EMMEGI®

HEAT-EXCHANGERS

SINCE 1975



GENERAL CATALOGUE

EMMEGI

Scambiatori di calore dal 1975
Heat - exchangers since 1975



50	Cassano d'Adda	20.000 m²	6	70	UNI EN ISO 9001 UNI EN ISO 15085-2 CL1.	200
anni di esperienza	sede principale	area produttiva totale	le nostre filiali	paesi gestiti tramite distributori	sistema di gestione per la qualità	dipendenti del gruppo
years of experience	headquarters	total production area	our branches	countries managed through distributors	quality management system	employees

EMMEGI è una azienda italiana che opera nel settore industriale. Progetta e produce scambiatori di calore al servizio dei macchinari industriali, delle macchine mobili da cantiere, dei compressori d'aria, dei motori endotermici e dell'impiantistica oleodinamica in generale.

Impresa storica italiana nata nel 1975, giunta alla terza generazione e in costante sviluppo, è in grado di distinguersi su un mercato altamente competitivo, sia a livello nazionale che internazionale, grazie all'elevata qualità dei prodotti e il continuo investimento in ricerca e sviluppo.

L'headquarter di EMMEGI, nonché sede produttiva principale, si trova in Italia, nel comune di Cassano d'Adda, tra le province di Milano e di Bergamo, zona logisticamente favorita per gli scambi commerciali.

La presenza pluridecennale sul mercato le ha consentito di maturare esperienze capaci di soddisfare più ambiti di applicazione, tanto da essere oggi riconosciuta worldwide come una consolidata realtà multinazionale.

La cura per i dettagli tecnici, la passione per il nostro lavoro, l'impegno per la soddisfazione del cliente sono le leve che ispirano Emmegi e che ne consentono la continua evoluzione.
Gli scambiatori EMMEGI sono tutti realizzati nelle nostre sedi produttive, progettati per garantire la massima affidabilità nel tempo. I materiali utilizzati di alto livello qualitativo (long-life) sono sinonimo di qualità e durabilità.

EMMEGI is an Italian company operating in the industrial sector. It designs and manufactures heat exchangers for industrial machinery, mobile construction site machinery, air compressors, endothermic engines, and hydraulic systems in general.

A historic Italian company established in 1975, now managed by the third generation and constantly growing, it stands out on a highly competitive market, both nationally and internationally, thanks to the high quality of its products and the continuous investment in research and development.

The EMMEGI headquarters and the main production facility are in Italy, in the town of Cassano d'Adda, between Milan and Bergamo, a popular area for logistics and trade.

The decades-long presence on the market has allowed it to gain the experience needed to work in many different sectors, and it is now globally considered to be a consolidated multinational.

Attention to technical details, passion for our work and commitment to customer satisfaction are the levers that inspire Emmegi and that allow it to continue to grow.
EMMEGI heat exchangers are all made at our production facilities and are designed to ensure maximum reliability over time. The high-quality materials used (long-life) are synonymous with quality and durability.

Gli scambiatori di calore EMMEGI nascono tutti da un'attenta fase di progettazione con la finalità di ottenere le migliori performances per lo scambio termico, garantedo la massima qualità ed affidabilità.
I nostri radiatori sono impiegati per il raffreddamento di impianti oleodinamici, motori endotermici (circuito acqua, circuito intercooler), componenti elettrici ed elettronici, impianti di trattamento di fluidi.
EMMEGI produce una vasta gamma di scambiatori di calore, sia per il raffreddamento ad aria che ad acqua.
I prodotti EMMEGI utilizzano l'aria ambiente come elemento di raffreddamento, convogliata sulla massa radiante da una ventola (azionata da motori elettrici, idraulici ecc) ottimizzata per ottenere la massima performance ed efficienza e per ridurne la pressione sonora. La massa radiante, in lega d'alluminio ad alta resistenza, è ottenuta mediante un processo produttivo di saldobrasatura ad alto vuoto, che rappresenta la migliore tecnologia per massimizzare la qualità e l'affidabilità del prodotto.
La particolare configurazione dei condotti, aumenta la turbolenza del fluido e di conseguenza la capacità di scambio.
La presenza di speciali turbinatori sull'alettatura del pacco radiante, migliora ulteriormente il coefficiente di trasmissione.
Il risultato è un prodotto tecnologicamente avanzato di dimensioni contenute, leggero, robusto e affidabile.
Gli scambiatori ad acqua EMMEGI rappresentano una soluzione compatta, robusta ed efficiente, garantendo la massima performance e l'affidabilità nel tempo.

EMMEGI heat exchangers all originate in a detailed design phase with the aim of obtaining the best heat exchanging performance, and reliability.
EMMEGI manifactures a wide range of heat exchangers, air or liquid cooled.
Our products are used for the cooling of hydraulic systems, endothermic engines (water circuit, intercooler circuit), electrical and electronic components and fluid treatment systems.
EMMEGI products use ambient air, conveyed over the radiator by a fan (driven by electric, hydraulic motors, etc.), optimized to obtain maximum performance and efficiency and reduce sound pressure, as a coolant. The high-tensile aluminum alloy radiator core is obtained by means of a vacuum brazing production process, the best technology to maximize the quality and reliability of the product.
The configuration of the tubes increases the turbulence of the fluid and, consequently, the exchange capacity. The presence of special turbulators on the finned surfaces of the cooling element improves the total transmission coefficient. The result is a small-sized, light, and robust technologically advanced product.
EMMEGI water cooled heat exchangers represents a compact, efficient, high performance solution and a durable product.









Scambiatori Aria-Olio / *Air-Oil Exchangers*

Gli scambiatori di calore aria-olio EMMEGI S.p.A., sono impiegati per il raffreddamento di circuiti oleodinamici usando, come fluido raffreddante, l'aria ambiente convogliata sulla radiante da una ventola azionata da un motore elettrico o idraulico.

EMMEGI S.p.A. air-oil heat exchangers are used for the cooling of hydraulic circuits using ambient air as a coolant, which is conveyed over the radiator by a fan driven by an electric or hydraulic motor.



Scambiatori di calore per ambienti aggressivi / *Heat exchangers for use in aggressive environments*

Gli scambiatori SERIE HPAM sono idonei per il raffreddamento di circuiti oleodinamici installati in ambienti con classe di corrosione C5, e resistenza a 480 ore in nebbia salina neutra, secondo normative UNI EN ISO 9227.

SERIES HPAM heat exchangers are suitable for the cooling of hydraulic circuits installed in environments with corrosion class C5, and resistance to 480 hours in neutral salt spray, according to UNI EN ISO 9227 standards.



Scambiatori di calore per uso in atmosfere esplosive / *Heat exchangers for use in explosive atmospheres*

La linea di scambiatori SERIE HPEx è nata per soddisfare le esigenze di Clienti che cercano un prodotto che coniughi a buone performance la sicurezza in ambienti con atmosfera esplosiva.

The HPEx SERIES heat exchanger line was created to meet the needs of customers looking for a product that combines excellent performance with safety in hazardous environments.



Serie EBR / *EBR series*

Gli scambiatori serie EBR utilizzano ventilatori brushless in corrente continua, garantendo la massima performance con un prodotto compatto ed efficiente, destinato al raffreddamento di circuiti oleodinamici o a base acqua glicolata per le macchine mobili di nuova generazione.

EBR heat exchangers are realized with brushless DC fan, in order to guarantee maximum performance, high efficency and compact dimensions, all requirements of new generation machines for oil or water-glycol cooling.



Combinati per Compressori / *Combi cooleres for Compressors*

La gamma di combinati per compressori, grazie al suo semplice layout, si presta ad adattarsi facilmente a molteplici applicazioni di varie potenze, per il raffreddamento sia del circuito olio, che dell'aria compressa.

CC series is a complete range of combined coolers suitable for several size of compressors, with different power.
These combi units cool down oil and compressed air circuits.



Gruppi Autonomi di Raffreddamento / *Stand alone cooling systems*

Sono gruppi di raffreddamento autonomi aria-olio a basso livello di rumorosità che utilizzano il principio del ricircolo, provvedendo autonomamente ad aspirare, raffreddare, eventualmente filtrare e riportare il fluido all'interno del serbatoio.

The low-npise independent air-oil cooling units use the principle of recirculation, independently collecting, cooling, filtering and returning the fluid to the tank.



HPA TK

La gamma di scambiatori della serie HPA TK prevede serbatoio integrato ed eventuale filtro flangiato. Tale soluzione si adatta perfettamente alle necessità di circuiti oledinamici delle betoniere.

HPA TK series includes an integrated tank and flanged filter.
This solution perfectly matches the requirements of hydraulic system installed on concrete mixer.



Scambiatori a fascio tubiero / *Shell & Tubes heat exchangers*

Gli scambiatori di calore a fascio tubiero, sono utilizzati per il raffreddamento di circuiti oleodinamici e normalmente inseriti su linee di ritorno.

Shell & tubes heat exchangers are used for the cooling of hydraulic circuits and are normally installed in return lines.



Scambiatori Acqua-Olio a piastre / *Brazed plate water-oil exchangers*

Gli scambiatori a piastre sono costituiti da piastre corrugate e garantiscono la massima performance con un ingombro compatto, rappresentando la soluzione ottimale quando gli spazi disponibili sono limitati.

Plate heat exchangers are made of corrugated plates for maximum performance with minimal size.



Scambiatori a progetto / *Project-based heat exchangers*

EMMEGI S.p.A. è specializzata nella progettazione di scambiatori di calore su specifica del cliente. La progettazione, a stretto contatto con il cliente, viene gestita totalmente all'interno di EMMEGI, garantendo il massimo della rapidità nelle risposte e nella flessibilità delle soluzioni proposte. Emmegi è specializzata nella progettazione e nello sviluppo di soluzioni combinate per raffreddamento di motori endotermici, comprensivi di sistema di ventilazione, vaso di espansione e connessioni.

EMMEGI S.p.A. specializes in the design of heat exchangers to customer specifications.
The design, in close contact with the customer, is managed entirely by EMMEGI,
in order to guarantee fastest response and flexibility of the proposed solutions.
Emmegi specializes in the design and development of combined solutions
for the cooling of diesel engines, including the ventilation system, expansion tanks and connections.

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SCAMBIATORI RAFFREDDATI AD ARIA - *AIR COOLERS*

Rendimento - *performance*

kW/°C
min 0,026
max 1,420

Portata - *flow rate*

Serie MG AIR - *MG AIR Series*

lpm..5 - 300	Serie 2000K
lpm..4 - 150	Serie 2000K 2Pass
lpm..35 - 500	Serie 2000 2KS
lpm..15 - 300	Serie 2000 KBV
lpm..1 - 50	Serie 2000K DRAIN

Rendimento - *performance*

kW/°C
min 0,210
max 7,780

Portata - *flow rate*

Serie HPA - *HPA Series*

lpm...15 - 400	Serie HPA
lpm..15 - 250	Serie HPA 2 PASS
lpm..45 - 800	Serie HPA/2 - HPA/3
lpm..15 - 400	Serie HPV
lpm..15 - 400	Serie HPA COMPACT
lpm..15 - 250	Serie HPA 2 Pass COMPACT
lpm..45 - 800	Serie HPA /2 COMPACT
lpm..40 - 800	Serie HPA LARGERS
lpm..15 - 250	Serie HPA TK

Rendimento - *performance*

kW/°C
min 0,064
max 0,560

Portata - *flow rate*

Serie Mobile - *MOBILE Series*

lpm..15 - 200	Mobile 1
lpm..15 - 200	Mobile Mini
lpm..15 - 200	Mobile Plus
lpm..20 - 250	Mobile 2
lpm..20 - 250	Mobile 3
lpm..25 - 300	Mobile 4
lpm..25 - 300	Mobile 5

Rendimento - *performance*

kW/°C
min 0,066
max 7,780

Portata - *flow rate*

Serie HPAM - *HPAM Series*

lpm..15 - 250	Serie HPAM06 - HPAM12 - HPAM18 - HPAM24 - HPAM30
lpm..25 - 400	Serie HPAM36 - HPAM42 - HPAM50 - HPAM52 - HPAM72
lpm..30 - 800	Serie HPAM135 - HPAM180 - HPAM255

Rendimento - *performance*

kW/°C
min 0,066
max 7,780

Portata - *flow rate*

Serie HPƐx - *HPƐx Series*

lpm..15 - 250	Serie HPƐx06 - HPƐx12 - HPƐx18 - HPƐx24 - HPƐx30
lpm..25 - 400	Serie HPƐx36 - HPƐx42 - HPƐx50 - HPƐx52 - HPƐx72
lpm..80 - 800	Serie HPƐx135 - HPƐx180 - HPƐ255

Rendimento - performance

kW/°C
min 0,085
max 1,045

Portata - *flow rate*

Serie EBR - *EBR Series*

lpm..3 - 500	Serie EBR

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ACCESSORI

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Potenza compressore
Compressor power

kW
min 4
max 110

Portata - *flow rate*

Combinati per Compressori
Combined for Compressors

Nm³/h..0,6 - 3,6	Serie CC01 - CC02 - CC03
Nm³/h..4,8 - 7,1	Serie CC04 - CC05 - CC06
Nm³/h..11,5 - 17	Serie CC07- CC08

GRUPPI AUTONOMI DI RAFFREDDAMENTO - OFFLINE COOLING UNIT

Potenza - *performance*

kW
min 1
max 65

Portata - *flow rate*

Serie SILENT EVO 3
SILENT EVO 3 Series

lpm..10 - 12	Serie S3E15
lpm..40 - 48	Serie S3E25 - Serie S3E35
lpm..40 - 48	Serie S3E45 - Serie S3E55
lpm..80 - 96	Serie S3E65 - Serie S3E75

Potenza - *performance*

kW
min 0,5
max 24

Portata - *flow rate*

Serie RID- *RID Series*

lpm..10	Serie RID 15
lpm..10	Serie RID 25
lpm..10	Serie RID 35
lpm..23	Serie RID 45
lpm..23	Serie RID 55

Potenza - *performance*

kW
min 0,9
max 10

Portata - *flow rate*

Serie DCO - *DCO Series*

lpm..5	Serie DCO 25
lpm..10	Serie DCO 25
lpm..5	Serie DCO 45
lpm..10	Serie DCO 45

SCAMBIATORI RAFFREDDATI AD ACQUA - WATER COOLED HEAT-EXCHANGERS

Potenza - *performance*

kW
min 1
max 340

Portata - *flow rate*

Scambiatori a fascio tubiero
Shell & tubes

lpm..10 - 450	Serie MG
lpm...5 - 80	Serie MGC
lpm...5 - 50	Serie MGE
lpm...30 - 800	Serie MGB
lpm...20 - 400	Serie MGF

Rendimento - *performance*

kW/°C
min 0,012
max 6,150

Portata - *flow rate*

Scambiatori a piastre saldobrasate
Brazed plate heat-exchangers

lpm..3 - 25	Serie PB014 - PB022 - PB031 - PB034
lpm..12 - 75	Serie PB047 - PB060
lpm..60 - 400	Serie PB110 - PB170



EMMEGI®
HEAT-EXCHANGERS

Scambiatori ad aria
Air coolers

Introduzione

Gli scambiatori di calore ad aria EMMEGI, sono impiegati per il raffreddamento di fluidi usando, come fluido raffreddante, l'aria ambiente convogliata sulla massa radiante da una ventola azionata da un motore elettrico o idraulico.
La massa radiante, in lega d'alluminio ad alta resistenza, è ottenuta mediante un processo costruttivo di saldobrasatura ad alto vuoto.
La particolare configurazione dei condotti aumenta la turbolenza del fluido e conseguentemente la capacità di scambio. La presenza, inoltre, di speciali turbolatori sull'alettatura del pacco radiante, migliora il coefficiente di trasmissione globale.
Il risultato è un prodotto tecnologicamente avanzato di dimensioni contenute, leggero e robusto.

Introduction

EMMEGI air heat exchangers are used for fluids cooling using ambient air that passes throught the cooling core by means of a fan operated by an electric or hydraulic motor.
The cooler element, in high resistance aluminium alloy, is obtained by means of a braze-welding process, carried out under vacuum.
The particular configuration of the channels increase the turbulence of the fluid so the exchange capacity; moreover, the presence of special design on the cooler finning further improves the total transmission coefficient.
The result is a very small, light and robust technologically advanced product.

Fluidi compatibili

. Oli minerali, HL, HLP.
. Emulsioni acqua-olio
. Acqua-glicole
. Per altri fluidi consultare EMMEGI.

Compatible fluids

. Mineral oils; HL; HLP.
. Water-oil emulsion.
. Water-glycol.
. Consult EMMEGI for other fluids.

Specifiche tecniche Masse Radianti

. Materiale: alluminio "long life".
. Pressione d'esercizio: fino a 20 bar.
. Pressione di collaudo: fino a 35 bar.
. Temperatura max d'esercizio: 120°c
. Per particolari atmosfere aggressive consultare EMMEGI.

Technical spacification of Cooler Element

. Material: "long life" aluminium.
. Operating pressure: up to 20 bar.
. Test pressure: up to 35 bar.
. Max operating temperature: 120°c.
. For " aggressive" atmospheres contact EMMEGI.



Manutenzione

É buona norma prestare particolare attenzione alla pulizia della massa radiante, da eseguire periodicamente in modo da mantenere una elevata efficenza.

Maintenance

It is very important to periodically clean the cooler in order to prevent a reduction in thermal efficiency.

Pulizia lato interno

Per eseguire la pulizia lato interno, lo scambiatore dovrà essere smontato. Lo sporco può essere rimosso flussando in controcorrente un prodotto sgrassante compatibile con alluminio. Effetuare un lavaggio con il fluido di processo prima di ricollegare il prodotto all'impianto.

Internal core cleaning

The exchanger should be disconnected and disassembled to clean oil in the internal channels. The dirt can be removed by flushing, in counter-current, a degreasing substance, compatible whit aluminium. Wash with process fluid before re-connecting the produtc to the system.

Pulizia lato aria

La pulizia lato aria può essere effettuata con aria compressa o con acqua, con direzione del getto parallelo alle alette per non danneggiarle. Lo sporco oleoso o grasso può essere rimosso con getto di vapore o acqua calda. Durante questa operazione, il motore elettrico non deve essere collegato alla tensione, e dovrà essere adeguamente protetto.

Air side Cleaning

Cleaning on the air side can be done using compressed air or water, directing the jet parallel to the fins so as not to damage them.
Oil dirt or grease can be removed with a jet of steam or hot water. During this operation, the electric motor must be disconnected from the voltage supply, and must be adequately protected.



Esempio di scelta dello scambiatore

Per effettuare la scelta dello scambiatore si procede come nel seguente esempio:

Tipologia di fluido	:	olio VG 32	
Potenza da dissipare	:	7,5	[kW]
Portata olio	:	100	[lpm]
Temperatura ingresso olio	:	60	[°c]
Temperatura ambiente	:	30	[°c]

Ventola azionata da motore elettrico 230/400V-50Hz.

Si calcola la potenza specifica di scambio espressa in kW/°C, conoscendo la potenza da dissipare e il ΔT (differenza tra la temperatura olio ingresso e la temperatura ambiente).

$$P = \frac{7{,}5\ kW}{60° - 30°} = 0.25\ kW/°C$$

Nota la portata olio (100 lpm) e la potenza specifica di scambio (0.25 kW/°C) si procede alla ricerca del prodotto avvalendosi dei grafici riportati a catalogo, relativi ai singoli modelli individuando il modello adeguato a garantire la potenza specifica.

Example of how to choose a heat exchanger

Proceed with sizing the exchanger, with a knowledge of the data as the example below shows:

Fluid type	:	oil VG 32	
Power to dissipate	:	7,5	[kW]
Oil flow	:	100	[lpm]
Oil inlet temperature	:	60	[°c]
Ambient temperature	:	30	[°c]

Fan operating with an electric motor 230/400V-50Hz.

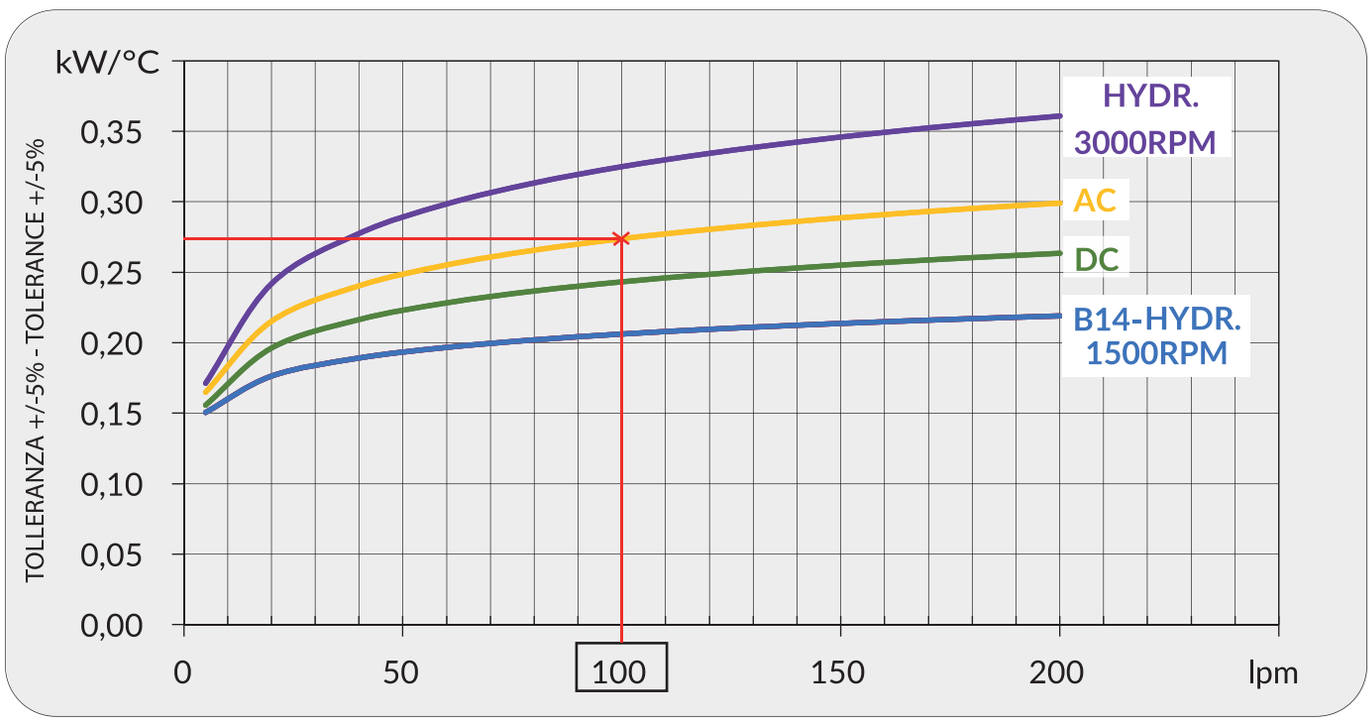
You can then calculate the specific heat exchange power kW/°C if you know the power to be dissipated and the ΔT (the difference between the oil inlet temperature and the ambient temperature).

$$P = \frac{7{,}5\ kW}{60° - 30°} = 0.25\ kW/°C$$

With the oil flow value (100 lpm) and calculeted specific exchange power (0.25 kW/°C), it is possible to find in the catalogue the best suitable solution for the required performance.



Diagramma rendimento *Performance diagram*



Lo scambiatore selezionato risulta il modello:
MG AIR 2030K - 230/400 - 50Hz
cod. 253003###.

Per la completa identificazione dello scambiatore consultare la pagina "DENOMINAZIONE CODICE PRODOTTO". Nel caso non siano conosciuti tutti i dati, per la scelta contattare EMMEGI S.p.A.

The exchanger selected is the following model:
MG AIR 2030K - 230/400V - 50Hz
cod. 253003###.

For a complete desription of the exchanger consult the " PRODUCT ORDERING CODE" page. If you do not know all the data required for selecting the model, contact EMMEGI S.p.A.



EMMEGI®
HEAT-EXCHANGERS

Serie MG AIR 2000K
MG AIR 2000K Series

APPLICAZIONE
APPLICATION

Grazie all'ampia gamma di combinazioni, gli scambiatori di calore della serie 2000K si prestano come la soluzione di raffreddamento ottimale per svariate applicazioni sia mobili che industriali quali:

Thanks to the wide range of combinations, the 2000K series heat exchangers are the optimal cooling solution for a wide range of mobile and industrial applications such as:



Industria agricola e forestale.
Gru mobili e fisse.
Veicoli industriali.
Veicoli municipali.
Macchine da costruzione.
Impianti di riciclo.
Impianti oleodinamici.
Macchine utensili.
Altro su richiesta.

Agriculture and forestry.
Mobile and stationary cranes.
Industrial vehicles.
Municipal vehicles.
Construction machines.
Recycling plants.
Hydraulic systems.
Machine tools.
Others on request.







Modulo richiesta dati

Sheet for cooler selection

CLIENTE *COMPANY*	
RICHIEDENTE *NAME*	

TIPOLOGIA FLUIDO *FLUID TYPE*		
PORTATA *FLOW RATE*	**lpm**	
POTENZA INSTALLATA *INSTALLED POWER*	**kW**	
POTENZA DA DISSIPARE *POWER TO BE DISSIPATED*	**kW**	
TEMPERATURA INGRESSO *INLET TEMPERATURE*	**°C**	
TEMPERATURA ARIA MAX *MAX AMBIENT TEMPERATURE*	**°C**	
PRESSIONE DI LAVORO *WORKING PRESSURE*	**bar**	

TIPO DI VENTILAZIONE *TYPE OF FAN UNIT*

- **CC** *DC*
  - **12V**
    - **24V**
- **PREDISPOSTO MOTORE IDRAULICO** *PREPARED FOR HYDRAULIC MOTOR*
  - **GR.2**
- **CA** *AC*
  - **MONOFASE 230V** *SINGLEPHASE 230V*
  - **TRIFASE** **230/400V** **265/460V** *THREEPHASE 230/400V 265/460V*
    - **TENSIONE SPECIALE** *SPECIAL VOLTAGE*
      - **50 Hz** **60 Hz**

Denominazione codice prodotto

Ordering code

2520 **03** **2** **01**

MODELLO *COOLER MODEL*

2520 *(MG AIR 2020K)*

TIPO DI MOTORIZZAZIONE *FAN MOTOR TYPE*

01	*AC 230V 50/60 Hz*
03	*AC 230-400V-50Hz / AC 230-400-60Hz*
04	*AC 230-400V-50Hz (B14) / AC 265-460V- 60Hz (B14)*
12	*DC 12V*
24	*DC 24V*
56	*Pred. per mot. idr. gr. 2 Prep. for hydr. mot. gr. 2*

TERMOSTATI *THERMOSTATS*

0	Senza termostato	*Whitout thermostat*	
1	Termostato fisso	*Fixed thermostat*	40-28°
2	Termostato fisso	*Fixed thermostat*	*50-38°*
3	Termostato fisso	*Fixed thermostat*	*60-48°*
4	Termostato fisso	*Fixed thermostat*	*70-58°*
5	Termostato fisso	*Fixed thermostat*	*80-68°*
6	Termostato fisso	*Fixed thermostat*	*90-78°*
8	Termostato regolabile *Adjustable thermostat*		*0-90° (TC2)*
9	Termostato regolabile collegato *Connected adjustable thermostat*		0-120° (TR2)

FLUSSO DI VENTILAZIONE *AIR FLOW DIRECTION*

01	*Aspirante Suction air flow*
02	*Soffiante Blowing air flow*

Modello - Codice prodotto

Cooler model - Code

Serie 2000K - *2000K Series*

Modello *Model*	Codice *Code*
2005K	.....
2010K	*2510*
2015K	*2515*
2020K	*2520*
2024K	*2524*
2030K	*2530*
2040K	*2540*
2050K	*2550*





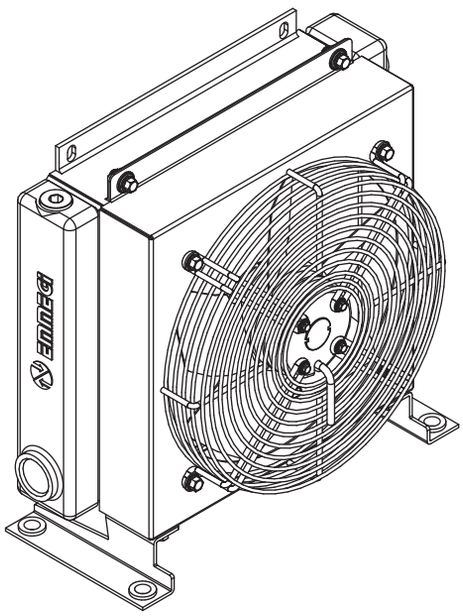
Serie 2000K 2 Pass - *2000K 2 Pass Series*

Modello *Model*	Codice *Code*
2010K 2PASS	*2G71*
2015K 2PASS	*2516*
2020K 2PASS	*2521*
2024K 2PASS	*2525*
2030K 2PASS	*2531*
2040K 2PASS	*2541*
2050K 2PASS	*2G70*

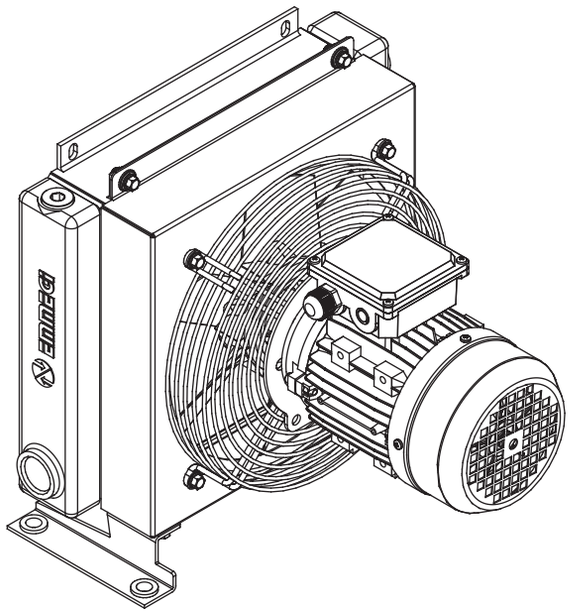
Serie 2000K 2KS - *2000K 2KS Series*

Modello *Model*	Codice *Code*
2020 2KS	*2321*
2024 2KS	*2324*
2030 2KS	*2330*
2040 2KS	*2340*

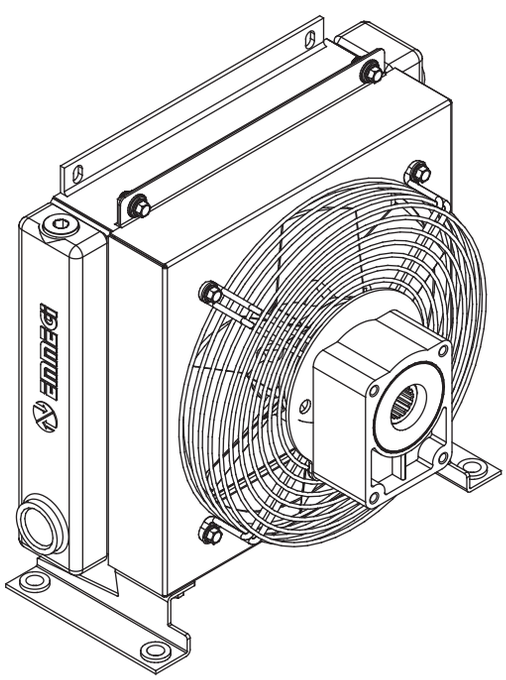




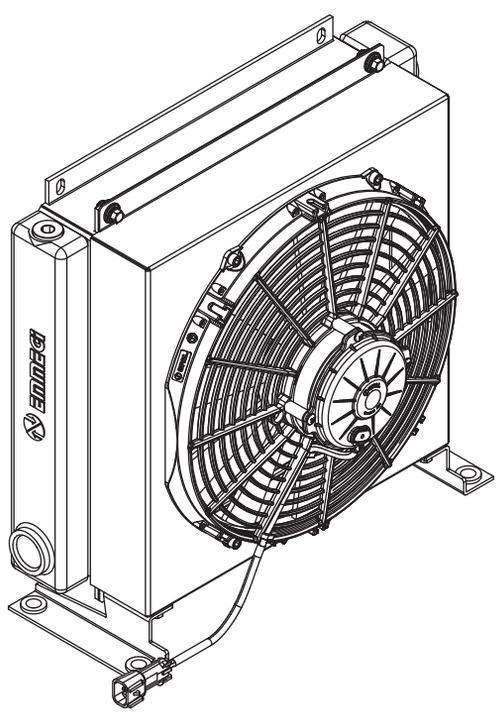
AC 230V 50/60 Hz
AC 230-400V 50/60Hz



AC 230-400V 50 Hz (B14)
AC 265-460V 60 Hz (B14)



Pred. per mot. idr. gr. 2
Pred for Gr.2 hydraulic mot.

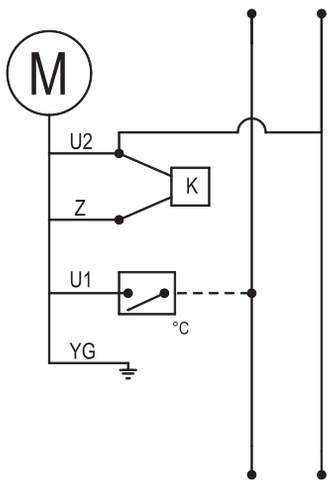


DC 12-24V

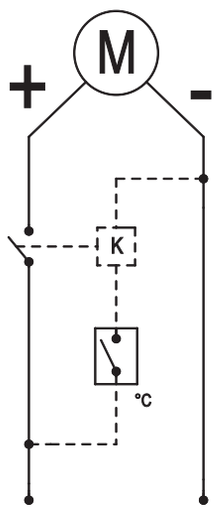
Collegamenti elettrici

Electric Wiring

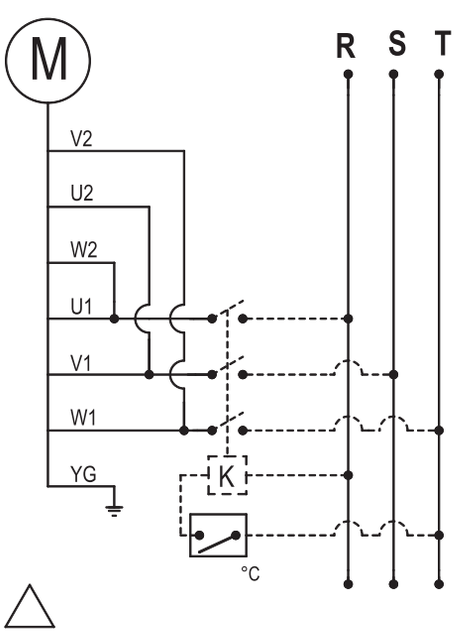
COLLEGAMENTO ELETTRICO 230V MON. AC
230V AC 1PH. ELECTRIC WIRING



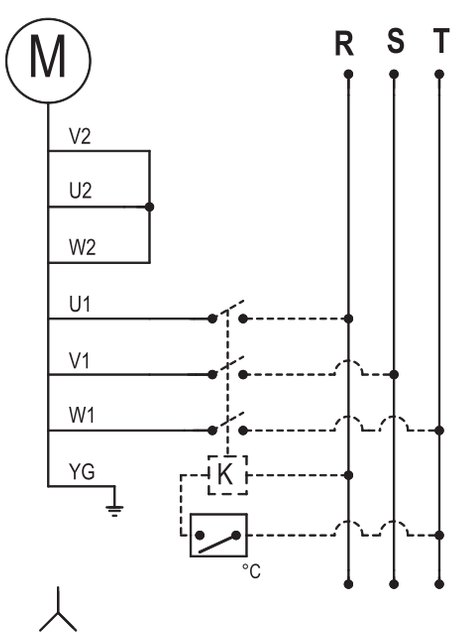
COLLEGAMENTO ELETTRICO 12-24V DC
12-24V DC ELECTRIC WIRING

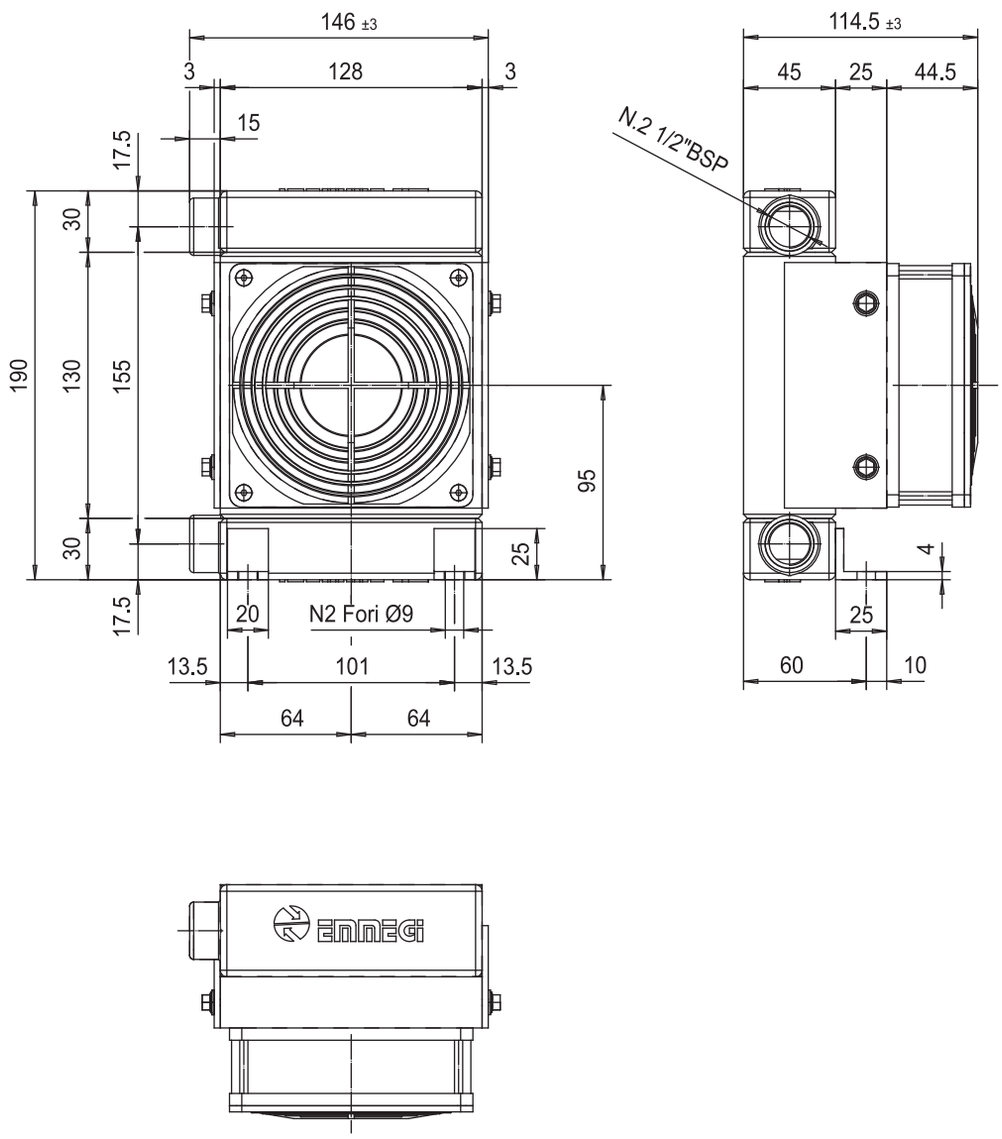


COLLEGAMENTO ELETTRICO 230V AC TRIF.
230V AC 3PH ELECTRIC WIRING



COLLEGAMENTO ELETTRICO 400/460V AC TRIF.
400/460V AC THREEPHASE ELECTRIC WIRING





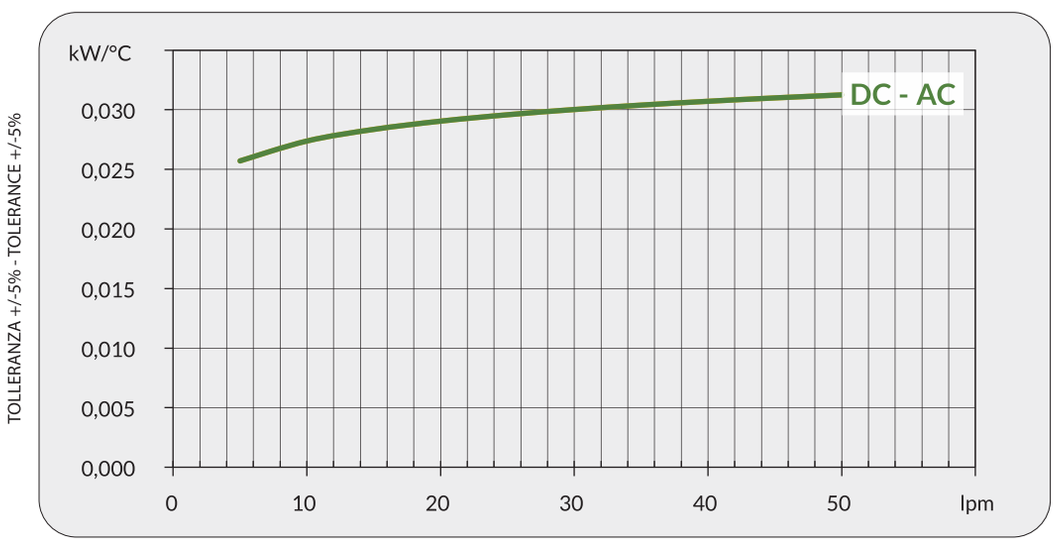
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

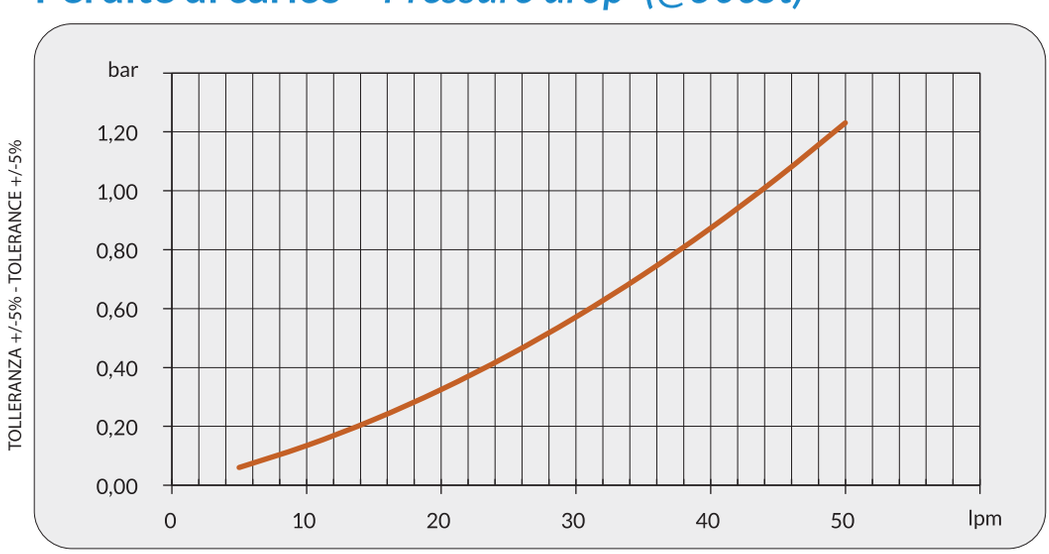
P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
054240023050#	230 AC	50	0,019	0,12	2650	105	40/47	125	20*	0,3	3,2
054240001200#	12 DC	/	0,005	0,4	3050	105	45/49	140	67	0,3	3,2
054240002400#	24 DC	/	0,005	0,2	3050	105	45/49	140	67	0,3	3,2

*Disponibile IP 55 / Available IP 55

Diagramma rendimento *Performance diagram*

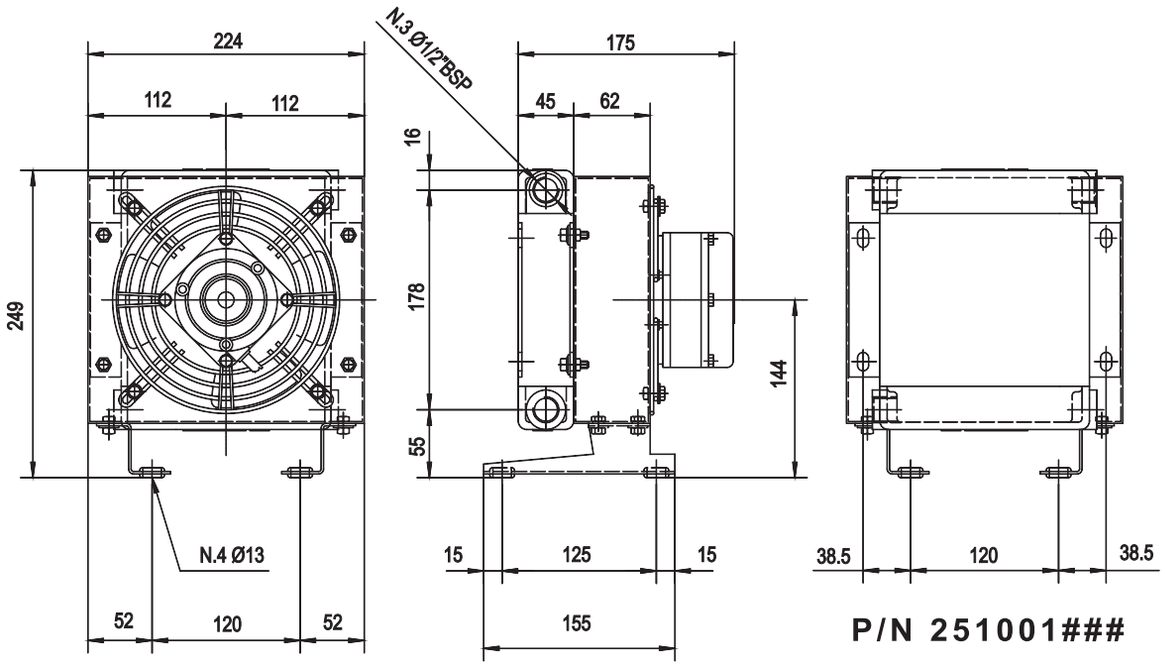


Perdite di carico *Pressure drop (@30cSt)*

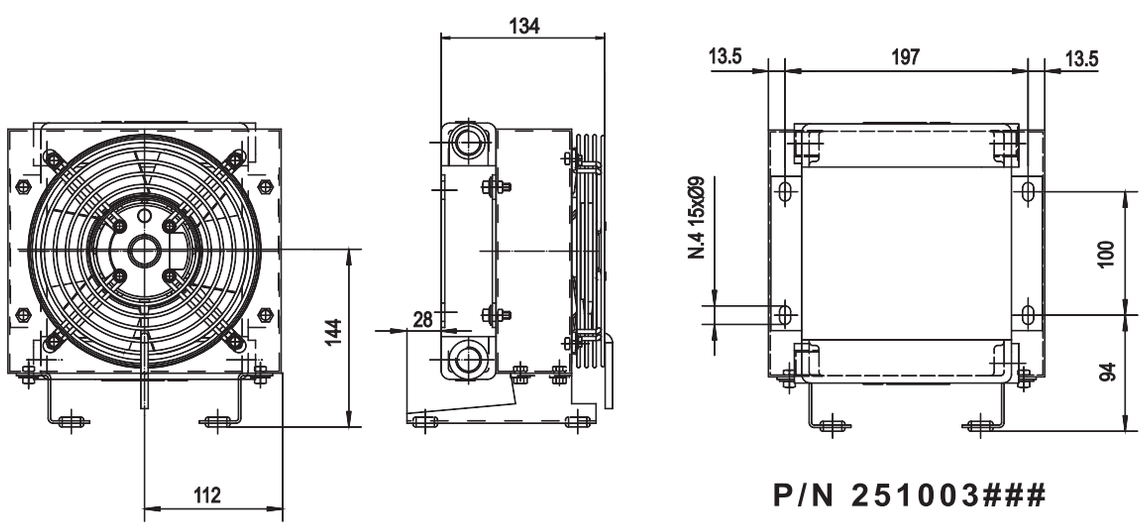


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

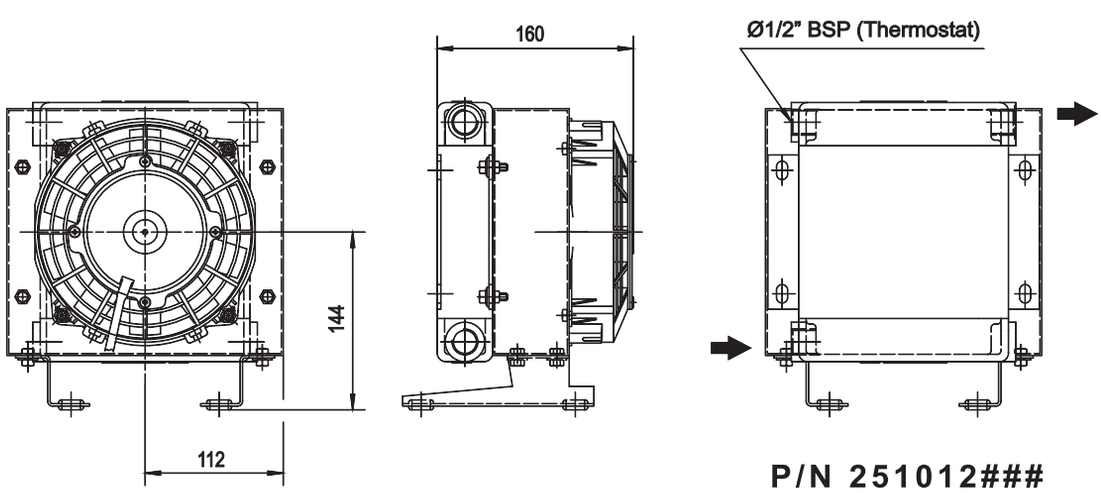
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 251001###



P/N 251003###



P/N 251012###
P/N 251024###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m^3/ h)	IP	It	kg
251001###	230 AC	50/60	0,010/0,047	0,21	2500	175	67	345	54	0,3	6
251003###	230 - 400 AC 230 - 400 AC	50 60	0,045 0,043	0,23 - 0,13 0,16 - 0,09	2750 3100	175	63	345	54	0,3	6
251012###	12 DC	/	0,06	5,5	3860	167	75	410	68	0,3	5
251024###	24 DC	/	0,06	2,4	4045	167	75	410	68	0,3	5

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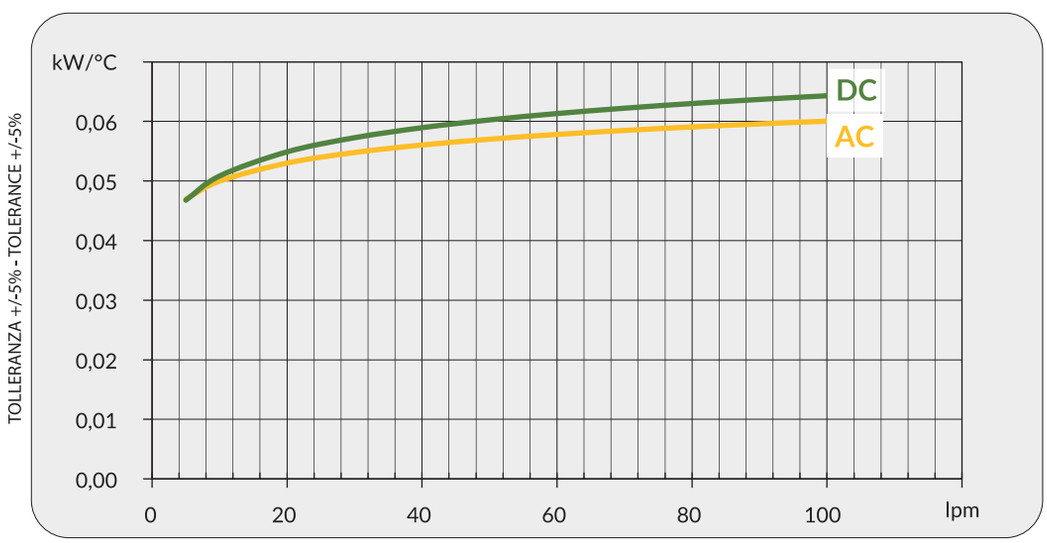
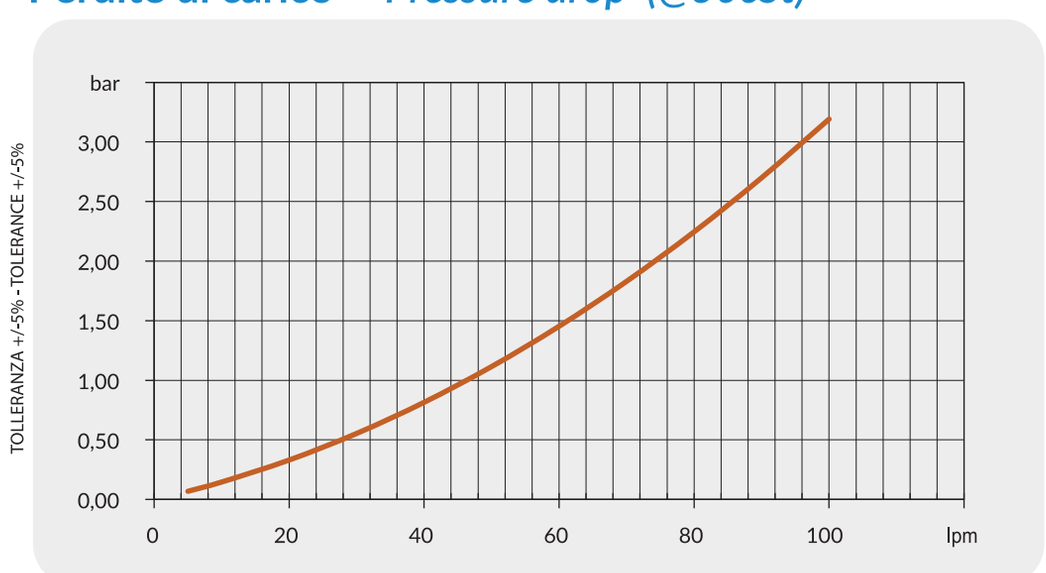
Diagramma rendimento *Performance diagram*

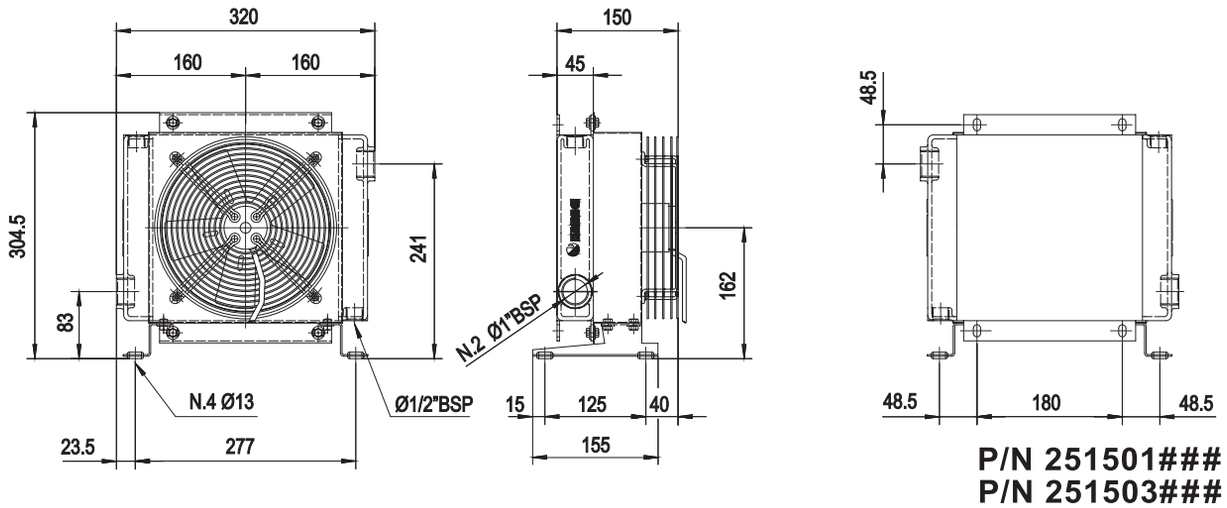


Perdite di carico *Pressure drop (@30cSt)*

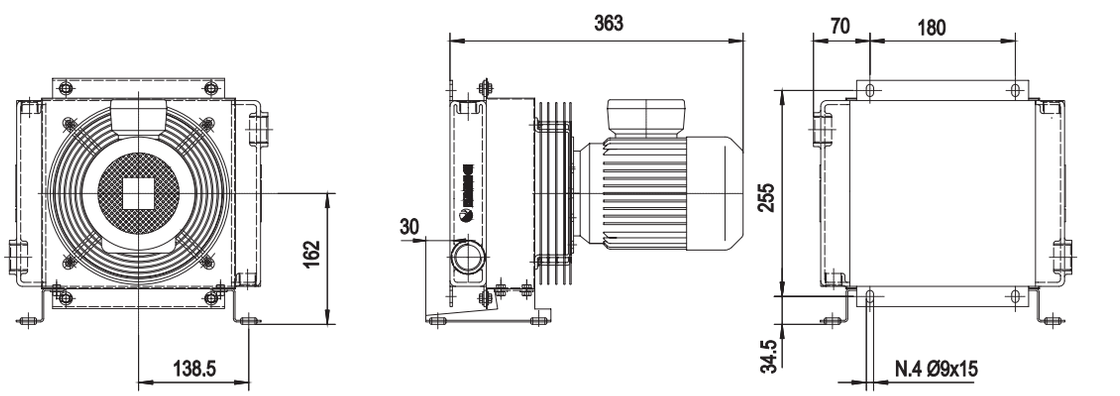


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

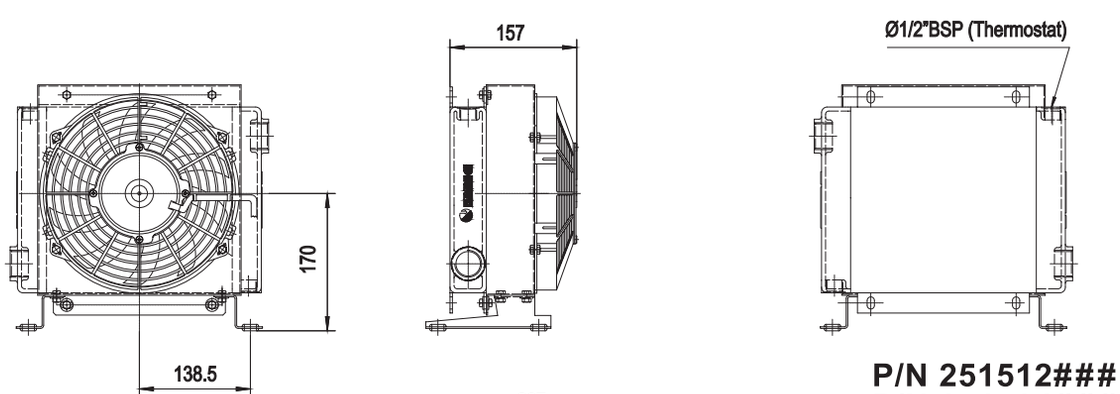
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



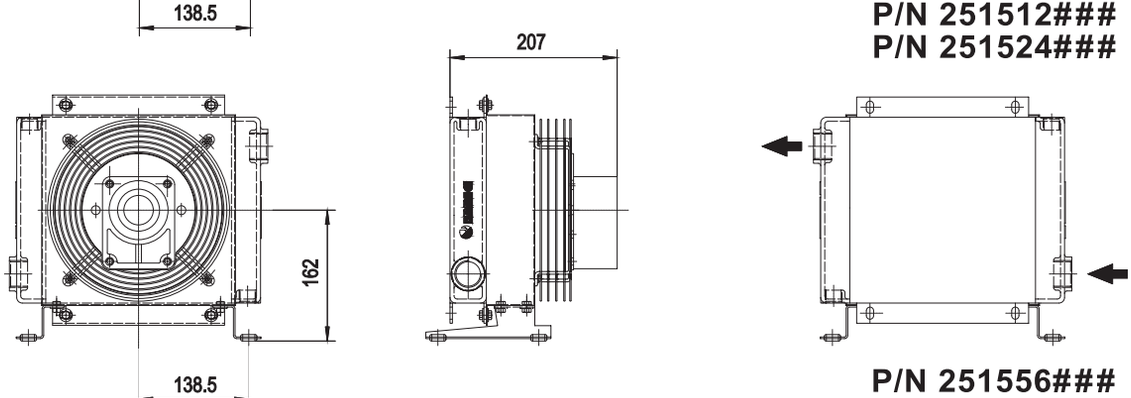
P/N 251501###
P/N 251503###



P/N 251504###



P/N 251512###
P/N 251524###



P/N 251556###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
251501###	230 AC	50/60	0,05/0,06	0,24-0,28	2740-3120	200	68	740	44	0,5	7
251503###	230-400 AC 230-400 AC	50 60	0,07 0,08	0,29-0,17 0,23-0,13	2500 2650	200	69	740	44	0,5	7
251504###	230-400 AC B14 265-460 AC B14	50 60	0,25 0,29	1,7- 1 1,7- 1	1350 1620	200	61	340	55	0,5	10
251512###	12 DC	/	0,08	6,7	2770	225	72	860	68	0,5	6,5
251524###	24 DC	/	0,09	4,1	2900	225	73	860	68	0,5	6,5
251556###	Prepared for Gr.2 hydraulic motor					200			/	0,5	6

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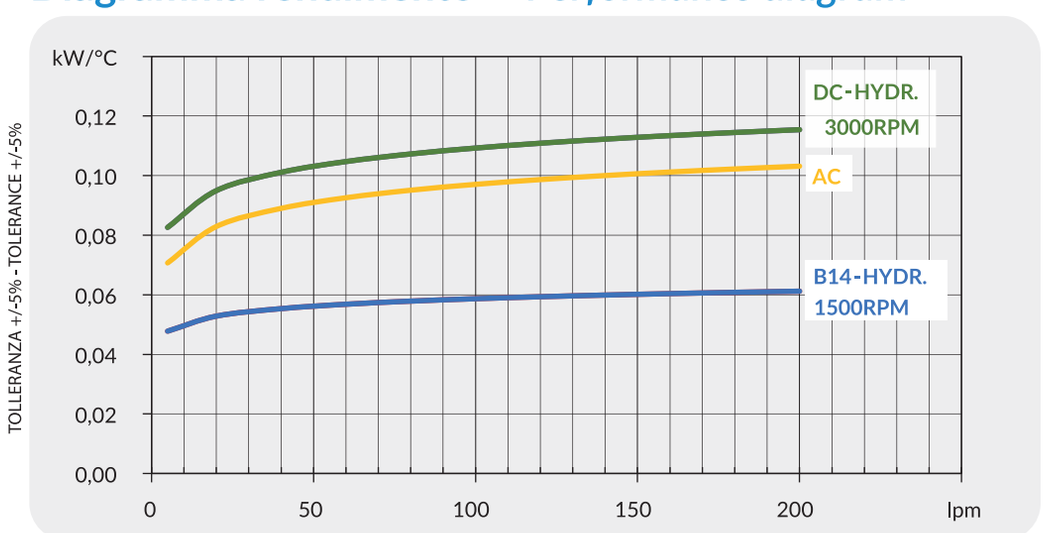
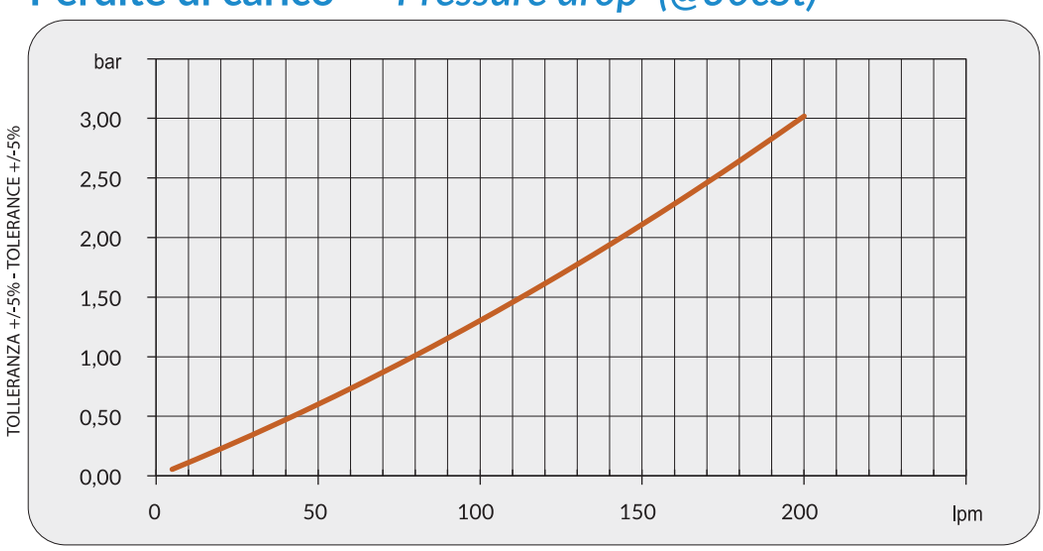
Diagramma rendimento *Performance diagram*

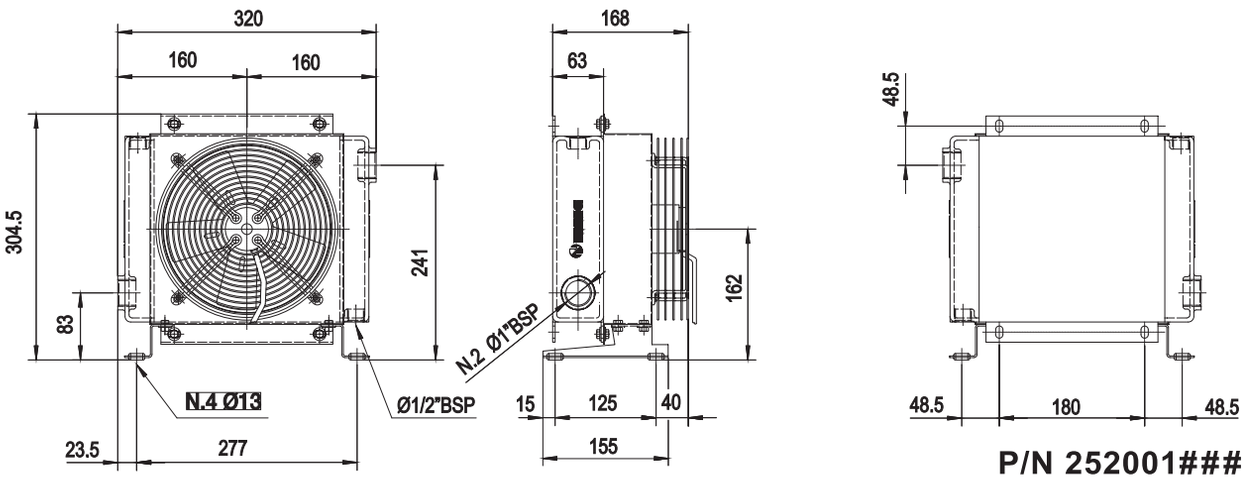


Perdite di carico *Pressure drop (@30cSt)*

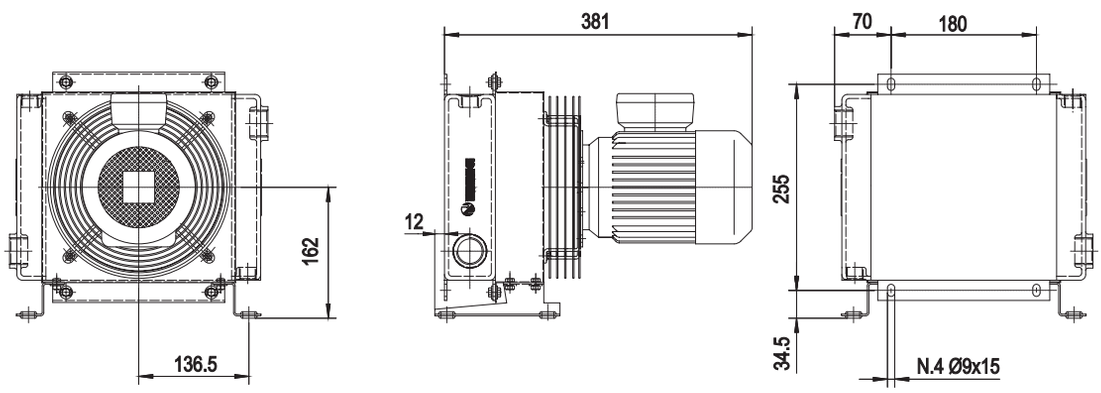


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

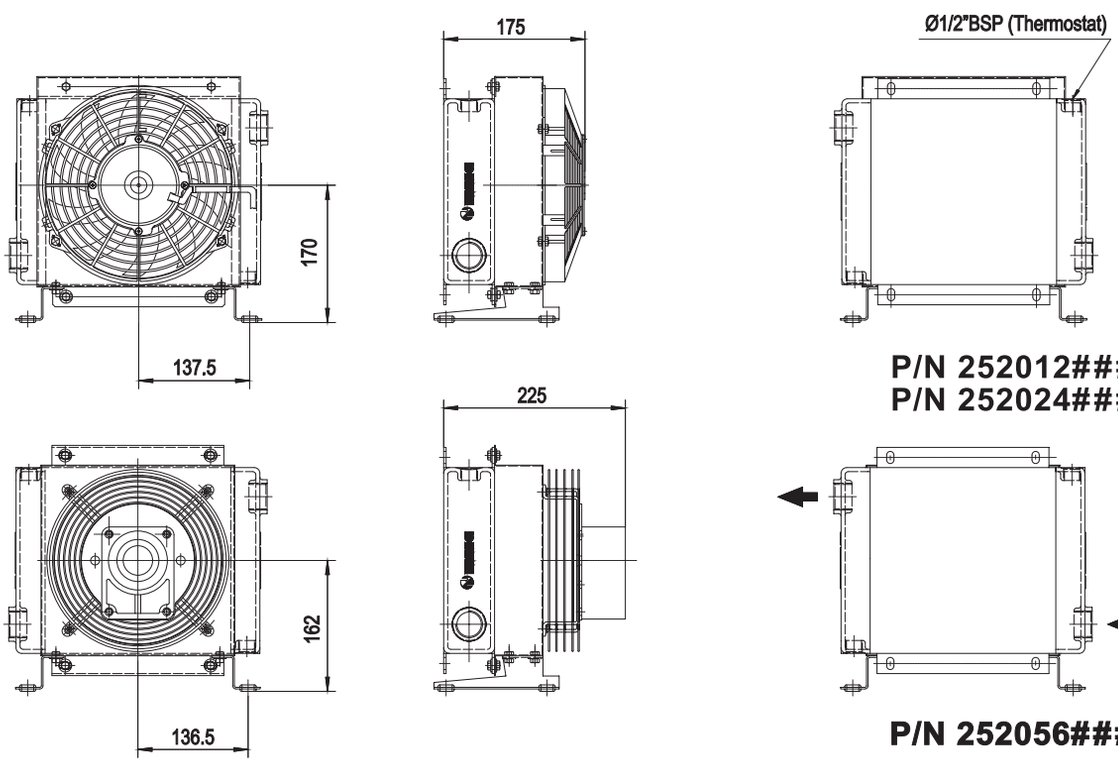
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 252001###
P/N 252003###



P/N 252004###



P/N 252012###
P/N 252024###

P/N 252056###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
252001###	230 AC	50/60	0,05/0,06	0,24-0,28	2740/3120	200	68	670	44	0,7	8
252003###	230-400 AC 230-400 AC	50 60	0,07 0,08	0,29-0,17 0,23-0,13	2500 2650	200	68	670	44	0,7	8
252004###	230-400 AC B14 265-460 AC B14	50 60	0,25 0,29	1,7- 1 1,7- 1	1350 1620	200	64	305	55	0,7	11
252012###	12 DC	/	0,08	6,4	2770	225	72	750	68	0,7	7
252024###	24 DC	/	0,09	3,9	2900	225	72	750	68	0,7	7
252056###	Prepared for Gr.2 hydraulic motor					200			/	0,7	7

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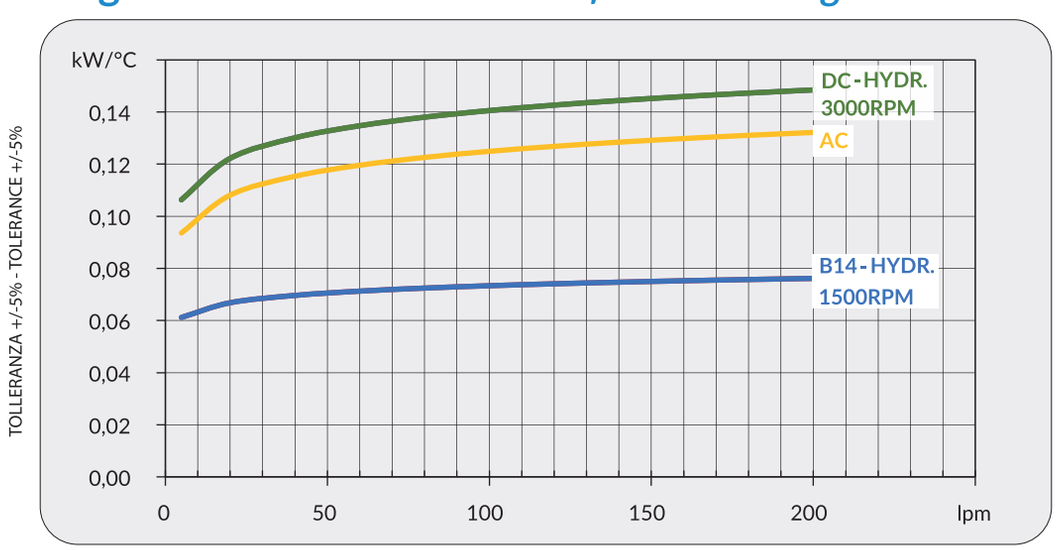
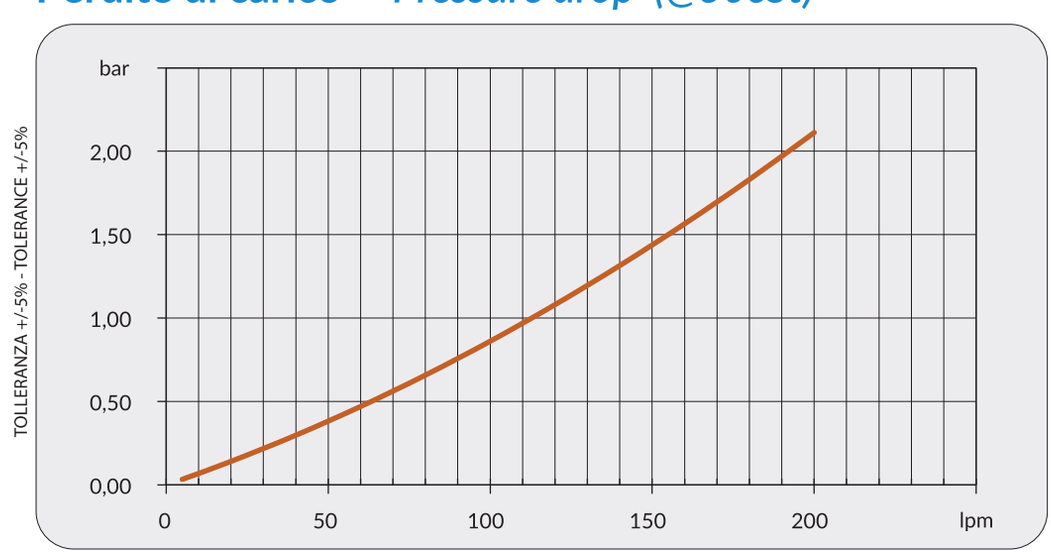
Diagramma rendimento *Performance diagram*

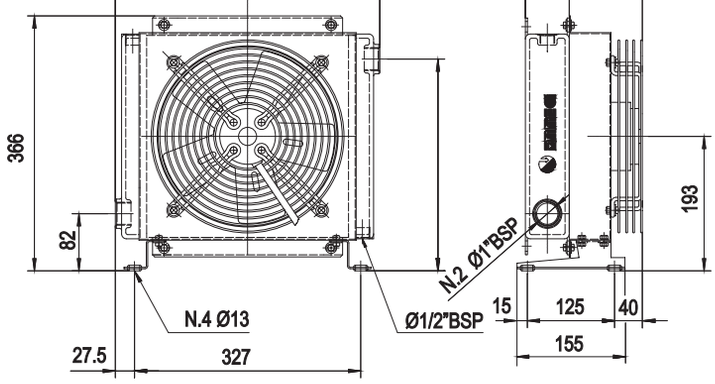


Perdite di carico *Pressure drop (@30cSt)*

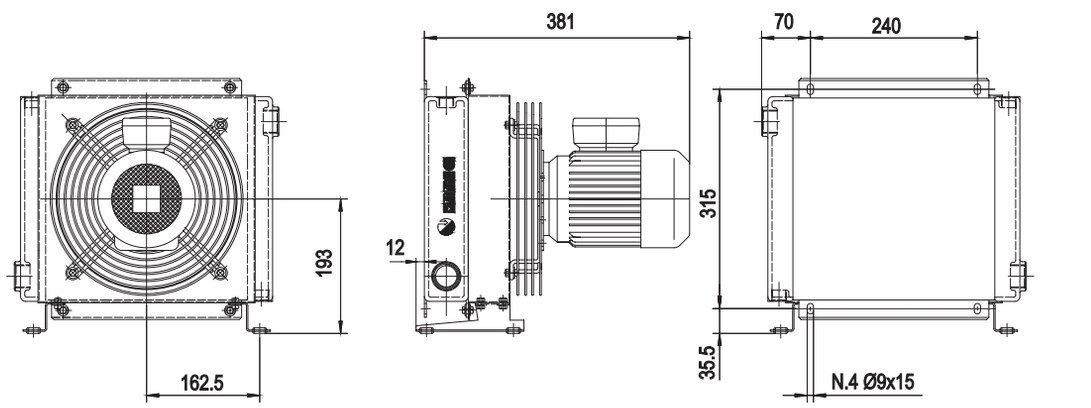


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

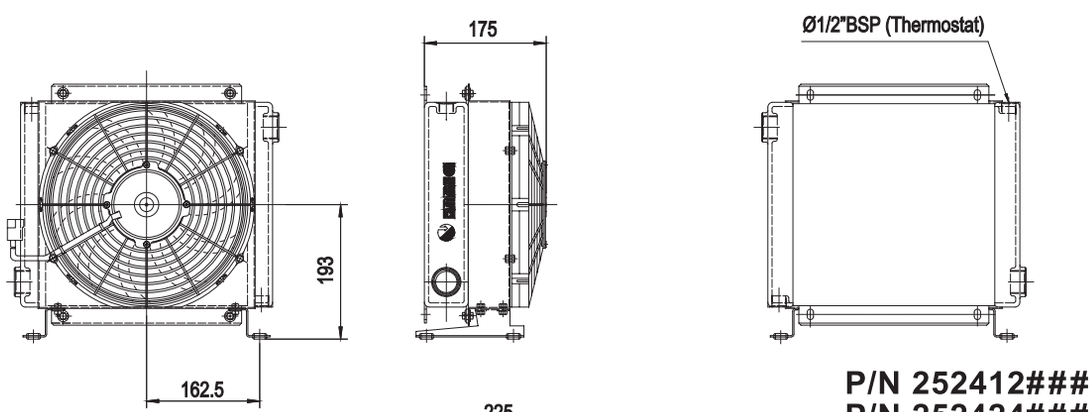
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



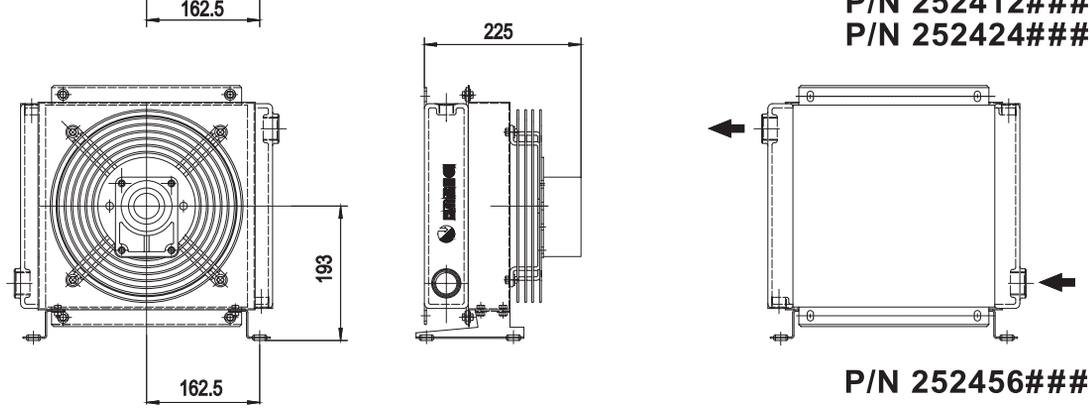
P/N 252401###
P/N 252403###



P/N 252404###



P/N 252412###
P/N 252424###



P/N 252456###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
252401###	230 AC	50/60	0,11/0,15	0,51/0,66	2450/2600	250	72	1275	44	1	11
252403###	230-400 AC 230-400 AC	50 60	0,10 0,14	0,33-0,19 0,39-0,23	2600 2900	250	72	1275	44	1	11
252404###	230-400 AC B14 265-460 AC B14	50 60	0,25 0,29	1,7- 1 1,7- 1	1350 1620	250	64	640	55	1	16
252412###	12 DC	/	0,09	7,5	2710	280	72	1045	68	1	10
252424###	24 DC	/	0,10	4,3	2765	280	74	1045	68	1	10
252456###	Prepared for Gr.2 hydraulic motor					250			/	1	10

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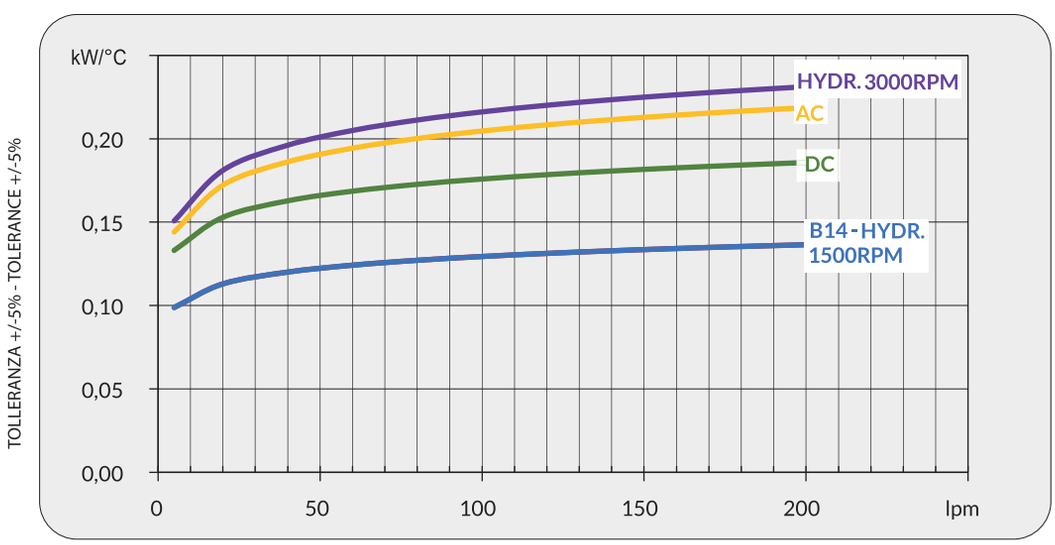
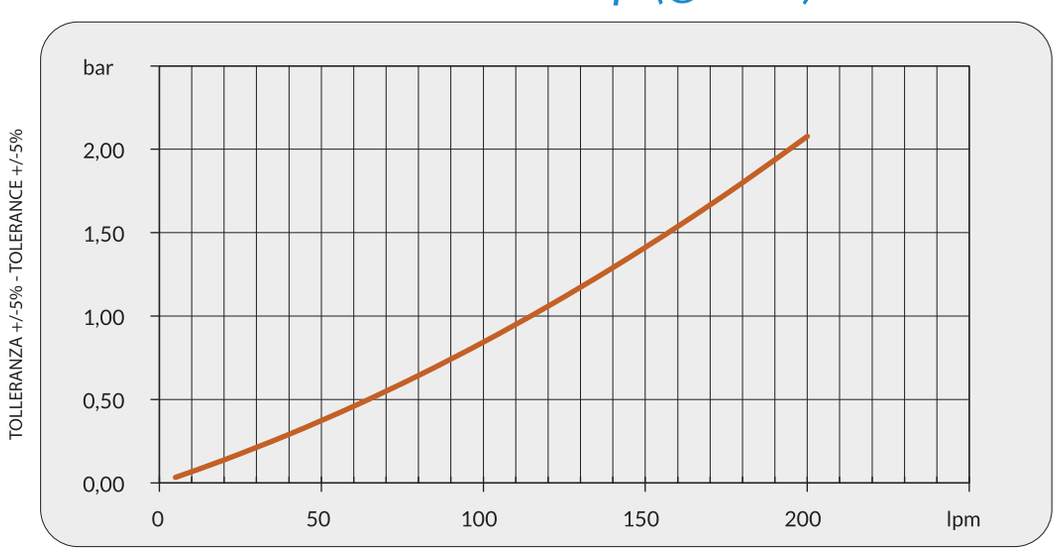
Diagramma rendimento *Performance diagram*

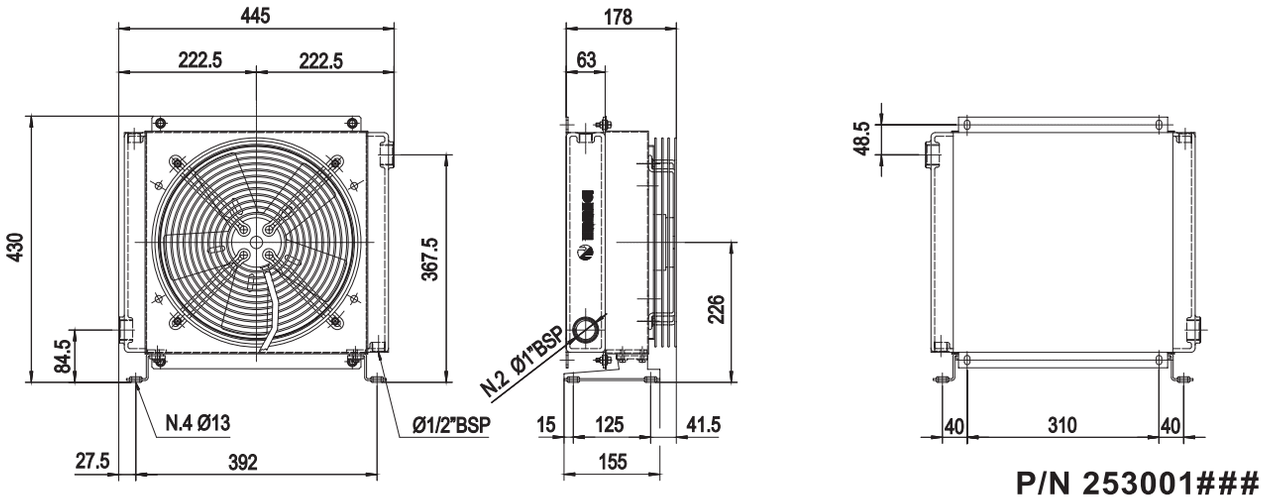


Perdite di carico *Pressure drop (@30cSt)*

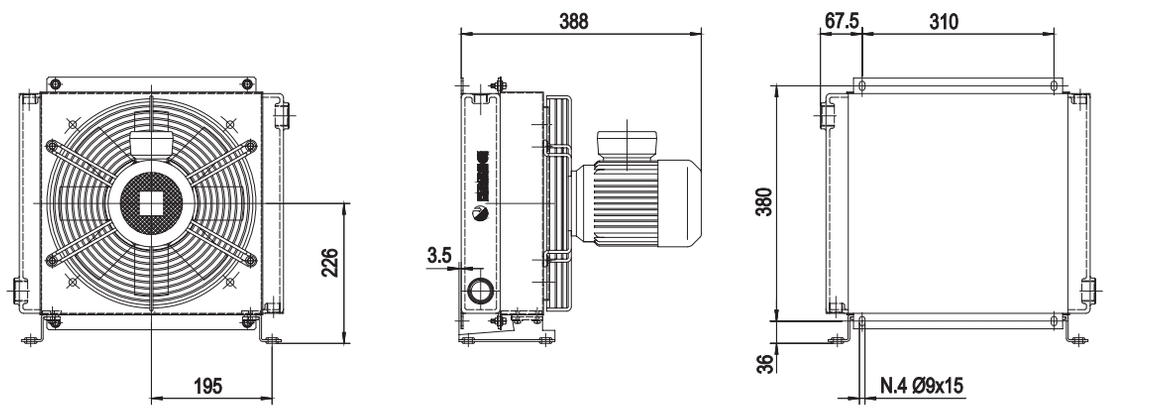


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

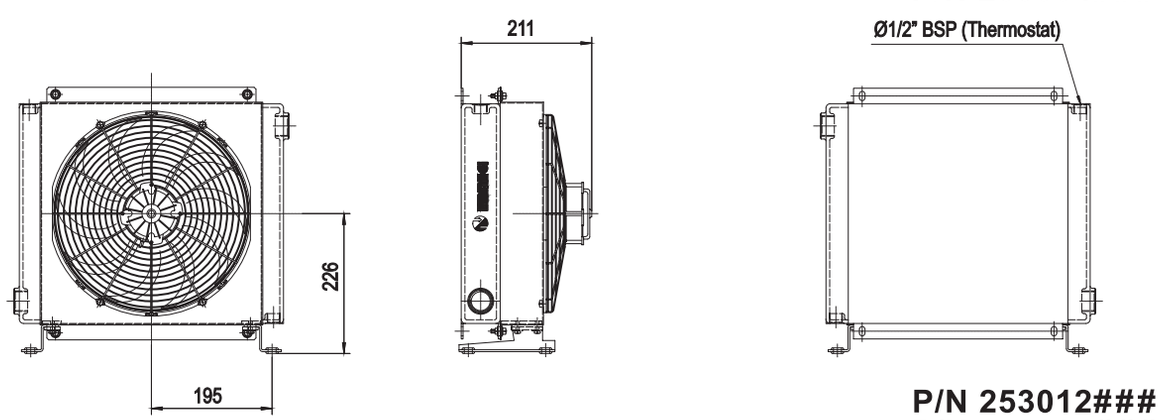
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



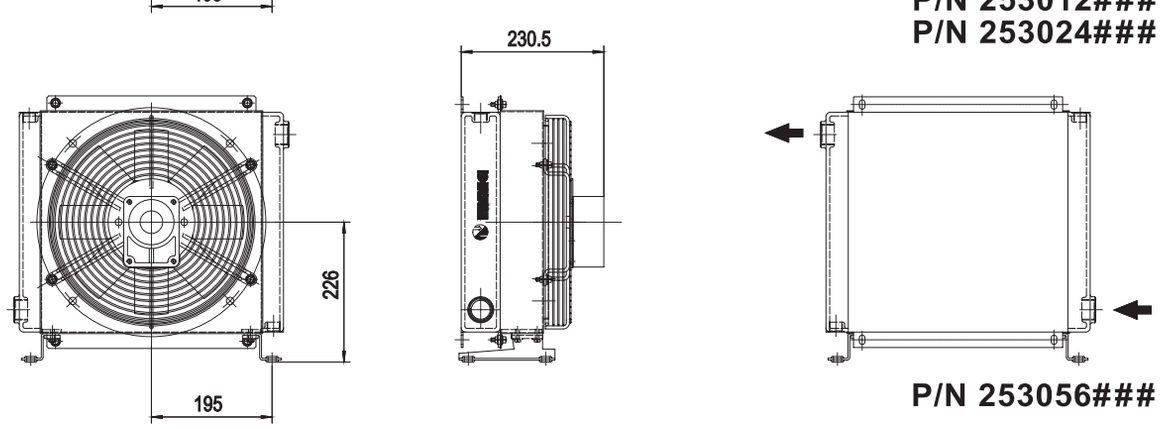
P/N 253001###
P/N 253003###



P/N 253004###



P/N 253012###
P/N 253024###



P/N 253056###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
253001###	230 AC	50/60	0,23/0,35	1,1/1,5	2700/3000	300	78	2200	44	1,6	15
253003###	230-400 AC 230-400 AC	50 60	0,21 0,30	0,62-0,36 0,84-0,48	2580 2750	300	76	2200	44	1,6	15
253004###	230-400 AC B14 265-460 AC B14	50 60	0,37 0,43	2,1- 1,1 2,1- 1,1	1370 1650	300	70	1380	55	1,6	20
253012###	12 DC	/	0,16	13,3	2660	305	80	1890	68	1,6	14
253024###	24 DC	/	0,18	7,4	2870	305	83	1890	68	1,6	14
253056###	Prepared for Gr.2 hydraulic motor					300			/	1,6	15

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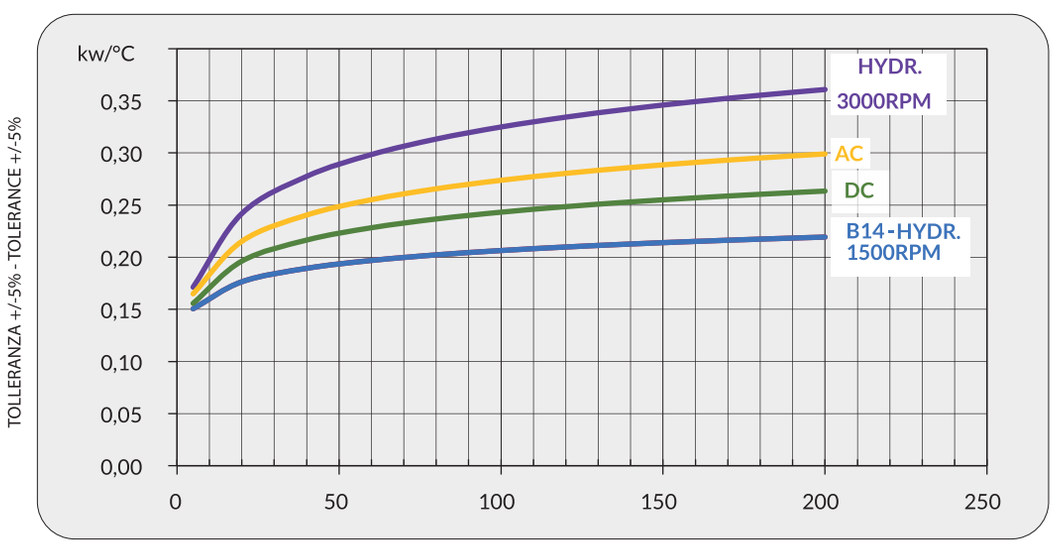
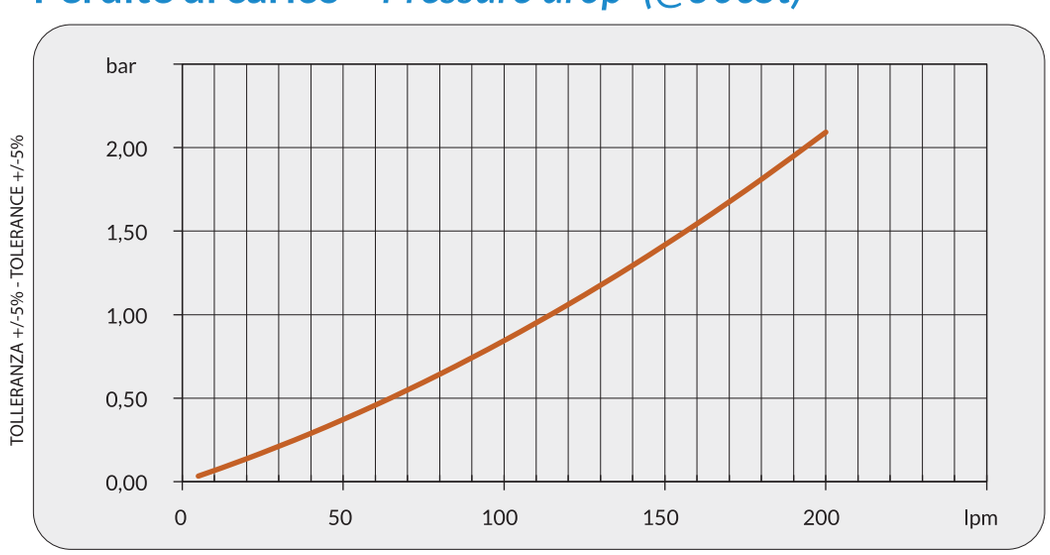
Diagramma rendimento *Performance diagram*

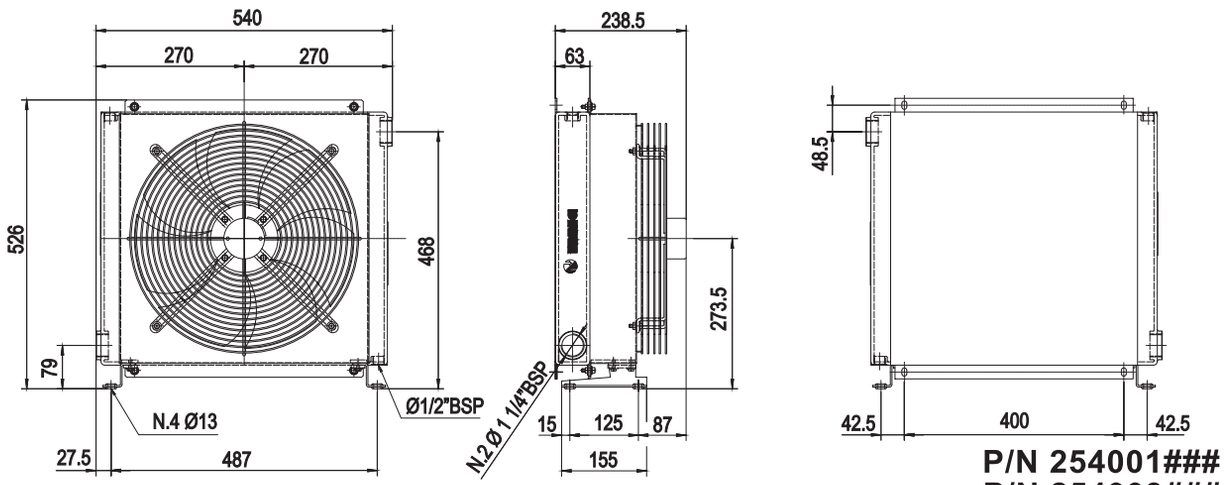


Perdite di carico *Pressure drop (@30cSt)*

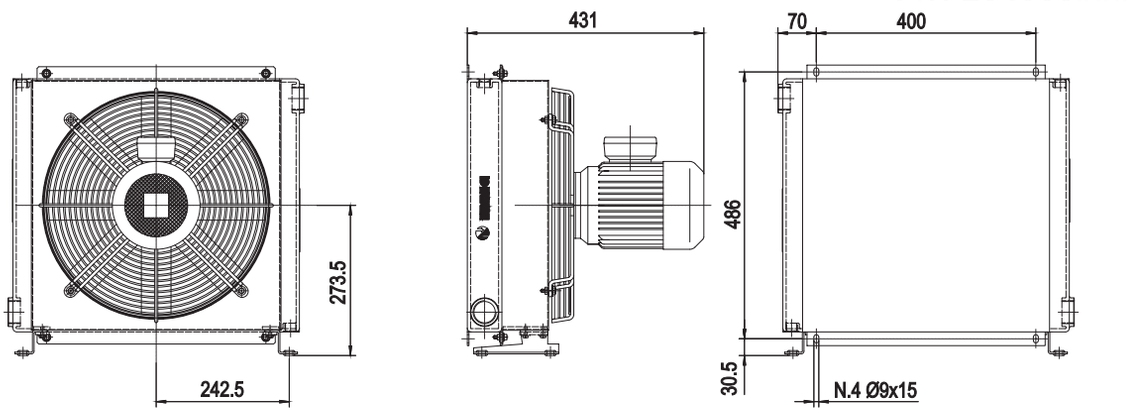


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

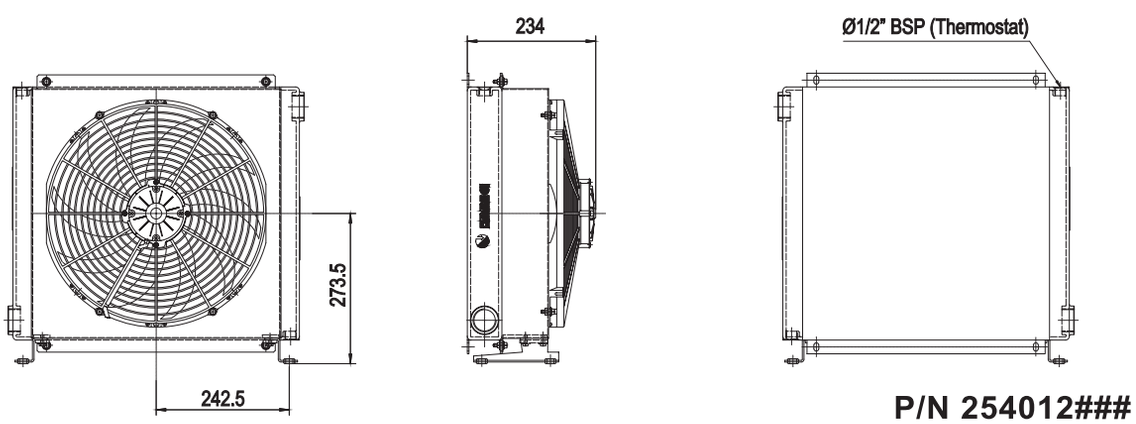
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



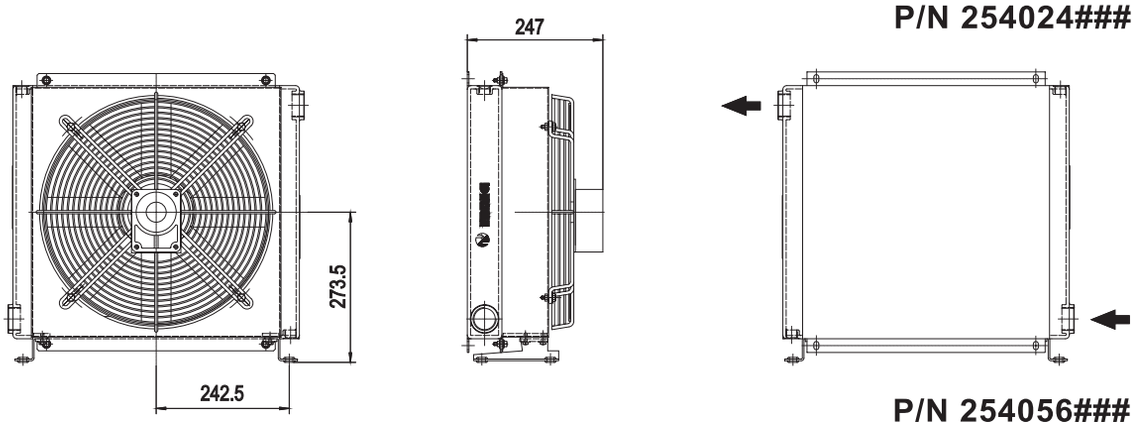
P/N 254001###
P/N 254003###



P/N 254004###



P/N 254012###
P/N 254024###



P/N 254056###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/h)	IP	It	kg
254001###	230 AC	50	0,16-0,24	0,73/1,06	1430/1700	400	71	2800	54	2,7	21
254003###	230-400 AC 230-400 AC	50 60	0,135 0,185	0,76-0,44 0,68-0,39	1450 1690	400	71	2800	54	2,7	21
254004###	230-400 AC B14 265-460 AC B14	50 60	0,55 0,63	2,9-1,7 2,9-1,7	1320 1690	395	77	3030	55	2,7	25
254012###	12 DC	/	0,22	20,3	2310	385	76	3030	68	2,7	20
254024###	24 DC	/	0,23	9,9	2380	385	79	2950	68	2,7	20
254056###	Prepared for Gr.2 hydraulic motor					400			/	2,7	19

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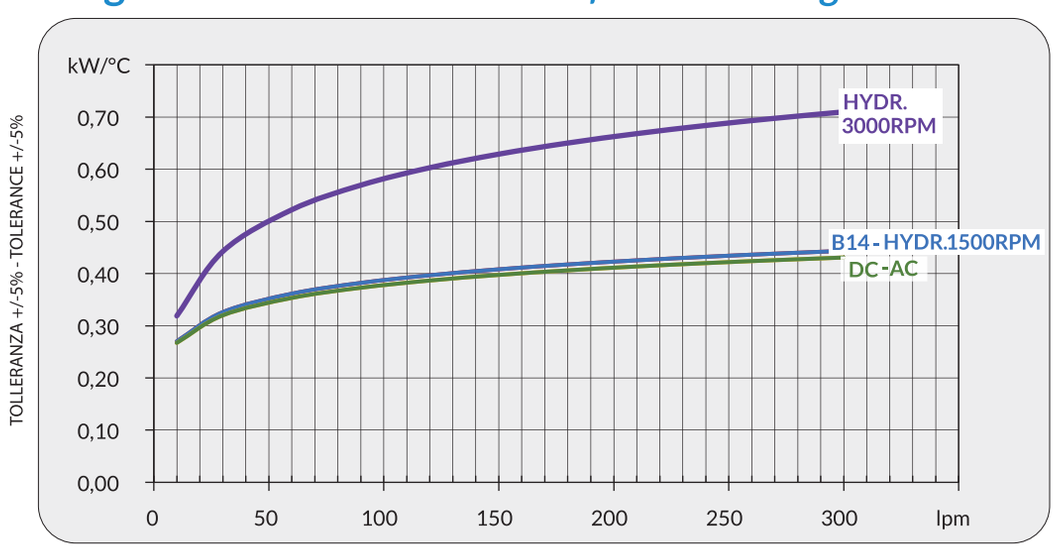
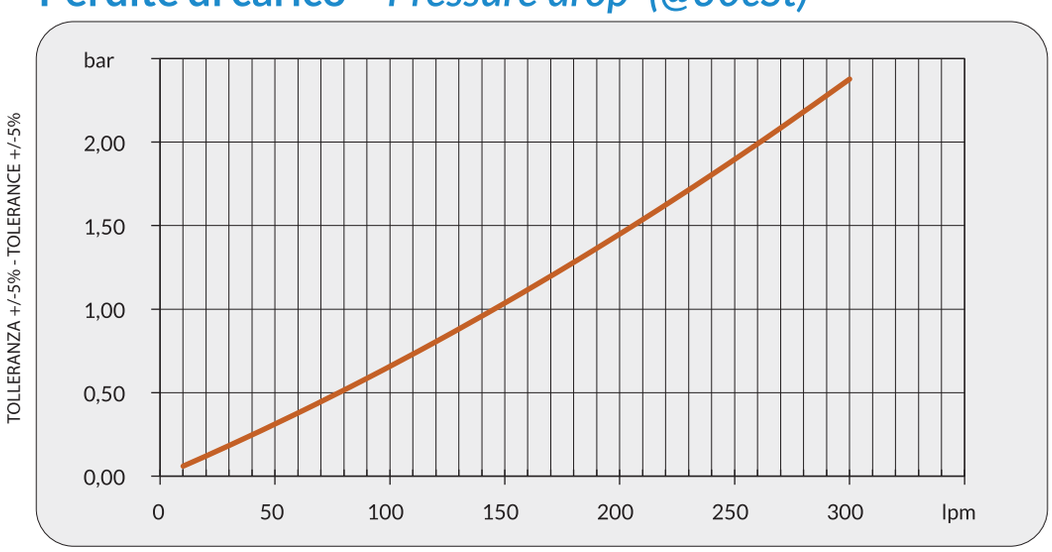
Diagramma rendimento *Performance diagram*

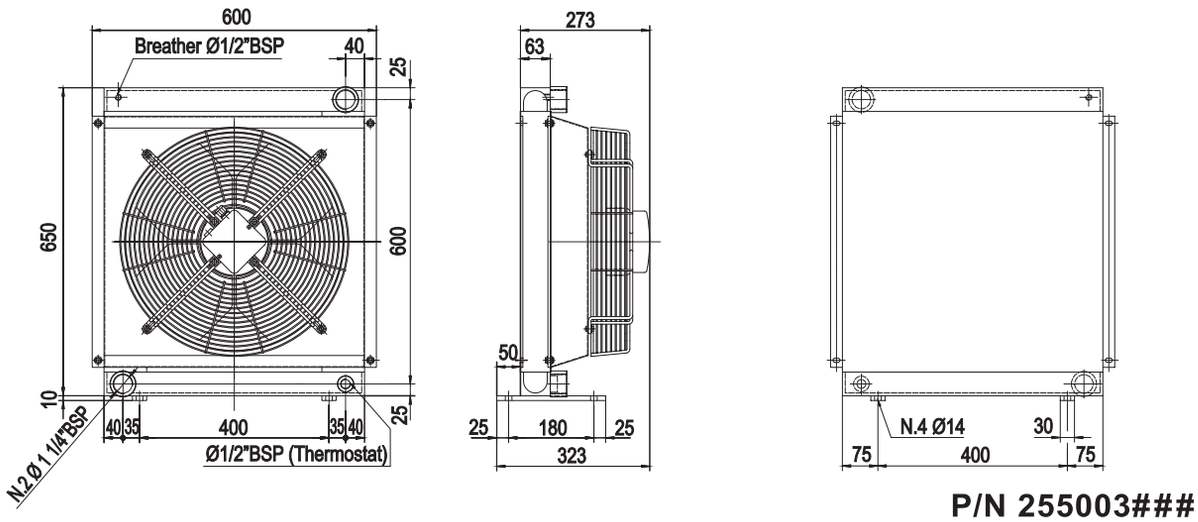


Perdite di carico *Pressure drop (@30cSt)*

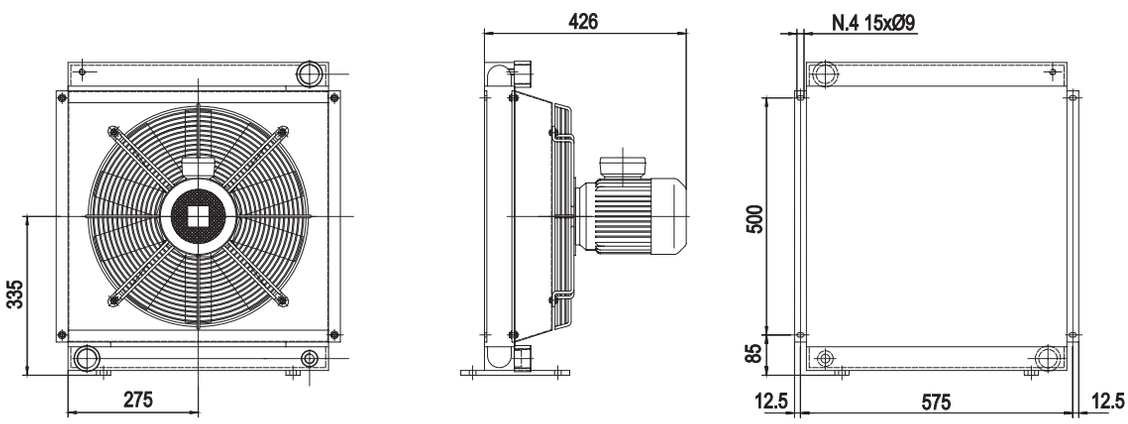


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

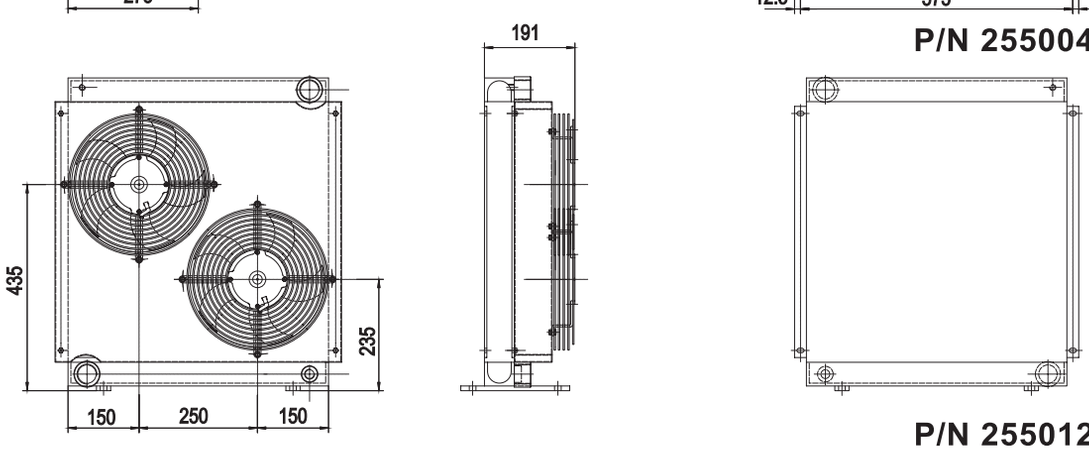
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



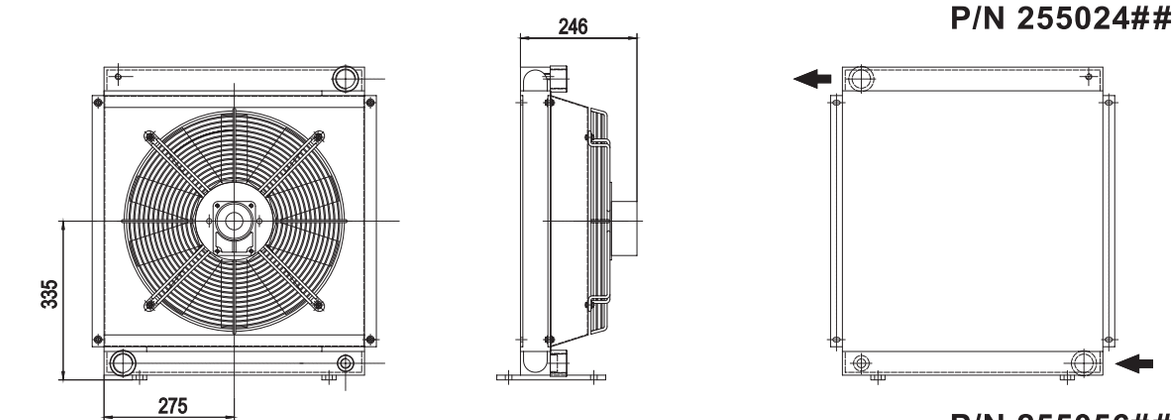
P/N 255003###



P/N 255004###



P/N 255012###
P/N 255024###



P/N 255056###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
255003###	230-400 AC 230-400 AC	50 60	0,52 0,66	1,9 - 1,1 2,0 - 1,2	1450 1690	450	76	5100	54	5	27
255004###	230-400 AC B14 265-460 AC B14	50 60	0,75 0,86	3,0-1,7 3,0-1,7	1440 1750	445	79	4500	55	5	30
255012###	12 DC	/	0,13	11,0	2340 2600	280	76	1785	68	5	24
255024###	24 DC	/	0,15	6,2	2600	280	79	1785	68	5	24
255056###	Prepared for Gr.2 hydraulic motor					445			/	5	23

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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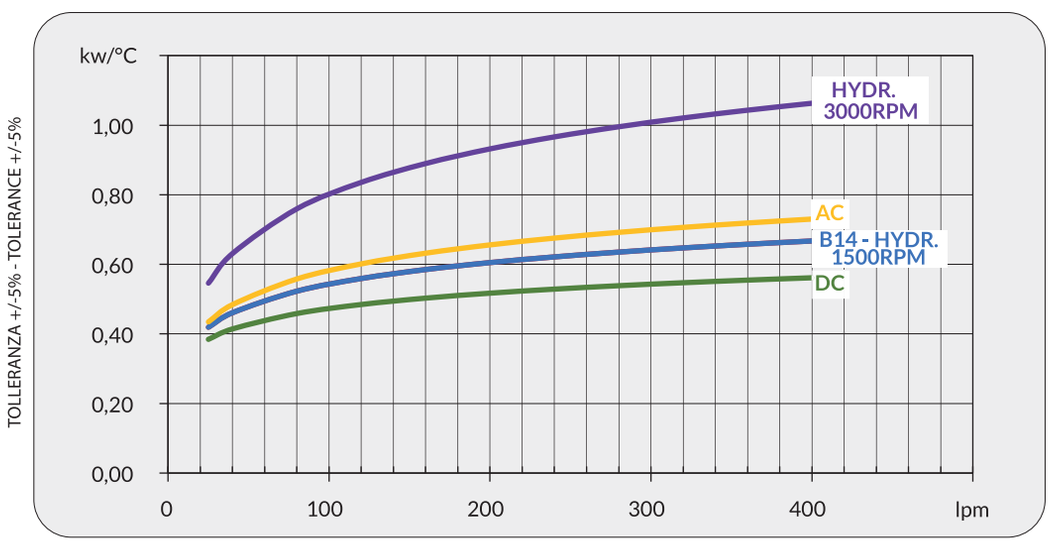
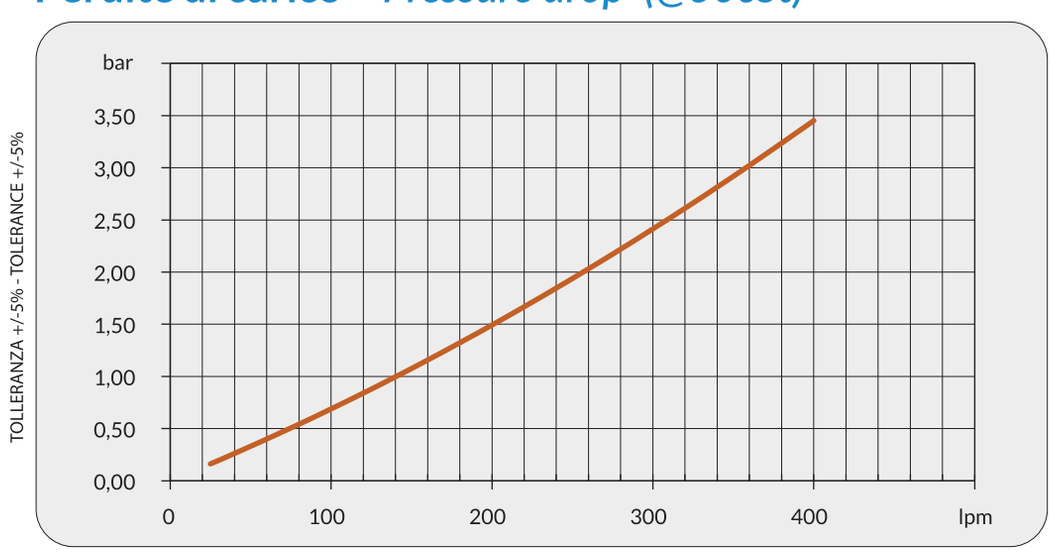
Diagramma rendimento *Performance diagram*

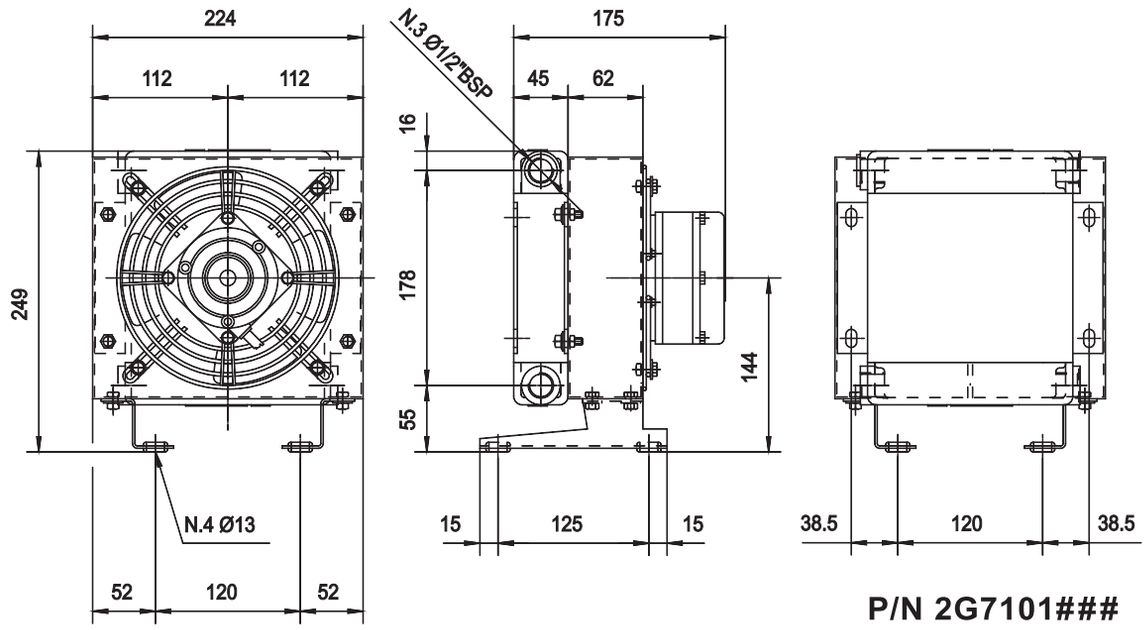


Perdite di carico *Pressure drop (@30cSt)*

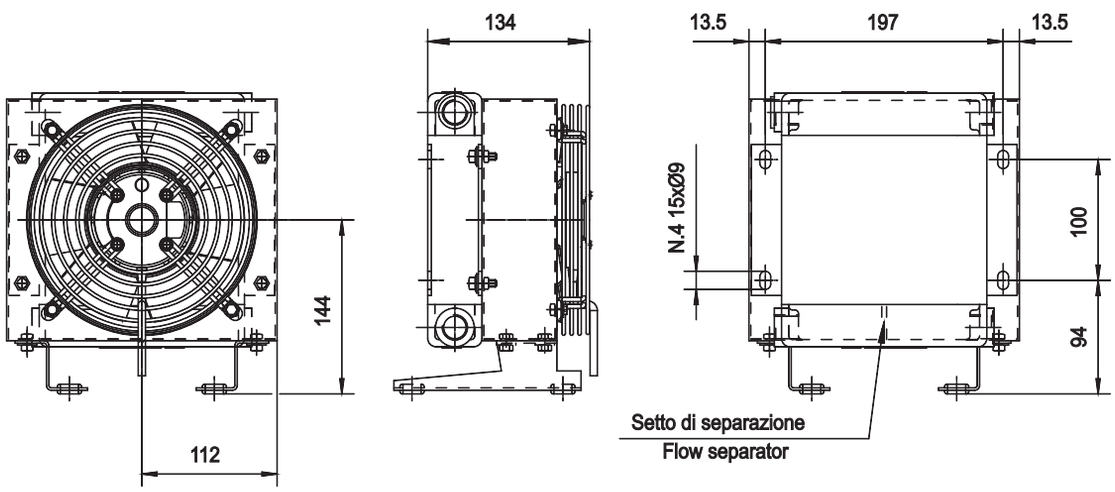


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

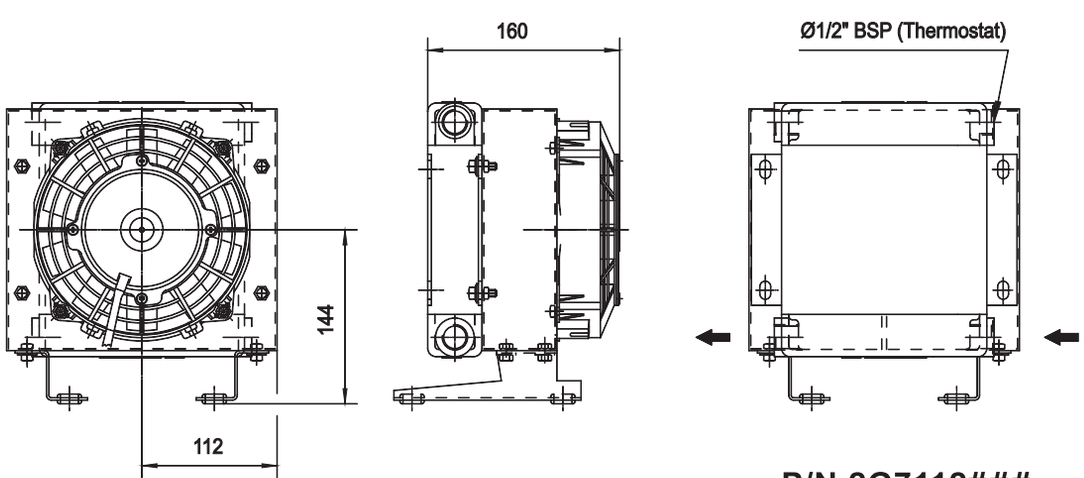
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 2G7101###



P/N 2G7103###



P/N 2G7112###
P/N 2G7124###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
2G7101###	230AC	50/60	0,010/0,047	0,21	2500	170	67	345	54	0,3	6
2G7103###	230-400 AC 230-400 AC	50 60	0,045 0,043	0,23-0,13 0,16-0,09	2750 3100	170	63	345	54	0,3	6
2G7112###	12 DC	/	0,06	5,5	3860	167	75	410	68	0,3	5
2G7124###	24 DC	/	0,06	2,4	4045	167	75	410	68	0,3	5

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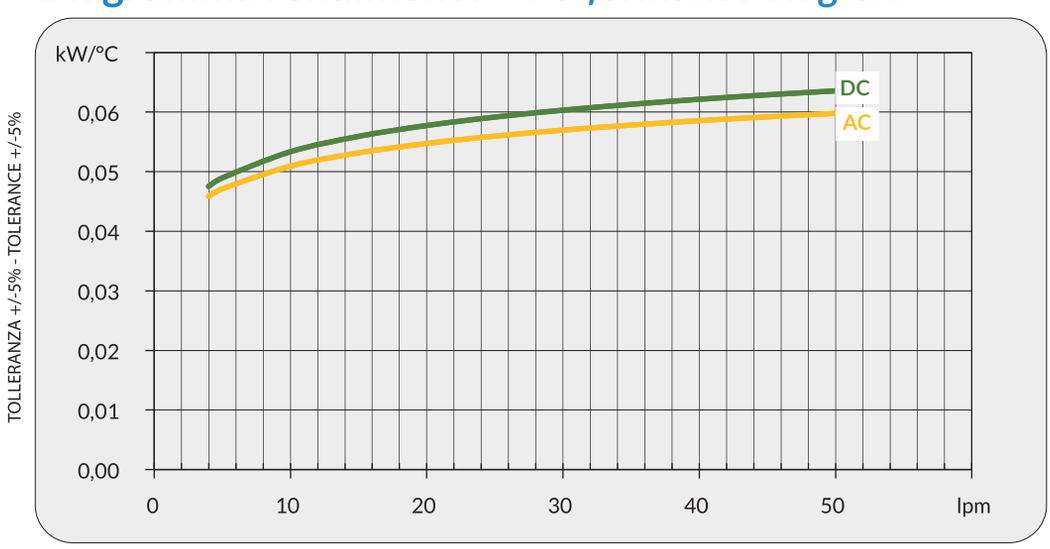
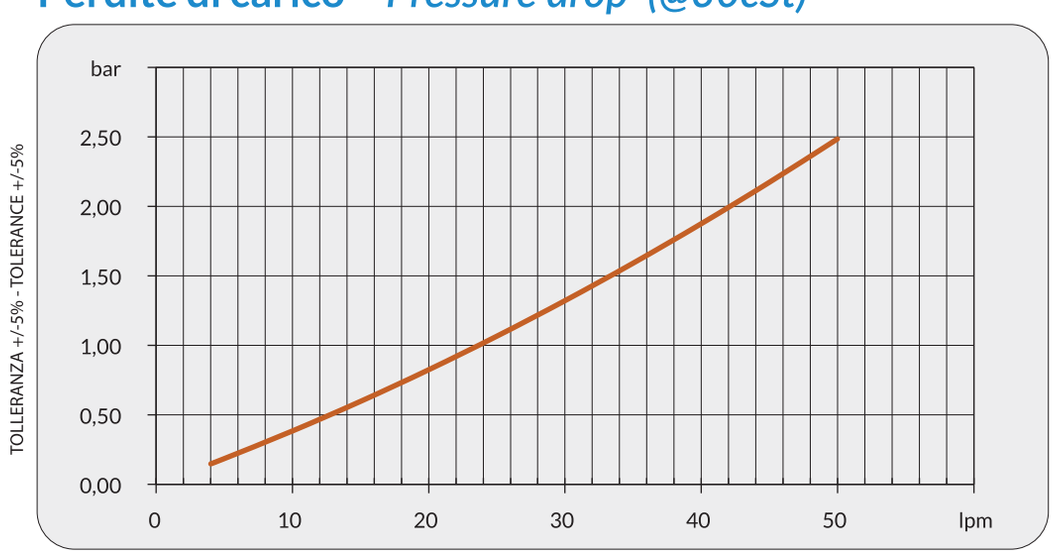
Diagramma rendimento *Performance diagram*

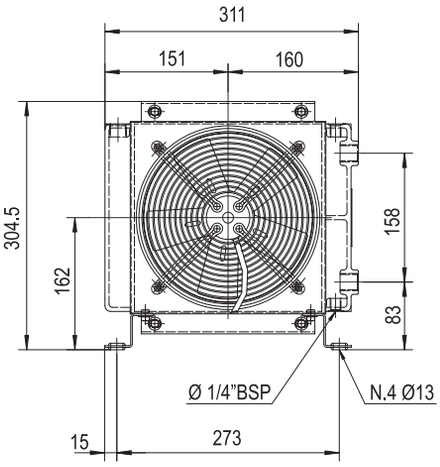


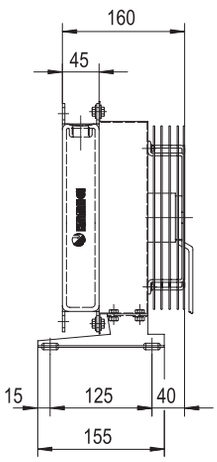
Perdite di carico *Pressure drop (@30cSt)*

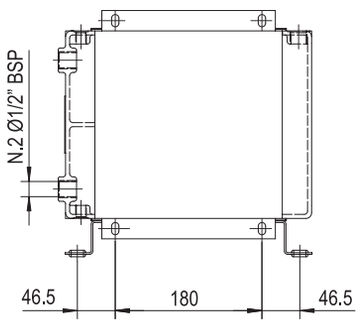


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

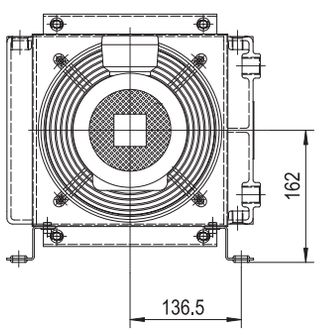
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

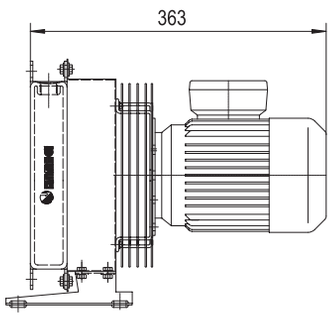


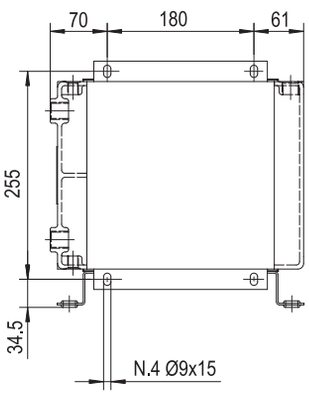




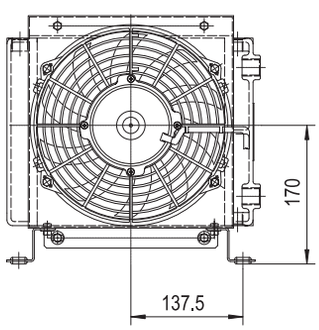
P/N 251601###
P/N 251603###

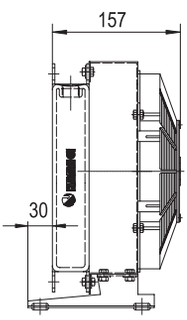


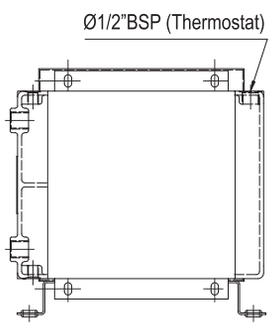




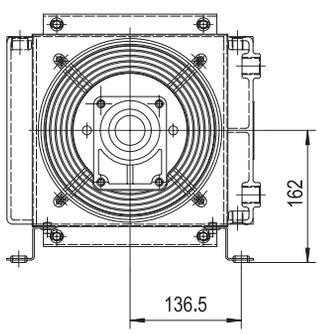
P/N 251604###

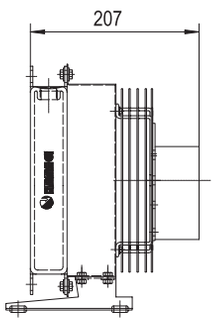


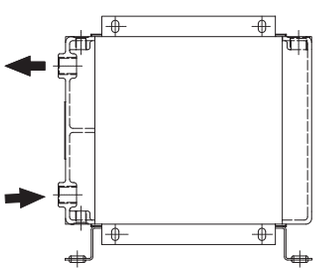




P/N 251612###
P/N 251624###







P/N 251656###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/h)	IP	It	kg
251601###	230 AC	50/60	0,05/0,06	0,24/0,28	2740/3120	200	68	740	44	0,5	7
251603###	230-400 AC 230-400 AC	50 60	0,07 0,08	0,29-0,17 0,23-0,13	2500 2650	200	69	740	44	0,5	7
251604###	230-400 AC B14 265-460 AC B14	50 60	0,25 0,29	1,7- 1 1,7- 1	1350 1620	200	61	340	55	0,5	10
251612###	12 DC	/	0,08	6,7	2770	225	72	860	68	0,5	6,5
251624###	24 DC	/	0,09	4,1	2900	225	73	860	68	0,5	6,5
251656###	Prepared for Gr.2 hydraulic motor					200			/	0,5	6

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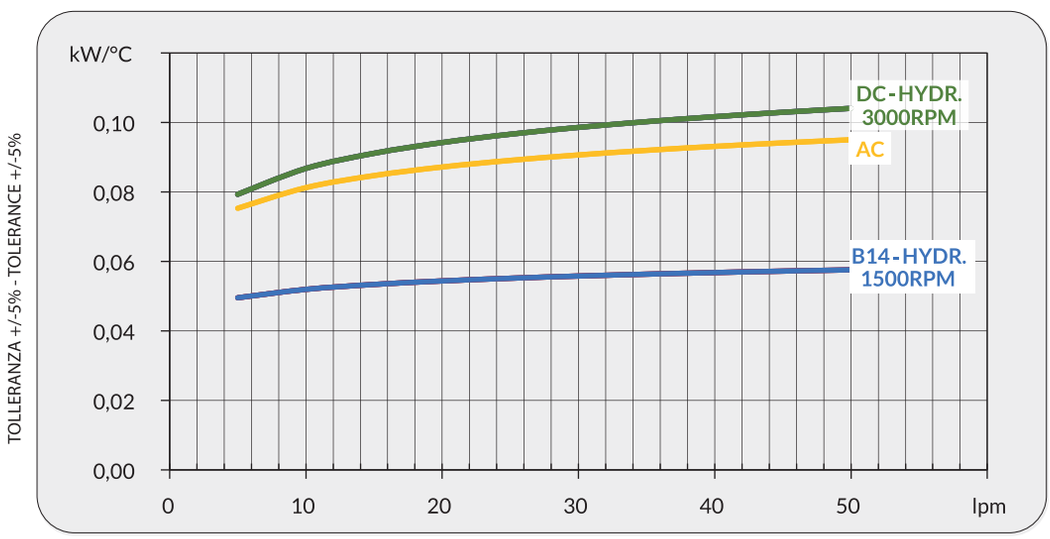
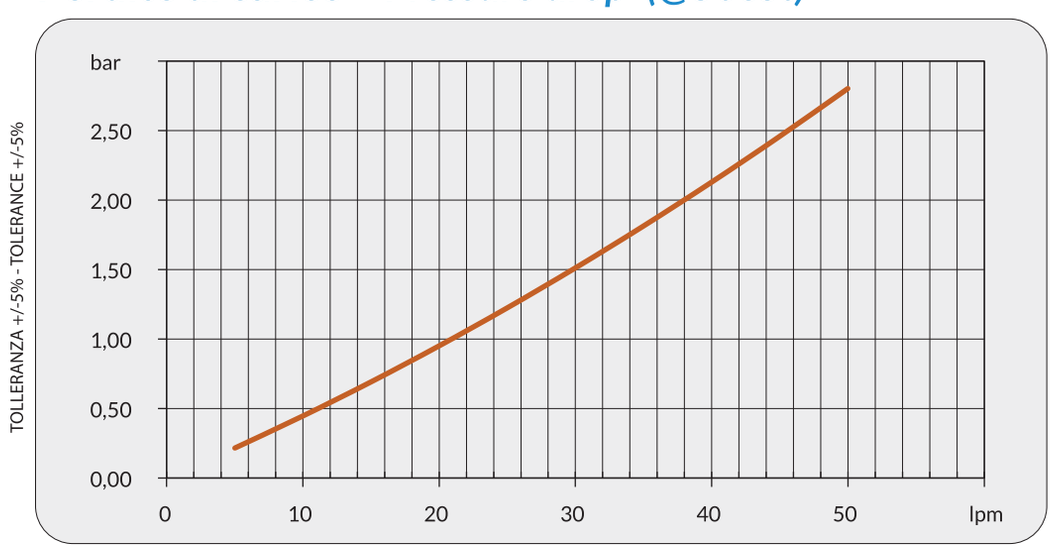
Diagramma rendimento *Performance diagram*

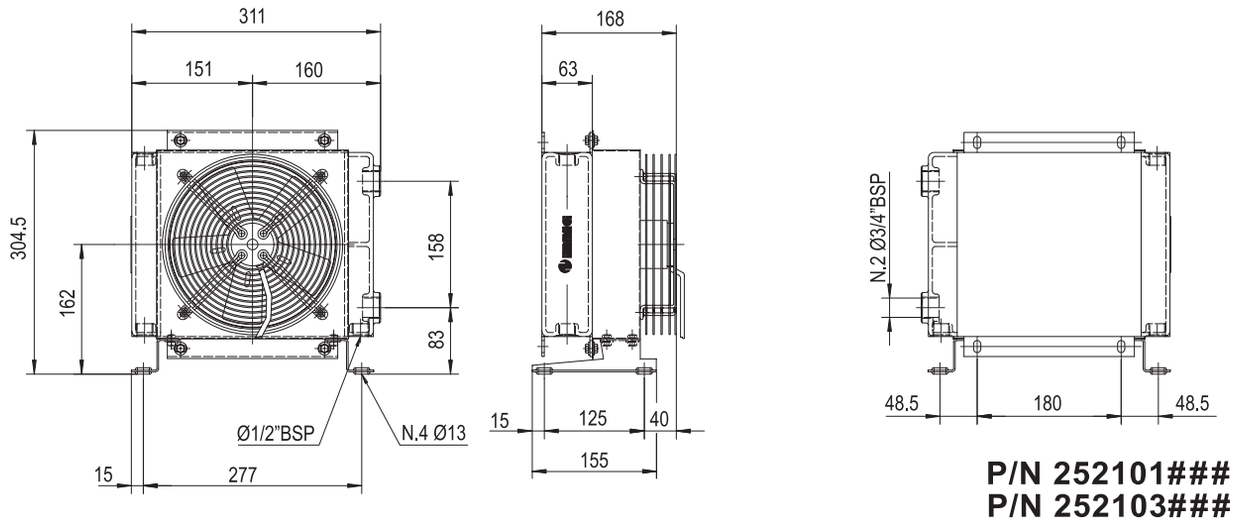


Perdite di carico *Pressure drop (@30cSt)*

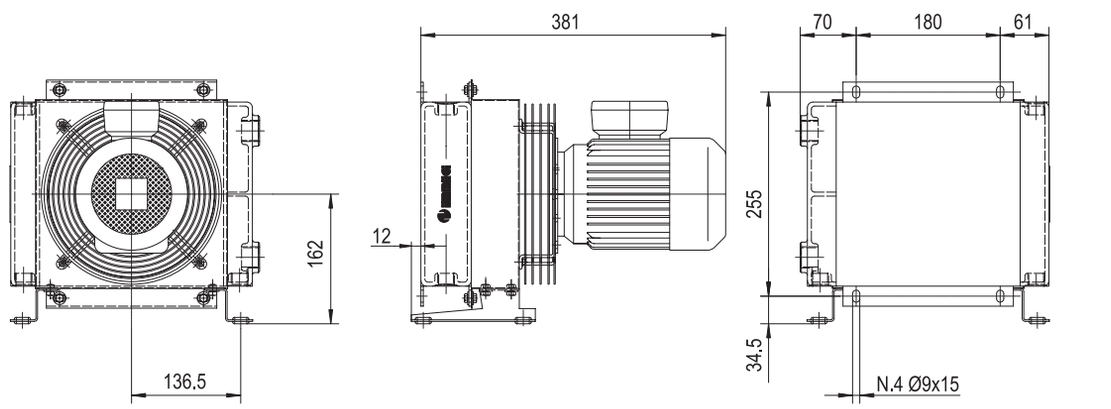


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

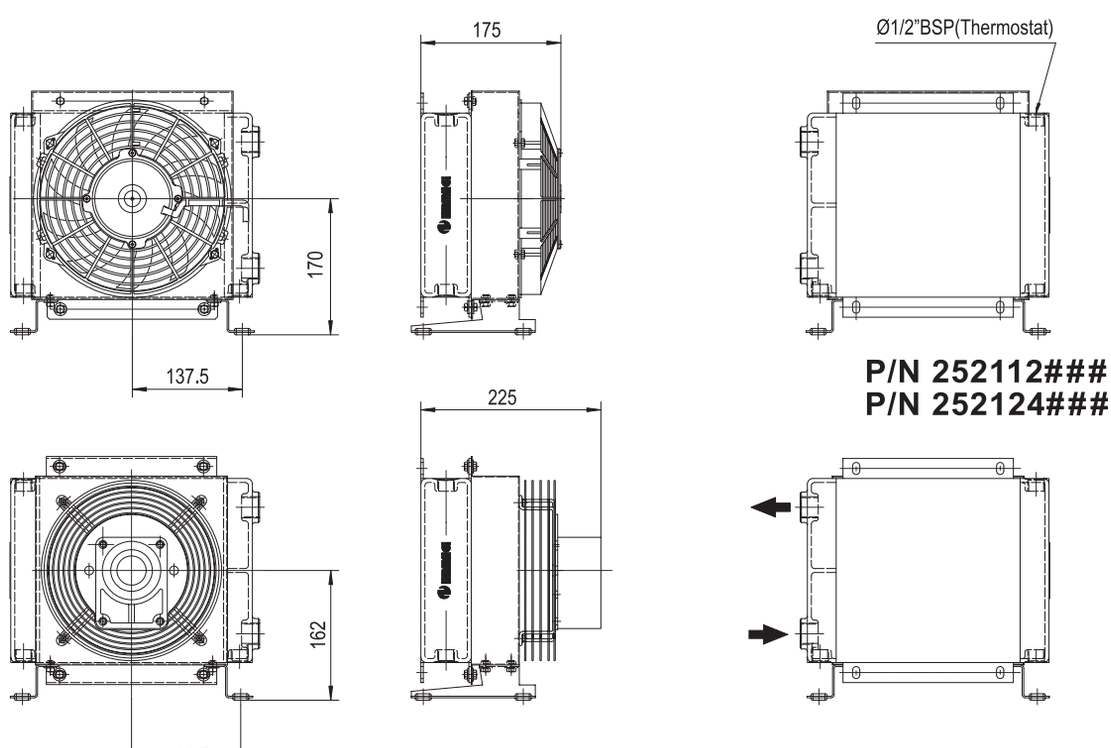
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 252101###
P/N 252103###



P/N 252104###



P/N 252112###
P/N 252124###

P/N 252156###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
252101###	230 AC	50/60	0,050/0,06	0,24/0,28	2740/3120	200	68	670	44	0,7	8
252103###	230-400 AC 230-400 AC	50 60	0,07 0,08	0,29-0,17 0,23-0,13	2500 2650	200	68	670	44	0,7	8
252104###	230-400 AC B14 265-460 AC B14	50 60	0,25 0,29	1,7- 1 1,7- 1	1350 1620	200	64	305	55	0,7	11
252112###	12 DC	/	0,08	6,4	2770	225	72	750	68	0,7	7
252124###	24 DC	/	0,09	3,9	2900	225	72	750	68	0,7	7
252156###	Prepared for Gr.2 hydraulic motor					200			/	0,7	7

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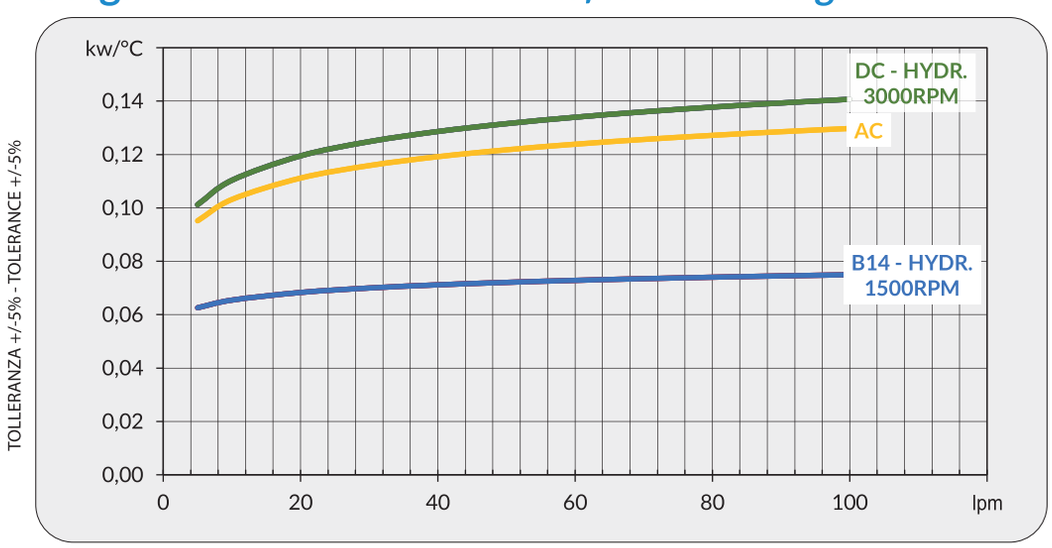
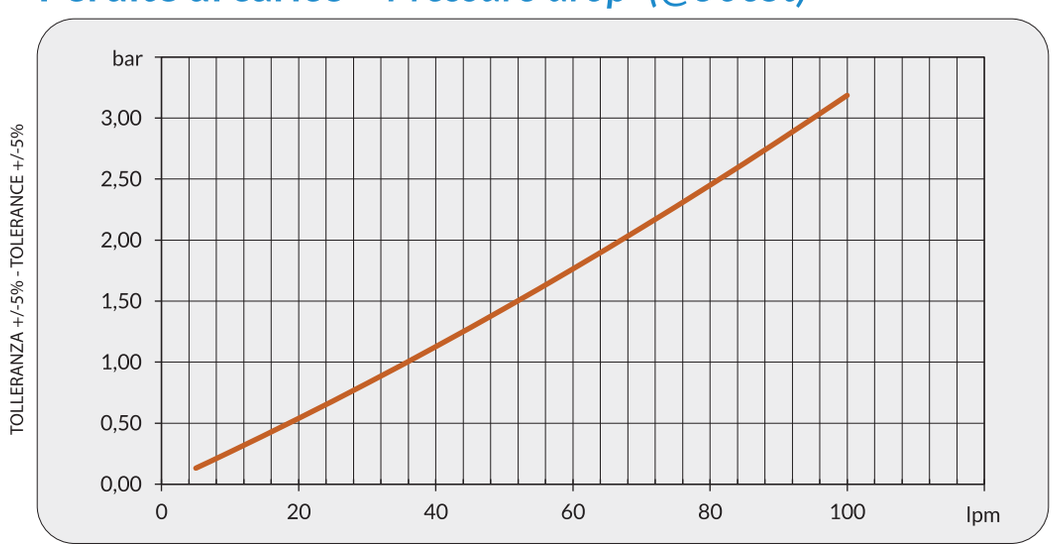
Diagramma rendimento *Performance diagram*

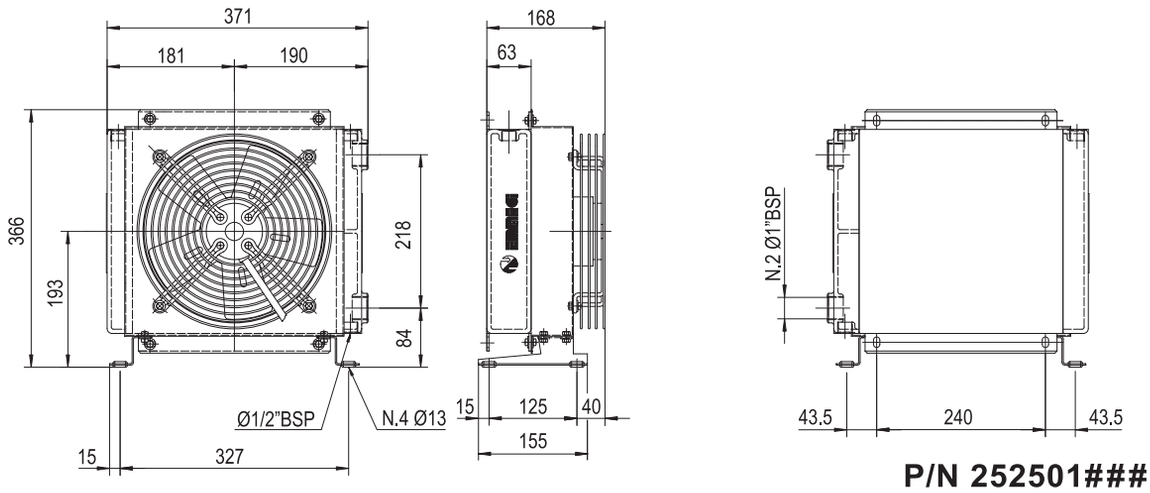


Perdite di carico *Pressure drop (@30cSt)*

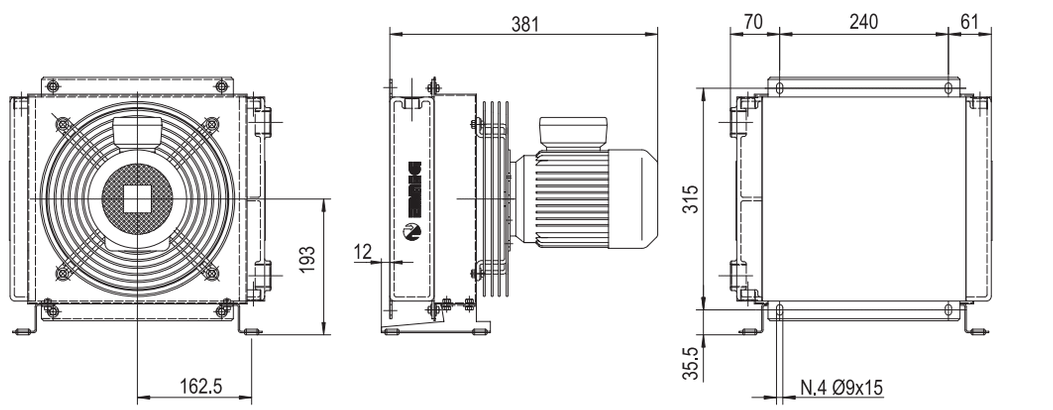


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

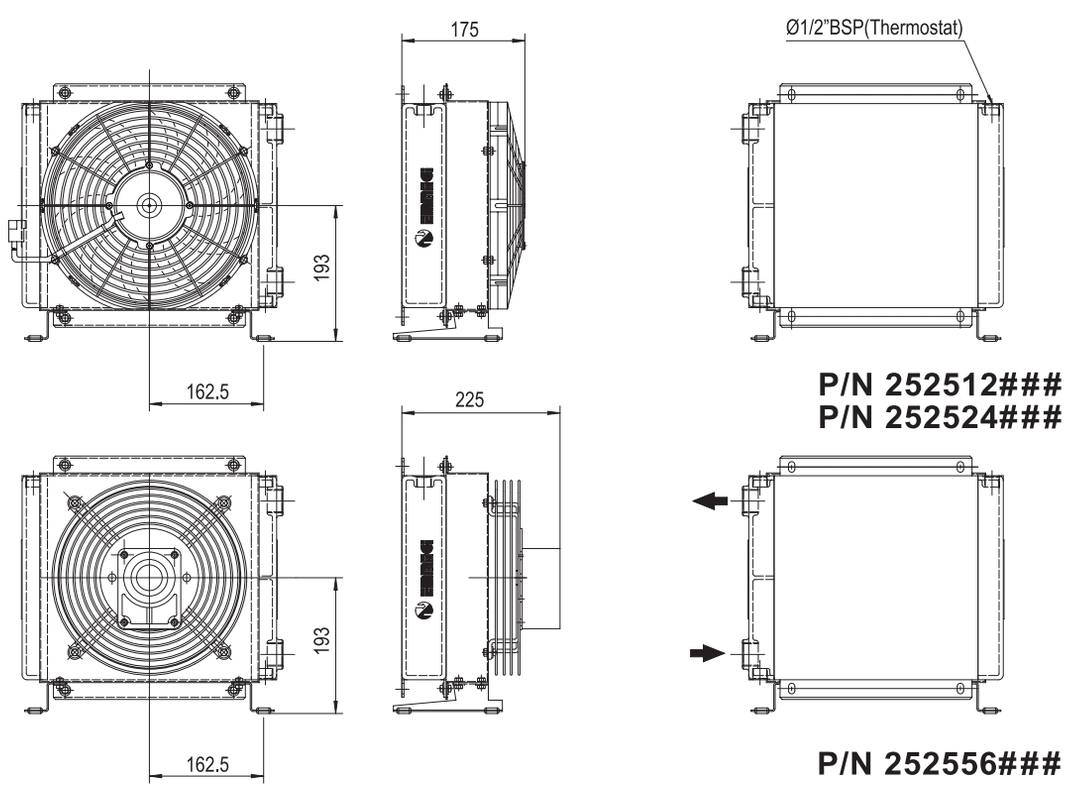
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 252501###
P/N 252503###



P/N 252504###



P/N 252512###
P/N 252524###

P/N 252556###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
252501###	230 AC	50/60	0,11/0,15	0,51/0,66	2450/2600	250	72	1275	44	1	11
252503###	230-400 AC 230-400 AC	50 60	0,10 0,14	0,33-0,17 0,23-0,13	2600 2900	250	72	1275	44	1	11
252504###	230-400 AC B14 265-460 AC B14	50 60	0,25 0,29	1,7- 1 1,7- 1	1350 1620	250	64	1000	55	1	16
252512###	12 DC	/	0,09	7,5	2710	280	72	1045	68	1	10
252524###	24 DC	/	0,10	4,3	2765	280	74	1045	68	1	10
252556###	Prepared for Gr.2 hydraulic motor					250			/	1	10

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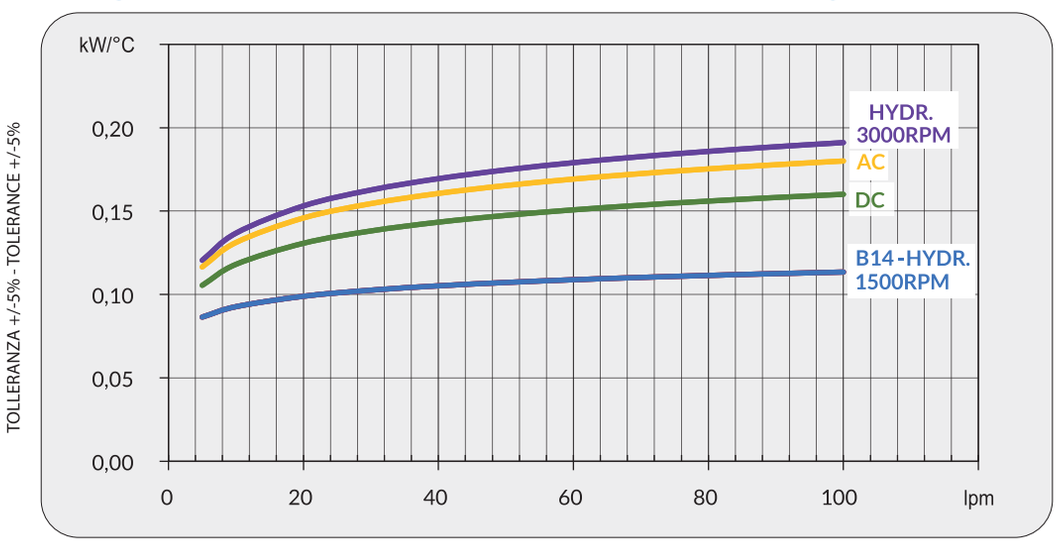
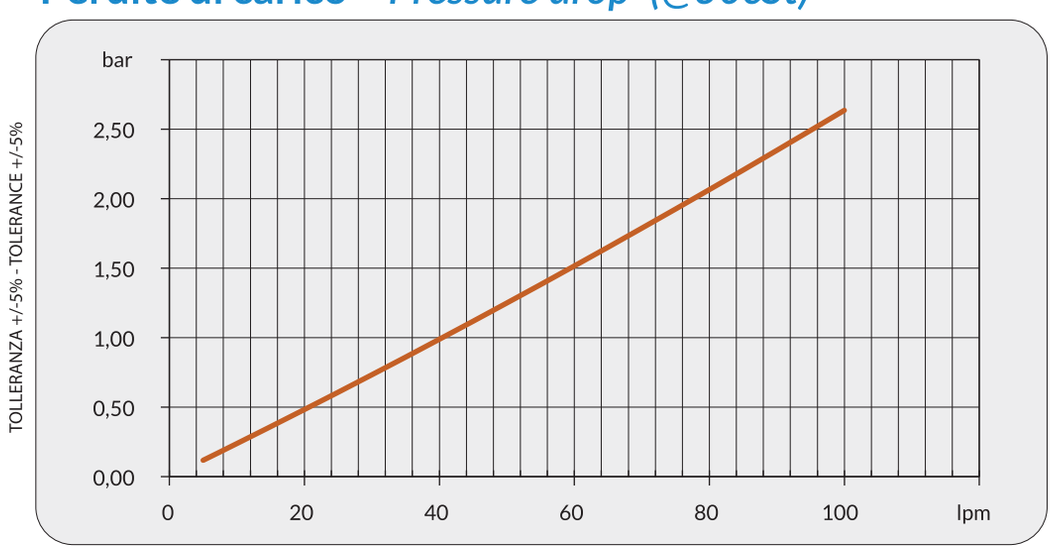
Diagramma rendimento *Performance diagram*

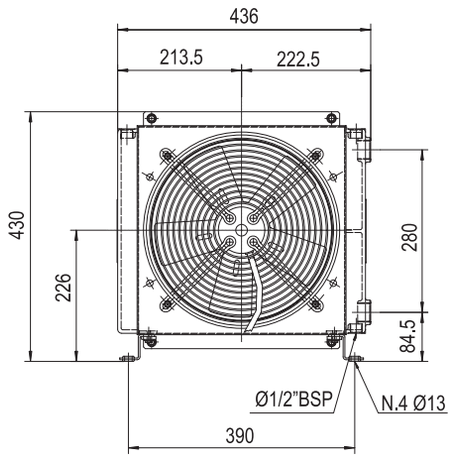


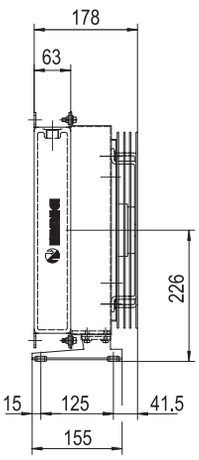
Perdite di carico *Pressure drop (@30cSt)*

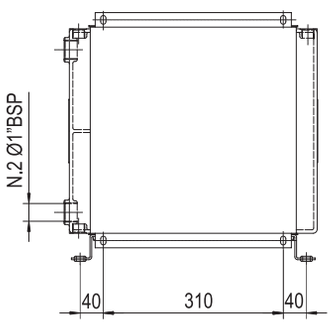


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

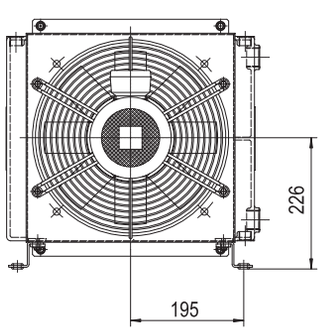
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

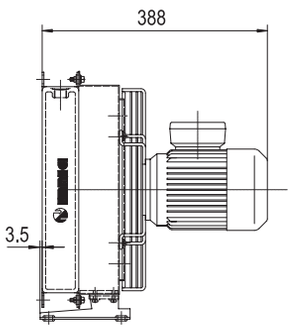


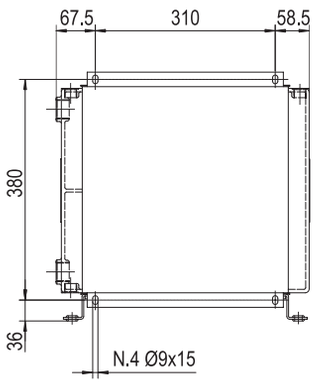




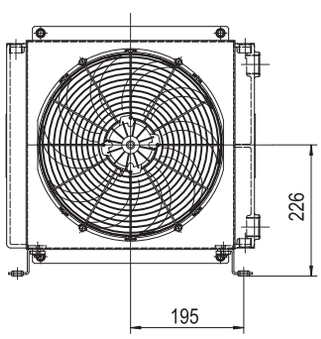
P/N 253101###
P/N 253103###

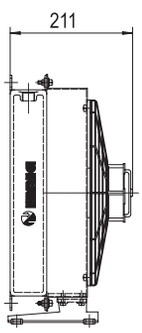


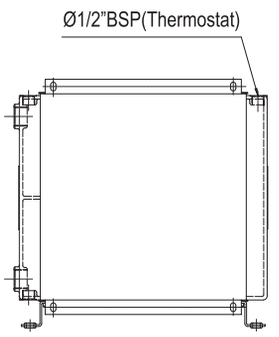




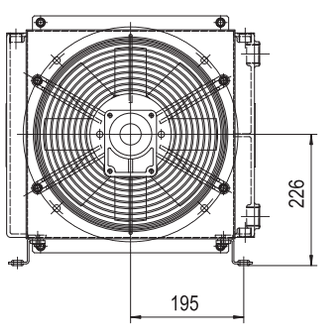
P/N 253104###

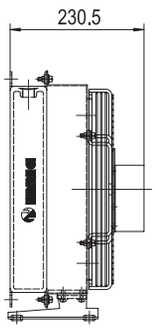


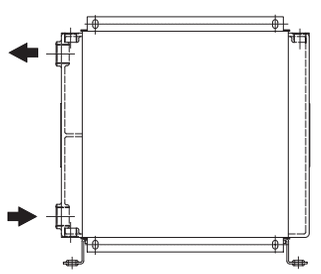




P/N 253112###
P/N 253124###







P/N 253156###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/h)	IP	lt	kg
253101###	230 AC	50/60	0,23/0,35	1,1/1,5	2700/3000	300	78	2220	44	1,6	15
253103###	230-400 AC 230-400 AC	50 60	0,21 0,30	0,62-0,36 0,84-0,48	2580 2750	300	76	2200	44	1,6	15
253104###	230-400 AC B14 265-460 AC B14	50 60	0,37 0,43	2,1- 1,1 2,1- 1,1	1370 1650	300	70	1350	55	1,6	20
253112###	12 DC	/	0,16	13,3	2660	305	80	1990	68	1,6	14
253124###	24 DC	/	0,18	7,4	2870	305	83	1990	68	1,6	14
253156###	Prepared for Gr.2 hydraulic motor					300			/	1,6	15

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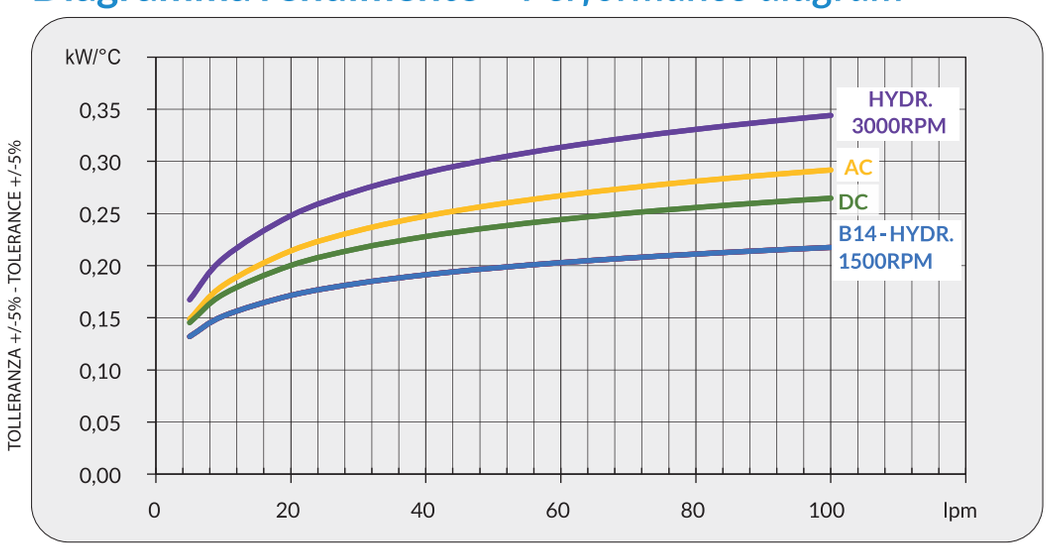
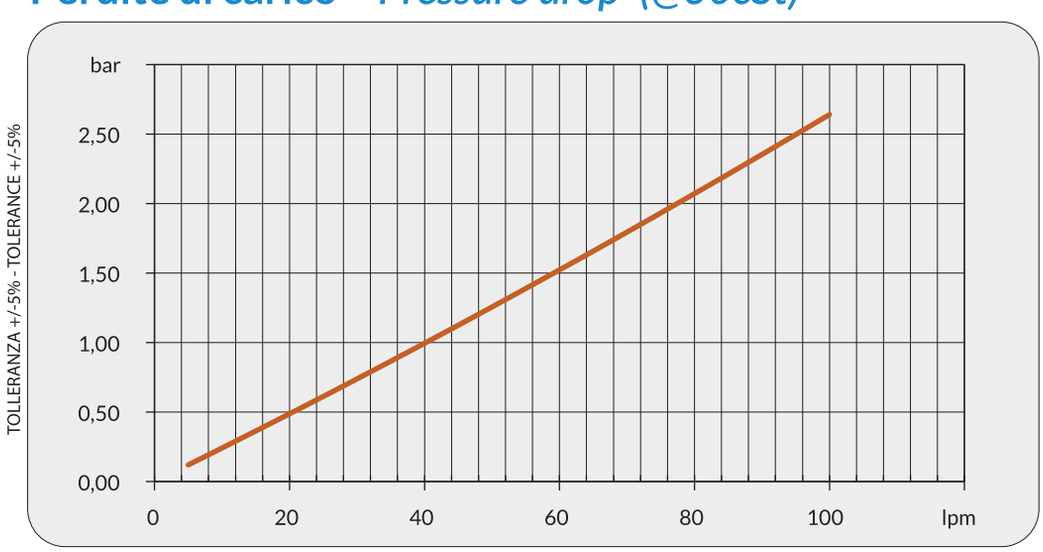
Diagramma rendimento *Performance diagram*

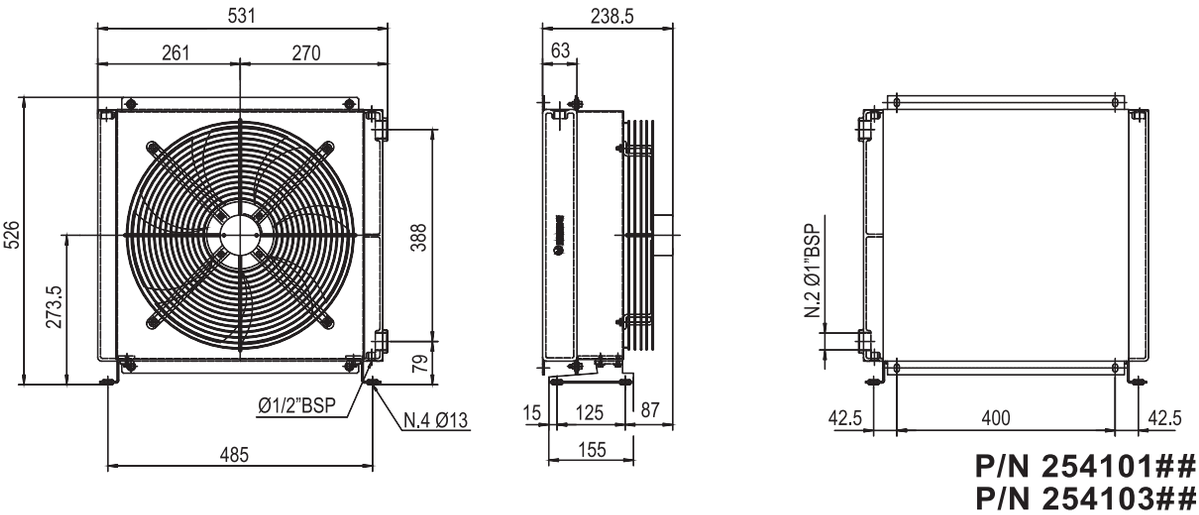


Perdite di carico *Pressure drop (@30cSt)*

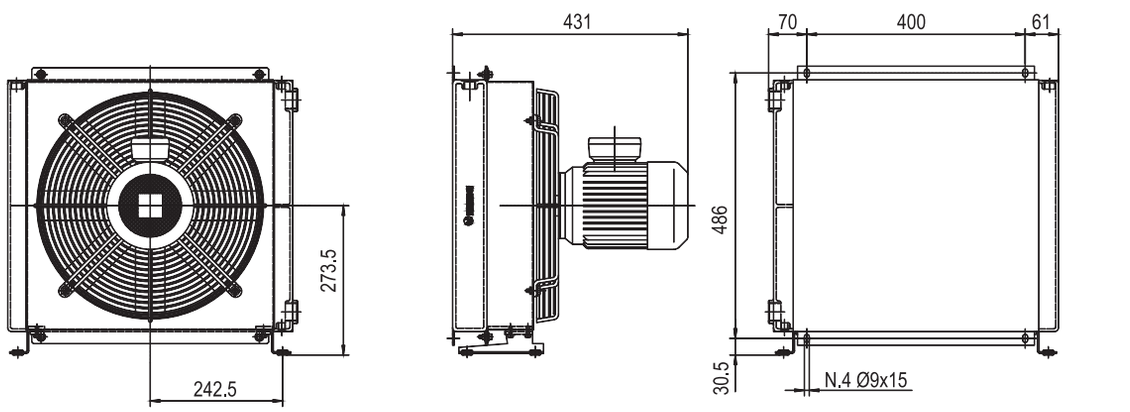


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

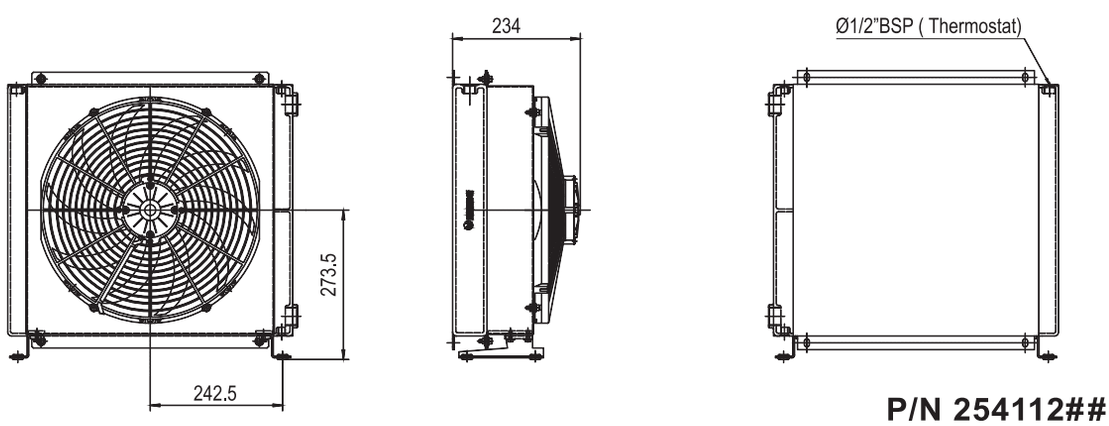
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



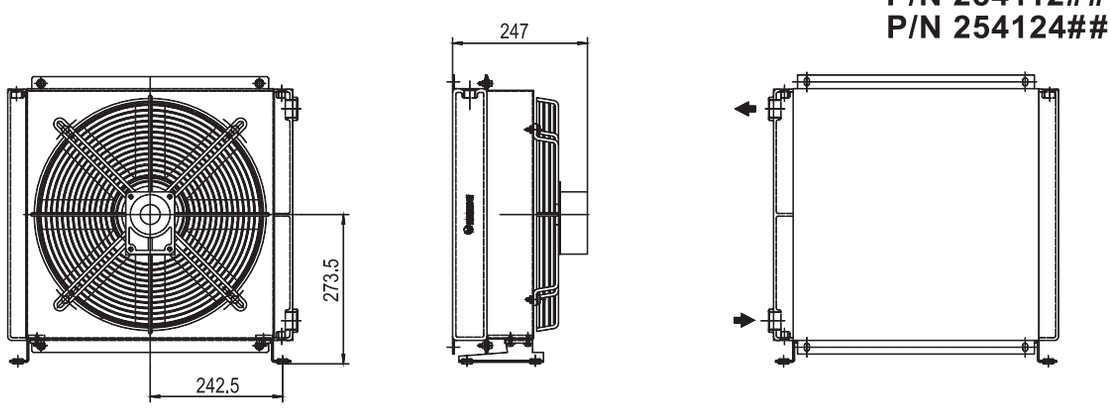
P/N 254101###
P/N 254103###



P/N 254104###



P/N 254112###
P/N 254124###



P/N 254156###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
254101###	230 AC	50/60	0,16/0,24	0,73-1,06	1430/1700	400	71	2800	54	2,7	21
254103###	230-400 AC 230-400 AC	50 60	0,135 0,185	0,76-0,44 0,68-0,39	1450 1690	400	71	2800	54	2,7	21
254104###	230-400 B14 265-460 B14	50 60	0,55 0,63	2,9- 1,7 2,9- 1,7	1320 1690	395	77	3030	55	2,7	25
254112###	12 DC	/	0,22	20,3	2310	385	76	3030	68	2,7	20
254124###	24 DC	/	0,23	9,9	2380	385	79	2950	68	2,7	20
254156###	Prepared for Gr.2 hydraulic motor					400			/	2,7	19

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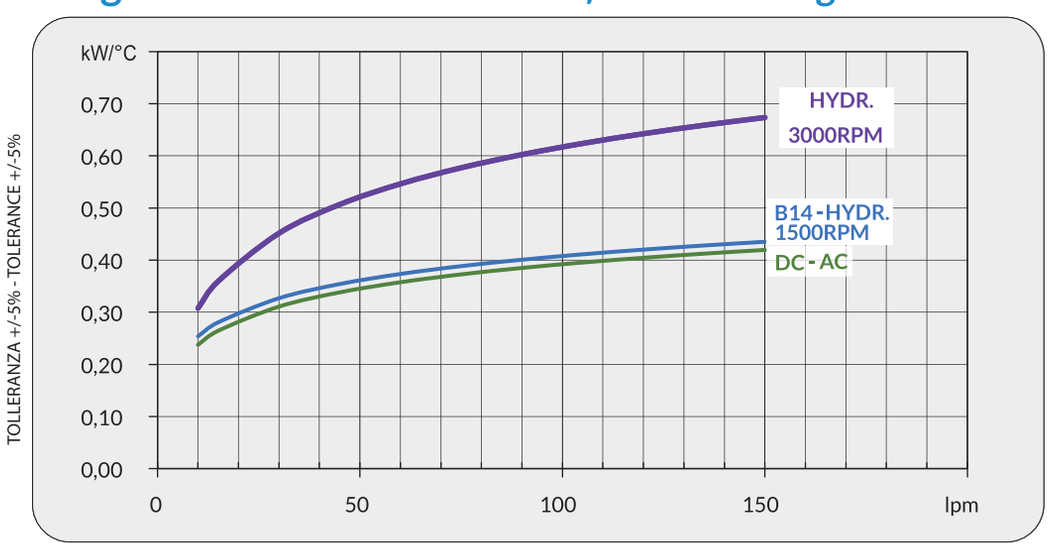
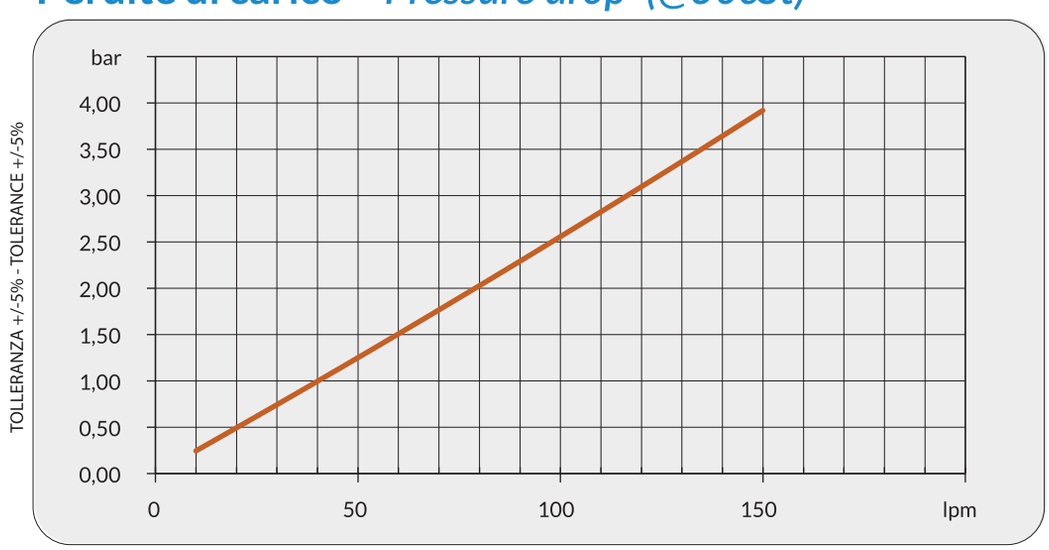
Diagramma rendimento *Performance diagram*

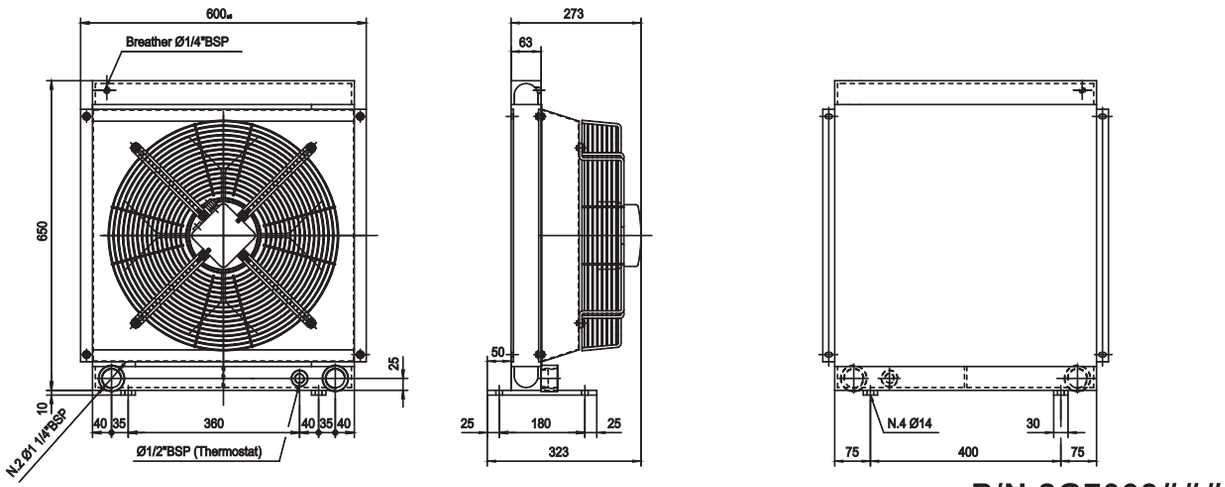


Perdite di carico *Pressure drop (@30cSt)*

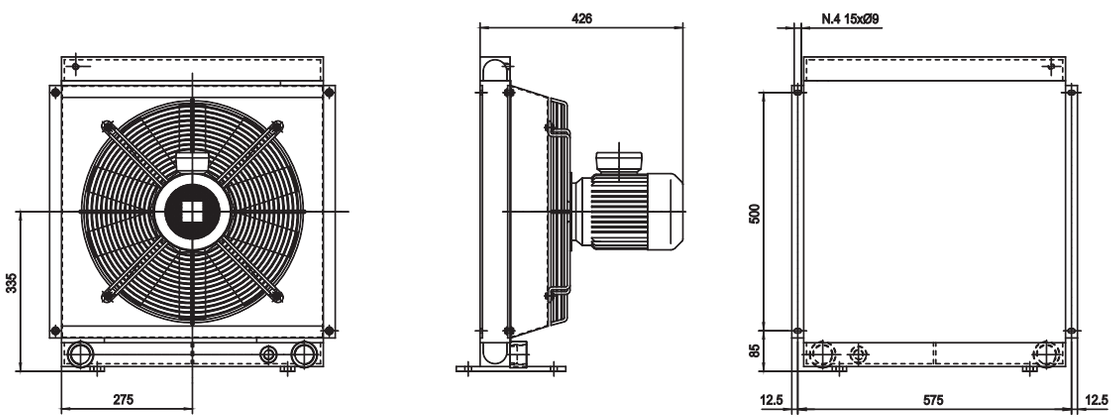


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

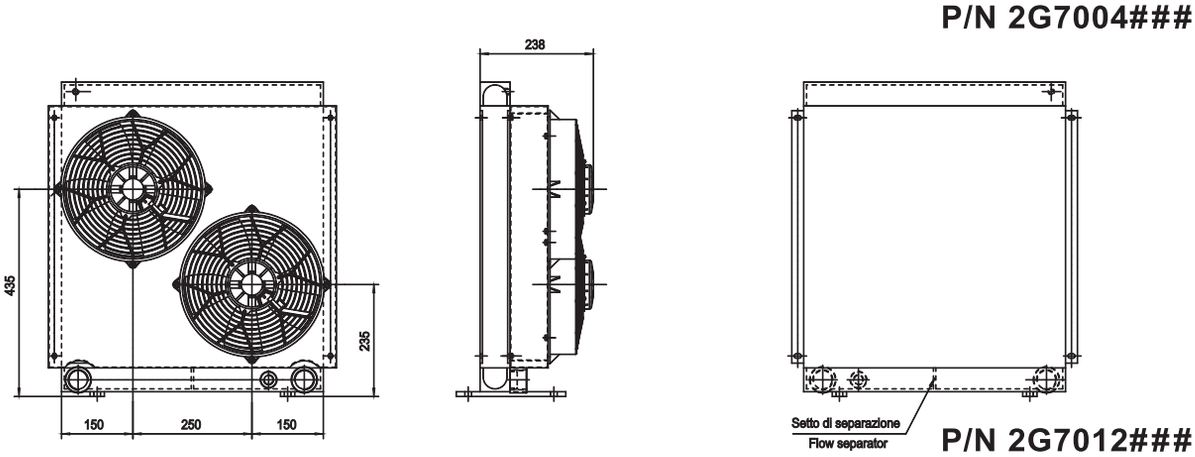
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



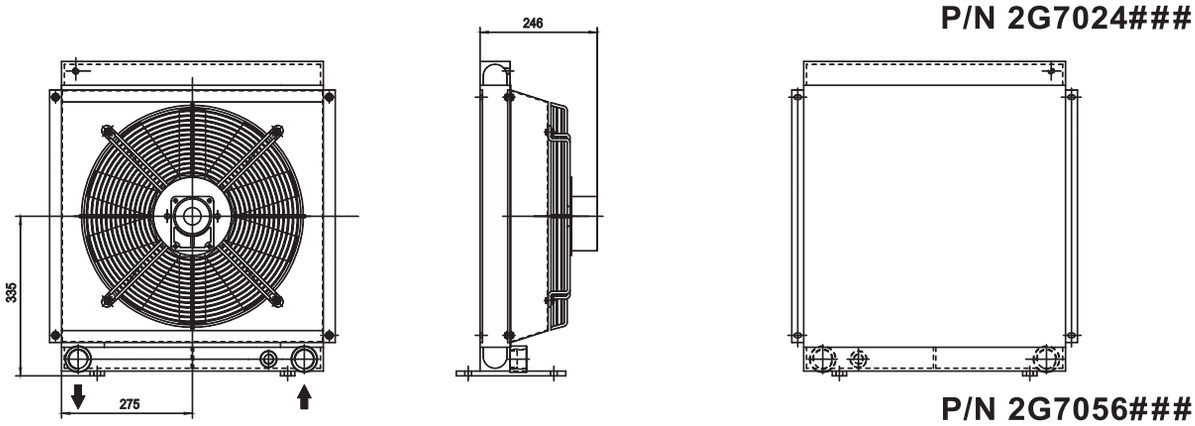
P/N 2G7003###



P/N 2G7004###



P/N 2G7012###
P/N 2G7024###



P/N 2G7056###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
2G7003###	230-400 AC 230-400 AC	50 60	0,52 0,66	1,9 - 1,1	1450 1690	450	76	5100	54	5	27
2G7004###	230-400 AC 265-460 AC	50 60	0,75 0,86	3,0-1,7 3,0-1,7	1440 1750	445	79	4500	55	5	30
2G7012###	12 DC	/	0,13	11,0	2340	280	76	1785	68	5	24
2G7024###	24 DC	/	0,15	6,2	2600	280	79	1785	68	5	24
2G7056###	Prepared for Gr.2 hydraulic motor					445			/	5	23

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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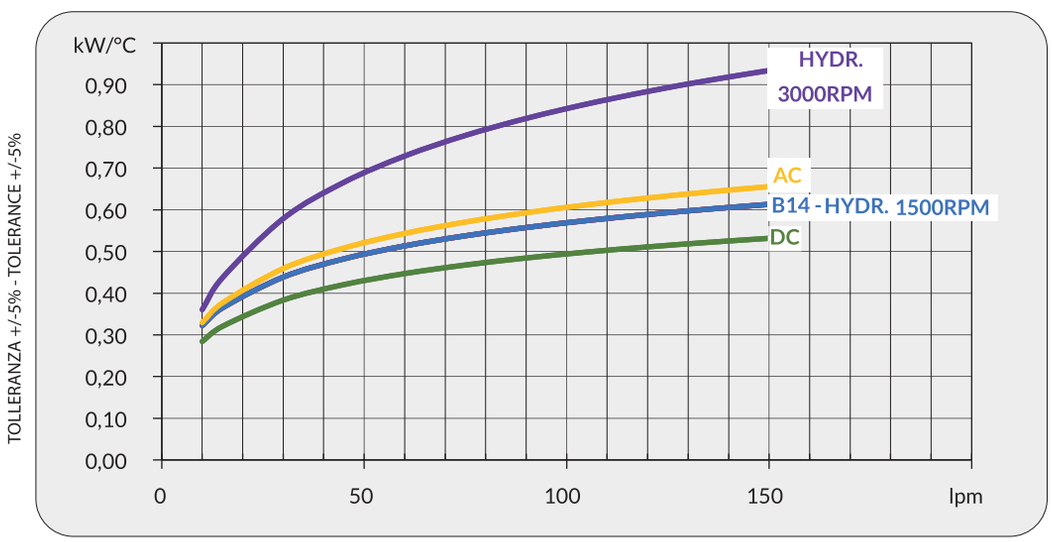
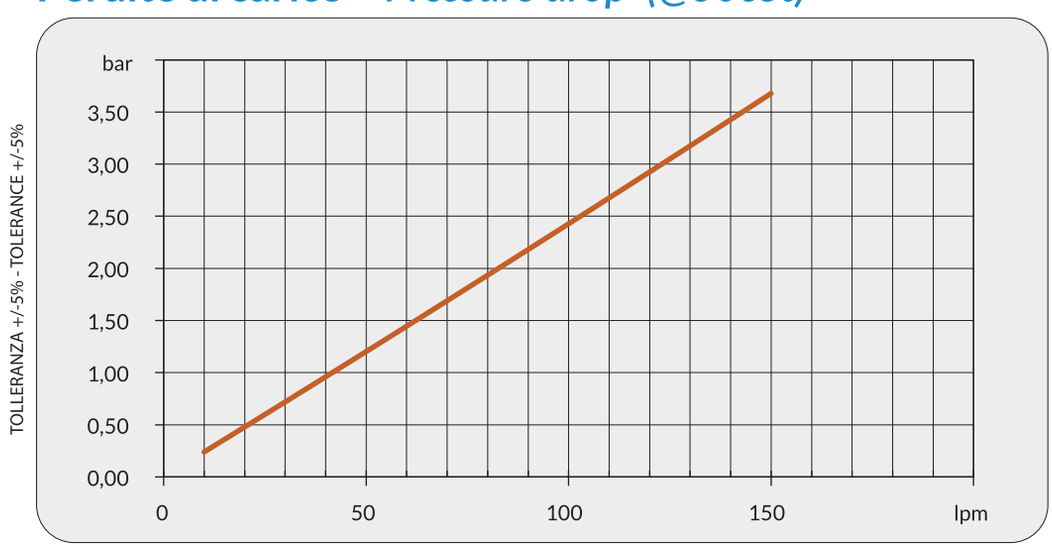
Diagramma rendimento *Performance diagram*

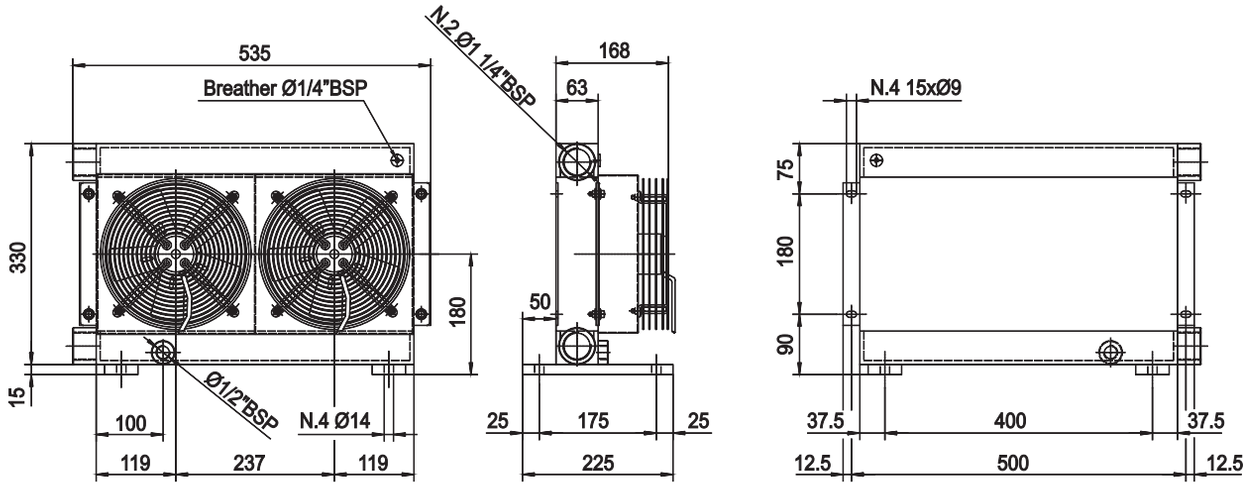


Perdite di carico *Pressure drop (@30cSt)*

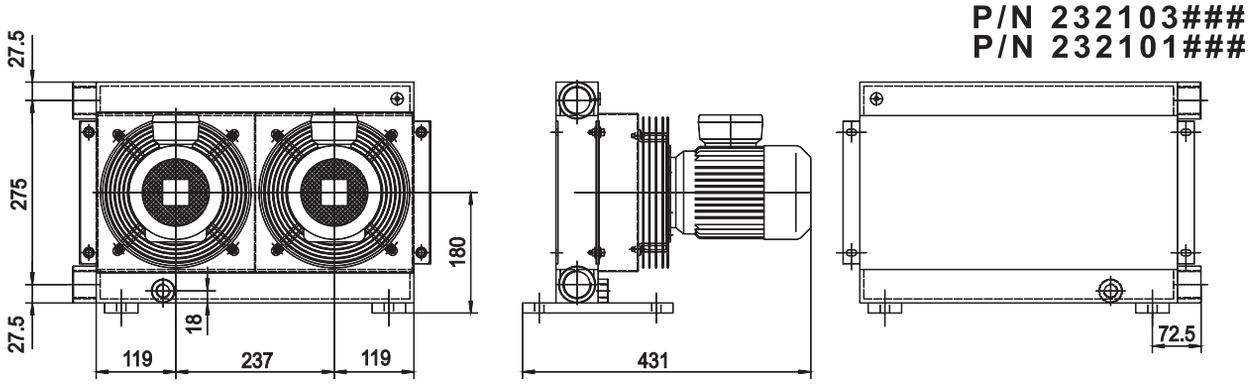


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

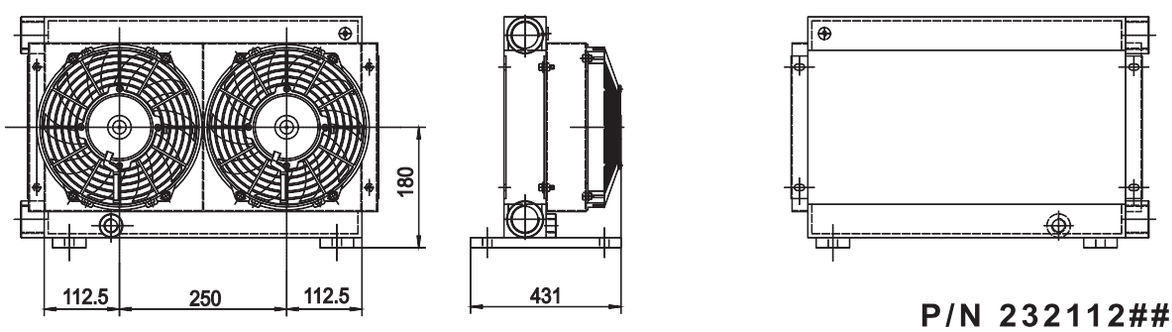
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



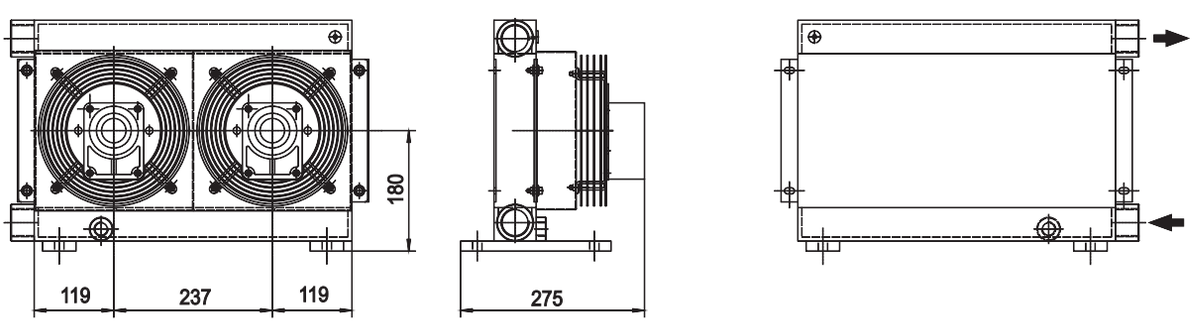
P/N 232103###
P/N 232101###



P/N 232104###



P/N 232112###
P/N 232124###



P/N 232156###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

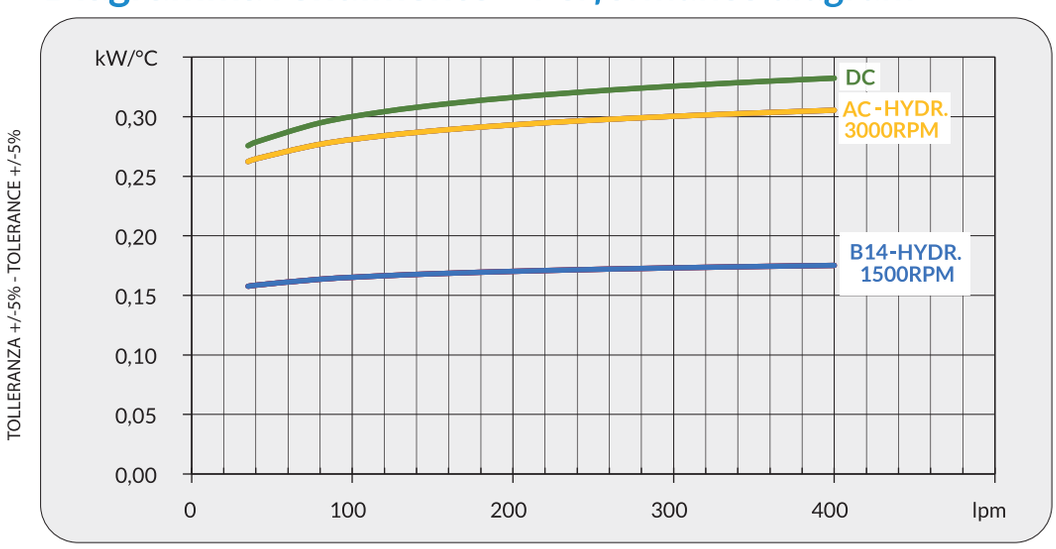
Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
232101###	230 AC	50/60	0,050/0,061	0,24/0,28	2740/3120	200	68	680	44	1,4	17
232103###	230-400 AC 230-400 AC	50 60	0,068 0,070	0,29-0,17 0,23-0,13	2500 2650	200	68	680	44	1,4	17
232104###	230-400 AC B14 265-460 AC B14	50 60	0,25 0,29	1,7- 1 1,7- 1	1350 1620	200	64	310	55	1,4	23
232112###	12 DC	/	0,08	6,7	2770	225	72	770	68	1,4	15
232124###	24 DC	/	0,09	4,0	2900	225	72	770	68	1,4	15
232156###	Prepared for Gr.2 hydraulic motor					200			/	1,4	14

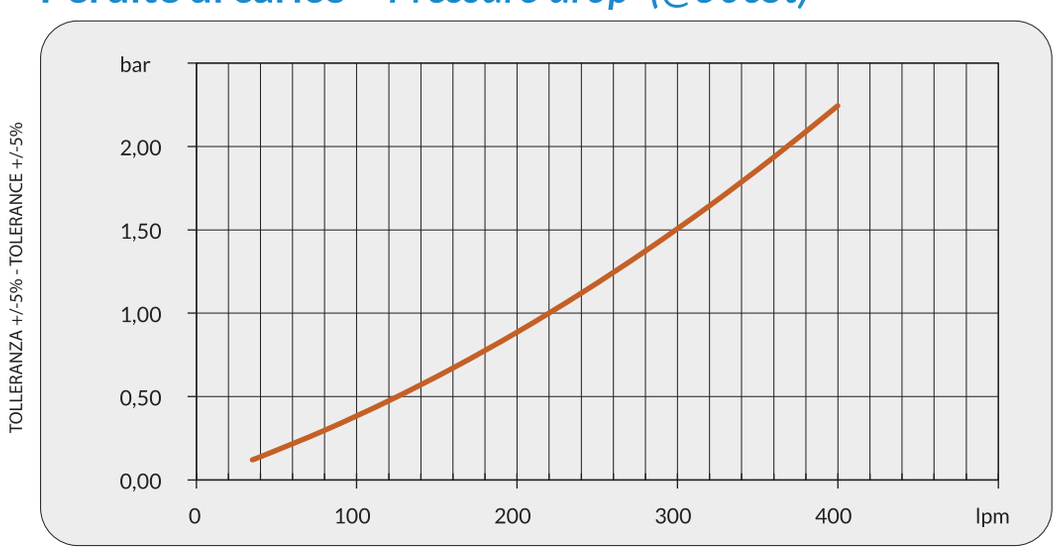
I dati si riferiscono al singolo ventilatore
Data refers to each fan

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento *Performance diagram*

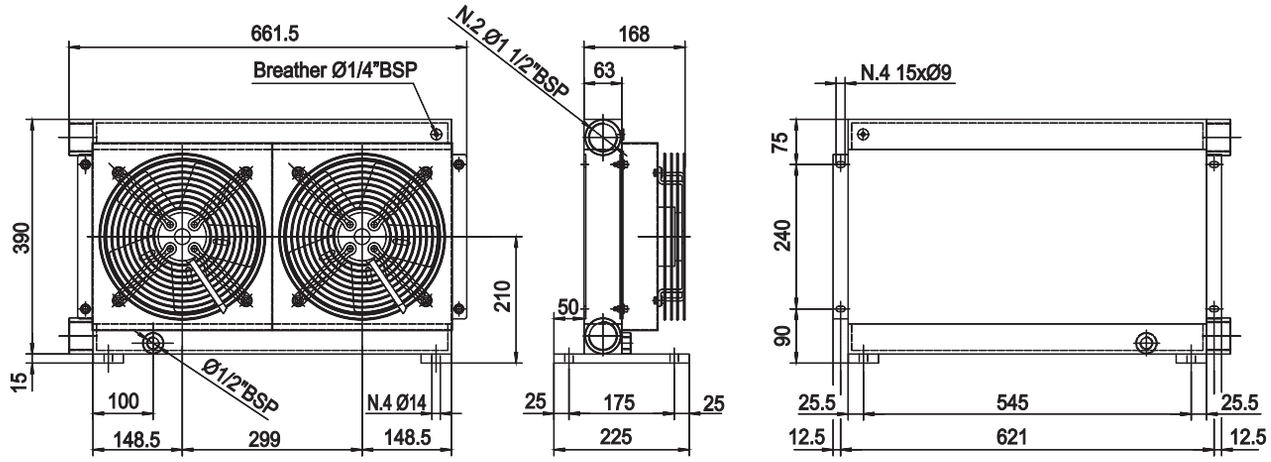


Perdite di carico *Pressure drop (@30cSt)*

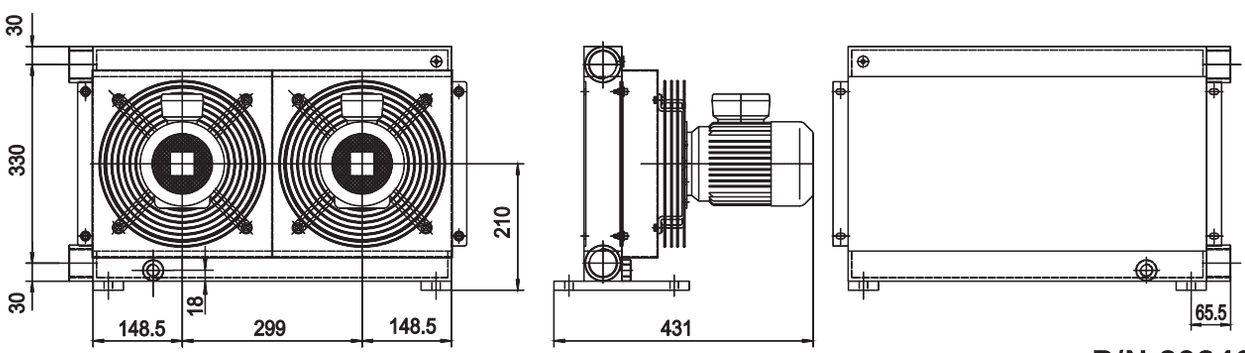


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

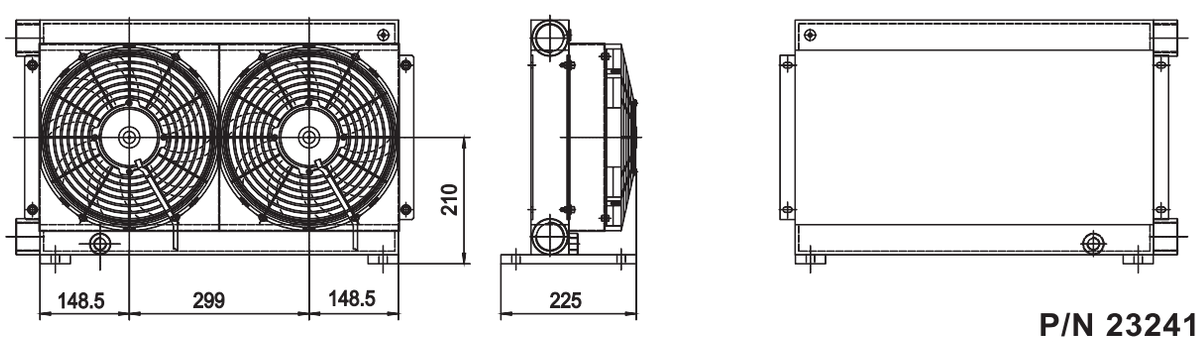
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



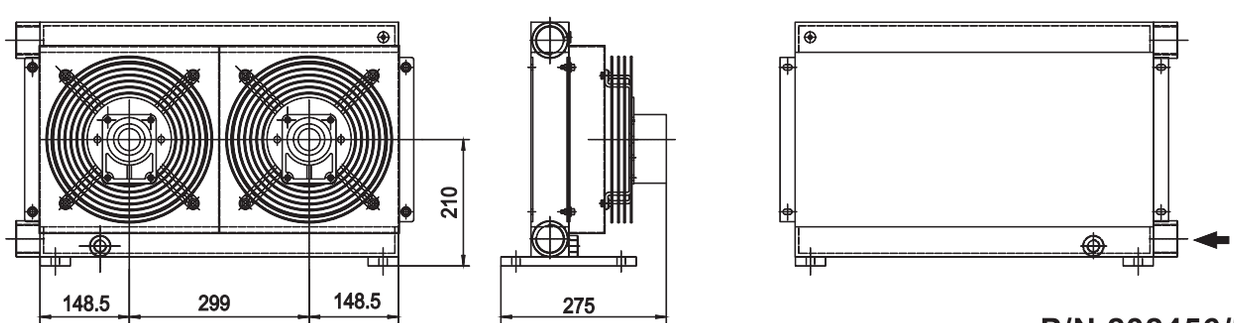
P/N 232401###
P/N 232403###



P/N 232404###



P/N 232412###
P/N 232424###



P/N 232456###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

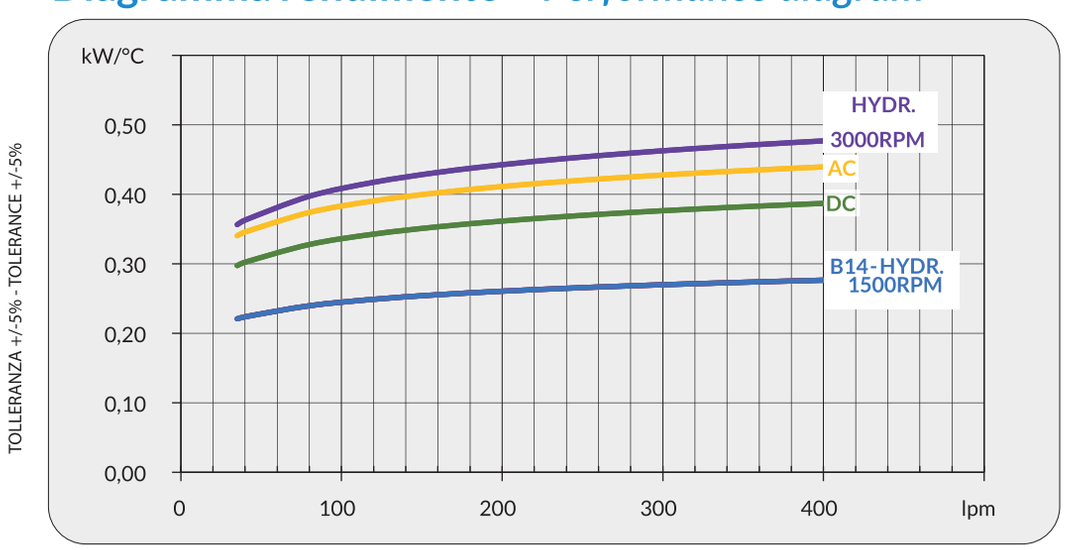
Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
232401###	230 AC	50/60	0,115/0,150	0,51/0,66	2450/2600	250	72	1300	44	2	23
232403###	230-400 AC 230-400 AC	50 60	0,105 0,145	0,33-0,19 0,39-0,23	2600 2900	250	72	1300	44	2	23
232404###	230-400 AC B14 265-460 AC B14	50 60	0,25 0,29	1,7- 1 1,7- 1	1350 1620	250	64	640	55	2	34
232412###	12 DC	/	0,09	6,6	2710	280	74	1050	68	2	21
232424###	24 DC	/	0,10	4,5	2765	280	74	1050	68	2	21
232456###	Prepared for Gr.2 hydraulic motor					250			/	2	20

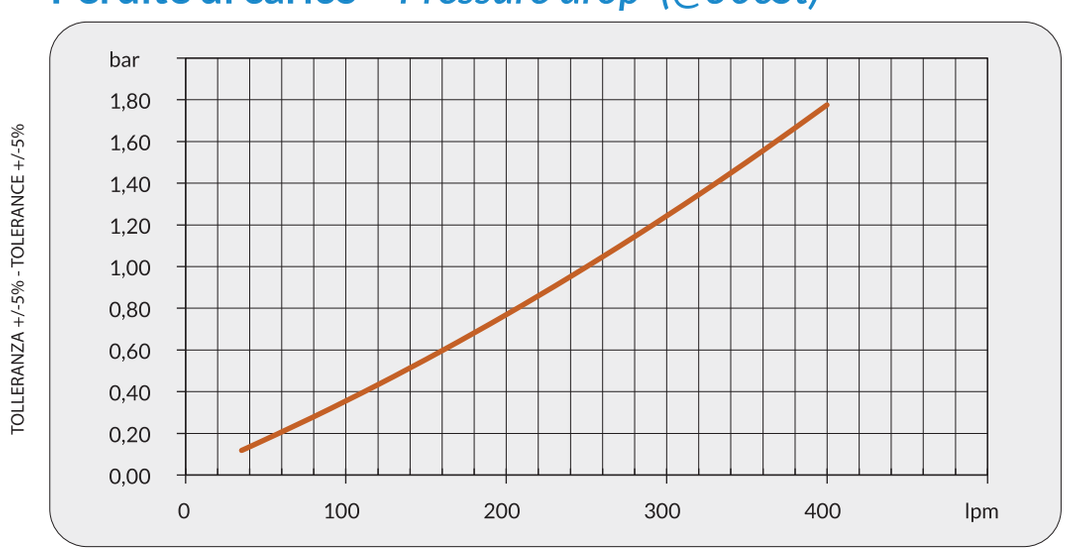
I dati si riferiscono al singolo ventilatore
Data refers to each fan

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento *Performance diagram*

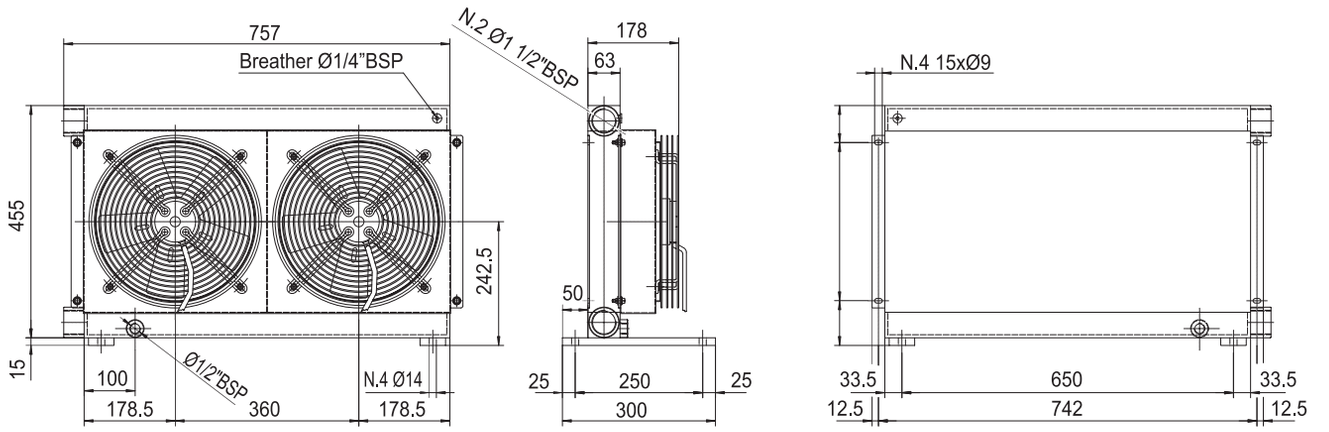


Perdite di carico *Pressure drop (@30cSt)*

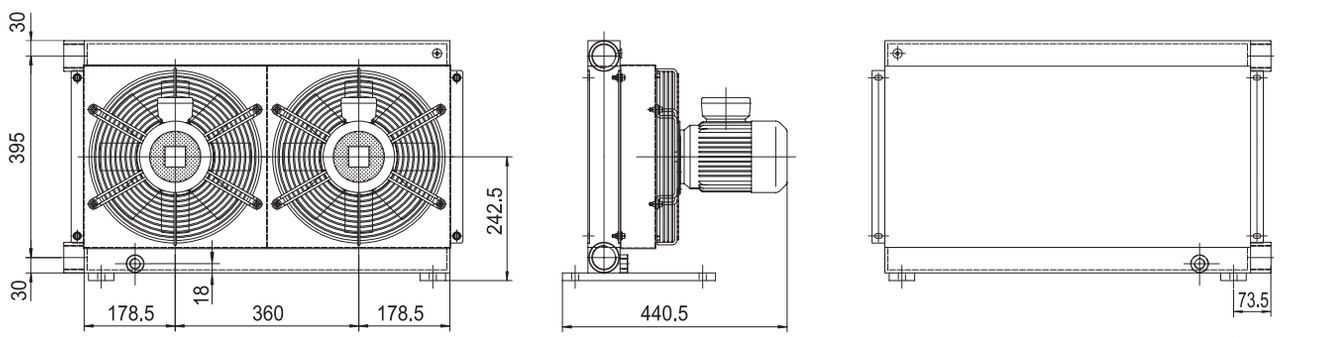


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

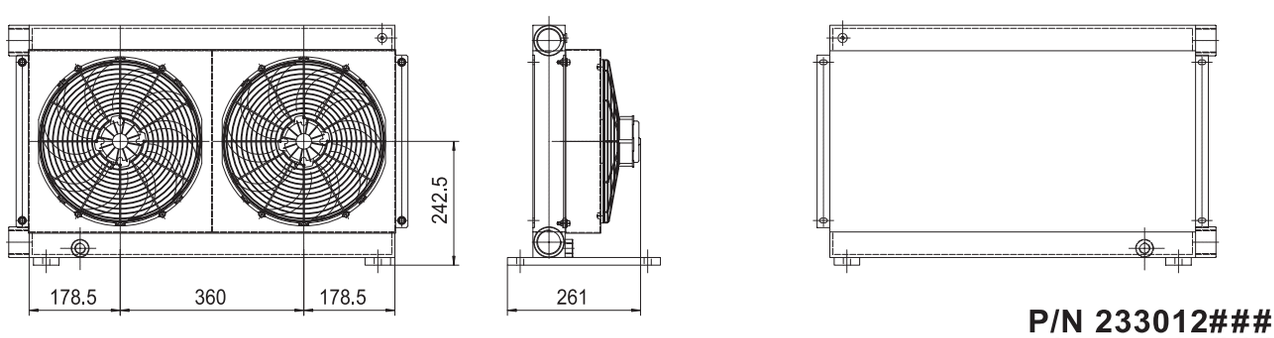
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



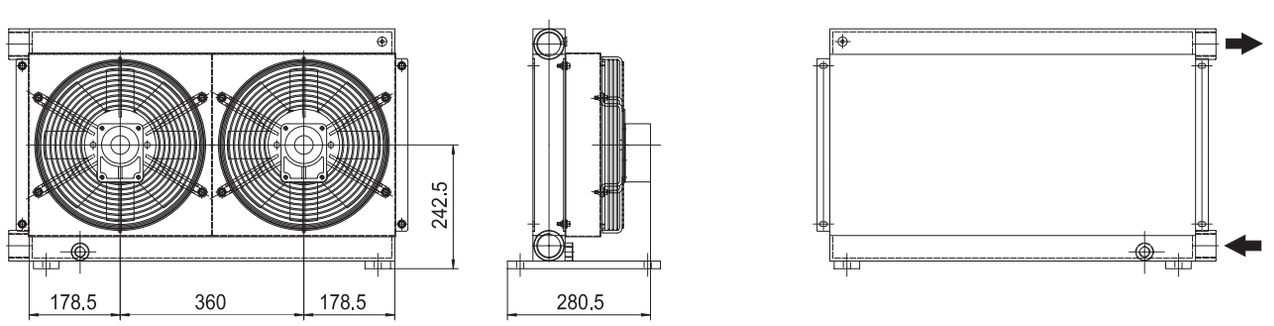
P/N 233001###
P/N 233003###



P/N 233004###



P/N 233012###
P/N 233024###



P/N 233056###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

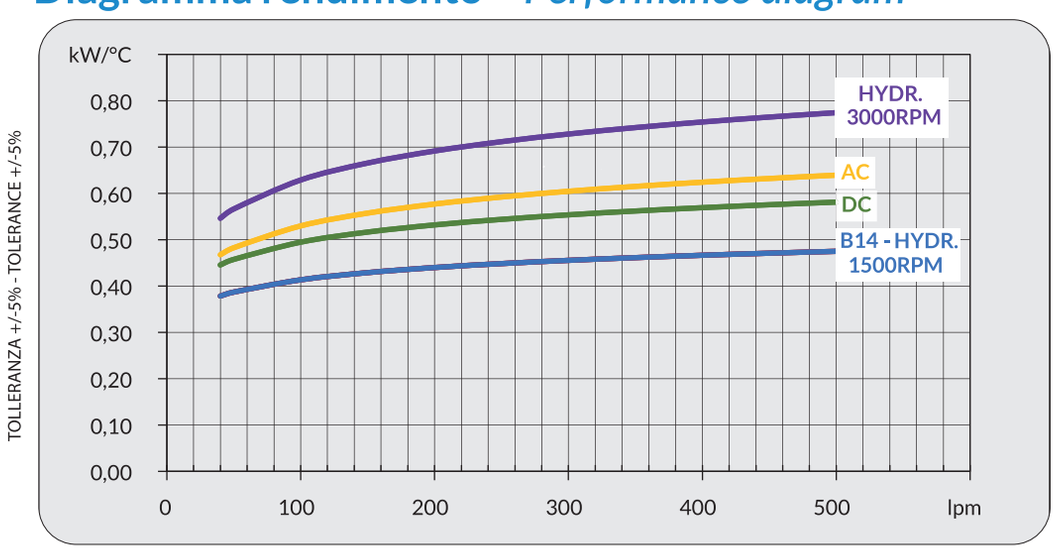
Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/h)	IP	It	kg
233001###	230 AC	50/60	0,23/0,35	1,1/1,55	2700/3000	300	78	2220	44	3,2	31
233003###	230-400 AC 230-400 AC	50 60	0,21 0,30	0,62-0,36 0,84-0,48	2580 2750	300	76	2500	44	3,2	31
233004###	230-400 AC B14 265-460 AC B14	50 60	0,37 0,43	2,1- 1,1 2,1- 1,1	1370 1650	300	70	1850	55	3,2	42
233012###	12 DC	/	0,16	13,3	2660	305	80	1675	68	3,2	29
233024###	24 DC	/	0,18	7,4	2870	305	83	1880	68	3,2	29
233056###	Prepared for Gr.2 hydraulic motor					300			/	3,2	30

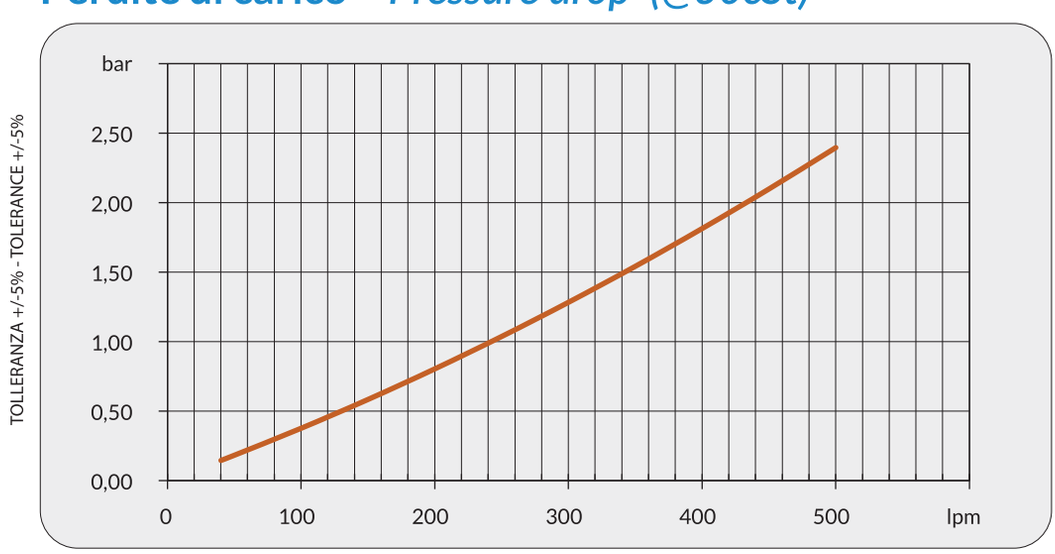
I dati si riferiscono al singolo ventilatore
Data refers to each fan

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento *Performance diagram*

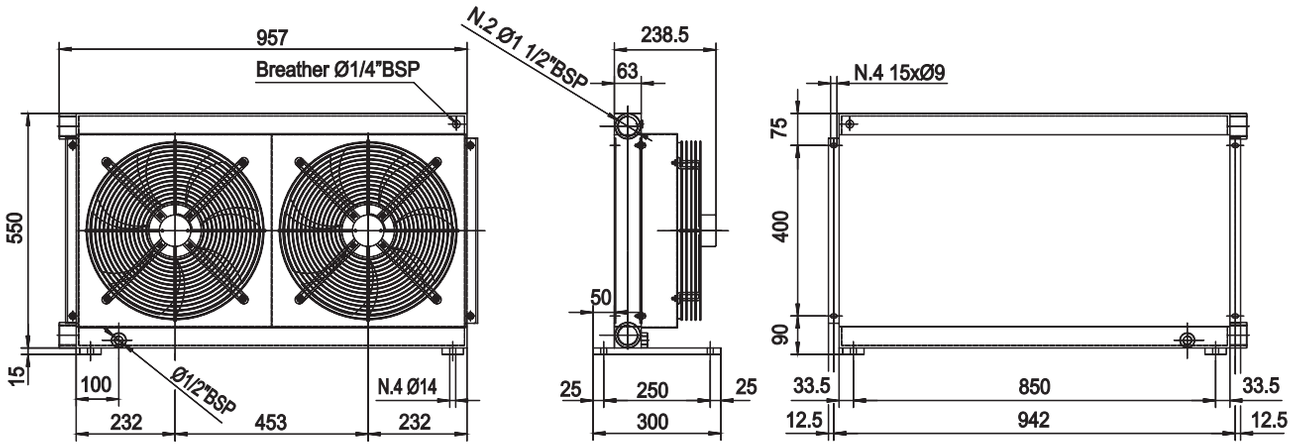


Perdite di carico *Pressure drop (@30cSt)*

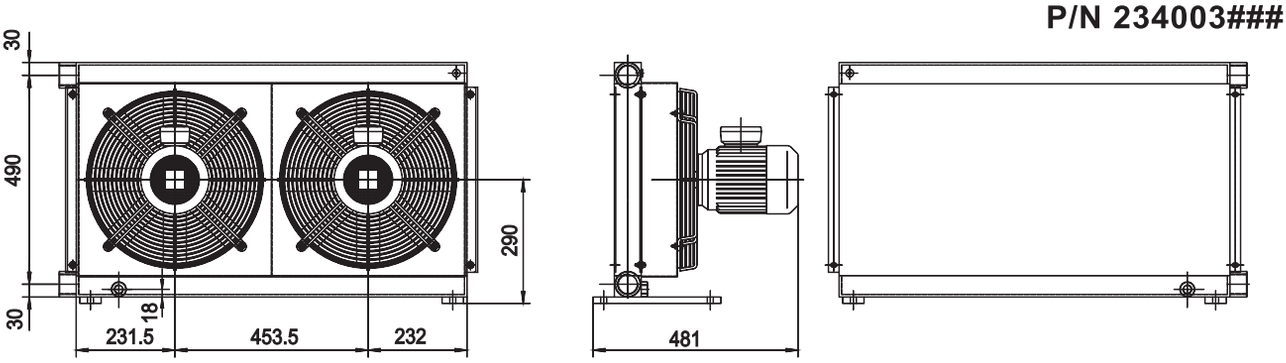


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

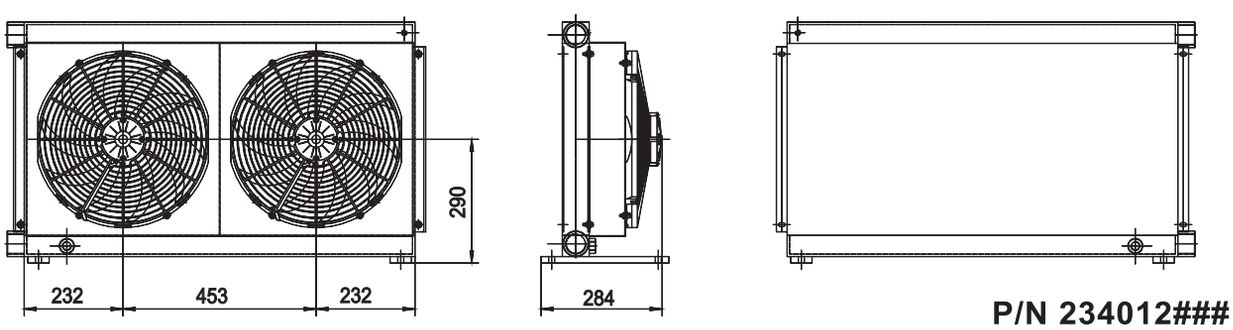
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



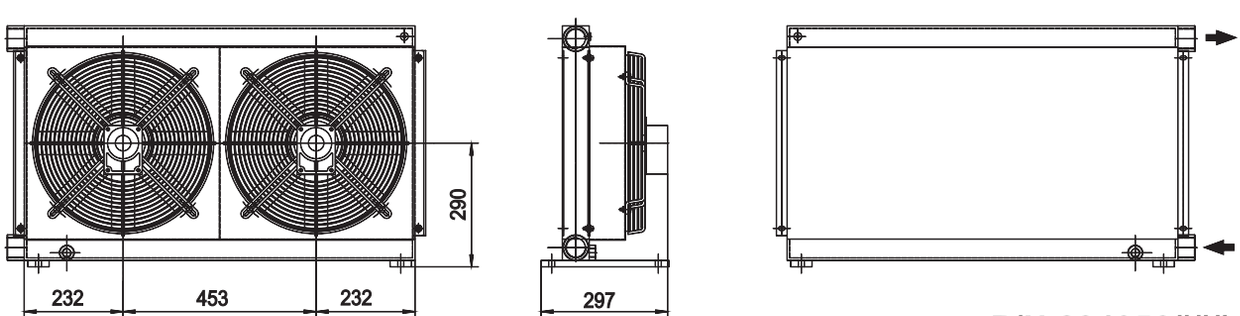
P/N 234001###
P/N 234003###



P/N 234004###



P/N 234012###
P/N 234024###



P/N 234056###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

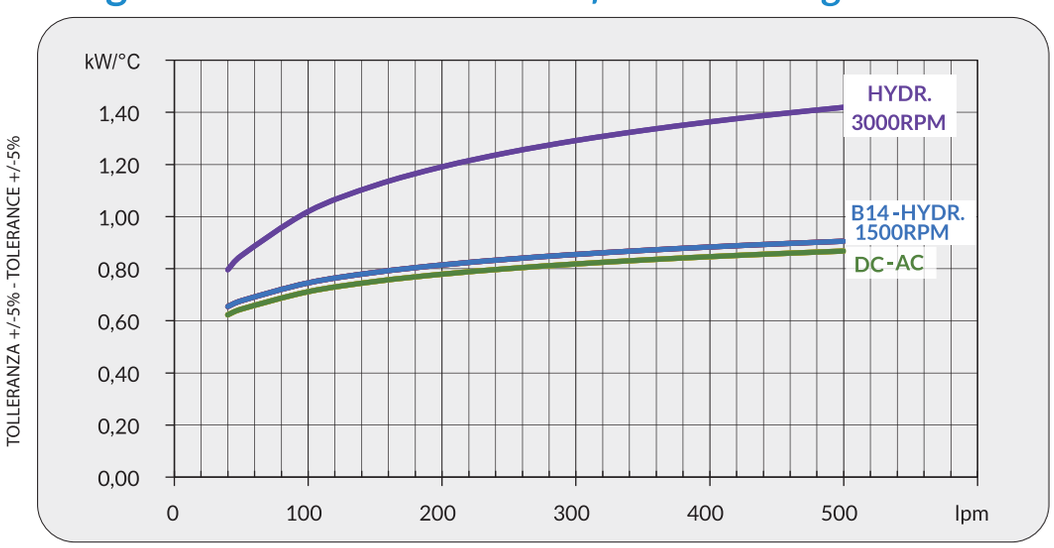
Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
234001###	230 AC	50	0,16/0,24	0,73/1,06	1430/1700	400	71	3200	54	5,4	42
234003###	230-400 AC 230-400 AC	50 60	0,135 0,185	0,76-0,44 0,68-0,39	1450 1690	400	71	3200	54	5,4	42
234004###	230-400 AC B14 265-460 AC B14	50 60	0,55 0,63	2,9- 1,7 2,9- 1,7	1320 1690	400	77	3740	55	5,4	50
234012###	12 DC	/	0,22	19,2	2310	385	76	2900	68	5,4	41
234024###	24 DC	/	0,23	9,3	2380	385	79	2900	68	5,4	41
234056###	Prepared for Gr.2 hydraulic motor					400			/	5,4	39

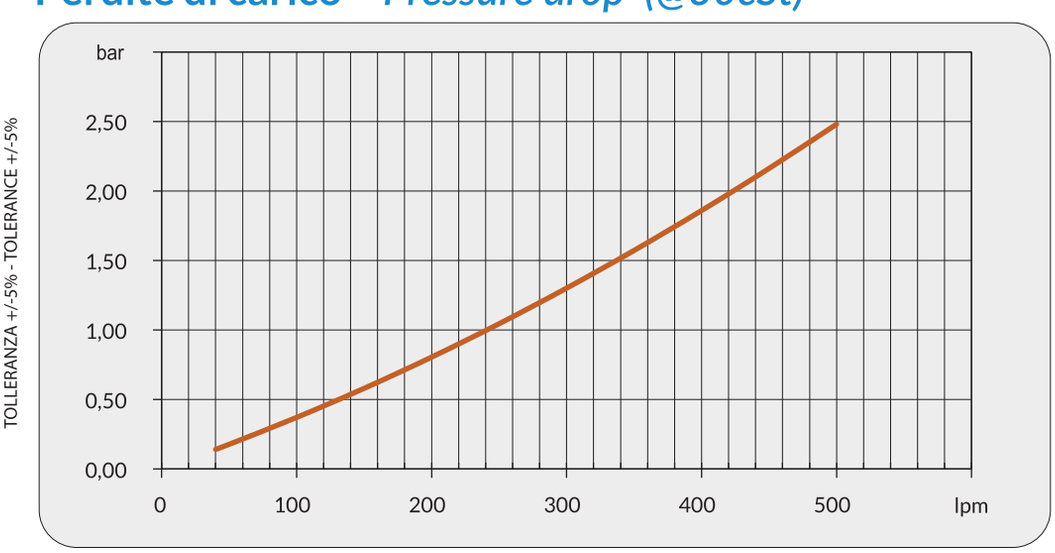
I dati si riferiscono al singolo ventilatore
Data refers to each fan

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento *Performance diagram*



Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



EMMEGI®
HEAT-EXCHANGERS

Serie 2000KBV
2000KBV Series

APPLICAZIONE
APPLICATION

Grazie all'ampia gamma di combinazioni, gli scambiatori della serie 2000KBV si prestano come la soluzione di raffreddamento ottimale per svariate applicazioni sia mobili che industriali quali:

Thanks to the wide range of combinations, the 2000KBV series heat exchangers are the optimal cooling solution for a wide range of mobile and industrial applications such as:



Industria agricola e forestale.
Gru mobili e fisse.
Veicoli industriali.
Veicoli municipali.
Impianti oleodinamici.
Macchine utensili.
Altro su richiesta.

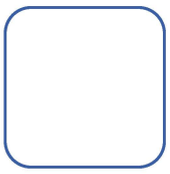
Agriculture and forestry.
Mobile and stationary cranes.
Industrial vehicles.
Municipal vehicles.
Hydraulic systems.
Machine tools.
Others on request.

Grazie alla sua valvola di bypass integrata, il prodotto può essere preservato da picchi di pressione causati da condizioni di elevata viscosità (es. partenze a freddo).

Thanks to the incorporated bypass valve, the product can be protected from high viscosity condition (ex. cold start).









Modulo richiesta dati

Sheet for cooler selection

CLIENTE *COMPANY*	
RICHIEDENTE *NAME*	

TIPOLOGIA FLUIDO *FLUID TYPE*		
PORTATA *FLOW RATE*	**lpm**	
POTENZA INSTALLATA *INSTALLED POWER*	**kW**	
POTENZA DA DISSIPARE *POWER TO BE DISSIPATED*	**kW**	
TEMPERATURA INGRESSO *INLET TEMPERATURE*	**°C**	
TEMPERATURA ARIA MAX *MAX AMBIENT TEMPERATURE*	**°C**	
PRESSIONE DI LAVORO *WORKING PRESSURE*	**bar**	

TIPO DI VENTILAZIONE *TYPE OF FAN UNIT*

- **CC** *DC*
  - **12V**
    - **24V**
- **PREDISPOSTO MOTORE IDRAULICO** *PREPARED FOR HYDRAULIC MOTOR*
  - **GR.2**
- **CA** *AC*
  - **MONOFASE 230V** *SINGLEPHASE 230V*
  - **TRIFASE** **230/400V 265/460V** *THREEPHASE 230/400V 265/460V*
    - **TENSIONE SPECIALE** *SPECIAL VOLTAGE*
      - **50 Hz** **60 Hz**

Denominazione codice prodotto

Ordering code

2W **24** **03** **2** **01**

TARATURA BY-PASS
BY-PASS SETTING

MODELLO *COOLER MODEL*

24 (MG AIR 2024KBV)

TIPO DI MOTORIZZAZIONE *FAN MOTOR TYPE*

01	*AC 230V 50 Hz*
03	*AC 230-400V-50Hz / AC 230-400V-60Hz*
04	*AC 230-400V-50Hz (B14) / AC 265-460V- 60Hz (B14)*
12	*DC 12V*
24	*DC 24V*
56	*Pred. per mot. idr. gr. 2 Prep. for hydr. mot. gr. 2*

TERMOSTATI *THERMOSTATS*

0	Senza termostato	*Whitout thermostat*	
1	Termostato fisso	*Fixed thermostat*	40-28°
2	Termostato fisso	*Fixed thermostat*	*50-38°*
3	Termostato fisso	*Fixed thermostat*	*60-48°*
4	Termostato fisso	*Fixed thermostat*	*70-58°*
5	Termostato fisso	*Fixed thermostat*	*80-68°*
6	Termostato fisso	*Fixed thermostat*	*90-78°*
8	Termostato regolabile *Adjustable thermostat*		*0-90° (TC2)*
9	Termostato regolabile collegato *Connected adjustable thermostat*		0-120° (TR2)

FLUSSO DI VENTILAZIONE *AIR FLOW DIRECTION*

01	*Aspirante Suction air flow*
02	*Soffiante Blowing air flow*

Modello - Codice prodotto

Cooler model - Code

Taratura BY-PASS
BY-PASS Setting

Taratura *Setting*	Codice *Code*
*1.5 bar **	*2W **
3.0 bar	*3W*
5.0 bar	*5W*

**Standard*

Serie KBV
2000KBV Series

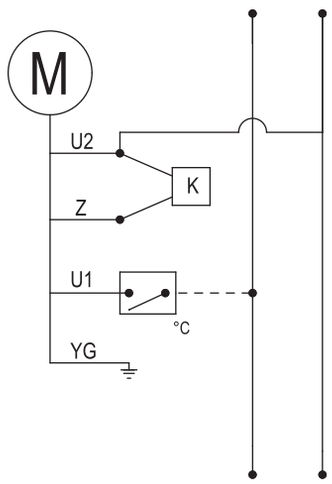
Modello *Model*	Codice *Code*
2015KBV	*15*
2020KBV	*20*
2024KBV	*24*
2030KBV	*30*
2040KBV	*40*
2050KBV	*50*



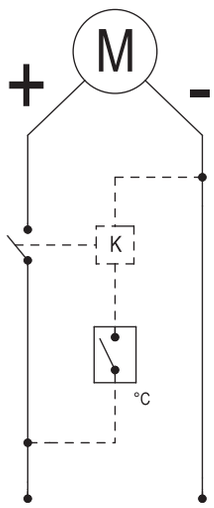
Collegamenti elettrici

Electric Wiring

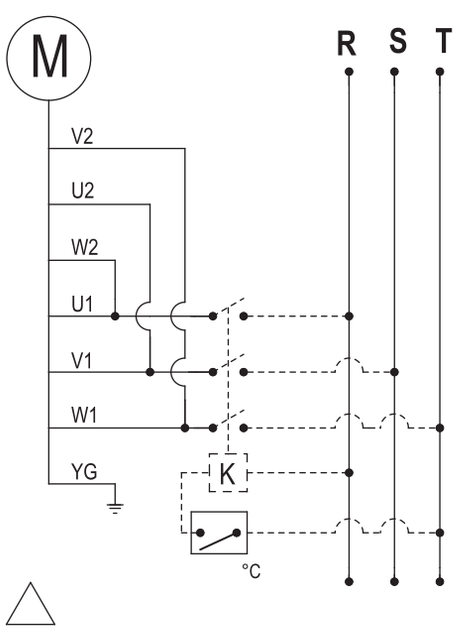
COLLEGAMENTO ELETTRICO 230V MON. AC
230V AC 1PH. ELECTRIC WIRING



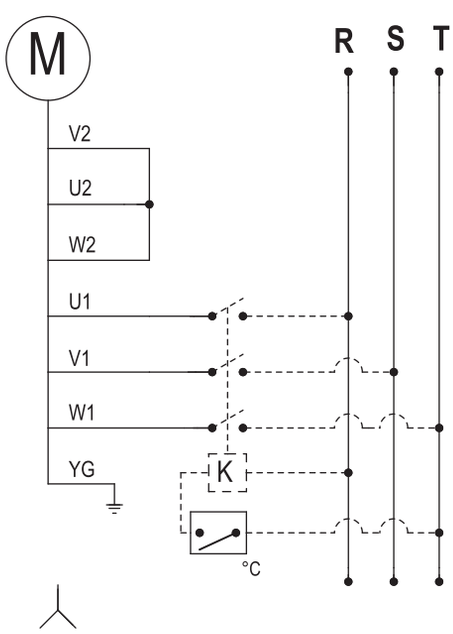
COLLEGAMENTO ELETTRICO 12-24V DC
12-24V DC ELECTRIC WIRING



COLLEGAMENTO ELETTRICO 230V AC TRIF.
230V AC 3PH ELECTRIC WIRING

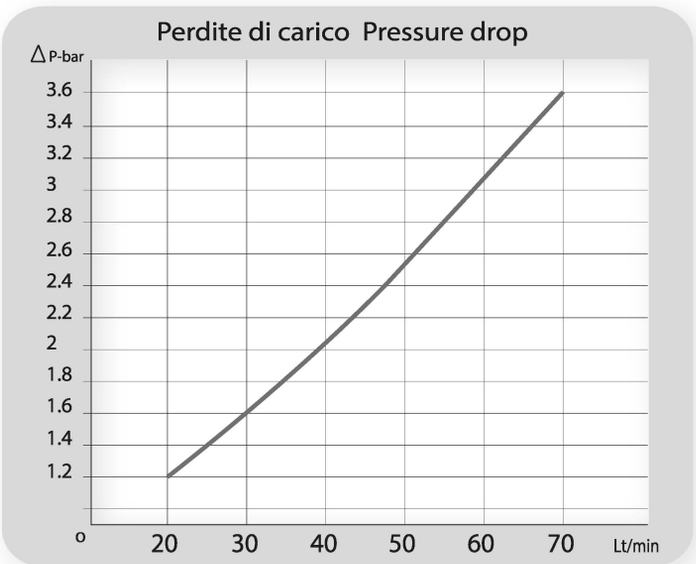


COLLEGAMENTO ELETTRICO 400/460V AC TRIF.
400/460V AC THREEPHASE ELECTRIC WIRING

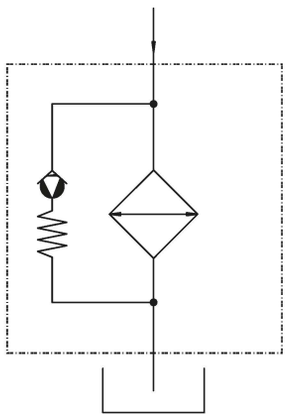


Dati tecnici valvola by-pass Technical data by-pass valve - (1.5 bar)

Valvola cartuccia tipo 2 / Cartridge valve type 2 - (1.5 bar)

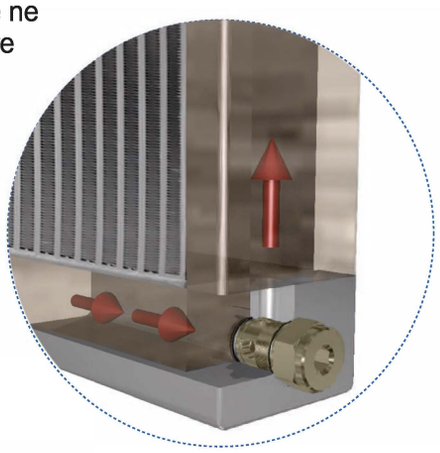


Schema idraulico Hydraulic circuit

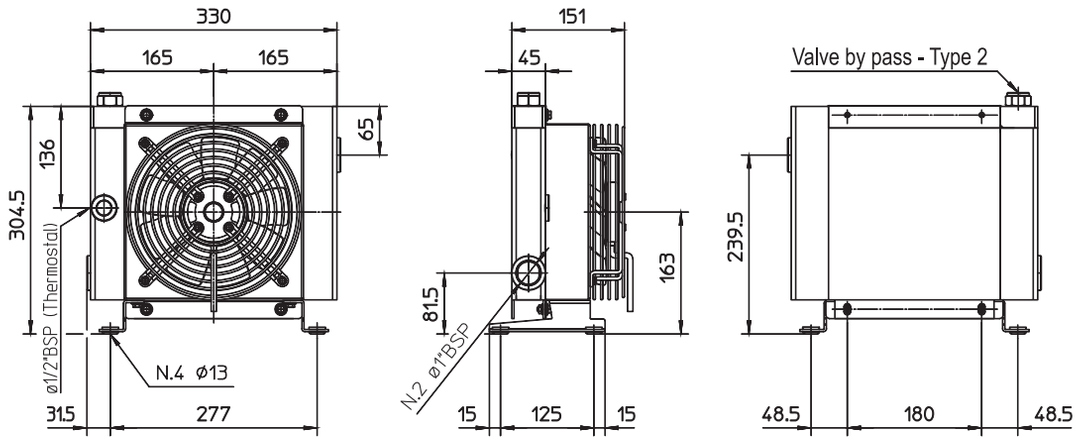


Gli scambiatori della serie KBV nascono dalle esigenze applicative espresse dal mercato. Punto di forza di questi prodotti é rappresentato dal by-pass integrato che ne amplifica la semplicità d'uso, eliminando la necessità di dovere aggiungere da parte del cliente una valvola esterna.

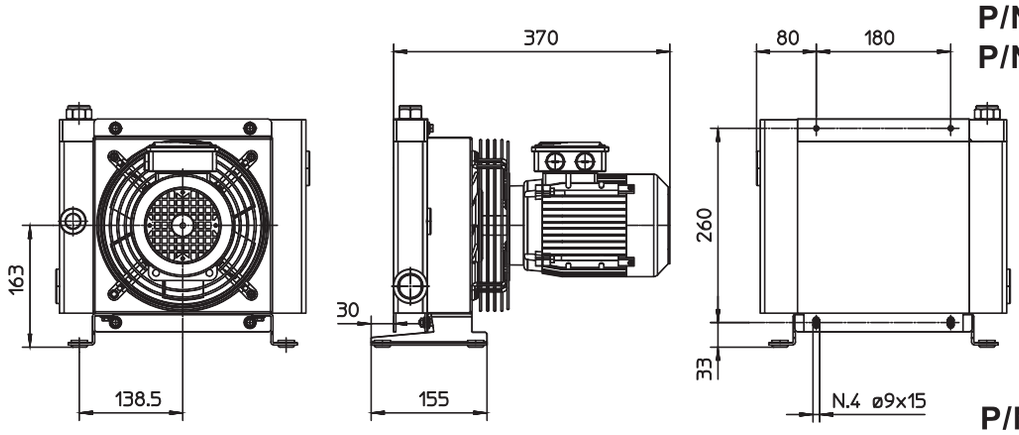
KBV Series was born to answer the needs of the market.
The main characteristic of this product is the integrated by-pass valve that simplify their employ and avoid the customers to add an external and independent valve.



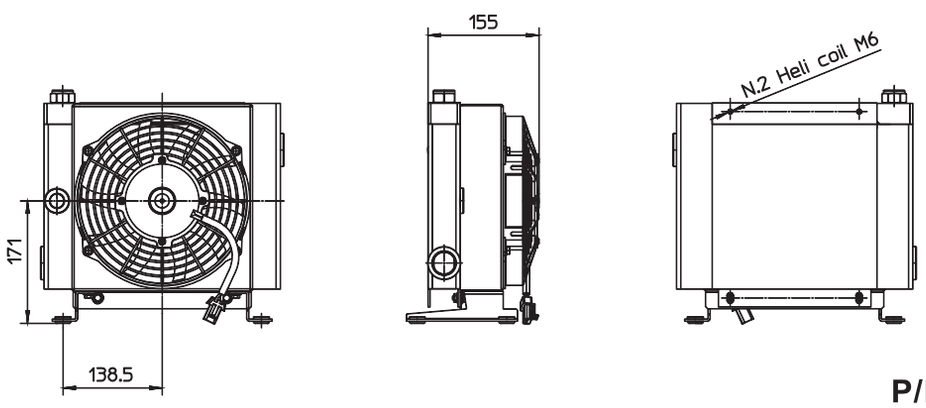




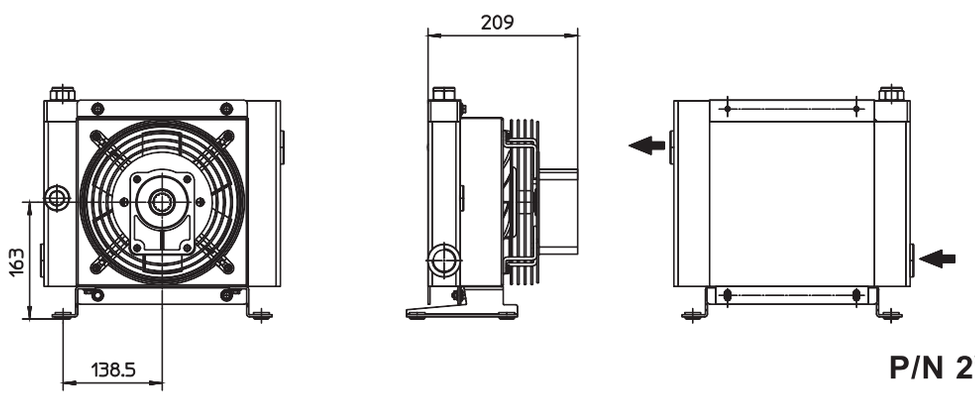
P/N 2W1501###
P/N 2W1503###



P/N 2W1504###



P/N 2W1512###
P/N 2W1524###



P/N 2W1556###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m^3/ h)	IP	It	kg
2W1501###	230 AC	50/60	0,050/0,061	0,24/0,28	2740/3120	200	68	700	44	0,5	7
2W1503###	230-400 AC 265-400 AC	50 60	0,068 0,070	0,29-0,17 0,23-0,13	2500 2650	200	69	720	44	0,5	7
2W1504###	230-400 AC B14 265-460 AC B14	50 60	0,25 0,30	1,7- 1 1,7- 1	1350 1620	200	61	415	55	0,5	10
2W1512###	12 DC	/	0,08	6,4	2770	225	72	790	67	0,5	6,5
2W1524###	24 DC	/	0,09	3,9	2900	225	73	865	67	0,5	6,5
2W1556###	Prepared for Gr.2 hydraulic motor					200			/	0,5	6

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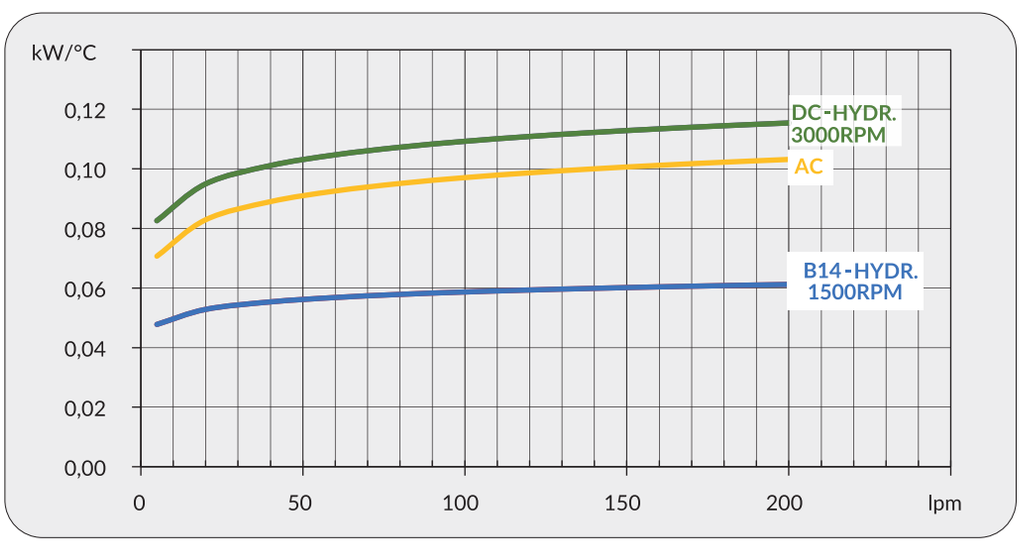
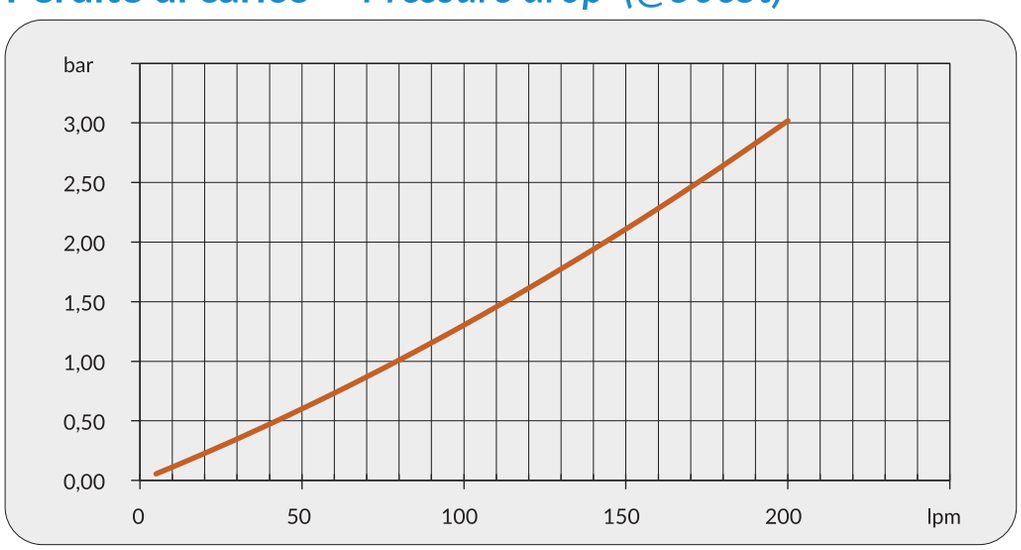
Diagramma rendimento *Performance diagram*

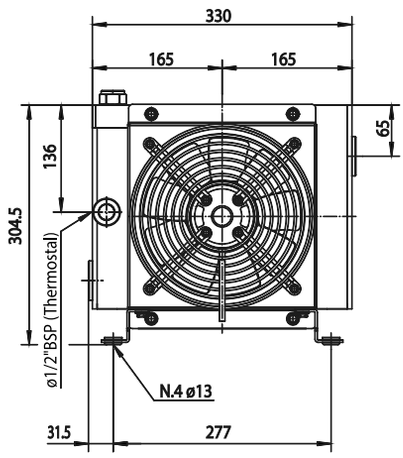


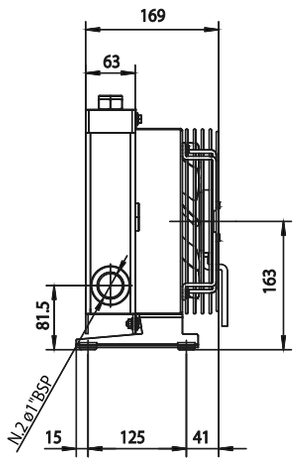
Perdite di carico *Pressure drop (@30cSt)*

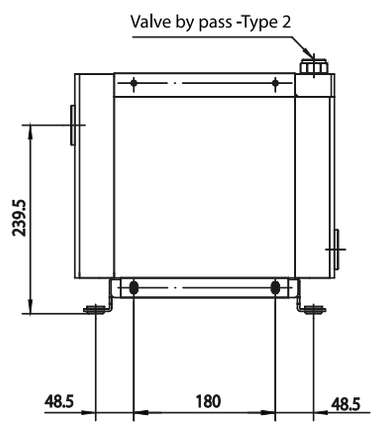


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

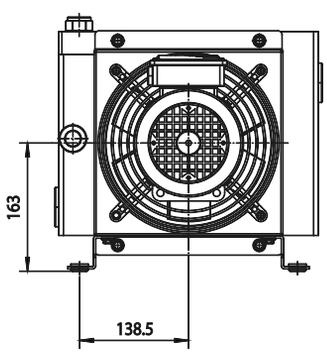
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

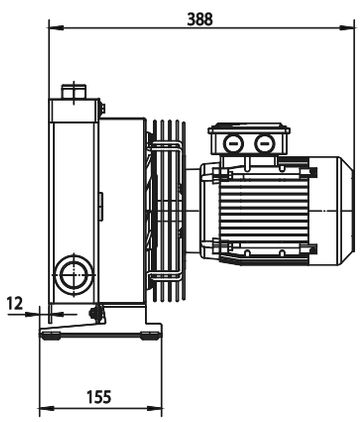


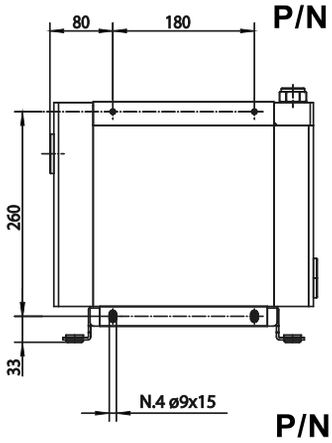




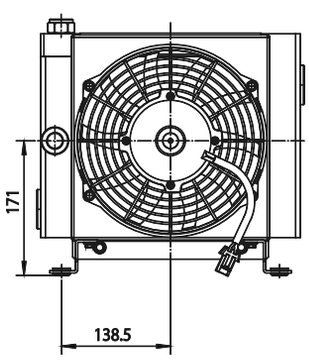
P/N 2W2001###
P/N 2W2003###

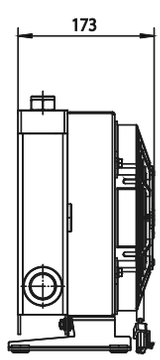


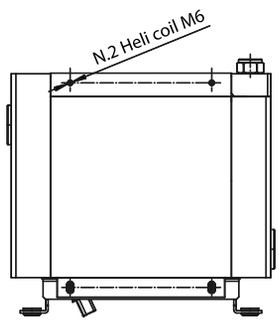




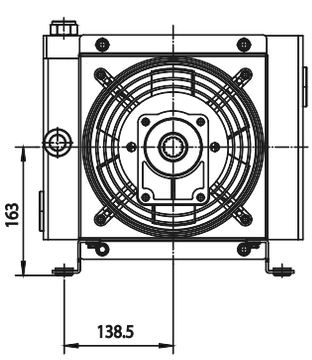
P/N 2W2004###

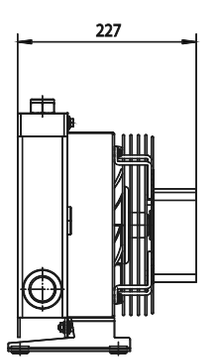


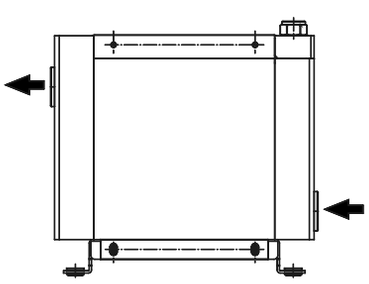




P/N 2W2012###
P/N 2W2024###







P/N 2W2056###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
2W2001###	230 AC	50/60	0,050/0,061	0,24/0,28	2740/3120	200	68	675	44	0,7	8
2W2003###	230-400 AC 265-400 AC	50 60	0,068 0,070	0,29 - 0,17 0,23 - 0,13	2500 2650	200	68	645	44	0,7	8
2W2004###	230-400 AC B14 265-460 AC B14	50 60	0,25 0,30	1,7- 1 1,7- 1	1350 1620	200	64	390	55	0,7	11
2W2012###	12 DC	/	0,08	6,4	2770	225	72	720	67	0,7	7
2W2024###	24 DC	/	0,09	3,9	2900	225	72	750	67	0,7	7
2W2056###	Prepared for Gr.2 hydraulic motor					200			/	0,7	7

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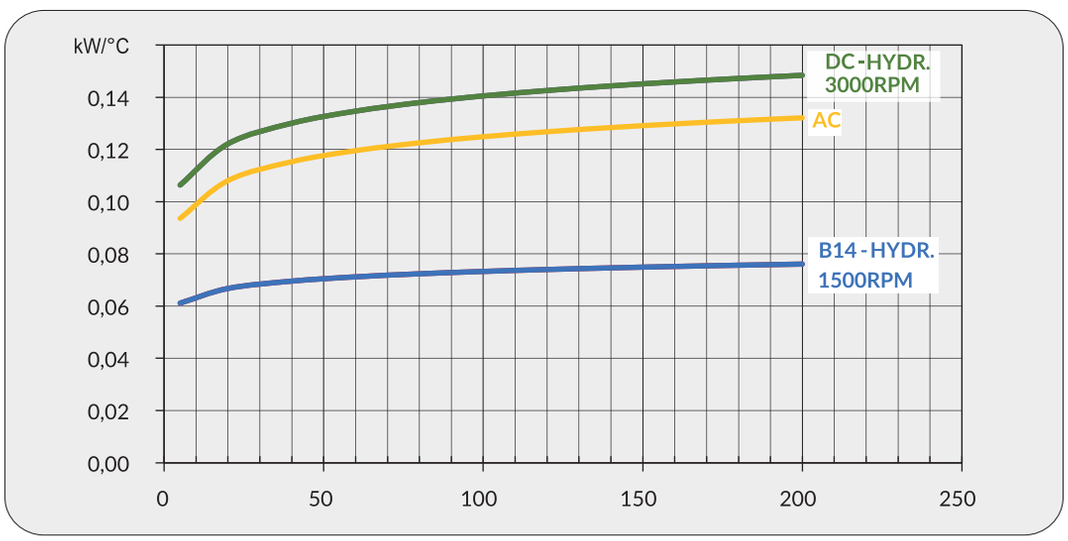
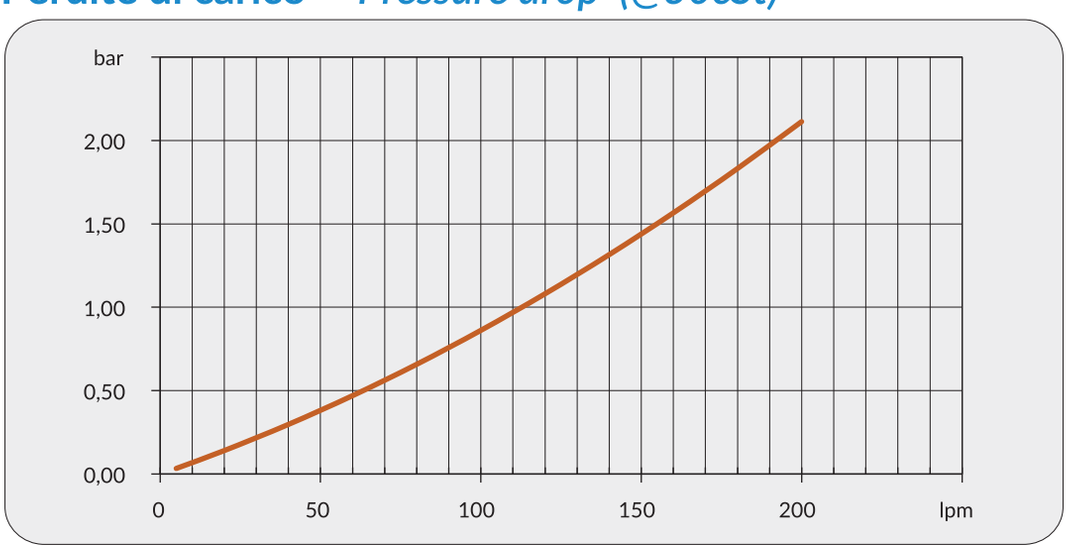
Diagramma rendimento *Performance diagram*

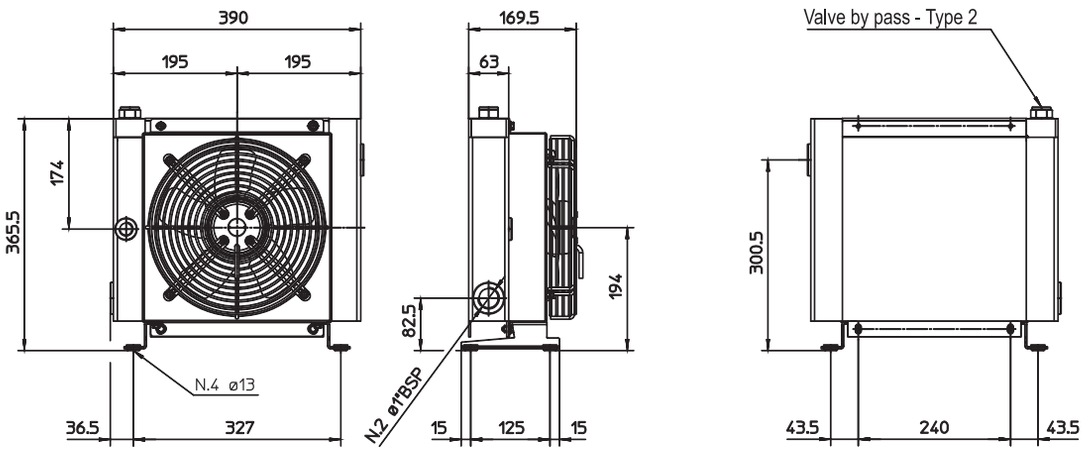


Perdite di carico *Pressure drop (@30cSt)*

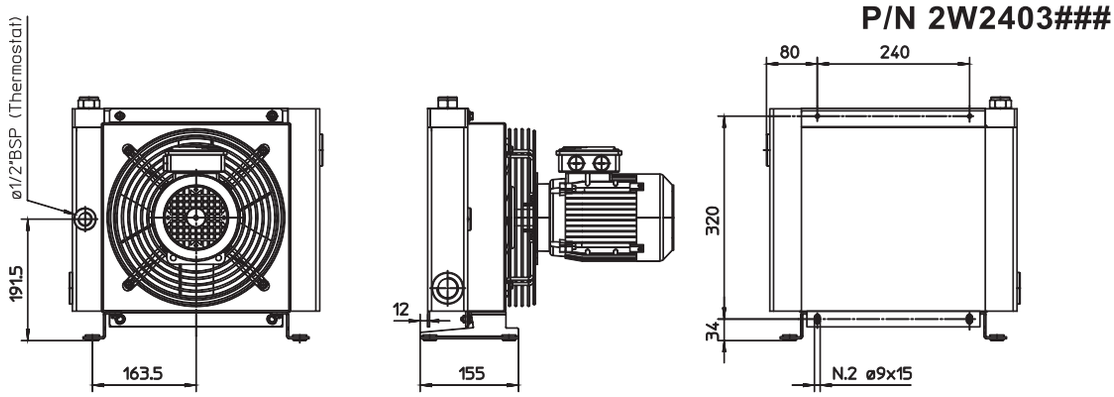


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

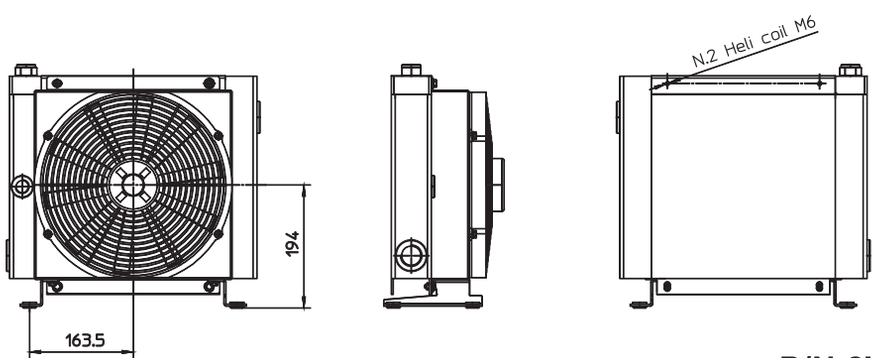
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



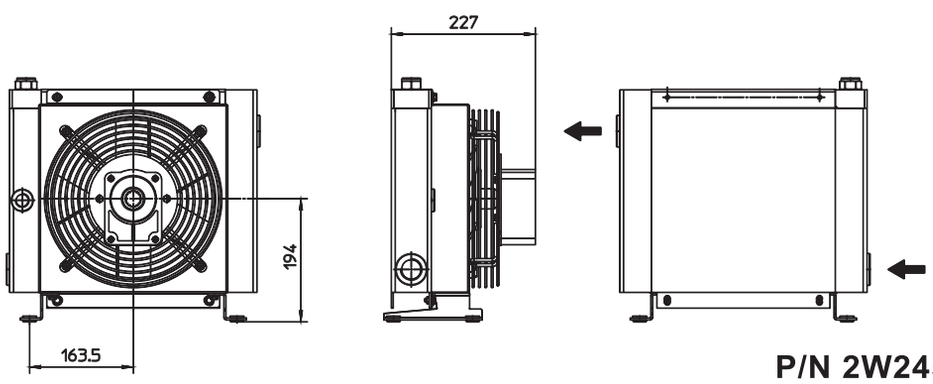
P/N 2W2401###
P/N 2W2403###



P/N 2W2404###



P/N 2W2412###
P/N 2W2424###



P/N 2W2456###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m^3/ h)	IP	lt	kg
2W2401###	230 AC	50/60	0,115/0,150	0,51/0,66	2450/2600	250	72	1350	44	1	11
2W2403###	230-400 AC 265-400 AC	50 60	0,105 0,145	0,33-0,19 0,39-0,23	2600 2900	250	72	1300	44	1	11
2W2404###	230-400 AC B14 265-460 AC B14	50 60	0,25 0,30	1,7- 1 1,7- 1	1350 1620	250	64	1000	55	1	16
2W2412###	12 DC	/	0,09	7,5	2710	280	72	950	67	1	10
2W2424###	24 DC	/	0,10	4,3	2765	280	74	1030	67	1	10
2W2456###	Prepared for Gr.2 hydraulic motor					250			/	1	10

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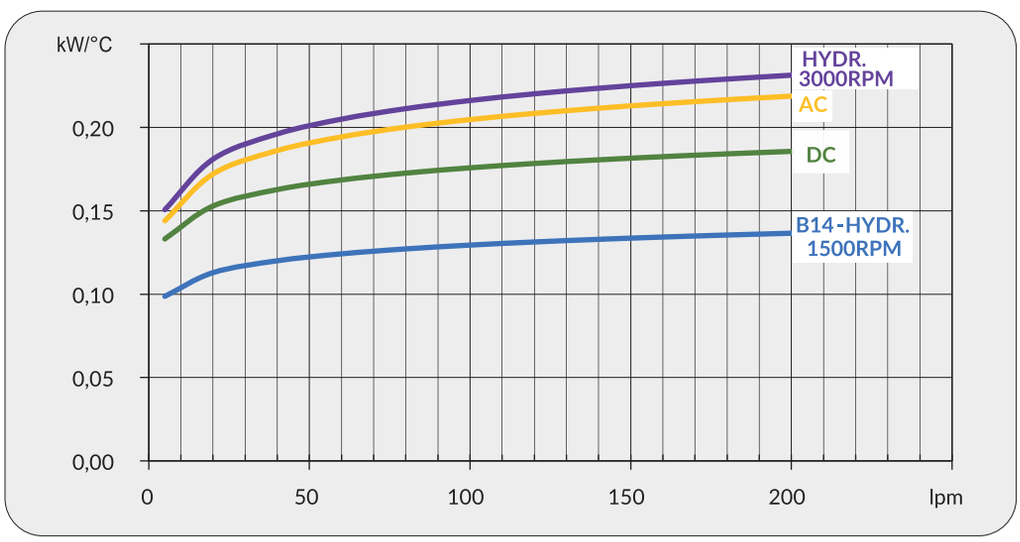
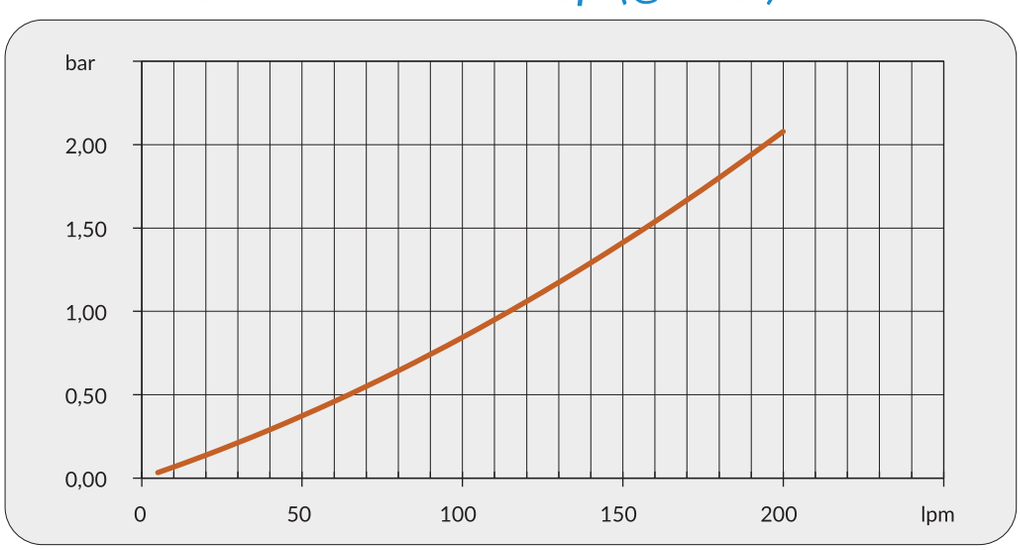
Diagramma rendimento *Performance diagram*

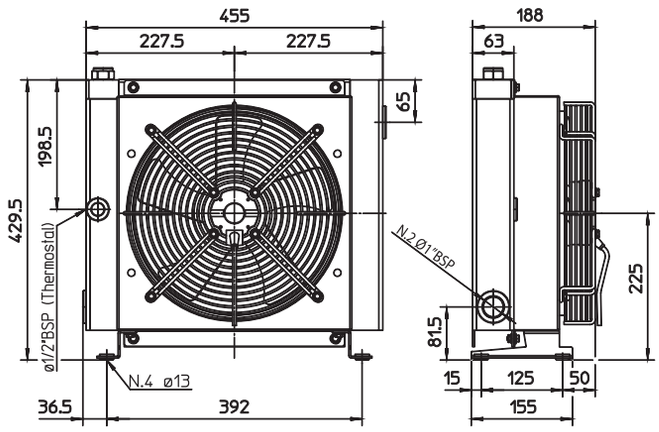


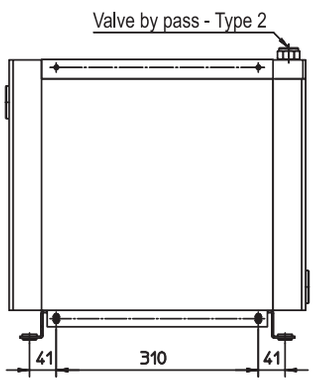
Perdite di carico *Pressure drop (@30cSt)*



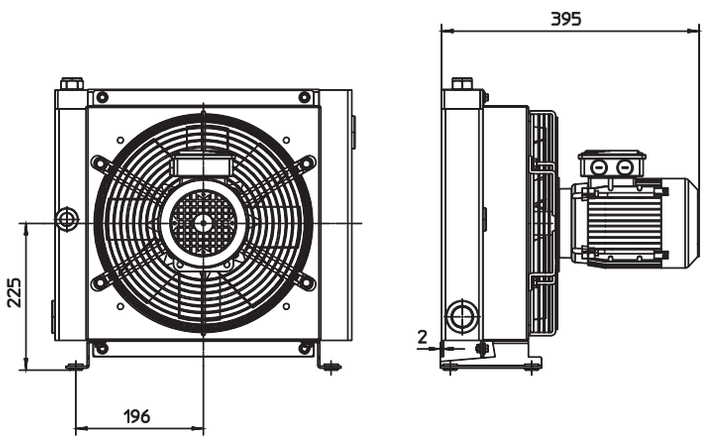
Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

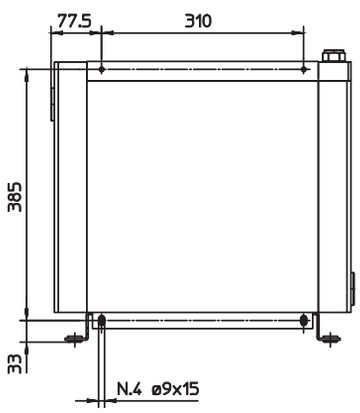
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



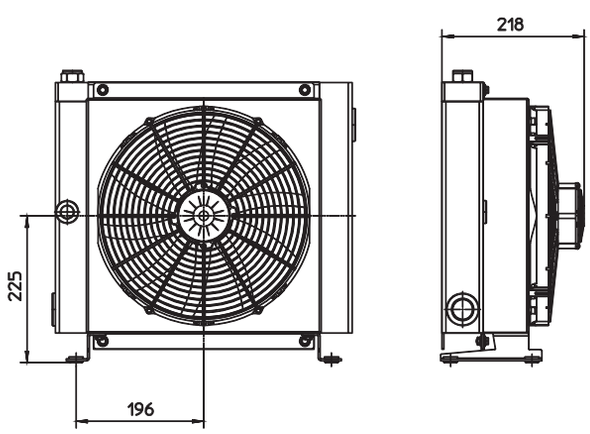


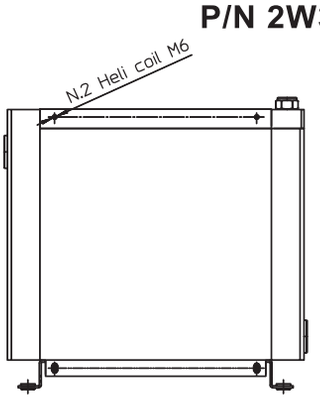
P/N 2W3001###
P/N 2W3003###



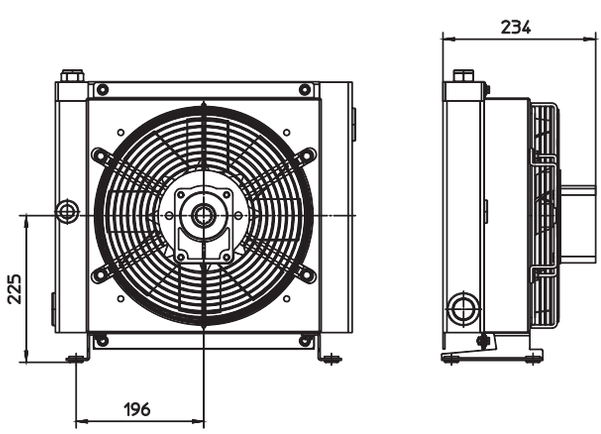


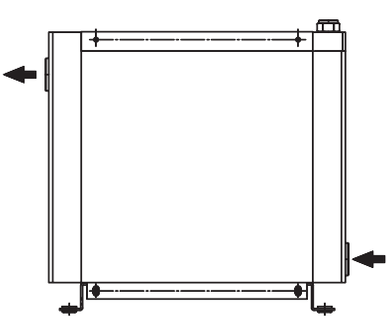
P/N 2W3004###





P/N 2W3012###
P/N 2W3024###





P/N 2W3056###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
2W3001###	230 AC	50/60	0,23/0,35	1,1/1,55	2700/3000	300	78	2220	44	1,6	15
2W3003###	230-400 AC 265-400 AC	50 60	0,21 0,30	0,62-0,36 0,84-0,48	2580 2750	300	76	2500	44	1,6	15
2W3004###	230-400 AC 265-460 AC	50 60	0,37 0,44	2,2- 1,25 2,2- 1,25	1370 1640	300	70	1850	55	1,6	20
2W3012###	12 DC	/	0,16	13,3	2660	305	80	1675	67	1,6	14
2W3024###	24 DC	/	0,18	7,4	2870	305	83	1880	67	1,6	14
2W3056###	Prepared for Gr.2 hydraulic motor					300			/	1,6	15

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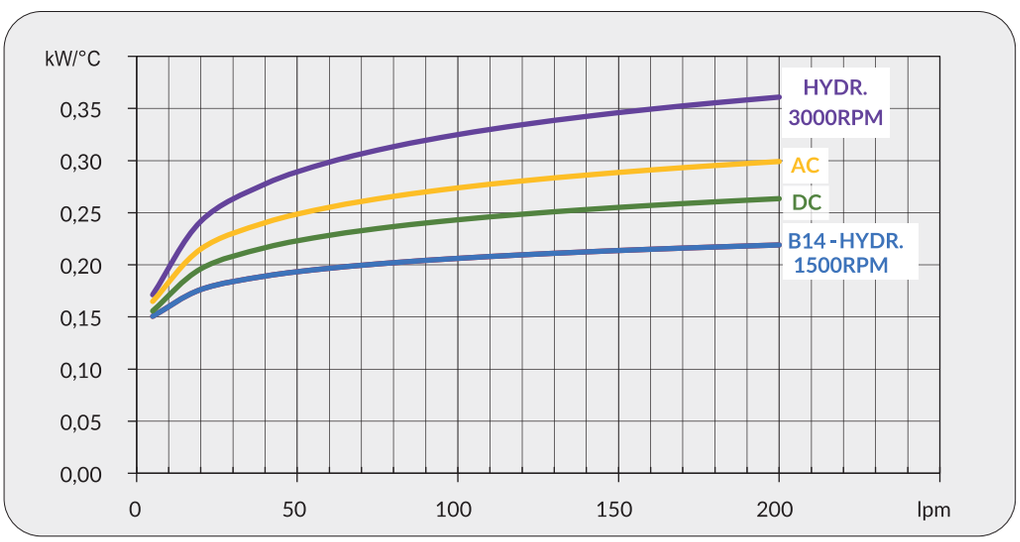
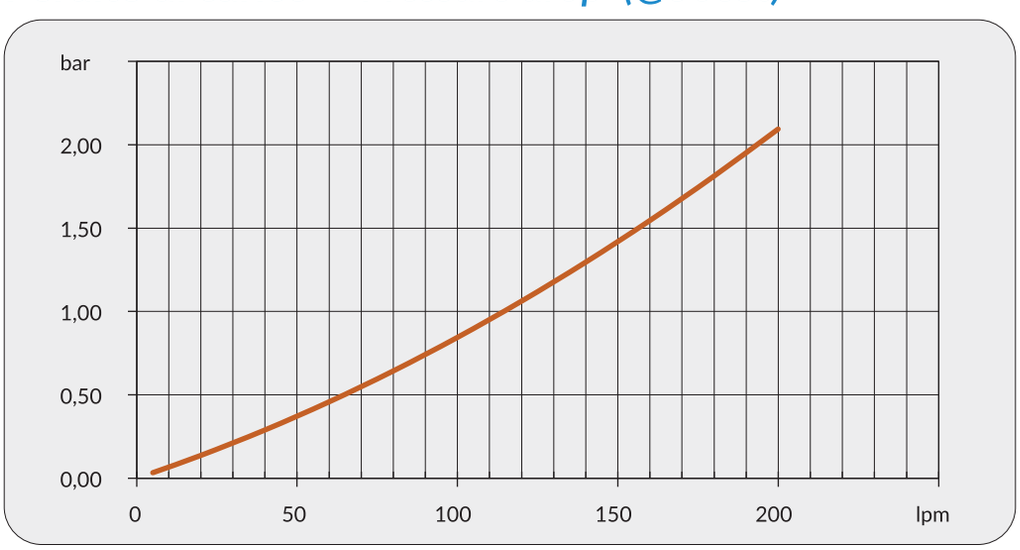
Diagramma rendimento *Performance diagram*

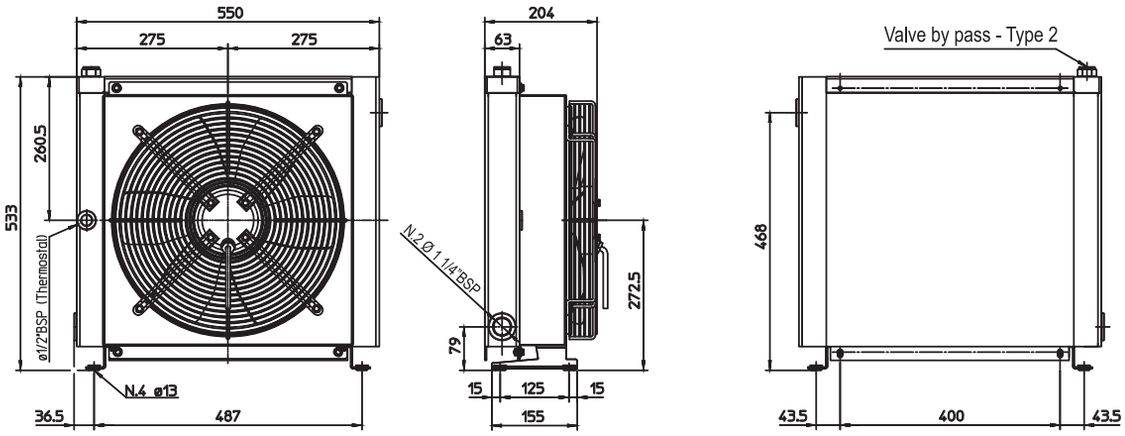


Perdite di carico *Pressure drop (@30cSt)*

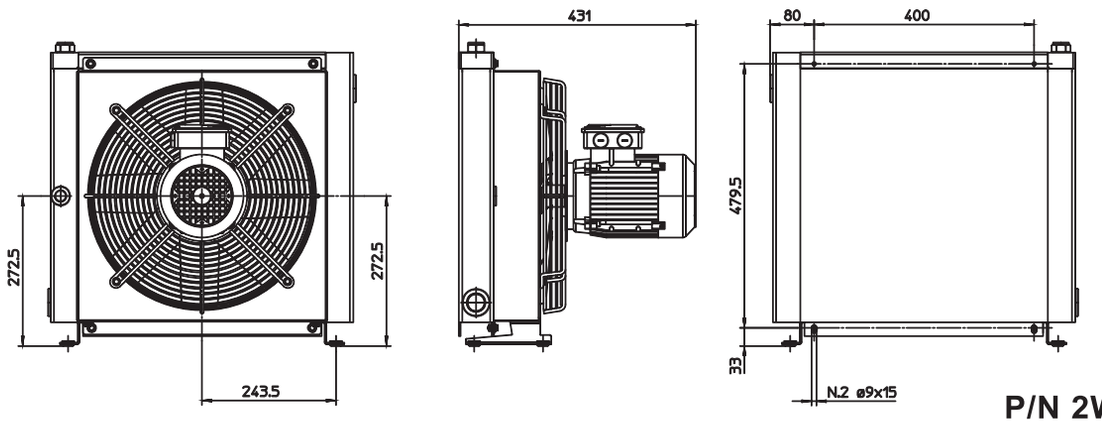


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

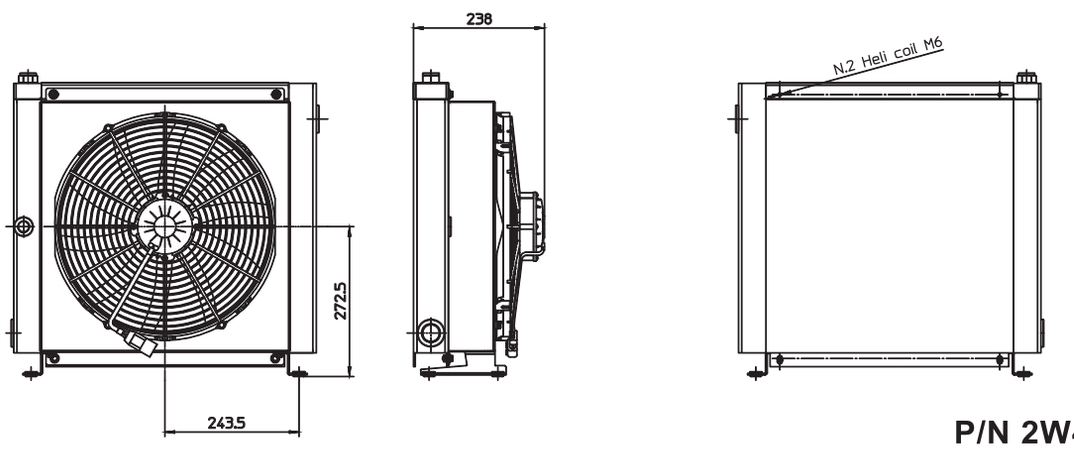
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



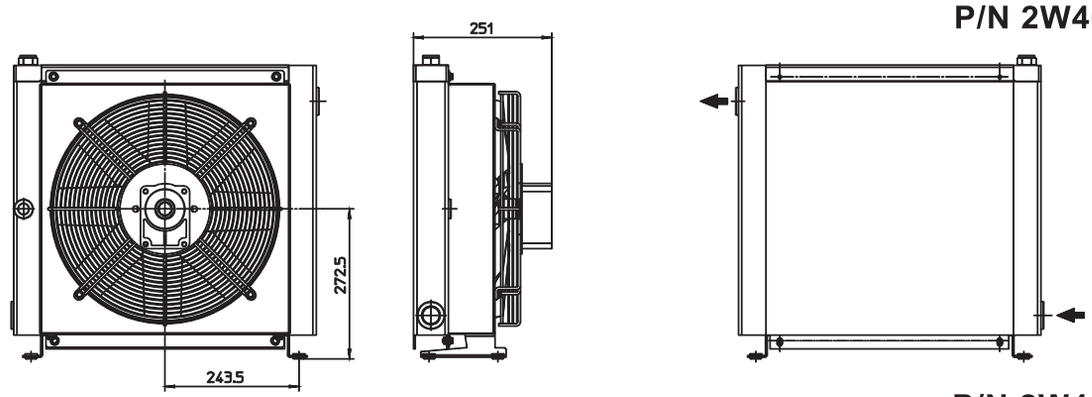
P/N 2W4001###
P/N 2W4003###



P/N 2W4004###



P/N 2W4012###
P/N 2W4024###



P/N 2W4056###

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
2W4001###	230 AC	50	0,16/0,24	0,73/1,06	1430/1700	400	71	3200	54	2,7	21
2W4003###	230-400 AC 265-400 AC	50 60	0,135 0,185	0,76/0,44 0,68/0,39	1450 1690	400	71	3200	54	2,7	21
2W4004###	230-400 AC B14 265-460 AC B14	50 60	0,55 0,63	2,9- 1,7 2,9- 1,7	1320 1690	400	77	3740	55	2,7	25
2W4012###	12 DC	/	0,22	19,2	2310	385	76	2770	67	2,7	20
2W4024###	24 DC	/	0,23	9,3	2380	385	79	2910	67	2,7	20
2W4056###	Prepared for Gr.2 hydraulic motor					400			/	2,7	19

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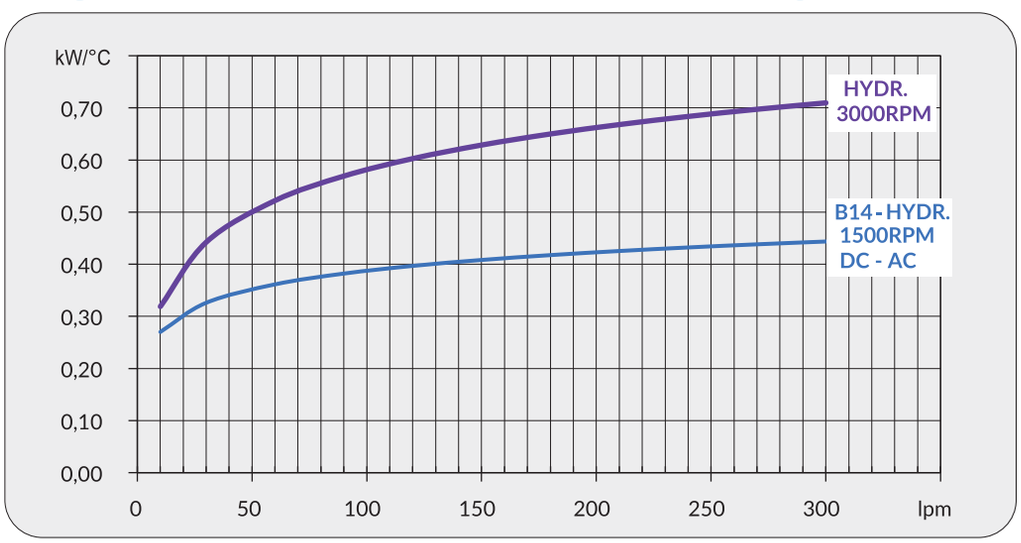
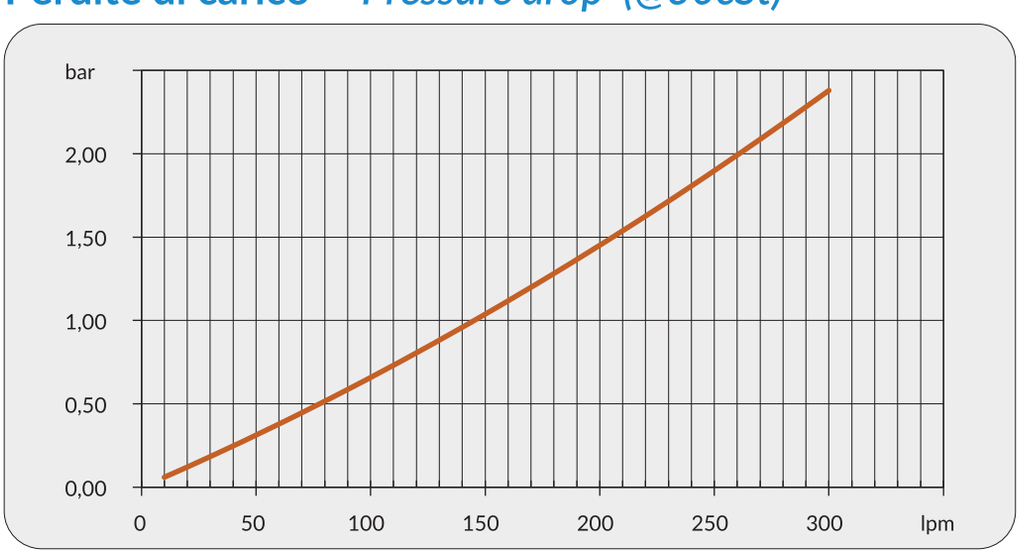
Diagramma rendimento *Performance diagram*

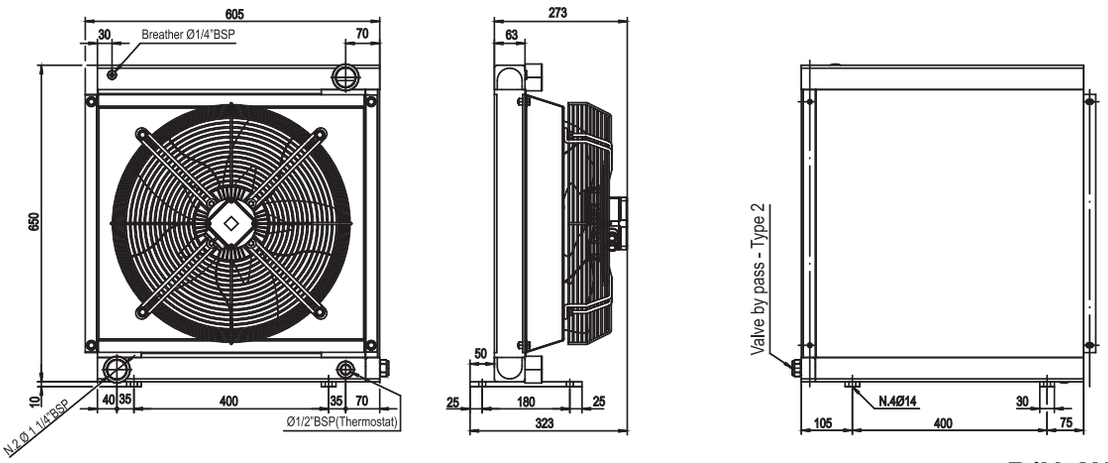


Perdite di carico *Pressure drop (@30cSt)*

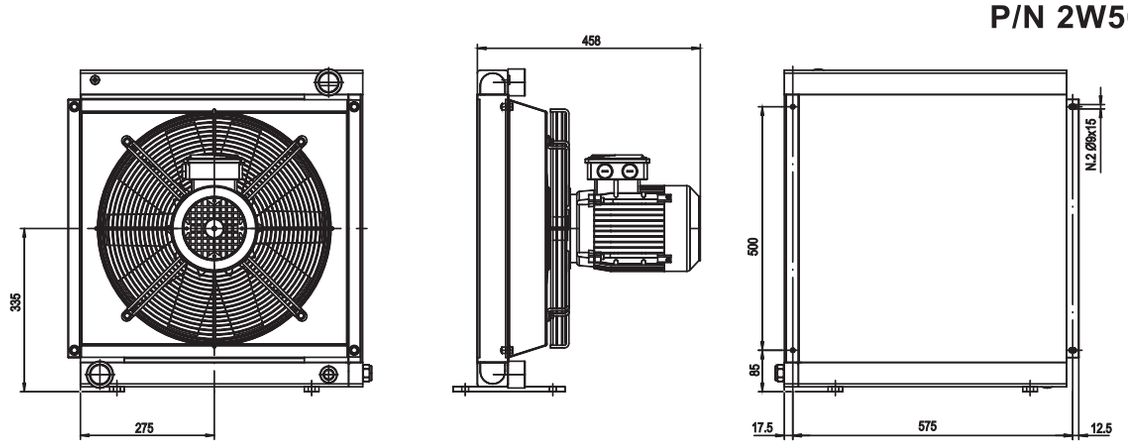


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

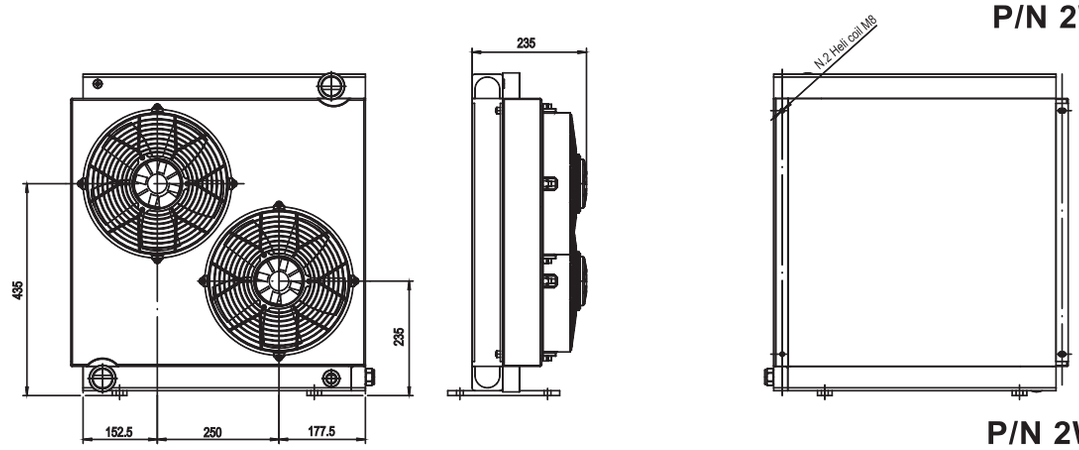
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



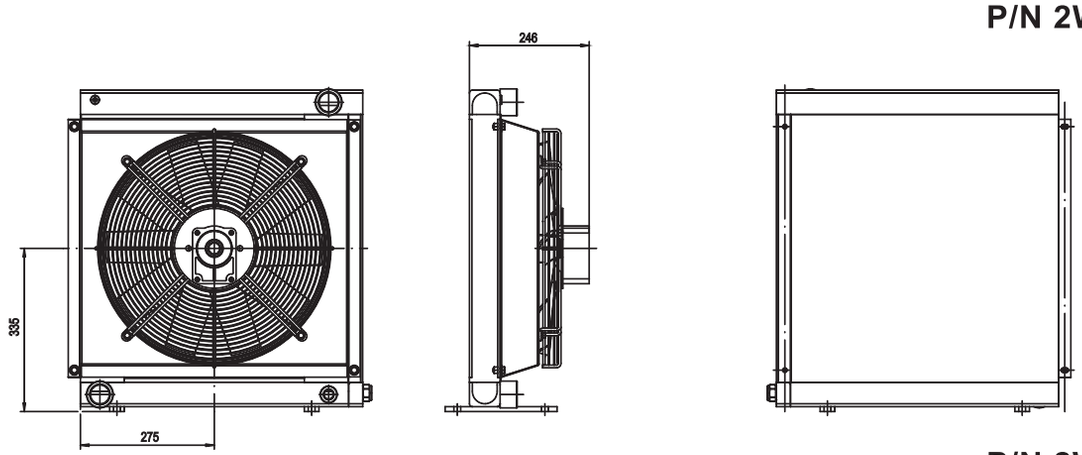
P/N 2W5003###



P/N 2W5004###



P/N 2W5012###
P/N 2W5024###



P/N 2W5056###

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m^3/ h)	IP	lt	kg
2W5003###	230-400 AC	50 /60	0,52/0,66	1,9/1,1	1450/1690	450	76	5000	54	5	27
2W5004###	230-400 AC B14 265-460 AC B14	50 60	0,75 0,86	3,0/1,7 3/1,7	1440 1750	450	79	5200	55	5	30
2W5012###	12 DC	/	0,13	11,0	2340	280	76	1720	67	5	24
2W5024###	24 DC	/	0,15	6,2	2600	280	79	1750	67	5	24
2W5056###	Prepared for Gr.2 hydraulic motor					450			/	5	23

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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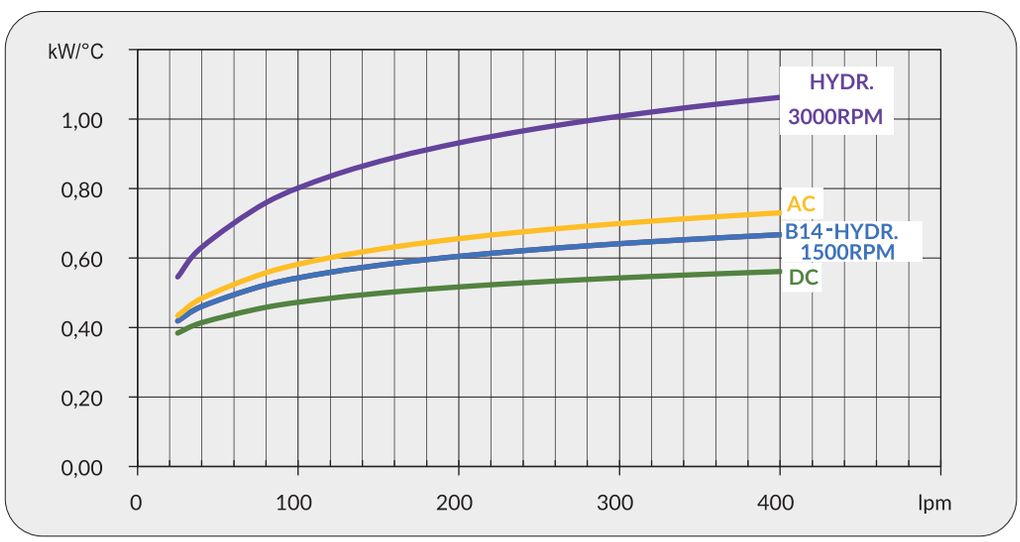
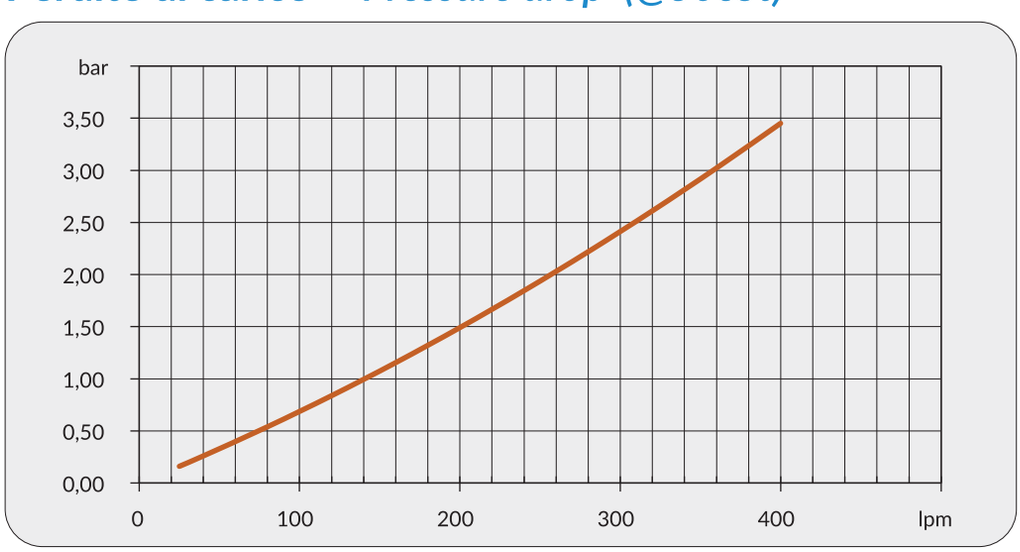
Diagramma rendimento *Performance diagram*



Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



EMMEGI®
HEAT-EXCHANGERS

Serie 2000K DRAIN

2000K DRAIN series

APPLICAZIONE

APPLICATION

Grazie all'ampia gamma di combinazioni, gli scambiatori della serie 2000K Drain si prestano come la soluzione di raffreddamento ottimale per svariate applicazioni sia mobili che industriali quali:

Thanks to the wide range of combinations, the 2000K Drain series heat exchangers are the optimal cooling solution for a wide range of mobile and industrial applications such as:



Industria agricola e forestale.	Agriculture and forestry.
Gru mobili e fisse.	Mobile and stationary cranes.
Veicoli industriali.	Industrial vehicles.
Impianti oleodinamici.	Hydraulic systems.
Macchine utensili.	Machine tools.
Movimentazione materiali.	Material handling.
Altro su richiesta.	Others on request.

Punto di forza di questi prodotti è l'elevata efficenza con basse portate di olio.

The main characteristic of this heat exchanger is the high efficiency with low oil flows.











Modulo richiesta dati

Sheet for cooler selection

CLIENTE *COMPANY*	
RICHIEDENTE *NAME*	

TIPOLOGIA FLUIDO *FLUID TYPE*		
PORTATA *FLOW RATE*	**lpm**	
POTENZA INSTALLATA *INSTALLED POWER*	**kW**	
POTENZA DA DISSIPARE *POWER TO BE DISSIPATED*	**kW**	
TEMPERATURA INGRESSO *INLET TEMPERATURE*	**°C**	
TEMPERATURA ARIA MAX *MAX AMBIENT TEMPERATURE*	**°C**	
PRESSIONE DI LAVORO *WORKING PRESSURE*	**bar**	

TIPO DI VENTILAZIONE *TYPE OF FAN UNIT*

- **CC** *DC*
  - **12V**
    - **24V**
- **PREDISPOSTO MOTORE IDRAULICO** *PREPARED FOR HYDRAULIC MOTOR*
  - **GR.2**
- **CA** *AC*
  - **MONOFASE 230V** *SINGLEPHASE 230V*
  - **TRIFASE** **230/400V** **265/460V** *THREEPHASE 230/400V 265/460V*
    - **TENSIONE SPECIALE** *SPECIAL VOLTAGE*
      - **50 Hz** **60 Hz**

Denominazione codice prodotto

Ordering code

2Z24 **03** **2** **01**

MODELLO *COOLER MODEL*

2Z24 (DRAIN 2024K)

TIPO DI MOTORIZZAZIONE *FAN MOTOR TYPE*

01 AC 230V 50/60 Hz
03 AC 230-400V-50Hz / AC 230-400-60Hz
04 AC 230-400V-50Hz (B14) / AC 265-460V- 60Hz (B14)
12 DC 12V
24 DC 24V
56 Pred. per mot. idr. gr. 2 Prep. for hydr. mot. gr. 2

TERMOSTATI *THERMOSTATS*

0	Senza termostato	*Whitout thermostat*	
1	Termostato fisso	*Fixed thermostat*	40-28°
2	Termostato fisso	*Fixed thermostat*	*50-38°*
3	Termostato fisso	*Fixed thermostat*	*60-48°*
4	Termostato fisso	*Fixed thermostat*	*70-58°*
5	Termostato fisso	*Fixed thermostat*	*80-68°*
6	Termostato fisso	*Fixed thermostat*	*90-78°*
8	Termostato regolabile *Adjustable thermostat*		*0-90° (TC2)*
9	Termostato regolabile collegato *Connected adjustable thermostat*		0-120° (TR2)

TIPO DI VENTILAZIONE *VENTILATING TYPE*

01 Aspirante Suction air flow
02 Soffiante Blowing air flow

Modello - Codice prodotto

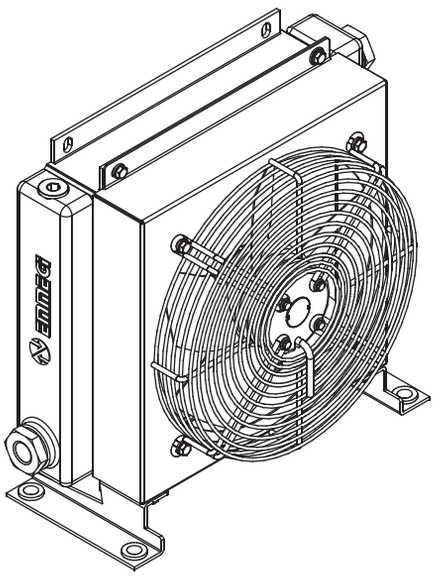
Cooler model - Code

Serie DRAIN - *DRAIN Series*

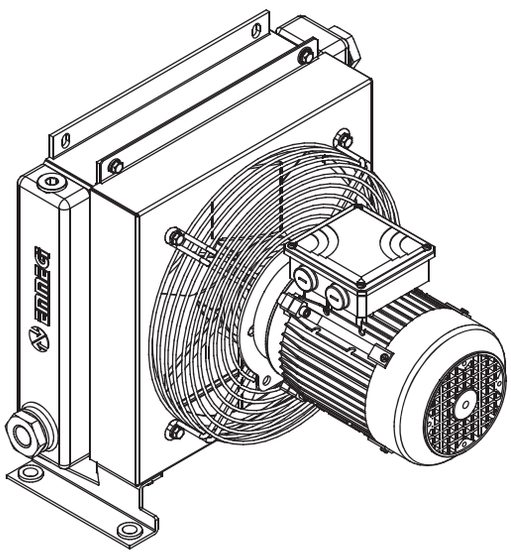
Modello *Model*	Codice *Code*
DRAIN 2010K	*2Z10*
DRAIN 2015K	*2Z15*
DRAIN 2020K	*2Z20*
DRAIN 2024K	*2Z24*
DRAIN 2030K	*2Z30*
DRAIN 2040K	*2Z40*
DRAIN 2050K	*2Z50*



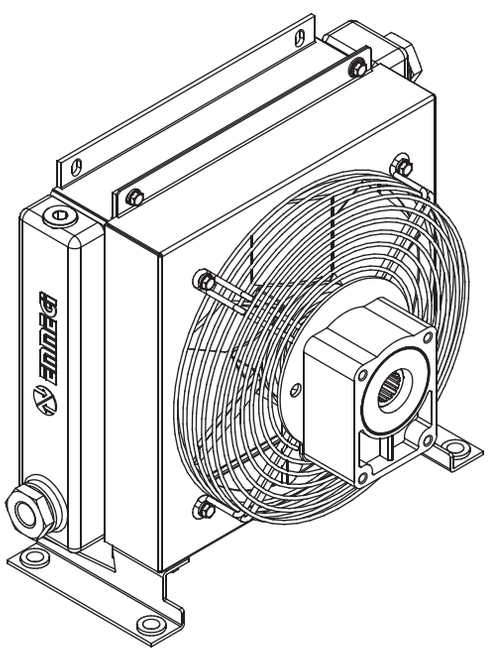




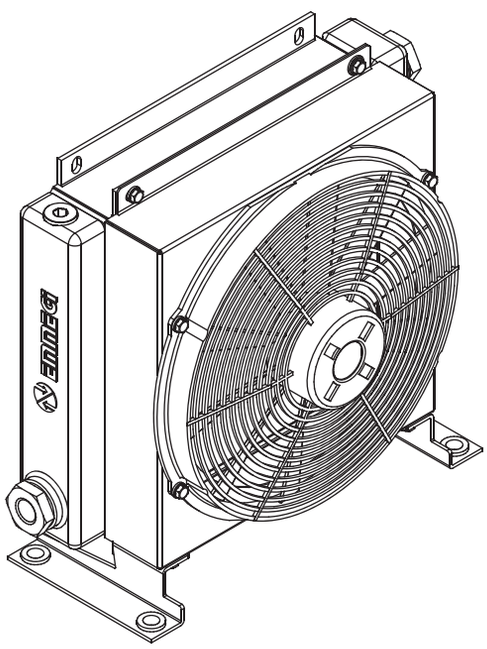
AC 230V 50/60 Hz
AC 230-400V 50/60Hz



AC 230-400V 50 Hz (B14)
AC 265-460V 60 Hz (B14)



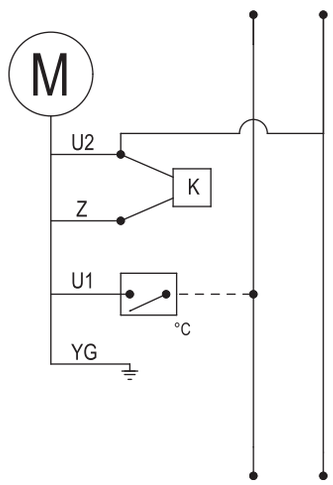
Pred. per mot. idr. gr. 2
Pred for Gr.2 hydraulic mot.



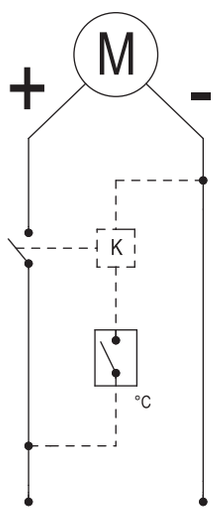
DC 12-24V

Collegamenti elettrici
Electric Wiring

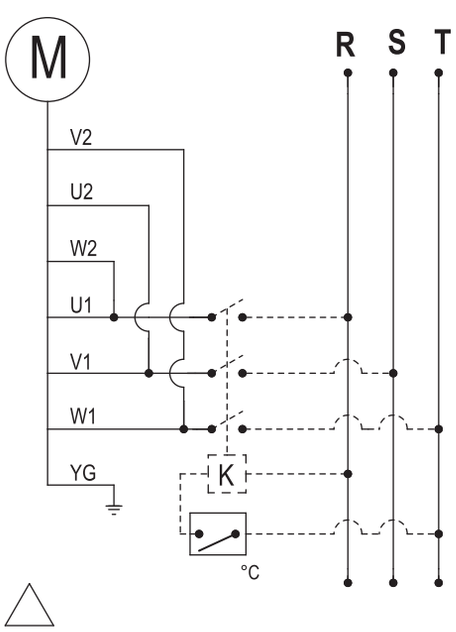
COLLEGAMENTO ELETTRICO 230V MON. AC
230V AC 1PH. ELECTRIC WIRING



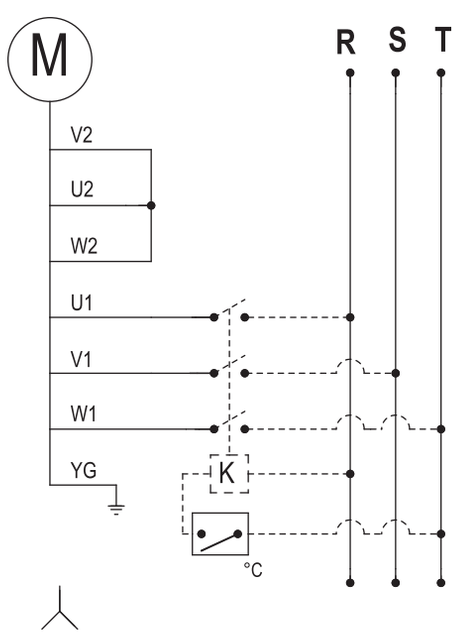
COLLEGAMENTO ELETTRICO 12-24V DC
12-24V DC ELECTRIC WIRING

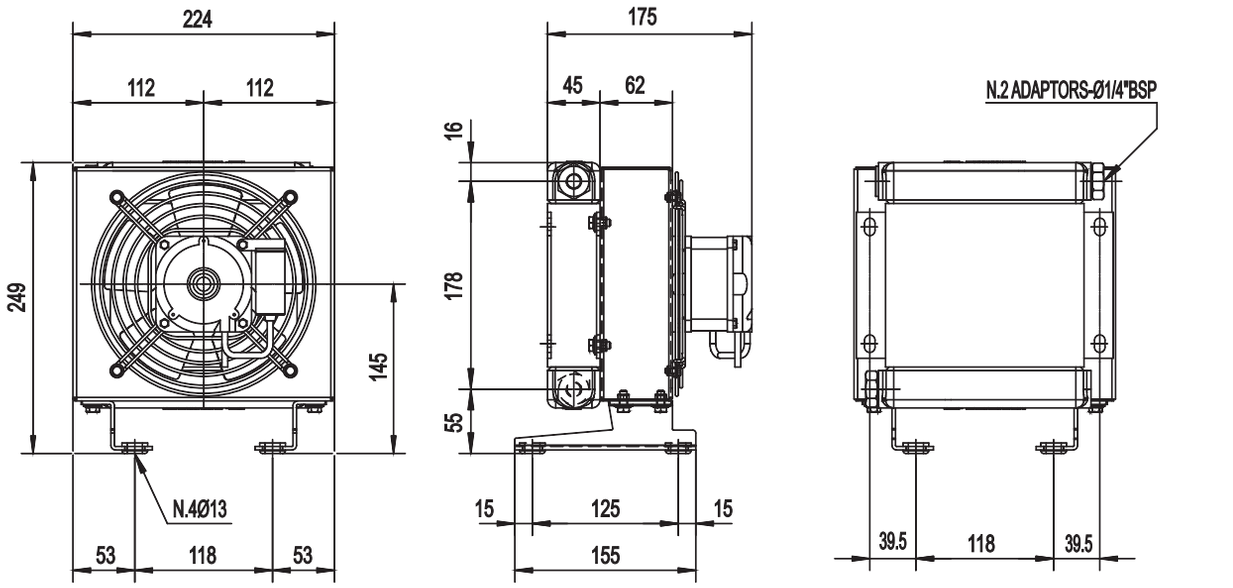


COLLEGAMENTO ELETTRICO 230V AC TRIF.
230V AC 3PH ELECTRIC WIRING

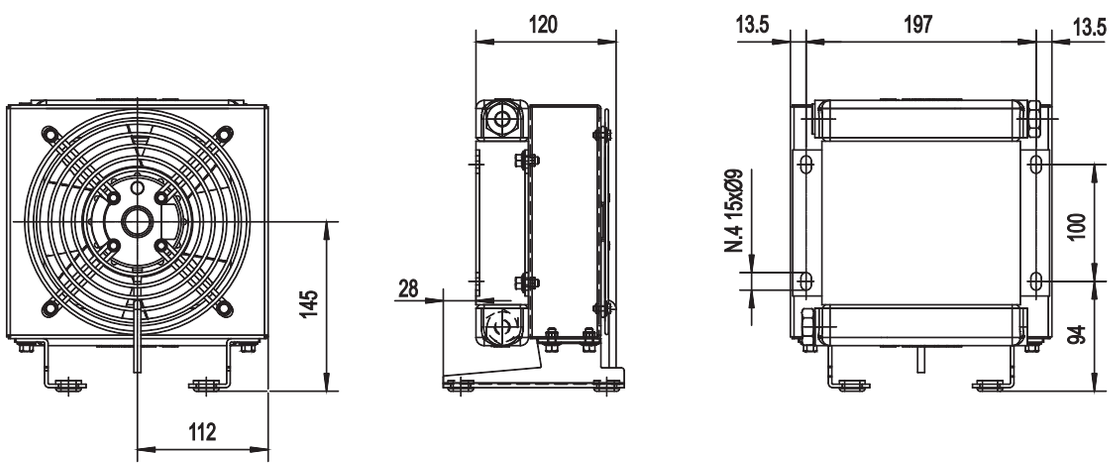


COLLEGAMENTO ELETTRICO 400/460V AC TRIF.
400/460V AC THREEPHASE ELECTRIC WIRING

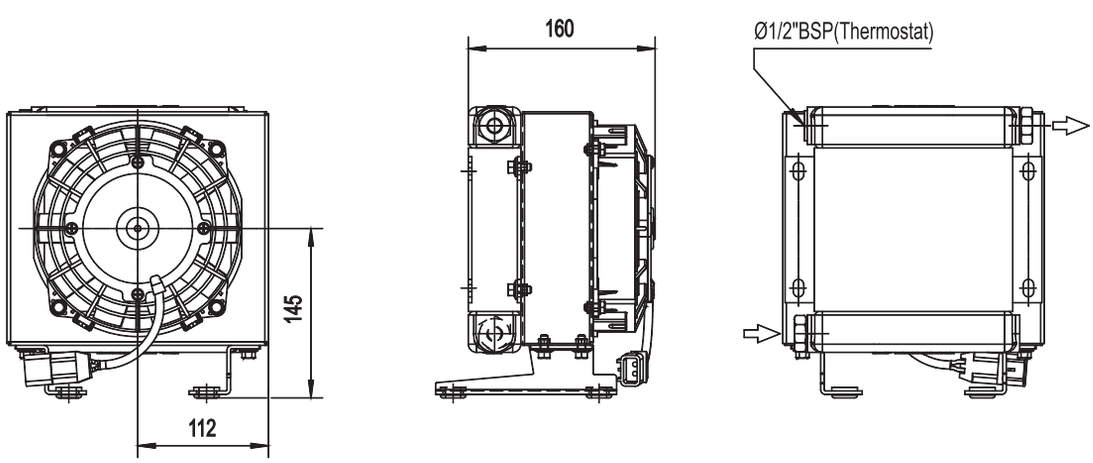




P/N 2Z1001###



P/N 2Z1003###



P/N 2Z1012###
P/N 2Z1024###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m^3/ h)	IP	It	kg
2Z1001###	230 AC	50/60	0,010/0,047	0,21	2500	175	67	235	54	0,3	6
2Z1003###	230-400 AC 230-400 AC	50 60	0,045 0,043	0,23 - 0,13 0,16 - 0,09	2750 3100	175	63	190	54	0,3	6
2Z1012###	12 DC	/	0,06	5,2	3860	167	75	410	67	0,3	5
2Z1024###	24 DC	/	0,06	2,3	4045	167	75	410	67	0,3	5

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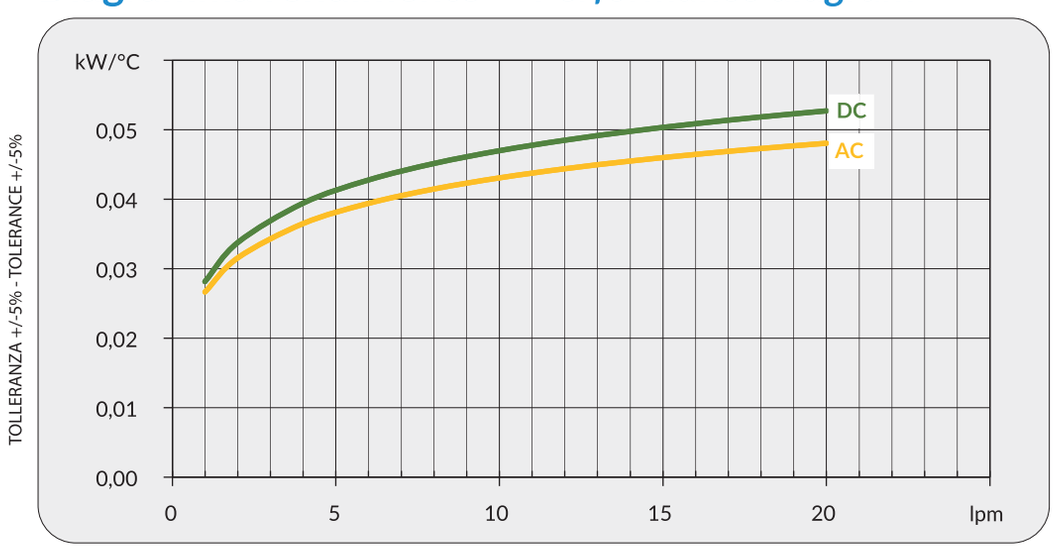
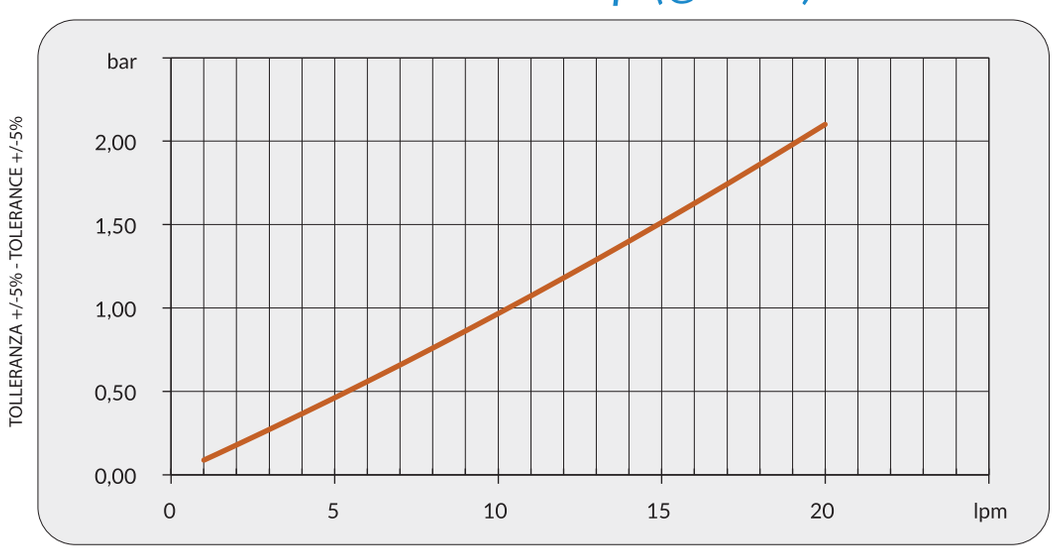
Diagramma rendimento *Performance diagram*



Perdite di carico *Pressure drop (@30cSt)*

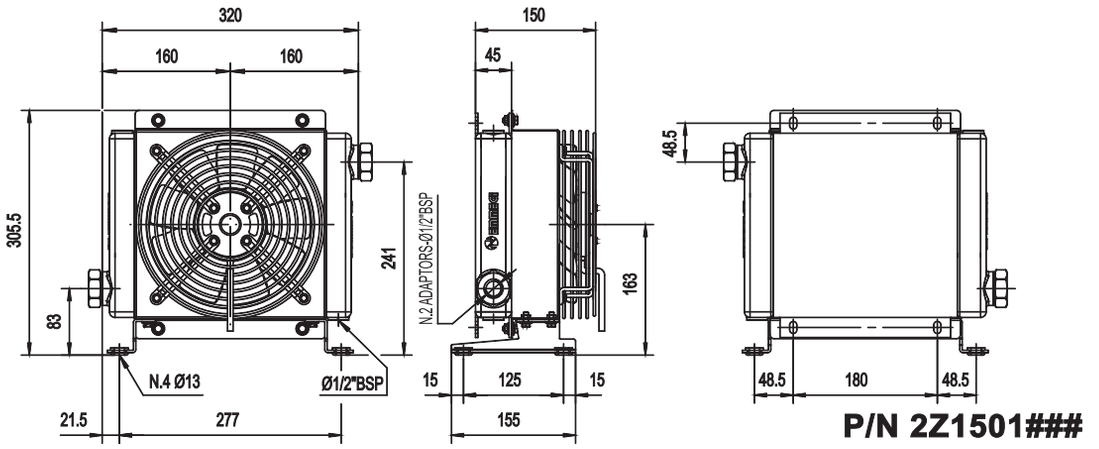


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

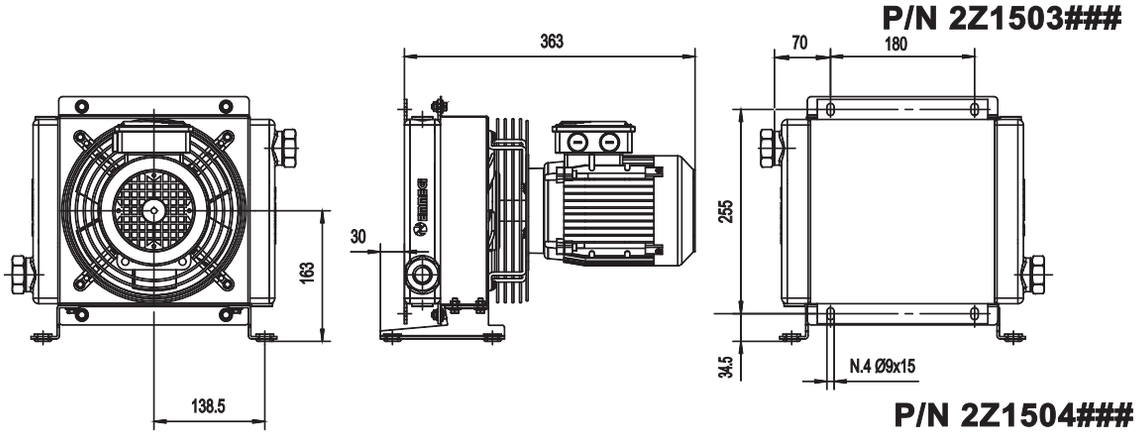
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

2000K DRAIN

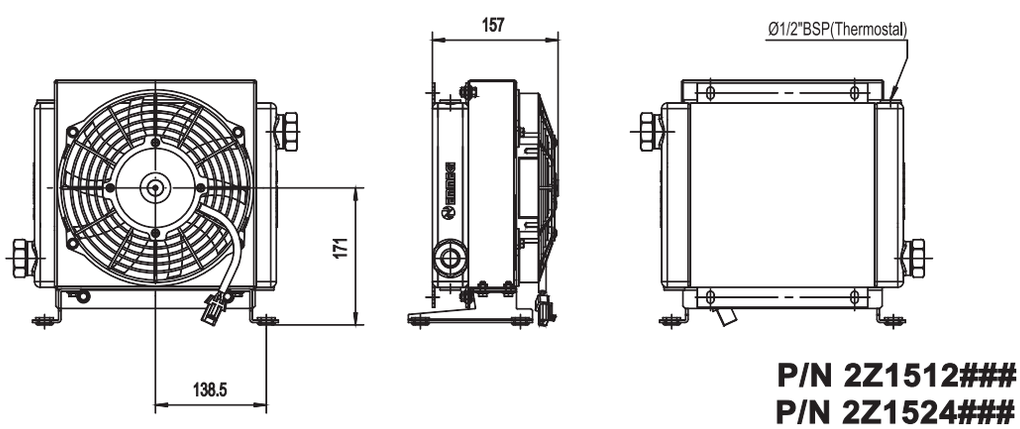
2015K DRAIN



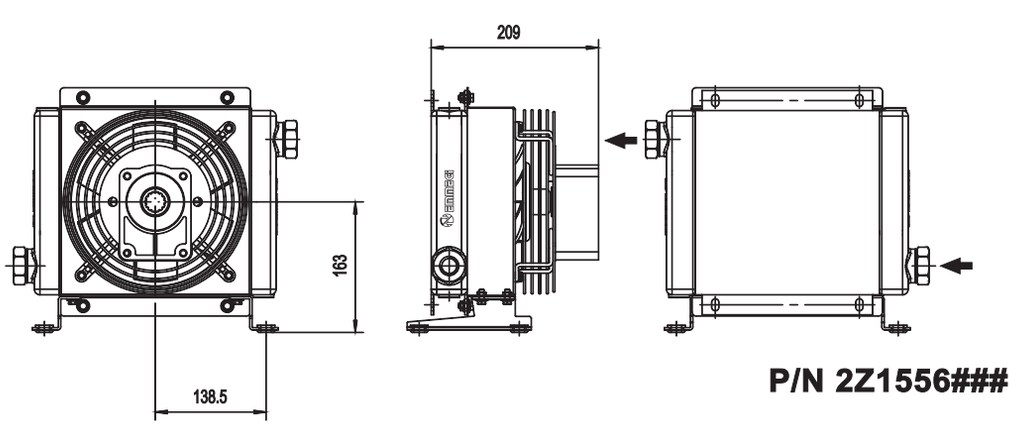
P/N 2Z1501###
P/N 2Z1503###



P/N 2Z1504###



P/N 2Z1512###
P/N 2Z1524###



P/N 2Z1556###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
2Z1501###	230 AC	50/60	0,050/0,061	0,24 - 0,28	2740-3120	200	68	700	44	0,5	7
2Z1503###	230-400 AC 230-400 AC	50 60	0,068 0,070	0,29 - 017 0,23 - 0,13	2500 2650	200	69	720	44	0,5	7
2Z1504###	230-400 AC B14 265-460 AC B14	50 60	0,25 0,29	1,7 - 1 1,7 - 1	1350 1620	200	61	415	55	0,5	10
2Z1512###	12 DC	/	0,08	6,4	2770	225	72	790	67	0,5	6,5
2Z1524###	24 DC	/	0,09	3,9	2900	225	73	865	67	0,5	6,5
2Z1556###	Prepared for Gr.2 hydraulic motor					200			/	0,5	6

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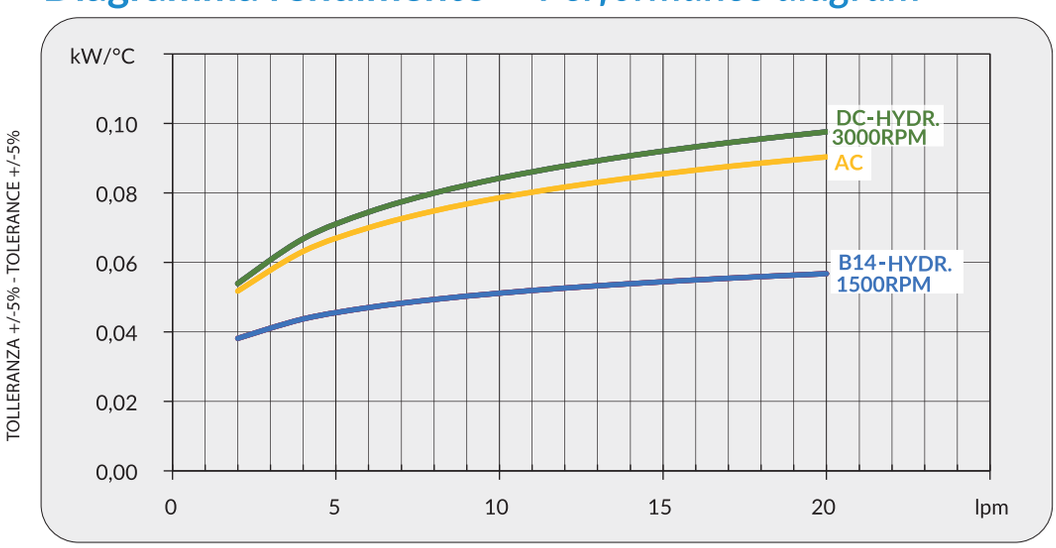
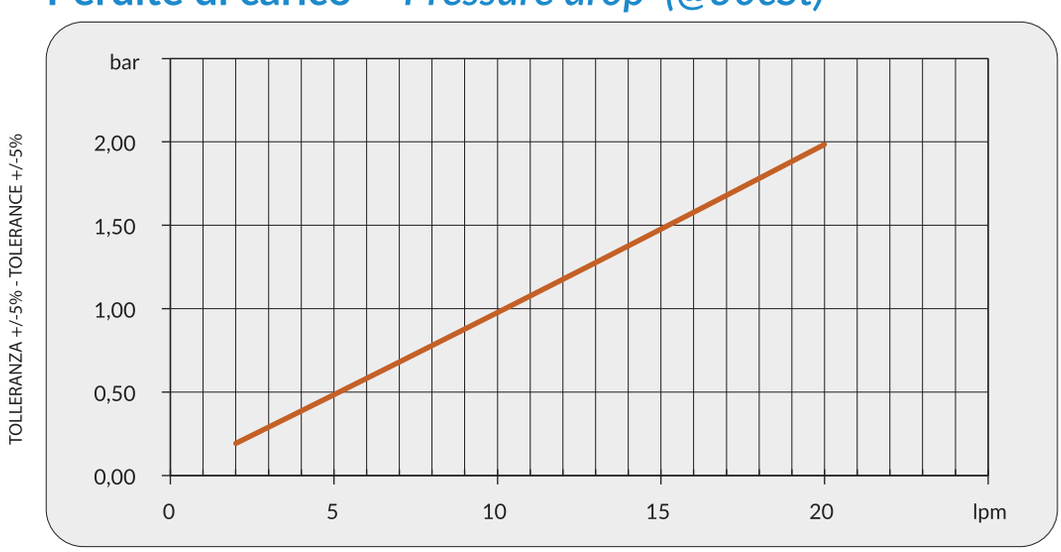
Diagramma rendimento *Performance diagram*



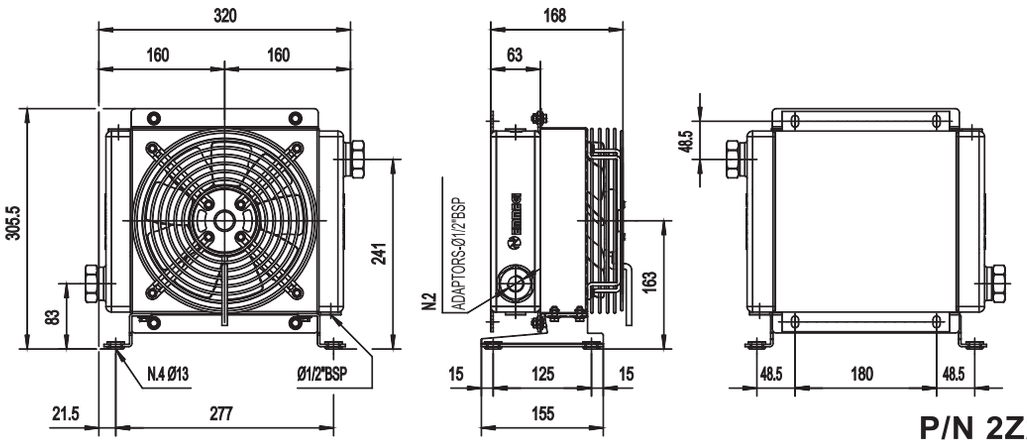
Perdite di carico *Pressure drop (@30cSt)*



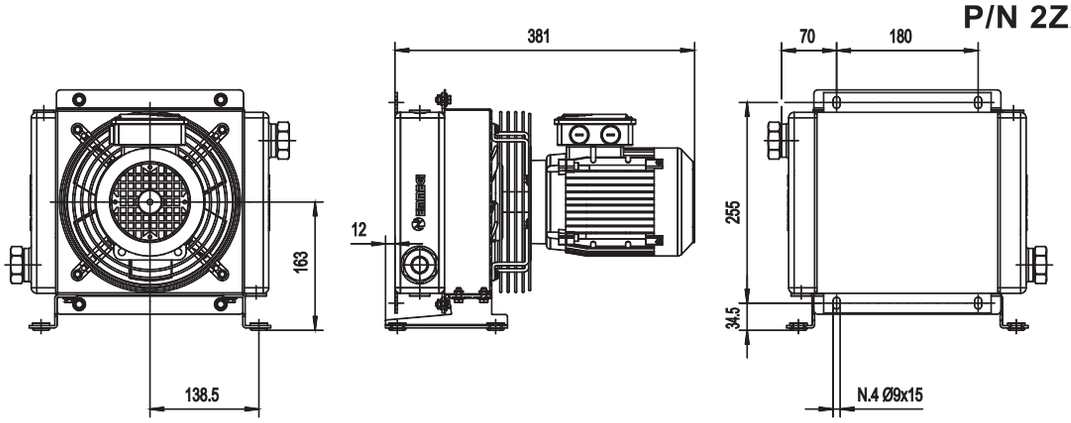
Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

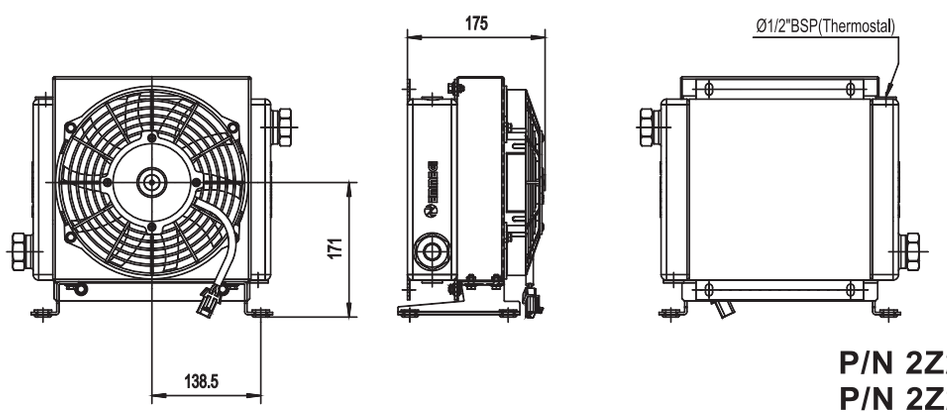
2000K DRAIN
2020K DRAIN



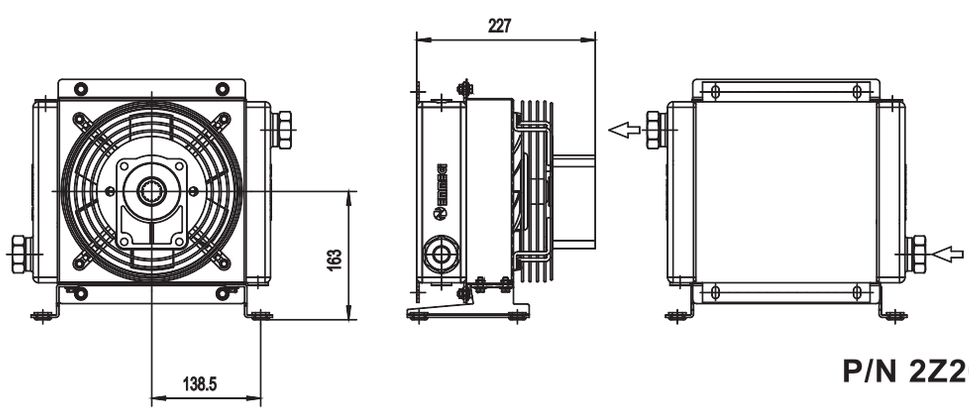
P/N 2Z2001###
P/N 2Z2003###



P/N 2Z2004###



P/N 2Z2012###
P/N 2Z2024###



P/N 2Z2056###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
2Z2001###	230 AC	50/60	0,050/0,061	0,24 - 0,28	2740-3120	200	68	675	44	0,7	8
2Z2003###	230-400 AC 230-400 AC	50 60	0,068 0,070	0,29 - 017 0,23 - 0,13	2500 2650	200	68	645	44	0,7	8
2Z2004###	230-400 B14 265-460 B14	50 60	0,25 0,29	1,7 - 1 1,7 - 1	1350 1620	200	64	390	55	0,7	11
2Z2012###	12 DC	/	0,08	6,4	2770	225	72	720	67	0,7	7
2Z2024###	24 DC	/	0,09	3,9	2900	225	72	750	67	0,7	7
2Z2056###	Prepared for Gr.2 hydraulic motor					200			/	0,7	7

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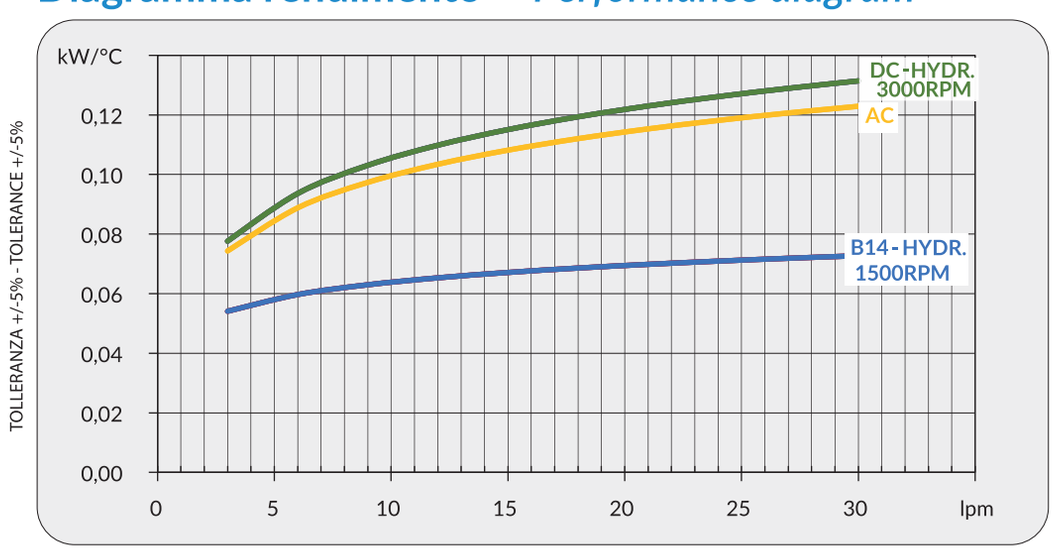
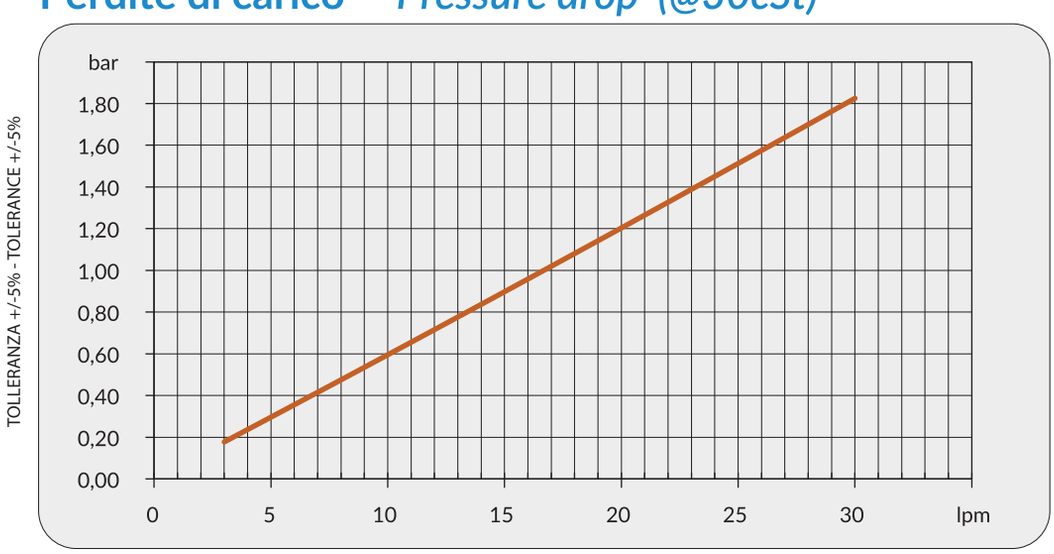
Diagramma rendimento *Performance diagram*



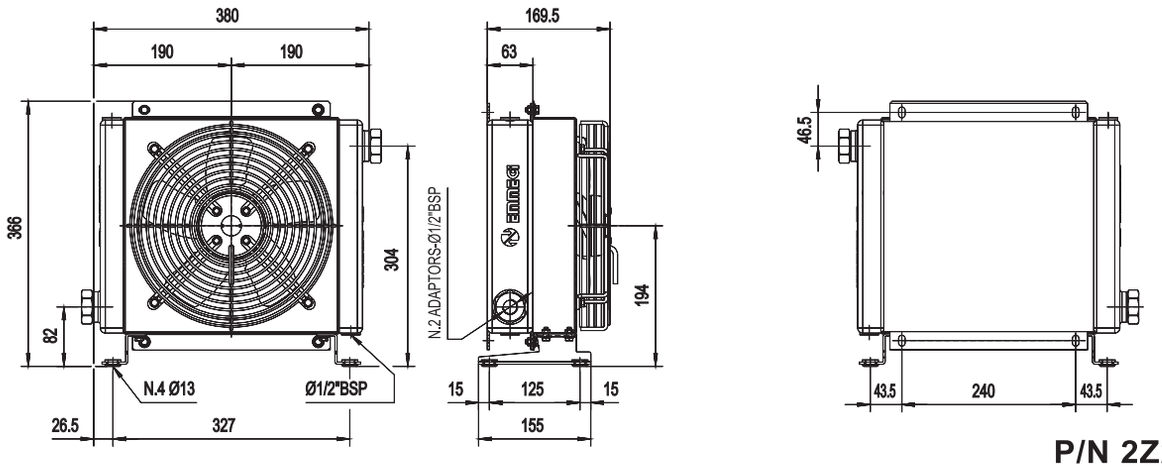
Perdite di carico *Pressure drop (@30cSt)*



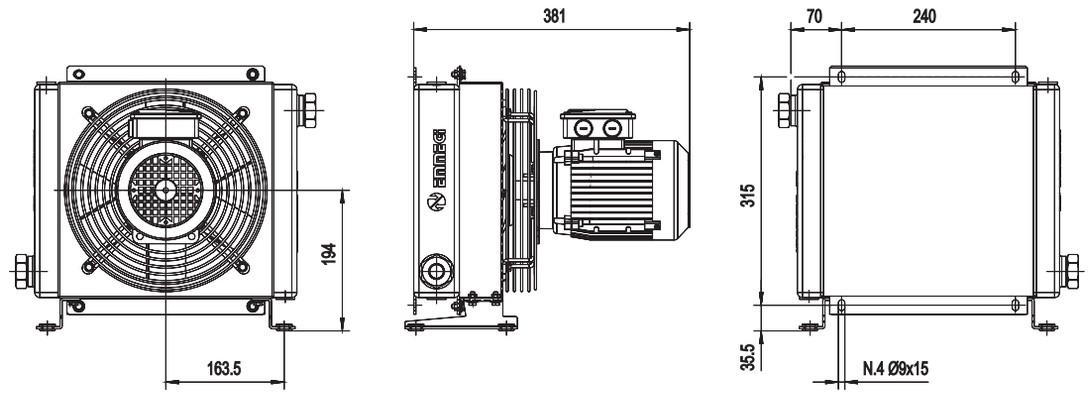
Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

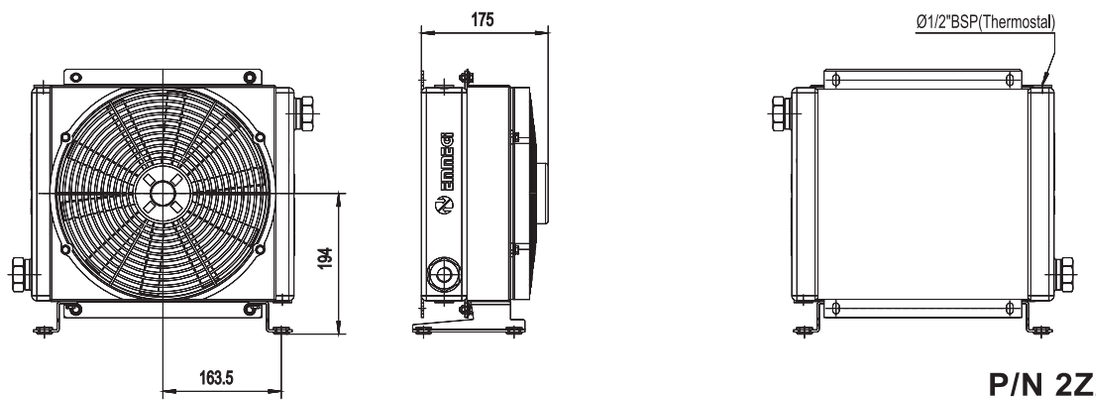
2000K DRAIN
2024K DRAIN



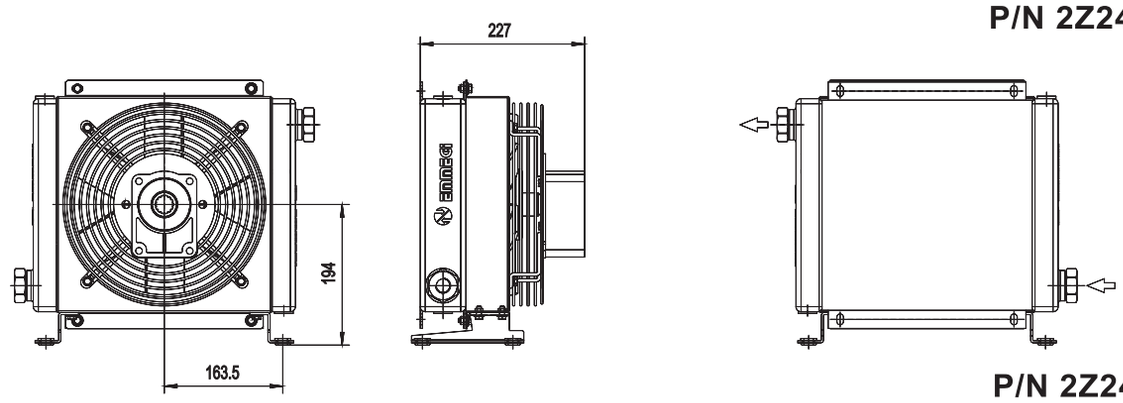
P/N 2Z2401###
P/N 2Z2403###



P/N 2Z2404###



P/N 2Z2412###
P/N 2Z2424###



P/N 2Z2456###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
2Z2401###	230 AC	50/60	0,115/0,150	0,51 - 0,66	2450 - 2600	250	72	1350	44	1	11
2Z2403###	230-400 AC 230-400 AC	50 60	0,105 0,145	0,33 - 0,19 0,39 - 0,23	2600 2900	250	72	1300	44	1	11
2Z2404###	230-400 B14 265-460 B14	50 60	0,25 0,29	1,7 - 1 1,7 - 1	1350 1620	250	64	1000	55	1	16
2Z2412###	12 DC	/	0,09	7,5	2710	280	72	950	67	1	10
2Z2424###	24 DC	/	0,10	4,3	2765	280	74	1030	67	1	10
2Z2456###	Prepared for Gr.2 hydraulic motor					250			/	1	10

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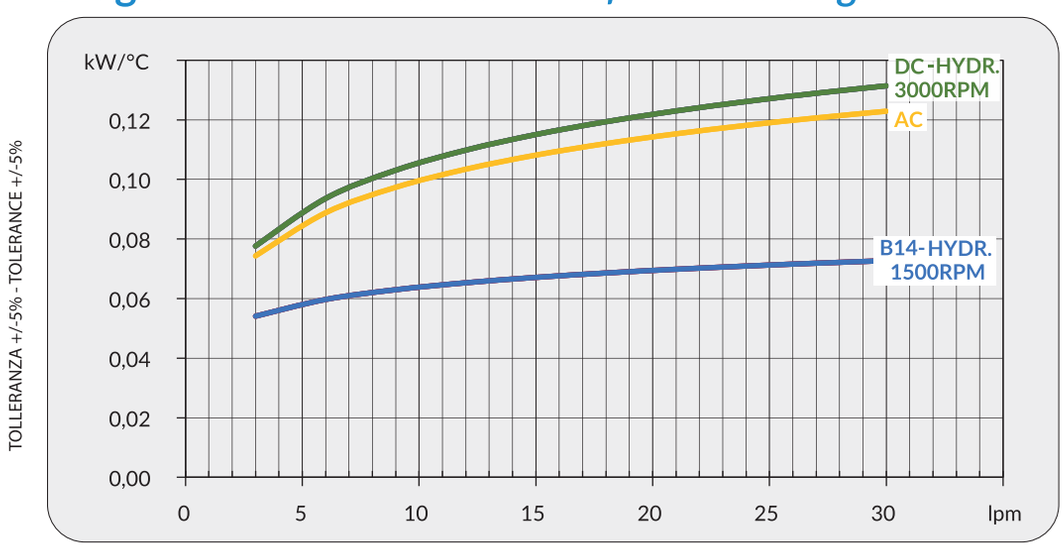
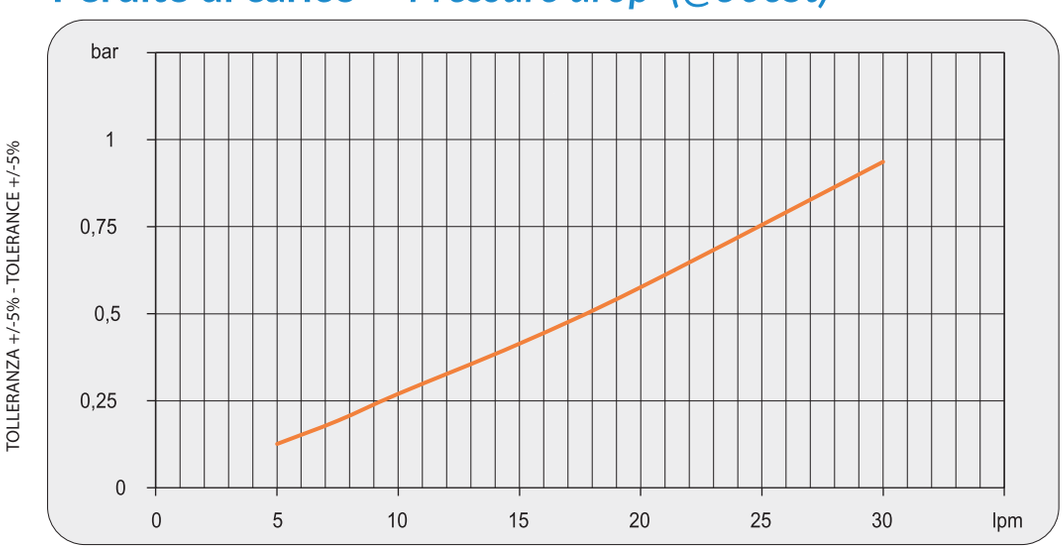
Diagramma rendimento *Performance diagram*



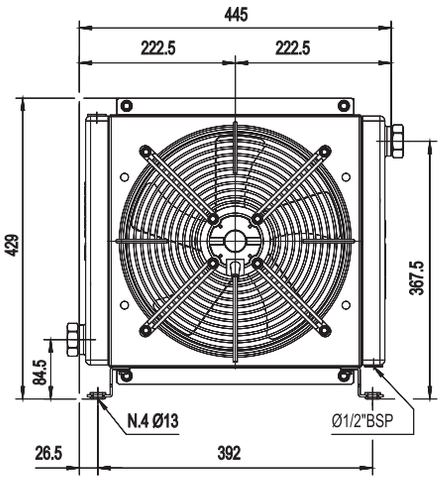
Perdite di carico *Pressure drop (@30cSt)*

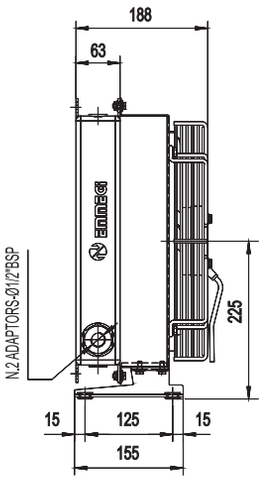


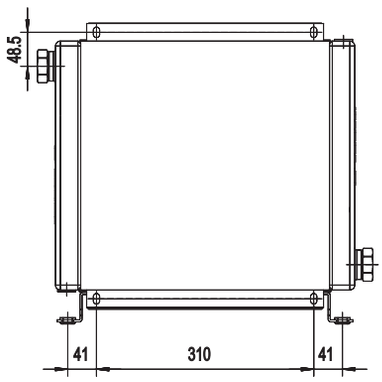
Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

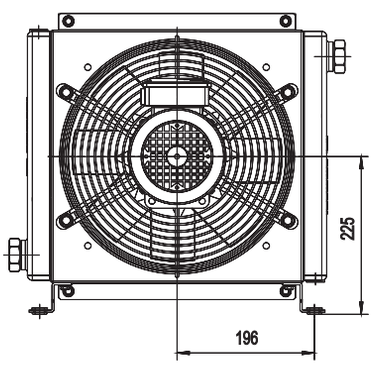
2000K DRAIN
2030K DRAIN

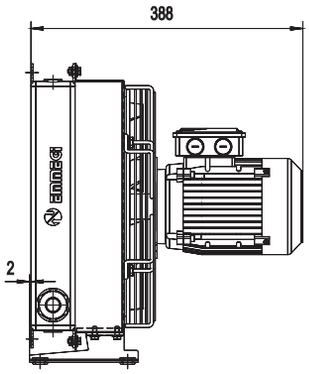


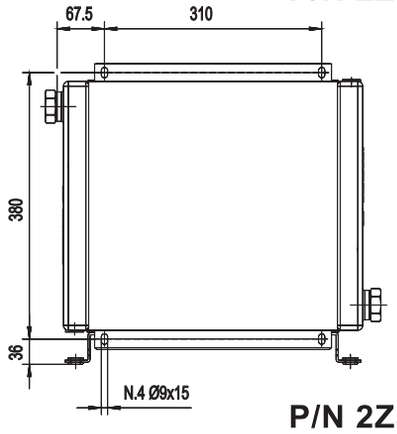




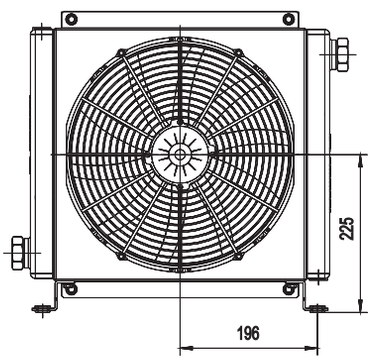
P/N 2Z3001###
P/N 2Z3003###

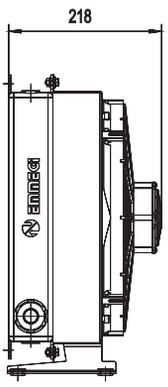


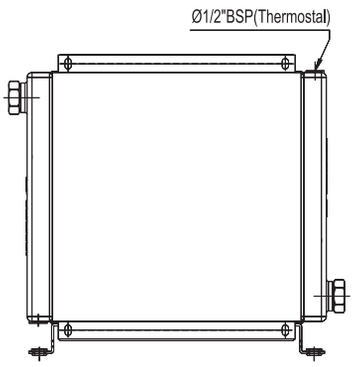




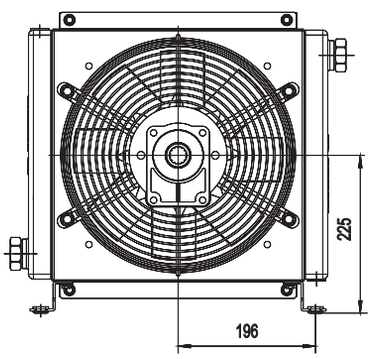
P/N 2Z3004###

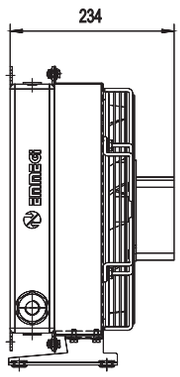


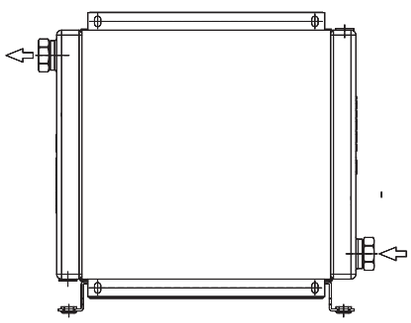




P/N 2Z3012###
P/N 2Z3012###







P/N 2Z3056###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
2Z3001###	230 AC	50/60	0,23/0,35	1,1 - 1,55	2700 - 3000	300	78	2220	44	1,6	15
2Z3003###	230-400 AC 230-400 AC	50 60	0,21 0,30	0,62 - 0,36 0,84 - 0,48	2580 2750	300	76	2500	44	1,6	15
2Z3004###	230-400 B14 265-460 B14	50 60	0,37 0,43	2,1 - 1,1 2,1 - 1,1	1370 1650	300	70	1850	55	1,6	20
2Z3012###	12 DC	/	0,16	13,3	2660	305	80	1675	67	1,6	14
2Z3024###	24 DC	/	0,18	7,4	2870	305	83	1880	67	1,6	14
2Z3056###	Prepared for Gr.2 hydraulic motor					300			/	1,6	15

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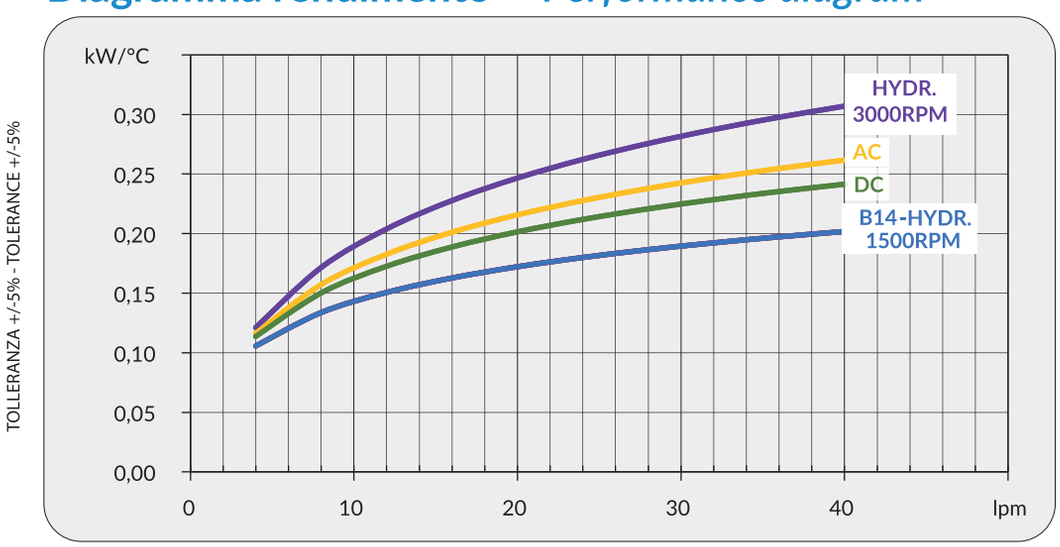
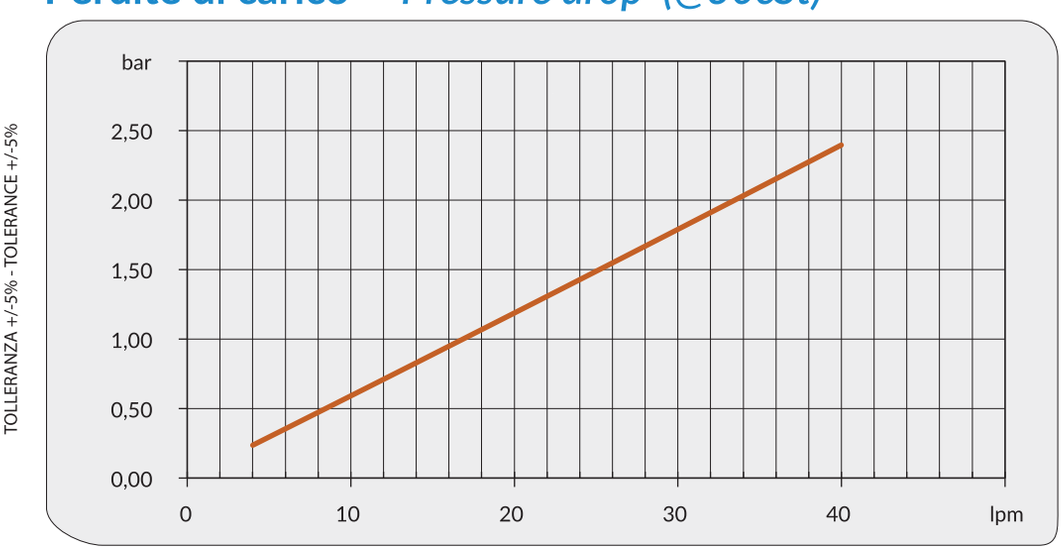
Diagramma rendimento *Performance diagram*



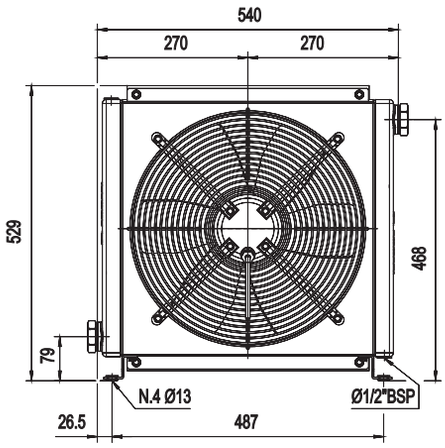
Perdite di carico *Pressure drop (@30cSt)*

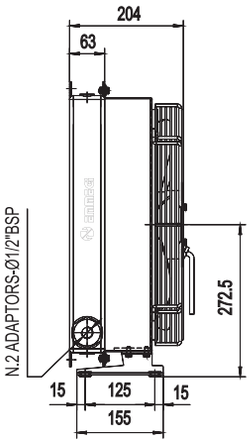


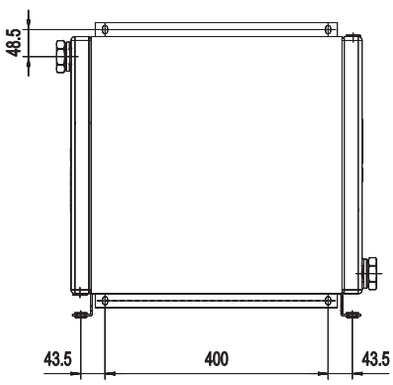
Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

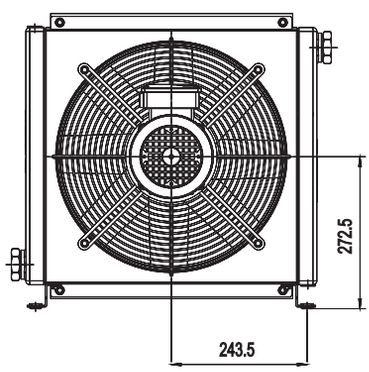
2000K DRAIN
2040K DRAIN

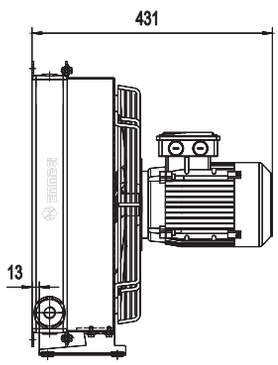


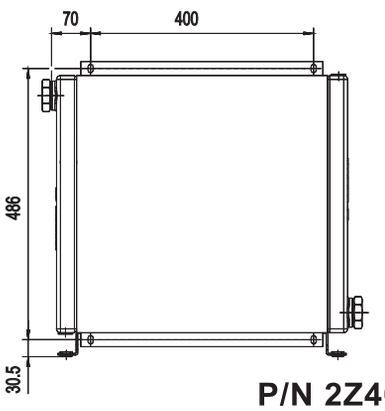




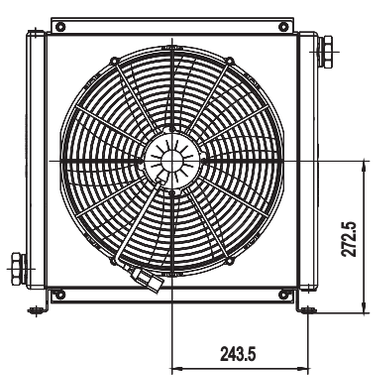
P/N 2Z4001###
P/N 2Z4003###

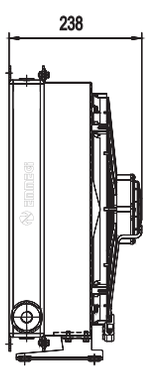


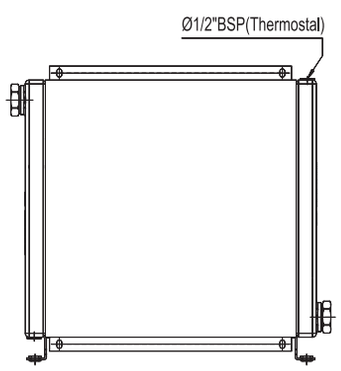




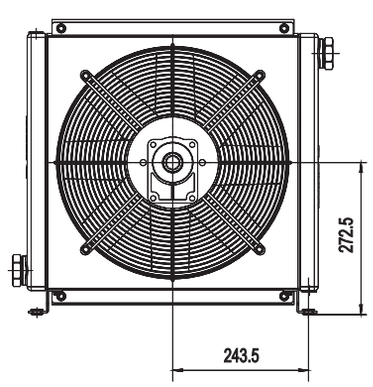
P/N 2Z4004###

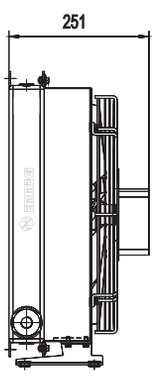


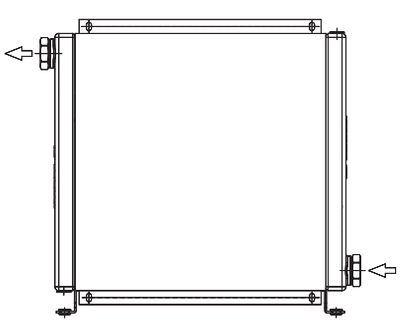




P/N 2Z4012###
P/N 2Z4024###







P/N 2Z4056###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
2Z4001###	230 AC	50	0,16/0,24	0,73 - 1,06	1430 - 1700	400	71	3200	54	2,7	21
2Z4003###	230-400 AC 230-400 AC	50 60	0,135 0,185	0,76 - 0,39 0,68 - 0,39	1450 1690	400	71	3200	54	2,7	21
2Z4004###	230-400 B14 265-460 B14	50 60	0,55 0,63	2,9 - 1,7 2,9 - 1,7	1320 1690	400	77	3740	55	2,7	25
2Z4012###	12 DC	/	0,22	19,2	2310	385	76	2770	67	2,7	20
2Z4024###	24 DC	/	0,23	9,3	2380	385	79	2910	67	2,7	20
2Z4056###	Prepared for Gr.2 hydraulic motor					400			/	2,7	19

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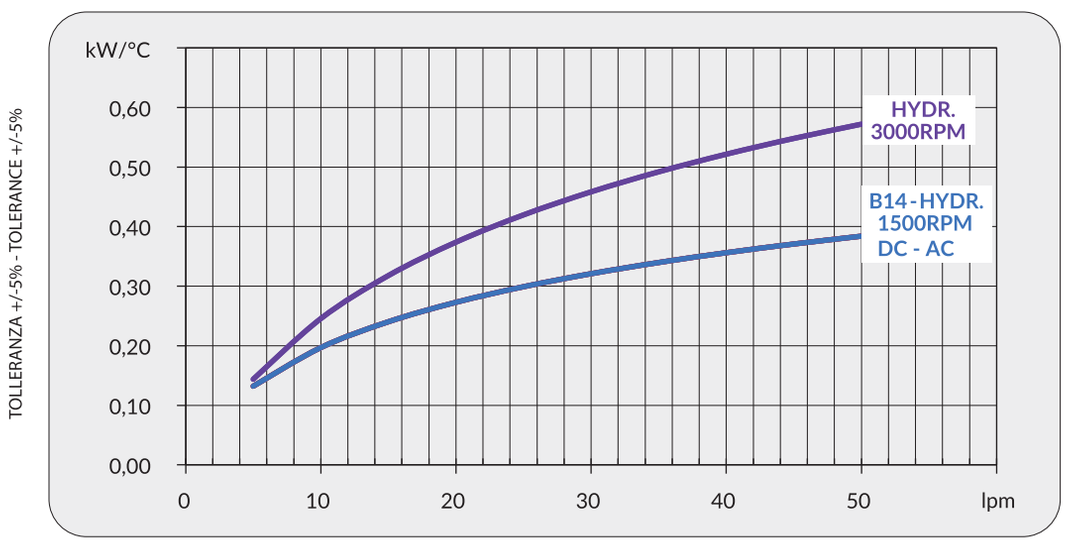
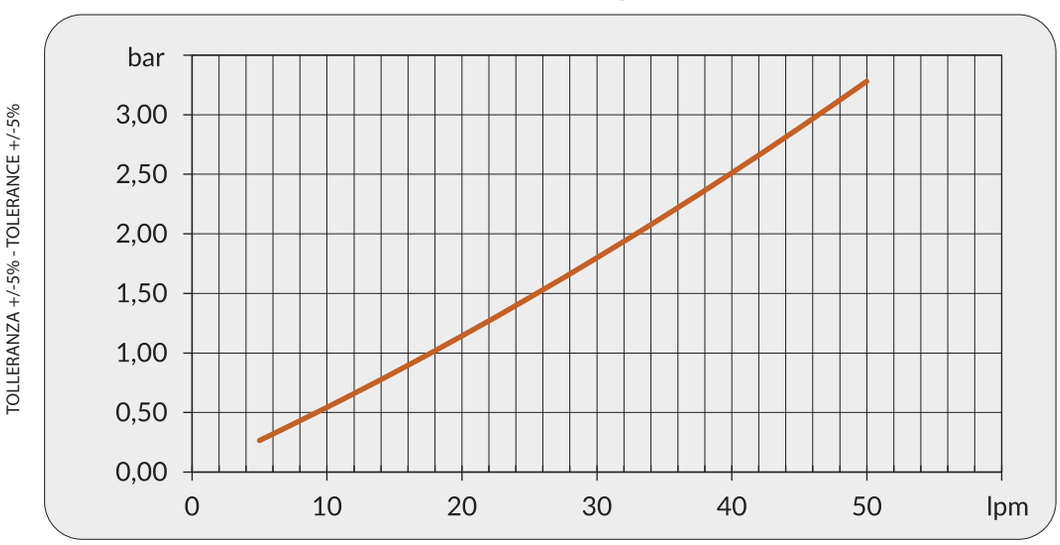
Diagramma rendimento *Performance diagram*

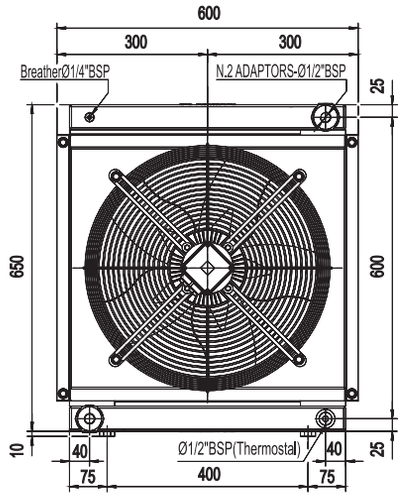


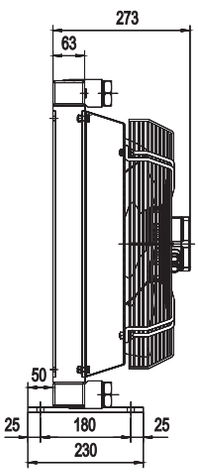
Perdite di carico *Pressure drop (@30cSt)*

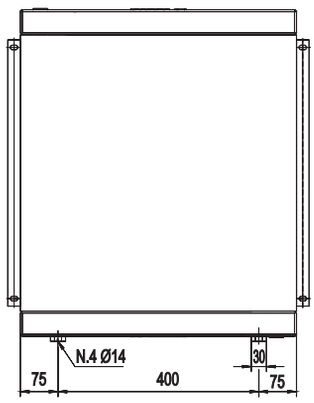


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

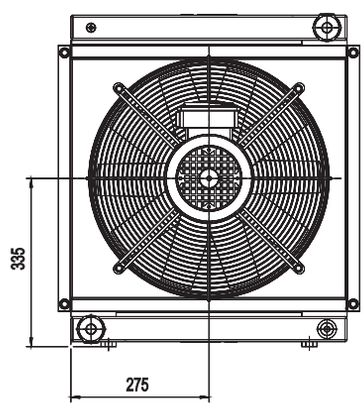
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

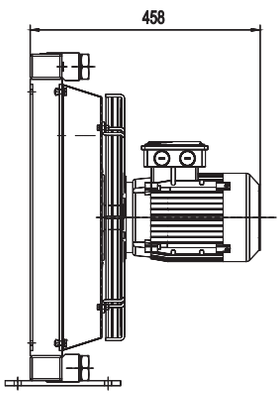


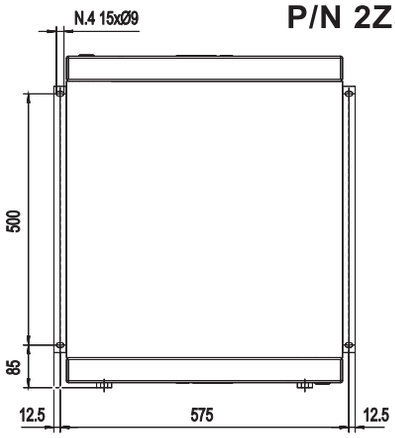




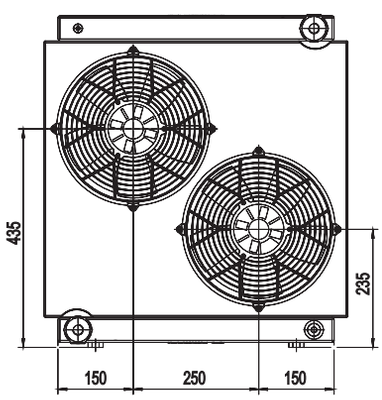
P/N 2Z5001###
P/N 2Z5003###

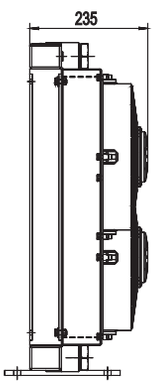


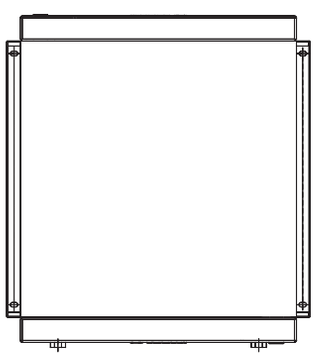




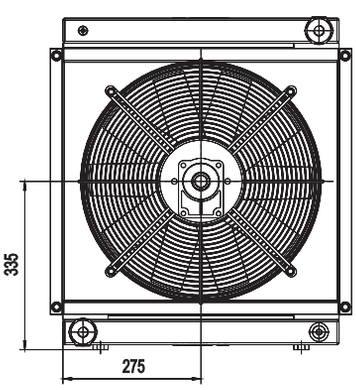
P/N 2Z5004###

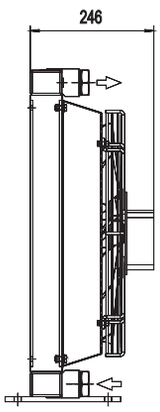


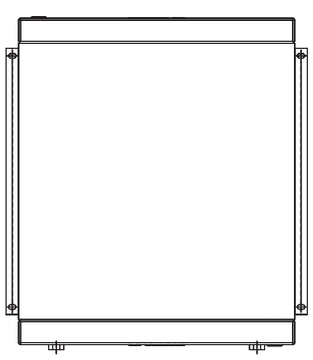




P/N 2Z5012###
P/N 2Z5024###







P/N 2Z5056###

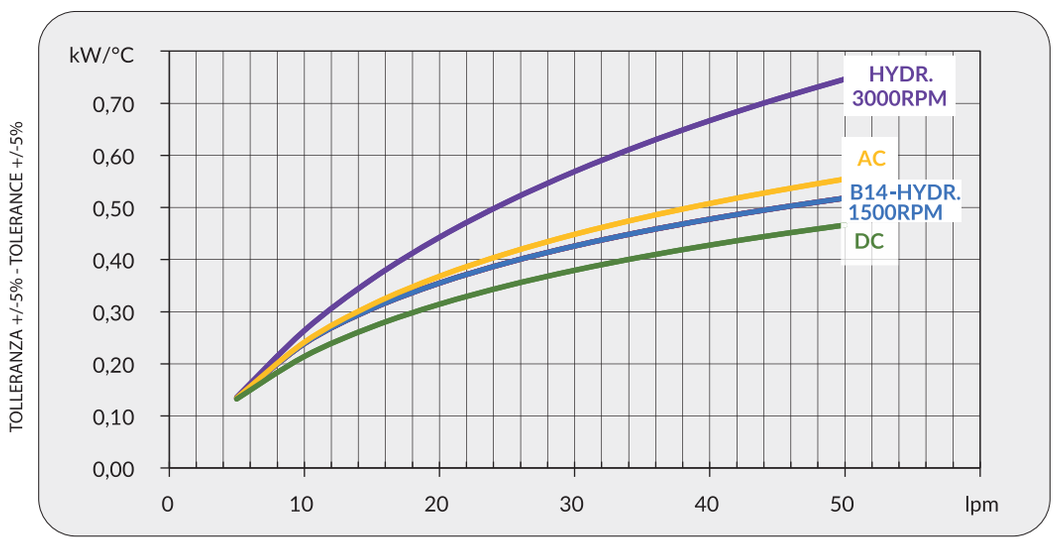
Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
2Z5003###	230-400 AC 230-400 AC	50 60	0,52 0,66	1,9 - 1,1 2-1,2	1450 1690	450	76	5000	54	5	27
2Z5004###	230-400 AC B14 265-460 AC B14	50 60	0,75 0,86	3,0 - 1,7 3,0 - 1,7	1450 1750	450	79	5200	55	5	30
2Z5012###	12 DC	/	0,13	11,0	2340	280	76	1720	67	5	24
2Z5024###	24 DC	/	0,15	6,2	2600	280	79	1750	67	5	24
2Z5056###	Prepared for Gr.2 hydraulic motor					450			/	5	23

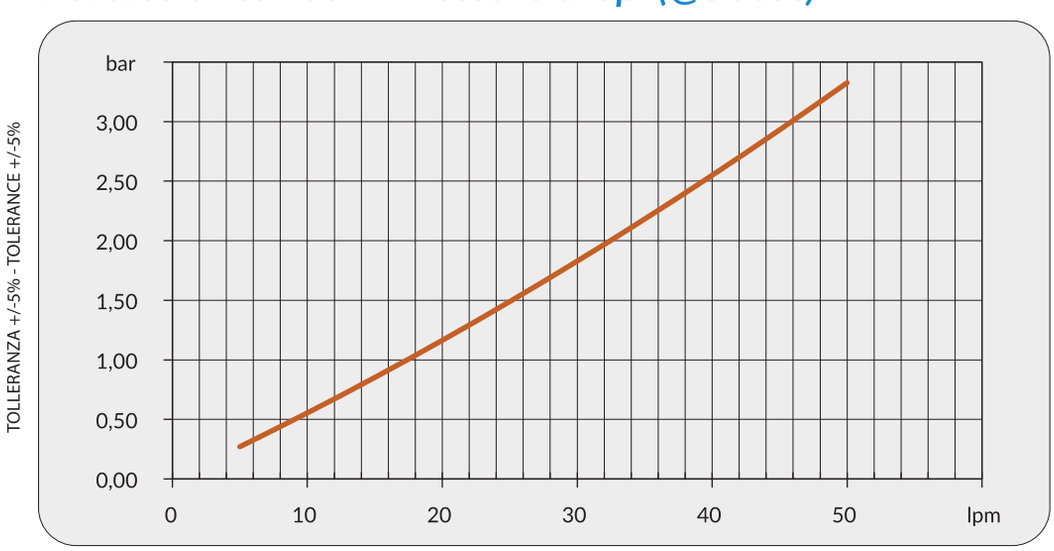
I dati si riferiscono al singolo ventilatore
Data refers to each fan

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento *Performance diagram*

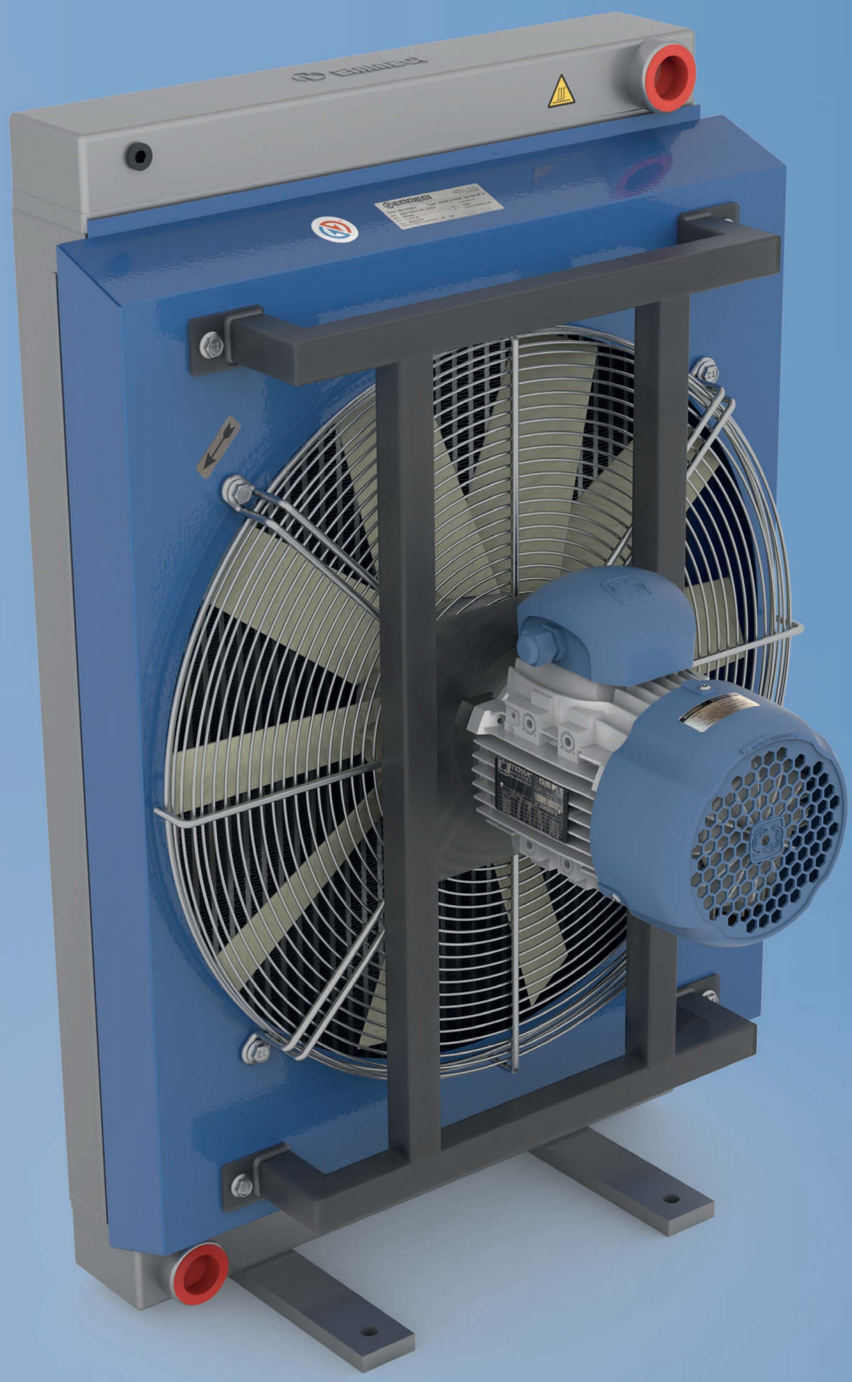


Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



EMMEGI®
HEAT-EXCHANGERS

Serie HPA
HPA Series

APPLICAZIONE
APPLICATION

Grazie all'ampia gamma di combinazioni, gli scambiatori della serie HPA si prestano come la soluzione di raffreddamento ottimale per svariate applicazioni mobili e industriali quali:
The wide range of combinations makes the HPA series heat exchangers the optimal cooling solution for a great variety of mobile and industrial applications such as:









Industria agricola e forestale.	Agriculture and forestry.
Gru mobili e fisse.	Mobile and stationary cranes.
Veicoli industriali.	Industrial vehicles.
Veicoli municipali.	Municipal vehicles.
Macchine da costruzione.	Construction machines.
Impianti di riciclo.	Recycling plants.
Impianti oleodinamici.	Hydraulic systems.
Macchine utensili.	Machine tools.
Altro su richiesta.	Others on request.





Modulo richiesta dati

Sheet for cooler selection

CLIENTE *COMPANY*	
RICHIEDENTE *NAME*	

TIPOLOGIA FLUIDO *FLUID TYPE*		
PORTATA *FLOW RATE*	**lpm**	
POTENZA INSTALLATA *INSTALLED POWER*	**kW**	
POTENZA DA DISSIPARE *POWER TO BE DISSIPATED*	**kW**	
TEMPERATURA INGRESSO *INLET TEMPERATURE*	**°C**	
TEMPERATURA ARIA MAX *MAX AMBIENT TEMPERATURE*	**°C**	
PRESSIONE DI LAVORO *WORKING PRESSURE*	**bar**	

TIPO DI VENTILAZIONE *TYPE OF FAN UNIT*

- **CC** *DC*
  - **12V**
  - **24V**
- **PREDISPOSTO MOTORE IDRAULICO** *PREPARED FOR HYDRAULIC MOTOR*
  - **GR.2**
  - **GR.3**
- **CA** *AC*
  - **MONOFASE 230V** *SINGLEPHASE 230V*
  - **TRIFASE** **230/400V** **265/460V** *THREEPHASE 230/400V 265/460V*
  - **TENSIONE SPECIALE** *SPECIAL VOLTAGE*
    - **50 Hz**
    - **60 Hz**

Denominazione codice prodotto

Ordering code

2424 **03** **2** **01**

MODELLO *COOLER MODEL*

2424 *(HPA 24)*

TIPO DI MOTORIZZAZIONE *FAN MOTOR TYPE*

03	*AC 230-400V 50Hz / AC 265-460V 60Hz (B14)*	
12	*DC 12V*	
24	*DC 24V*	
56	*Pred. per mot. idr. gr.2*	*Pred. for hydr. mot. gr.2*
58	*Pred. per mot. idr. gr.3*	*Prep. for hydr. mot. gr.3*

TERMOSTATI *THERMOSTATS*

0	Senza termostato	*Whitout thermostat*	
1	Termostato fisso	*Fixed thermostat*	40-28°
2	Termostato fisso	*Fixed thermostat*	*50-38°*
3	Termostato fisso	*Fixed thermostat*	*60-48°*
4	Termostato fisso	*Fixed thermostat*	*70-58°*
5	Termostato fisso	*Fixed thermostat*	*80-68°*
6	Termostato fisso	*Fixed thermostat*	*90-78°*
8	Termostato regolabile *Adjustable thermostat*		*0-90° (TC2)*
9	Termostato regolabile collegato *Connected adjustable thermostat*		*0-90°(TC2)*

FLUSSO DI VENTILAZIONE *AIR FLOW DIRECTION*

01	*Aspirante*	*Suction air flow*
02	*Soffiante*	*Blowing air flow*

Modello - Codice prodotto

Cooler model - Product Code

Serie HPA - *HPA Series*

Modello *Model*	Codice *Code*
HPA 12	*2412*
HPA 18	*2418*
HPA 24	*2424*
HPA 30	*2430*
HPA 36	*2436*
HPA 42	*2442*
HPA 50	*2450*
HPA 52	*2452*





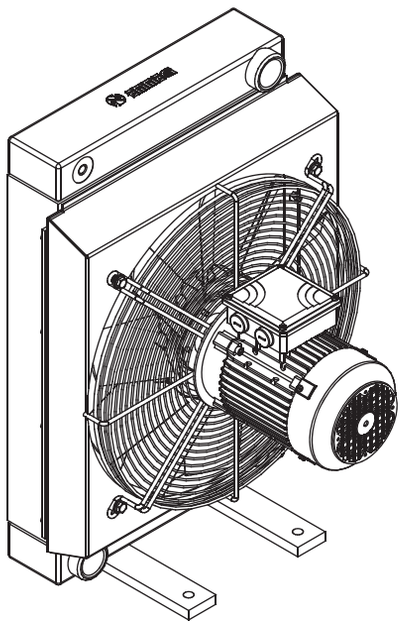
Serie HPA 2 Pass - *HPA 2 Pass Series*

Modello *Model*	Codice *Code*
HPA 24 2PASS	*2427*
HPA 30 2PASS	*2433*
HPA 36 2PASS	*2438*
HPA 42 2PASS	*2445*
HPA 50 2PASS	*2987*
HPA 52 2PASS	*2454*

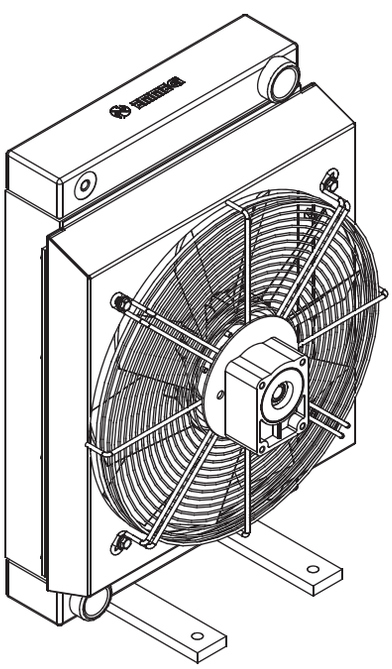
Serie HPA/2 - *HPA/2 Series*

Modello *Model*	Codice *Code*
HPA 30/2	*2431*
HPA 36/2	*2437*
HPA 42/2	*2443*
HPA 50/2	*2988*
HPA 52/2	*2453*

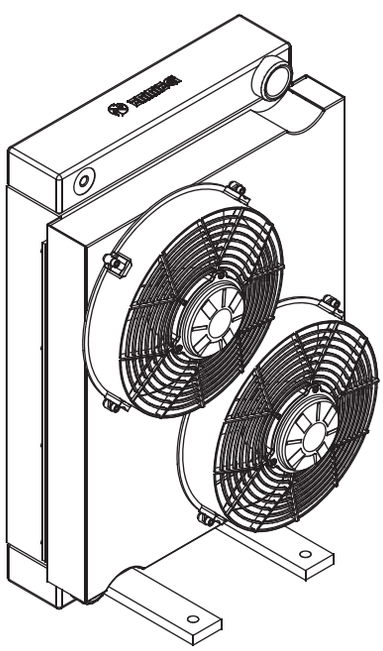




AC 230-400V 50 Hz (B14)
AC 265-460V 60 Hz (B14)



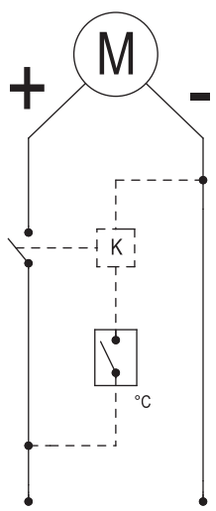
Pred. per mot. idr. gr. 2 / gr. 3
Pred for Gr.2 / Gr.3 hydraulic mot.



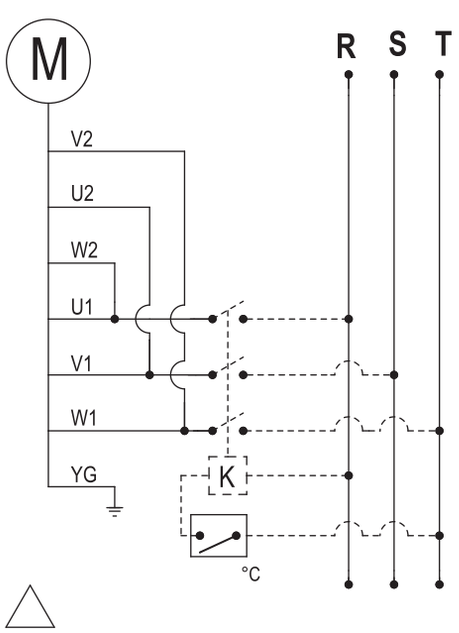
DC 12V - 24V

Collegamenti elettrici
Electric Wiring

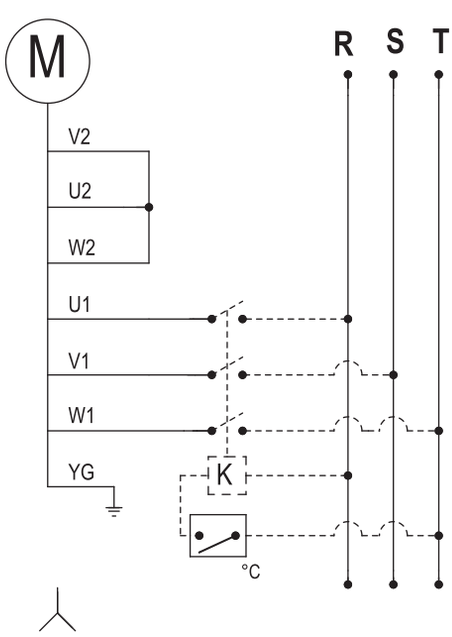
COLLEGAMENTO ELETTRICO 12-24V DC
12-24V DC ELECTRIC WIRING

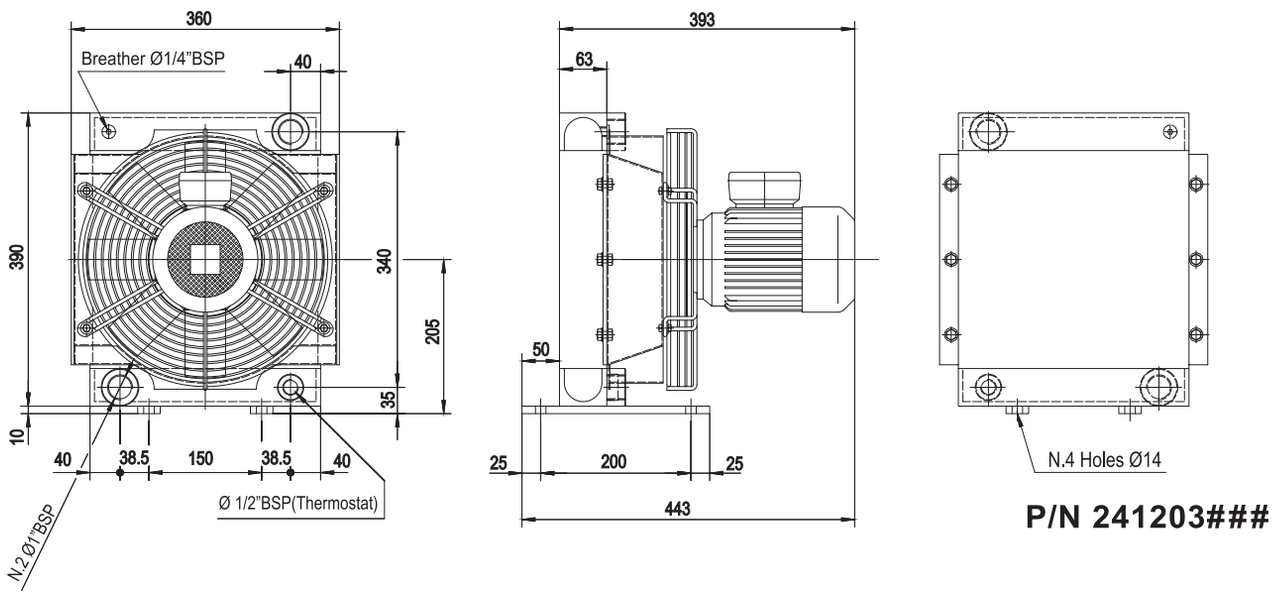


COLLEGAMENTO ELETTRICO 230V AC TRIF.
230V AC 3PH ELECTRIC WIRING

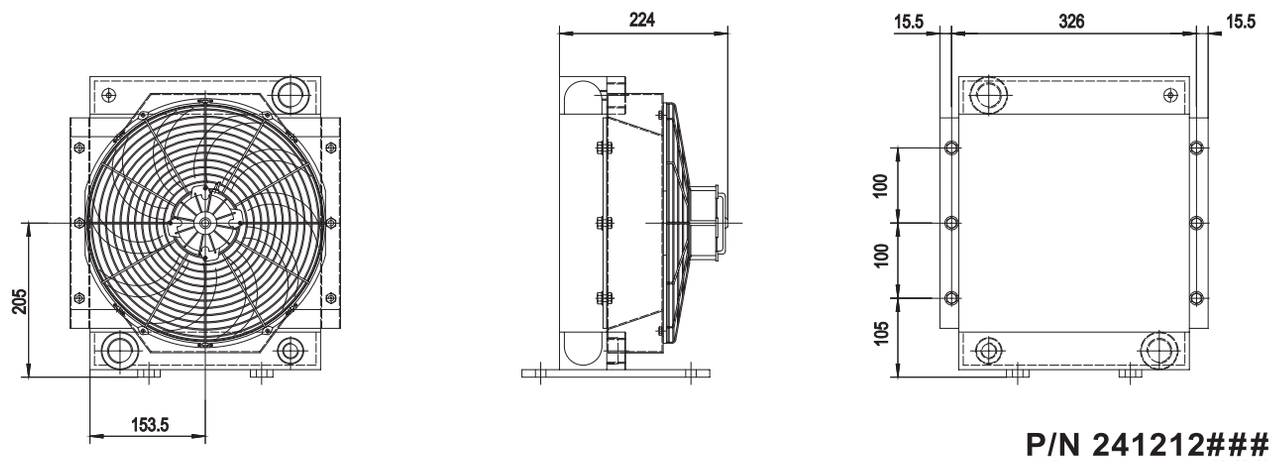


COLLEGAMENTO ELETTRICO 400/460V AC TRIF.
400/460V AC THREEPHASE ELECTRIC WIRING

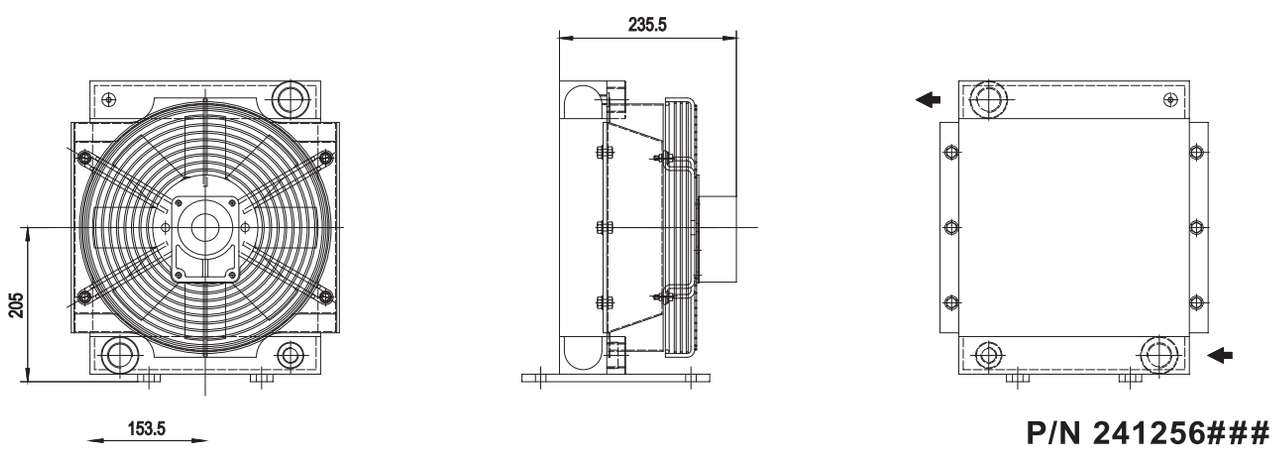




P/N 241203###



P/N 241212###
P/N 241224###



P/N 241256###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m^3/ h)	IP	lt	kg
241203###	230-400 B14 AC 265-460 B14 AC	50 60	0,25 0,29	1,45 - 0,84 1,7 - 1	1350 1620	315	72	1500	55	1,9	17
241212###	12 DC	/	0,16	13,6	3000	305	77	1500	68	1,9	15
241224###	24 DC	/	0,18	7,6	3100	305	80	1500	68	1,9	15
241256###	Prepared for Gr.2 hydraulic motor					315			/	1,9	16

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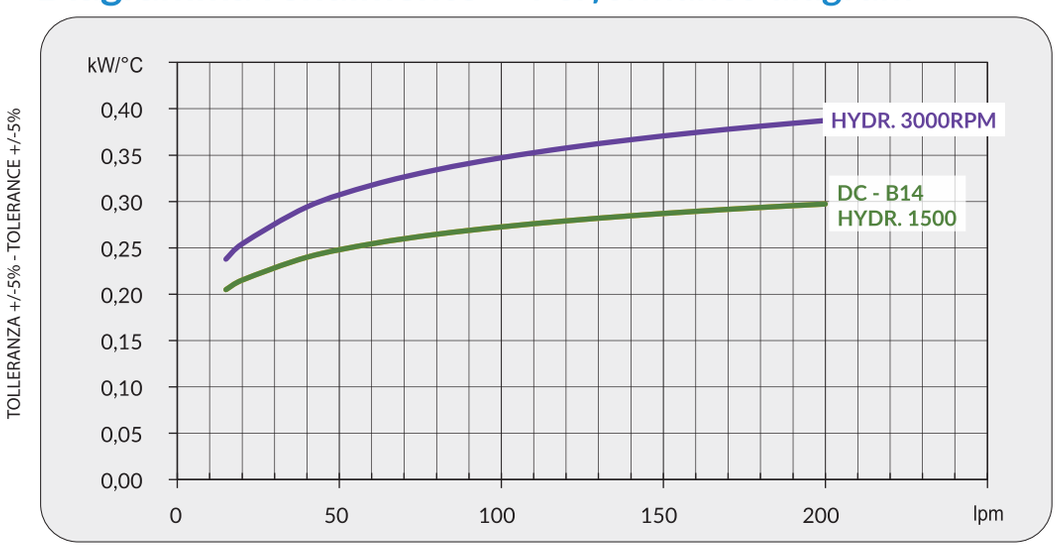
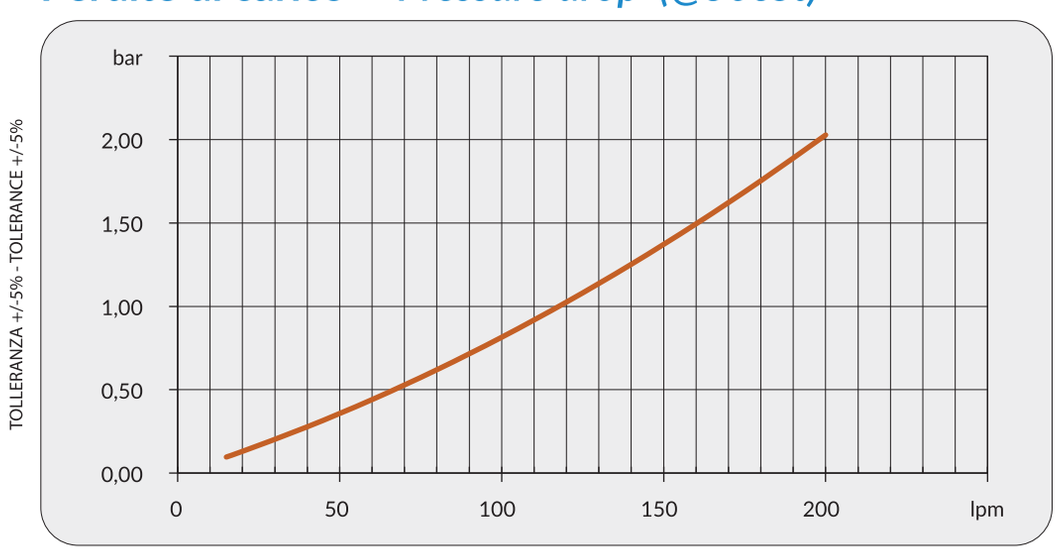
Diagramma rendimento *Performance diagram*

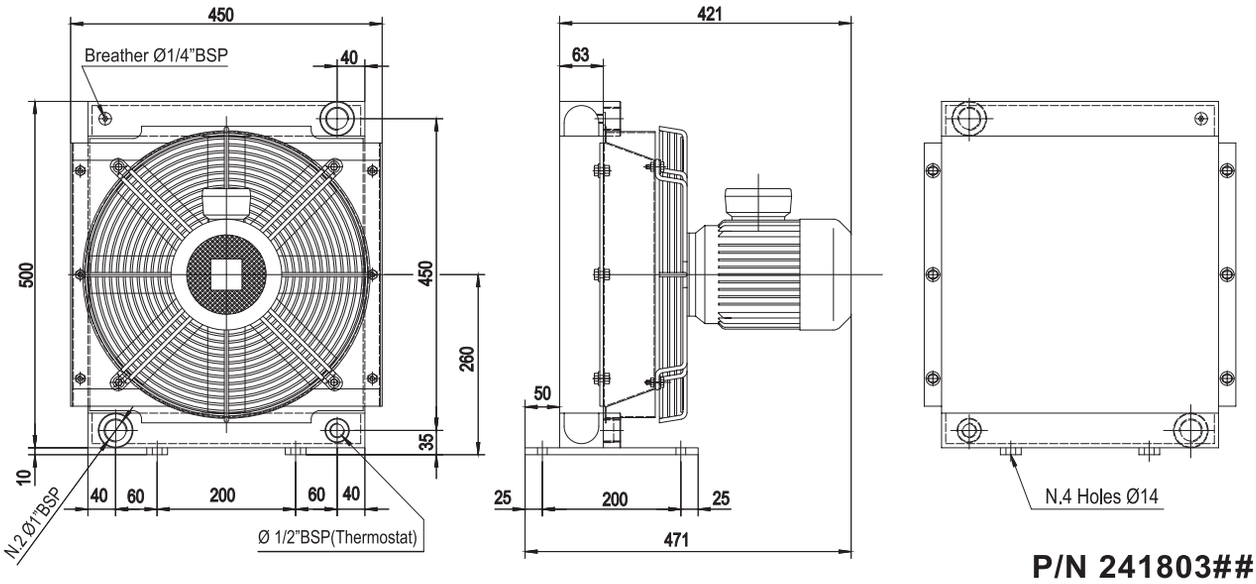


Perdite di carico *Pressure drop (@30cSt)*

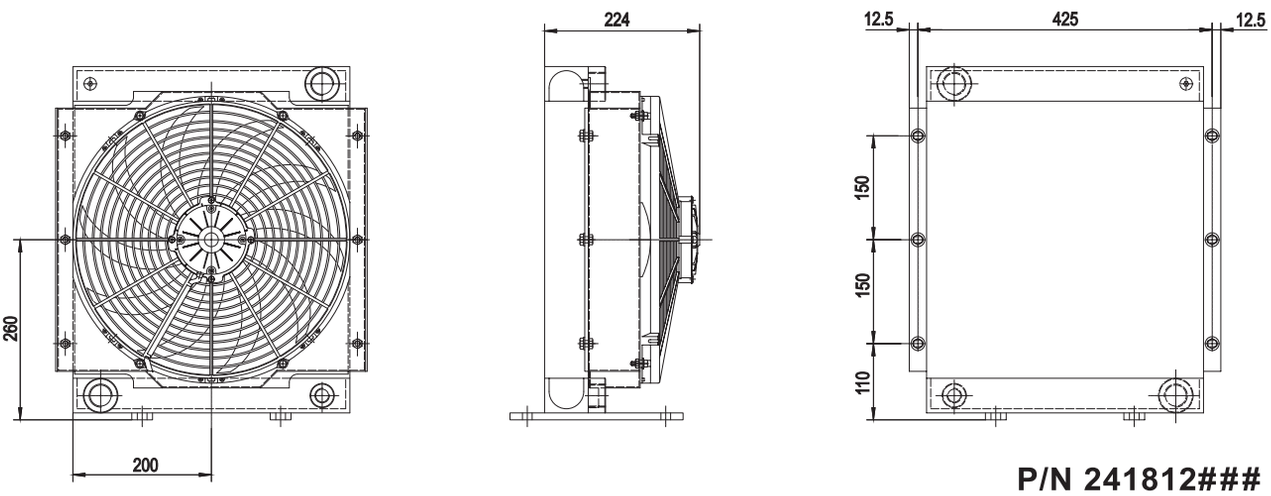


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

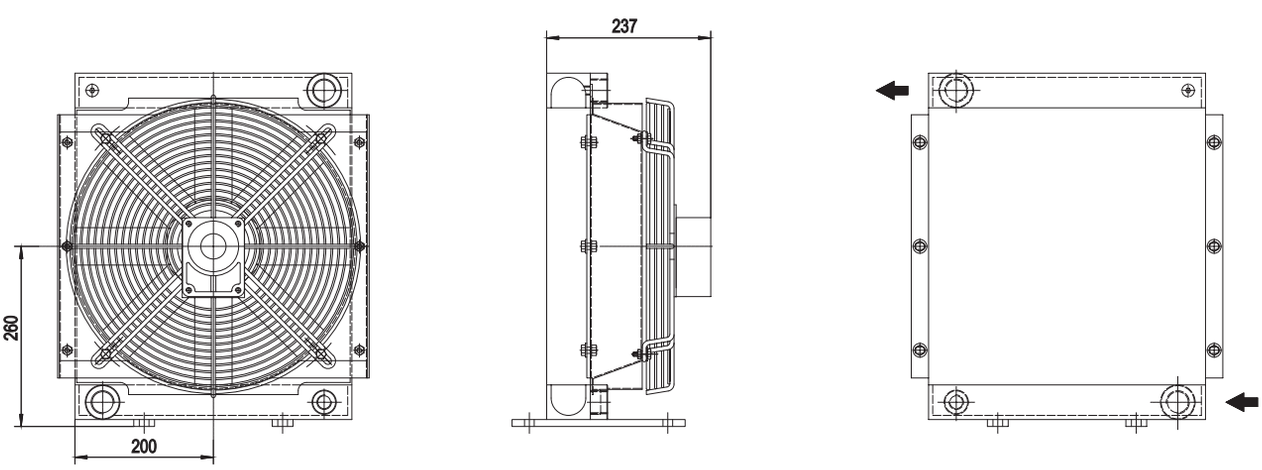
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 241803###



P/N 241812###
P/N 241824###



P/N 241856###

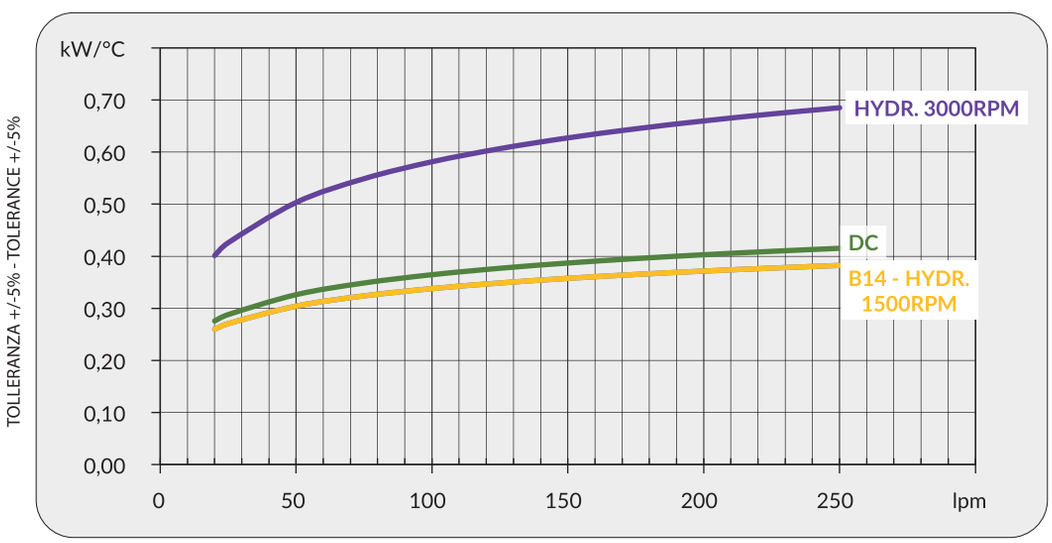
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

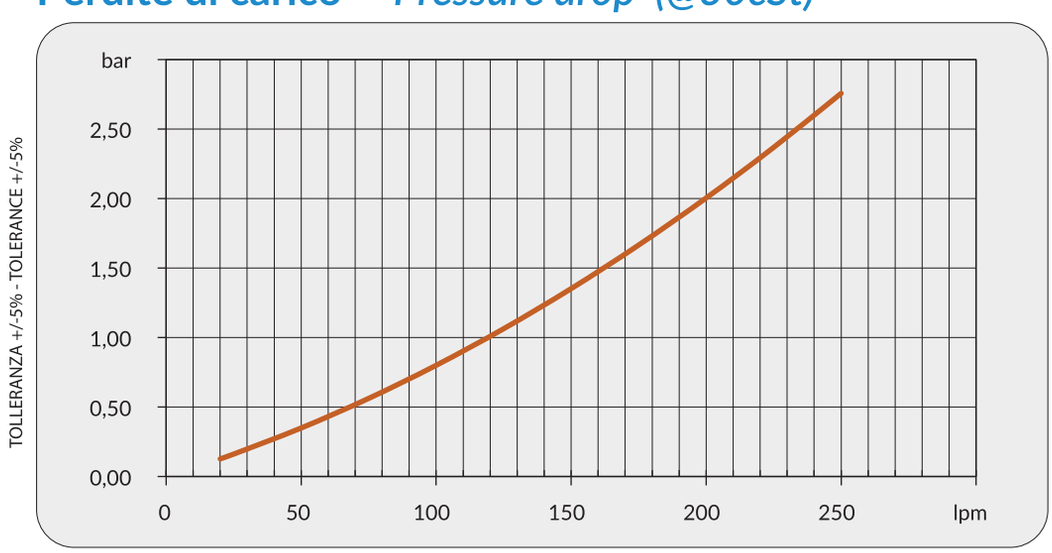
P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
241803###	230-400 B14 AC 265-460 B14 AC	50 60	0,37 0,43	1,9 - 1,1 1,9 - 1,1	1370 1650	400	77	2300	55	2,9	20
241812###	12 DC	/	0,25	20,9	2350	385	77	2620	68	2,9	18
241824###	24 DC	/	0,24	9,9	2580	385	81	2620	68	2,9	18
241856###	Prepared for Gr.2 hydraulic motor					400			/	2,9	19

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento *Performance diagram*

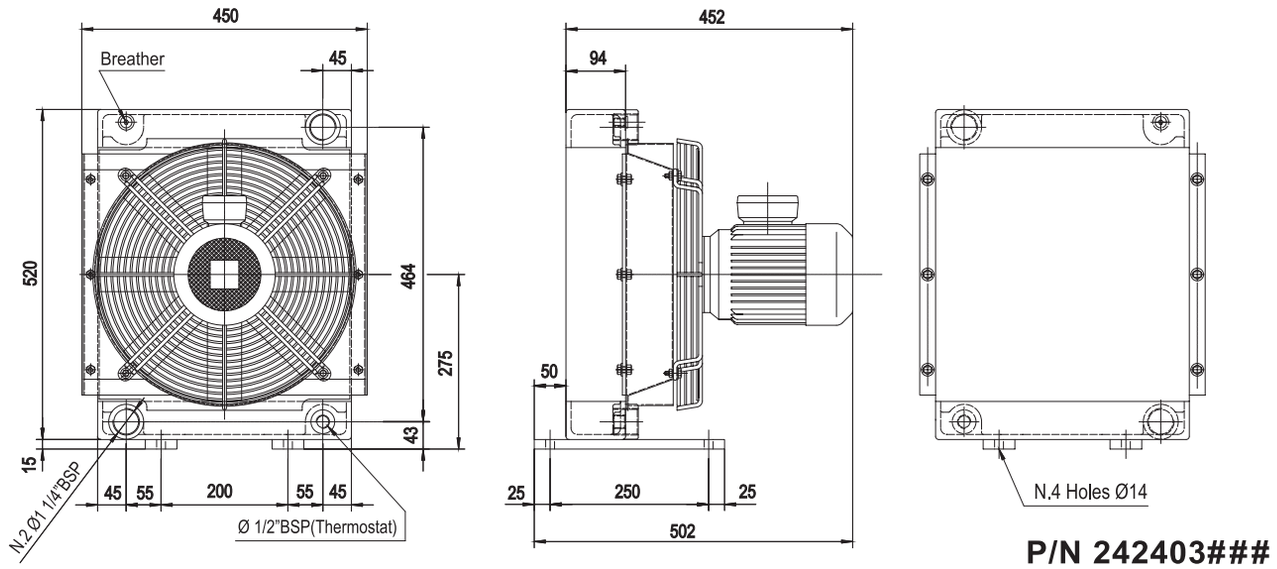


Perdite di carico *Pressure drop (@30cSt)*

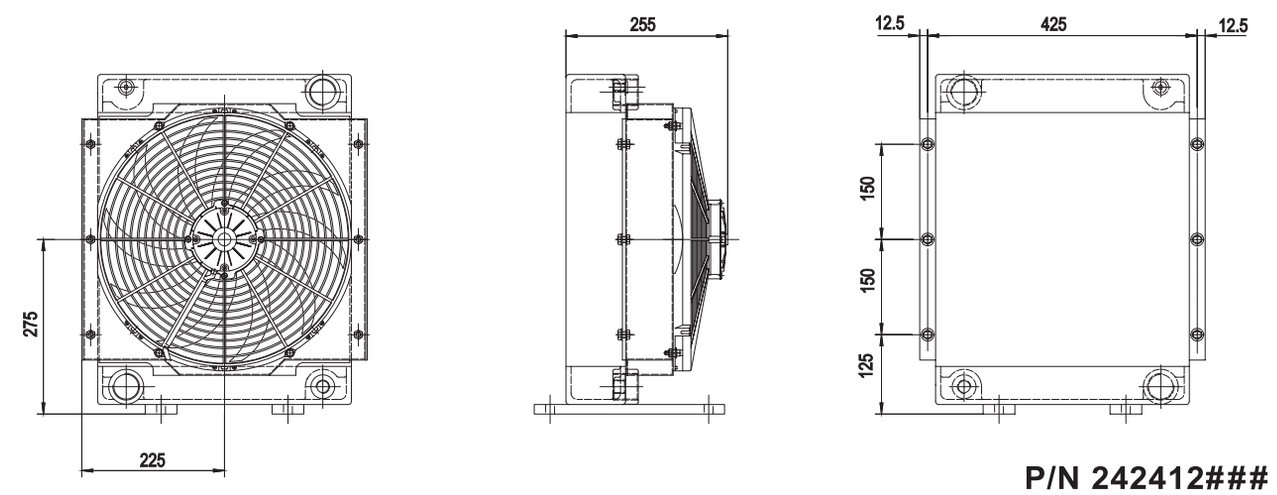


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

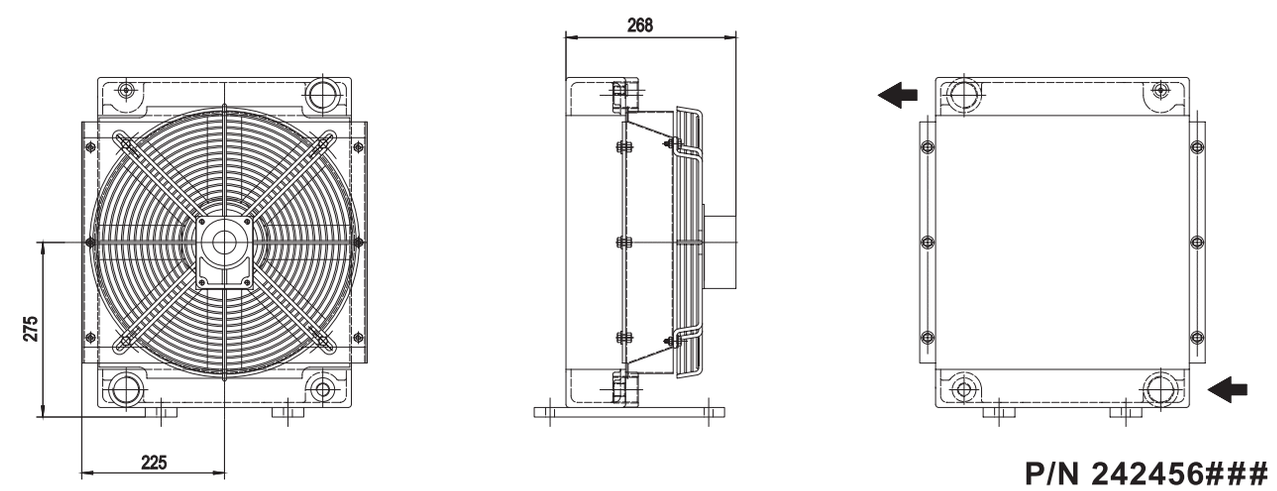
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 242403###



P/N 242412###
P/N 242424###



P/N 242456###

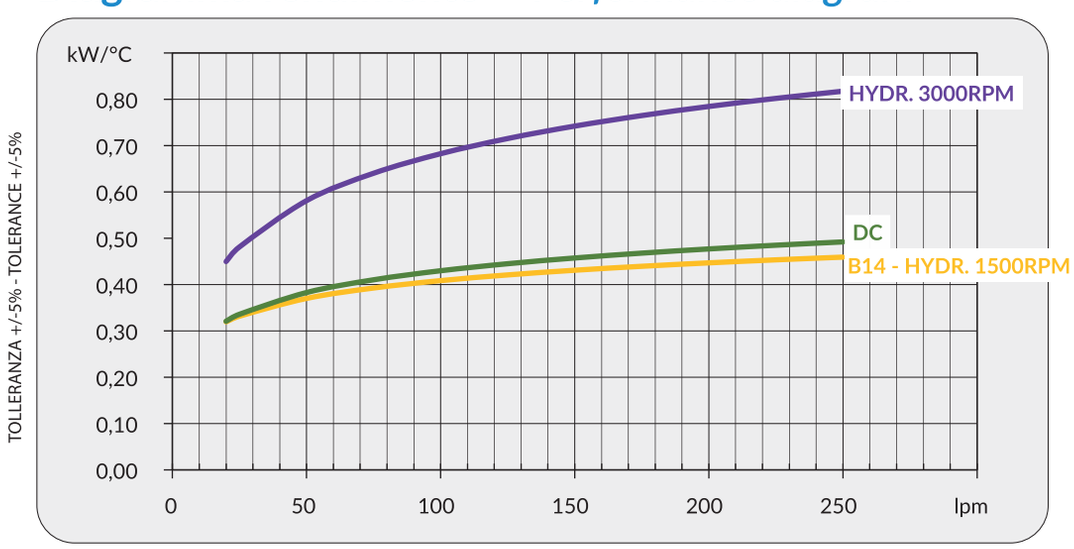
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

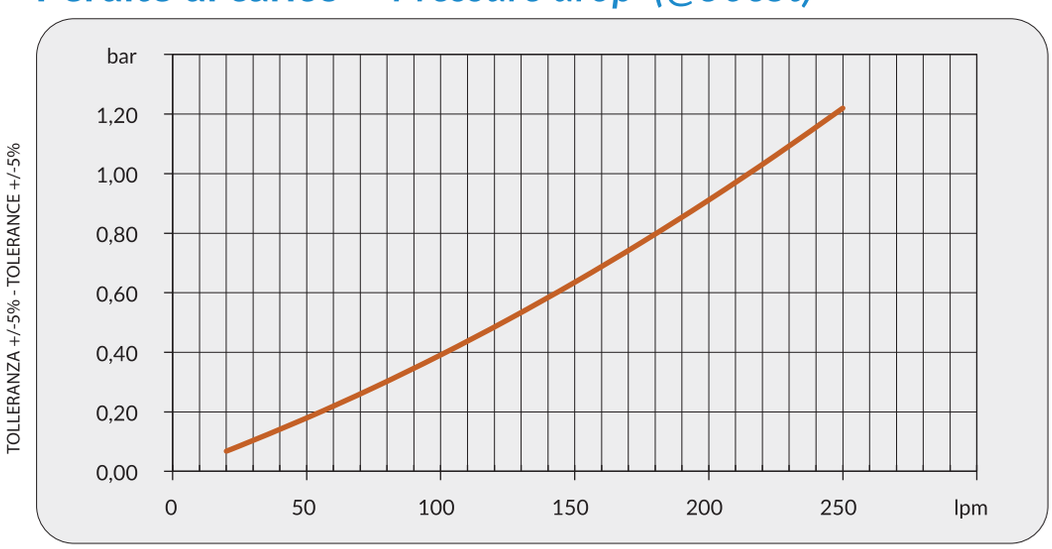
P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
242403###	230-400 B14 AC 265-460 B14 AC	50 60	0,55 0,63	2,5 - 1,5 2,5 - 1,5	1220 1710	400	79	1850	55	2,9	28
242412###	12 DC	/	0,24	20,3	2580	385	77	2250	68	2,9	28
242424###	24 DC	/	0,23	9,7	2580	305	80	2250	68	2,9	22
242456###	Prepared for Gr.2 hydraulic motor					400			/	2,9	23

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento *Performance diagram*

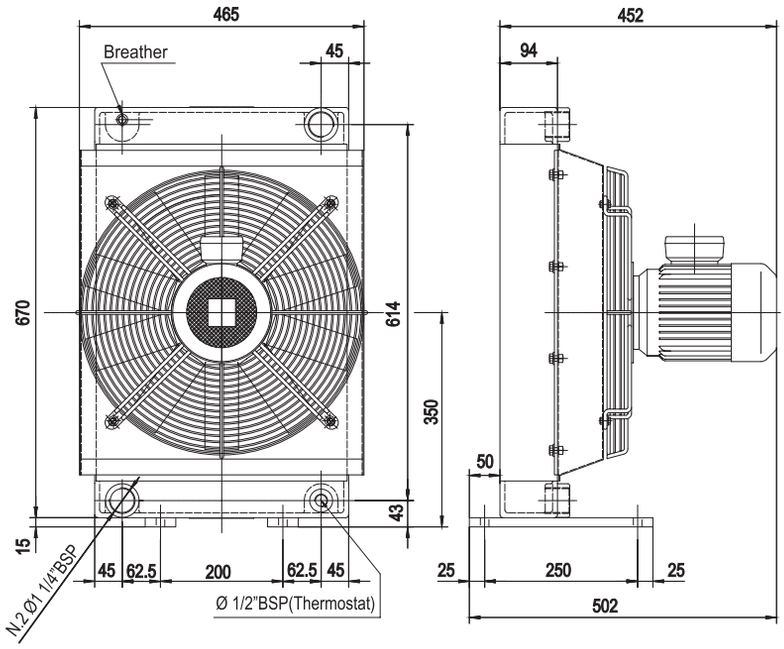


Perdite di carico *Pressure drop (@30cSt)*

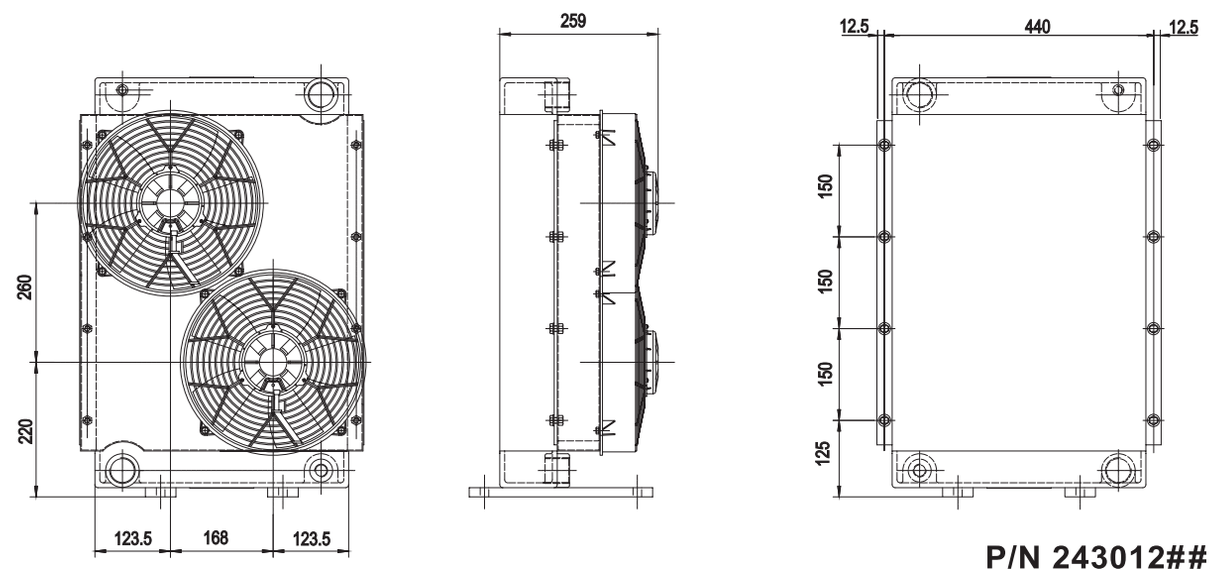


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

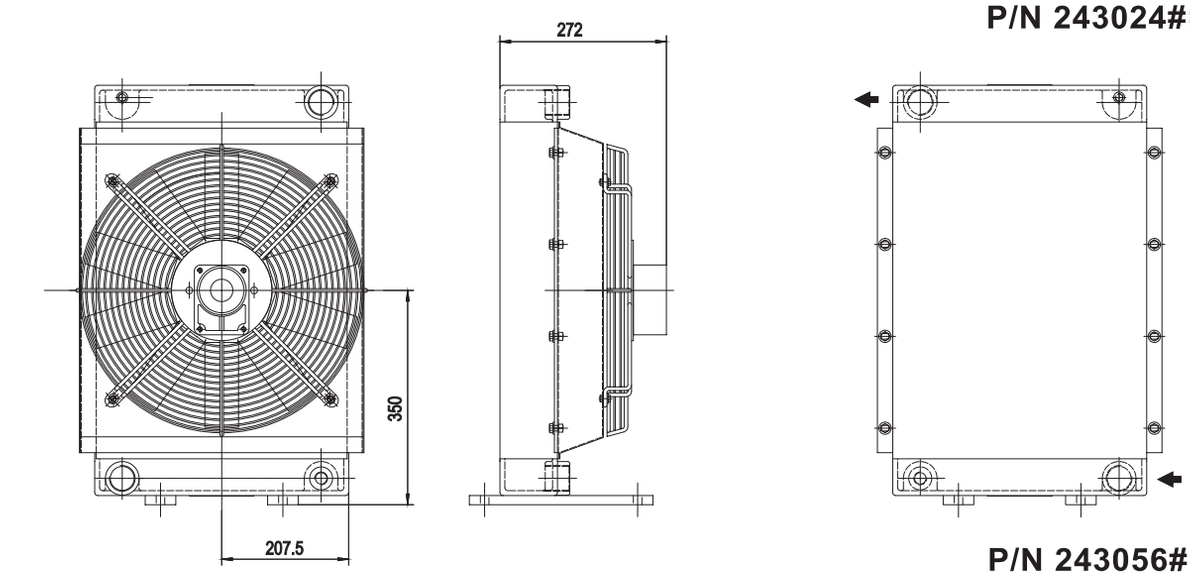
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 243003###



P/N 243012###
P/N 243024###



P/N 243056###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
243003###	230-400 B14 AC 265-460 B14 AC	50 60	0,75 0,86	3,1 - 1,8 3,1 - 1,8	1430 1715	450	82	3100	55	6,8	37
243012###	12 DC	/	0,17	13,9	2900	280	78	3050	68	6,8	32
243024###	24 DC	/	0,16	6,7	2900	280	78	3050	68	6,8	32
243056###	Prepared for Gr.2 hydraulic motor					450			/	6,8	35

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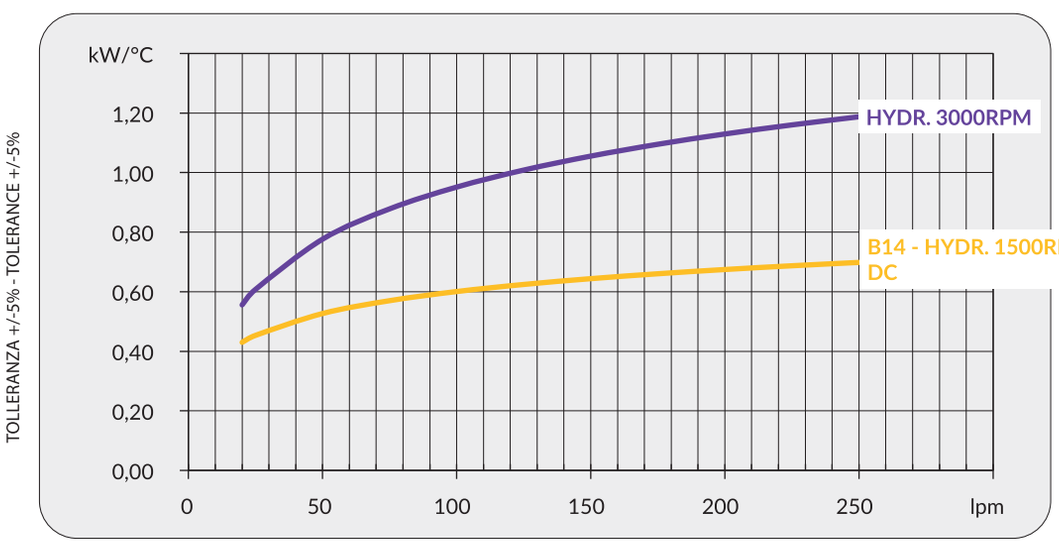
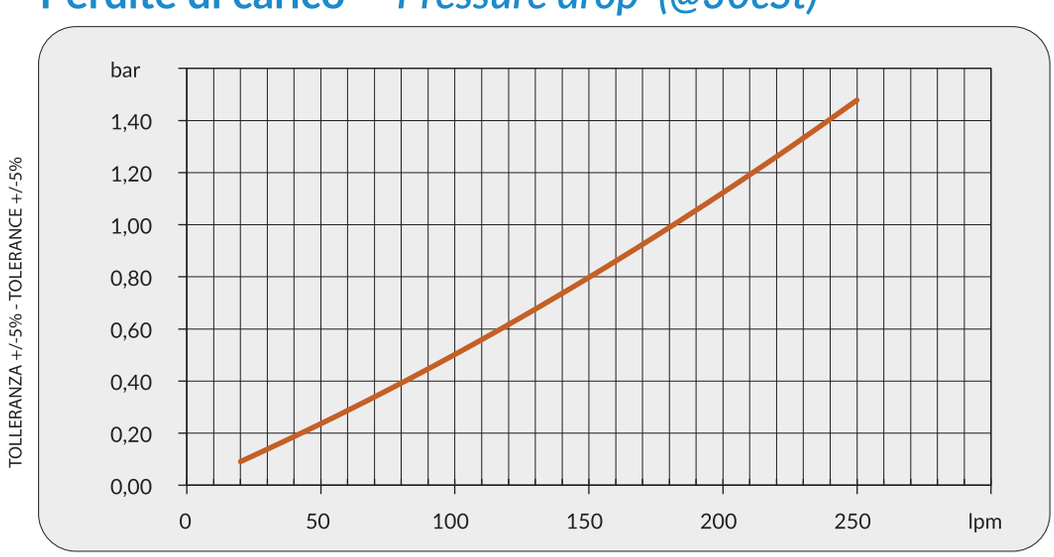
Diagramma rendimento *Performance diagram*

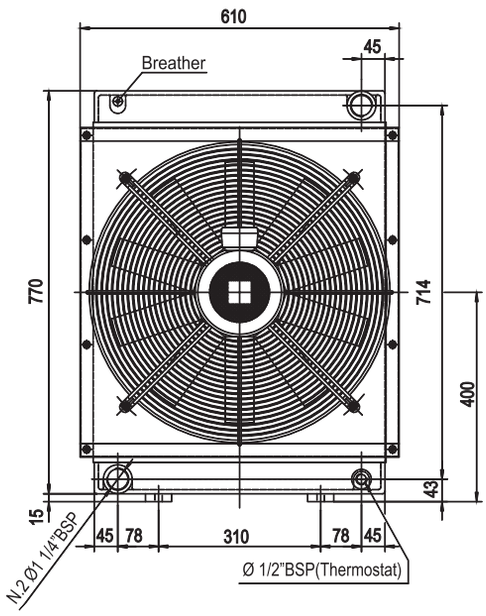


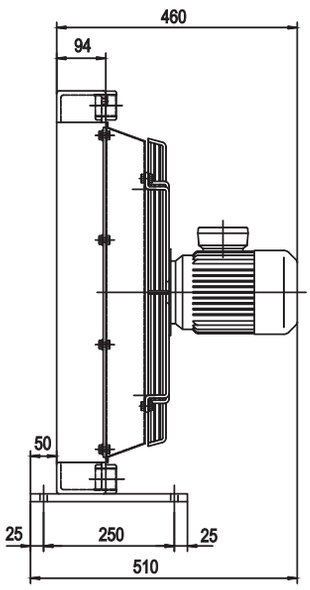
Perdite di carico *Pressure drop (@30cSt)*

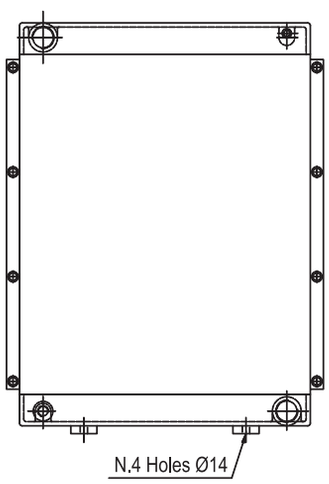


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

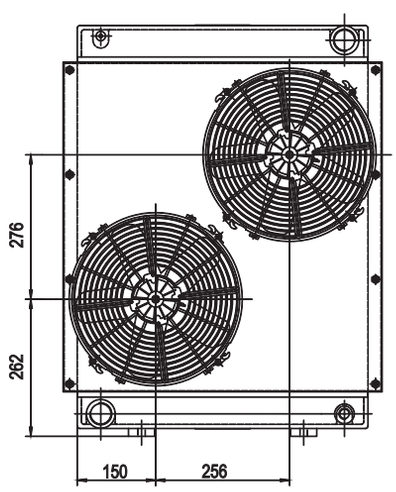
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

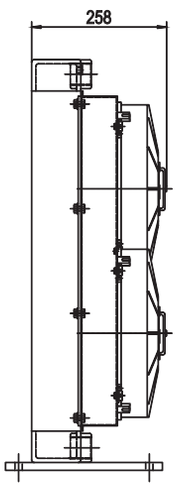


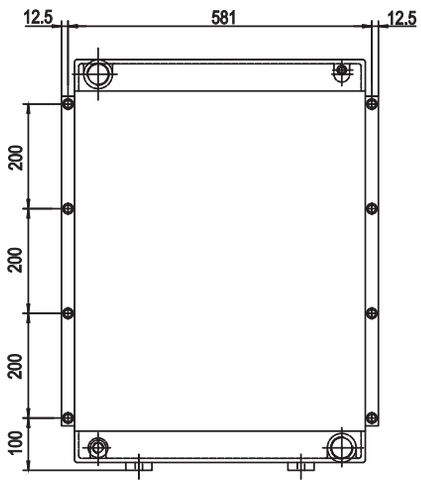




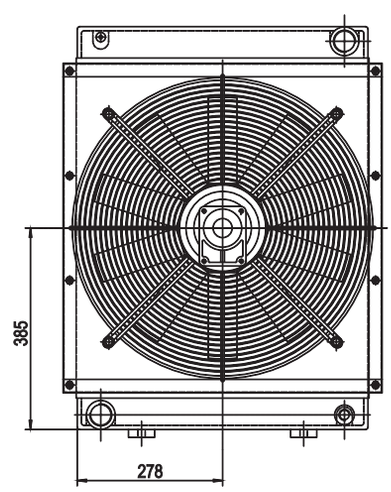
P/N 243603###

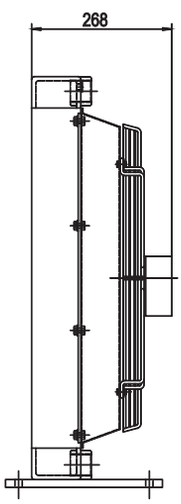


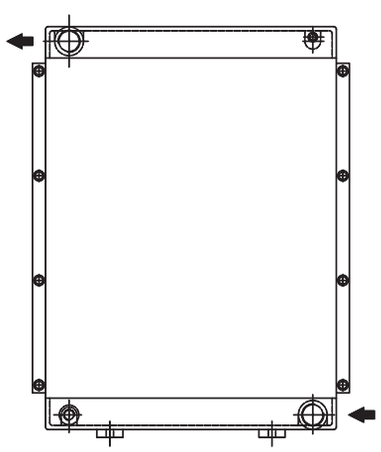




P/N 243612###
P/N 243624###







P/N 243656###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
243603###	230-400 B14 AC 265-460 B14 AC	50 60	1,1 1,3	4,5 - 2,6 4,5 - 2,6	1440 1730	500	82	5420	55	9,4	60
243612###	12 DC	/	0,19	16	3000	305	83	4100	68	9,4	50
243624###	24 DC	/	0,2	8,5	3000	305	84	4100	68	9,4	50
243656###	Prepared for Gr.2 hydraulic motor					500			/	9,4	52

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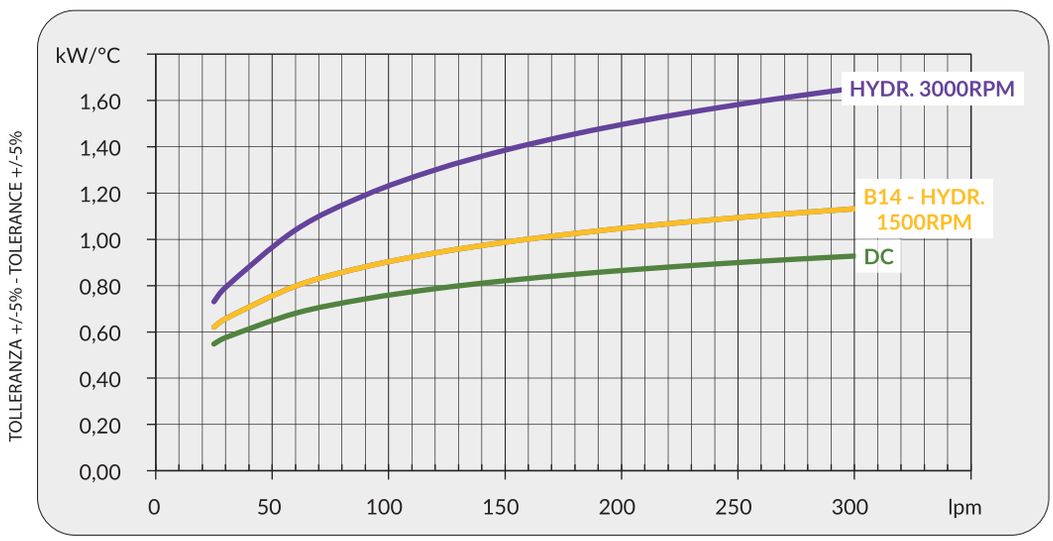
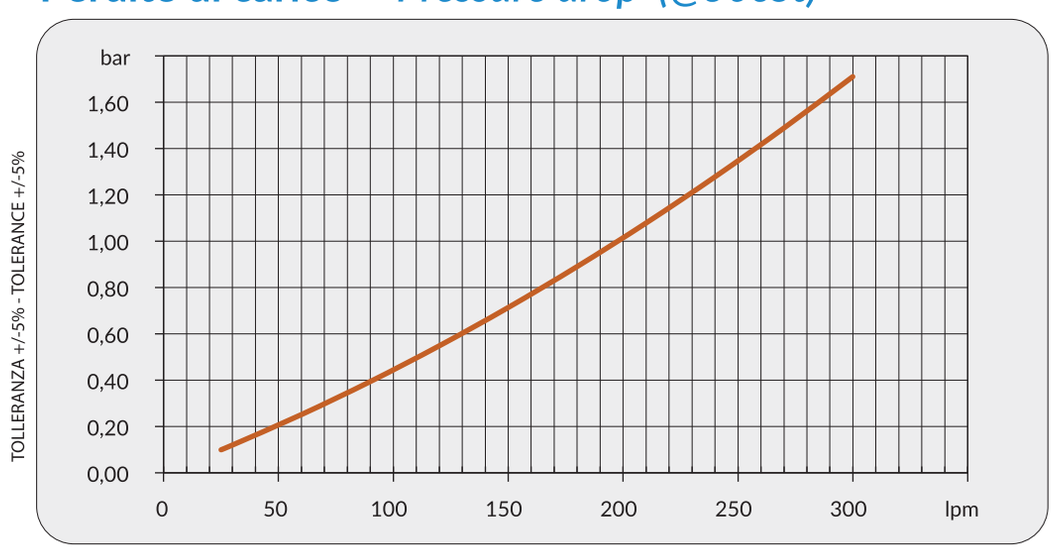
Diagramma rendimento *Performance diagram*

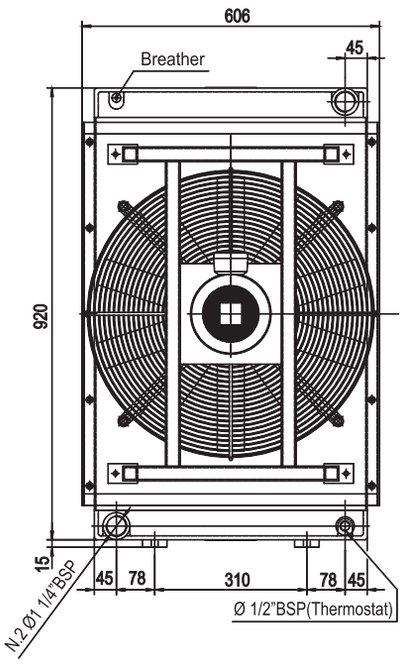


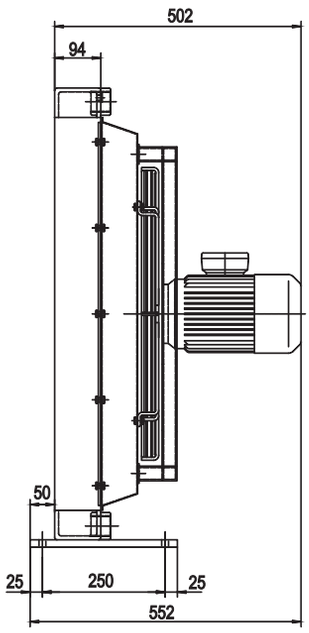
Perdite di carico *Pressure drop (@30cSt)*

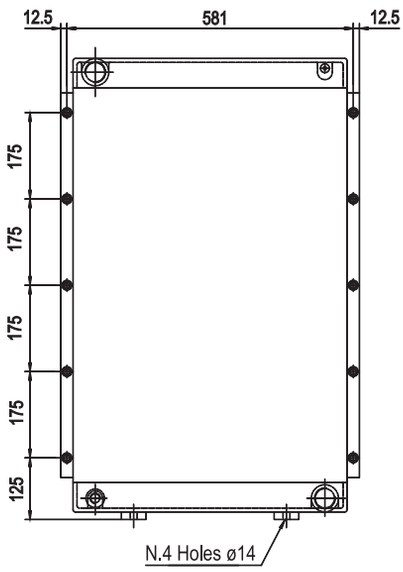


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

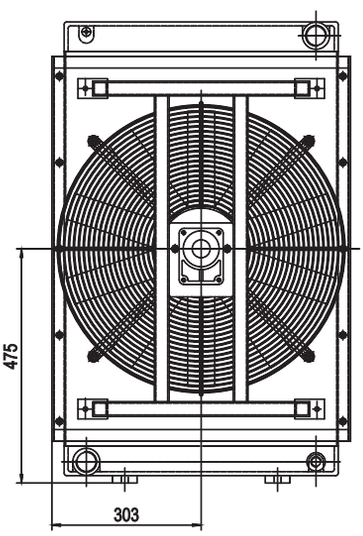
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

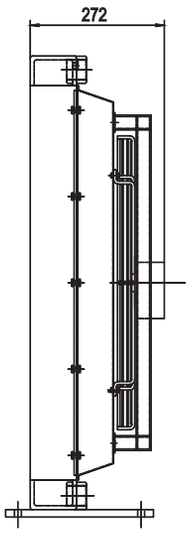




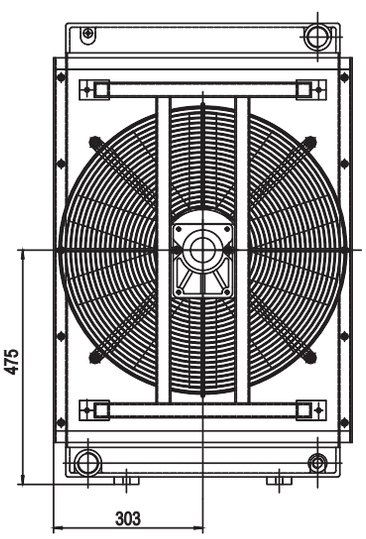


P/N 244203###

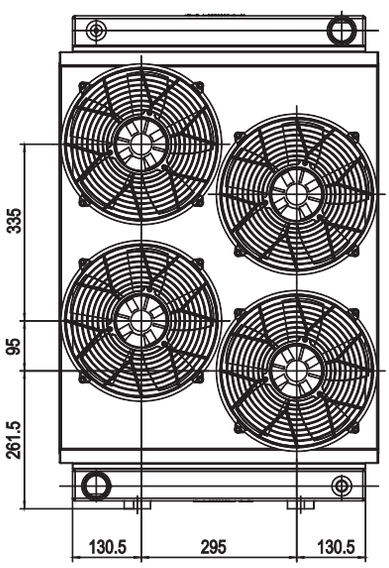


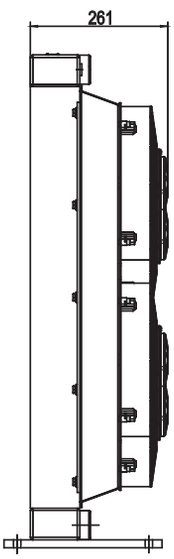


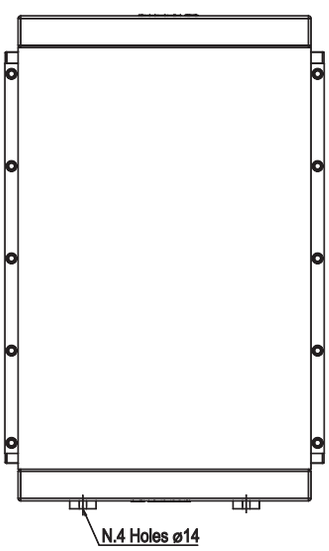
P/N 244256###



P/N 244258###







P/N 244212###
P/N 244224###

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
244203###	230-400 B14 AC 265-460 B14 AC	50 60	1,1 1,3	4,5 - 2,6 4,5 - 2,6	1440 1730	560	84	6820	55	10,6	65
244256###	Prepared for Gr.2 hydraulic motor					560			/	10,6	58
244258###	Prepared for Gr.3 hydraulic motor					560			/	10,6	58
244212###	12V	-	0,19	14,3	2920	280		6820	68	10,6	58
244224###	24V	-	0,18	6,8	2920	280		6820	68	10,6	58

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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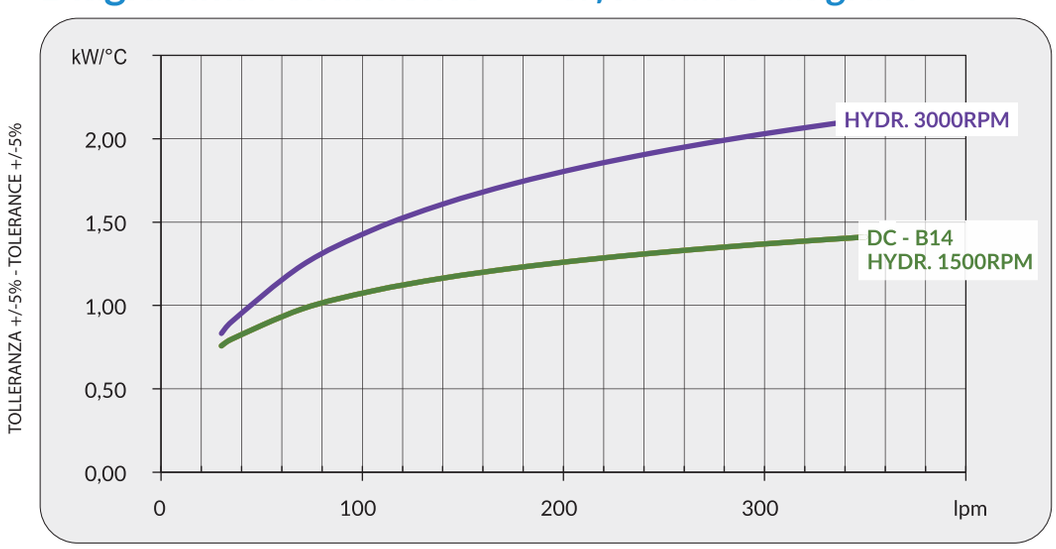
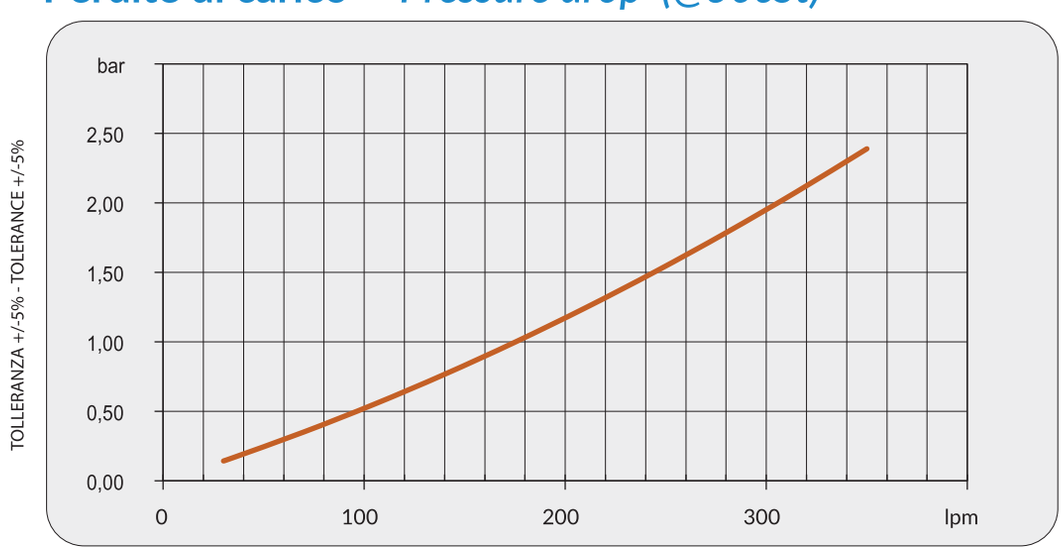
Diagramma rendimento *Performance diagram*

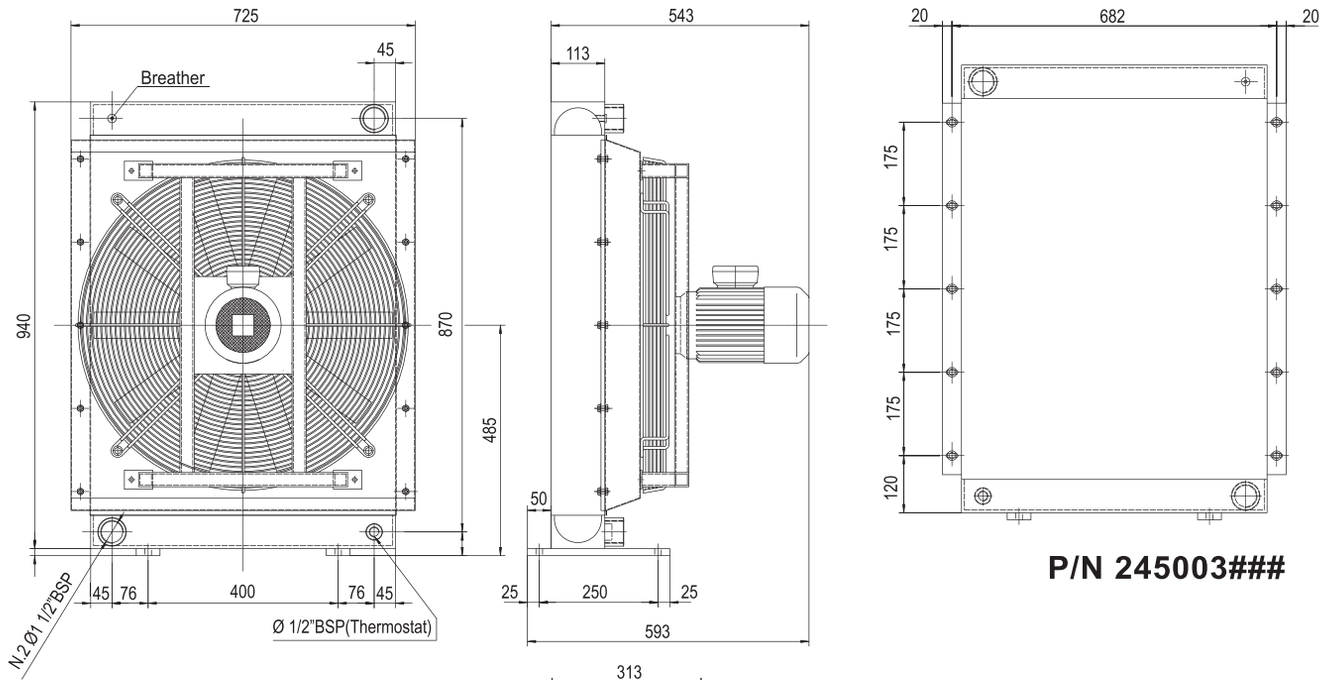


Perdite di carico *Pressure drop (@30cSt)*

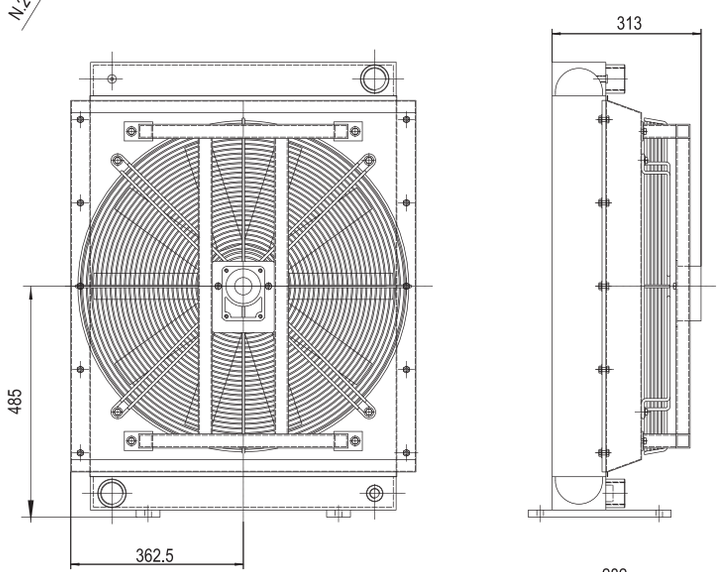


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

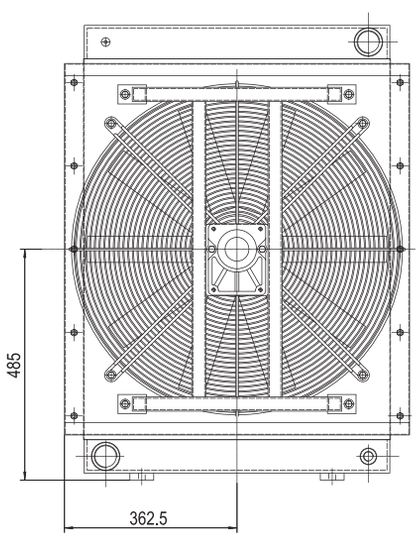
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



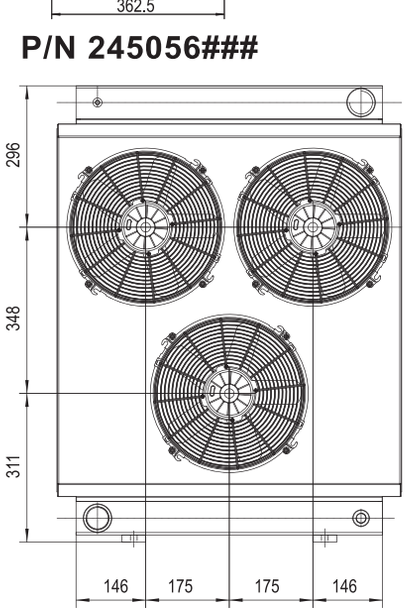
P/N 245003###

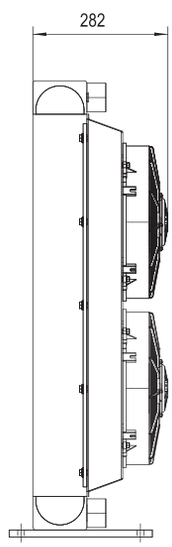


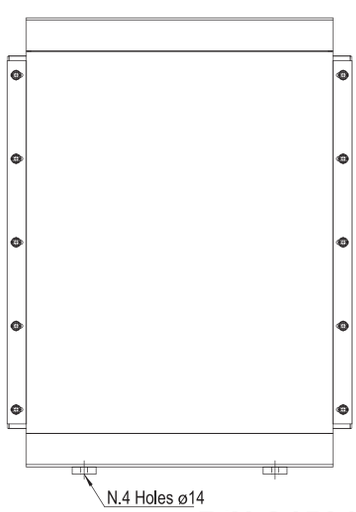
P/N 245056###



P/N 245058###







P/N 245012###
P/N 245024###

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
245003###	230-400 B14 AC 265-460 B14 AC	50 60	1,1 1,3	5 - 2,9 5 - 2,9	950 1140	630	80	5910	55	14,2	90
245056###	Prepared for Gr.2 hydraulic motor					630			/	14,2	83
245058###	Prepared for Gr.3 hydraulic motor					630			/	14,2	83
245012###	12	-	0,21	16,1		305			68	14,2	83
245024###	24	-	0,21	8,5		305			68	14,2	83

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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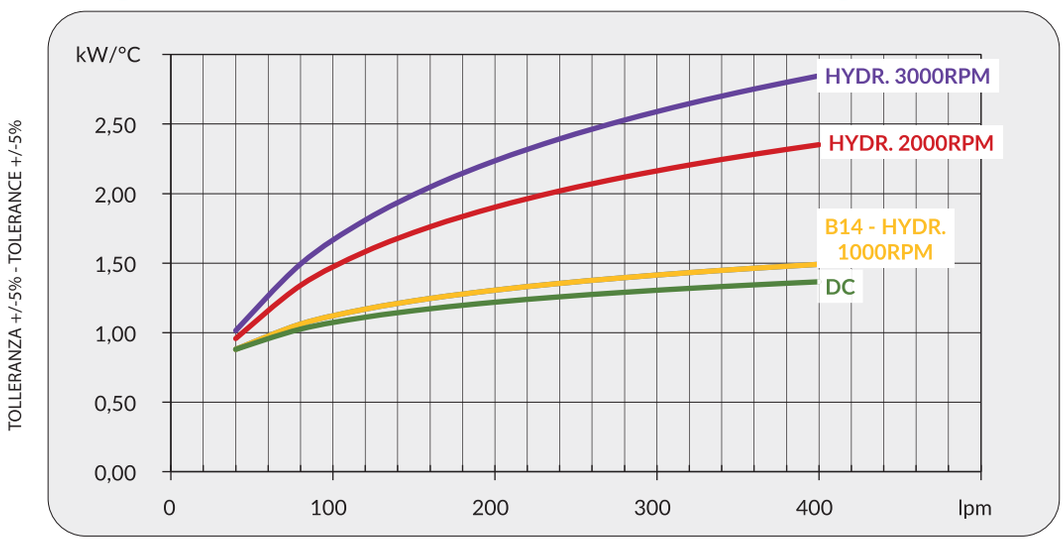
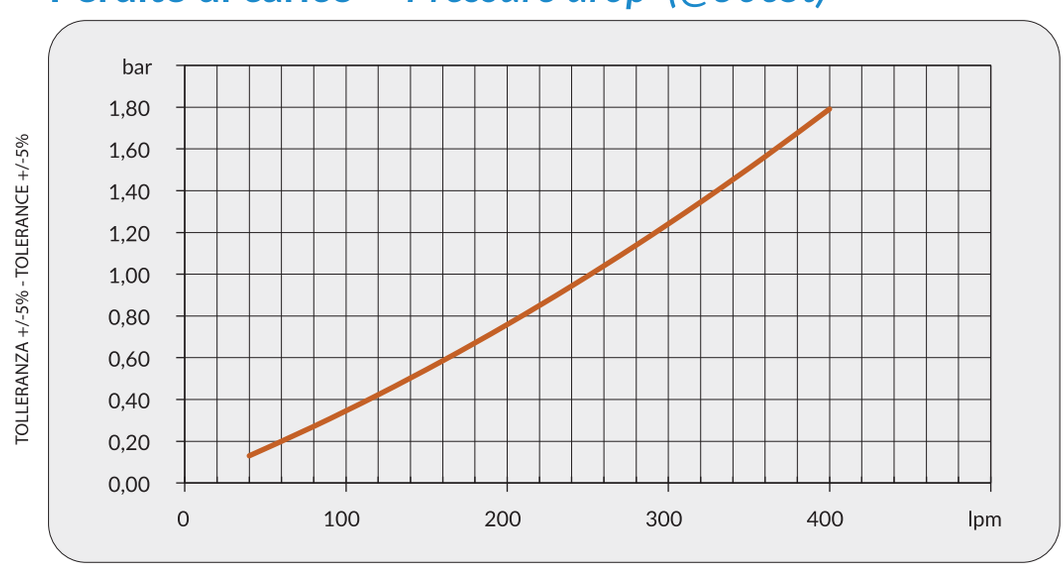
Diagramma rendimento *Performance diagram*

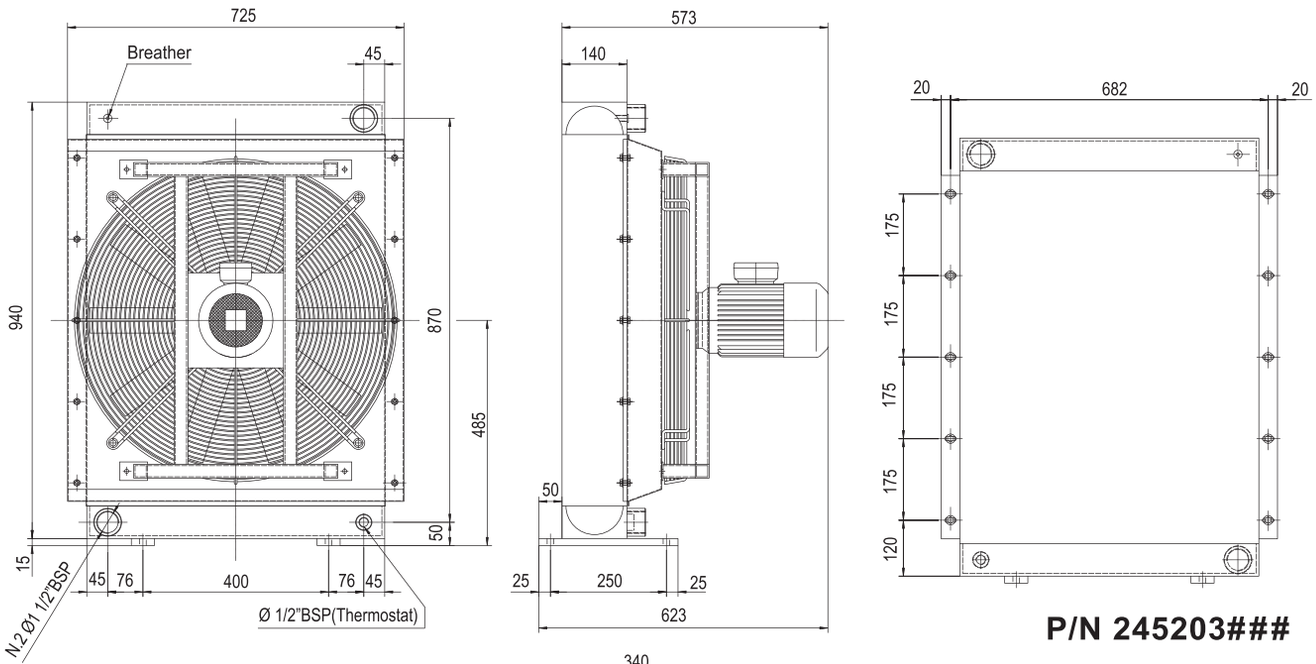


Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



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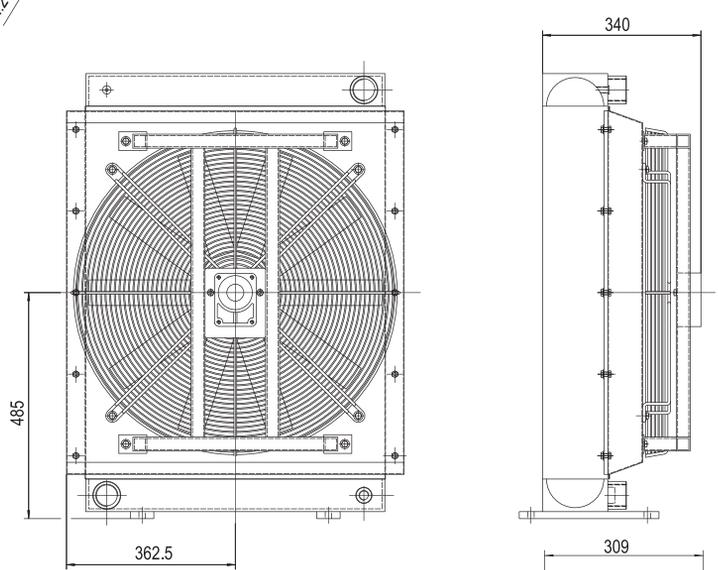
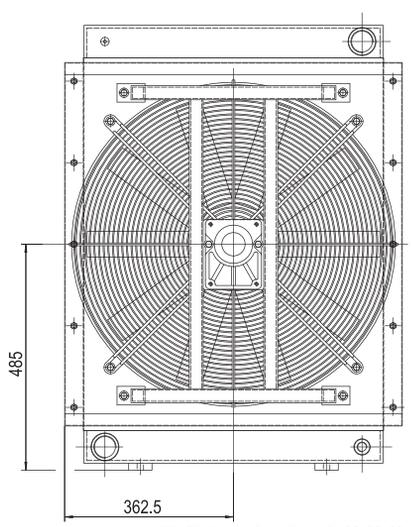
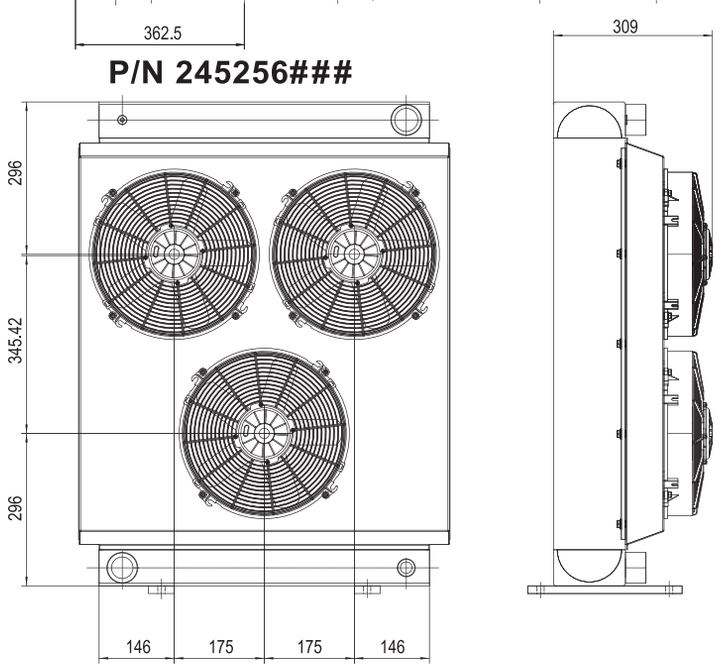
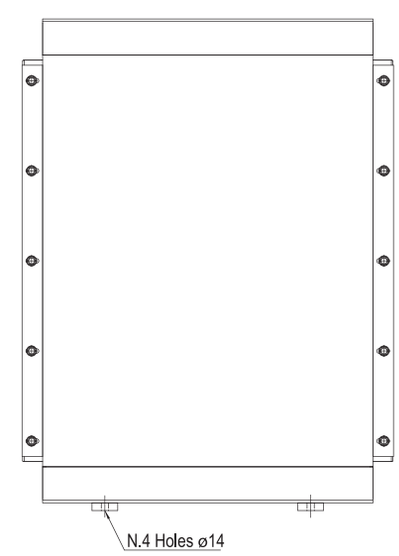


P/N 245256###



P/N 245258###





P/N 245212###
P/N 245224###

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m^3/ h)	IP	It	kg
245203###	230-400 B14 AC 265-460 B14 AC	50 60	1,1 1,3	5 - 2,9 5 - 2,9	950 1140	630	80	5260	55	17,7	95
245256###	Prepared for Gr.2 hydraulic motor					630			/	17,7	89
245258###	Prepared for Gr.3 hydraulic motor					630			/	17,7	89
245212###	12	-	0,21	16,1		305			68	17,7	89
245224###	24	-	0,22	8,5		305			68	17,7	89

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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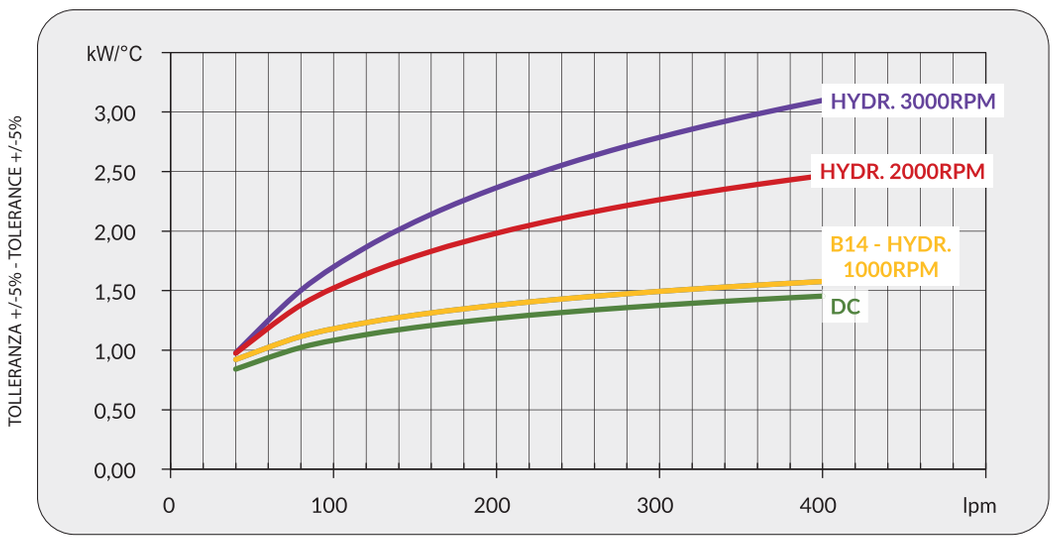
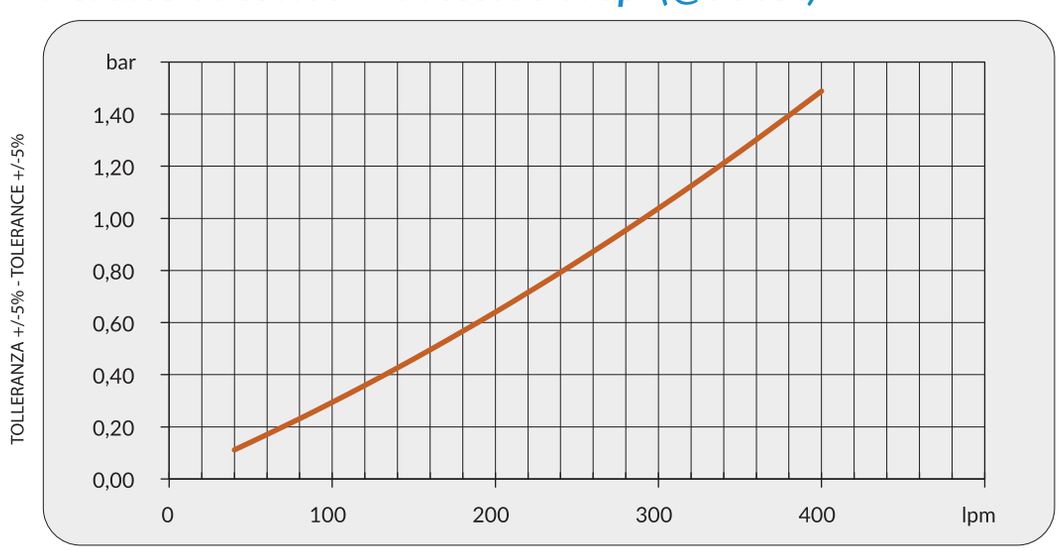
Diagramma rendimento *Performance diagram*

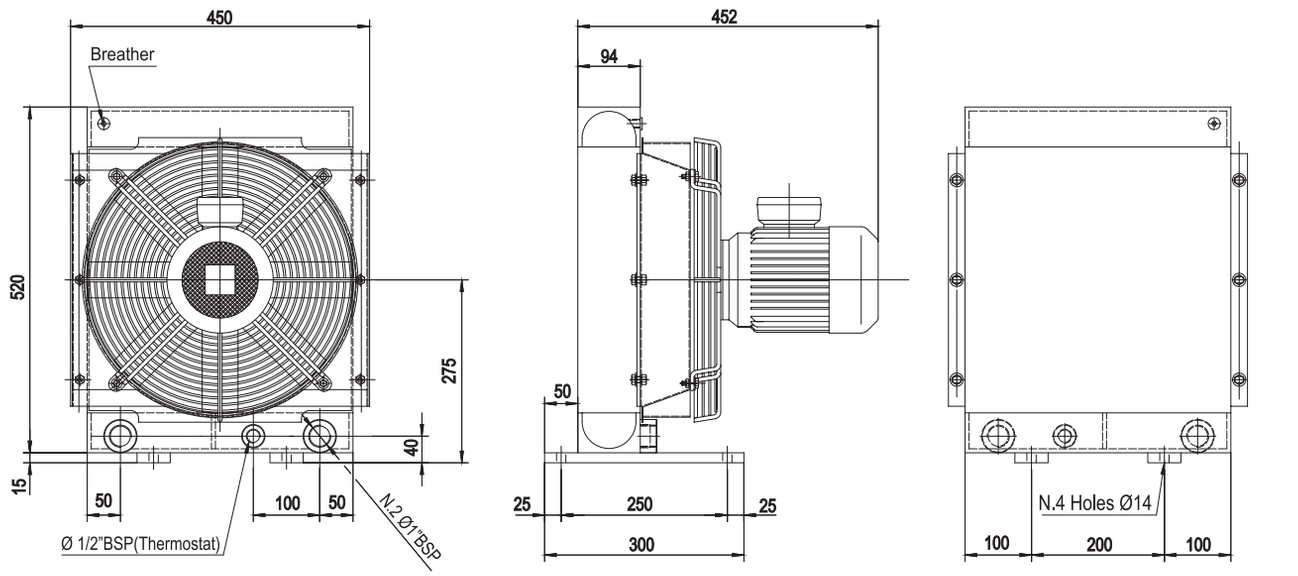


Perdite di carico *Pressure drop (@30cSt)*

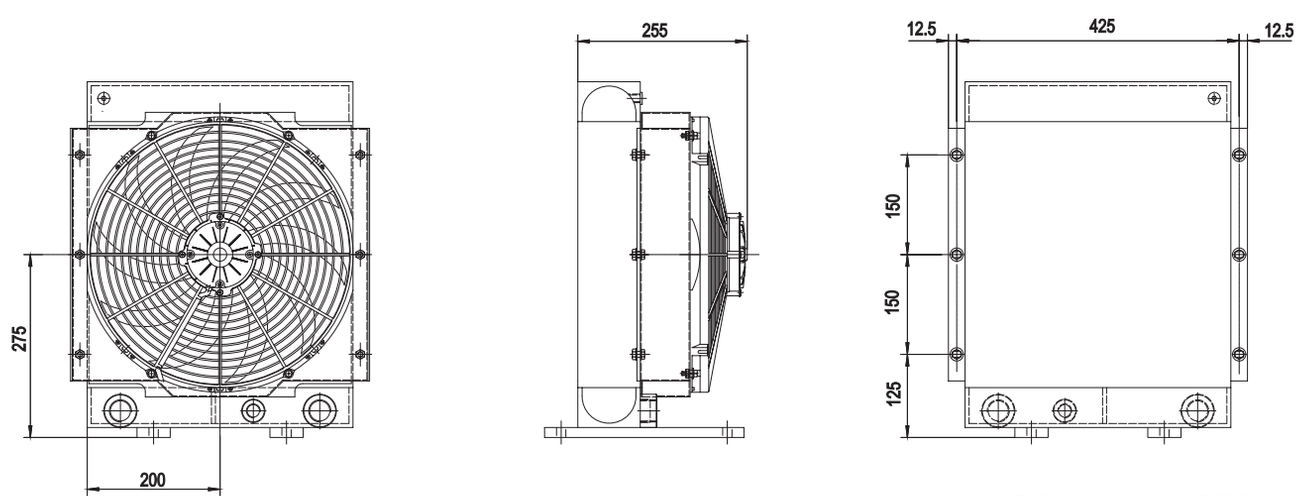


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

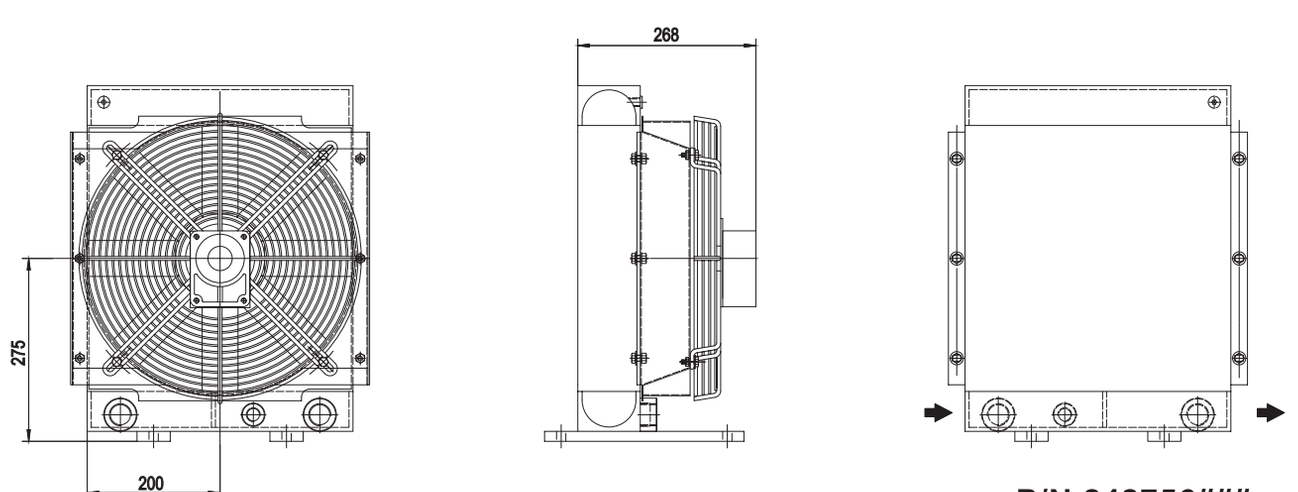
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 242703###



P/N 242712###
P/N 242724###



P/N 242756###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/h)	IP	lt	kg
242703###	230-400 B14 AC 265-460 B14 AC	50 60	0,55 0,63	2,5 - 1,5 2,5 - 1,5	1420 1710	400	79	1850	55	2,9	28
242712###	12 DC	/	0,24	20,3	2380	385	77	2250	68	2,9	22
242724###	24 DC	/	0,23	9,7	2580	305	80	2250	68	2,9	22
242756###	Prepared for Gr.2 hydraulic motor					400			/	2,9	23

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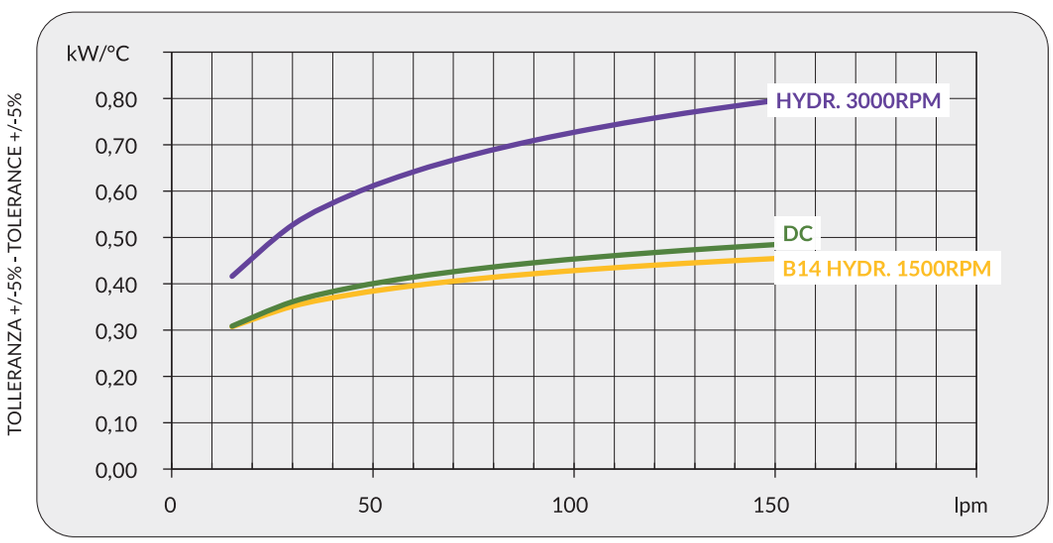
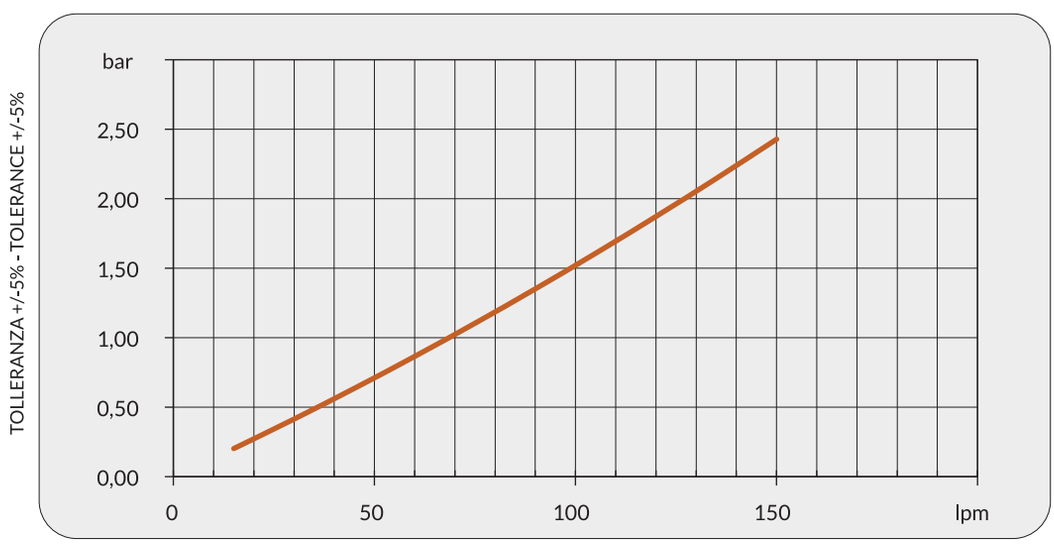
Diagramma rendimento *Performance diagram*

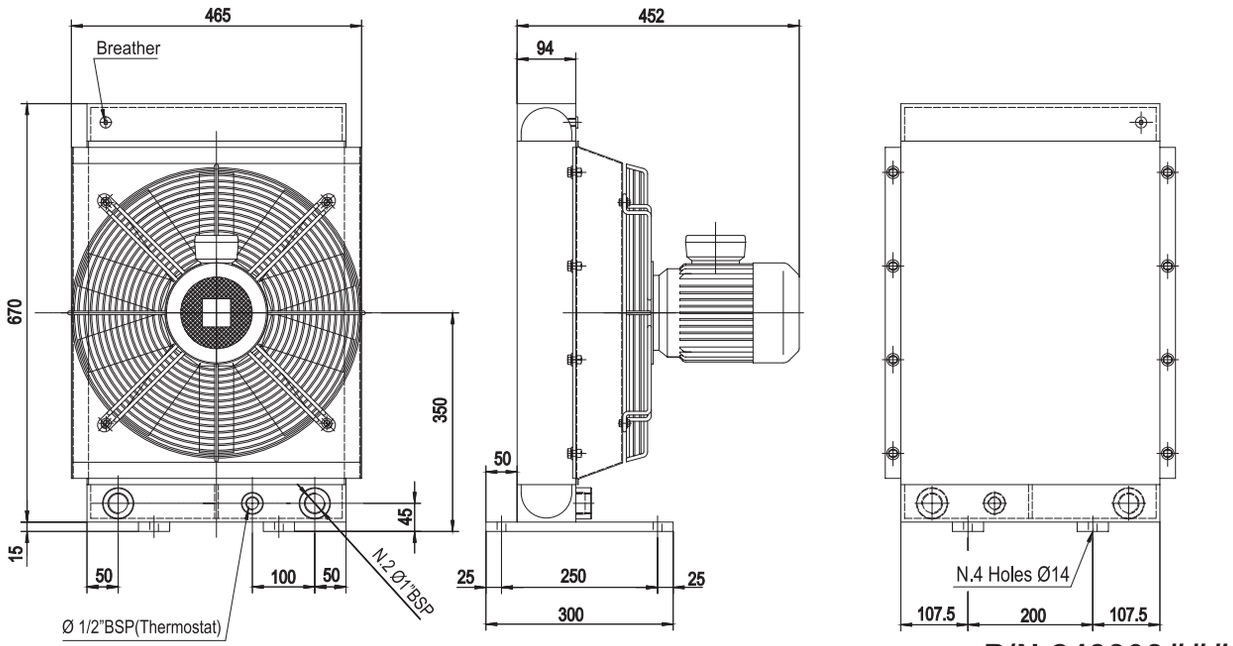


Perdite di carico *Pressure drop (@30cSt)*

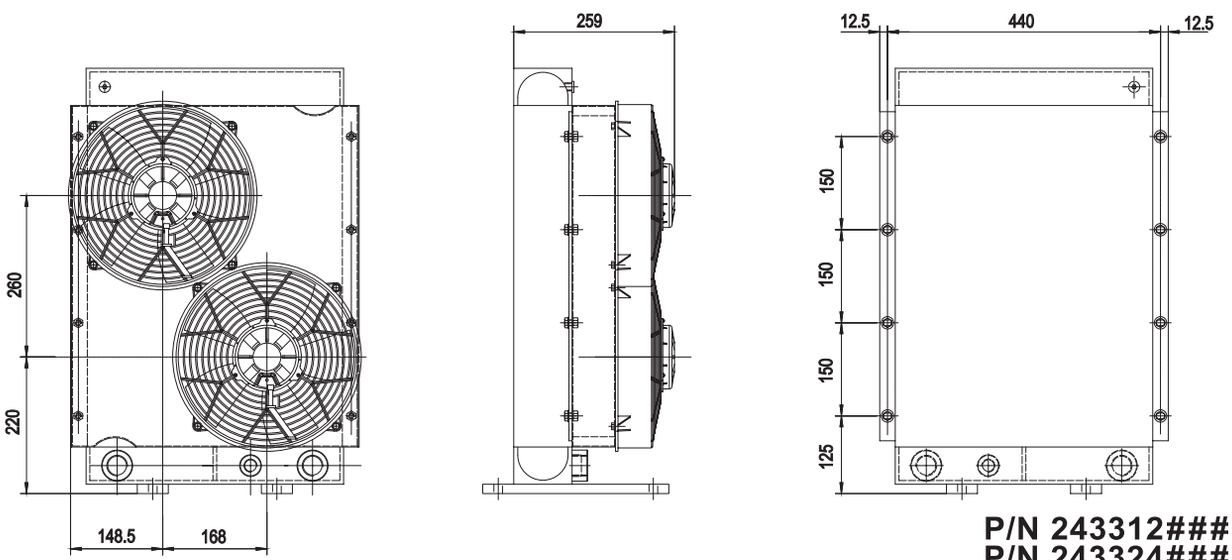


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

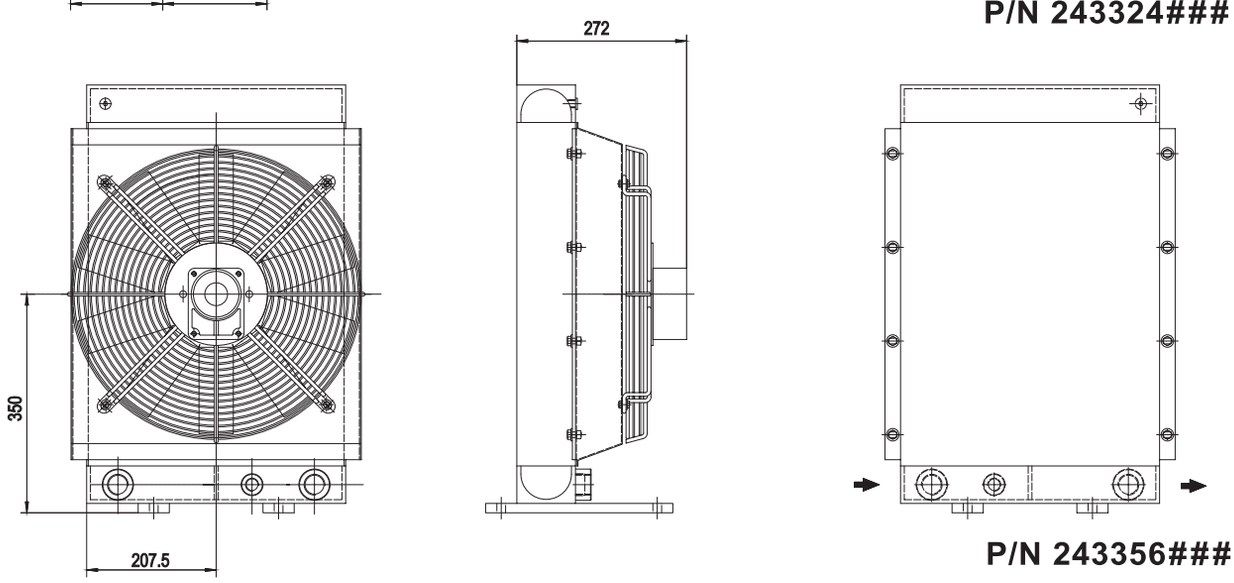
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 243303###



P/N 243312###
P/N 243324###



P/N 243356###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
243303###	230-400 B14 AC 265-460 B14 AC	50 60	0,75 0,86	3,1 - 1,8 3,1 - 1,8	1430 1715	450	82	3100	55	6,8	37
243312###	12 DC	/	0,17	13,9	2530	280	74	3050	68	6,8	32
243324###	24 DC	/	0,16	6,7	2900	280	78	3050	68	6,8	32
243356###	Prepared for Gr.2 hydraulic motor					450			/	6,8	35

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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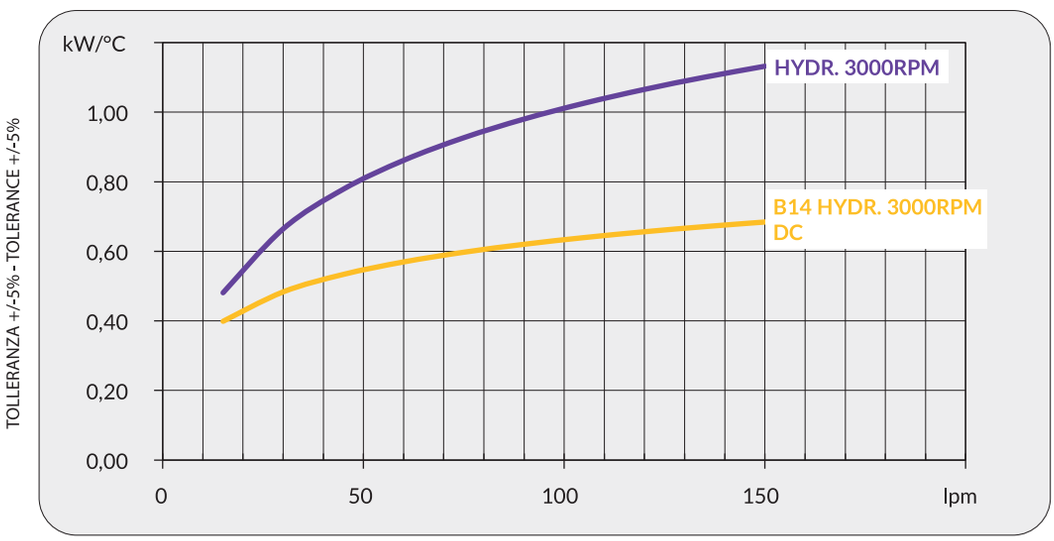
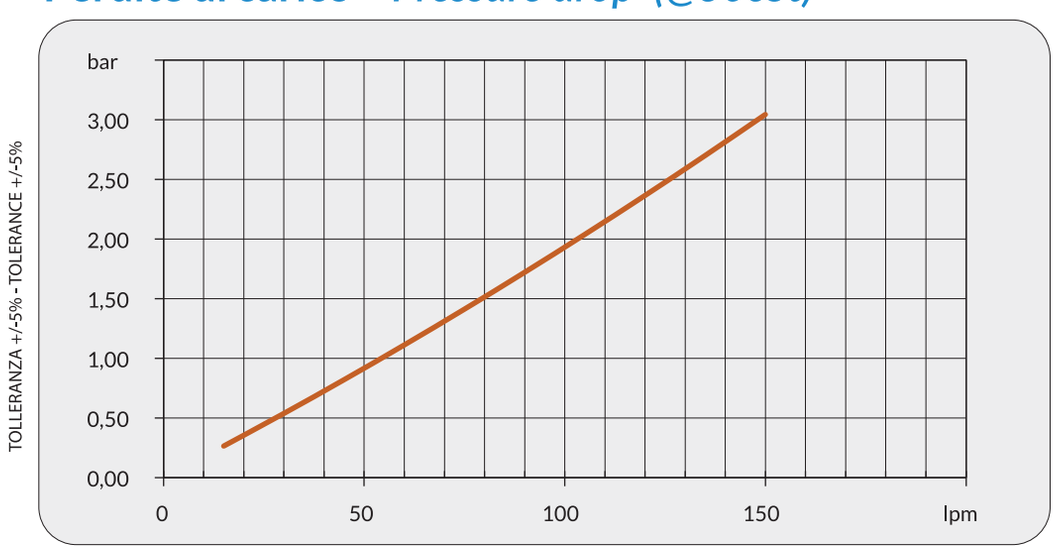
Diagramma rendimento *Performance diagram*

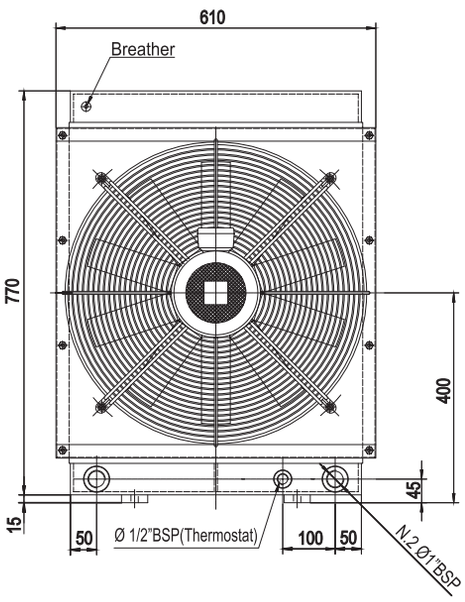


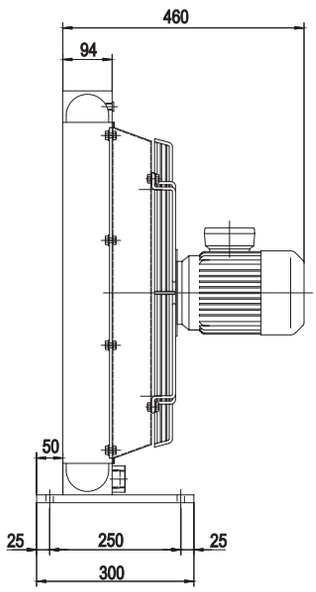
Perdite di carico *Pressure drop (@30cSt)*

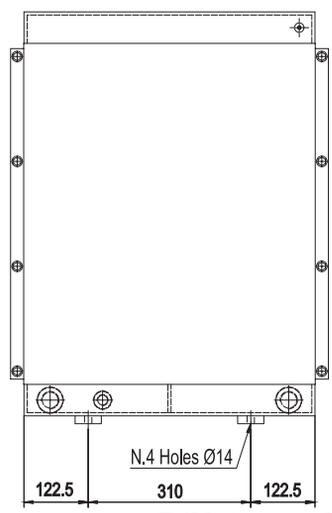


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

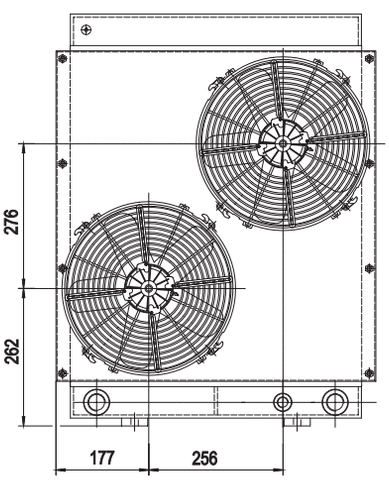
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

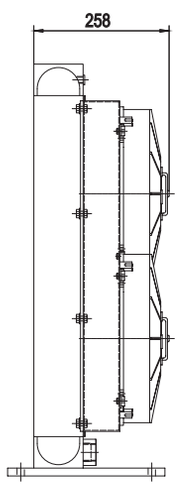


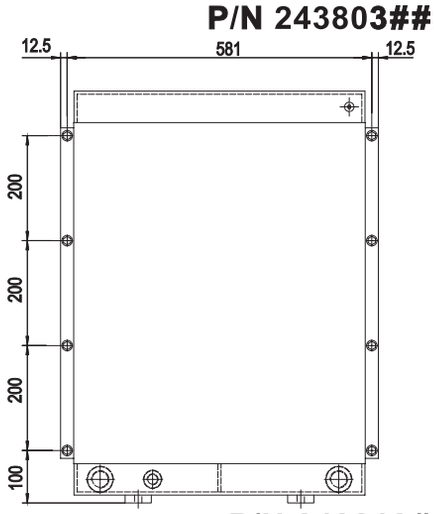




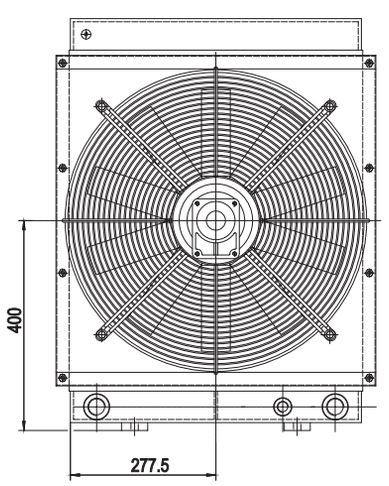
P/N 243803###

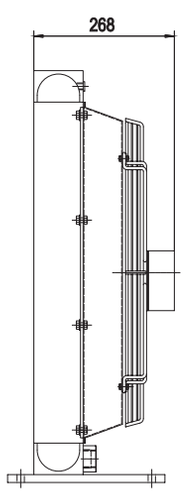


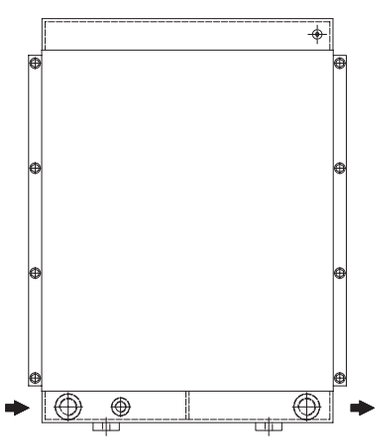




P/N 243812###
P/N 243824###







P/N 243856###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
243803###	230-400 B14 AC 265-460 B14 AC	50 60	1,1 1,3	4,5 - 2,6 4,5 - 2,6	1440 1730	500	82	5420	55	9,4	60
243812###	12 DC	/	0,19	16	3000	305	83	4100	68	9,4	50
243824###	24 DC	/	0,2	8,5	3000	305	84	4100	68	9,4	50
243856###	Prepared for Gr.2 hydraulic motor					500			/	9,4	52

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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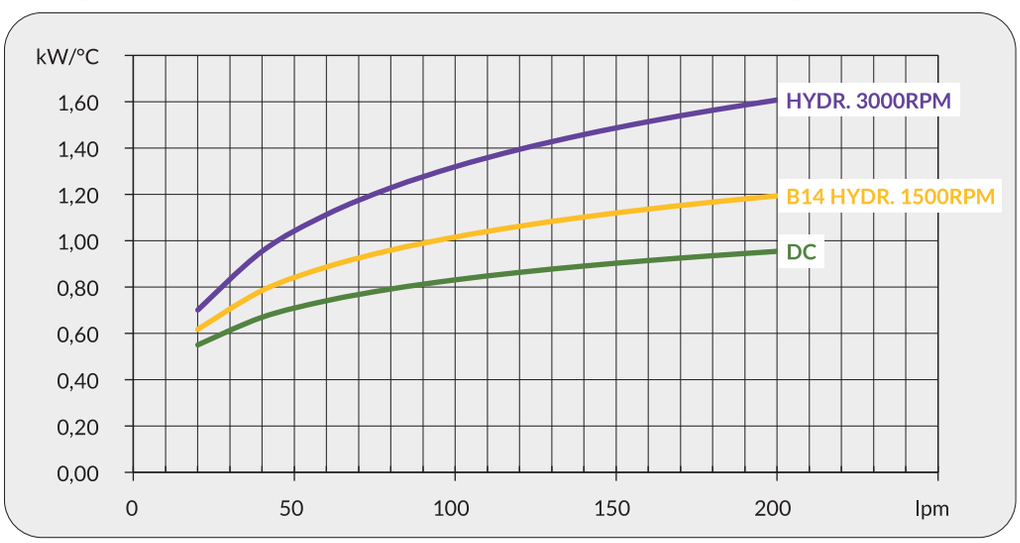
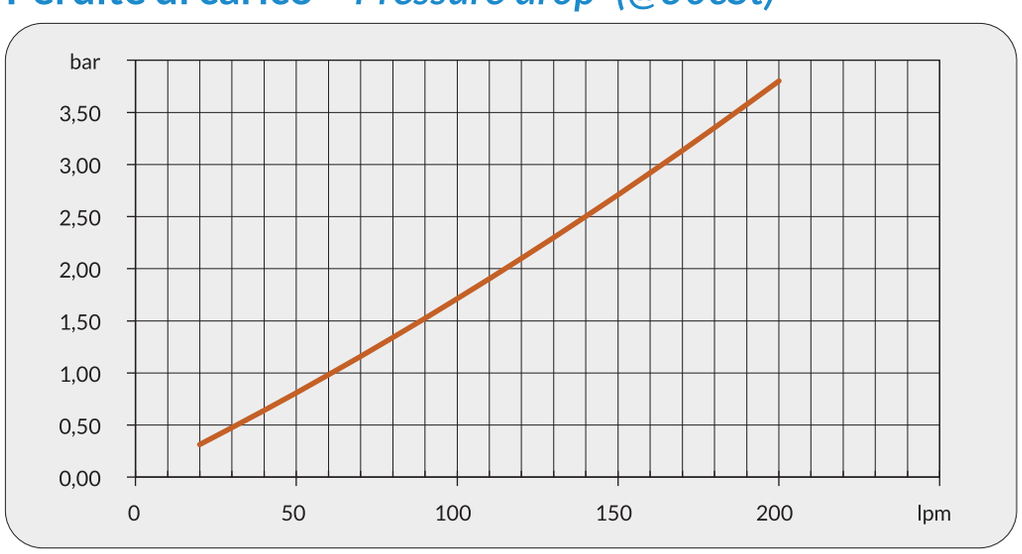
Diagramma rendimento *Performance diagram*

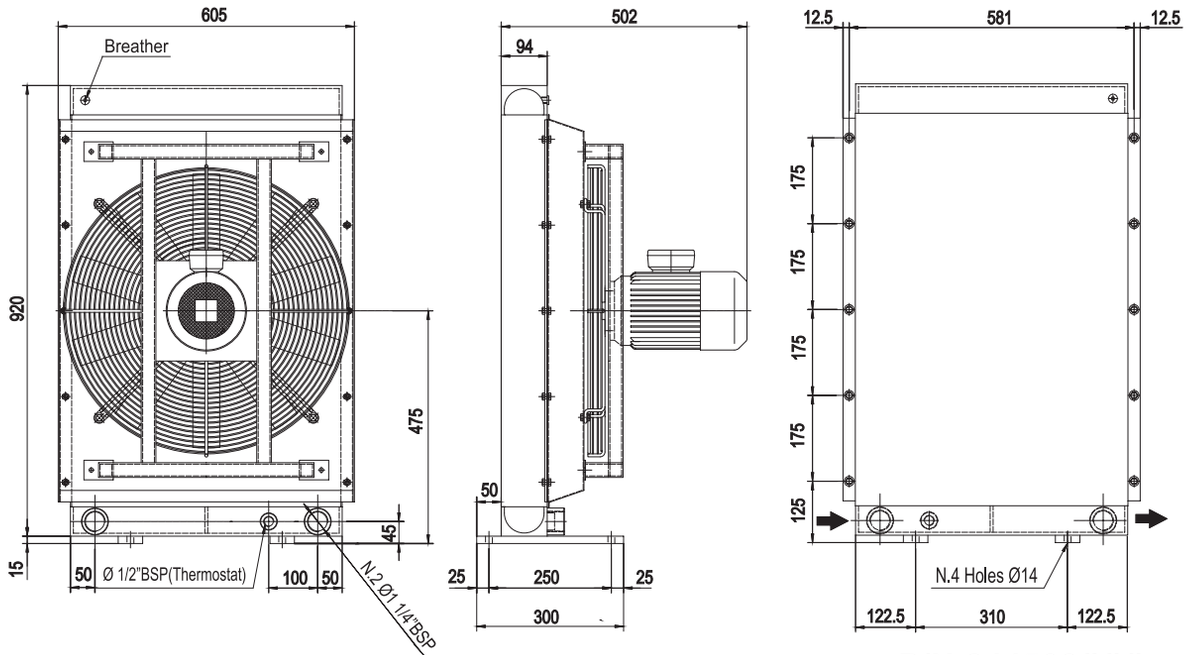


Perdite di carico *Pressure drop (@30cSt)*

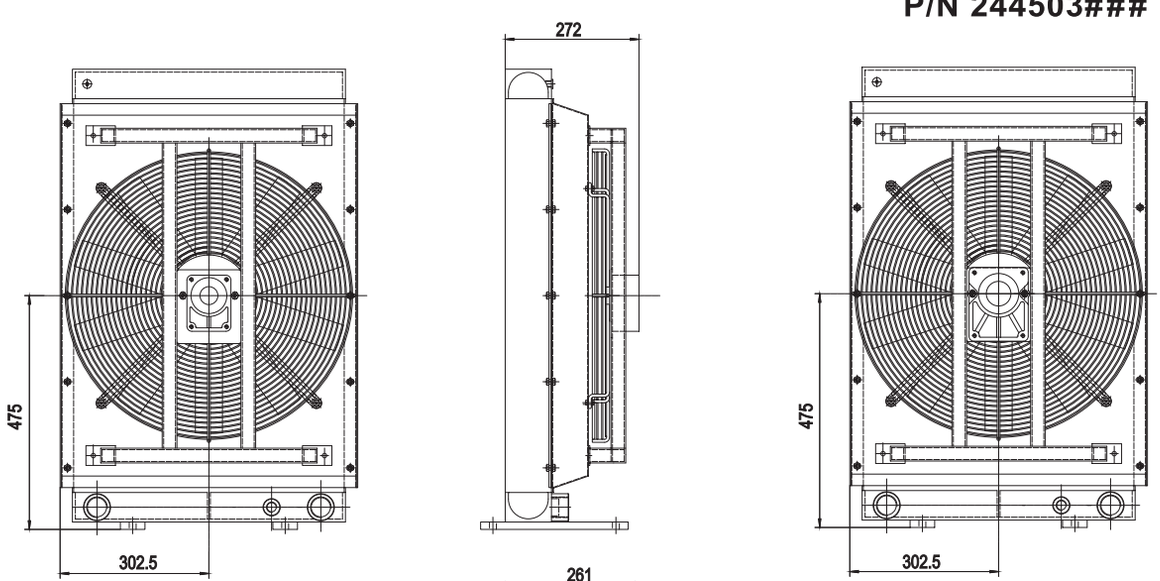


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

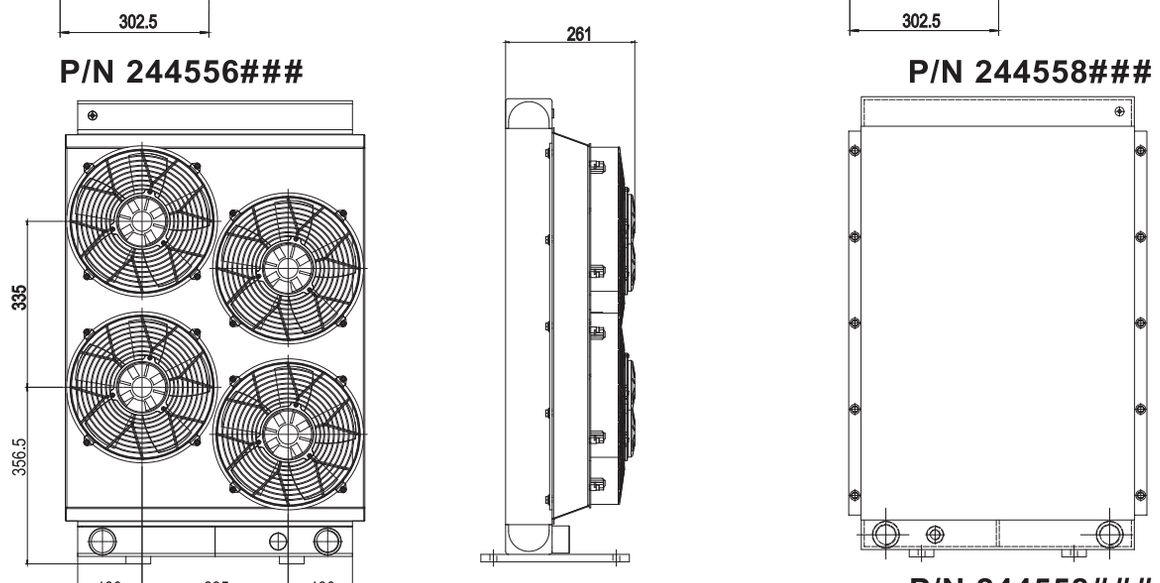


P/N 244503###



P/N 244556###

P/N 244558###



P/N 244558###
P/N 244558###

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
244503###	230-400 B14 AC 265-460 B14 AC	50 60	1,1 1,3	4,5 - 2,6 4,5 - 2,6	1440 1730	560	84 ☎	6850 ☎	55	10,6	65
244556###	Prepared for Gr.2 hydraulic motor				☎	560	☎	☎	/	10,6	58
244558###	Prepared for Gr.3 hydraulic motor				☎	560	☎	☎	/	10,6	58
244512###	12V	-	0,19	14,3	2920	280	☎	☎	68	10,6	58
244524###	24V	-	0,18	6,8	2920	280	☎	☎	68	10,6	58

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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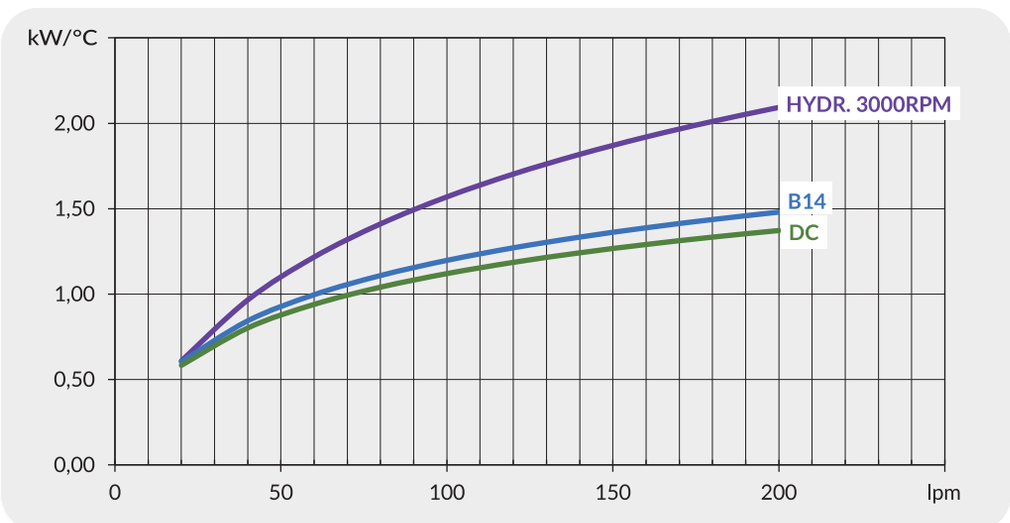
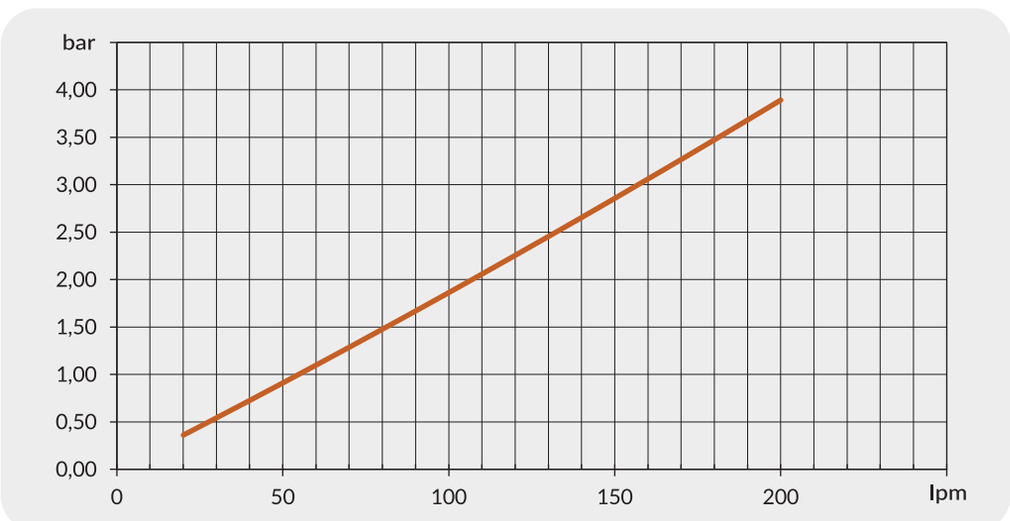
Diagramma rendimento *Performance diagram*

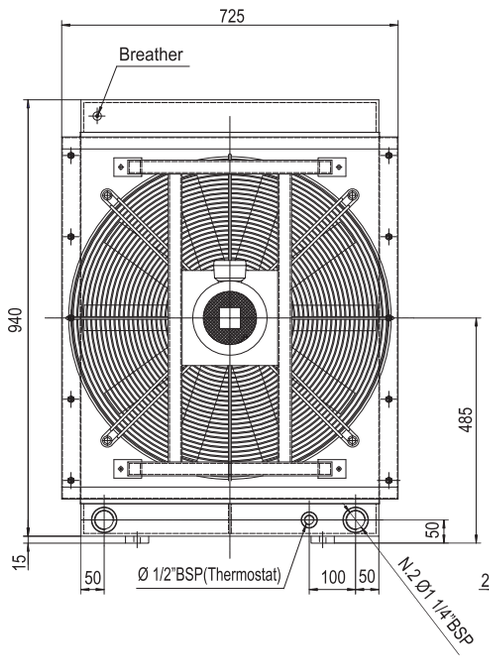


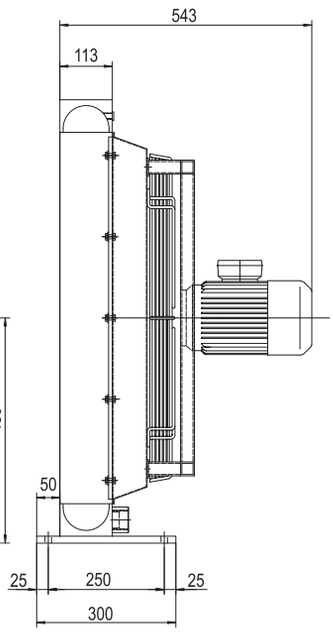
Perdite di carico *Pressure drop (@30cSt)*

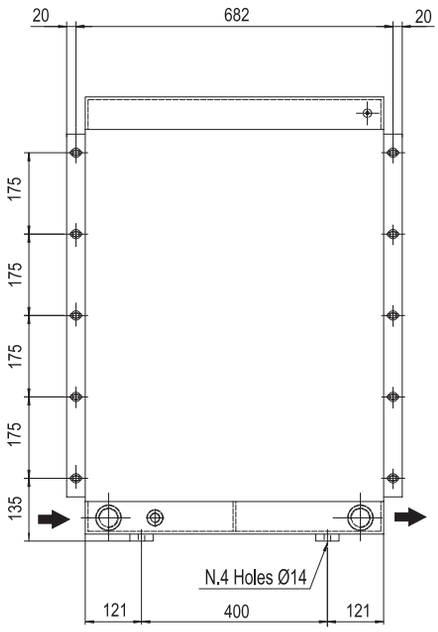


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

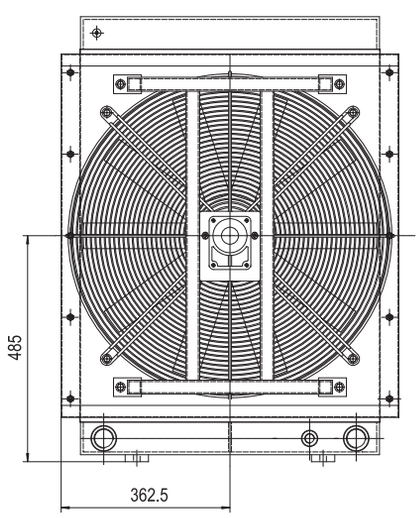
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

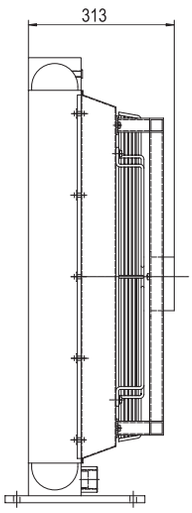




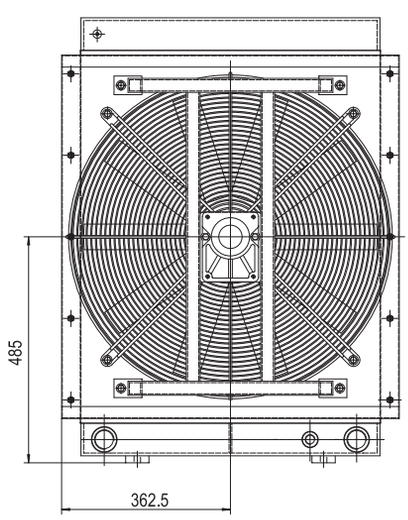


P/N 298703###

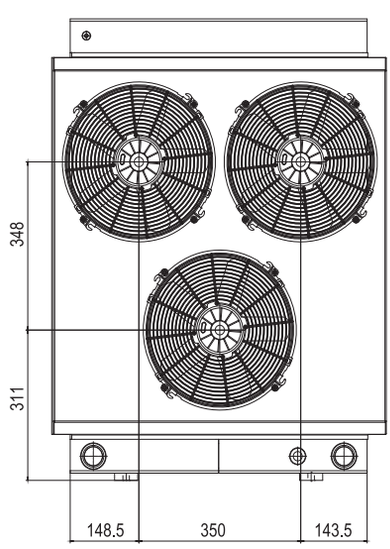


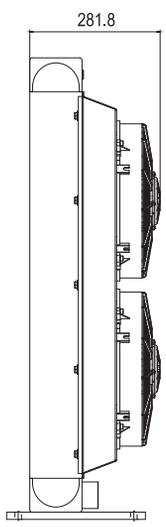


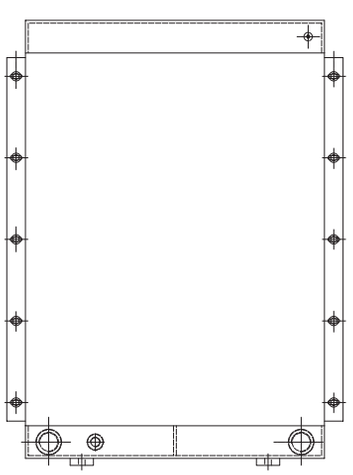
P/N 298758###



P/N 298756###







P/N 298712###
P/N 298724###

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
298703###	230-400 B14 AC 265-460 B14 AC	50 60	1,1 1,3	5-2,9 5-2,9	936 1123	630	80 ☎	7550 ☎	55	14,2	90
298756###	Prepared for Gr.2 hydraulic motor				☎	630	☎	☎	/	14,2	83
298758###	Prepared for Gr.3 hydraulic motor				☎	630	☎	☎	/	14,2	83
298712###	12	-	0,21	16,1	☎	305	☎	☎	68	14,2	83
298724###	24	-	0,21	8,5	☎	305	☎	☎	68	14,2	83

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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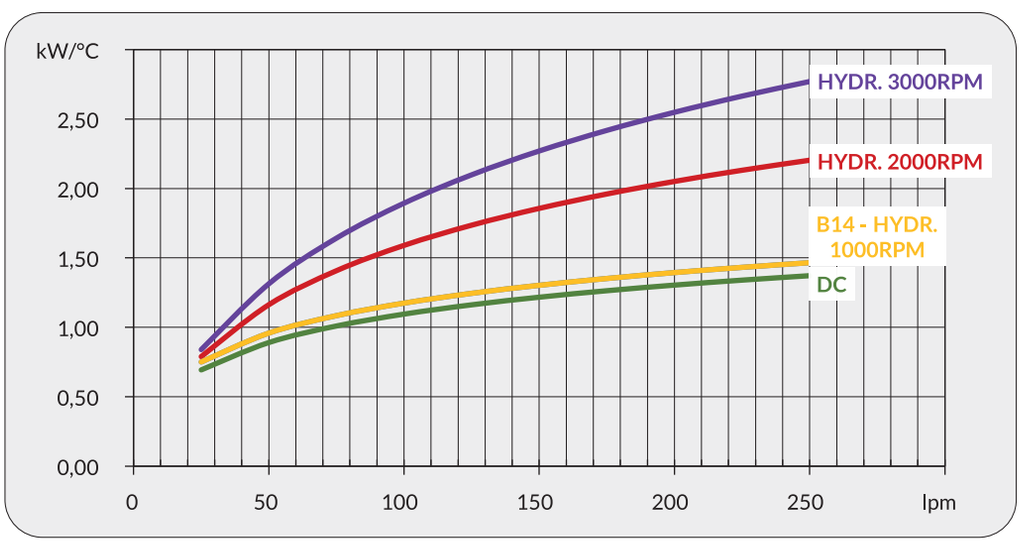
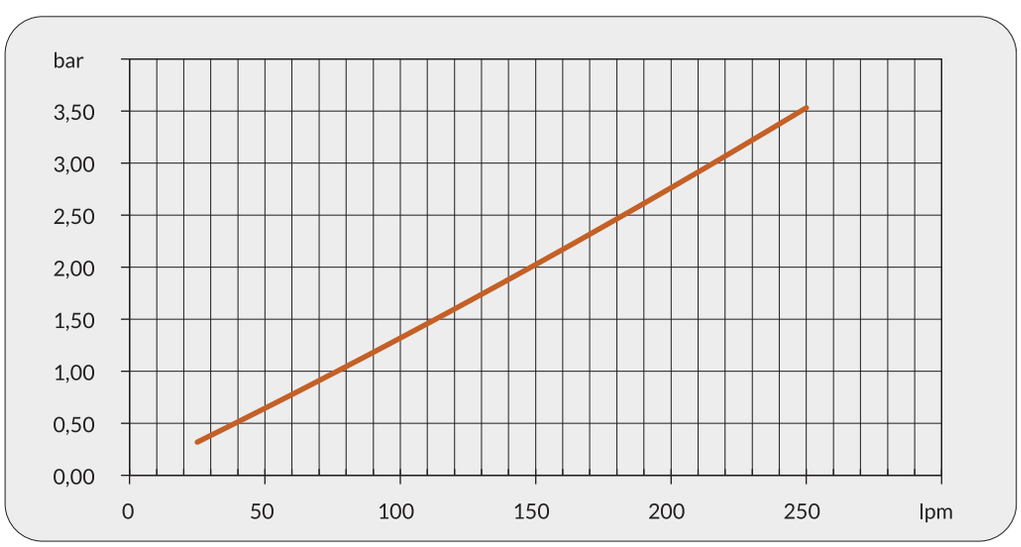
Diagramma rendimento *Performance diagram*

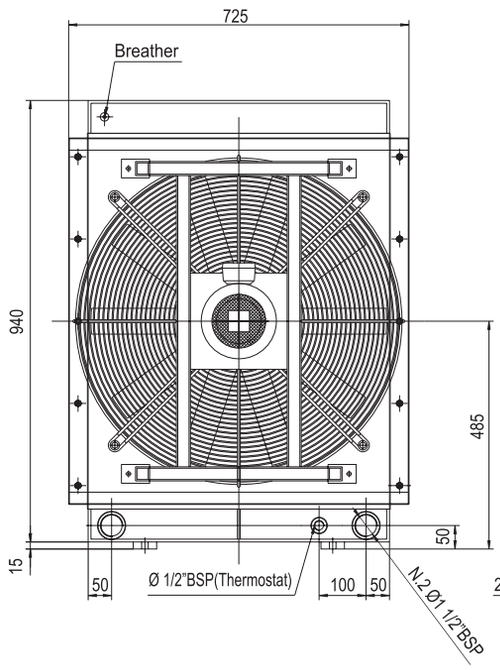


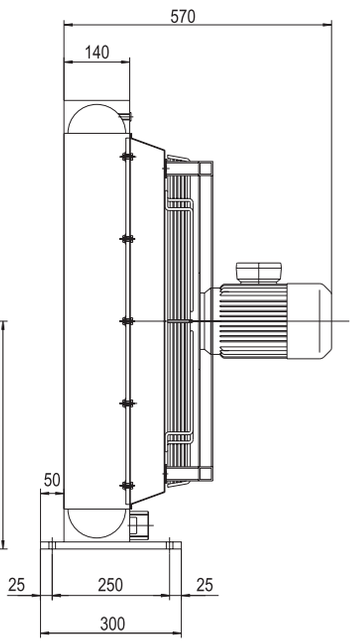
Perdite di carico *Pressure drop (@30cSt)*

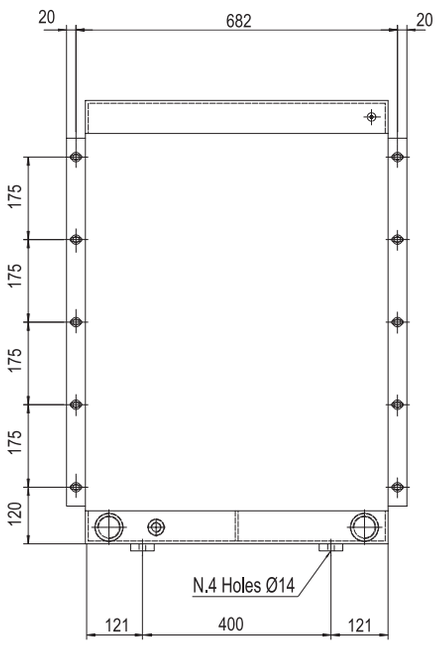


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

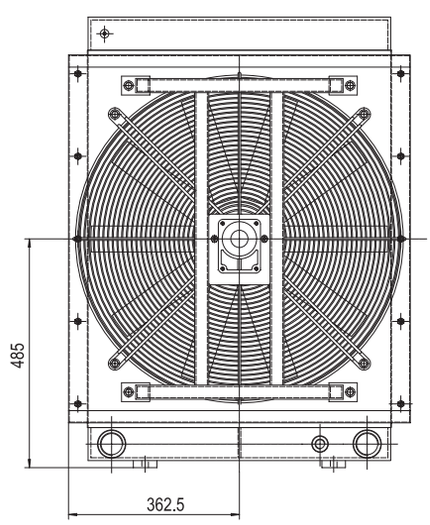
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

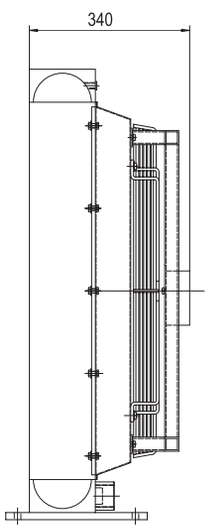




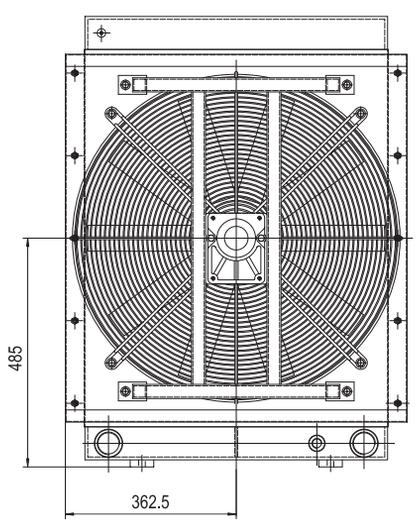


P/N 245403###

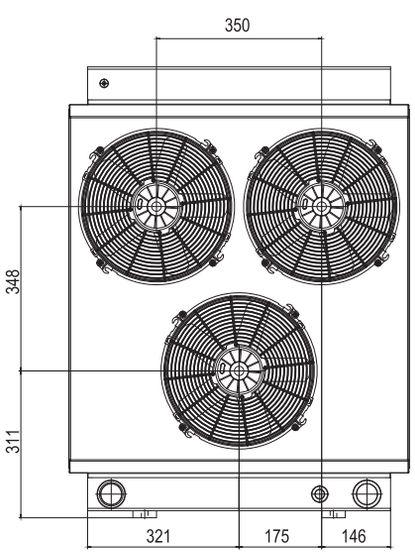


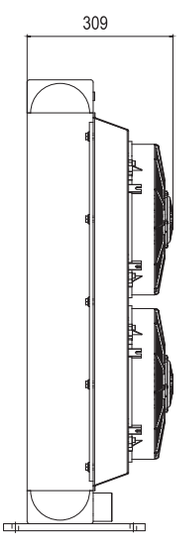


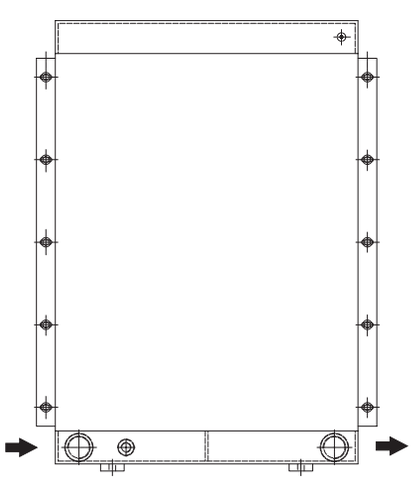
P/N 245456###



P/N 245458###







P/N 245412###
P/N 245424###

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
245403###	230-400 B14 AC 265-460 B14 AC	50 60	1,1 1,3	5 - 2,9 5 - 2,9	936 1123	630	80 ☎	7050 ☎	55	17,7	95
245456###	Prepared for Gr.2 hydraulic motor				☎	630	☎	☎	/	17,7	89
245458###	Prepared for Gr.3 hydraulic motor				☎	630	☎	☎	/	17,7	89
245412###	12	-	0,21	16,1	☎	305	☎	☎	68	17,7	89
245424###	24	-	0,21	8,5	☎	305	☎	☎	68	17,7	89

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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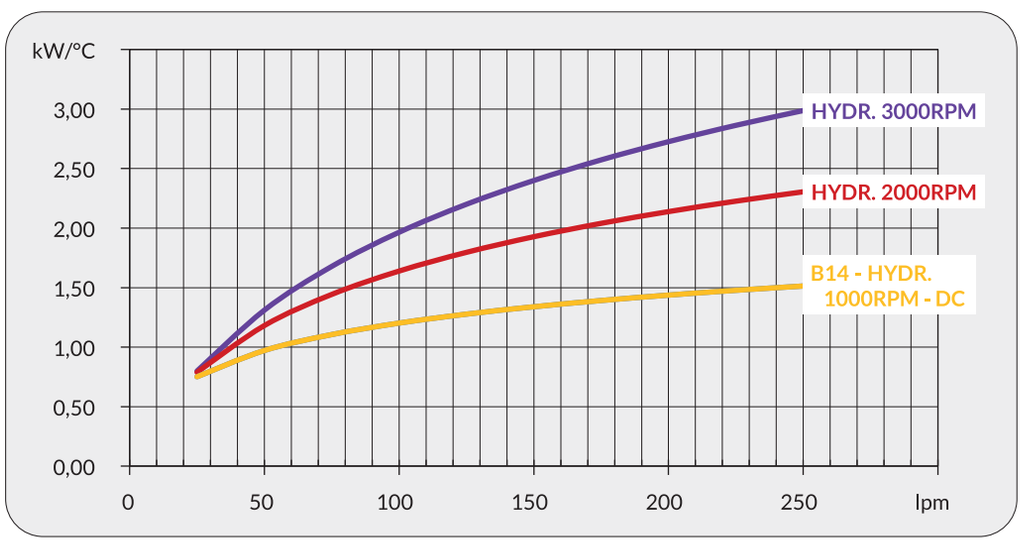
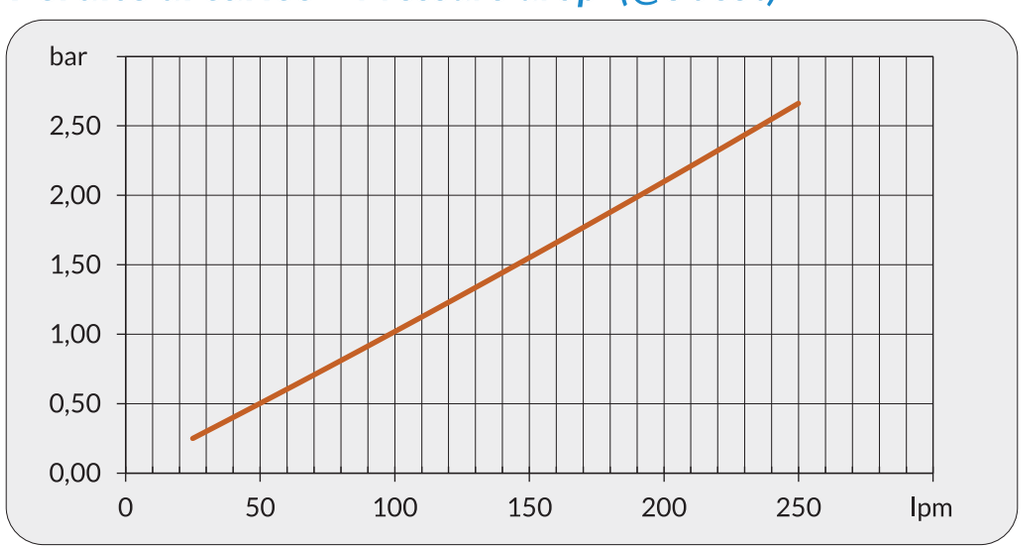
Diagramma rendimento *Performance diagram*

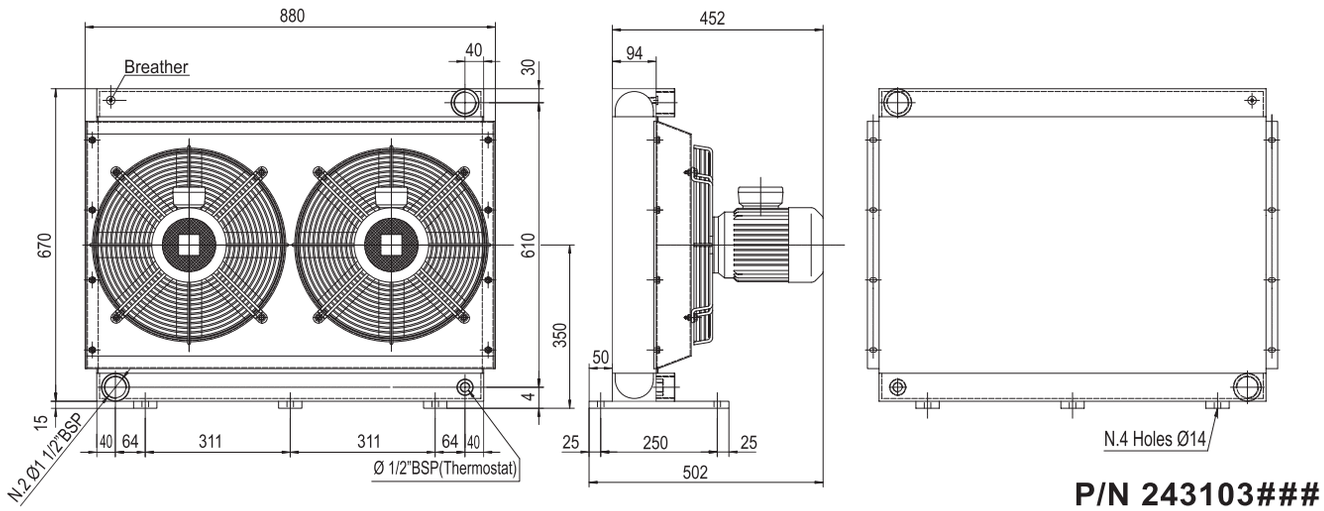


Perdite di carico *Pressure drop (@30cSt)*

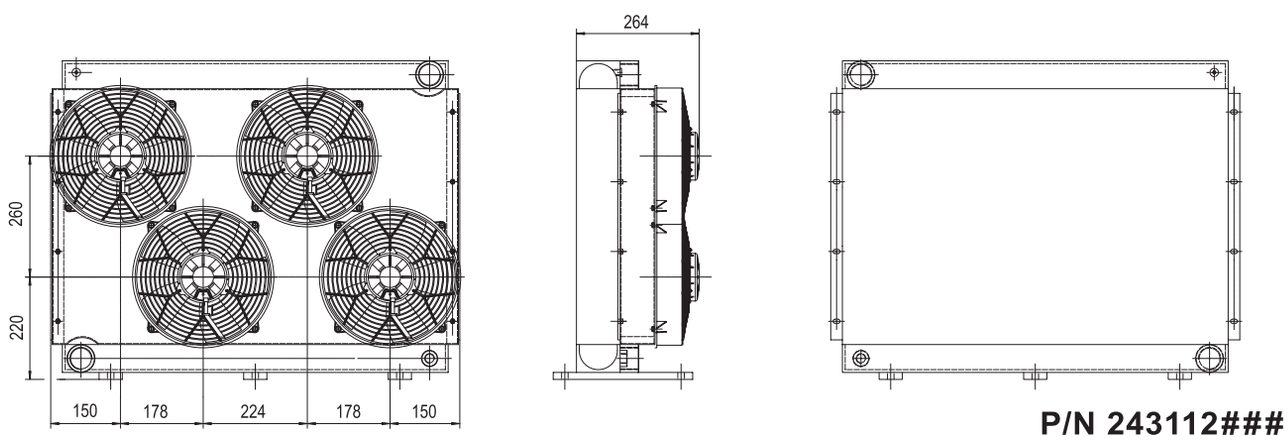


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

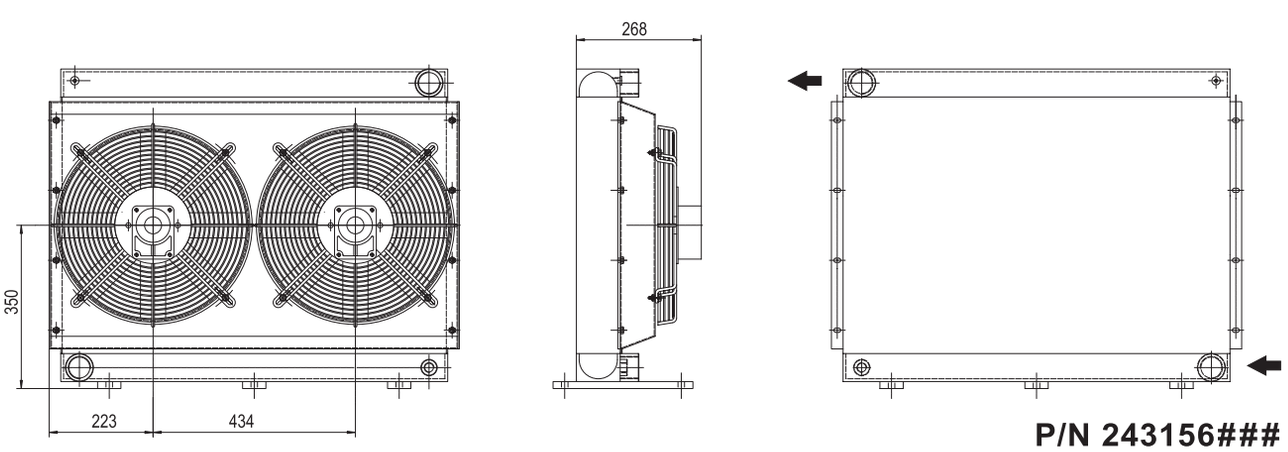
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 243103###



P/N 243112###
P/N 243124###



P/N 243156###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

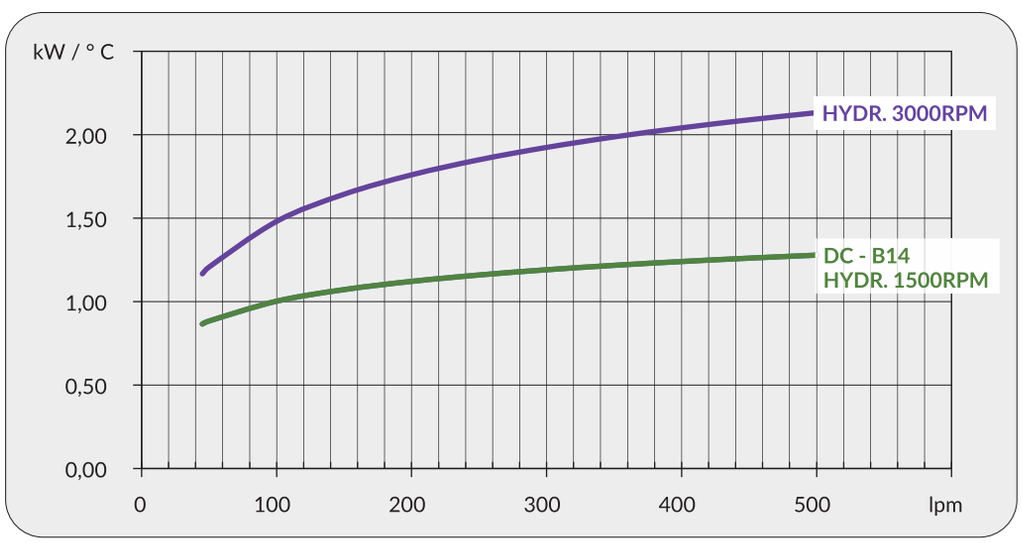
Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m^3/ h)	IP	lt	kg
243103###	230-400 B14 AC 265-460 B14 AC	50 60	0,55 0,63	2,5 - 1,5 2,5 - 1,5	1420 1710	400	79	3060	55	13,6	74
243112###	12 DC	/	0,16	8,9	2530	280	77	3060	68	13,6	64
243124###	24 DC	/	0,16	6,7	2900	280	81	3060	68	13,6	64
243156###	Prepared for Gr.2 hydraulic motor					400			/	13,6	70

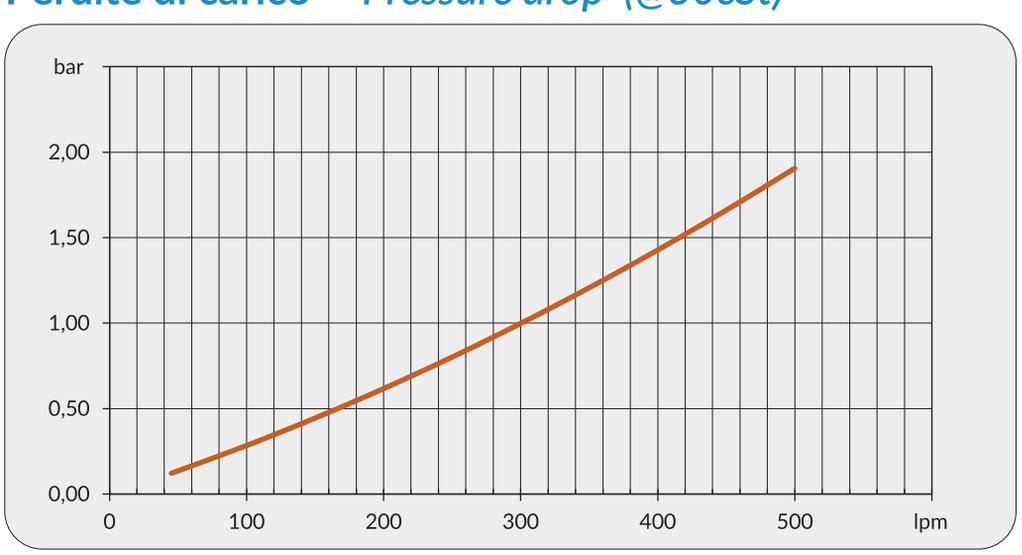
I dati si riferiscono al singolo ventilatore
Data refers to each fan

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento *Performance diagram*

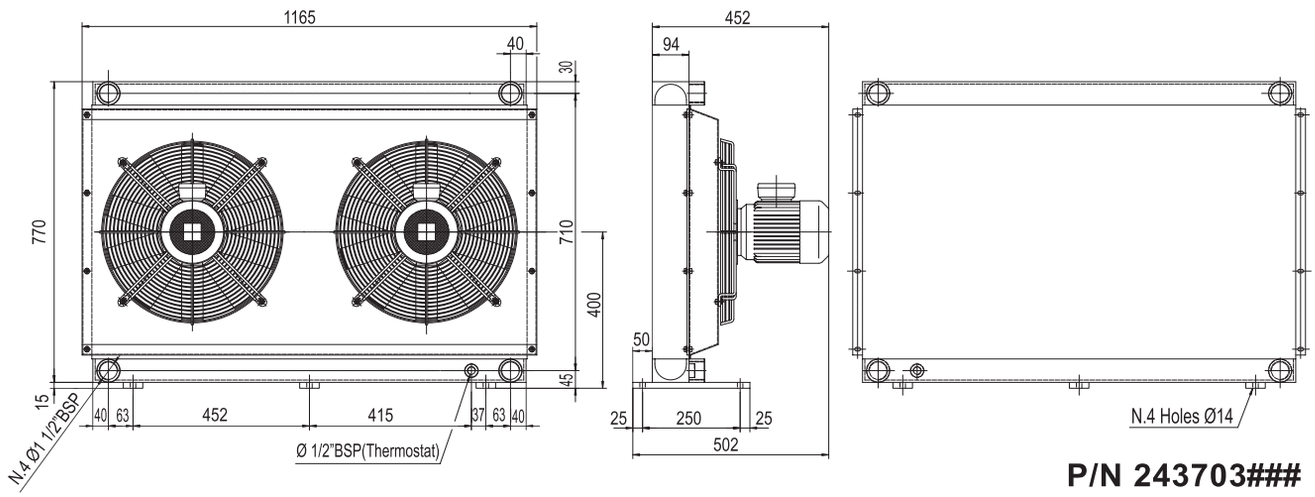


Perdite di carico *Pressure drop (@30cSt)*

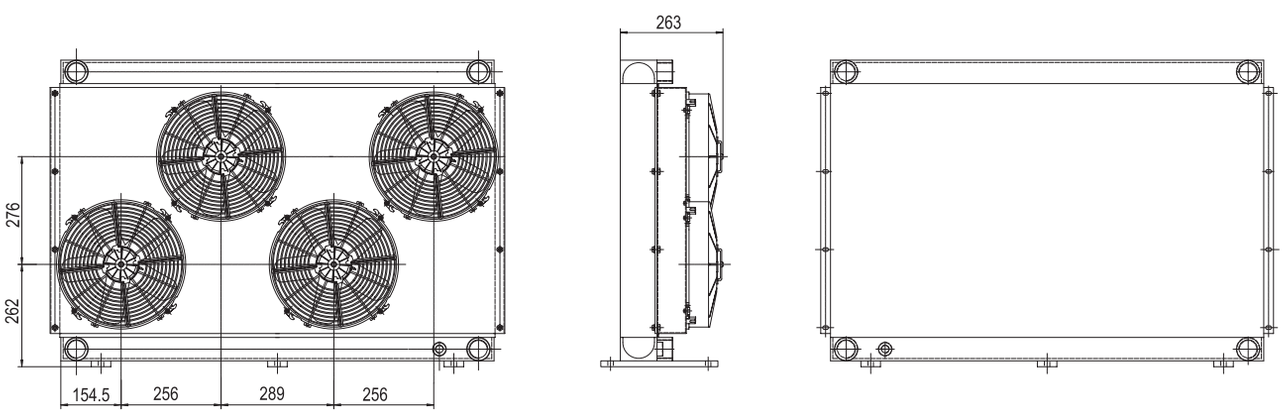


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

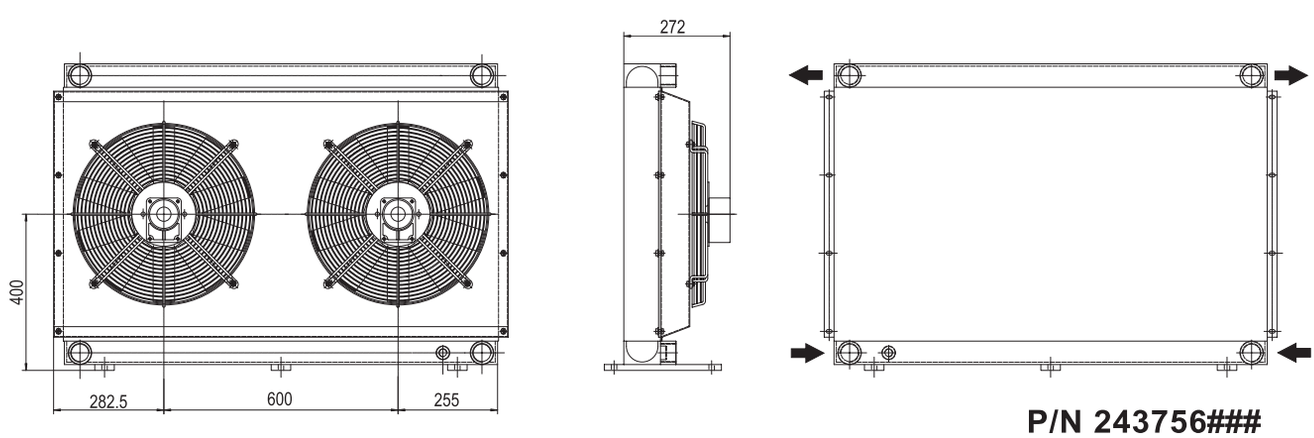
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 243703###



P/N 243712###
P/N 243724###



P/N 243756###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

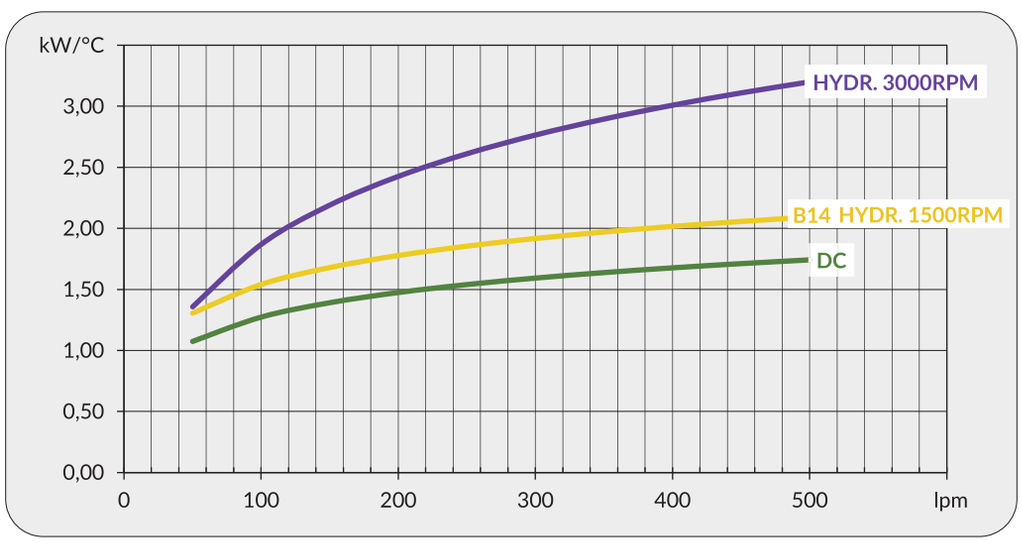
Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m^3/ h)	IP	It	kg
243703###	230-400 B14 AC 265-460 B14 AC	50 60	0,75 0,86	3,1 - 1,8 3,1 - 1,8	1430 1715	445	85	4270	55	18,8	120
243712###	12 DC	/	0,18	15,60	2560	305	86	3750	68	18,8	100
243724###	24 DC	/	0,2	8,5	3000	305	87	3750	68	18,8	100
243756###	Prepared for Gr.2 hydraulic motor					445			/	18,8	102

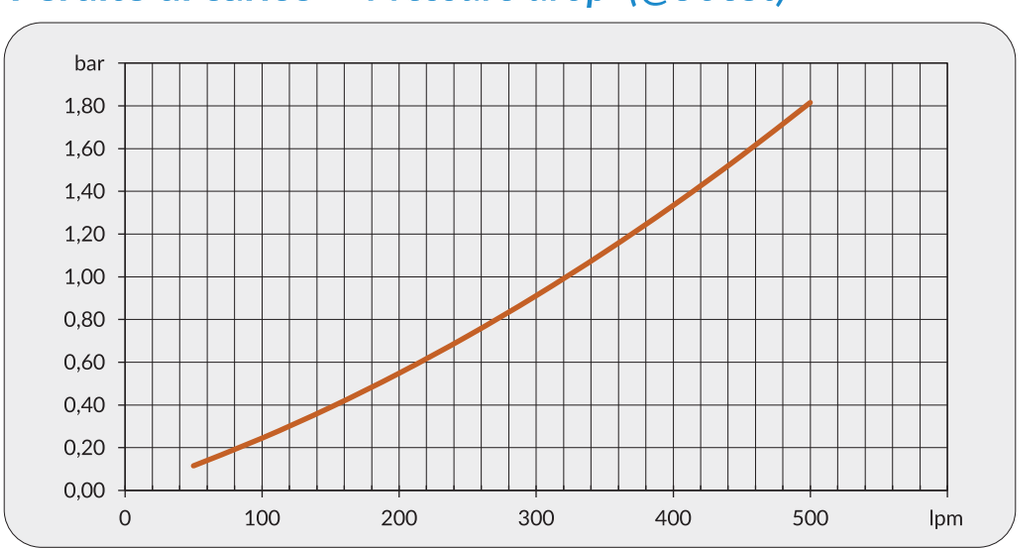
I dati si riferiscono al singolo ventilatore
Data refers to each fan

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento *Performance diagram*

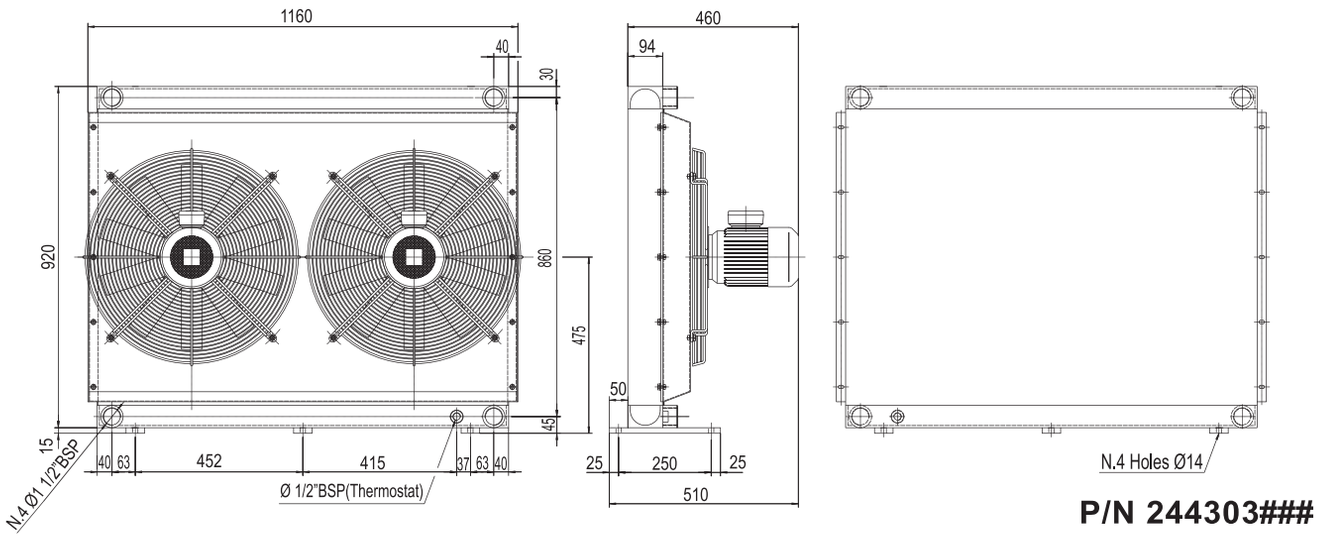


Perdite di carico *Pressure drop (@30cSt)*

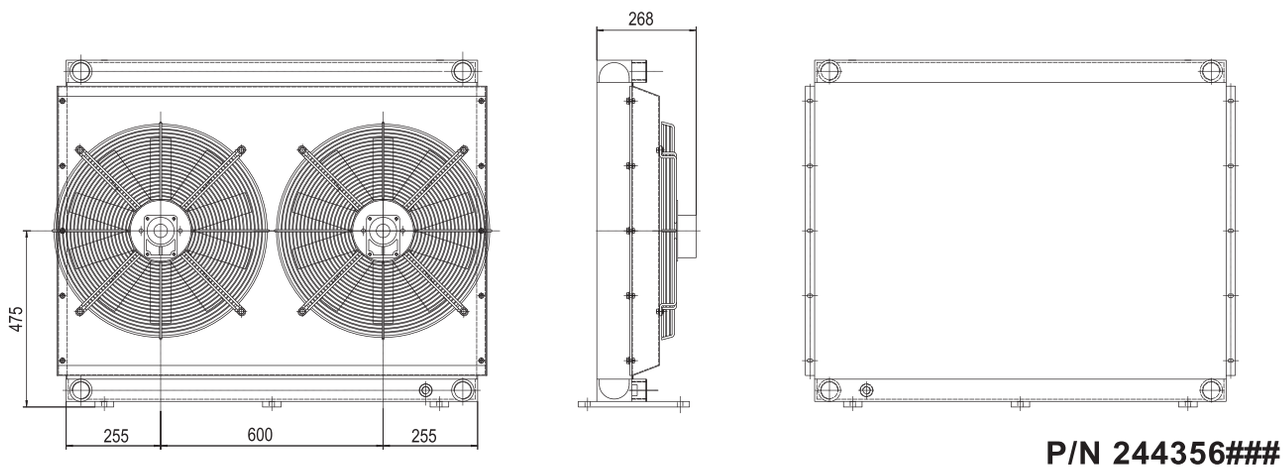


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

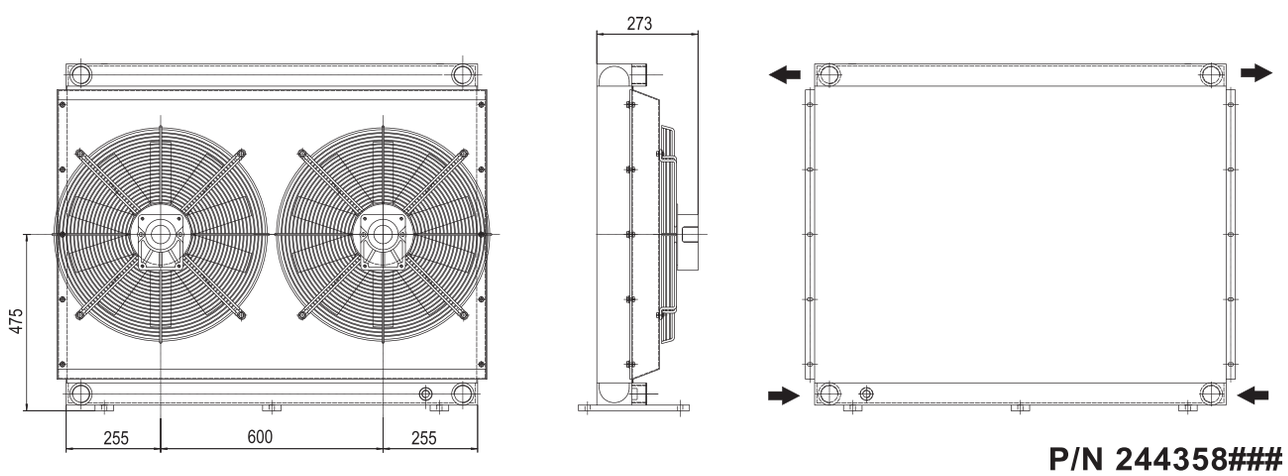
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 244303###



P/N 244356###



P/N 244358###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

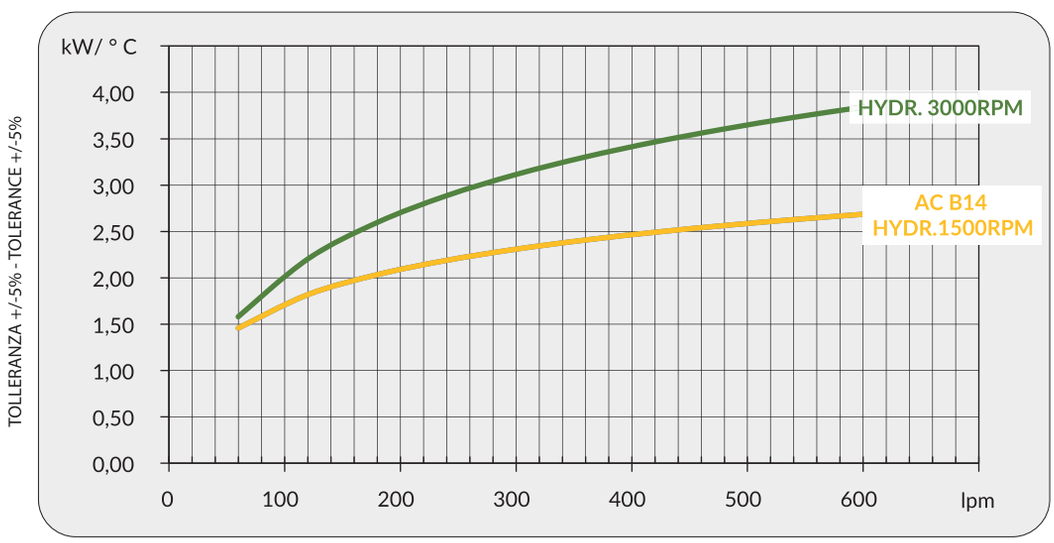
Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	lt	kg
244303###	230-400 B14 AC 265-460 B14 AC	50 60	1,1 1,3	4,5 - 2,6 4,5 - 2,6	1440 1730	500	87	5700	55	21,2	135
244356###	Prepared for Gr.2 hydraulic motor					500			/	21,2	122
244358###	Prepared for Gr.3 hydraulic motor					500			/	21,2	122

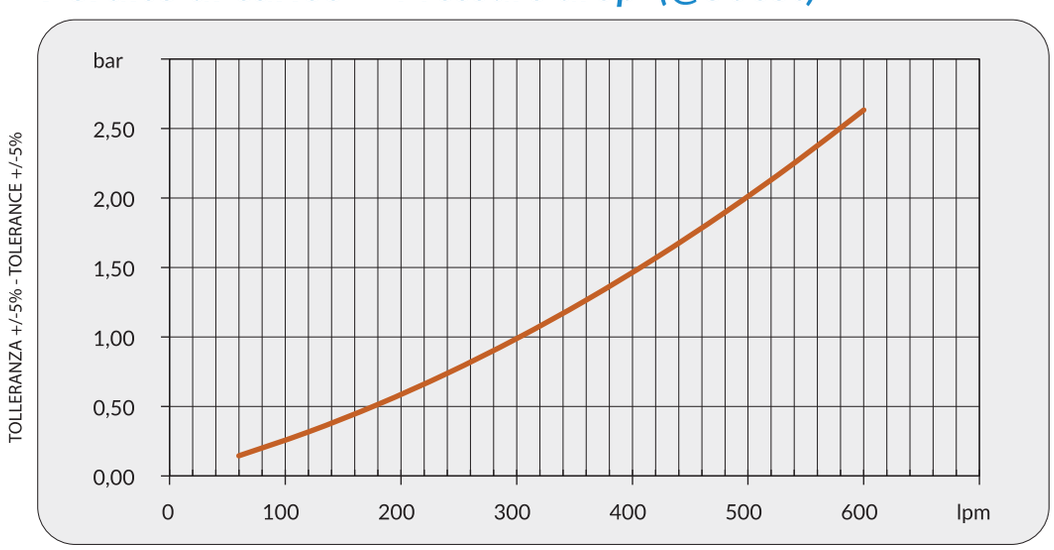
Contattare EMMEGI Contact EMMEGI

I dati si riferiscono al singolo ventilatore
Data refers to each fan

Diagramma rendimento *Performance diagram*

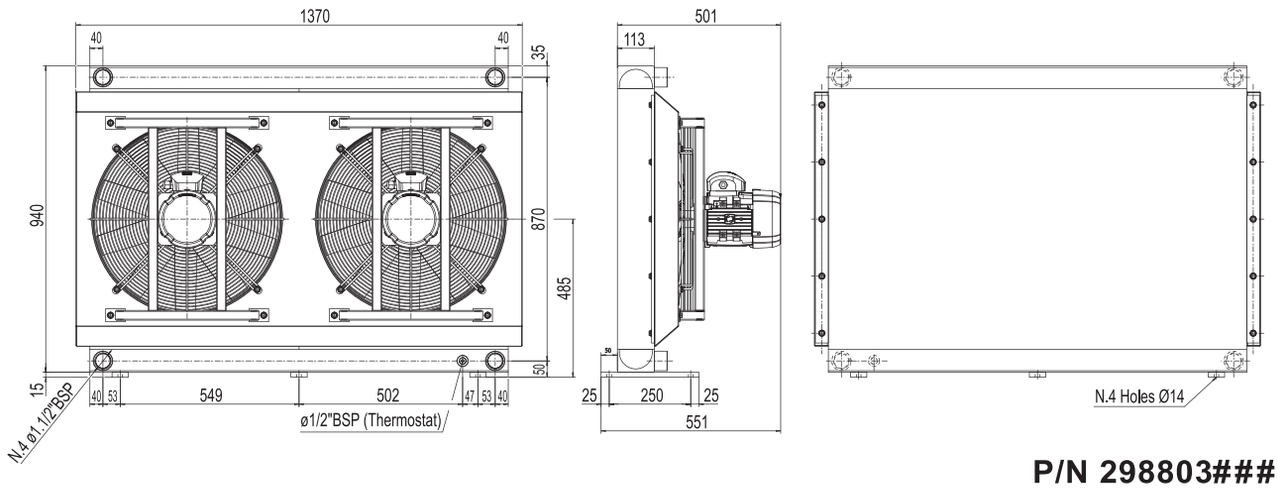


Perdite di carico *Pressure drop (@30cSt)*

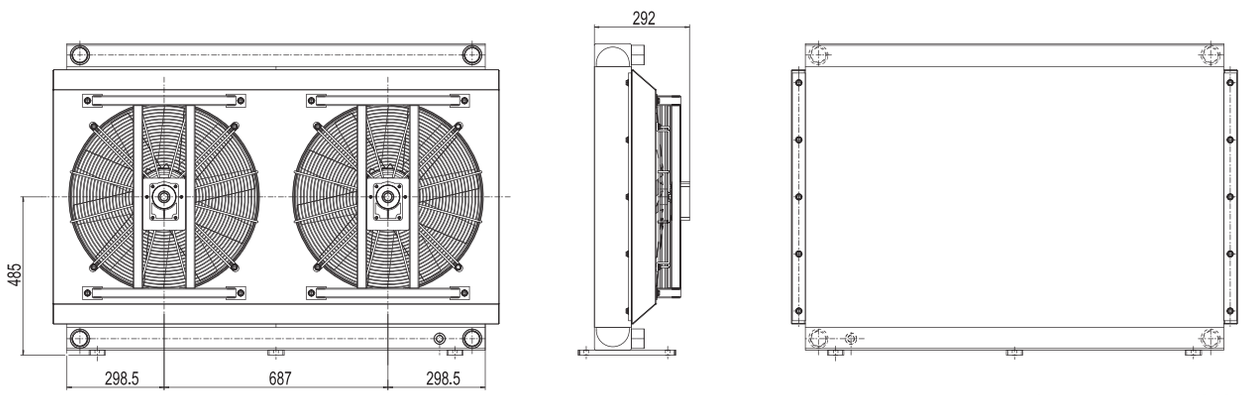


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

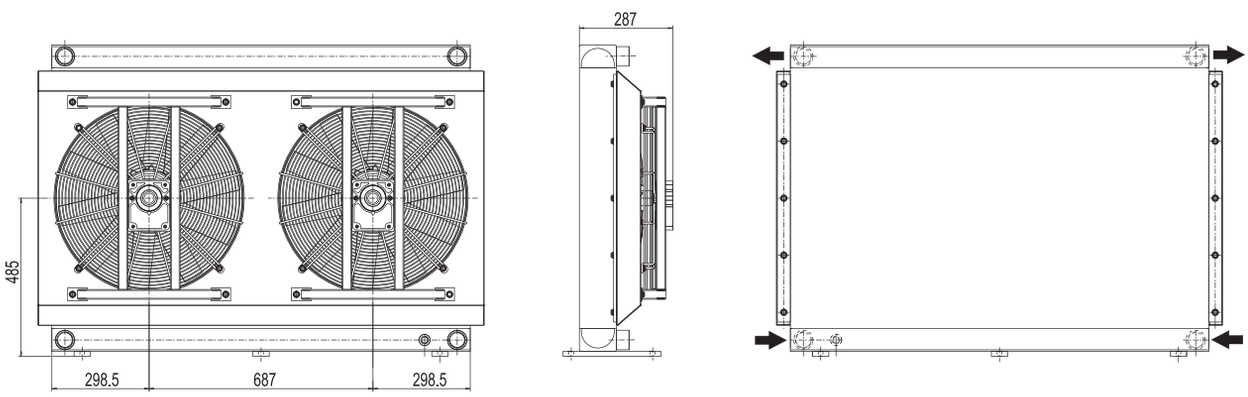
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 298803###



P/N 298856###



P/N 298858###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

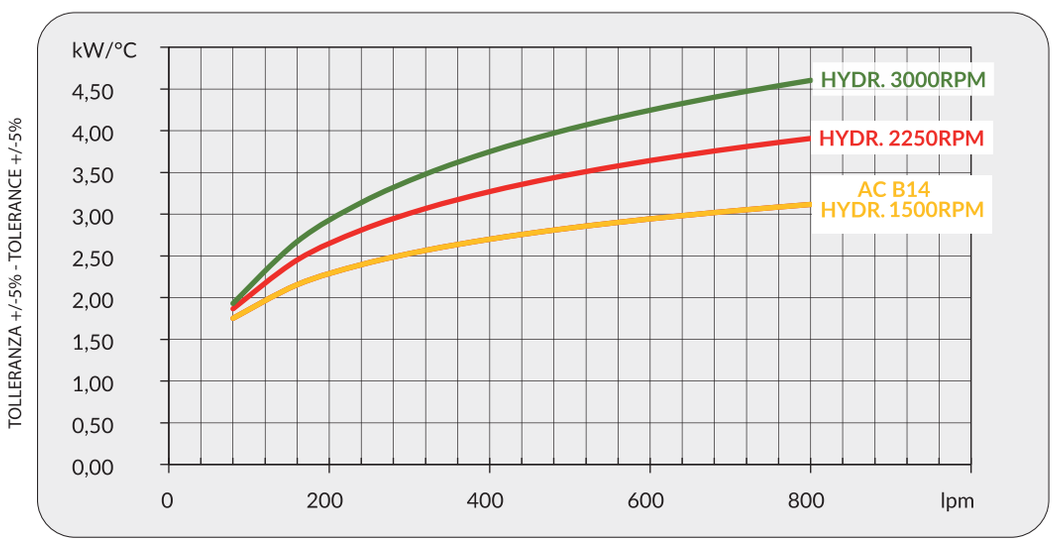
Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m^3/ h)	IP	lt	kg
298803###	230-400 B14 AC 265-460 B14 AC	50 60	1,1 1,3	4,5 - 2,6 4,5 - 2,6	1440 1730	560	87	6900	55	28,4	192
298856###	Prepared for Gr.2 hydraulic motor					560			/	28,4	180
298858###	Prepared for Gr.3 hydraulic motor					560			/	28,4	180

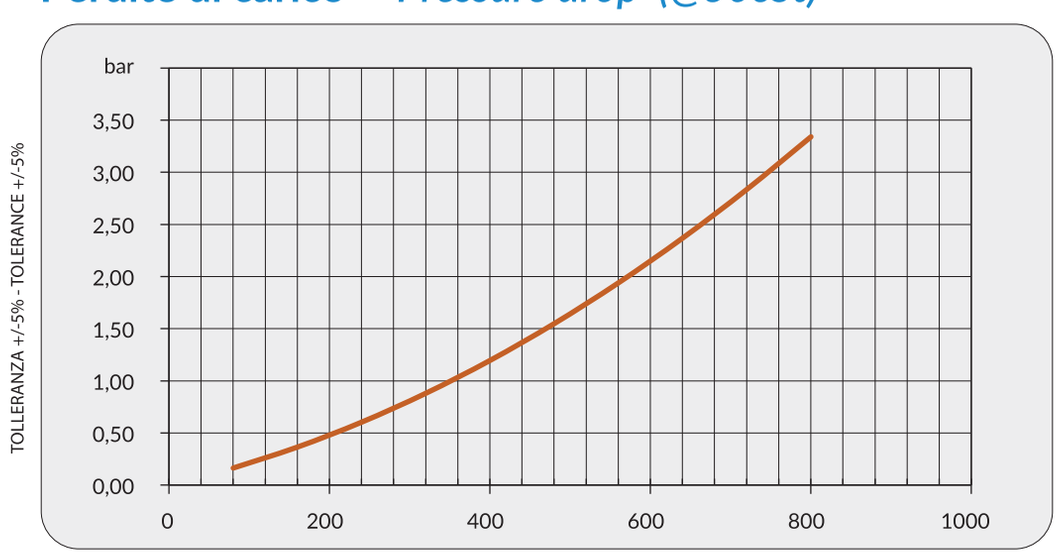
I dati si riferiscono al singolo ventilatore
Data refers to each fan

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento *Performance diagram*

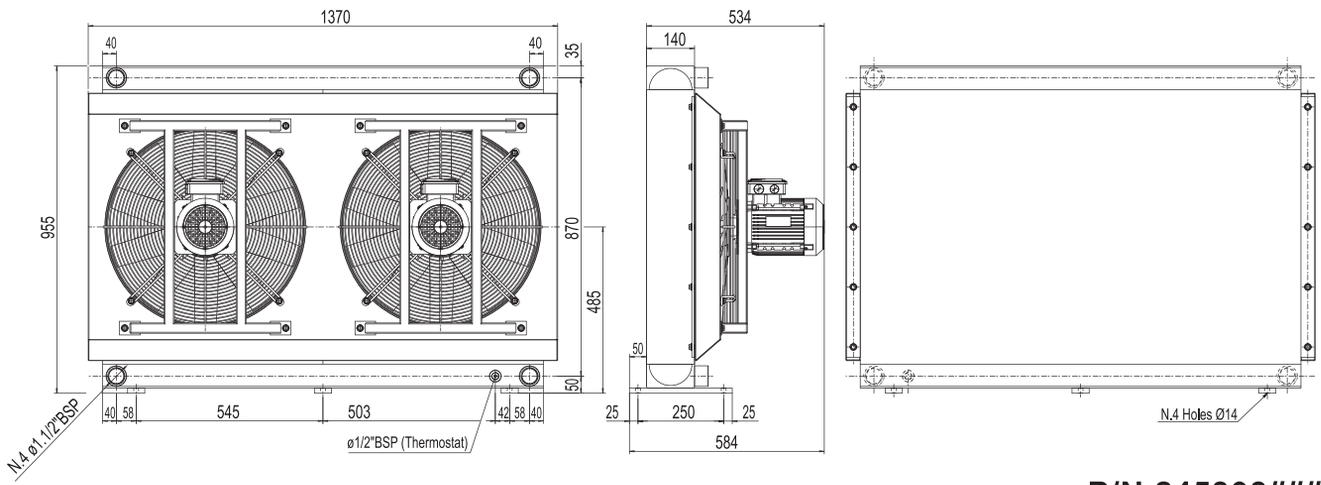


Perdite di carico *Pressure drop (@30cSt)*

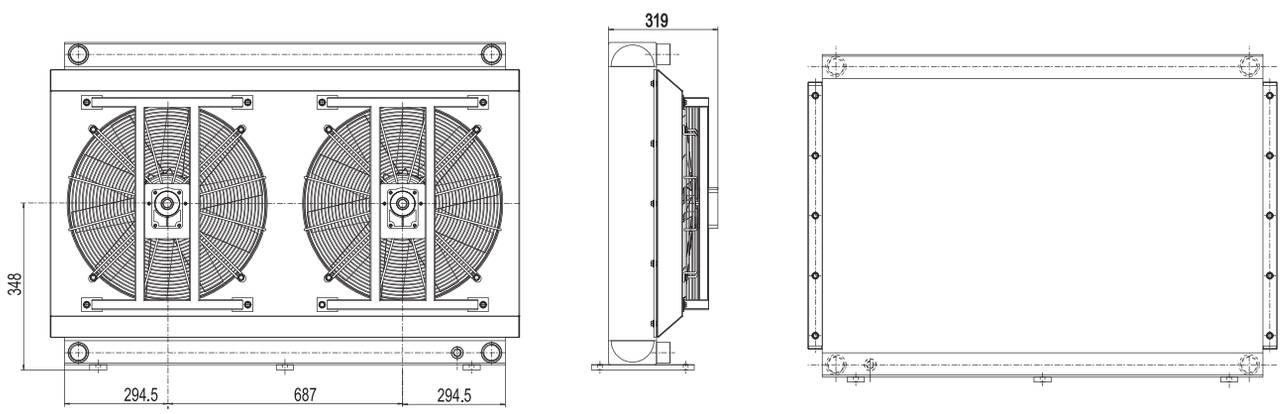


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

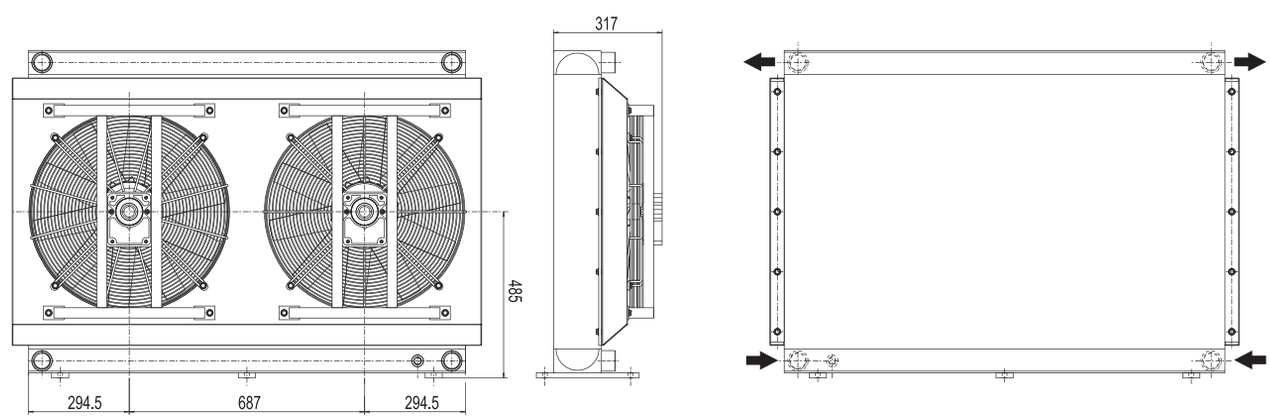
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 245303###



P/N 245356###



P/N 245358###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

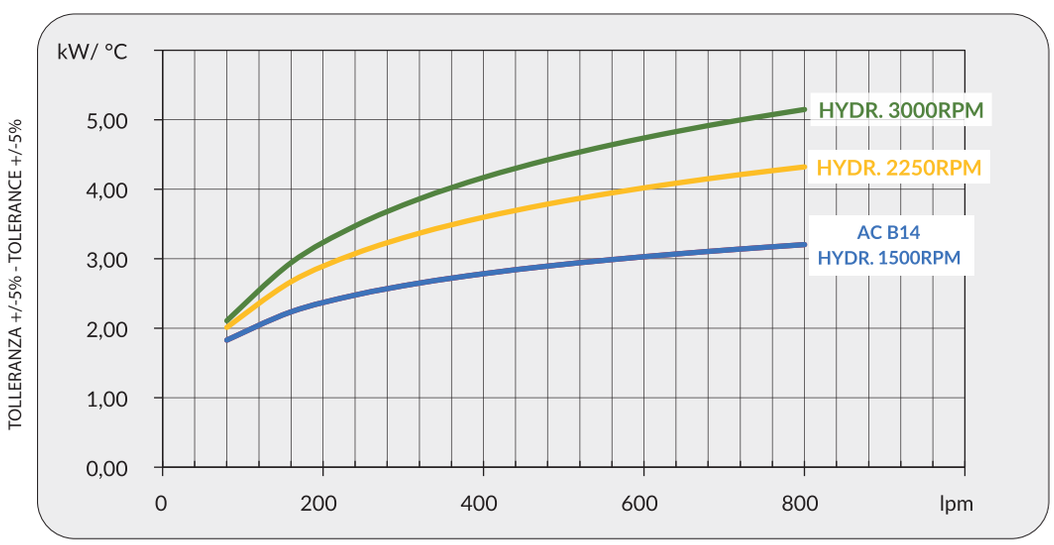
Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m^3/ h)	IP	lt	kg
245303###	230-400 B14 AC 265-460 B14 AC	50 60	1,1 1,3	4,5 - 2,6 4,5 - 2,6	1440 1730	560	87	6440	55	28,4	195
245356###	Prepared for Gr.2 hydraulic motor					560			/	28,4	180
245358###	Prepared for Gr.3 hydraulic motor					560			/	28,4	180

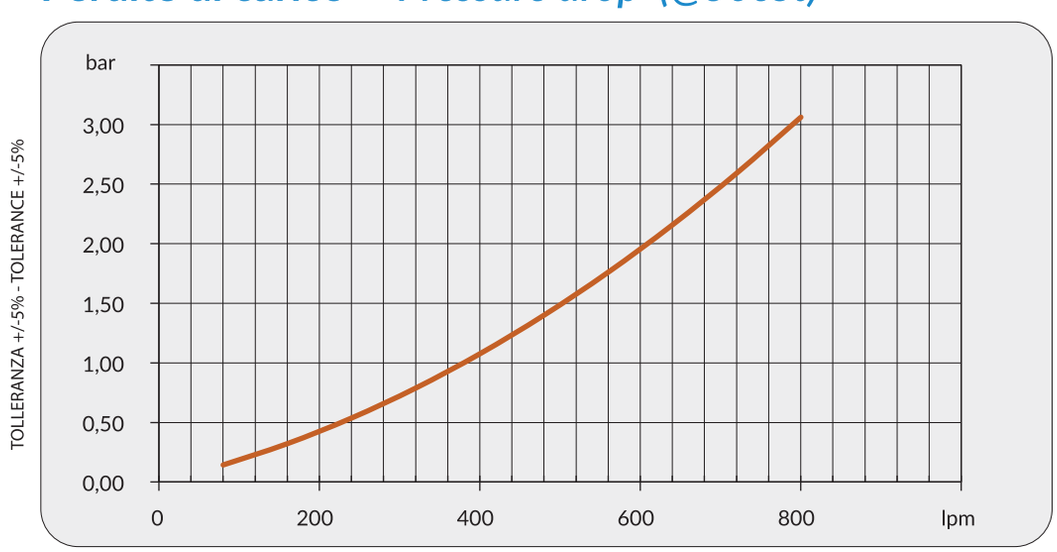
I dati si riferiscono al singolo ventilatore
Data refers to each fan

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento *Performance diagram*

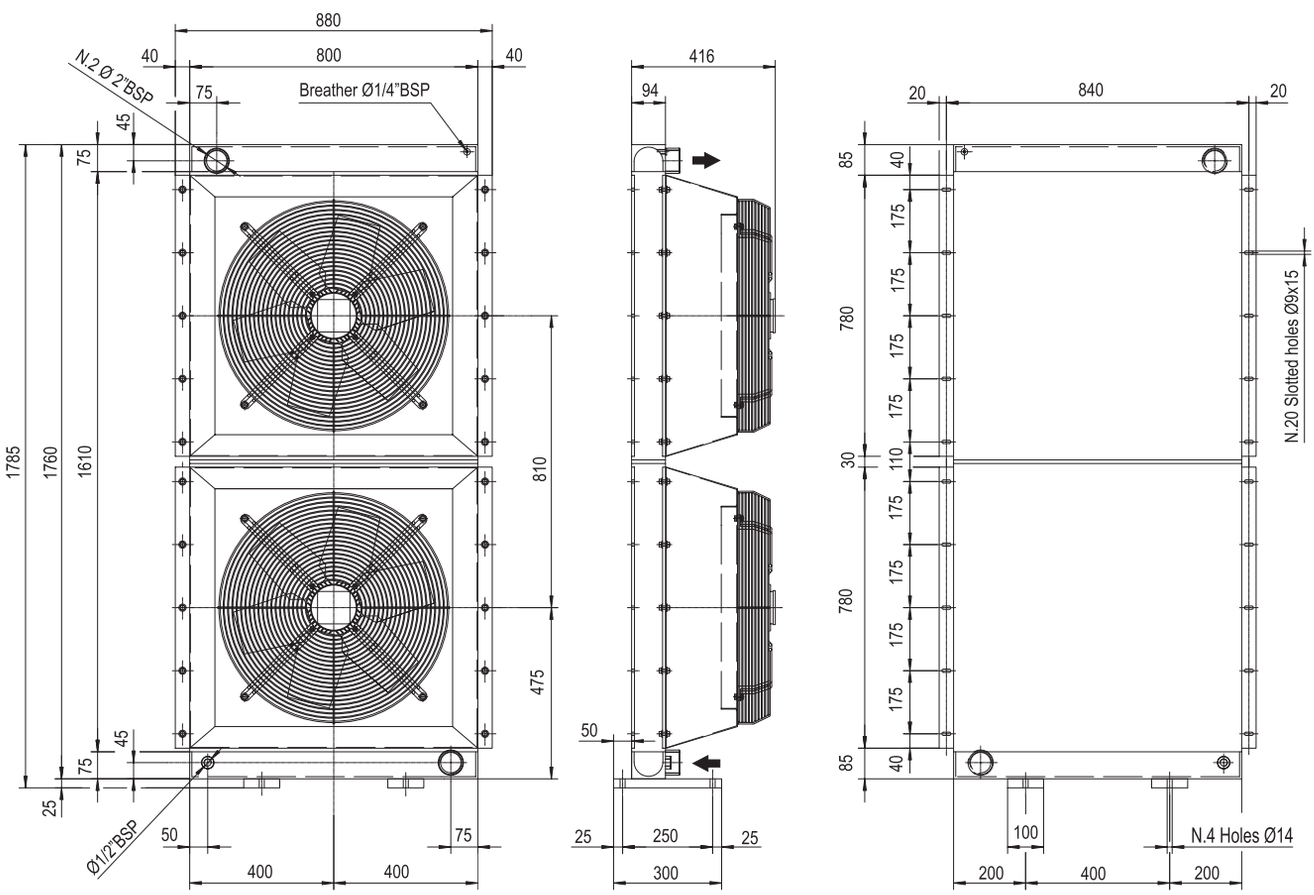


Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

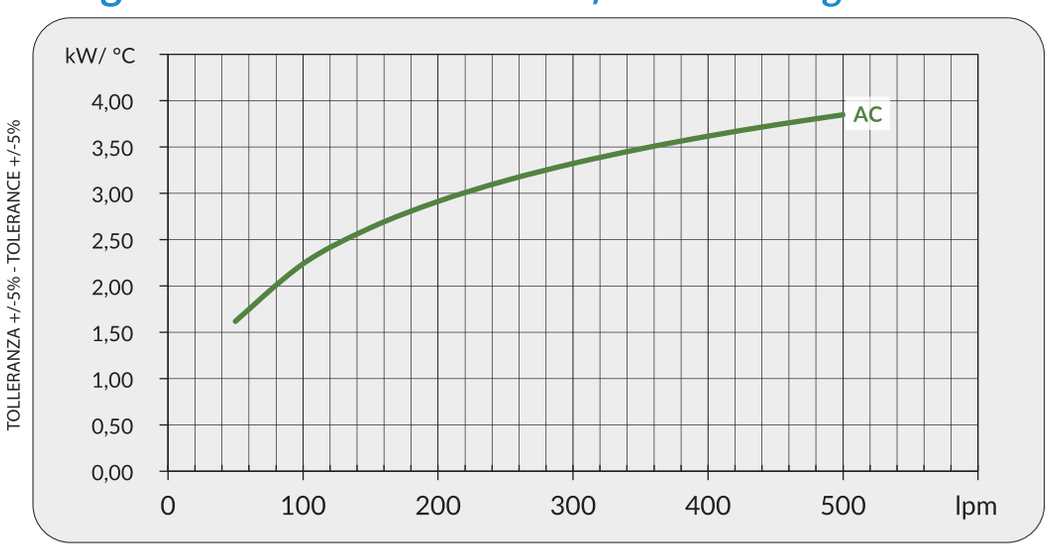
Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
041650C40050#	400 AC	50	1,3	2,4	1378	560	78	9500	54	25	140
041650C40060#	460 AC	60	1,5	2,5	1600	560	78	9500	54	25	140

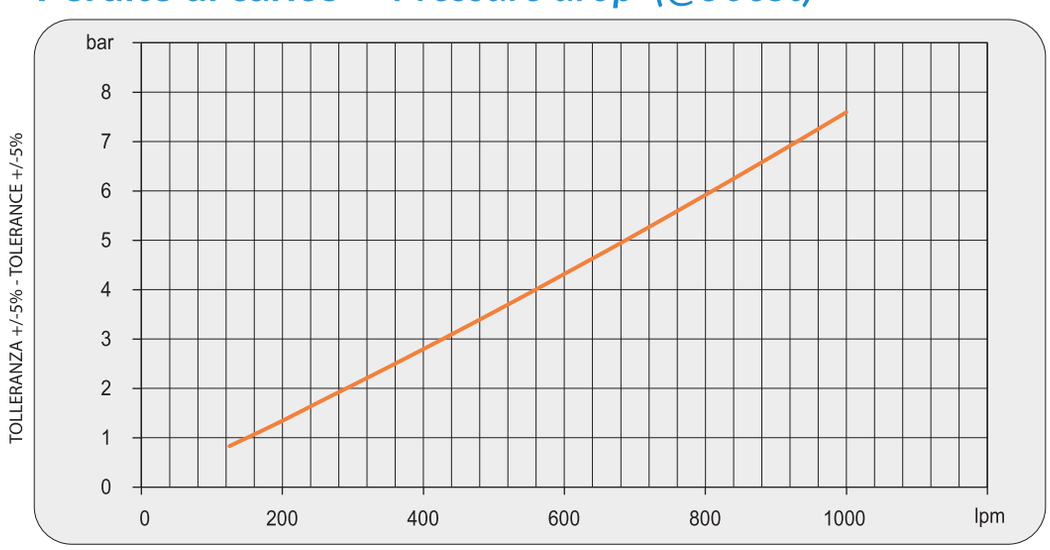
I dati si riferiscono al singolo ventilatore
Data refers to each fan

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento *Performance diagram*

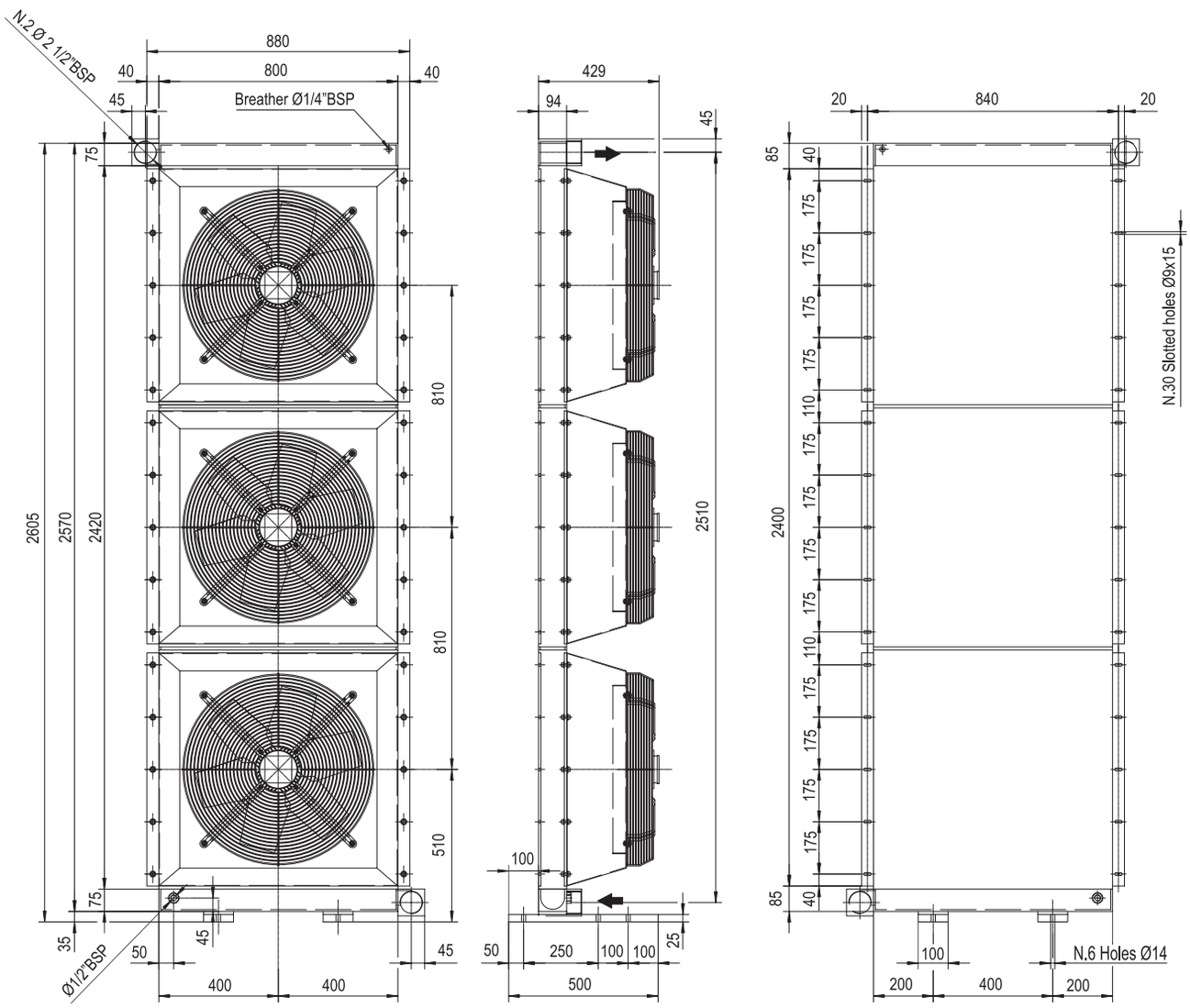


Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

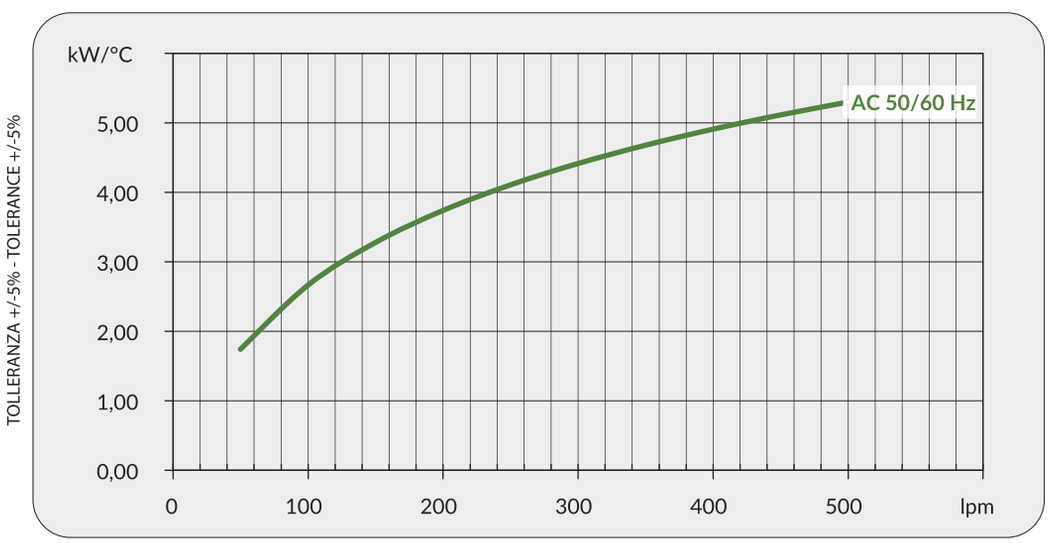
Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m^3/ h)	IP	It	kg
041240C40050#	400 AC	50	1,3	2,4	1378	560	81	9500	54	35	210
041240C40060#	460 AC	60	1,5	2,5	1600	560	81	9500	54	35	210

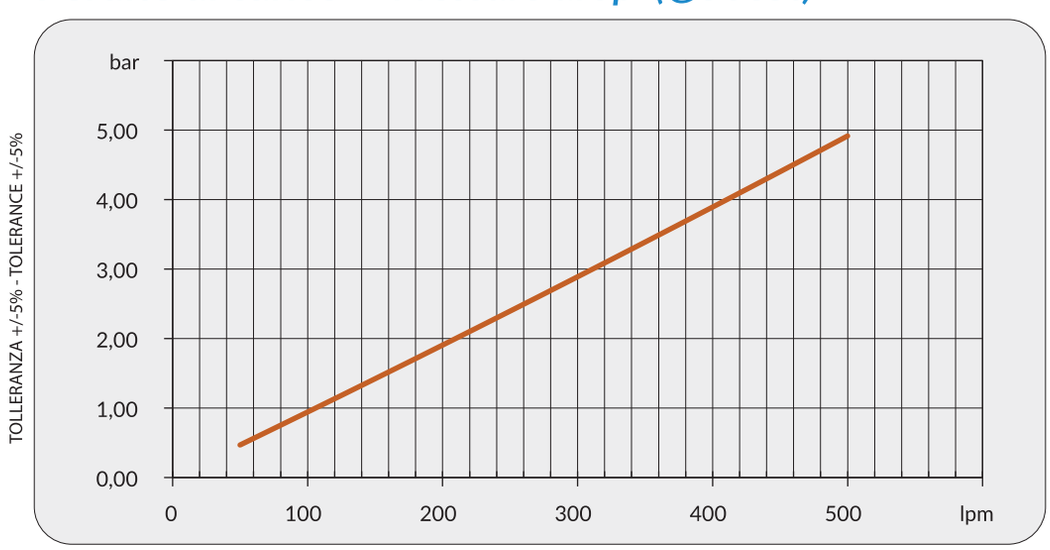
I dati si riferiscono al singolo ventilatore
Data refers to each fan

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento *Performance diagram*

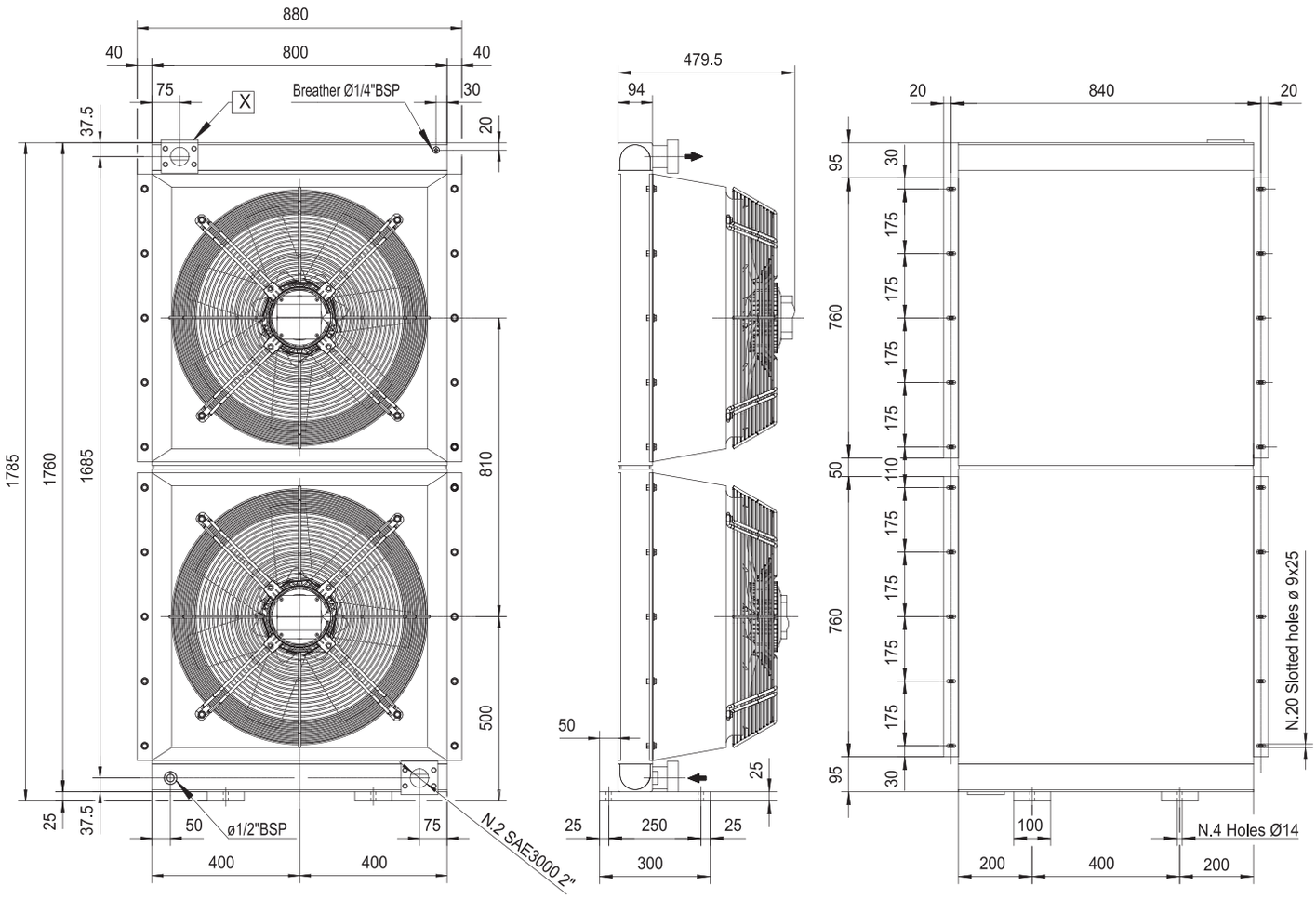


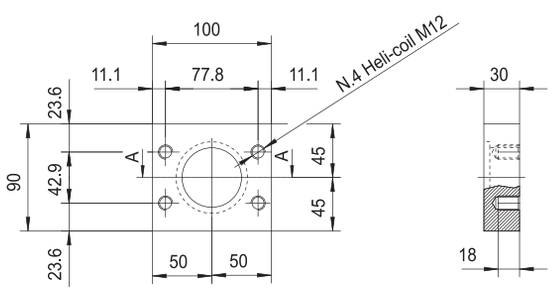
Perdite di carico *Pressure drop (@30cSt)*



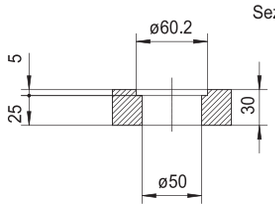
Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3





Sez. A-A



Part. X

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

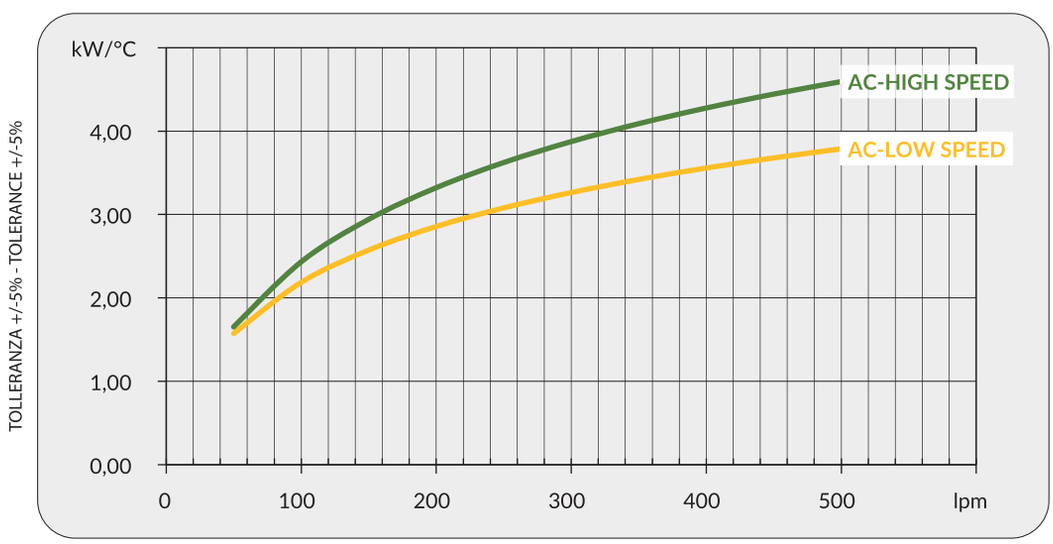
Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m^3/ h)	IP	It	kg
A0351004005#1	400 AC (LS) ⅄	50	1,37	2,3	1020	630	80	9000	54	25	185
A0351004005#1	400 AC (HS) Δ	50	2,1	3,6	1350	630	86	12500	54	25	185

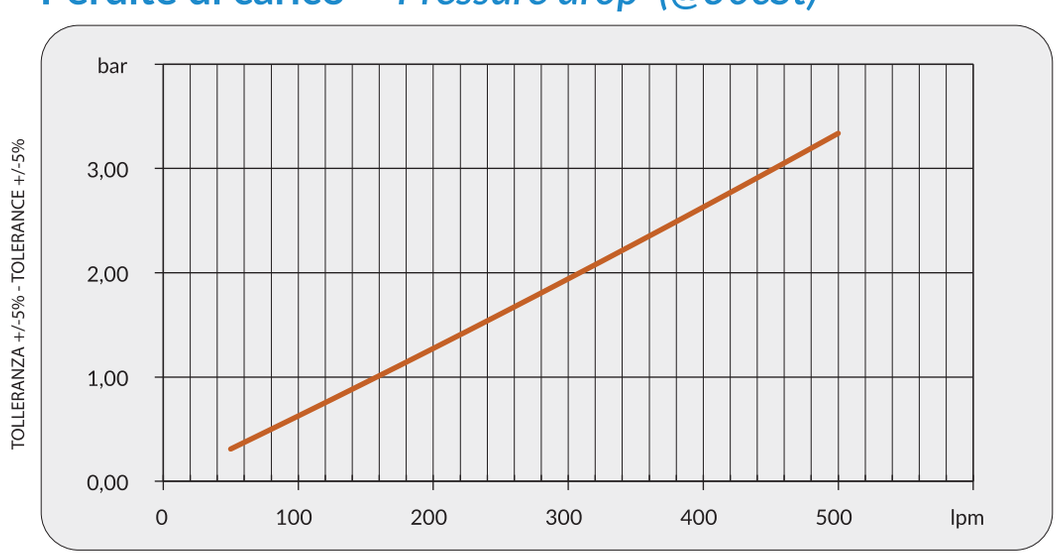
I dati si riferiscono al singolo ventilatore
Data refers to each fan

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento *Performance diagram*

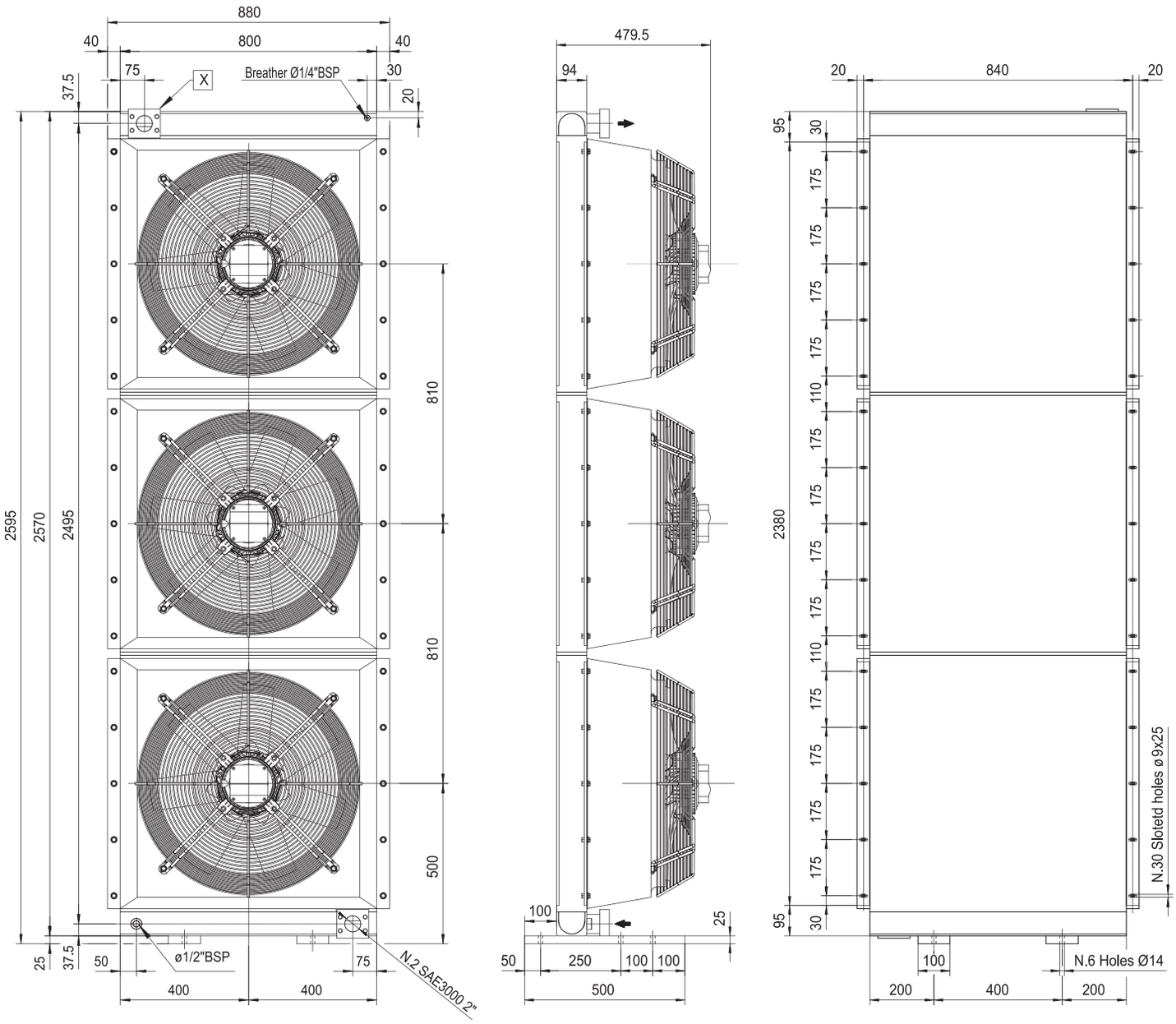


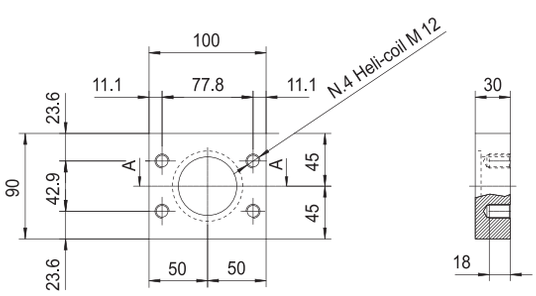
Perdite di carico *Pressure drop (@30cSt)*



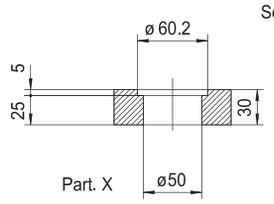
Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3





Sez. A-A



Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m^3/ h)	IP	It	kg
A0352004005#1	400 AC (LS) ⅄	50	1,37	2,3	950	630	80	9000	54	35	255
A0352004005#1	400 AC (HS) Δ	50	2,1	3,6	1300	630	86	12500	54	35	185

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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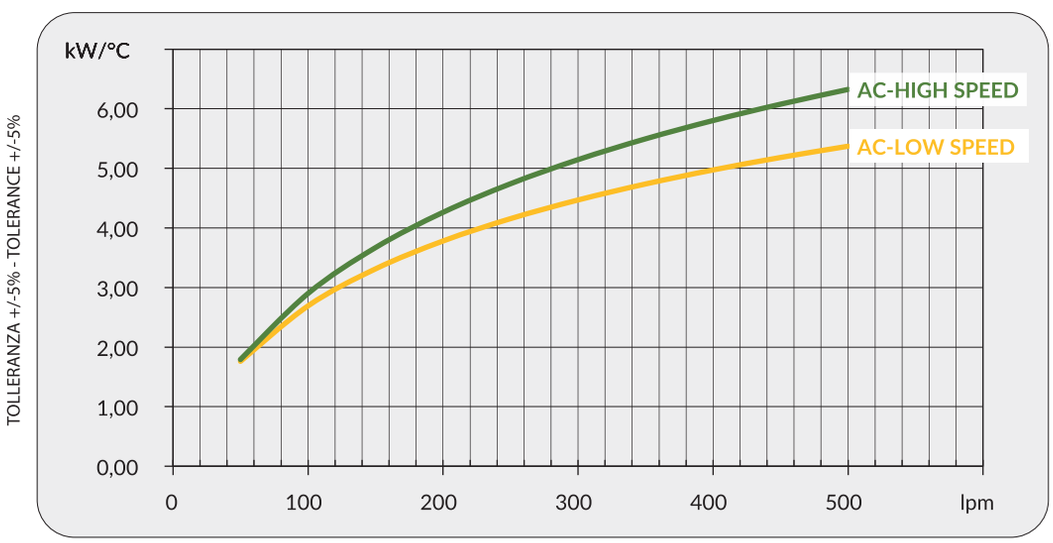
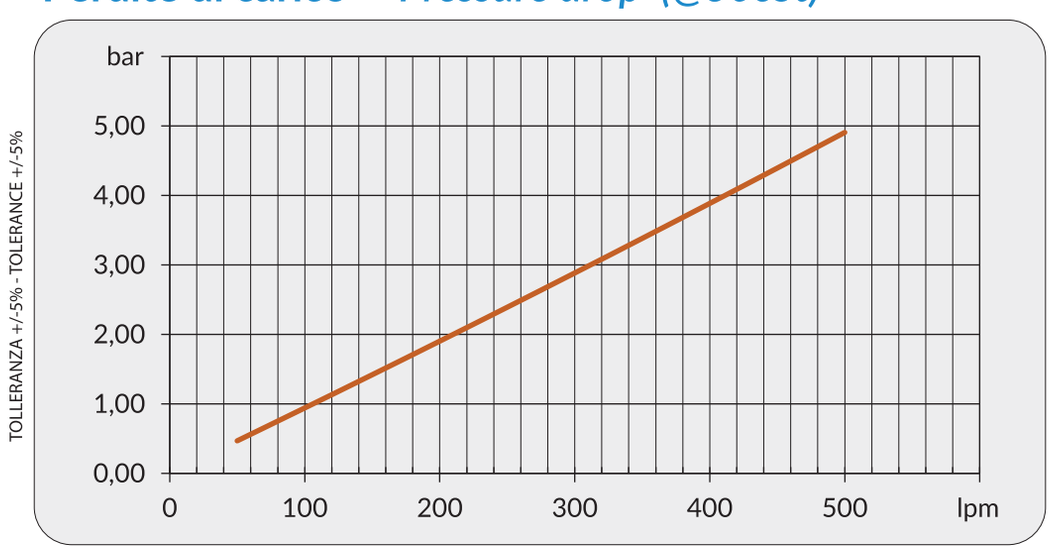
Diagramma rendimento *Performance diagram*



Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



EMMEGI®
HEAT-EXCHANGERS

Serie HPV

HPV Series

APPLICAZIONE
APPLICATION

Grazie all'ampia gamma di combinazioni, gli scambiatori della serie HPV si prestano come la soluzione di raffreddamento ottimale per svariate applicazioni mobili e industriali quali:

The wide range of combinations makes the HPV series heat exchangers the optimal cooling solution for a great variety of mobile and industrial applications such as:



Industria agricola e forestale.
Gru mobili e fisse.
Veicoli industriali.
Veicoli municipali.
Macchine da costruzione.
Impianti di riciclo.
Impianti oleodinamici.
Macchine utensili.
Altro su richiesta.

Agriculture and forestry.
Mobile and stationary cranes.
Industrial vehicles.
Municipal vehicles.
Construction machines.
Recycling plants.
Hydraulic systems.
Machine tools.
Others on request.

Grazie alla sua valvola di bypass integrata, il prodotto può essere preservato dai picchi di pressione dovuti alle partenze ad olio freddo.

Thanks to the incorporated bypass valve, the product can be protected from pressure peaks, caused by cold oil startintings.







Modulo richiesta dati

Sheet for cooler selection

CLIENTE *COMPANY*	
RICHIEDENTE *NAME*	

TIPOLOGIA FLUIDO *FLUID TYPE*		
PORTATA *FLOW RATE*	**lpm**	
POTENZA INSTALLATA *INSTALLED POWER*	**kW**	
POTENZA DA DISSIPARE *POWER TO BE DISSIPATED*	**kW**	
TEMPERATURA INGRESSO *INLET TEMPERATURE*	**°C**	
TEMPERATURA ARIA MAX *MAX AMBIENT TEMPERATURE*	**°C**	
PRESSIONE DI LAVORO *WORKING PRESSURE*	**bar**	

TIPO DI VENTILAZIONE *TYPE OF FAN UNIT*

- **CC** *DC*
  - **12V**
  - **24V**
- **PREDISPOSTO MOTORE IDRAULICO** *PREPARED FOR HYDRAULIC MOTOR*
  - **GR.2**
  - **GR.3**
- **CA** *AC*
  - **MONOFASE 230V** *SINGLEPHASE 230V*
  - **TRIFASE** **230/400V** **265/460V** *THREEPHASE 230/400V 265/460V*
  - **TENSIONE SPECIALE** *SPECIAL VOLTAGE*
    - **50 Hz**
    - **60 Hz**

Denominazione codice prodotto

Ordering code

2V **24** **03** **2** **01**

TARATURA BY-PASS
BY-PASS SETTING

MODELLO *COOLER MODEL*

24 (HPV 24)

TIPO DI MOTORIZZAZIONE *FAN MOTOR TYPE*

03	*AC 230-400V 50Hz / AC 265-460V 60Hz (B14)*	
12	*DC 12V*	
24	*DC 24V*	
56	*Pred. per mot. idr. gr. 2*	*Prep. for hydr. mot. gr. 2*
58	*Pred. per mot. idr. gr. 3*	*Prep. for hydr. mot. gr. 3*

TERMOSTATI *THERMOSTATS*

0	Senza termostato	*Whitout thermostat*	
1	Termostato fisso	*Fixed thermostat*	*40-28°*
2	Termostato fisso	*Fixed thermostat*	*50-38°*
3	Termostato fisso	*Fixed thermostat*	*60-48°*
4	Termostato fisso	*Fixed thermostat*	*70-58°*
5	Termostato fisso	*Fixed thermostat*	*80-68°*
6	Termostato fisso	*Fixed thermostat*	*90-78°*
8	Termostato regolabile *Adjustable thermostat*		*0-90° (TC2)*
9	Termostato regolabile collegato *Connected adjustable thermostat*		*0-90°(TC2)*

FLUSSO DI VENTILAZIONE *AIR FLOW DIRECTION*

01	*Aspirante*	*Suction air flow*
02	*Soffiante*	*Blowing air flow*

Modello - Codice prodotto
Cooler model - Product Code

Taratura BY-PASS
BY-PASS Setting

Taratura *Setting*	Codice *Code*
*1.5 bar **	*2W **
3.0 bar	*3W*
5.0 bar	*5W*

**Standard*

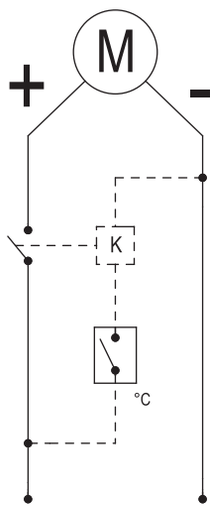
Serie DRAIN
DRAIN Series

Modello *Model*	Codice *Code*
HPV 12	*2V12*
HPV 18	*2V18*
HPV 24	*2V24*
HPV 30	*2V30*
HPV 36	*2V36*
HPV 42	*2V42*
HPV 50	*2V50*
HPV 52	*2V52*

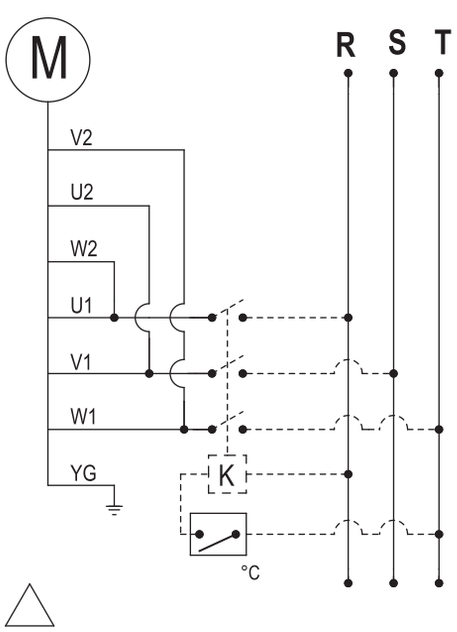


Collegamenti elettrici
Electric Wiring

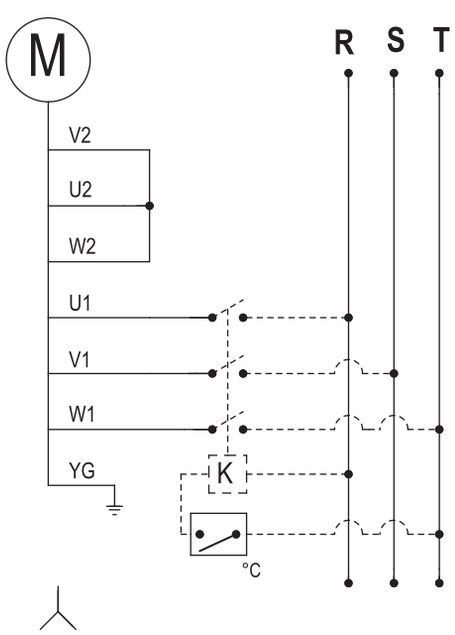
COLLEGAMENTO ELETTRICO 12-24V DC
12-24V DC ELECTRIC WIRING



COLLEGAMENTO ELETTRICO 230V AC TRIF.
230V AC 3PH ELECTRIC WIRING



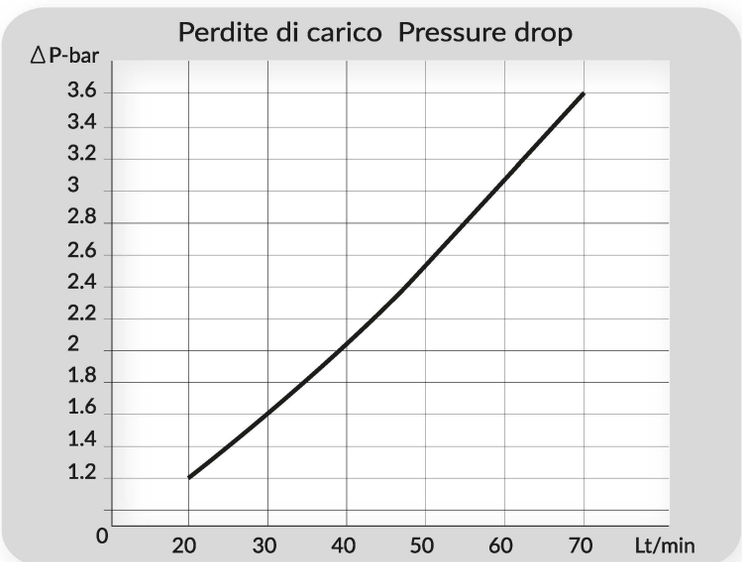
COLLEGAMENTO ELETTRICO 400/460V AC TRIF.
400/460V AC THREEPHASE ELECTRIC WIRING



Dati tecnici valvola by-pass *Technical data by-pass valve*



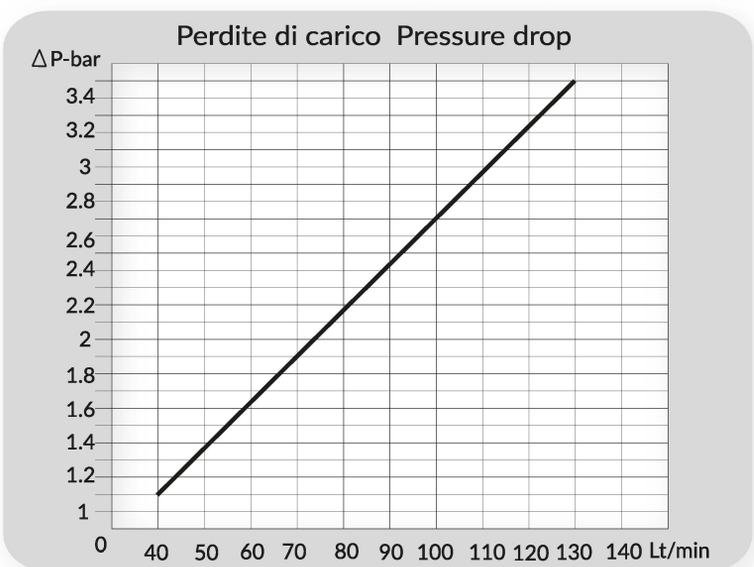
Valvola cartuccia tipo 2 / Cartridge valve type 2 - (1.5 bar)



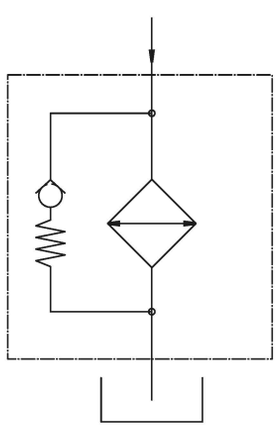
Gli scambiatori della serie HPV nascono dalle esigenze applicative ad ampio raggio espresse dal mercato.
Punto di forza di questi prodotti é rappresentato dal by-pass integrato che ne amplifica la semplicità d' uso, eliminando la necessità di dovere aggiungere da parte del cliente una valvola autonoma, assicurando così elevata funzionalità.

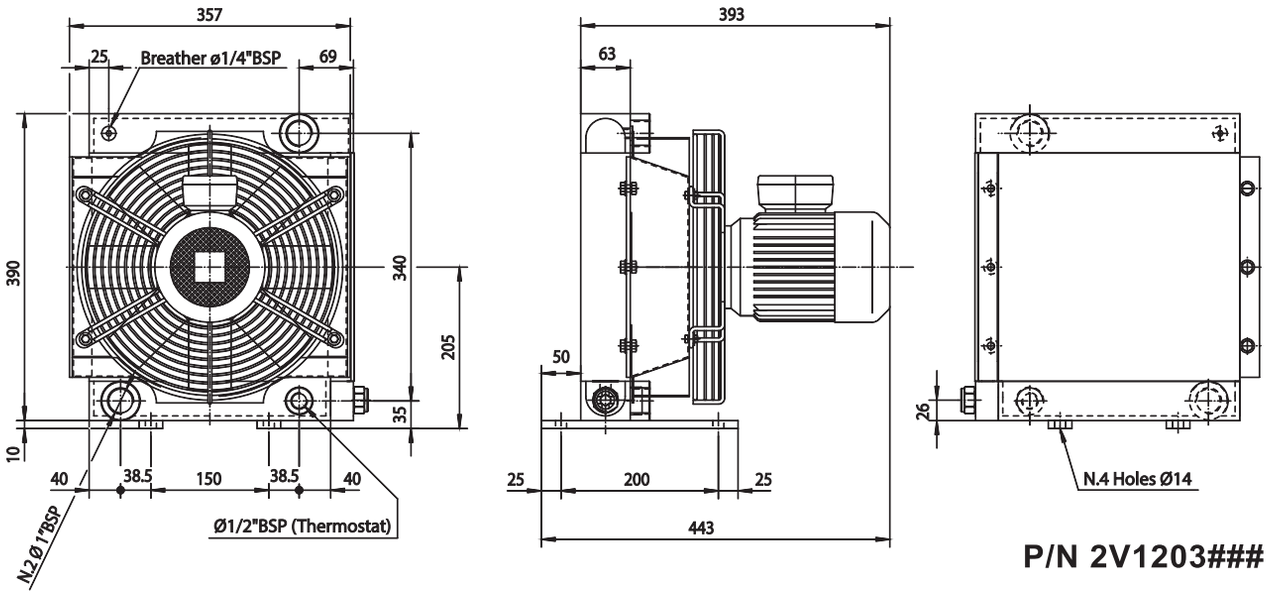
HPV Series were born to answer the large application needs of the market.
The main characteristic of this new products is the integrated by-pass valve that will simplify their employ and will avoid the customers to add an external and independent valve.
This will guarantee a very high efficiency.

Valvola cartuccia tipo 3 / Cartridge valve type 3 - (1.5 bar)

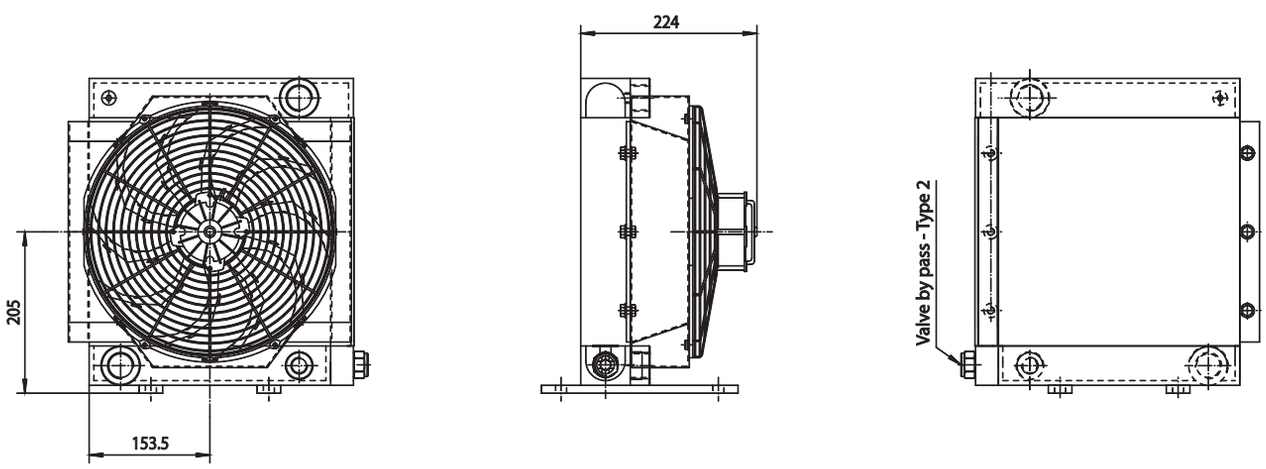


Schema idraulico
Hydraulic circuit

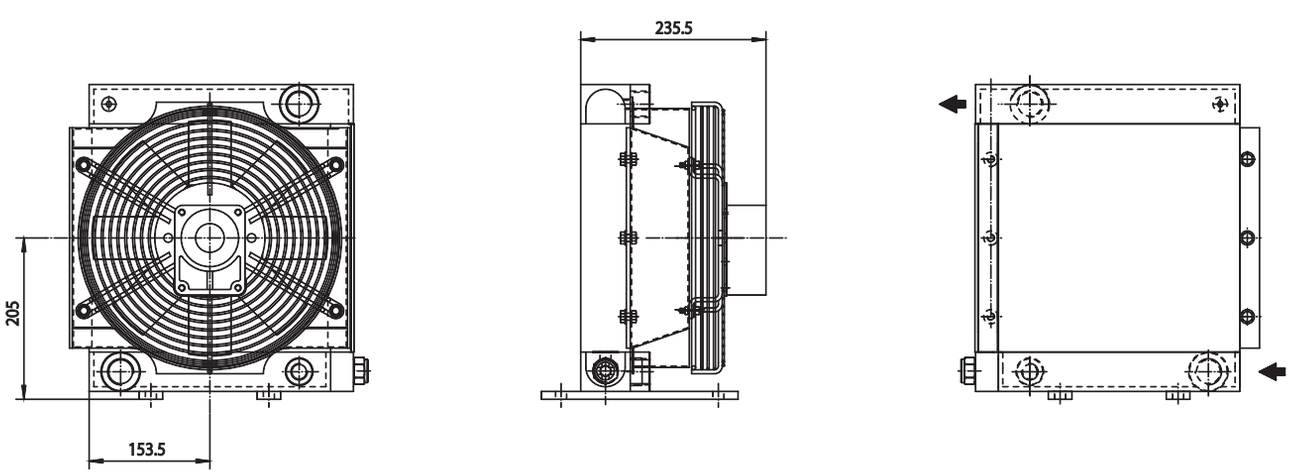




P/N 2V1203###



P/N 2V1212###
P/N 2V1224###



P/N 2V1256###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
2V1203###	265-460 B14 AC 230-400 B14AC	50 60	0,25 0,29	1,7-1	1350 1620	315	72	1670	55	1,9	17
2V1212###	12 DC	/	0,111	9,3	2600	305	77	1590	67	1,9	15
2V1224###	24 DC	/	0,160	6,15	3100	305	80	1700	67	1,9	15
2V1256###	Prepared for Gr.2 hydraulic motor					315			/	1,9	16

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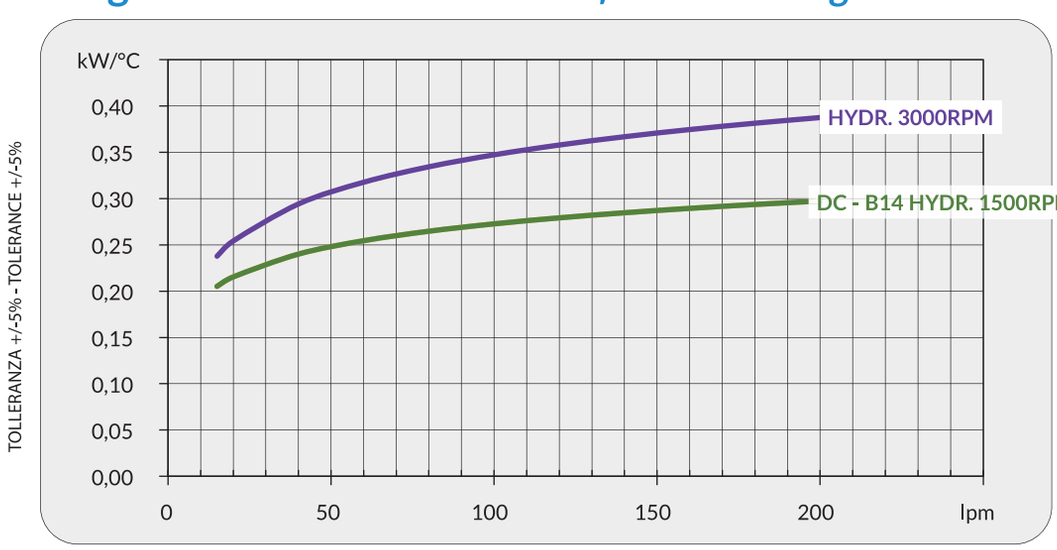
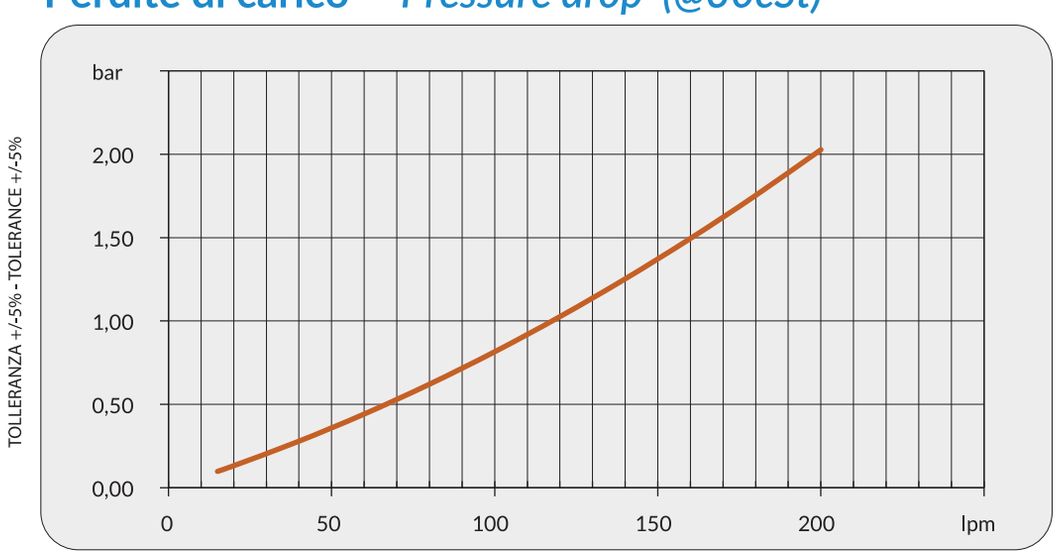
Diagramma rendimento *Performance diagram*

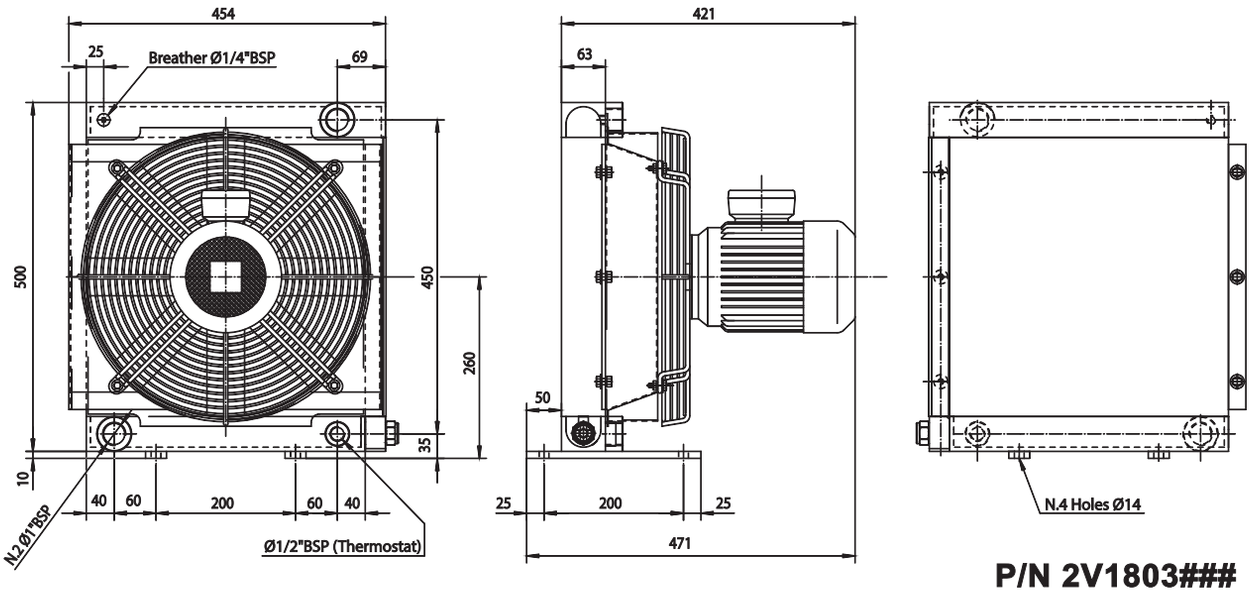


Perdite di carico *Pressure drop (@30cSt)*

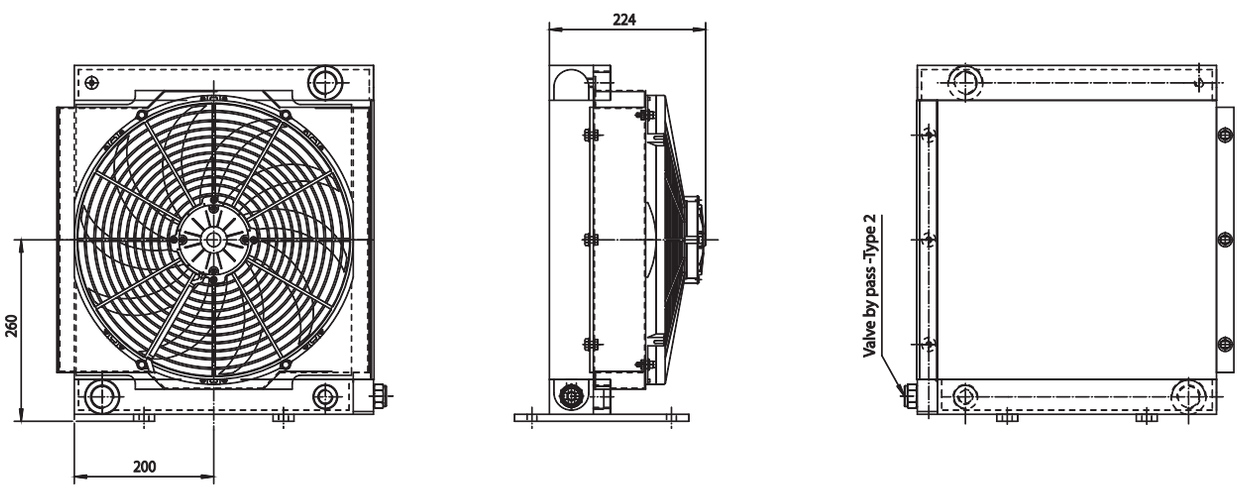


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

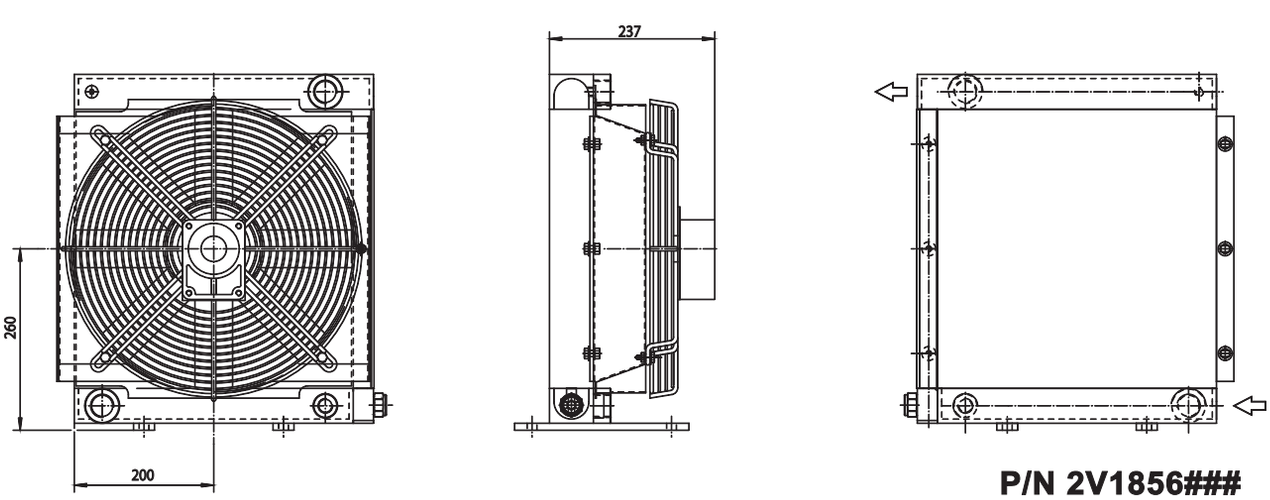
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 2V1803###



P/N 2V1812###
P/N 2V1824###



P/N 2V1856###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/h)	IP	lt	kg
2V1803###	230-400 B14 AC 265-460 B14 AC	50 60	0,37 0,43	2,1-1,1 2,1-1,1	1370 1650	400	77	2300	55	2,9	20
2V1812###	12 DC	/	0,25	20,9	2350	385	77	2620	68	2,9	18
2V1824###	24 DC	/	0,24	9,9	2580	385	81	2620	68	2,9	18
2V1856###	Prepared for Gr.2 hydraulic motor					400			/	2,9	19

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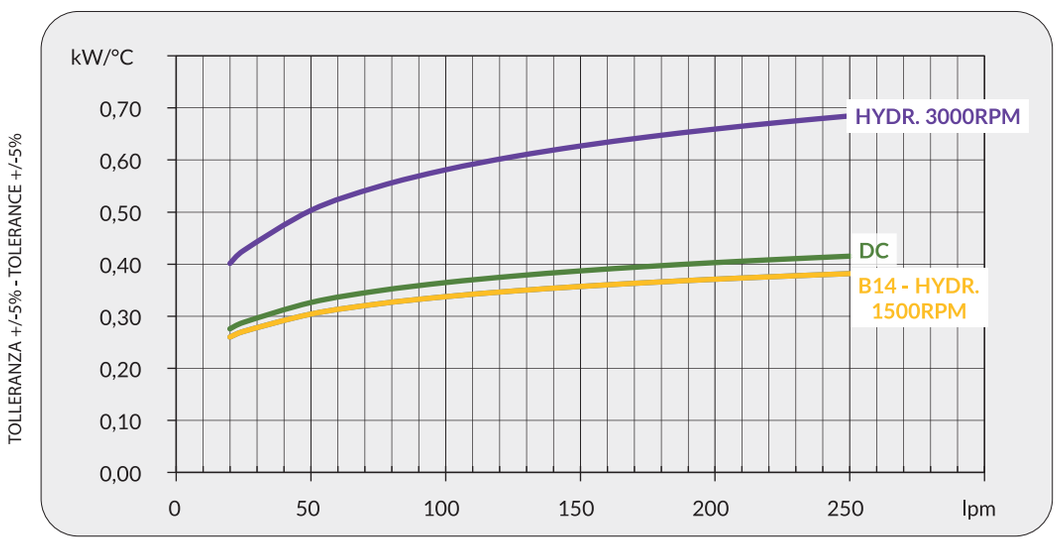
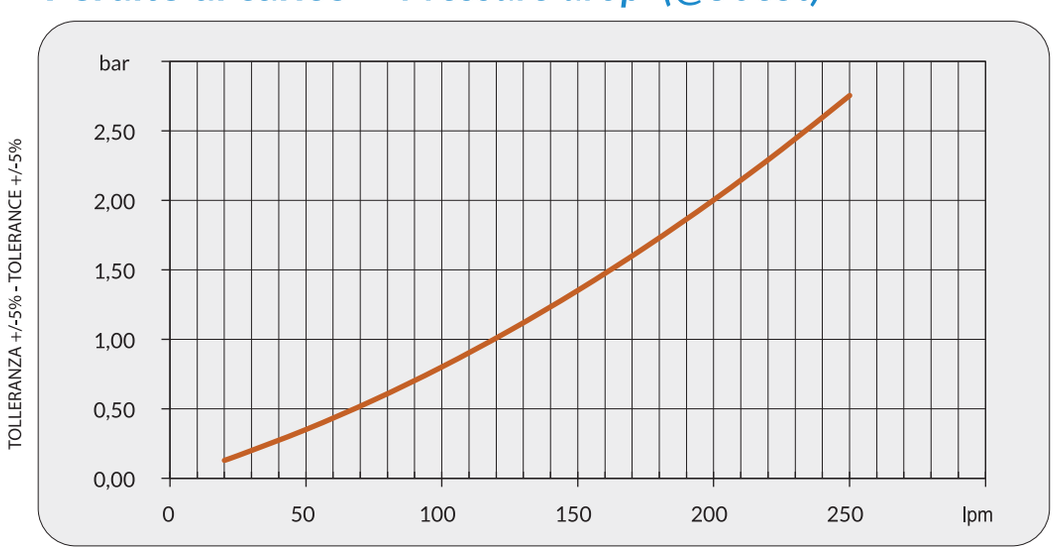
Diagramma rendimento *Performance diagram*

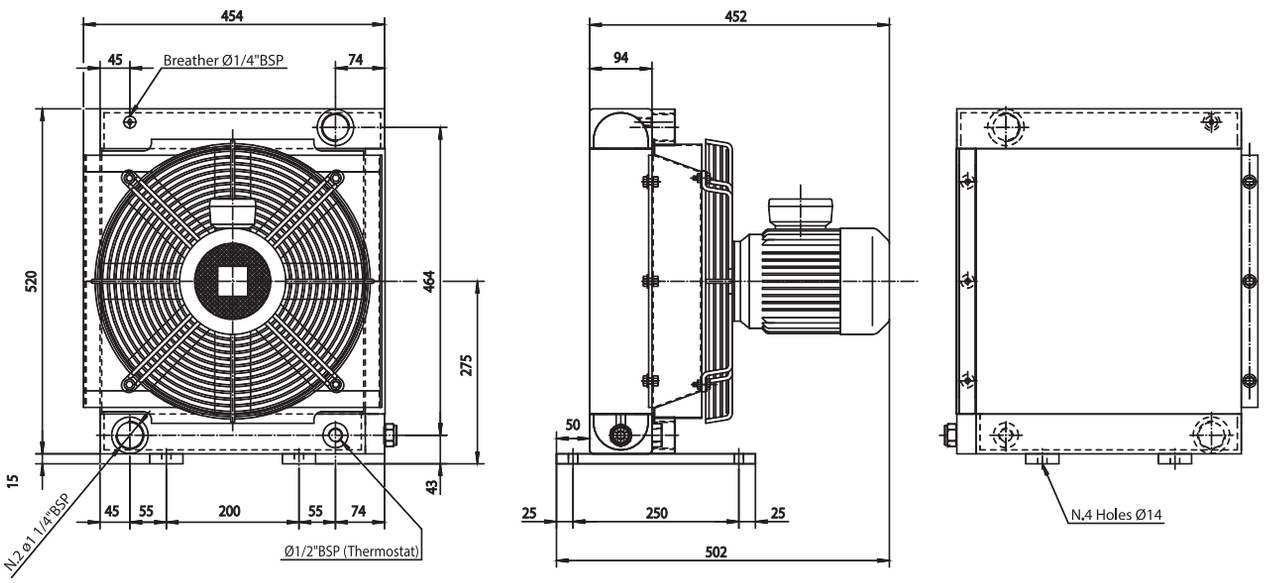


Perdite di carico *Pressure drop (@30cSt)*

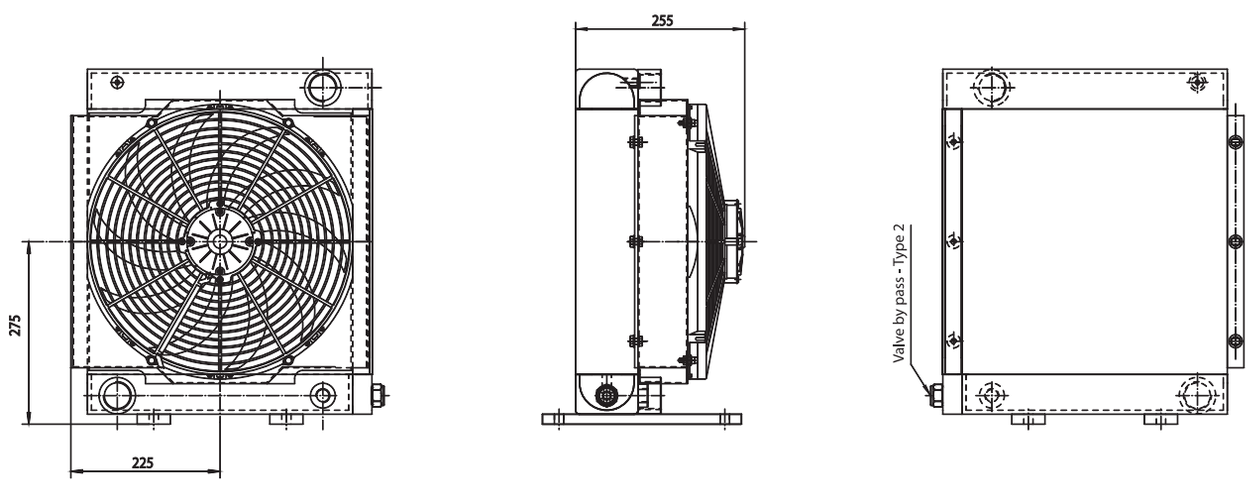


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

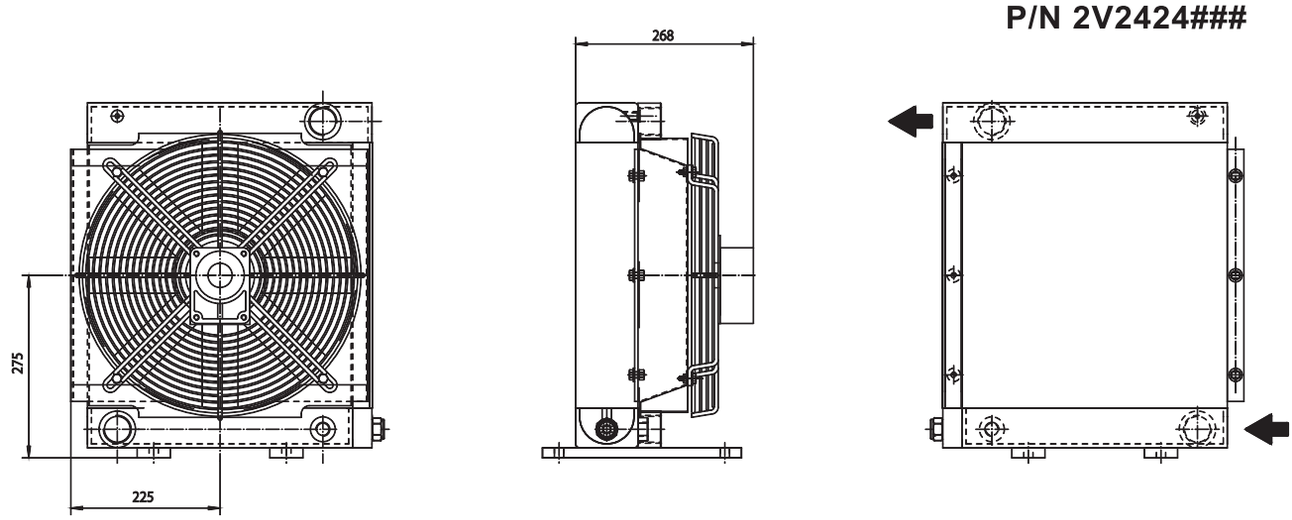
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 2V2403###



P/N 2V2412###
P/N 2V2424###



P/N 2V2456###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/h)	IP	lt	kg
2V2403###	230-400 B14 AC 230-460 B14 AC	50 60	0,55 0,63	2,9 - 1,7 2,9 - 1,7	1320 1690	400	79	1850	55	2,9	28
2V2412###	12 DC	/	0,24	20,3	2350	385	77	2250	68	2,9	22
2V2424###	24 DC	/	0,23	9,7	2580	305	80	2250	68	2,9	22
2V2456###	Prepared for Gr.2 hydraulic motor					400			/	2,9	23

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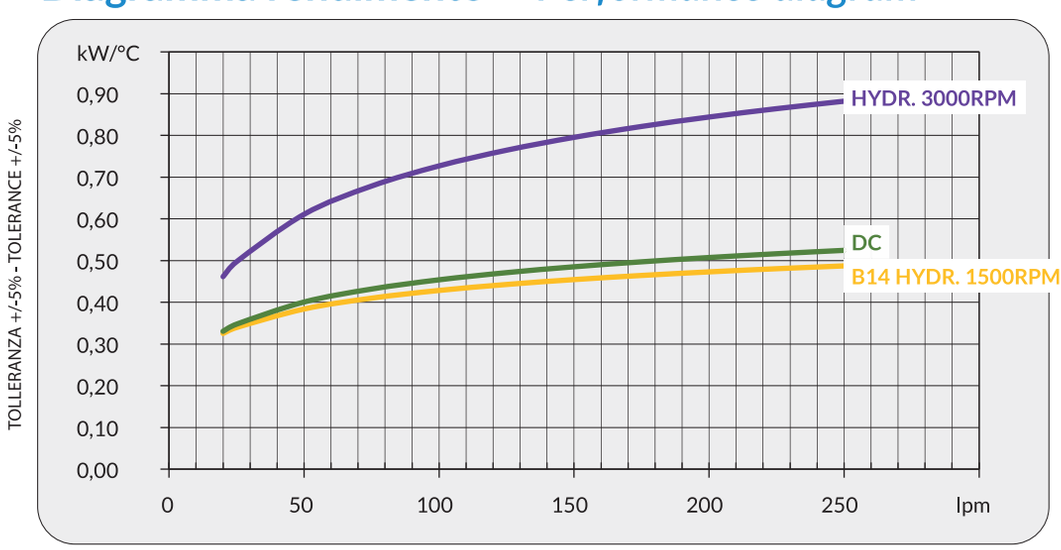
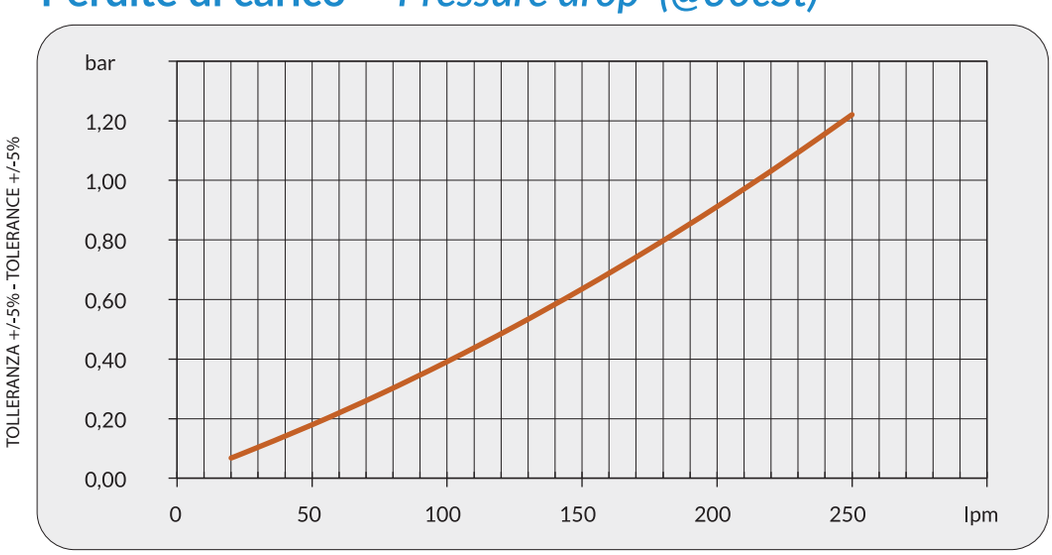
Diagramma rendimento *Performance diagram*

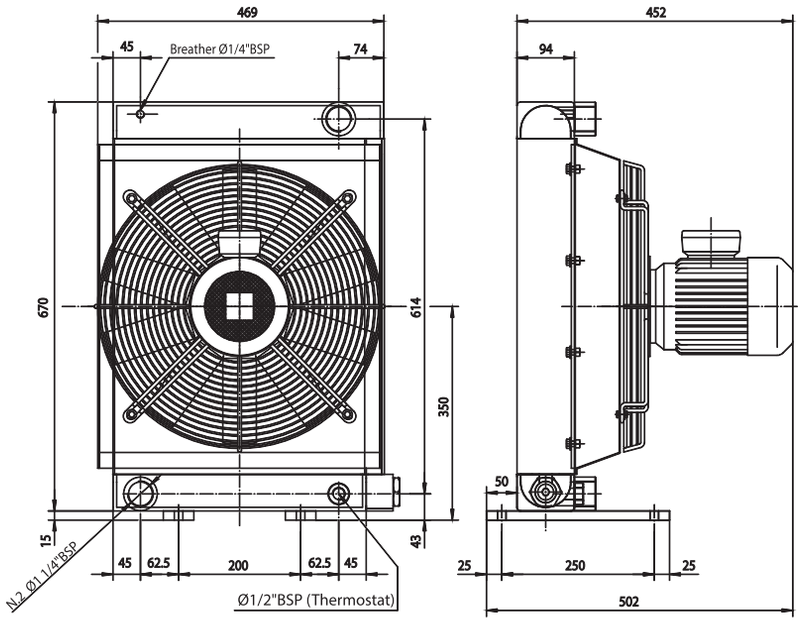


Perdite di carico *Pressure drop (@30cSt)*

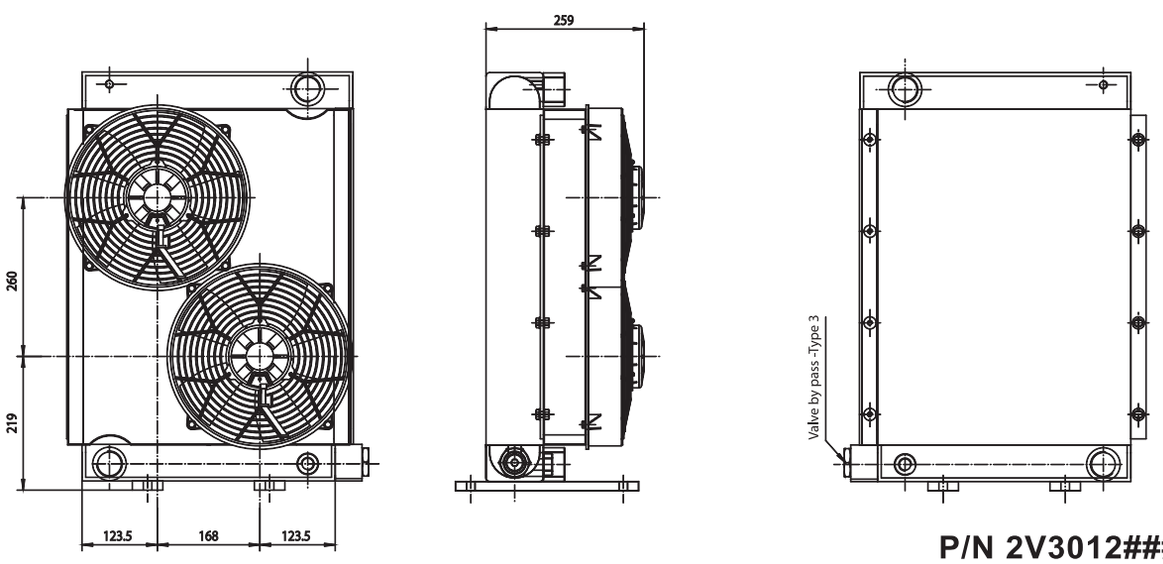


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

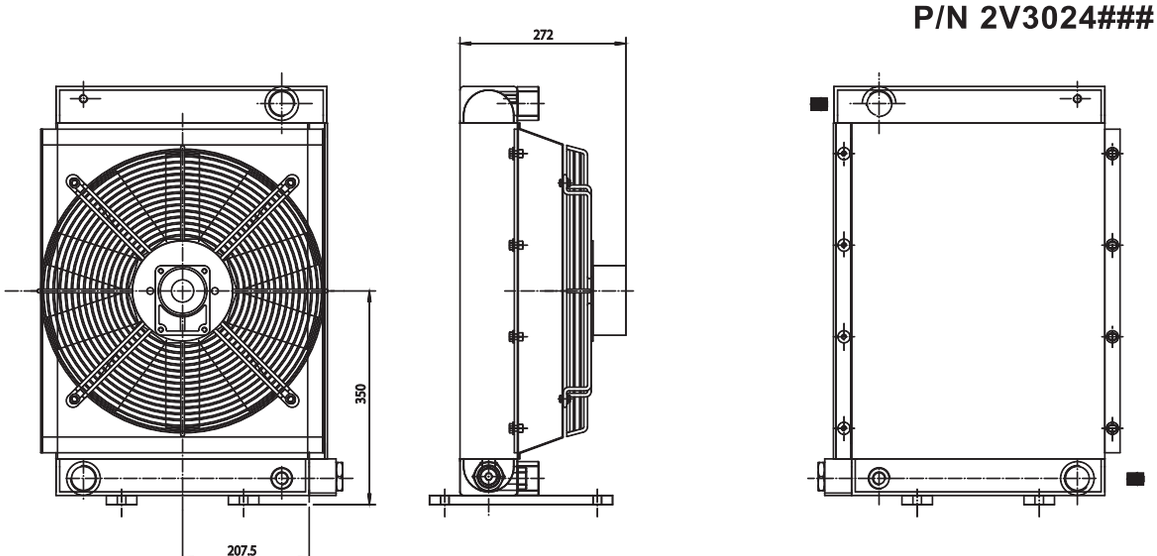
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N 2V3003###



P/N 2V3012###
P/N 2V3024###



P/N 2V3056###

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/h)	IP	It	kg
2V3003###	230-400 B14 AC 230-460 B14 AC	50 60	0,75 0,86	3,1-1,8 3,1-1,8	1430 1715	450	82	3100	55	6,8	37
2V3012###	12 DC	/	0,17	13,9	2900	280	78	1550	68	6,8	32
2V3024###	24 DC	/	0,16	6,7	2900	280	78	1700	68	6,8	32
2V3056###	Prepared for Gr.2 hydraulic motor					450			/	6,8	35

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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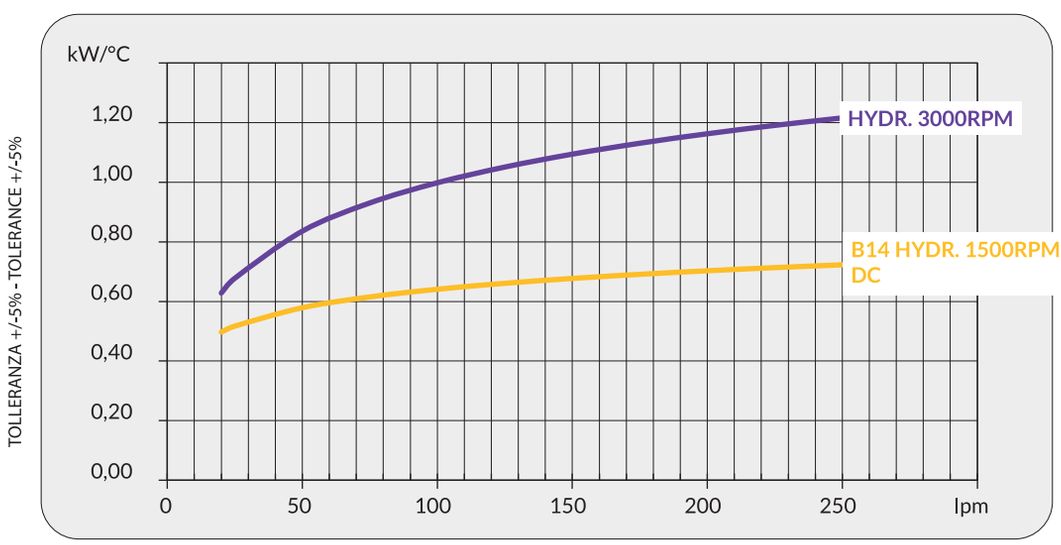
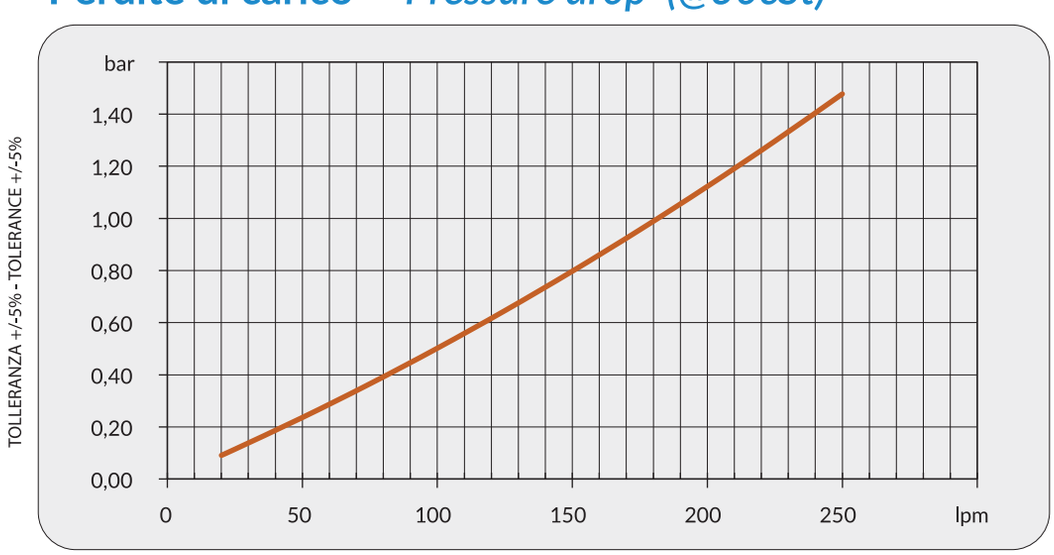
Diagramma rendimento *Performance diagram*

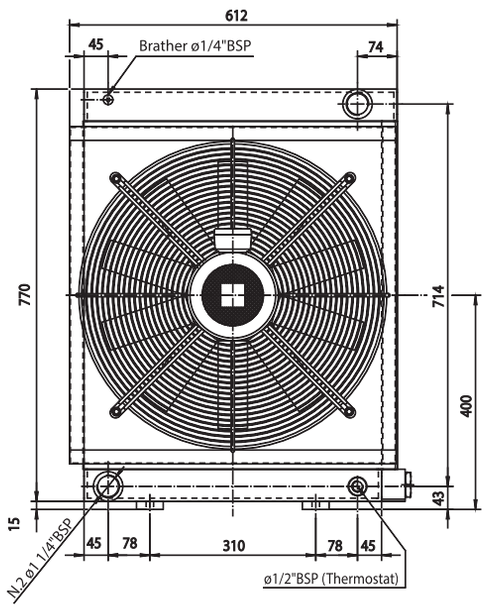


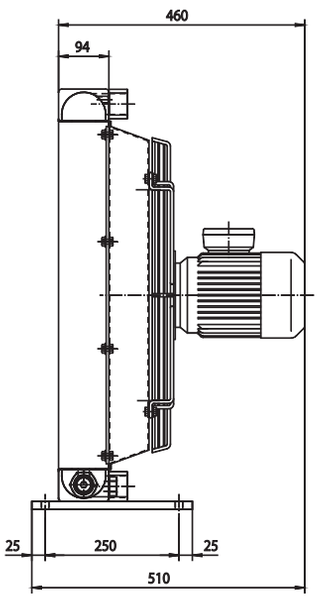
Perdite di carico *Pressure drop (@30cSt)*

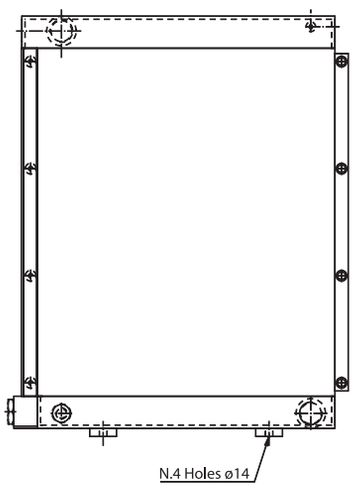


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

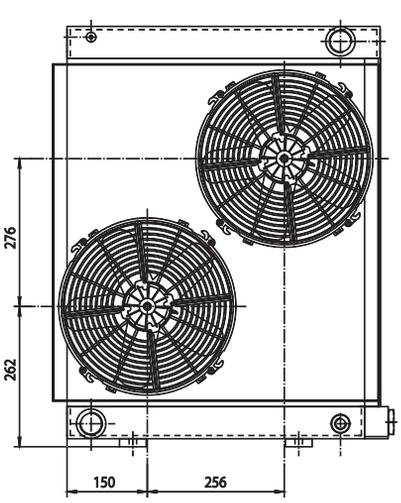
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

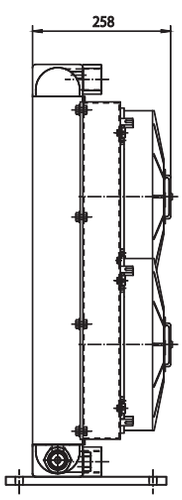


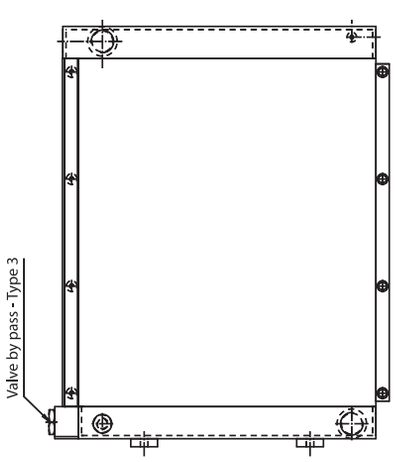




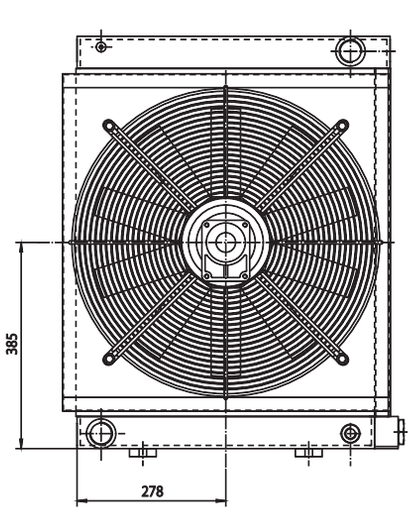
P/N 2V3603###

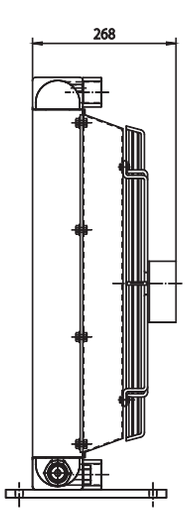


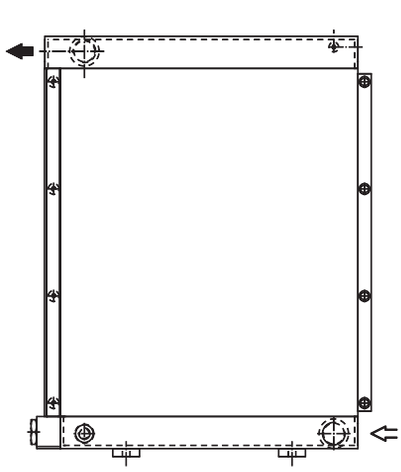




P/N 2V3612###
P/N 2V3624###







P/N 2V3656###

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
2V3603###	230-400 B14 AC 265-460 B14 AC	50 60	1,1 1,3	4,5 - 2,6 4,5 - 2,6	1440 1730	500	82	5650	55	9,4	60
2V3612###	12 DC	/	0,160	13,30	2560	305	83	2100	67	9,4	50
2V3624###	24 DC	/	0,177	7,35	3000	305	84	2400	67	9,4	50
2V3656###	Prepared for Gr.2 hydraulic motor					450			/	9,4	52

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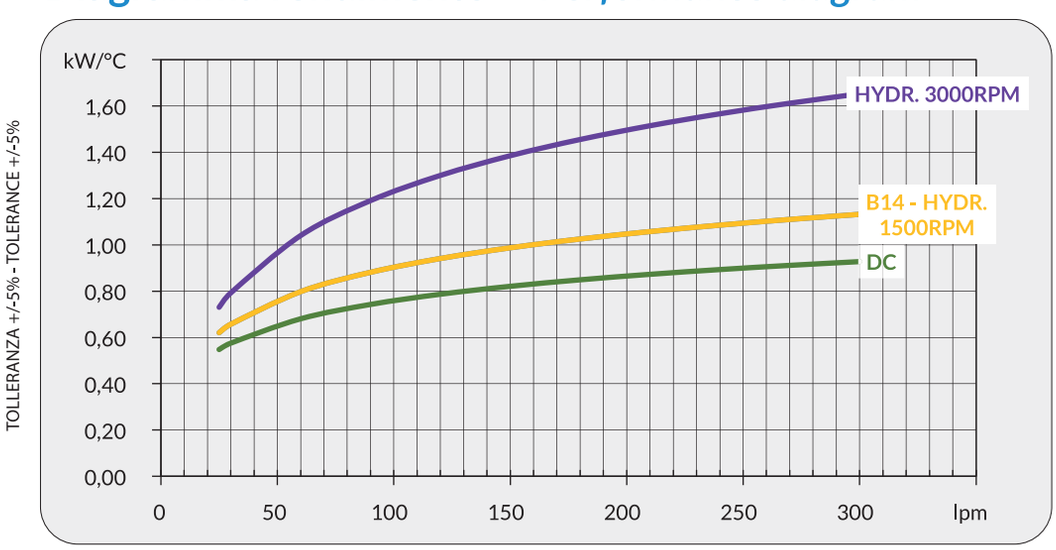
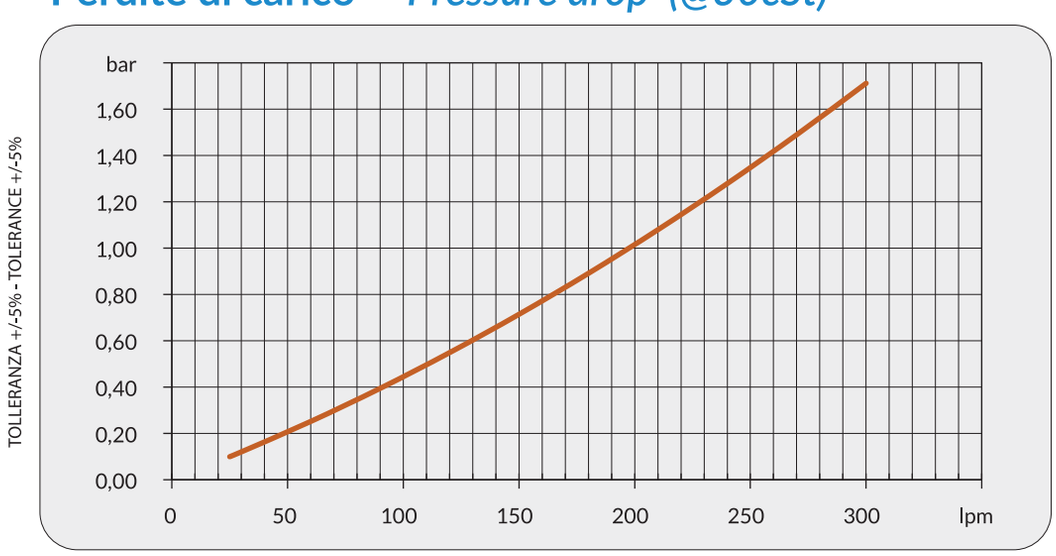
Diagramma rendimento *Performance diagram*

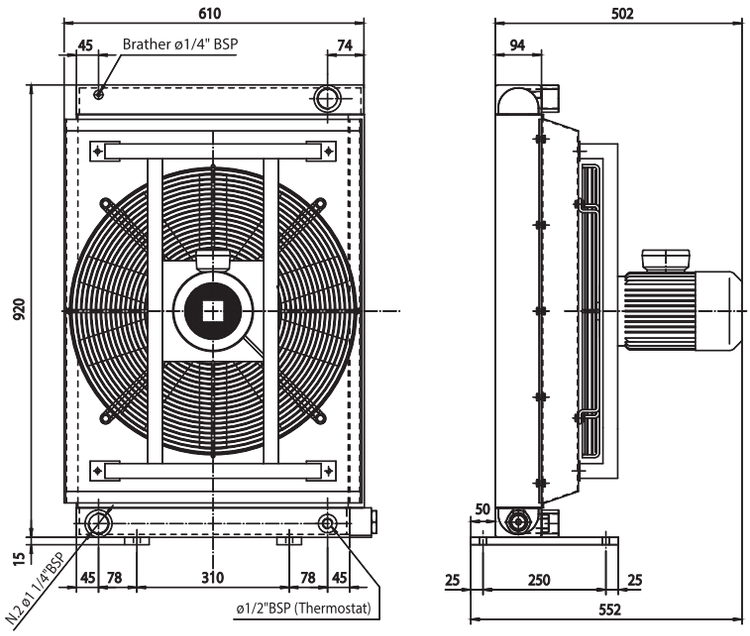


Perdite di carico *Pressure drop (@30cSt)*

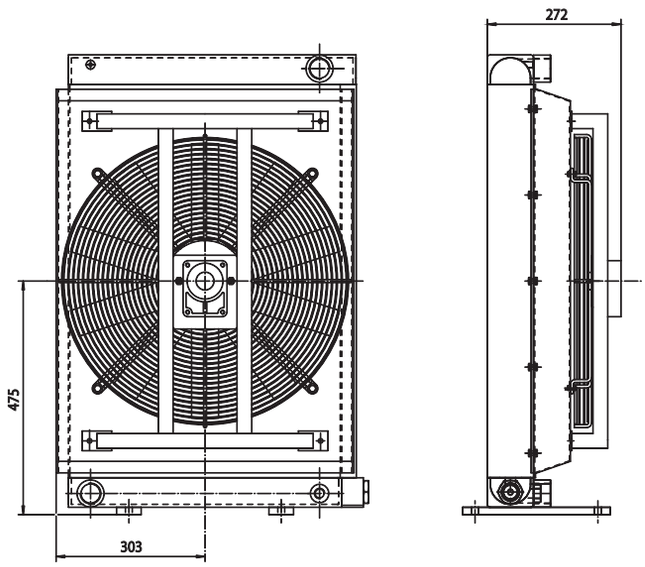


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

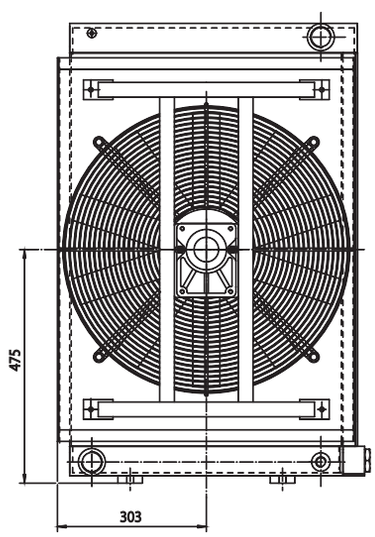
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



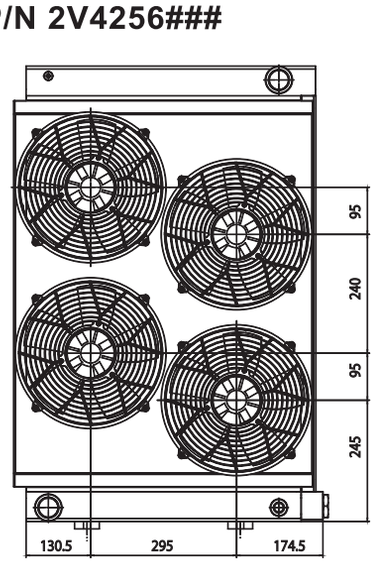
P/N 2V4203###

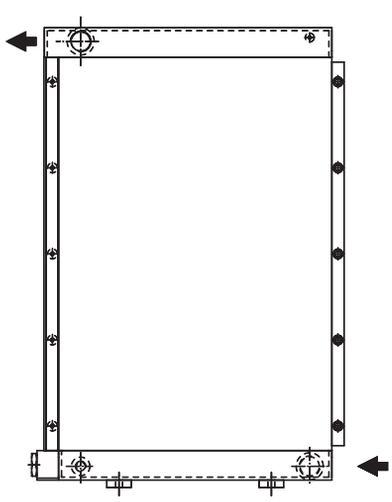


P/N 2V4256###



P/N 2V4258###





P/N 2V4212###
P/N 2V4224###

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/ h)	IP	It	kg
2V4203###	230-400 B14 AC 265-460 B14 AC	50 60	1,1 1,3	4,5 - 2,6 4,5 - 2,6	1440 1730	560	84	6820	55	10,6	65
2V4256###	Prepared for Gr.2 hydraulic motor					560			/	10,6	58
2V4258###	Prepared for Gr.3 hydraulic motor					560			/	10,6	58
2V4212###	12V	-	0,19	14,3	2920	280		6820	68	10,6	58
2V4224###	24V	-	0,18	6,8	2920	280		6820	68	10,6	58

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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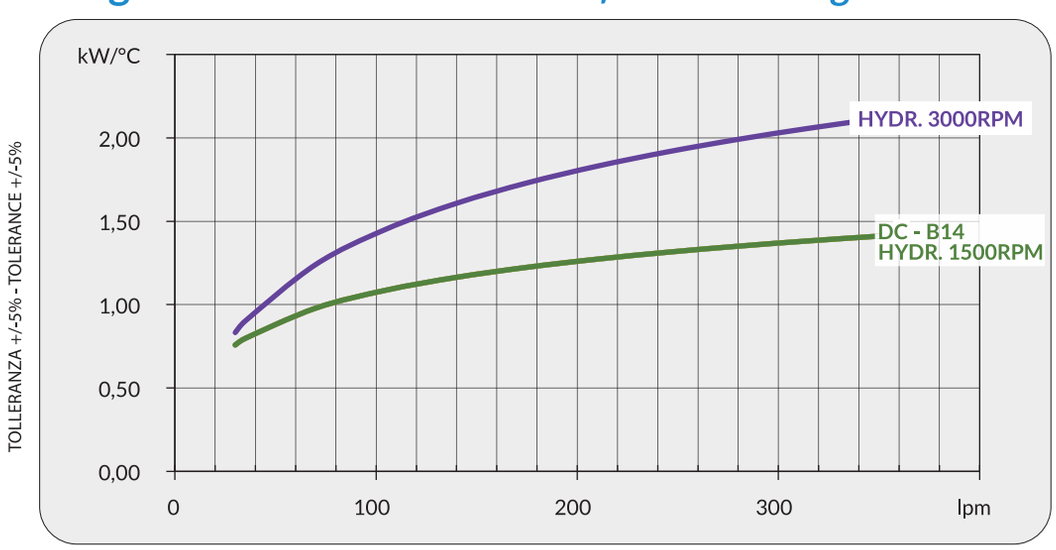
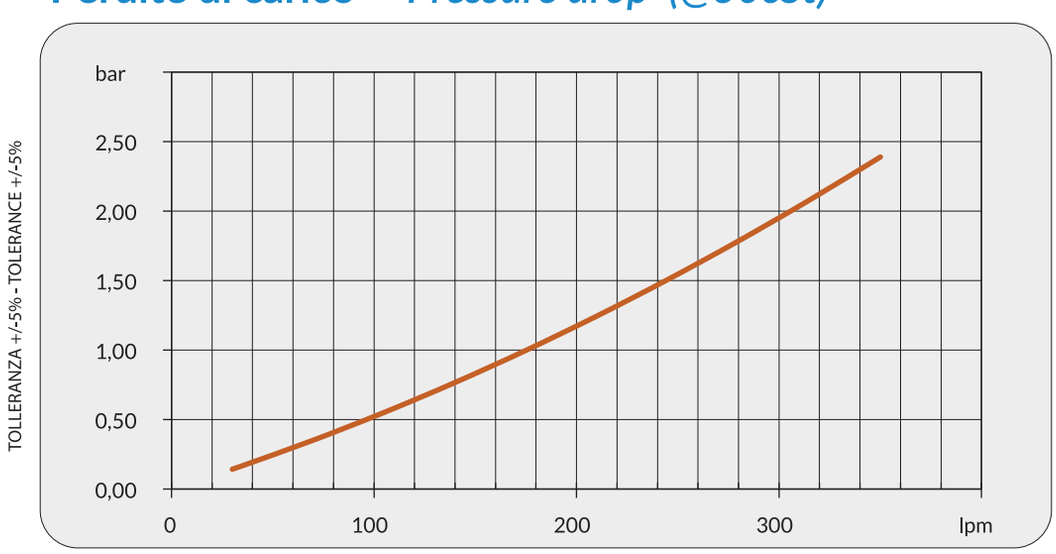
Diagramma rendimento *Performance diagram*

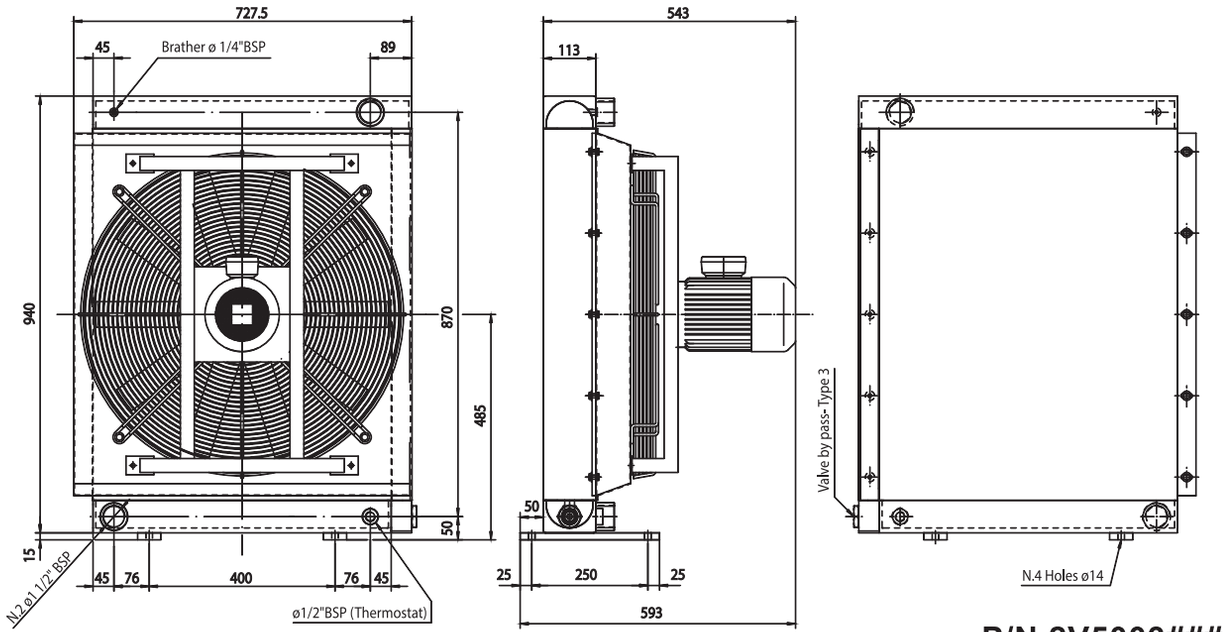


Perdite di carico *Pressure drop (@30cSt)*

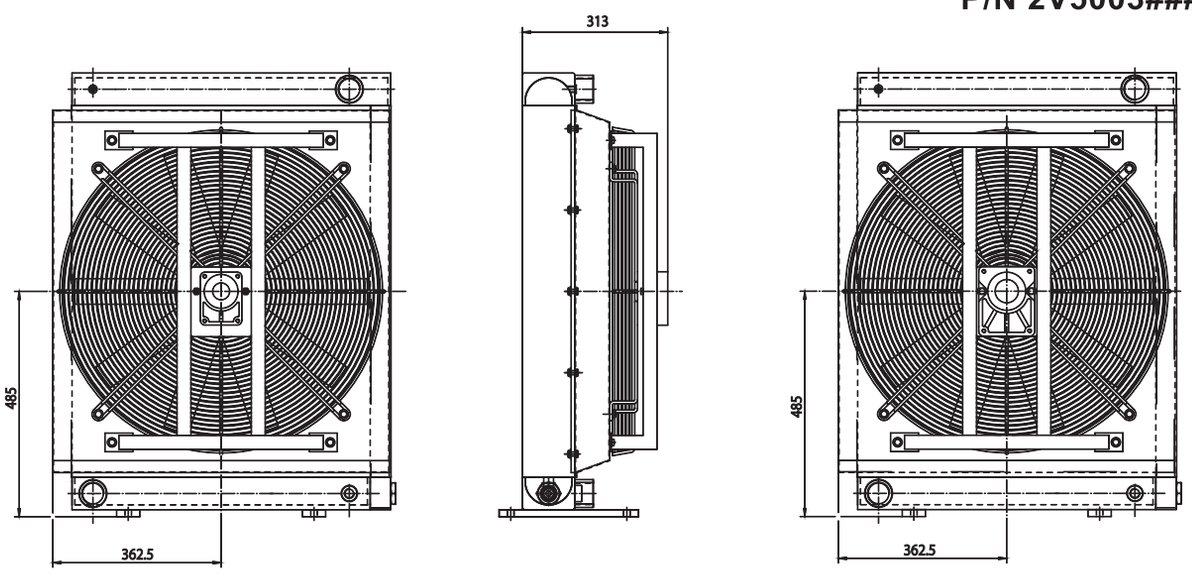


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

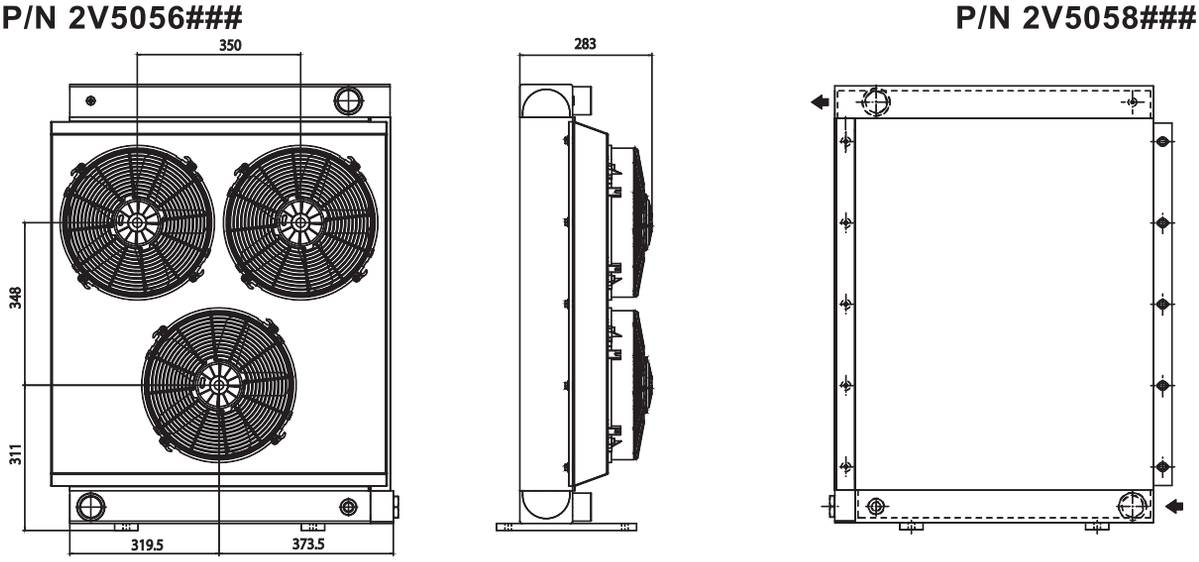


P/N 2V5003###



P/N 2V5056###

P/N 2V5058###



P/N 2V5012###
P/N 2V5024###

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/h)	IP	lt	kg
2V5003###	230-400 B14 AC 265-460 B14 AC	50 60	1,1 1,3	5-2,9 5-2,9	950 1140	630	80	5910	55	14,2	90
2V5056###	Prepared for Gr.2 hydraulic motor					630			/	14,2	83
2V5058###	Prepared for Gr.3 hydraulic motor					630			/	14,2	83
2V5012###	12	-	0,21	16,1		305			/	14,2	83
2V5024###	24	-	0,21	8,5		305			68	14,2	83

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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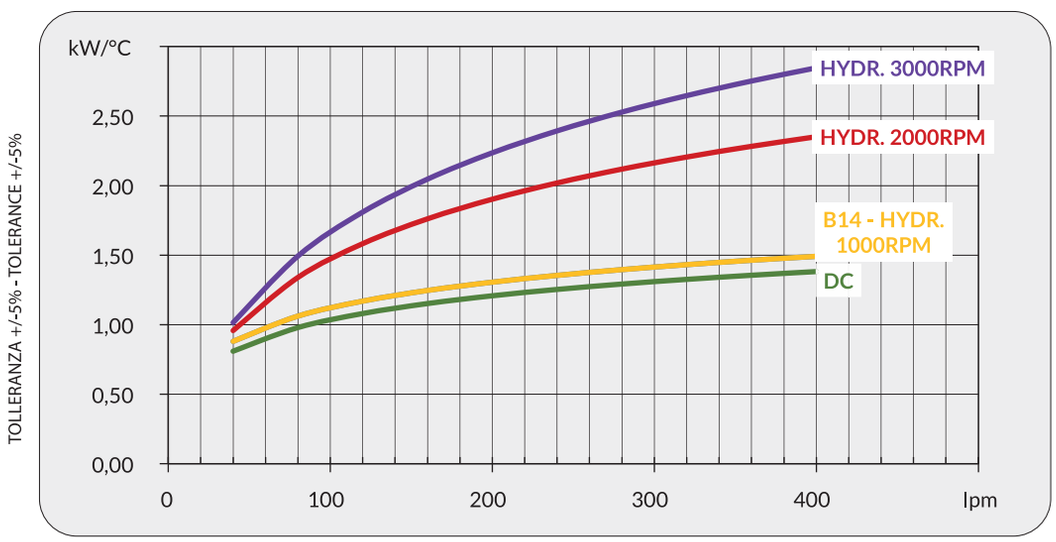
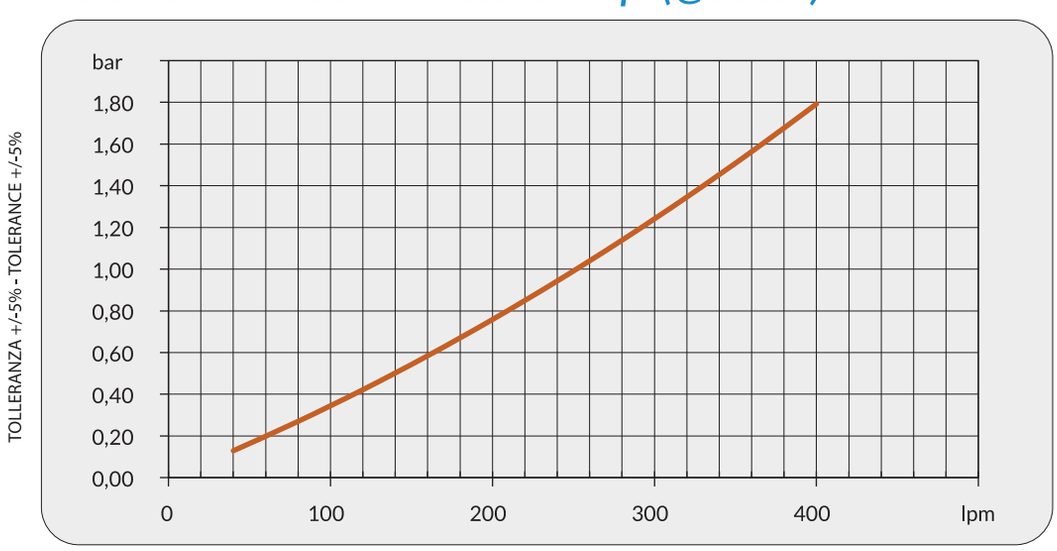
Diagramma rendimento *Performance diagram*

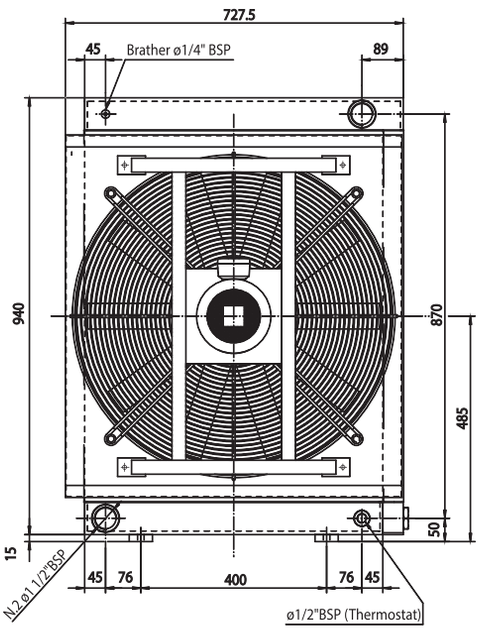


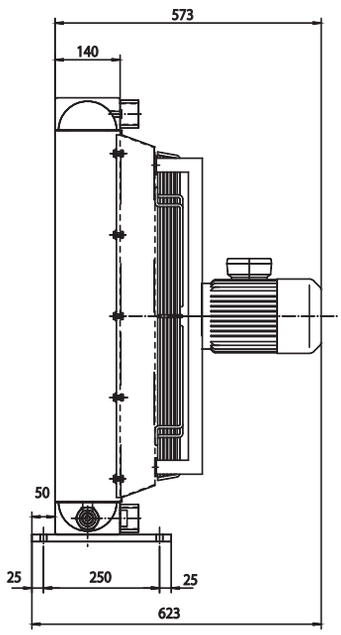
Perdite di carico *Pressure drop (@30cSt)*

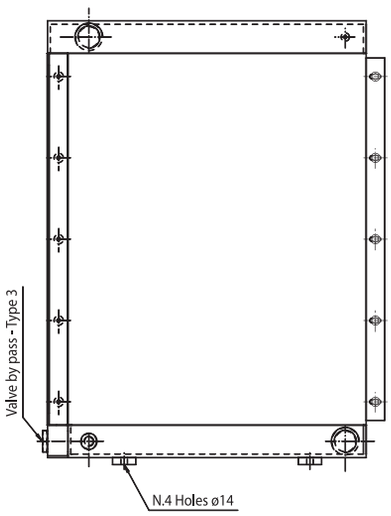


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

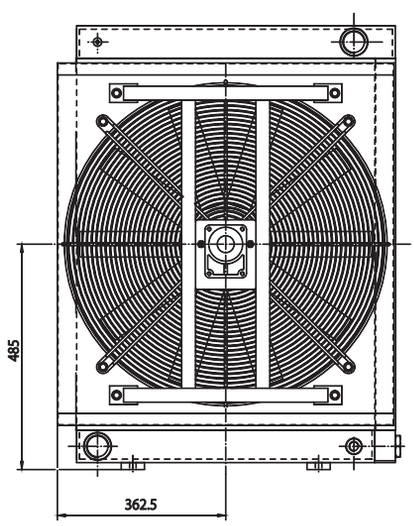
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

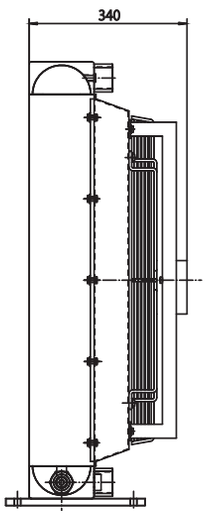




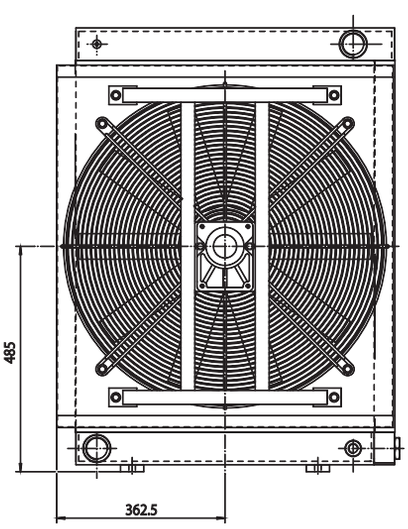


P/N 2V5203###

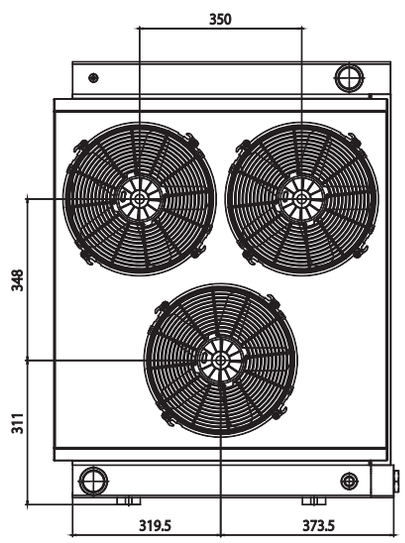


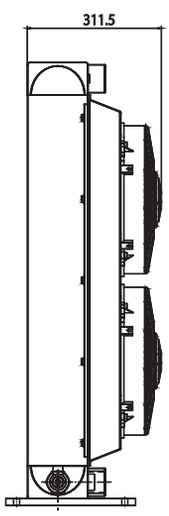


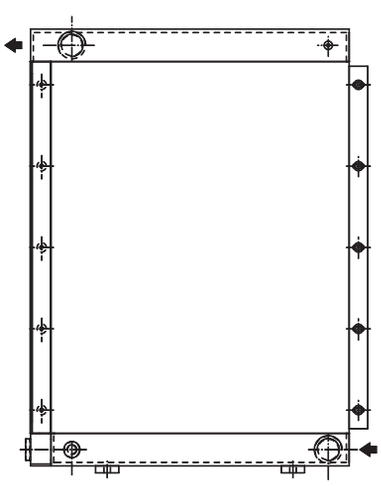
P/N 2V5256###



P/N 2V5258###







P/N 2V5212###
P/N 2V5224###

Dati tecnici *Technical Data*

P/N	V	Hz	kW(±10%)	A (±10%)	rpm	Ø Fan	dB (A)	(m³/h)	IP	It	kg
2V5203###	230-400 B14 AC 265-460 B14 AC	50 60	1,1 1,3	5-2,9 5-2,9	950 1140	630	80	5260	55	17,7	95
2V5256###	Prepared for Gr.2 hydraulic motor					630			/	17,7	89
2V5258###	Prepared for Gr.3 hydraulic motor					630			/	17,7	89
245212###	12	-	0,21	16,1		305			68	17,7	89
245224###	24	-	0,22	8,5		305			68	17,7	89

I dati si riferiscono al singolo ventilatore
Data refers to each fan

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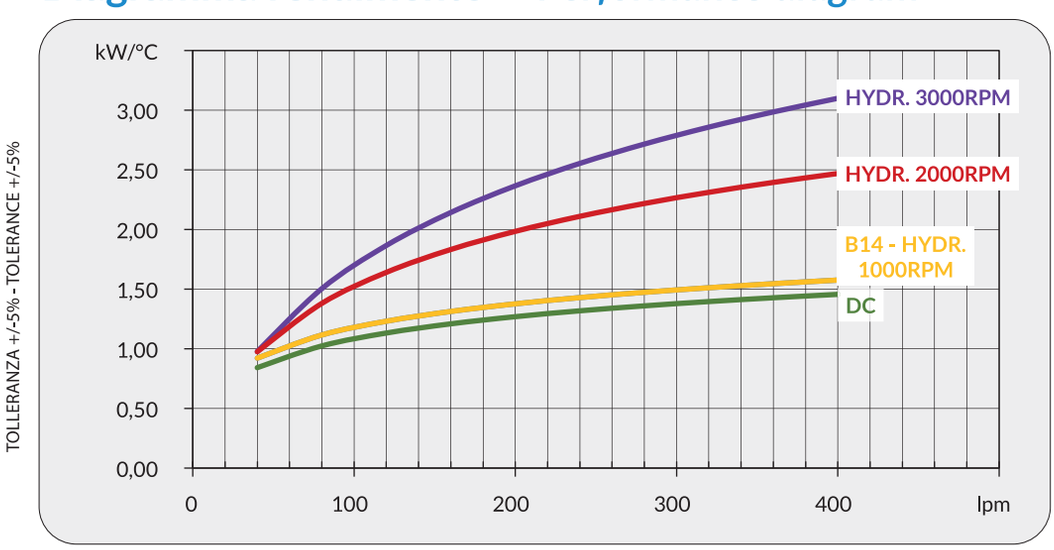
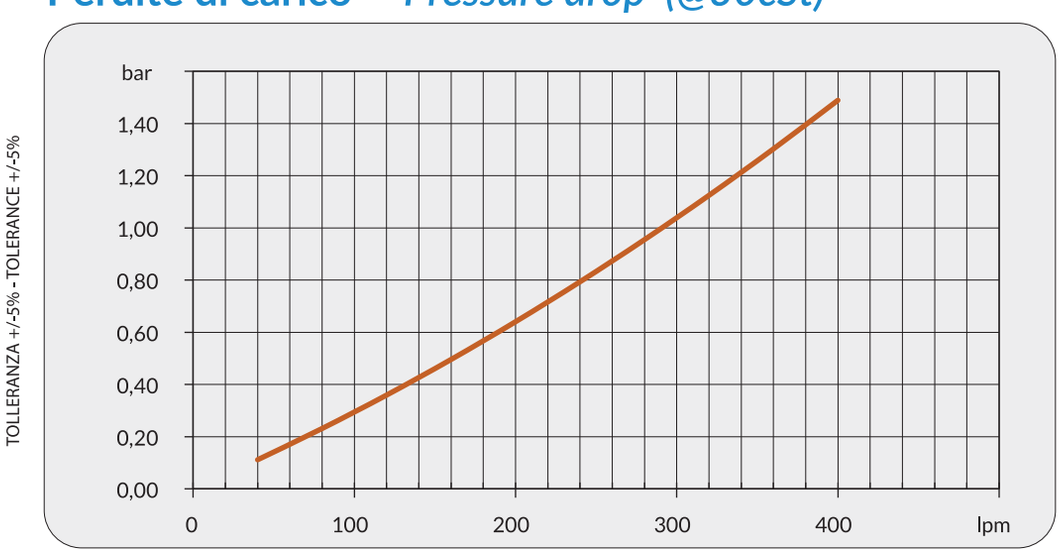
Diagramma rendimento *Performance diagram*



Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



EMMEGI HEAT-EXCHANGERS

Serie HPA Compact

HPA Compact Series

APPLICAZIONE
APPLICATION

Grazie all'ampia gamma di combinazioni, gli scambiatori della serie HPA Compact si prestano come la soluzione di raffreddamento ottimale per svariate applicazioni industriali quali:

The wide range of combinations makes the HPA Compact series heat exchangers the optimal cooling solution for a great variety of industrial applications such as:

Gru fisse.	Stationary cranes.
Impianti di riciclo.	Recycling plants.
Impianti oleodinamici.	Hydraulic systems.
Macchine utensili.	Machine tools.
Altro su richiesta.	Others on request.

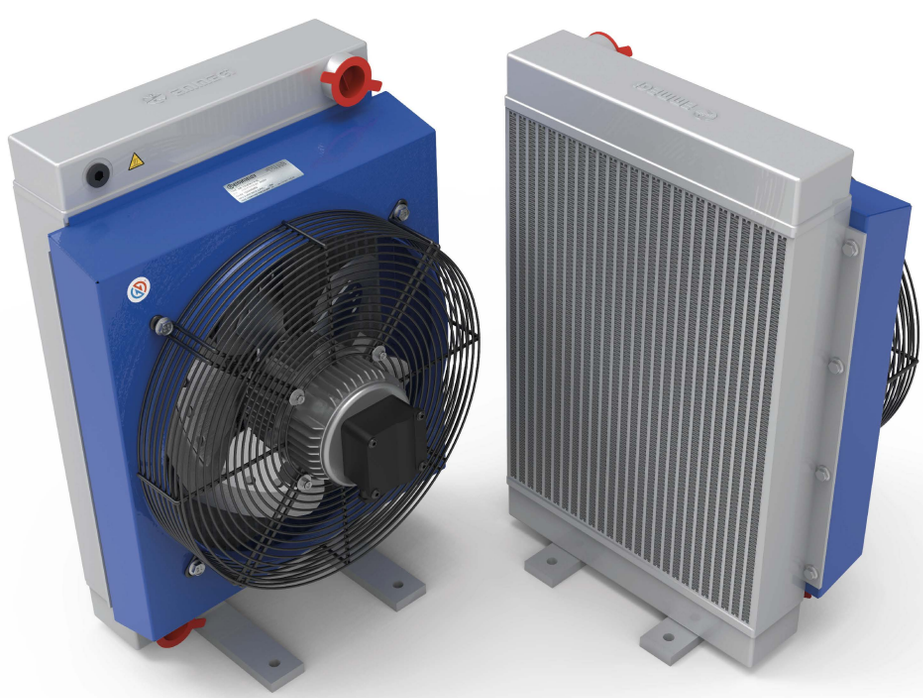


Compatti e silenziosi l'intera gamma di scambiatori, è disponibile con motori elettrici con grado di protezione IP55 e varie tensioni.

Minimun dimensions, minimun noise the entire range of exchangers is available with electric motors with IP55 protection and various voltages







Modulo richiesta dati

Sheet for cooler selection

CLIENTE *COMPANY*	
RICHIEDENTE *NAME*	

TIPOLOGIA FLUIDO *FLUID TYPE*		
PORTATA *FLOW RATE*	**lpm**	
POTENZA INSTALLATA *TOTAL POWER*	**kW**	
POTENZA DA DISSIPARE *POWER TO BE DISSIPATED*	**kW**	
TEMPERATURA INGRESSO *INLET TEMPERATURE*	**°C**	
TEMPERATURA ARIA MAX *MAX AMBIENT TEMPERATURE*	**°C**	
PRESSIONE DI LAVORO *WORKING PRESSURE*	**bar**	

TIPO DI VENTILAZIONE *TYPE OF FAN UNIT*

CA
AC

MONOFASE 230V
SINGLEPHASE 230V

TRIFASE **230/400V**
THREEPHASE **277/480V**

TENSIONE SPECIALE
SPECIAL VOLTAGE

50 Hz **60 Hz**

Denominazione codice prodotto

Ordering code

2K24 | 03 | 2 | 01

MODELLI COOLER MODEL

2K24 (HPA 24 Compact)

TIPO DI MOTORIZZAZIONE FAN MOTOR TYPE

03 AC 230-400V/277-480V 50/60 Hz

TERMOSTATI THERMOSTATS

0 Senza termostato Whitout thermostat
1 Termostato fisso Fixed thermostat 40-28°
2 Termostato fisso Fixed thermostat 50-38°
3 Termostato fisso Fixed thermostat 60-48°
4 Termostato fisso Fixed thermostat 70-58°
5 Termostato fisso Fixed thermostat 80-68°
6 Termostato fisso Fixed thermostat 90-78°
8 Termostato regolabile Adjustable thermostat 0-90° (TC2)

FLUSSO DI VENTILAZIONE AIR FLOW DIRECTION

01 Aspirante Suction air flow
02 Soffiante Blowing air flow

Serie HPA COMPACT
HPA COMPACT Series

Modello *Model*	Codice *Code*
HPA 12 COMPACT	*2K12*
HPA 18 COMPACT	*2K18*
HPA 24 COMPACT	*2K24*
HPA 30 COMPACT	*2K30*
HPA 36 COMPACT	*2K36*
HPA 42 COMPACT	*2K42*
HPA 50 COMPACT	*2K50*
HPA 52 COMPACT	*2K52*





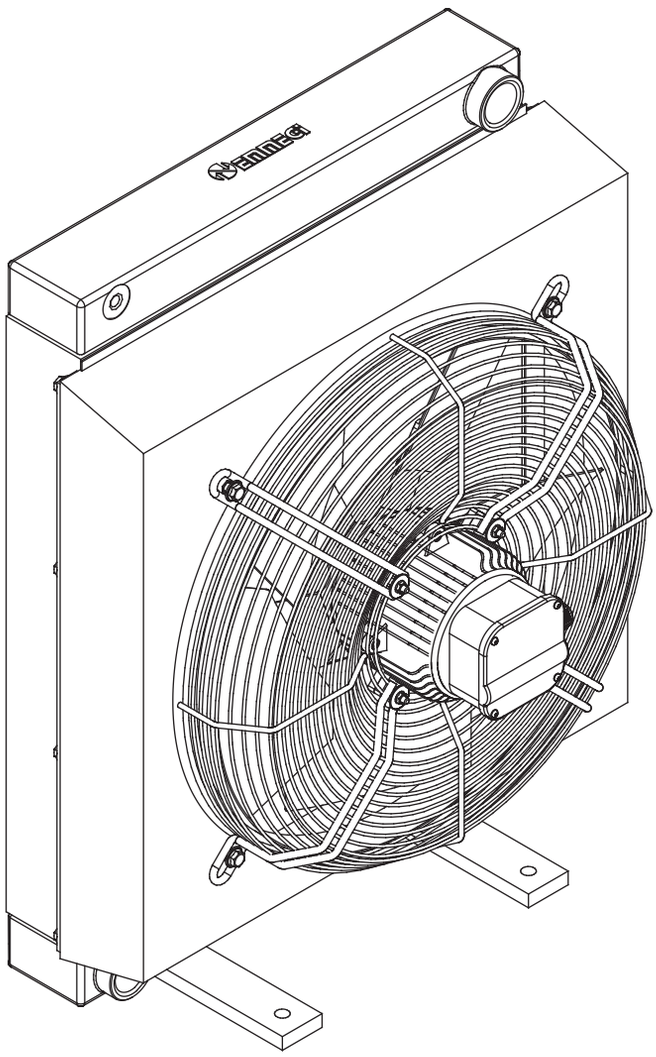
Serie HPA COMPACT 2 PASS
HPA COMPACT 2 PASS Series

Modello *Model*	Codice *Code*
HPA 24 COMPACT 2 PASS	*2K27*
HPA 24 COMPACT 2 PASS	*2K33*
HPA 36 COMPACT 2 PASS	*2K38*
HPA 42 COMPACT 2 PASS	*2K45*
HPA 50 COMPACT 2 PASS	*2K87*
HPA 52 COMPACT 2 PASS	*2K54*

Serie HPA COMPACT / 2
HPA COMPACT / 2 Series

Modello *Model*	Codice *Code*
HPA 30/2 COMPACT	*2K31*
HPA 36/2 COMPACT	*2K37*
HPA 42/2 COMPACT	*2K43*
HPA 50/2 COMPACT	*2K88*
HPA 52/2 COMPACT	*2K53*

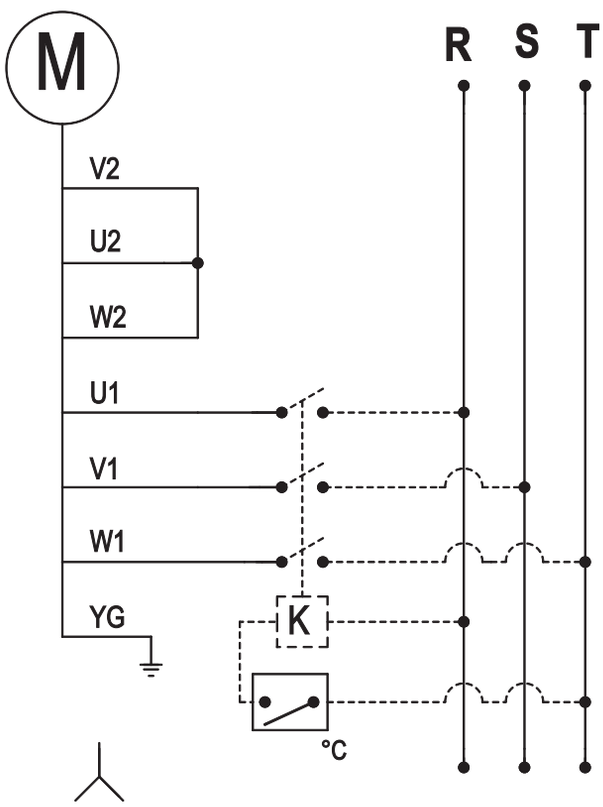




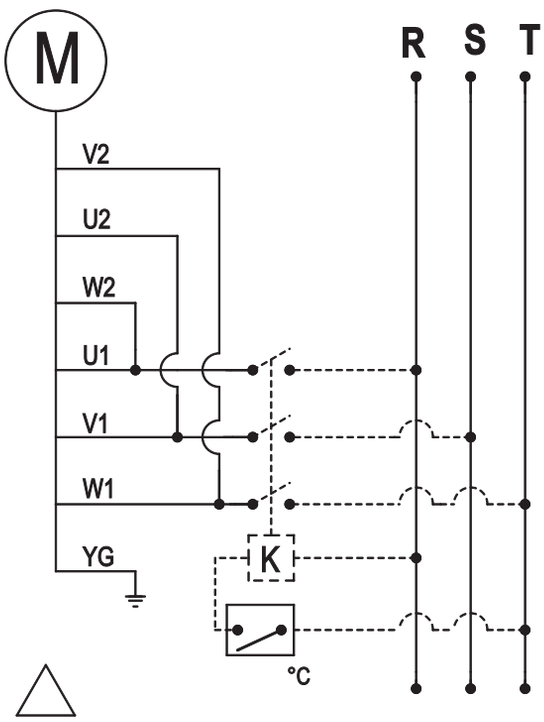
AC 230-400V 50Hz
AC 277-480V 60Hz

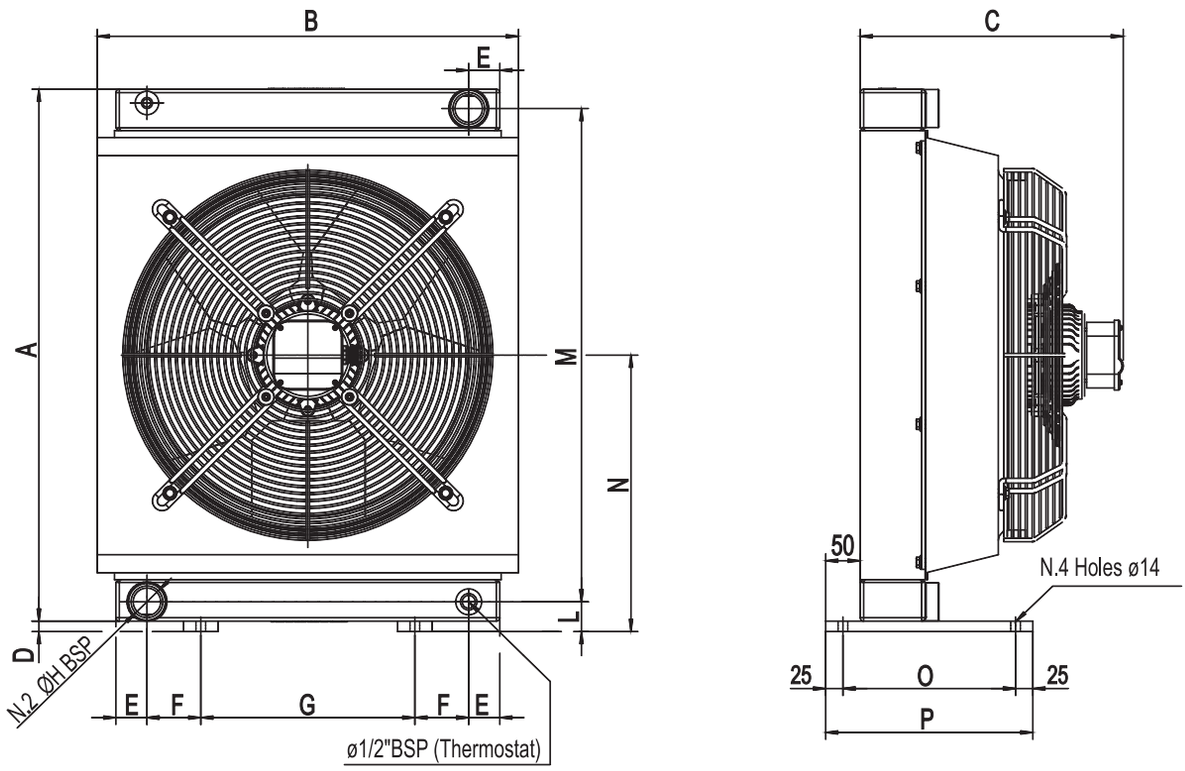
Collegamenti elettrici
Electric Wiring

COLLEGAMENTO ELETTRICO 400/460V AC TRIF.
400/460V AC THREEPHASE ELECTRIC WIRING



COLLEGAMENTO ELETTRICO 230V AC TRIF.
230V AC 3PH ELECTRIC WIRING





Dimensioni *Dimensions*

Model	A	B	C	D	E	F	G	H	L	M	N	O	P
HPA 12 COMPACT	390	357	278	10	40	38,5	150	1 "	35	340	205	200	250
HPA 18 COMPACT	500	450	308	10	40	60	200	1 "	35	450	260	200	250
HPA 24 COMPACT	520	450	339	15	45	55	200	1 1/4"	43	464	275	250	300
HPA 30 COMPACT	670	465	365	15	45	62,5	200	1 1/4"	43	614	350	250	300
HPA 36 COMPACT	770	610	380	15	45	78	310	1 1/4"	43	714	400	250	300
HPA 42 COMPACT	920	606	415	15	45	78	310	1 1/4"	43	864	475	250	300
HPA 50 COMPACT	940	725	443	15	45	76	400	1 1/2"	50	870	485	250	300
HPA 52 COMPACT	940	725	470	15	45	76	400	1 1/2"	50	870	485	250	300

Dati tecnici *Techincal data*

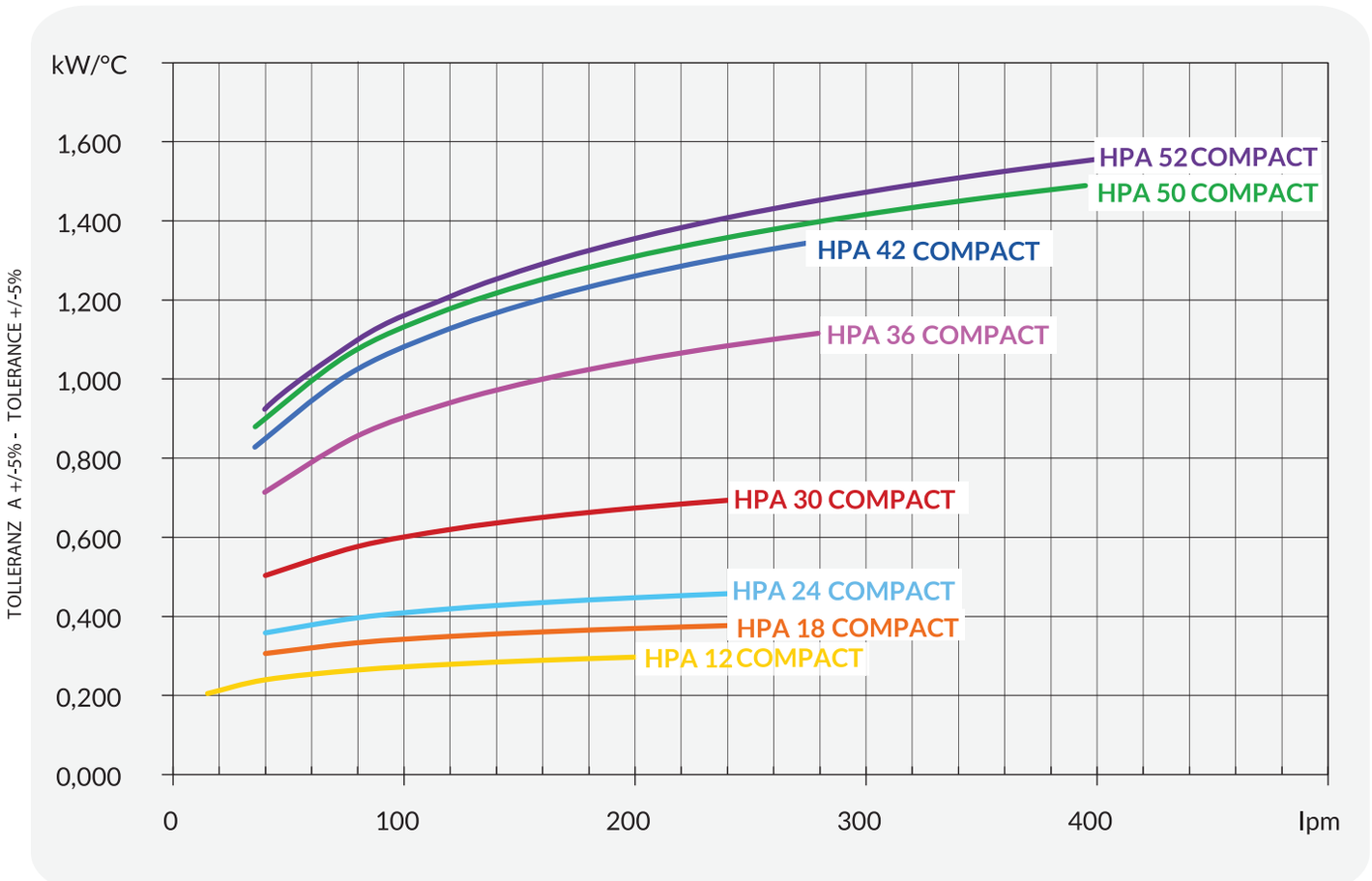
P/N	V	Hz	kW	A	rpm	ø Fan	dB (A)***	(m^3/h)	IP	It	kg
2K1203###	230-400/277-480	50/60	0,17	0,33	2240	250	69	1500	55	1,9	12
2K1803###	230-400/277-480	50/60	0,42	0,85	2580	315	72	2300	55	2,9	20
2K2403###	230-400/277-480	50/60	0,42	0,85	2540	315	75	1850	55	6,2	28
2K3003###	230-400/277-480	50/60	0,40	1	1430	400	70	3100	55	6,8	35
2K3603###	230-400/277-480	50/60	0,53	1,1	1350	500	73	5420	55	9,4	50
2K4203###	230-400/277-480	50/60	0,79	1,49	1420	500	75	6820	55	10,6	59
2K5003###	230-400/277-480	50/60	0,58	1,51	900	630	71	5910	55	14,2	82
2K5203###	230-400/277-480	50/60	0,58	1,51	900	630	71	5260	55	17,7	87

I dati sopraripportati si riferiscono @400V/50Hz – The data refer @400V/50Hz * In accordo alle norme ISO 3744-1981 (E) In accordance to ISO 3744-1981 (E)**

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Diagramma rendimento *Performance diagram*

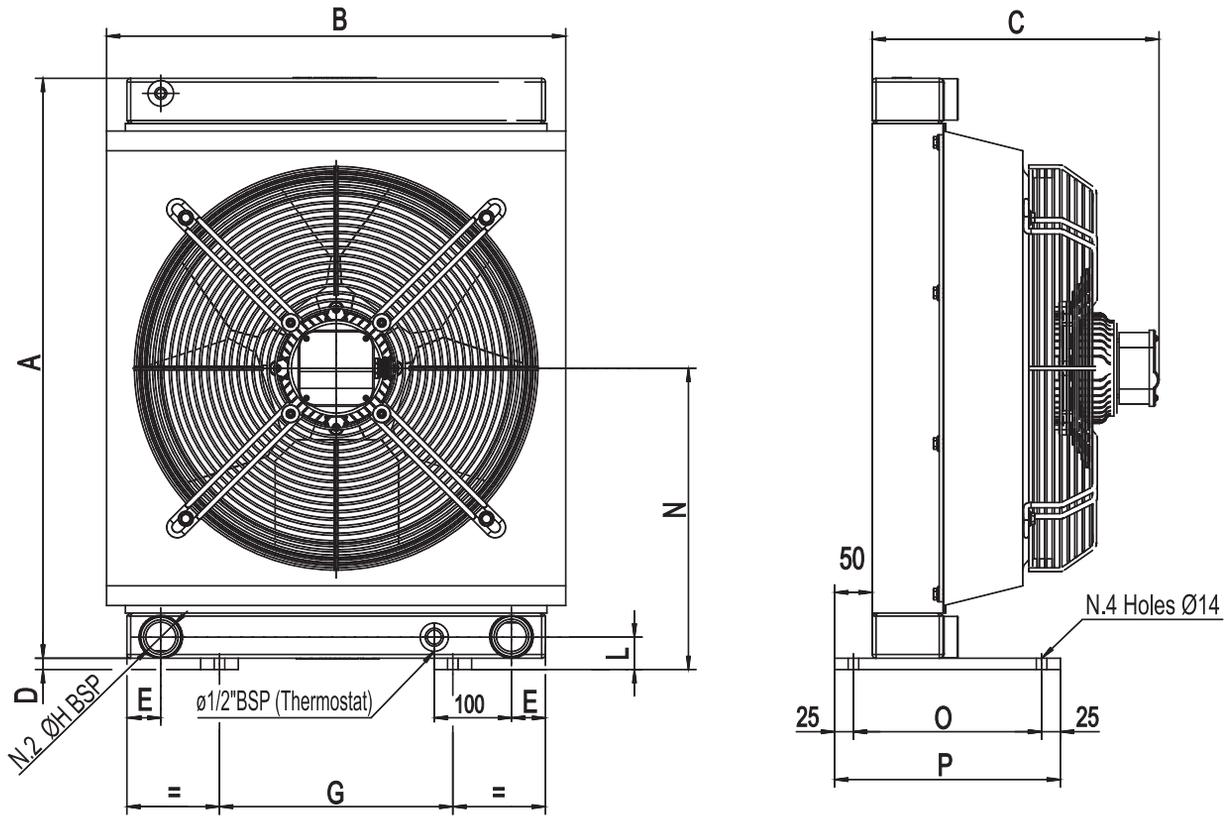


Perdite di carico *Pressure drop (@30cSt)*

Model	40 lpm	80 lpm	120 lpm	160 lpm	200 lpm	240 lpm	280 lpm
HPA 12 COMPACT	0,3	0,6	0,9				
HPA 18 COMPACT	0,3	0,6	1	1,5			
HPA 24 COMPACT	0,15	0,3	0,5	0,7			
HPA 30 COMPACT	0,2	0,4	0,6	0,9			
HPA 36 COMPACT	0,2	0,4	0,6	0,8	1		
HPA 42 COMPACT	0,2	0,4	0,6	0,9	1,2	1,5	1,8
HPA 50 COMPACT		0,3	0,4	0,6	0,8	0,9	1,1
HPA 52 COMPACT		0,2	0,4	0,5	0,6	0,8	1

Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



Dimensioni *Dimensions*

Model	A	B	C	D	E	G	H	L	N	O	P
HPA 24 2P COMPACT	520	450	339	15	50	200	1“	40	275	250	300
HPA 30 2P COMPACT	670	465	365	15	50	200	1“	45	350	250	300
HPA 36 2P COMPACT	770	610	380	15	50	310	1“	45	400	250	300
HPA 42 2P COMPACT	920	605	415	15	50	310	1 1/4“	45	475	250	300
HPA 50 2P COMPACT	940	725	443	15	50	400	1 1/4“	50	485	250	300
HPA 52 2P COMPACT	940	725	470	15	50	400	1 1/2“	50	485	250	300

Dati tecnici *Techincal data*

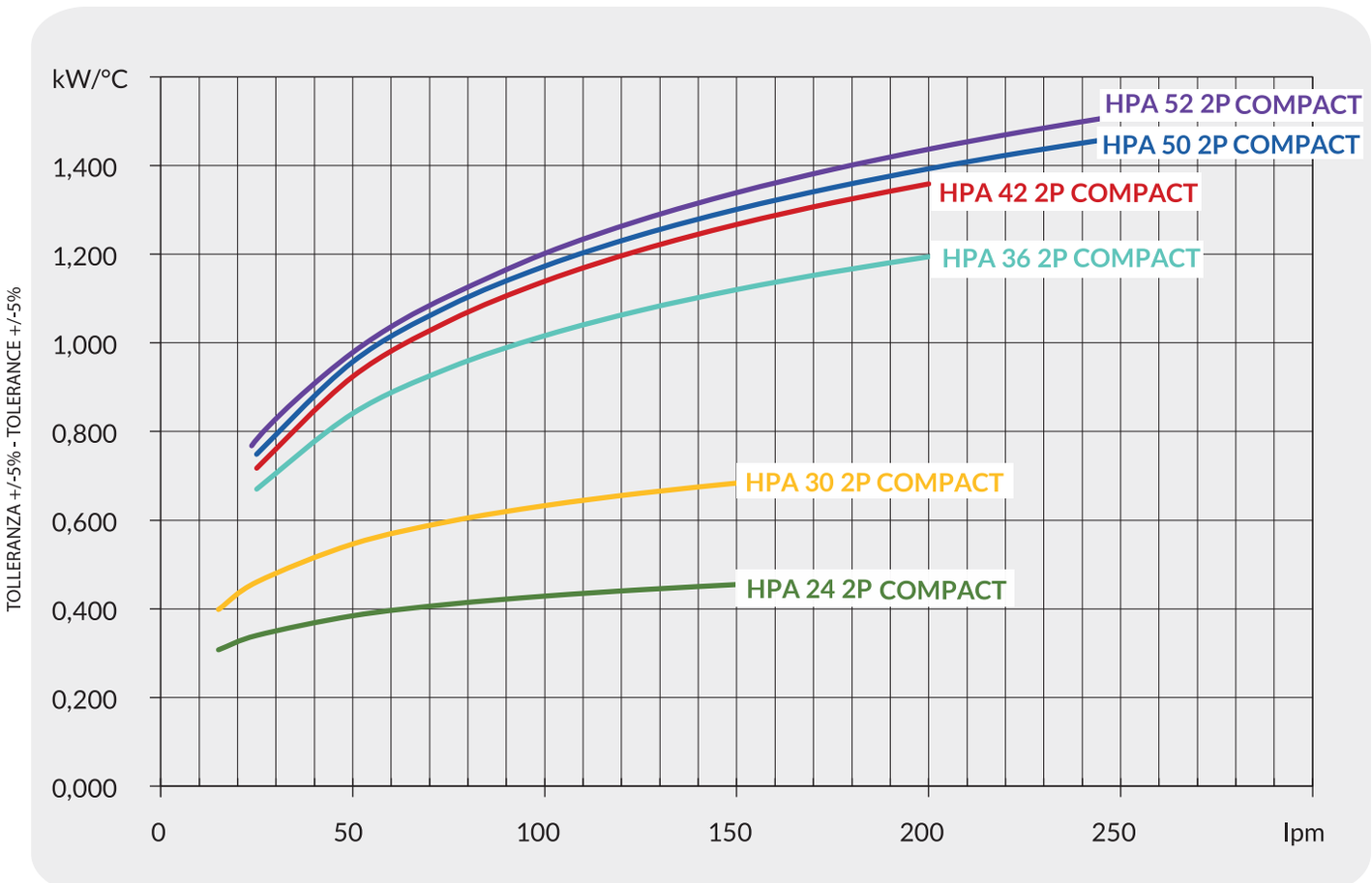
P/N	V	Hz	kW	A	rpm	ø Fan	dB (A)***	(m^3/h)	IP	It	kg
2K2703###	230-400/277-480	50/60	0,42	0,85	2540	315	75	2800	55	6,2	28
2K3303###	230-400/277-480	50/60	0,40	1	1430	400	70	4000	55	6,8	35
2K3803###	230-400/277-480	50/60	0,53	1,1	1350	500	73	5650	55	9,4	50
2K4503###	230-400/277-480	50/60	0,79	1,49	1420	500	75	8400	55	10,6	59
2K8703###	230-400/277-480	50/60	0,58	1,5	900	630	71	7450	55	14,2	82
2K5403###	230-400/277-480	50/60	0,58	1,5	900	630	71	6970	55	17,7	87

I dati sopraripportati si riferiscono @400V/50Hz – The data refer @400V/50Hz *** In accordo alle norme ISO 3744-19 81 (E) – In accordance to ISO 3744-19 81 (E)

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Diagramma rendimento *Performance diagram*

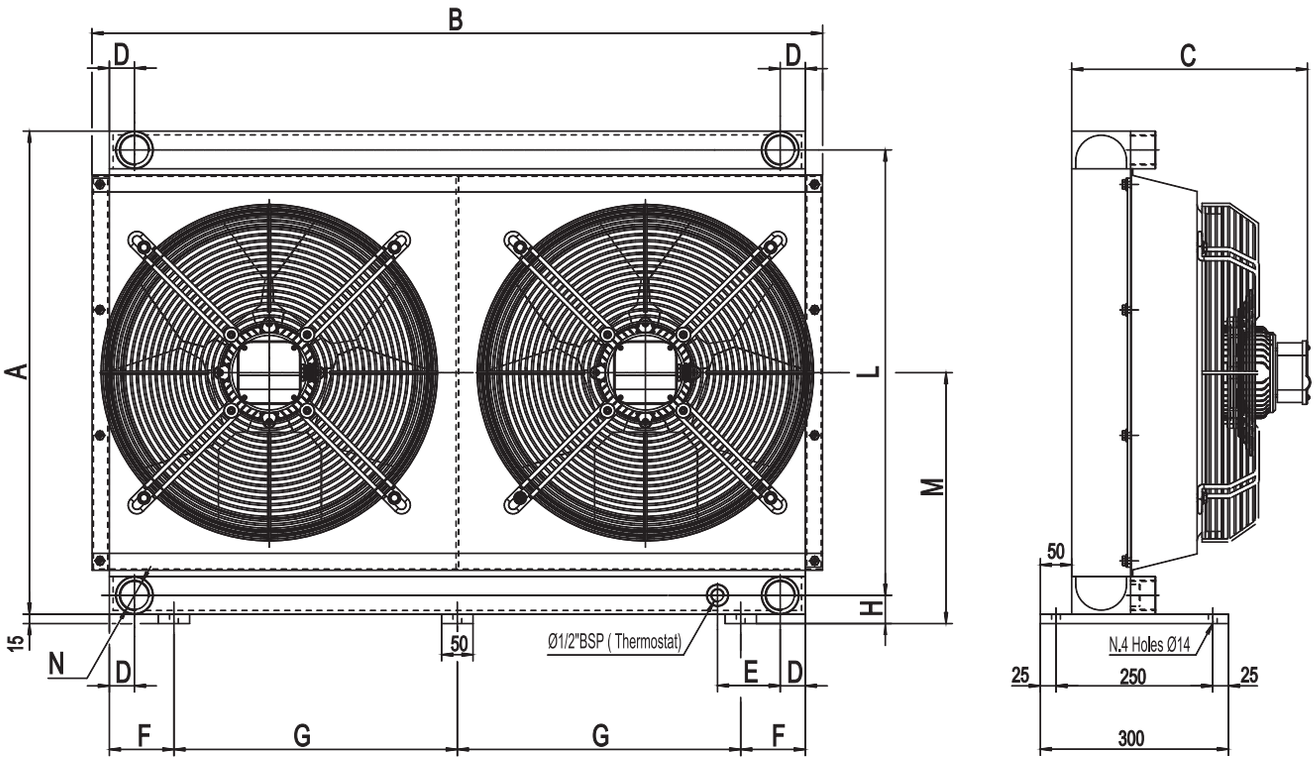


Perdite di carico *Pressure drop* (ISO VG 32)

Model	20 lpm	40 lpm	60 lpm	80 lpm	100 lpm	120 lpm	140 lpm
HPA 24 2P COMPACT	0,3	0,6	0,9	1,2			
HPA 30 2P COMPACT	0,4	0,7	1,1	1,5	1,9		
HPA 36 2P COMPACT	0,3	0,6	1	1,3	1,7	2,2	
HPA 42 2P COMPACT	0,4	0,7	1,1	1,5	1,9	2,65	
HPA 50 2P COMPACT		0,5	0,8	1	1,3	1,65	2
HPA 52 2P COMPACT		0,4	0,6	0,8	1	1,35	1,6

Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



Dimensioni *Dimensions*

Model	A	B	C	D	E	F	G	H	L	M	N
HPA 30/2 COMPACT	670	880	365	40	----	104	311	45	610	350	Ø 1½"
HPA 36/2 COMPACT	770	1165	380	40	100	103	452	45	710	400	Ø 1½"
HPA 42/2 COMPACT	920	1165	415	40	100	103	452	45	860	475	Ø 1½"
HPA 50/2 COMPACT	940	1430	440	40	100	93	549	50	870	485	Ø 1½"
HPA 52/2 COMPACT	940	1430	465	40	100	98	545	50	870	485	Ø 1½"

Nel modello HPA 30/2 sono previsti solo 2 manicotti da Ø1½" BSP.
For HPA 30/2 model n° 2 oil ports Ø1½" BSP only.

Dati tecnici *Techincal data*

P/N	V	Hz	kW	A	rpm	ø Fan	dB (A)***	(m^3/h)	IP	lt	kg
2K3703###	230-400/277-480	50/60	0,53	1,1	1350	500	76	5650	55	18,8	100
2K4303###	230-400/277-480	50/60	0,79	1,49	1420	500	78	8400	55	21,2	123
2K8803###	230-400/277-480	50/60	0,58	1,51	900	630	74	7450	55	28,4	176
2K5303###	230-400/277-480	50/60	0,58	1,51	900	630	74	6970	55	35,4	187

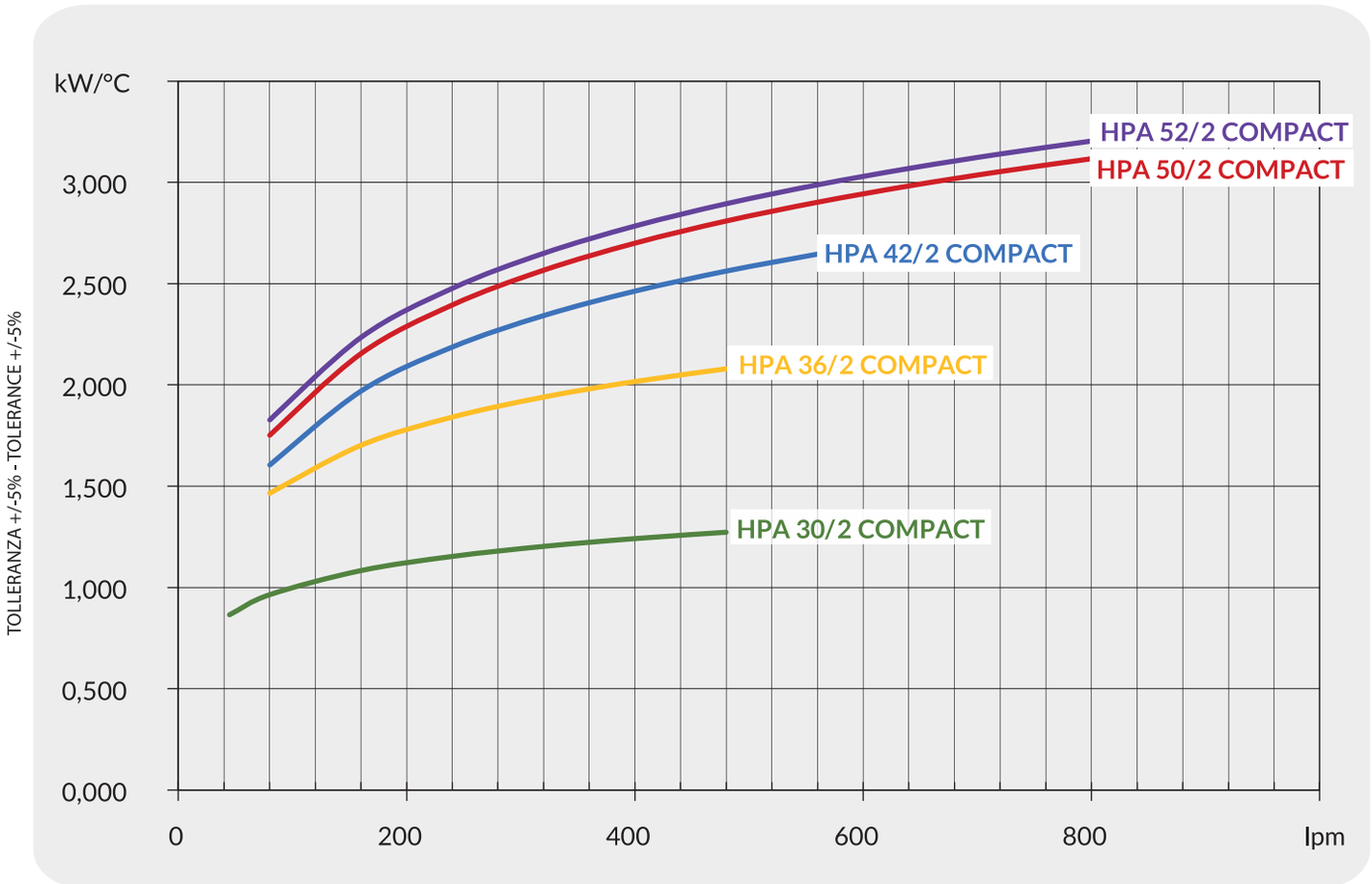
I dati soprariportati sono riferiti al singolo ventilatore @400V/50Hz The data refers to each ventilator @400V/50Hz

*** In accordo alle norme ISO 3744-19 81 (E) In accordance to ISO 3744-19 81 (E)

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Diagramma rendimento *Performance diagram*



Perdite di carico *Pressure drop (@30cSt)*

Model	80 lpm	160 lpm	240 lpm	320 lpm	400 lpm	480 lpm	560 lpm
HPA 30/2 COMPACT	0,2	0,5	0,8	1,1			
HPA 36/2 COMPACT	0,2	0,4	0,7	1	1,3		
HPA 42/2 COMPACT		0,5	0,7	1,1	1,5	1,9	
HPA 50/2 COMPACT		0,4	0,6	0,9	1,2	1,6	1,9
HPA 52/2 COMPACT		0,3	0,5	0,8	1,1	1,4	1,7

Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



EMMEGI®
HEAT-EXCHANGERS

Serie HPA Larger

HPA Larger Series

APPLICAZIONE
APPLICATION

Questa gamma di prodotti soddisfa importanti esigenze di raffreddamento in termini di portate e potenze da dissipare, ampliando di fatto la capacità di offrire più soluzioni anche per situazioni gravose.
Tali performance sono supportate da una componentistica particolarmente robusta che ne garantisce una lunga durata nel tempo.
Questi scambiatori sono prevalentemente elettroventilati con motori industriali, ma possiamo considerare anche ventilazioni ad azionamento idraulico.
Grazie all'ampia gamma di combinazioni, gli scambiatori della serie HPA Larger si prestano come la soluzione di raffreddamento ottimale per svariate applicazioni industriali quali:



This range of products meets important cooling requirements in terms of flow rates and power to dissipate, effectively expanding the ability to offer more solutions even for heavy situations.
These performances are supported by a particularly robust component that guarantees a long life.
These heat exchangers are mainly electroventilated with industrial motors, but we can also consider hydraulically driven ventilation.
The wide range of combinations makes the HPA Larger series heat exchangers the optimal cooling solution for a wide range of industrial applications such as:



Gru fisse.
Impianti di riciclo.
Impianti oleodinamici.
Macchine utensili.
Altro su richiesta.

Stationary cranes.
Recycling plants.
Hydraulic systems.
Machine tools.
Others on request.





Denominazione codice prodotto

Ordering code

A035700 **400B** **1** **1**

MODELLO *COOLER MODEL*

HPA 72	*A035700*
HPA 135	*A03750A*
HPA 180	*A03280A*
HPA 255	*A03790B*

TIPO DI MOTORIZZAZIONE *FAN MOTOR TYPE*

230-400V 50 Hz | 265-460V 60 Hz
(HPA 72 - HPA 135)

400-690V 50 Hz | 460-795V 60 Hz
(HPA 180 - HPA 255)

TERMOSTATI *THERMOSTATS*

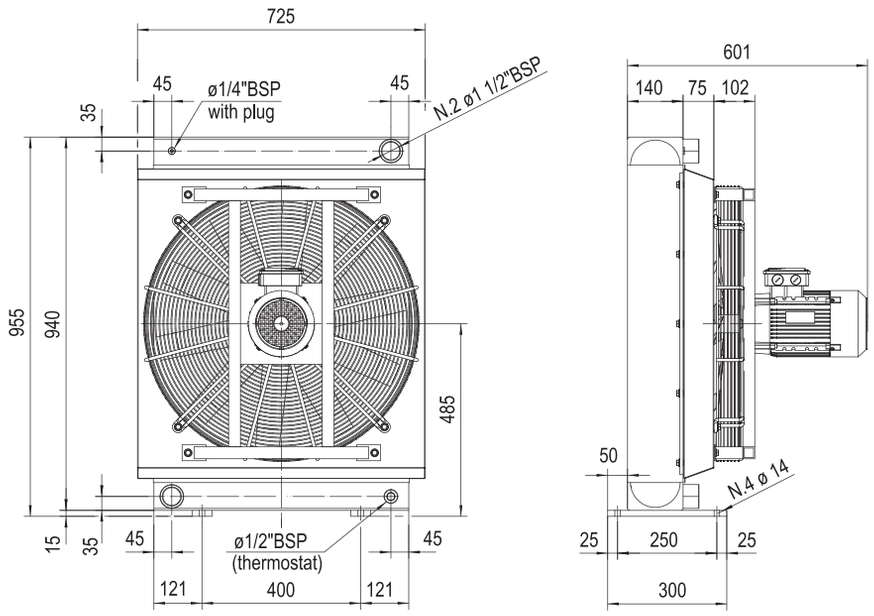
0	Senza termostato	*whitout thermostat*	
1	Termostato fisso	*Fixed thermostat*	40-28°
2	Termostato fisso	*Fixed thermostat*	*50-38°*
3	Termostato fisso	*Fixed thermostat*	*60-48°*
4	Termostato fisso	*Fixed thermostat*	*70-58°*
5	Termostato fisso	*Fixed thermostat*	*80-68°*
6	Termostato fisso	*Fixed thermostat*	*90-78°*

FLUSSO DI VENTILAZIONE *AIR FLOW DIRECTION*

1	*Aspirante*	*Suction air flow*
2	*Soffiante*	*Blowing air flow*

Serie HPA Larger

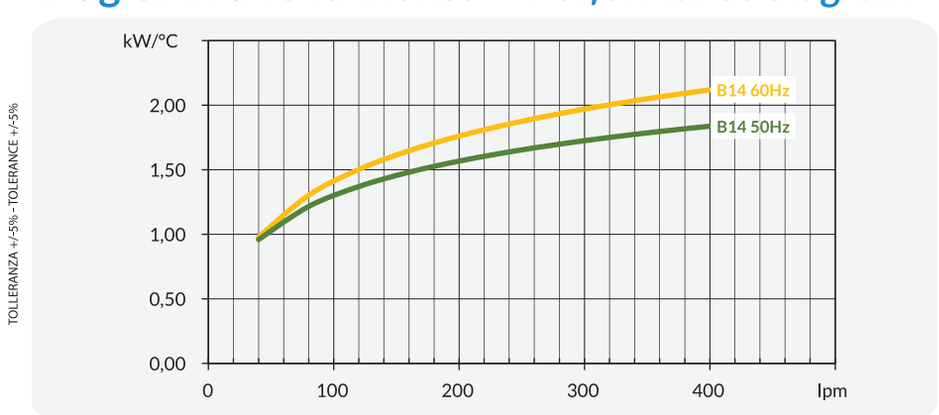
HPA 72



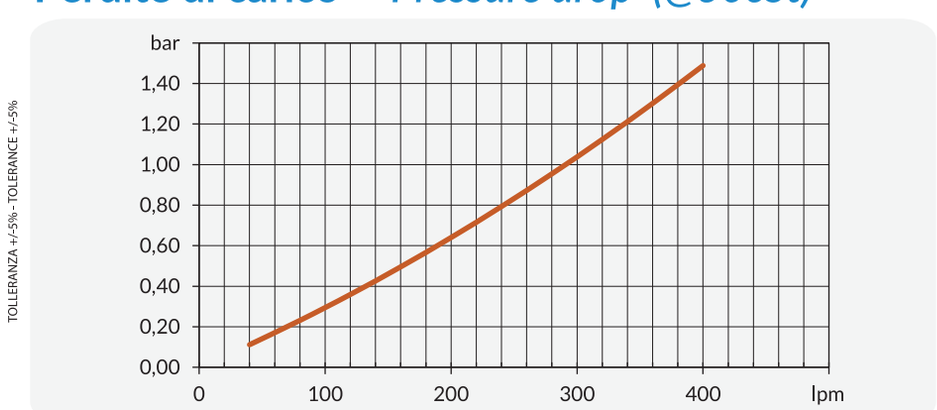
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

P/N	V	Hz	kW	A	rpm	dB (A)	IP	It	kg
A035700400B##	230-400 / 265-460V	50/60	2,2 / 2,5	8,3-4,8 / 8,3-4,8	1435/1722	79/82	55	19	105

Diagramma rendimento *Performance diagram*

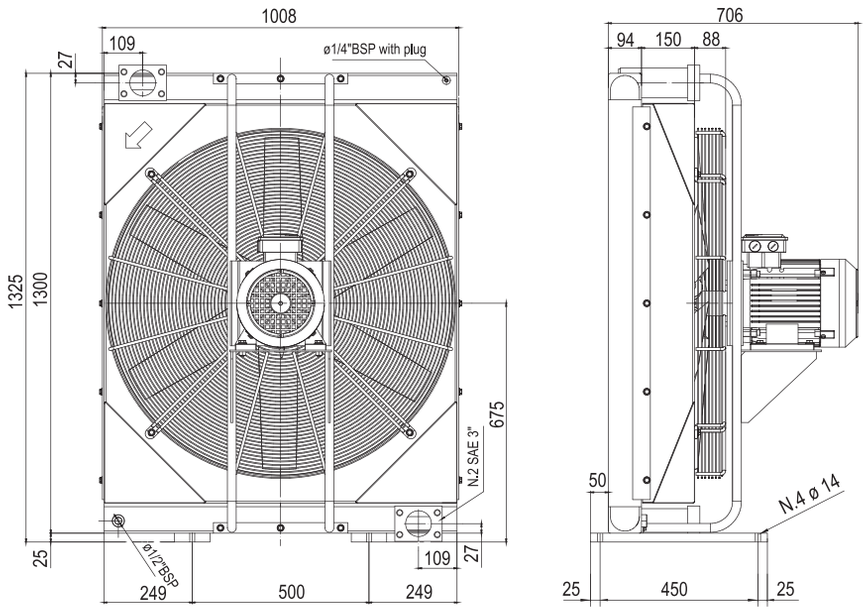


Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

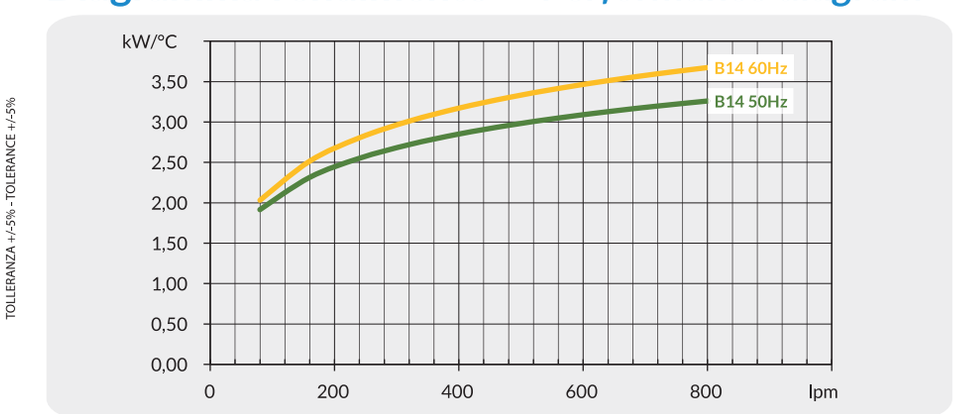
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



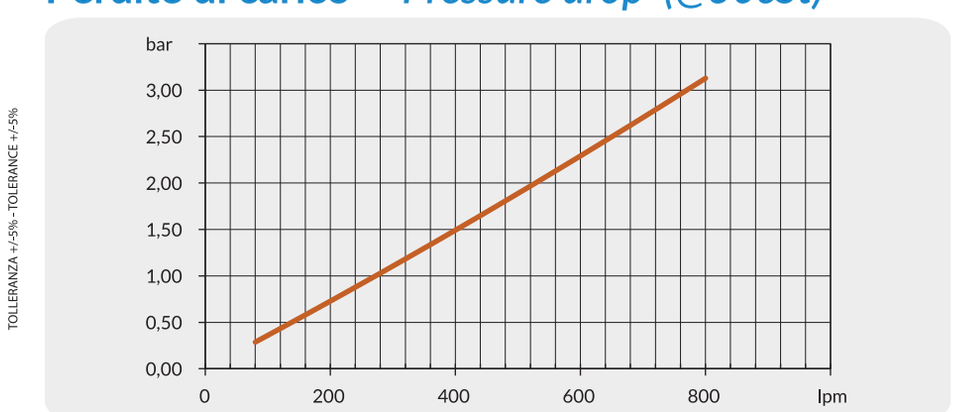
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

P/N	V	Hz	kW	A	rpm	dB (A)	IP	It	kg
A03750A400B##	230-400 / 265-460V	50/60	3,0 / 3,5	12,1 - 7 / 12,1 - 7,0	969/1163	76 / 86	55	26	126

Diagramma rendimento *Performance diagram*



Perdite di carico *Pressure drop (@30cSt)*

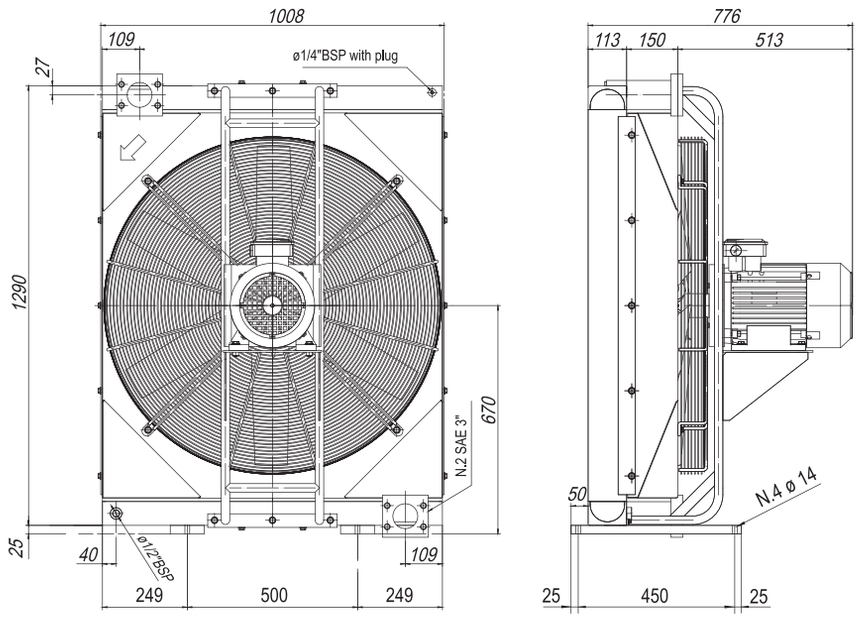


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

Serie HPA Larger

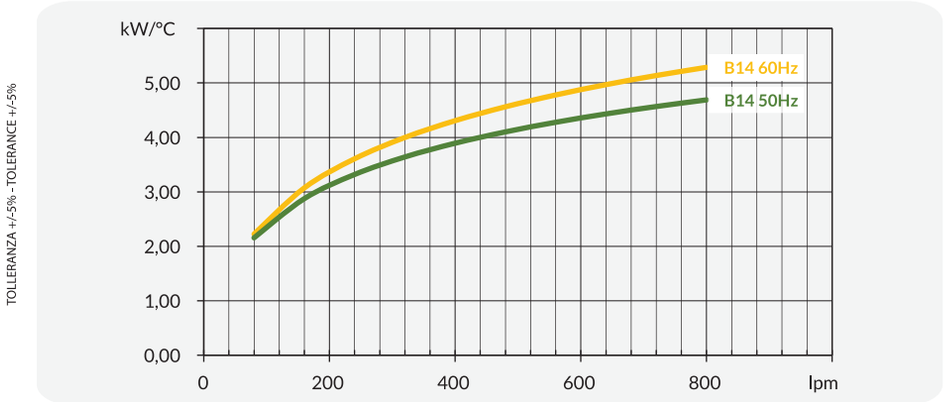
HPA 180



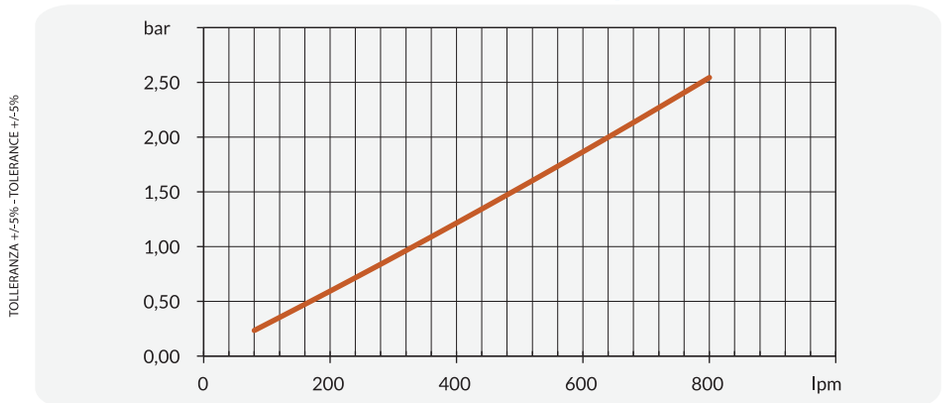
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

P/N	V	Hz	kW	A	rpm	dB (A)	IP	It	kg
A03280A400B##	400-690 / 460-795V	50/60	7,5 / 8,6	14,4 - 8,3 / 14,4 - 8,3	1450/1740	85 / 89	55	31	200

Diagramma rendimento *Performance diagram*

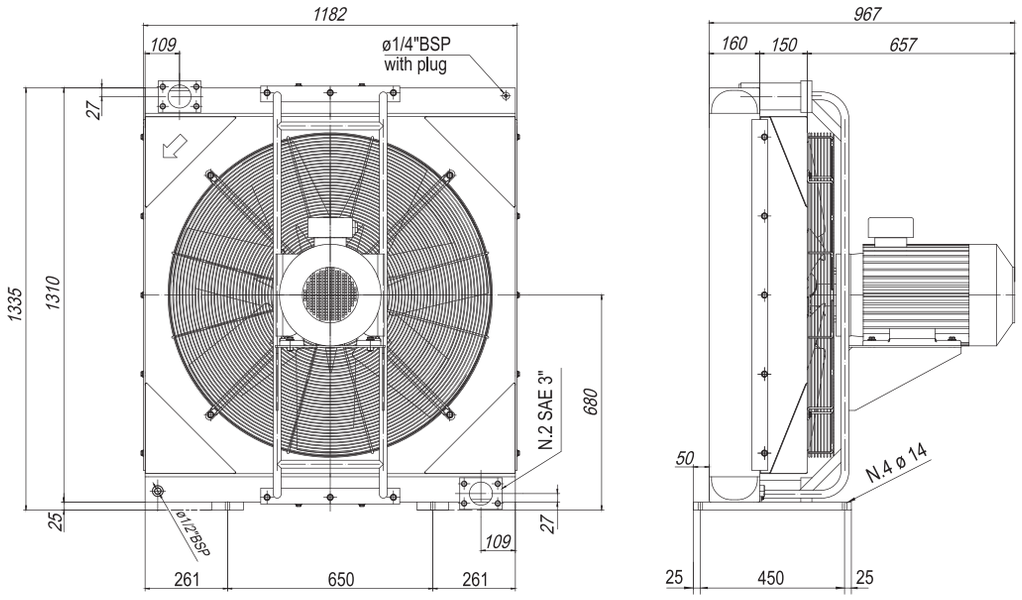


Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

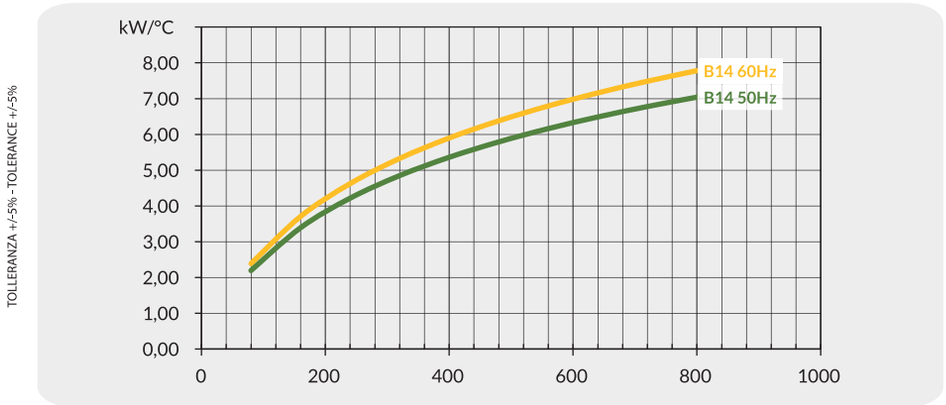
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



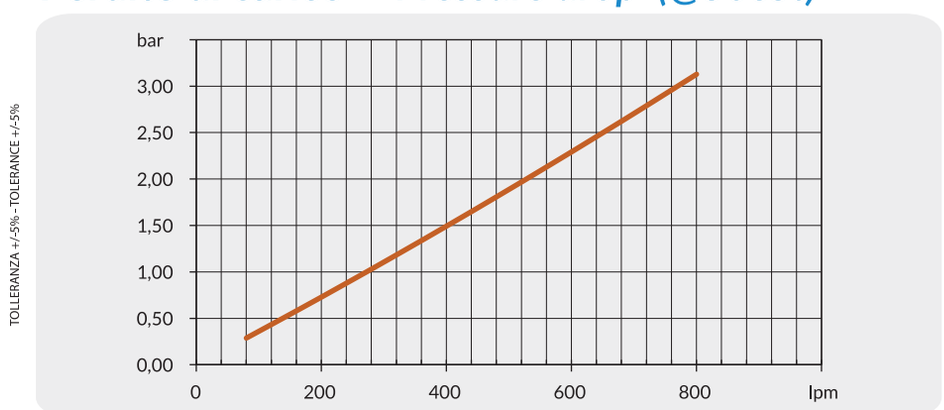
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

P/N	V	Hz	kW	A	rpm	dB (A)	IP	It	kg
A03790B400B##	400-690 / 460-795V	50/60	15 / 17,3	28,2 - 16,3 / 28,2-16,3	1456/1747	90 / 94	55	56	358

Diagramma rendimento *Performance diagram*



Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



EMMEGI®
HEAT-EXCHANGERS

Serie HPA TK

HPA TK Series

APPLICAZIONE

APPLICATION

Questa soluzione di raffreddamento garantisce una ottimale temperatura di funzionamento dell'olio sulle betoniere a circuito chiuso
Grazie anche ad un filtro disponibile a richiesta, è possibile mantenere un buon grado di pulizia del fluido.
La ventilazione avviene tramite elettroventole DC con convogliatore integrato, rende il prodotto particolarmente compatto.
Oltre alla versione DC possiamo considerare sistemi alternativi a richiesta.

This cooling solution ensures optimum oil operating temperature on closed-circuit mixers
Thanks to a filter available on request, it is possible to maintain a good degree of cleaning of the fluid.
Ventilation is via DC electric fans with integrated conveyor, making the product particularly compact.
In addition to the DC version we can consider alternative systems on request.









Serie HPA TK - *HPA TK Series*

Modello
Model
HPA 12 TK15

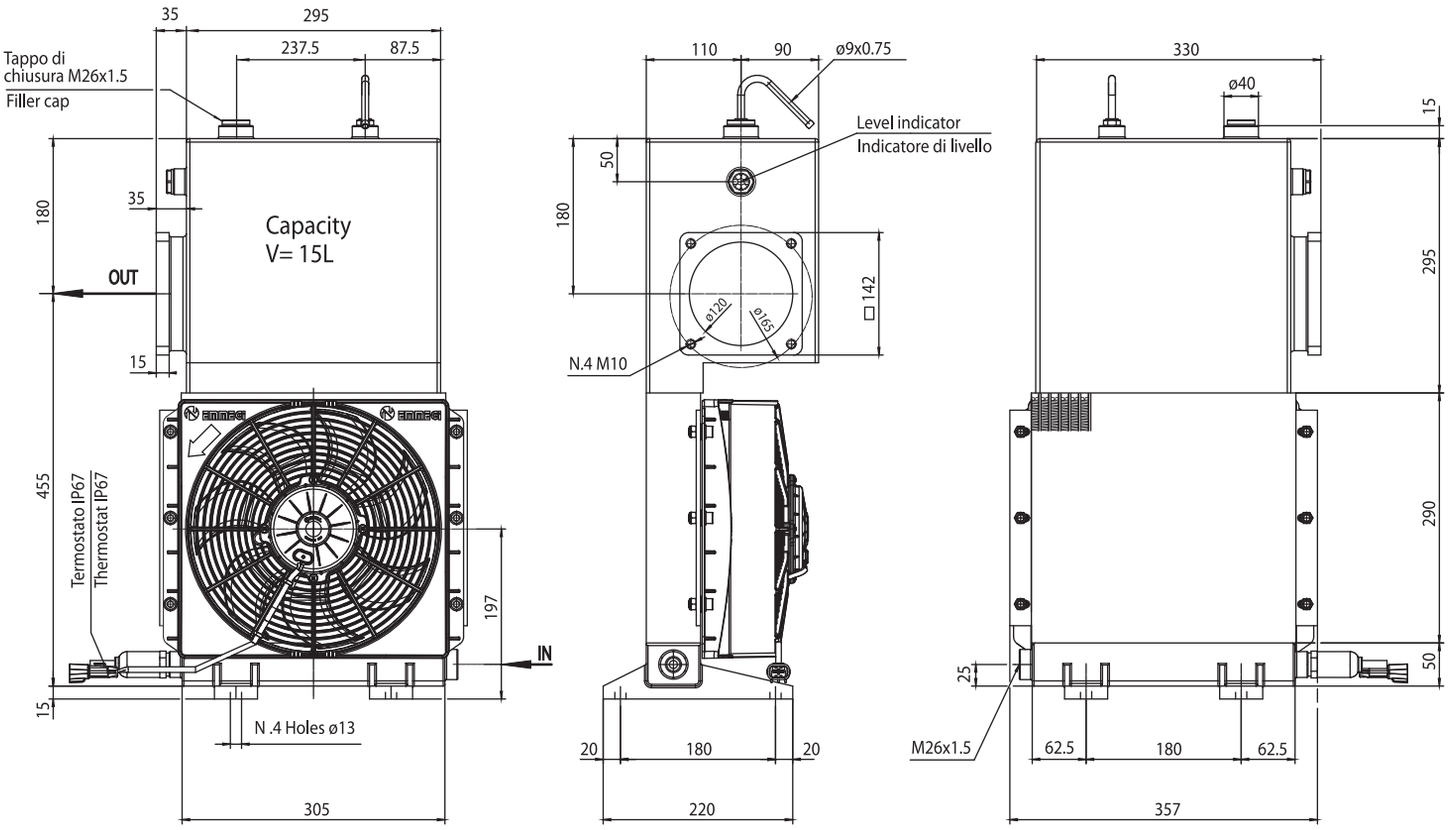


Serie HPA TK 2 PASS - *HPA TK 2 PASS Series*

Modello
Model
HPA 18 2 PASS TK18
HPA 18 2 PASS TK30
HPA 24 2 PASS TK30



Dimensioni *Dimensions*

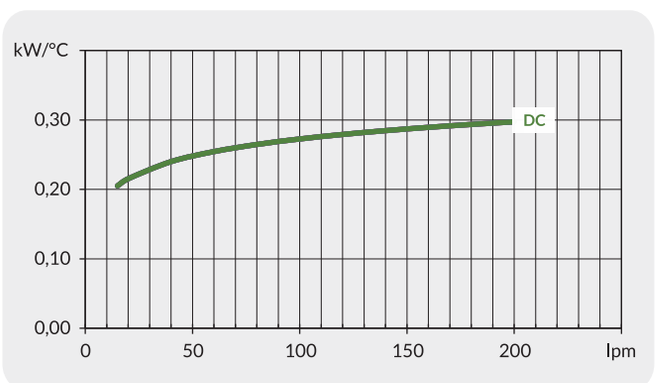


La fornitura comprende connettore WPC (M - F)

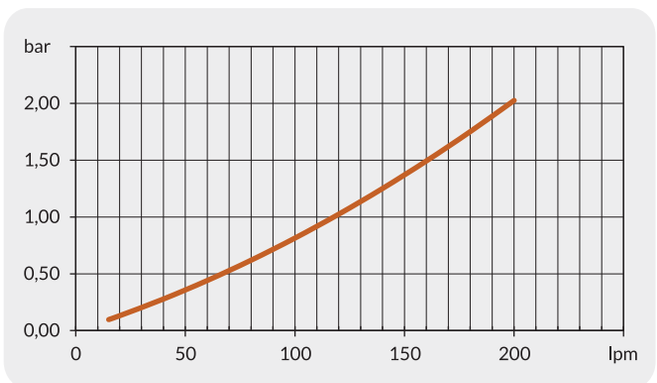
The supply includes WPC connector (M-F)

CODICE CODE	TIPO DI VENTILAZIONE VENTILATING UNIT TYPE	IP	Ø Fan	dB (A)	kg	Q.air (m^3/h)	Cap. (Lt.)
4D7412301D	12V; 0.180kW; rpm 3000	68	280	68	15	2300	15
4D7424301D	24V; 0.180kW; rpm 3000	68	280	68	15	2400	15

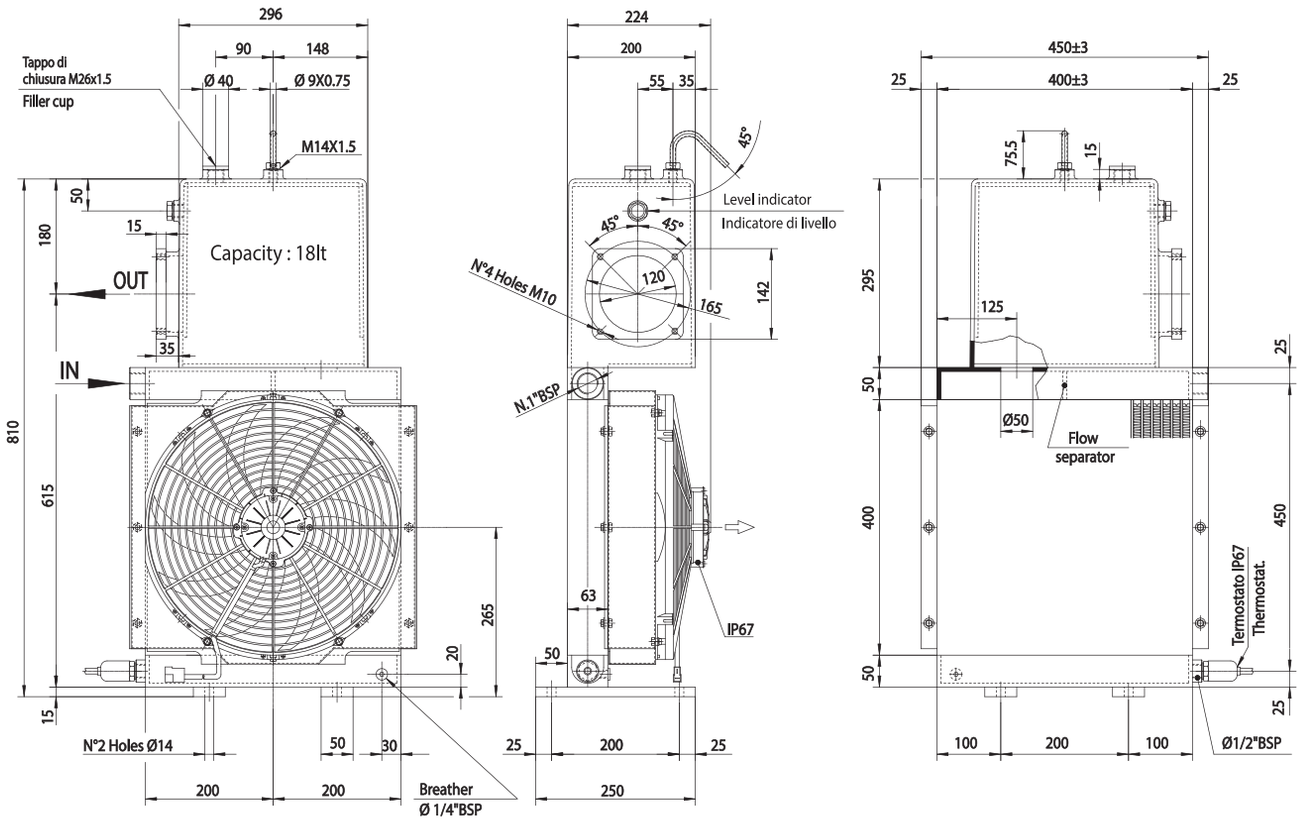
Diagramma rendimento *Performance diagram*



Perdite di carico *Pressure drop (@30cSt)*



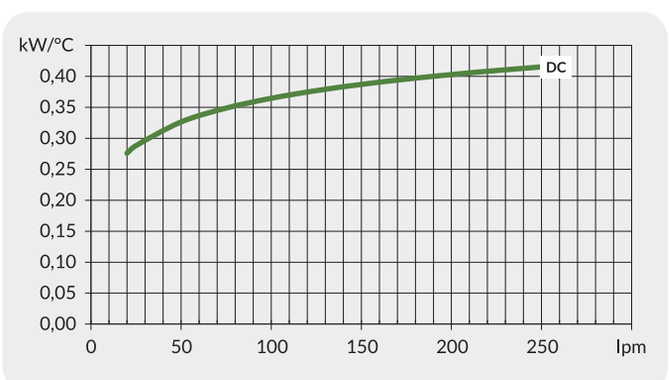
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding



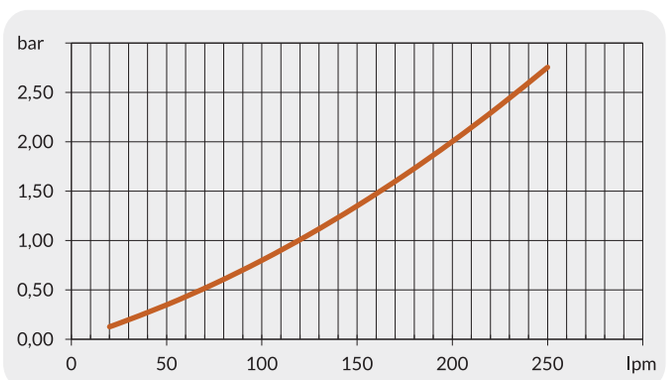
La fornitura comprende connettore WPC (M - F)
The supply includes WPC connector (M-F)

CODICE CODE	TIPO DI VENTILAZIONE VENTILATING UNIT TYPE	IP	Ø Fan	dB (A)	kg	Q.air (m^3/h)	Cap. (Lt.)
039768A012031	12V; 0.180kW; rpm 3000	68	385	68	24	3500	18
039768A024031	24V; 0.180kW; rpm 3000	68	385	68	24	3600	18

Diagramma rendimento *Performance diagram*



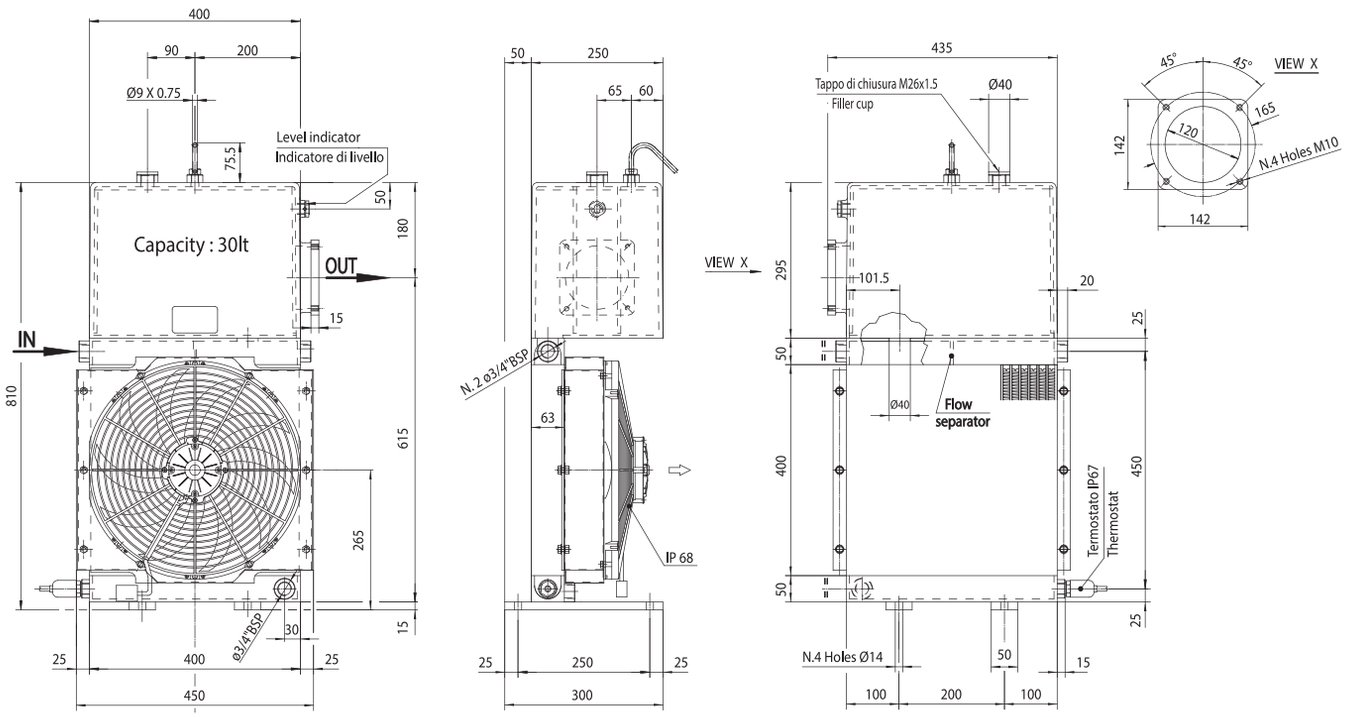
Perdite di carico *Pressure drop (@30cSt)*



Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

Serie HPA TK

HPA 18 2 PASS TK30

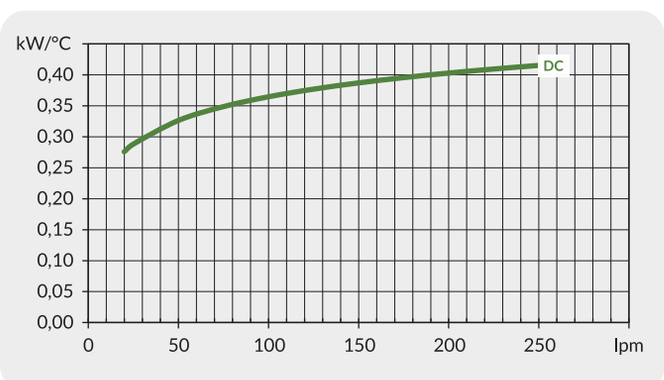


La fornitura comprende connettore WPC (M - F)

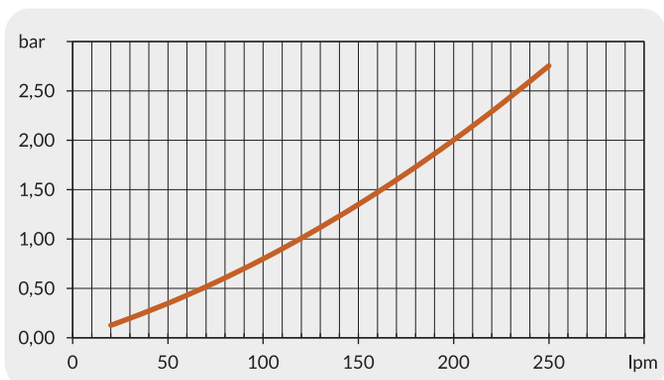
The supply includes WPC connector (M-F)

CODICE CODE	TIPO DI VENTILAZIONE VENTILATING UNIT TYPE	IP	Ø Fan	dB (A)	kg	Q.air (m^3/h)	Cap. (Lt.)
0583200012021	12V; 0.180kW; rpm 3000	68	385	68	25	3500	30
0583200024021	24V; 0.180kW; rpm 3000	68	385	68	25	3600	30

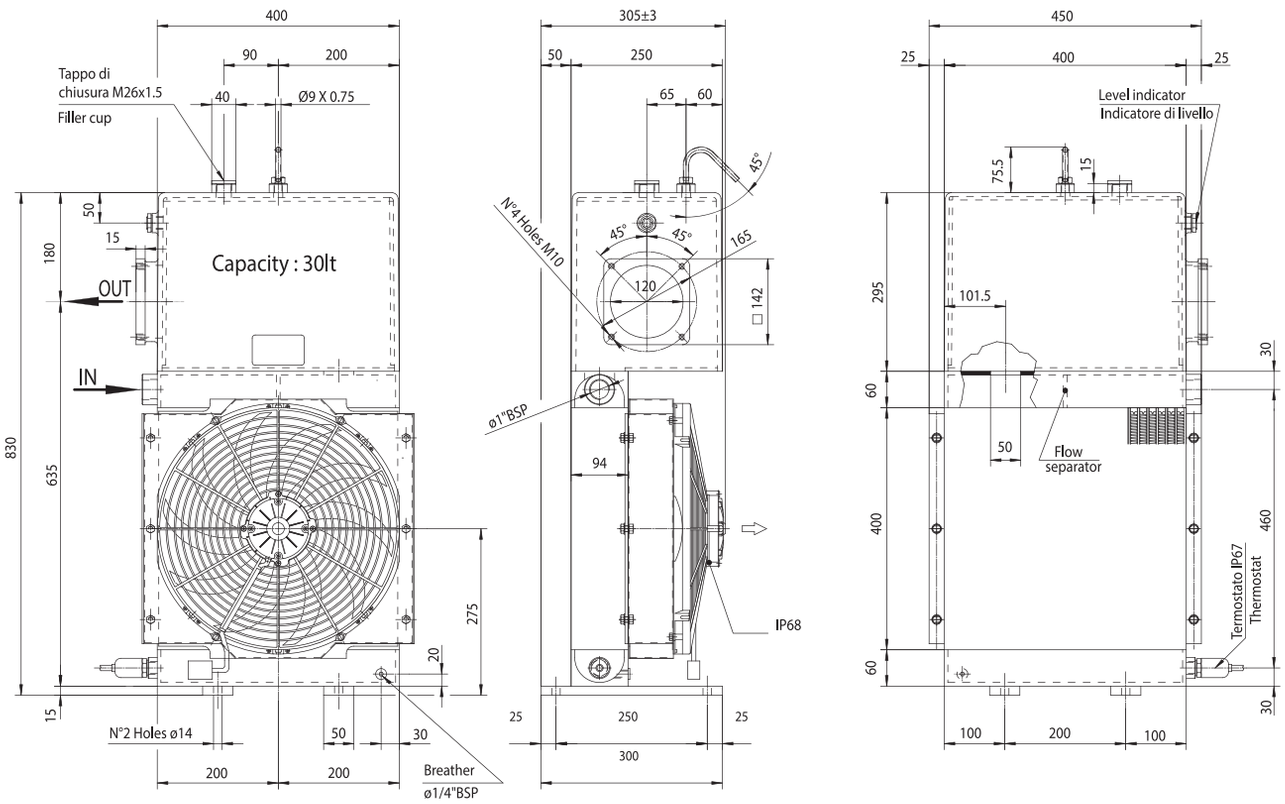
Diagramma rendimento *Performance diagram*



Perdite di carico *Pressure drop (@30cSt)*



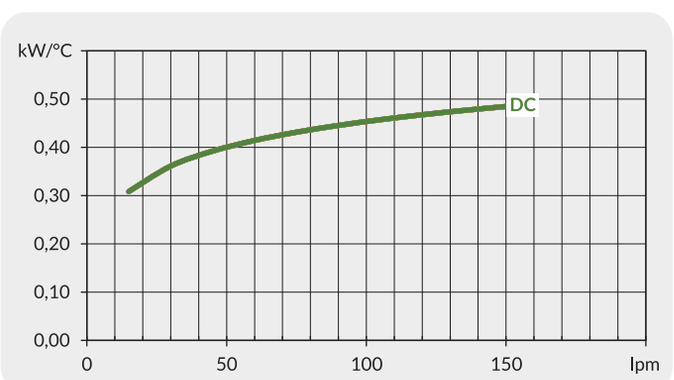
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding



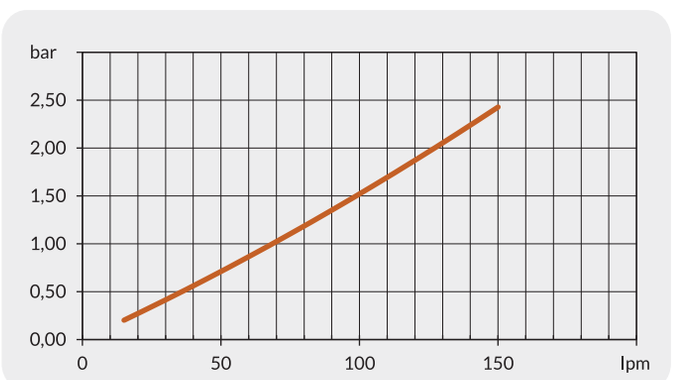
La fornitura comprende connettore WPC (M - F)
The supply includes WPC connector (M-F)

CODICE CODE	TIPO DI VENTILAZIONE VENTILATING UNIT TYPE	IP	Ø Fan	dB (A)	kg	Q.air (m^3/h)	Cap. (Lt.)
051550A012031	12V; 0.180kW; rpm 3000	68	385	68	35	3500	30
051550A024031	24V; 0.180kW; rpm 3000	68	385	68	35	3600	30

Diagramma rendimento *Performance diagram*



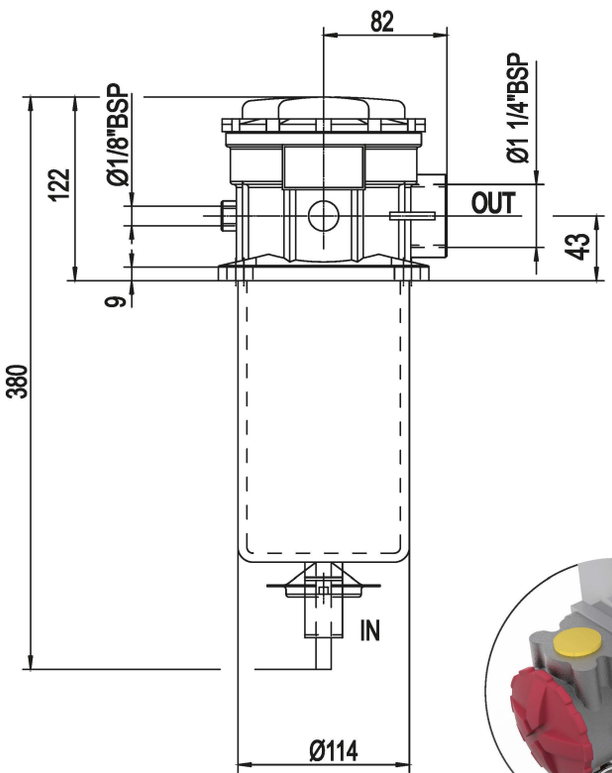
Perdite di carico *Pressure drop (@30cSt)*

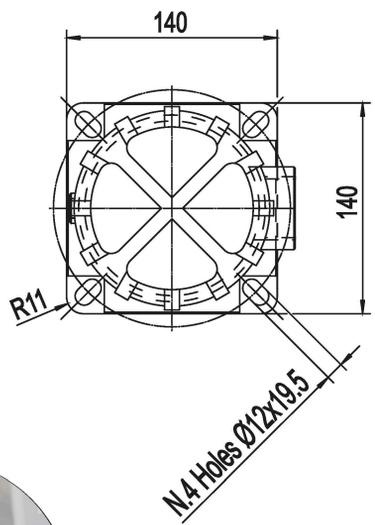


Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

Filtro in aspirazione senza By-pass

Suction line filter without By-pass







Codice *Code:* **0320810**

Caratteristiche tecniche *Technical information*

Installazione : *Installation :*	Sotto battente sul fianco del serbatoio *Mounting semi immersed under fluidlevel on tank side*
Elemento filtrante : *Filtration material :*	Carta impregnata con resina *Resintreated paper*
Filtrazione : *Filtration rating :*	10µ assoluti *10µ absolute*
Indicatore intasamento : *Clogging indicator :*	Ottico (vuotostato) *Visual vacuometer*
Portata : *Max oil flow :*	45 l/min. *45 l/min.*
Perdita di carico : *Pressure drop :*	0.12 bar con olio 32 cst @40°C. *0.12 bar with oil 32 cst @40°C.*

Possibilità di sostituire l' elemento filtrante senza svuotare il serbatoio.
cartrige element can be replaced without empting the tank.

Cartuccia di ricambio *Replacement element code:* **0320860**





EMMEGI®
HEAT-EXCHANGERS

Serie MOBILE

MOBILE Series

APPLICAZIONE APPLICATION



Grazie all'ampia gamma di combinazioni, gli scambiatori della **serie Mobile** si prestano ad essere la soluzione di raffreddamento ottimale per svariate applicazioni mobili:

Thanks to its wide range of possible combinators the mobile series exchangers make for the optimal solution on a great variety for mobile applications:

Industria agricola e forestale.	Agriculture and forestry.
Gru mobili e fisse.	Mobile and stationary cranes.
Veicoli industriali.	Industrial vehicles.
Veicoli municipali	Municipal vehicles.
Macchine da costruzione.	Construction machines.
Movimentazione materiali.	Material handling.
Altro su richiesta.	Others on request.













Denominazione codice prodotto

Ordering code

2	MS1	12	2	01

MODELLO *MODEL*

MS1	*(MOBILE-S1)*
MSM	*(MOBILE S MINI)*
MSP	*(MOBILE S PLUS)*
MS2	*(MOBILE-S2)*
MS3	*(MOBILE-S3)*
MS4	*(MOBILE-S4)*
MS5	*(MOBILE-S5)*
MA1	*(MOBILE-A1)*
MA2	*(MOBILE-A2)*
MA3	*(MOBILE-A3)*
MA4	*(MOBILE-A4)*
MA5	*(MOBILE-A5)*
MV1	*(MOBILE-V1)*
MVM	*(MOBILE-V MINI)*
MVP	*(MOBILE-V PLUS)*
MV2	*(MOBILE-V2)*
MV3	*(MOBILE-V3)*
MV4	*(MOBILE-V4)*
MV5	*(MOBILE-V5)*
MW1	*(MOBILE-W1)*
MW2	*(MOBILE-W2)*
MW3	*(MOBILE-W3)*
MW4	*(MOBILE-W4)*

TIPO DI MOTORIZZAZIONE *FAN MOTOR TYPE*

12	*DC 12V*
24	*DC 24V*

TERMOSTATI *THERMOSTATS*

0	*Senza termostato whitout thermostat*		
1	Termostato fisso	*Fixed thermostat*	*40-28°*
2	Termostato fisso	*Fixed thermostat*	*50-38°*
3	Termostato fisso	*Fixed thermostat*	*60-48°*
4	Termostato fisso	*Fixed thermostat*	*70-58°*
5	Termostato fisso	*Fixed thermostat*	*80-68°*
6	Termostato fisso	*Fixed thermostat*	*90-78°*

TIPO DI VENTILAZIONE *VENTILATING TYPE*

01	*Aspirante*	*Suction air flow*
02	*Soffiante*	*Blowing air flow*

Serie MOBILE S - *MOBILE S Series (STANDARD FIN)*

MOBILE S1
MOBILE S MINI
MOBILE S PLUS
MOBILE S2
MOBILE S3
MOBILE S4
MOBILE S5



Serie MOBILE A - *MOBILE A Series (CLEAN AIR FIN)*

MOBILE A1
MOBILE A2
MOBILE A3
MOBILE A4
MOBILE A5



Serie MOBILE V - *MOBILE V Series (BY-PASS | STANDARD FIN)*

MOBILE V1
MOBILE V MINI
MOBILE V PLUS
MOBILE V2
MOBILE V3
MOBILE V4
MOBILE V5

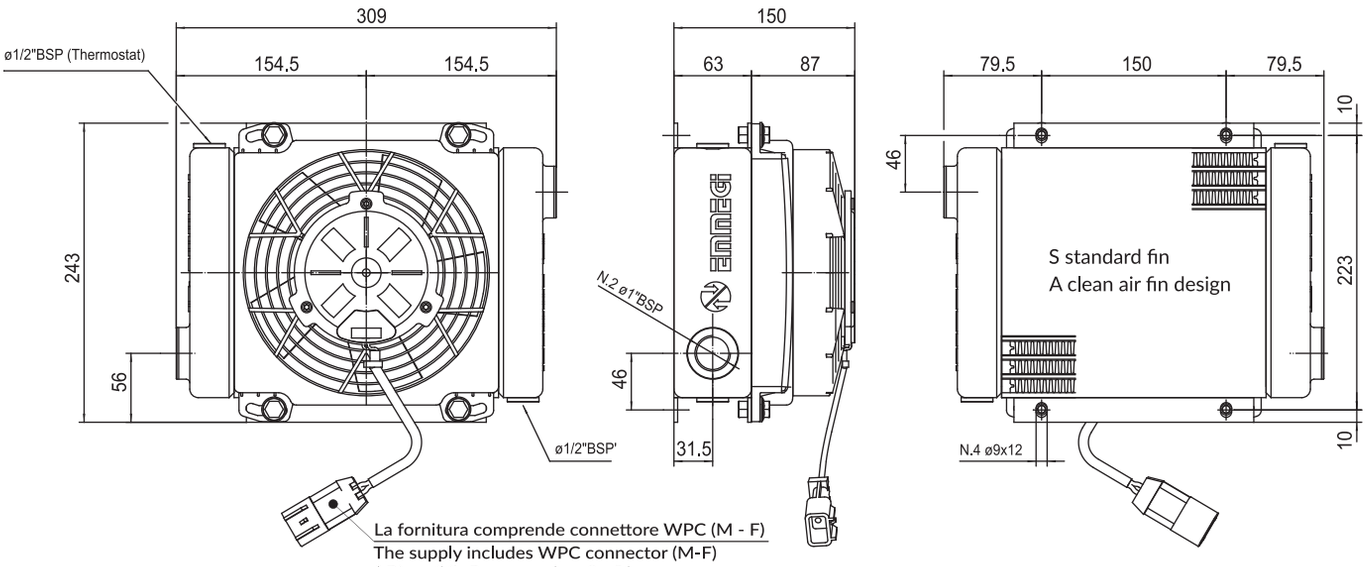


Serie MOBILE W - *MOBILE W Series (BY-PASS | CLEAN AIR FIN)*

MOBILE W1
MOBILE W2
MOBILE W3
MOBILE W4
MOBILE W5

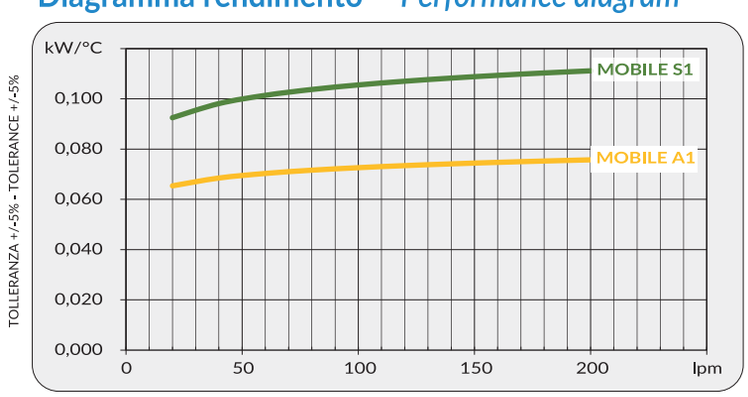


Dimensioni *Dimensions*

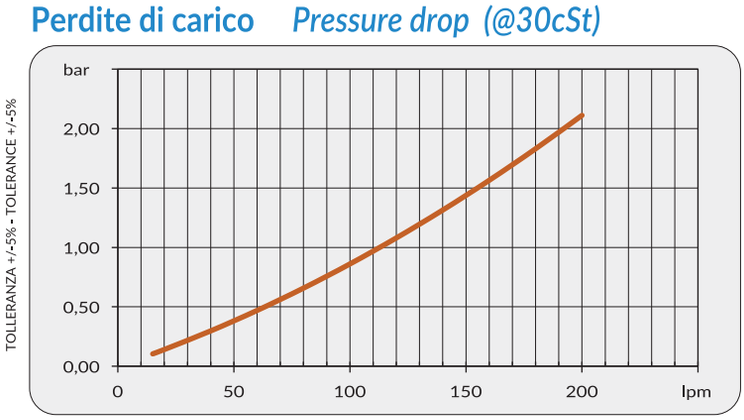


CODICE CODE	Dati tecnici / Technical Data								
	V	kw	A	rpm	Ø Fan	dB (A)	IP	It	kg
2MS112###	12V DC	0,10	8,4	4160	190	73	68	0,6	5
2MS124###	24V DC	0,10	4,2	4240	190	76	68	0,6	5
2MA112###	12V DC	0,11	8,3	4190	190	73	68	0,6	5
2MA124###	24V DC	0,11	4,1	4270	190	76	68	0,6	5

Diagramma rendimento *Performance diagram*



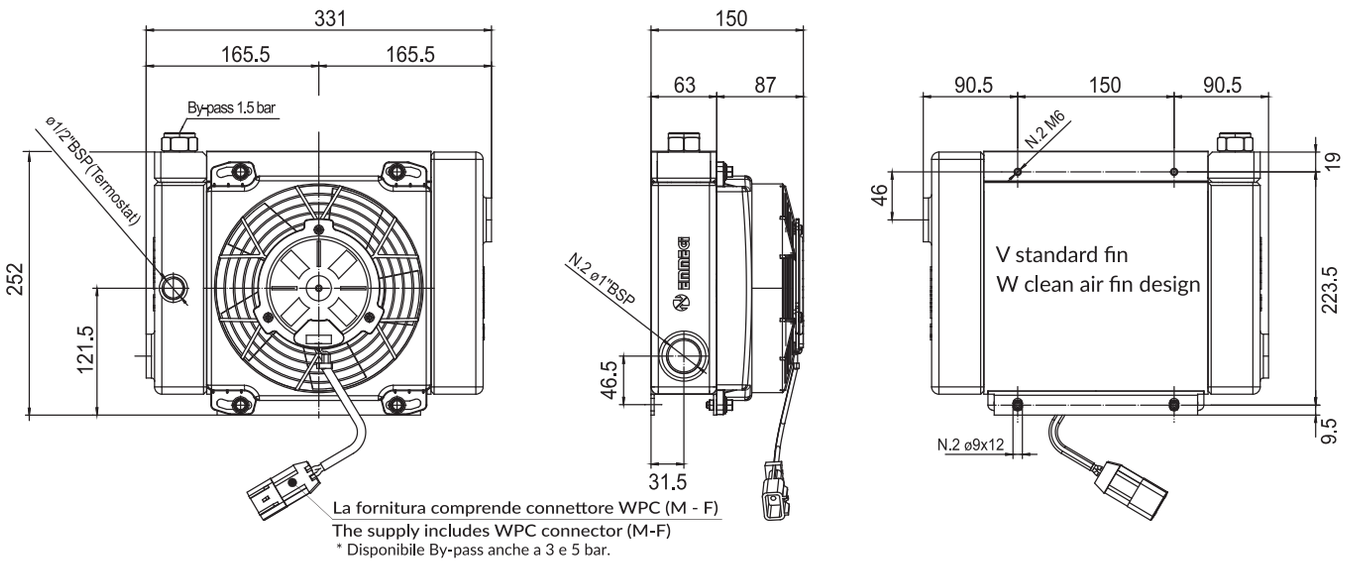
Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

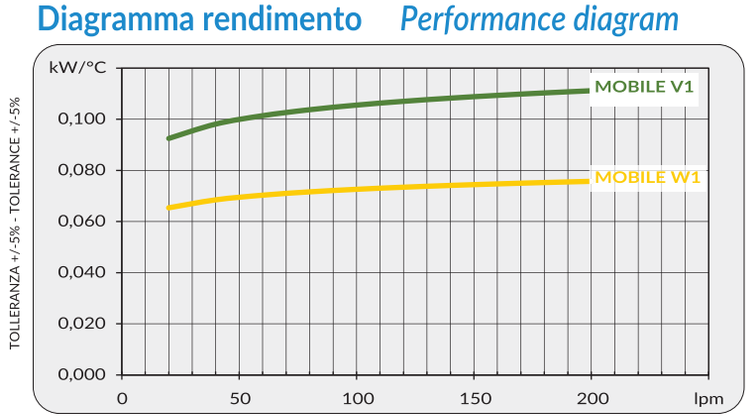
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

Dimensioni *Dimensions*

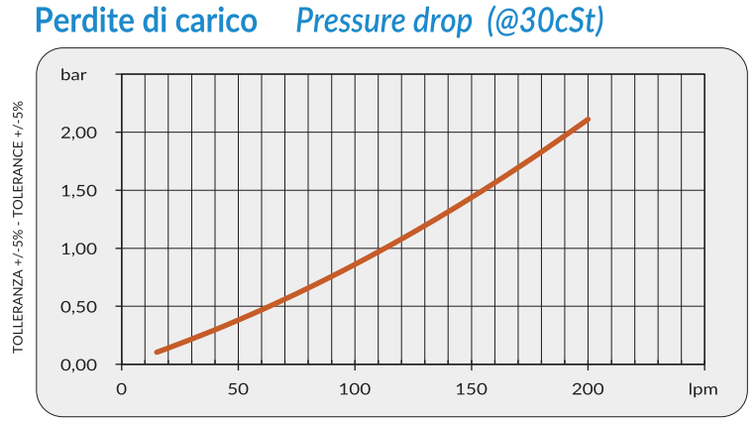


CODICE CODE	Dati tecnici / Technical Data								
	V	kW	A	rpm	Ø Fan	dB (A)	IP	lt	kg
2MV112###	12V DC	0,1	8,4	4160	190	73	68	0,6	6
2MV124###	24V DC	0,1	4,2	4240	190	76	68	0,6	6
2MW112###	12V DC	0,11	8,3	4190	190	73	68	0,6	6
2MW124###	24V DC	0,11	4,1	4270	190	76	68	0,6	6

Diagramma rendimento *Performance diagram*



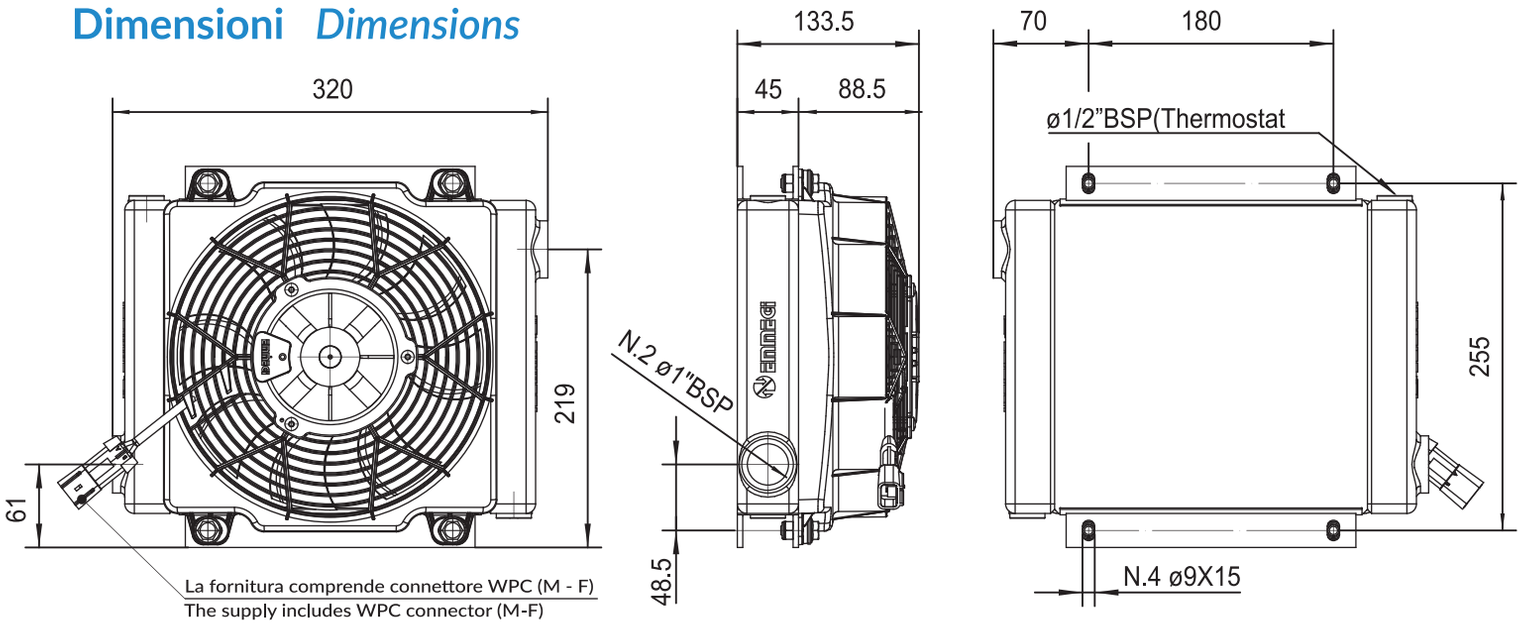
Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

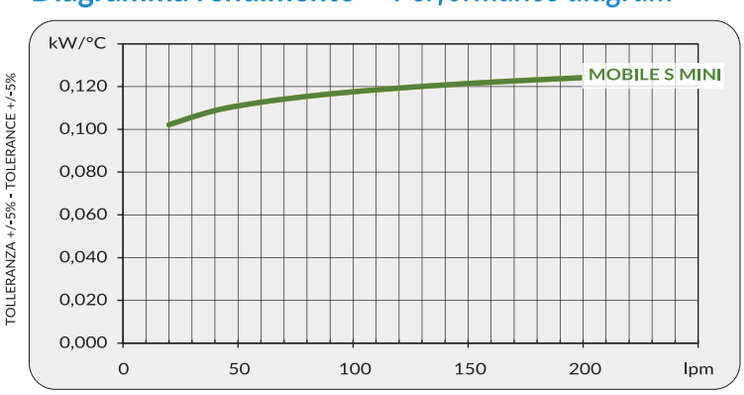
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

Dimensioni *Dimensions*

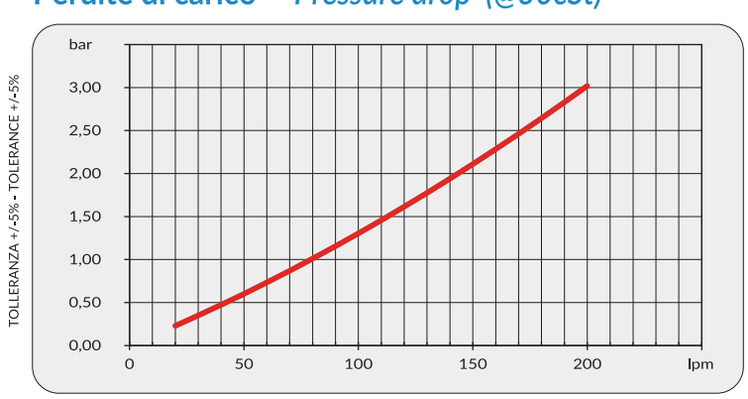


CODICE CODE	Dati tecnici / Technical Data								
	V	kW	A	rpm	Ø Fan	dB (A)	IP	lt	kg
2MSM12###	12V DC	0.13	10.2	4080	225	72	68	0.5	5
2MSM24###	24V DC	0.14	5.7	4280	225	74	68	0.5	5

Diagramma rendimento *Performance diagram*



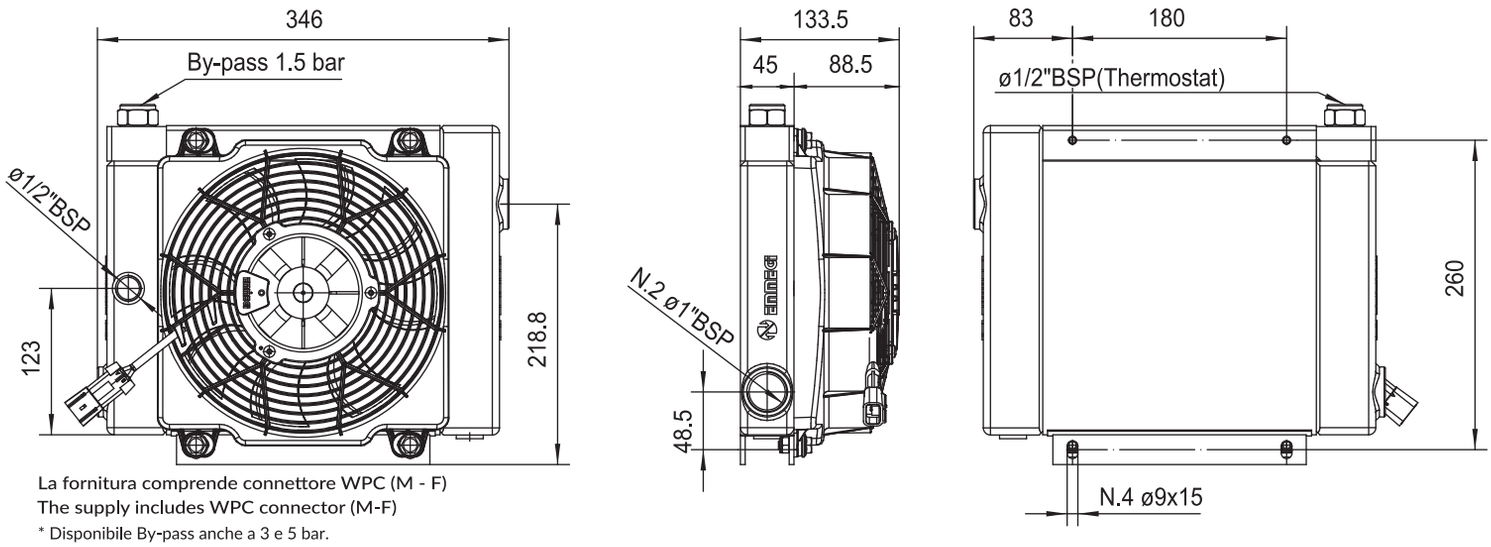
Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

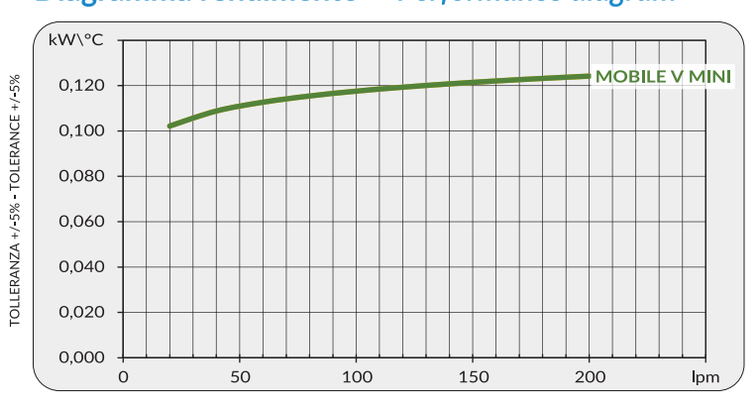
Dimensioni *Dimensions*



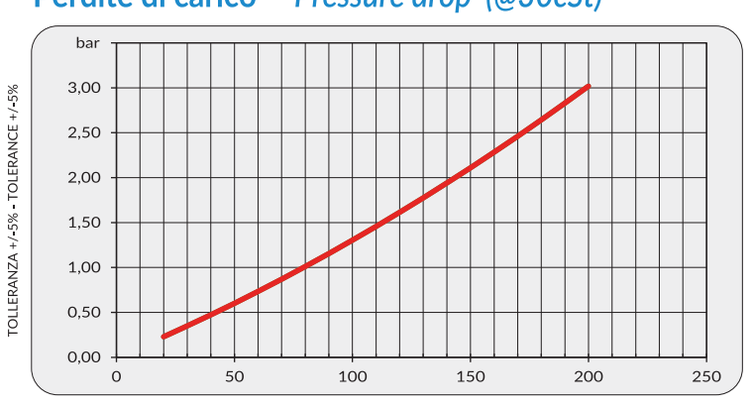
La fornitura comprende connettore WPC (M - F)
The supply includes WPC connector (M-F)
* Disponibile By-pass anche a 3 e 5 bar.

CODICE CODE	Dati tecnici / Technical Data								
	V	kw	A	rpm	Ø Fan	dB (A)	IP	lt	kg
2MVM12###	12V DC	0.13	10.2	4080	225	72	68	0.5	6
2MVM24###	24V DC	0.14	5.7	4285	225	74	68	0.5	6

Diagramma rendimento *Performance diagram*



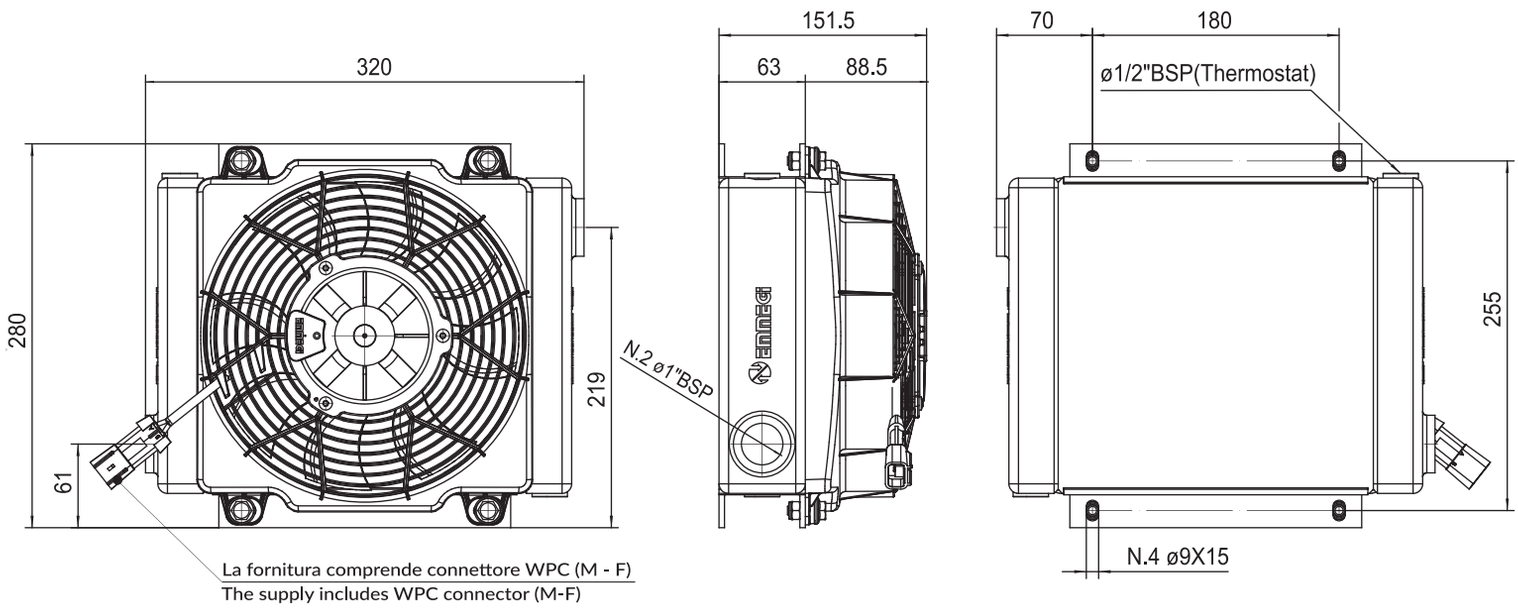
Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

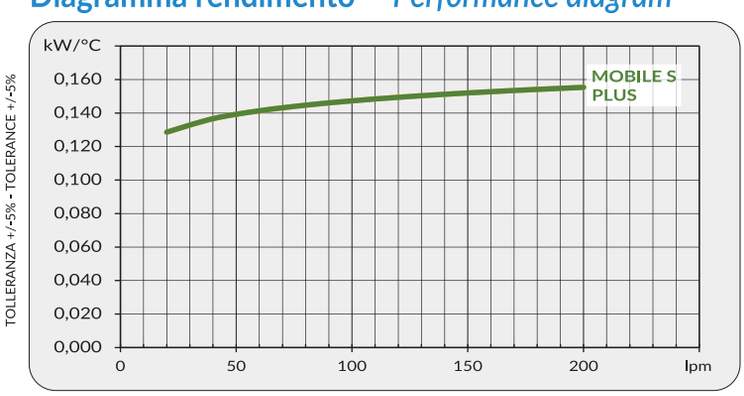
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

Dimensioni *Dimensions*

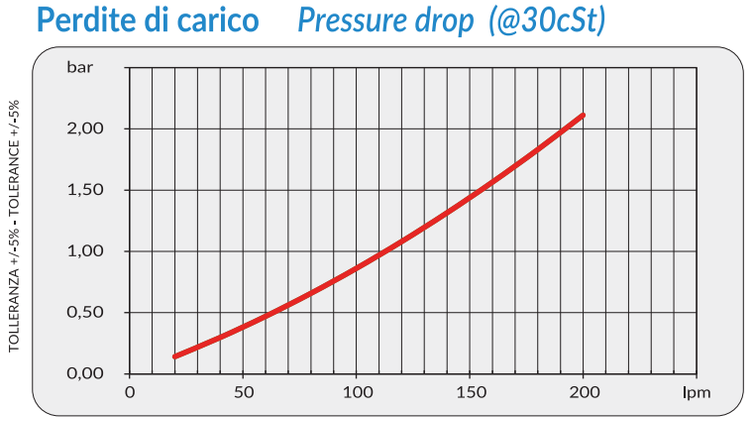


CODICE CODE	Dati tecnici / Technical Data								
	V	kW	A	rpm	Ø Fan	dB (A)	IP	lt	kg
2MSP12###	12V DC	0.13	10.2	4080	225	72	68	0.7	6
2MSP24###	24V DC	0.15	5.8	4280	225	74	68	0.7	6

Diagramma rendimento *Performance diagram*



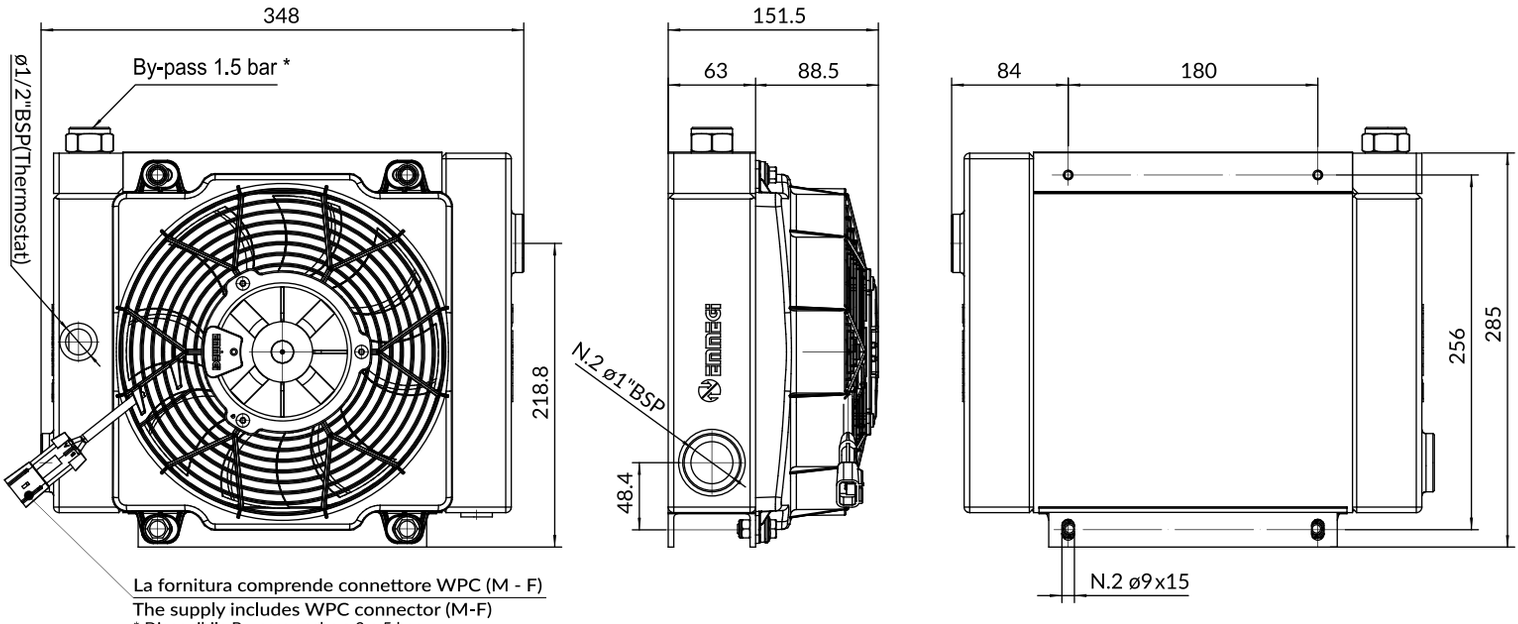
Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

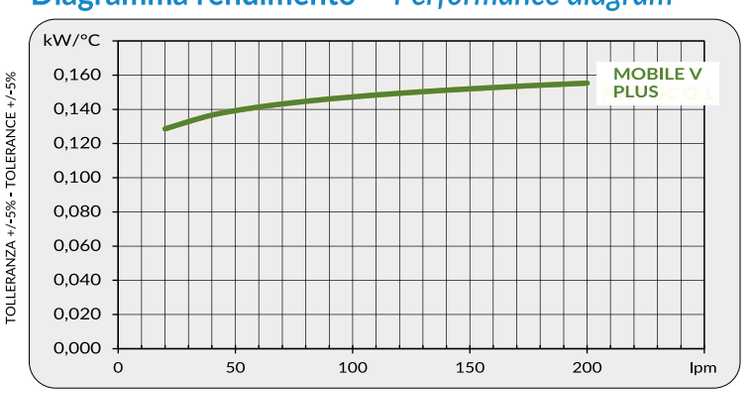
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

Dimensioni *Dimensions*

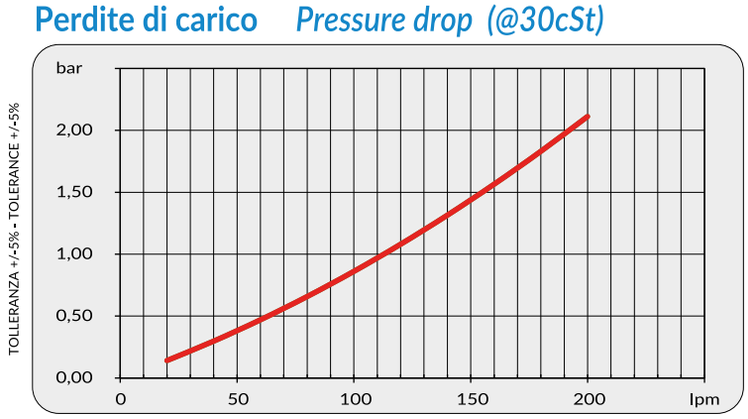


CODICE CODE	Dati tecnici / Technical Data								
	V	kw	A	rpm	Ø Fan	dB (A)	IP	lt	kg
2MVP12###	12V DC	0.14	10.4	4080	225	72	68	0.7	7
2MVP24###	24V DC	0.15	5.8	4280	225	74	68	0.7	7

Diagramma rendimento *Performance diagram*



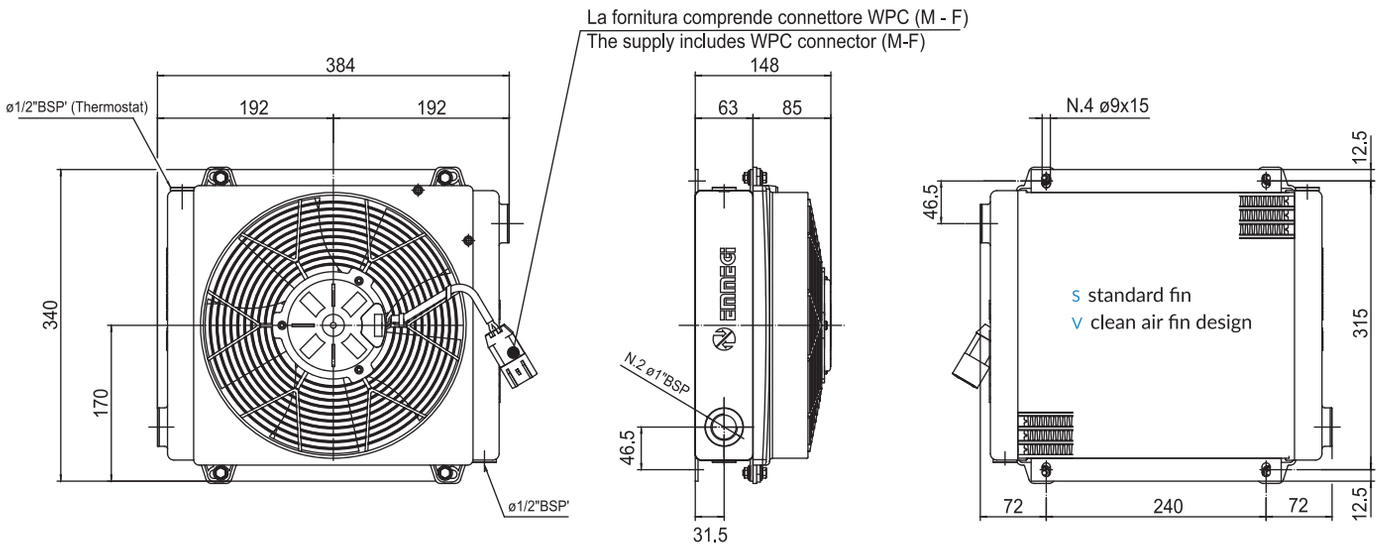
Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

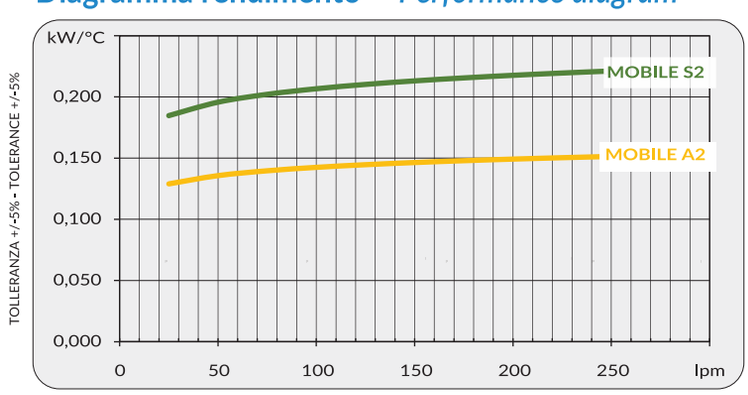
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

Dimensioni *Dimensions*

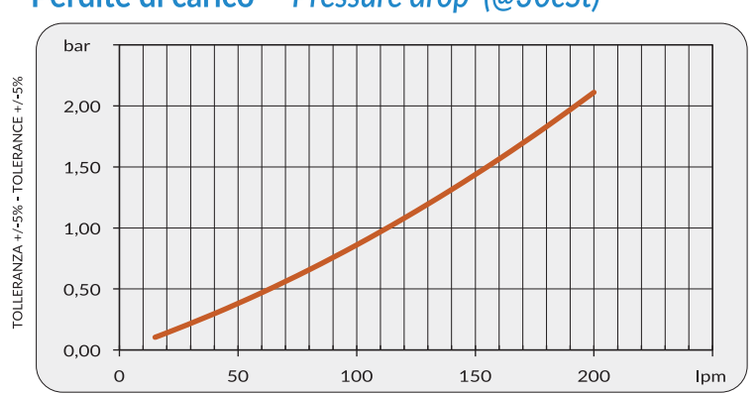


CODICE CODE	Dati tecnici / Technical Data								
	V	kW	A	rpm	Ø Fan	dB (A)	IP	lt	kg
2MS212###	12V DC	0,09	7,7	2490	280	71	68	1	7,5
2MS224###	24V DC	0,09	3,9	2520	280	73	68	1	7,5
2MA212###	12V DC	0,09	7,4	2550	280	71	68	1	7,5
2MA224###	24V DC	0,09	3,8	2560	280	73	68	1	7,5

Diagramma rendimento *Performance diagram*



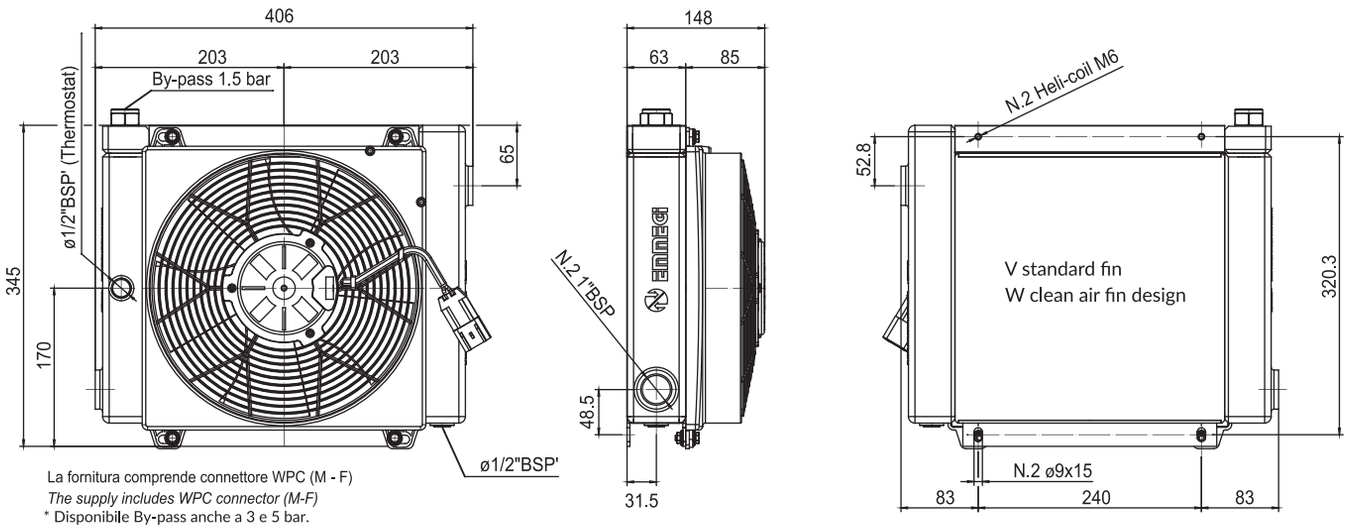
Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

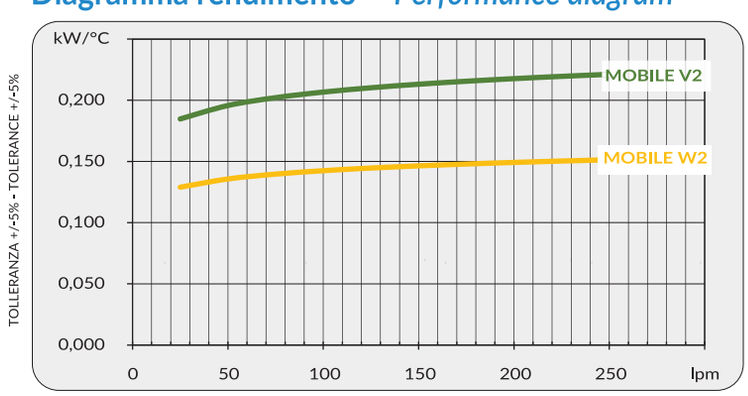
Dimensioni *Dimensions*



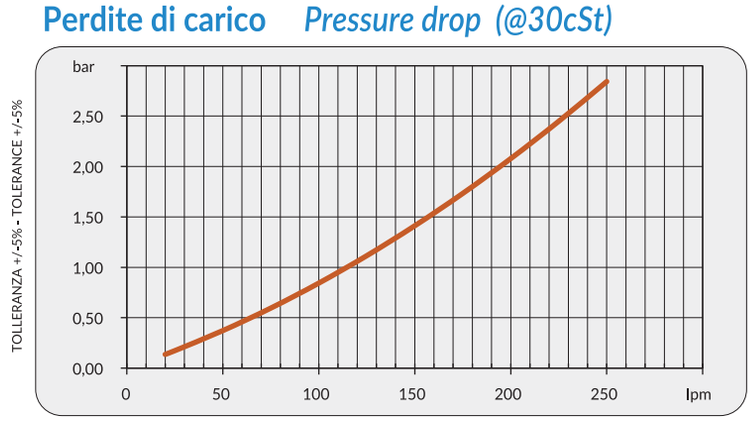
La fornitura comprende connettore WPC (M - F)
The supply includes WPC connector (M-F)
* Disponibile By-pass anche a 3 e 5 bar.

CODICE CODE	Dati tecnici / Technical Data								
	V	kW	A	rpm	Ø Fan	dB (A)	IP	It	kg
2MV212###	12V DC	0,09	7,7	2490	280	71	68	1	9
2MV224###	24V DC	0,08	3,9	2520	280	73	68	1	9
2MW212###	12V DC	0,1	7,4	2550	280	71	68	1	9
2MW224###	24V DC	0,08	3,8	2560	280	73	68	1	9

Diagramma rendimento *Performance diagram*



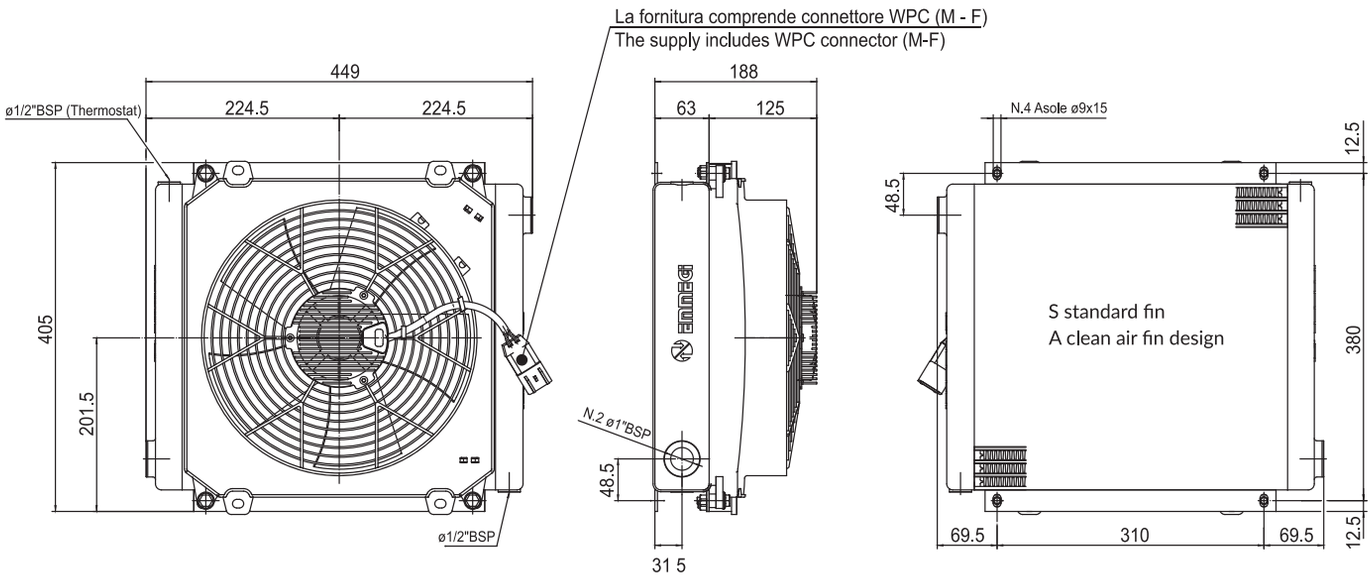
Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

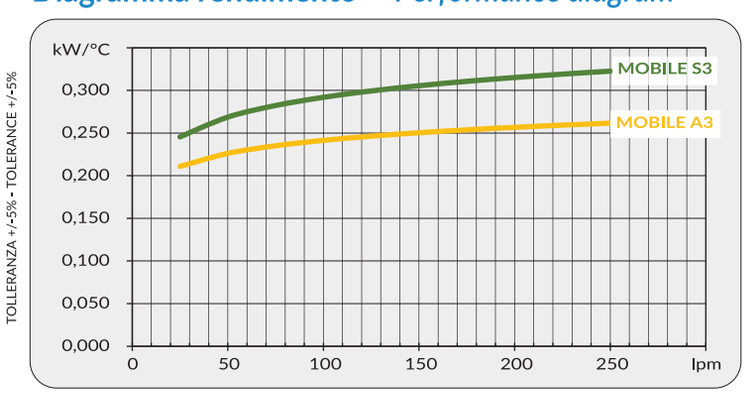
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

Dimensioni *Dimensions*

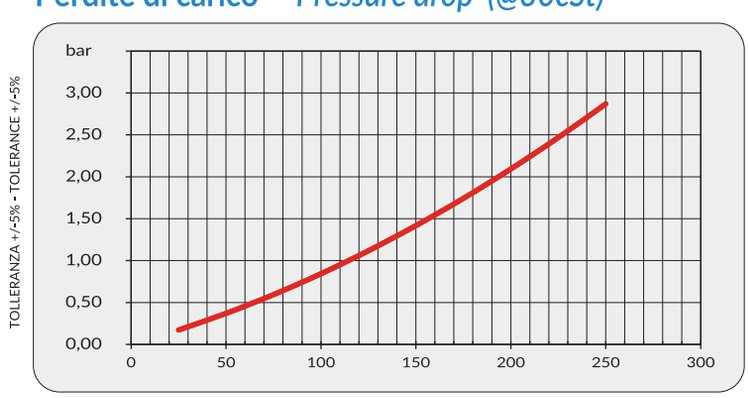


CODICE CODE	Dati tecnici / Technical Data								
	V	kW	A	rpm	Ø Fan	dB (A)	IP	It	kg
2MS312###	12V DC	0,19	15,6	2840	305	74	68	1,6	10,5
2MS324###	24V DC	0,18	7,6	3040	305	79	68	1,6	10,5
2MA312###	12V DC	0,19	15,8	3110	305	74	68	1,6	10,5
2MA324###	24V DC	0,16	6,7	3124	305	79	68	1,6	10,5

Diagramma rendimento *Performance diagram*



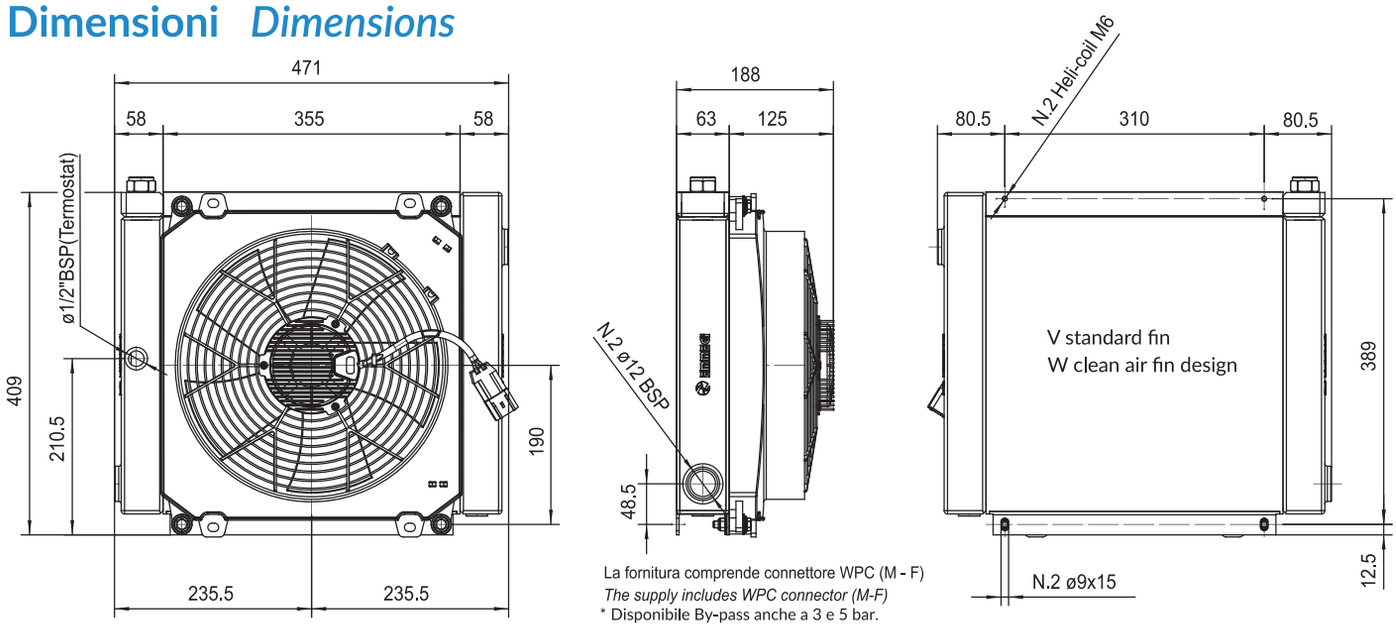
Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

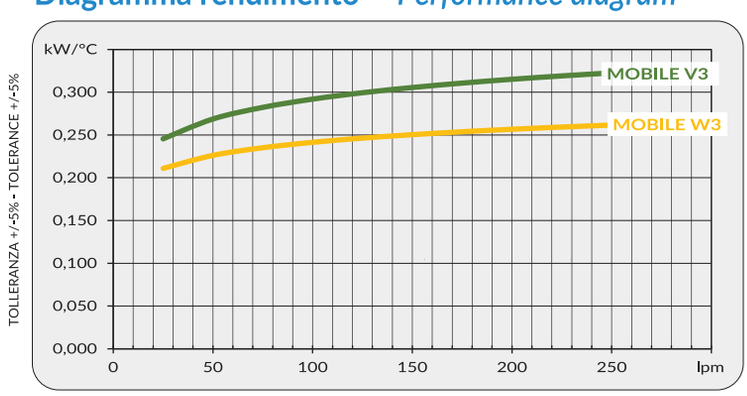
Dimensioni *Dimensions*



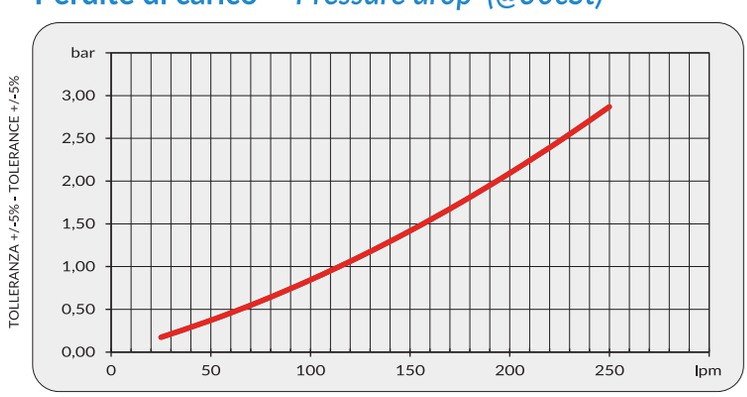
La fornitura comprende connettore WPC (M - F)
The supply includes WPC connector (M-F)
* Disponibile By-pass anche a 3 e 5 bar.

CODICE CODE	Dati tecnici / Technical Data								
	V	kW	A	rpm	Ø Fan	dB (A)	IP	It	kg
2MV312###	12V DC	0,19	15,6	2840	305	74	68	1,6	12
2MV324###	24V DC	0,18	7,6	3040	305	79	68	1,6	12
2MW312###	12V DC	0,19	15,8	3110	305	74	68	1,6	12
2MW324###	24V DC	0,16	6,7	3124	305	79	68	1,6	12

Diagramma rendimento *Performance diagram*



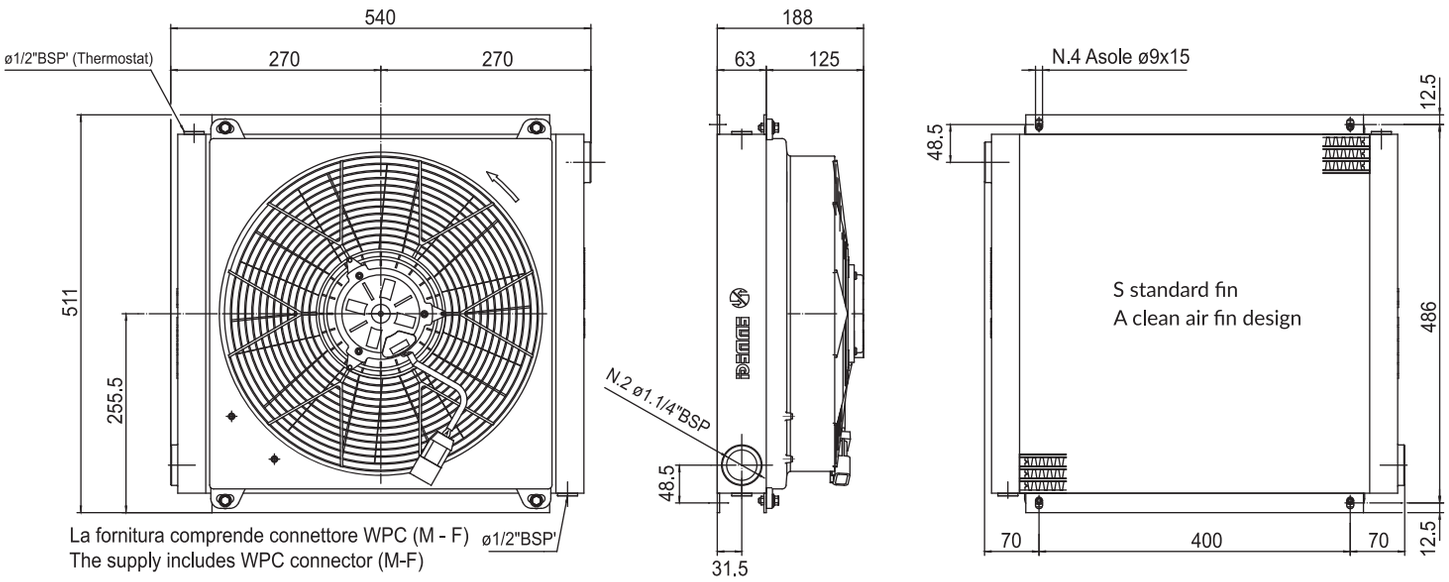
Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

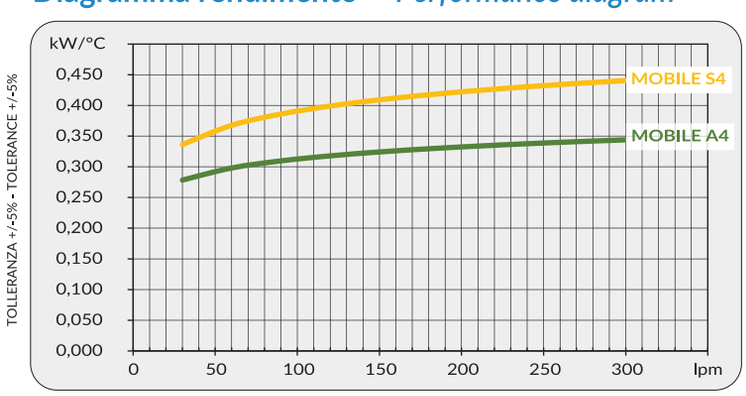
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

Dimensioni *Dimensions*

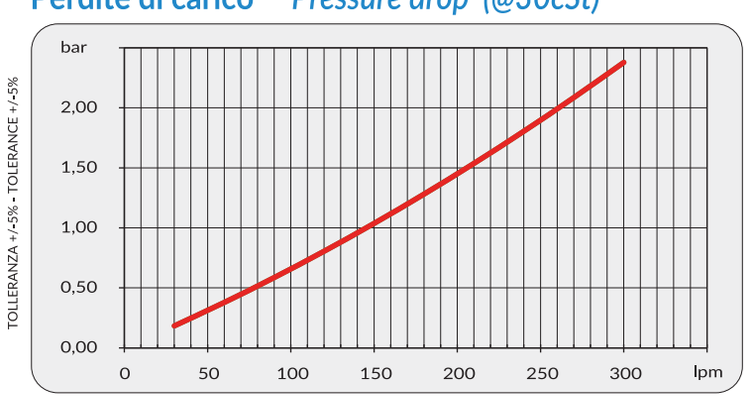


CODICE CODE	Dati tecnici / Technical Data								
	V	kW	A	rpm	Ø Fan	dB (A)	IP	It	kg
2MS412###	12V DC	0,18	15,2	2210	385	76	68	2,7	16,5
2MS424###	24V DC	0,19	8,1	2390	385	79	68	2,7	16,5
2MA412###	12V DC	0,15	15,5	2280	385	76	68	2,7	16,5
2MA424###	24V DC	0,17	7,3	2460	385	79	68	2,7	16,5

Diagramma rendimento *Performance diagram*



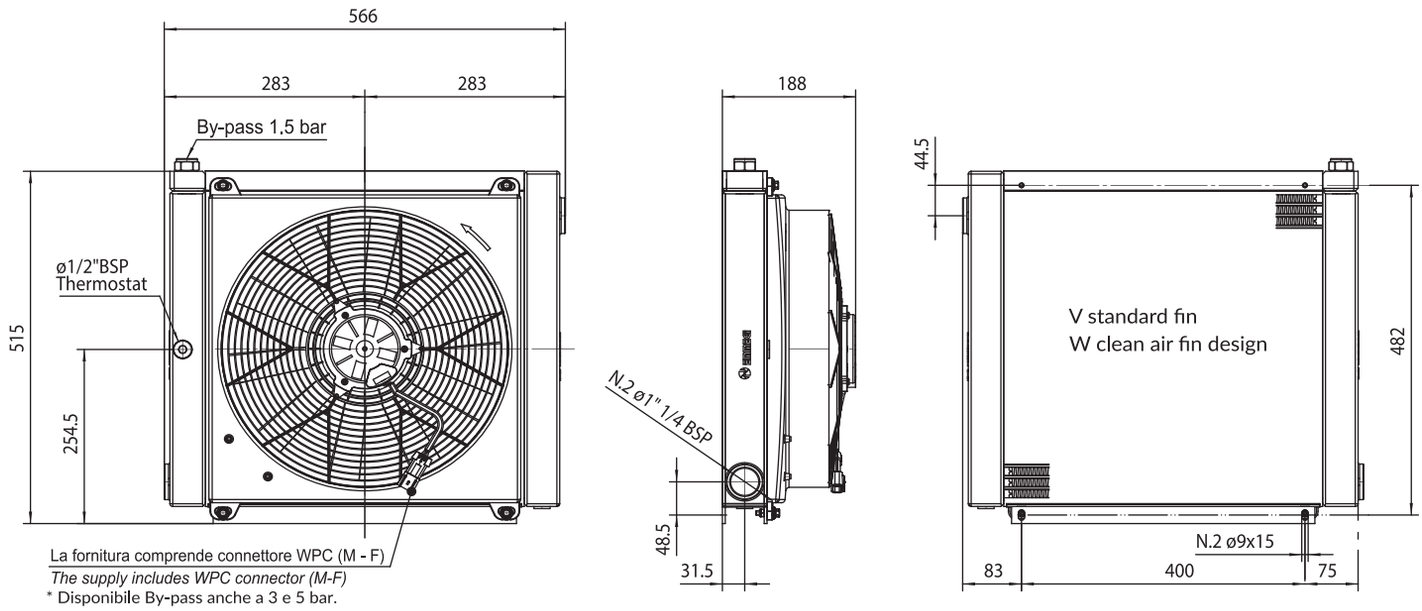
Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

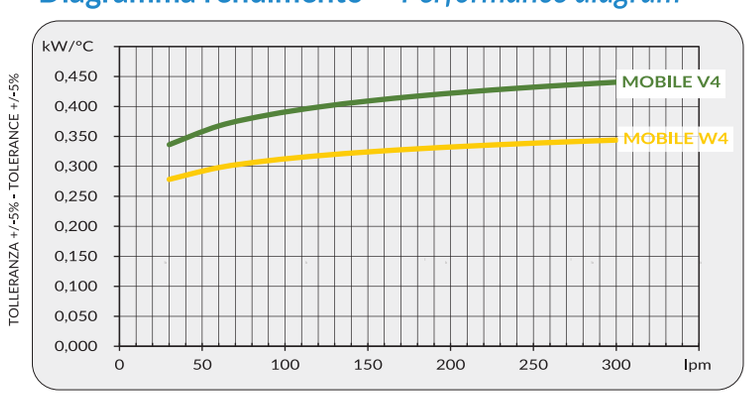
Dimensioni *Dimensions*



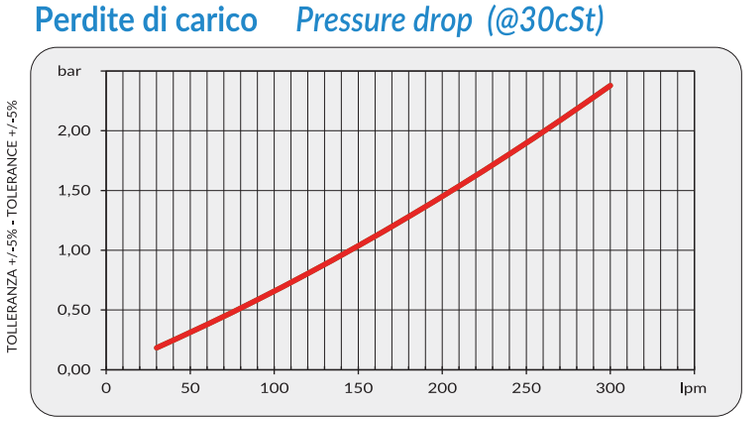
* Disponibile By-pass anche a 3 e 5 bar.

CODICE CODE	Dati tecnici / Technical Data								
	V	kW	A	rpm	Ø Fan	dB (A)	IP	lt	kg
2MV412###	12V DC	0,18	15,2	2210	385	76	68	2,7	18
2MV424###	24V DC	0,19	8,1	2390	385	79	68	2,7	18
2MW412###	12V DC	0,15	15,5	2280	385	76	68	2,7	18
2MW424###	24V DC	0,17	7,3	2460	385	79	68	2,7	18

Diagramma rendimento *Performance diagram*



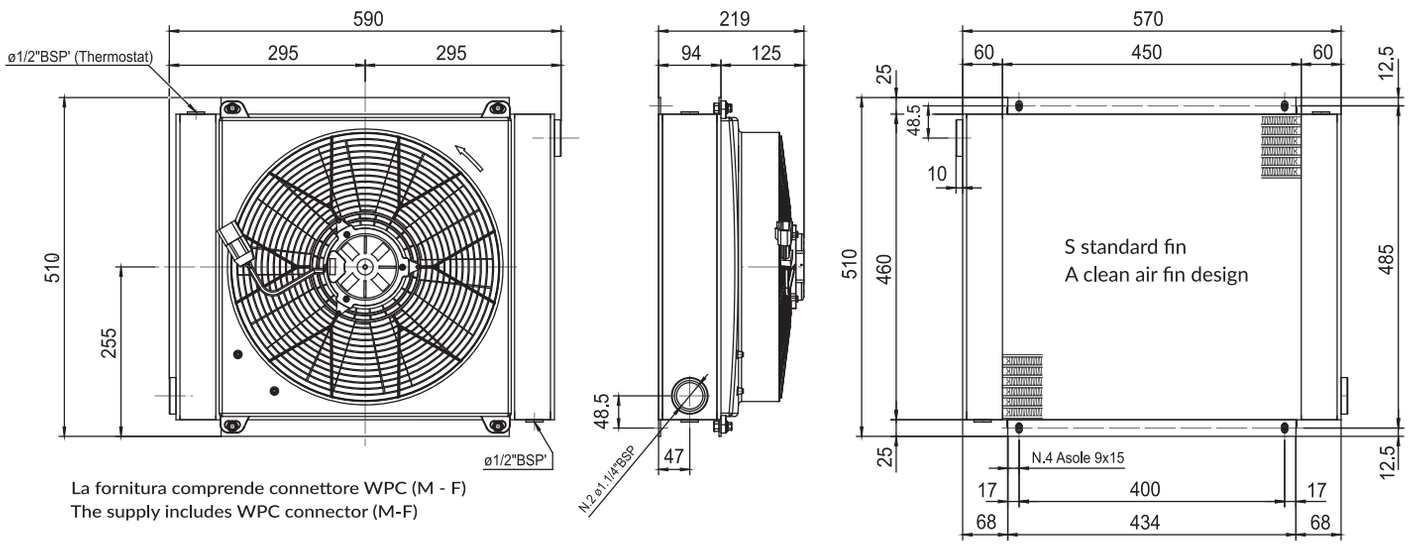
Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

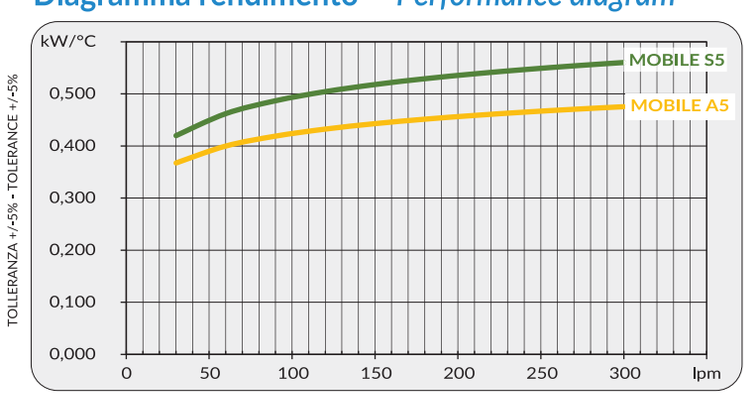
Dimensioni *Dimensions*



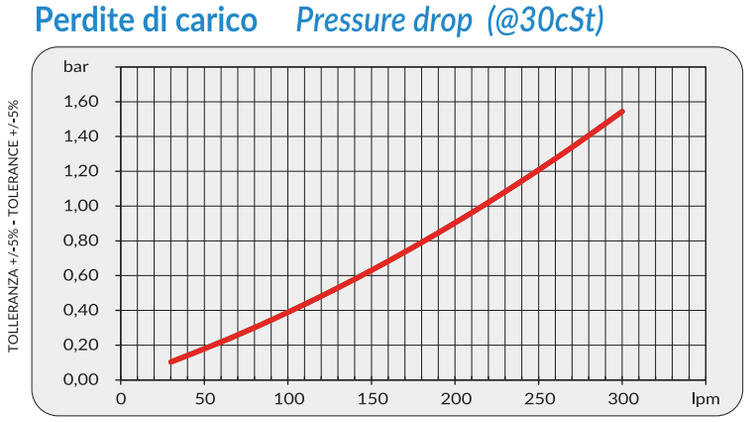
La fornitura comprende connettore WPC (M - F)
The supply includes WPC connector (M-F)

CODICE CODE	Dati tecnici / Technical Data								
	V	kW	A	rpm	Ø Fan	dB (A)	IP	It	kg
2MS512###	12V DC	0,23	19	2270	385	73	68	6,6	22,5
2MS524###	24V DC	0,23	9,9	2420	385	75	68	6,6	22,5
2MA512###	12V DC	0,23	19,4	2340	385	73	68	6,6	22,5
2MA524###	24V DC	0,22	9,0	2500	385	75	68	6,6	22,5

Diagramma rendimento *Performance diagram*



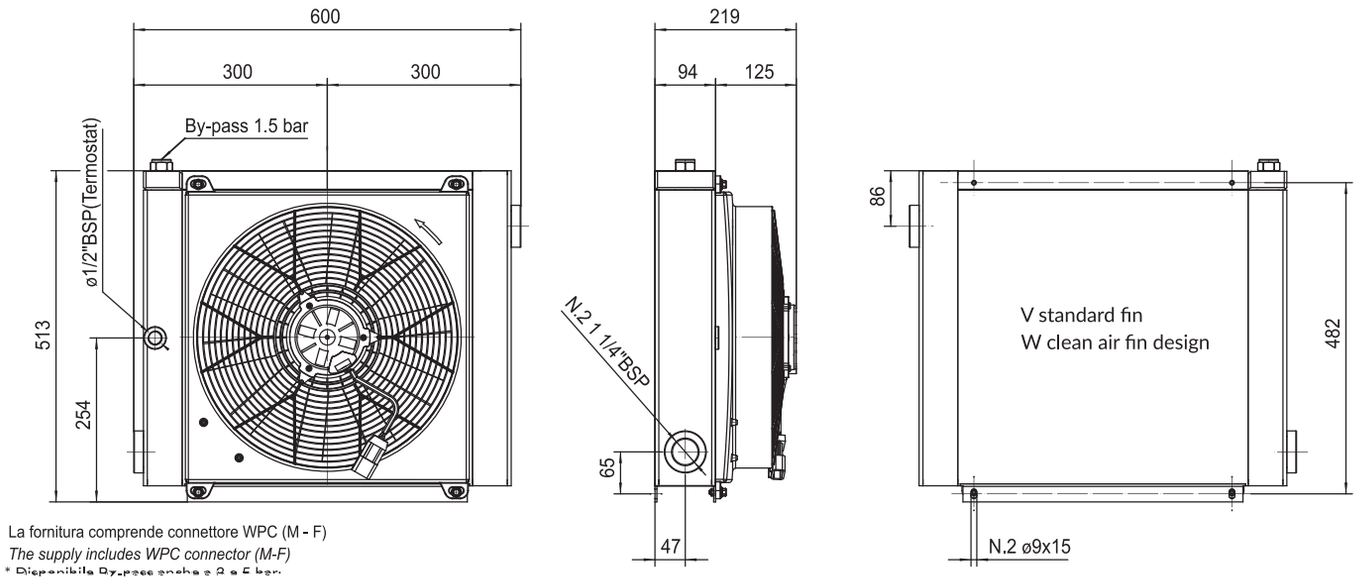
Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

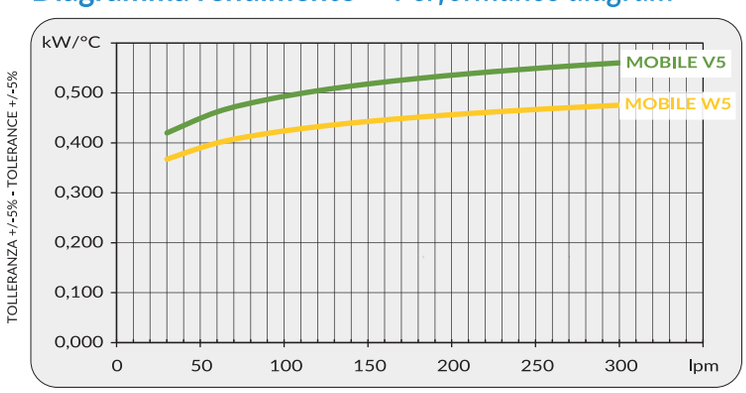
Dimensioni *Dimensions*



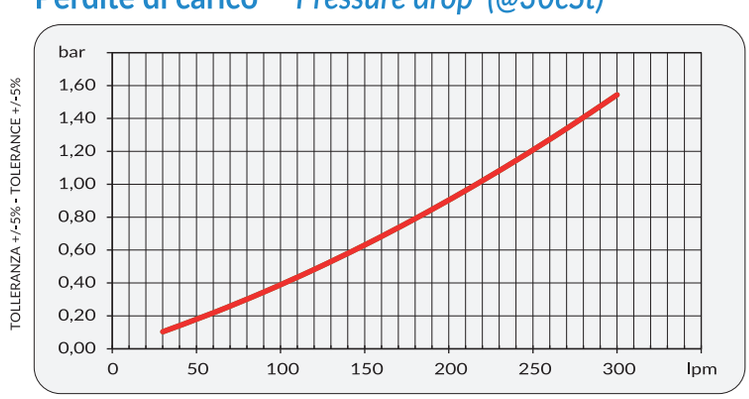
La fornitura comprende connettore WPC (M - F)
The supply includes WPC connector (M-F)
* Disponibile By-pass anche a 2 e 5 bar.

CODICE CODE	Dati tecnici / Technical Data								
	V	kW	A	rpm	Ø Fan	dB (A)	IP	lt	kg
2MV512###	12V DC	0,23	19	2270	385	73	68	6,6	24
2MV524###	24V DC	0,23	9,9	2420	385	75	68	6,6	24
2MW512###	12V DC	0,23	19,4	2340	385	73	68	6,6	24
2MW524###	24V DC	0,22	9,0	2500	385	75	68	6,6	24

Diagramma rendimento *Performance diagram*



Perdite di carico *Pressure drop (@30cSt)*

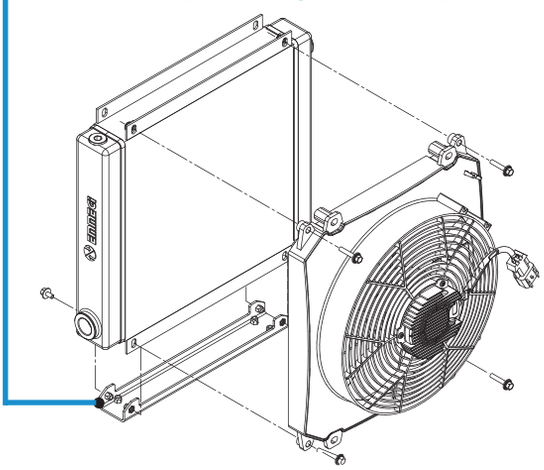


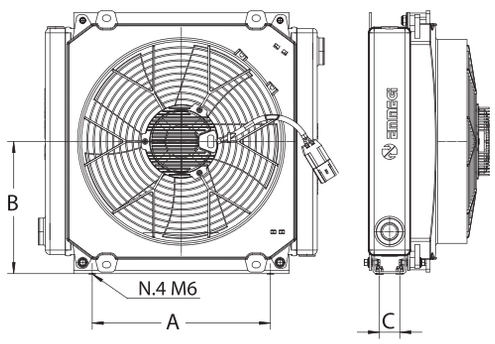
Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

Staffe di fissaggio serie 1 (articolo optional)

1 Series supporting frame (optional)

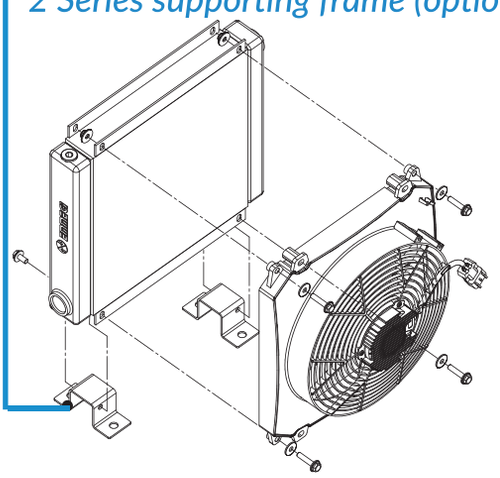


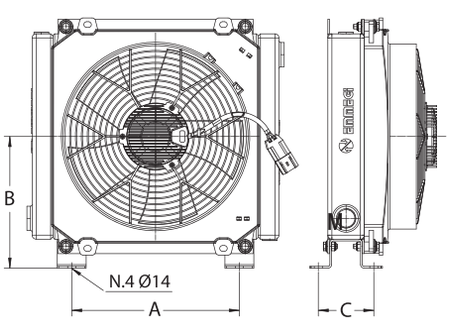


Serie 1 1 Series				
MODELLO MODEL	Dimensioni Dimensions			Staffe di fissaggio Supporting frame
	A	B	C	PN
MS1/MA1/MV1/MW1	170	124	32	051961A
MSP/MVP	150	146	32	0562980
MS2/MA2/MV2/MW2	210	173	32	051962A
MS3/MA3/MV3/MW3	280	204	32	051963A
MS4/MA4/MV4/MW4	380	258	32	051964A
MS5/MA5/MV5/MW5	380	258	64	051965A

Staffe di fissaggio serie 2 (articolo optional)

2 Series supporting frame (optional)





Series 2 2 Series				
MODELLO MODEL	Dimensioni Dimensions			Staffe di fissaggio (N. 2 Pz. per scambiatore) Supporting frame (N. 2 Pcs for heat exchanger)
	A	B	C	PN
MS1/MA1/MV1/MW1	130	86	96	056295A
MSM/MVM	160	166	81	0562940
MSP/MVP	220	195	96	056293A
MS2/MA2/MV2/MW2	220	195	96	056293A
MS3/MA3/MV3/MW3	290	227.5	96	056293A
MS4/MA4/MV4/MW4	380	280.5	96	056293A
MS5/MA5/MV5/MW5	380	280	127	056292A



EMMEGI®
HEAT-EXCHANGERS

Serie HPAM

HPAM Series

APPLICAZIONE
APPLICATION



Gli scambiatori della serie HPAM sono stati progettati per ambienti marini classificati come C5 in accordo alle normative UNI EN ISO 12944:2018 o con alta umidità e salinità con presenza di atmosfere corrosive.

The HPAM series heat exchangers have been designed for marine environments classified as C5 in accordance with the UNI EN ISO 12944:2018 standards or in environments with high humidity and salinity.









Denominazione codice prodotto
Ordering code

A250500 **400B** **2** **1**

MODELLO *MODEL*

A250500	*(HPAM06)*
A250600	*(HPAM12)*
A250700	*(HPAM18)*
A250800	*(HPAM24)*
A250900	*(HPAM30)*
A251000	*(HPAM36)*
A250000	*(HPAM42)*
A251100	*(HPAM50)*
A251200	*(HPAM52)*
A251300	*(HPAM72)*
A251400	*(HPAM135)*
A251500	*(HPAM180)*
A251600	*(HPAM255)*

TIPO DI MOTORIZZAZIONE *FAN MOTOR TYPE*

400B	*(Electric Motor AC 230-400V 50Hz / 265-460V 60Hz - 280-480V 60Hz - 400-690V 50HZ / 460-795V 60Hz)*
2000	*(Prepared for Gr.2 hydraulic motor)*
3000	*(Prepared for Gr.3 hydraulic motor)*

TERMOSTATI *THERMOSTATS*

0	Senza termostato *without thermostat*	
1	Termostato fisso *Fixed thermostat*	*40-28°*
2	Termostato fisso *Fixed thermostat*	*50-38°*
3	Termostato fisso *Fixed thermostat*	*60-48°*
4	Termostato fisso *Fixed thermostat*	*70-58°*
5	Termostato fisso *Fixed thermostat*	*80-68°*
6	Termostato fisso *Fixed thermostat*	*90-78°*

TIPO DI VENTILAZIONE *VENTILATING TYPE*

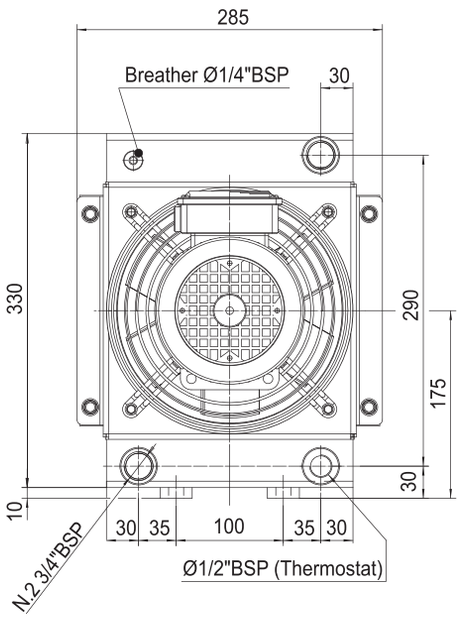
1	*Aspirante Suction air flow*
2	*Soffiante Blowing air flow*

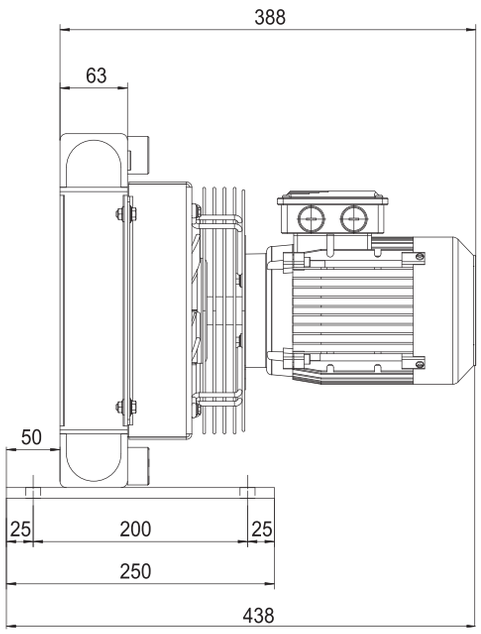
Serie HPAM - *HPAM Series*

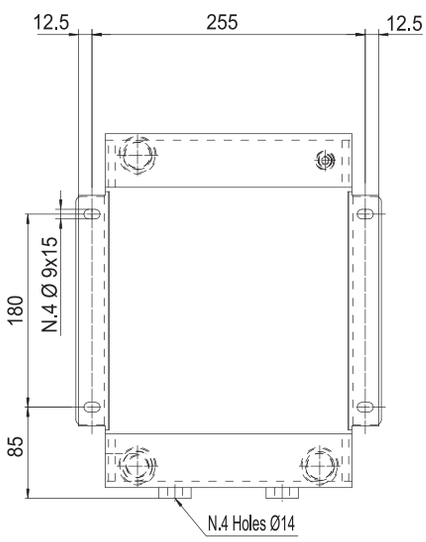
Modello *Model*	Codice *Code*
HPAM 06	A250500
HPAM 12	A250600
HPAM 18	A250700
HPAM 24	A250800
HPAM 30	A250900
HPAM 36	A251000
HPAM 42	A250000
HPAM 50	A251100
HPAM 52	A251200
HPAM 72	A251300
HPAM 135	A251400
HPAM 180	A251500
HPAM 255	A251600



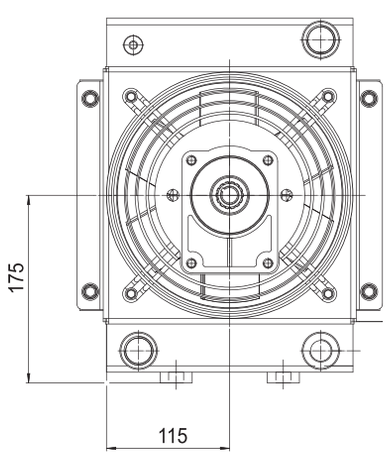


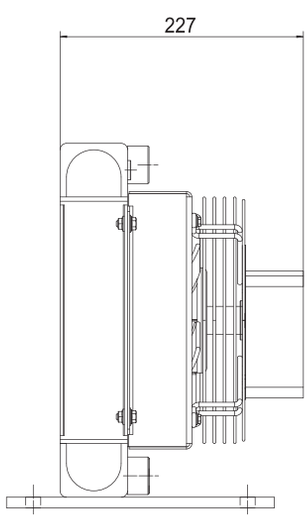


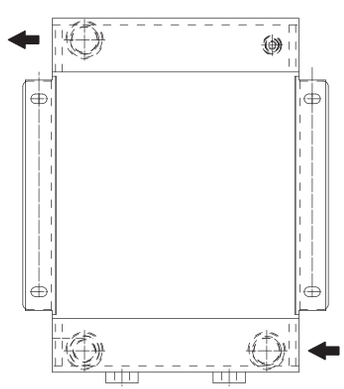




P/N A250500400B##







P/N A2505002000##

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Modello Model	P/N	V	Hz	kW (±10%)	A (±10%)	rpm	dB (A)	IP	lt	kg
HPAM06	A250500400B##	230/400 AC B14 265/460 AC B14	50 60	0,25 0,29	1,7 - 1 1,7 - 1	1350 1620	62 66	56	1,2	13
HPAM06	A2505002000##	Prepared for Gr.2 hydraulic motor						-	1,2	9

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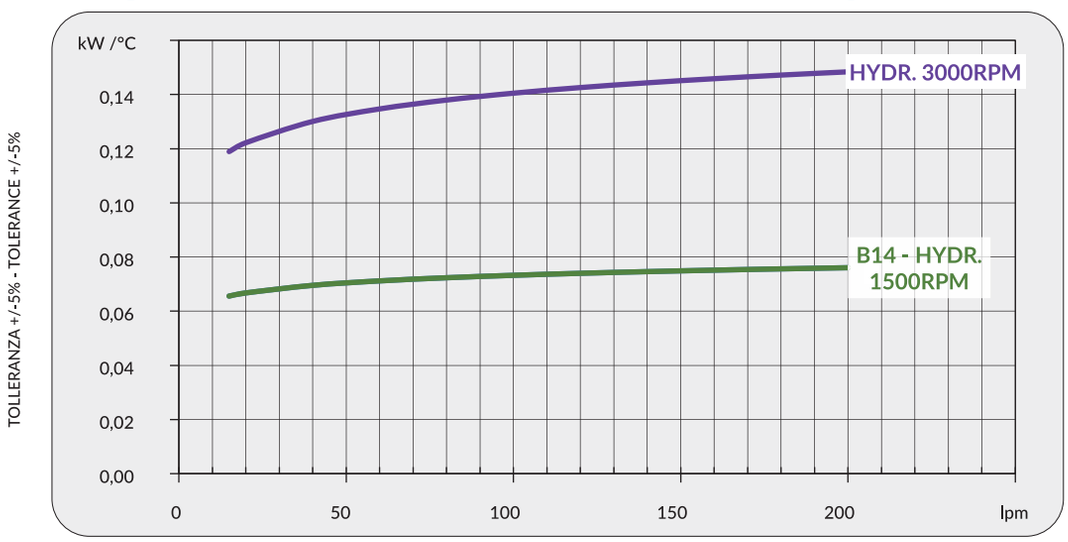
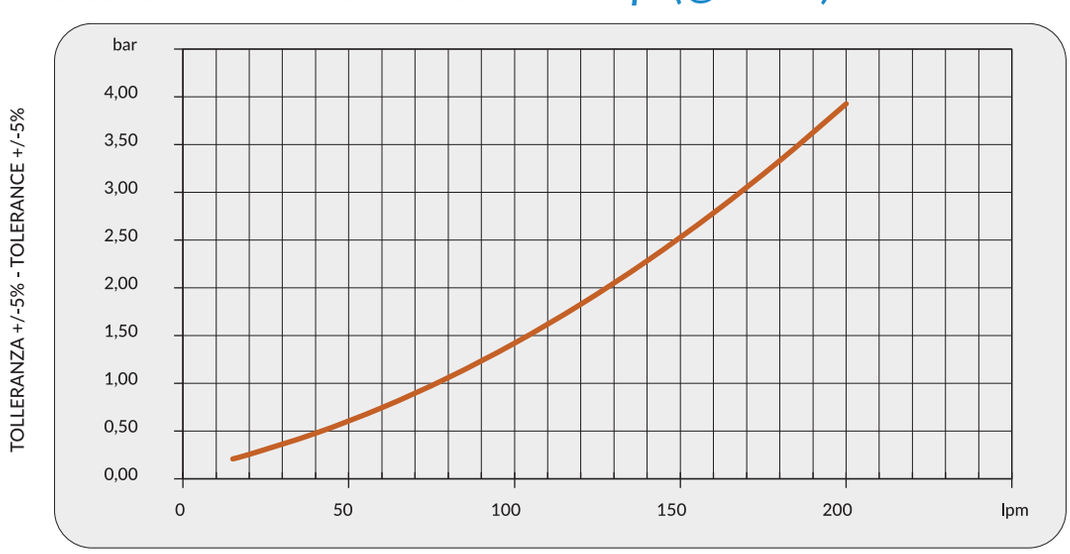
Diagramma rendimento *Performance diagram*

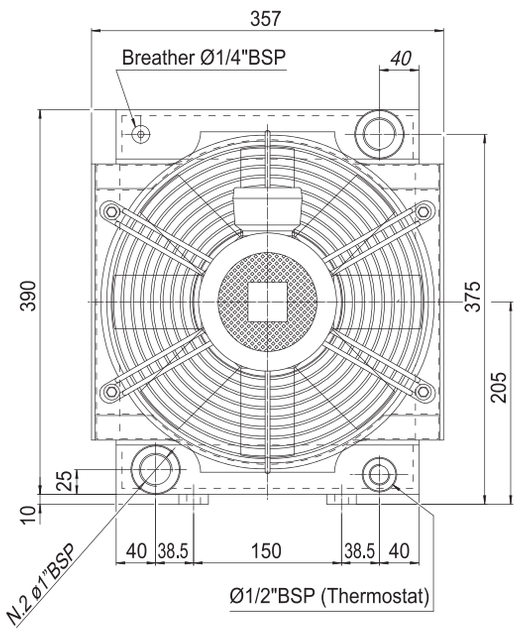


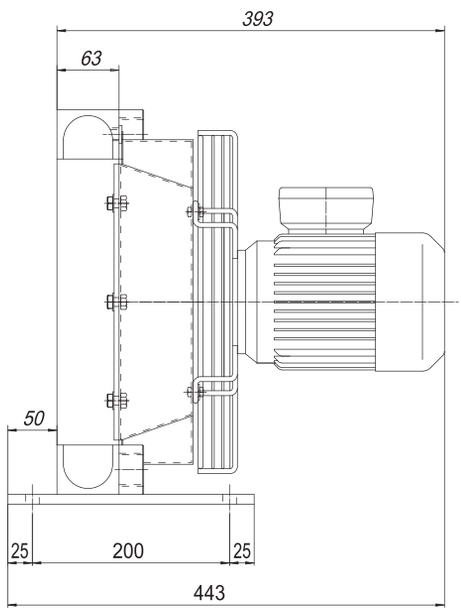
Perdite di carico *Pressure drop (@30cSt)*

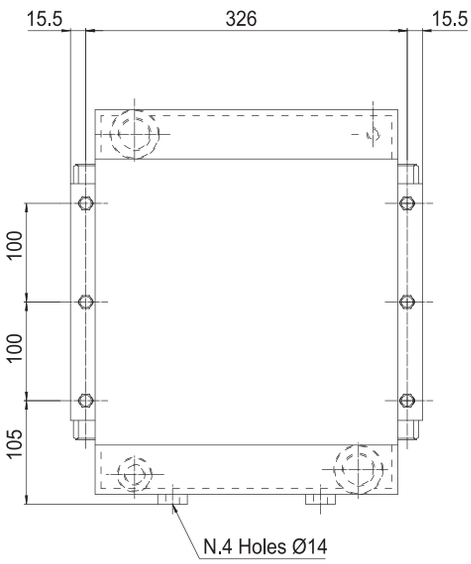


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

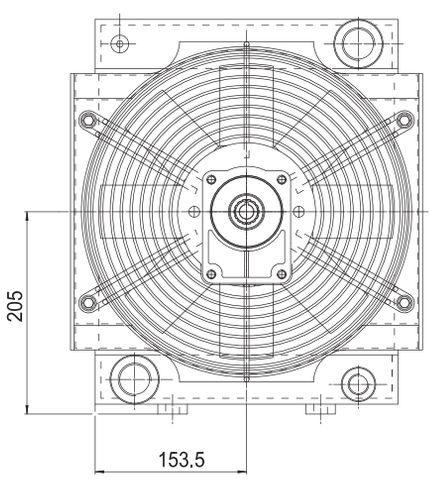
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

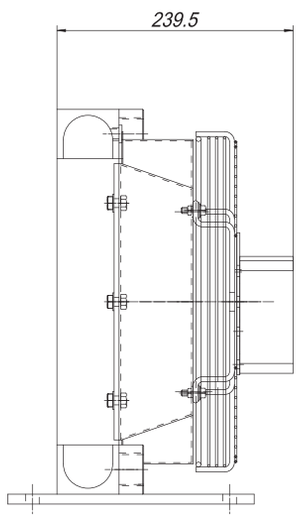


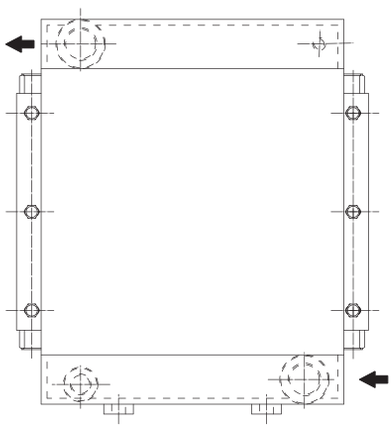




P/N A250600400B##







P/N A2506002000##

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Modello Model	P/N	V	Hz	kW(±10%)	A (±10%)	rpm	dB (A)	IP	lt	kg
HPAM12	A250600400B##	230/400 AC B14 265/460 AC B14	50 60	0,25 0,29	1,7 - 1 1,7 - 1	1350 1620	74 78	56	1,9	17
HPAM12	A2506002000##	Prepared for Gr.2 hydraulic motor						-	1,9	12

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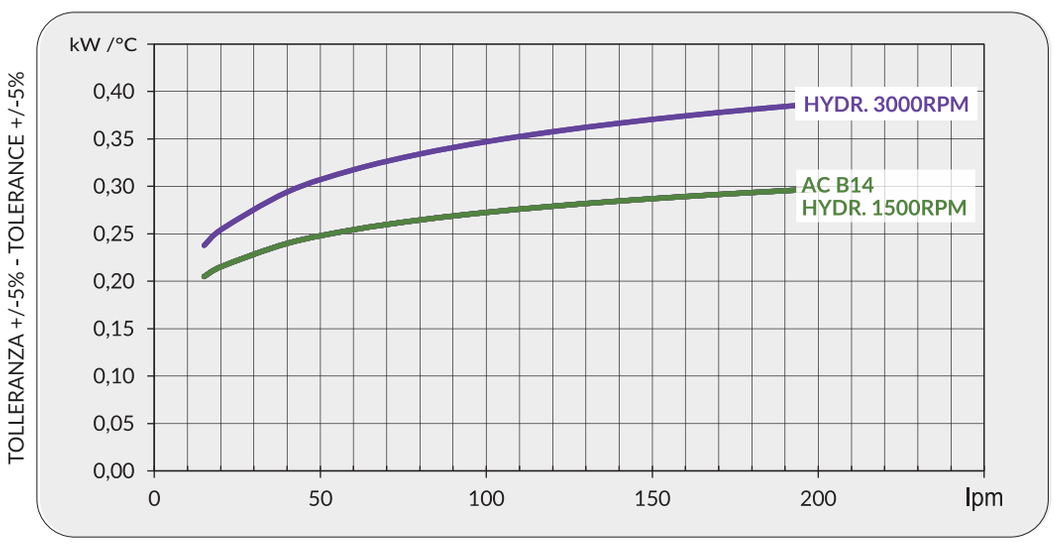
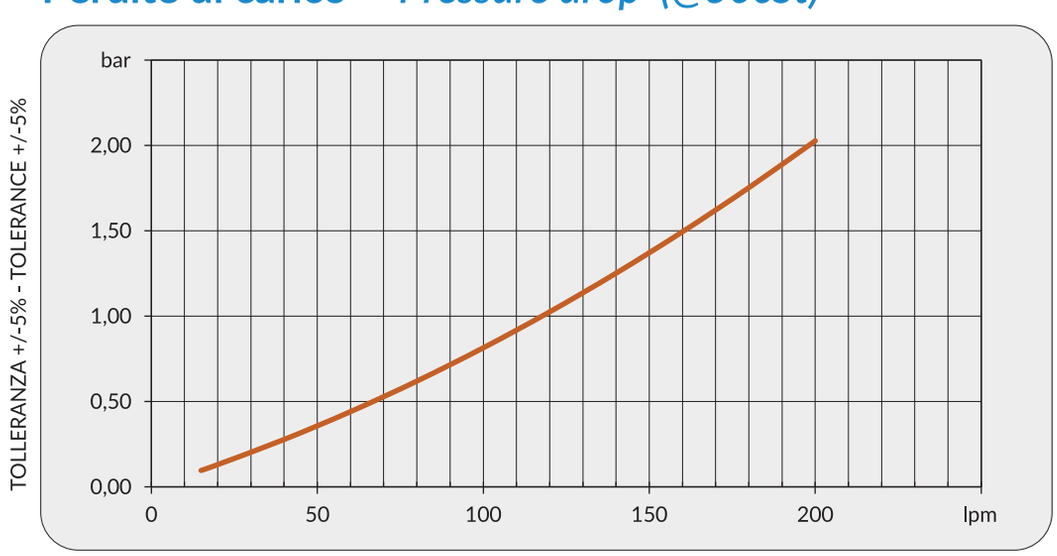
Diagramma rendimento *Performance diagram*

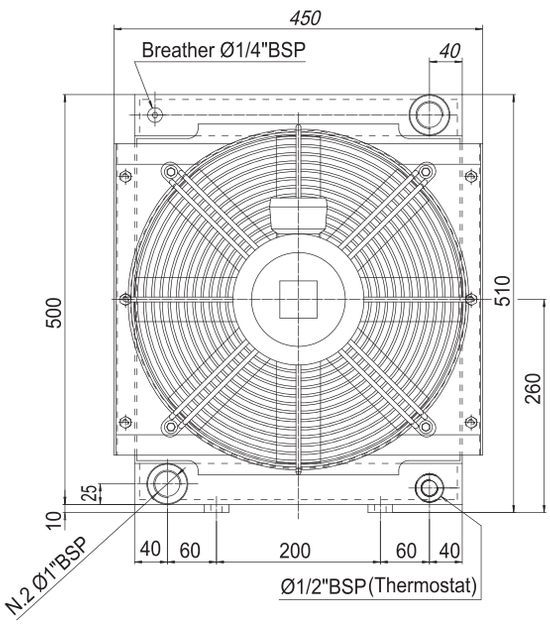


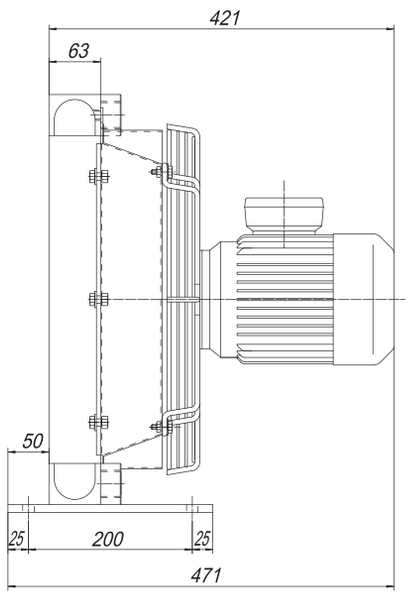
Perdite di carico *Pressure drop (@30cSt)*

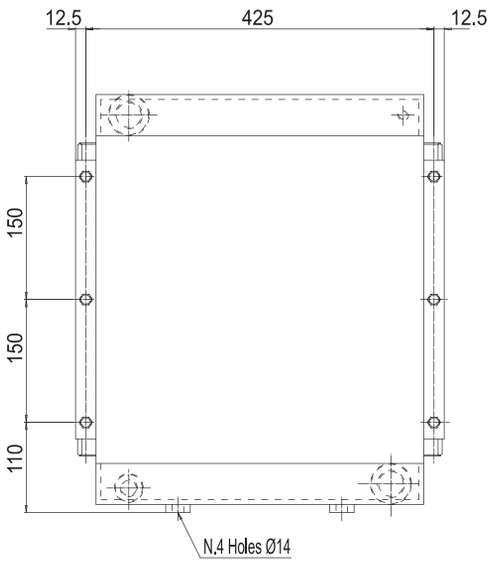


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

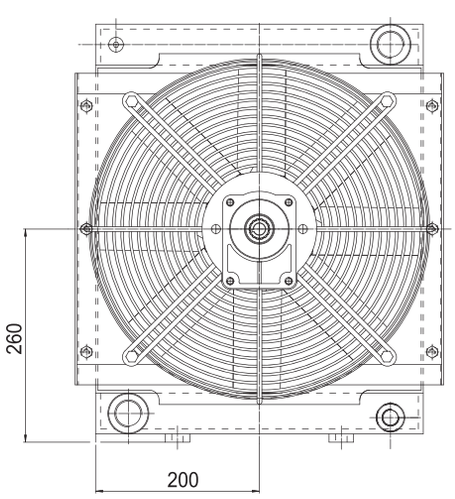
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

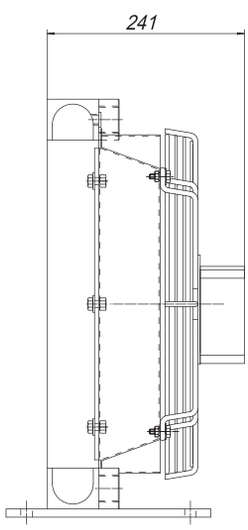


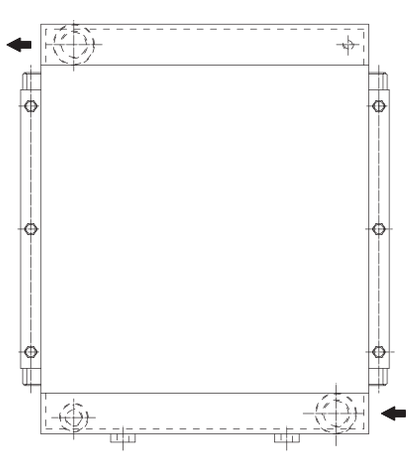




P/N A250700400B##







P/N A2507002000##

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Modello Model	P/N	V	Hz	kW(±10%)	A (±10%)	rpm	dB (A)	IP	It	kg
HPAM18	A250700400B##	230/400 AC B14 265/460 AC B14	50 60	0,37 0,43	2,1 - 1,1 2,1 - 1,1	1370 1650	74 78	56	2,9	20
HPAM18	A2507002000##	Prepared for Gr.2 hydraulic motor						-	2,9	15

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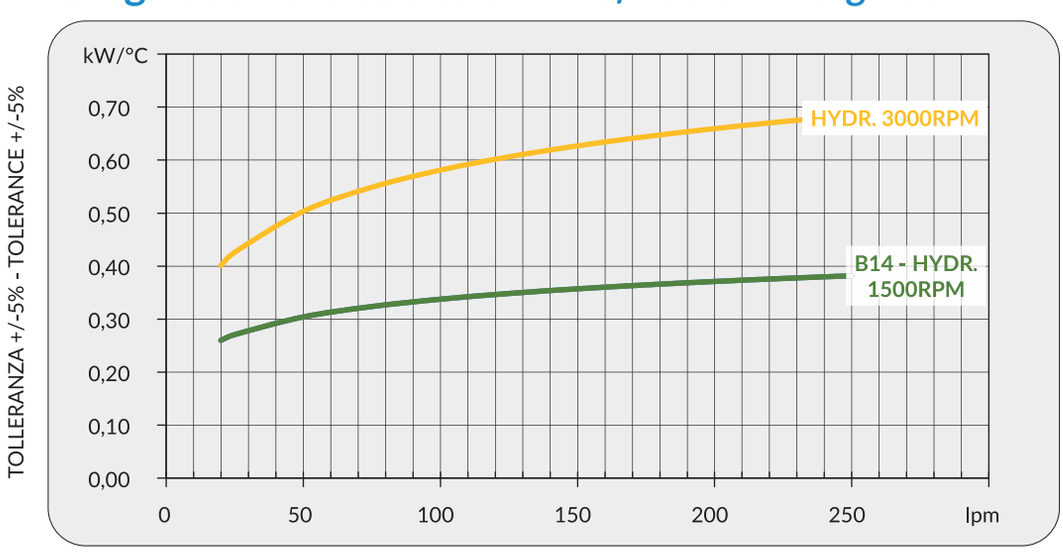
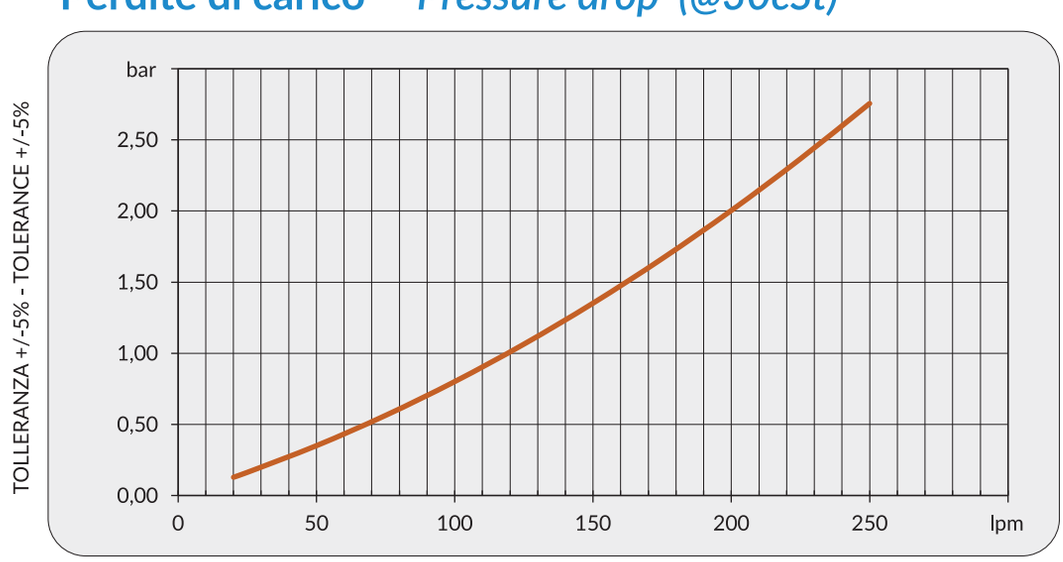
Diagramma rendimento *Performance diagram*

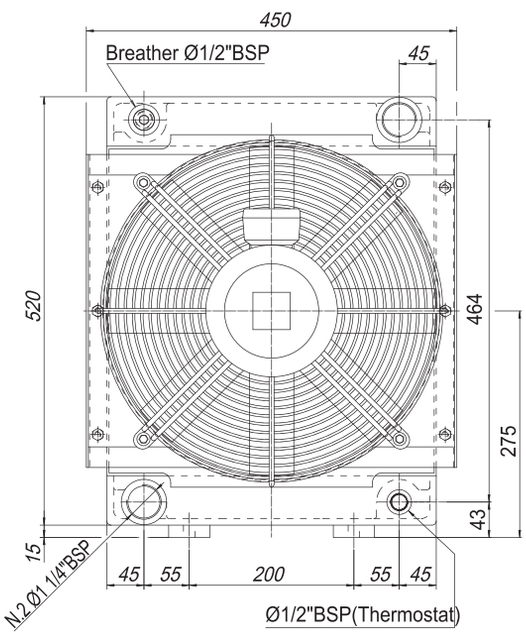


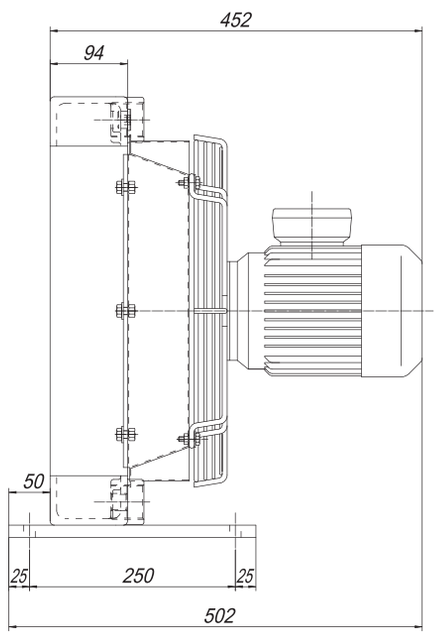
Perdite di carico *Pressure drop (@30cSt)*

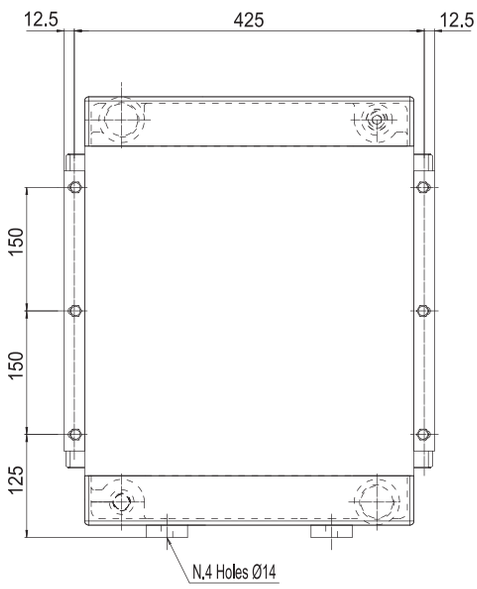


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

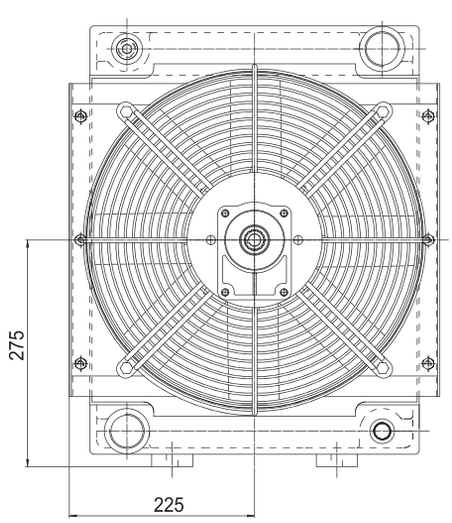
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

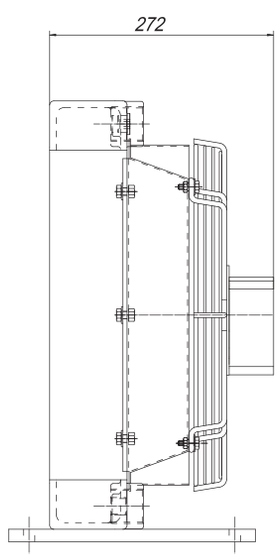


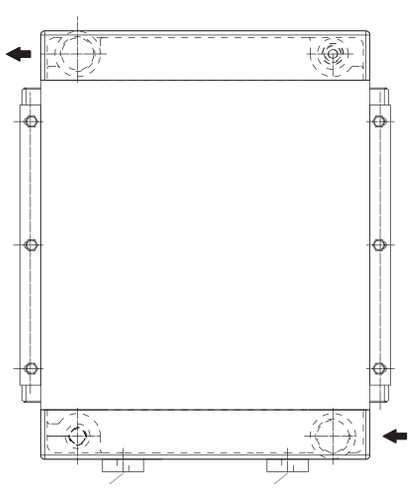




P/N A250800400B##







P/N A2808002000##

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Modello Model	P/N	V	Hz	kW(±10%)	A (±10%)	rpm	dB (A)	IP	lt	kg
HPAM24	A250800400B##	230/400 AC B14 265/460 AC B14	50 60	0,55 0,63	2,9 - 1,7 2,9 - 1,7	1320 1690	76 80	56	6,2	28
HPAM24	A2808002000##	Prepared for Gr.2 hydraulic motor						-	6,2	20

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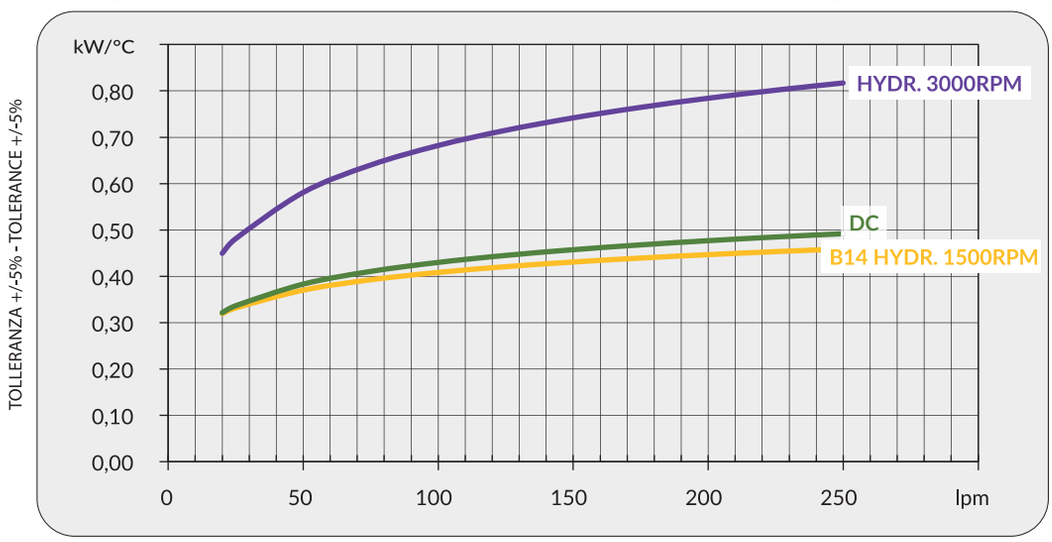
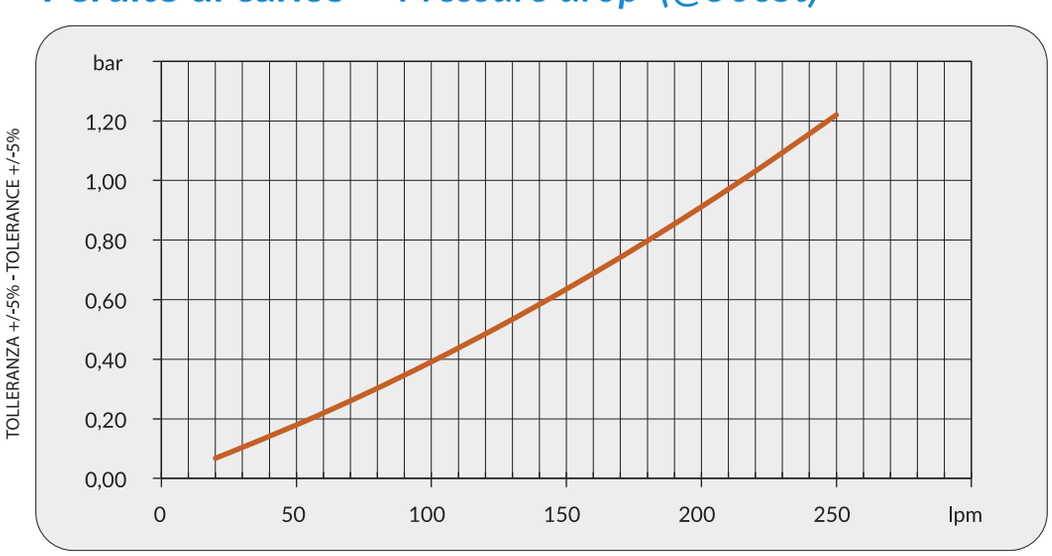
Diagramma rendimento *Performance diagram*

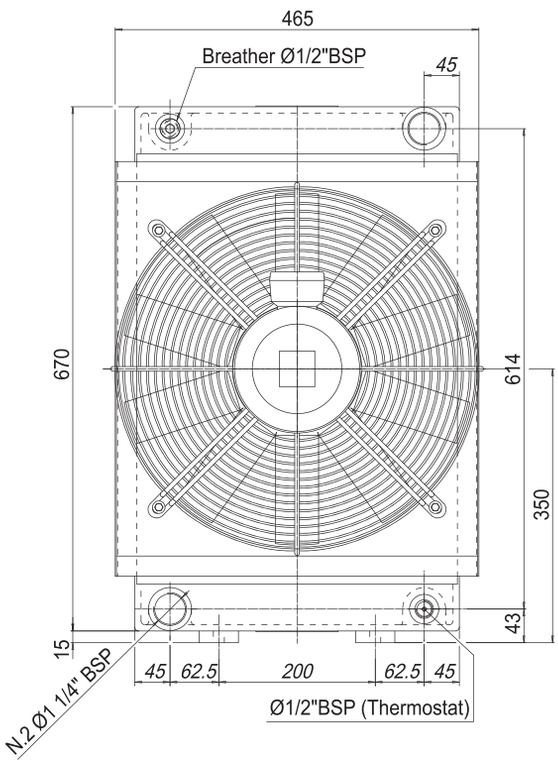


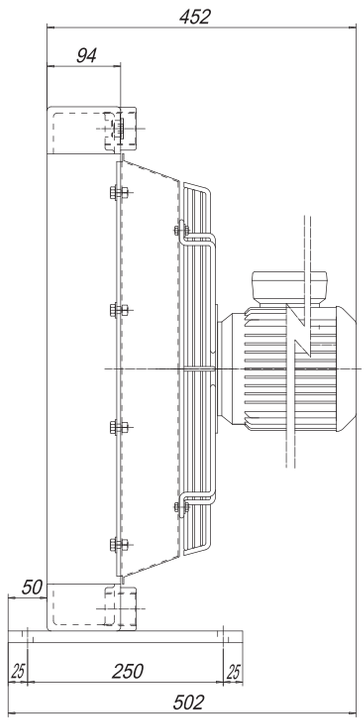
Perdite di carico *Pressure drop (@30cSt)*

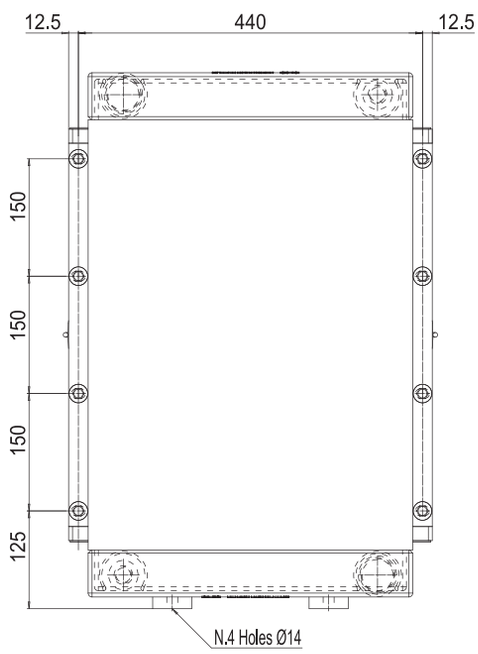


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

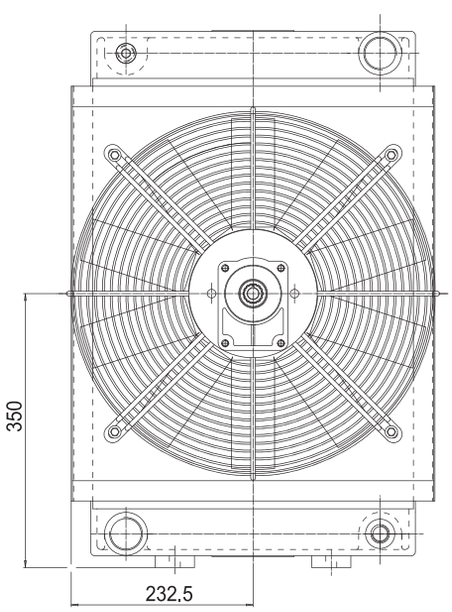
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

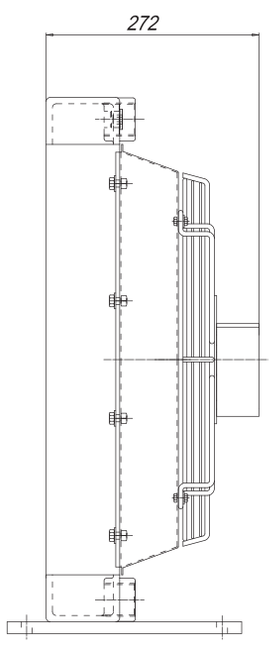


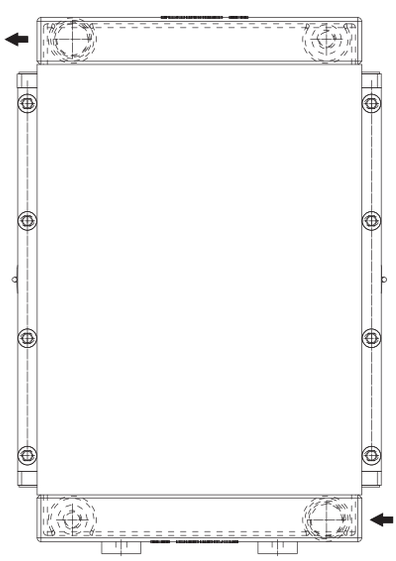




P/N A250900400B##







P/N A2509002000##

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Modello Model	P/N	V	Hz	kW(±10%)	A (±10%)	rpm	dB (A)	IP	It	kg
HPAM30	A250900400B##	230/400 AC B14 265/460 AC B14	50 60	0,75 0,86	3 - 1,7 3 - 1,7	1440 1730	73 77	56	6,8	37
HPAM30	A2509002000##	Prepared for Gr.2 hydraulic motor						-	6,8	21

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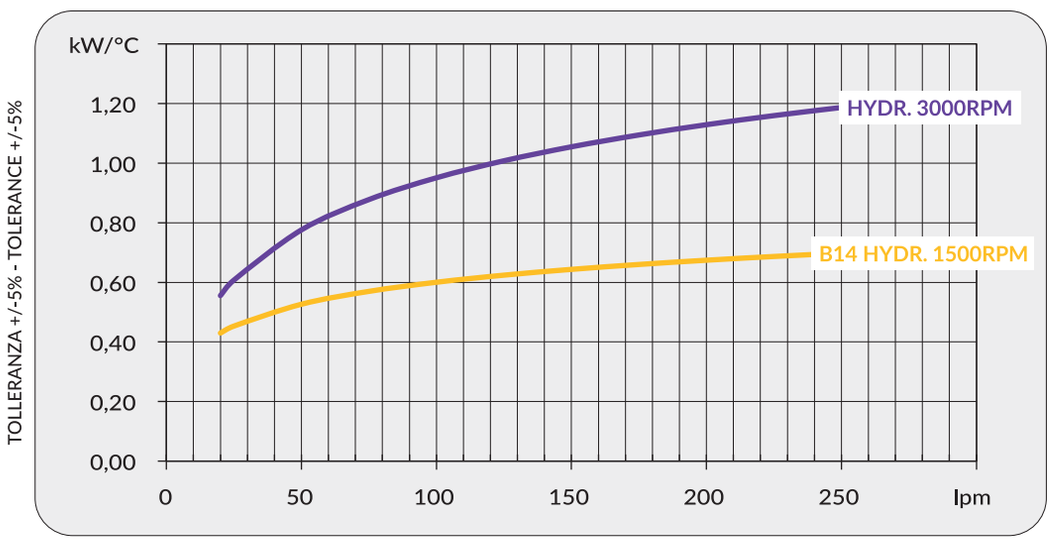
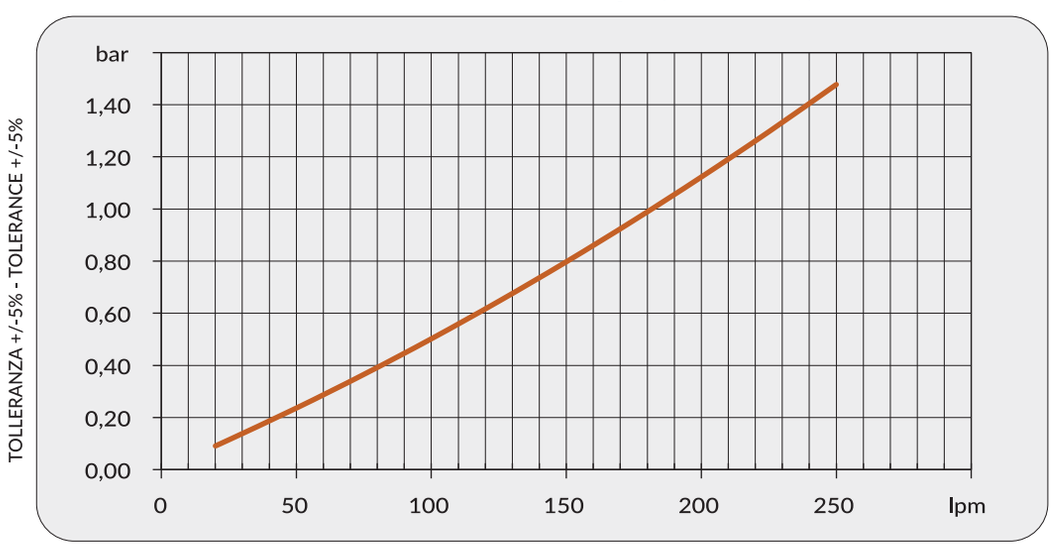
Diagramma rendimento *Performance diagram*

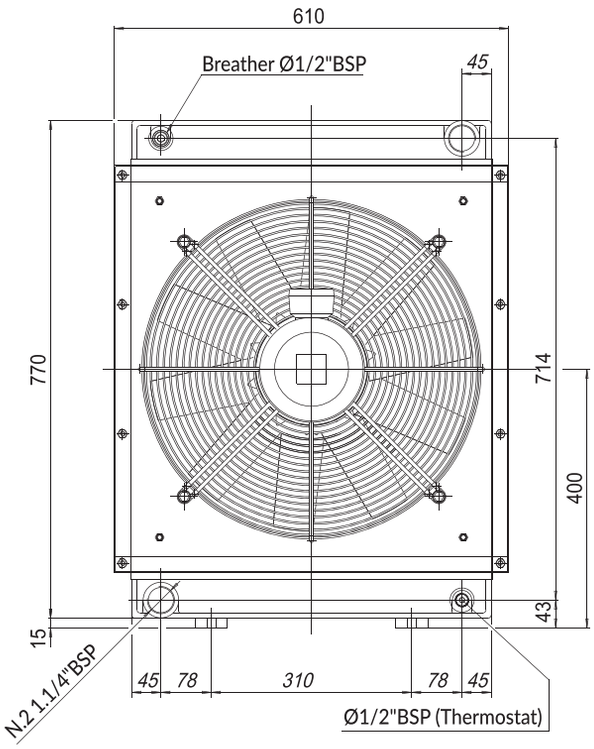


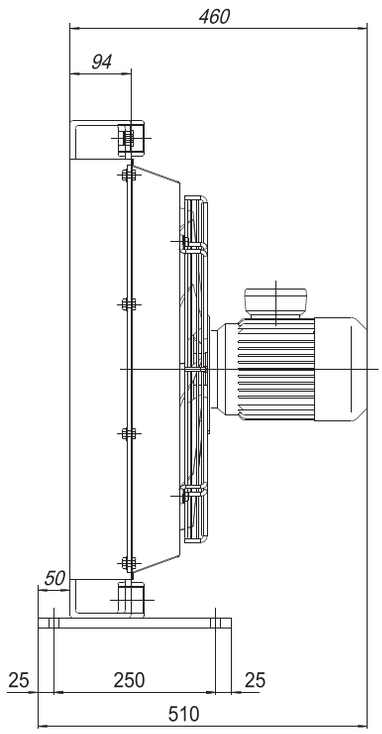
Perdite di carico *Pressure drop (@30cSt)*

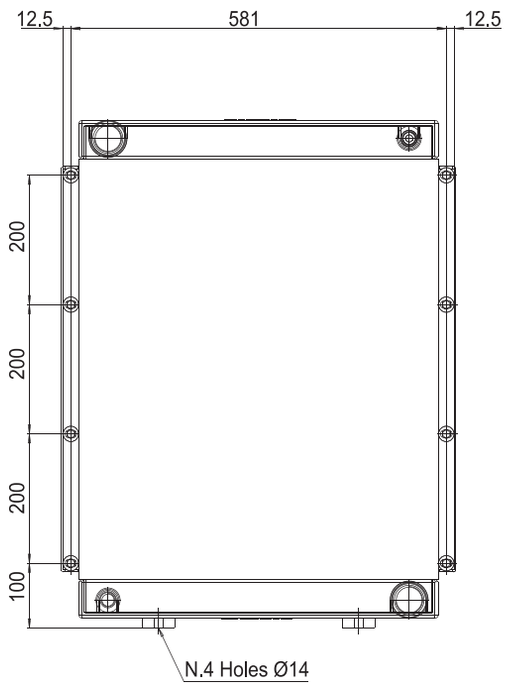


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

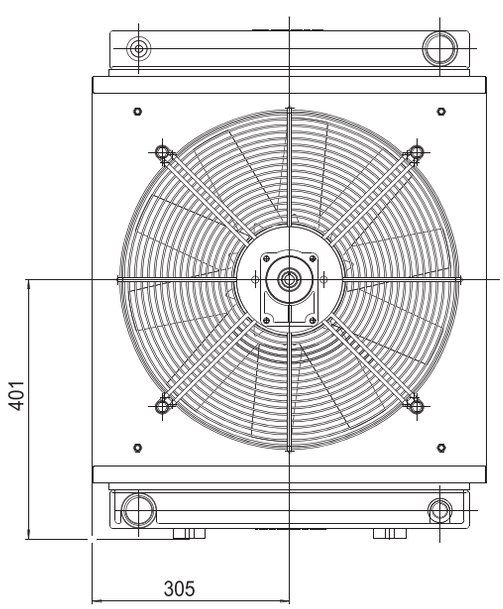
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

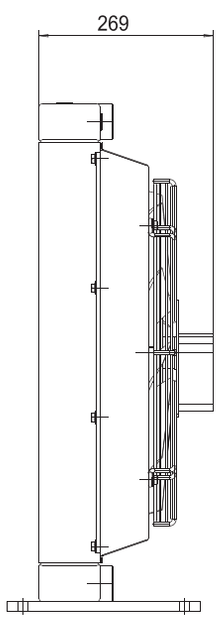


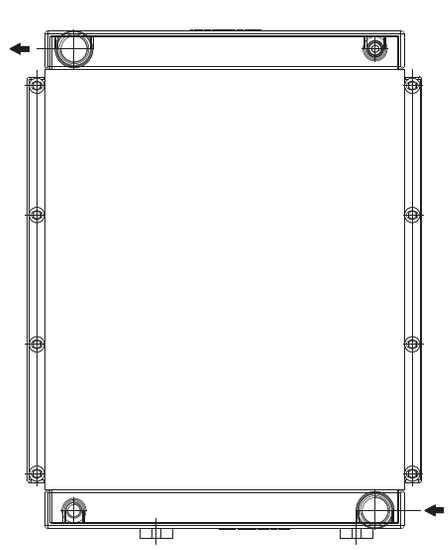




P/N A251000400B##







P/N A2510002000##

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Modello Model	P/N	V	Hz	kW(±10%)	A (±10%)	rpm	dB (A)	IP	It	kg
HPAM36	A251000400B##	230/400 AC B14 265/460 AC B14	50 60	1,1 1,3	4,5 - 2,6 4,5 - 2,6	1440 1730	76 84	56	9,4	60
HPAM36	A2510002000##	Prepared for Gr.2 hydraulic motor						56	9,4	37

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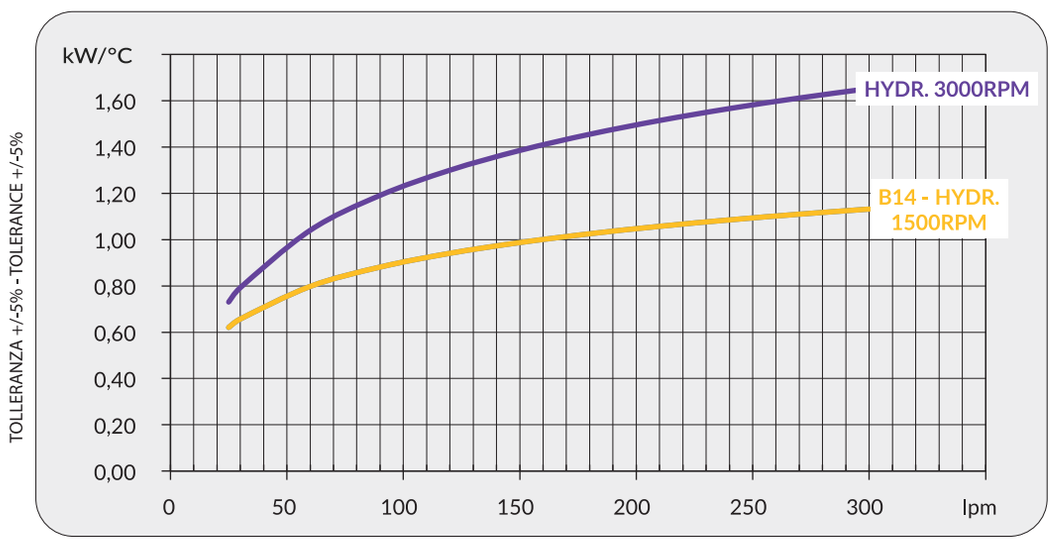
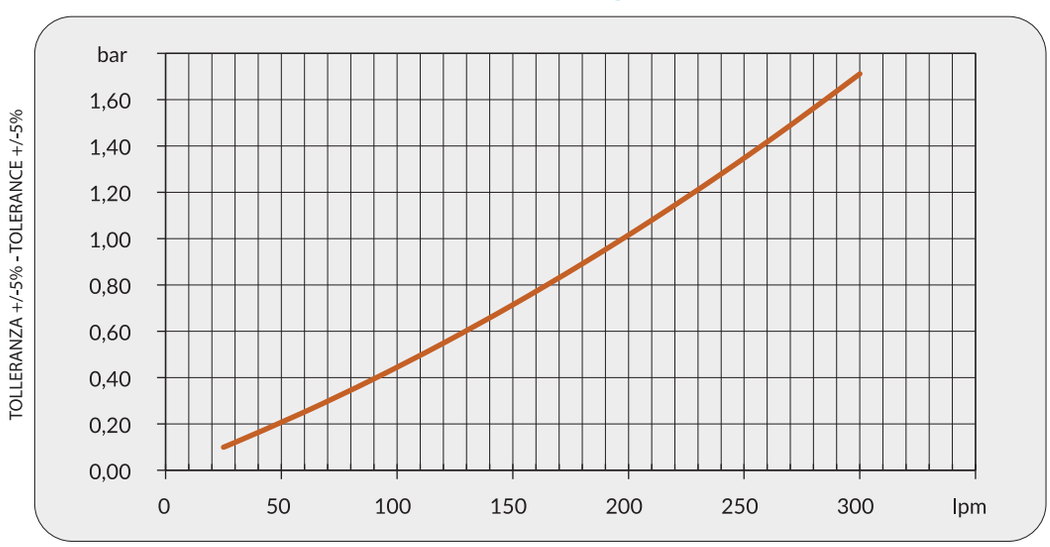
Diagramma rendimento *Performance diagram*

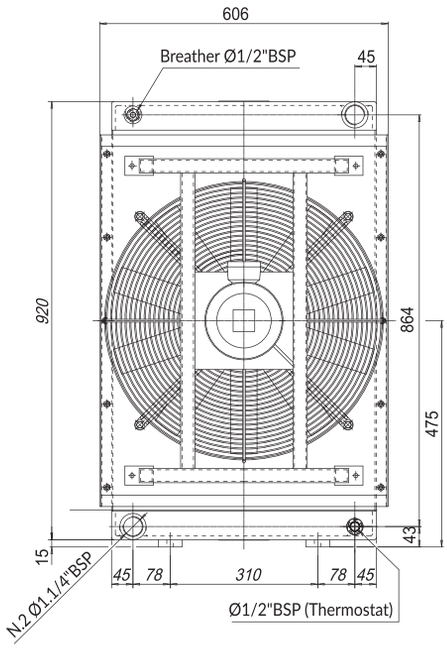


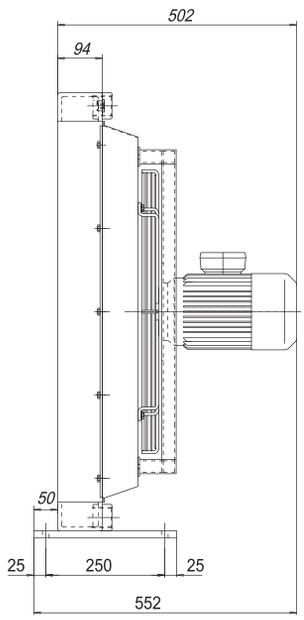
Perdite di carico *Pressure drop (@30cSt)*

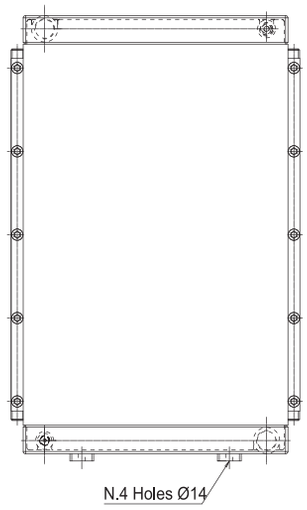


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

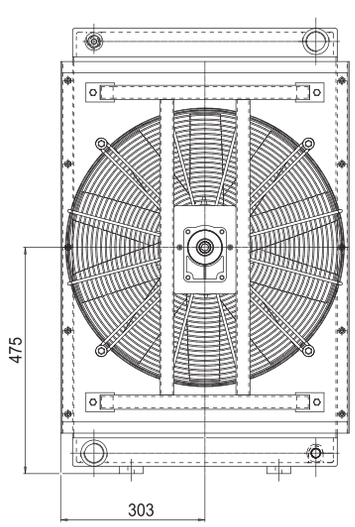
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

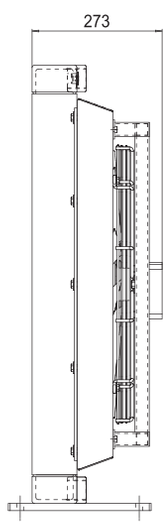


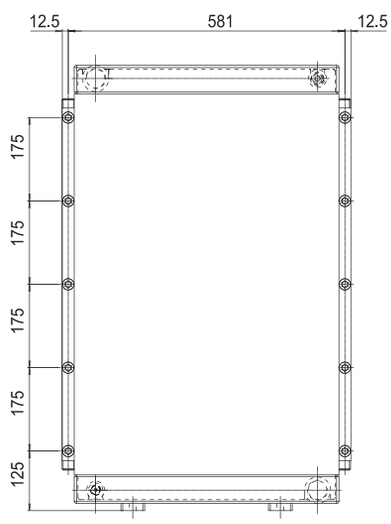




P/N A250000400B##







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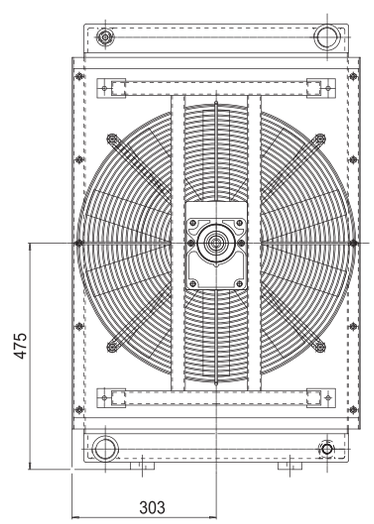

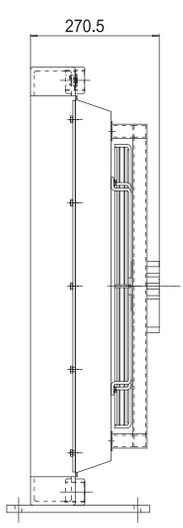

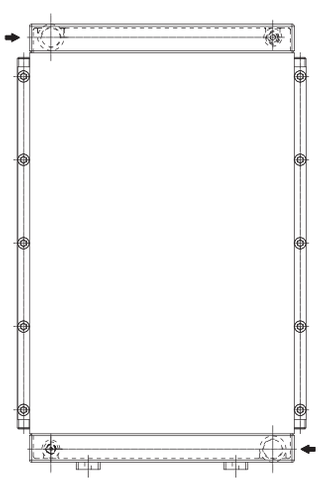

P/N A2500003000##

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Modello Model	P/N	V	Hz	kW(±10%)	A (±10%)	rpm	dB (A)	IP	lt	kg
HPAM42	A250000400B##	230/400 AC B14 265/460 AC B14	50 60	1,1 1,3	4,5 - 2,6 4,5 - 2,6	1440 1730	80 84	56	10,6	65
HPAM42	A2500002000## A2500003000##	Prepared for Gr.2 hydraulic motor Prepared for Gr.3 hydraulic motor						-	10,6	42

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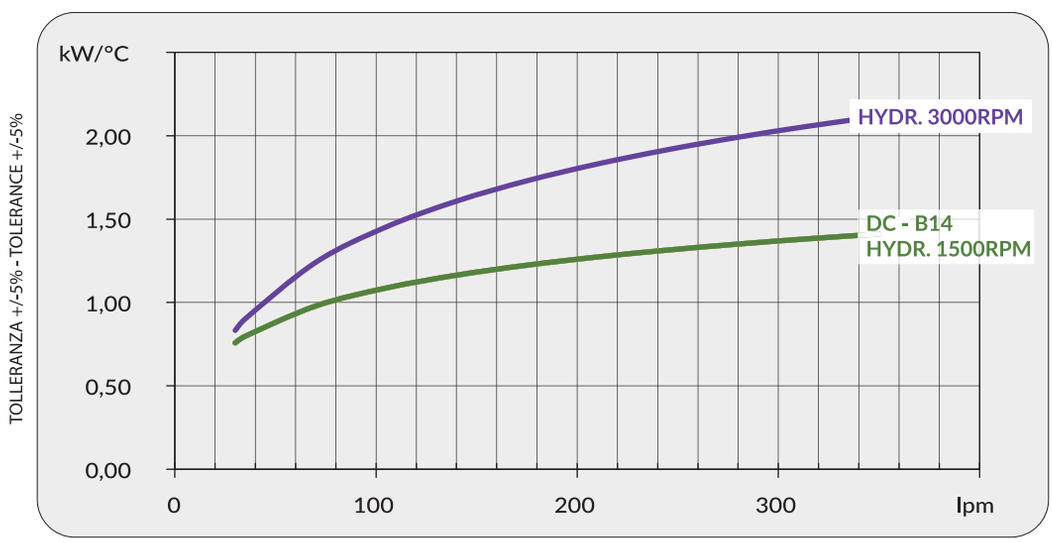
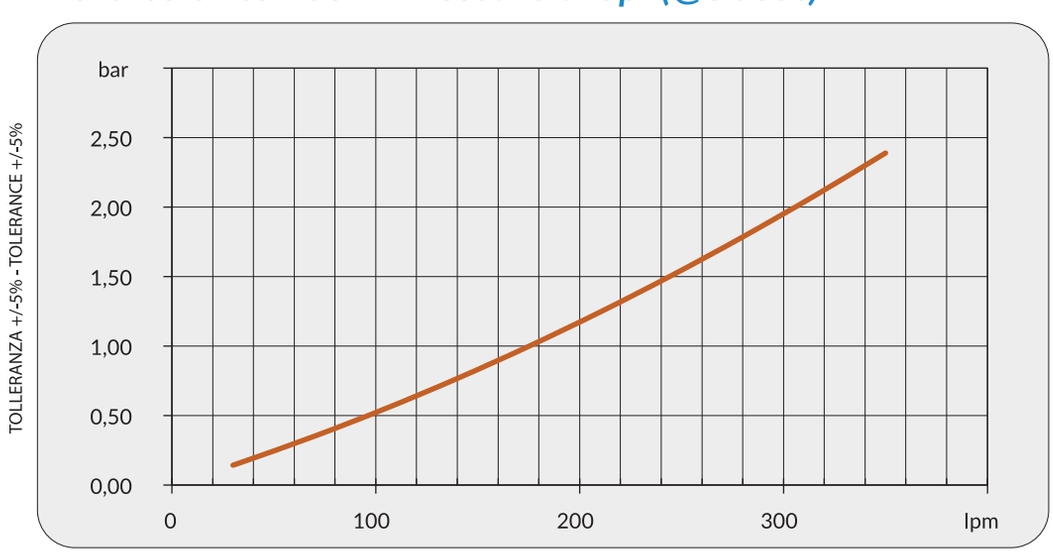
Diagramma rendimento *Performance diagram*

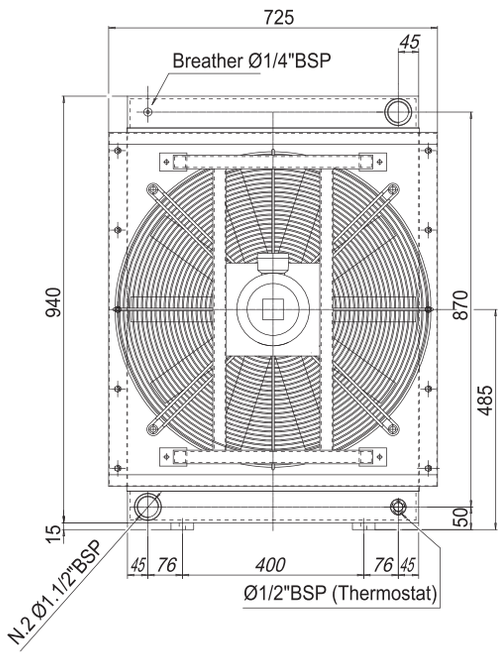


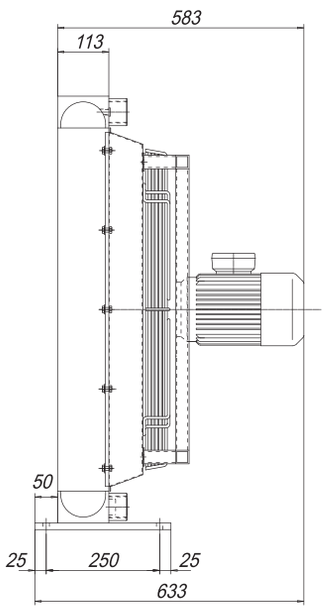
Perdite di carico *Pressure drop (@30cSt)*

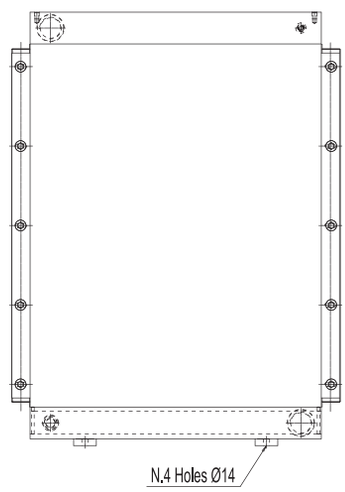


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

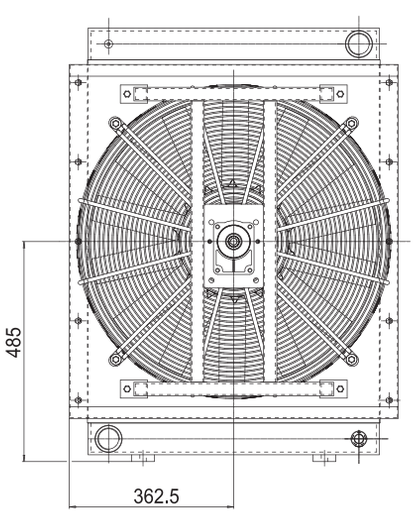
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

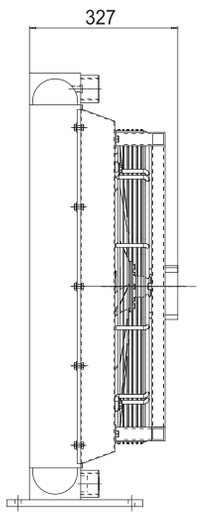


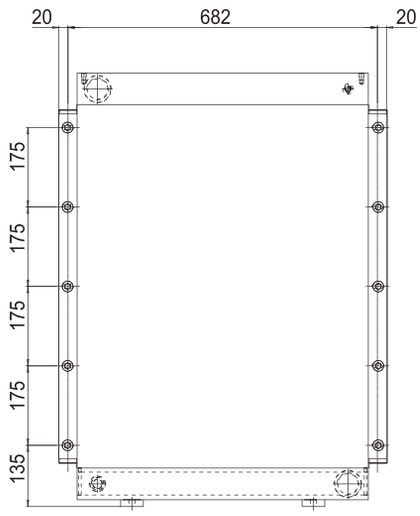




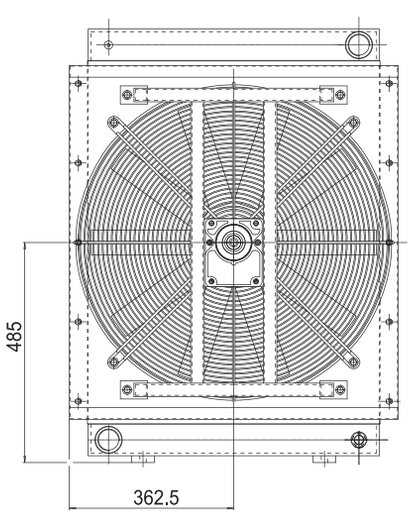
P/N A251100400B##

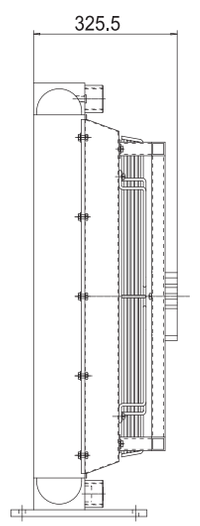


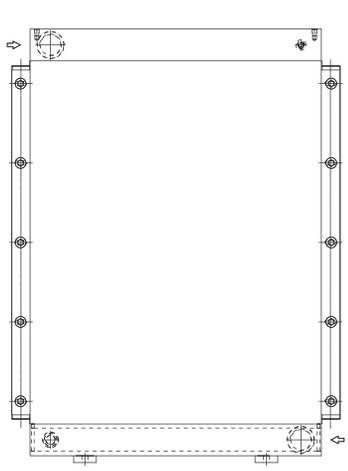




P/N A2511002000##







P/N A2511003000##

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Modello Model	P/N	V	Hz	kW(±10%)	A (±10%)	rpm	dB (A)	IP	lt	kg
HPAM50	A251100400B##	230/400 AC B14 265/460 AC B14	50 60	1,1 1,3	5 - 2,9 5 - 2,9	936 1123	79 83	56	14,2	90
HPAM50	A2511002000## A2511003000##	Prepared for Gr.2 hydraulic motor Prepared for Gr.3 hydraulic motor						-	14,2	66

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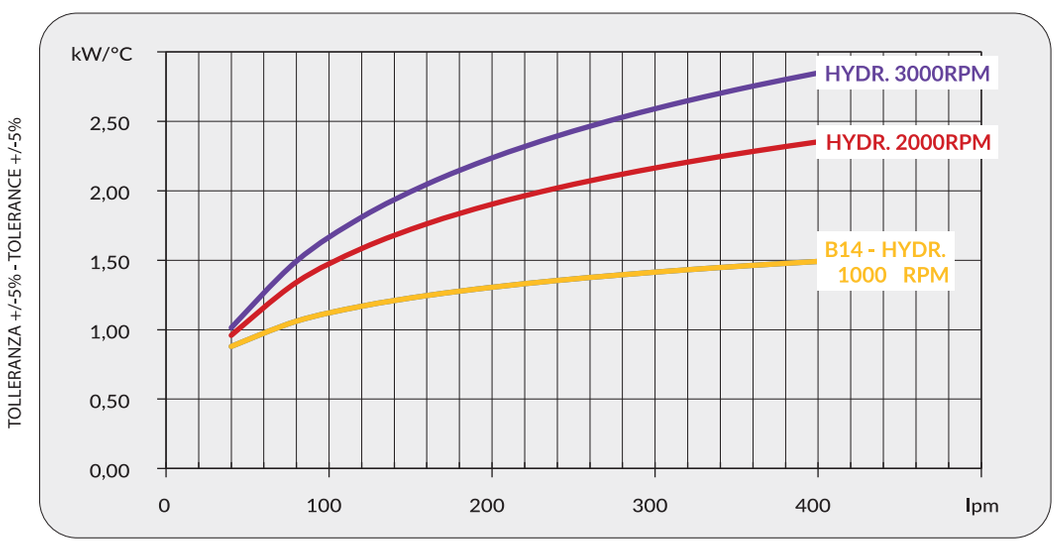
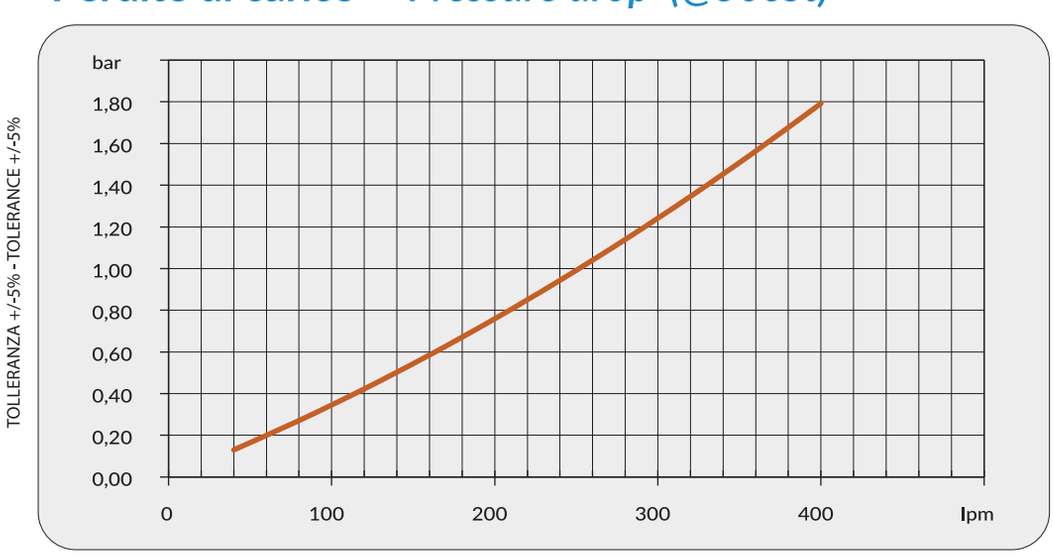
Diagramma rendimento *Performance diagram*

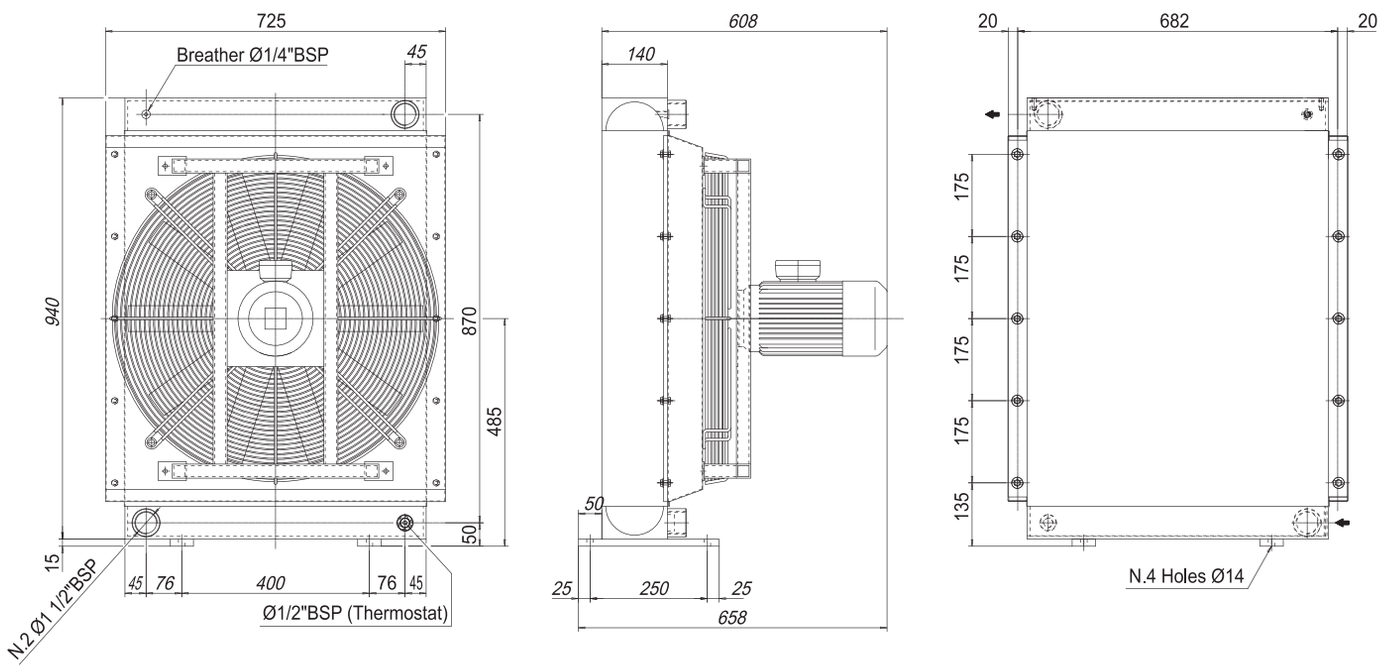


Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



P/N A251200400B##

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Modello Model	P/N	V	Hz	kW(±10%)	A (±10%)	rpm	dB (A)	IP	lt	kg
HPAM52	A251200400B#1	230/400 AC B14 265/460 AC B14	50 60	1,1 1,3	5 - 2,9 5 - 2,9	936 1123	79 82	56	17,7	95

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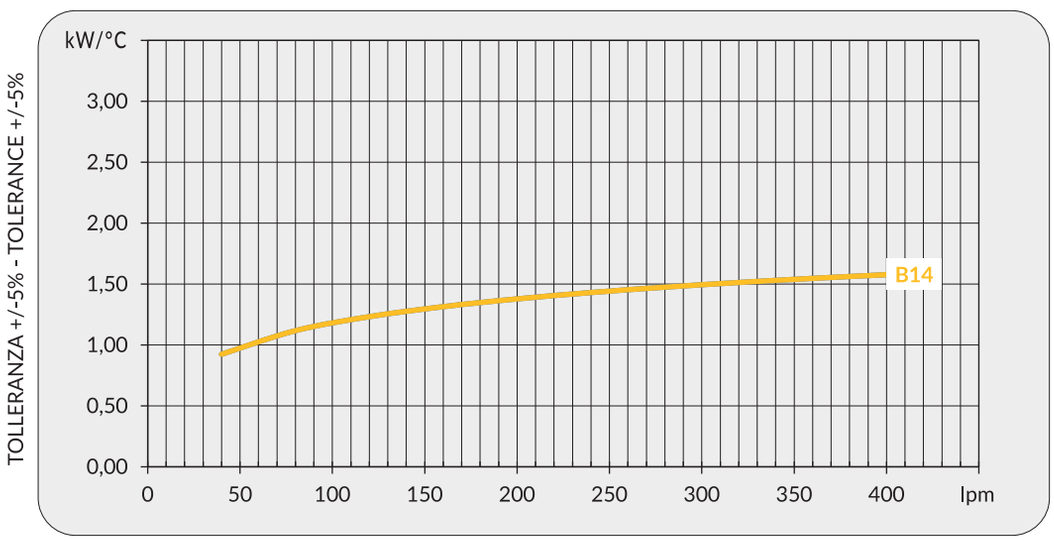
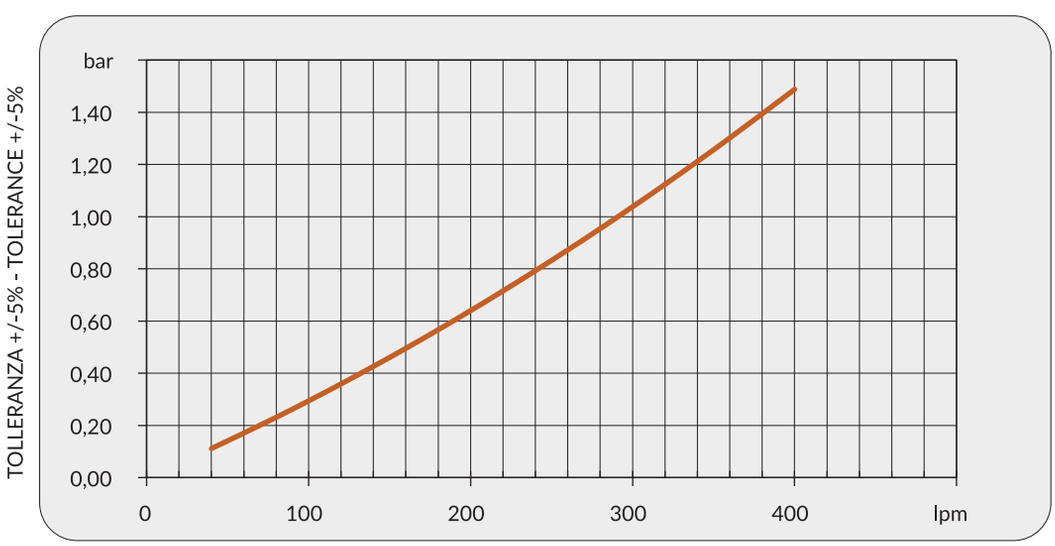
Diagramma rendimento *Performance diagram*

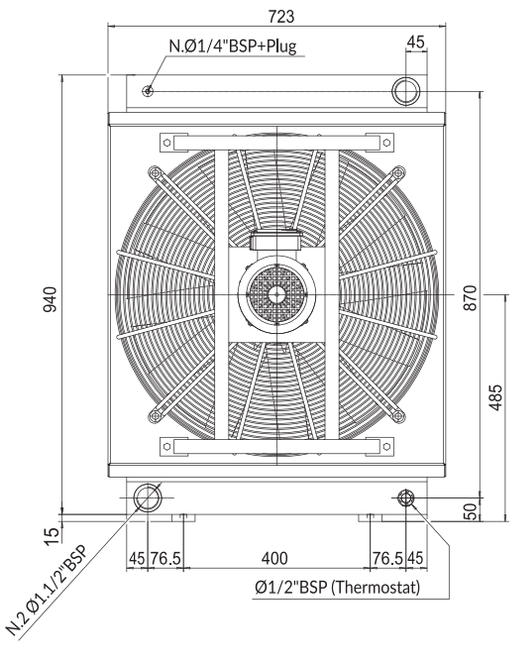


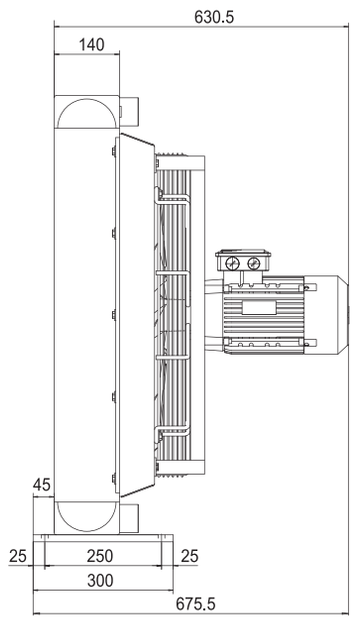
Perdite di carico *Pressure drop (@30cSt)*

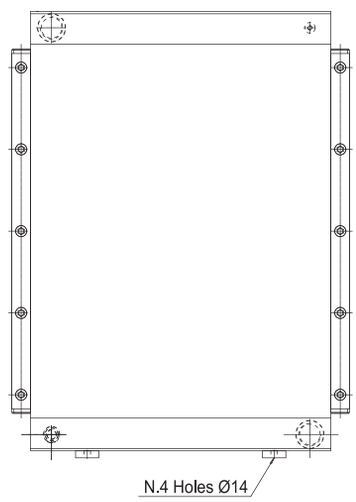


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

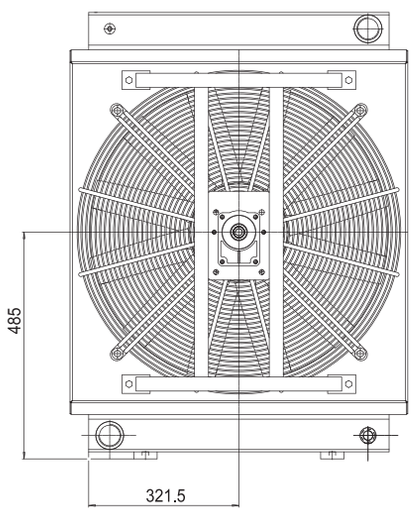
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

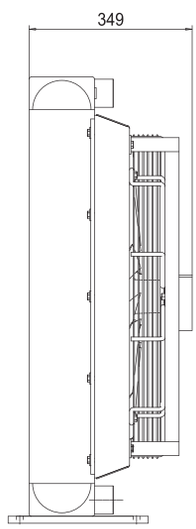


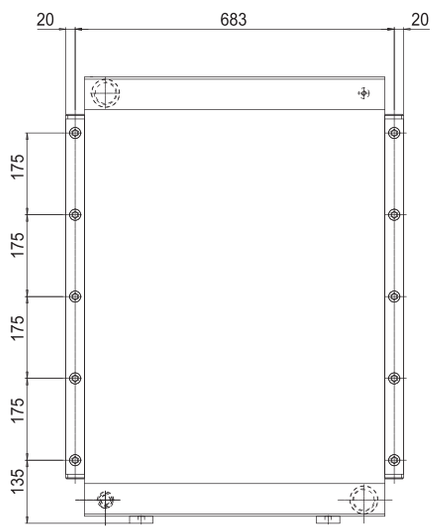




P/N A251300400B##







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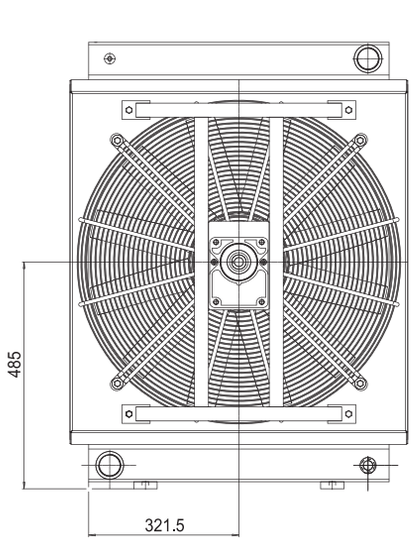

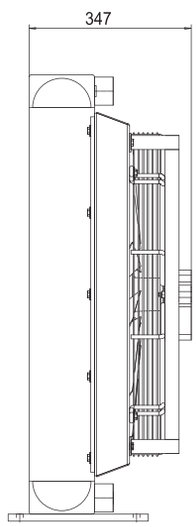

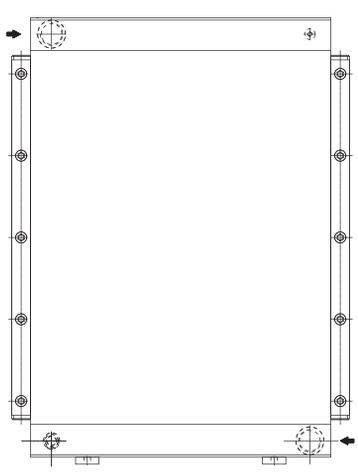

P/N A2513003000##

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Modello Model	P/N	V	Hz	kW(±10%)	A (±10%)	rpm	dB (A)	IP	It	kg
HPAM72	A251300400B##	230/400 AC B14 265/460 AC B14	50 60	2,2 2,5	8,3 - 4,8 8,3 - 4,8	1435 1722	83 86	56	17,7	105
HPAM72	A2513002000## A2513003000##	Prepared for Gr.2 hydraulic motor Prepared for Gr.3 hydraulic motor						-	17,7	105

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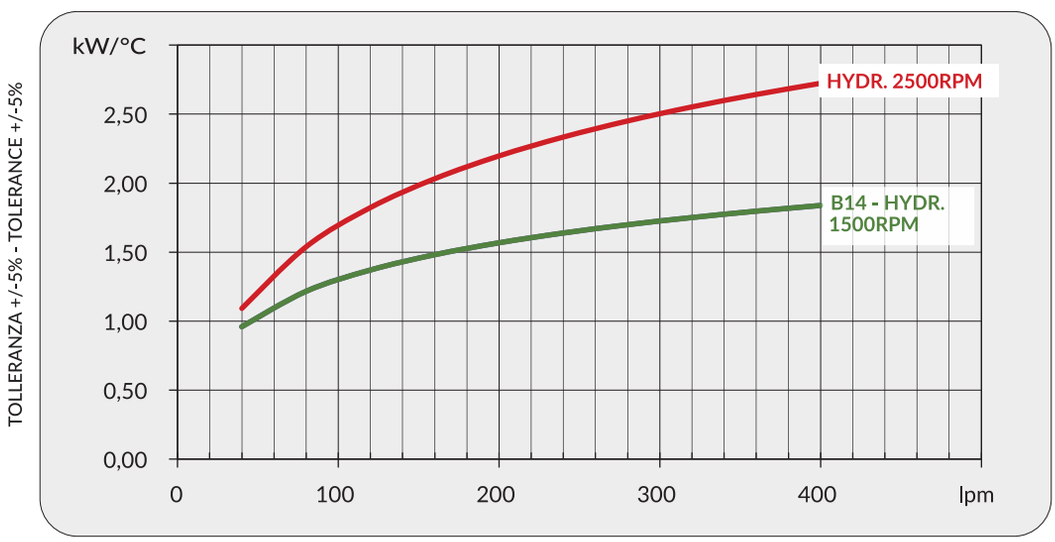
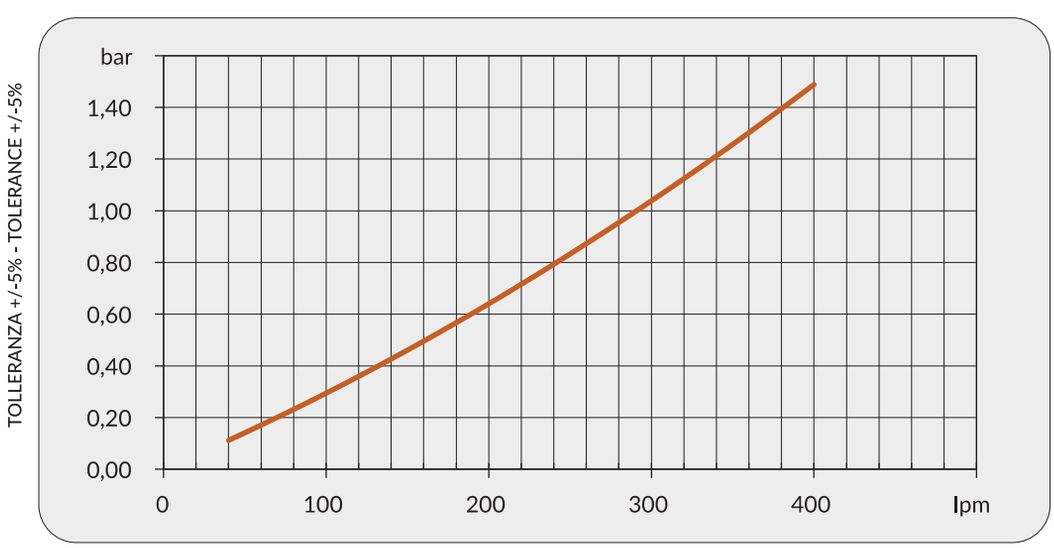
Diagramma rendimento *Performance diagram*

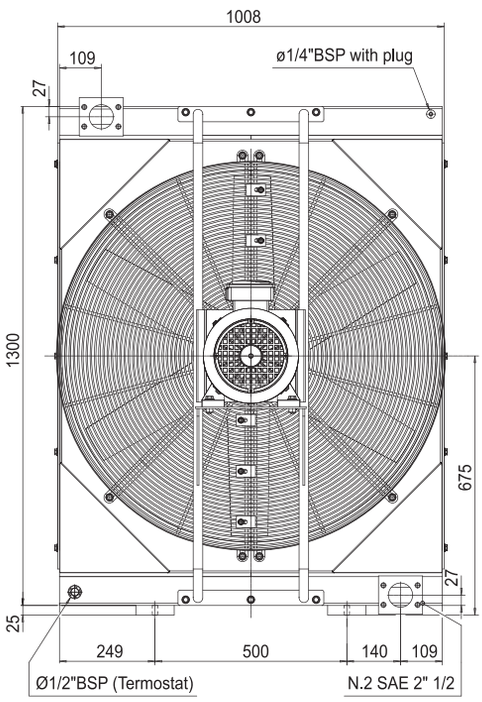


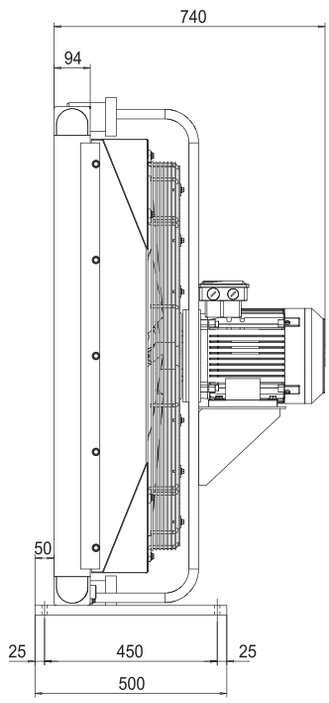
Perdite di carico *Pressure drop (@30cSt)*

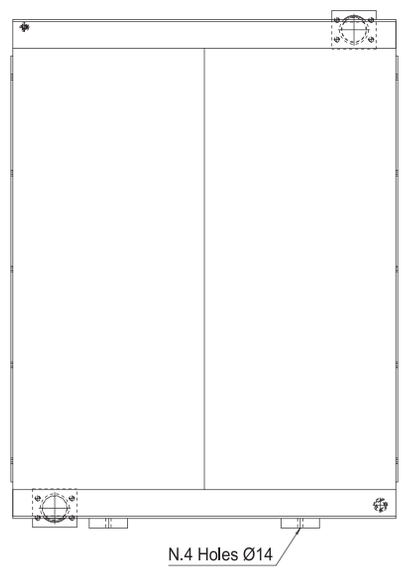


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

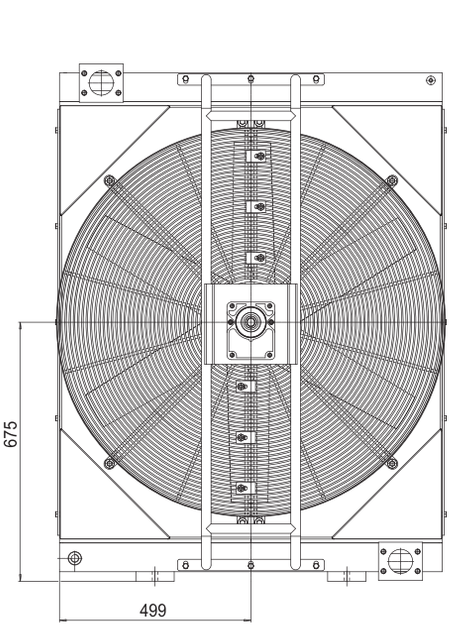
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

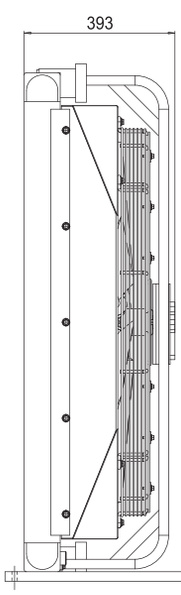


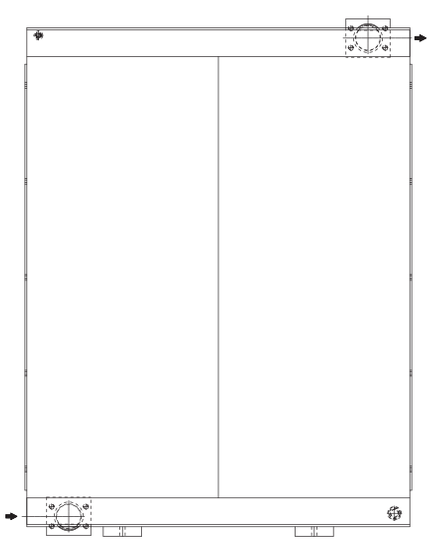




P/N A251400400B##







P/N A2514003000##

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Modello Model	P/N	V	Hz	kW(±10%)	A (±10%)	rpm	dB (A)	IP	lt	kg
HPAM135	A251400400B##	230/400 AC B14 265/460 AC B14	50 60	3 3,5	12,1 - 7,0 12,1 - 7,0	969 1163	80 84	56	26	126
HPAM135	A2514003000##	Prepared for Gr.3 hydraulic motor						-	26	61

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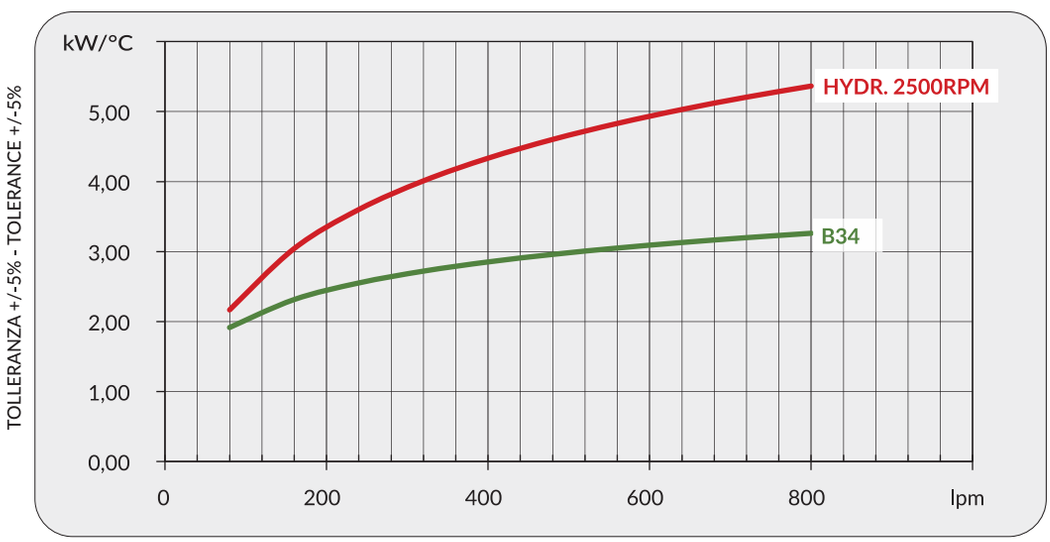
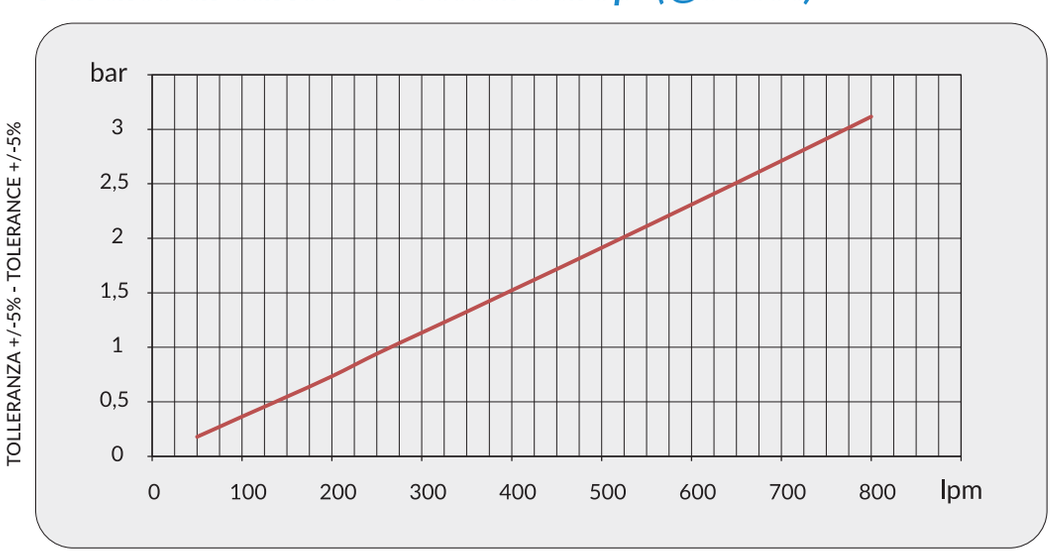
Diagramma rendimento *Performance diagram*

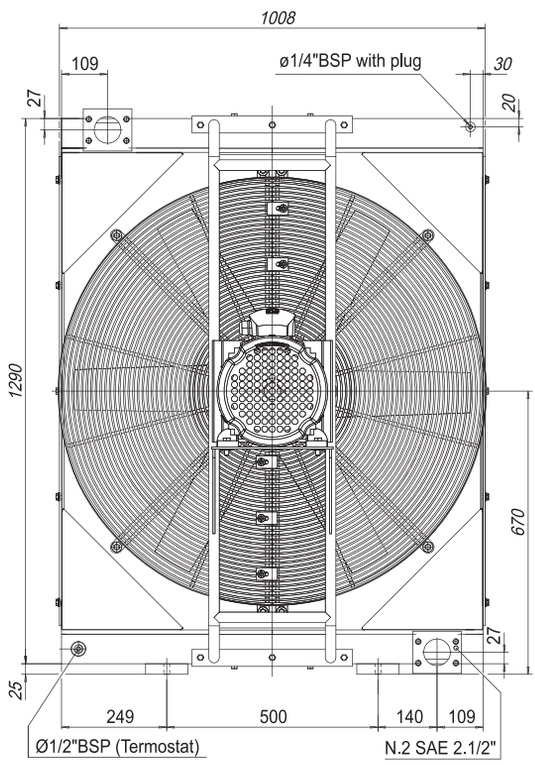


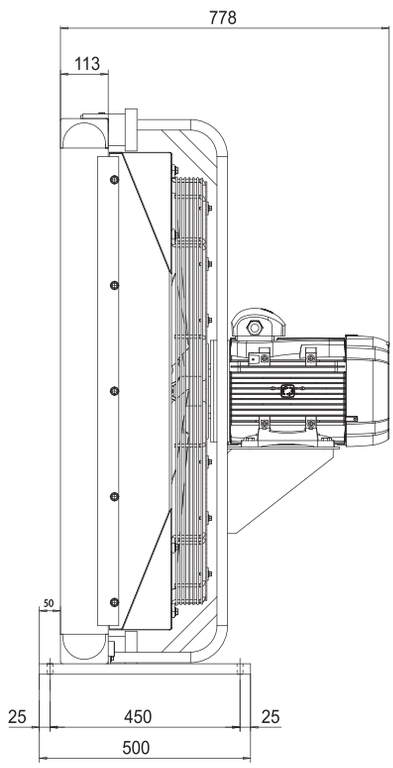
Perdite di carico *Pressure drop (@30cSt)*

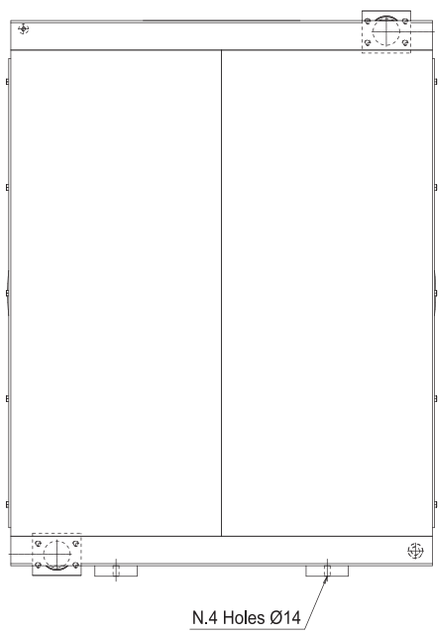


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

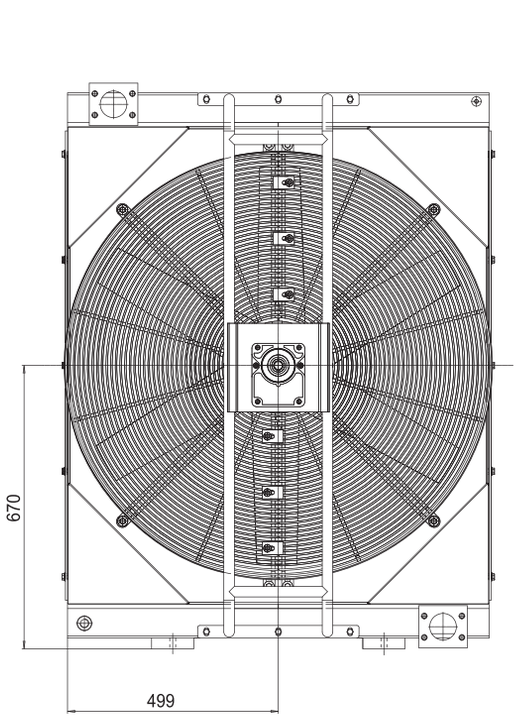
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

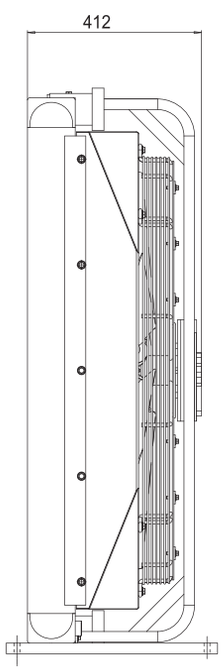


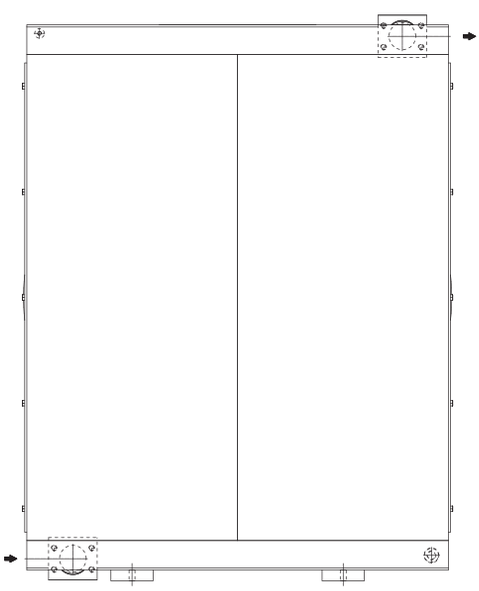




P/N A251500400B##







P/N A2515003000##

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Modello Model	P/N	V	Hz	kW(±10%)	A (±10%)	rpm	dB (A)	IP	It	kg
HPAM180	A251500400B##	400/690 AC B14 460/795 AC B14	50 60	7,5 8,6	14,4 - 8,3 14,4 - 8,3	1450 1740	89 93	56	31	200
HPAM180	A2515003000##	Prepared for Gr.3 hydraulic motor						56	31	143

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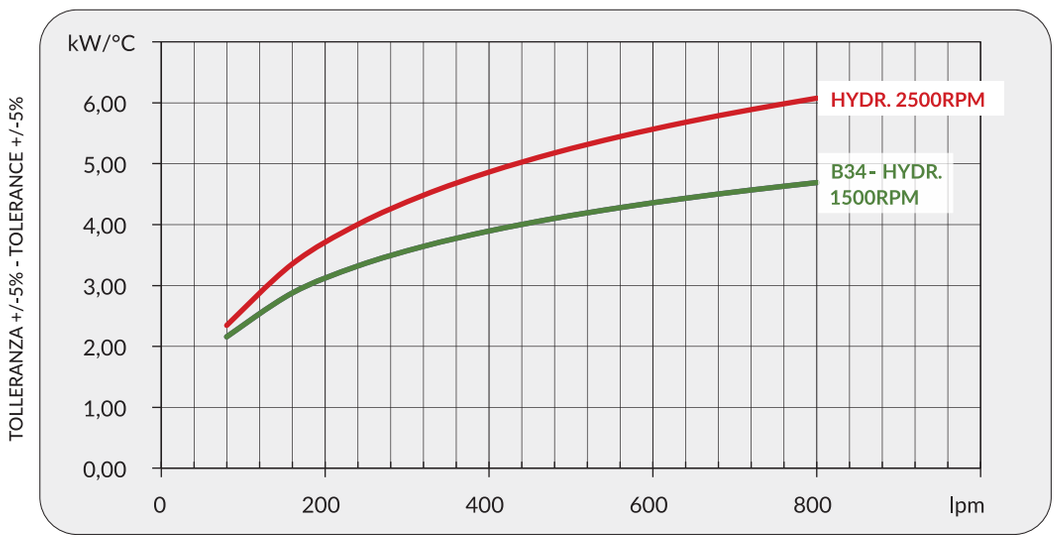
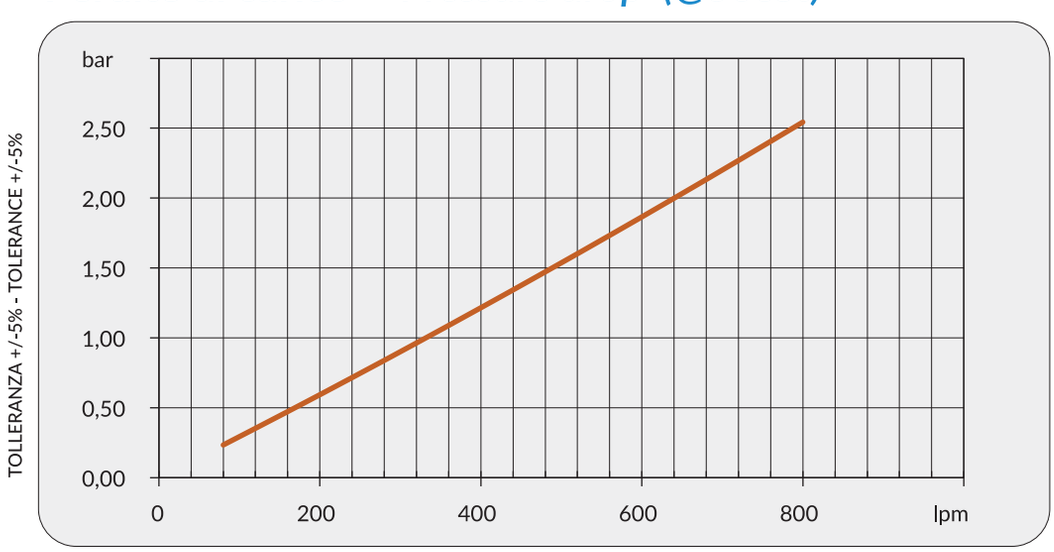
Diagramma rendimento *Performance diagram*

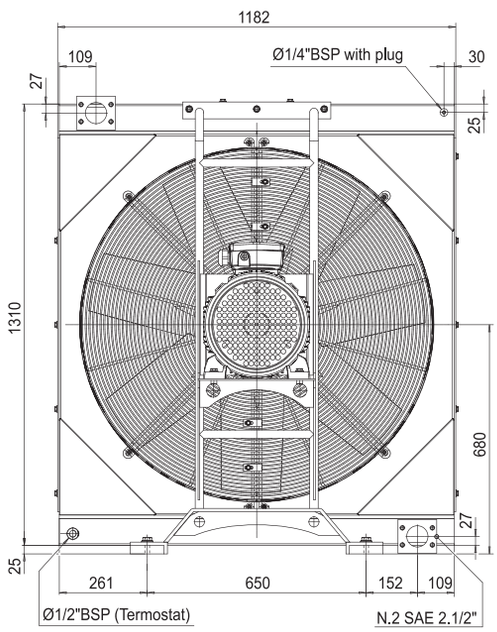


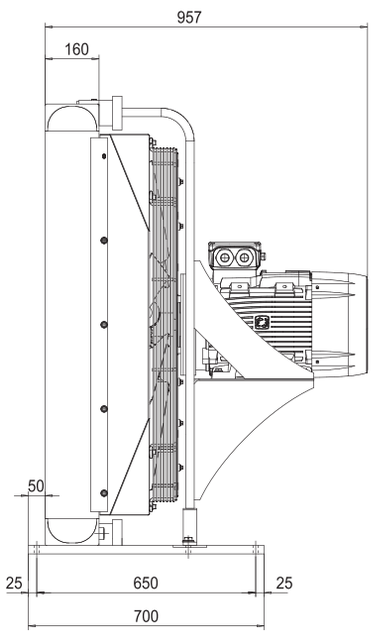
Perdite di carico *Pressure drop (@30cSt)*

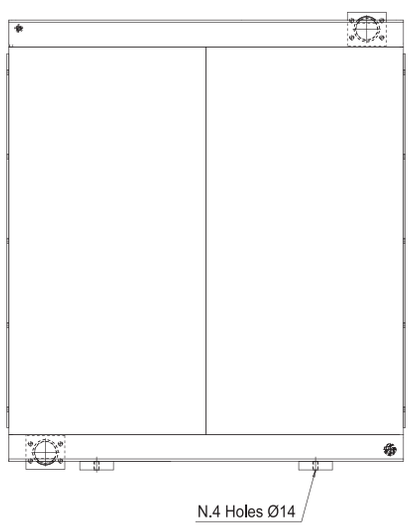


Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

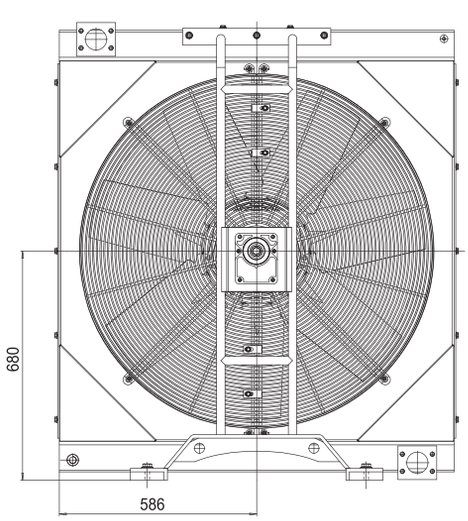
cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

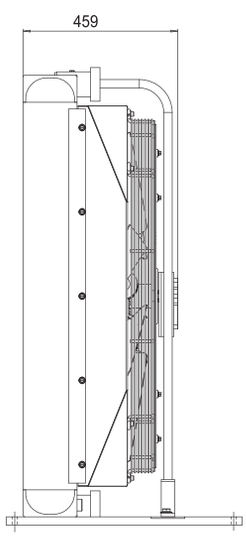


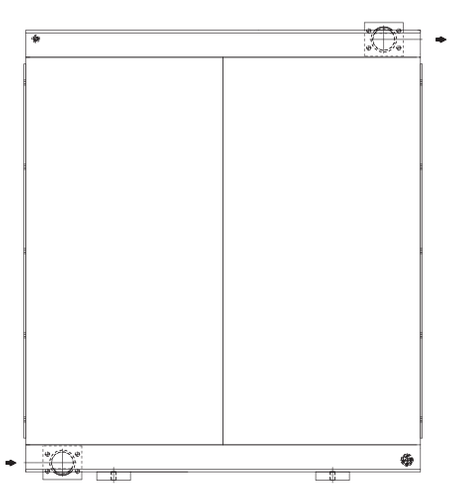




P/N A251600400B##







P/N A2516003000##

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Modello Model	P/N	V	Hz	kW(±10%)	A (±10%)	rpm	dB (A)	IP	It	kg
HPAM255	A251600400B##	400/690 AC B14 460/795 AC B14	50 60	15 17,3	28,1 - 16,3 28,1 - 16,3	1456 1747	96 100	56	56	358
HPAM255	A2516003000##	Prepared for Gr.3 hydraulic motor						-	56	210

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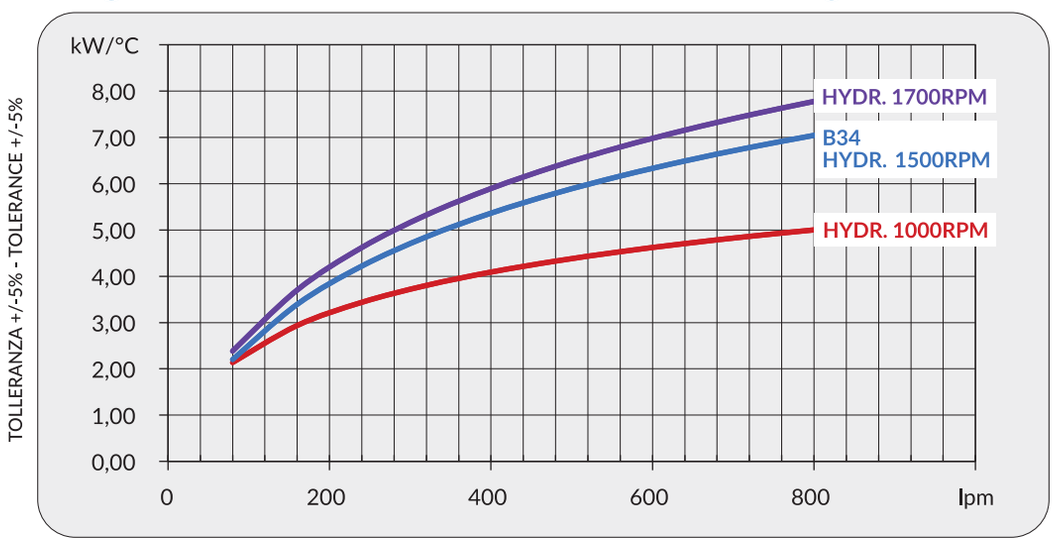
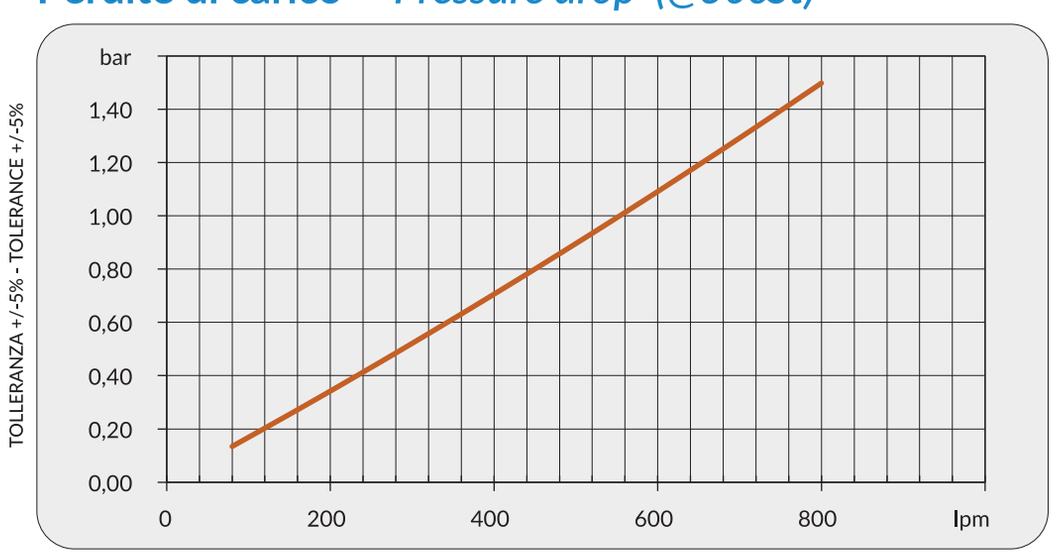
Diagramma rendimento *Performance diagram*



Perdite di carico *Pressure drop (@30cSt)*



Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



EMMEGI®
HEAT-EXCHANGERS

Serie HPEx
HPEx Series

APPLICAZIONE

APPLICATION



La linea di scambiatori SERIE HPEx è nata per soddisfare le esigenze di clienti che cercano un prodotto che coniughi buone performance con la sicurezza in ambienti pericolosi.
Tali prodotti sono idonei, infatti, per ambienti industriali con presenza di gas che rendono l'atmosfera potenzialmente esplosiva.
La SERIE HPEx è stata sviluppata in accordo alla direttiva ATEX 2014/34/UE.
Gli scambiatori HPEx, gruppo II e categoria 2G, sono idonei all'utilizzo in zona 1 e zona 2

The HPEx series heat exchanger line has been created to meet the needs of customers looking for a product that combines excellent performance with safety in dangerous environments.
Indeed, these products are suitable for industrial environments where the presence of gases makes the atmosphere potentially explosive.
The HPEx series has been developed in accordance with ATEX directive 2014/34/EU.
HPEx exchangers, group II category 2G, are suitable for use in zone 1 and zone 2.









Denominazione codice prodotto

Ordering code

A280000 **400B** **01**

MODELLO *MODEL*

A280000	(HPEx06)
A280100	(HPEx12)
A280200	(HPEx18)
A280300	(HPEx24)
A280400	(HPEx30)
A280500	(HPEx36)
A280600	(HPEx42)
A280700	(HPEx50)
A280800	(HPEx52)
A280900	(HPEx72)
A281000	(HPEx135)
A281100	(HPEx180)
A281200	(HPEx255)

TIPO DI MOTORIZZAZIONE *FAN MOTOR TYPE*

400B (Electric Motor AC 230-400V 50Hz / 265-460V 60Hz - 280-480V 60Hz - 400-690V 50HZ / 460-795V 60Hz)

TIPO DI VENTILAZIONE *VENTILATING TYPE*

01 Aspirante Suction air flow

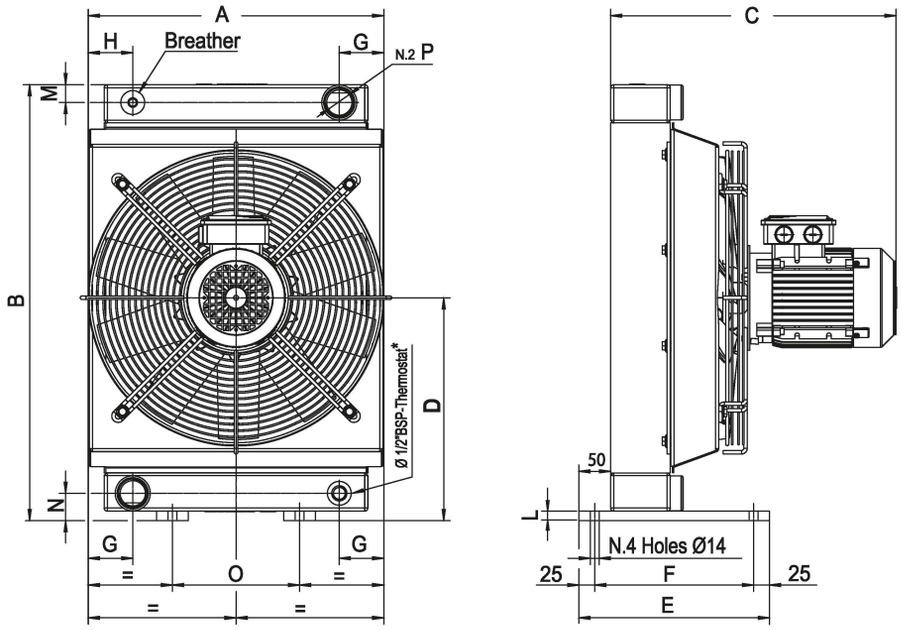


Serie HPEx - *HPEx Series*

Modello *Model*	Codice *Code*
HPEx 06	A280000
HPEx 12	A280100
HPEx 18	A280200
HPEx 24	A280300
HPEx 30	A280400
HPEx 36	A280500
HPEx 42	A280600
HPEx 50	A280700
HPEx 52	A280800
HPEx 72	A280900
HPEx 135	A281000
HPEx 180	A281100
HPEx 255	A281200

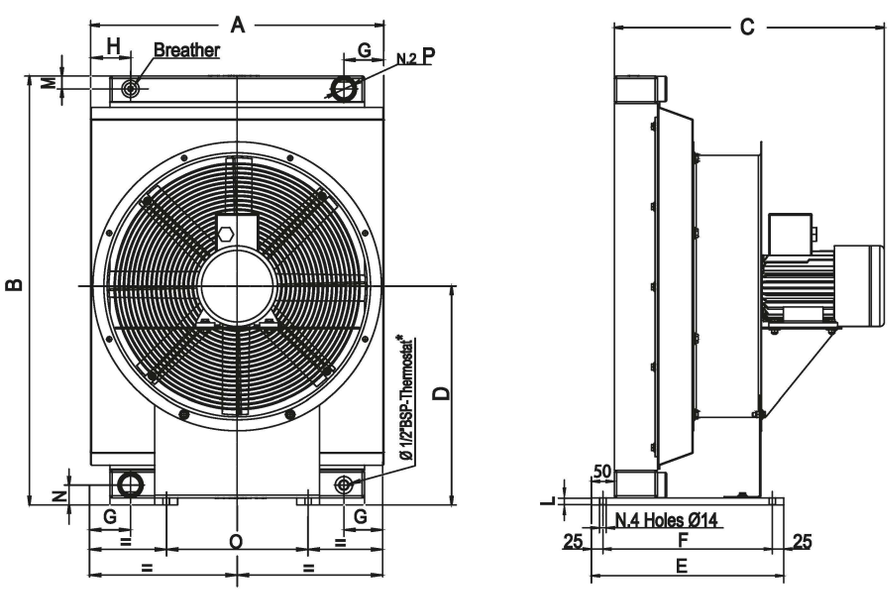






Termostato fornito separatamente - contattare Emmegi - *Thermostat supplied separately - contact Emmegi

Modello Model	Codice Code	Dimensioni / dimensions												
		A	B	C	D	E	F	G	H	L	M	N	O	P
HPEx06	A280000400B01	285	340	388	175	250	200	57.5	52.5	10	25	30	100	Ø 3/4 " BSP
HPEx12	A280100400B01	357	400	401	205	250	200	65	50	10	25	35	150	Ø 1 " BSP
HPEx18	A280200400B01	450	510	403	260	250	200	65	50	10	25	35	200	Ø 1 " BSP
HPEx24	A280300400B01	450	535	452	275	300	250	70	70	15	28	43	200	Ø 1 1/4 " BSP
HPEx30	A280400400B01	465	685	462	350	300	250	70	70	15	28	43	200	Ø 1 1/4 " BSP



Termostato fornito separatamente - contattare Emmegi - *Thermostat supplied separately - contact Emmegi

Modello Model	Codice Code	Dimensioni / dimensions												
		A	B	C	D	E	F	G	H	L	M	N	O	P
HPEx36	A280500400B01	610	785	591	400	300	250	72	72	15	28	43	310	Ø 1 1/4 " BSP
HPEx42	A280600400B01	640	935	476.5	589.5	420	370	87	87	15	28	43	310	Ø 1 1/4 " BSP
HPEx50	A280700400B01	725	955	630	485	466	416	87	87	15	35	50	400	Ø 1 1/2 " BSP
HPEx52	A280800400B01	725	955	658	485	493	443	87	87	15	35	50	400	Ø 1 1/2 " BSP
HPEx72	A280900400B01	725	955	658	485	493	443	87	87	15	35	50	400	Ø 1 1/2 " BSP

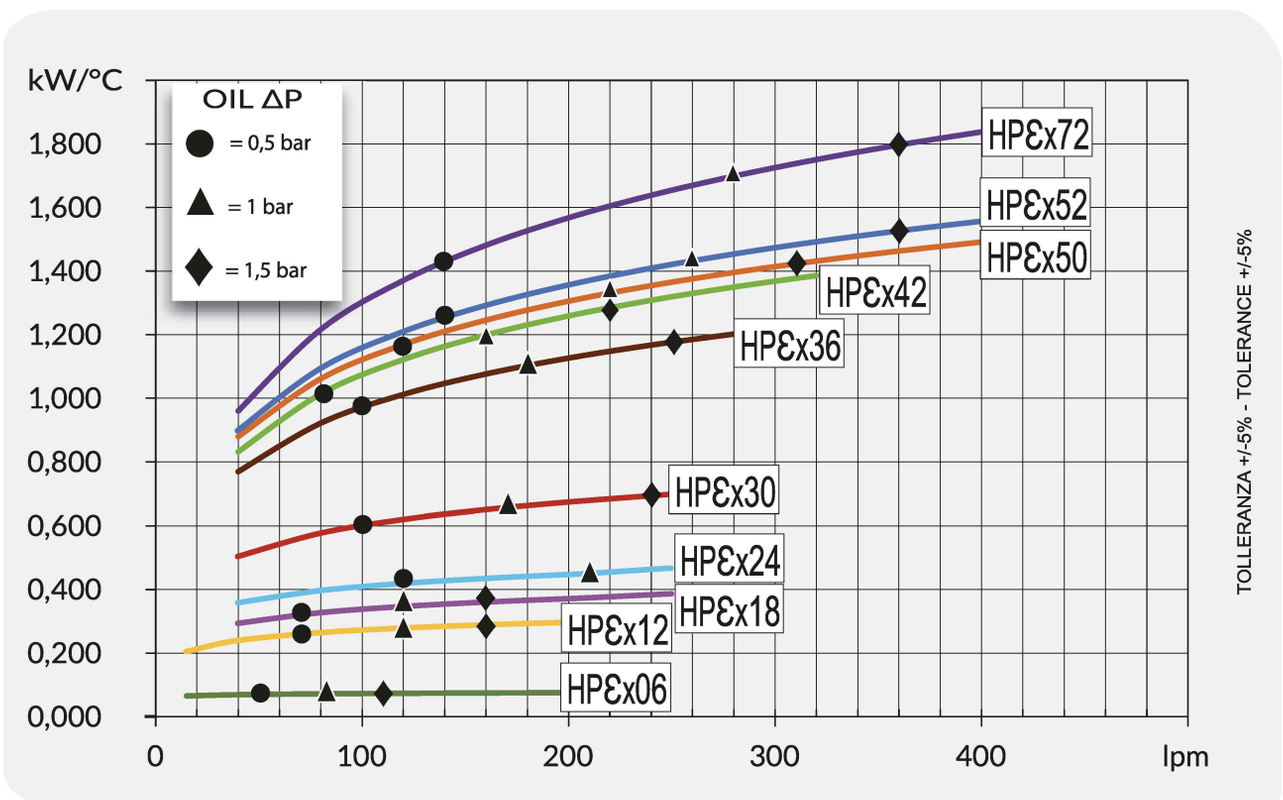
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative - Over-all dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Modello Model	Codice Code	Dati tecnici - Technical Data								
		V	Hz	kW	A	rpm	db (A)	IP	It	kg
HPEx06	A280000400B01	230/400 AC B14 265/460 AC B14	50 60	0,25 0,29	2,1 - 1,2	1400 1680	62 66	66	1,2	13
HPEx12	A280100400B01	230/400 AC B14 265/460 AC B14	50 60	0,25 0,29	2,1 - 1,2	1400 1680	74 78	66	1,9	17
HPEx18	A280200400B01	230/400 AC B14 265/460 AC B14	50 60	0,37 0,43	2,6 - 1,5	1370 1650	74 78	66	2,9	20
HPEx24	A280300400B01	230/400 AC B14 265/460 AC B14	50 60	0,55 0,63	3,0 - 1,7	1410 1690	76 80	66	6,2	28
HPEx30	A280400400B01	230/400 AC B14 265/460 AC B14	50 60	0,75 0,86	3,8 - 2,2	1410 1690	73 77	66	6,8	37
HPEx36	A280500400B01	230/400 AC B14 265/460 AC B14	50 60	1,1 1,3	5,2 - 3,0	1440 1690	76 84	66	9,4	60
HPEx42	A280600400B01	230/400 AC B14 265/460 AC B14	50 60	1,1 1,3	5,2 - 3,0	1410 1690	80 84	66	10,6	65
HPEx50	A280700400B01	230/400 AC B14 265/460 AC B14	50 60	1,1 1,3	5,9 - 3,4	910 1090	79 83	66	14,2	90
HPEx52	A280800400B01	230/400 AC B14 265/460 AC B14	50 60	1,1 1,3	5,9 - 3,4	910 1090	79 82	66	17,7	95
HPEx72	A280900400B01	230/400 AC B14 265/460 AC B14	50 60	2,2 2,5	8,9 - 5,2	1410 1690	83 86	66	17,7	105

Diagramma rendimento & Perdite di carico (@30cSt)

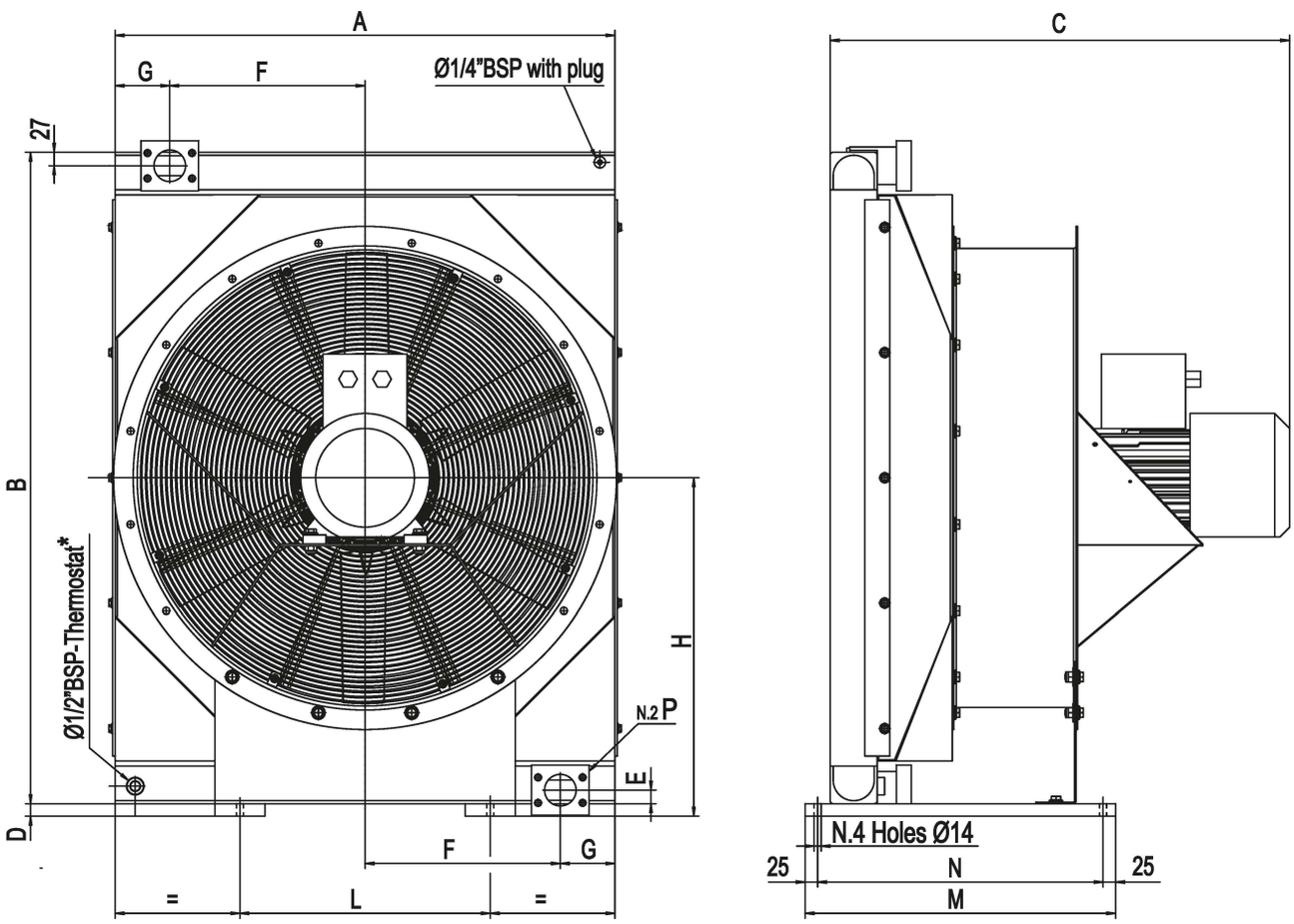
Performance & Pressure drop diagram (@30cSt)



I diagrammi si riferiscono alle versioni a 50Hz / The diagrams refer to 50Hz versions
Per versioni a 60Hz Contattare EMMEGI / For 60Hz versions contact EMMEGI

Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



*Termostato fornito separatamente - contattare Emmegi -*Thermostat supplied separately - contact Emmegi

Modello Model	Codice Code	DIMENSIONI - Overall dimension											
		A	B	C	D	E	F	G	H	L	M	N	P
HPƐx135	A281000400B01	1008	1300	914	25	27	390	109	675	500	620	570	SAE 2.1/2"**
HPƐx180	A281100400B01	1008	1290	1016	25	27	390	109	670	500	620	570	SAE 2.1/2"**
HPƐx255	A281200400B01	1182	1310	1127	25	27	477	109	680	650	700	650	SAE 2.1/2"**

** Flange: SAE 3000

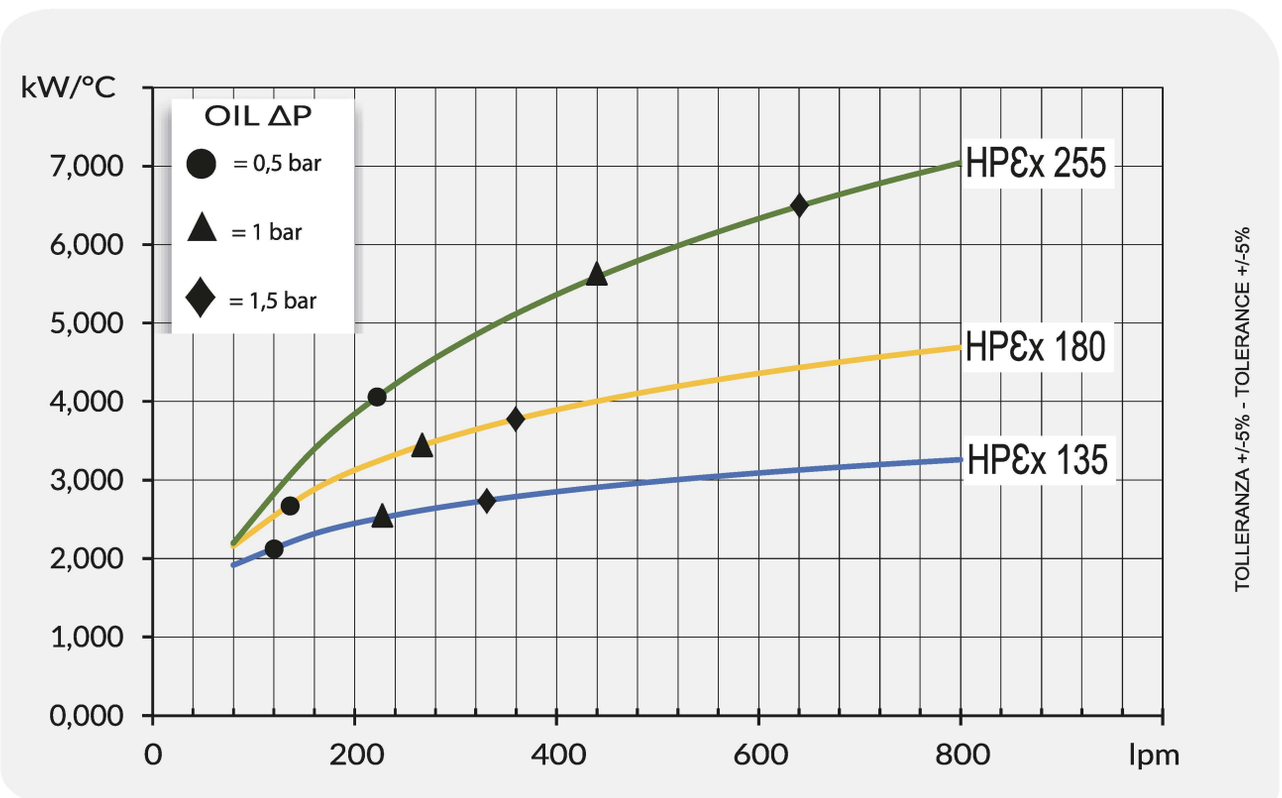
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

Modello Model	Codice Code	Dati tecnici - Technical Data								
		V	Hz	kW	A	rpm	db (A)	IP	lt	kg
HPEx135	A281000400B01	230/400 265/460	50 60	3 3,5	14,7 / 8,5	945 1135	80 84	66	26	126
HPEx180	A281100400B01	400/690 460/795	50 60	7,5 8,6	16,3 / 9,4	1448 1738	89 93	66	31	200
HPEx255	A281200400B01	400/690 460/795	50 60	15 17,3	30,6 / 17,7	1450 1740	96 100	66	56	358

Diagramma rendimento & Perdite di carico (@30cSt)

Performance & Pressure drop diagram (@30cSt)



I diagrammi si riferiscono alle versioni a 50Hz / The diagrams refer to 50Hz versions
Per versioni a 60Hz Contattare EMMEGI / For 60Hz versions contact EMMEGI

Fattore di correzione-F-(perdite di carico) *Correction factor-F-(pressure drop)*

cst	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3



EMMEGI®
HEAT-EXCHANGERS

Serie EBR
EBR Series

APPLICAZIONE
APPLICATION

La combinazione di elettroventole brushless di ultima generazione, ha permesso agli scambiatori della serie EBR di essere la soluzione di raffreddamento ottimale per svariate applicazioni mobili:

The combination of state-of-the-art brushless electric fans, makes the EBR series heat exchangers the optimal cooling solution for a wide range of mobile applications:

Industria agricola e forestale.
Gru mobili e fisse.
Veicoli industriali.
Veicoli municipali.
Macchine da costruzione.
Altro su richiesta.

Agriculture and forestry.
Mobile and stationary cranes.
Industrial vehicles.
Municipal vehicles.
Construction machines.
Others on request.









Denominazione codice prodotto
Ordering code

SERIE *SERIES* — **EBR**

MODELLO *MODEL* — **D4**

D4
D5
D6
24
30
40
44
60
70

TIPO DI MOTORIZZAZIONE *FAN MOTOR TYPE* — **24**

24 *DC 24V*

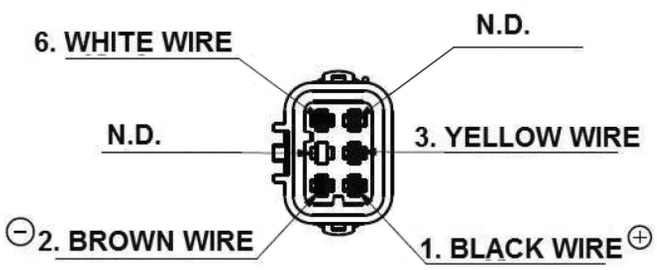
TIPO DI VENTILAZIONE *VENTILATING TYPE* — **01**

01 *Aspirante Suction air flow*



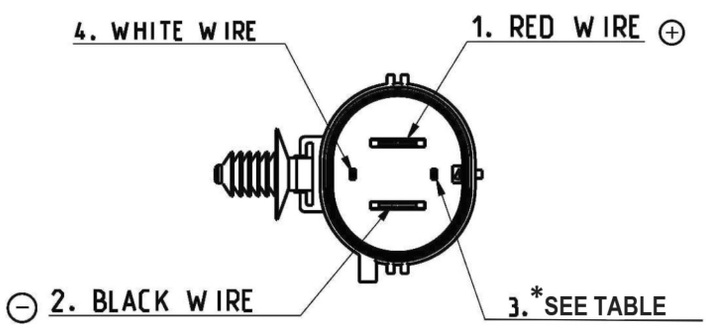
Connettori / Connectors and wires.

Model : EBRD42401 / EBR242401



DUCON 2.8	
1.Nero/Black :	+D
2.Marrone/Brown :	-D
3.Giallo/Yellow :	PWM / E
6.Bianco/White :	FO

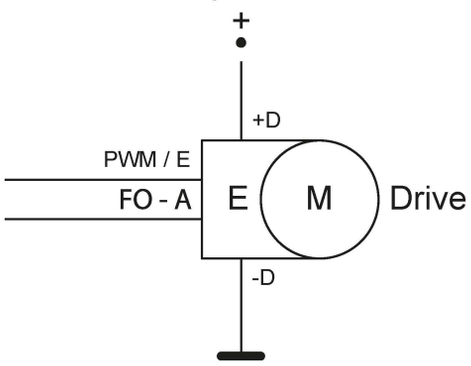
EBRD52401/EBRD62401*/EBR302401/EBR402401*/EBR442401*/EBR602401/EBR702401*



YAZAKI			
1.Rosso/Red :	+D		
2.Nero/Black :	-D		
3.Nero/Black :	FO	*Giallo/Yellow :	A
4.Bianco/White :	PWM / E		

Collegamento elettrico / Drive diagram.

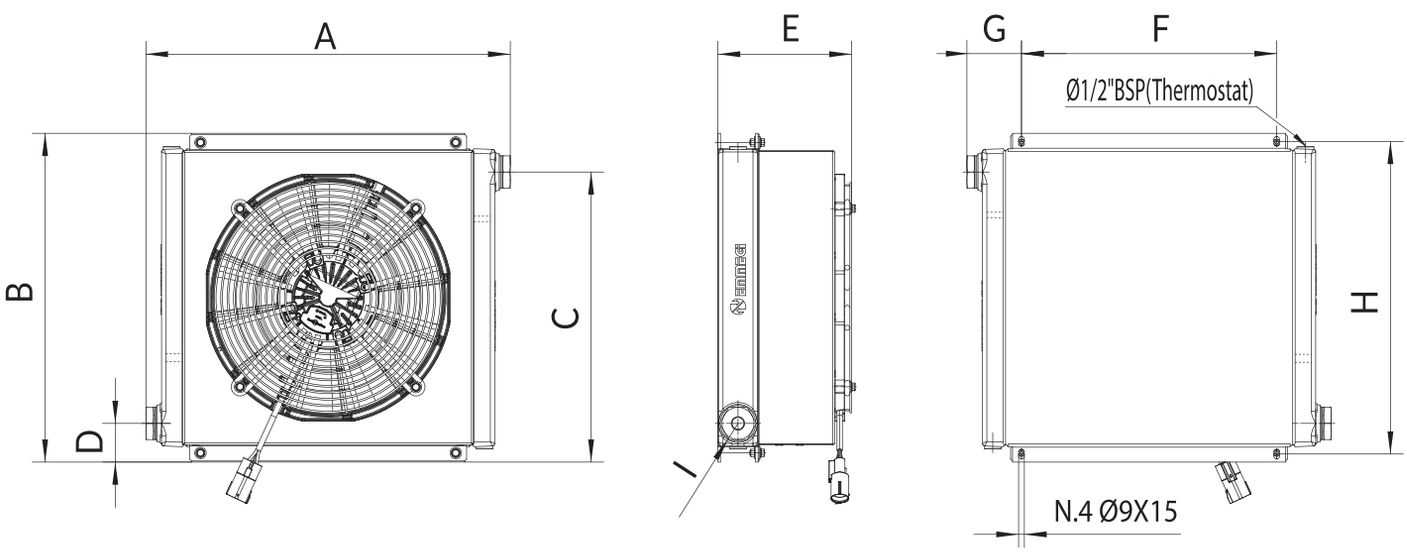
Lo schema di collegamento è indicato nella figura qui di seguito / The drive diagram is shown below.



Legenda / Key:
E : Elettronica integrata / integrated electronics
M : Motore elettrico / Motor
Drive : M+E
+ D : tensione alimentazione positivo / supply voltage plus
- D : tensione alimentazione negativo / supply voltage minus
PWM / E : controllo elettronico in ingresso / control input
FO : Feedback OUTPUT A: analogic INPUT

Il segnale PWM / E è usato come input per il controllo.
The signal pin PWM / E is used to control the Drive mode, it is the control input.
Il segnale FO è utilizzato per conoscere lo stato di funzionamento.
The signal pin FO is used to notify the Drive status.
Il segnale A può essere usato per controllare la velocità del Drive.
The signal pin A can be used to control speed of the Drive.

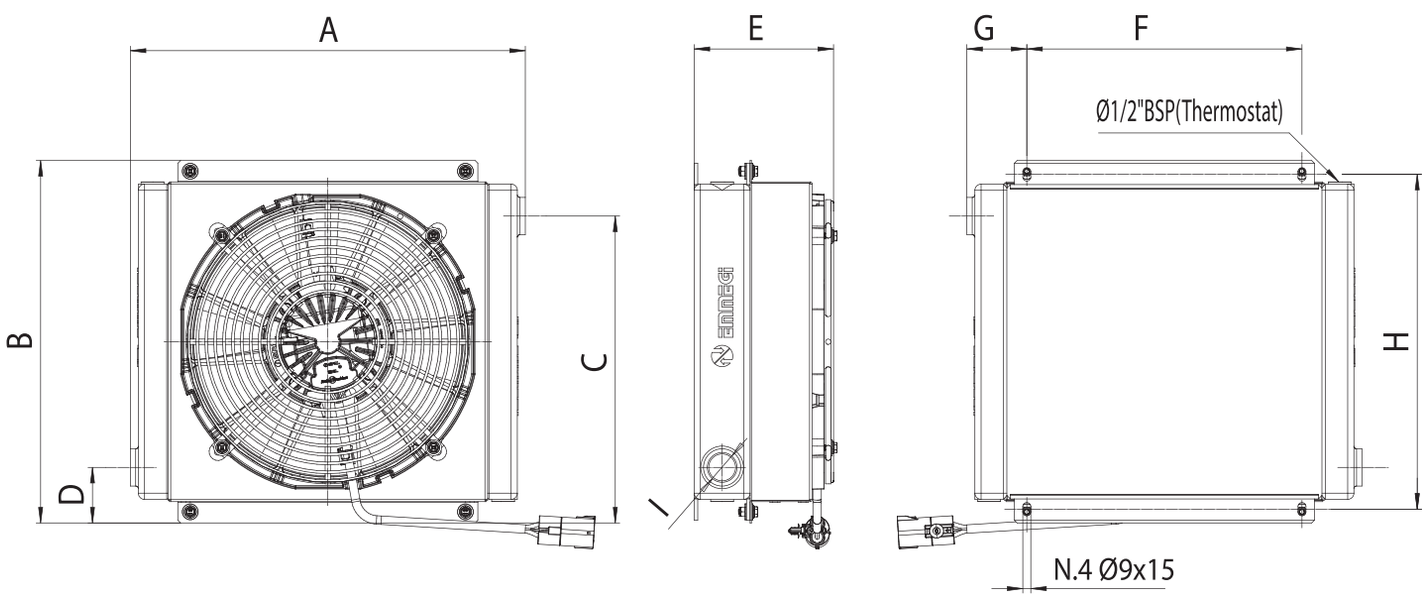
Cod. Emmegi Part Number	Dati tecnici / Technical data						
	Voltage (V)	Amp. rating (A)	Plug	Ø Fan	db(A)	Approx Weight (Kg)	Cooler volume (l)
EBRD42401	24	16	DUCON 2.8	255	78	12	1
EBRD52401	24	32	YAZAKI	305	85.5	15	1.6
EBRD62401	24	23	YAZAKI	355	79.5	21	2.7



Cod. Emmegi Part Number	Dimensioni / Dimension								
	A	B	C	D	E	F	G	H	I
EBRD42401	403	340	281	59	219	240	81.5	316	1/2" BSP
EBRD52401	468	401.5	342	59	208	305	81.5	376	1/2" BSP
EBRD62401	577	508	449	60	209	400	88	486	1/2" BSP

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

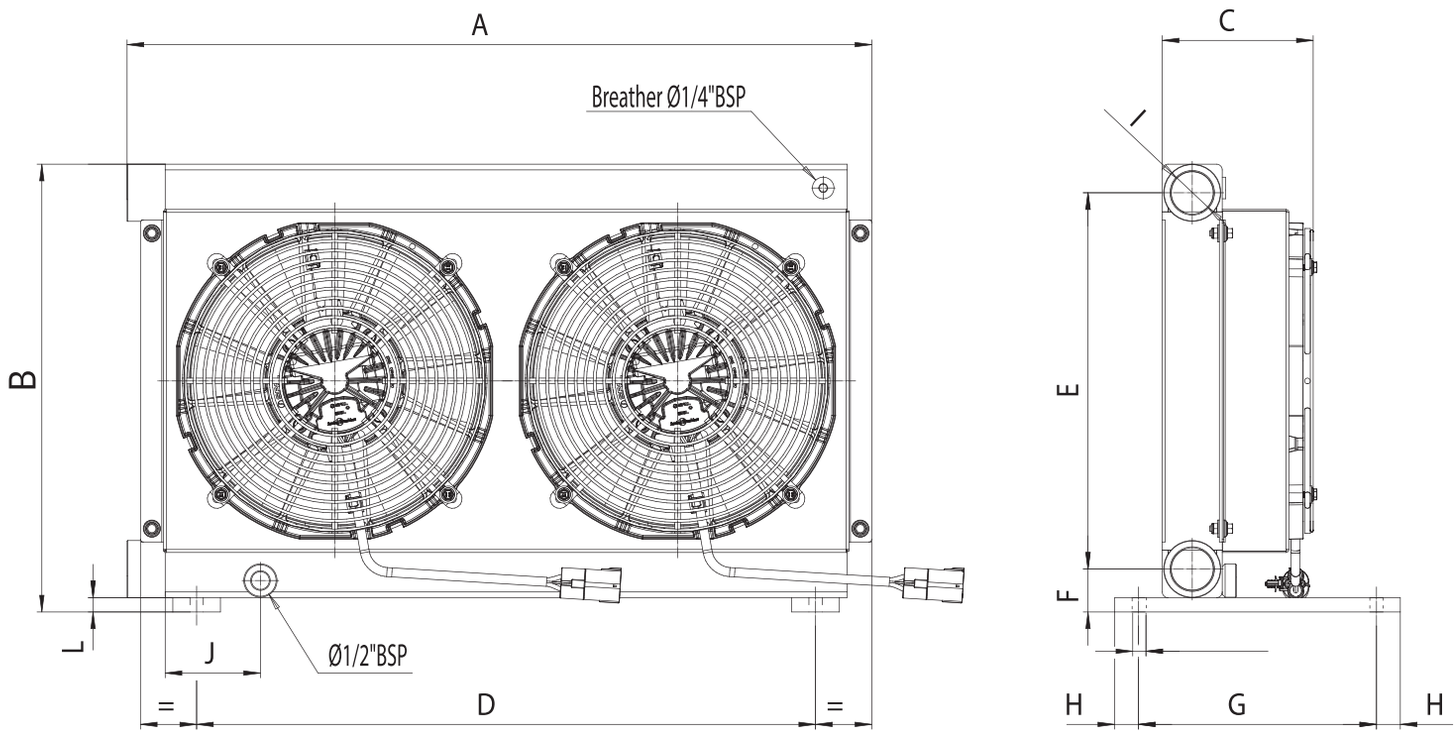
Cod. Emmegi Par Number	Dati tecnici / Technical data						
	Voltage (V)	Amp. rating (A)	Plug	Ø Fan	db(A)	Approx Weight (Kg)	Cooler volume (l)
EBR242401	24	16	DUCON 2.8	255	78	12	1
EBR302401	24	32	YAZAKI	305	85.5	15	1.6
EBR402401	24	23	YAZAKI	355	79.5	21	2.7
EBR442401	24	23	YAZAKI	355	79.5	26	6.6



Cod. Emmegi Par Number	Dimensioni / Dimension								
	A	B	C	D	E	F	G	H	I
EBR242401	380	340	281	59	219	240	70	315	1" BSP
EBR302401	455	402	342	59	208	310	67.5	377	1" BSP
EBR402401	540	512	450	61.5	210	400	70	487	1 1/4" BSP
EBR442401	600	508	430.5	77.5	240	400	100	483	1 1/4" BSP

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Cod. Emmegi Par Number	Dati tecnici / Technical data						
	Voltage (V)	Amp. rating (A)	Plug	Ø Fan	db(A)	Approx Weight (Kg)	Cooler volume (l)
EBR602401	24	32 (x2)	YAZAKI	305 (x2)	88.5	31	3.2
EBR702401	24	23 (x2)	YAZAKI	355 (x2)	88.5	43	5.4



Cod. Emmegi Par Number	Dimensioni / Dimension									
	A	B	C	D	E	F	G	H	I	J
EBR602401	782	470	208	650	395	45	250	25	1 1/2" BSP	100
EBR702401	982	565	208	850	490	45	250	25	1 1/2" BSP	100

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

DIAGRAMMA RENDIMENTO CON OLIO ISOVG 46 / *OIL ISO VG 46 PERFORMANCE*

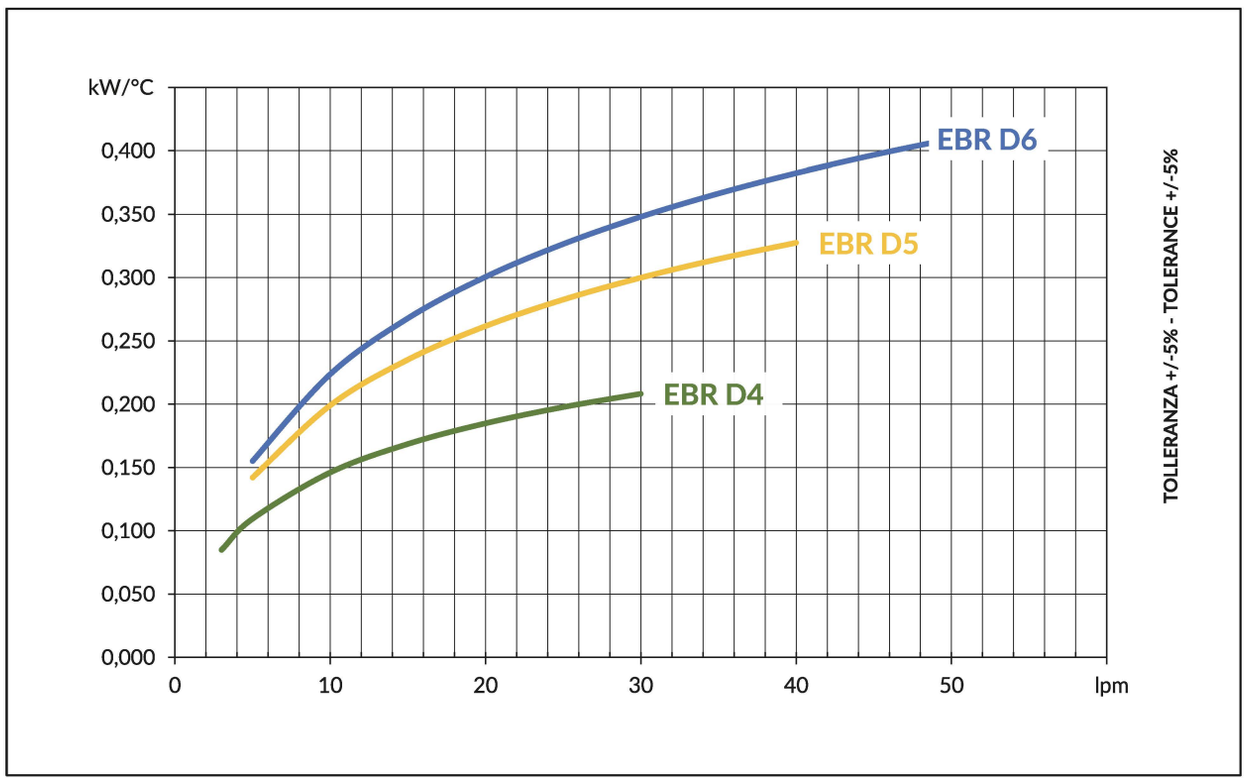


DIAGRAMMA PERDITE DI CARICO OLIO ISOVG 46 / *OIL ISO VG 46 PRESSURE DROP*

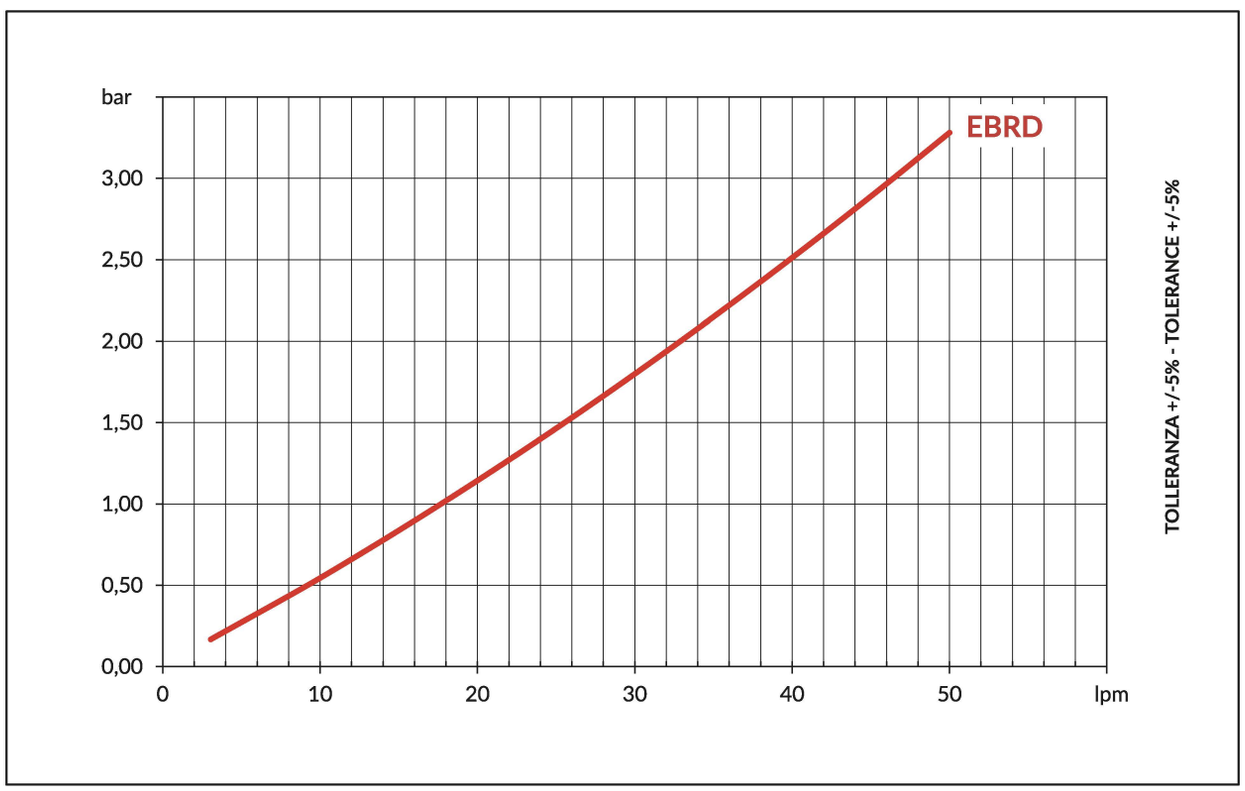


DIAGRAMMA RENDIMENTO CON ACQUA-GLICOLE 50 % / *WATER-GLYCOL 50 % PERFORMANCE*



PERDITE DI CARICO CON ACQUA-GLICOLE 50 % / *WATER-GLYCOL 50 % PRESSURE DROP*

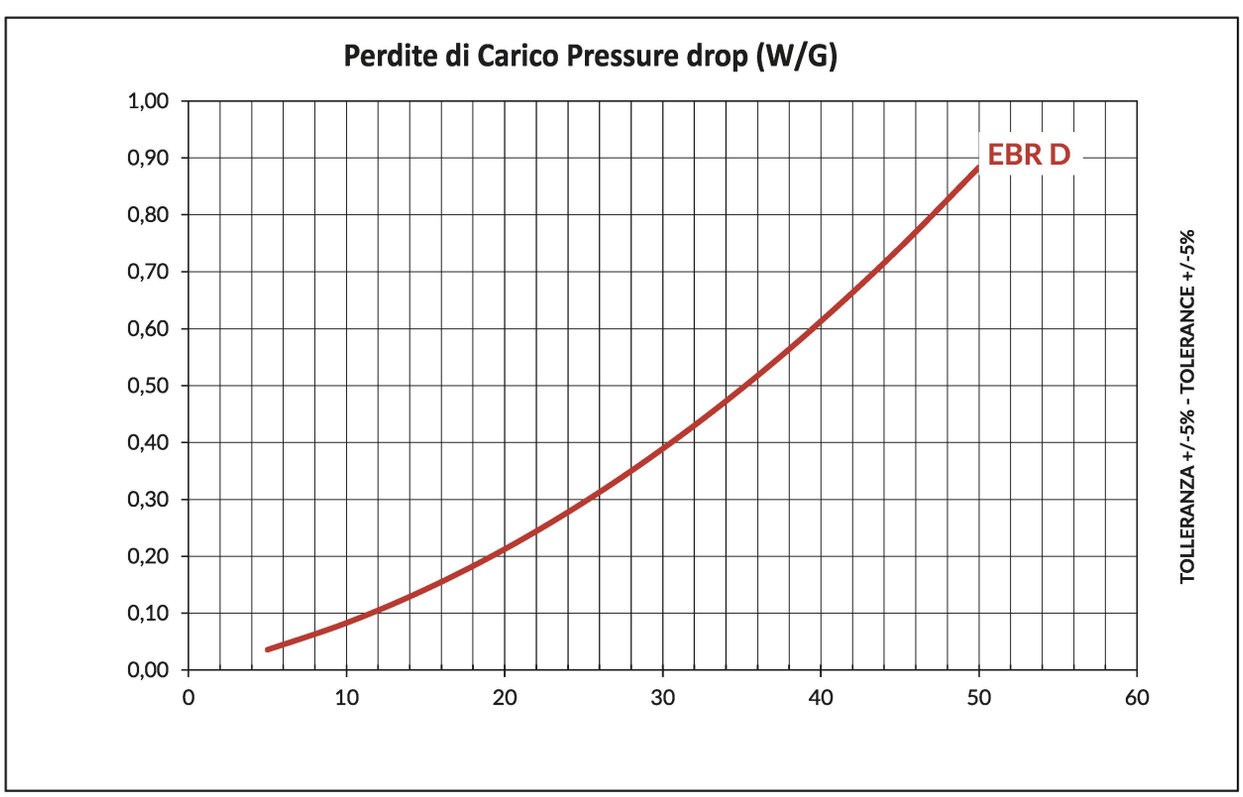


DIAGRAMMA RENDIMENTO CON OLIO ISOVG 46 / OIL ISO VG 46 PERFORMANCE

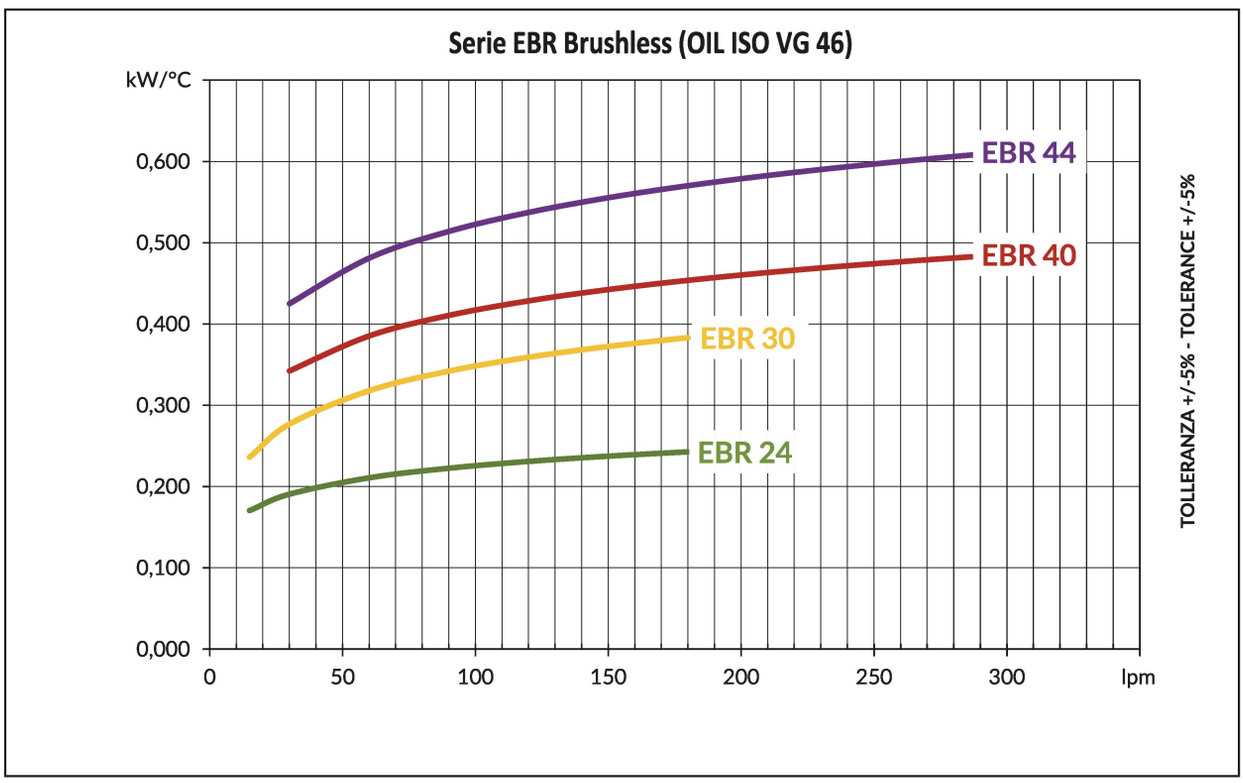


DIAGRAMMA PERDITE DI CARICO OLIO ISOVG 46 / OIL ISO VG 46 PRESSURE DROP

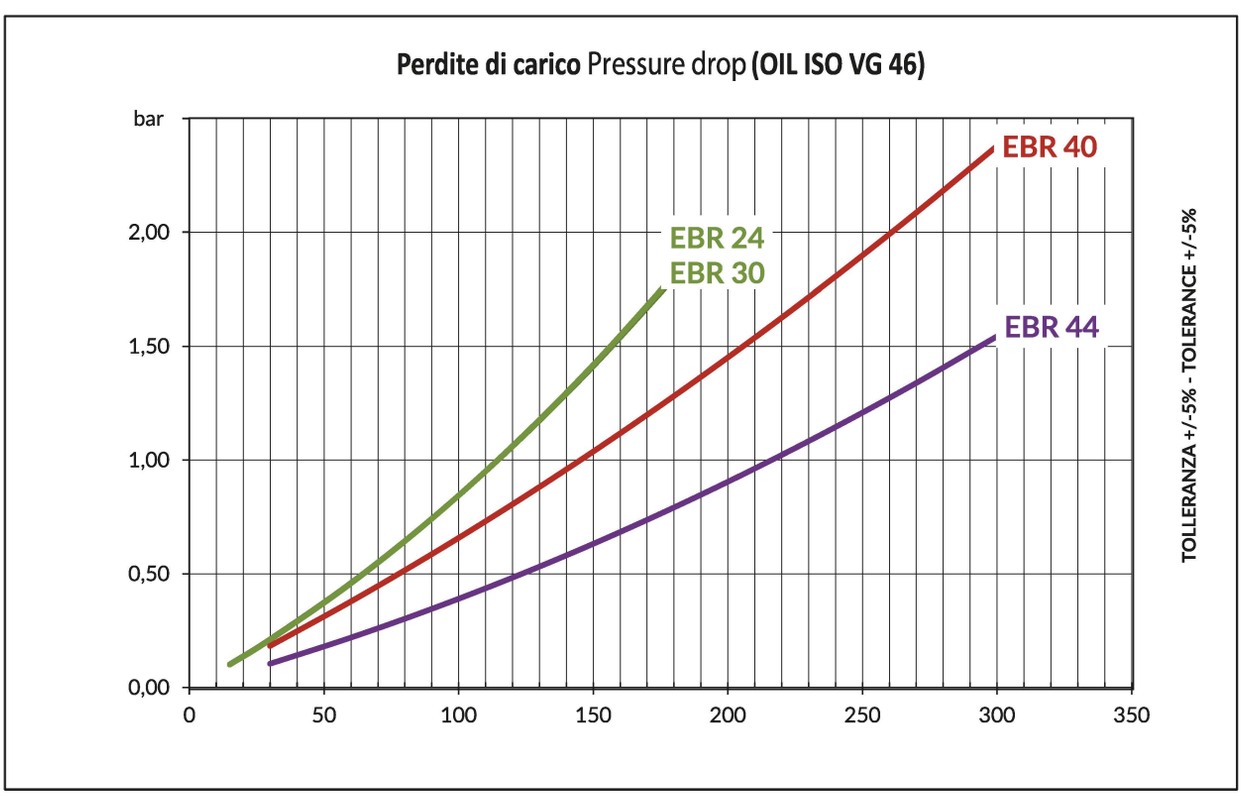


DIAGRAMMA RENDIMENTO ACQUA-GLICOLE 50% / *WATER-GLYCOL 46 PERFORMANCE*

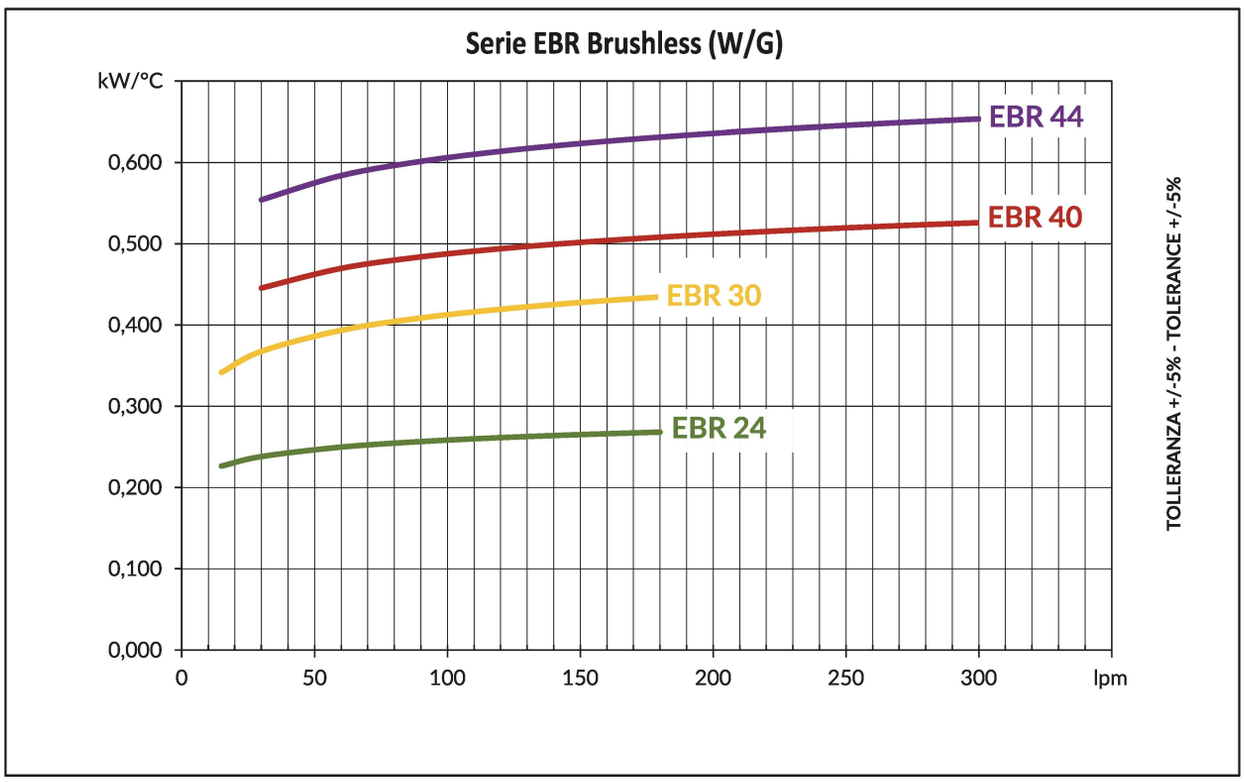


DIAGRAMMA PERDITE DI CARICO ACQUA-GLICOLE 50% / *WATER-GLYCOL 50% PERFORMANCE*

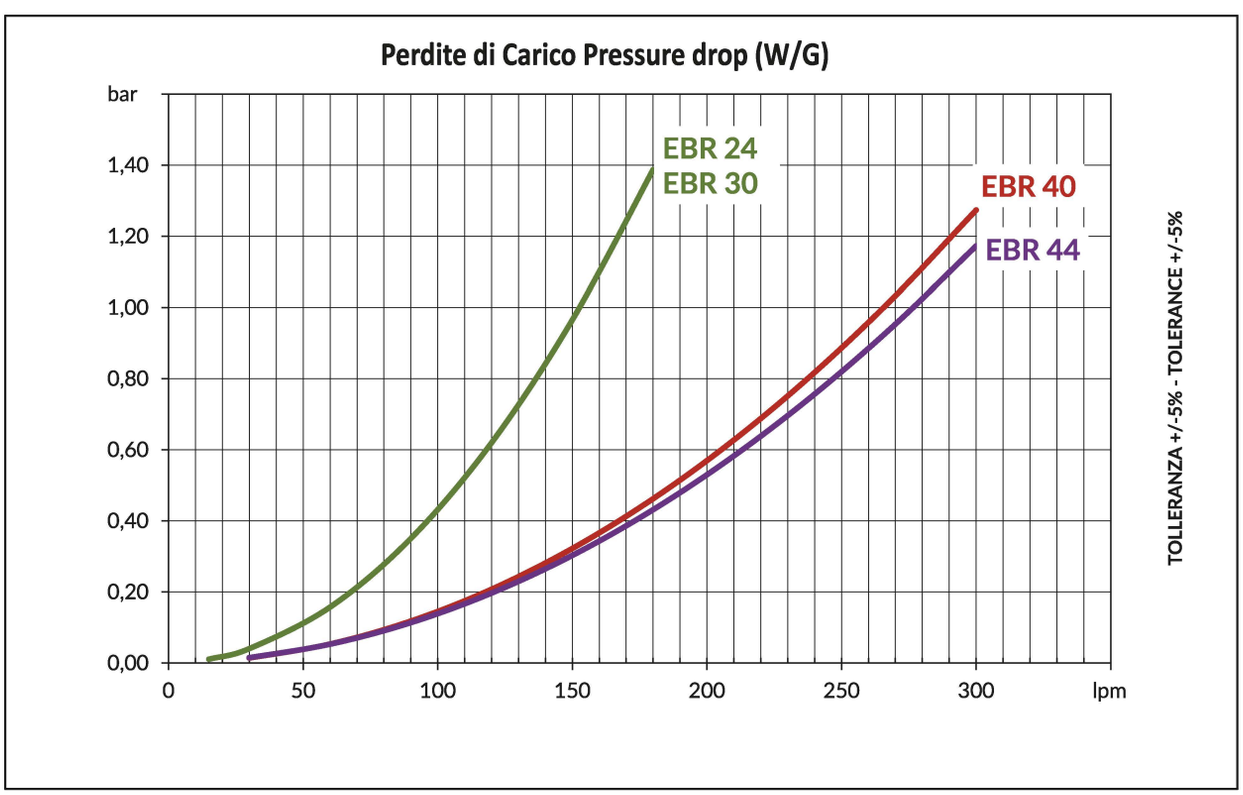


DIAGRAMMA RENDIMENTO CON OLIO ISOVG 46 / *OIL ISOVG 46 PERFORMANCE*

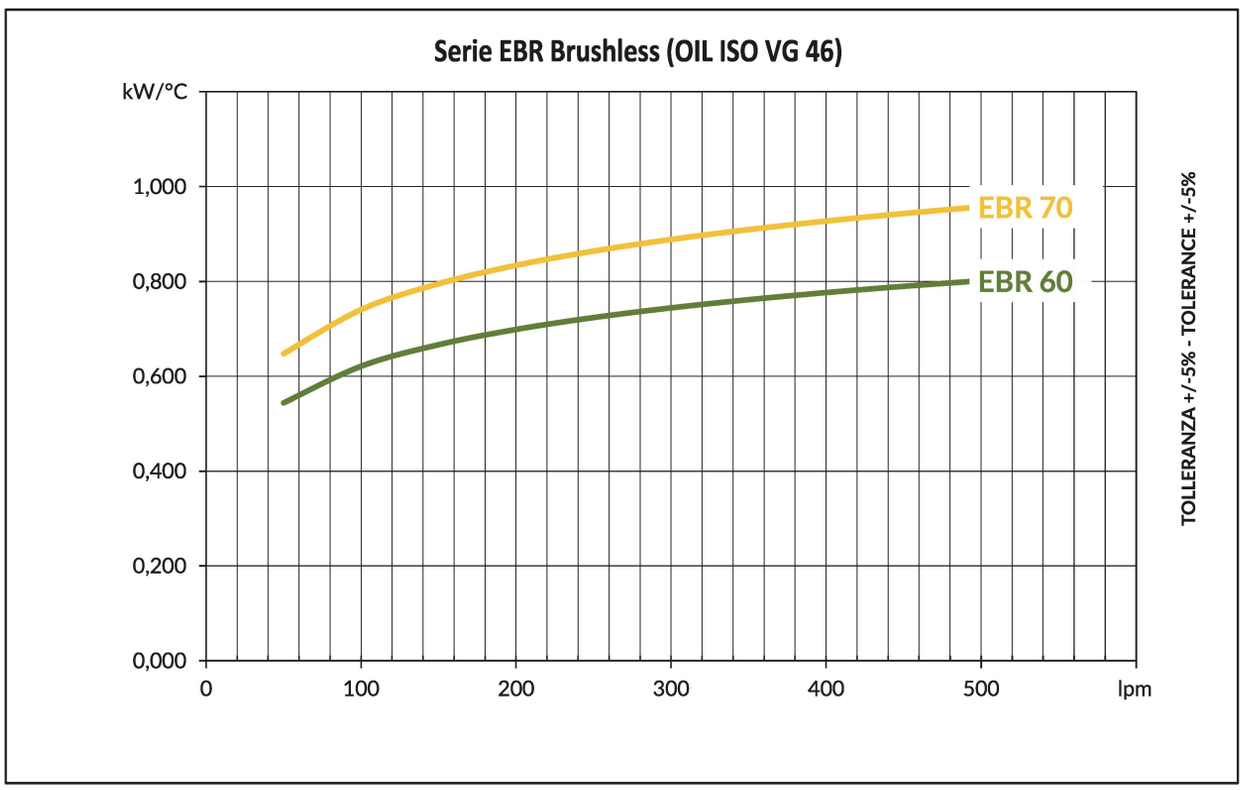


DIAGRAMMA PERDITE DI CARICO OLIO ISOVG 46 / *OIL ISOVG 46 PRESSURE DROP*

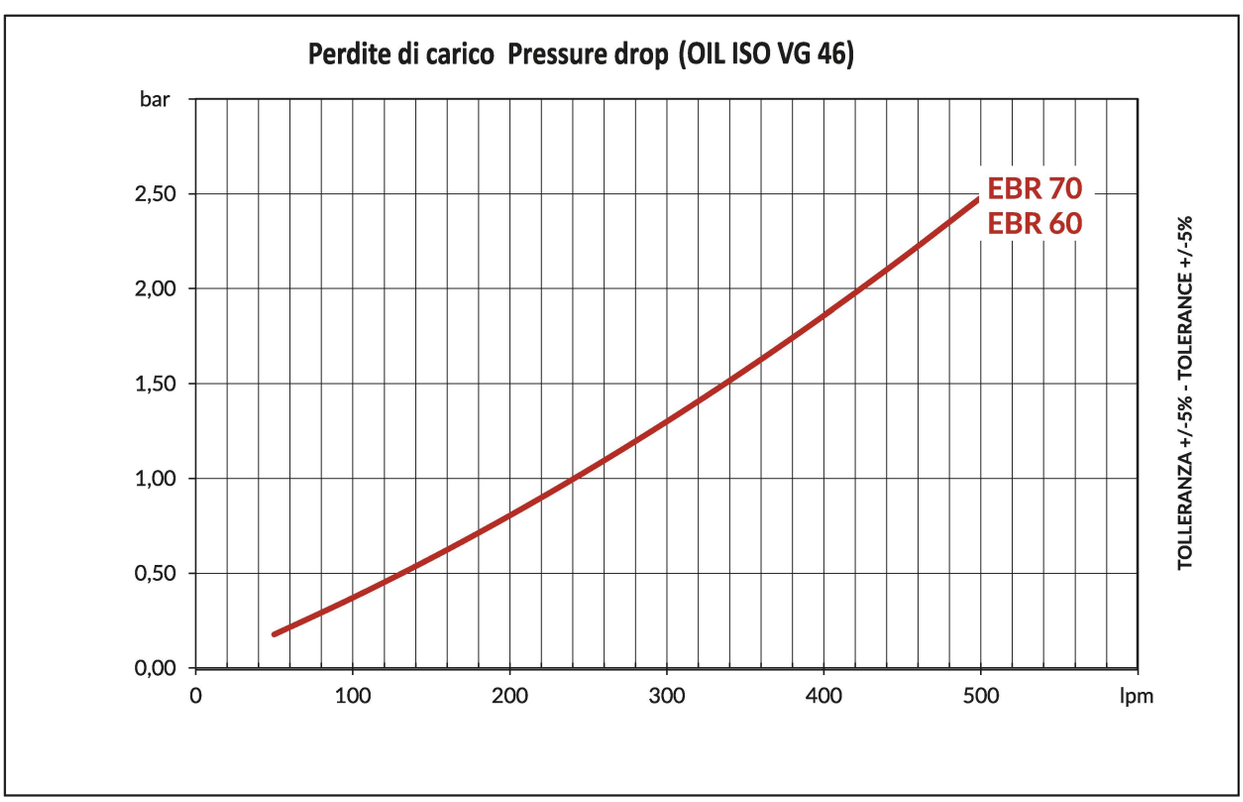
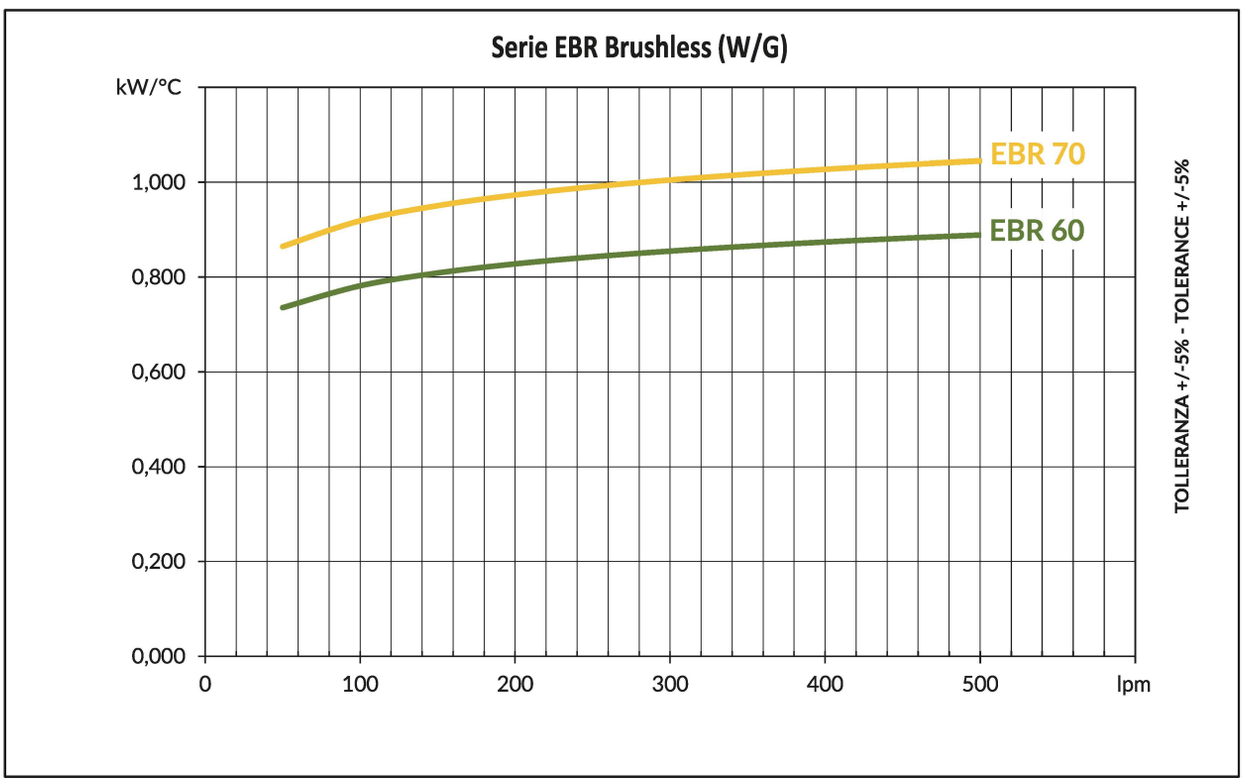
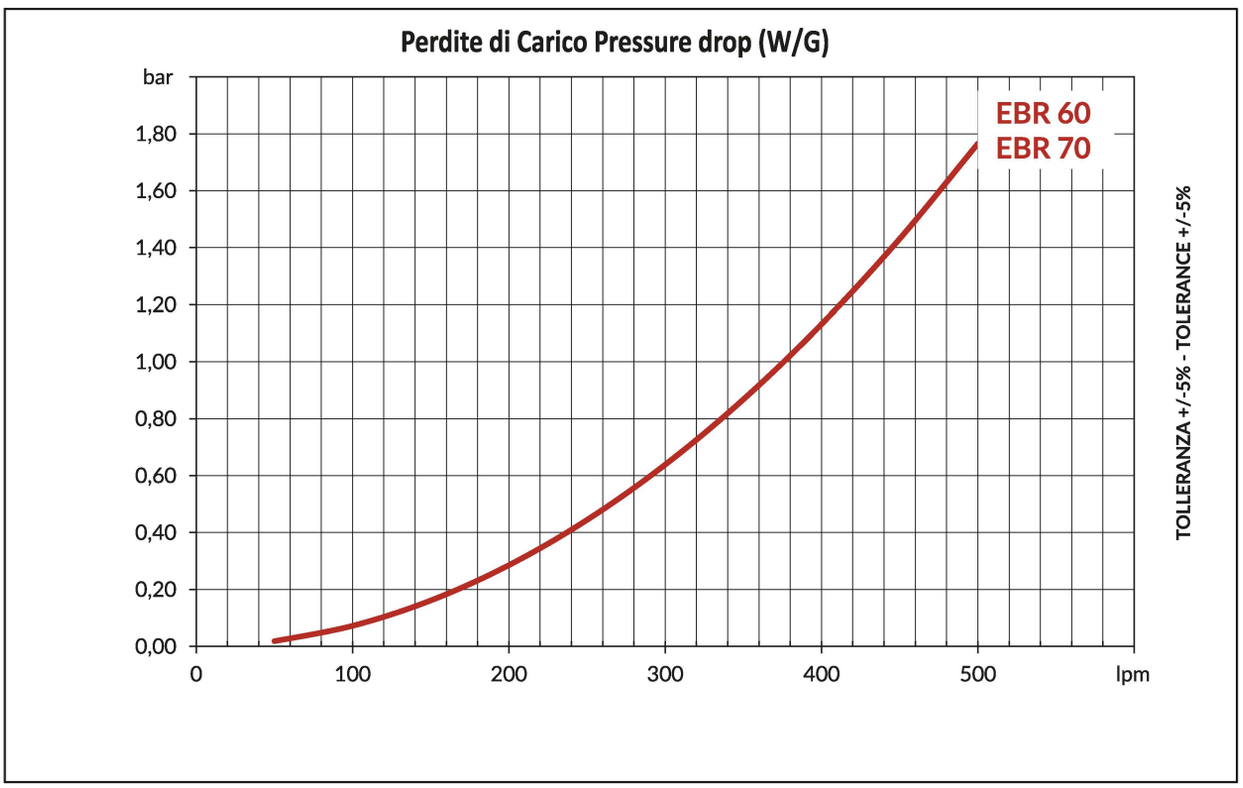


DIAGRAMMA RENDIMENTO CON ACQUA-GLICOLE 50 % / *WATER-GLYCOL 50 % PERFORMANCE*



PERDITE DI CARICO CON ACQUA-GLICOLE 50 % / *WATER-GLYCOL 50 % PRESSURE DROP*



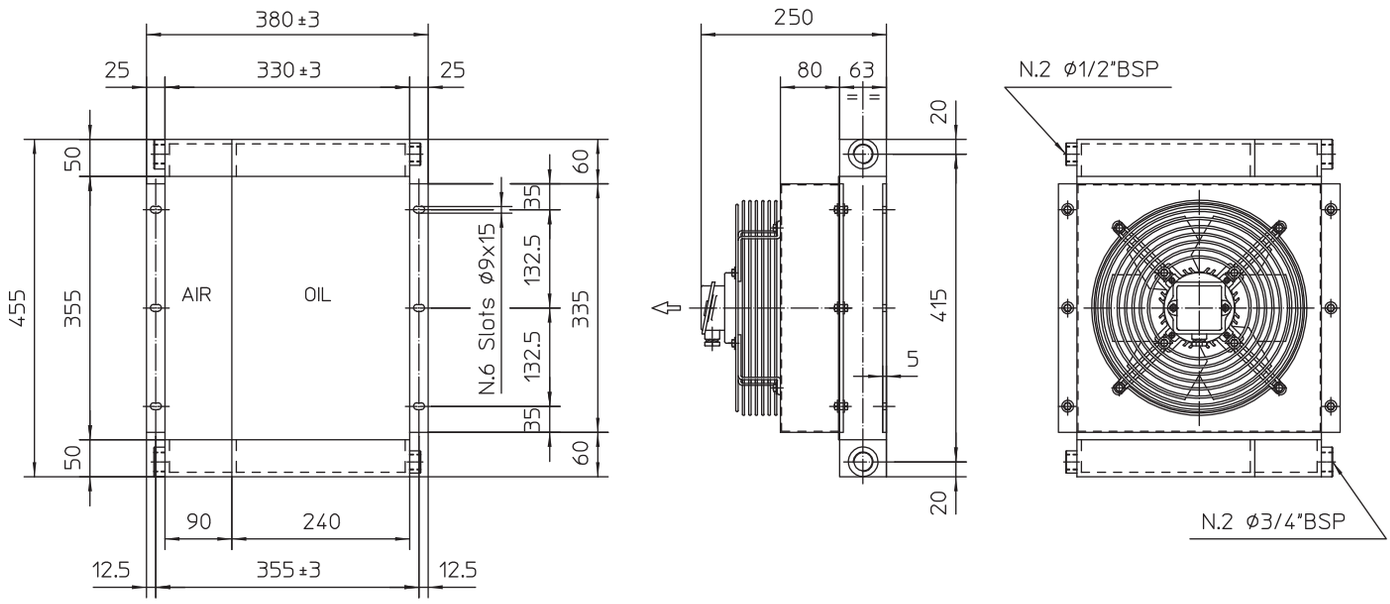


EMMEGI®
HEAT-EXCHANGERS

Combinati per Compressori
Combined for Compressor

Serie CC

CC01 (4 - 7.5 kW)

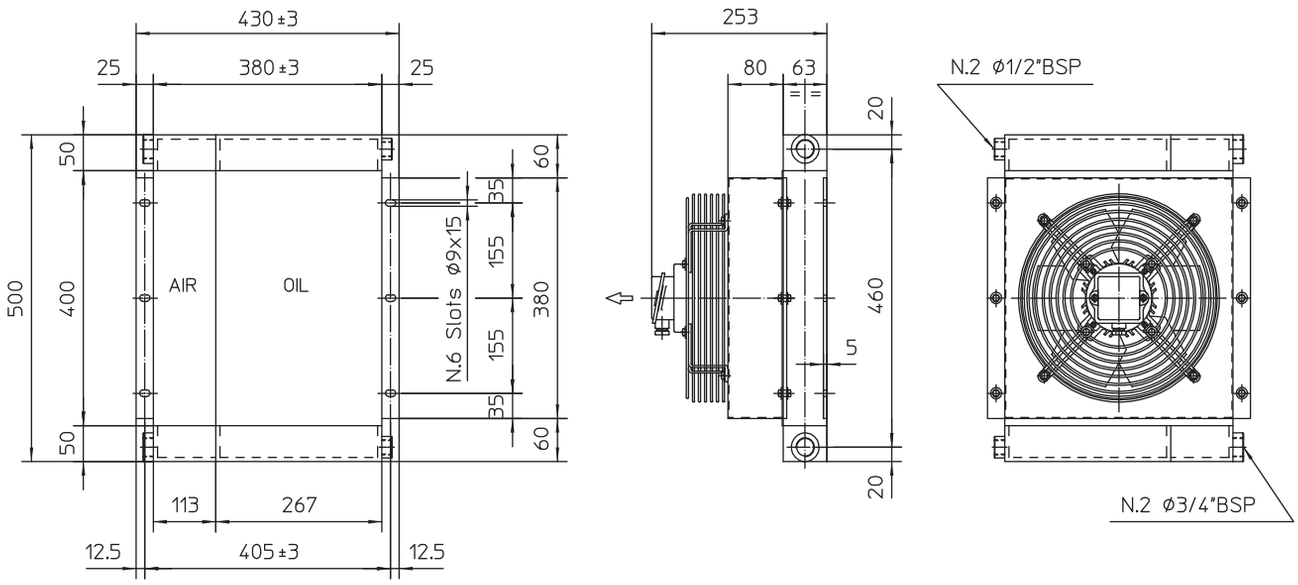


Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

BLOCCO RADIANTE MAIN COOLER BODY	KIT ELETTROVENTOLA KIT AXIAL MOTOR FAN	CONVOGLIATORE HOUSING
Alluminio	Acciao e alluminio	Acciao
Alluminium	Steel and aluminium	Steel

TIPO COMPR. COMPR. TYPE	CODICE CODE	V	Hz	kW	rpm	IP	ØFan	dB(A)	kg	Q.air m^3/h	CAP . (lt) (oil side)
4 - 5.5 kW	8.C01.05.0.01	230-400	50	0,02	1400	55	250	52	15	850	
5.5 - 7.5 kW	8.C01.03.0.01	230-400	50	0,18	2850	55	250	68	15	1550	1.7
4 - 7.5 kW	8.C01.00.0.00	MASSA RADIANTE - COOLER ELEMENT ONLY									

Potenza dispersa lato olio / Oil cooler output	3.5-6.5	kW
Potenza dispersa lato aria / Air after cooler output	0.6-1.1	kW
Portata olio / Oil flow rate	12-20	lpm
Portata aria compressore / Compressed air flow rate	0.6-1.2	m^3/min.
Temperatura entata olio / oil inlet temperature	max 100	°C
Temperatura entata aria / Compressed air inlet temperature	max 100	°C
Temperatura ambiente / Ambient temperature	max 45	°C
Massima pressione di esercizio / Max working pressure	13	bar
Pressione di collaudo / Test pressure	20	bar
Temperatura massima di esercizio / Max operating temperature	120	°C



Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

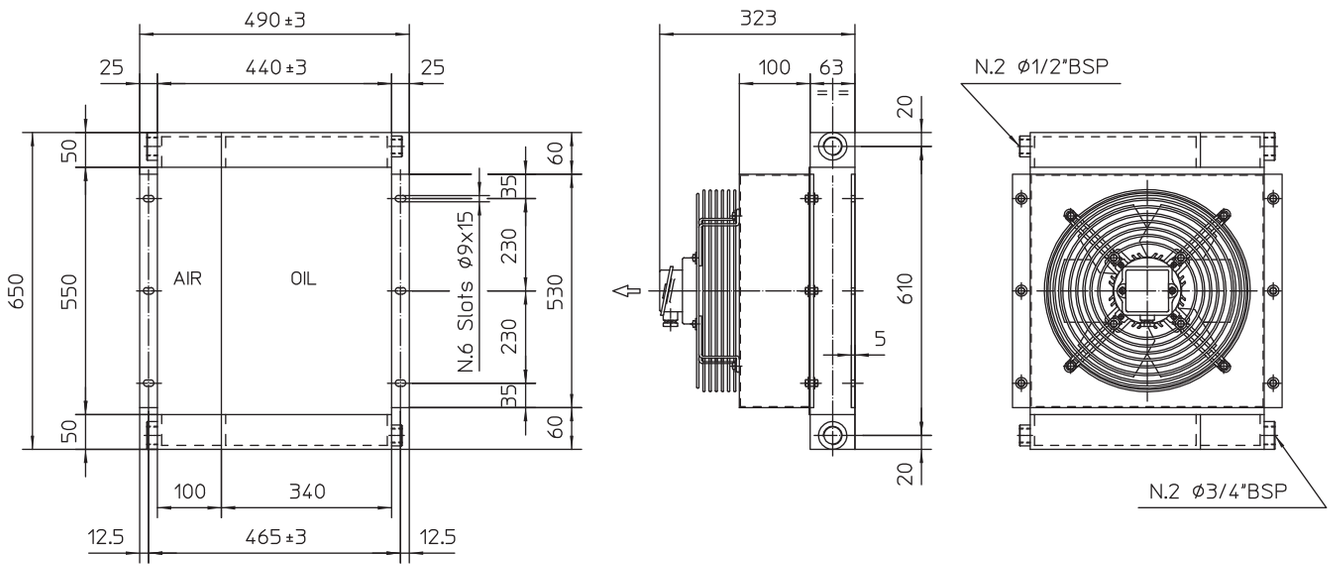
BLOCCO RADIANTE MAIN COOLER BODY	KIT ELETTROVENTOLA KIT AXIAL MOTOR FAN	CONVOGLIATORE HOUSING
Alluminio	Acciao e alluminio	Acciao
Alluminium	Steel and aluminium	Steel

TIPO COMPR. COMPR. TYPE	CODICE CODE	V	Hz	kW	rpm	IP	ØFan	dB(A)	kg	Q.air m^3/h	CAP . (lt) (oil side)
7.5 - 11 kW	8.C02.05.0.01	230-400	50	0.100	1390	55	300	59	18	1300	1.8
11 - 15 kW	8.C02.03.0.01	230-400	50	0.250	2800	55	300	68	18	3000	
7.5 - 15 kW	8.C02.00.0.00	MASSA RADIANTE - COOLER ELEMENT ONLY									

Potenza dispersa lato olio / Oil cooler output	6.2-12.5	kW
Potenza dispersa lato aria / Air after cooler output	1.1-2.2	kW
Portata olio / Oil flow rate	20-28	lpm
Portata aria compressore / Compressed air flow rate	1.2-2.5	m^3/min.
Temperatura entata olio / oil inlet temperature	max 100	°C
Temperatura entata aria / Compressed air inlet temperature	max 100	°C
Temperatura ambiente / Ambient temperature	max 45	°C
Massima pressione di esercizio / Max working pressure	13	bar
Pressione di collaudo / Test pressure	20	bar
Temperatura massima di esercizio / Max operating temperature	120	°C

Serie CC

CC03 (18 - 22 kW)

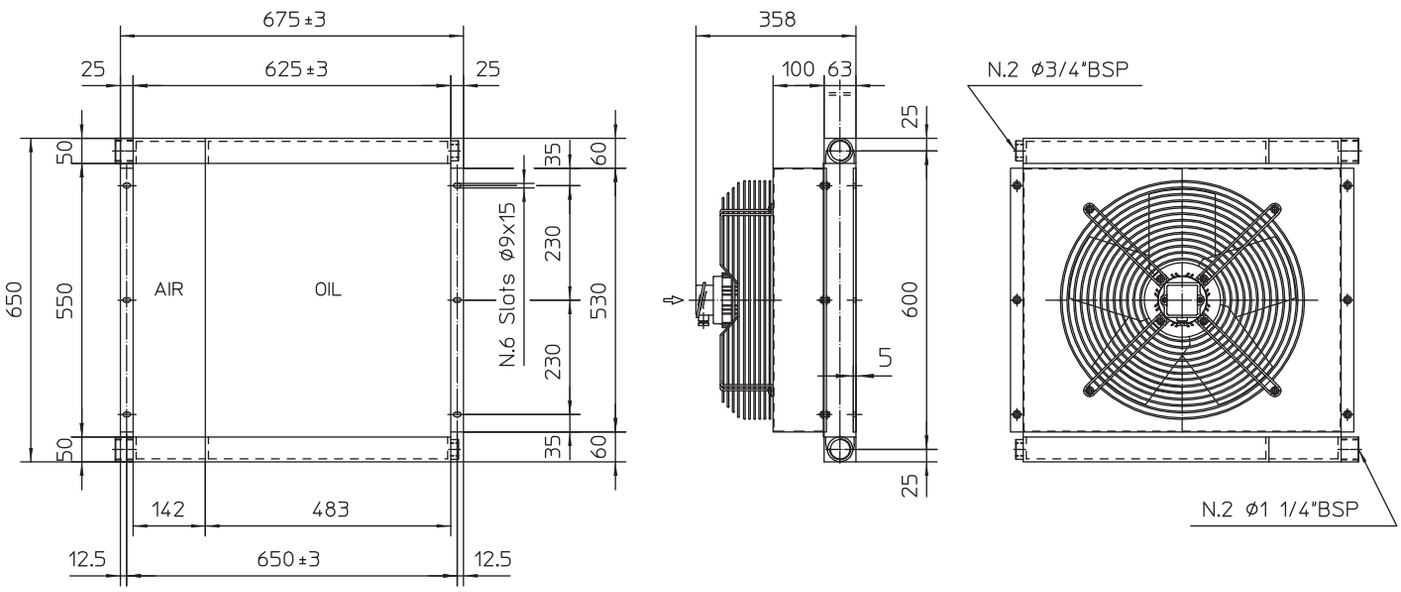


Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

BLOCCO RADIANTE MAIN COOLER BODY	KIT ELETTROVENTOLA KIT AXIAL MOTOR FAN	CONVOGLIATORE HOUSING
Alluminio	Acciao e alluminio	Acciao
Alluminium	Steel and aluminium	Steel

TIPO COMPR. COMPR. TYPE	CODICE CODE	V	Hz	kW	rpm	IP	ØFan	dB(A)	kg	Q.air m^3/h	CAP . (lt) (oil side)
18 - 22 kW	8.C03.03.0.01	230-400	50	0.210	1390	55	400	65	25	3400	2.9
18 - 22 kW	8.C03.00.0.00	MASSA RADIANTE - COOLER ELEMENT ONLY									

Potenza dispersa lato olio / Oil cooler output	15.6-18.7	kW
Potenza dispersa lato aria / Air after cooler output	2.7-3.2	kW
Portata olio / Oil flow rate	33-40	lpm
Portata aria compressore / Compressed air flow rate	2.9-3.6	m^3/min.
Temperatura entata olio / oil inlet temperature	max 100	°C
Temperatura entata aria / Compressed air inlet temperature	max 100	°C
Temperatura ambiente / Ambient temperature	max 45	°C
Massima pressione di esercizio / Max working pressure	13	bar
Pressione di collaudo / Test pressure	20	bar
Temperatura massima di esercizio / Max operating temperature	120	°C



Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

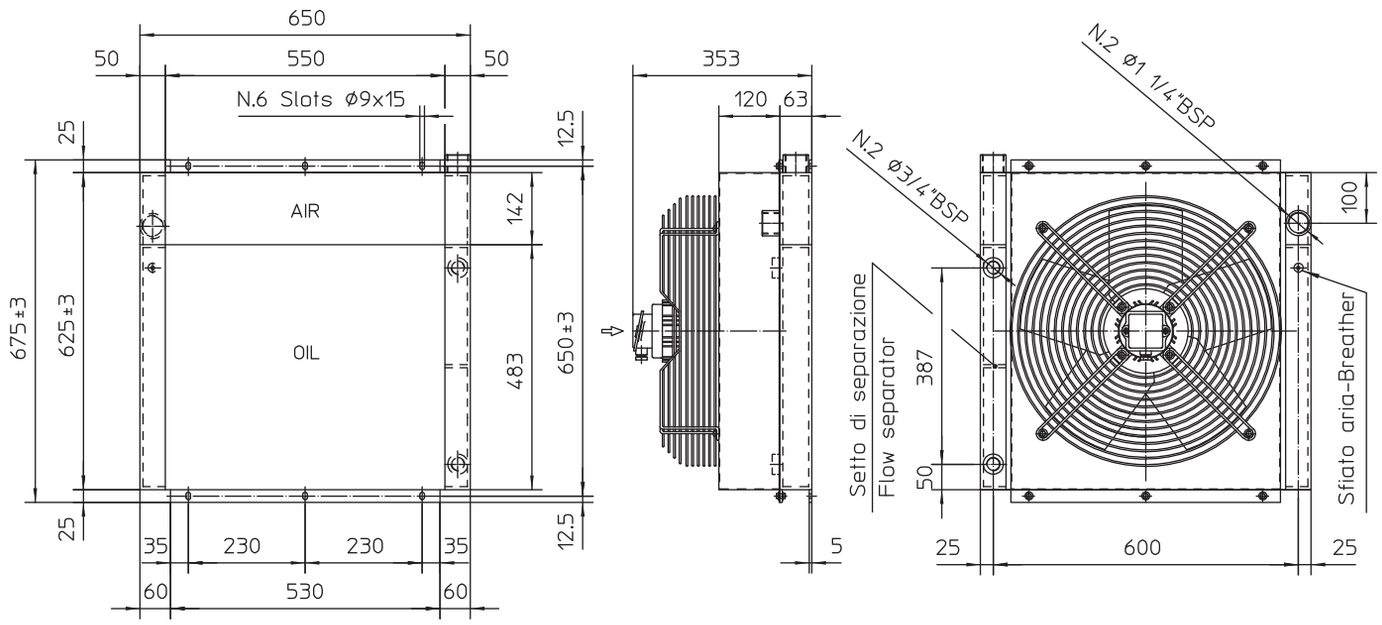
BLOCCO RADIANTE MAIN COOLER BODY	KIT ELETTROVENTOLA KIT AXIAL MOTOR FAN	CONVOGLIATORE HOUSING
Alluminio	Acciao e alluminio	Acciao
Alluminium	Steel and aluminium	Steel

TIPO COMPR. COMPR. TYPE	CODICE CODE	V	Hz	kW	rpm	IP	ØFan	dB(A)	kg	Q.air m^3 /h	CAP . (lt) (oil side)
30 kW	8.C04.03.0.02	230-400	50	0.350	900	55	500	65	30	5100	4,2
30 kW	8.C04.00.0.00	MASSA RADIANTE - COOLER ELEMENT ONLY									

Potenza dispersa lato olio / Oil cooler output	25	kW
Potenza dispersa lato aria / Air after cooler output	4.3	kW
Portata olio / Oil flow rate	45	lpm
Portata aria compressore / Compressed air flow rate	4.8	m^3/min.
Temperatura entata olio / Oil inlet temperature	max 100	°C
Temperatura entata aria / Compressed air inlet temperature	max 100	°C
Temperatura ambiente / Ambient temperature	max 45	°C
Massima pressione di esercizio / Max working pressure	13	bar
Pressione di collaudo / Test pressure	20	bar
Temperatura massima di esercizio / Max operating temperature	120	°C

Serie CC

CC05 (37 kW)

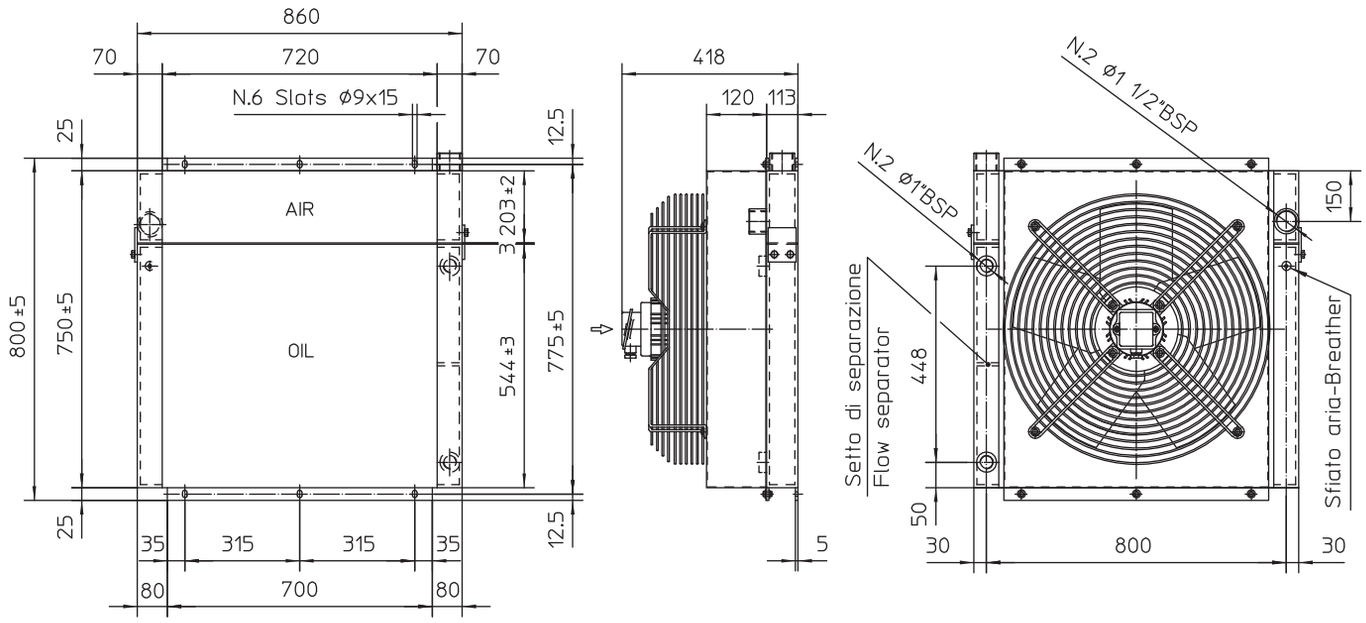


Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

BLOCCO RADIANTE MAIN COOLER BODY	KIT ELETTROVENTOLA KIT AXIAL MOTOR FAN	CONVOGLIATORE HOUSING
Alluminio	Acciao e alluminio	Acciao
Alluminium	Steel and aluminium	Steel

TIPO COMPR. COMPR. TYPE	CODICE CODE	V	Hz	kW	rpm	IP	ØFan	dB(A)	kg	Q.air m^3/h	CAP . (lt) (oil side)
37 kW	8.C05.03.0.02	230-400	50	0.680	1400	55	500	73	40	6700	4.2
37 kW	8.C05.00.0.00	MASSA RADIANTE - COOLER ELEMENT ONLY									

Potenza dispersa lato olio / Oil cooler output	30	kW
Potenza dispersa lato aria / Air after cooler output	6	kW
Portata olio / Oil flow rate	43	lpm
Portata aria compressore / Compressed air flow rate	5.6	m^3/min.
Temperatura entata olio / oil inlet temperature	max 100	°C
Temperatura entata aria / Compressed air inlet temperature	max 100	°C
Temperatura ambiente / Ambient temperature	max 45	°C
Massima pressione di esercizio / Max working pressure	13	bar
Pressione di collaudo / Test pressure	20	bar
Temperatura massima di esercizio / Max operating temperature	120	°C



Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

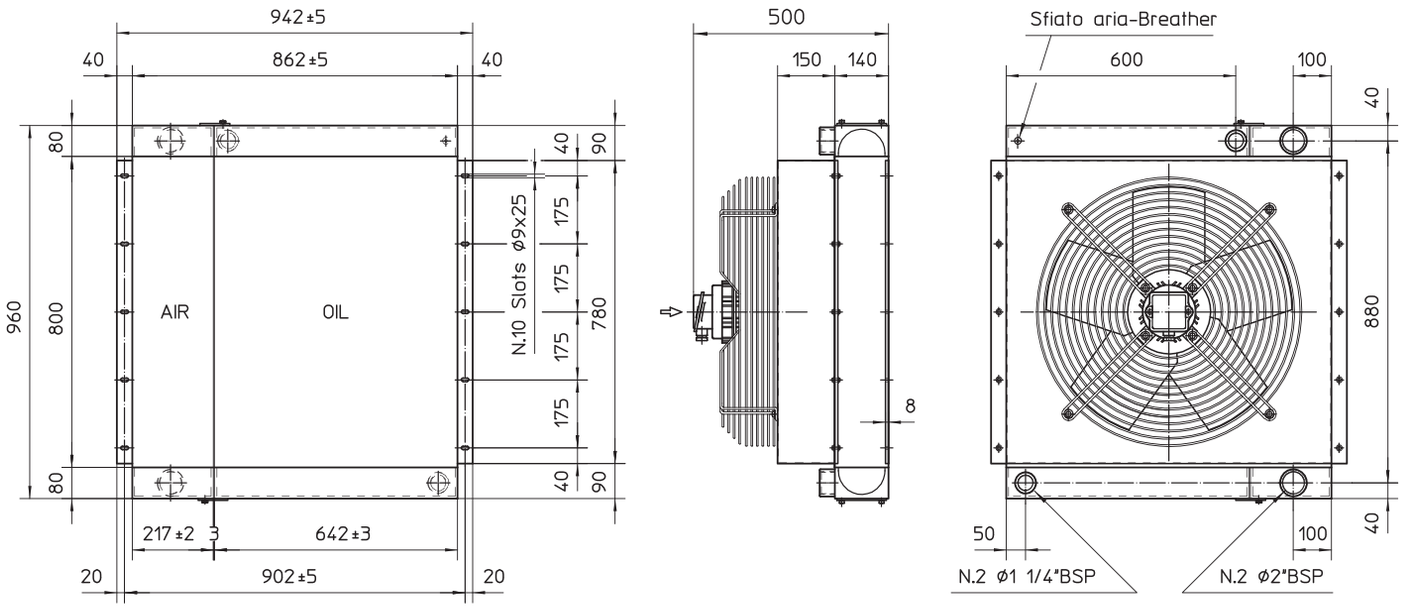
BLOCCO RADIANTE MAIN COOLER BODY	KIT ELETTROVENTOLA KIT AXIAL MOTOR FAN	CONVOGLIATORE HOUSING
Alluminio	Acciao e alluminio	Acciao
Alluminium	Steel and aluminium	Steel

TIPO COMPR. COMPR. TYPE	CODICE CODE	V	Hz	kW	rpm	IP	ØFan	dB(A)	kg	Q.air m^3/h	CAP . (lt) (oil side)
45-55 kW	8.C06.03.0.02	230-400	50	0.650	1400	55	560	78	80	8100	7.9
45-55 kW	8.C06.00.0.00	MASSA RADIANTE - COOLER ELEMENT ONLY									

Potenza dispersa lato olio / Oil cooler output	38-47	kW
Potenza dispersa lato aria / Air after cooler output	7-8	kW
Portata olio / Oil flow rate	45-60	lpm
Portata aria compressore / Compressed air flow rate	6.3-7.1	m^3/min.
Temperatura entata olio / oil inlet temperature	max 100	°C
Temperatura entata aria / Compressed air inlet temperature	max 100	°C
Temperatura ambiente / Ambient temperature	max 45	°C
Massima pressione di esercizio / Max working pressure	13	bar
Pressione di collaudo / Test pressure	20	bar
Temperatura massima di esercizio / Max operating temperature	120	°C

Serie CC

CC07 (75 kW)

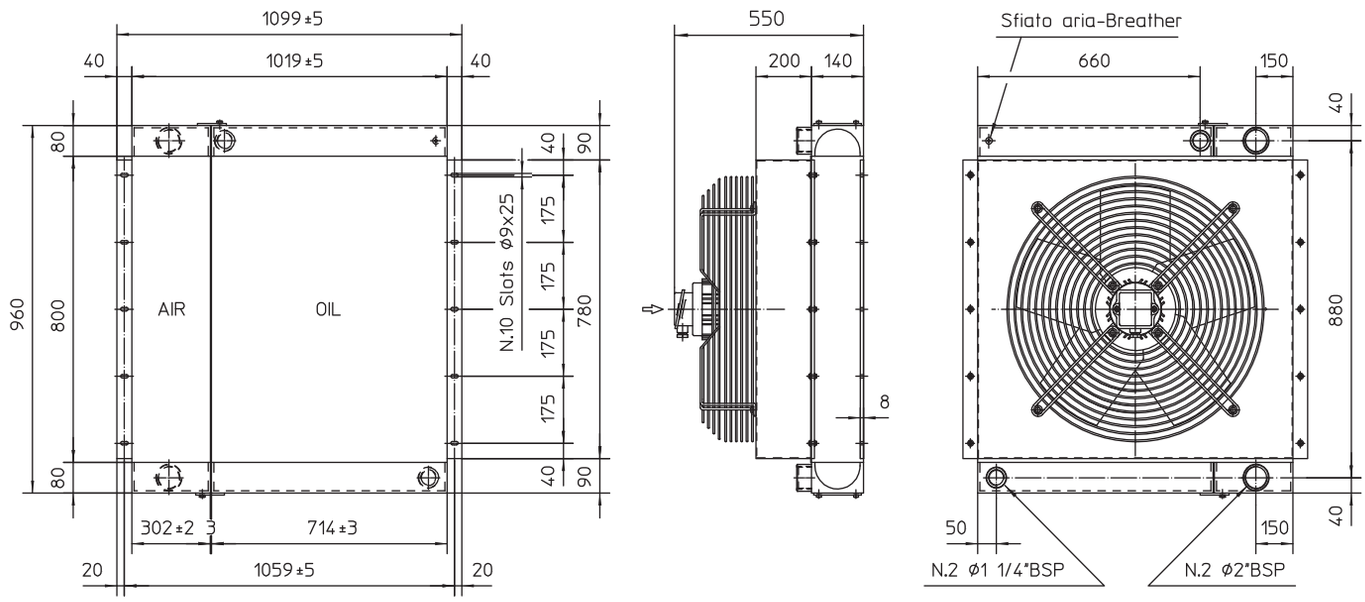


Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

BLOCCO RADIANTE MAIN COOLER BODY	KIT ELETTROVENTOLA KIT AXIAL MOTOR FAN	CONVOGLIATORE HOUSING
Alluminio	Acciao e alluminio	Acciao
Alluminium	Steel and aluminium	Steel

TIPO COMPR. COMPR. TYPE	CODICE CODE	V	Hz	kW	rpm	IP	ØFan	dB(A)	kg	Q.air m^3/h	CAP . (lt) (oil side)
75 kW	8.C07.03.0.02	230-400	50	0.770	900	55	700	75	115	9100	16.1
75 kW	8.C07.00.0.00	MASSA RADIANTE - COOLER ELEMENT ONLY									

Potenza dispersa lato olio / Oil cooler output	63	kW
Potenza dispersa lato aria / Air after cooler output	11	kW
Portata olio / Oil flow rate	75	lpm
Portata aria compressore / Compressed air flow rate	11.5	m^3/min.
Temperatura entata olio / oil inlet temperature	max 100	°C
Temperatura entata aria / Compressed air inlet temperature	max 100	°C
Temperatura ambiente / Ambient temperature	max 45	°C
Massima pressione di esercizio / Max working pressure	13	bar
Pressione di collaudo / Test pressure	20	bar
Temperatura massima di esercizio / Max operating temperature	120	°C



Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

BLOCCO RADIANTE MAIN COOLER BODY	KIT ELETTROVENTOLA KIT AXIAL MOTOR FAN	CONVOGLIATORE HOUSING
Alluminio	Acciao e alluminio	Acciao
Alluminium	Steel and aluminium	Steel

TIPO COMPR. COMPR. TYPE	CODICE CODE	V	Hz	kW	rpm	IP	ØFan	dB(A)	kg	Q.air m^3/h	CAP . (lt) (oil side)
90-110 kW	8.C08.03.0.02	230-400	50	0.810	900	55	730	77	140	10000	18
90-110 kW	8.C08.00.0.00	MASSA RADIANTE - COOLER ELEMENT ONLY									

Potenza dispersa lato olio / Oil cooler output	78-94	kW
Potenza dispersa lato aria / Air after cooler output	14-16	kW
Portata olio / Oil flow rate	90-110	lpm
Portata aria compressore / Compressed air flow rate	14-17	m^3/min.
Temperatura entata olio / Oil inlet temperature	max 100	°C
Temperatura entata aria / Compressed air inlet temperature	max 100	°C
Temperatura ambiente / Ambient temperature	max 45	°C
Massima pressione di esercizio / Max working pressure	13	bar
Pressione di collaudo / Test pressure	20	bar
Temperatura massima di esercizio / Max operating temperature	120	°C



EMMEGI®
HEAT-EXCHANGERS

Gruppi autonomi di raffreddamento Serie SILENT EVO 3

Offline cooling units SILENT EVO 3 Series

APPLICAZIONE
APPLICATION





Grazie all'ampia gamma di combinazioni, gli scambiatori della serie Silent EVO 3 si prestano ad essere la soluzione di raffreddamento ottimale per applicazioni industriali quali:

The Silent EVO 3 heat exchangers series is the optimal cooling solution for industrial applications such as:

Impianti di riciclo.	Recycling plants.
Impianti oleodinamici.	Hydraulic systems.
Macchine utensili.	Machine tools.



DENOMINAZIONE CODICE PRODOTTO SERIE SILENT EVO 3
ORDERING CODE SILENT EVO 3 SERIES

SERIE-SERIES

S3E — **S3E** | **35** | **SC** | **400** | **B** | **2** | **2**

MODELLO - MODEL
15
25
35
45
55
65
75

CARENA - COVER
CON CARENA - WITH COVER **(CC)**
SENZA CARENA+WITHOUT COVER **(SC)**
CON CARENA+QUADRO ELETTRICO - WITH COVER+ELECTRIC BOX **(CQ)**
SENZA CARENA+QUADRO ELETTRICO-WITHOUT COVER+ELECTRIC BOX **(SQ)**

TENSIONE - VOLTAGE
230 - 400V 50 Hz / 265-460V 60Hz or 230/400V 50 Hz / 208-230-460 60 Hz SE3 15 ONLY — *(400V)* **STANDARD VERSION**
TENSIONE SPECIALE - SPECIAL VOLTAGE **(SPECIFY VOLTAGE)**

FREQUENZA - FREQUENCY
PER TENSIONI STD - FOR STD VOLTAGE **(B)**
PER TENSIONI SPECIALI - FOR SPECIAL VOLTAGE 50Hz **(5)**
PER TENSIONI SPECIALI - FOR SPECIAL VOLTAGE 60Hz **(6)**

FILTRO - FILTER
SENZA FILTRO - WITHOUT FILTER **(0)**
10 µ **(1)**
25 µ **(2)**
60 µ **(3)**

HEAT-EXCHANGERS

DESCRIZIONE

Nei circuiti oleodinamici parte dell'energia idraulica e meccanica viene dissipata in calore che, come è noto, innalza la temperatura del fluido di tutto il sistema idraulico.
Nasce pertanto l'esigenza di dissipare tale calore, mediante l'utilizzo di uno scambiatore di calore, in modo da mantenere stabile la temperatura all'equilibrio termico, quando calore generato e dissipato si equivalgono.
In molti casi, data la presenza nel circuito principale di alte portate, elevate pressioni di esercizio, presenza di fenomeni di colpi d'ariete e pressioni pulsanti, non è possibile collegare direttamente lo scambiatore sul circuito primario.

EMMEGI ha realizzato dei gruppi di raffreddamento autonomi aria-olio a basso livello di rumorosità, i SILENT EVO 3, che utilizzano il principio del ricircolo, provvedendo autonomamente ad aspirare, raffreddare, eventualmente filtrare e riportare il fluido all'interno del serbatoio.
I gruppi di raffreddamento autonomi SILENT si avvalgono di una pompa volumetrica a vite per alimentare lo scambiatore di calore aria-olio, azionata da un motore elettrico ad alta efficienza, che provvede anche all'azionamento della ventola.

SCHEMA IDRAULICO

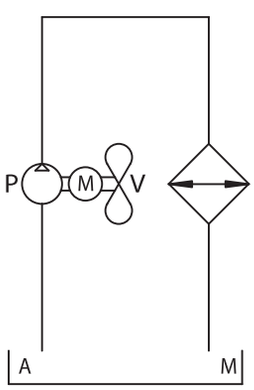


fig. 01

Tutti i modelli possono essere forniti con scocca metallica di comodo accesso, in grado di proteggere e preservare i vari componenti da danni.
È disponibile opzionalmente la versione con quadro elettrico precablato e fornito di cavo con spina industriale.
La semplice modalità di installazione e di messa in servizio permette di risolvere con estrema facilità problemi termici e/o filtrazione del fluido.

DESCRIPTION

All hydraulic systems have their efficiency, lower than 100%. The lost energy is converted to heat which is transmitted to the hydraulic fluid, increasing its temperature.
In order to dissipate this heat and maintain the system in good condition a heat exchanger must be installed in the system.
The heat exchanger should be selected to maintain the fluid at a constant temperature at the highest expected ambient temperature.
In many cases, high oil flow rate, high working pressure, or pulsations in the system, do not allow the use of a conventional inline heat exchanger. In these cases an offline cooling solution is preferable.

EMMEGI has developed an off-line and autonomous air/oil cooling series, the SILENT EVO 3, taking the oil from the tank, cooling it and filtering it before returning it to the tank.
The offline EMMEGI cooling system includes a volumetric screw pump driven by an electric motor, feeding the cooler with a fixed fluid flow.
The electric motor also drives an axial fan which blows ambient air over the heat exchanger.
This combination provides a highly efficient, cost effective and compact offline cooling solution.

HYDRAULIC CIRCUIT

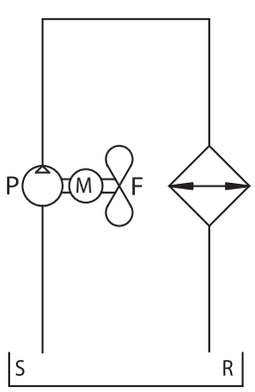


fig. 01

The cooler can be ordered with a fully protective steel cover to protect components from damage.
As optional the cooler can be supplied with electrical box including the contactor, fuses and industrial plug.
The Silent Evo 3 provides a simple, quickly installed solution for many cooling and filtration needs.

FLUIDI COMPATIBILI:

OLI MINERALI, HL, HLP.
Deve essere sempre garantita la compatibilità con i materiali costruttivi utilizzati:
- LEGA DI ALLUMINIO (MASSA RADIANTE)
- ACCIAIO ZINCATO (RACCORDERIA)
- GOMMA NITRILICA (GUARNIZIONI)

In caso di fluidi differenti si consiglia di contattare EMMEGI S.p.A per la verifica di compatibilità.

COMPATIBLE FLUIDS:

MINERAL OILS, HL, HLP
Compatibility with following material must be always confirmed:
- ALUMINIUM ALLOY (COOLING CORE)
- GALVANIZED STEEL (FITTINGS)
- NITRILE RUBBER (SEALINGS)

The Evo 3 may be compatible with other fluid types. Please contact EMMEGI to discuss your individual requirements.

SPECIFICHE TECNICHE

PRESSIONE DI ESERCIZIO: 6 barG
TEMPERATURA DEL FLUIDO 20°C – 93°C
CAMPO DI VISCOSITA' CONSIGLIATO: 20 cSt – 320 cSt
TEMPERATURA DI STOCCAGGIO: -10°C – 60°C

TECHNICAL SPECIFICATIONS

WORKING PRESSURE: 6 barG
FLUID TEMPERATURE: 20°C – 93°C
SUGGESTED VISCOSITY: 20 cSt – 320 cSt
STORAGE TEMPERATURE: -10°C – 60°C

INSTALLAZIONE

I sistemi di raffreddamento SILENT EVO 3 devono essere collegati al serbatoio del fluido da raffreddare mediante tubi flessibili.
È buona norma che nel locale di installazione dello scambiatore sia garantito un ricambio di aria sufficiente a non riscaldare l'ambiente, pregiudicando la resa dello scambiatore stesso.
Il gruppo deve essere installato in modo che il flusso d'aria non sia ostacolato, sia in aspirazione, sia in uscita dal pacco radiante (vedi fig.02) .

INSTALLATION

The SILENT EVO 3 off-line cooling system must be connected to the tank by suitable flexible hoses.
If installed inside a building adequate ventilation must be provided to ensure no significant rise in ambient temperature, which would adversely affect the Silent EVO3 cooling performance.
The Silent EVO3 should be installed to provide adequate airflow for the cooling fan, See Fig. 02 for dimensions.

SERIES	MODEL	D
S3E	SILENT EVO 3 15	300 mm
	SILENT EVO 3 25	400 mm
	SILENT EVO 3 35	500 mm
	SILENT EVO 3 45	500 mm
	SILENT EVO 3 55	600 mm
	SILENT EVO 3 65	700 mm
	SILENT EVO 3 75	800 mm

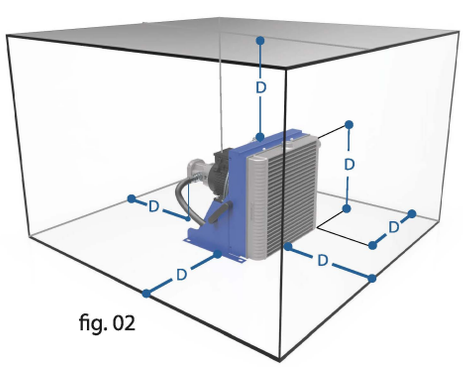


fig. 02

SERIES	MODEL	D
S3E	SILENT EVO 3 15	300 mm
	SILENT EVO 3 25	400 mm
	SILENT EVO 3 35	500 mm
	SILENT EVO 3 45	500 mm
	SILENT EVO 3 55	600 mm
	SILENT EVO 3 65	700 mm
	SILENT EVO 3 75	800 mm

E' indispensabile che i tubi di aspirazione e mandata siano di diametro uguale o superiore a quello del raccordo indicato in Fig.03; in caso contrario si potrebbero verificare fenomeni di cavitazione che comporterebbero aumento della rumorosità, riduzione delle prestazioni e, sul lungo periodo, rottura della pompa.
Per lo stesso motivo, il tubo di aspirazione non deve offrire eccessive perdite di carico; si devono pertanto evitare percorsi tortuosi, riduzioni di diametro, eccessive lunghezze, ecc.
La posizione dello scambiatore, rispetto al serbatoio, deve tener conto di quanto riportato in Fig. 03.
In tutti i casi la pressione all'aspirazione della pompa non deve essere inferiore a -0,5 barG. All'atto della prima messa in marcia è indispensabile controllare che la ventola ruoti nel senso indicato dalla freccia sul convogliatore.

Hose sizes must be selected in accordance with the recommended sizes in the chart Fig. 03.
Failure to provide adequate flow to and from the Silent Evo 3 could cause a reduction in its performance and eventually premature failure of the components. For the same reason suction piping must not include elbows, section reduction excessive length. The position of the cooler to the tank is showed in Fig.03.
The minimum allowable pressure at the oil inlet after installation is -0.5barG.
Check the correct direction of the fan, as showed by the arrow sticker on the shroud at the first start of the system.

LUNGHEZZA E DIAMETRO TUBI / *HOSES LENGTH AND DIAMETER*

SILENT EVO3 - 15	SILENT EVO3 - 15	SILENT EVO3 - 15
Tubo/hole Ø 1/2" G. - L= 3m (MAX)	Tubo/hole Ø 1/2" G. - L= 1m H=1m (MAX)	Tubo/hole Ø 1/2" G. - L=2m H=1m (MAX)
SILENT EVO3 - 25/ 35 / 45 / 55	SILENT EVO3 - 25/ 35 / 45 / 55	SILENT EVO3 - 25/ 35 / 45 / 55
Tubo/hole Ø 1" G. - L= 7m (MAX)	Tubo/hole Ø 1" G. - L= 3m H=2m (MAX)	Tubo/hole Ø 1" G. - L= 2m H=10m (MAX)
SILENT EVO3 - 65 / 75	SILENT EVO3 - 65 / 75	SILENT EVO3 - 65 / 75
Tubo/hole Ø 1 1/2" G. - L= 20m (MAX)	Tubo/hole Ø 1 1/2" G. - L= 8m H=3m (MAX)	Tubo/hole Ø 1 1/2" G. - L= 25m H=3m (MAX)

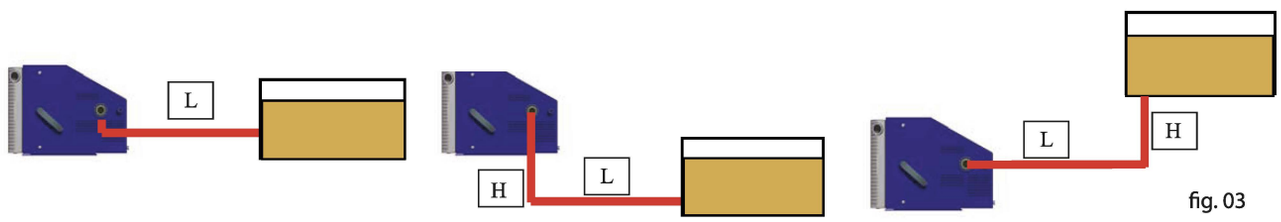


fig. 03

COPPIE DI SERRAGGIO RACCORDI CON GUARNIZIONE BONDED TIGHTENING TORQUE FITTINGS WITH BONDED SEALING						
Filettatura BSPP/BSPP Thread	1/4"	1/2"	3/4"	1"	1" 1/4"	1" 1/2"
Coppia / Torque Nm	25	45	60	140	160	190

I valori indicati sono riferiti alle seguenti condizioni
Data refers to the following condition
ISO VG 46 @ 40°C
Garantire sempre una pressione all' aspirazione di almeno -0.5barG
In any case minimum admissible pump inlet pressure -0.5barG

Il gruppo remoto dovrà essere avviato se le condizioni del fluido rispettano quanto indicato in "SPECIFICHE TECNICHE".
Il motore elettrico è di grado IP55, classe di isolamento F.
E' prevista una protezione interna al surriscaldamento; si consiglia in ogni caso di proteggere con salvamotore.
Il collegamento elettrico dovrà essere effettuato da un tecnico qualificato, in accordo con quanto riportato nel paragrafo "COLLEGAMENTO ELETTRICO" Fig.05 e all'interno del coperchio motore Fig.04.

The group must be started if fluid conditions are compliance with "TECHNICAL SPECIFICATION".
The electric motor is IP55, insulation class F.
An internal protection for overheating is included, but the installation of external protection is recommended. All electric connections must be performed by a qualified electrician, in accordance with the "WIRING DIAGRAM" Fig. 05 and information inside motor cover see Fig.04.

COLLEGAMENTO ELETTRICO / *ELECTRIC WIRING*

MOTORE ELETTRICO / *ELECTRIC MOTOR*

S3E 25-35-45-55-65-75

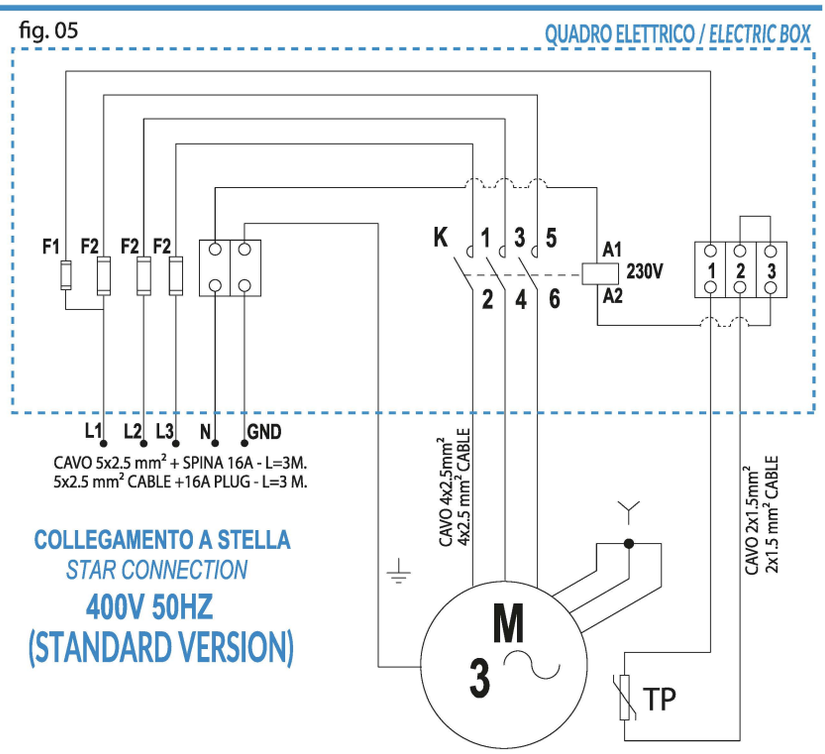
COLLEGAMENTO ELETTRICO - ELECTRIC WIRING	
TRIANGOLO / DELTA	STELLA / STAR
U1 V1 W1	U1 V1 W1
Volts 230 / 265	Volts 400 / 460

S3E 15

COLLEGAMENTO ELETTRICO - ELECTRIC WIRING	
DOPPIA STELLA	STELLA
U1 V1 W1	U1 V1 W1
Volts 200 / 230	Volts 400 / 460

fig. 04

fig. 05



COLLEGAMENTO A STELLA
STAR CONNECTION
400V 50HZ
(STANDARD VERSION)

fig. 06

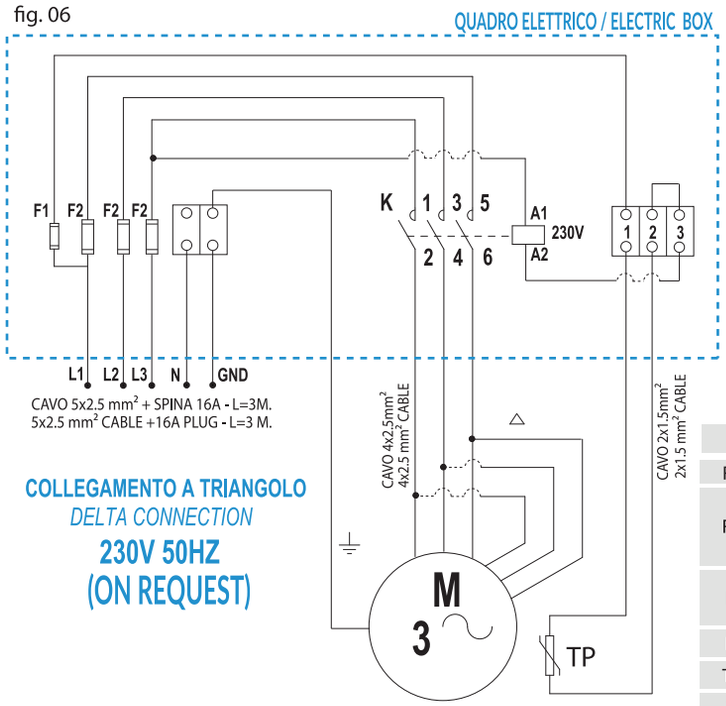
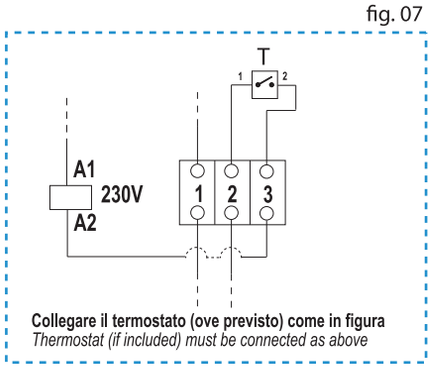


fig. 07



LEGENDA / LEGEND	
F1	FUSIBILE / FUSE 10x38 1A
F2	FUSIBILE / FUSE 10x38 6A (S3E 15-25-35)
	FUSIBILE / FUSE 10x38 10A (S3E 45-55)
	FUSIBILE / FUSE 10x38 16A (S3E 55-65-75)
K	CONTATTORE / CONTACTOR 4KW (S3E 15-25-35-45-55)
	CONTATTORE / CONTACTOR 5.5KW (S3E 65-75)
M	MOTORE ELETTRICO TRIFASE / INDUCTION MOTOR
TP	PROTEZIONE TERMICA / THERMAL PROTECTION
T	TERMOSTATO (OPZIONALE) / THERMOSTAT (OPTIONAL)

MANUTENZIONE

Si raccomanda di effettuare periodicamente operazioni di pulizia ordinarie dello scambiatore, in modo da preservare l'integrità del prodotto, allungarne la vita utile e garantire nel tempo le performance indicate a catalogo.

PULIZIA LATO ARIA

La pulizia della alettatura lato aria può essere effettuata mediante aria compressa o acqua, con direzione del getto parallela alle alette.
Una pulizia più efficacie può essere effettuata mediante l'utilizzo di appositi prodotti detergenti, in funzione della tipologia di sporco.
Se l'accumulo di sporco è causato da olio o grasso, è possibile utilizzare un getto di vapore o acqua calda, ponendo sempre la massima attenzione alla direzione del getto. Durante le operazioni di pulizia il motore elettrico dovrà essere disinserito e convenientemente protetto.

PULIZIA LATO OLIO

Per la pulizia dell'alettatura interna, lo scambiatore dovrà essere smontato e flussato in controcorrente per 10-20min con appositi solventi per olio, compatibili con leghe di alluminio.
Procedere quindi allo svuotamento del circuito interno con aria compressa, non superando la massima pressione ammissibile dello scambiatore.
Assicurarsi quindi che il detergente utilizzato sia stato completamente rimosso.
Si raccomanda infine di sostituire il filtro periodicamente (ove previsto), prestando attenzione all'indicatore di intasamento.

MAINTENENCE

The cooler should be inspected monthly and cleaned of any built up of dust or debris.
Check for leaks and rectify as appropriate.
Inspect annually for wear to the fan blades.

AIR SIDE CLEANING

Air side cleaning can be carried out with either water or compressed air, keeping the jet direction parallel to the fins.
More aggressive cleaning can be achieved using a suitable detergent.
If the debris accumulation is caused by oil or grease, cleaning can be carried out by use of hot water pressure washer or steam, ensuring that the water jets are projected away from the motor.
Disconnect the electricity supply and protect the motor from any water during the cleaning process.

OIL SIDE CLEANING

To clean the cooling element internally it should be disassembled from the housing and back flushed for 10 - 20 mins with a suitable cleaning fluid.
After completion the cooler should be drained and purged dry with compressed air.
Do not exceed the operating pressure of the cooler during the cleaning process.
The optional oil filter should be changes at regular intervals to be determined by the application.





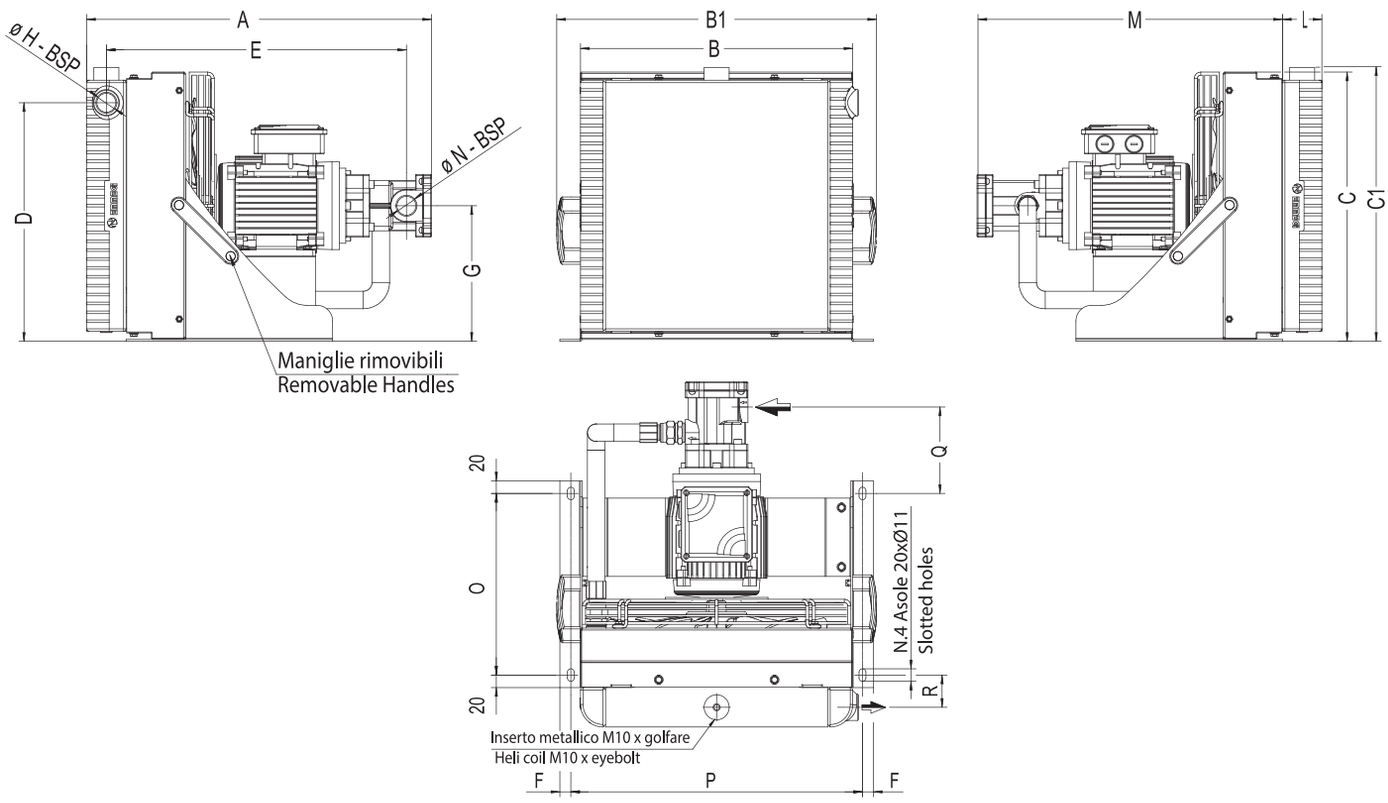
SILENT EVO3 - *SILENT EVO3*

SILENT EVO 3 15
SILENT EVO 3 25
SILENT EVO 3 35
SILENT EVO 3 45
SILENT EVO 3 55
SILENT EVO 3 65
SILENT EVO 3 75






DATI TECNICI
TECHNICAL DATA

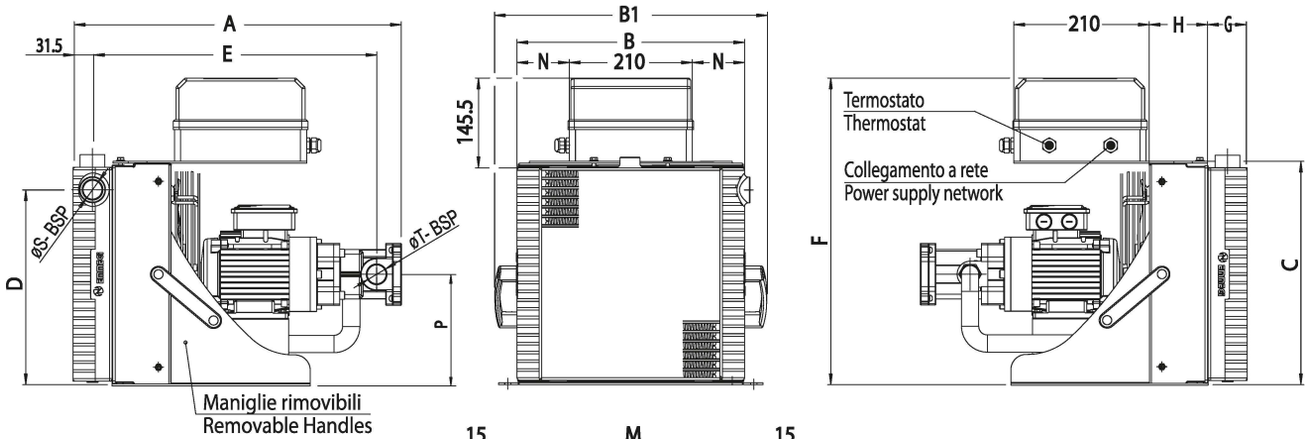


* il livello di efficienza IE3 è riferito al funzionamento a 50Hz. EMMEGI S.p.A. garantisce il funzionamento in servizio S1 a 50Hz-60Hz.
IE3 efficiency level refers to 50Hz only. EMMEGI S.p.A. guarantees SE3 series for S1 service at 50Hz-60Hz.

SERIES	MODEL	A	B	B1	C	C1	D	E	F	G	H	L	M	N	0	P	Q	R
S3E	SILENT EVO 3 15	509	312	396	312	330	274	425	14.5	172	1/2"	63	445	1/2"	280	347	93.5	51.5
	SILENT EVO 3 25	552	370	454	360	373	317	481	15	180	1"	63	489	1"	280	400	129	51.5
	SILENT EVO 3 35	551	435	519	430	437	381	480	17.5	217	1"	63	488	1"	290	466	138	51.5
	SILENT EVO 3 45	590	530	614	510	528	472	519	17	258	1"	63	527	1"	315	555	151	51.5
	SILENT EVO 3 55	646	655	739	609	627	570	575	12	305	1"	63	583	1"	380	695	183	51.5
	SILENT EVO 3 65	791	776	860	710	727	657	695	13	357	1.1/2"	94	547	1.1/2"	500	820	128	67
	SILENT EVO 3 75	810	876	960	810	827	757	704	13	407	1.1/2"	113	679	1.1/2"	500	920	128	76.5

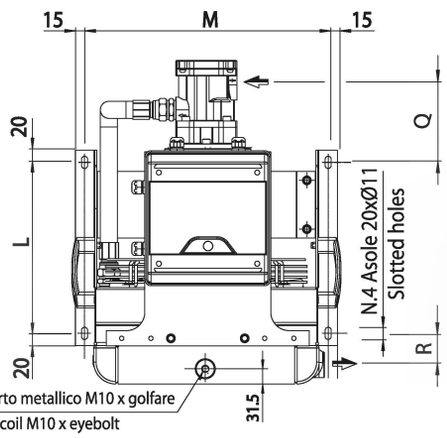
SERIES	Volt	Volt	Hz	Kw	A (±10%)	Oil flow (lpm)	Air flow (m^3/h)	Kg (max)	index of protection
S3E	SILENT EVO 3 15	230-400 208-230 460	50 60 60	0.37 0.44 0.44	2.48 - 1 2 1	10 12 12	630 780 780	27	IP 55
	SILENT EVO 3 25	230-400 265-460	50 60	0.75 0.90	3.4 - 2.0 3.4 - 2.0	40 48	1170 1450	30	IP 55
	SILENT EVO 3 35	230-400 265-460	50 60	0.75 0.90	3.4 - 2.0 3.4 - 2.0	40 48	1750 2150	32	IP 55
	SILENT EVO 3 45	230-400 265-460	50 60	1.15 1.30	4.5 - 2.6 4.5 - 2.6	40 48	3350 4100	36	IP 55
	SILENT EVO 3 55	230-400 265-460	50 60	1.50 1.80	6.1 - 3.5 6.1 - 3.5	40 48	4300 5150	51	IP 55
	SILENT EVO 3 65	230-400 265-460	50 60	4.00 4.80	14.3 - 8.3 14.3 - 8.3	80 96	8300 10000	115	IP 55
	SILENT EVO 3 75	230-400 265-460	50 60	4.00 4.80	14.3 - 8.3 14.3 - 8.3	80 96	9000 10800	125	IP 55

DATI TECNICI
TECHNICAL DATA





Versione con carena + quadro elettrico
version with cover + electric box





Versione senza carena + quadro elettrico
Version without cover + electric box

* il livello di efficienza IE3 è riferito al funzionamento a 50Hz. EMMEGI S.p.A. garantisce il funzionamento in servizio S1 a 50Hz-60Hz.
IE3 efficiency level refers to 50Hz only. EMMEGI S.p.A. guarantees SE3 series for S1 service at 50Hz-60Hz.

SERIES	MODEL	A	B	B1	C	D	E	F	G	H	L	M	N	P	Q	R	S	T
S3E	SILENT EVO 3 15	509	312	396	315	274	425	420	63	95	280	347	66	172	93.5	51.5	1"	1/2"
	SILENT EVO 3 25	552	370	454	363	317	481	470	63	95	280	400	85	180	129	51.5	1"	1"
	SILENT EVO 3 35	551	435	519	433	381	480	540	63	94	290	466	118	217	138	51.5	1"	1"
	SILENT EVO 3 45	550	530	614	513	472	519	620	63	106	315	555	165	258	151	51.5	1"	1"
	SILENT EVO 3 55	646	655	739	702	570	575	720	63	150	380	695	228	305	183	51.5	1"	1"
	SILENT EVO 3 65	791	776	860	710	657	695	820	94	150	500	820	288	357	128	67	1.1/2"	1.1/2"
	SILENT EVO 3 75	810	876	960	810	757	704	920	113	150	500	920	338	407	128	76.5	1.1/2"	1.1/2"

SERIES	MODEL	Volt	Hz	Kw	A (±10%)	Oil flow (lpm)	Air flow (m³/h)	Kg (max)	index of protection
S3E	SILENT EVO 3 15	230-400 208-230 460	50 60 60	0.37 0.44 0.44	2.48 - 1 2 1	10 12 12	630 780 780	27	IP 55
	SILENT EVO 3 25	230-400 265-460	50 60	0.75 0.90	3.4 - 2.0 3.4 - 2.0	40 48	1170 1450	30	IP 55
	SILENT EVO 3 35	230-400 265-460	50 60	0.75 0.90	3.4 - 2.0 3.4 - 2.0	40 48	1750 2150	32	IP 55
	SILENT EVO 3 45	230-400 265-460	50 60	1.15 1.30	4.5 - 2.6 4.5 - 2.6	40 48	3350 4100	36	IP 55
	SILENT EVO 3 55	230-400 265-460	50 60	1.50 1.80	6.1 - 3.5 6.1 - 3.5	40 48	4300 5150	51	IP 55
	SILENT EVO 3 65	230-400 265-460	50 60	4.00 4.80	14.3 - 8.3 14.3 - 8.3	80 96	8300 10000	115	IP 55
	SILENT EVO 3 75	230-400 265-460	50 60	4.00 4.80	14.3 - 8.3 14.3 - 8.3	80 96	9000 10800	125	IP 55

DIAGRAMMA RENDIMENTO 50Hz (ISO VG 46)

PERFORMANCE DIAGRAM 50Hz (ISO VG 46)

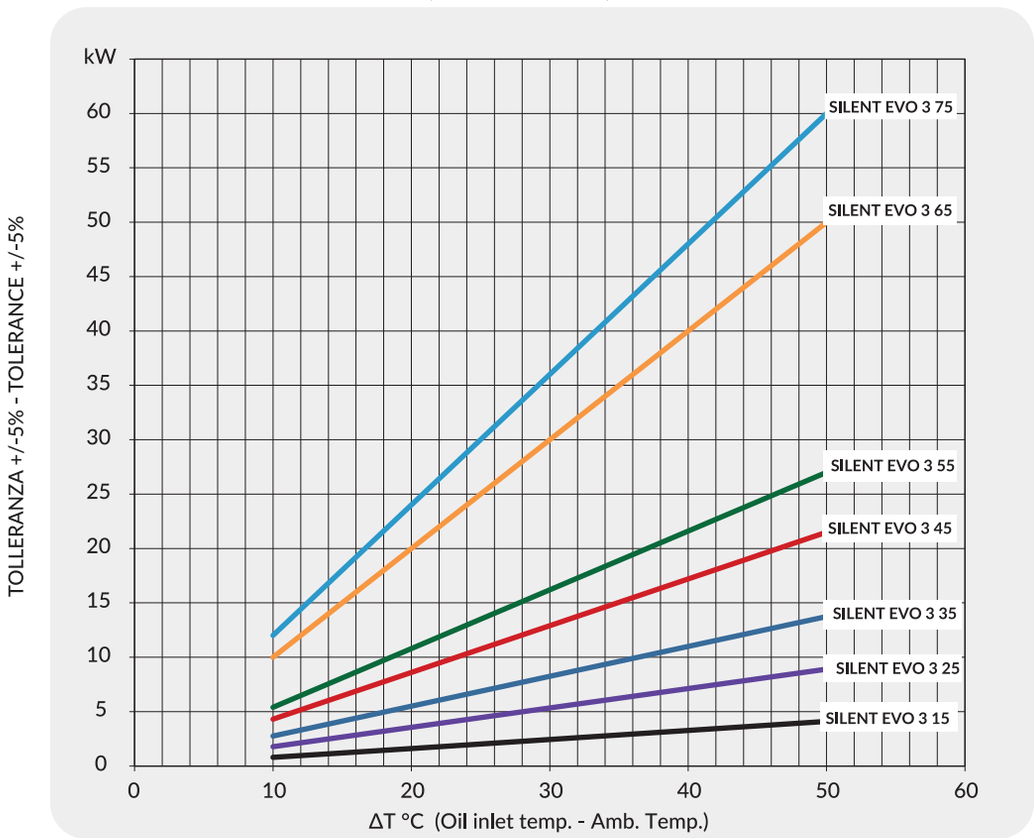
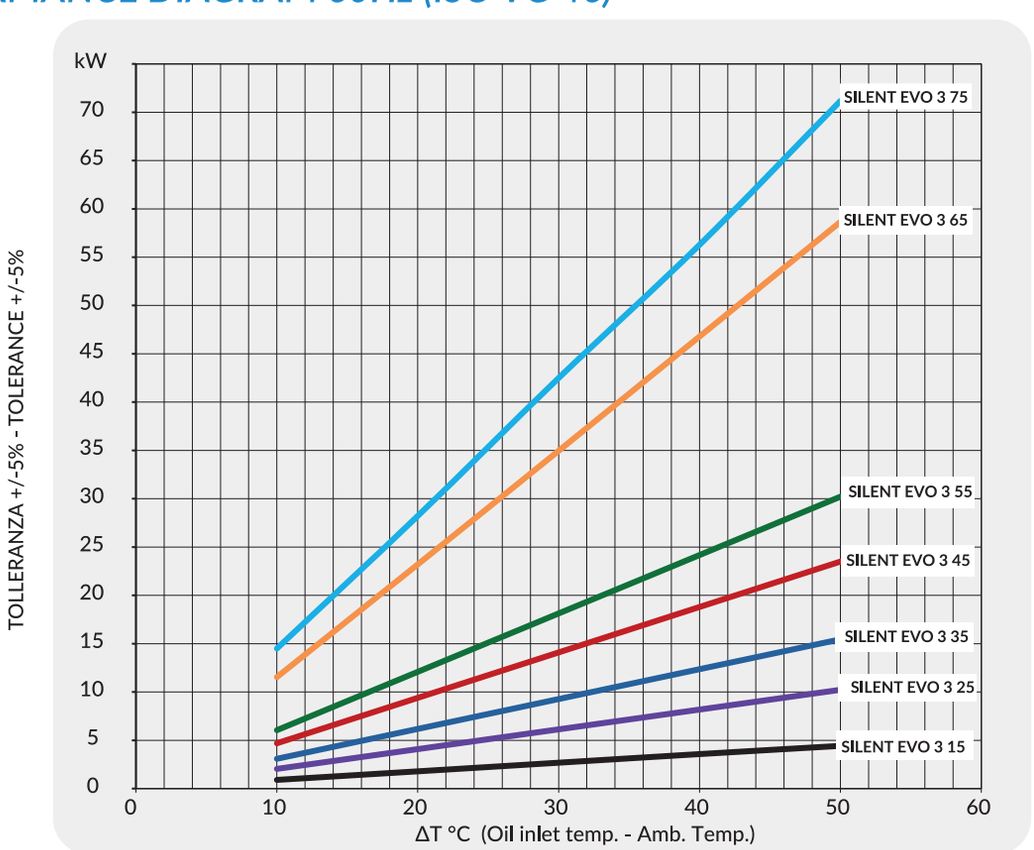


DIAGRAMMA RENDIMENTO 60Hz (ISO VG 46)

PERFORMANCE DIAGRAM 60Hz (ISO VG 46)



LIVELLO RUMOROSITA' db (A)

NOISE LEVEL db (A)

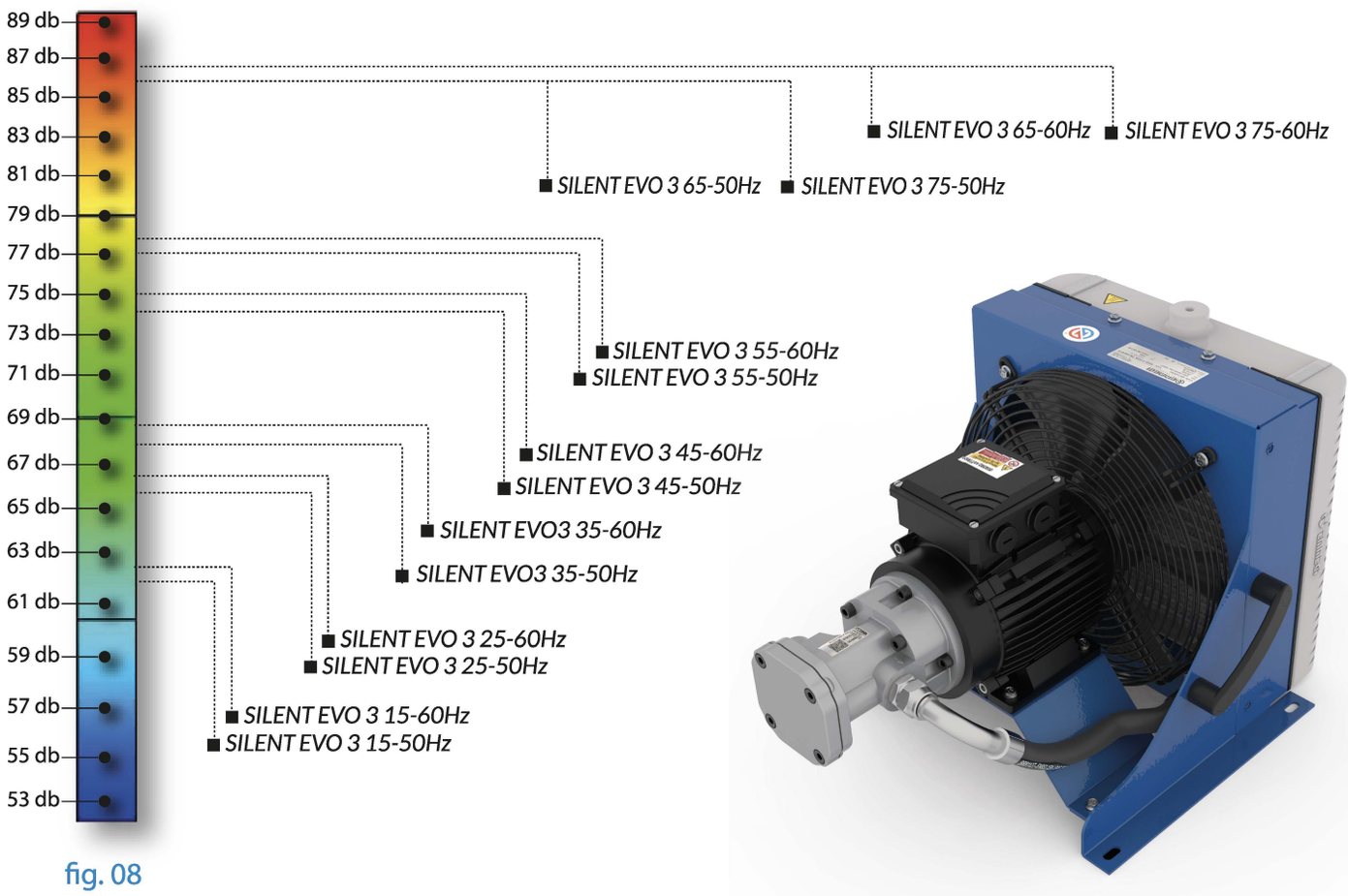


fig. 08

Pressione sonora misurata in camera anecoica, a 1 mt dallo scambiatore
L'ambiente circostante può influire sui valori riscontrati.

Sound pressure levels measured in an anechoic chamber 1mt
from the cooler unit.

- Alla ricerca di un continuo miglioramento del prodotto, EMMEGI S.p.A. si riserva il diritto di approntare modifiche ai dati e alle caratteristiche illustrate nel catalogo.
- La riproduzione, anche parziale, del presente catalogo è vietata ai termini di legge.
- Questo catalogo sostituisce tutti i precedenti.

- As EMMEGI S.p.A. are always investigating methods of improving products and introducing new technology, we reserve the right to modyfy without notice the data features shown in this catalogue.
- The reproduction, even partial of this catalogue is forbidden by law.
- This catalogue replace all the previous one.



EMMEGI®
HEAT-EXCHANGERS

Gruppi autonomi di raffreddamento Serie RID

Offline cooling units RID Series

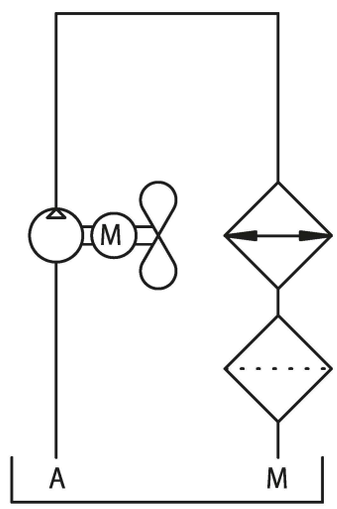
DESCRIZIONE

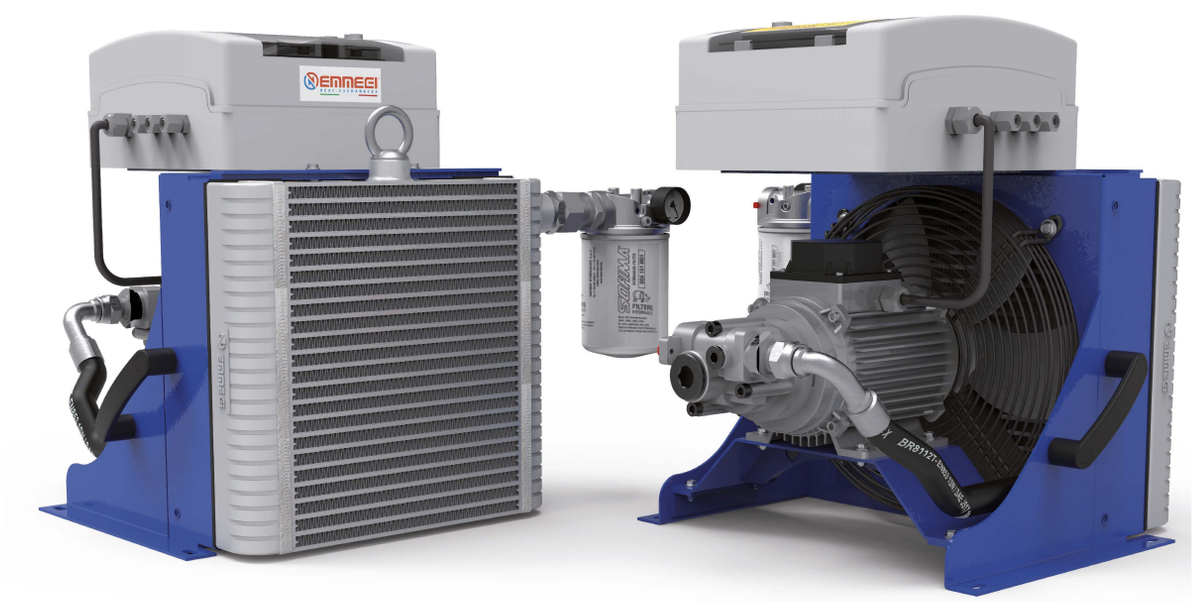
Per il settore dei riduttori EMMEGI ha realizzato una apposita unità ausiliaria di raffreddamento e filtrazione
RID, composta da scambiatore di calore aria/olio, gruppo motore elettrico, ventola e pompa idraulica (vite per RID55/56 ad ingranaggi per gli altri modelli).
Può essere dotato di quadro elettrico di potenza con termostato per l' avviamento della pompa;
termostato di allarme per raggiunta sovratemperatura;
pressostato per il controllo della pressione nella cassa ingranaggi
filtro SPIN/ON.
Il gruppo autonomo RID può essere utilizzato per raffreddare.
altre tipologie di circuito su impianti stazionari.

DESCRIPTION

EMMEGI has designed a cooling system unit with filter, called RID intended for the planetary reduction gear market.
The RID consists of an high efficiency air/oil heat exchanger an electric motor, a hydraulic pump (screw for RID55/56 and gears for other models).
It can be supplied with:
a power electric box whit a thermostat to turn on and off the pump;
alarm thermostat for over temperature;
control pressure switch (to be applied to the reduction gear box);
SPIN/ON filter.
The RID cooling system unit can be employed to cool different types of stationary system circuits as well.

SCHEMA IDRAULICO
HYDRAULIC CIRCUIT





APPLICAZIONE
APPLICATION

Grazie all'ampia gamma di combinazioni, gli scambiatori della serie RID si prestano come la soluzione di raffreddamento ottimale per applicazioni industriali quali:

The wide range of combinations makes the RID heat exchangers series the optimal cooling solution for industrial applications such as:











Impianti di riciclo.	Recycling plants.
Impianti oleodinamici.	Hydraulic systems.
Macchine utensili.	Machine tools.
Riduttori.	Gear boxes.



FLUIDI COMPATIBILI:

OLI MINERALI, HL HLP
PER L' UTILIZZO CON FLUIDI DIVERSI DALL' OLIO MINERALE CONSULTARE EMMEGI

SPECIFICHE TECNICHE

PRESSIONE DI ESERCIZIO: 6 bar
TEMPERATURA MINIMA FLUIDO: 20°C
TEMPERATURA MAX FLUIDO: +93°C
CAMPO DI VISCOSITA':

min	max
20 cst	320 CST

TEMPERATURA DI STOCCAGGIO: -10°C – 60°C

INSTALLAZIONE

E' buona norma collegare i gruppi autonomi RID alle unità da raffreddare mediante tubi flessibili.
Nel locale in cui il gruppo autonomo RID funziona, è necessario garantire un ricambio d'aria sufficiente per non pregiudicare la resa termica dello scambiatore.
Il gruppo deve essere installato in modo che, il flusso d'aria non sia ostacolato da pareti troppo vicine al pacco radiante.
E' indispensabile che i tubi d'aspirazione e mandata, siano di diametro uguale o superiore a quello del raccordo esistente sul gruppo; in caso contrario si possono verificare fenomeni di cavitazione che causano rumorosità elevata e possibile rottura della pompa.

PRESSIONE ASPIRAZIONE	MIN = 0.7 bar
	MAX= 3 bar

All'atto della messa in marcia è indispensabile controllare che il motore elettrico, ruoti nel senso indicato dalla freccia.
Il gruppo autonomo deve essere messo in funzione a una temperatura del fluido superiore a 20°C.
Il motore elettrico ha un grado di protezione IP55 e una classe di isolamento F.
I RID 55 e 56 sono dotati di protezione termica che dovrà essere collegata al quadro elettrico.
Gli altri modelli sono dotati di valvola di by-pass inserita nella pompa.
E' richiesto il pre-riempimento dei tubi quando lo scambiatore non e' sotto battente.

COMPATIBLE FLUIDS:

MINERAL OILS, HL HLP
FOR OTHER FLUIDS CONTACT EMMEGI

TECHNICAL SPECIFICATIONS

WORKING PRESSURE: 6 bar.
MINIMUM FLUID TEMPERATURE: 20°C
MAXIMUM FLUID TEMPERATIRE: +93°C
VISCOSITY RANGE:

min	max
20 cst	320 CST

STORAGE TEMPERATURE: -10°C – 60°C

INSTALLATION

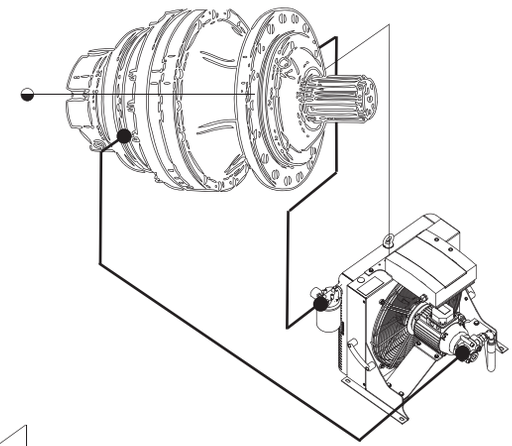
The RID off line cooling systems must be connected to the tank by means of flexible tubing.
In the normal functioning of this area, where the RID functions, there must be sufficent air circulation to prevent that the air becomes reheated and thereby interfering with the process of thermal exchange in the heat exchanger.
The RID should be installed in such a way that the flow of air will not be obstructed in either in/out conduits of the exchanger body.
It is essential that the in - and out-let tubes are of a dimension equal to or greater than those in the existing system, to avoid cavitation which is very noisy and might cause vibration and thus fracture the pump.

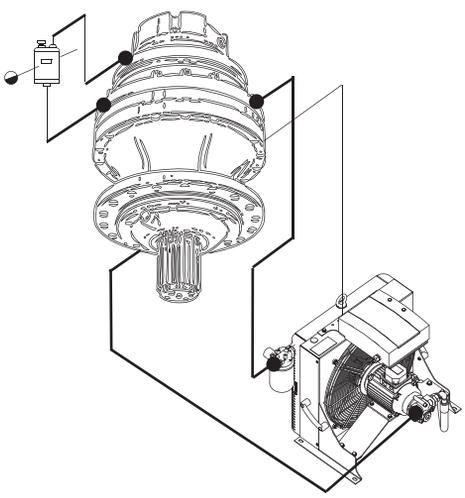
SUCTION PRESSURE	MIN = 0.7 bar
	MAX= 3 bar

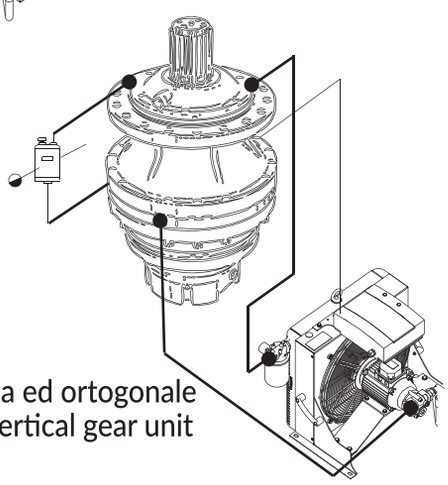
To start up, it is imperative to control that the electric motor, operated in the direction indicated like the arrow. The start up of the unit has to take place when the oil temperature is higher than 20°C.

The electrical motors type asynchronous is three phase with class F winding and protection index IP55. RID 55 and 56 has got a thermal protection and must be connected to electrical box.
Other models have got integrated by-pass valve in the pump.
We would recommend to full-fill the hoses when the unit is installed higher than the tank level.

Riduttore orizzontale
Horizontal gear unit







Riduttore verticale in linea ed ortogonale
In-line and ryght-angle vertical gear unit

MANUTENZIONE

PULIZIA LATO ARIA:

Può essere effettuata mediante aria compressa o acqua, con la direzione del getto parallelo alle alette.
Una pulizia più energica si ottiene con l'aggiunta di un prodotto detergente.
Se l'accumulo di sporco è causato da olio o da grasso, la pulizia potrà essere fatta con un getto di vapore o di acqua calda, facendo sempre attenzione alla direzione del getto.
Durante le operazioni di pulizia, il motore elettrico dovrà essere disinserito e convenientemente protetto.

PULIZIA LATO OLIO:

Per compiere questo tipo di pulizia, lo scambiatore deve essere smontato e flussato in controcorrente con percloretilene per un periodo che va dai 10 min. ai 20 min.
Procedere quindi allo svuotamento del circuito interno con aria compressa, prestando attenzione che la pressione non superi la massima ammessa dallo scambiatore.
Effettuare un prelavaggio interno prima di collegarlo all'impianto.

MAINTENANCE

AIR SIDE CLEANING

Can be done through means of compressed air or water, with the direction of the jet moving parallel to the channels.
More thorought cleaning can be carried out using detergent.
If the accumulations of dirt is caused by oil or grease, then it can be carried out with a jet of steam or hot water, always paying attention to the direction of the jet.
During the cleaning operation, the electric motor must be disconnected and properly protected.

OIL SIDE CLEANING

To carry out this type of cleaning, the heat exchanger must be dismantled and flushed out with a counter-current of perchloride for a period of 10/20 minutes.
Then flush out the system with compressed air, paying particular attention to the pressure not more than the maximum allowed for the heat exchanger.
We suggest to do a internal pre-washing before connecting to the system.

DENOMINAZIONE CODICE PRODOTTO
ORDERING CODE

RID	25	CQ	400	B	2	1

MODELLO - *MODEL*
15
25
45
55
56

QUADRO ELETTRICO - *ELECTRIC BOX*
QUADRO ELETTRICO - WITH ELECTRIC BOX **(CQ)**
SENZA QUADRO ELETTRICO-WITHOUT ELECTRIC BOX **(SQ)**

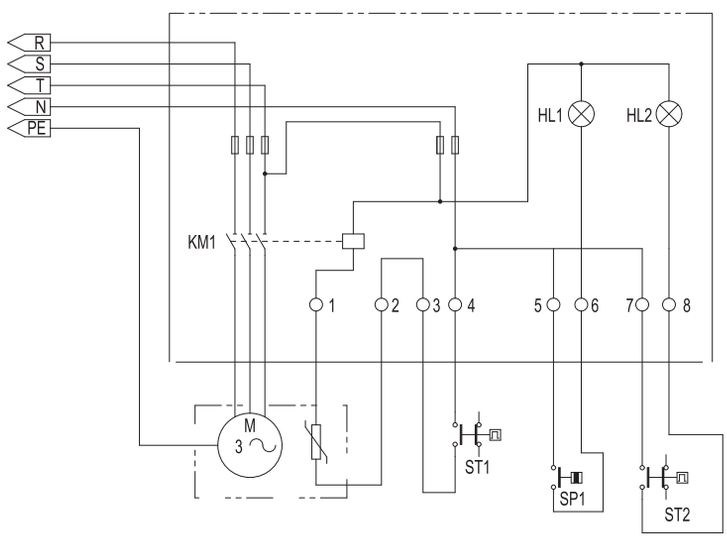
TENSIONE - *VOLTAGE*
400V 50Hz or 460V 60Hz **(400)**
(For RID55 only 400V 50Hz - For RID56 460V 60Hz)

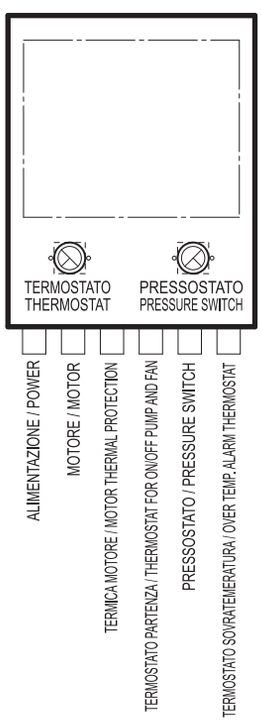
TENSIONE SPECIALE - SPECIAL VOLTAGE **(SPECIFICY VOLTAGE)**

FREQUENZA - *FREQUENCY*
PER TENSIONI STD - FOR STD VOLTAGE **(B)**
PER TENSIONI SPECIALI - FOR SPECIAL VOLTAGE 50Hz **(5)**
PER TENSIONI SPECIALI - FOR SPECIAL VOLTAGE 60Hz **(6)**

FILTRO - *FILTER*
10 µ **(1)**
25 µ **(2)**
60 µ **(3)**
SENZA FILTRO - WITHOUT FILTER **(0)**

COLLEGAMENTO ELETTRICO - *ELECTRIC WIRING*





MORSETTIERA
1-2= TERMICA MOTORE
3-4= TERMOSTATO PARTENZA VENTOLA E POMPA
5-6= PRESSOSTATO
7-8= TERMOSTATO SOVRATEMPERATURA

TERMINAL BLOCK
1-2= MOTOR THERMAL PROTECTION
3-4= THERMOSTAT FOR ON / OFF PUMP AND FAN
5-6= PRESSURE SWITCH
7-8= OVER TEMP. ALARM THERMOSTAT





Serie RID - *RID SERIES*

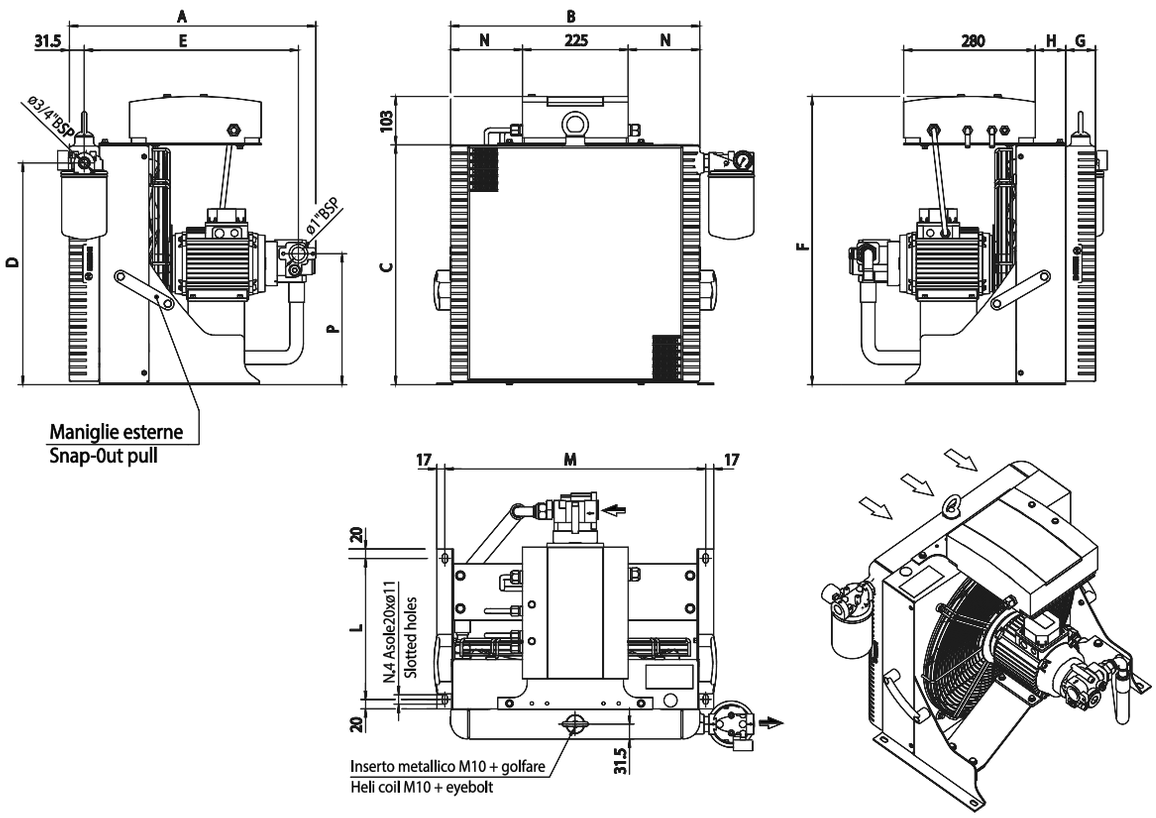
RID 15
RID 25
RID 45
RID 55
RID 56





DATI TECNICI

TECHNICAL DATA



La versione con quadro elettrico è comprensiva di :

- *Termostato fisso IP65 - TM46/A1 60-48°C*
- *Termostato fisso IP65 - TM49/A1 90-78°C*
- *N°4 Antivibranti Ø 30 L=20mm. M8*
- *5 Metri di cavo*

With electric box version the supply includes :

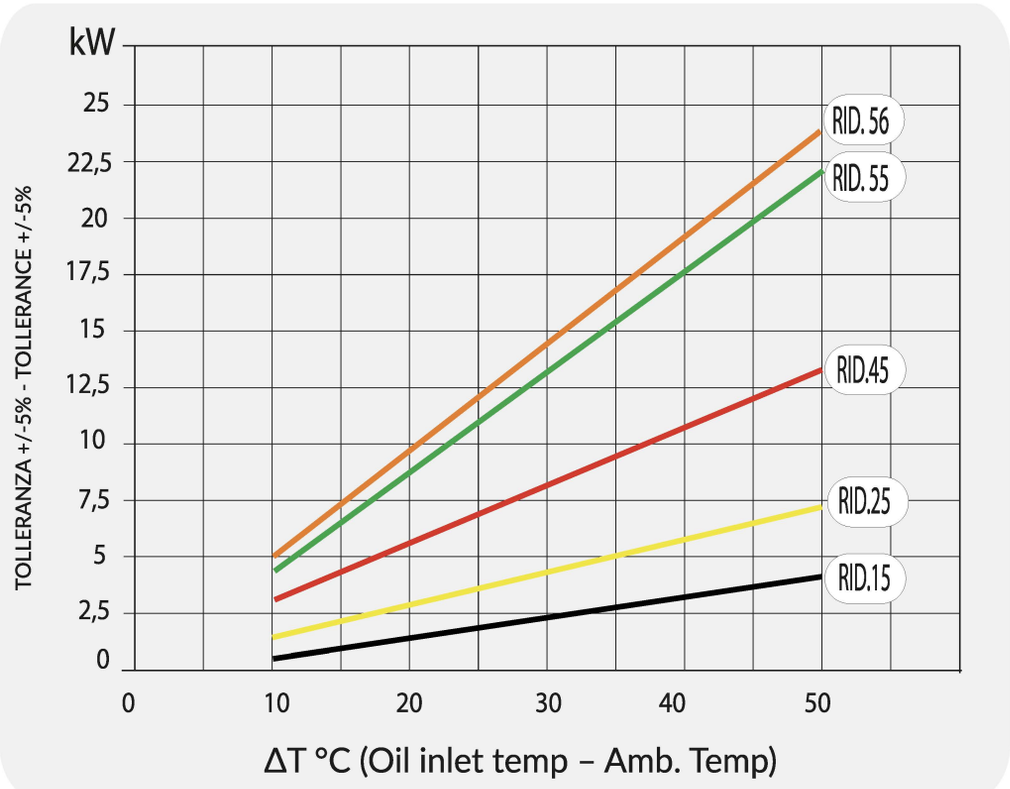
- *Thermostat integrated IP65 - TM46/A1 60-48°C*
- *Thermostat integrated IP65 - TM49/A1 90-78°C*
- *N°4 Anti-vibration Ø 30 L=20mm. M8*
- *5 Mt.cable*

TYPE	A	B	C	D	E	F	G	H	L	M	N	P
RID 15	512	310	312	273.5	442.5	415	63	35.5	280	347	42.5	179.5
RID 25	515	370	360	316.5	446.5	503	63	55	280	400	55	201
RID 45	524	530	510	471.5	456	611	63	65	300	555	152.2	278.5
RID 55	632	650	609	570.5	560.5	712	63	65	380	695	211	305
RID 56	688	650	609	570.5	617	712	63	65	380	695	211	305

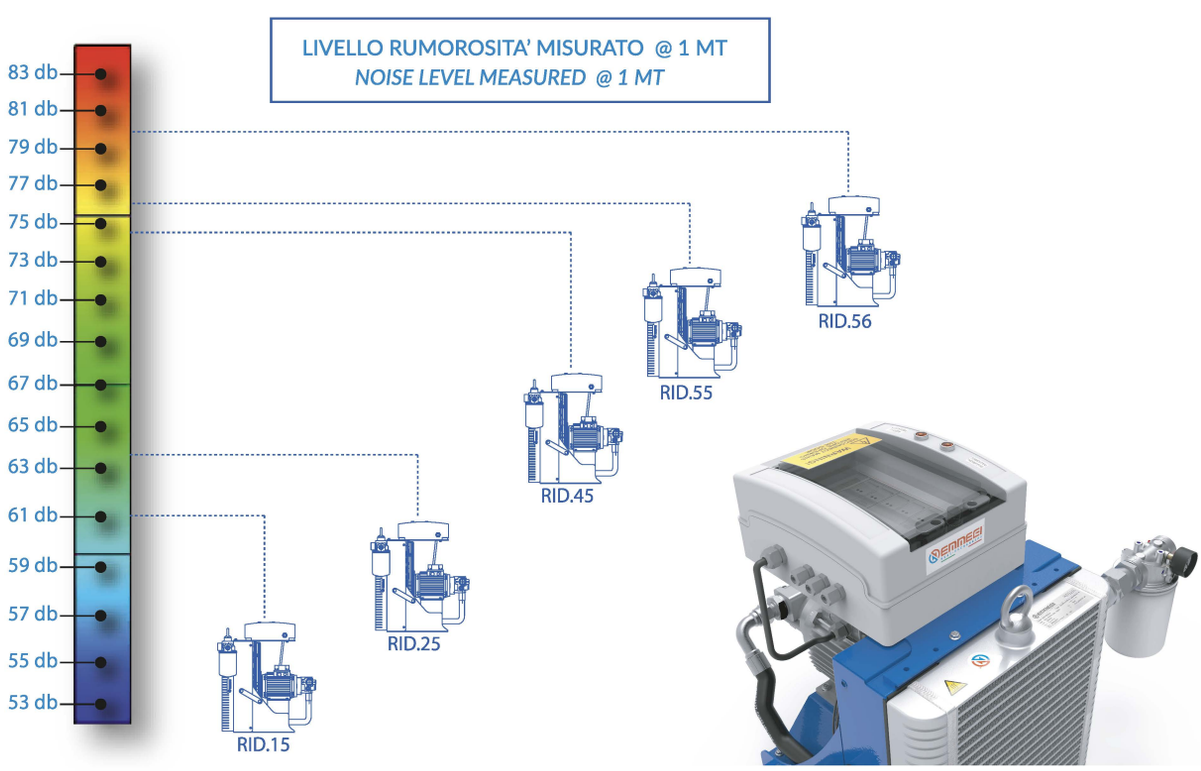
Per tensioni speciali contattare EMMEGI - For special voltage contact EMMEGI

TYPE	V	kW	A	Oil Flow (lpm)	Air Flow (m /h)	Kg (max)	Index of protection
RID 15	400 V 50 Hz / 460 V 60 Hz	0.95 / 1.1	2.1 / 2.0	10	700	28	IP 55
RID 25	400 V 50 Hz / 460 V 60 Hz	0.95 / 1.1	2.1 / 2.0	10	1630	30	IP 55
RID 45	400 V 50 Hz / 460 V 60 Hz	0.95 / 1.1	2.1 / 2.0	10	4100	47	IP 55
RID 55	400V 50 Hz	1.1	3.6	23	6048	57	IP 55
RID 56	460V 60Hz	2.2	609	28	7250	68	IP 55

DIAGRAMMA RENDIMENTO ISO VG 46)
PERFORMANCE DIAGRAM (ISO VG 46)



LIVELLO RUMORE db (A)
NOISE LEVEL db (A)





EMMEGI®
HEAT-EXCHANGERS

Serie DCO
DCO Series

DESCRIZIONE

Le nuove esigenze di contenimento energetico sui veicoli industriali di nuova generazione, aventi impianti sempre più complessi ed efficenti, impongono soluzione dedicate, allo scopo di aumentarne le performance ed i rendimenti.

Il DCO rappresenta la soluzione per queste nuove esigenze, massimizzando le prestazioni e contendendo gli ingombri, grazie alla sua semplicità d'installazione.

La serie DCO, prevede un innovativo gruppo autonomo di pompaggio e ventilazione, attivato da un motore in corrente continua che permette installazioni in remoto e disaccoppiate rispetto all'impianto principale.
I vantaggi principali sono:

- Prodotto di facile installazione.
- Ingombri contenuti.
- Adatto per retofit.
- Gestione autonoma del raffreddamento olio.

I gruppi sono disponibili sia a 12V che a 24V DC, e possono essere connessi all'impianto preesistente azionandoli a mezzo termostato o tramite dispositivi elettronici di regolazione azionamento (SSC).

DESCRIPTION

The new energy containment needs on new generation industrial vehicles, with increasingly complex and efficent systems, require dedicated solutions, with the aim of increasing their performance and yields.

The DCO represents the solution for these new needs, maximizing performance and competing for space, thanks to its simplicity of installation.

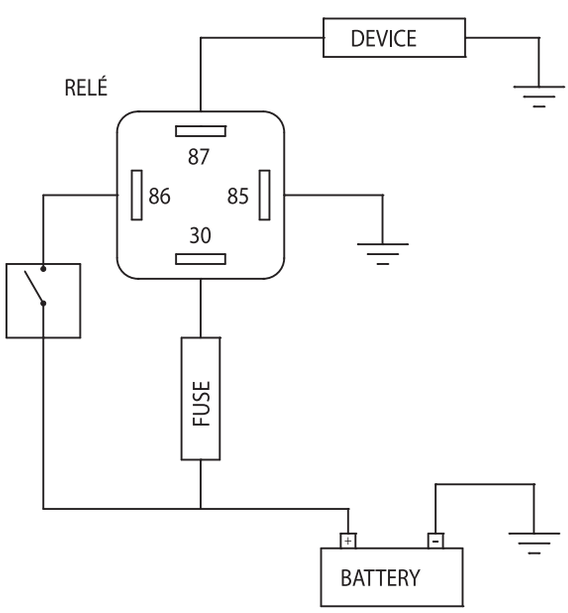
The DCO series provides an innovative autonomous pumping and ventilation unit, powered by a direct current motor, which allows remote and decoupled installations from the main system.
The main advantages are:

- Plug and play install product.
- Compact dimensions.
- Suitability for retrofitting.
- Autonomous management of oil cooling.

The groups are available at both 12V and 24V DC, and can be connected to the existing system by a thermostat or by electronic control devices (SSC).

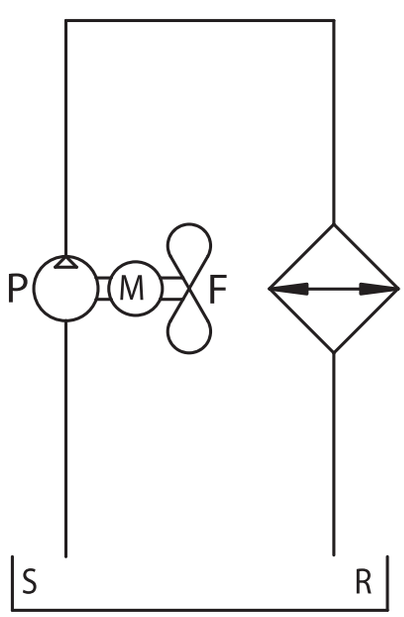
SCHEMA ELETTRICO

WIRING DIAGRAM



SCHEMA IDRAULICO

HYDRAULIC CIRCUIT



APPLICAZIONE
APPLICATION

La serie DCO completa la gamma di unità di raffreddamento di ricircolo per tutte le installazione dove non è previsto uno scambiatore sulla linea ottimale per applicazioni mobili quali:

The DCO series completes the range of recirculation cooling units for all installations where there is no exchanger on the line; optimal for mobile applications such as:



Veicoli industriali.
Veicoli ibridi.
Per altro contattateci.

Industrial vehicles
Hybrid vehicles.
Contact us for others.









FLUIDI COMPATIBILI:

OLI MINERALI, HL, HLP. Deve essere sempre garantita la compatibilità.
con i materiali costruttivi utilizzati:
- LEGA DI ALLUMINIO (MASSA RADIANTE)
- ACCIAIO ZINCATO (RACCORDERIA)
- GOMMA NITRILICA (GUARNIZIONI NBR)

In caso di fluidi differenti si consiglia di contattare EMMEGI per la verifica di compatibilità, fornendo informazioni dettagliate riguardo le specifiche del fluido.

COMPATIBLE FLUIDS:

MINERAL OILS, HL, HLP Compatibility with following material must be always confirmed:
- ALUMINIUM ALLOY (COOLING CORE)
- GALVANIZED STEEL (FITTINGS)
- NITRILE RUBBER (NBR SEALINGS)

DCO series may be compatible with other fluid types.
Please contact EMMEGI to discuss your individual requirements

SPECIFICHE TECNICHE

PRESSIONE DI ESERCIZIO: 6 barG
TEMPERATURA DEL FLUIDO -10°C +80°C
CAMPO DI VISCOSITA' CONSIGLIATO: 10 cSt – 100 cSt
TEMPERATURA DI STOCCAGGIO: -10°C +60°C
In caso di esigenze diverse da quanto indicato contattare EMMEGI S.p.A.

TECHNICAL SPECIFICATIONS

WORKING PRESSURE: 6 barG
FLUID TEMPERATURE: -10°C +80°C
SUGGESTED VISCOSITY: 10 cSt – 100 cSt
STORAGE TEMPERATURE: -10°C +60°C
In case of requirements other than indicated, please contact EMMEGI S.p.A.

INSTALLAZIONE

Il DCO deve essere collegato direttamente al serbatoio, in prossimità dello stesso.

La filtrazione dell'olio è sempre raccomandata, in modo da evitare danneggiamenti al gruppo motopompa e/o intasamenti alla massa radiante.

Il filtro è disponibile a richiesta e integrabile sul prodotto stesso.

INSTALLATION

The DCO must be connected directly to the tank, near it.

Oil filtration is always recommended, in order to avoid damage to the motor pump unit and / or blockages to the radiant mass.

The filter is available on request and can be integrated on board of the product.



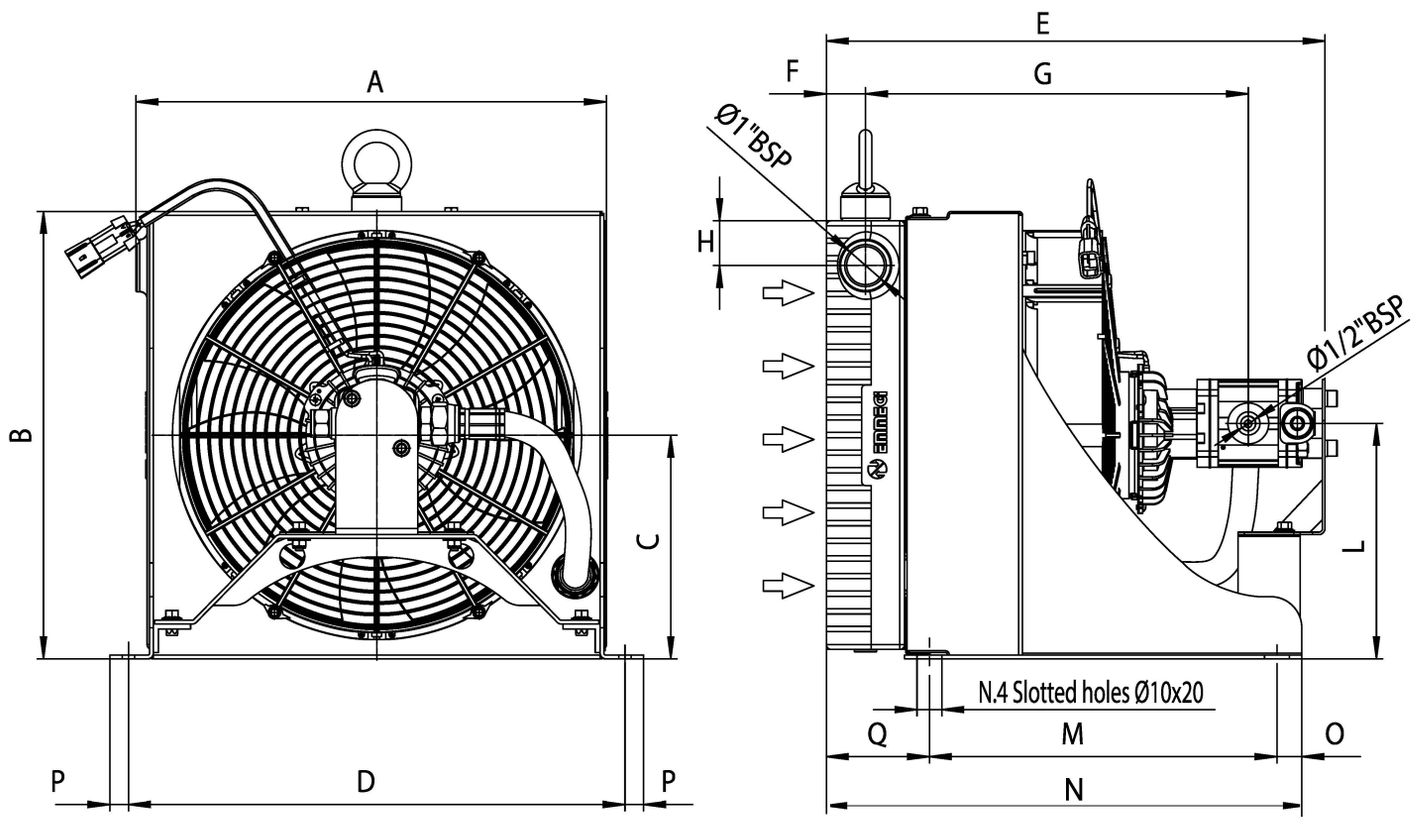


SERIE DCO - *DCO Series*

DCO 25
DCO 45







Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Modello Model	Codice Code	A	B	C	D	E	F	G	H	L	M	N	O	P	Q
DCO25	DCO250512T0F0	379	360	180	400	402	31.5	308.5	36	189.5	280	383	20	15	83
DCO25	DCO250524T0F0	379	360	180	400	402	31.5	308.5	36	189.5	280	383	20	15	83
DCO25	DCO251012T0F0	379	360	180	400	402	31.5	308.5	36	189.5	280	383	20	15	83
DCO25	DCO251024T0F0	379	360	180	400	402	31.5	308.5	36	189.5	280	383	20	15	83
DCO45	DCO450512T0F0	540	510	257.5	555	407.5	33.5	315.5	38	266.5	300	441	55	17	86
DCO45	DCO450524T0F0	540	510	257.5	555	407.5	33.5	315.5	38	266.5	300	441	55	17	86
DCO45	DCO451012T0F0	540	510	257.5	555	407.5	33.5	315.5	38	266.5	300	441	55	17	86
DCO45	DCO451024T0F0	540	510	257.5	555	407.5	33.5	315.5	38	266.5	300	441	55	17	86

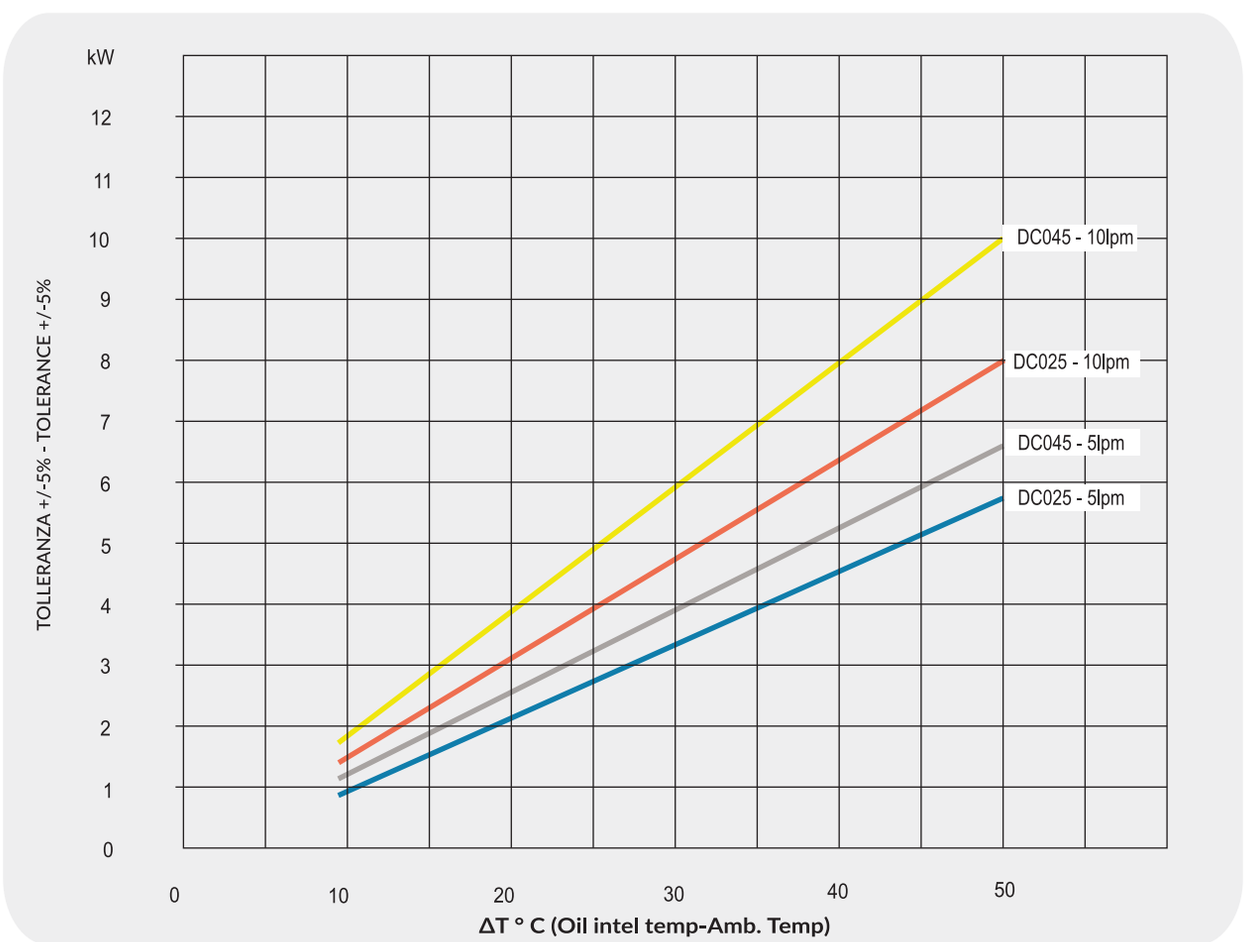


Dati tecnici *Technical Data*

Modello Model	Codice Code	V	A	Oil flow (lpm)	index of protection	dB (A)	lt	kg
DCO25	DCO250512T0F0	12V	17,8	5 lpm	IP68	79	2,2	18
DCO25	DCO250524T0F0	24V	8,6	5 lpm	IP68	79	2,2	18
DCO25	DCO251012T0F0	12V	18,6	10 lpm	IP68	79	2,2	18
DCO25	DCO251024T0F0	24V	9,2	10 lpm	IP68	79	2,2	18
DCO45	DCO450512T0F0	12V	20,1	5 lpm	IP68	80	4	35
DCO45	DCO450524T0F0	24V	9,3	5 lpm	IP68	80	4	35
DCO45	DCO451012T0F0	12V	20,1	10 lpm	IP68	80	4	35
DCO45	DCO451024T0F0	24V	10,1	10 lpm	IP68	80	4	35

I dati riportati in tabella fanno riferimento a olio ISO VG 46 @ 40°C
The data refer to oil ISO VG 46 @ 40°C

Diagramma rendimento
Perfomance diagram





EMMEGI®
HEAT-EXCHANGERS

Scambiatori a fascio tubiero

Shell & Tubes heat-exchangers

APPLICAZIONE
APPLICATION

La gamma MG Shell & Tubes comprende un'ampia scelta di modelli caratterizzati da un elevata efficenza, e i materiali utilizzati consentono di ottenere un prodotto altamente affidabile e si prestano a essere la soluzione di raffreddamento ottimale per svariate applicazioni.
Tutti gli scambiatori hanno il circuito acqua ispezionabile a 1, 2 o 4 passaggi, e possono essere predisposti per l'utilizzo di una valvola termostatica che consente un notevole risparmio sul consumo dell'acqua.

Shell & Tubes heat exchangers are used for the cooling of hydraulic circuits and are normally installed in return lines.
The range includes a vast choice of high-efficiency models.
The choice of top-quality materials, worked with precision machines, results in a highly reliable product.
All exchangers have a water circuit in 1, 2, 4 pass design, witch can be inspected for maintenance and can be fitted with a thermostatic valve, allowing significant saving on water consumption.





Impiantistica oleodinamica.	Hydraulic plants.
Macchine alimentari.	Food machines.
Installazioni marine.	Marine installations.
Macchine industriali.	Industrial machines.
Macchine utensili.	Machine tools.
Compressori.	Compressors.
Generatori.	Generators.







Introduzione

Gli scambiatori di calore a fascio tubiero EMMEGI S.p.A. sono utilizzati per il raffreddamento di circuiti oleodinamici e sono normalmente inseriti su linee di ritorno.
La gamma EMMEGI S.p.A. comprende una vasta scelta di modelli caratterizzati da un' elevata efficienza. La scelta di materiali di prima qualità, lavorati con macchine di precisione, consente d' ottenere un prodotto altamente affidabile.
Gli scambiatori EMMEGI S.p.A. hanno circuito acqua ispezionabile a 1,2,4 passaggi, e possono essere forniti con valvola termostatica che consente un notevole risparmio sul consumo dell' acqua.

Introduction

EMMEGI S.p.A. shell & tubes heat-exchangers are normally used for the cooling of oil hydraulic systems and are installed on the return line of the system.
The EMMEGI S.p.A. range includes wide choice of applicable models, highly efficent. The range of high quality material manufactured with precision machinery, result in extremely reliable product.
The EMMEGI S.p.A. heat exchangers have a inspectable water circuit in 1,2 or 4 pass. They can be supplied with thermostatic valves which greatly assist in the reduction of water consuption.

Fluidi compatibili

Oli minerali, HL, HLP.
Emulsioni acqua/olio
Acqua/glicole
Acqua/acqua industriale
Per altri fluidi consultare EMMEGI S.p.A.

Compatible fluids

Mineral oils; HL;HLP.
Mixture water/oil
Water-glicolic acid
Water/indutrial water
For other fluids, contact EMMEGI S.p.A.

Specifiche tecniche

Versioni: standards-acqua marina AISI-
Pressione di esercizio: 12 bar.
Pressione di collaudo: 18 bar.
Temperatura max di esercizio: 120°C
Pressione di esercizio acqua: 5 bar.
Pressione di collaudo acqua: 8 bar.
Temperatura MAX di esercizio: 70°C

Technical specifications

Version: fresh water - sea water - AISI
Operating pressure: 12 bar.
Test pressure : 18 bar.
Max operating temperature : 120°C
Operating pressure water : 5 bar.
Test pressure water : 8 bar.
Max operantig temperature water : 70°C

Installazione

In fig. 1 è indicata la corretta posizione d' entrata dei due fluidi, che devono circolare in controcorrente per ottenere il massimo scambio termico.
Il posizionamento dello scambiatore sulla macchina deve essere eseguito utilizzando appositi supporti elastici, e quindi collegato all' impianto idraulico e alla rete idrica mediante tubi flessibili.
E' consigliabile prevedere, su impianti che lavorano in ambienti con forti escursioni termiche, una valvola di by-pass (fig.2) tra ingresso e uscita olio.
Con temperature molto basse e impianto fermo è opportuno mantenere l' acqua in continua circolazione per evitare dannose rotture; oppure svuotare lo scambiatore avvalendosi del tappo di scarico.
E' suggerita la messa a terra per evitare rotture dovute a correnti vaganti.

Installation

The correct position of inlet of the two fluids is indicated in fig. 1. They should circulate in opposite direction, in order to obtain the maximum heat exchange.

The positioning of the heat exchanger on the machine should be carried out using appropiate flexible supports and all those in connection with hydraulic or power plant, through flexible tubing.
It is advisable, to preserve the heat exchanger,

that a by-pass valve is inserted (fig.2).

At very low temperatures, it is advisable to keep the water in costant circulation, to preved harmful fractures othrwise emptyng the exchanger by use of the discharge valve.
EMMEGI suggest to connect eletrical grounding in order to avoid leakage currents.

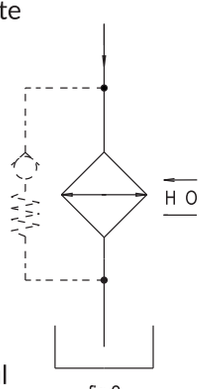


fig.2

Manutenzione

Pulizia lato tubi

Per garantire il massimo rendimento dello scambiatore, è consigliabile una periodica ispezione del circuito acqua al fine d'eliminare eventuali tracce di calcare o altre impurità che si sono depositate all' interno dei tubi.
Quest' operazione si compie agevolmente togliendo solo il fondello e procedendo allo scovolamento dei tubi.

Pulizia lato mantello

Su questo lato del circuito, la pulizia avviene mediante flussaggio con percloretilene fatto circolare in controcorrente per ca. 30 min.
Procedere quindi all' eliminazione dei residui tramite flussaggio con acqua calda.

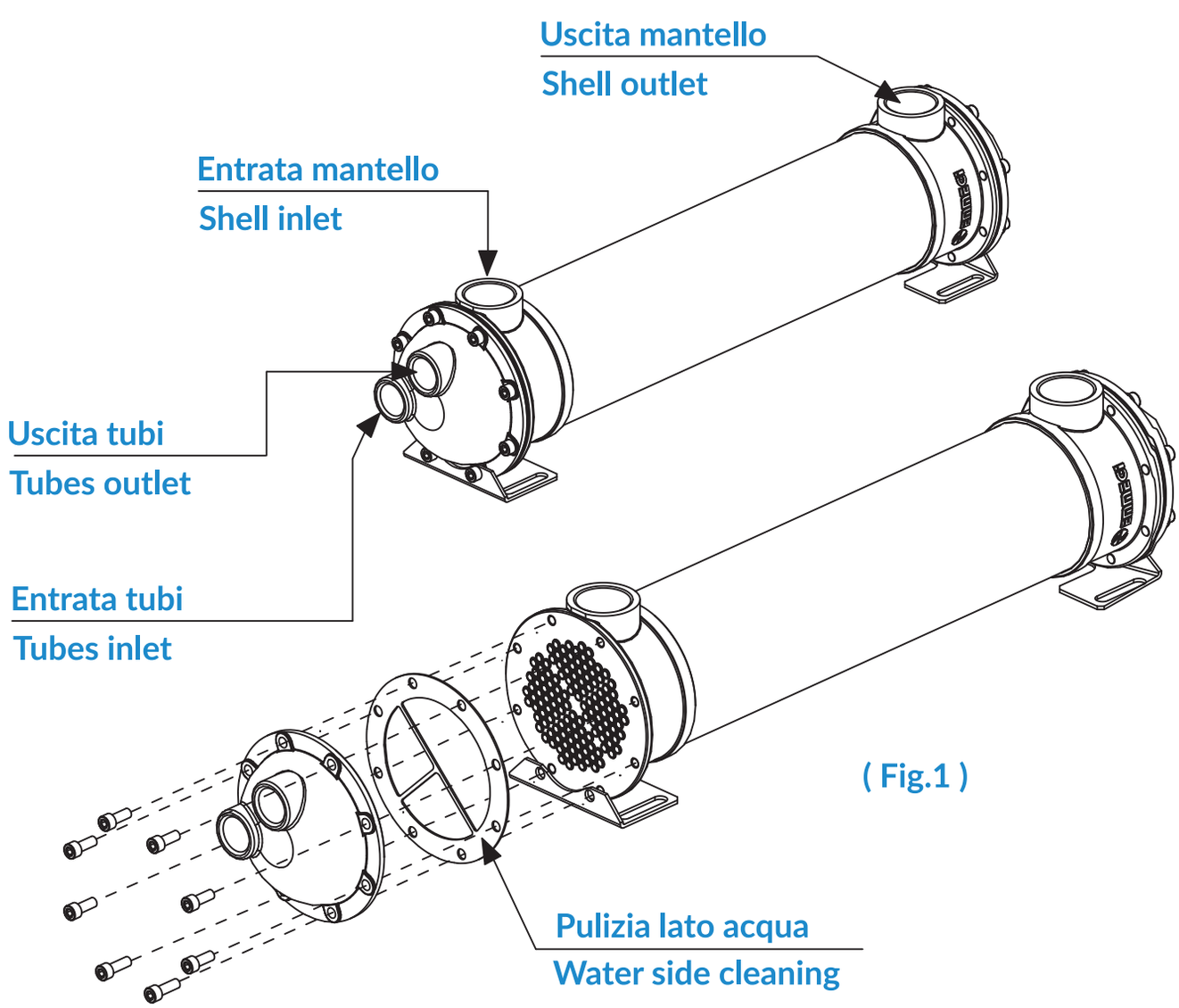
Maintenance

Tubes side cleaning

To guarantee the maximum effectiveness in exchange, an ispection of the tubes circuit is advisable, to eliminate all trace of lime or any other impurities, which might be deposited inside the tubes.
This operation will be easily accomplished by removing the headers and flushing out the tubes.

Shell side cleaning

In this part of the circuit, the cleaning will be carried out through the circulation of perchloride in the opposite direction of the normal flow, for about 30 minutes. This will help to eliminate any residue left by flushing out with hot water.



(Fig.1)

Esempio di scelta dello scambiatore di calore

DATI :

Portata olio	: 60	[lt/min.]
Peso specifico	: 0,88	[Kg/dm³]
Calore specifico	: 0,49	[Kcal/Kg °C]
Viscosità	: 32	[cst]
Temperatura IN olio	: 55	[°C]
Temperatura IN acqua	: 20	[°C]
Potenza da dissipare	: 15	[kW]

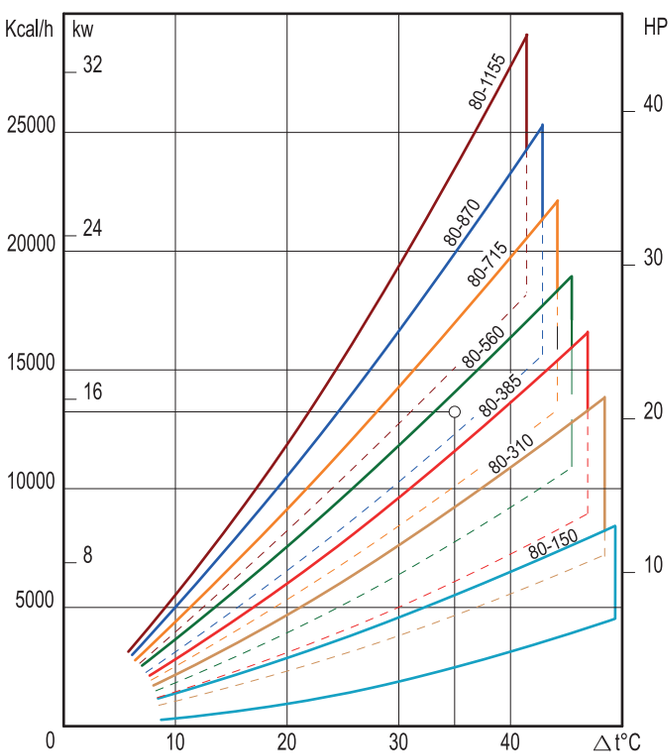
Conoscendo la portata dell' olio, la potenza da dissipare, e stabilito il △T, ovvero la differenza tra la temperatura ingresso olio e la temperatura ingresso acqua, si può ricercare sui diagrammi riportati a catalogo lo scambiatore idoneo.

Heat exchanger selection

DATA :

Oil flow	: 60	[lt/min.]
Specific weight	: 0,88	[Kg/dm³]
Specific heat	: 0,49	[Kcal/Kg °C]
Viscosity	: 32	[cst]
Oil temperature	: 55	[°C]
Water temperature	: 20	[°C]
Cooling power	: 15	[kW]

Knowing the viscosity and flow rate of the oil, cooling power and stability of △T (inlet temperature of oil - water) it is possible to obtain the suitable cooler from the performance diagram.



TIPO *TYPE*	PORTATA OLIO *OIL FLOW* (lt/min)	HP DISPERSI CON OLIO *HP DISSIPATED WITH OIL* @ 55°C H_2O @ 20°C
MG 80-150 -...	25 - 75	4 - 8
MG 80-310-...	25 - 80	7 - 14
MG 80-385-...	25 - 80	9 - 17
MG 80-560-...	25 - 80	12 - 20
MG 80-715-...	35 - 120	15 - 24
MG 80-870-...	40 - 130	18 - 29
MG 80-1155-...	40 - 130	22 - 36

Lo scambiatore selezionato risulta il modello MG-80-870-4.
La dissipazione segnata nel diagramma di rendimento espressa in HP si ottiene con viscosità pari a 32 cst e portate acqua indicate nella seguente tabella A:

Selected exchangers results in the model MG-80-870-4.
The cooling performance diagram expressed in HP is obtained, with a viscosity of 32 cst and water flow as indicated in the following table A:



A)

n° passaggi lato acqua *n° of water pass*	lt/min x ogni HP da dissipare *l/min per any HP to be dissipated*
1	3
2	2
4	1

Nel caso si abbiano variazioni di temperatura e portata d' acqua, considerare i seguenti coefficenti:

In case there are different values of temperature and flow, the following coefficents Must be considered.

B)

Fattore di correzione scambio termico
Cooling power correction factor

Portata acqua *Water flow*	Portata indicata in tabelle "A" *Flow expressed in table "A"*	Due volte la portata indicata nella tabella "A" *Flow expressed in table "A" multiply x 2*	Tre volte la portata indicata nella tabella "A" *Flow expressed in table "A" multiply x 3*
Fattore di correzione *Correction factor*	1	1,2	1,4

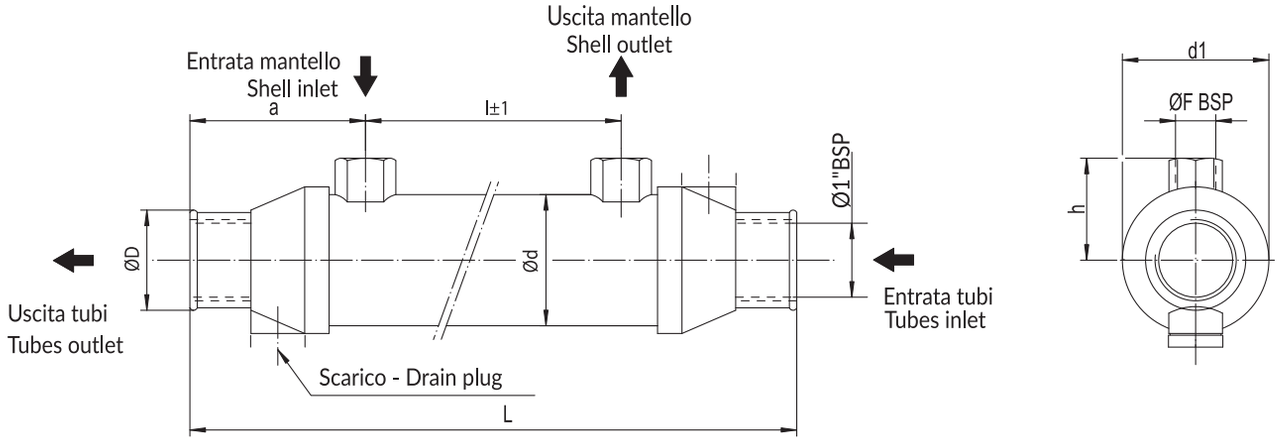
C)

Fattore di correzione T °C acqua con olio a 55°C
Temp °C water correction factor with oil at 55°C

Temperatura acqua *Water temp*	20°C	25°C	30°C	35°C
Fattore di correzione *Correction factor*	1	0.85	0.70	0.60

Se per la scelta, tutti i dati non sono conosciuti, contattare EMMEGI.

In case of dubts contact EMMEGI.



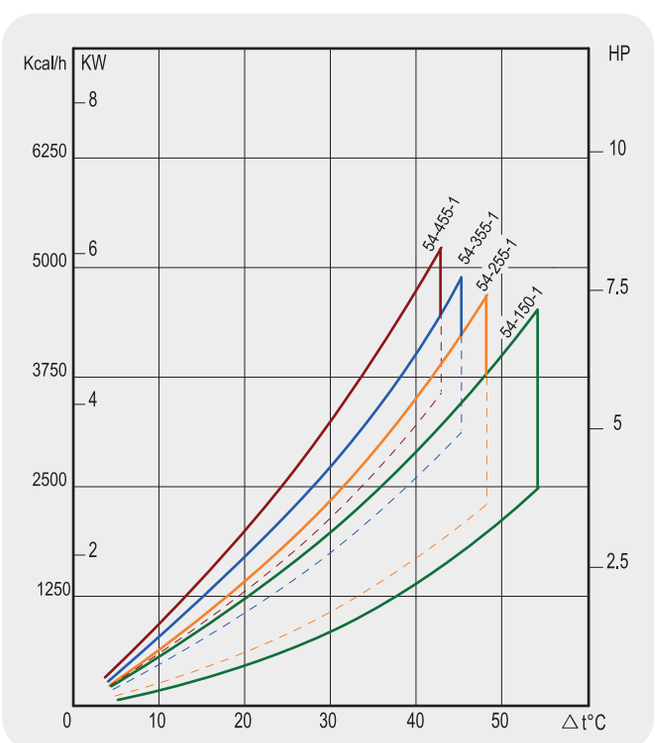
Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBO	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL
SEA WATER	CuNi10Mn1Fe	CuZn37	CuZn37	CuZn40	CuZn37

TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITH OIL =55°C H2O=20°C	CAPACITA' CAPACITY (lt)	kg	Dimensioni - Over all dimension 1 Pass							
					ØD	ØF	l	L	a	Ød	d1	h
MG 54-150-1	10-40	1.5-4	0.26	1.3	39	3/8"	150	303	74	54	60	42
MG 54-255-1	10-50	2-4.5	0.4	1.8	39	3/8"	255	399	74	54	60	42
MG 54-355-1	10-50	3.5-5.5	0.5	2.3	39	3/8"	355	499	74	54	60	42
MG 54-455-1	10-50	4-6.5	0.6	2.7	39	3/8"	455	599	74	54	60	42

DIAGRAMMA RENDIMENTO
Alla portata massima e minima indicata in tabella

PERFORMANCE DIAGRAM
At the maximum and minimum flow stated in schedule

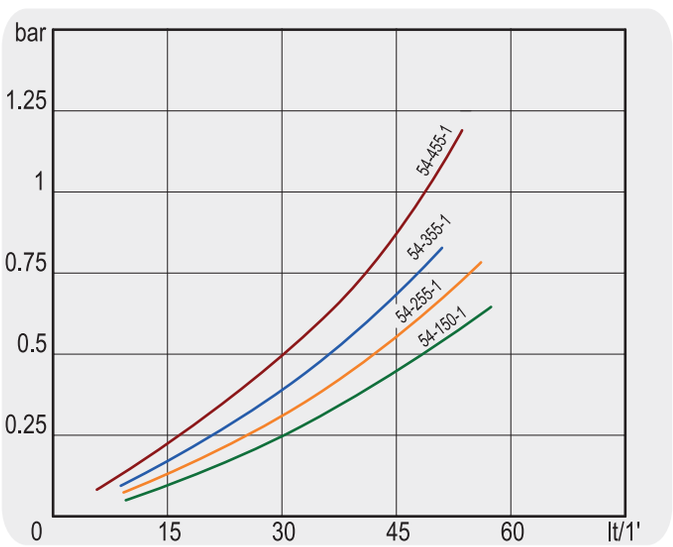


FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

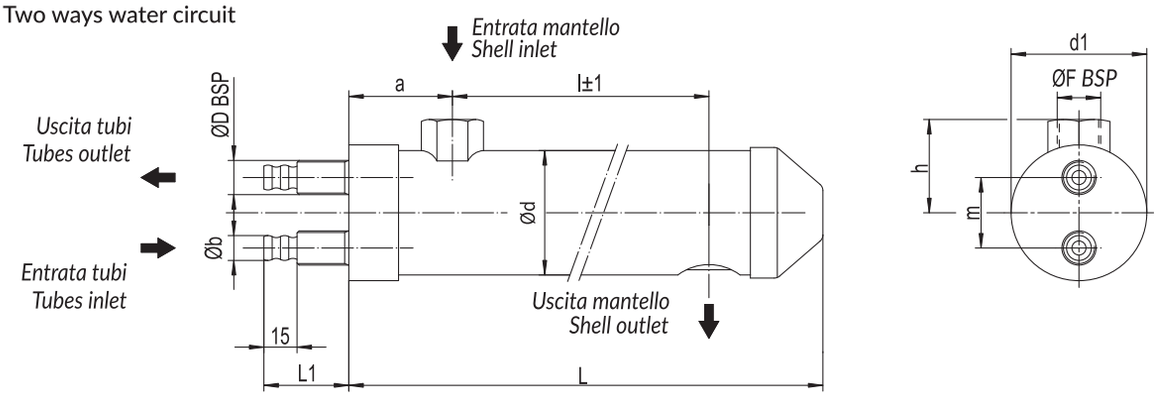
PERDITE DI CARICO (32 cst)
PRESSURE DROP (32 cst)



MG Shell & Tubes

MGC 60 - MGC 80

Con circuito acqua a due passaggi.
Two ways water circuit



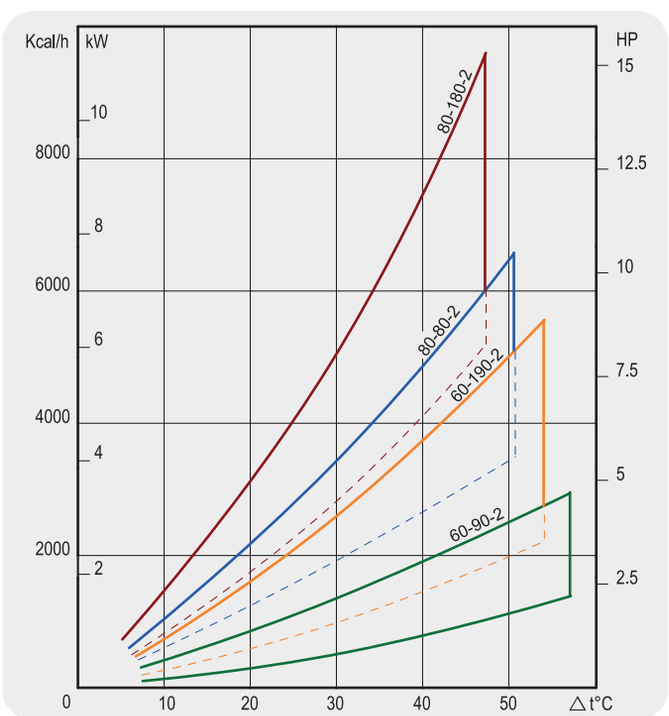
Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL
STANDARD	CuDHP	CuZn40	CuZn37	CuZn40	CuZn37

TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITH OIL =55°C H2O=20°C	CAPACITA' CAPACITY (lt)	kg	Dimensioni - Over all dimension 2 Pass										
					ØD	ØF	l	L	L1	a	Ød	h	Øb	m	d1
MGC 60-90-2	5-30	1-2.5	0.3	1.5	3/8"	1/2"	90	190	40	48	60	45	13	38	65
MGC 60-190-2	7.5-40	2-5.5	0.4	2	3/8"	1/2"	190	290	40	48	60	45	13	38	65
MGC 80-80-2	25-60	3.5-6.5	0.5	2.3	3/8"	1/2"	80	190	40	50	60	65	16	45	85
MGC 80-180-2	30-80	5.5-10	0.7	3.5	3/8"	1/2"	180	290	40	50	60	65	16	45	85

DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella
PERFORMANCE DIAGRAM
At the maximum and minimum flow stated in schedule

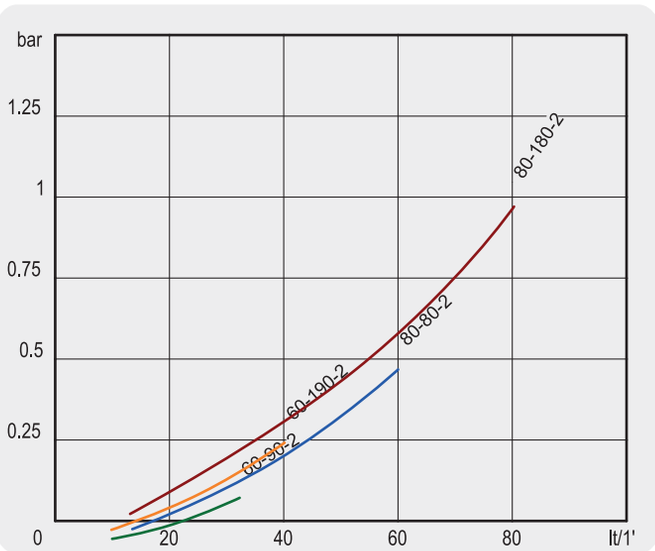


FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

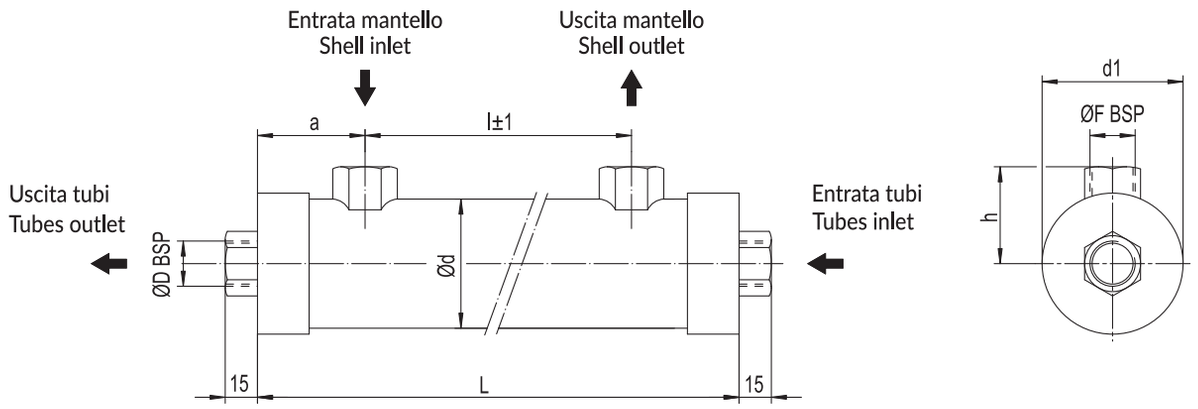
CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

PERDITE DI CARICO (32 cSt) PRESSURE DROP (32 cSt)



Con circuito acqua a un passaggio.
One way water circuit

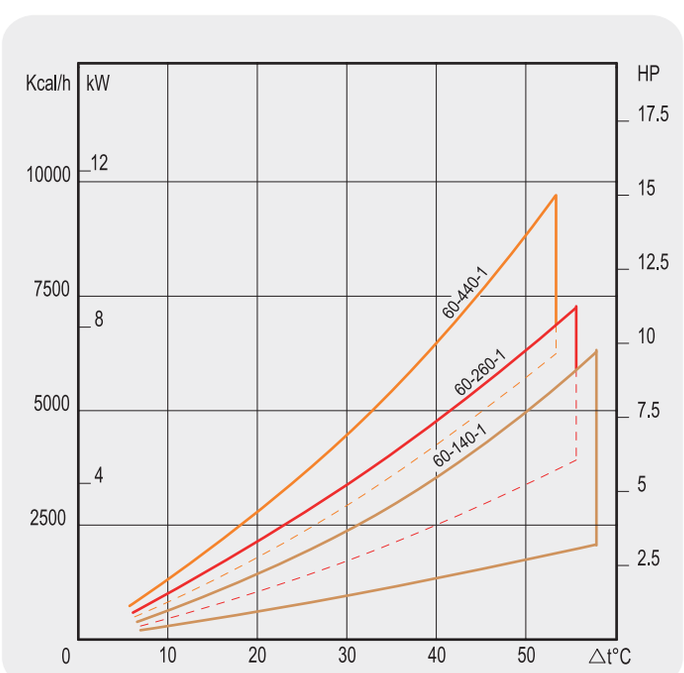


Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL
STANDARD	CuDHP	CuZn40	CuZn37	CuZn40	CuZn37

TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITH OIL =55°C H2O=20°C	CAPACITA' CAPACITY (lt)	kg	Dimensioni - Over all dimension 1 Pass							
					ØD	ØF	l	L	a	Ød	d1	h
MGE 60-140-1	5-30	1.5-4.5	0.4	1.8	1/2"	1/2"	140	240	50	60	65	45
MGE 60-260-1	7.5-40	3.5-6.5	0.6	3	1/2"	1/2"	260	360	50	60	65	45
MGE 80-440-1	10-50	6-9	0.9	5	1/2"	1/2"	440	540	50	60	65	45

DIAGRAMMA RENDIMENTO
Alla portata massima e minima indicata in tabella
PERFORMANCE DIAGRAM
At the maximum and minimum flow stated in schedule

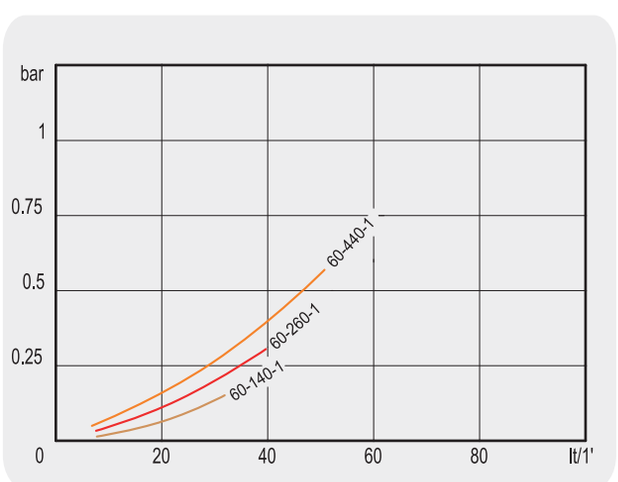


FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

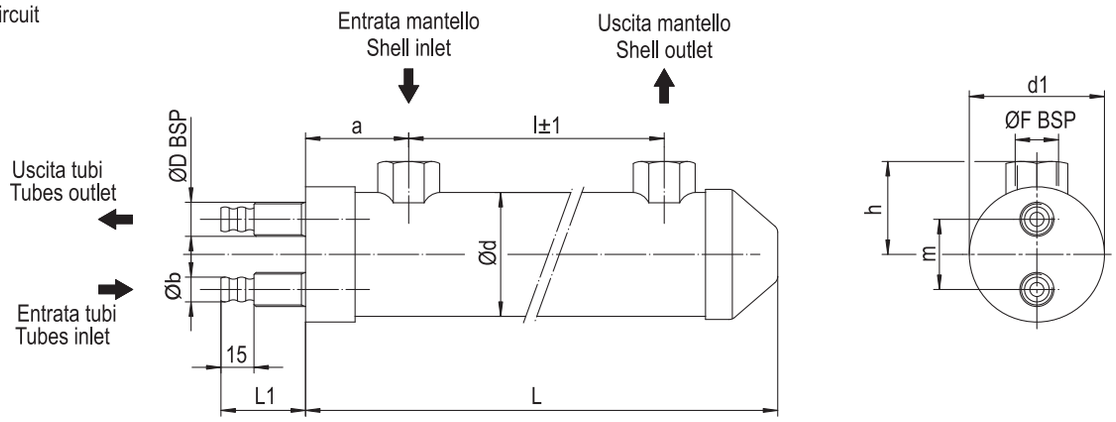
PERDITE DI CARICO (32 cSt) PRESSURE DROP (32 cSt)



MG Shell & Tubes

MGE 60 2 PASS

Con circuito acqua a due passaggi.
Two ways water circuit



Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL
STANDARD	CuDHP	CuZn40	CuZn37	CuZn40	CuZn37

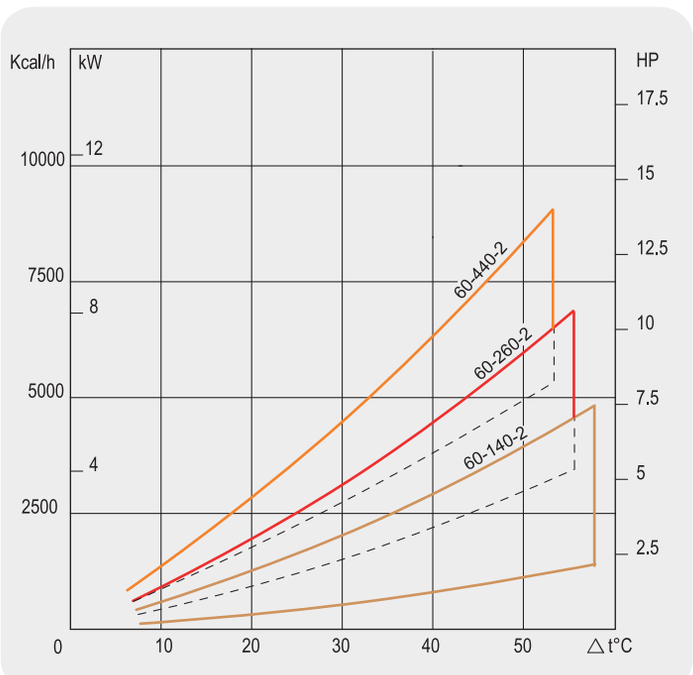
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON HP DISSIPATED WITH OIL =55°C H2O=20°C	CAPACITA' CAPACITY (lt)	kg	Dimensioni - Over all dimension 2 Pass										
					ØD	ØF	l	L	L1	a	Ød	h	Øb	m	d1
MGE 60-140-2	5-30	1-4	0.4	1.8	3/8"	1/2"	140	245	40	50	60	45	13	38	65
MGE 60-260-2	7.5-40	3-6	0.6	3	3/8"	1/2"	260	365	40	50	60	45	13	38	65
MGE 60-440-2	10-50	5-8.5	0.9	5	3/8"	1/2"	440	545	40	50	60	45	16	38	65

DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

PERFORMANCE DIAGRAM

At the maximum and minimum flow stated in schedule

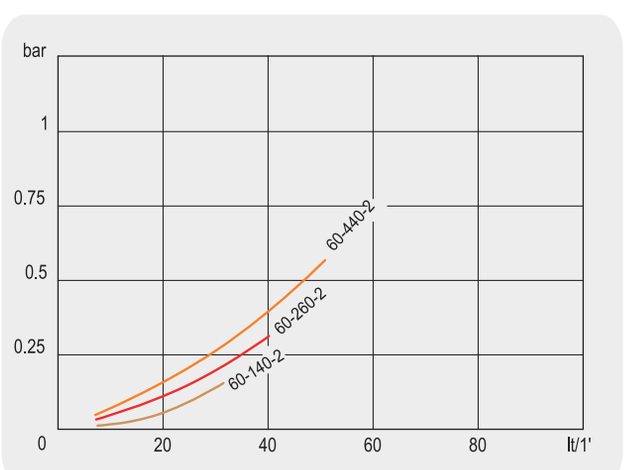


FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

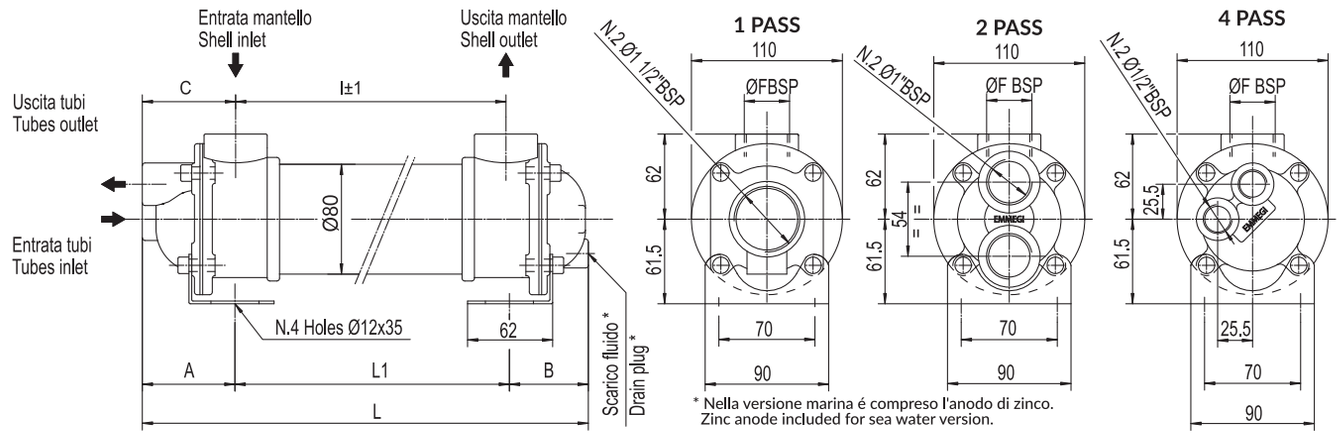
CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

PERDITE DI CARICO (32 cSt) PRESSURE DROP (32 cSt)



Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways inspectable water circuit

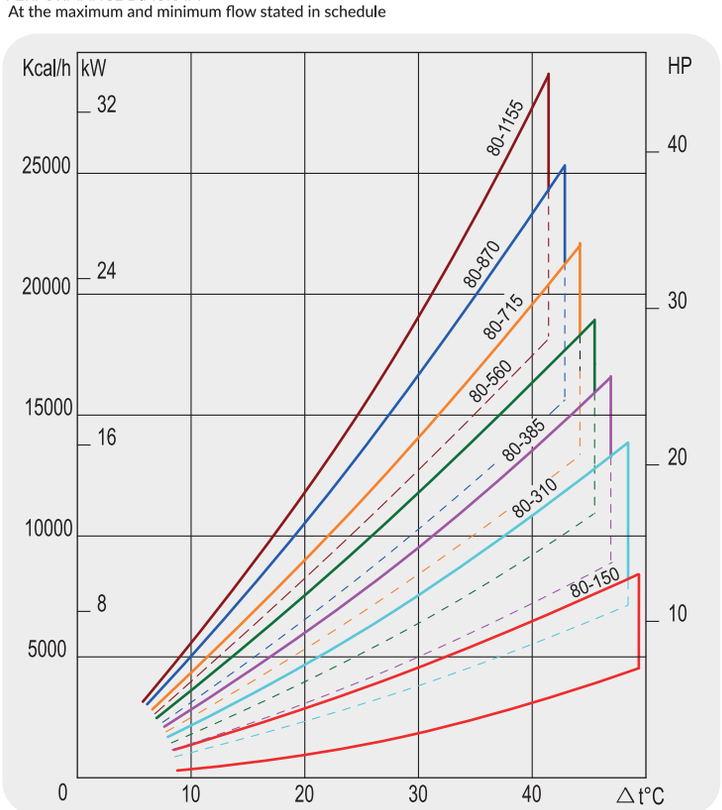


Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZn40	CuZn37	CuZn40	Fe510.2	Rubber-cork
SEA WATER	CuNi10Mn1Fe	CuZn40	CuZn37	CuZn40	Fe510.2	Rubber-cork

TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITK OIL =55°C H20=20°C	CAPACITÀ CAPACITY (lt)	kg	DIMENSIONI - Overall dimension													
					ØF	I	L	L1	1 Pass			2Pass			4Pass			
									A	B	C	A	B	C	A	B	C	
MG 80-150-..	25-70	4-8	0.65	4.5	1"	150	321	141	90	90	85.5	72	64	67	72	64	67.5	
MG 80-310-..	25-80	7-14	1.1	5.7	1"	310	481	301	90	90	85.5	72	64	67	72	64	67.5	
MG 80-385-..	25-80	9-17	1.3	6.0	1"	385	556	376	90	90	85.5	72	64	67	72	64	67.5	
MG 80-560-..	25-80	12-20	1.9	7.5	1"	560	731	551	90	90	85.5	72	64	67	72	64	67.5	
MG 80-715-..	35-120	15-24	2.3	8.0	1"	715	886	706	90	90	85.5	72	64	67	72	64	67.5	
MG 80-870-..	40-130	18-29	2.8	10.0	1"	870	1041	861	90	90	85.5	72	64	67	72	64	67.5	
MG 80-1155-..	40-130	22-36	3.7	13.5	1"	1155	1326	1146	90	90	85.5	72	64	67	72	64	67.5	

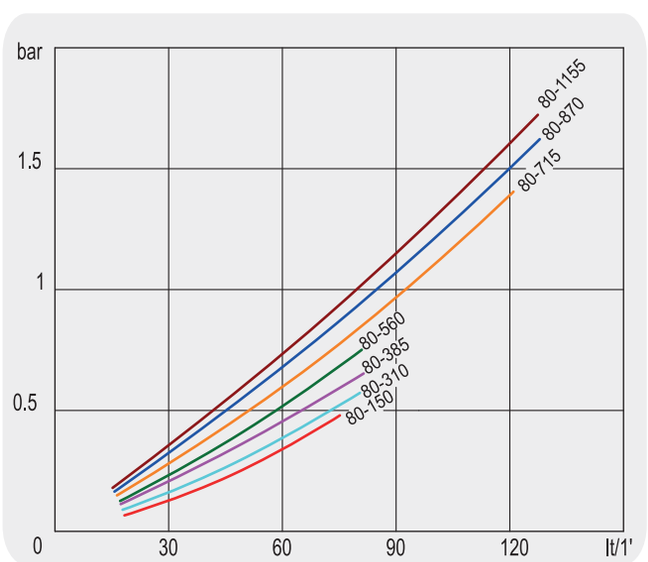
DIAGRAMMA RENDIMENTO
Alla portata massima e minima indicata in tabella
PERFORMANCE DIAGRAM
At the maximum and minimum flow stated in schedule



FATTORE DI CORREZIONE (F)-PERDITE DI CARICO
CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

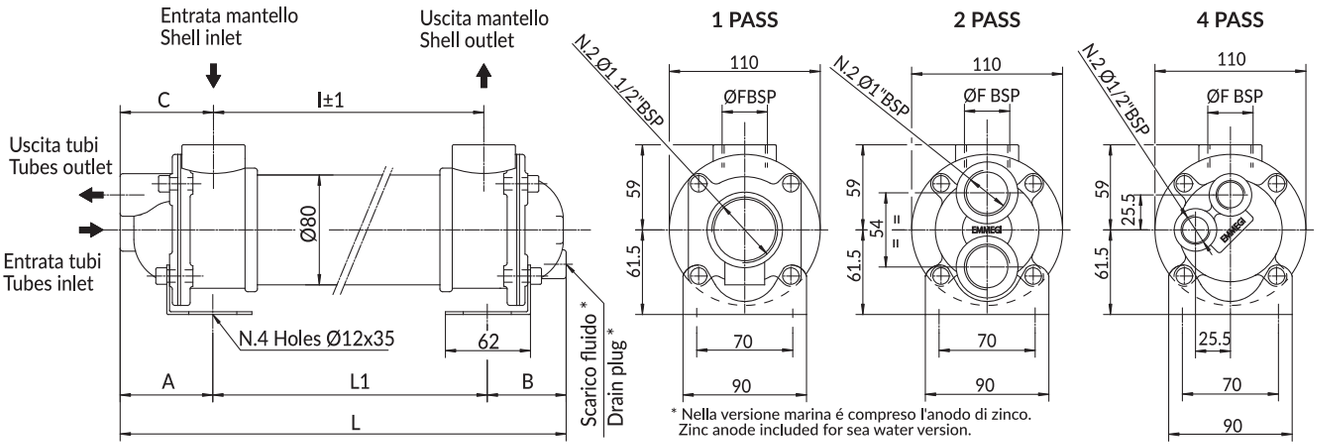
PERDITE DI CARICO (32 cSt) PRESSURE DROP (32 cSt)



MG Shell & Tubes

MG 81

Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways controllable water circuit



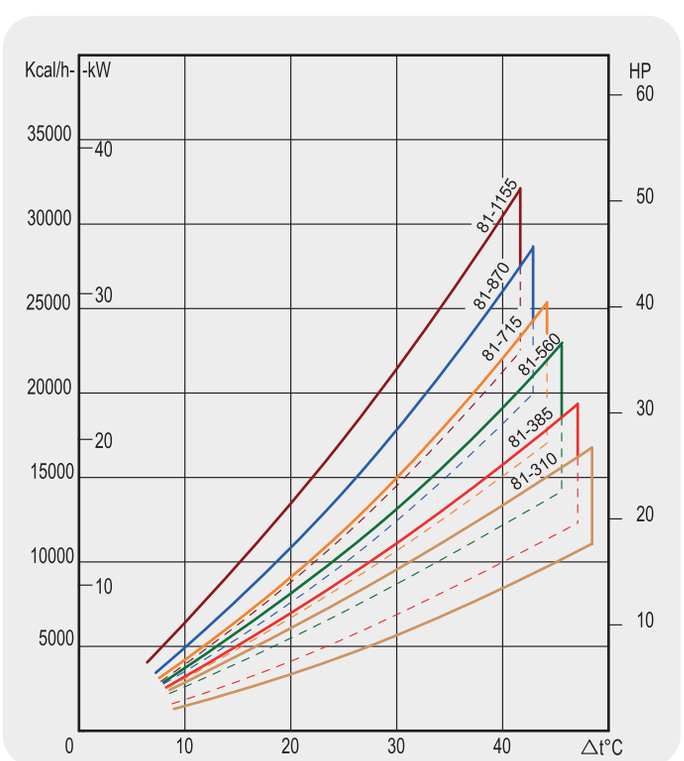
Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZN40	CuZN37	CuZN40	Fe510.2	Rubber-cork
SEA WATER	CuNi10Mn1Fe	CuZN40	CuZN37	CuZN40	Fe510.2	Rubber-cork

TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITK OIL =55°C H20=20°C	CAPACITÀ CAPACITY (lt)	kg	DIMENSIONI - Overall dimension													
					ØF	I	L1	1 Pass				2Pass				4Pass			
								A	B	C	L	A	B	C	L	A	B	C	L
MG 81-310-..	50-120	11-18	1.2	5.7	1 1/2"	310	314	90	90	92	494	72	64	74	494	72	64	74	450
MG 81-385-..	50-120	13-21	1.4	6.0	1 1/2"	385	389	90	90	92	569	72	64	74	569	72	64	74	525
MG 81-560-..	60-150	16-25	2	7.5	1 1/2"	560	564	90	90	92	744	72	64	74	744	72	64	74	700
MG 81-715-..	75-180	20-29	2.4	8.0	1 1/2"	715	719	90	90	92	899	72	64	74	899	72	64	74	855
MG 81-870-..	75-180	24-34	2.9	10.0	1 1/2"	870	874	90	90	92	1054	72	64	74	1054	72	64	74	1010
MG 81-1155-.	75-180	29-40	3.8	13.5	1 1/2"	1155	1159	90	90	92	1339	72	64	74	1339	72	64	74	1295

DIAGRAMMA RENDIMENTO
Alla portata massima e minima indicata in tabella

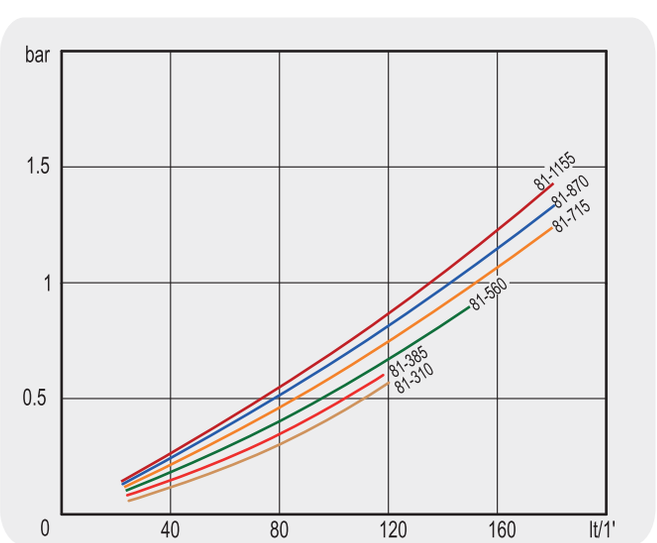
PERFORMANCE DIAGRAM
At the maximum and minimum flow stated in schedule



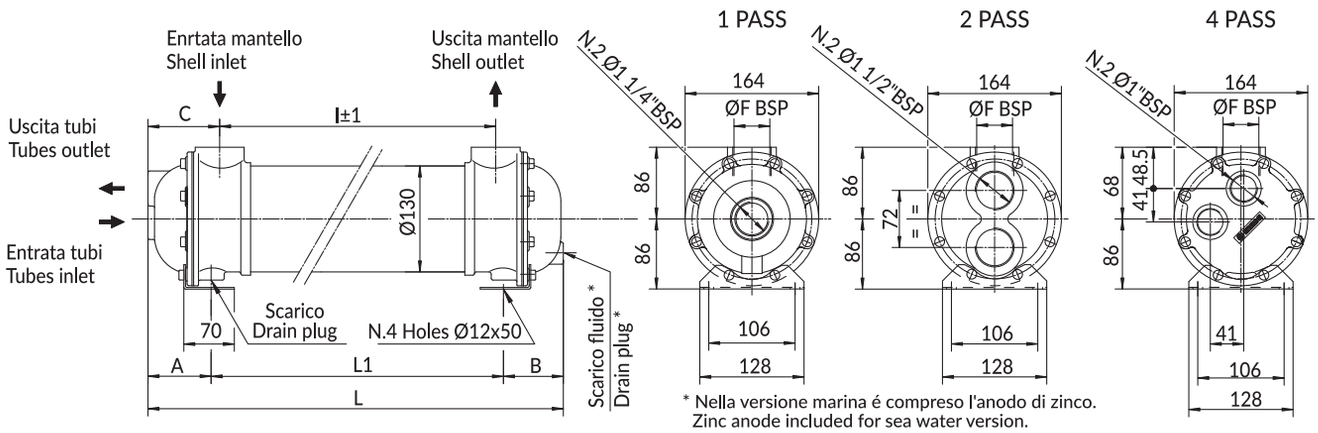
FATTORE DI CORREZIONE (F)-PERDITE DI CARICO
CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

PERDITE DI CARICO (32 cSt) PRESSURE DROP (32 cSt)



Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways inspectable water circuit



* Nella versione marina é compreso l'anodo di zinco.
Zinc anode included for sea water version.

Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZN40	CuZN37	CuZN40	Fe510.2	Rubber-cork
SEA WATER	CuNi10Mn1Fe	CuZN40	CuZN37	CuZN40	Fe510.2	Rubber-cork

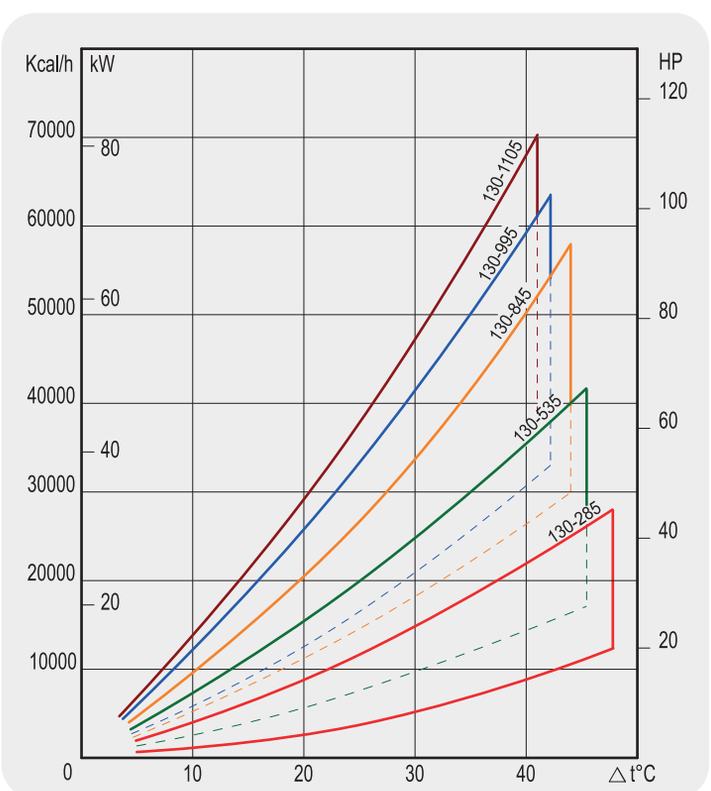
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITK OIL =55°C H20=20°C	CAPACITÀ CAPACITY (lt)	kg	DIMENSIONI - Overall dimension													
					ØF	I	L1	1 Pass				2Pass				4Pass			
								A	B	C	L	A	B	C	L	A	B	C	L
MG 130-285-..	60-160	12-30	3	16	1 1/2"	285	303	85	85	94	473	80	75	89	458	80	75	89	458
MG 130-535-..	80-200	18-48	5.2	22	1 1/2"	535	553	85	85	94	723	80	75	89	708	80	75	89	708
MG 130-845-..	120-280	35-68	7.9	28	1 1/2"	845	863	85	85	94	1033	80	75	89	1018	80	75	89	1018
MG 130-995-..	120-280	41-78	9.2	32	1 1/2"	995	1013	85	85	94	1183	80	75	89	1168	80	75	89	1168
MG 130-870-..	120-280	50-90	10	35	1 1/2"	1105	1293	85	85	94	1293	80	75	89	1278	80	75	89	1278

DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

PERFORMANCE DIAGRAM

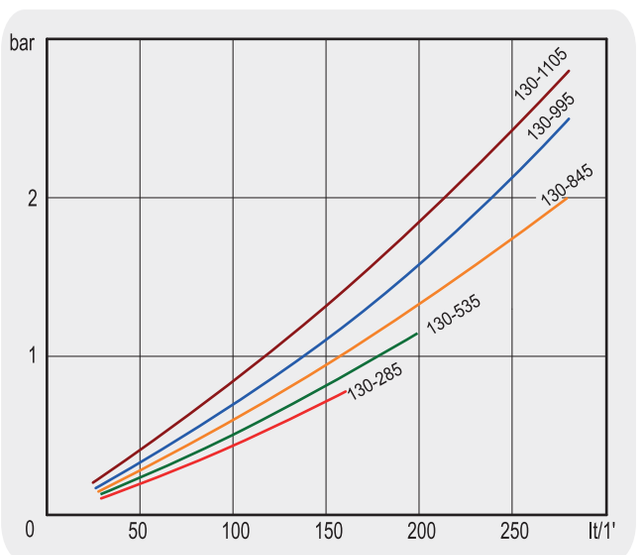
At the maximum and minimum flow stated in schedule



FATTORE DI CORREZIONE (F)-PERDITE DI CARICO
CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

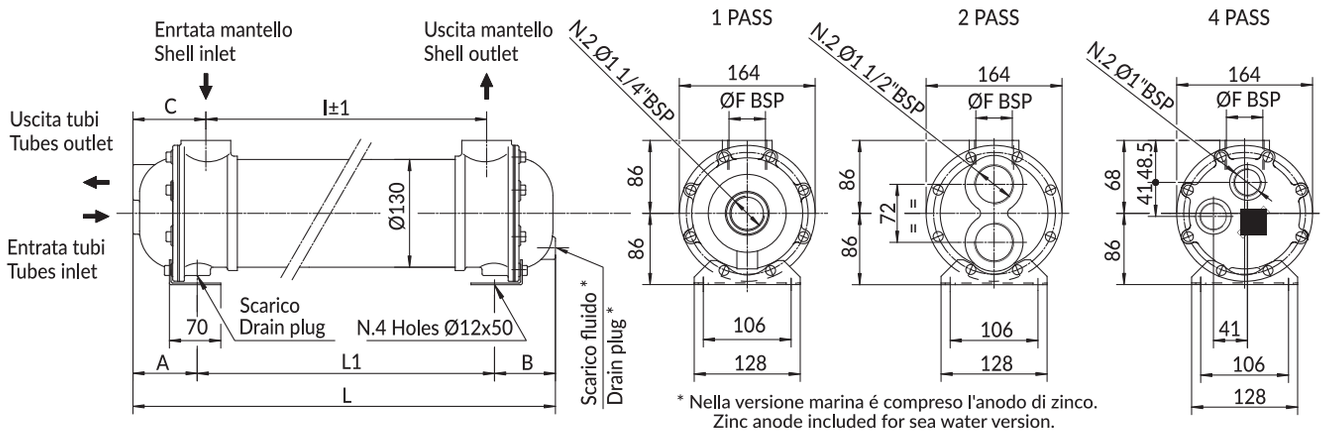
PERDITE DI CARICO (32 cSt) PRESSURE DROP (32 cSt)



MG Shell & Tubes

MG 131

Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways inspectable water circuit



* Nella versione marina é compreso l'anodo di zinco.
Zinc anode included for sea water version.

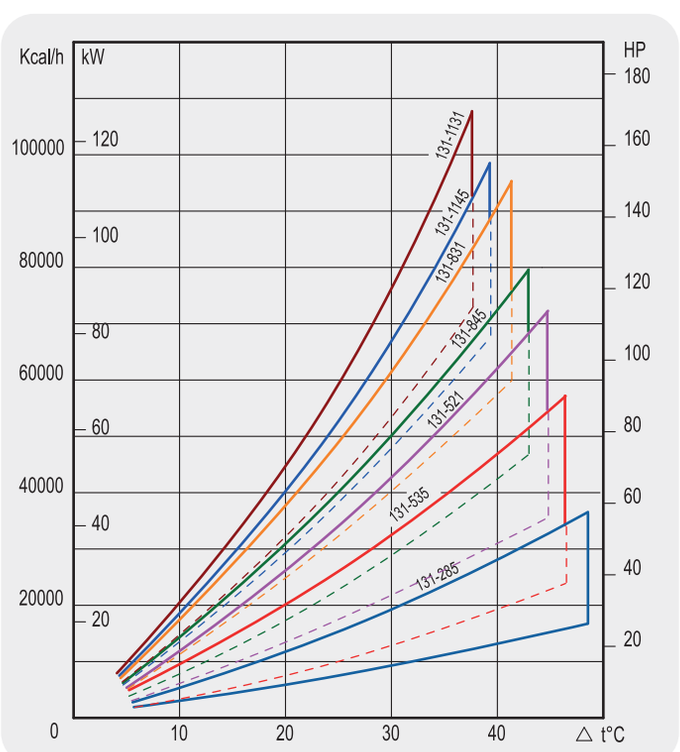
Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZN40	CuZN37	CuZN40	Fe510.2	Rubber-cork
SEA WATER	CuNi10Mn1Fe	CuZN40	CuZN37	CuZN40	Fe510.2	Rubber-cork

TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITK OIL =55°C H20=20°C	CAPACITÀ CAPACITY (lt)	kg	DIMENSIONI - Overall dimension													
					ØF	I	L1	1 Pass				2Pass				4Pass			
								A	B	C	L	A	B	C	L	A	B	C	L
MG 131-285-..	50-140	17-38	2.7	17	1 1/2"	285	303	85	85	94	473	80	75	89	458	80	75	89	458
MG 131-535-..	80-200	24-63	4.5	23	1 1/2"	535	553	85	85	94	723	80	75	89	708	80	75	89	708
MG 131-521-..	120-280	40-82	4.6	23	2"	521	555	85	85	94	725	80	75	97	710	80	75	97	710
MG 131-845-..	100-250	56-96	6.9	29	1 1/2"	845	863	85	85	94	1033	80	75	89	1018	80	75	89	1018
MG 131-831-..	160-400	77-120	7	29	2"	831	866	85	85	94	1036	80	75	97	1020	80	75	97	1020
MG 131-1145-..	120-280	85-132	8	36	1 1/2"	1145	1163	85	85	94	1333	80	75	89	1318	80	75	89	1318
MG 131-1131-..	160-420	102-153	8.1	36	2"	1131	1165	85	85	94	1335	80	75	97	1320	80	75	97	1320

DIAGRAMMA RENDIMENTO
Alla portata massima e minima indicata in tabella

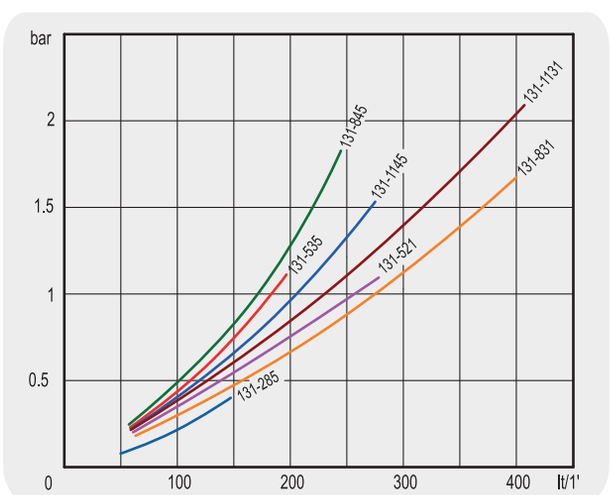
PERFORMANCE DIAGRAM
At the maximum and minimum flow stated in schedule



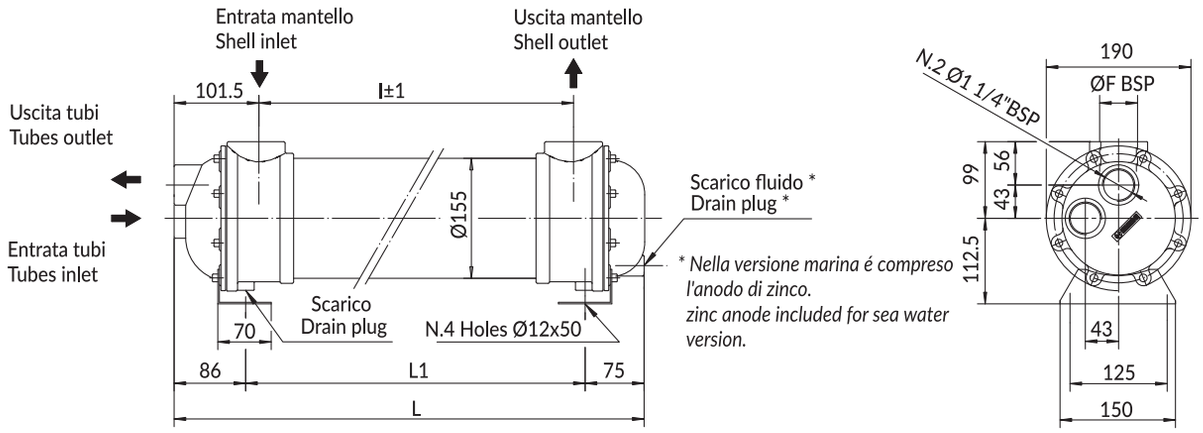
FATTORE DI CORREZIONE (F)-PERDITE DI CARICO
CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

PERDITE DI CARICO (32 cSt) PRESSURE DROP (32 cSt)



Con circuito acqua ispezionabile a quattro passaggi. Four ways inspectable water circuit



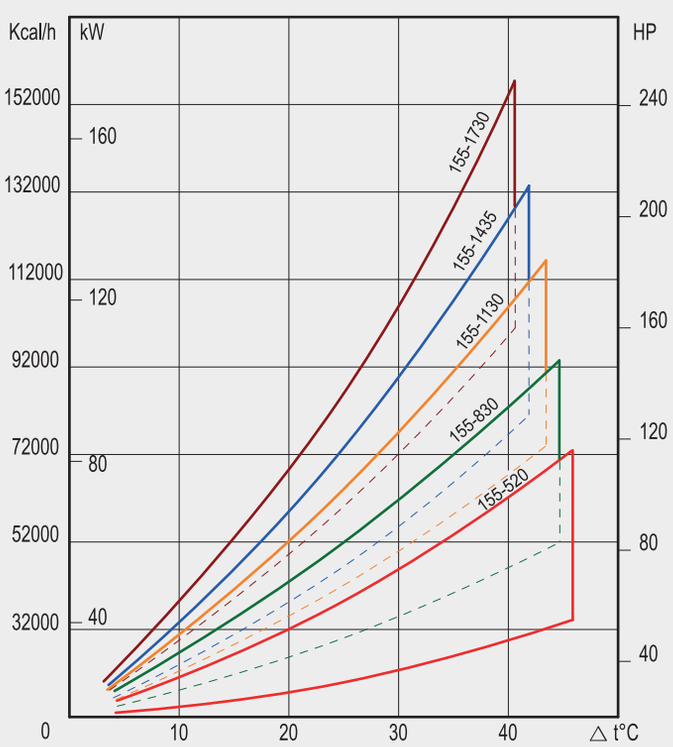
Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZN40	CuZN37	CuZN40	Fe510.2	Rubber-cork
SEA WATER	CuNi10Mn1Fe	CuZN40	CuZN37	CuZN40	Fe510.2	Rubber-cork

TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITK OIL =55°C H20=20°C	CAPACITÀ CAPACITY (lt)	kg	DIMENSIONI - Overall dimension			
					ØF	I	L	L1
MG 155-520-4	120-300	55-120	6.4	35	2"	520	712	551
MG 155-830-4	140-380	95-155	9.6	43	2"	830	1022	861
MG 155-1130-4	160-420	115-185	12.8	51	2"	1130	1322	1161
MG 155-1435-4	180-450	135-235	16	58	2"	1435	1627	1466
MG 155-1730-4	180-450	160-250	19	66	2"	1730	1922	1761

DIAGRAMMA RENDIMENTO
Alla portata massima e minima indicata in tabella

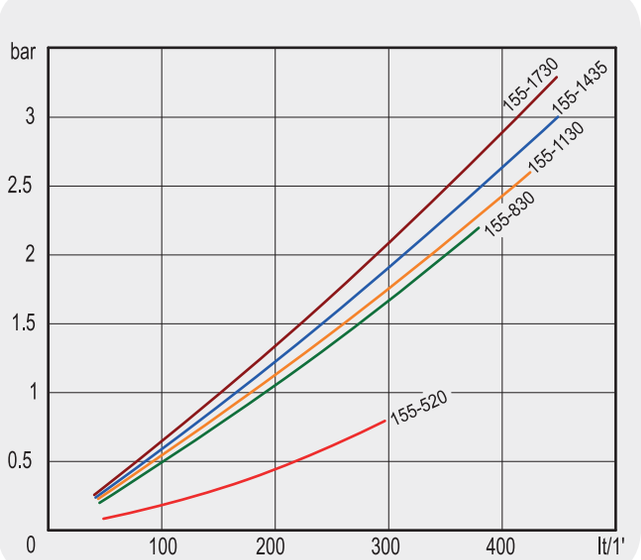
PERFORMANCE DIAGRAM
At the maximum and minimum flow stated in schedule



FATTORE DI CORREZIONE (F)-PERDITE DI CARICO
CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

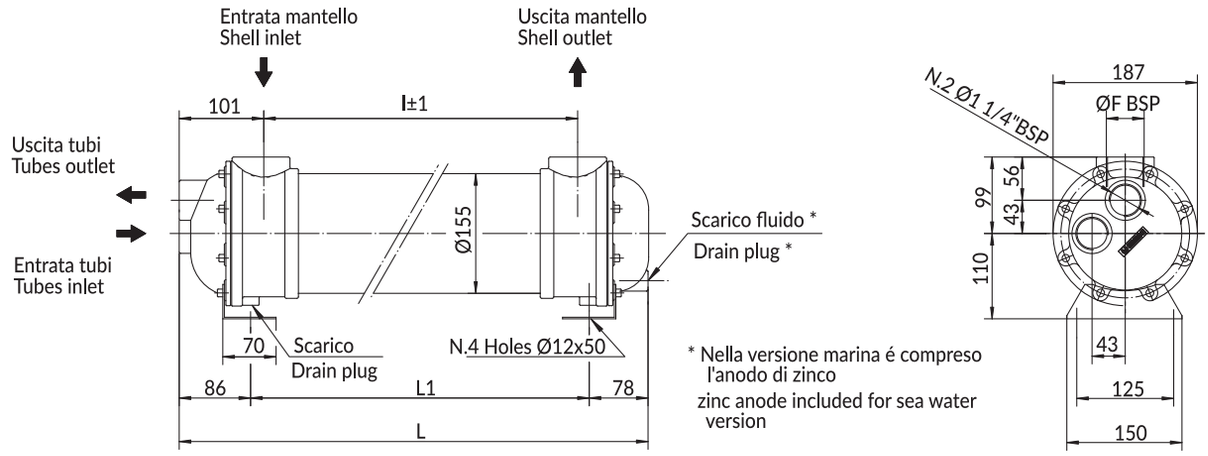
PERDITE DI CARICO (32 cSt) PRESSURE DROP (32 cSt)



MG Shell & Tubes

MG 157

Con circuito acqua ispezionabile a quattro passaggi. Four ways inspectable water circuit



Le dimensioni e le caratteristiche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZN40	CuZN37	CuZN40	Fe510.2	Rubber-cork
SEA WATER	CuNi10Mn1Fe	CuZN40	CuZN37	CuZN40	Fe510.2	Rubber-cork

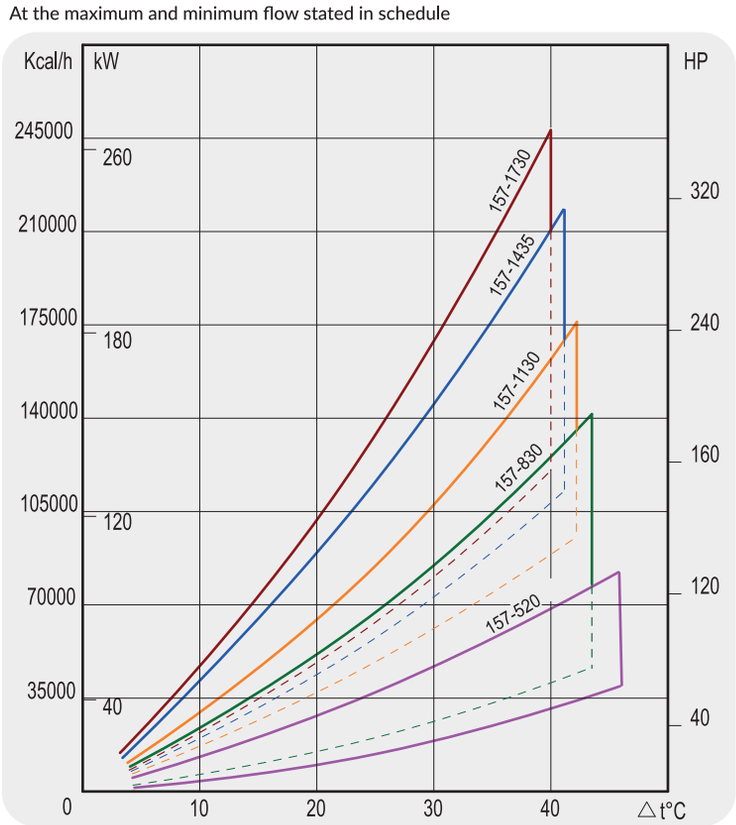
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITK OIL =55°C H20=20°C	CAPACITÀ CAPACITY (lt)	kg	DIMENSIONI - Overall dimension			
					ØF	I	L	L1
MG 157-520-4..	120-300	35-92	5.5	40	2"	520	711	547
MG 157-830-4..	140-380	54-166	8.4	50	2"	830	1021	857
MG 157-1130-4..	160-420	110-215	11.3	59	2"	1130	1321	1157
MG 157-1435-4..	180-450	140-280	14.1	66	2"	1435	1626	1462
MG 157-1730-4..	180-450	155-315	17	76	2"	1730	1921	1757

DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

PERFORMANCE DIAGRAM

At the maximum and minimum flow stated in schedule

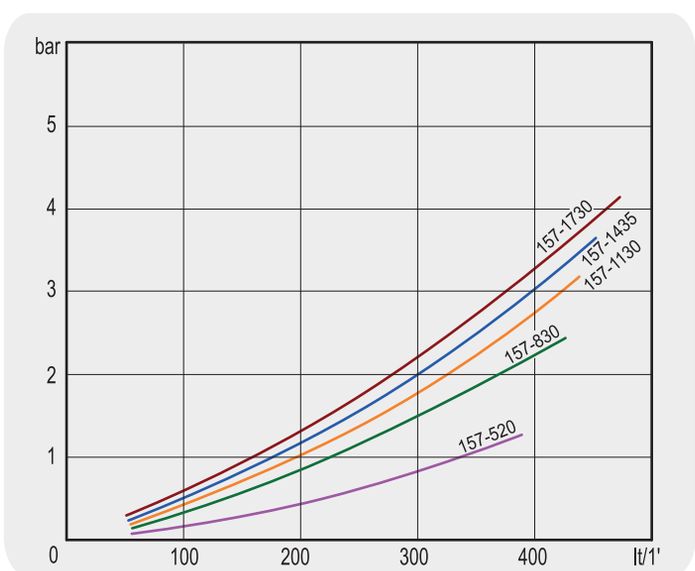


FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

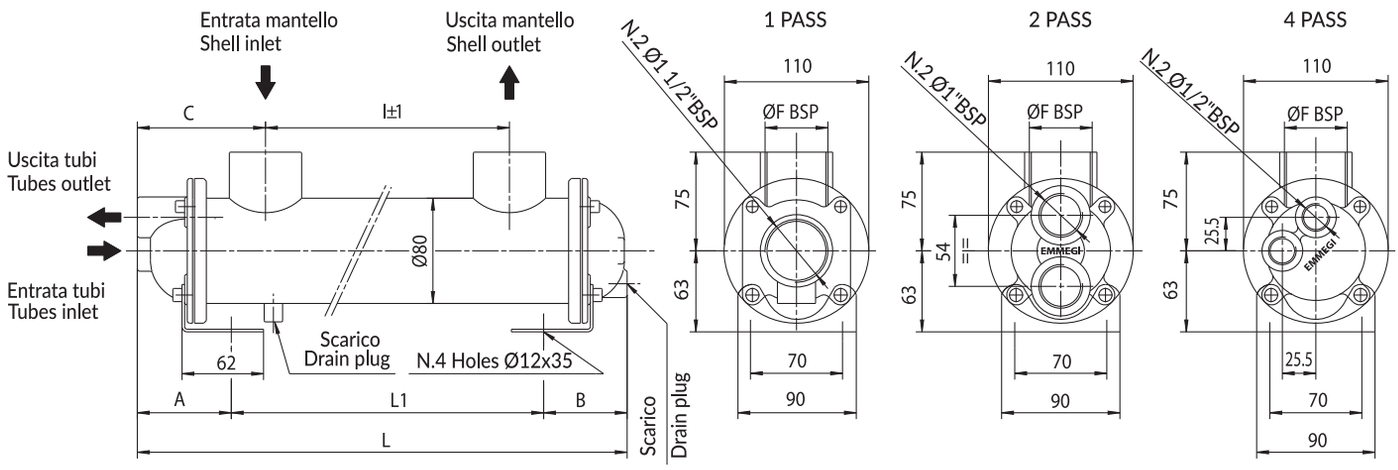
CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

PERDITE DI CARICO (32 cSt)
PRESSURE DROP (32 cSt)



Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways inspectable water circuit



Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
AISI 304	AISI 304	AISI 304	AISI 304	CuZn40	AISI 304	Graphite-kevlar

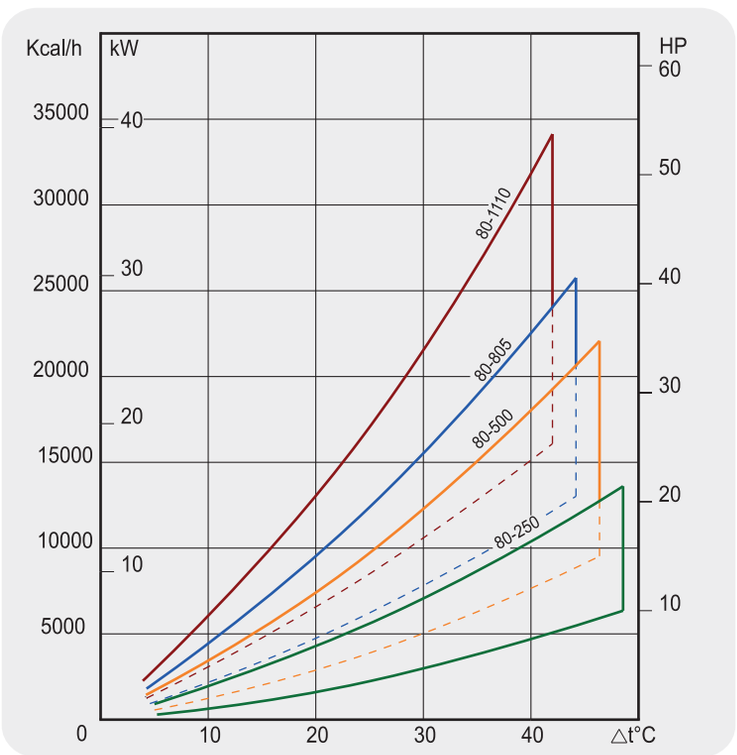
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITK OIL =55°C H20=20°C	CAPACITÀ CAPACITY (lt)	kg	DIMENSIONI - Overall dimension													
					ØF	I	L1	1 Pass				2 Pass				4 Pass			
								A	B	C	L	A	B	C	L	A	B	C	L
MGB 80-250-..	30-160	6-4	1.1	6	1 1/2"	250	325	90	90	127.5	505	72	64	127.5	461	72	64	127.5	461
MGB 80-500-..	40-180	10-24	2	9	1 1/2"	500	575	90	90	127.5	755	72	64	127.5	711	72	64	127.5	711
MGB 80-805-..	40-180	15-30	3	12	1 1/2"	805	880	90	90	127.5	1060	72	64	127.5	1016	72	64	127.5	1016
MGB 80-1110-..	50-200	20-42	4	15	1 1/2"	1110	1185	90	90	127.5	1365	72	64	127.5	1321	72	64	127.5	1185

DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

PERFORMANCE DIAGRAM

At the maximum and minimum flow stated in schedule

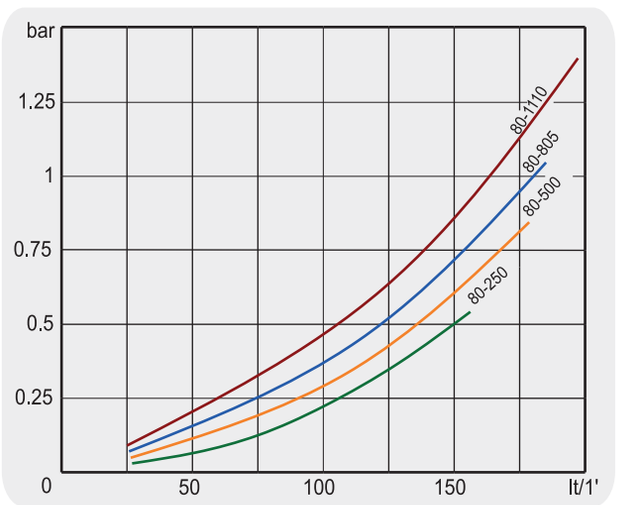


FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

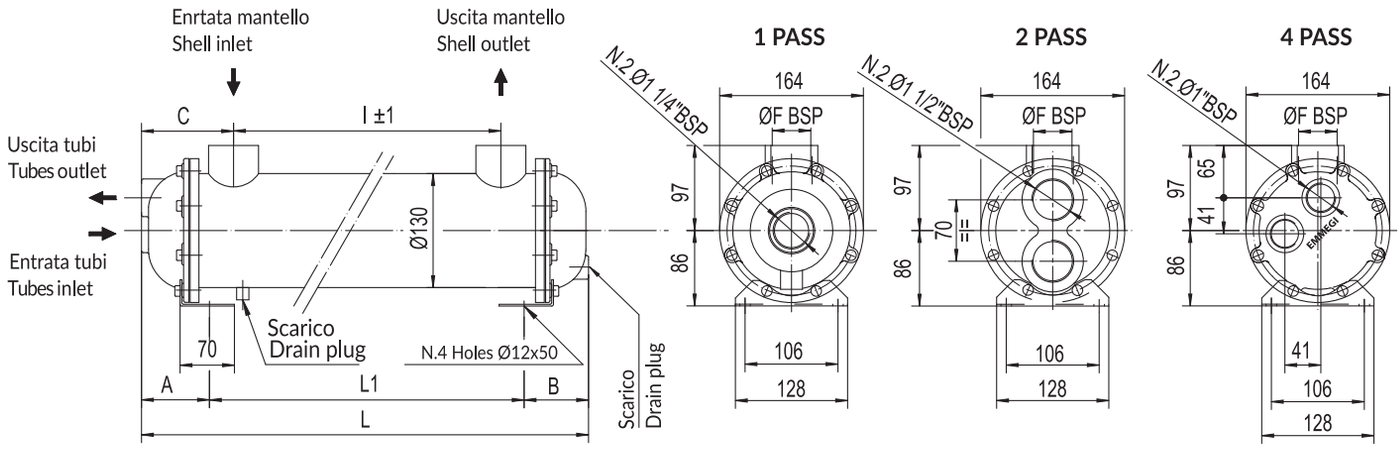
PERDITE DI CARICO (32 cSt) PRESSURE DROP (32 cSt)



MG Shell & Tubes

MGB 130 - AISI 304

Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways inspectable water circuit



Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
AISI 304	AISI 304	AISI 304	AISI 304	CuZn40	AISI 304	Graphite-kevlar

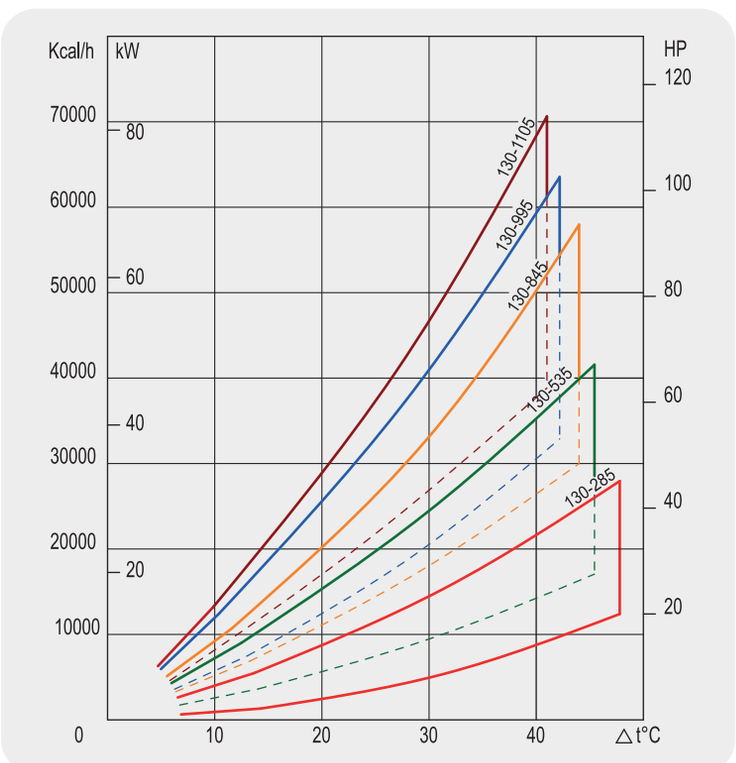
TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITK OIL =55°C H20=20°C	CAPACITÀ CAPACITY (lt)	kg	DIMENSIONI - Overall dimension															
					ØF	I	1 Pass					2 Pass					4 Pass				
							A	B	C	L1	L	A	B	C	L1	L	A	B	C	L1	L
MGB 130-285-..	60-160	12-30	3	16	1 1/2"	285	85	85	132	379	549	80	75	127	379	534	80	75	127	381	536
MGB 130-535-..	80-200	18-48	5.2	22	1 1/2"	535	85	85	129.5	624	794	80	75	124.5	624	779	80	75	124.5	626	781
MGB 130-845-..	120-280	35-68	7.9	28	1 1/2"	845	85	85	124.5	924	1094	80	75	119.5	924	1079	80	75	119.5	926	1081
MGB 130-995-..	120-280	41-78	9.2	32	1 1/2"	995	85	85	132	1089	1259	80	75	127	1089	1244	80	75	127	1091	1246
MGB 130-1105-..	120-280	50-90	10	35	1 1/2"	1105	85	85	129.5	1194	1364	80	75	124.5	1194	1349	80	75	124.5	1196	1351

DIAGRAMMA RENDIMENTO

Alla portata massima e minima indicata in tabella

PERFORMANCE DIAGRAM

At the maximum and minimum flow stated in schedule

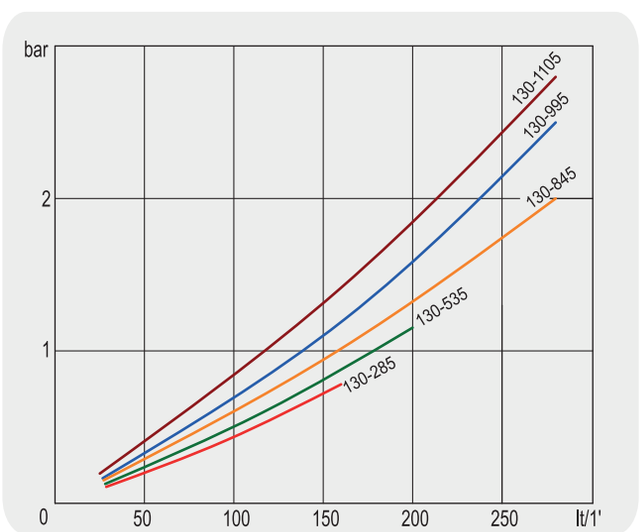


FATTORE DI CORREZIONE (F)-PERDITE DI CARICO

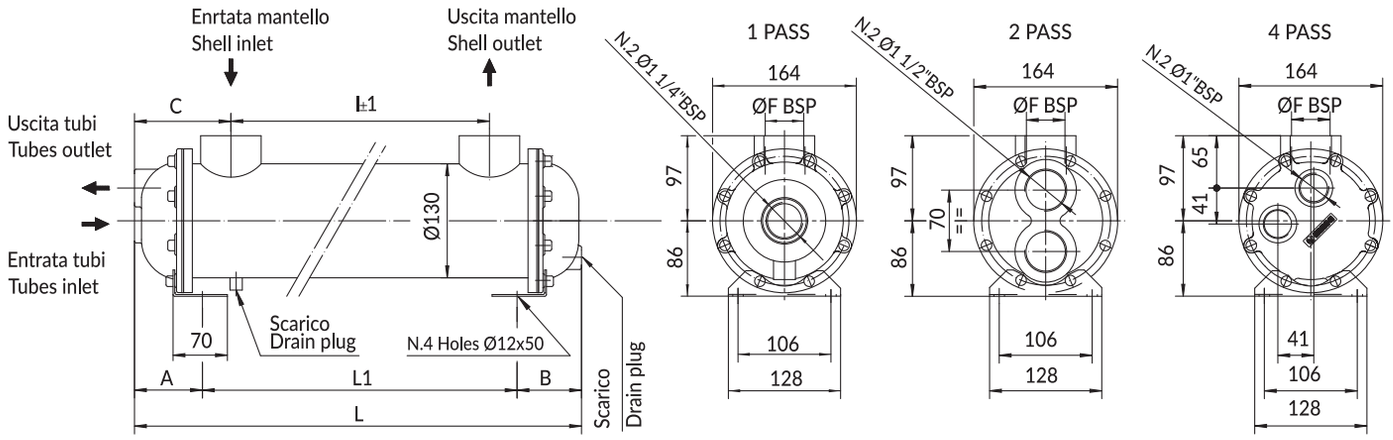
CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

PERDITE DI CARICO (32 cSt) PRESSURE DROP (32 cSt)



Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways inspectable water circuit



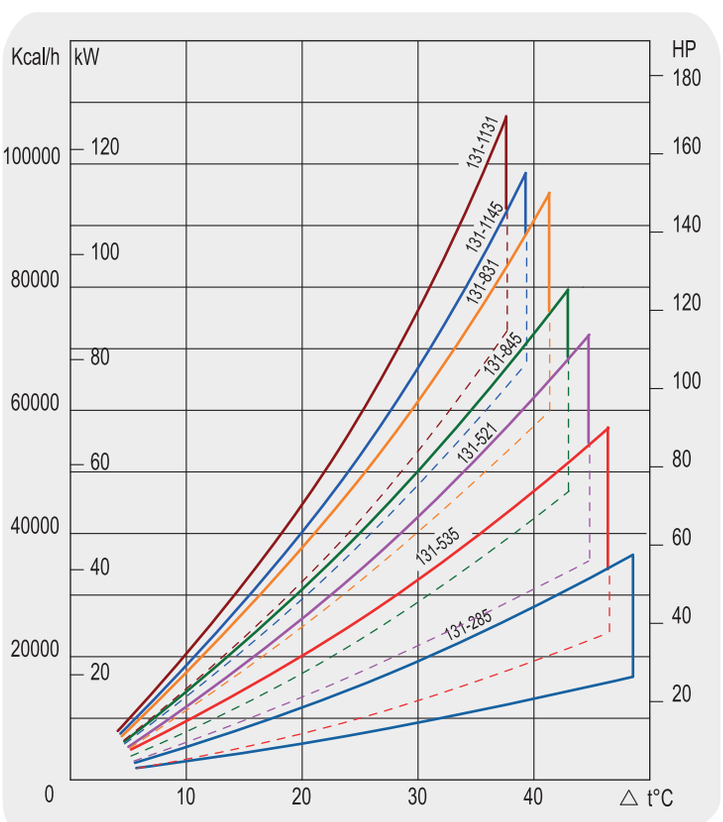
Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
AiSi	AiSi 304	AiSi 304	AiSi 304	CuZn40	AISI 304	Graphite-kevlar

TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITK OIL =55°C H20=20°C	CAPACITÀ CAPACITY (lt)	kg	DIMENSIONI - Overall dimension																
					ØF	I	L1	1 Pass				2Pass				4Pass					
								A	B	C	L	A	B	C	L	A	B	C	L1	L
MGB 131-285-..	50-140	17-38	2.7	17	1 1/2"	285	379	85	85	132	549	72	64	67	534	72	64	67.5	381	536
MGB 131-535-..	80-200	24-63	4.5	23	1 1/2"	535	624	85	85	129.5	794	72	64	67	779	72	64	67.5	626	781
MGB 131-521-..	120-280	40-82	4.6	23	2"	521	624	85	85	136.5	794	72	64	67	779	72	64	67.5	626	781
MGB 131-845-..	100-250	56-96	6.9	29	1 1/2"	845	924	85	85	124.5	1094	72	64	67	1079	72	64	67.5	926	1081
MGB 131-831-..	160-400	77-120	7	29	2"	831	924	85	85	131.5	1094	72	64	67	1079	72	64	67.5	926	1081
MGB 131-1145-	120-280	85-132	8	36	1 1/2"	1145	1224	85	85	124.5	1394	72	64	67	1379	72	64	67.5	1224	1379
MGB 131-1131-.	160-420	102-153	8.1	36	2"	1131	1224	85	85	131.5	1394	72	64	67	1379	72	64	67.5	1224	1379

DIAGRAMMA RENDIMENTO
Alla portata massima e minima indicata in tabella

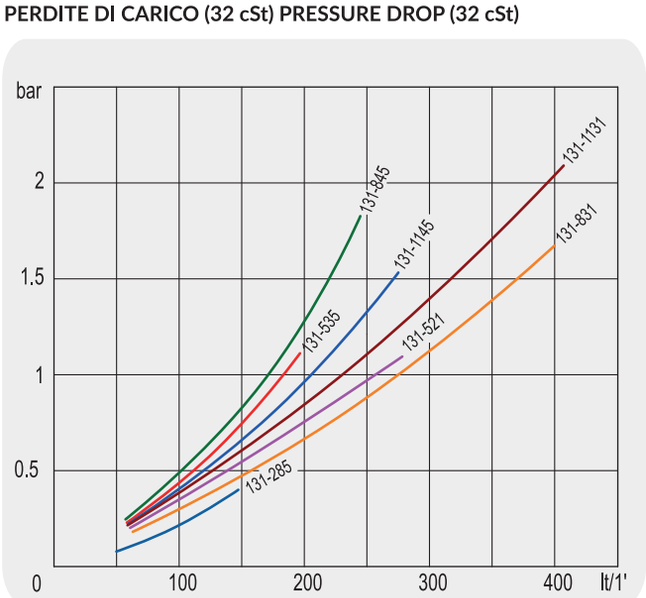
PERFORMANCE DIAGRAM
At the maximum and minimum flow stated in schedule



FATTORE DI CORREZIONE (F)-PERDITE DI CARICO
CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

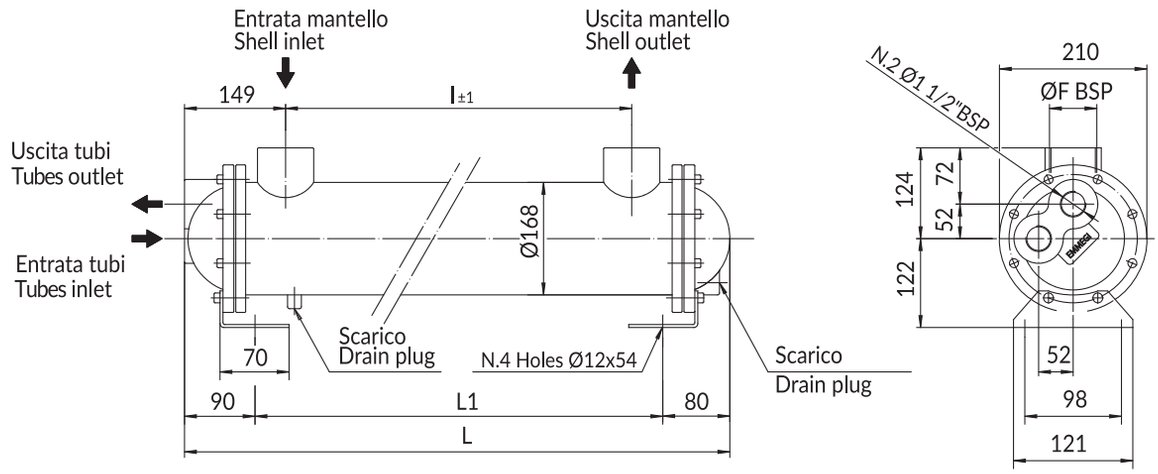
PERDITE DI CARICO (32 cSt) PRESSURE DROP (32 cSt)



MG Shell & Tubes

MGB 168 - AISI 304

Con circuito acqua ispezionabile a quattro passaggi. Four ways inspectable water circuit



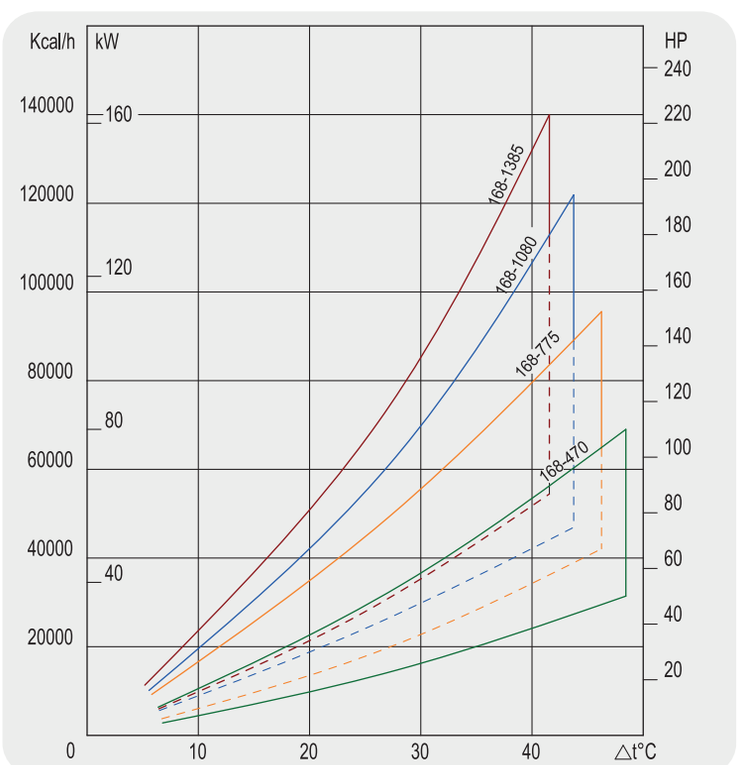
Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
AISI	AISI 304	AISI 304	AISI 304	G25	AISI 304	Graphite-kevlar

TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITK OIL =55°C H20=20°C	CAPACITÀ CAPACITY (lt)	kg	DIMENSIONI - Overall dimension 4 Pass			
					ØF	l	L	L1
MGB 168-470-4..	100-450	32-72	8.3	35	2"	470	756	586
MGB 168-775-4..	120-500	45-105	12.5	43	2"	775	1061	891
MGB 168-1080-4..	150-550	55-142	16.7	50	2"	1080	1366	1196
MGB 168-1385-4..	150-550	70-172	21	57	2"	1385	1671	1501

DIAGRAMMA RENDIMENTO
Alla portata massima e minima indicata in tabella

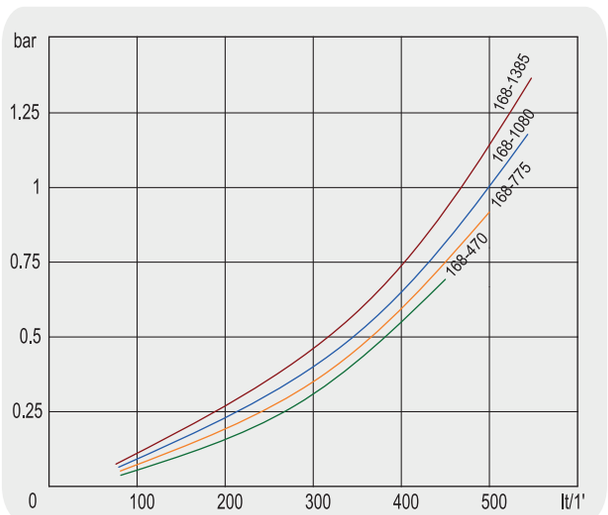
PERFORMANCE DIAGRAM
At the maximum and minimum flow stated in schedule



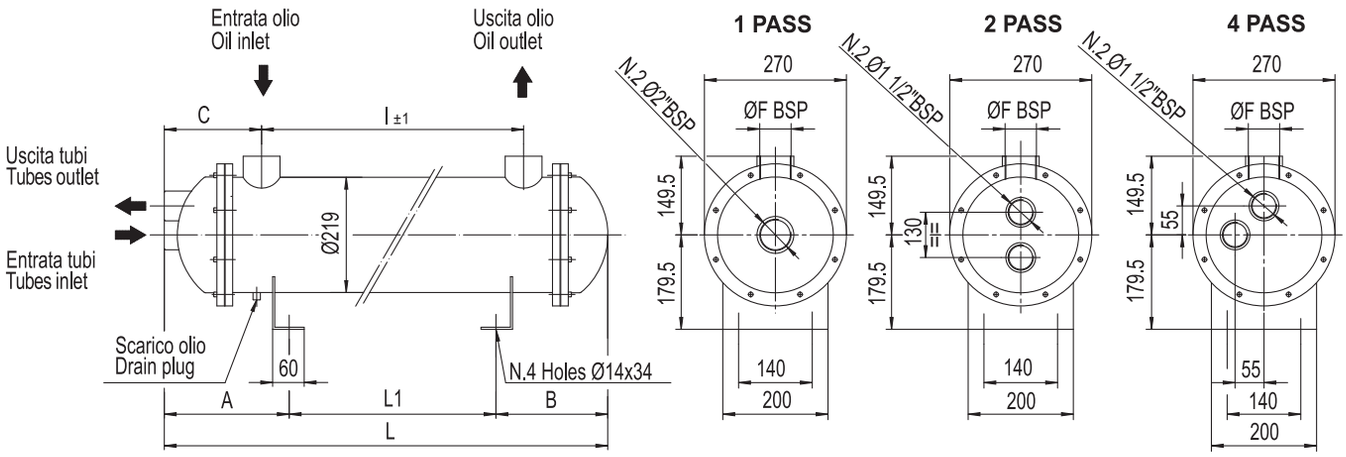
FATTORE DI CORREZIONE (F)-PERDITE DI CARICO
CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

PERDITE DI CARICO (32 cSt) PRESSURE DROP (32 cSt)



Con circuito acqua ispezionabile a uno-due-quattro passaggi. One-two-four ways inspectable water circuit



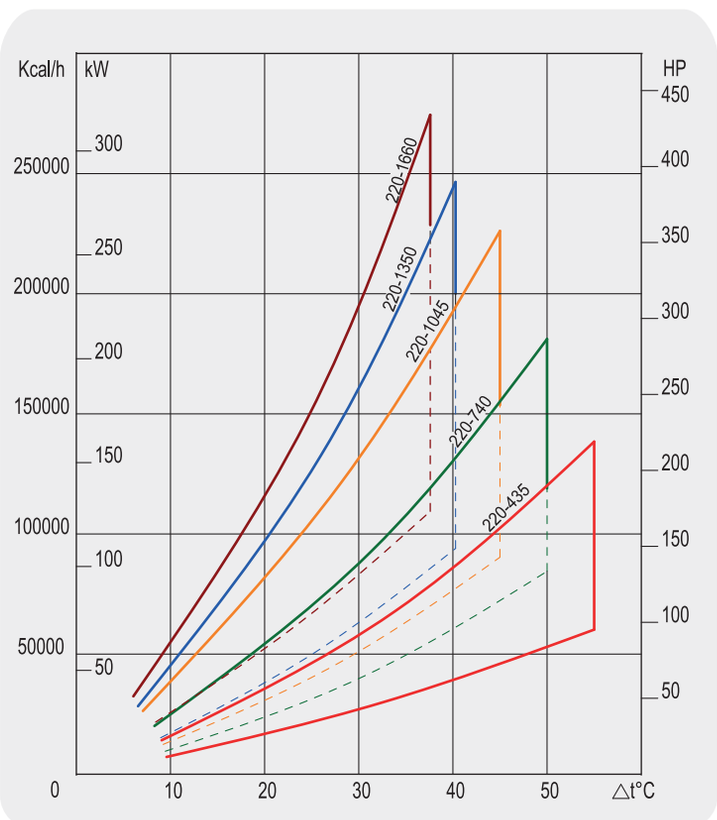
Le dimensioni e le caratteristiche tecniche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZN40	CuZN37	CuZN40	AISI 304	OR 4900
AISI	AISI 304	AISI 304	AISI 304	AISI 304	AISI 304	OR 4900

TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITK OIL =55°C H20=20°C	CAPACITÀ CAPACITY (lt)	kg	DIMENSIONI - Overall dimension													
					ØF	I	L1	1 Pass				2Pass				4Pass			
								A	B	C	L	A	B	C	L	A	B	C	L
MGB 220-435-..	80-800	50-120	11	48	2 1/2"	435	322	264	225	208	811	235	225	179	782	235	225	178.5	782
MGB 220-740-..	100-800	75-180	16.8	82	2 1/2"	740	627	264	225	207.5	1116	235	225	179	1087	235	225	178.5	1087
MGB 220-1045-..	100-800	100-250	22.2	110	2 1/2"	1045	932	264	225	207.5	1421	235	225	179	1392	235	225	178.5	1392
MGB 220-1350-..	100-250	125-320	27.9	120	2 1/2"	1350	1237	264	225	207.5	1726	235	225	179	1697	235	225	178.5	1697
MGB 220-1660-..	100-800	150-390	33.6	145	2 1/2"	1660	1547	264	225	207.5	2036	235	225	179	2007	235	225	178.5	2007

DIAGRAMMA RENDIMENTO
Alla portata massima e minima indicata in tabella

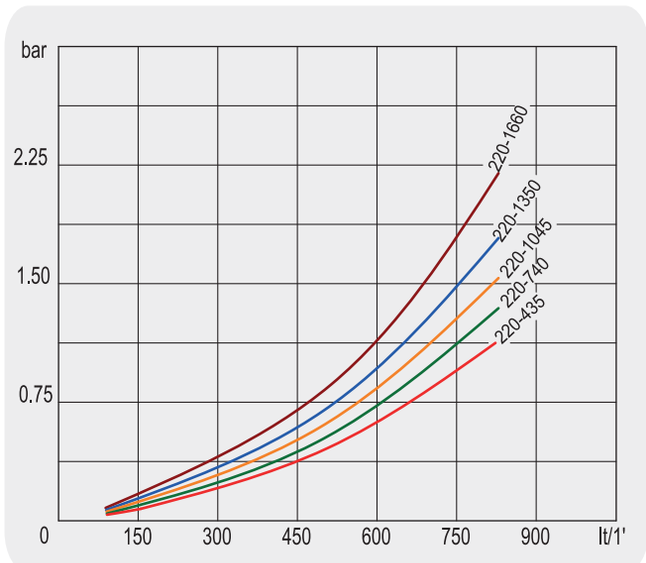
PERFORMANCE DIAGRAM
At the maximum and minimum flow stated in schedule



FATTORE DI CORREZIONE (F)-PERDITE DI CARICO
CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

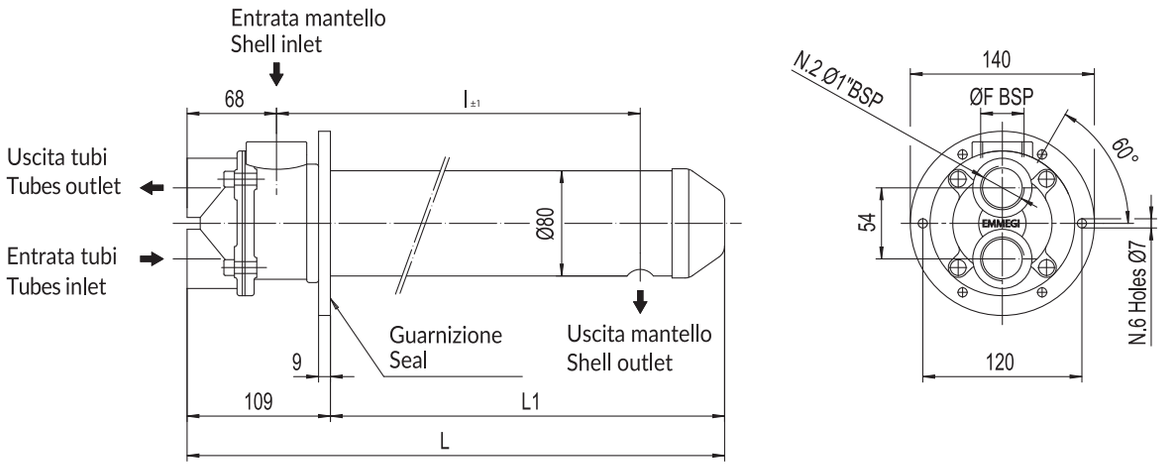
PERDITE DI CARICO (32 cSt) PRESSURE DROP (32 cSt)



MG Shell & Tubes

MGF 80

Con circuito acqua ispezionabile a due passaggi. Two ways inspectable water circuit



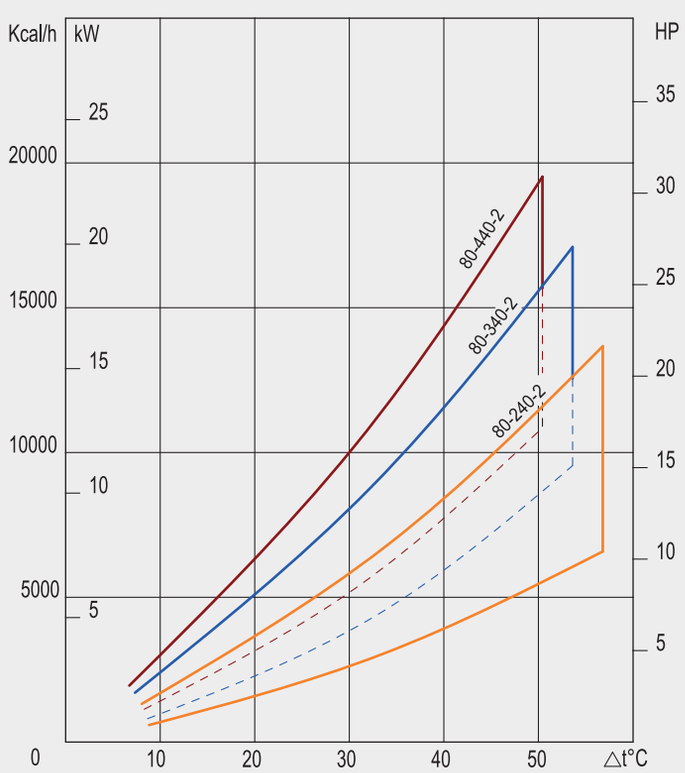
Le dimensioni e le caratteristiche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	CuDHP	CuZn40	CuZN37	CuZN40	CuZn37	Rubber-cork

TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITK OIL =55°C H20=20°C	CAPACITÀ CAPACITY (lt)	kg	DIMENSIONI - Overall dimension 2 Pass			
					ØF	I	L	L1
MGF 80-240-2	20-60	3-6	0.9	5	1"	240	369	260
MGF 80-340-2	30-70	6-9	1.2	5.7	1"	340	469	360
MGF 80-440-2	40-80	9-12	1.5	6.4	1"	440	569	460

DIAGRAMMA RENDIMENTO
Alla portata massima e minima indicata in tabella

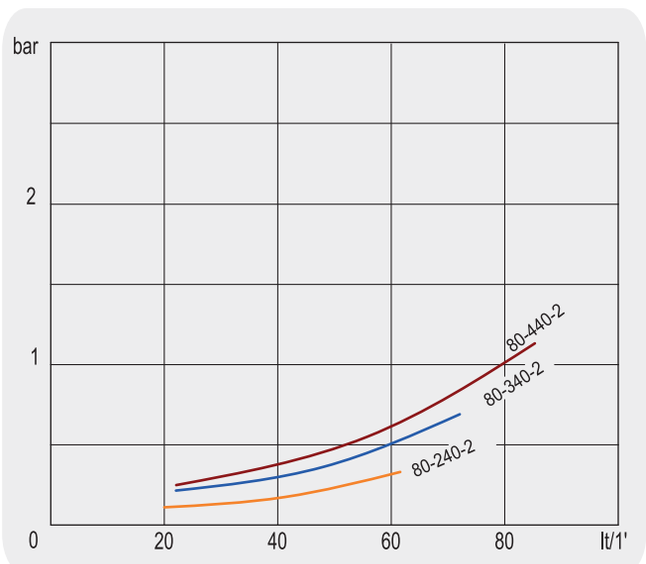
PERFORMANCE DIAGRAM
At the maximum and minimum flow stated in schedule



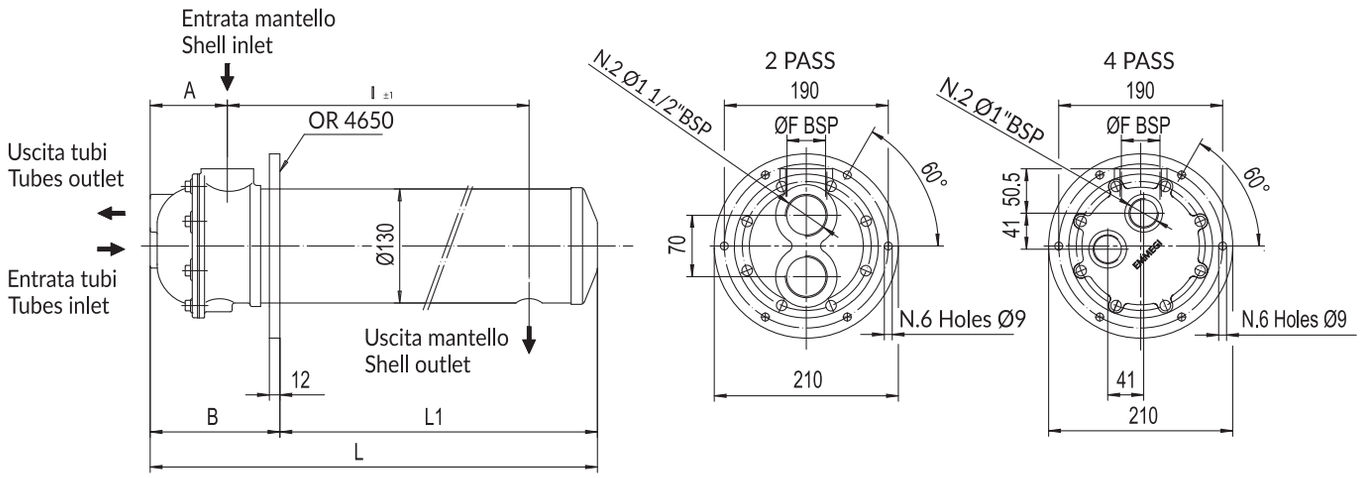
FATTORE DI CORREZIONE (F)-PERDITE DI CARICO
CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

PERDITE DI CARICO (32 cSt) PRESSURE DROP (32 cSt)



Con circuito acqua ispezionabile a due-quattro passaggi. Two-four ways inspectable water circuit.



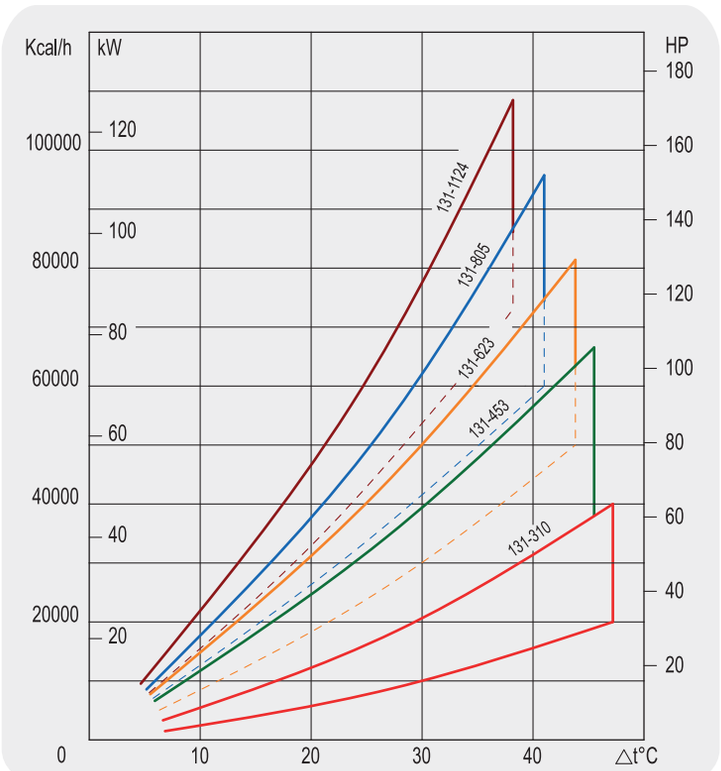
Le dimensioni e le caratteristiche non sono impegnative. Over-all dimension and technical characteristics are not binding.

TIPO TYPE	TUBI TUBES	PIASTRA TUBIERA TUBES SHEET	DEFLETTORI BAFFLES	FONDI COVERS	MANTELLO SHELL	GUARNIZIONI SEALS
STANDARD	cuDHP	CUZn40	CUZn37	CUZn40	Fe 360 UNI EN 10305 - 03	Rubber-cork

TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISSIPATI CON OLIO HP DISSIPATED WITK OIL =55°C H20=20°C	CAPACITÀ CAPACITY (lt)	kg	DIMENSIONI - Overall dimension							
					2 Pass				4 Pass			
					ØF	I	L1	L	ØF	I	L1	L
MGF 131-310-..	50-150	20-40	3.2	16	1 1/2"	310	314	462	1 1/2"	310	314	462
MGF 131-453-..	100-150	40-75	4.3	22	1 1/2"	453	465	613	1 1/2"	453	465	613
MGF 131-623-..	150-300	58-96	5.7	28	2"	623	635	795	2"	623	635	795
MGF 131-805-..	150-350	78-118	7.1	32	2"	805	817	977	2"	805	817	977
MGF 131-1124-..	200-400	105-150	9.6	35	2"	1124	1136	1296	2"	1124	1136	1296

DIAGRAMMA RENDIMENTO
Alla portata massima e minima indicata in tabella

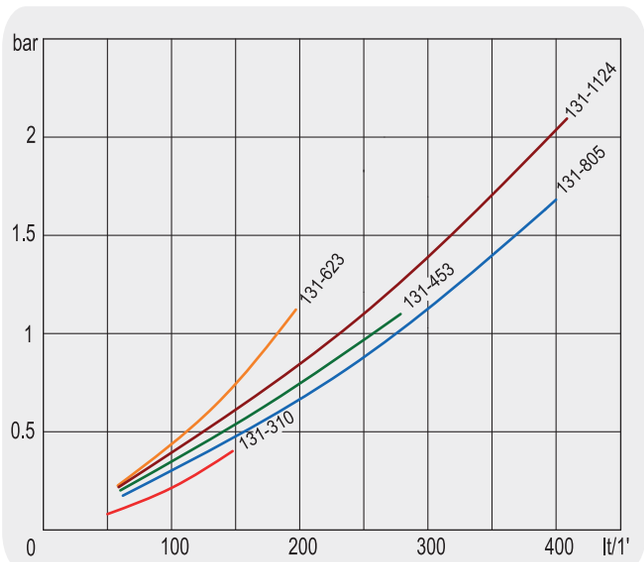
PERFORMANCE DIAGRAM
At the maximum and minimum flow stated in schedule



FATTORE DI CORREZIONE (F)-PERDITE DI CARICO
CORRECTION FACTOR (F)-PRESSURE DROP

cSt	10	15	20	30	40	50	60	80	100	200	300
F	0.5	0.65	0.77	1	1.2	1.4	1.6	1.9	2.1	3.3	4.3

PERDITE DI CARICO (32 cSt) PRESSURE DROP (32 cSt)





EMMEGI HEAT-EXCHANGERS

Scambiatori a Piastre Saldobrasate

Brazed Plate Heat Exchangers

APPLICAZIONI:
APPLICATIONS:

Dove è possibile impiegare acqua per il raffreddamento dei fluidi di processo, gli scambiatori a piastre saldobrasate della gamma PB, si prestano come la soluzione di raffreddamento ottimale per svariate applicazioni industriali quali:

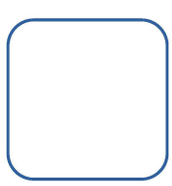
When water can be used to cool the process fluids, the PB range of heat exchangers with brazed plates are the optimal cooling solution for various industrial

Impianti oleodinamici.
Macchine utensili.
Altro su richiesta.

Hydraulic systems.
Machine tools.
Others on request.





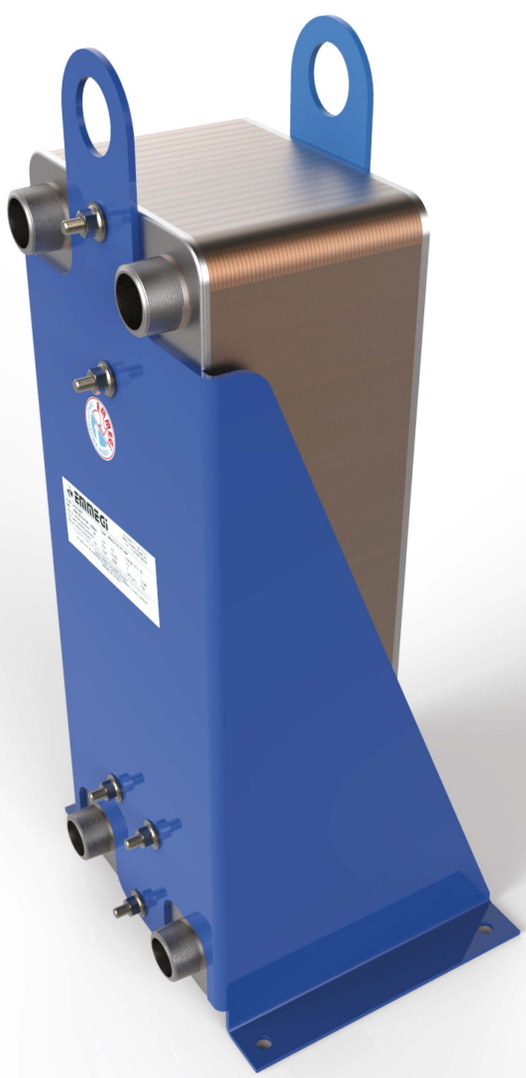






Serie PB - *PB Series*

Modello *Model*
PB014
PB022
PB031
PB034
PB047
PB060
PB110
PB170



Scambiatori a Piastre Saldobrasate

Blazed Plate Heat Exchangers

Vantaggi degli scambiatori a piastre saldobrasate

- *Alto coefficiente di scambio termico;*
- *Dimensioni contenute con alte performance;*
- *Alta resistenza alla pressione e temperatura;*
- *Connessioni in AISI 321;*
- *Facile installazione;*

Gli scambiatori a piastre sono costituiti da piastre corrugate.
Le piastre sono ruotate di 180° l'una dall'altra al fine di creare un reticolo di canali intersecati.
I fluidi possono fluire sia in controcorrente che equicorrente.
Le piastre sono unite insieme tra loro con materiale brasante in speciali forni sottovuoto.
La speciale corrugazione permette al fluido di turbolare aumentando lo scambio termico e riducendo i depositi di sporco nelle piastre.

Advantages of Brazed Plate Heat Exchangers

- *High heat transfer coefficient;*
- *Small unit size with high heat transfer capacity;*
- *High resistance to pressure and temperature fluctuations;*
- *Stainless steel connections;*
- *Easy installation;*

Brazed plate heat exchangers consist of stainless steel plate packs, which have embossed chevron patterns.
The plates are turned 180°to each other, causing the plate ridges to intersect, and creating a lattice of intersecting channels. The fluids can flow in counter-current or co-current way.
The entire construction is sealed together by the means of brazing in a special vacuum furmace.
Special corrugation patterns promote high turbulence flow. Turbulence dramatically improves heat transfer rates and reduces the amount of deposits inside the unit.



Denominazione codice prodotto
Ordering code

PB **014** **030** **F012** **6**

MODELLO *Model*

SERIE *Series*

014
022
031
034
047
060
110
170

NUMERO DI PIASTRE *Number of plates*

006
010
020
030
040
050
060
070
080
090
100
110
120
130
140
150
160
170
180

CONNESSIONI *Connection Type*

1/2" BSP Femmina *Internal Thread 1/2" BSP*	**(PB014 - PB022)**	*F012*
3/4" BSP Femmina *Internal Thread 3/4" BSP*	**(PB034)**	*F034*
1" BSP Femmina *Internal Thread 1" BSP*	**(PB31 - PB047 - PB060)**	*F100*
2" BSP Maschio *External Thread 2" BSP*	**(PB110 - PB170)**	*M200*

PB Series

PB014

Dimensioni *Dimensions*

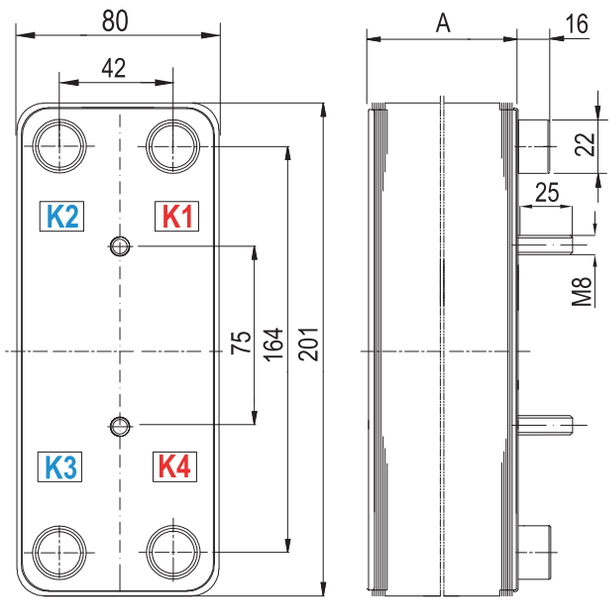
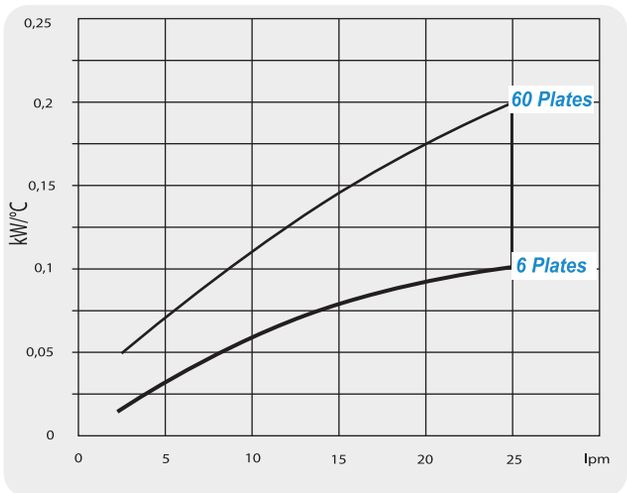


Diagramma rendimento *Performance diagram - ISO VG46 @50°C*



Rapporto portata olio/acqua 2:1 - flow ratio 2:1

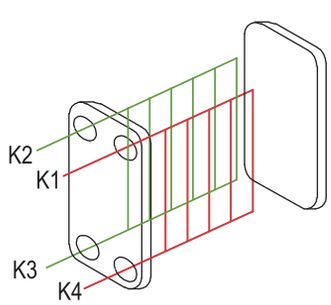
Per informazioni inerenti la perdita di carico contattare EMMEGI.
For pressure drop information please contact EMMEGI.

Collegamenti Standard Standard of Connection Location	Connessioni Connection Types
K1 / K4 - Ingresso/uscita caldo K1 / K4 - Inlet/Outlet Hot Side	G 1/2" Femmina Internal Thread G 1/2"
K3 / K2 - Ingresso/uscita freddo K3 / K2 - Inlet/Outlet Cold Side	G 1/2" Femmina Internal Thread G 1/2"

A richiesta connessioni speciali
Special connections on request

Condizioni di esercizio Working Conditions	
Massima Temperatura Max. Working Pressure	230°C
Minima Temperatura Min. Working Temperature	-10°C
Massima Pressione Max. Working Pressure	30 bar

Materiali Utilizzati Materials	
Piastre Plate	Aisi 316
Attacchi Connection	Aisi 316
Brasatura Brazing Material	Cu 99,95%



N° Piastre Plate No.	A (mm)	Peso (kg) Weight (kg)	Capacità per circuito Channel Volume (lt)
6	23	0.9	0.1
10	32	1.1	0.1
20	55	1.6	0.2
30	78	2.1	0.33
40	101	2.6	0.4
50	124	3.1	0.6
60	147	3.5	0.7

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dimensioni *Dimensions*

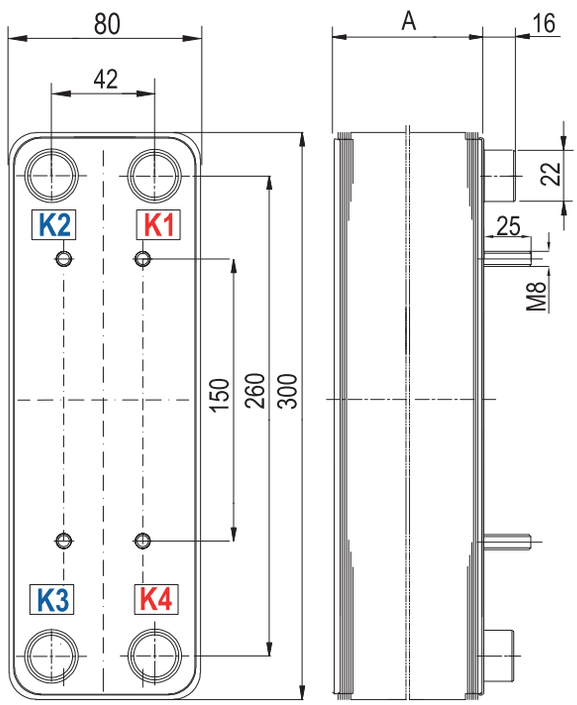
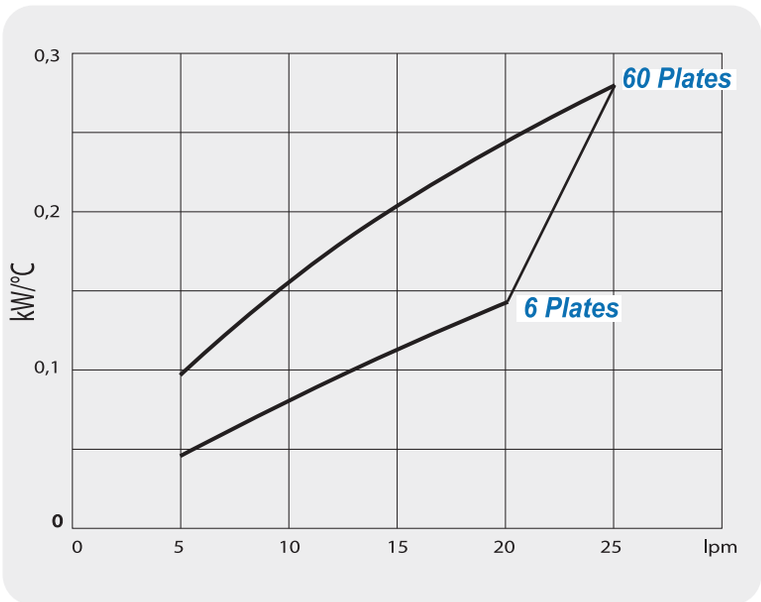


Diagramma rendimento *Performance diagram - ISO VG46 @50°C*



Rapporto portata olio/acqua 2:1 - flow ratio 2:1

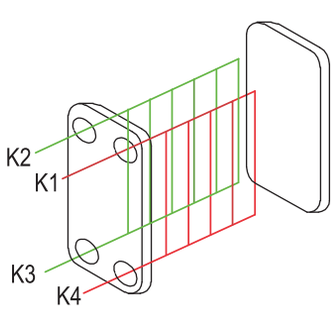
Per informazioni inerenti la perdita di carico contattare EMMEGI.
For pressure drop information please contact EMMEGI.

Collegamenti Standard Standard of Connection Location	Connessioni Connection Types
K1 / K4 - Ingresso/uscita caldo **K1 / K4** - Inlet/Outlet Hot Side	G 1/2" Femmina Internal Thread G 1/2"
K3 / K2 - Ingresso/uscita freddo **K3 / K2** - Inlet/Outlet Cold Side	G 1/2" Femmina Internal Thread G 1/2"

A richiesta connessioni speciali
Special connections on request

Condizioni di esercizio Working Conditions	
Massima Temperatura Max. Working Pressure	230°C
Minima Temperatura Min. Working Temperature	-10°C
Massima Pressione Max. Working Pressure	30 bar

Materiali Utilizzati Materials	
Piastre Plate	Aisi 316
Attacchi Connection	Aisi 316
Brasatura Brazing Material	Cu 99,95%



N° Piastre Plate No.	A (mm)	Peso (kg) Weight (kg)	Capacità per circuito Channel Volume (lt)
6	23	1.2	0.1
10	32	1.5	0.2
20	55	2.3	0.4
30	78	3.0	0.5
40	101	3.7	0.7
50	124	4.5	0.9
60	147	5.2	1.1

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dimensioni *Dimensions*

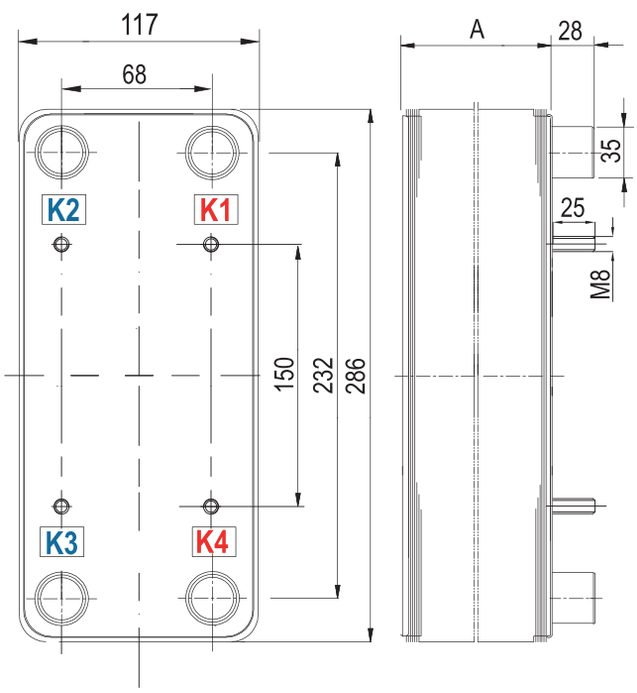
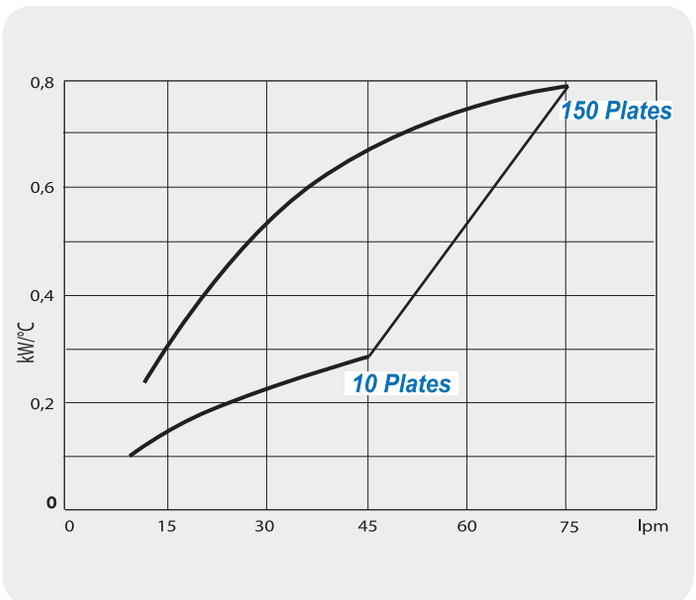


Diagramma rendimento *Performance diagram - ISO VG46 @50°C*



Rapporto portata olio/acqua 2:1 - flow ratio 2:1

Per informazioni inerenti la perdita di carico contattare EMMEGI.
For pressure drop information please contact EMMEGI.

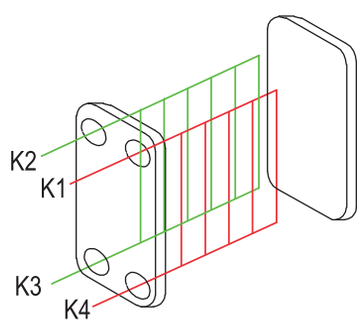
Collegamenti Standard Standard of Connection Location	Connessioni Connection Types
K1 / K4 - Ingresso/uscita caldo K1 / K4 - Inlet/Outlet Hot Side	G 1" Femmina Internal Thread G 1"
K3 / K2 - Ingresso/uscita freddo K3 / K2 - Inlet/Outlet Cold Side	G 1" Femmina Internal Thread G 1"

A richiesta connessioni speciali
Special connections on request

N° Piastre Plate No.	A (mm)	Peso (kg) Weight (kg)	Capacità per circuito Channel Volume (lt)
10	33	2.7	0.3
20	57	3.9	0.6
30	81	5.0	0.9
40	104	6.2	1.2
50	128	7.3	1.5
60	151	8.4	1.8
70	175	9.6	2.1
80	198	10.7	2.4
90	222	11.9	2.7
100	245	13.0	3.1
110	269	14.1	3.4
120	292	15.3	3.7
130	316	16.4	4.0
140	339	17.6	4.3
150	363	18.7	4.6

Condizioni di esercizio Working Conditions	
Massima Temperatura Max. Working Pressure	230°C
Minima Temperatura Min. Working Temperature	-10°C
Massima Pressione Max. Working Pressure	30 bar

Materiali Utilizzati Materials	
Piastre Plate	Aisi 316
Attacchi Connection	Aisi 316
Brasatura Brazing Material	Cu 99,95%



Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dimensioni *Dimensions*

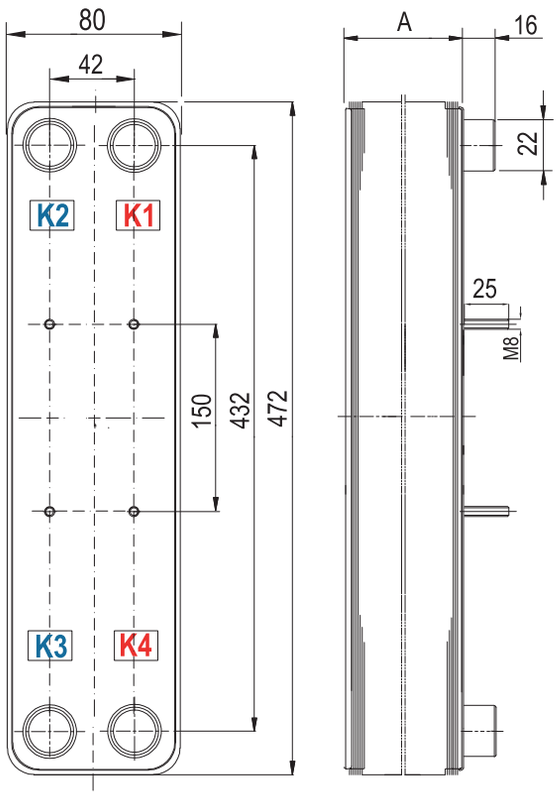
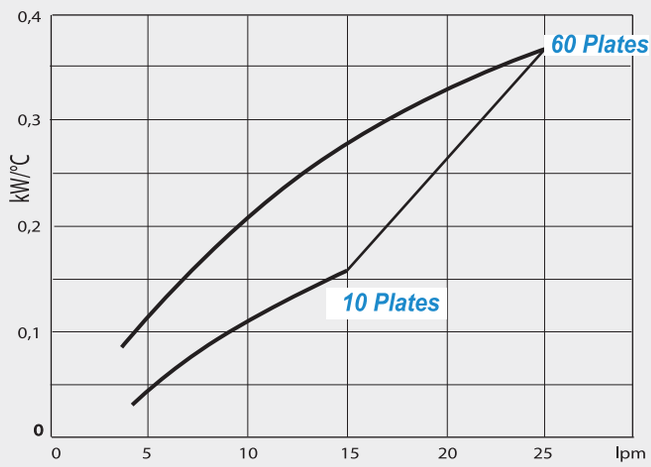


Diagramma rendimento *Performance diagram - ISO VG46 @50°C*



Rapporto portata olio/acqua 2:1 - flow ratio 2:1

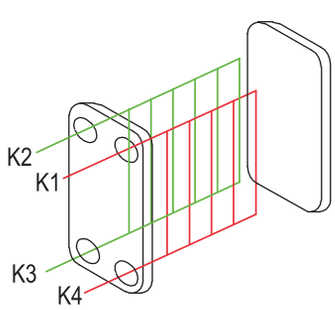
Per informazioni inerenti la perdita di carico contattare EMMEGI.
For pressure drop information please contact EMMEGI.

Collegamenti Standard Standard of Connection Location	Connessioni Connection Types
K1 / K4 - Ingresso/uscita caldo K1 / K4 - Inlet/Outlet Hot Side	G 3/4" Femmina Internal Thread G 3/4"
K3 / K2 - Ingresso/uscita freddo K3 / K2 - Inlet/Outlet Cold Side	G 3/4" Femmina Internal Thread G 3/4"

A richiesta connessioni speciali
Special connections on request

Condizioni di esercizio Working Conditions	
Massima Temperatura Max. Working Pressure	230°C
Minima Temperatura Min. Working Temperature	-10°C
Massima Pressione Max. Working Pressure	30 bar

Materiali Utilizzati Materials	
Piastre Plate	Aisi 316
Attacchi Connection	Aisi 316
Brasatura Brazing Material	Cu 99,95%



N° Piastre Plate No.	A (mm)	Peso (kg) Weight (kg)	Capacità per circuito Channel Volume (lt)
10	32	2.4	0.3
20	55	3.5	0.5
30	78	4.7	0.8
40	101	5.8	1.1
50	124	7.0	1.3
60	147	8.2	1.6

Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dimensioni *Dimensions*

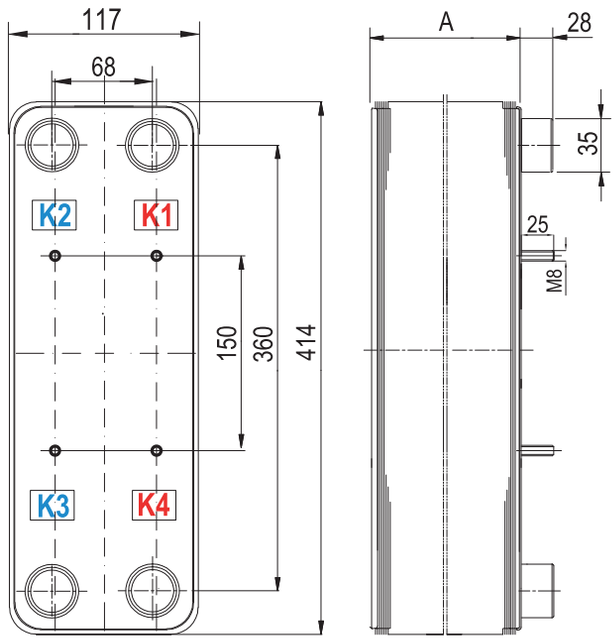
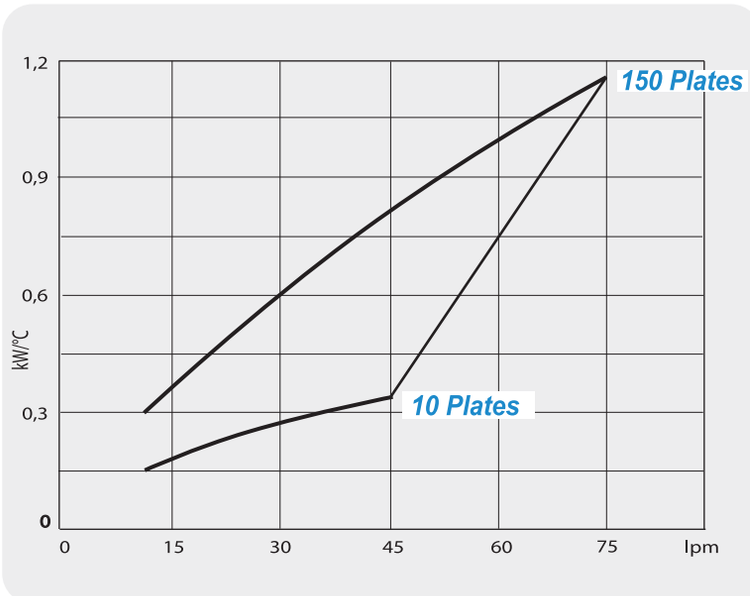


Diagramma rendimento
Performance diagram - ISO VG46 @50°C



Rapporto portata olio/acqua 2:1 - flow ratio 2:1

Per informazioni inerenti la perdita di carico contattare EMMEGI.
For pressure drop information please contact EMMEG.

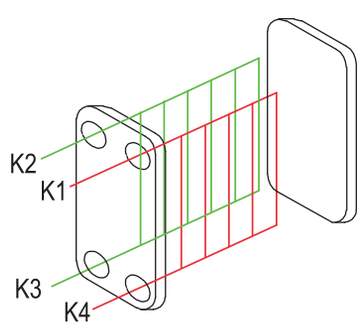
Collegamenti Standard Standard of Connection Location	Connessioni Connection Types
K1 / K4 - Ingresso/uscita caldo K1 / K4 - Inlet/Outlet Hot Side	G 1" Femmina Internal Thread G 1"
K3 / K2 - Ingresso/uscita freddo K3 / K2 - Inlet/Outlet Cold Side	G 1" Femmina Internal Thread G 1"

A richiesta connessioni speciali
Special connections on request

N° Piastre Plate No.	A (mm)	Peso (kg) Weight (kg)	Capacità per circuito Channel Volume (lt)
10	34	3.8	0.5
20	57	5.5	0.9
30	81	7.1	1.4
40	104	8.8	1.9
50	128	10.5	2.3
60	151	12.2	2.8
70	175	13.9	3.3
80	198	15.5	3.7
90	222	19.2	4.2
100	245	18.9	4.7
110	269	20.6	5.1
120	292	22.3	5.6
130	316	23.9	6.0
140	339	25.6	6.5
150	363	27.3	7.0

Condizioni di esercizio Working Conditions	
Massima Temperatura Max. Working Pressure	230°C
Minima Temperatura Min. Working Temperature	-10°C
Massima Pressione Max. Working Pressure	30 bar

Materiali Utilizzati Materials	
Piastre Plate	Aisi 316
Attacchi Connection	Aisi 316
Brasatura Brazing Material	Cu 99,95%



Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dimensioni *Dimensions*

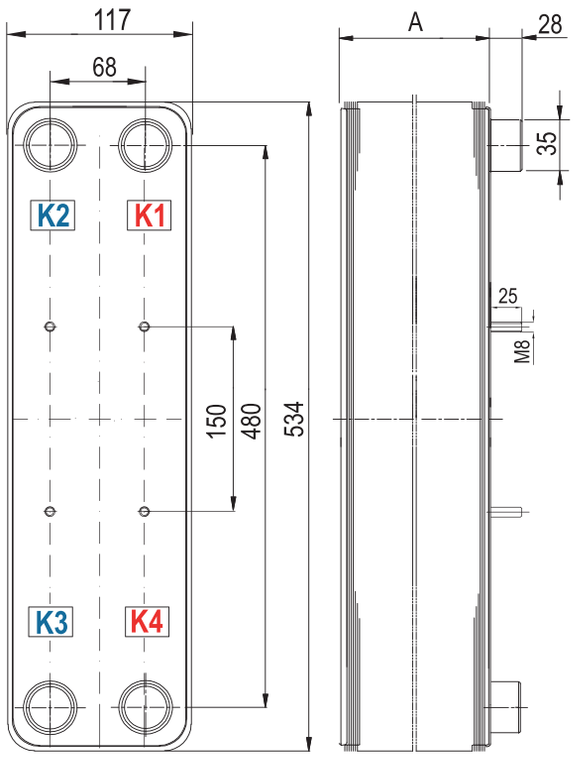
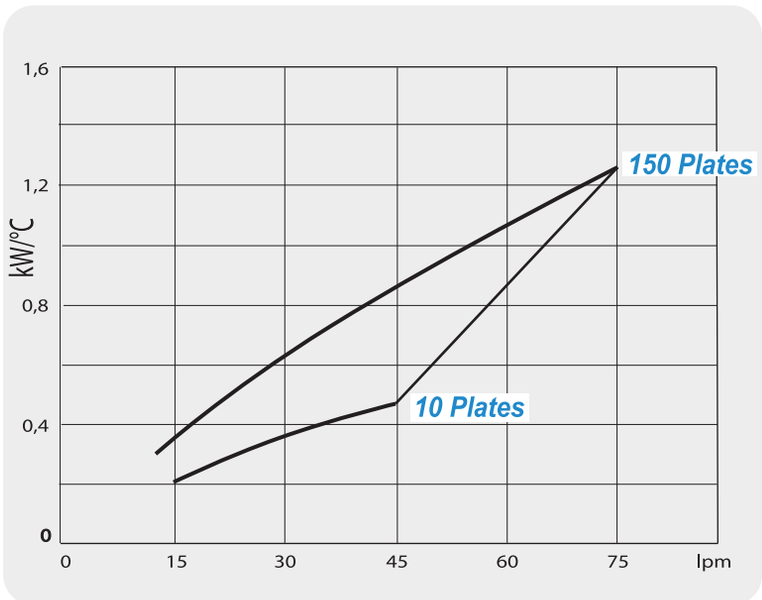


Diagramma rendimento
Performance diagram - ISO VG46 @50°C



Rapporto portata olio/acqua 2:1 - flow ratio 2:1

Per informazioni inerenti la perdita di carico contattare EMMEGI.
For pressure drop information please contact EMMEG.

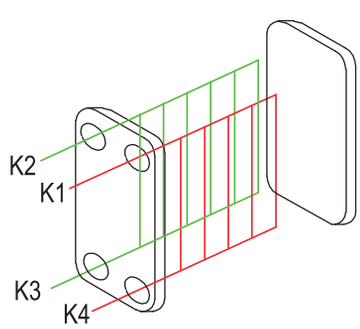
Collegamenti Standard Standard of Connection Location	Connessioni Connection Types
K1 / K4 - Ingresso/uscita caldo K1 / K4 - Inlet/Outlet Hot Side	G 1" Femmina Internal Thread G 1"
K3 / K2 - Ingresso/uscita freddo K3 / K2 - Inlet/Outlet Cold Side	G 1" Femmina Internal Thread G 1"

A richiesta connessioni speciali
Special connections on request

N° Piastre Plate No.	A (mm)	Peso (kg) Weight (kg)	Capacità per circuito Channel Volume (lt)
10	34	4.3	0.6
20	57	7.0	1.2
30	81	9.2	1.8
40	104	11.4	2.4
50	128	13.6	3.0
60	151	15.7	3.6
70	175	17.9	4.2
80	198	20.1	4.8
90	222	22.3	5.4
100	245	24.5	6.0
110	269	26.7	6.5
120	292	28.9	7.1
130	316	31.1	7.7
140	339	33.3	8.3
150	363	35.5	8.9

Condizioni di esercizio Working Conditions	
Massima Temperatura Max. Working Pressure	230°C
Minima Temperatura Min. Working Temperature	-10°C
Massima Pressione Max. Working Pressure	30 bar

Materiali Utilizzati Materials	
Piastre Plate	Aisi 316
Attacchi Connection	Aisi 316
Brasatura Brazing Material	Cu 99,95%



Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dimensioni *Dimensions*

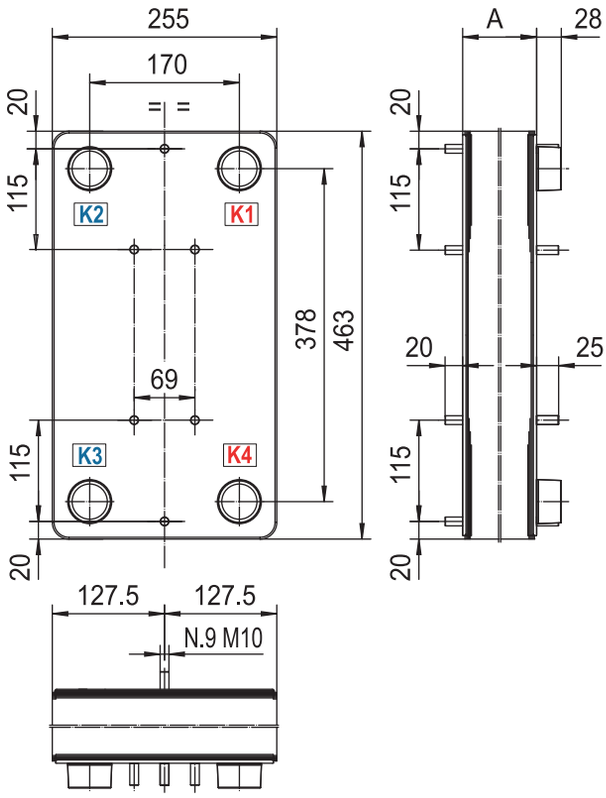
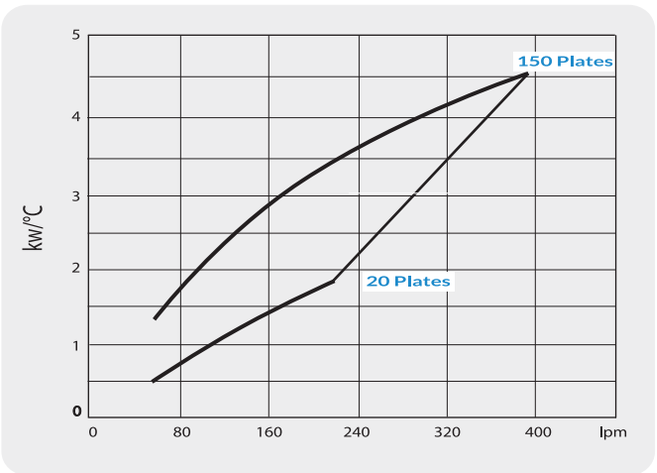


Diagramma rendimento *Performance diagram - ISO VG46 @50°C*



Rapporto portata olio/acqua 2:1 - flow ratio 2:1

Per informazioni inerenti la perdita di carico contattare EMMEGI.
For pressure drop information please contact EMMEGI.

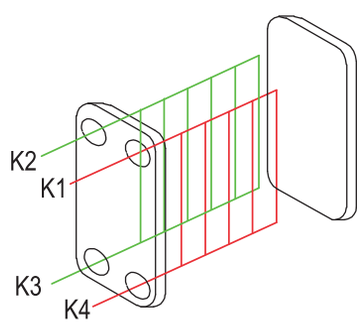
Collegamenti Standard Standard of Connection Location	Connessioni Connection Types
K1 / K4 - Ingresso/uscita caldo **K1 / K4** - Inlet/Outlet Hot Side	G 2" Maschio External Thread G 2"
K3 / K2 - Ingresso/uscita freddo **K3 / K2** - Inlet/Outlet Cold Side	G 2" Maschio External Thread G 2"

A richiesta connessioni speciali
Special connections on request

N° Piastre Plate No.	A (mm)	Peso (kg) Weight (kg)	Capacità per circuito Channel Volume (lt)
20	59	16.9	1.6
30	83	20.9	2.4
40	107	25.0	3.2
50	131	29.1	4.0
60	155	33.2	4.8
70	179	37.3	5.6
80	203	41.3	6.4
90	227	45.4	7.2
100	251	49.5	8.0
110	275	53.6	8.8
120	299	57.7	9.6
130	323	61.7	10.4
140	347	65.8	11.2
150	371	69.9	12.0

Condizioni di esercizio Working Conditions	
Massima Temperatura Max. Working Pressure	230°C
Minima Temperatura Min. Working Temperature	-10°C
Massima Pressione Max. Working Pressure	30 bar

Materiali Utilizzati Materials	
Piastre Plate	Aisi 316
Attacchi Connection	Aisi 316
Brasatura Brazing Material	Cu 99,95%



Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

Dimensioni *Dimensions*

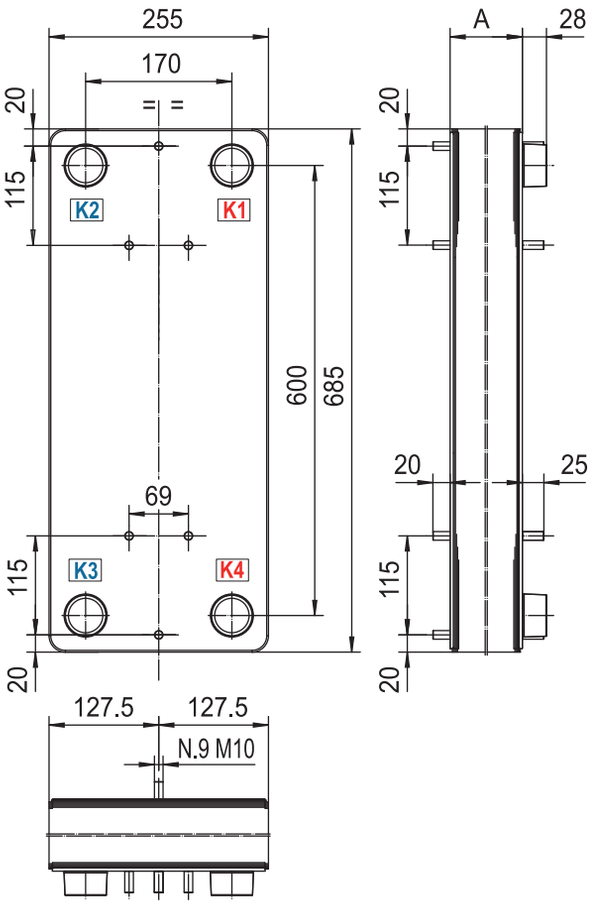
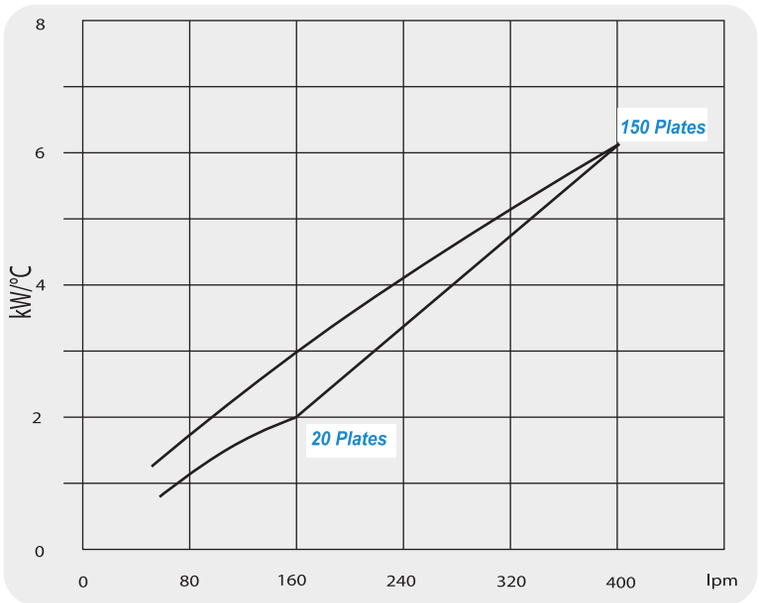


Diagramma rendimento *Performance diagram - ISO VG46 @50°C*



Rapporto portata olio/acqua 2:1 - flow ratio 2:1

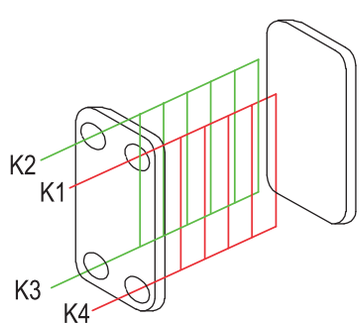
Per informazioni inerenti la perdita di carico contattare EMMEGI.
For pressure drop information please contact EMMEGI.

Collegamenti Standard Standard of Connection Location	Connessioni Connection Types
K1 / K4 - Ingresso/uscita caldo **K1 / K4** - Inlet/Outlet Hot Side	G 2" Maschio External Thread G 2"
K3 / K2 - Ingresso/uscita freddo **K3 / K2** - Inlet/Outlet Cold Side	G 2" Maschio External Thread G 2"

N° Piastre Plate No.	A (mm)	Peso (kg) Weight (kg)	Capacità per circuito Channel Volume (lt)
20	59	23.8	2.5
30	83	30.0	3.8
40	107	36.2	5.1
50	131	42.4	6.3
60	155	48.5	7.6
70	179	54.7	8.9
80	203	60.9	10.1
90	227	67.0	11.4
100	251	73.2	12.7
110	275	79.4	13.9
120	299	85.5	15.2
130	323	91.7	16.4
140	347	97.9	17.7
150	371	104.1	19.0

Condizioni di esercizio Working Conditions	
Massima Temperatura Max. Working Pressure	230°C
Minima Temperatura Min. Working Temperature	-10°C
Massima Pressione Max. Working Pressure	30 bar

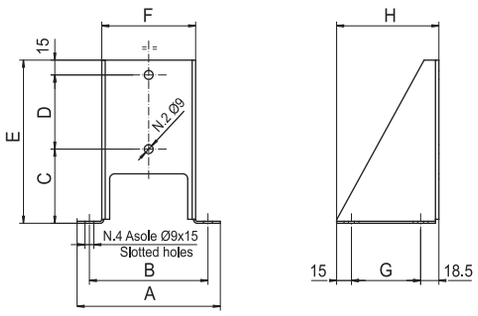
Materiali Utilizzati Materials	
Piastre Plate	Aisi 316
Attacchi Connection	Aisi 316
Brasatura Brazing Material	Cu 99,95%



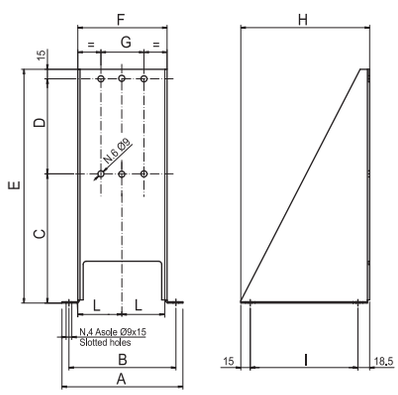
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Overall dimensions and technical characteristic are not binding

STAFFE DI FISSAGGIO SERIE PB (OPTIONAL) assemblaggio a cura del cliente

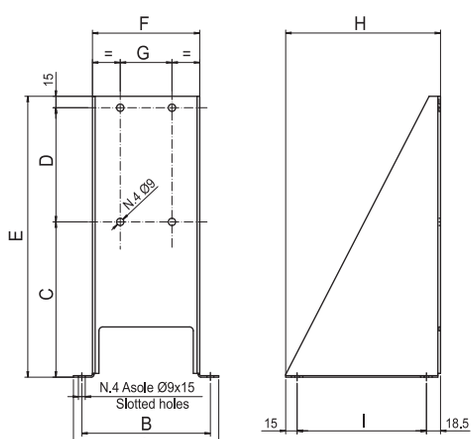
PB Series Supporting frame (OPTIONAL) the assembling is at customer care



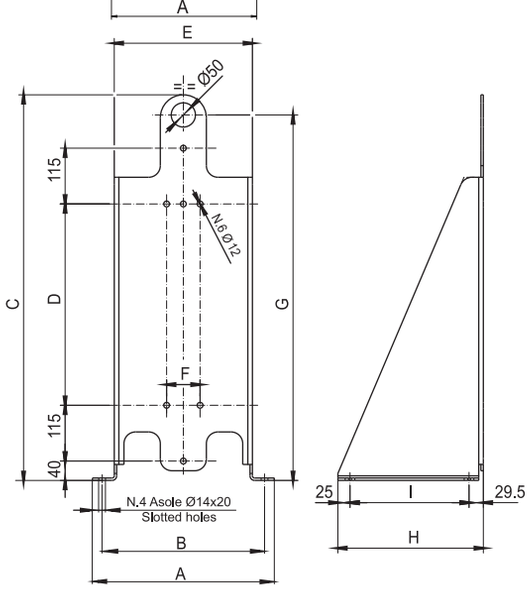
MODELLO MODEL	Dimensioni Dimensions								Staffe di fissaggio Supporting frame
	A	B	C	D	E	F	G	H	P/N
PB014	145	120	75	165	165	95	70	104	0533920



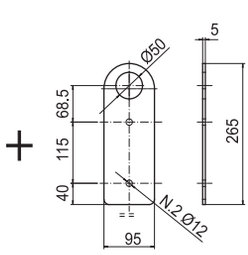
MODELLO MODEL	Dimensioni Dimensions								Staffe di fissaggio Supporting frame
	A	B	C	D	E	F	G	H	P/N
PB022	145	120	87	150	252	95	42	103.5	053393A



MODELLO MODEL	Dimensioni Dimensions									Staffe di fissaggio Supporting frame
	A	B	C	D	E	F	G	H	I	P/N
PB031	191	169	80	150	245	141	68	204	170	0533940
PB034	145	120	173	150	338	95	42	104	170	0533950
PB047	191	169	144	150	309	141	68	204	170	0533960
PB034	145	169	204	150	369	141	68	204	170	0533970



MODELLO MODEL	Dimensioni Dimensions									Staffe di fissaggio Supporting frame
	A	B	C	D	E	F	G	H	I	P/N
PB110	375	335	573	193	285	69	532	300	245	053398A
PB170	375	335	795	415	285	69	754	300	245	053399A





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HEAT-EXCHANGERS

Accessori
Accessories

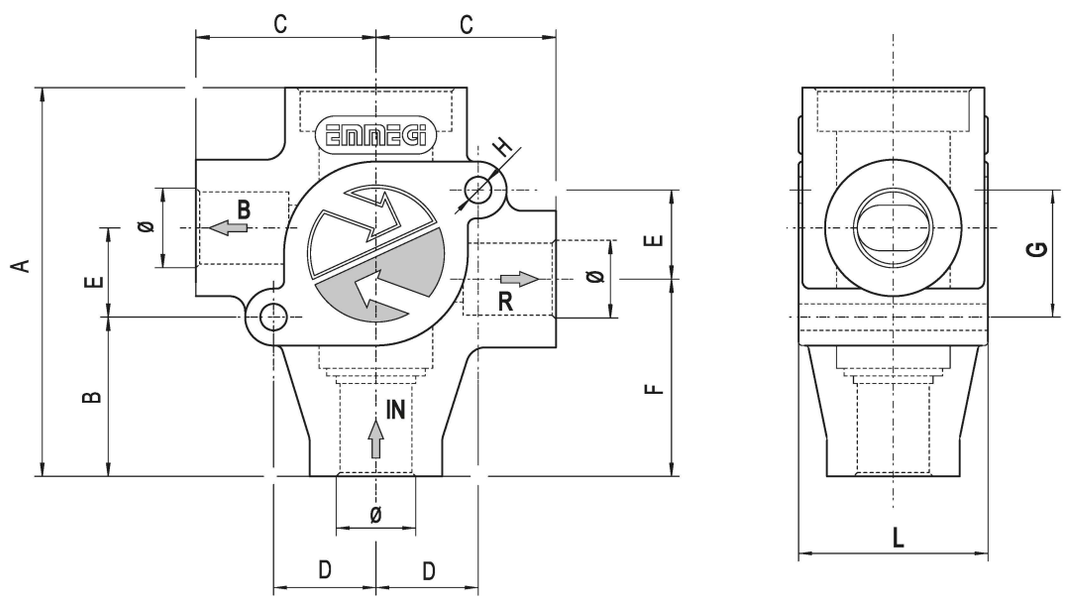
Regolatore di temperatura
Temperature regulator

Installazione

Il regolatore di temperatura viene installato nel circuito tra pompa e scambiatore di calore. Funziona come un by-pass regolabile mantenendo costante la temperatura in serbatoio (fig.2)

Installation

The temperature regulator is installed in the oil circuit between the pump and the heat exchanger. It works as a by-pass regulator and the oil reservoir temperature is held constant. (see fig.2)



IN : INGRESSO / INLET **R** : SCAMBIATORE/ HEAT EXCHANGERS **B** : BY-PASS

Fig. 1

TIPO TYPE	Ø BSP	A	B	C	D	E	F	G	H	L
012	1/2"	102	41	46,5	27	23	51	33	Ø 6,5	50
034	3/4"	102	41	46,5	27	23	51	33	Ø 6,5	50
100	1"	122	49	55,5	43,5	32,5	59,5	43	Ø 8,5	64
112	1 1/2"	122	49	55,5	43,5	32,5	59,5	43	Ø 8,5	64

Caratteristiche Tecniche

Corpo in alluminio;
Temperatura costante;
Alta precisione di regolazione;
Regolazione indipendente dalla pressione olio;
Basse perdite di carico;
Costruzione robusta;
Insensibile alla pulsazioni;
Funzionamento indipendente dalla posizione di montaggio;
Assenza di manutenzione;
Affidabilità;
Pressione max. di esercizio: 8 bar.
Temperatura max. di esercizio: 120°C

Technical Features

Aluminium body;
Fixed temperature values;
Sharp regulating accuracy;
Not sensitive to oil pressure;
Low pressure drop values;
Solid design;
Shockproof;
Not sensitive to installation position;
Maintenance-free;
Long service life
Working pressure: 8 bar.
Max temperature: 120°C



REGOLAZIONE DELLE VALVOLE

Temp. inizio apertura	Temp. completa apertura
40 C °	50 C°
55 C°	65 C°
70 C°	80 C°
80 C°	90 C°

Per identificare il codice completo comporre tipo e temperature di inizio e completa apertura della valvola;
Es.Tipo 100 - temperatura 40 - 50°C:
CODICE : 1004050

STANDARD TEMPERATURE RANGES

Starting temperature	Full open temperature
40 C °	50 C°
55 C°	65 C°
70 C°	80 C°
80 C°	90 C°

The part number of the valve is composed by type and starting and final temperature.

Es. Type 100 - temperature 40 - 50°C:
CODICE : 1004050

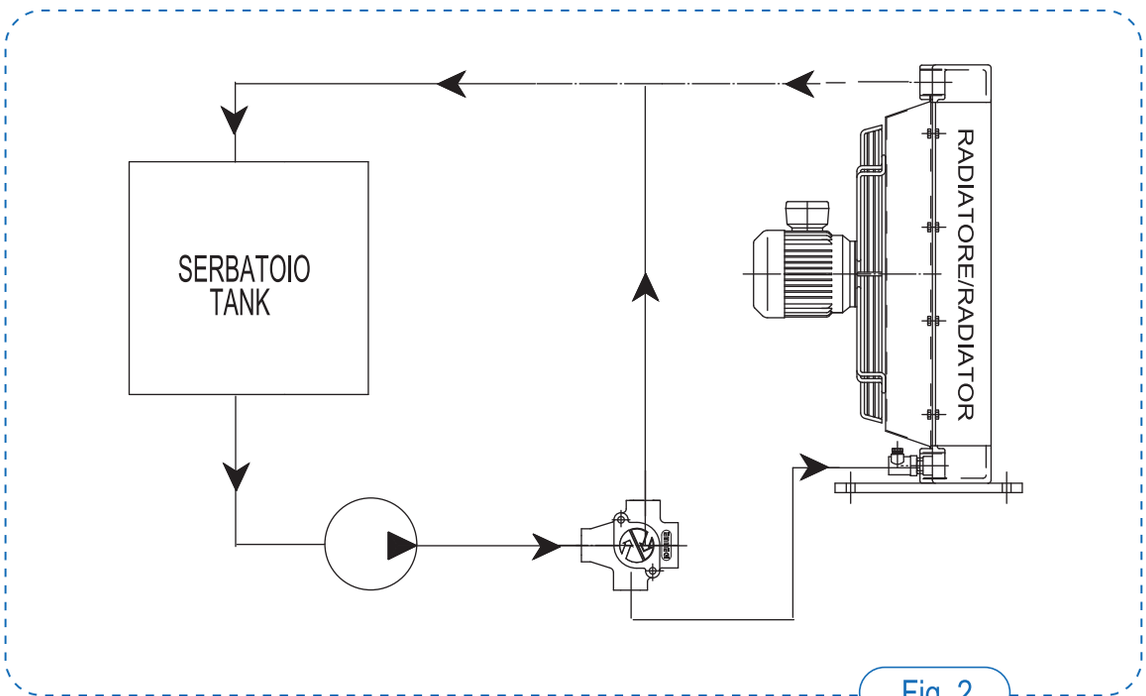
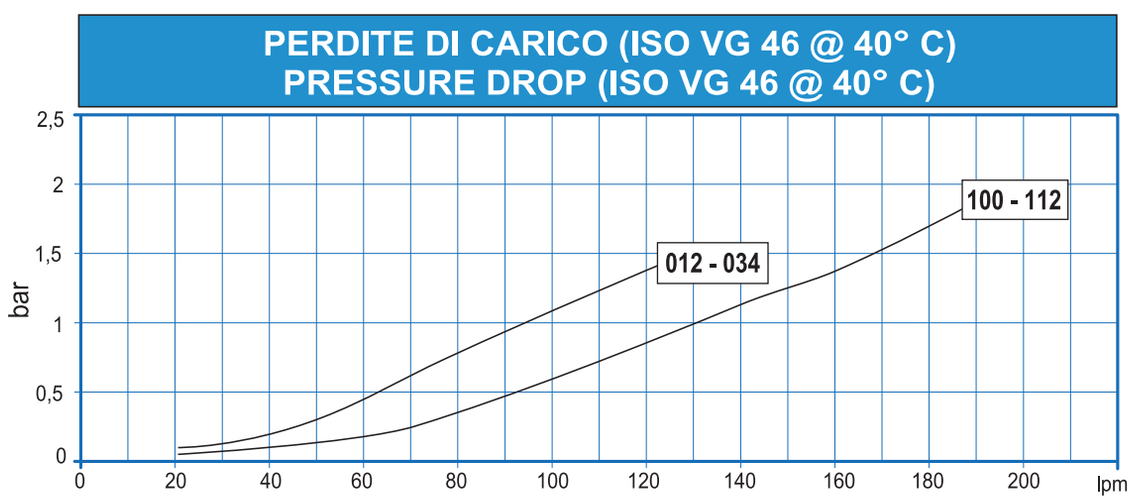
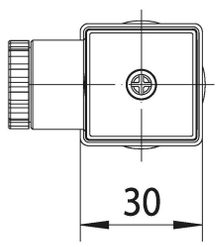


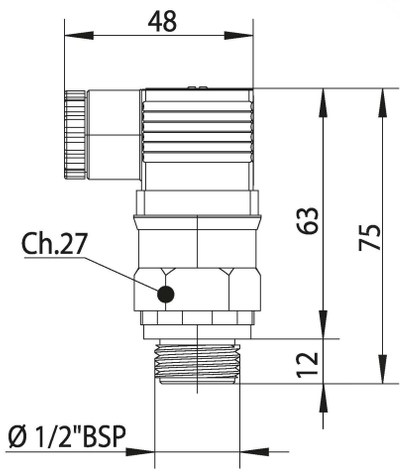
Fig. 2



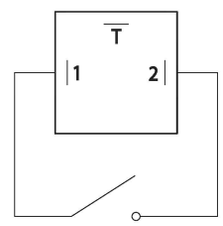
Termostato bimetallico TM4

Bimetallic thermostat TM4









Tipo NA Type NO	Taratura Temperature range	Codice Code		Tipo NC Type NC	Taratura Temperature range	Codice Code
TM 44 A1	40 - 28 °C	0510540		TM 44 C1	40 - 28 °C	0510340
TM 45 A1	50 - 38 °C	0510550		TM 45 C1	50 - 38 °C	0510350
TM 46 A1	60 - 48 °C	0511160		TM 46 C1	60 - 48 °C	0511360
TM 47 A1	70 - 58 °C	0510570		TM 47 C1	70 - 58 °C	0510370
TM 48 A1	80 - 68 °C	0510580		TM 48 C1	80 - 68 °C	0510380
TM 49 A1	90 - 78 °C	0510590		TM 49 C1	90 - 78 °C	0510390

I termostati serie TM4/A1-TM4/C1 permettono la chiusura o l'apertura di un contatto elettrico al raggiungimento di un valore fisso di temperatura. Il connettore elettrico permette una rotazione di 360° rispetto al corpo del termostato.

The thermostat TM4/A1-TM4/C1series allow the closing or the opening of an electrical contact when the fluid temperature reaches the set-point value. Electrical connector has 360° free rotation to the thermostat body.

CARATTERISTICHE TECNICHE

Temperatura d'impiego: da -20°C a 120°C
Precisione d'intervento: ±3.5°C
Valore fisso d'isteresi: ~12°C del valore impostato
Corpo: ottone
Attacco di processo: ½" BSP (guarnizione NBR inclusa)
Pressione massima: 200 bar
Montaggio: in ogni posizione
Peso: 70 gr.

TECHNICAL FEATURES

Working temperature: from -20°C to 120°C
Switching accurancy: ±3.5°C
Fixed hysteresy value: ~12°C
Body material: brass
Thread connection: ½"BSP (NBR sealing included)
Max pressure: 200 bar
Mounting: in any position
Weigth: 70 gr

CARATTERISTICHE ELETTRICHE

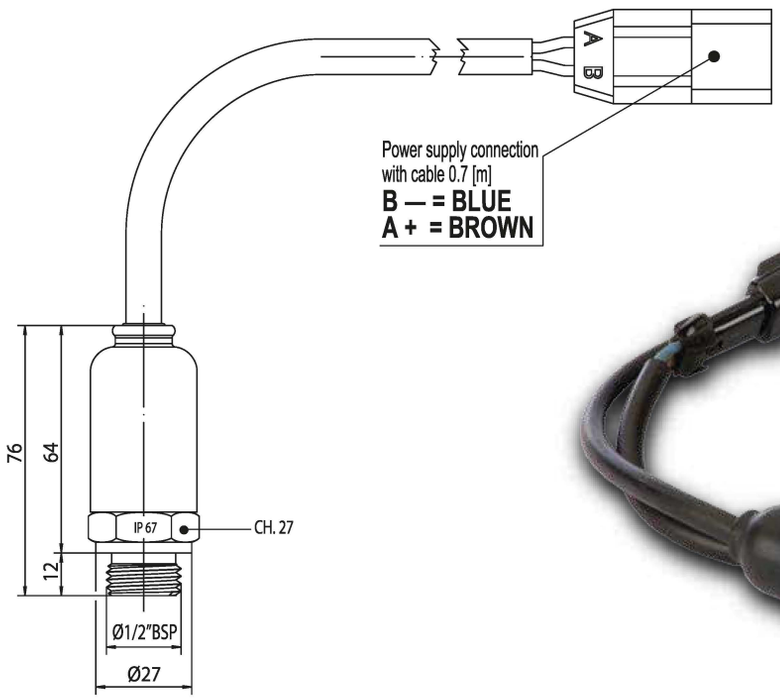
Attacco elettrico secondo normeDIN 43650
Protezione elettrica secondo norme DIN 40050 IP65
Massimo carico sui contatti: 10A

ELECTRIC FEATURES

Electric connection according to DIN 43650
Electric protection according to DIN 40050 IP65
Maximum contact load: 10A

Termostato bimetallico TM4/P1

Bimetallic thermostat TM4/P1



IP67



Tipo NA Type NO	Taratura Temperature range	Codice Code		Tipo NC Type NC	Taratura Temperature range	Codice Code
TM 44 A1/ P1	40 - 28 °C	0510440		TM 44 C1/P1	40 - 28 °C	0510240
TM 45 A1/ P1	50 - 38 °C	0510450		TM 45 C1/P1	50 - 38 °C	0510250
TM 46 A1/ P1	60 - 48 °C	0510460		TM 46 C1/P1	60 - 48 °C	0510260
TM 47 A1/ P1	70 - 58 °C	0510470		TM 47 C1/P1	70 - 58 °C	0510270
TM 48 A1/ P1	80 - 68 °C	0510480		TM 48 C1/P1	80 - 68 °C	0510280
TM 49 A1/ P1	90 - 78 °C	0510490		TM 49 C1/P1	90 - 78 °C	0510290

La fornitura è comprensiva di ulteriore connettore maschio per linea alimentazione P/N 0496950
The supply includes a male connector for the connection to the power supply P/N 0496950

CARATTERISTICHE TECNICHE

Temperatura d'impiego: da -20°C a 120°C
Precisione d'intervento: ±3.5°C
Valore fisso d'isteresi: ~12°C del valore impostato
Corpo: ottone
Attacco di processo: ½" BSP (guarnizione NBR inclusa)
Pressione massima: 200 bar
Montaggio: in ogni posizione
Peso: 70 gr.

TECHNICAL FEATURES

Working temperature: from -20°C to 120°C
Switching accurancy: ±3.5°C
Fixed hysteresy value: ~12°C
Body material: brass
Thread connection: ½"BSP (NBR sealing included)
Max pressure: 200 bar
Mounting: in any position
Weigth: 70 gr

CARATTERISTICHE ELETTRICHE

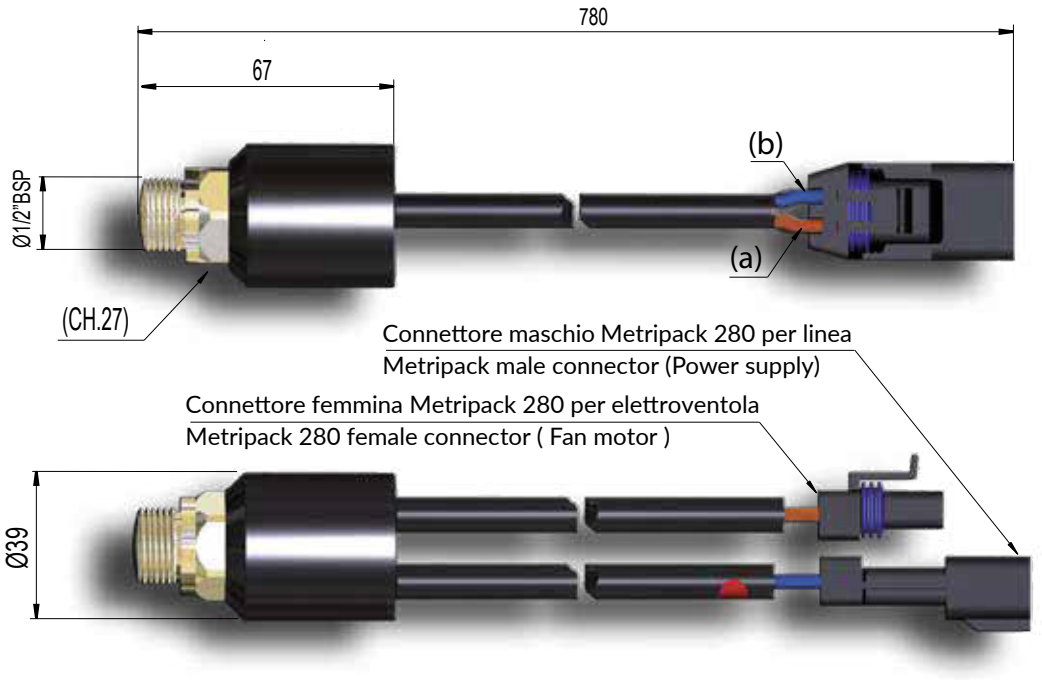
Attacco elettrico secondo norme DIN 43650
Protezione elettrica secondo norme DIN 40050 IP67
Massimo carico sui contatti: 10A

ELECTRIC FEATURES

Electric connection according to DIN 43650
Electric protection according to DIN 40050 IP67
Maximum contact load: 10A

Termostato fisso TMR4 con relè di potenza incorporato

TMR4 fixed thermostat with integrated relay



La fornitura è comprensiva di ulteriore connettore maschio per linea alimentazione P/N 0496950
The supply includes a male connector for the connection to the power supply P/N 0496950

Tipo Type	Taratura Temperature range	Codice Code	V	Tipo Type	Taratura Temperature range	Codice Code
TMR 44	40 - 28 °C	0590140	12 DC	TMR 47	70 - 58 °C	0590170
TMR 45	50 - 38 °C	0590150	12 DC	TMR 48	80 - 68 °C	0590180
TMR 46	60 - 48 °C	0590160	12 DC	TMR 49	90 - 78 °C	0590190
TMR 44	40 - 28 °C	0590040	24 DC	TMR 47	70 - 58 °C	0590070
TMR 45	50 - 38 °C	0590050	24 DC	TMR 48	80 - 68 °C	0590080
TMR 46	60 - 48 °C	0590060	24 DC	TMR 49	90 - 78 °C	0590090

*Disponibile versione TMR5 per assorbimento fino a 40A.
TMR5 version available for input corrent up to 40A.

CARATTERISTICHE TECNICHE

Temperatura d'impiego : da -20°C a 120°C
Precisione d'intervento : ±3.5°C
Valore fisso d'isteresi: ~12°C del valore impostato
Corpo: ottone
Attacco di processo: ½" BSP (guarnizione NBR inclusa)
Pressione massima : 200 bar
Montaggio : in ogni posizione
Peso : 0.35 kg.

TECHNICAL FEATURES

Working temperature : from -20°C to 120°C
Switching accurancy : ±3.5°C
Fixed hysteresy value : ~12°C
Body material : brass
Thread connection : ½"BSP (NBR sealing included)
Max pressure : 200 bar
Mounting : in any position
Weigth : 0.35 kg

CARATTERISTICHE ELETTRICHE

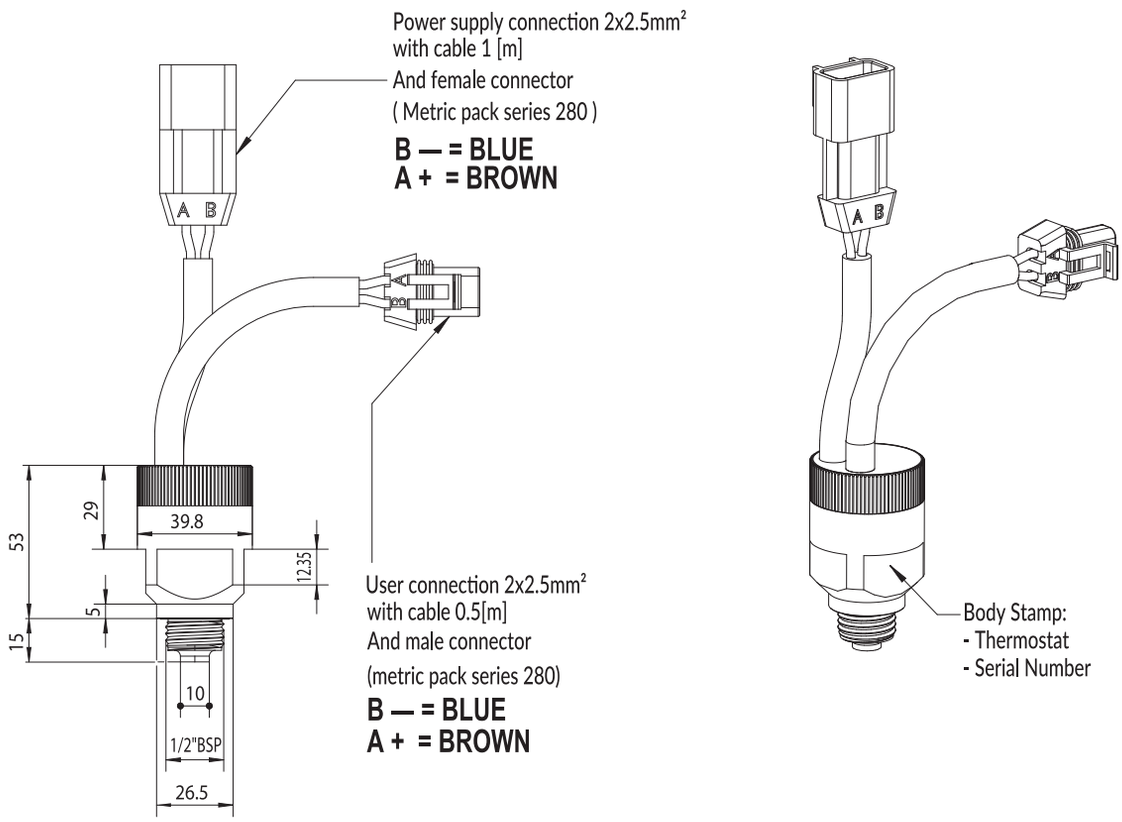
Attacco elettrico secondo normeDIN 43650
Protezione elettrica secondo norme DIN 40050 IP67
Tensione di alimentazione : 12V / 24V CC
Massimo carico sui contatti : 30A
(a) Pin positivo : cavo marrone
(b) Pin negativo : cavo blu

ELECTRIC FEATURES

Electric connection according to DIN 43650
Electric protection according to DIN 40050 IP67
Power supply : 12V / 24V DC
Maximum contact load : 30A
(a) Positive pin : brown cable
(b) Negative pin : blue cable

Termostato fisso TMS4 con relè soft-start integrato

TMS4 fixed thermostat with integrated relay and soft start



La fornitura è comprensiva di ulteriore connettore maschio per linea alimentazione P/N 0496950
The supply includes a male connector for the connection to the power supply P/N 0496950

Tipo Type	Temperatura d'impiego Fix setting temperature	Codice Code	Tipo Type	Temperatura d'impiego Fix setting temperature	Codice Code
TMS 44	40 ° C	074564A	TMS 47	70 ° C	074567A
TMS 45	50 ° C	074565A	TMS 48	80 ° C	074568A
TMS 46	60 ° C	074566A	TMS 49	90 ° C	074569A

Ad una fissata temperatura di intervento il termostato permette l'avviameneto della ventola con un aumento progressivo della velocità di rotazione.
Il motore raggiunge la sua velocità di regime in circa 5 secondi.
Quando la temperatura decresce di ~5°C il motore della ventola si spegne.

At the fix setting temperature the fan's motor starts with a progressive increasing of the rotation speed.
The motor reaches the maximun speed after about 5 seconds.
When the temperature decreases ~5°C the fan's motor switch-off.

Dati tecnici

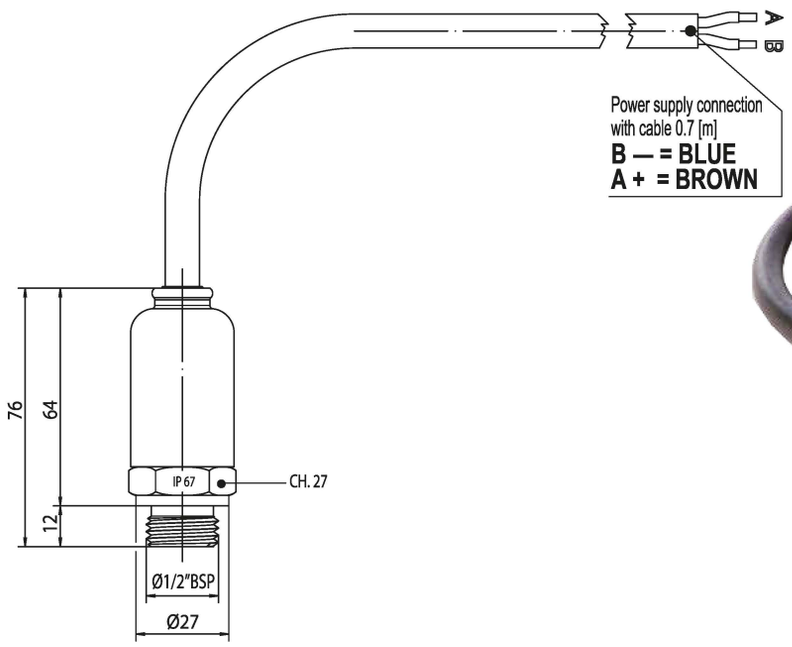
Precisione d'intervento: ± 3.5°C
Differenziale fisso: ~ 5°C
Contatti elettrici: NA
Posizione di montaggio: in ogni posizione
Tensione di alimentazione: da 10 a 28V CC
Massimo carico sui contatti: 25A
Protezione elettrica secondo norme DIN 40050: IP 67
Peso: 0.35 Kg
Filettatura: 1/2"BSP (guarnizione NBR inclusa)
Pressione massima: 200 bar

Technical data

Switching accuracy: ± 3.5°C
Fixed hysteresis: ~ 5°C
Electric contact: NO
Assembly: In any position
Power supply from: 10 to 28V DC
Maximun charge on contacts: 25A
Electric protection according DIN 40050: IP 67
Weight: 0.35 Kg
Thread: 1/2"BSP (NBR sealing included)
Max pressure: 200 bar

Termostato bimetallico TM4/XP1 AISI 316

Bimetallic thermostat TM4/XP1 AISI 316





Tipo NA Type NO	Taratura Temperature range	Codice Code		Tipo NC Type NC	Taratura Temperature range	Codice Code
TM 44 AX1/ P1	40 - 28 °C	0484660		TM 44 CX1 / P1	40 - 28 °C	0484720
TM 45 AX1/ P1	50 - 38 °C	0484670		TM 45 CX1 / P1	50 - 38 °C	0484730
TM 46 AX1/ P1	60 - 48 °C	0484680		TM 46 CX1 / P1	60 - 48 °C	0484740
TM 47 AX1/ P1	70 - 58 °C	0484690		TM 47 CX1 / P1	70 - 58 °C	0484760
TM 48 AX1/ P1	80 - 68 °C	0484700		TM 48 CX1 / P1	80 - 68 °C	0484770
TM 49 AX1/ P1	90 - 78 °C	0484710		TM 49 CX1 / P1	90 - 78 °C	0484780

CARATTERISTICHE TECNICHE

Temperatura d'impiego: da -20°C a 120°C
Precisione d'intervento: ±3.5°C
Valore fisso d'isteresi: ~12°C del valore impostato
Corpo: AISI 316
Attacco di processo: ½" BSP (guarnizione NBR inclusa)
Pressione massima: 200 bar
Montaggio: in ogni posizione
Peso: 70 gr.

TECHNICAL FEATURES

Working temperature: from -20°C to 120°C
Switching accurancy: ±3.5°C
Fixed hysteresy value: ~12°C
Body material: AISI 316
Thread connection: ½"BSP (NBR sealing included)
Max pressure: 200 bar
Mounting: in any position
Weigth: 70 gr

CARATTERISTICHE ELETTRICHE

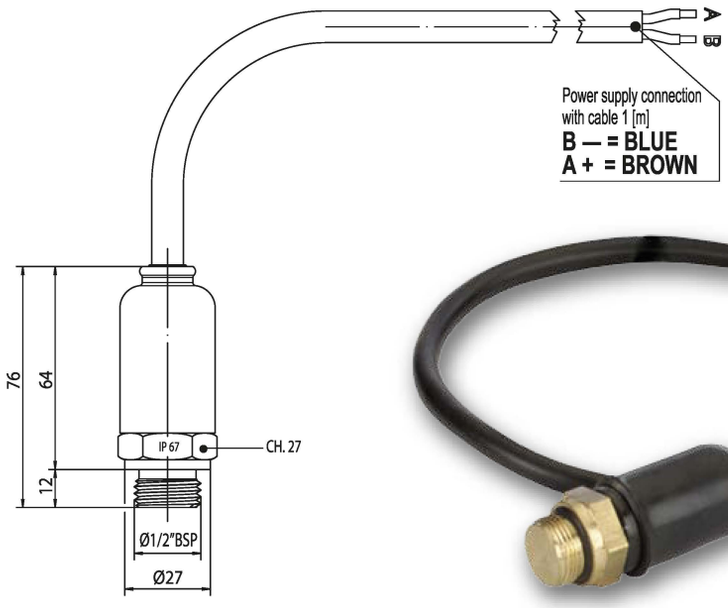
Attacco elettrico secondo normeDIN 43650
Protezione elettrica secondo norme DIN 40050 IP67
Massimo carico sui contatti: 10A

ELECTRIC FEATURES

Electric connection according to DIN 43650
Electric protection according to DIN 40050 IP67
Maximum contact load: 10A

Termostato bimetallico TM46A1/AT ATEX

Bimetallic thermostat TM46A1/AT ATEX



CE Ex II 3G/D EEx m T4

Tipo NA Type NO	Taratura Temperature range	Codice Code
TM 44 A1 / AT	40 - 28 °C	0576110
TM 45 A1 / AT	50 - 38 °C	0576120
TM 46 A1 / AT	60 - 48 °C	0576130
TM 47 A1 / AT	70 - 58 °C	0576140
TM 48 A1 / AT	80 - 68 °C	0576150
TM 49 A1 / AT	90 - 78 °C	0576160

CARATTERISTICHE TECNICHE

Temperatura d'impiego: da -20°C a 120°C
Precisione d'intervento: ±3.5°C
Valore fisso d'isteresi: ~12°C del valore impostato
Corpo: ottone
Attacco di processo: ½" BSP (guarnizione NBR inclusa)
Pressione massima: 200 bar
Montaggio: in ogni posizione
Peso: 70 gr.

TECHNICAL FEATURES

Working temperature: from -20°C to 120°C
Switching accurancy: ±3.5°C
Fixed hysteresy value: ~12°C
Body material: brass
Thread connection: ½"BSP (NBR sealing included)
Max pressure: 200 bar
Mounting: in any position
Weigth: 70 gr

CARATTERISTICHE ELETTRICHE

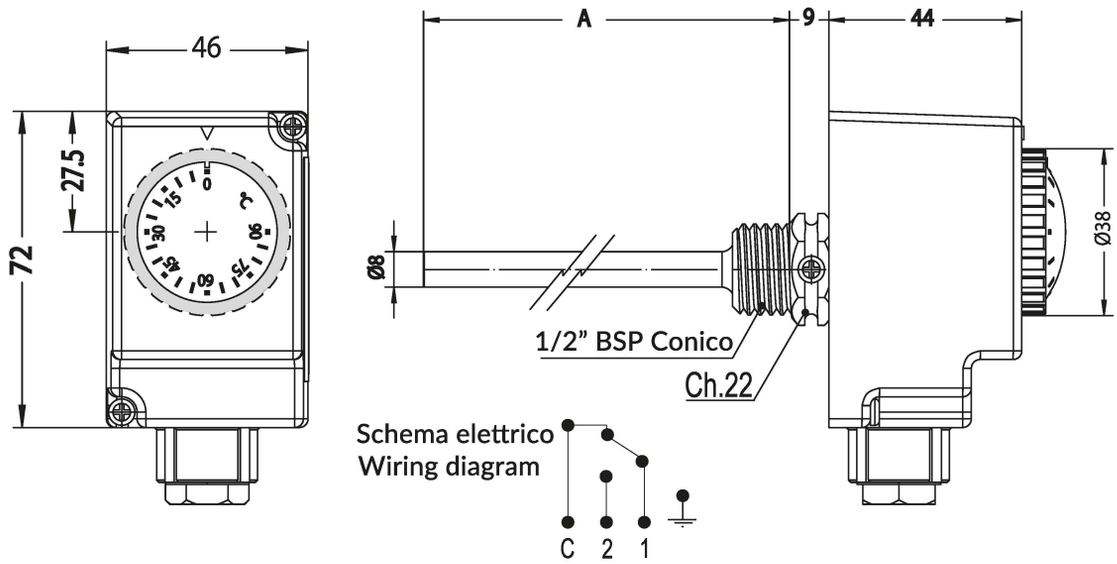
Attacco elettrico secondo norme DIN 43650
Protezione elettrica secondo norme DIN 40050 IP67
Massimo carico sui contatti: 10A

ELECTRIC FEATURES

Electric connection according to DIN 43650
Electric protection according to DIN 40050 IP67
Maximum contact load: 10A

Termostato regolabile TC2

Adjustable thermostat TC2



Tipo Type	Codice Code	Campo di regolazione Temperature range	A (mm)
TC2-RE - L100	0300250	0 - 90°C	97
TC2-RE - L200	0300260	0 - 90°C	197

Termostato ad immersione inscatolato ad espansione di liquido, unipolare con contatti in commutazione, completo di guaina di protezione a tenuta stagna.

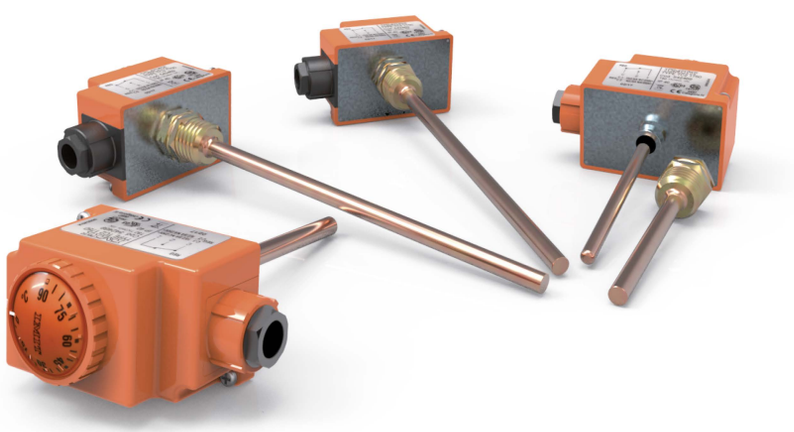
Boxed immersion thermostat with liquid expansion, unipolar contacts, complete with a waterproof pocket.

Dati tecnici

Precisione d'intervento: ±3°C
Differenziale: 4°C
Massimo carico sui contatti:
contatto 1 10A (250V AC)
contatto 2 6A (250V AC)
Pressacavo: M20X1.5
Temperatura max. testa: 80°C
Temperatura max. bulbo: 150°C
Grado di protezione: IP 40

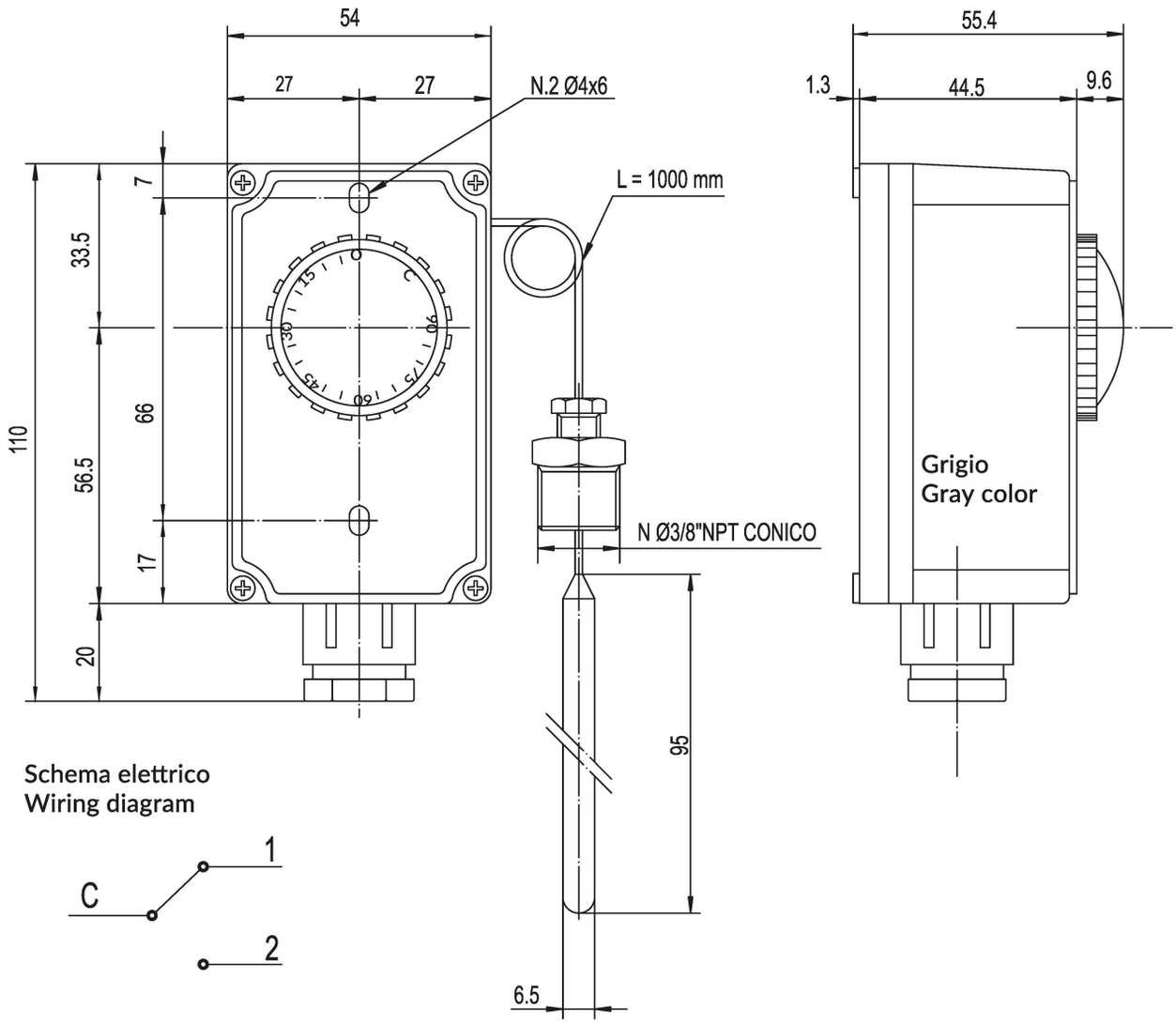
Technical data

Switching accuracy: ±3°C ;
Differential: 4°C
Maximum contact load:
contact 1 10A (250V AC)
contact 2 6A (250V AC)
Cable gland: M20X1.5
Max. heat temperature: 80°C
Max. sensing buld temperature: 150°C
Degree of protection: IP 40



Termostato regolabile TC2 L= 1000 mm

Adjustable thermostat TC2 L= 1000 mm



Schema elettrico
Wiring diagram

Codice : 0387290
Dati tecnici

Campo di regolazione: 0 - 90°C
Precisione d'intervento: ±3°C
Differenziale: 4°C
Massimo carico sui contatti :
contatto 1 10A (250V AC)
contatto 2 6A (250V AC)
Pressacavo: M20X1.5
Temperatura max. testa: 80°C
Temperatura max. bulbo: 150°C
Grado di protezione: IP 40

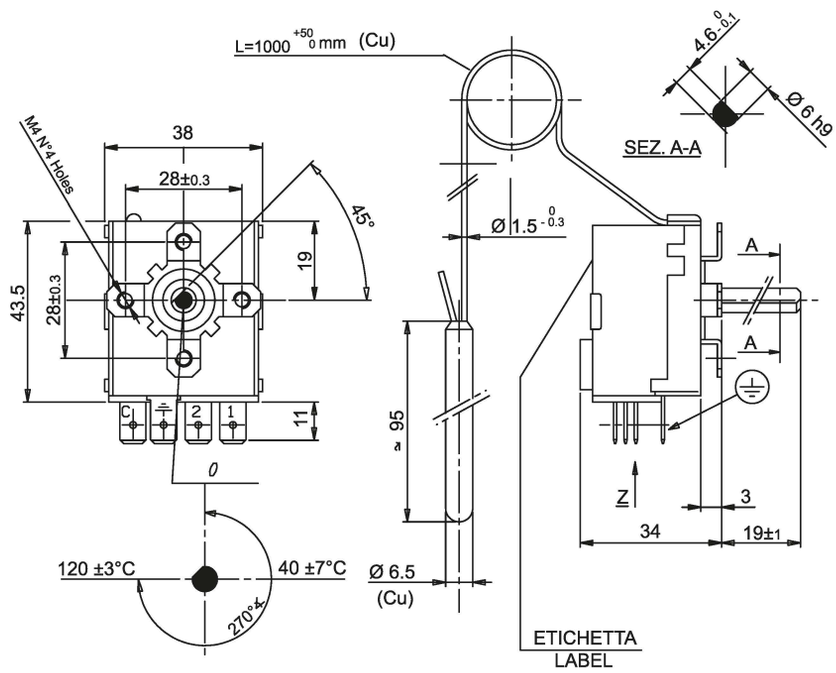
Code: 0387290
Technical data

Temperature range: 0 - 90°C
Switching accuracy: ±3°C ;
Differential: 4°C
Maximum contact load:
contact 1 10A (250V AC)
contact 2 6A (250V AC)
Cable gland: M20X1.5
Max. heat temperature: 80°C
Max. sensing buld temperature: 150°C
Degree of protection: IP 40

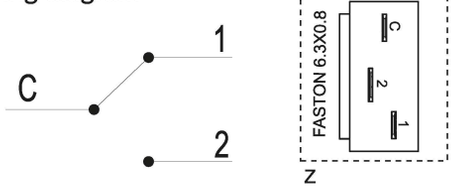


Termostato regolabile TR2

Adjustable Thermostat TR2



Schema elettrico
Wiring diagram





Codice: 0300240

Dati tecnici

Campo di regolazione: 0 - 120°C
Precisione d'intervento: ±3°C
Differenziale: 4°C
Massimo carico sui contatti:
contatto 1 16A (250V AC)
contatto 2 6A (250V AC)
Temperatura max. testa: 85°C
Temperatura max. bulbo: 150°C

Code: 0300240

Technical data

Temperature range: 0 - 120°C
Switching accuracy: ±3°C;
Differential: 4°C
Maximum contact load:
contact 1 16A (250V AC)
contact 2 6A (250V AC)
Max. heat temperature: 85°C
Max. sensing buld temperature: 150°C

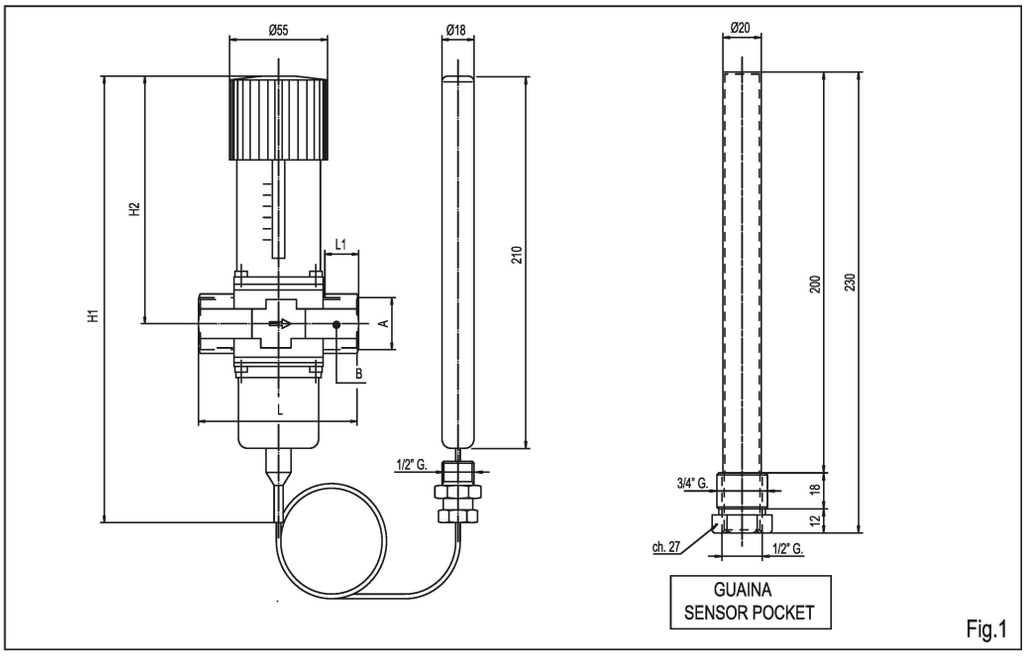


Fig.1

Tipo Type	Codice Code	H1	H2	L	L1	A	B	kg
AVTA 10	0941860	240	133	72	14	3/8" G	NV 27	1,45
AVTA 15	0941870	240	133	72	14	1/2" G	NV 27	1,45
AVTA 20	0941880	240	133	90	16	3/4" G	NV 32	1,50
AVTA 25	0941890	250	138	95	19	1" G	NV 41	1,65

Funzionamento

Le valvole termostatiche AVTA sono utilizzate per il controllo e la regolazione dell'acqua, in diverse applicazioni, ove è richiesto il raffreddamento del circuito.
Il funzionamento della valvola avviene tramite un elemento sensibile che, all'aumentare o al diminuire della temperatura del fluido primario, comanda l'apertura o chiusura della stessa, regolando di conseguenza il flusso dell'acqua di raffreddamento.
La valvola AVTA, può essere installata sul circuito acqua dello scambiatore sia in mandata che sul ritorno.

Settori di applicazione

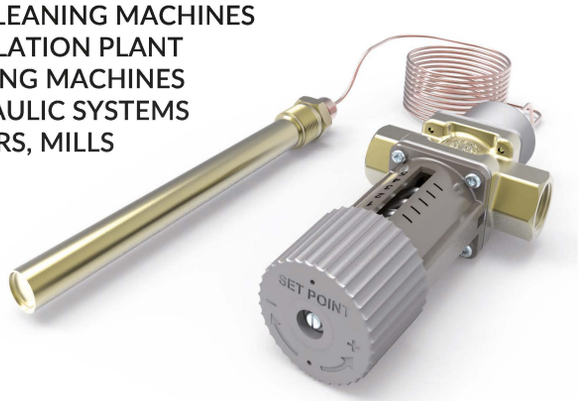
- MACCHINE INIEZIONE PLASTICA
- COMPRESSORI
- POMPE PER IL VUOTO
- MACCHINE LAVAGGIO A SECCO
- IMPIANTI DI DISTILLAZIONE
- MACCHINE DA STAMPA
- IMPIANTI IDRAULICI
- FRANTUMATORI, MESCOLATORI

Functioning

Self-acting AVTA cooling water valves are widely used for temperature regulation in many different machines and installations where cooling is a requirement.
AVTA always opens to admit flow on rising sensor temperature.
The valve can be installed either in the cooling water flow line.

Applications

- INJECTION MOULDING MACHINES
- COMPRESSORS
- VACUUM PUMPS
- DRY CLEANING MACHINES
- DISTILLATION PLANT
- PRINTING MACHINES
- HYDRAULIC SYSTEMS
- ROLLERS, MILLS



Specifiche Tecniche

VALVOLA:
- Apertura/funzionamento gestito dall' elemento sensibile a contatto con il fluido
- Temperatura min/max -25°C/ +130°C
- Pressione differenziale 0-10 bar
- Pressione di collaudo : 25 bar
- Pressione massima al sensore : 25 bar
- Le valvole AVTA si auto-regolano in riferimento alla pressione di circuito. Il punto di apertura non viene influenzato dal valore della pressione differenziale Δp (perdita di carico)

ELEMENTO SENSIBILE :
- Dimensioni : Ø 18 x 210 mm
- Posizionare come descritto in Fig.02
- Massima pressione : 25 bar

Technical Specification

VALVE :
- Opens on rising sensor temperature
- Media temperature from -25 to 130°C
- Differential pressure : 0-10 bar
- Max. test pressure : 25 bar
- Max. pressure on sensor : 25 bar
- The valves are pressure- relieved, i.e. the degree of opening is not affected by differential pressure Δp (pressure drop).

SENSOR :
- Dimensions : Ø 18x210 mm
- To be positioned as shown in Fig.02
- Max pressure 25 bar

Installazione

VALVOLA:
Montare la valvola in modo che il flusso sia nella direzione indicata dalla freccia sul corpo valvola.
Il corpo può essere montato in ogni posizione.
Inserire un filtro a monte della valvola.

TUBO CAPILLARE :
Installare il tubo capillare senza piegature brusche.
Svolgere il tubo capillare alle sue estremità.

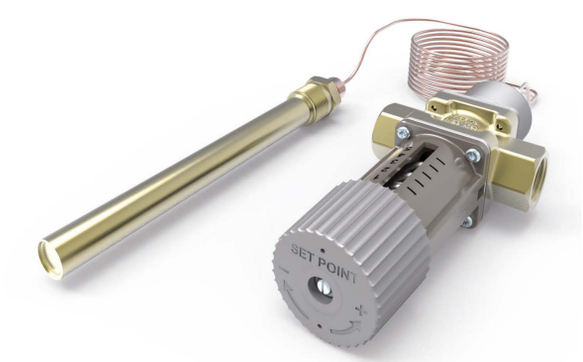
NOTA
L'elemento sensibile deve poter registrare le variazioni della temperatura dell'acqua di raffreddamento, in fase di avviamento dell'impianto. Può essere necessaria, pertanto, una linea in by-pass con valvola di intercettazione per assicurare il fluido all'elemento sensibile durante l'avviamento, quando la valvola può essere chiusa.

Installation

VALVE :
Mount the valve in such a way that flow is in the direction indicated by the arrow on the valve body.
The valve body can be mounted in any positions.
Insert a filter in the piping before of the valve.

CAPILLARY TUBE :
Install the capillary tube without sharp bends.
Relieve the capillary tube at the ends.

NOTE
At system starting, the sensor must be able to feel temperature variations of the cooling water.
Therefore a by-pass line with shut-off valve may be necessary to ensure the flow at the sensor during start up, when the valve may be closed.



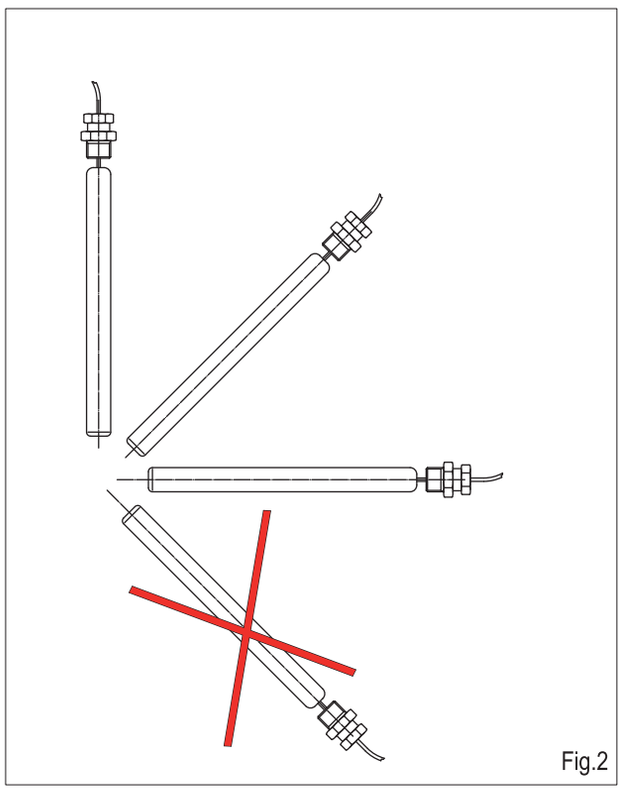


Fig.2

TIPO / TYPE	CODICE / CODE	H1	H2	L	L1	A	B	kg
AVTA 10	0941860	240	133	72	14	3/8" G	NV 27	1,45
AVTA 15	0941870	240	133	72	14	1/2" G	NV 27	1,45
AVTA 20	0941880	240	133	90	16	1/2" G	NV 32	1,5
AVTA 25	0941890	250	138	95	19	1" G	NV 41	1,65

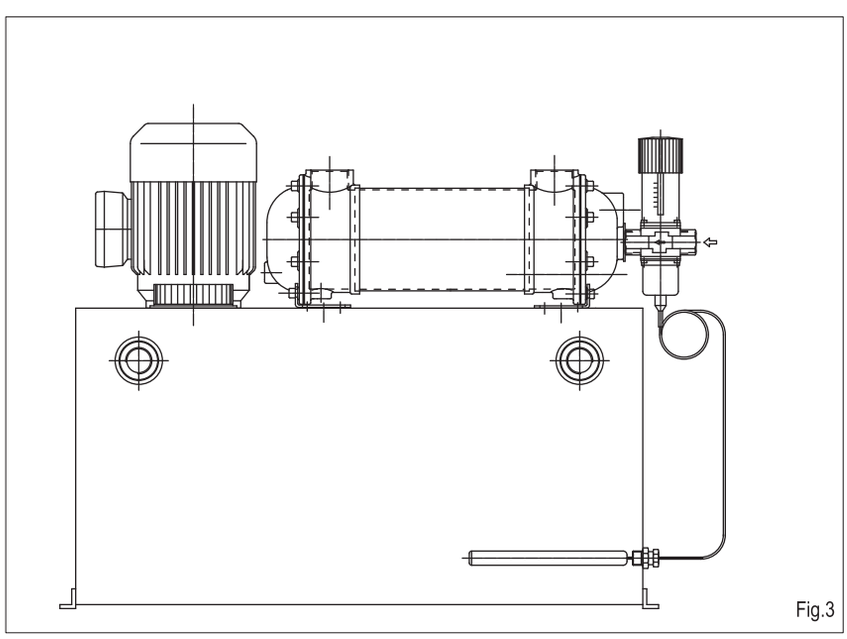


Fig.3

Regolazione della velocità elettroventole DC

Il dimensionamento degli scambiatori è generalmente effettuato imponendo le condizioni più restrittive ed estreme riscontrabili dal cliente in fase di utilizzo (es. potenza da dissipare massima, temperatura ambiente elevata ecc.). Spesso tali condizioni vengono raggiunte solo per periodi di tempo limitati, pertanto lo scambiatore risulta sovradimensionato durante le condizioni ”usuali” di utilizzo.

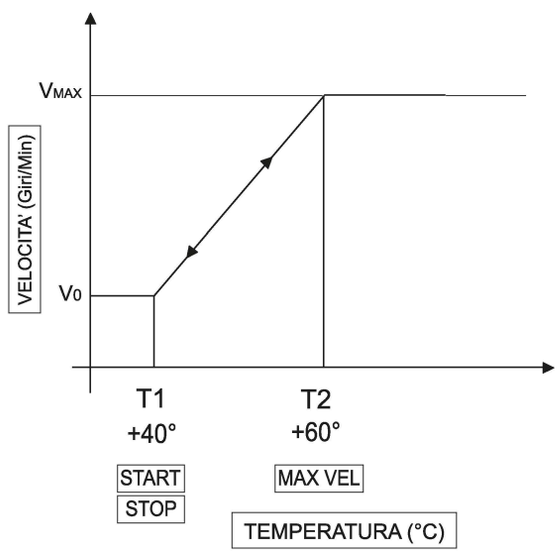
Nel campo degli scambiatori allestiti con elettroventole a corrente continua, a 12V o 24V, una delle soluzioni proponibili è quella di utilizzare dei termostati di tipo ON/OFF, per l’attivazione o lo spegnimento della ventola. Questo tipo di funzionamento però, oltre a non avere un controllo raffinato sulla temperatura del fluido, sottopone la ventola a continui cicli di accensione che ne causano l’usura prematura delle spazzole.

Risulta quindi fondamentale poter controllare le prestazioni dello scambiatore e regolarne il funzionamento in modo dinamico in funzione delle condizioni di lavoro effettive.

È stato quindi introdotto il sistema con variatore elettronico di velocità e sonda NTC, in grado di regolare la velocità della elettroventola in funzione della temperatura del fluido.

Principio di funzionamento

Il variatore elettronico è in grado di variare la tensione disponibile alla elettroventola, da 0V alla massima tensione disponibile (12V o 24V a seconda del caso), regolando di conseguenza la velocità di rotazione delle pale e quindi le prestazioni dello scambiatore. La regolazione viene effettuata in modo lineare, in funzione della temperatura, all’ interno di un campo definito (per lo standard 40°C-60°C). Per temperature del fluido inferiori al limite minimo, la ventola rimarrà spenta; per temperature superiori al limite massimo, la ventola andrà alla sua velocità di rotazione nominale.



Vantaggi

- Controllo della temperatura del fluido.
- Riduzione delle correnti di spunto, aumento aumento vita utile della ventola e dei componenti dell’ impianto elettrico del cliente.
- Risparmio energetico.
- Riduzione della rumorosità della ventola.
- Utilizzabile con ventole di qualsiasi fornitore.
- Semplicità di installazione e collegamento.
- Pulizia della massa radiante (per la versione dotata di inversione).



Codice Code	Descrizione Description
059001A	VARIATORE DI VELOCITA’ CON INVERSIONE DI SENSO DI ROTAZIONE
059003A	VARIATORE DI VELOCITA’ SENZA INVERSIONE DI SENSO DI ROTAZIONE
0523130	SONDA DI TEMPERATURA NTC 1/2” BSP
0523180	SONDA DI TEMPERATURA NTC 1/4” BSP
0590020	SONDA DI TEMPERATURA M14x1,0
0590210	SONDA DI TEMPERATURA M22x1,5

Speed regulation for DC electric fans

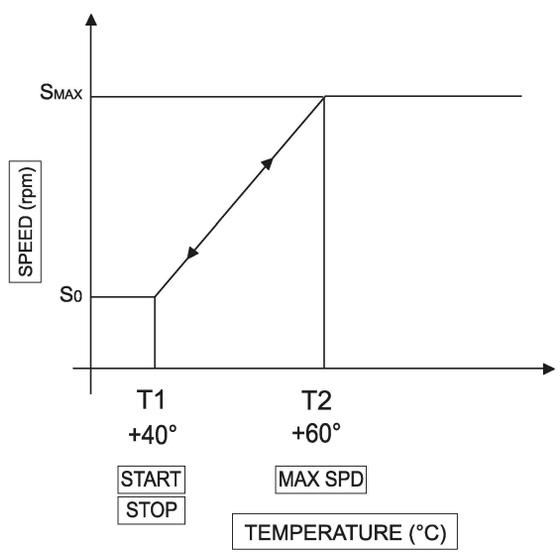
Coolers are usually sized using the most extreme conditions that the customer can expect during operation (Es. maximun cooling power, highest ambient temperature, ecc).
Often such conditions are reached only for limited periods , so the cooler is oversized for the " usual " working conditions.
Normaly, an ON/OFF thermal switch is used for fan control.
This kind of solution does not perform a good control of fluid temperature and stress fan motor with multiple switching cycles, causing a reduction of brush life.

A dynamic control of the temperature can improve the performance and efficiency of the complete system, adapting fan behaviour to working condition.

Working Principle

The ESC is able to control the voltage supplied to the electric fan, from 0 V to the maximum voltage (12V or 24V depending on the fan), varying speed and cooler performance.
The controller works lineary, depending on temperature, in a defined range (standard is 40°C to 60°C).

If fluid temperature is lower than minimum threshold fan will stay powered off; if over than maximum, speed will be the nominal one.



Advantages

- Fluid temperature control.
- Reduction of inrush current, increased expected life of the fan.
- Energy saving.
- Noise reduction.
- Can be used with fans from different suppliers.
- Simple to install and connect.
- Can be used to clean the cooling core
  (For model with inversion function).



Codice Code	Descrizione Description
059001A	ELECTRONIC SPEED CONTROL WITH REVERSIBLE FAN DIRECTION
059003A	ELECTRONIC SPEED CONTROL WITHOUT REVERSIBLE FAN DIRECTION
0523130	TEMPERATURE SENSOR NTC 1/2" BSP
0523180	TEMPERATURE SENSOR NTC 1/4" BSP
0590020	TEMPERATURE SENSOR M14x1,0
0590210	TEMPERATURE SENSOR M22x1,5

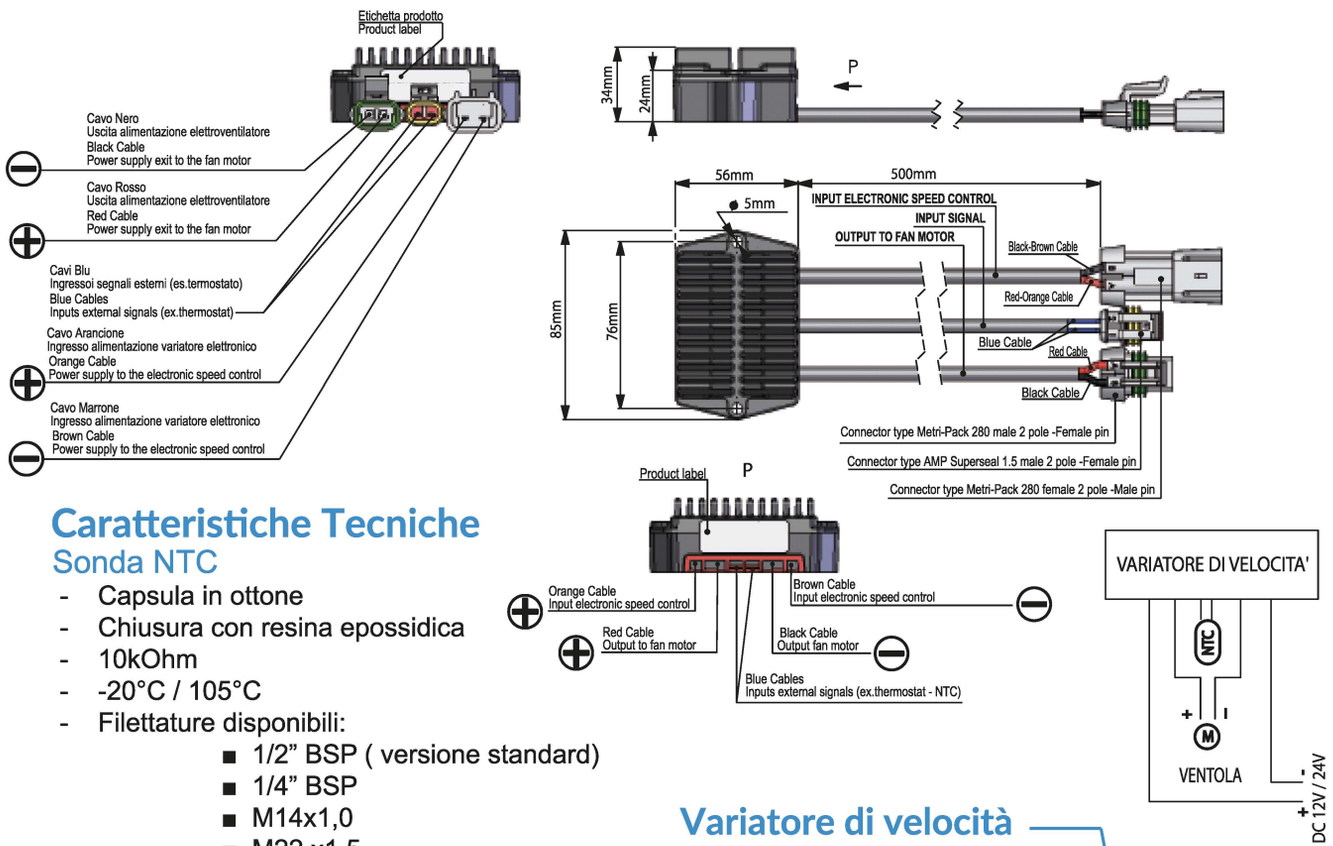
Installazione

Il sistema è di semplice installazione:

- la sonda NTC standard è dotata di filettatura 1/2" BSP e viene collocata nella posizione normalmente riservata al termostato.
- il variatore dispone di due fori passanti per il fissaggio con viti M6.
- il variatore è dotato di connettori Plug and Play immediatamente installabili sui prodotti EMMEGI.
- il variatore include rele' di potenza e protezioni che non richiedono ulteriori cablaggi.

I connettori sono a tenuta stagna e, se correttamente installati, mantengono il grado di protezione del variatore (IP67).

Collegamenti e connettori come da schema sotto



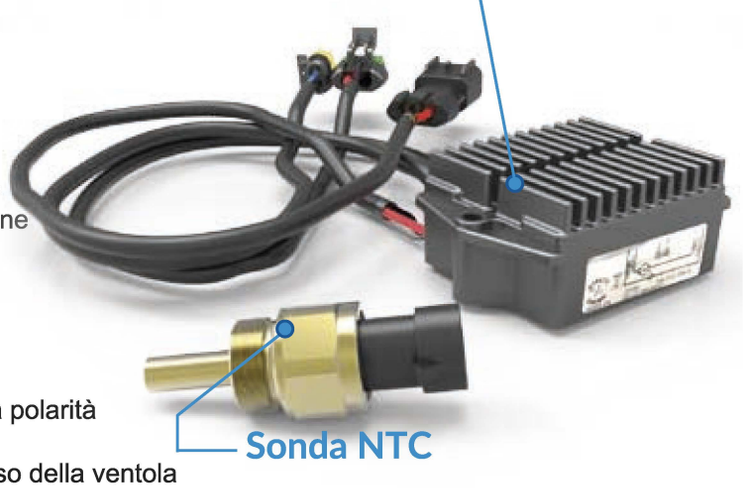
Caratteristiche Tecniche

Sonda NTC

- Capsula in ottone
- Chiusura con resina epossidica
- 10kOhm
- -20°C / 105°C
- Filettature disponibili:
  - 1/2" BSP (versione standard)
  - 1/4" BSP
  - M14x1,0
  - M22 x1,5

Variatore di velocità

- Tensione di alimentazione da 7 a 40V DC
- Corrente di lavoro (in continuo) massima:
  - 25A per modello con inversione
  - 30A per modello senza inversione



- Intervento protezione 35A
- Corrente in standby 4mA a 24V
- Durata oltre 200.000 cicli
- Funzione Soft-Start sempre attiva
- Protezione contro inversione accidentale della polarità
- Grado di protezione IP67
- Elettronica protetta in caso di blocco improvviso della ventola (si consiglia in ogni caso di installare un fusibile per ogni ventola).
- Protezione da Load-Dump
- Lunghezza cavi 500mm.

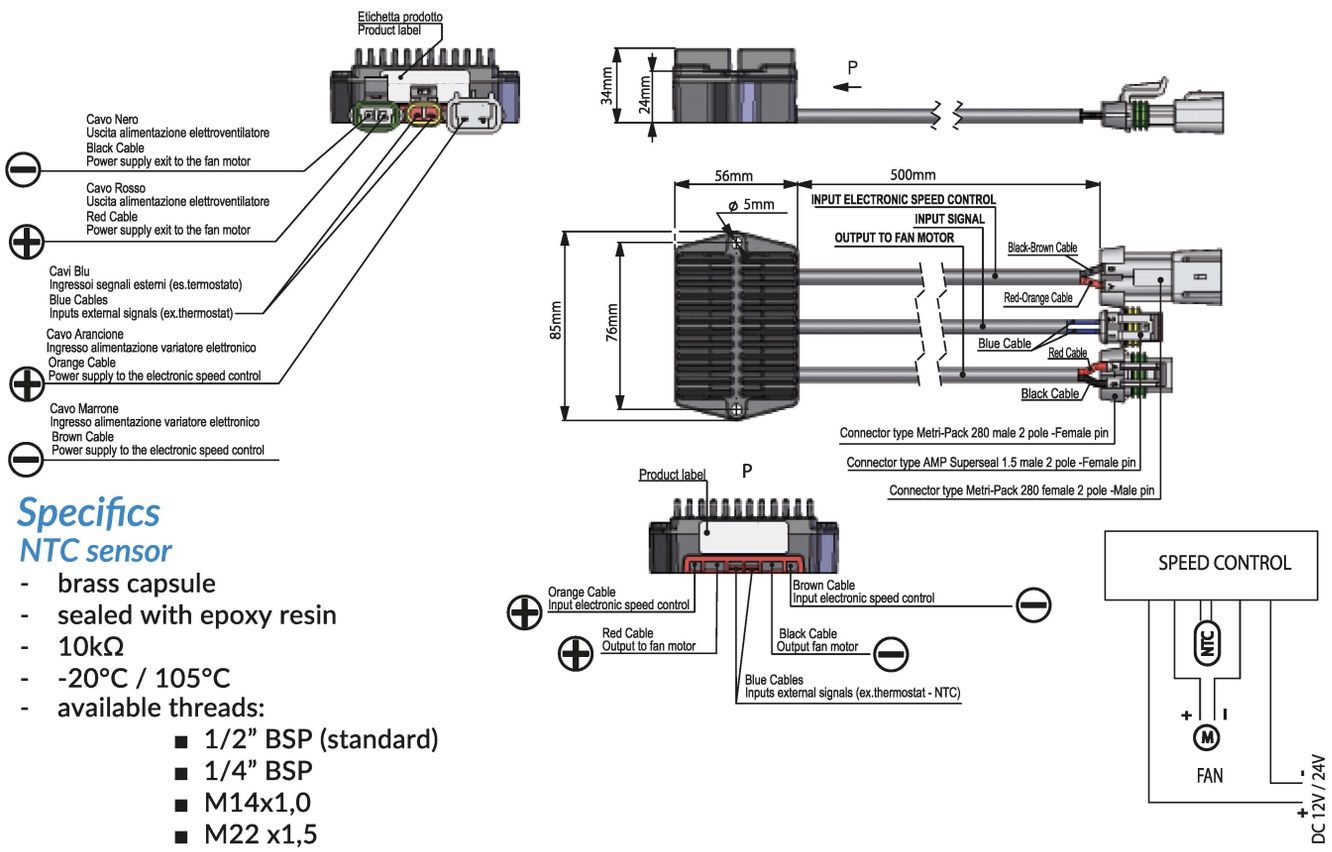
Installation

The device is easy to install:

- Standard NTC sensor is 1/2" BSP threaded and is installed in the same position of the thermostat.
- The device has two through holes for M6 screws for fixing.
- The device is equipped with plug and play connections, suitable to EMMEGI DC models.
- Power relay and protection are included, avoiding external cabling system.

Connectors and device are water proof; if correctly installed, the system is guaranteed for IP67.

Cabling and connections as following diagram



Specifics

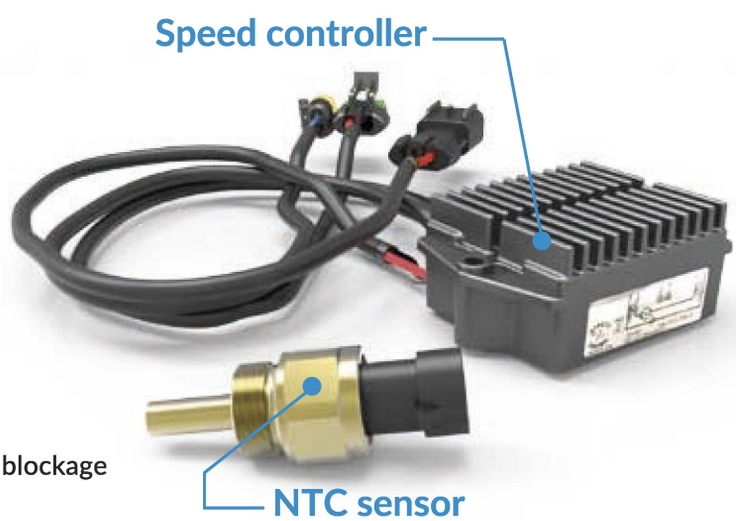
NTC sensor

- brass capsule
- sealed with epoxy resin
- 10kΩ
- -20°C / 105°C
- available threads:
  - 1/2" BSP (standard)
  - 1/4" BSP
  - M14x1,0
  - M22 x1,5

Speed Control

- Voltage range: 7 - 40V DC
- Working current (maximum for continuous use):
  - 25A with reverse
  - 30A without reverse

- Protection: 35A.
- Stand-by current 4mA at 24V.
- Expected working life over 200.000 cycles.
- Soft-start fuction: always active.
- Reverse polarity protection: always active.
- Load dump protection.
- IP67 sealed.
- Electronic device protected against unexpected fan blockage (a fuse per each fan is recommended)
- Cable length 500mm..



Note *Notes*

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EMMEGI®

HEAT-EXCHANGERS



EMMEGI NORDIC AB.
Viaduktgatan 8,
SE 34132 Ljungby
info@emmeginordic.se
Sweden

EMMEGI HEAT EXCHANGERS INC.
3626 E.Southern Ave #3
Phoenix, AZ 85040
sales@emmegiinc.com
U.S.A.

EMMEGI TERMAL SISTEMLER SANAYI VE TICARET LDT.ŞT
Ataşehir Mah. 8229/2 Sokak No:12
Odin Iş Merkezi çiğli- Izmir
info@emmegi-turkey.com
Turkey

EMMEGI GMBH
Philipp - Reis-Stra ße 2
41516 Grevenbroich - Kappellen
vertrieb@emmegi-gmbh.de
Germany

EMMEGI UK LTD.
Unit 19C Coln Park Andoverford
Indutrial Estate Cheltenham
Gloucestershire
sales@emmegi.co.uk
UK

EMMEGI S.R.O.
UI.M. Razusa 1
95514 Topolcany
sro@emmegi-heat-exchangers.com
Slovakia

EMMEGI S.p.a.

Via Newton 52, Cassano d'Adda (MI) Italy • Tel +39 0363 360 236
e-mail: info@emmegi-heat-exchangers.com • website: emmegi.group