Scambiatori Aria-olio
Serie HPA

Air-oil heat-exchangers
HPA Series

EMMEGI

Introduzione

Introduction

Gli scambiatori di calore aria-olio **EMMEGI**, 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.
La massa radiante, in lega d'alluminio ad alta resistenza, è ottenuta mediante un processo costuttivo di saldobrasatura sottovuoto.
La particolare configurazione dei condotti aumenta la turbolenza del fluido e di conseguenza la capacità di scanbio; inoltre, la presenza di speciali turbolatori sull' alettatura del pacco radiante, migliora ulteriormente il coefficiente di trasmissione totale.
Il risultato è un prodotto tecnologicamente avanzato di dimensioni contenute, leggero e robusto.

EMMEGI *air-oil heat exchangers are used for cooling oil hydraulic systems using as the coolant ambient air that passes over the radiant 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 cooling pipes increase the turbulence of the fluid consequently of the exchange capacity; moreover, the presence of special jets on the cooler finning further improves the total transmission coefficient.
The result is a very small, light and robust technologically advanced product.

Fluidi compatibili

Compatible fluids

. OIL MINERALI, HL, HLP.
. EMULSIONI ACQUA-OLIO
. ACQUA-GLICOLE
. Per altri fluidi consultare EMMEGI.

. *MINERAL OILS; HL; HLP.*
. *WATER-OIL EMULSION.*
. *WATER-GLYCOL.*
. *Consults EMMEGI for other fluids.*

Specifiche tecniche Masse Radianti

Technical specification of Cooler Element

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

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

Installazione

Installation

Lo scambiatore può essere montato in posizione orrizontale o verticale, rispettando la distanza minima dalla parete (vedi fig. 1), in modo da assicurare un naturale afflusso e deflusso dell' aria di raffreddamento.
Lo scambiatore è installato, di norma, sulle tubazioni di ritorno dell' olio del serbatoio; deve, inoltre essere protetto da urti e vibrazioni meccaniche mediante supporti e collegato all' impianto con tubazioni flessibili. É necessario evitare che sia sottoposto a brusche variazioni di portata, colpi d' ariete e pulsazioni continue che danneggiano in modo irreversibile la radiante.
Per preservare lo scambiatore dalla sovrapressione che si genera all' avviamento dell' impianto, per elevata viscosità dell' olio, si suggerisce l' inserimento di una valvola di by-pass (vedi fig.2).

The exchangers can be fitted in a horizontal position, respecting the minimum distance from the wall (see fig.1) so as to ensure a natural flow of cooling air.
The exchangers is usually installed on oil tank return piping; it must also be protected from impacts and mechanical vibrations by supports and must be connected to the plant with flexible pipes.
Avoid subjecting the exchanger to sudden changes in flow, hammering and pulsations that can cause irreversible damage to the element.
We recommend installing a by-pass valve (see fig.2) to protect the exchanger from over-pressure generated when the plants is started up due to high oil viscosity.

Manutenzione

É buona norma prestare particolare attenzione alla pulizia della massa radiante per garantire un naturale ricambio d' aria, ed evitare una diminuzione dell' efficenza termica.

Pulizia lato olio

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

Pulizia lato aria

La pulizia lato aria può essere effettuata con aria compressa o 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 drovà essere adeguatamente protetto.

Esempio di scelta dello scambiatore

Per effettuare la scelta dello scambiatore si procede come segue:

Potenza da dissipare	:	19,5	[KW]
Portata olio ISO VG 32	:	90	[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).

$$P= \frac{19,5\ KW}{60°- 30°} = 0.65\ KW/°C$$

Nota la portata olio (90 lpm) e la potenza specifica di scambio (0.65 KW/°C) si procede alla ricerca del prodotto avvalendosi dei grafici riportati a catalogo, relativi ai singoli modelli.

Maintenance

You should be particularly carefully in cleaning the cooler element to guarantee a natural exchange of air, in order to prevent a reduction in thermal efficiency

Cleaning oil side

The exchanger should be dismantled to clean on the oil side. The dirt can be removed by flushing, in counter-current, de-greasing substance, compatible with aluminium. Wash with hydraulic oil before re-connecting the product to the plant.

Cleaning air side

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.
Oily 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.

Example of how to choose a heat exchanger

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

Power to dissipate	*:*	*19,5*	*[KW]*
ISO VG 32 oil flow	*:*	*90*	*[lpm]*
Oil input 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 dissipate and the ΔT (the difference between the oil input temperature and the ambient temperature).

$$P= \frac{19,5\ KW}{60°- 30°} = 0.65\ KW/°C$$

Note the oil flow (90 lpm) and specific exchange power (0.65 KW/°C), product research is made by referring to the graph in the catalogue which is relevant to each model.

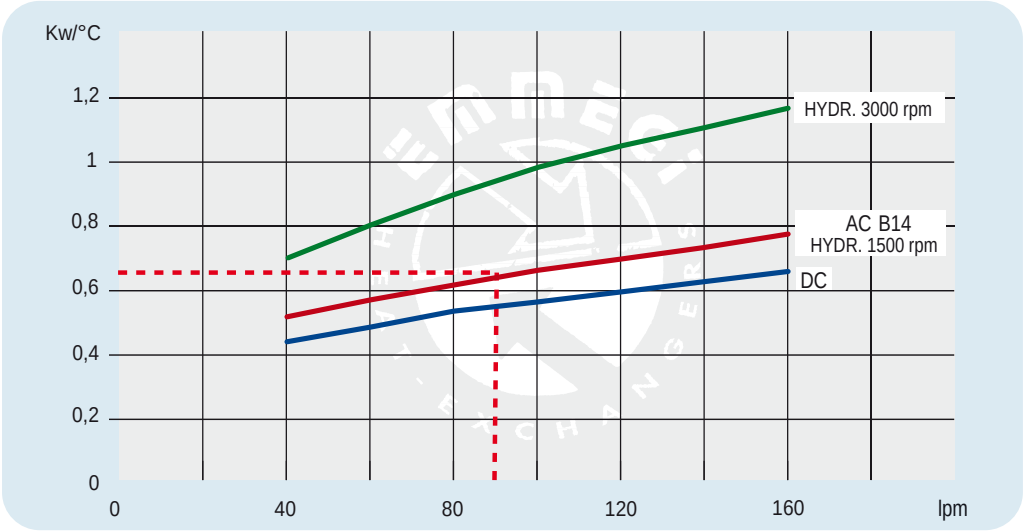
Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	It	Kg
243003 # # #	230-400 B14 AC 280-480 B14 AC	50 60	0,75 0,90	3,46-1,90 3,41-1,99	1394 1673	450	82	4000	55	6,8	37
243012 # # #	12 DC	/	0,115	9,58	2530	280	74	1550	65		32
243024 # # #	24 DC	/	0,125	5,20	2900	280	78	1700	65		32
243056 # # #	Prepared for Gr.2 hydraulic motor					450			/		35

Per il 12-24V i dati sono riferiti al singolo ventilatore *For 12-24V the data refers to each ventilator*

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento Performance diagram



Lo scambiatore selezionato risulta il modello:
HPA 30 - 230/400 - 50Hz
cod. 243003###.

Per la completa identificazione dello scambiatore consultare la pagina "DENOMINAZIONE CODICE PRODOTTO". Nel caso non siano conosciuti tutti i dati, per la scelta prendere contatto **EMMEGI**.

The exchanger selected is the following model:
HPA 30 - 230/400 - 50Hz
cod. 243003###.

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.

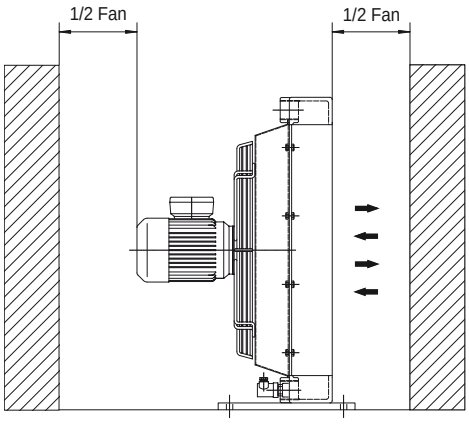


Fig.1

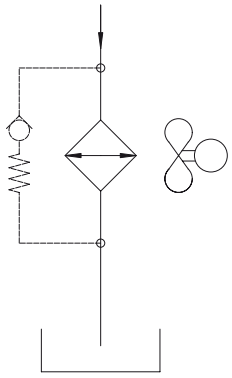
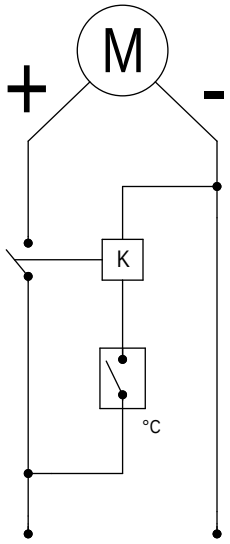


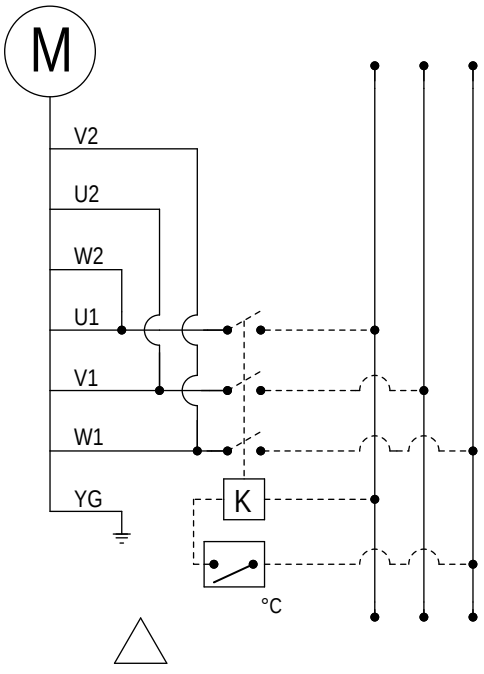
Fig.2

Collegamenti elettrici

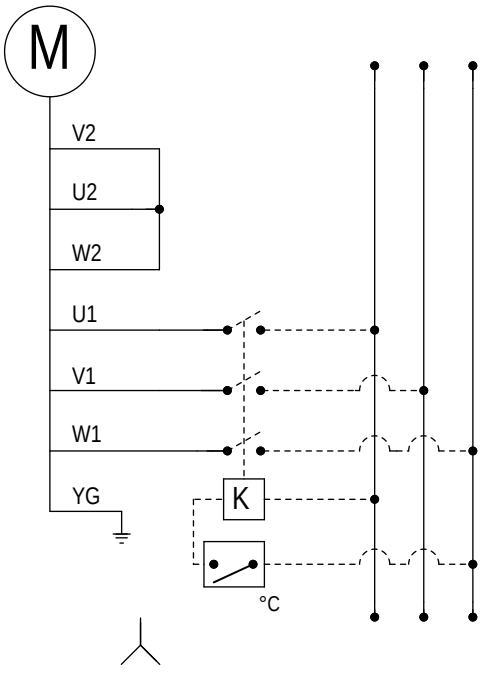
Electric Wiring



12-24V DC



230V-280V AC 3 PHASE



400V-480V AC 3 PHASE

°C = Termostato NA./Thermostat No.
K = Relè/Relay

Modulo richiesta dati

Sheet for cooler selection

CLIENTE *COMPANY*	
RICHIEDENTE *NAME*	

ARIA-OLIO *AIR-OIL*

PORTATA OLIO *OIL FLOW RATE*	lmp	
POTENZA INSTALLATA *TOTAL POWER*	KW	
POTENZA DA DISSIPARE *POWE TO BE DISSIPATED*	KW	
TEMPERATURA INGRESSO OLIO *OIL TEMPERATURE INLET*	°C	
TEMPERATURA ARIA MAX *MAX AMBIENT TEMPERATURE*	°C	
VISCOSITÀ OLIO *OIL VISCOSITY*	cst	
PRESSIONE DI LAVORO *WORKING PRESSURE*	bar	

TIPO DI VENTILAZIONE *TYPE OF FAN UNIT*

- CORRENTE CONTINUA *DIRECT CURRENT*
  - 12V
  - 24V
- PREDISTOSTO MOTORE IDRAULICO *PREPARATED FOR HYDRAULIC MOTOR*
  - GR.2
  - GR.3
- CORRENTE ALTERNATA *ALTERNATE CURRENT*
  - TRIFASE 230-400V 280-480V *THREEPHASE*
  - TENSIONE SPECIALE *SPECIAL VOLTAGE*
    - 50 HZ
    - 60 HZ

Denominazione codice prodotto *Aria-olio Serie HPA*

Ordering code *Air-oil HPA eries*

2	424	03	2	01

TIPO DI SISTEMA *COOLER SERIES*

424 (HPA 24)

TIPO DI MOTORIZZAZIONE *FAN MOTOR TYPE*

03	*AC 230V-400V 50Hz / AC 280-480 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*

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°(TC2)*

TIPO DI VENTILAZIONE *VENTILATING TYPE*

01 Aspirante Suction air flow
02 Soffiante Blowing air flow

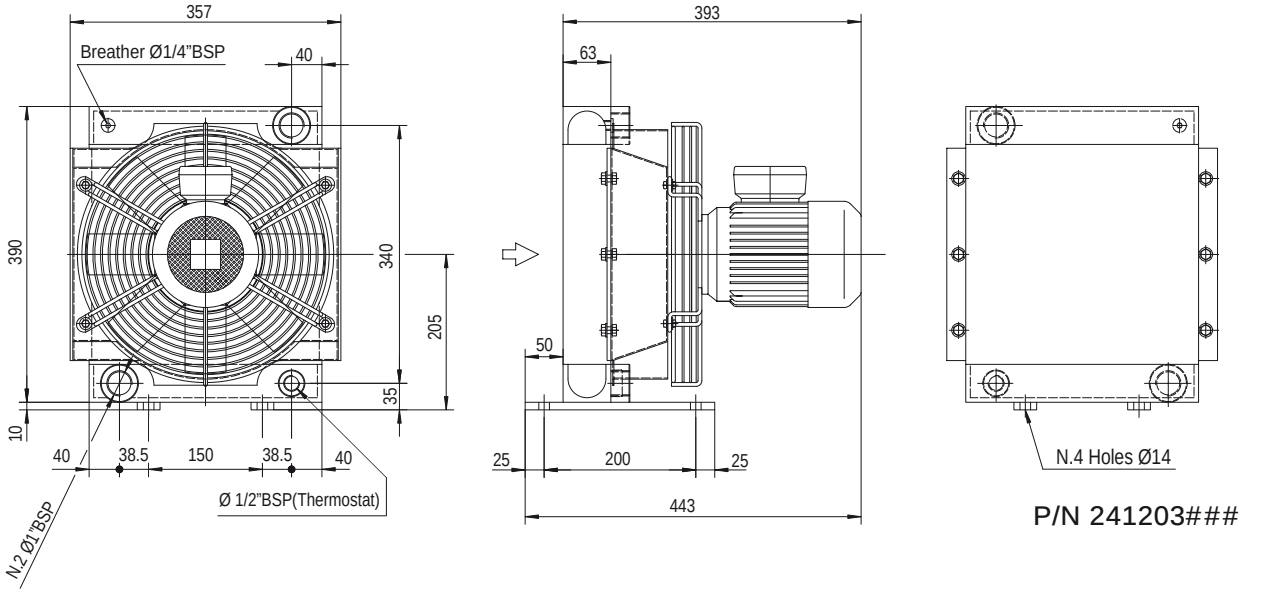
Indice *Index*

Serie HPA - *HPA Series*

Serie HPA 2 Pass - *HPA 2pass Series*

Serie HPA/2 - *HPA/2 Series*

Dimensioni Dimensions



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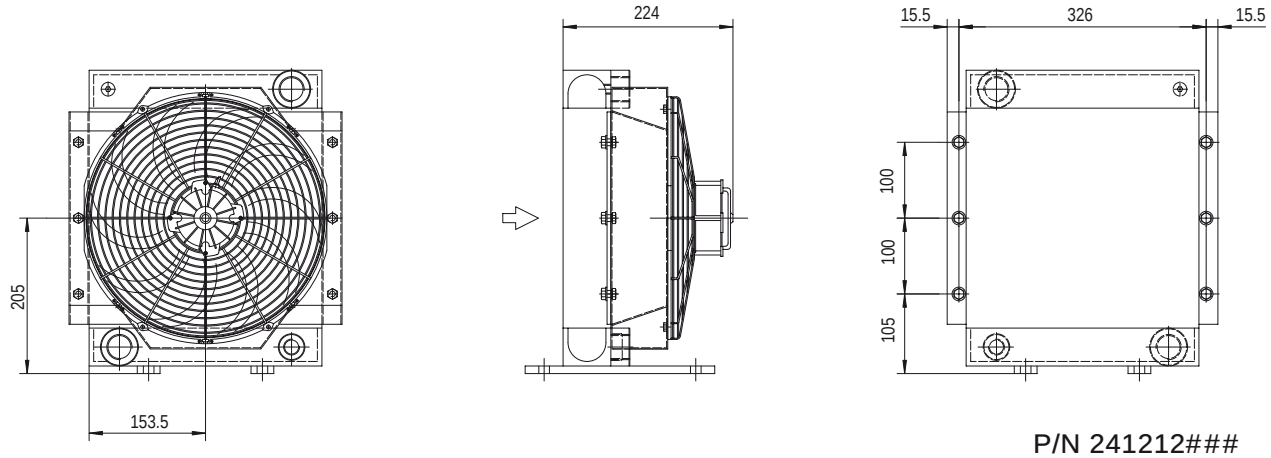
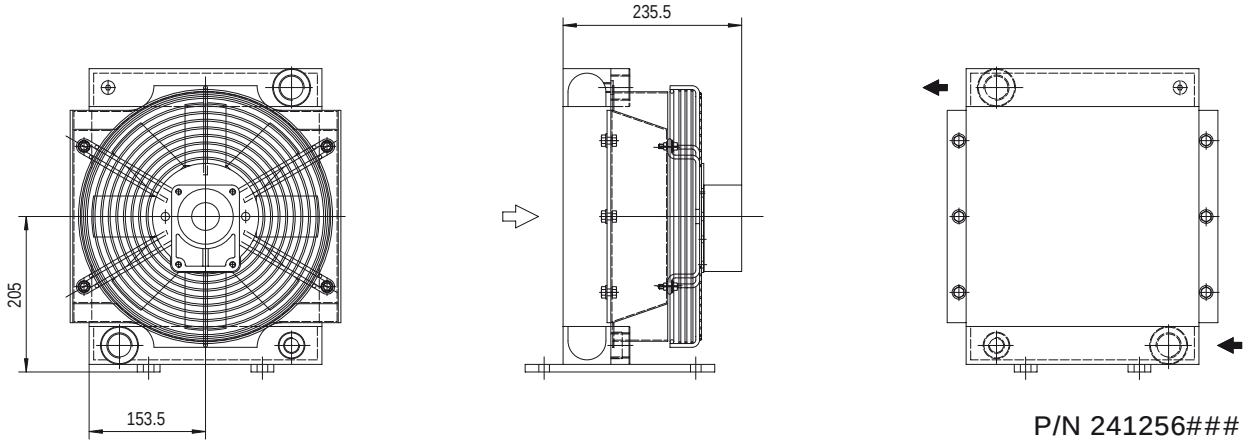


P/N 241212###
P/N 241224###



P/N 241256###

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

HPA 12

Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
241203 # # #	230-400 B14 AC 280-480 B14 AC	50 60	0,250 0,3	1,2-0,69 1,18-0,69	1400 1680	315	72	1670	55	1,9	17
241212 # # #	12 DC	/	0,111	9,30	2600	305	77	1590	65		15
241224 # # #	24 DC	/	0,148	6,15	3100	305	80	1700	65		15
241256 # # #	Prepared for Gr.2 hydraulic motor					315			/		16

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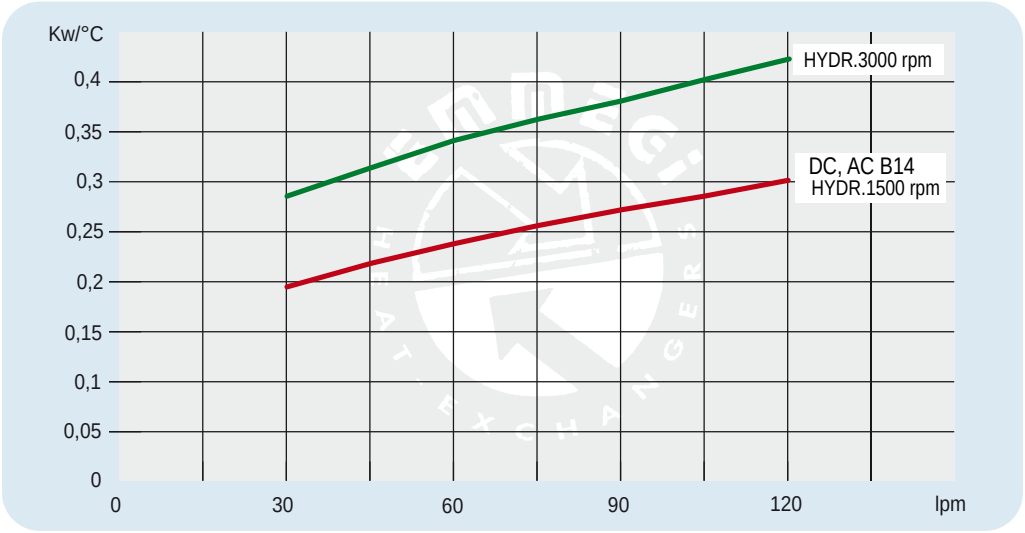
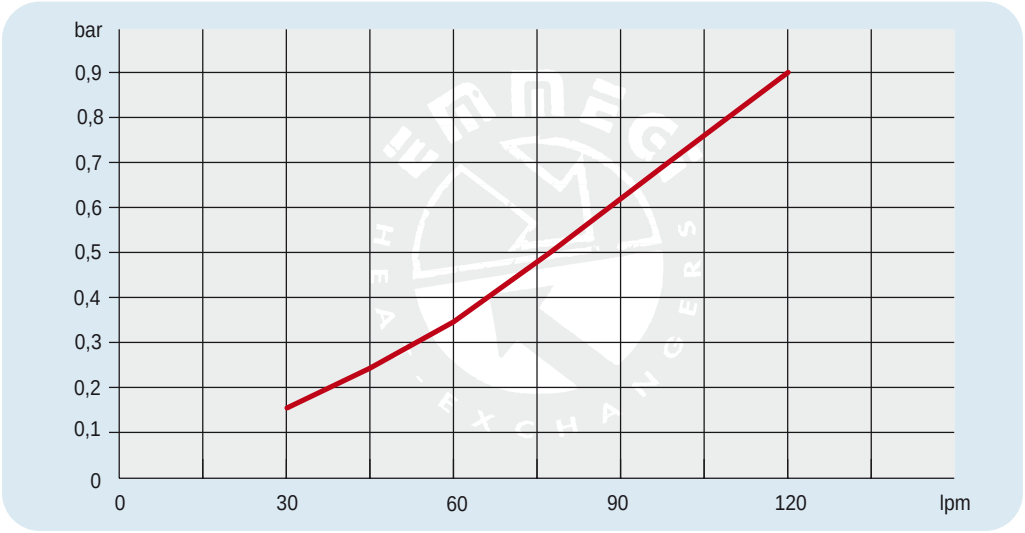
Diagramma rendimento Performance diagram



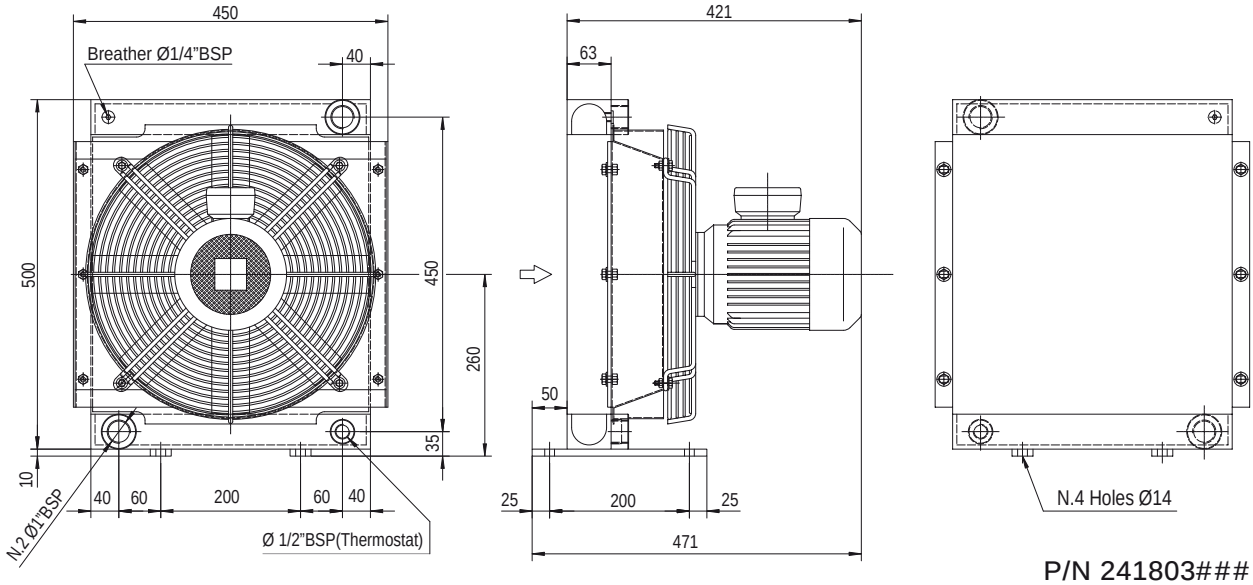
Perdite di carico Pressure drop (ISO VG 32)



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



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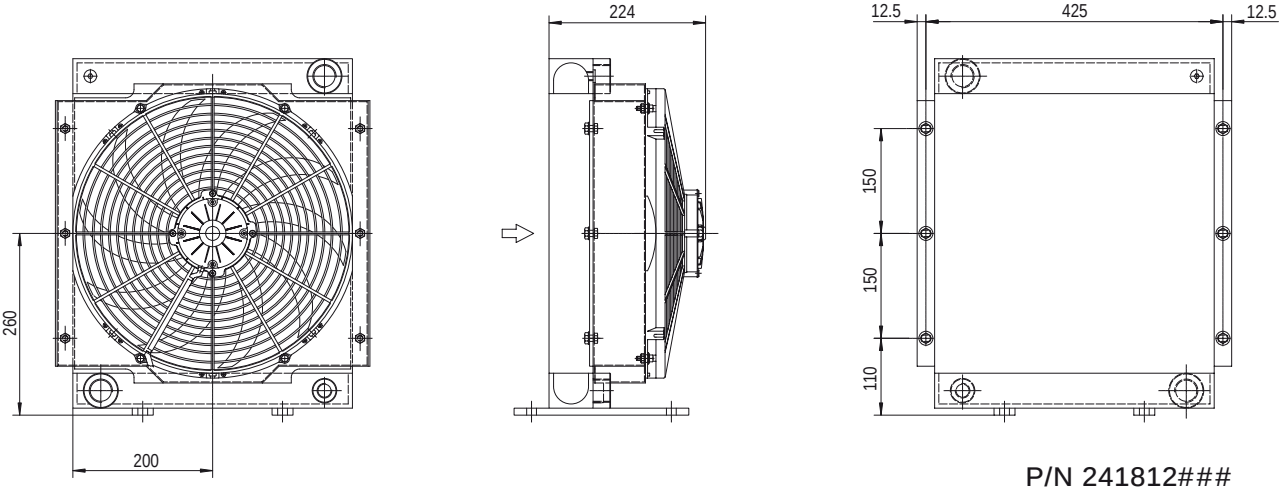
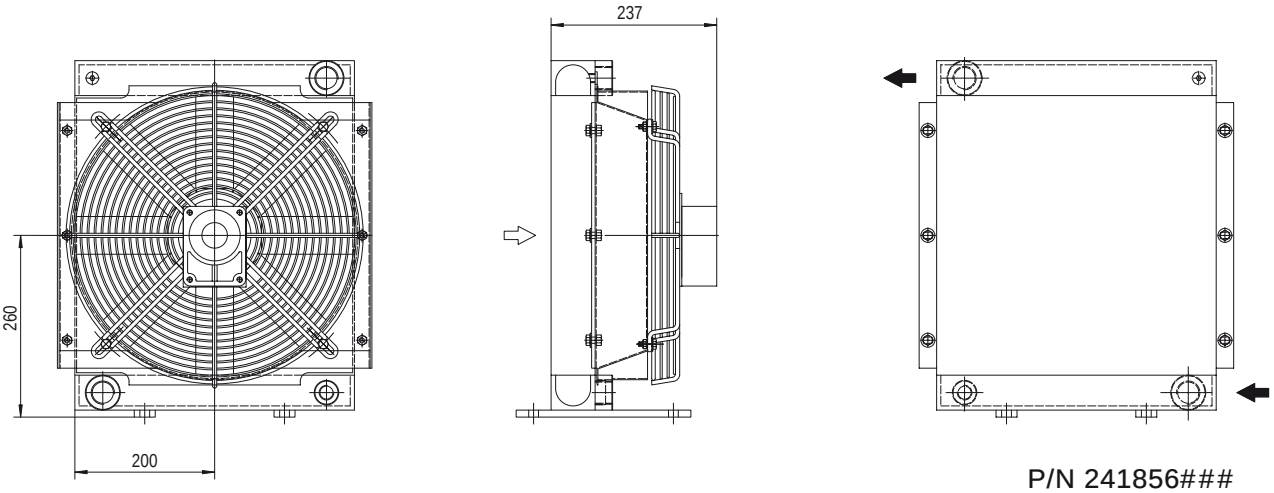


P/N 241812###
P/N 241824###



P/N 241856###

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

HPA 18

Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
241803 # # #	230- 400 B14 AC 280- 480 B14 AC	50 60	0,37 0,44	1,81-1,04 1,78-1,04	1366 1639	400	77	3350	55	2,9	20
241812 # # #	12 DC	/	0,187	15,6	2350	385	77	2950	65		18
241824 # # #	24 DC	/	0,170	7,1	2580	385	81	3100	65		18
241856 # # #	Prepared for Gr.2 hydraulic motor					400			/		19

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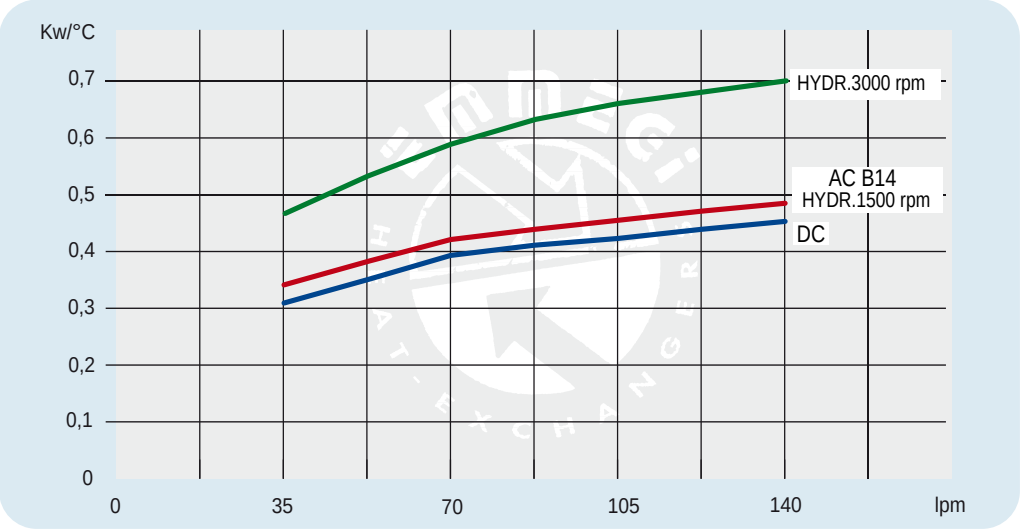
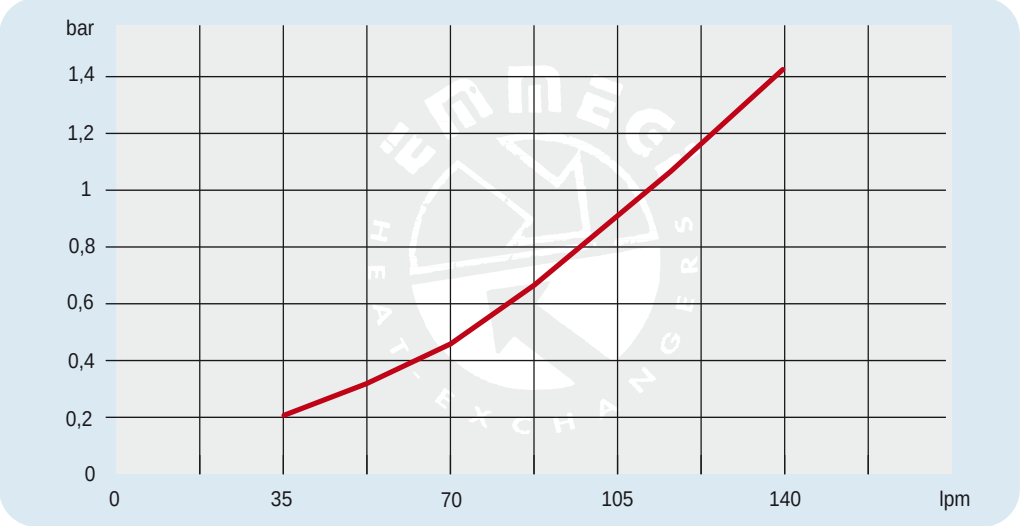
Diagramma rendimento Performance diagram



Perdite di carico Pressure drop (ISO VG 32)

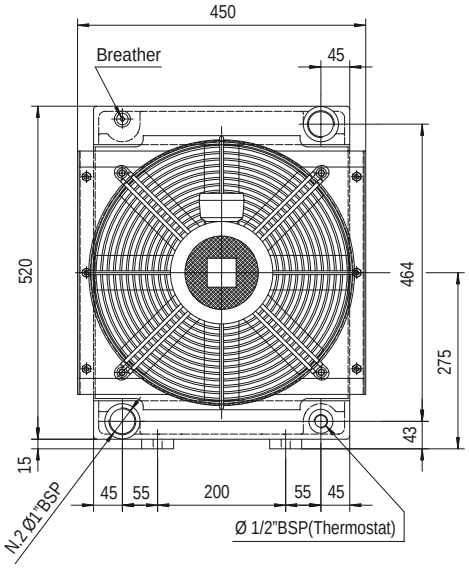


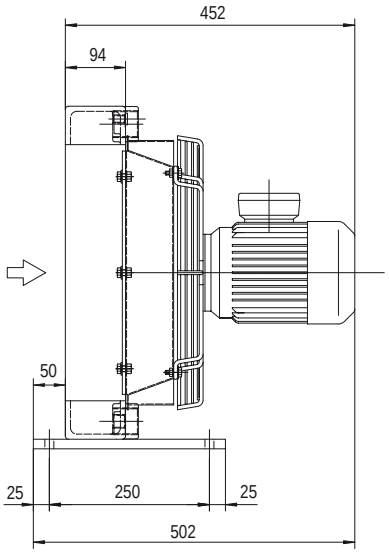
Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

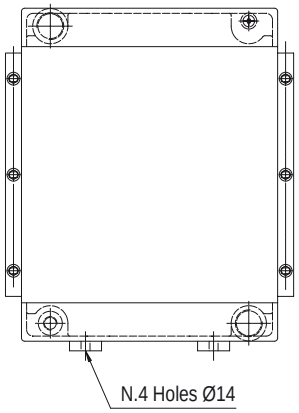
cst	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

HPA 18

Dimensioni Dimensions







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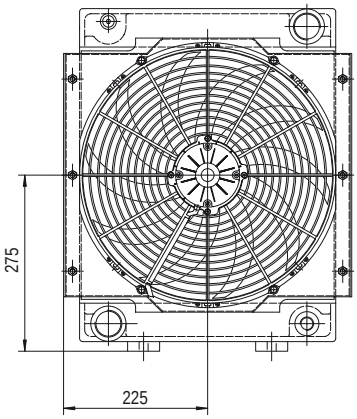
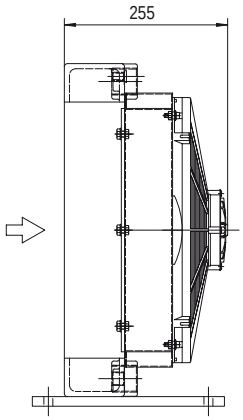
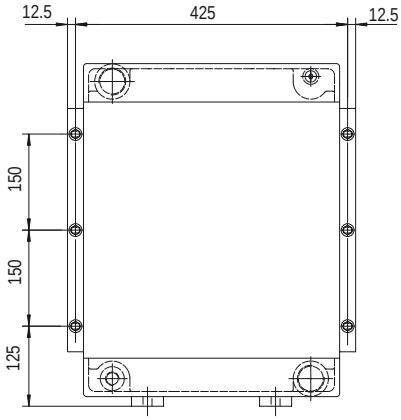
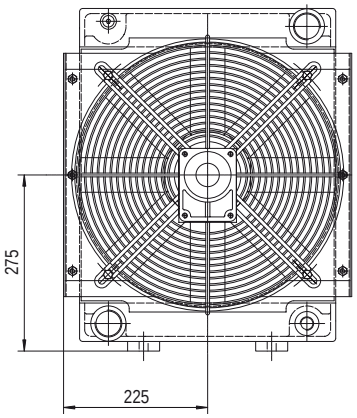
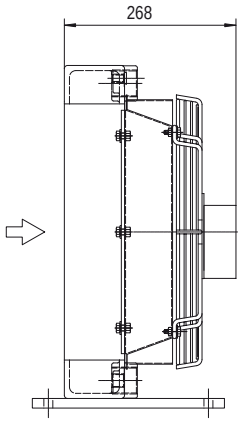


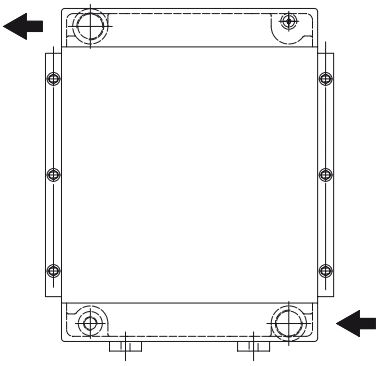




P/N 242412###
P/N 242424###







P/N 242456###

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

HPA 24

Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
242403 # # #	230-400 B14 AC 280-480 B14 AC	50 60	0,55 0,66	2,58-1,49 2,56-1,49	1391 1669	400	79 ☎	2800 ☎	55	2,9	28 28
242412 # # #	12 DC	/	0,187	15,6	2350	385	77	2100	65		22
242424 # # #	24 DC	/	0,170	7,1	2580	305	80	2250	65		22
242456 # # #	Prepared for Gr.2 hydraulic motor				☎	400	☎	☎	/		23

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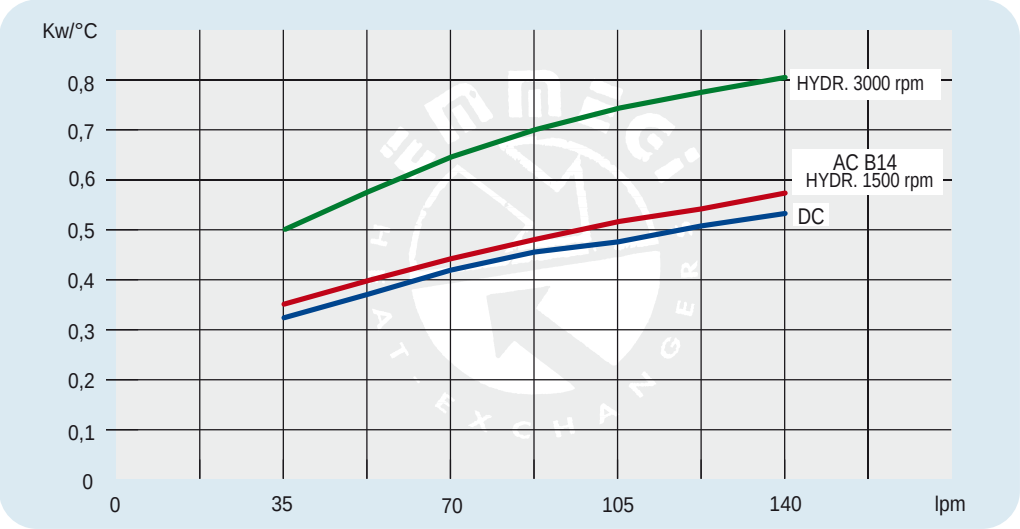
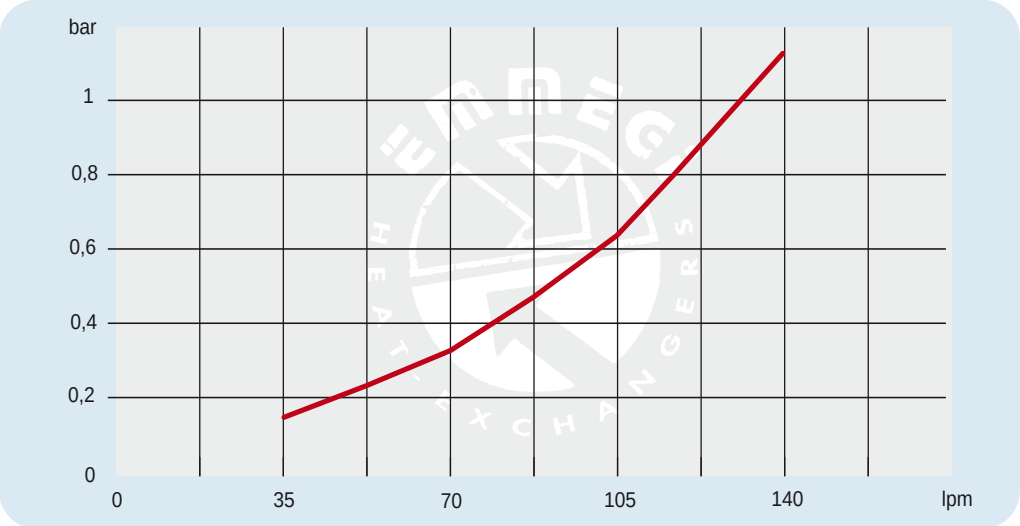
Diagramma rendimento Performance diagram



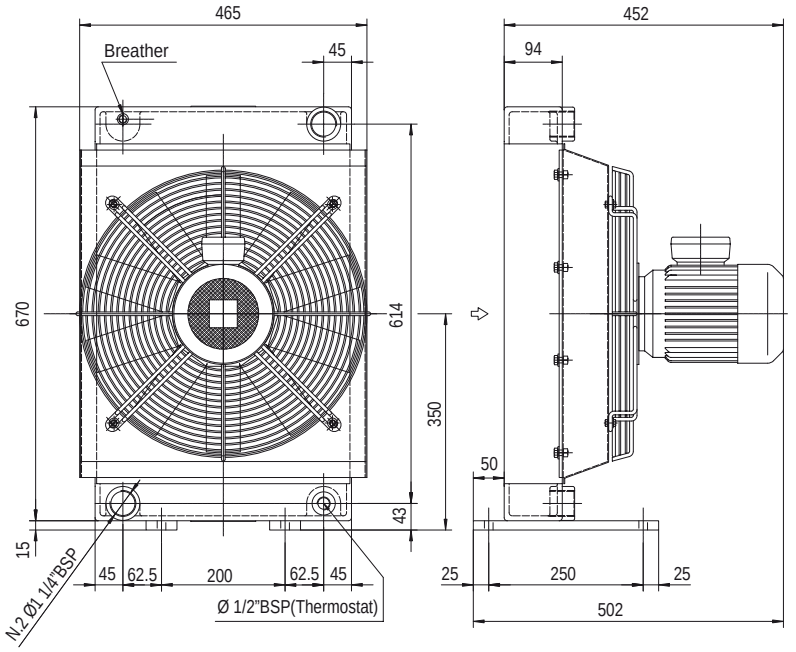
Perdite di carico Pressure drop (ISO VG 32)



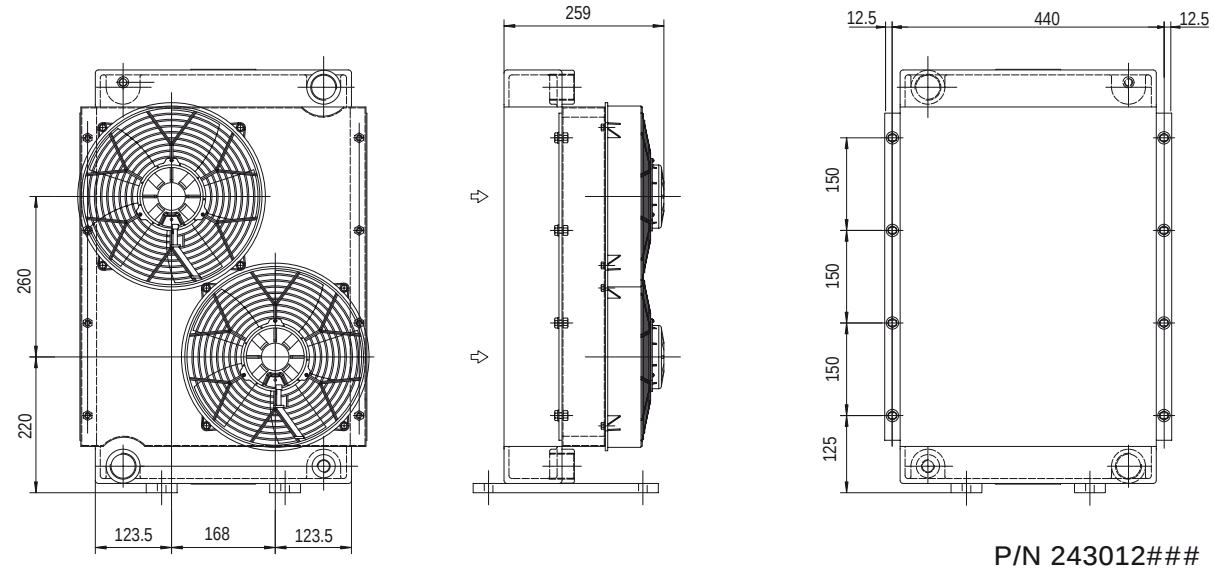
Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

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

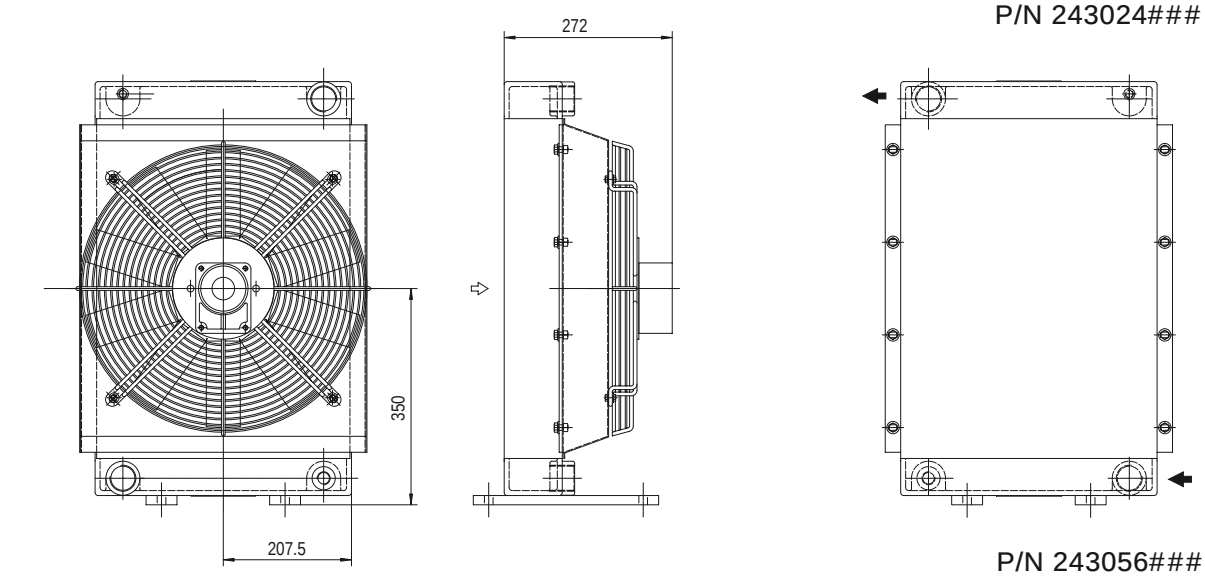
Dimensioni Dimensions



P/N 243003###



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



P/N 243056###

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

HPA 30

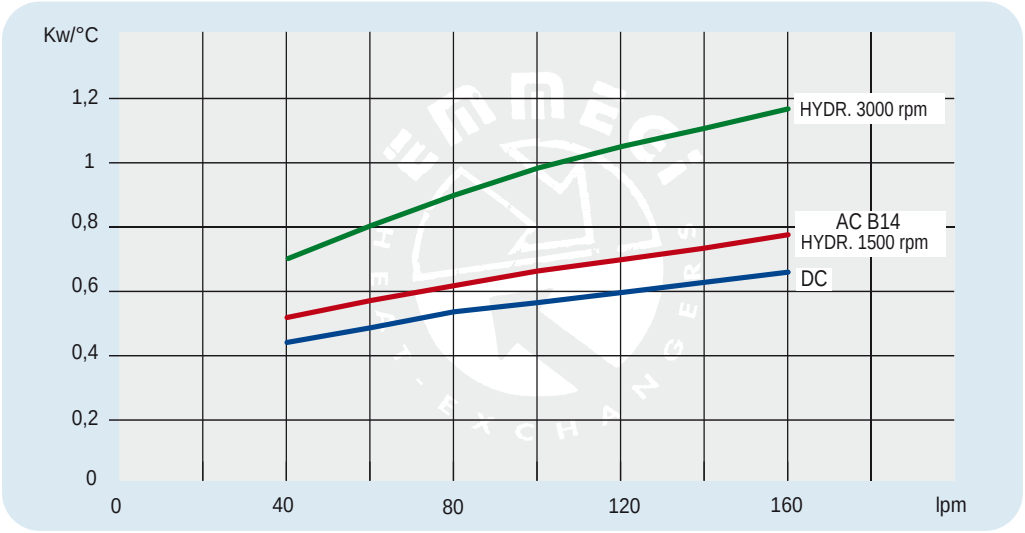
Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
243003 # # #	230-400 B14 AC 280-480 B14 AC	50 60	0,75 0,90	3,46-1,90 3,41-1,99	1394 1673	450	82	4000	55	6,8	37
243012 # # #	12 DC	/	0,115	9,58	2530	280	74	1550	65		32
243024 # # #	24 DC	/	0,125	5,20	2900	280	78	1700	65		32
243056 # # #	Prepared for Gr.2 hydraulic motor					450			/		35

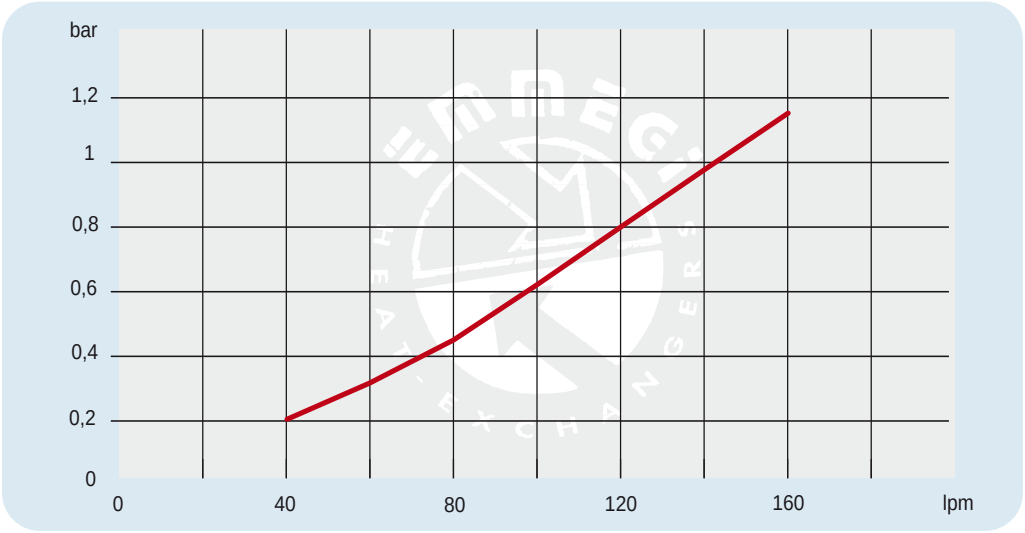
Per il 12-24V i dati sono riferiti al singolo ventilatore *For 12-24V the data refers to each ventilator*

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento Performance diagram



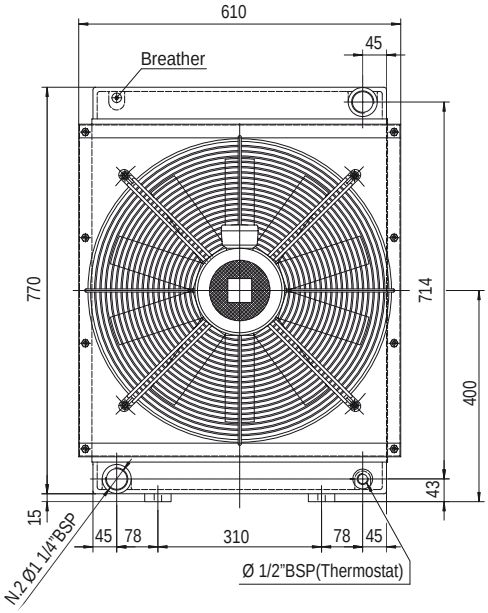
Perdite di carico Pressure drop (ISO VG 32)

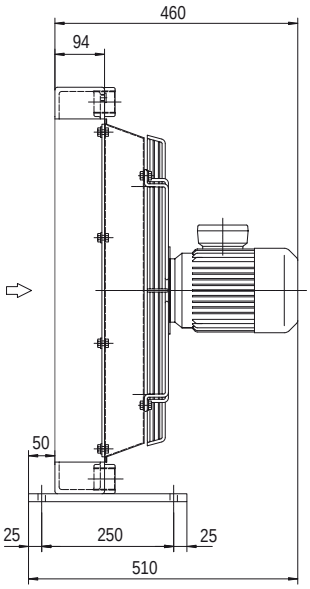


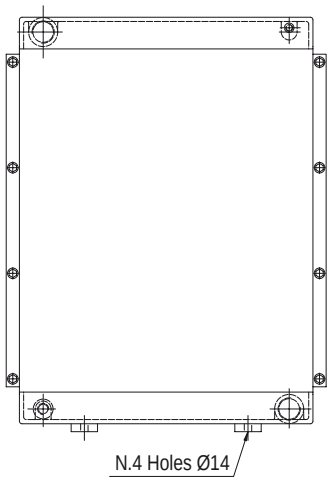
Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

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

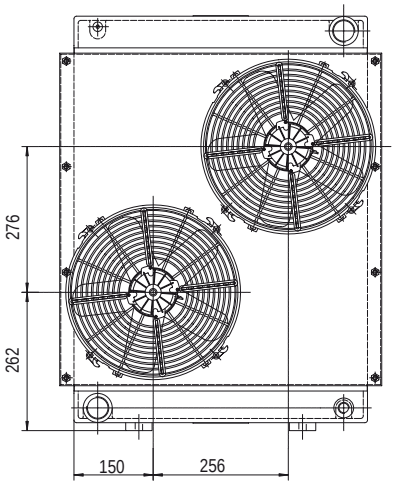
Dimensioni Dimensions

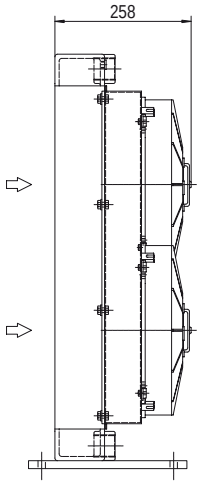


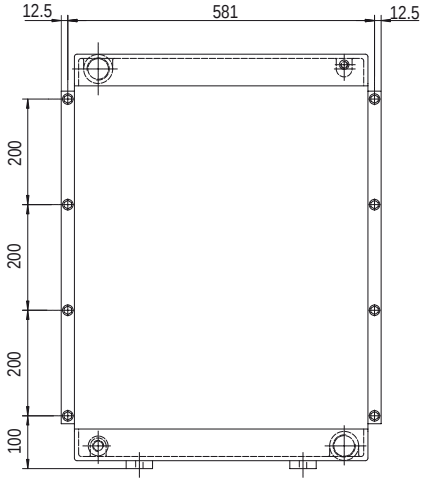




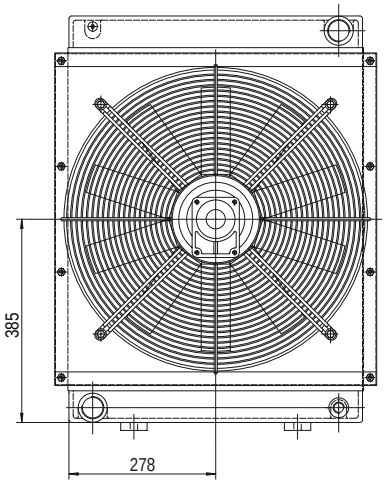
P/N 243603###

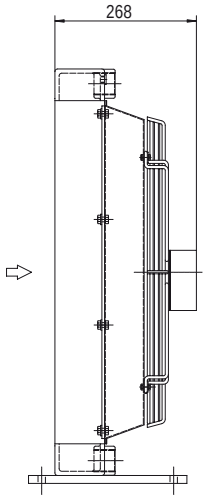


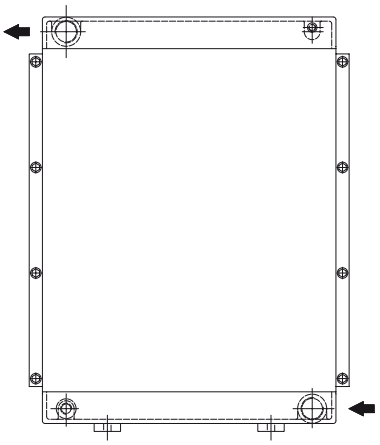




P/N 243612###
P/N 243624###







P/N 243656###

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

HPA 36

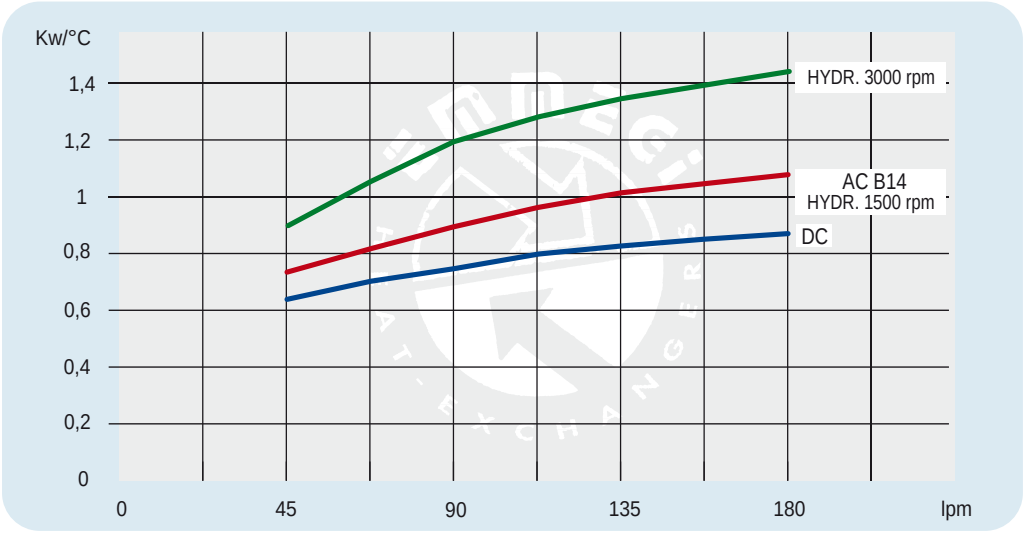
Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
243603 # # #	230-400 B14 AC 280-480 B14 AC	50 60	1,1 1,32	4,35-2,50 4,29-2,50	1378 1654	500	82	5650	55	9,4	60
243612 # # #	12 DC	/	0,160	13,30	2560	305	83	2100	64		50
243624 # # #	24 DC	/	0,177	7,35	3000	305	84	2400	64		50
243656 # # #	Prepared for Gr.2 hydraulic motor					450			/		52

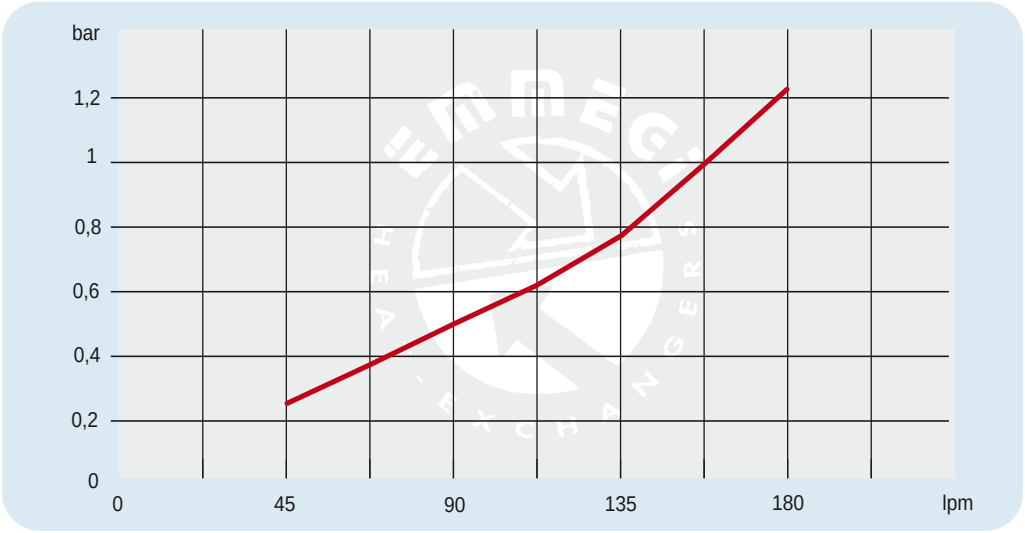
Per il 12-24V i dati sono riferiti al singolo ventilatore *For 12-24V the data refers to each ventilator*

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento Performance diagram



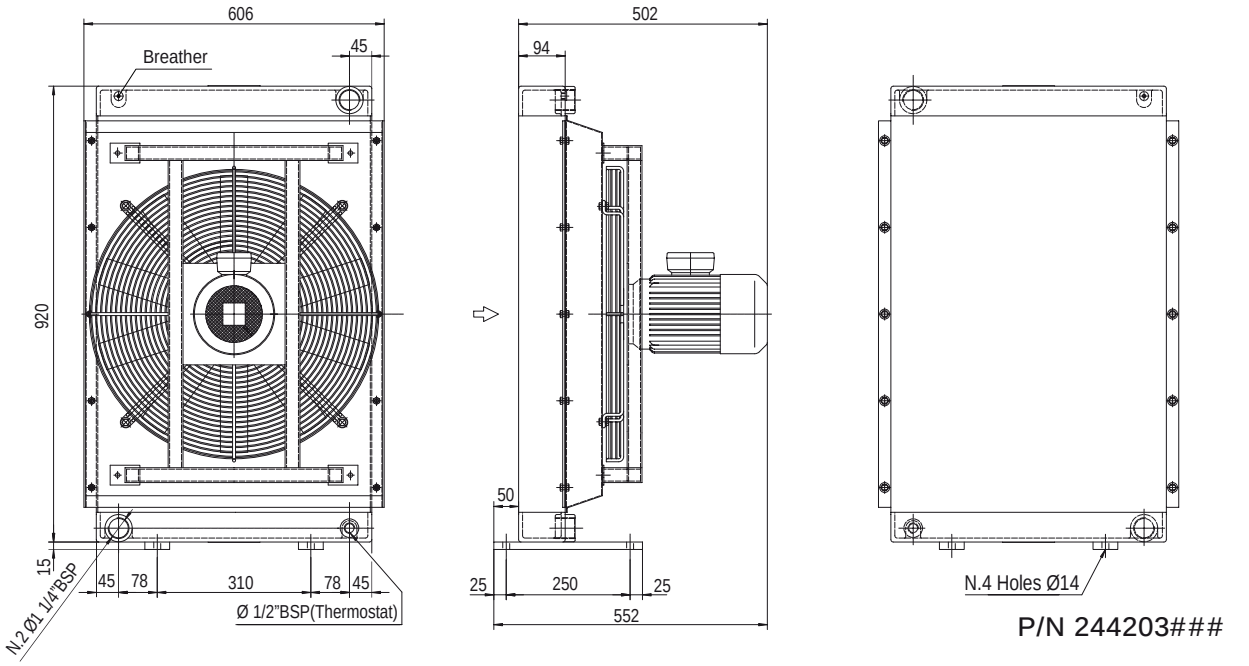
Perdite di carico Pressure drop (ISO VG 32)



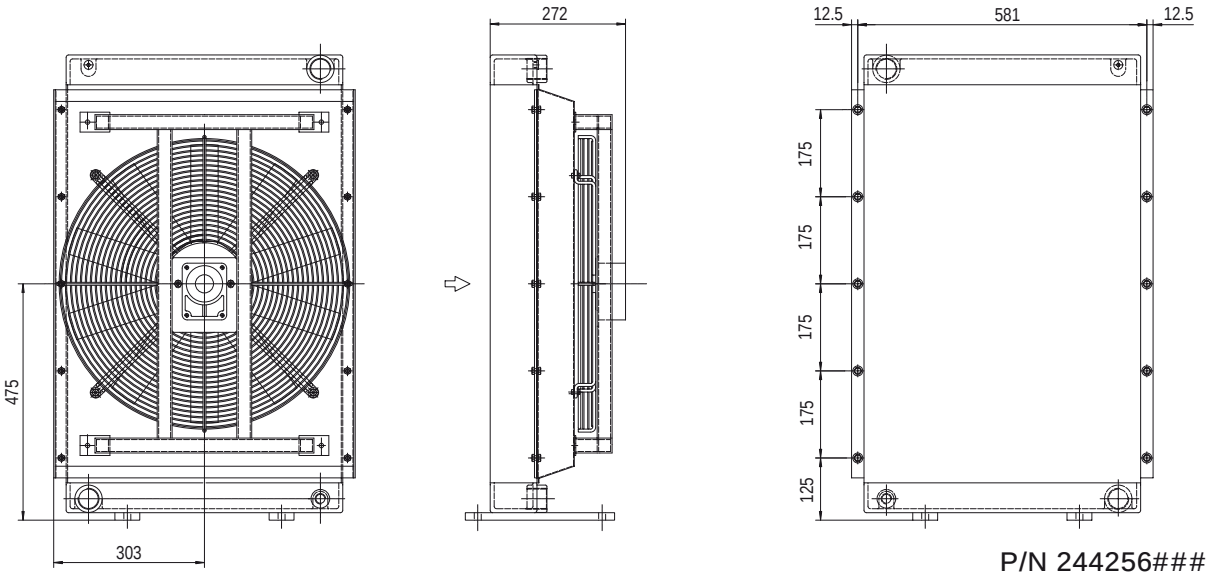
Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

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

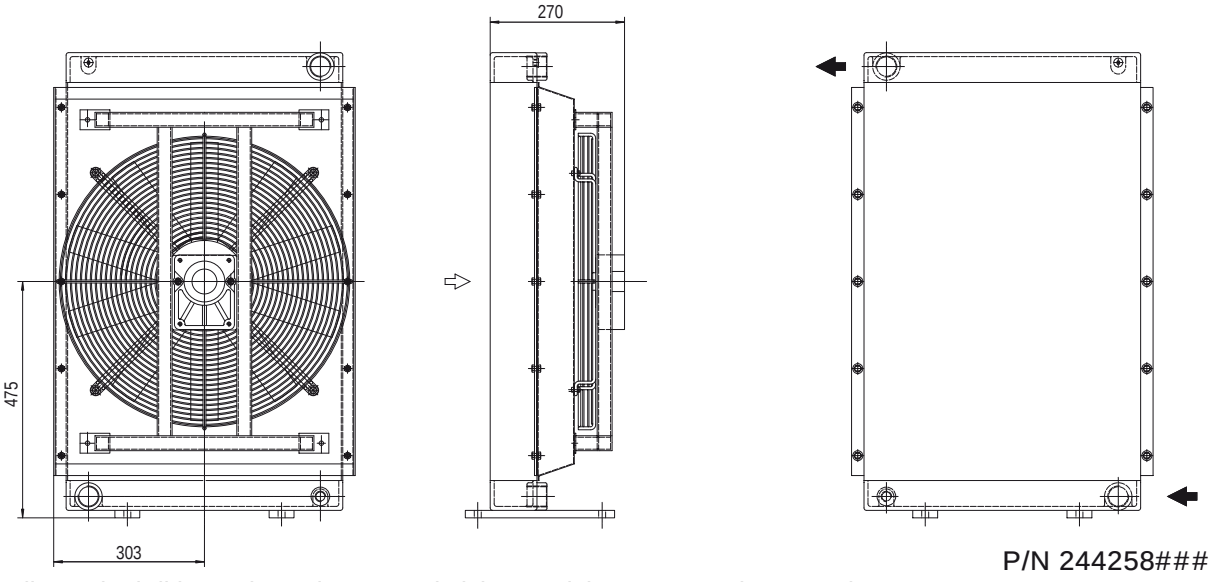
Dimensioni Dimensions



P/N 244203###



P/N 244256###



P/N 244258###

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

HPA 42

Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
244203 # # #	230-400 B14 AC 280-480 B14 AC	50 60	1,1 1,32	4,35-2,50 4,29-2,50	1378 1654	560	84	7550	55	10,6	65
244256 # # #	Prepared for Gr.2 hydraulic motor					560			/		58
244258 # # #	Prepared for Gr.3 hydraulic motor					560			/		58

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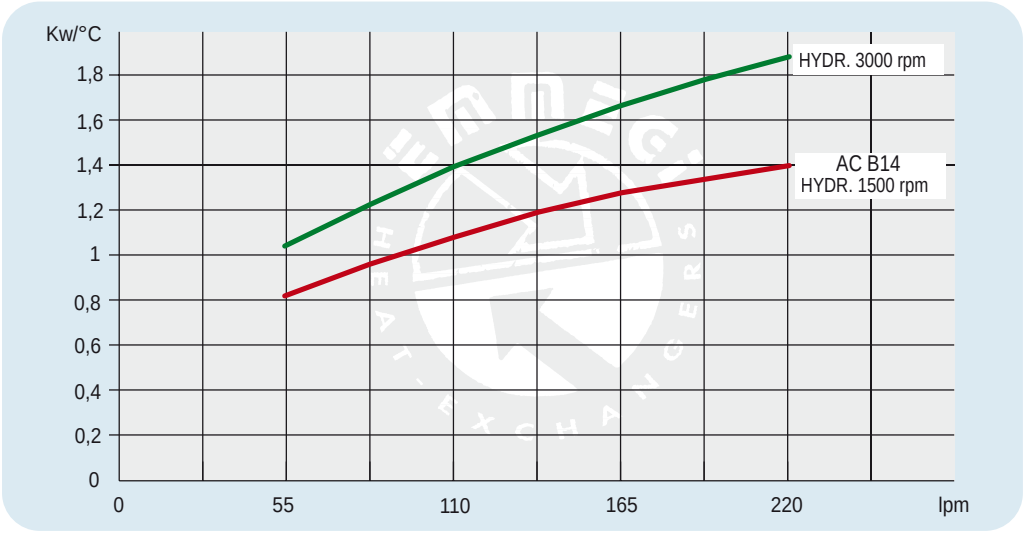
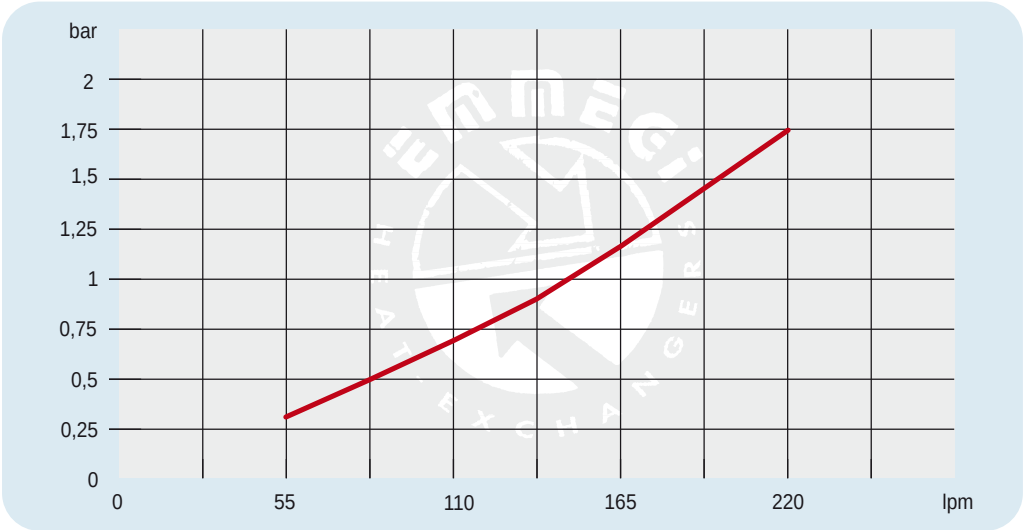
Diagramma rendimento Performance diagram



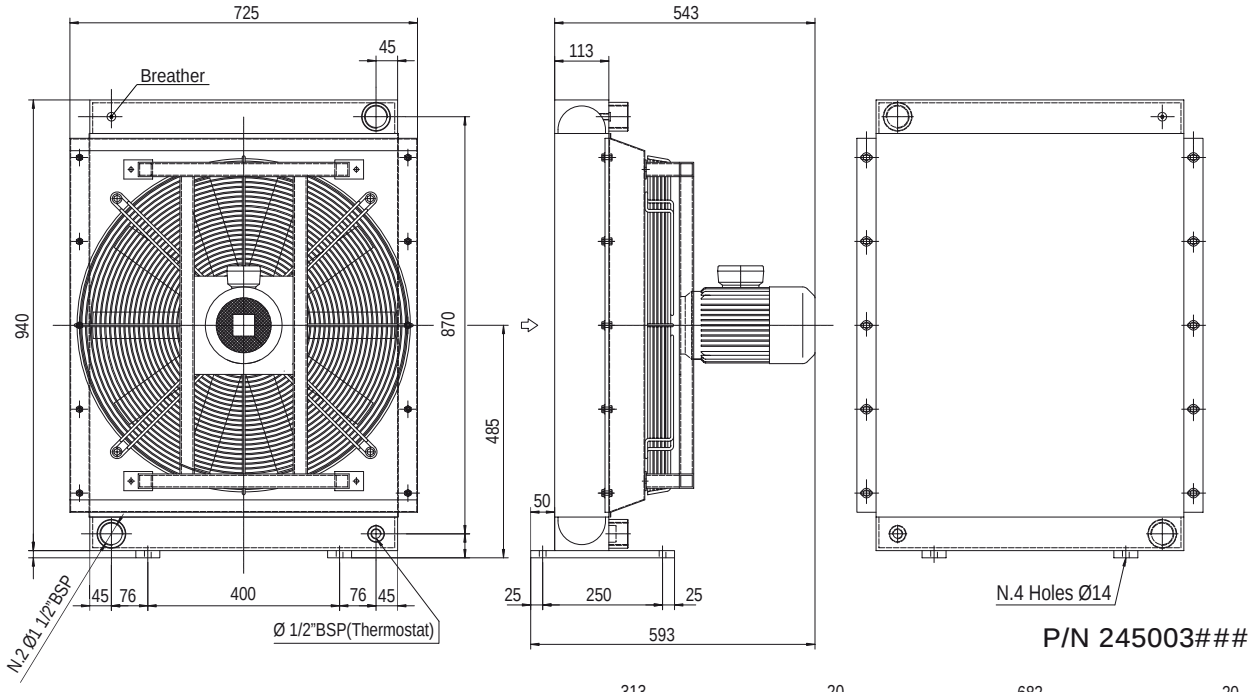
Perdite di carico Pressure drop (ISO VG 32)



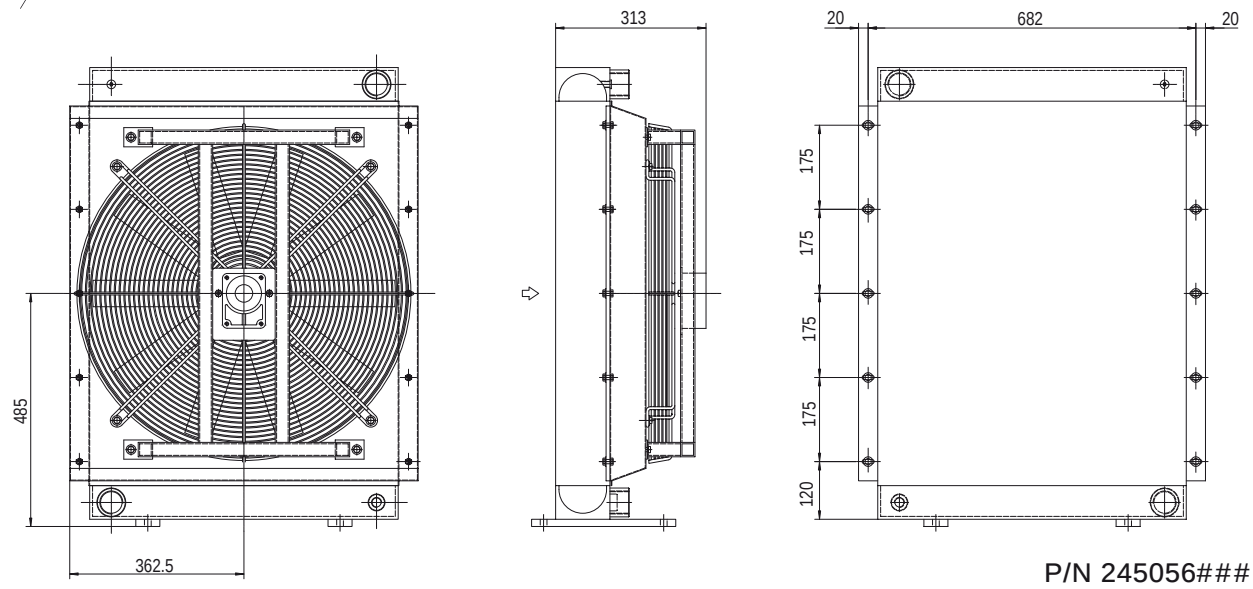
Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

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

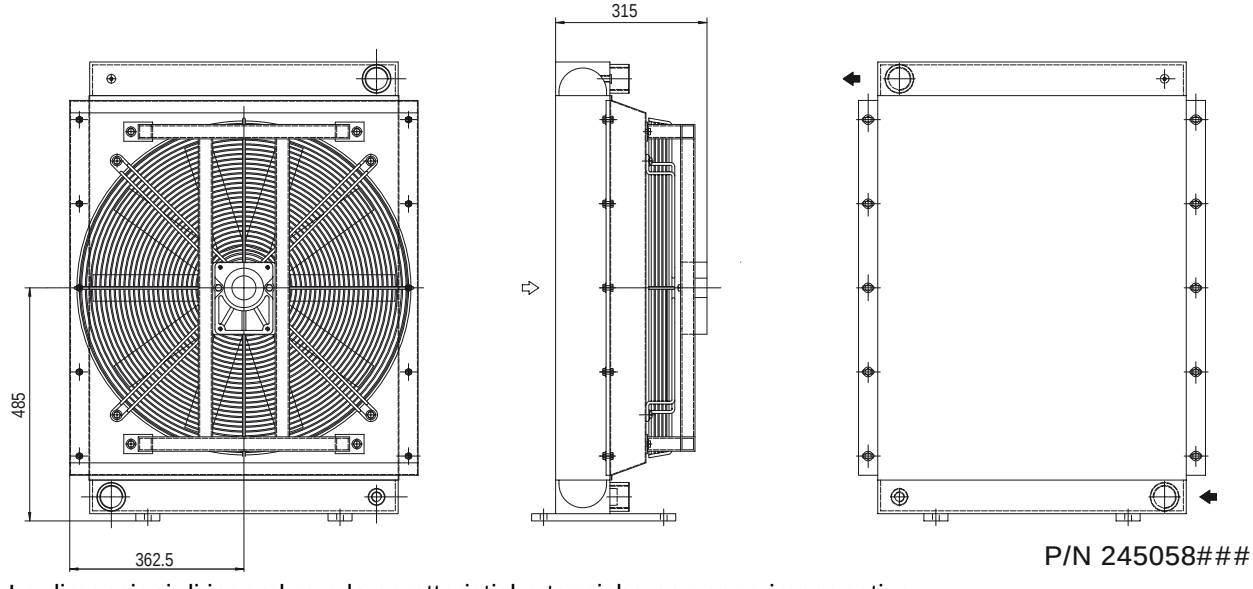
Dimensioni Dimensions



P/N 245003###



P/N 245056###



P/N 245058###

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

HPA 50

Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
245003 # # #	230-400 B14 AC 280-480 B14 AC	50 60	1,1 1,32	4,77-2,74 4,70-2,74	915 1098	630	80	7550	55	14,2	90
245056 # # #	Prepared for Gr.2 hydraulic motor					630			/		83
245058 # # #	Prepared for Gr.3 hydraulic motor					630			/		83

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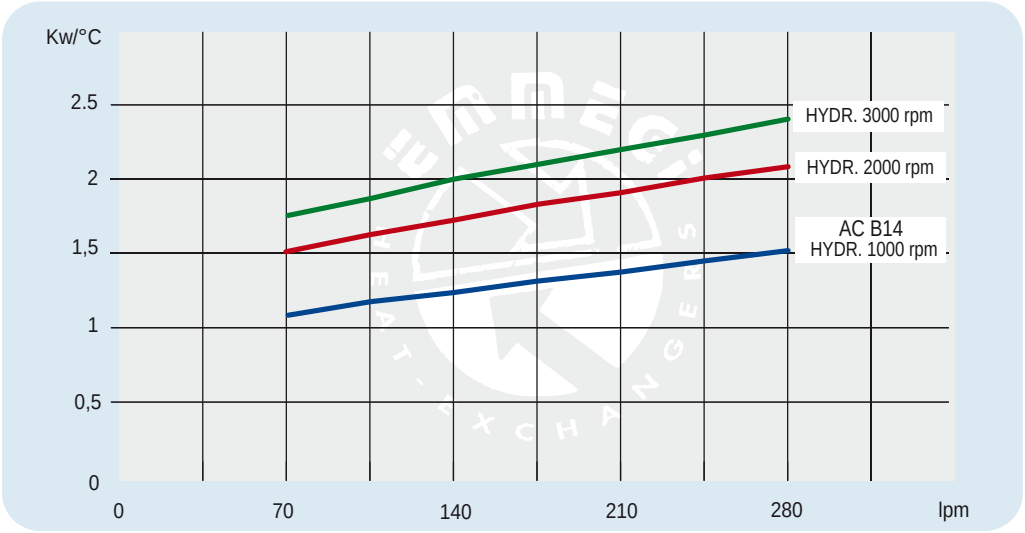
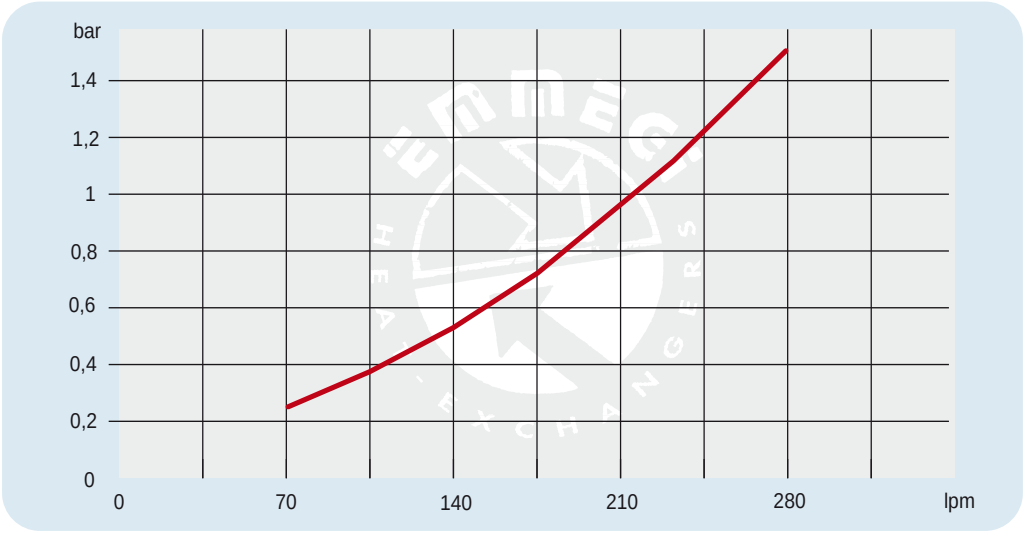
HPA 50

Diagramma rendimento Performance diagram



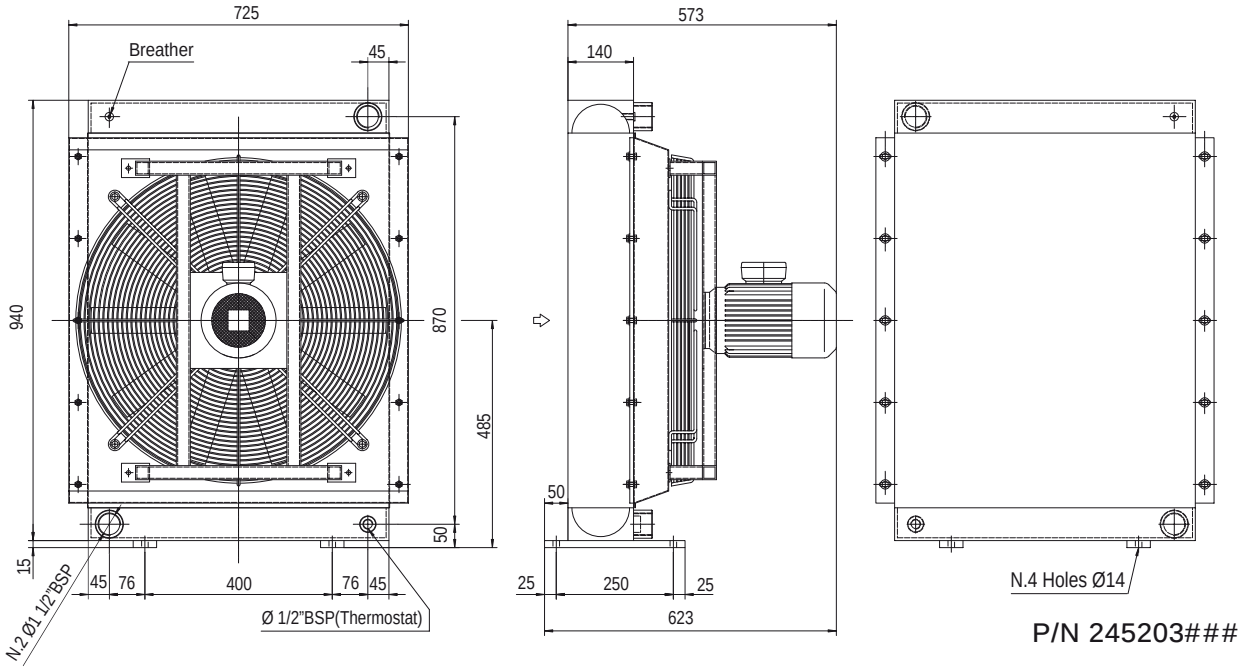
Perdite di carico Pressure drop (ISO VG 32)



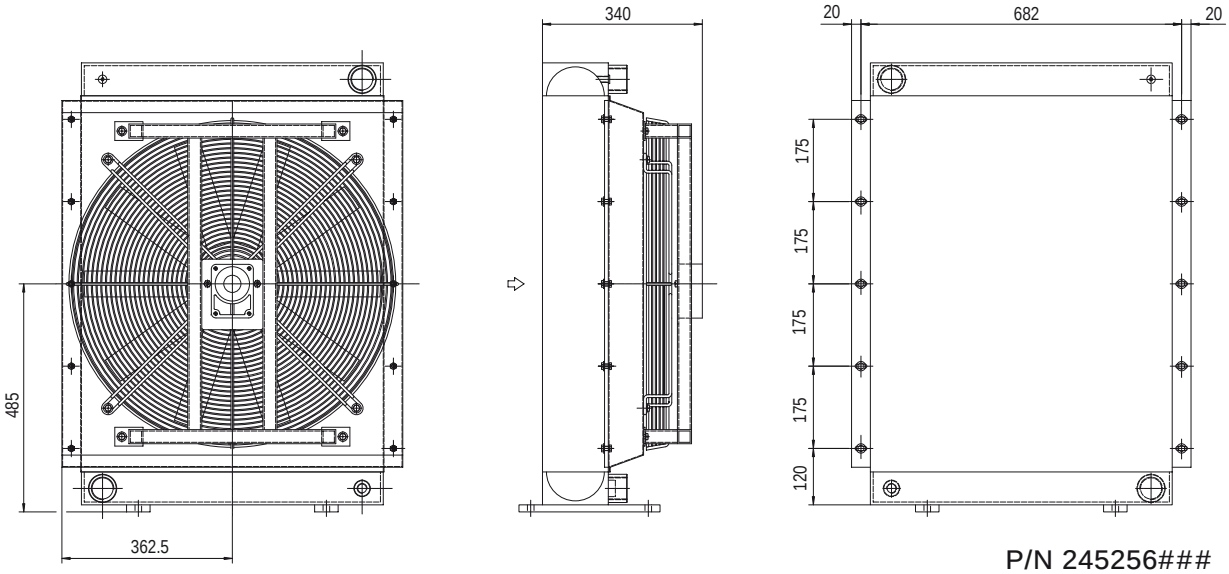
Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

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

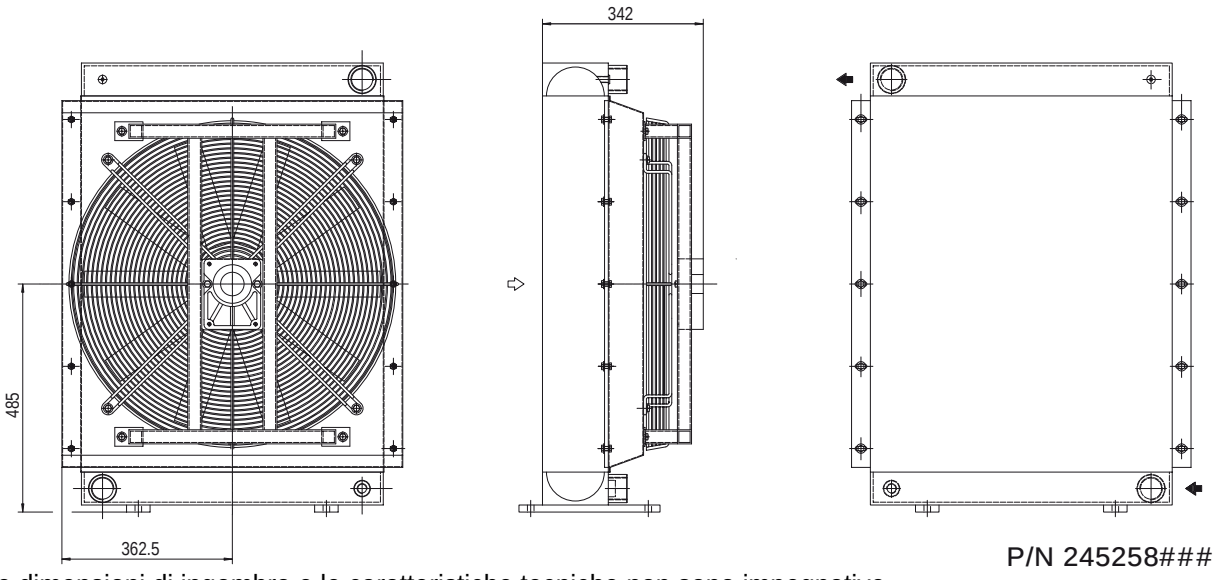
Dimensioni Dimensions



P/N 245203###



P/N 245256###



P/N 245258###

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

HPA 52

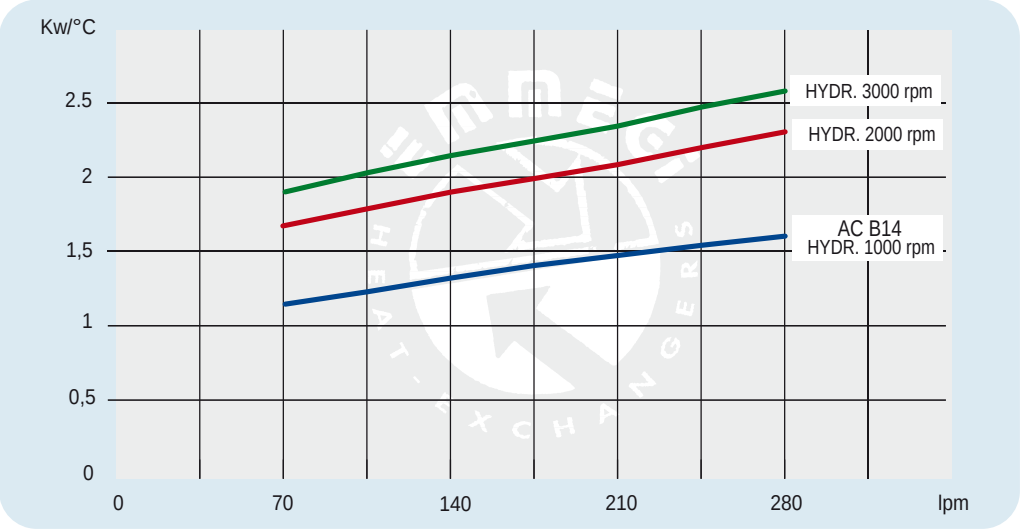
Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
245203 # # #	230-400 B14 AC 280-480 B14 AC	50 60	1,1 1,32	4,77-2,74 4,70-2,74	915 1098	630	80	7050	55	17,7	95
245256 # # #	Prepared for Gr.2 hydraulic motor					630			/		89
245258 # # #	Prepared for Gr.3 hydraulic motor					630			/		89

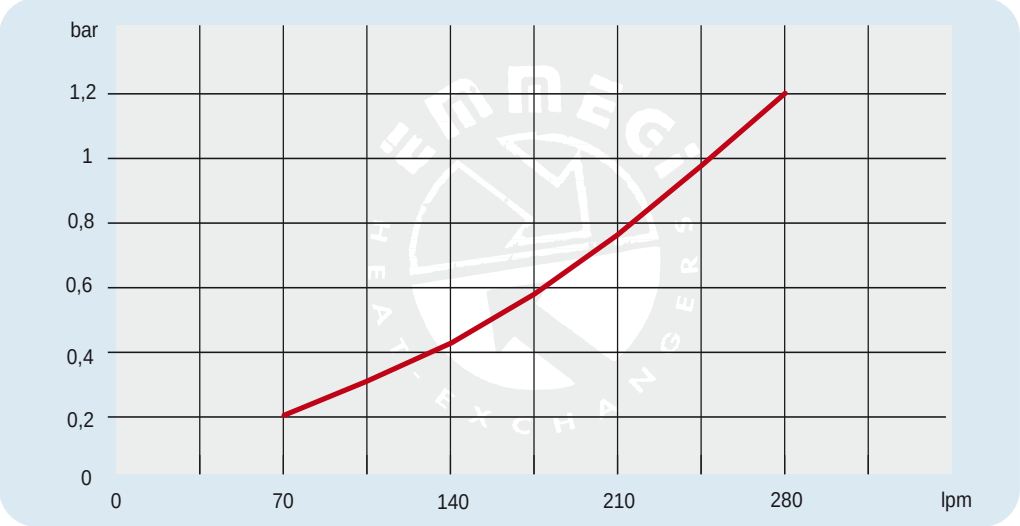
Contattare EMMEGI Contact EMMEGI

HPA 52

Diagramma rendimento Performance diagram



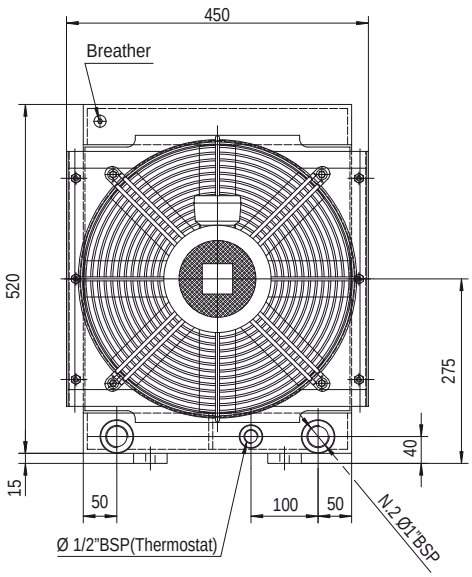
Perdite di carico Pressure drop (ISO VG 32)

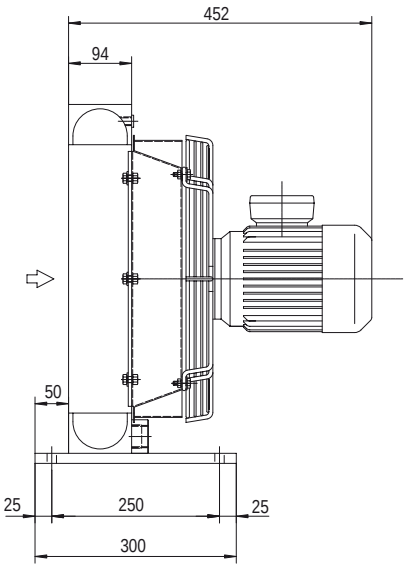


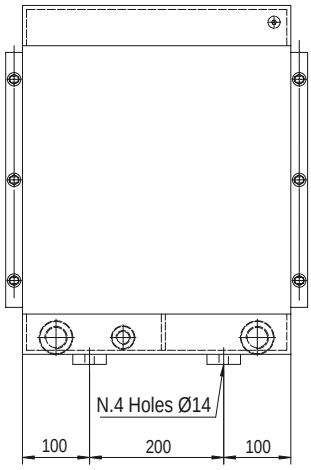
Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

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

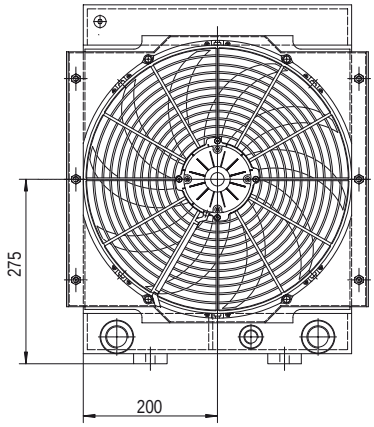
Dimensioni Dimensions

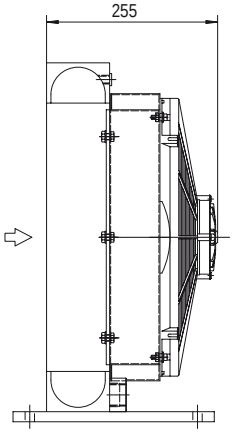


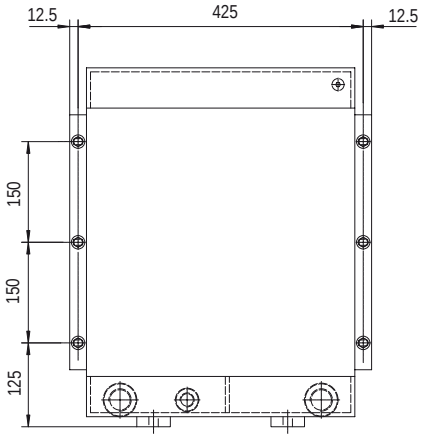




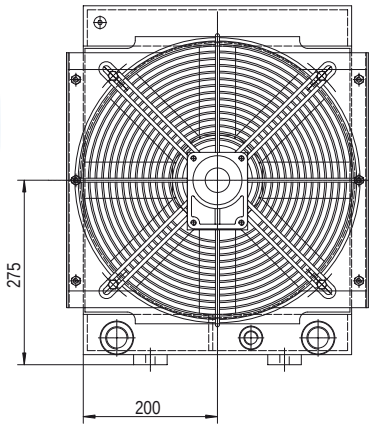
P/N 242703###

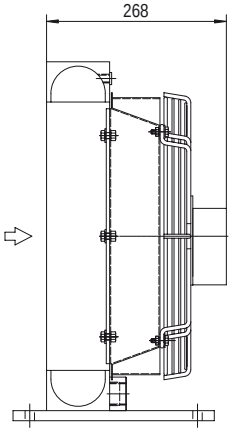


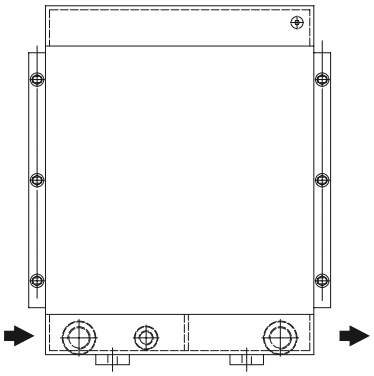




P/N 242712###
P/N 242724###







P/N 242756###

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

HPA 24 2 PASS

Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
242703 # # #	230-400 B14 AC 280-480 B14 AC	50 60	0,55 0,66	2,58-1,49 2,56-1,49	1391 1669	400	79 ☎	2800 ☎	55	2,9	28 28
242712 # # #	12 DC	/	0,187	15,6	2350	385	77	2100	65		22
242724 # # #	24 DC	/	0,170	7,1	2580	305	80	2250	65		22
242756 # # #	Prepared for Gr.2 hydraulic motor				☎	400	☎	☎	/		23

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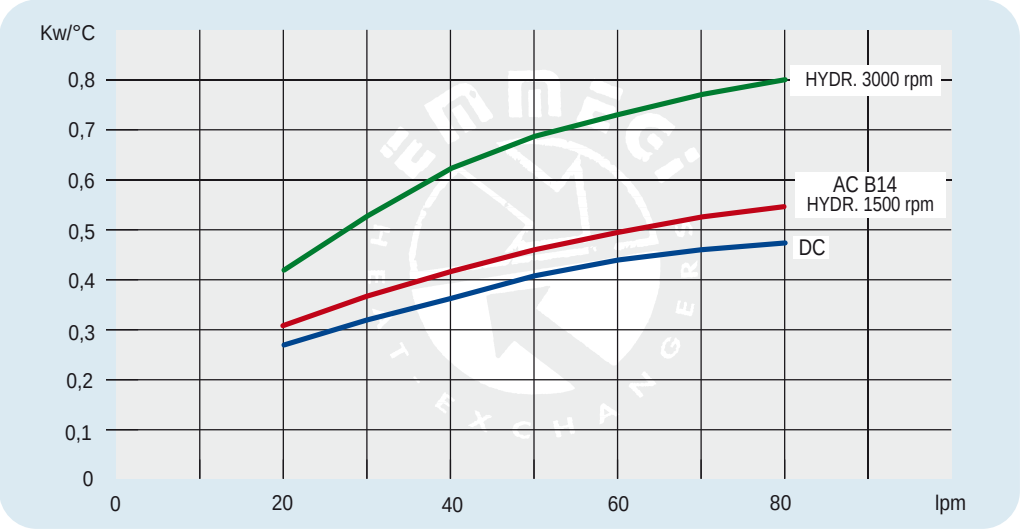
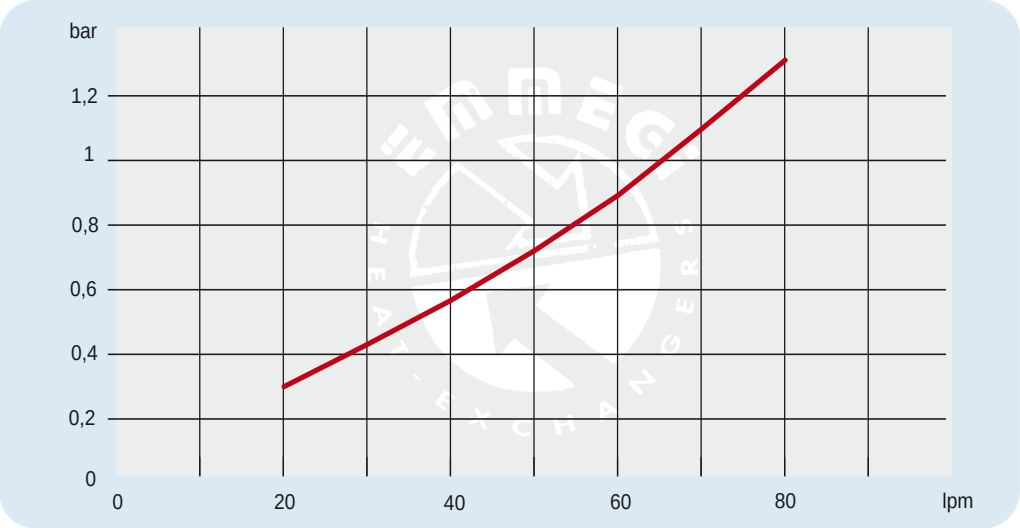
Diagramma rendimento Performance diagram



Perdite di carico Pressure drop (ISO VG 32)

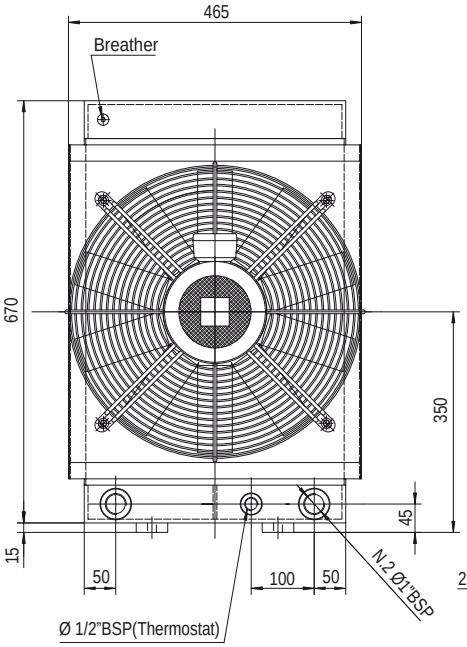


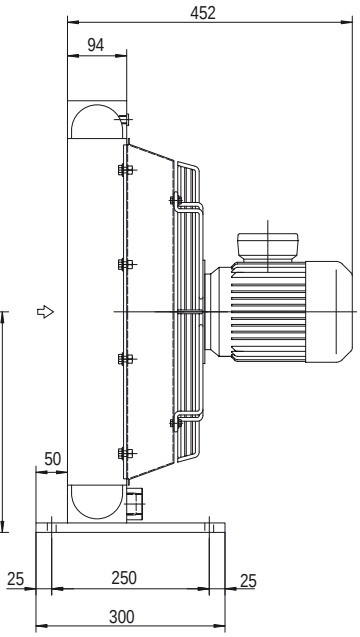
Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

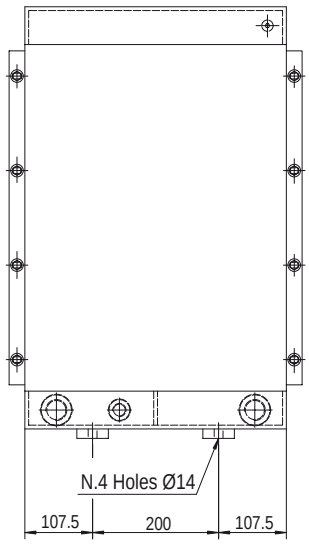
cst	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

HPA 24 2 PASS

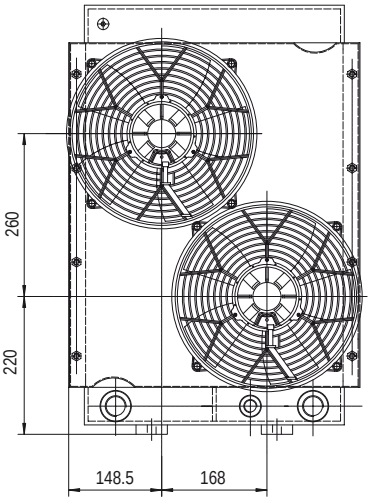
Dimensioni Dimensions

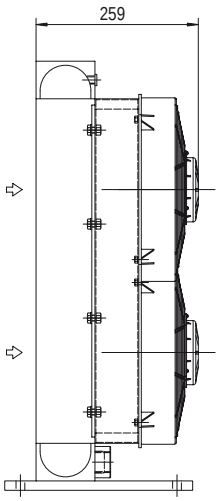


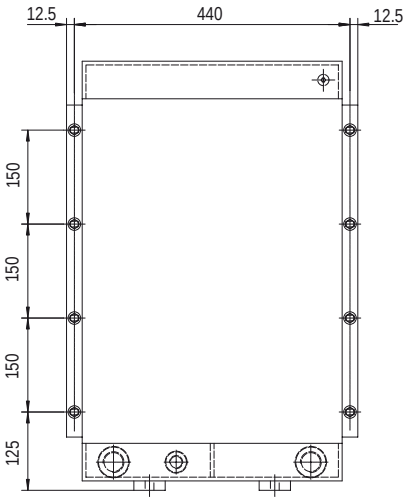




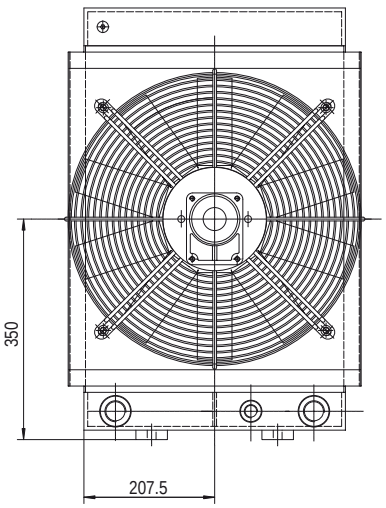
P/N 243303###

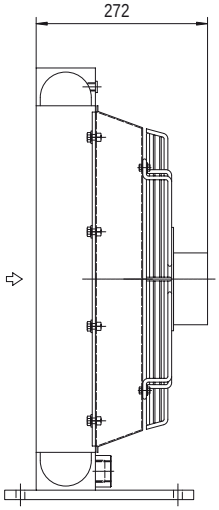


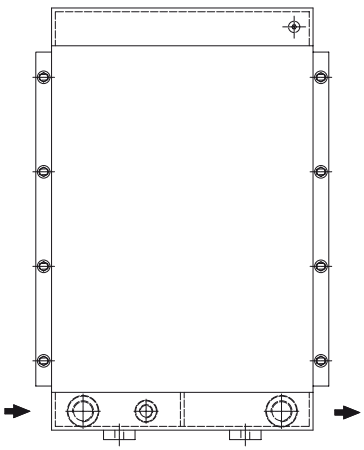




P/N 243312###
P/N 243324###







P/N 243356###

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

HPA 30 2 PASS

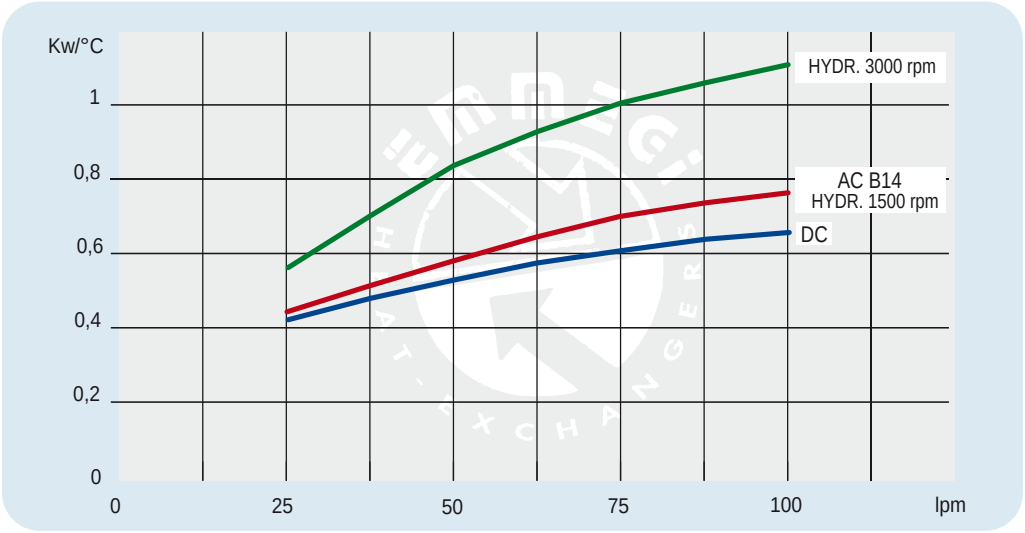
Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
243303 # # #	230-400 B14 AC 280-480 B14 AC	50 60	0,75 0,90	3,46-1,90 3,41-1,99	1394 1673	450	82	4000	55	6,8	37
243312 # # #	12 DC	/	0,115	9,58	2530	280	74	1550	65		32
243324 # # #	24 DC	/	0,125	5,20	2900	280	78	1700	65		32
243356 # # #	Prepared for Gr.2 hydraulic motor					450			/		35

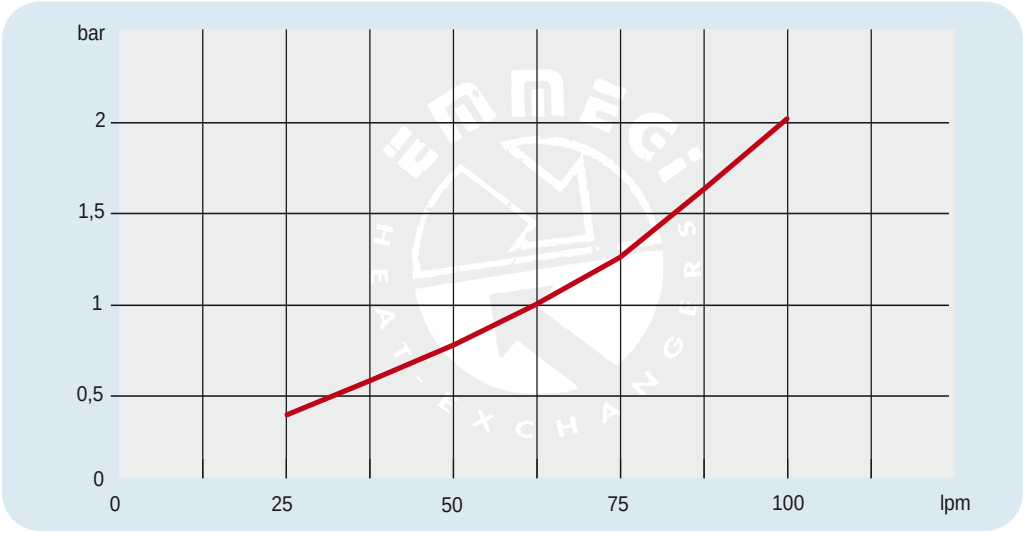
Per il 12-24V i dati sono riferiti al singolo ventilatore *For 12-24V the data refers to each ventilator*

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento Performance diagram



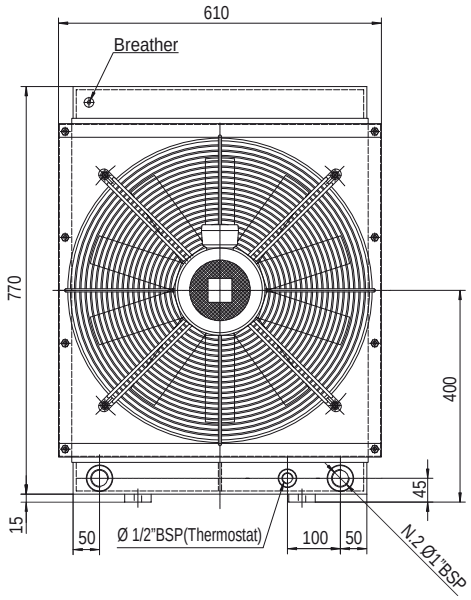
Perdite di carico Pressure drop (ISO VG 32)

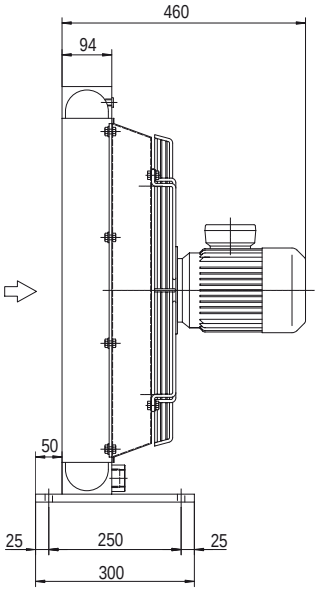


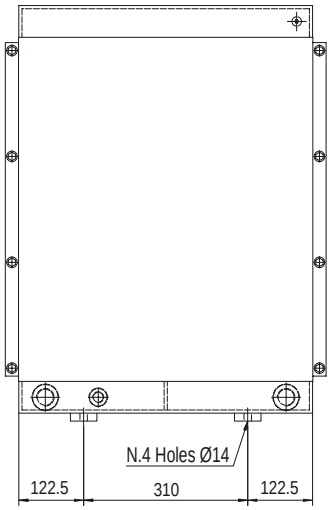
Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

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

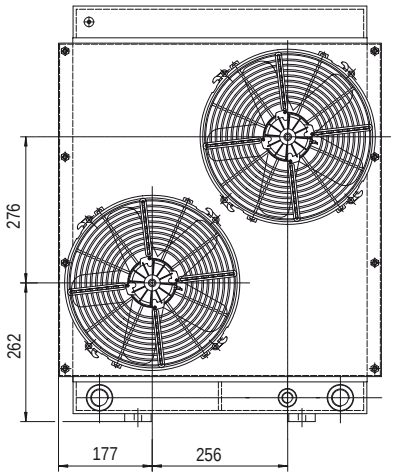
Dimensioni Dimensions

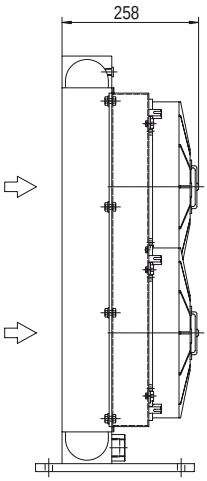


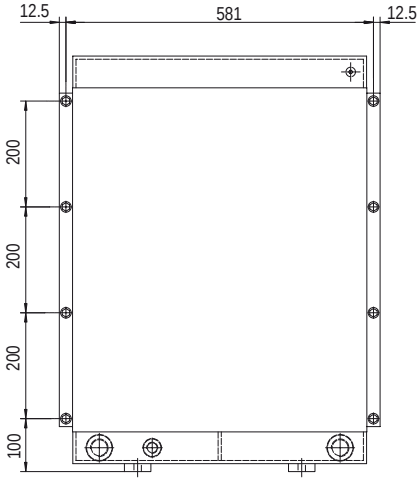




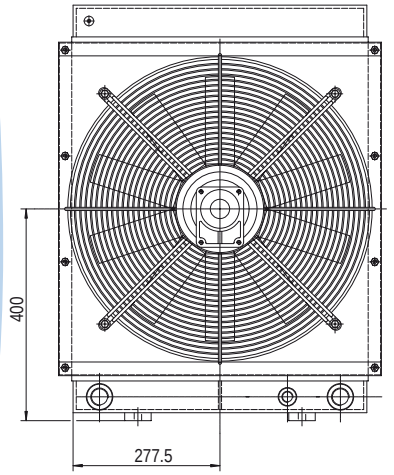
P/N 243803###

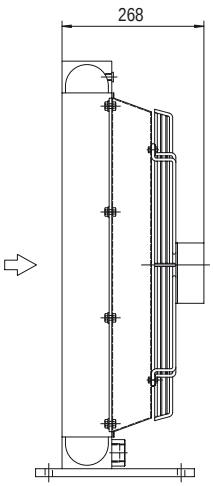


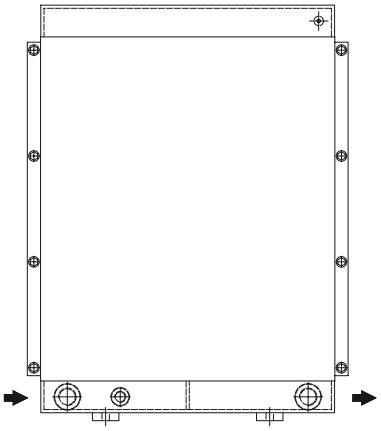




P/N 243812###
P/N 243824###







P/N 243856###

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

HPA 36 2 PASS

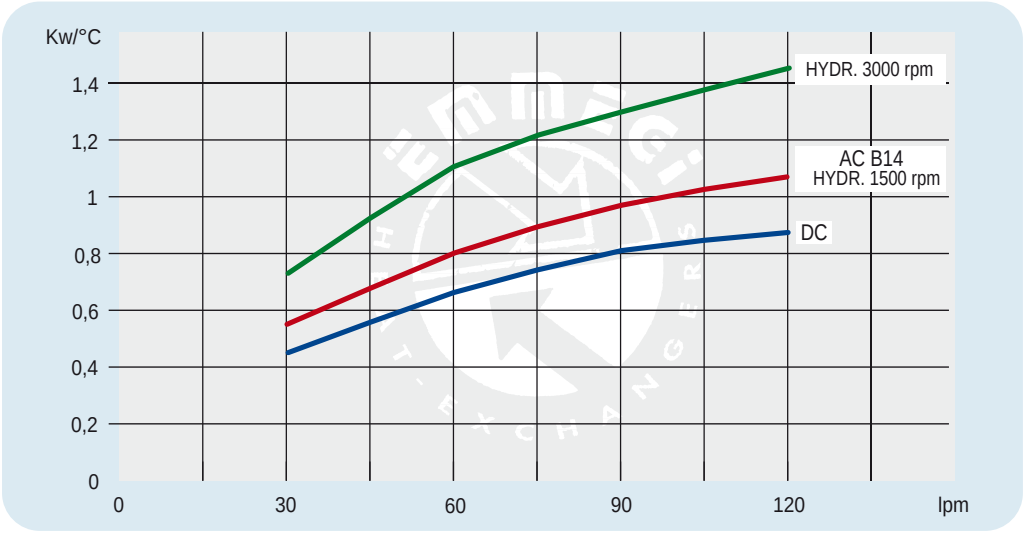
Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
243803 # # #	230-400 B14 AC 280-480 B14 AC	50 60	0,75 0,90	3,46-1,90 3,41-1,99	1394 1673	450	82	4000	55	6,8	37
243812 # # #	12 DC	/	0,115	9,58	2530	280	74	1550	65		32
243824 # # #	24 DC	/	0,125	5,20	2900	280	78	1700	65		32
243856 # # #	Prepared for Gr.2 hydraulic motor					450			/		35

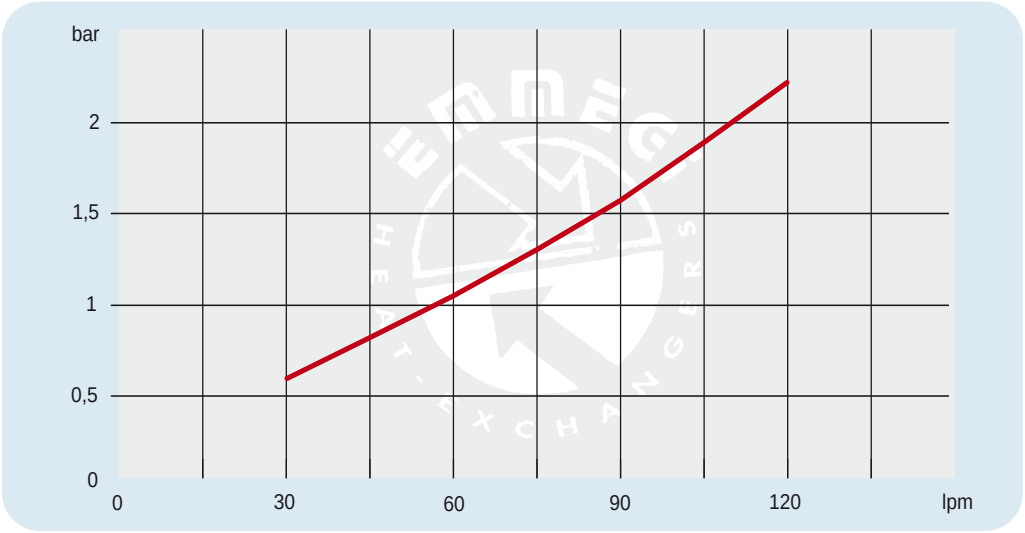
Per il 12-24V i dati sono riferiti al singolo ventilatore *For 12-24V the data refers to each ventilator*

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento Performance diagram



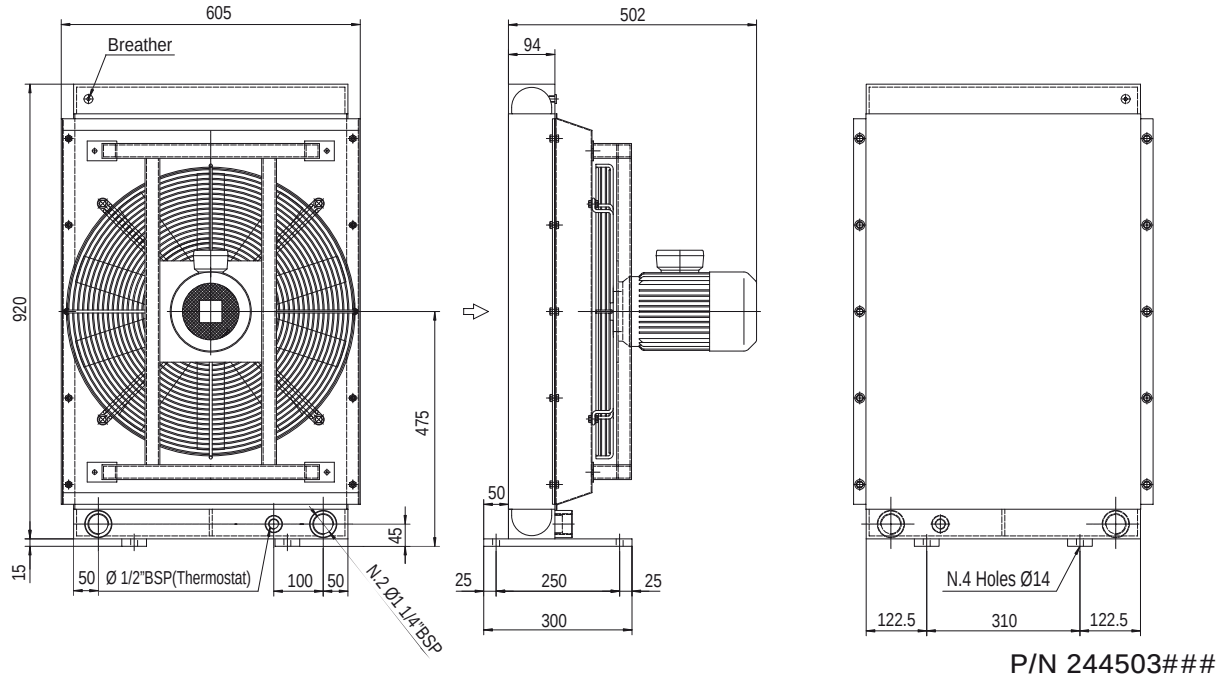
Perdite di carico Pressure drop (ISO VG 32)



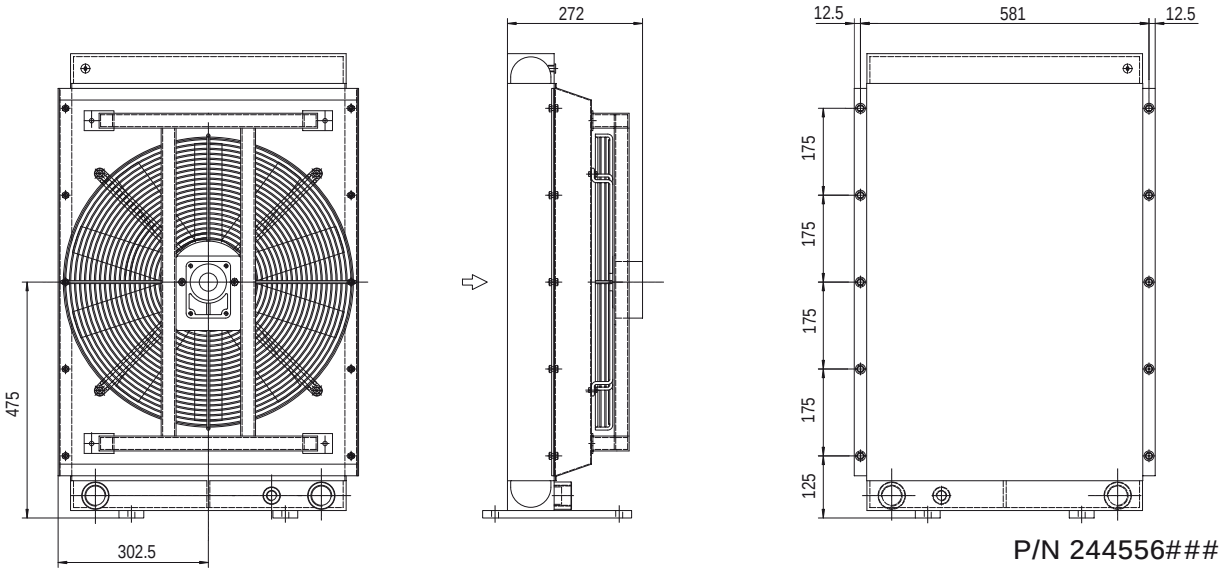
Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

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

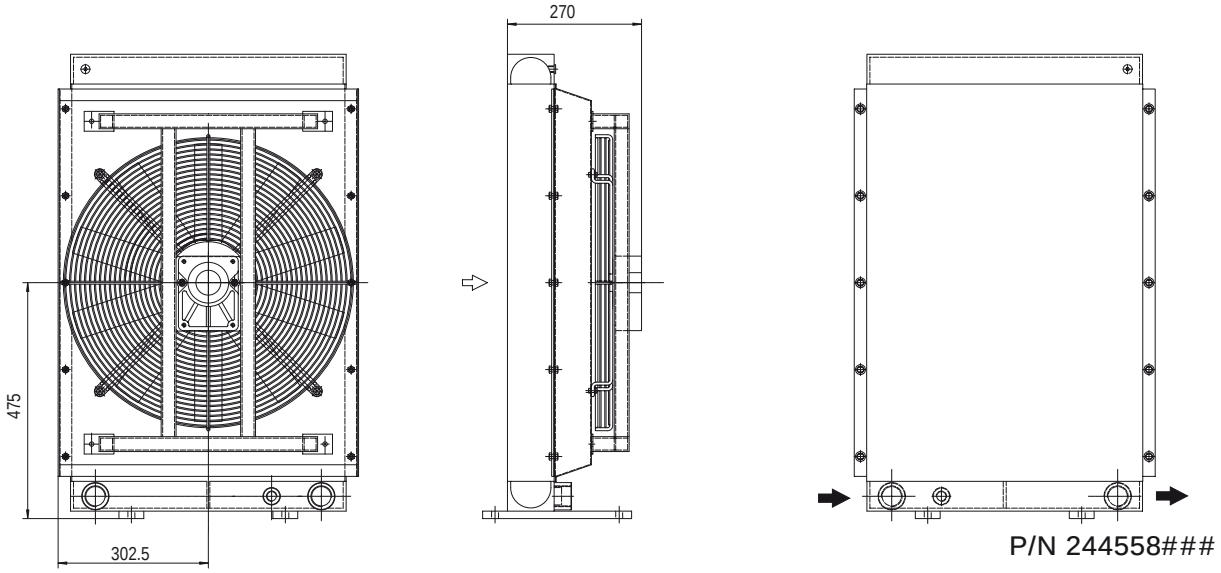
Dimensioni Dimensions



P/N 244503###



P/N 244556###



P/N 244558###

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

HPA 42 2 PASS

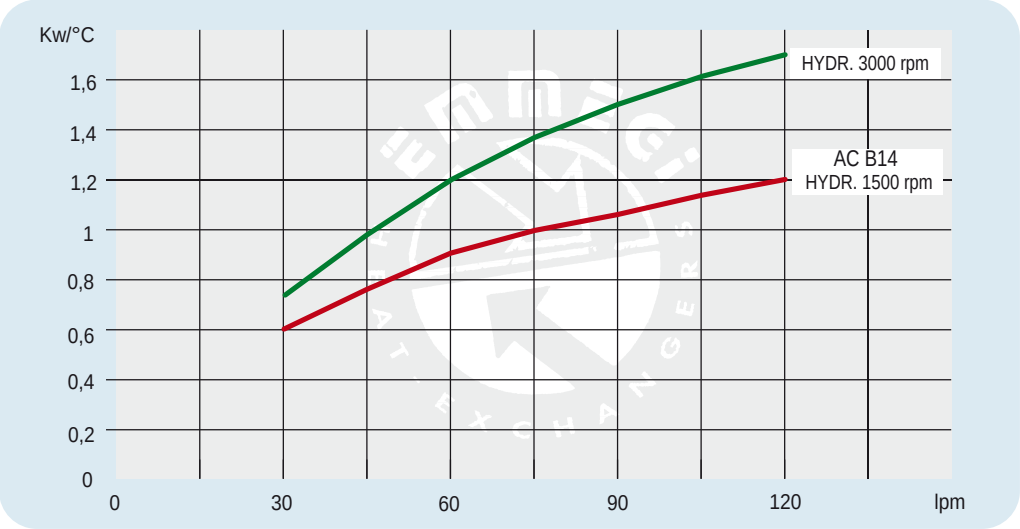
Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
244503 # # #	230-400 B14 AC 280-480 B14 AC	50 60	1,1 1,32	4,35-2,50 4,29-2,50	1378 1654	560	84	7550	55	10,6	65
244556 # # #	Prepared for Gr.2 hydraulic motor					560			/		58
244558 # # #	Prepared for Gr.3 hydraulic motor					560			/		58

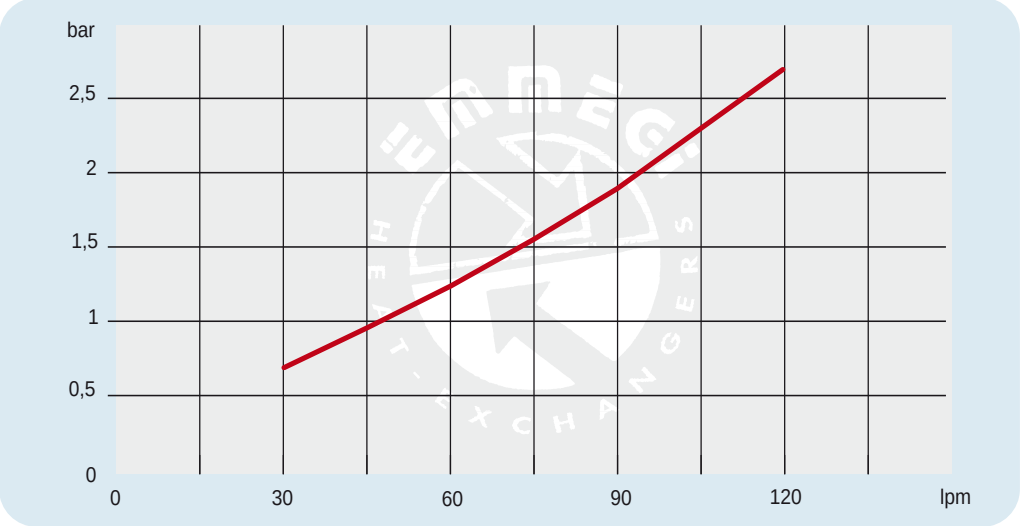
Contattare EMMEGI Contact EMMEGI

HPA 42 2 PASS

Diagramma rendimento Performance diagram



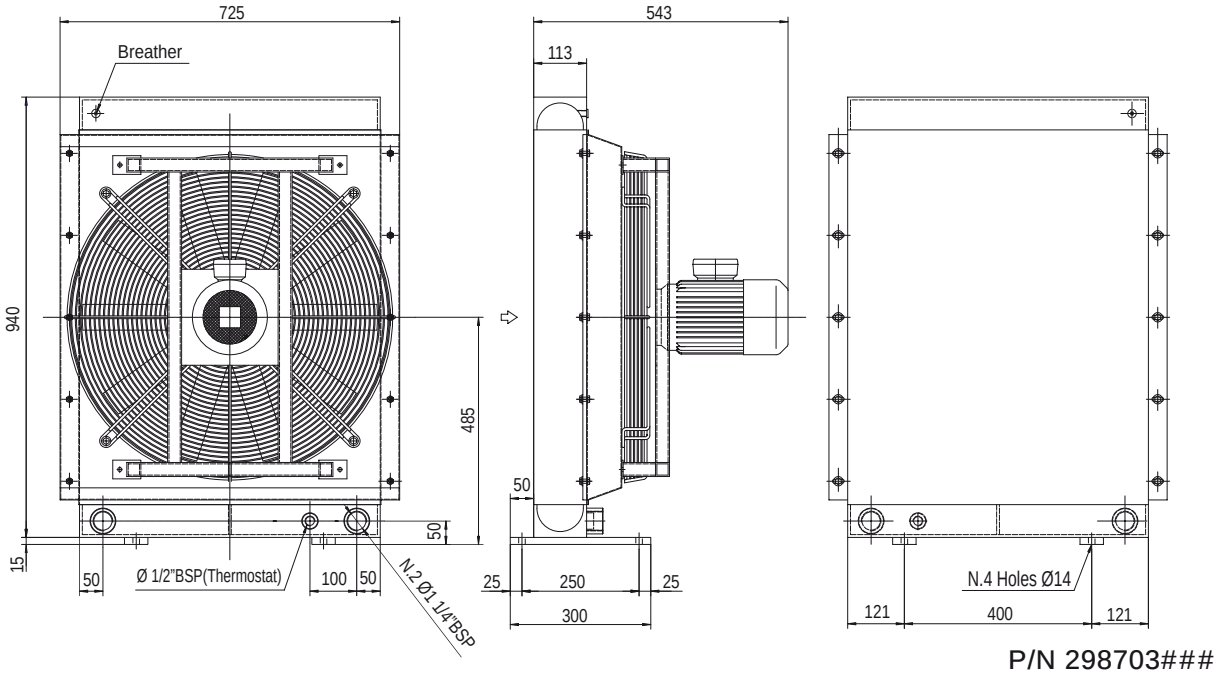
Perdite di carico Pressure drop (ISO VG 32)



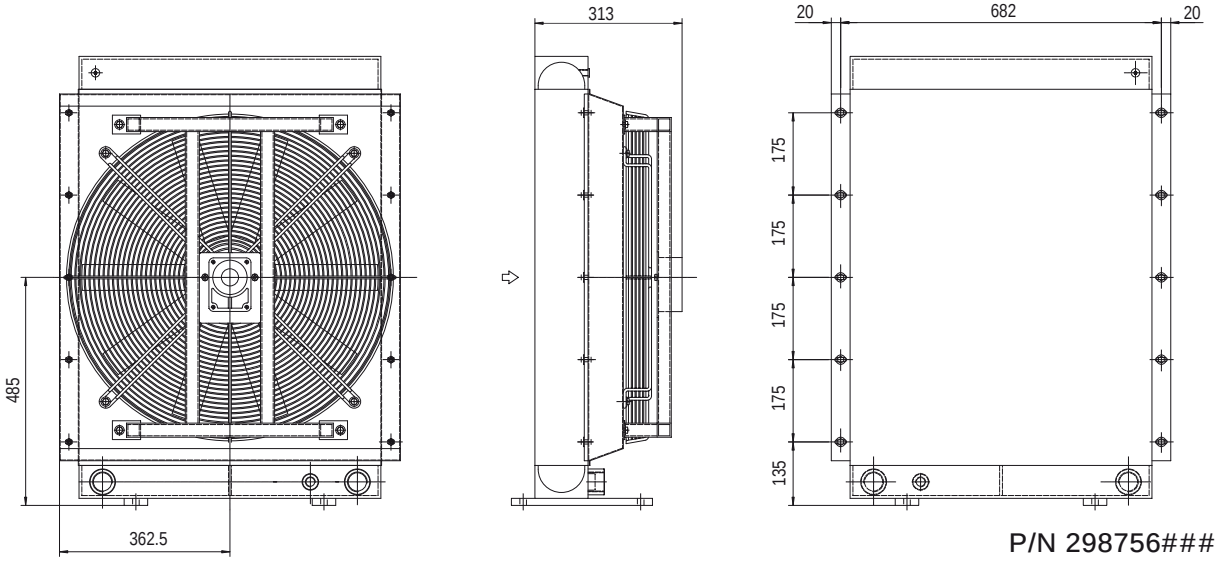
Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

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

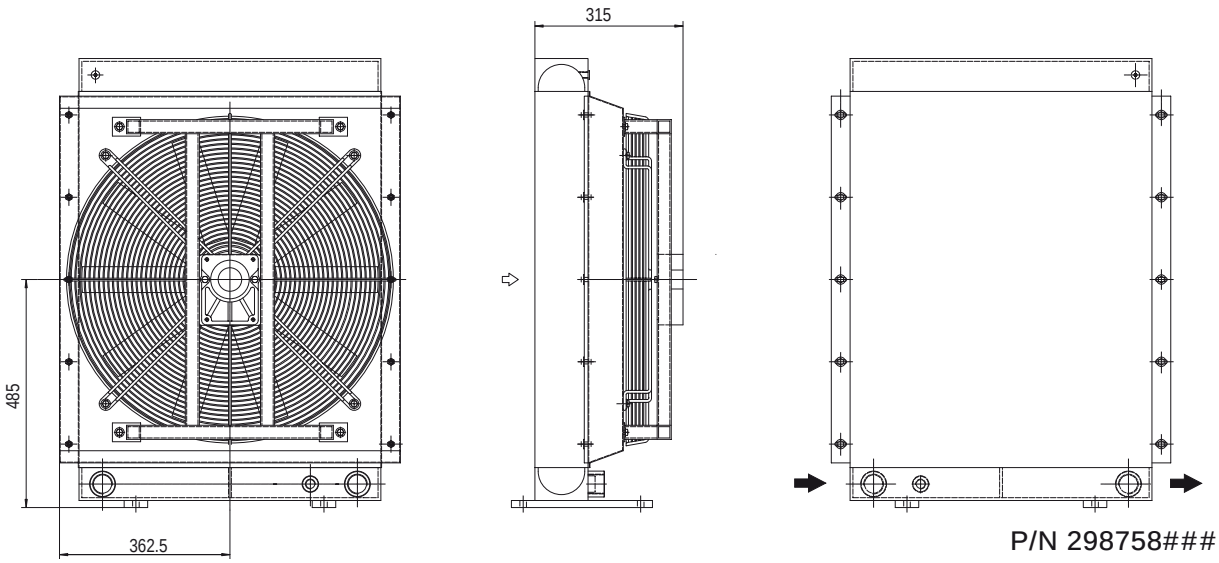
Dimensioni Dimensions



P/N 298703###



P/N 298756###



P/N 298758###

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

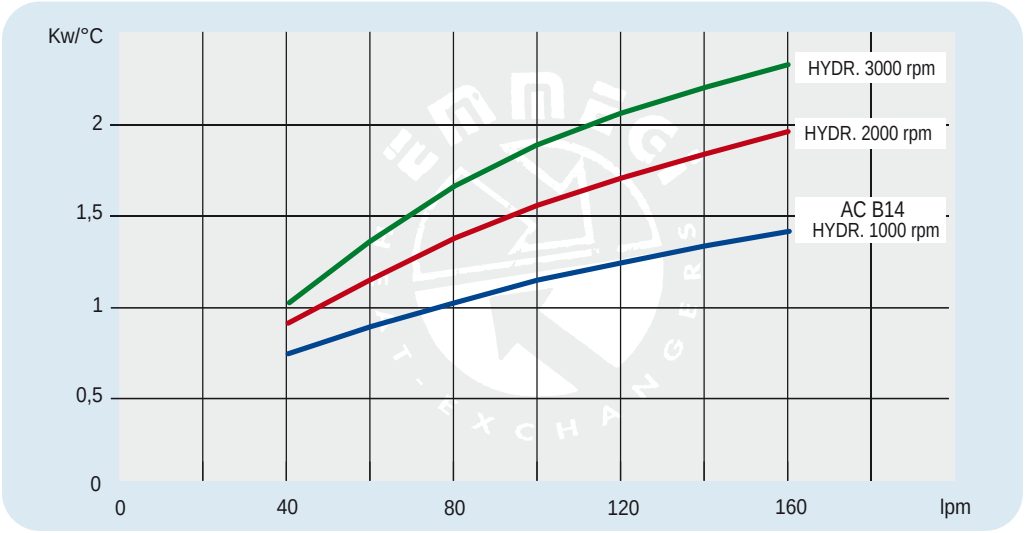
HPA 50 2 PASS

Dati tecnici Technical Data

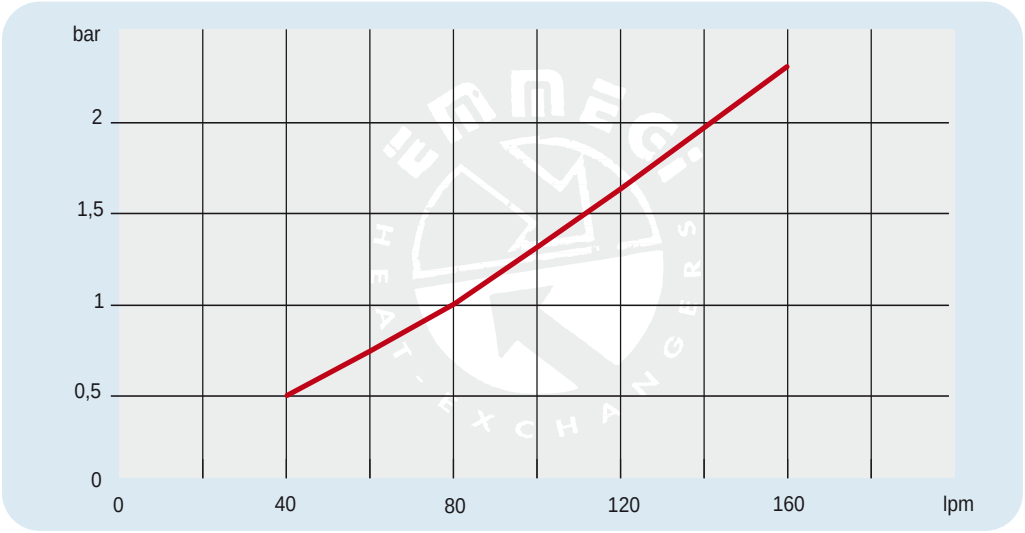
P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
298703 # # #	230-400 B14 AC 280-480 B14 AC	50 60	1,1 1,32	4,77-2,74 4,70-2,74	915 1098	630	80	7550	55	14,2	90
298756 # # #	Prepared for Gr.2 hydraulic motor					630			/		83
298758 # # #	Prepared for Gr.3 hydraulic motor					630			/		83

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento Performance diagram



Perdite di carico Pressure drop (ISO VG 32)

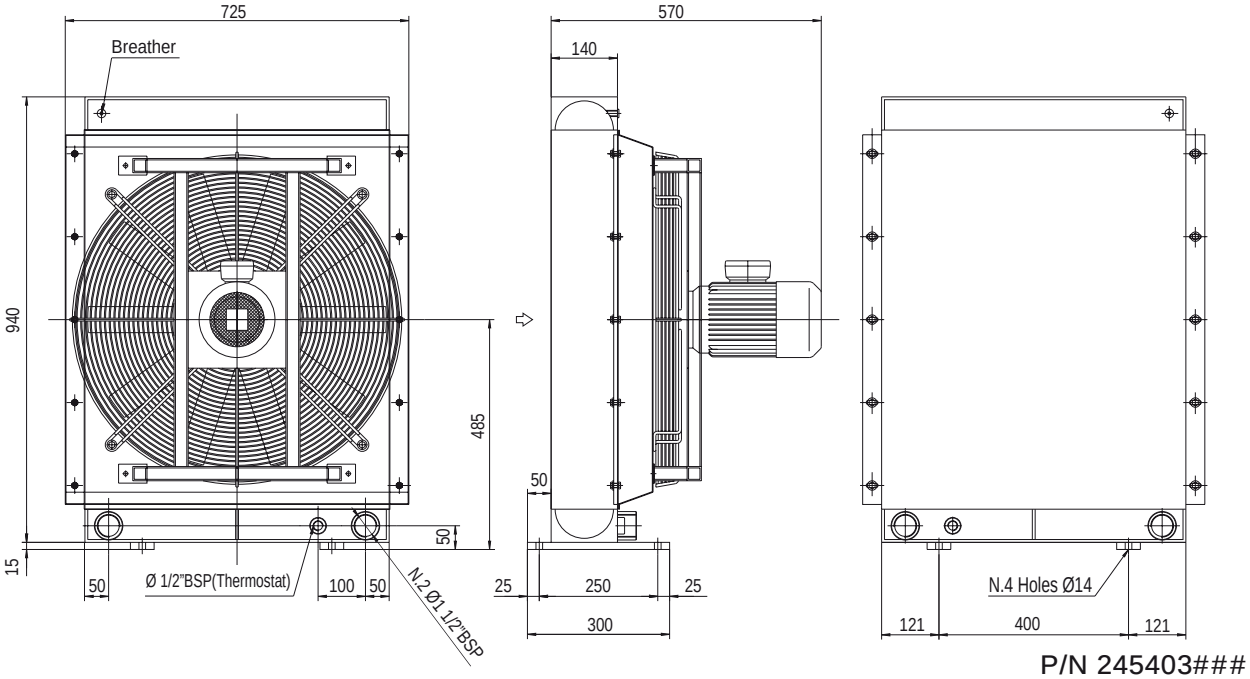


Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

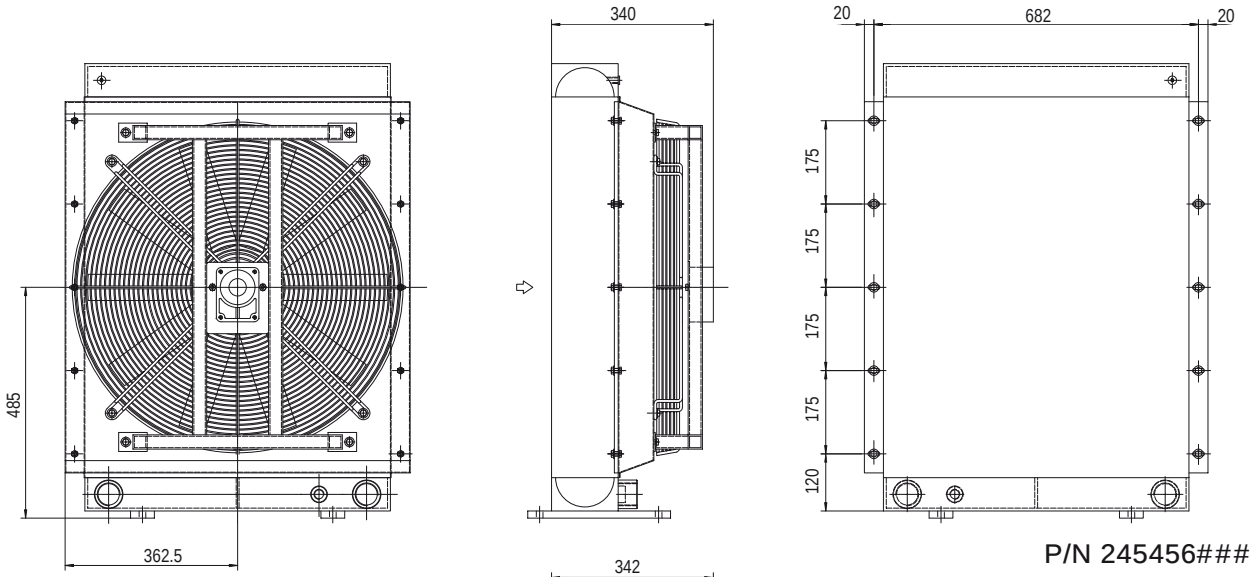
cst	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

HPA 50 2 PASS

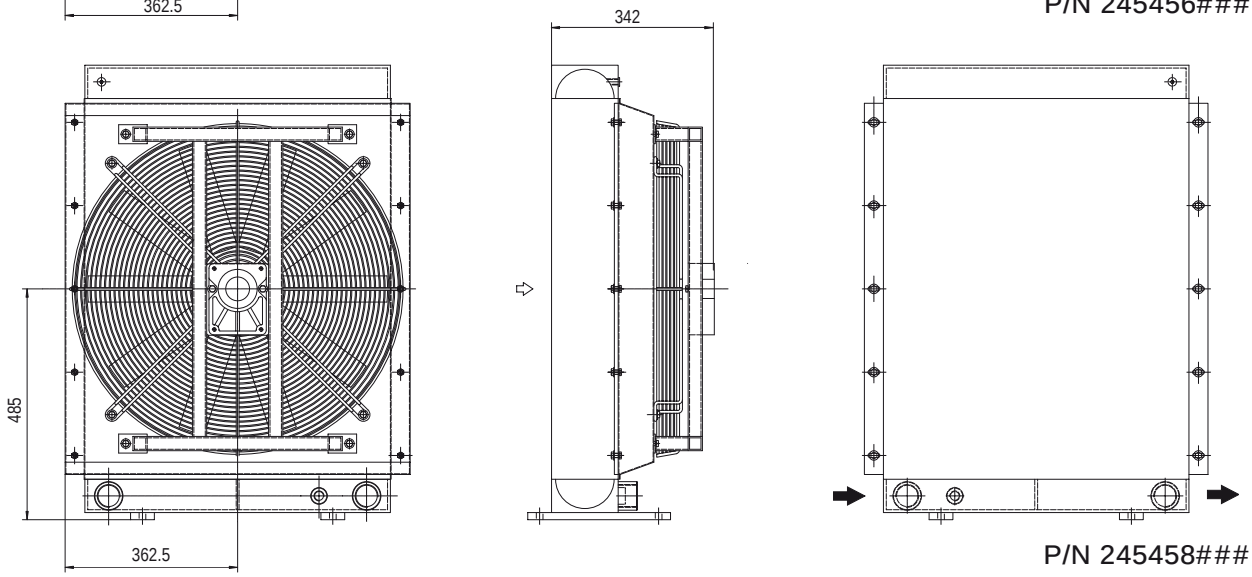
Dimensioni Dimensions



P/N 245403###



P/N 245456###



P/N 245458###

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

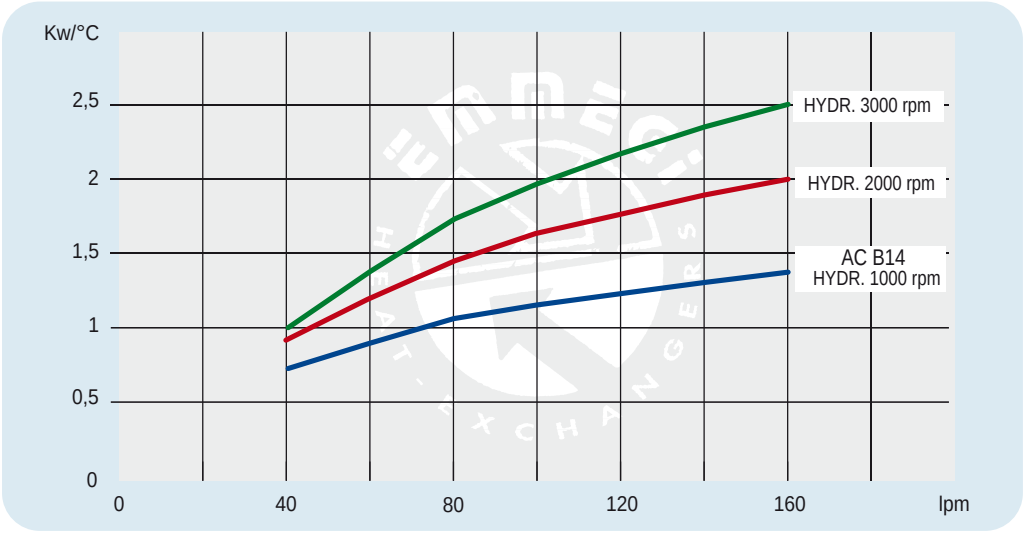
HPA 52 2 PASS

Dati tecnici Technical Data

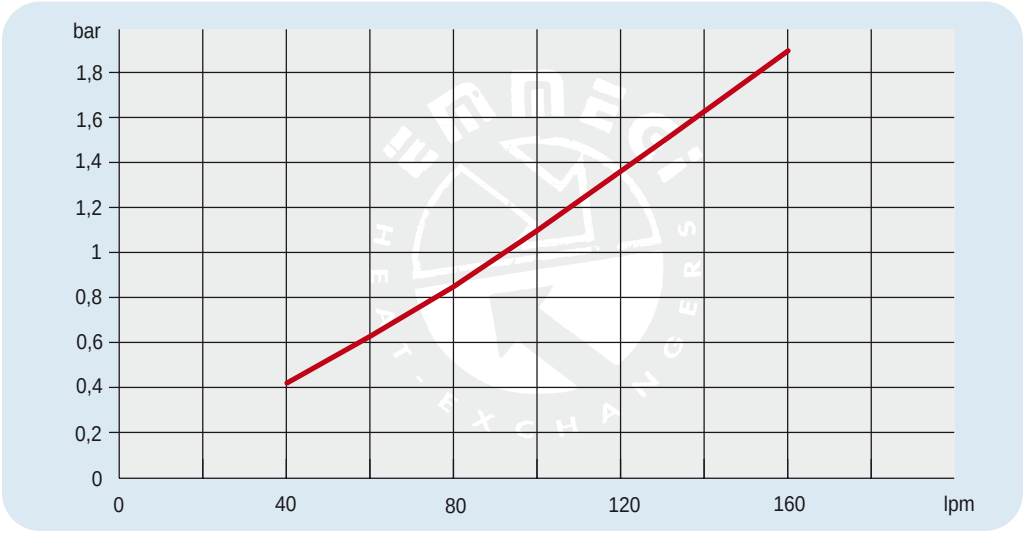
P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
245403 # # #	230-400 B14 AC 280-480 B14 AC	50 60	1,1 1,32	4,77-2,74 4,70-2,74	915 1098	630	80	7050	55	17,7	95
245456 # # #	Prepared for Gr.2 hydraulic motor					630			/		89
245458 # # #	Prepared for Gr.3 hydraulic motor					630			/		89

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento Performance diagram



Perdite di carico Pressure drop (ISO VG 32)

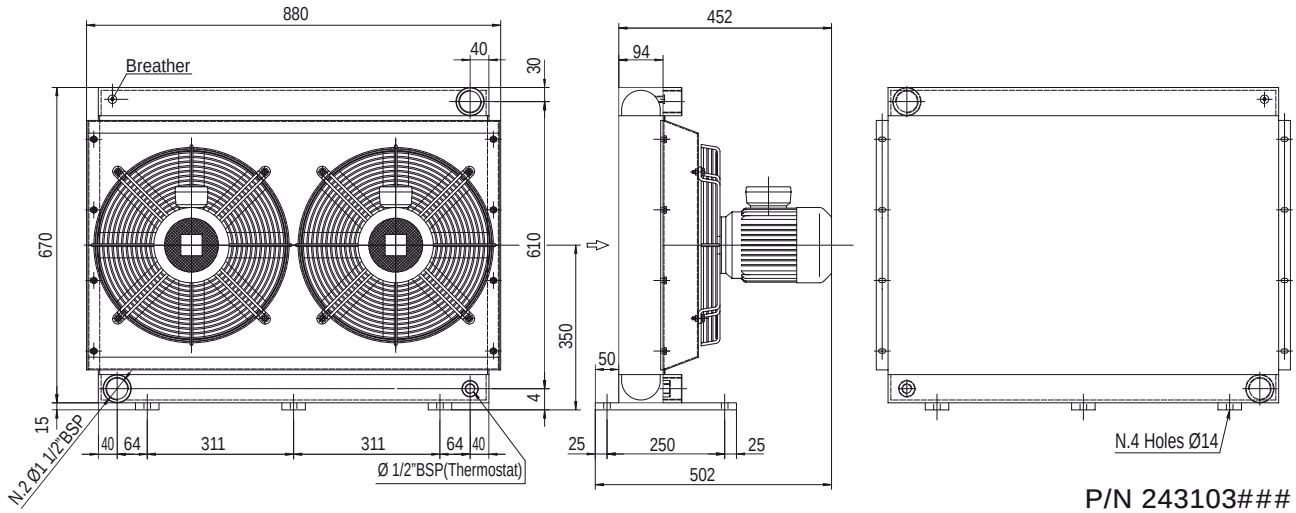


Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

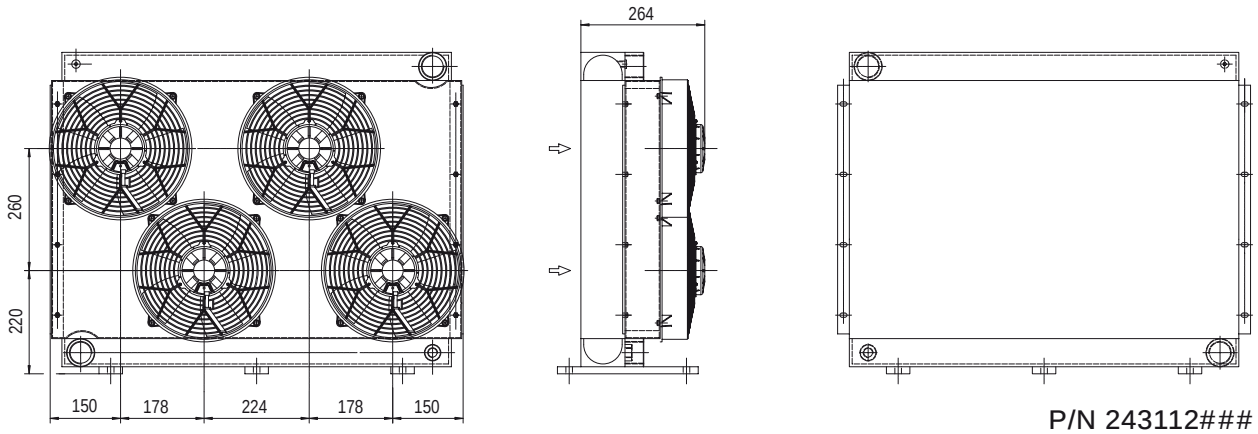
cst	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

HPA 52 2 PASS

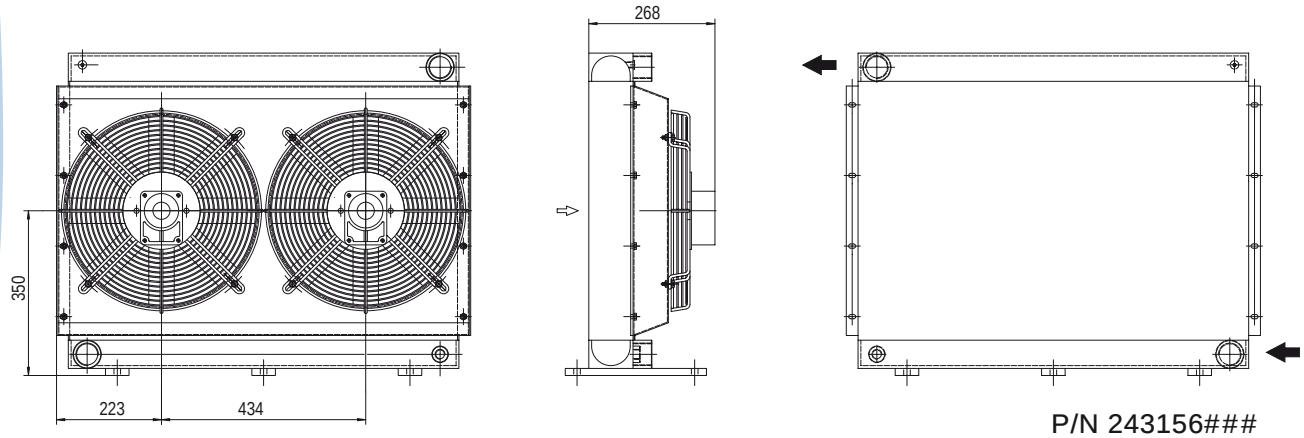
Dimensioni Dimensions



P/N 243103###



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



P/N 243156###

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

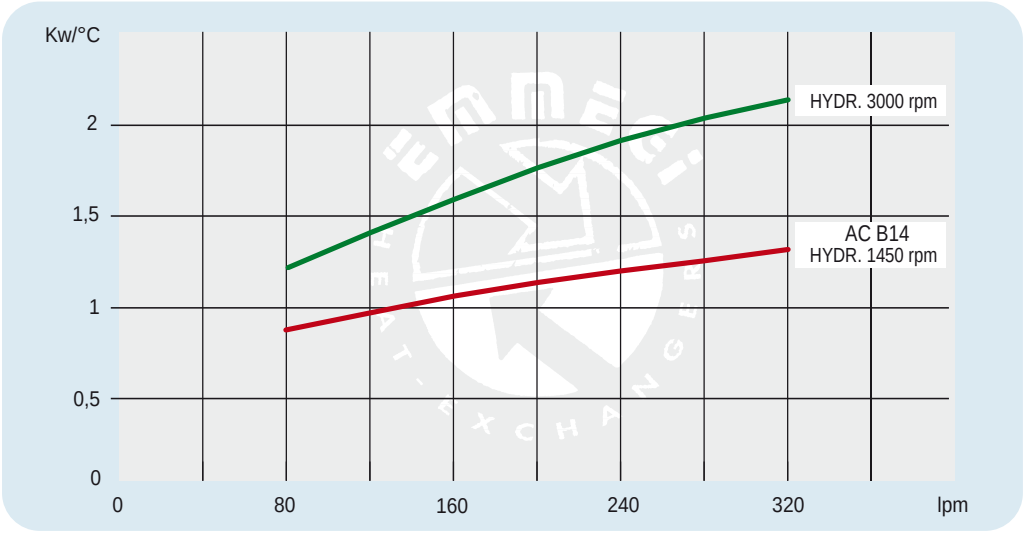
Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
243103 # # #	230-400 B14 AC 280-480 B14 AC	50 60	0,55 0,66	2,58-1,49 2,56-1,49	1391 1669	400	79	3300	55	13,6	74
243112 # # #	12 DC	/	0,115	9,58	2530	280	77	1550	65		64
243124 # # #	24 DC	/	0,125	5,20	2900	280	81	1700	65		64
243156 # # #	Prepared for Gr.2 hydraulic motor					400			/		70

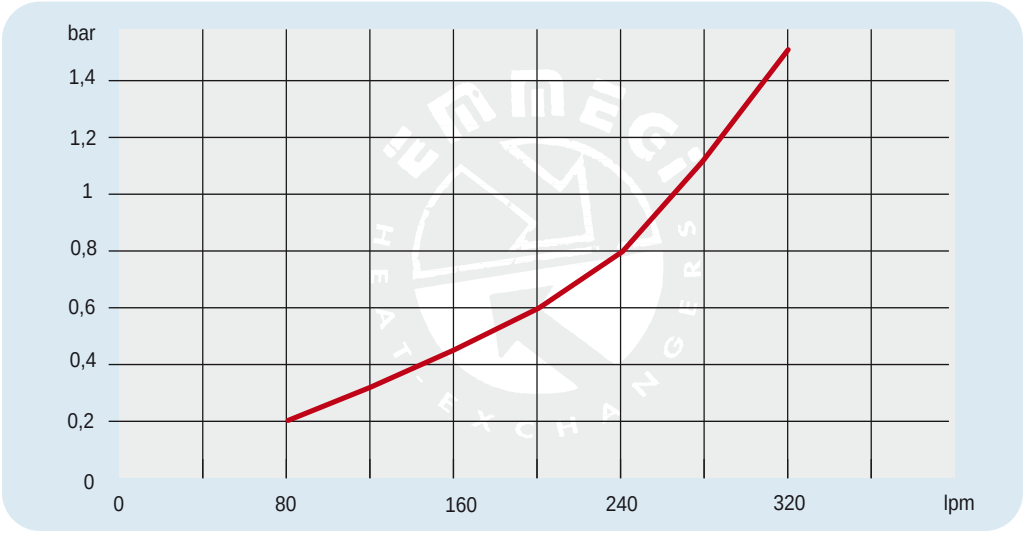
I dati sopraripportati sono riferiti al singolo ventilatore *The data refers to each ventilator*

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento Performance diagram



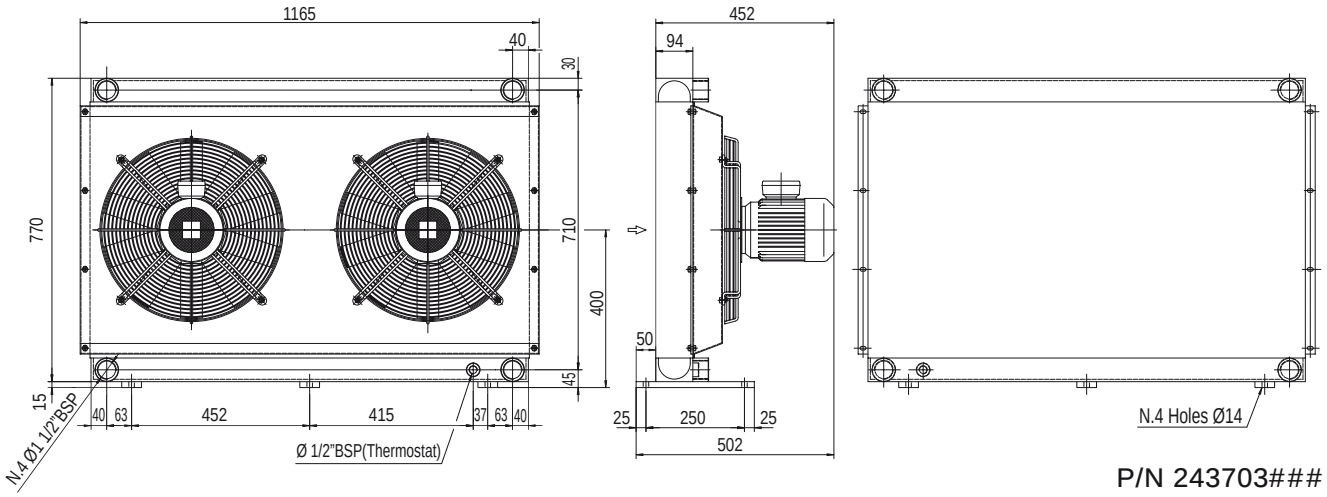
Perdite di carico Pressure drop (ISO VG 32)



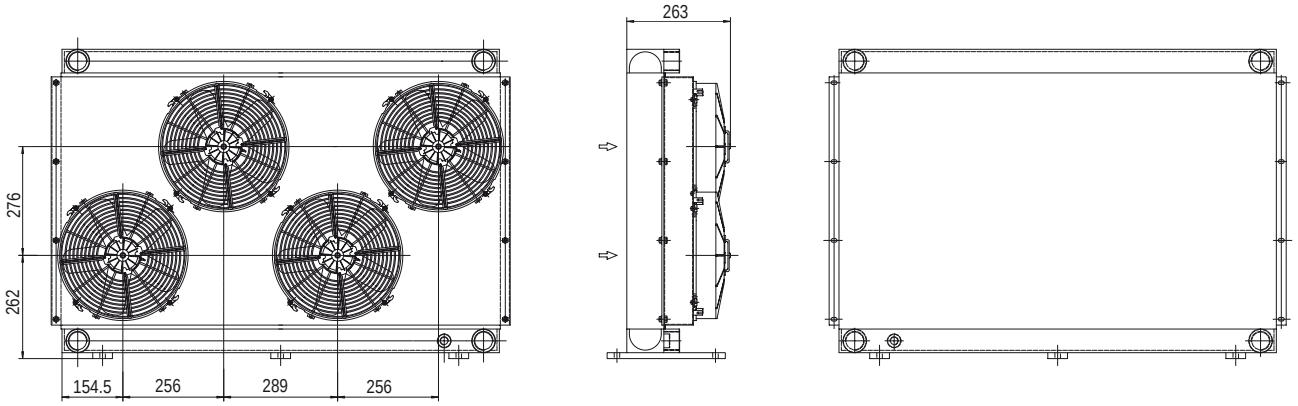
Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

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

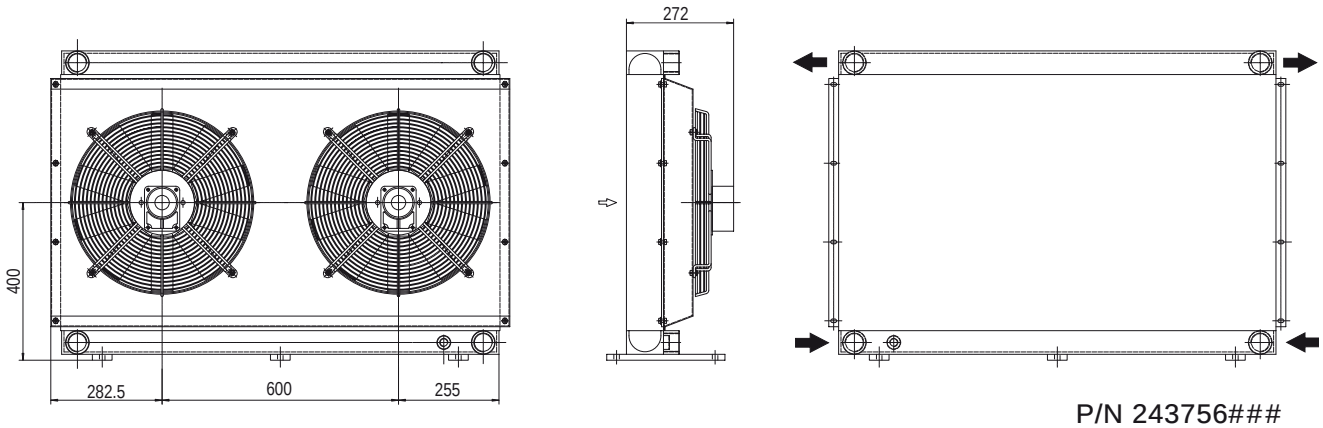
Dimensioni Dimensions



P/N 243703###



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



P/N 243756###

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

HPA 36 / 2

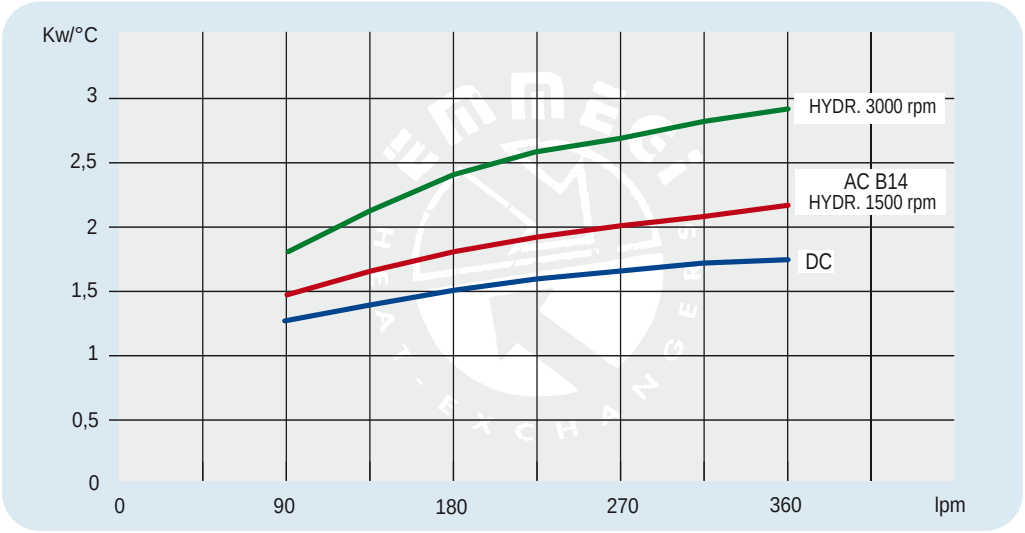
Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
243703 # # #	230-400 B14 AC 280-480 B14 AC	50 60	0,75 0,90	3,46-1,90 3,41-1,99	1394 1673	450	85	4000	55	18,8	120
243712 # # #	12 DC	/	0,160	13,30	2560	305	86	2100	64		100
243724 # # #	24 DC	/	0,177	7,35	3000	305	87	2400	64		100
243756 # # #	Prepared for Gr.2 hydraulic motor					450			/		102

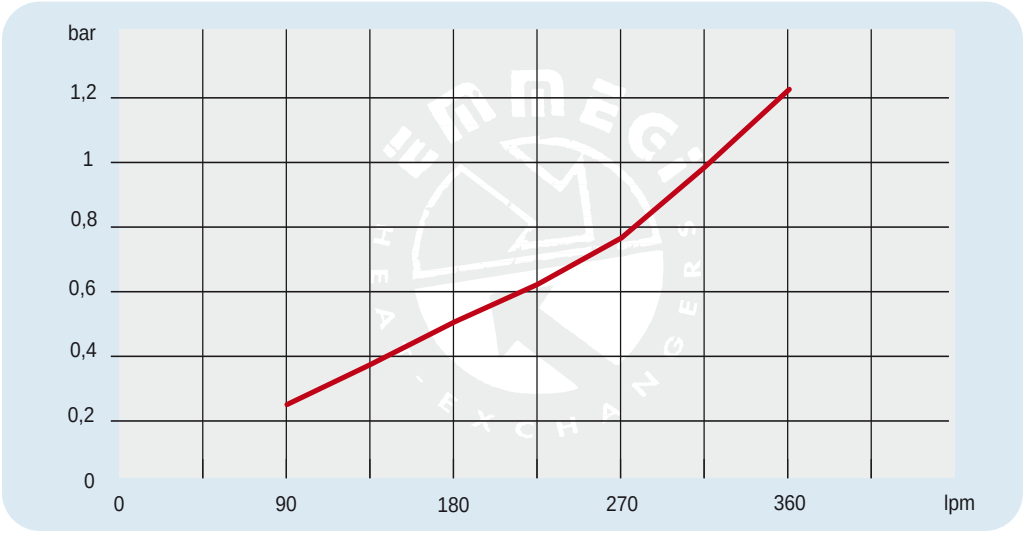
I dati sopraripportati sono riferiti al singolo ventilatore *The data refers to each ventilator*

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento Performance diagram



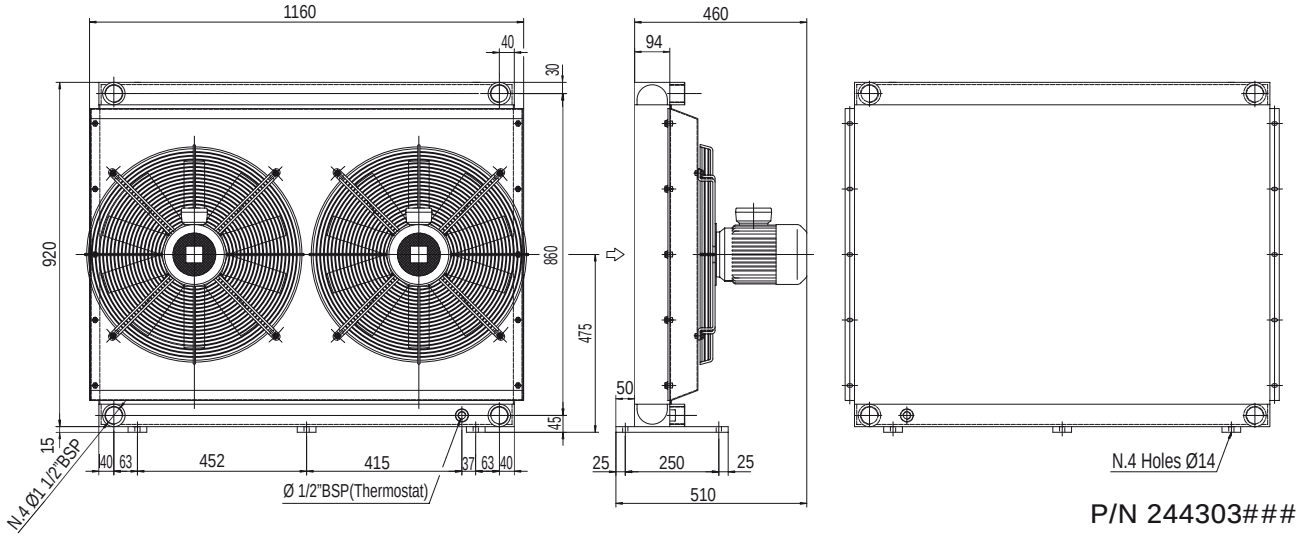
Perdite di carico Pressure drop (ISO VG 32)



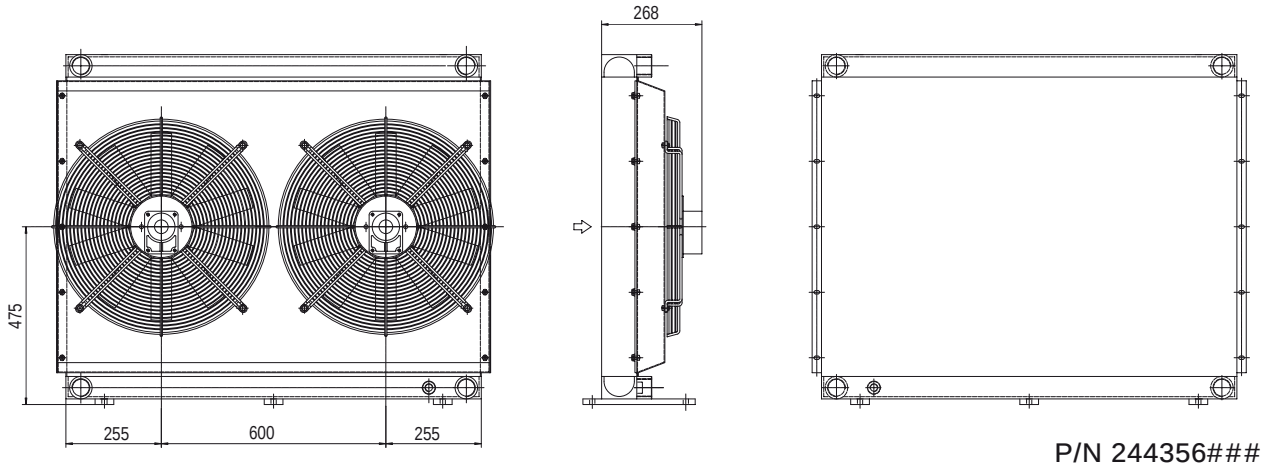
Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

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

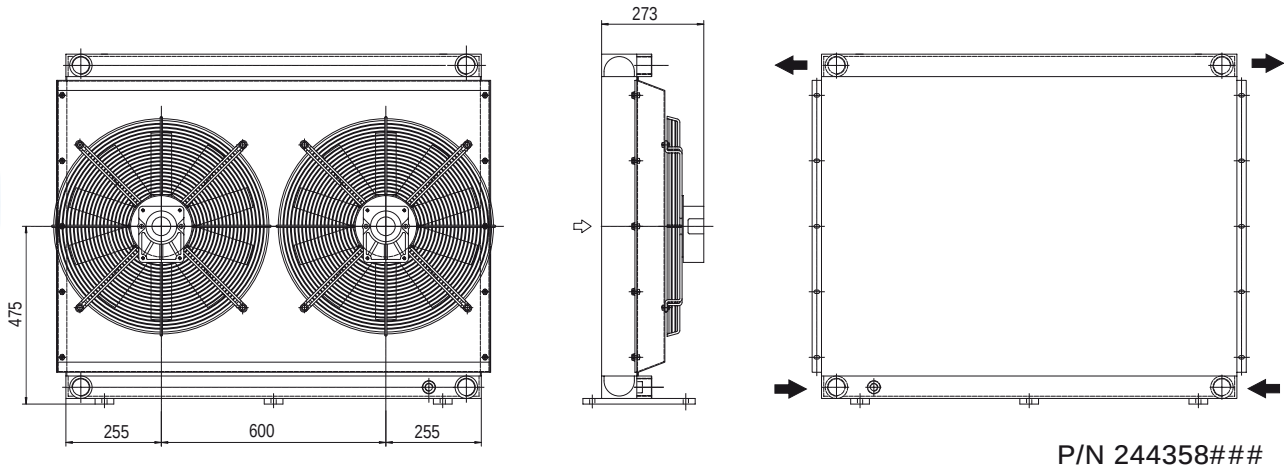
Dimensioni Dimensions



P/N 244303###



P/N 244356###



P/N 244358###

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

HPA 42 / 2

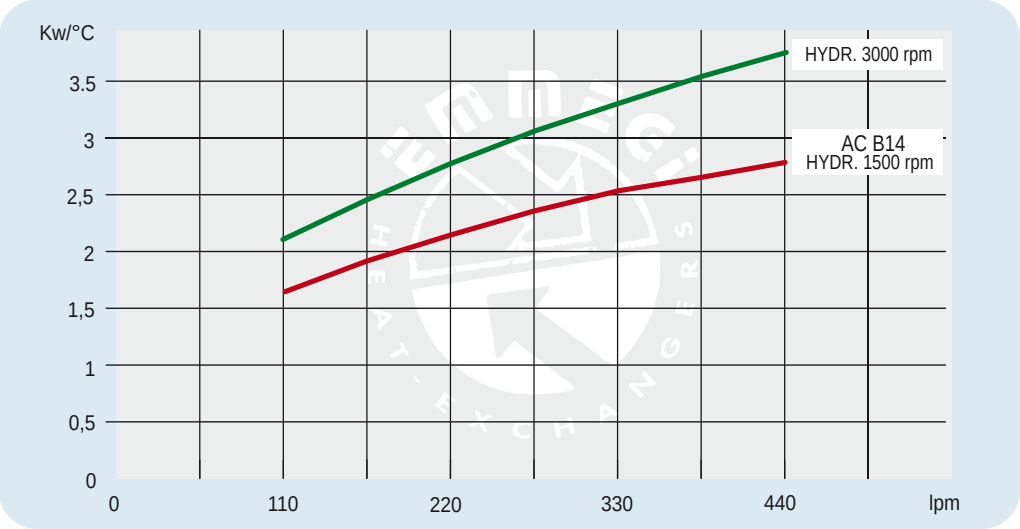
Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
244303 # # #	230-400 B14 AC 280-480 B14 AC	50 60	1,1 1,32	4,35-2,50 4,29-2,50	1378 1645	500	87	7550	55	21,2	135
244356 # # #	Prepared for Gr.2 hydraulic motor					500			/		122
244358 # # #	Prepared for Gr.3 hydraulic motor					500			/		122

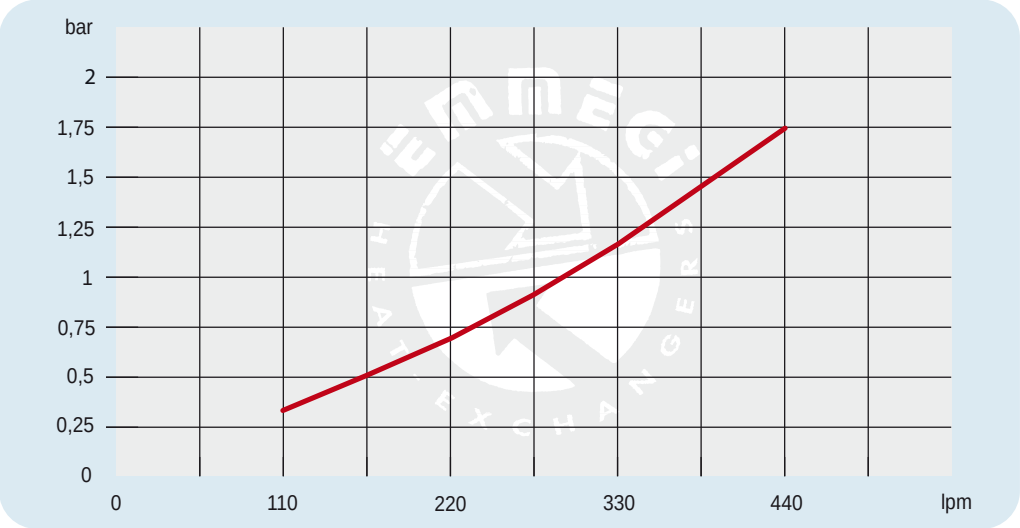
I dati sopraripportati sono riferiti al singolo ventilatore *The data refers to each ventilator*

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento Performance diagram



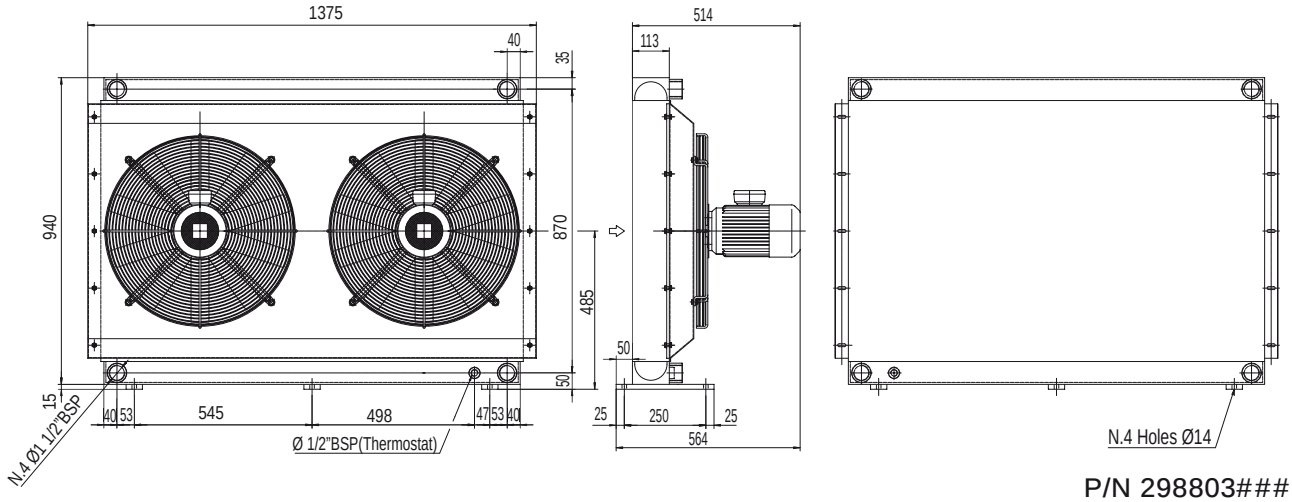
Perdite di carico Pressure drop (ISO VG 32)



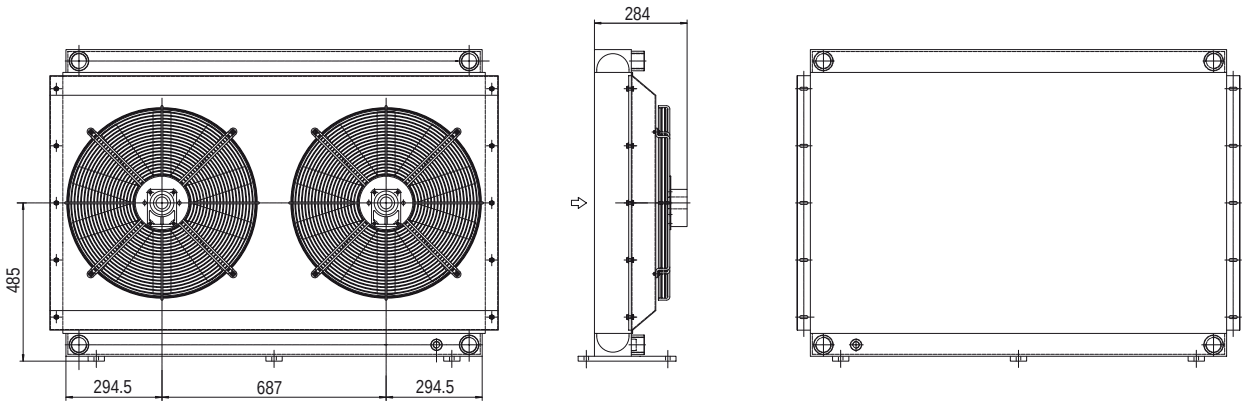
Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

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

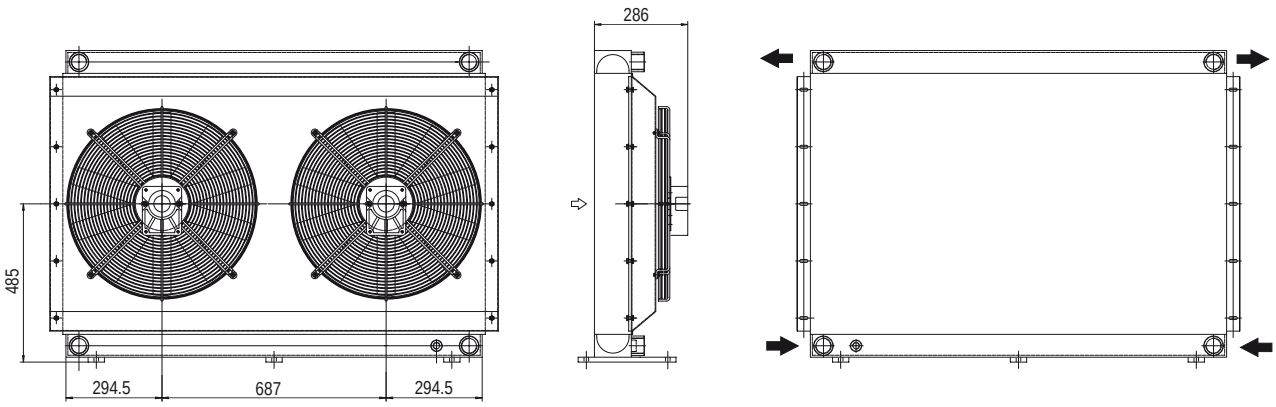
Dimensioni Dimensions



P/N 298803###



P/N 298856###



P/N 298858###

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

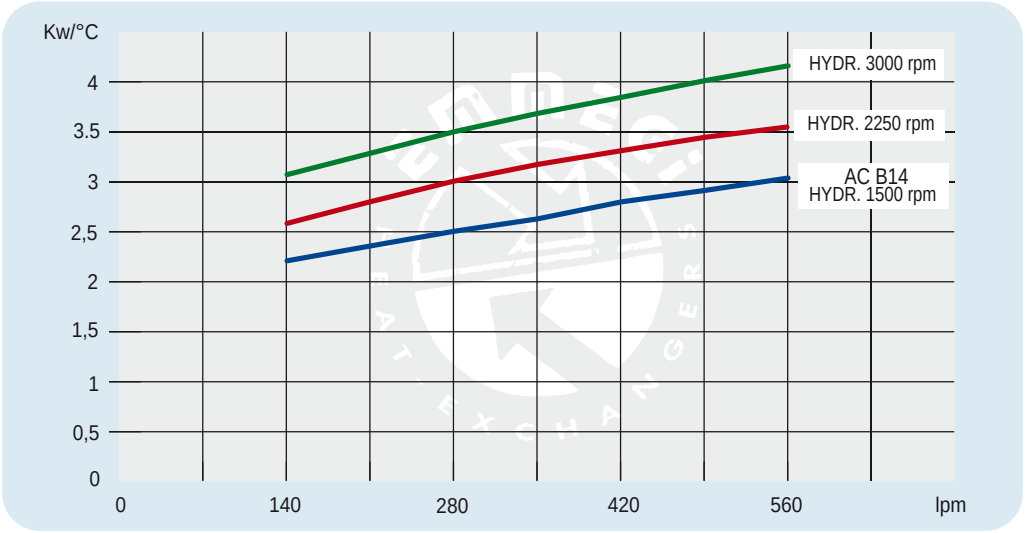
Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
298803 # # #	230-400 B14 AC 280-480 B14 AC	50 60	1,1 1,32	4,35-2,50 4,29-2,50	1378 1645	560	87	8500	55	28,4	192
298856 # # #	Prepared for Gr.2 hydraulic motor					560			/		180
298858 # # #	Prepared for Gr.3 hydraulic motor					560			/		180

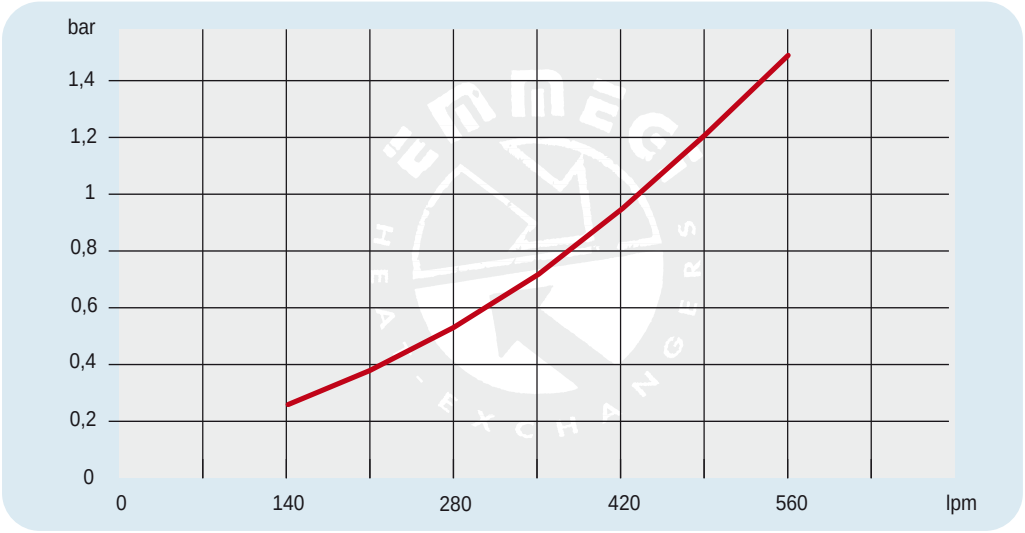
I dati sopraripportati sono riferiti al singolo ventilatore *The data refers to each ventilator*

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento Performance diagram



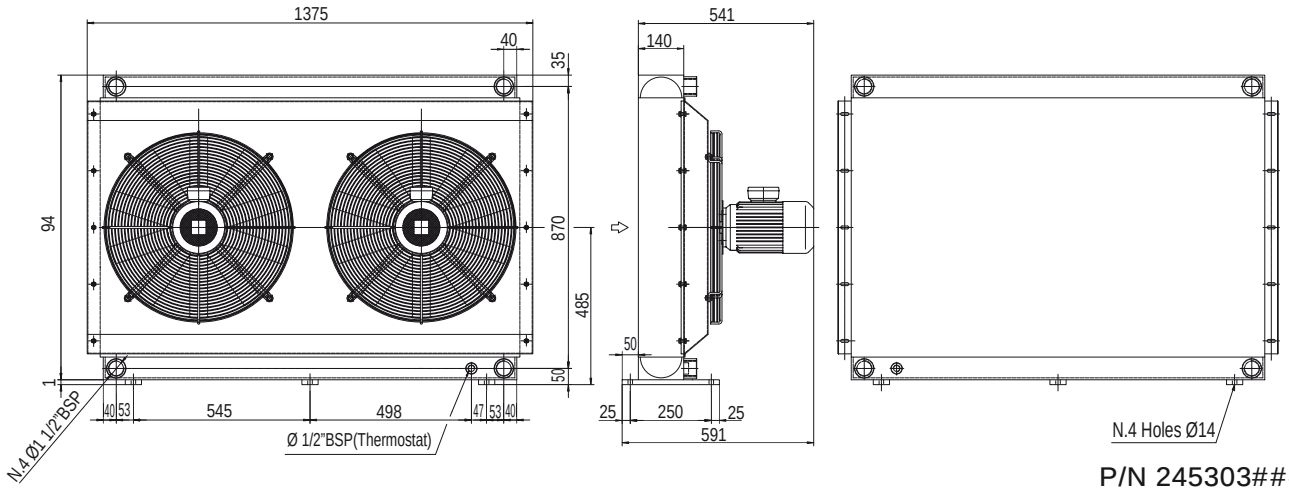
Perdite di carico Pressure drop (ISO VG 32)



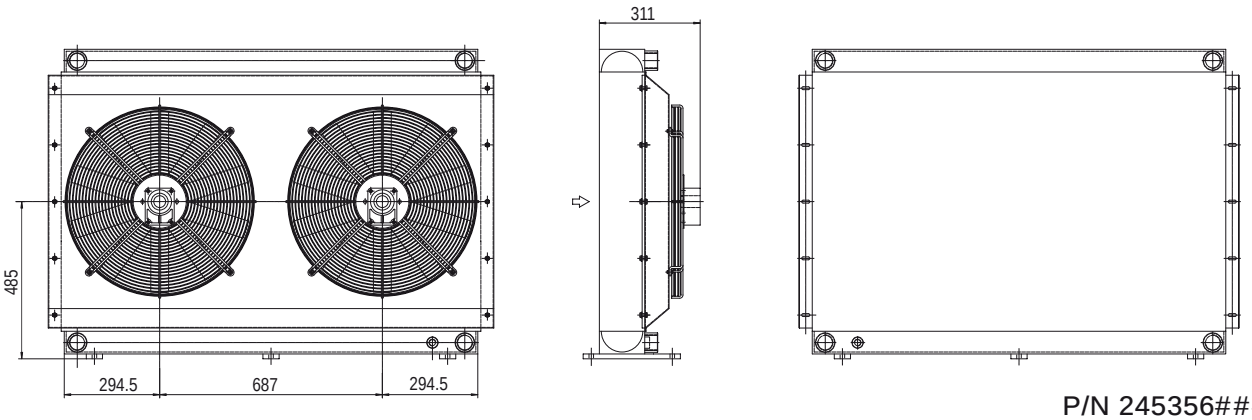
Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

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

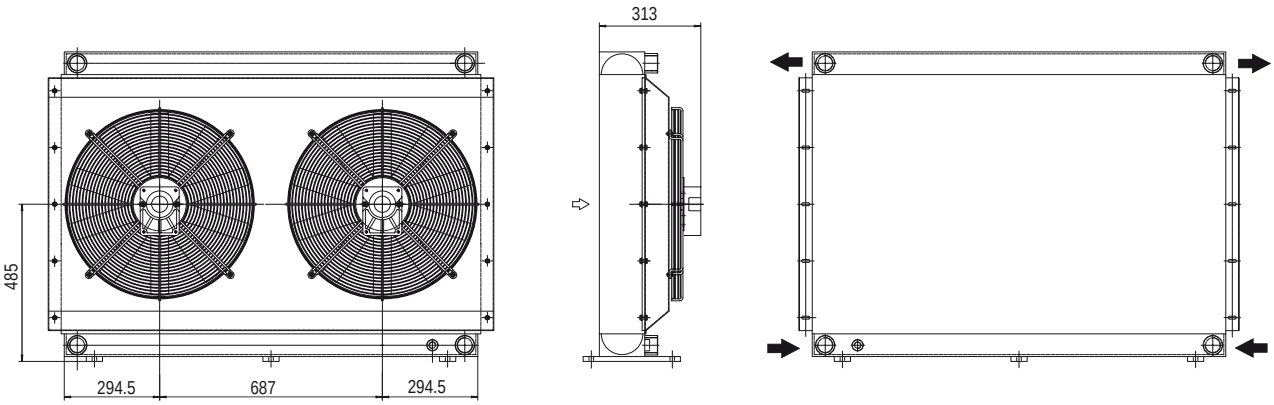
Dimensioni Dimensions



P/N 245303###



P/N 245356###



P/N 245358###

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

HPA 52 / 2

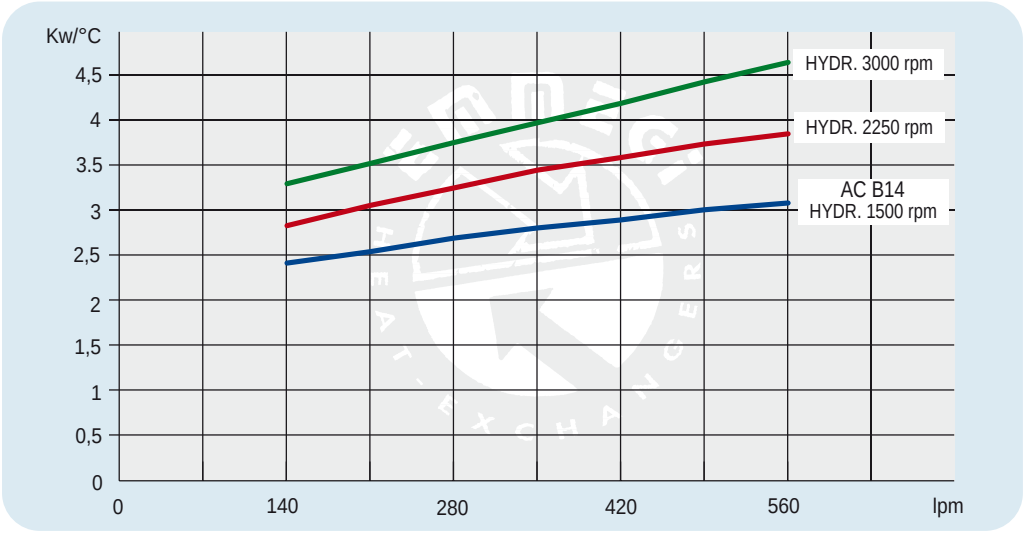
Dati tecnici Technical Data

P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
245303 # # #	230-400 B14 AC 280-480 B14 AC	50 60	1,1 1,32	4,35-2,50 4,29-2,50	1378 1645	560	87	7750	55	28,4	195
245356 # # #	Prepared for Gr.2 hydraulic motor					560			/		180
245358 # # #	Prepared for Gr.3 hydraulic motor					560			/		180

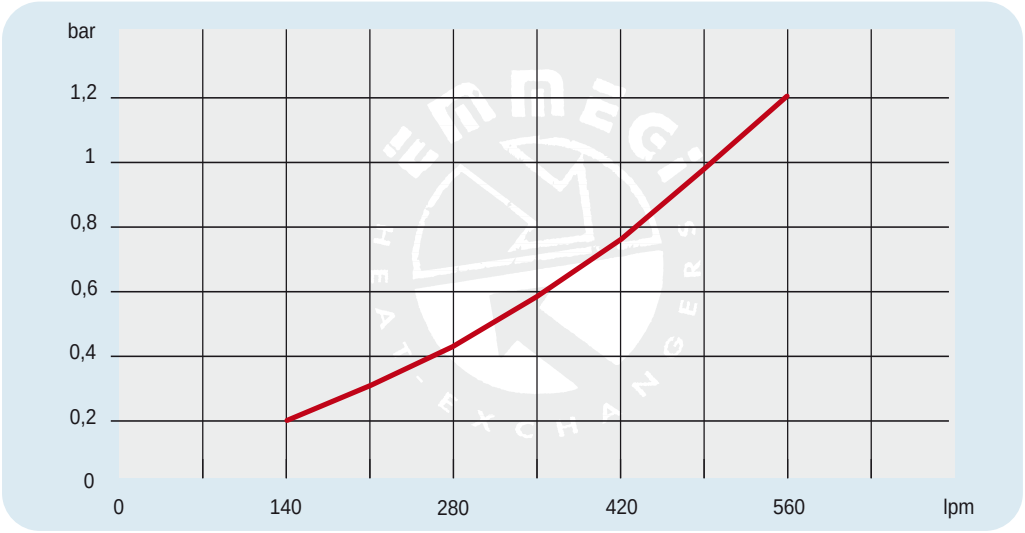
I dati soprariportati sono riferiti al singolo ventilatore *The data refers to each ventilator*

Contattare EMMEGI Contact EMMEGI

Diagramma rendimento Performance diagram



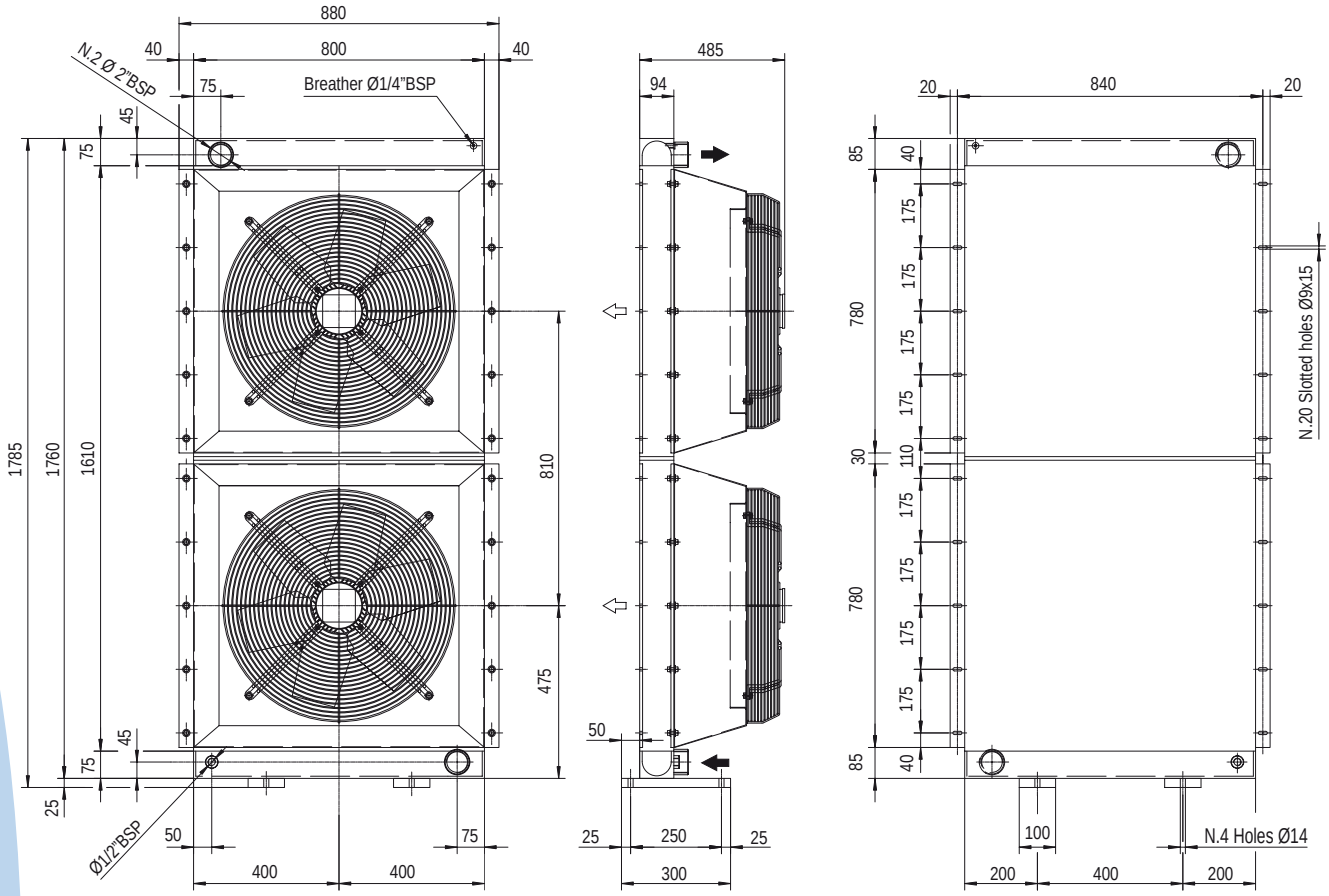
Perdite di carico Pressure drop (ISO VG 32)



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



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

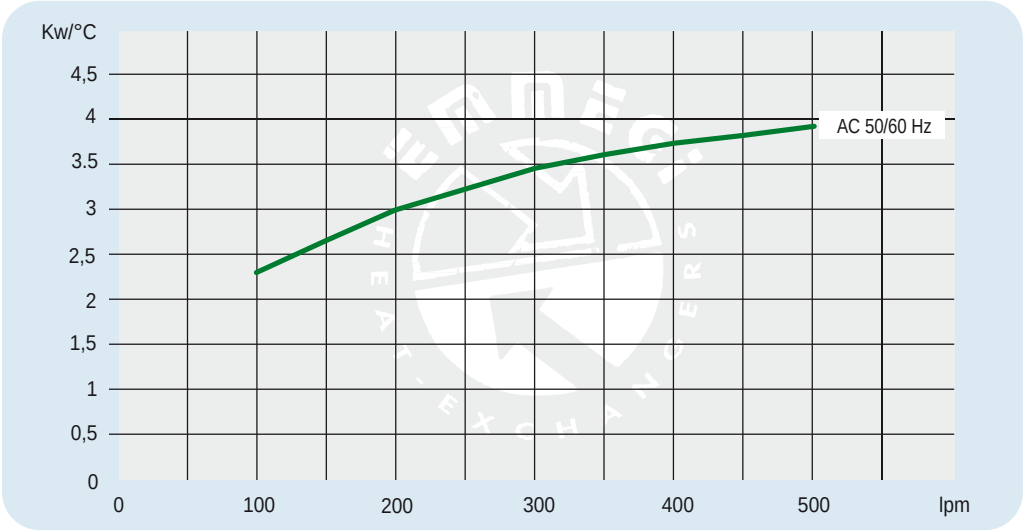
HPA 44 / 2

Dati tecnici Technical Data

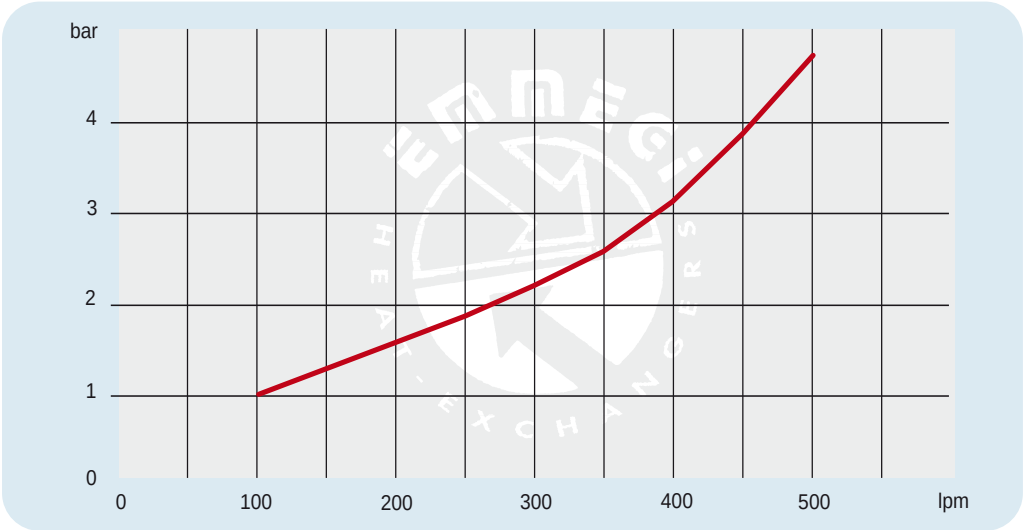
P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
041650B40050#	400 B14 AC	50	1,5	2,7	1378	560	78	10000	54	25	140
041650B40060#	400-460 B14 AC	60	1,5	2,5	1600	560	78	10000	54		140

I dati sopraripportati sono riferiti al singolo ventilatore *The data refers to each ventilator*

Diagramma rendimento Performance diagram



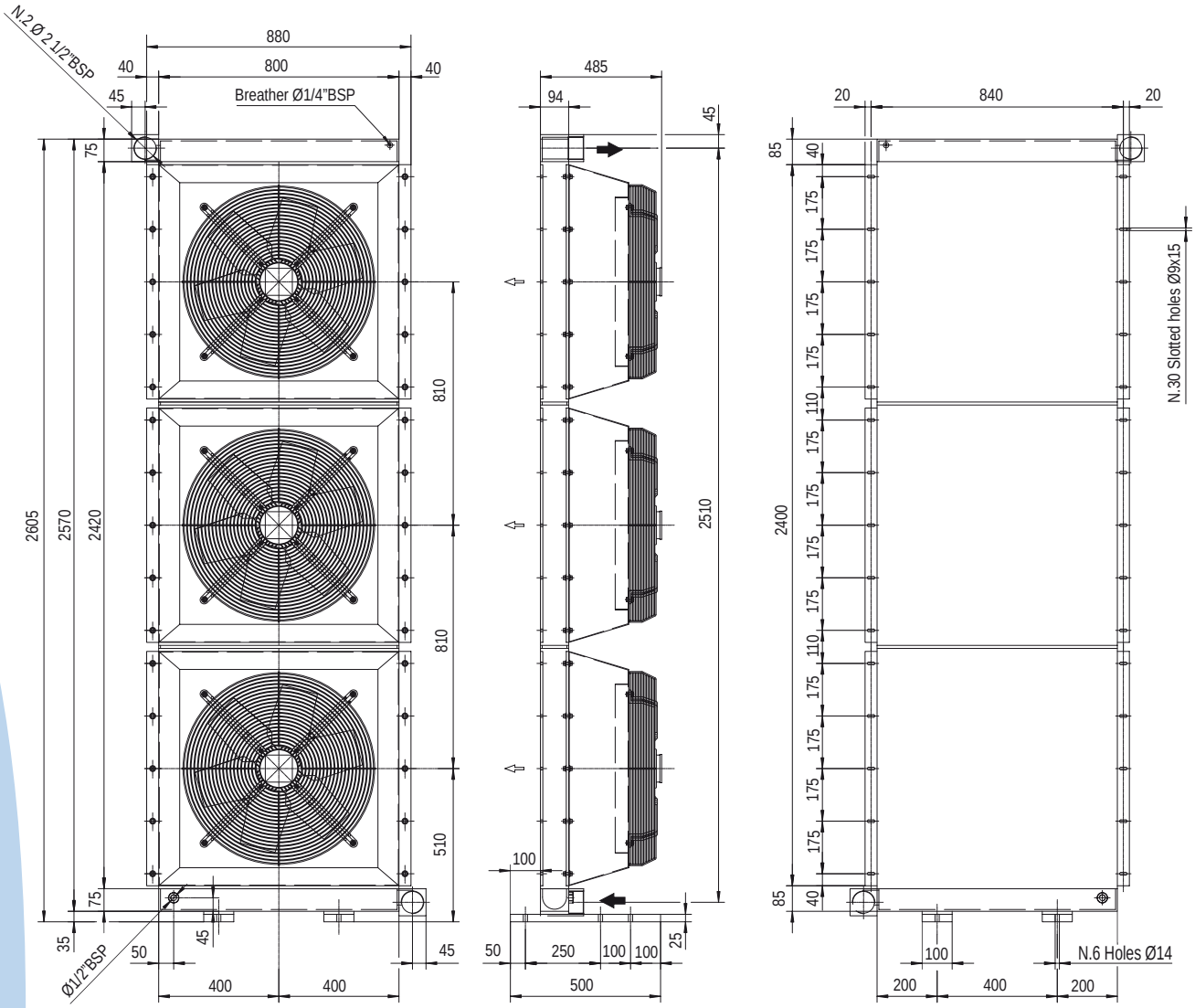
Perdite di carico Pressure drop (ISO VG 32)



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



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

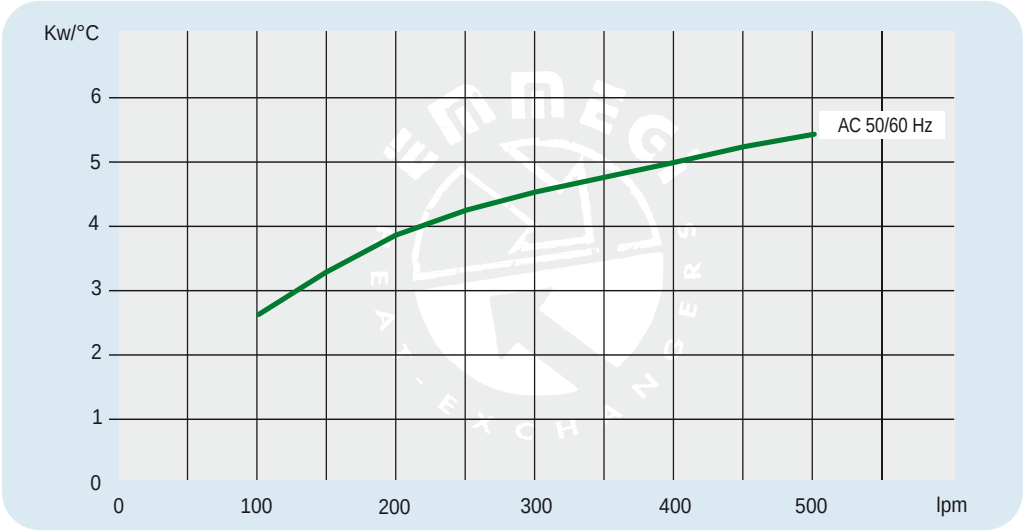
HPA 44 / 3

Dati tecnici Technical Data

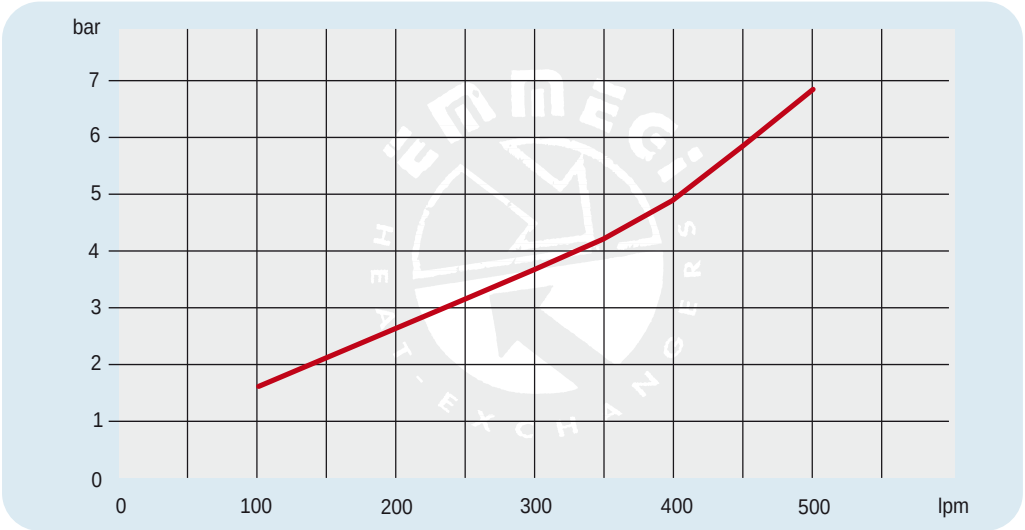
P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
041240B40050#	400 B14 AC	50	1,5	2,7	1378	560	81	10000	54	35	210
041240B40060#	400-460 B14 AC	60	1,5	2,5	1600	560	81	10000	54		210

I dati soprariportati sono riferiti al singolo ventilatore *The data refers to each ventilator*

Diagramma rendimento Performance diagram



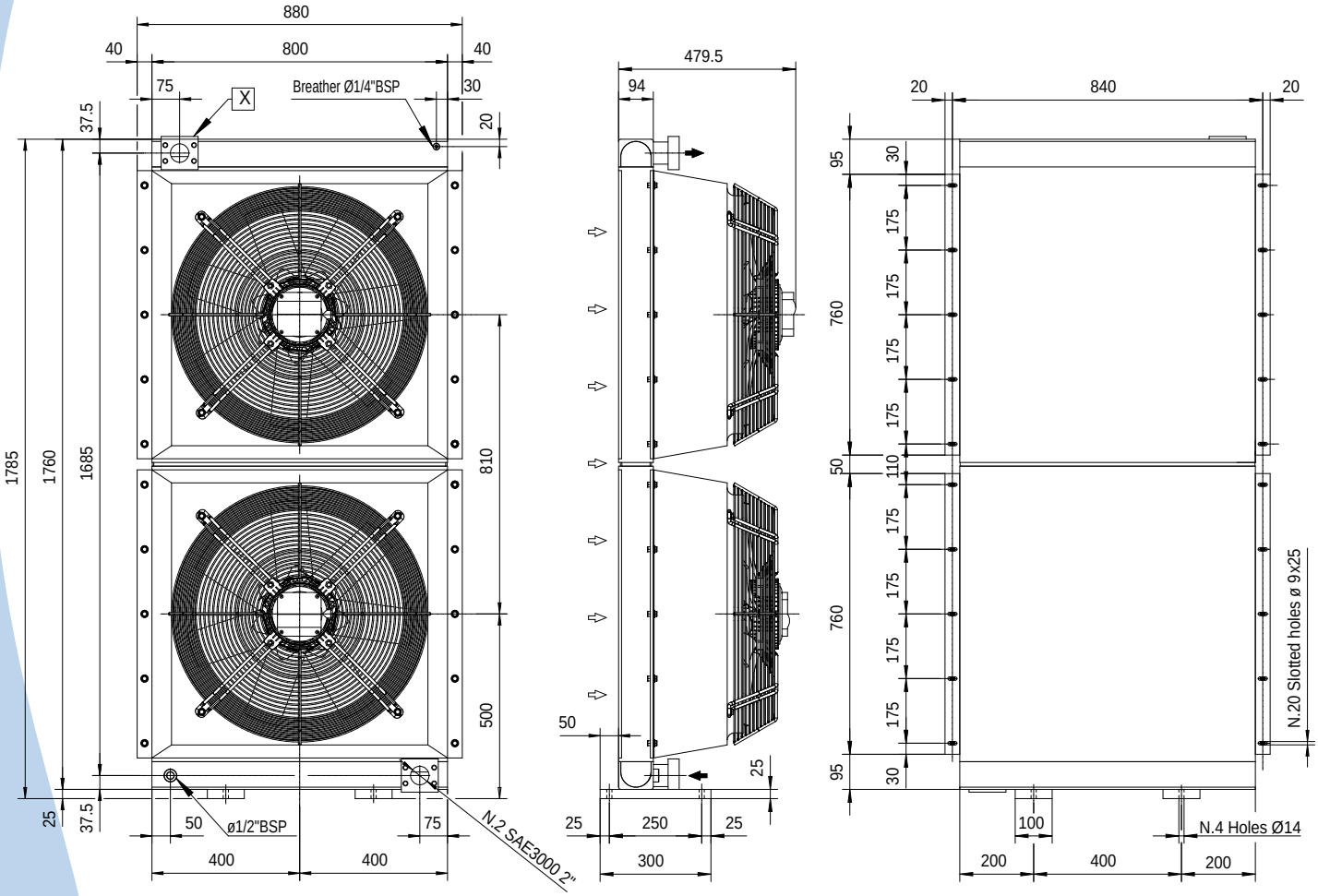
Perdite di carico Pressure drop (ISO VG 32)

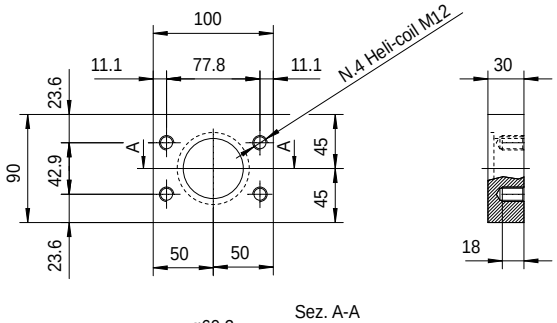


Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

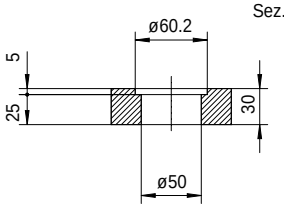
cst	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

Dimensioni Dimensions





Sez. A-A



Part. X

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

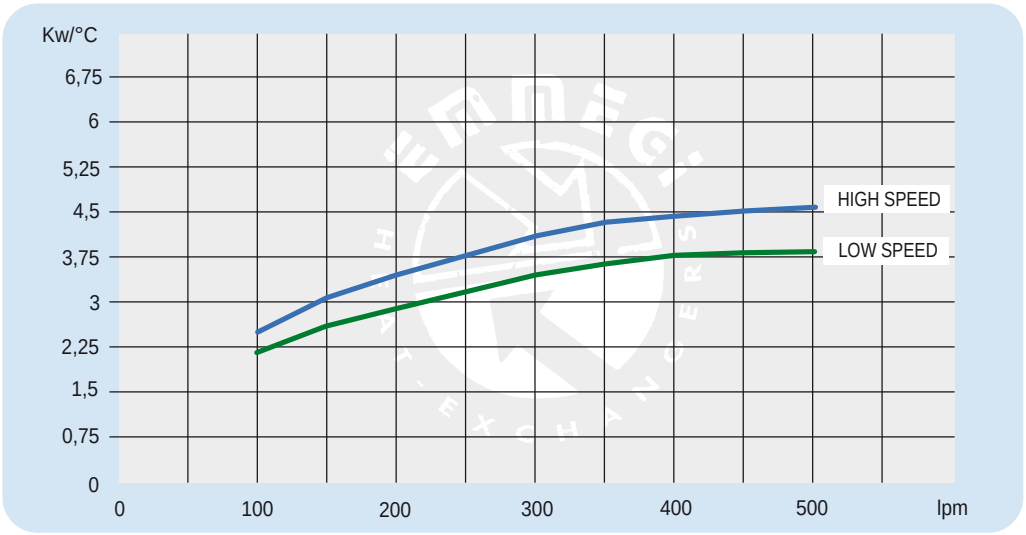
HPA 46 / 2

Dati tecnici Technical Data

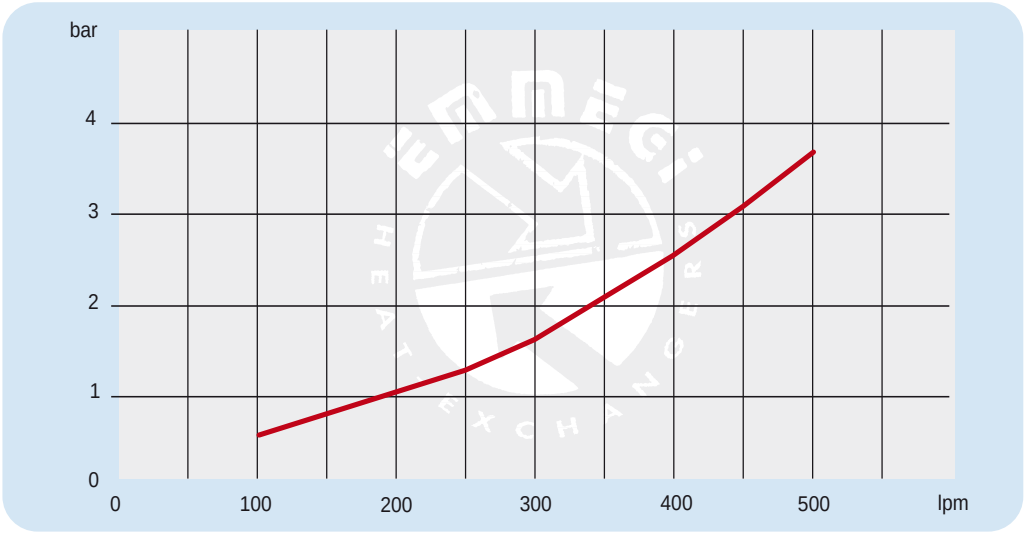
P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/ h)	IP	lt	Kg
A0351004005#1	400 AC (LS) ⅄	50	1,37	2,3	950	630	80	/	54	25	185
A0351004005#1	400 AC (LS) Δ	50	2,1	3,6	1300	630	86	/	54		185

I dati soprariportati sono riferiti al singolo ventilatore *The data refers to each ventilator*

Diagramma rendimento Performance diagram



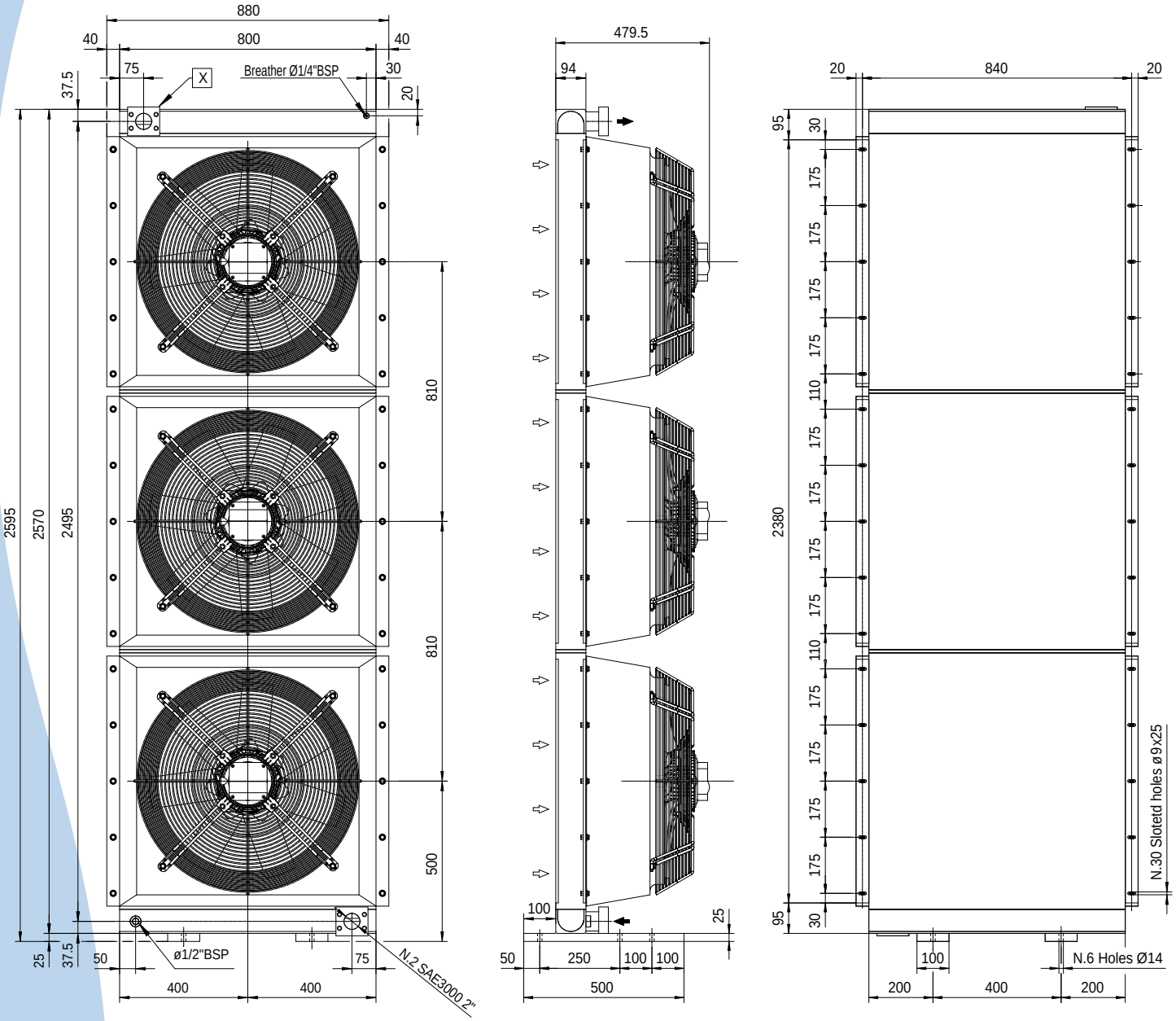
Perdite di carico Pressure drop (ISO VG 32)

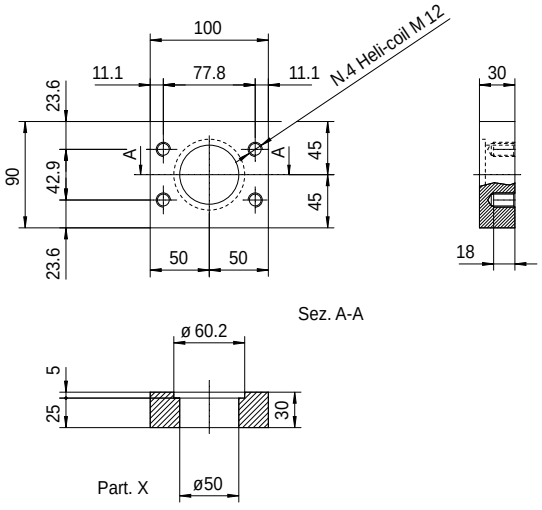


Fattore di correzione - F - (perdite di carico) Correction factor - F - (Pressure drop)

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





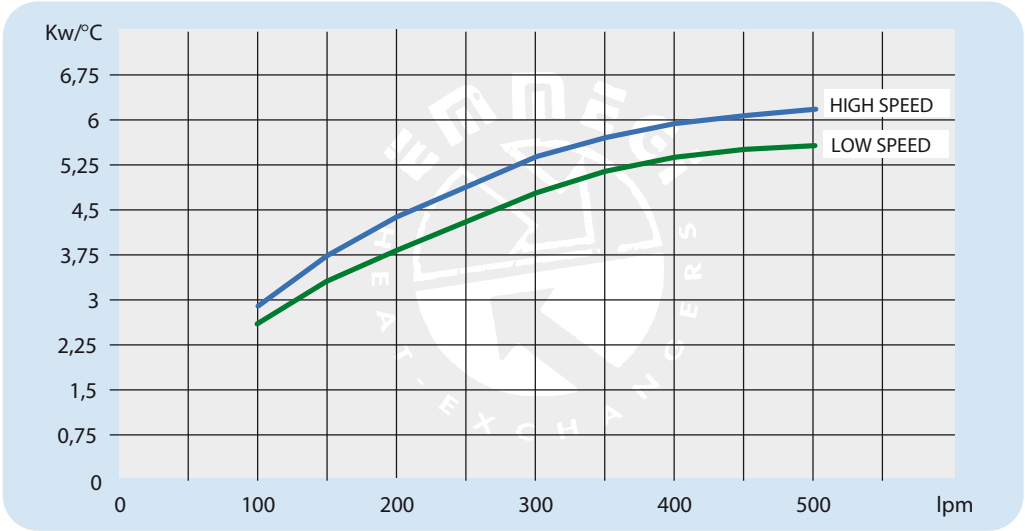
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

Dati tecnici *Technical Data*

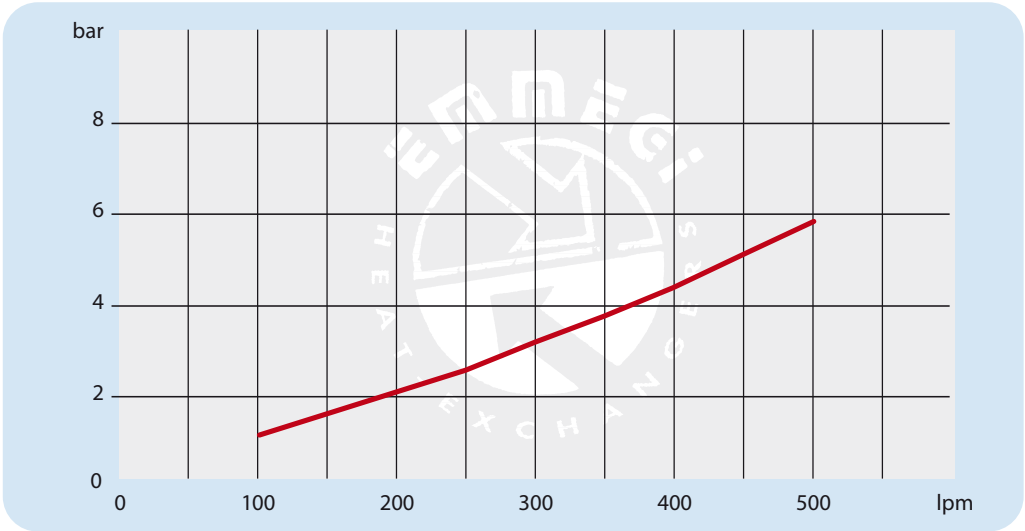
P/N	V	Hz	kW	A	rpm	ø Fan	dB(A)	(m³/h)	IP	lt	Kg
A0352004005#1	400 AC (LS) ⅄	50	1,37	2,3	950	630	80	/	54	35	255
A0352004005#1	400 AC (HS) Δ	50	2,1	3,6	1300	630	86	/	54		255

I dati soprariportati sono riferiti al singolo ventilatore. The data refers to each ventilator.

Diagramma rendimento *Performance diagram*



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



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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