SOCAH HYDRAULIQUE

Catalogue 2023

Echangeurs de température

- **air/huile**

  Séries SS, ST, SSPV, SSV et SSP-SER

- **eau/huile**

  Série SA

cabsoc Group

NOS VALEURS NOUS ENGAGENT

Dans notre entreprise, au sein de Cabsoc Group, nous partageons des valeurs exigeantes que nous veillons à incarner au quotidien :

L'ENGAGEMENT : s'impliquer à 100% dans chaque projet, mettre tout en œuvre pour proposer le meilleur produit et le meilleur service, ne rien lâcher tant que le projet n'est pas finalisé tel qu'il a été demandé. L'engagement c'est aussi des co-équipiers qualifiés, exigeants, et curieux des dernières évolutions de leurs métiers.

LA RÉACTIVITÉ : une organisation centrée Client, déterminée sur le respect des délais, structurée selon des process qualifiés et flexibles, animée par des équipes disponibles et rigoureuses.

L'ENTRAIDE : une culture du faire ensemble, avec toutes nos parties prenantes (co-équipiers, clients, fournisseurs, société civile…), pour répondre aux challenges du quotidien et ceux de demain. Un état d'esprit de coopération, pour faciliter la résolution des difficultés, favoriser la transmission des savoir-faire, nourrir le savoir-être, encourager chacun à faire mieux.

LA SIMPLICITÉ : être simple, c'est être authentique, sans artifice. C'est aller à l'essentiel, rester ouvert, et savoir se remettre en question. Faire simple, c'est avoir le comportement adapté pour… simplifier les choses.

SOCAH HYDRAULIQUE

NOUS CONSTRUISONS DES RELATIONS DURABLES

Nous souhaitons un avenir durable et profitable à nos clients, nos fournisseurs, et nos co-équipiers. Nous avons donc à cœur de vous accompagner dans la durée, avec implication et passion.

Pour bien vous servir nous travaillons en équipes soudées, où chacun peut interagir et compter sur son collègue pour résoudre une difficulté, déterminer collectivement une solution, et améliorer nos produits et services.

Cette ambition se construit tous les jours dans la confiance, par des relations de proximité et de qualité. Nous plaçons l'humain au cœur des richesses de l'entreprise.

Chaque jour nous éprouvons de la satisfaction personnelle à être challengés pour vous accompagner de manière personnalisée dans vos projets.

VOUS ÊTES AU CŒUR DE NOS SERVICES

Pour disposer d'un très large éventail de produits disponibles avec réactivité, nous avons fait le choix de constituer des stocks importants. Notre plateforme logistique et l'organisation de nos équipes permettent un traitement rapide des demandes, avec plusieurs co-équipiers fortement impliqués pour assurer la continuité de service et respecter les délais. Nous disposons également d'une équipe de monteurs qui assemblent les composants et assurent le montage des centrales hydrauliques selon les souhaits.

Nos équipes apportent aussi tout le conseil technique pour bien définir les composants dont les clients ont besoin, ou trouver une solution équivalente et adaptée à ce qu'ils recherchent.

Notre longue expérience et le large spectre des secteurs d'activités pour lesquels nous travaillons permettent en effet à nos salariés de s'adapter aux besoins clients, et d'apporter la solution la plus pertinente.

NOTRE SAVOIR-FAIRE EST RECONNU

Nous sommes l'un des leaders français en négoce de composants hydrauliques et pneumatiques, avec l'un des catalogues les plus complets du marché. Depuis 1980 nous sommes le partenaire des constructeurs et revendeurs de matériels.

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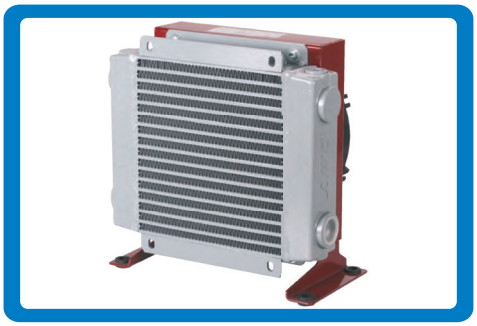
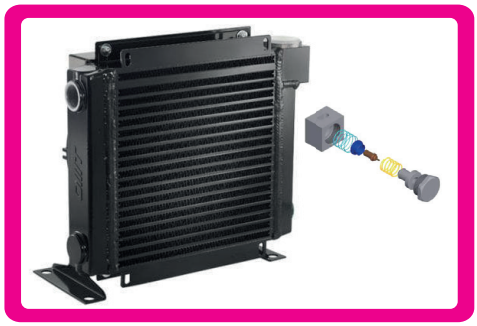




SOCAH HYDRAULIQUE

ECHANGEURS DE TEMPERATURE AIR/HUILE SERIE **S**

ÉCHANGEURS DE TEMPÉRATURE

Série S

Édition Juin 2020

Sommaire

Présentation du produit

Gli scambiatori ARIA-OLIO della OMT, nascono per essere installati sulle linee di ritorno dei circuiti oleodinamici.
La speciale conformazione del pacco radiante, realizzato in lega di alluminio che ne esalta le qualità di conducibilità ed il processo di saldobrasatura dei turbinatori e dei condotti, hanno permesso di ottenere un elevato coefficiente di scambio termico e una buona resistenza alla pressione, qualità ottenuta tramite l'utilizzo di materiali altamente qualificati.

OMT air/oil heat exchangers have been designed to be used on the return line of the hydraulic systems.
The special structure of the cooler element in alu-alloy increases the conductivity quality, and the brase welding process of the conduits allows a high thermic exchange and a good resistance to pressure, obtained by using qualified materials.

Specifiche pacco radiante

Materiale	Alluminio
Pressione di esercizio	25 bar
Pressione di collaudo	35 bar
Temperatura max d'esercizio	120 °C

Radiating mass data

Material	Aluminium
Nominal pressure	25 bar
Test pressure	35 bar
Max temperature	120 °C

Compatibilità con i fluidi

Oli minerali, hl, hlp, emulsioni acqua-olio.

Fluid compatibility

Mineral oils, hl, hlp, water-oil emulsion.

Installazione

È consigliabile installare in parallelo allo scambiatore una valvola di By-pass, per proteggerlo durante la fase di avviamento.

Inoltre assicurarsi di non interporre ostacoli alla portata dell'aria.

Installation

We recommend to install a by-pass valve in parallel to the heat exchanger, for its protection during the starting up. Make sure there is no obstacle to the air flow.

Manutenzione

Pulizia lato olio

Lo sporco potrà essere eliminato con il flussaggio di un prodotto detergente o sgrassante compatibile con l'alluminio. Alla fine di tale operazione bisognerà ricorrere all'aria compressa per eliminare i residui che restano all'interno.

Pulizia lato aria

La pulizia dovrà essere effettuata mediante aria compressa o acqua. Durante tale operazione bisognerà prestare particolare attenzione alla direzione del getto per non rovinare le alette. Se lo sporco è causato da olio o da grasso, la pulizia potrà essere effettuata con un getto di vapore o di acqua calda. Durante tali operazioni il motore elettrico dovrà essere scollegato e adeguatamente protetto.

Maintenance

Oil side cleaning

LFlushing with a detergent or a degreasing product compatible with aluminium, eliminates the dirt.
To remove the residuals, use compressed air.

Air side cleaning

It can be done by using compressed air or water and paying attention to the jet direction for not spoiling the vanes. If oil or grease has to be removed, clean with a jet of steam or hot water. Make sure that the electric motor is disconnected and properly protected.

MATERIALI UTILIZZATI

Ventola	Acciaio o plastica rinforzata
Convogliatore	Acciaio o plastica rinforzata
Griglia di protezione	Acciaio o plastica rinforzata

MATERIALS

Fan	Steel or hard plastic
Fan case	Steel or hard plastic
Fan protection	Steel or hard plastic

Déterminez votre échangeur de température

Di seguito sono riportati tre differenti famiglie di scambiatori:
- **serie "SS"** standard
- **serie "SS2"** con doppio passaggio per portate ridotte, ma con maggiore potenzialità di scambio termico
- **serie "SD"** per portate elevate.

Sull'asse delle ascisse viene indicata la portata d'olio che attraversa lo scambiatore, espressa in (lt/min), mentre sulle ordinate è indicato il rendimento di dissipazione per ogni grado centigrado, espresso in (kcal/h °C); oppure in (kW/°C).
Il calore specifico di dissipazione (η) è dato dal rapporto tra la potenzialità termica (Q) dello scambiatore e la differenza di temperatura tra l'olio in entrata e la temperatura ambiente (T°olio - T°aria), con la seguente formula:

$$\eta = \frac{Q\ (kcal/h)}{T^{o}olio - T^{o}aria\ (^{o}C)}$$

Supponendo che lo scambiatore possa dissipare 3000 (kcal/h) e si abbia una differenza di temperatura (T°olio - T°aria) = 30(°C):

$$\eta = \frac{3000\ (kcal/h)}{30\ (^{o}C)} = 100\ (kcal/h\ ^{o}C)$$

Nel caso in cui non sia nota la potenzialità termica (Q) dello scambiatore è possibile calcolarla empiricamente con la seguente formula:

$Q = 0,40 \cdot V \cdot \Delta to$

Dove:
V = portata olio in (lt/h)
Δto = differenza temp. tra olio in entrata e in uscita

0,40 è un valore approssimato o utilizzabile per olio idraulico (nel caso non se ne conoscano il peso specifico e il calore specifico).

0,40 (kcal/lt°C) = c·y
dove:
C = calore specifico (kcal/kg°C)
Y = peso specifico (kg/dm^3)

Supponendo di avere una portata di 6000 (lt/h) e una differenza di temperatura tra olio in ingresso e olio in uscita (Δto) di 8 (°C) la potenzialità termica dello scambiatore è:

$Q = 0,40 \cdot 6000\ 8 = 19200$ kcal/h

Here you can find three different series of exchangers:
- **series "SS"** standard
- **series "SS2"** with double passage for reduced flows, but with bigger power of heat exchange
- **series "SD"** for high flows.

On the abscissas you can find the oil flow going through the exchanger, expressed in (lt/min), while on the ordinates you can find the dissipation performance for each centigrade degree, expressed in (kcal/h °C); or in (kW/°C).
The specific dissipation heat (η) is the result of the ratio between thermic power (Q) of the exchanger and the difference of the temperature between oil input and the ambient temperature (oil T° - air T°), using the following formula:

$$\eta = \frac{Q\ (kcal/h)}{oil\ T^{o} - air\ T^{o}\ (^{o}C)}$$

Supposing the exchanger can dissipate 3000 (kcal/h) and you have a temperature difference (oil T° - air T°) = 30 (°C):

$$\eta = \frac{3000\ (kcal/h)}{30\ (^{o}C)} = 100\ (kcal/h\ ^{o}C)$$

When the thermic power (Q) of the exchanger is unknown, it is possible to calculate it empirically using the following formula:

$Q = 0,40 \cdot V \cdot \Delta to$

Where:
V = oil flow in (lt/h)
Δto = temperature difference between oil in and out

0,40 is an approximate value or it can be used for hydraulic oil (when specific weight and specific heat are unknown).

0,40 (kcal/lt°C) = c·y
dove:
C = specific heat (kcal/kg°C)
Y = specific weight (kg/dm^3)

Supposing the flow is 6000 (lt/h) and the difference between oil in and out (Δto) is 8 (°C) the thermic power of the exchanger is:

$Q = 0,40 \cdot 6000\ 8 = 19200$ kcal/h

Le curve riportate a catalogo sono valide dal momento in cui si aziona il gruppo di raffreddamento.

La gamma OMT prevede diversi tipi di motorizzazione. Spazia dal motore in C.A. monofase, trifase e trifase unificato B14, a quello in C.C. 12-24V, oltre alla possibilità della predisposizione per il motore idraulico. È consigliato l'utilizzo della tipologia B14 nel momento in cui l'apparecchio ha un funzionamento continuo.

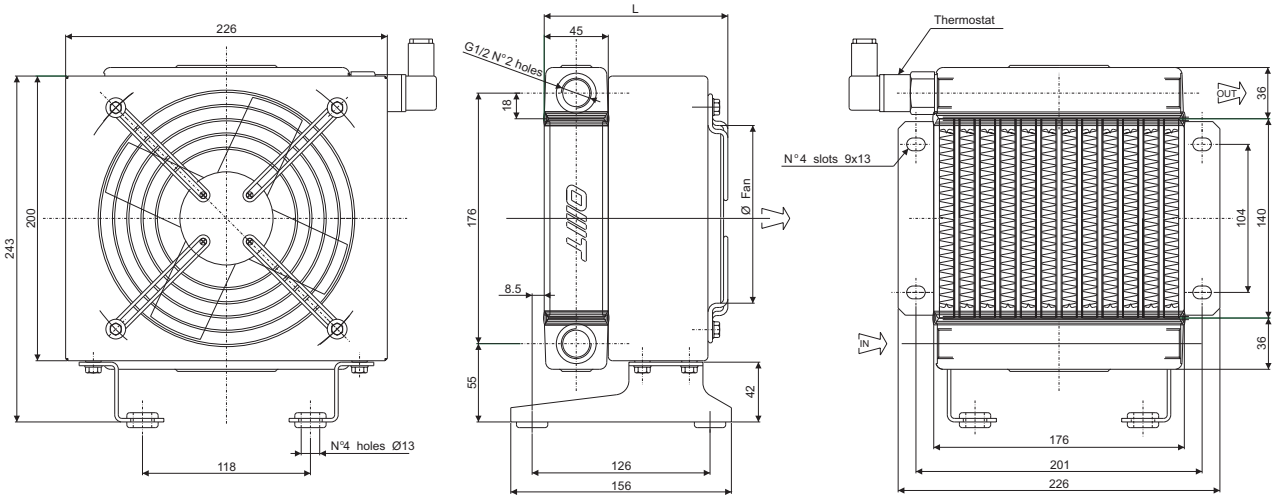
The above curves are valid when the cooler element is activated.

OMT range offers various types of motors. It ranges from C.A. single-phase, three-phase and B14 standardized three-phase motor to C.C. 12-24V motor, in addition to the possibility of the prearrangement for hydraulic motor. We advice the use of B14 type when the equipment runs continuously.

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	2600/2980	0.023/0.026	170	50	122	500	0.28	6	44
03	50/60	380	1470/1750	0.032/0.027	170	45	122	500	0.28	6	44
12	DC	12	4101	0.076	167	71	167	569	0.28	5	68
24	DC	24	4101	0.076	167	71	167	560	0.28	5	68

Portata olio consigliata da 5 a 40 (lt/min)
Suggested oil flow from 5 to 40 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)

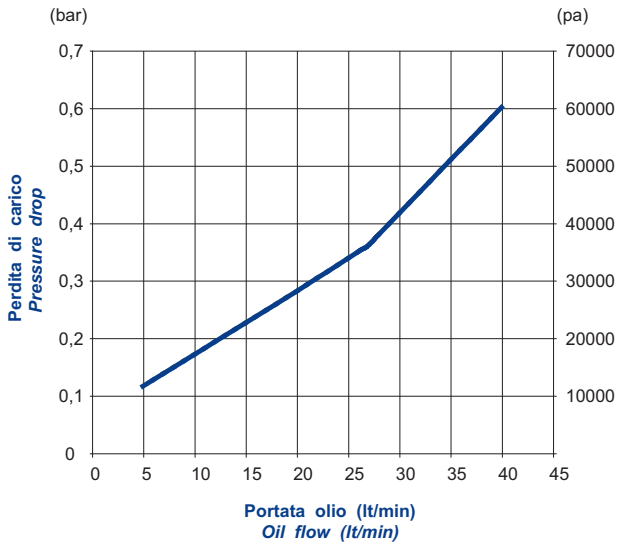
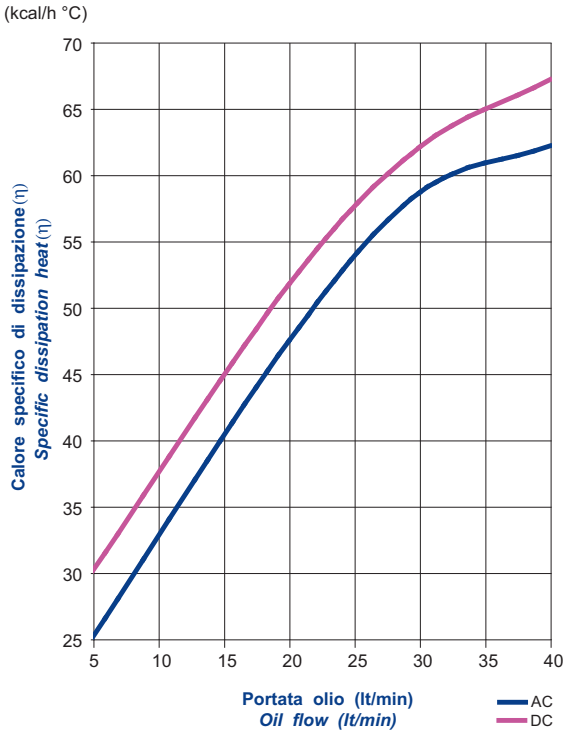


Diagramma di rendimento
Performance diagram

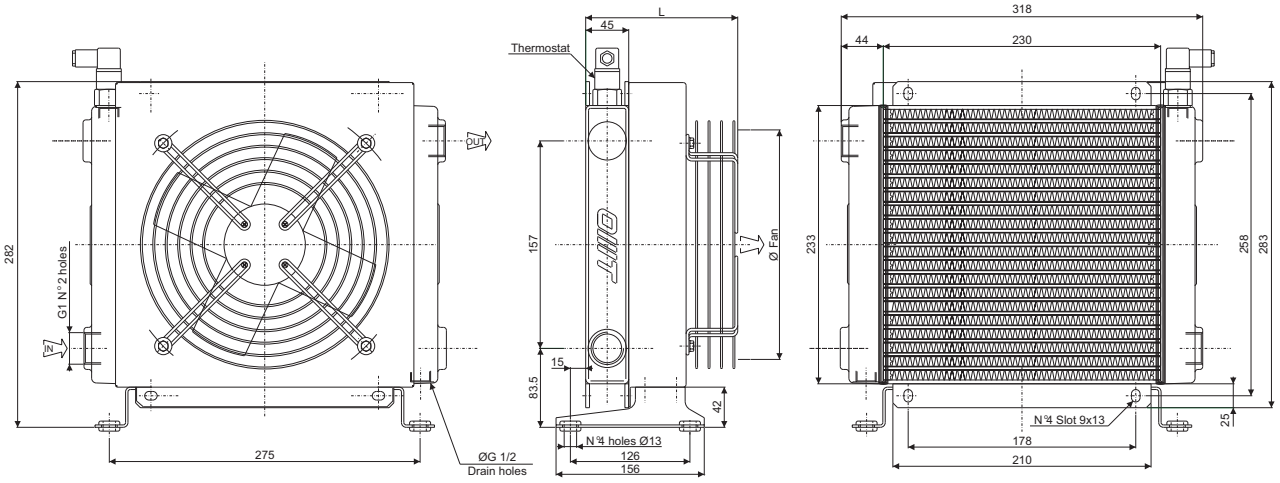


Type SS15

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	2500/2700	0.055/0.060	200	55	170.5	715	0.48	7	44
03	50/60	380	1400/1650	0.035/0.030	200	50	170.5	340	0.48	7	44
14	50 60	230/400 276/480	1350 1620	0.25 0.30	200	67	347	700	0.48	10	55
12	DC	12	3305	0.087	225	75	157	999	0.48	6.5	68
24	DC	24	3305	0.087	225	75	157	994	0.48	6.5	68
G2	-	-	-	-	200	-	200.5	-	0.48	6	-

Portata olio consigliata da 20 a 80 (lt/min)
Suggested oil flow from 20 to 80 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

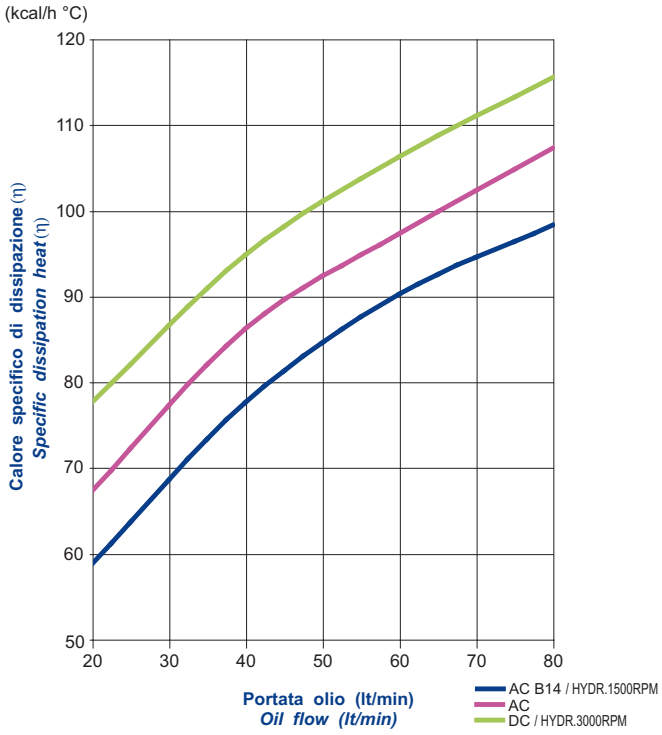
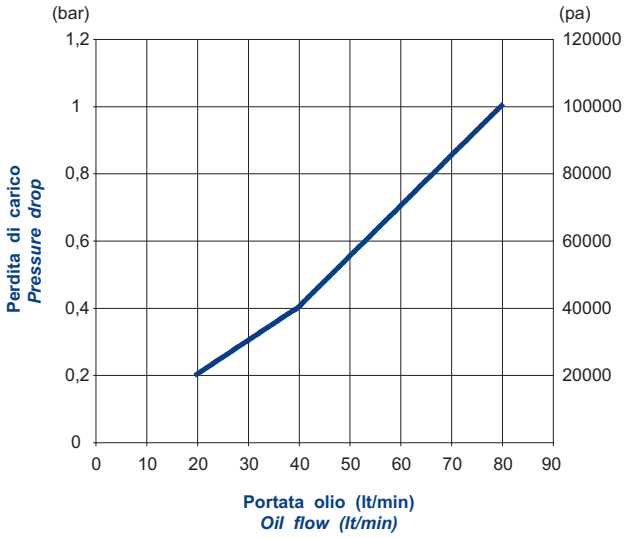


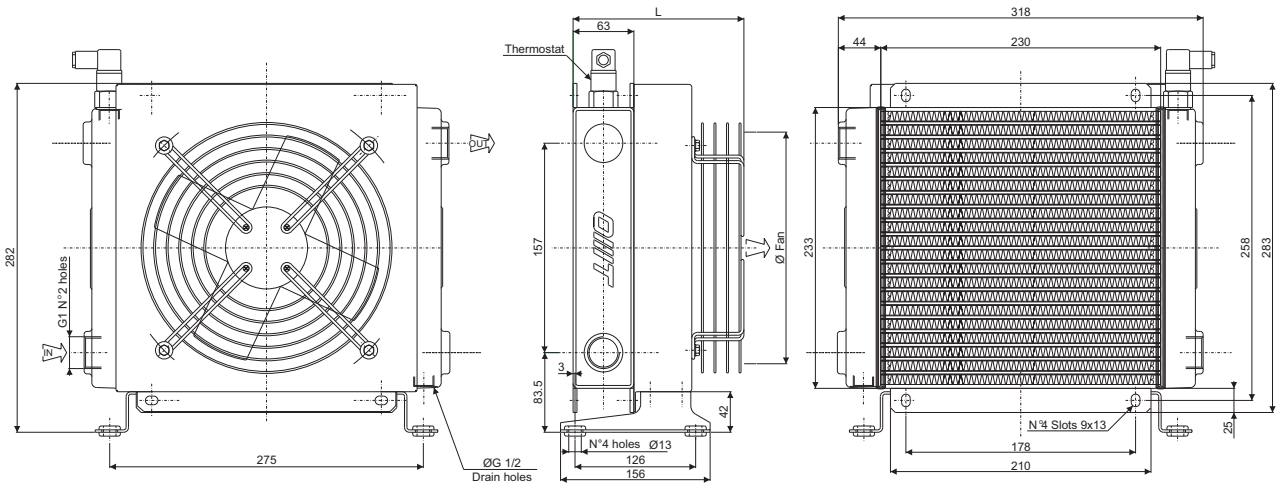
Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)



CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	2500/2700	0.055/0.060	200	55	188.5	715	0.68	8	44
03	50/60	380	1400/1650	0.035/0.030	200	50	188.5	340	0.68	8	44
14	50 60	230/400 276/480	1350 1620	0.25 0.30	200	67	365	700	0.68	11	55
12	DC	12	3305	0.087	225	75	175	999	0.68	7	68
24	DC	24	3305	0.087	225	75	175	994	0.68	7	68
G2	-	-	-	-	200	-	218.5	-	0.68	7	-

Portata olio consigliata da 30 a 100 (lt/min)
Suggested oil flow from 30 to 100 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)

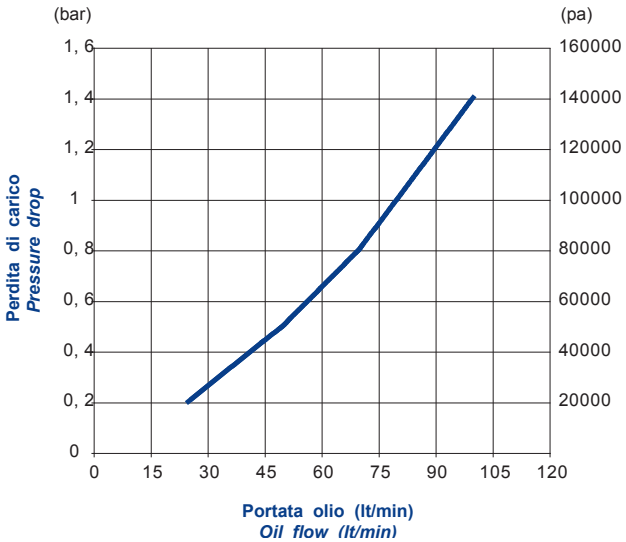
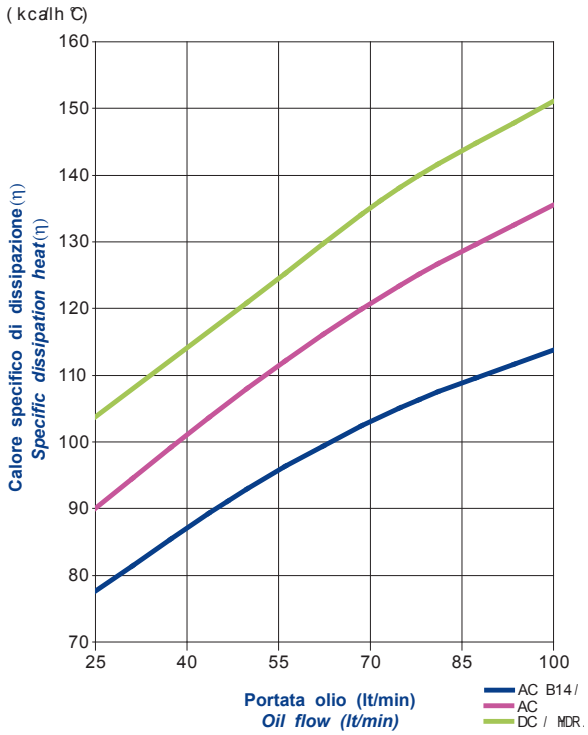


Diagramma di rendimento
Performance diagram



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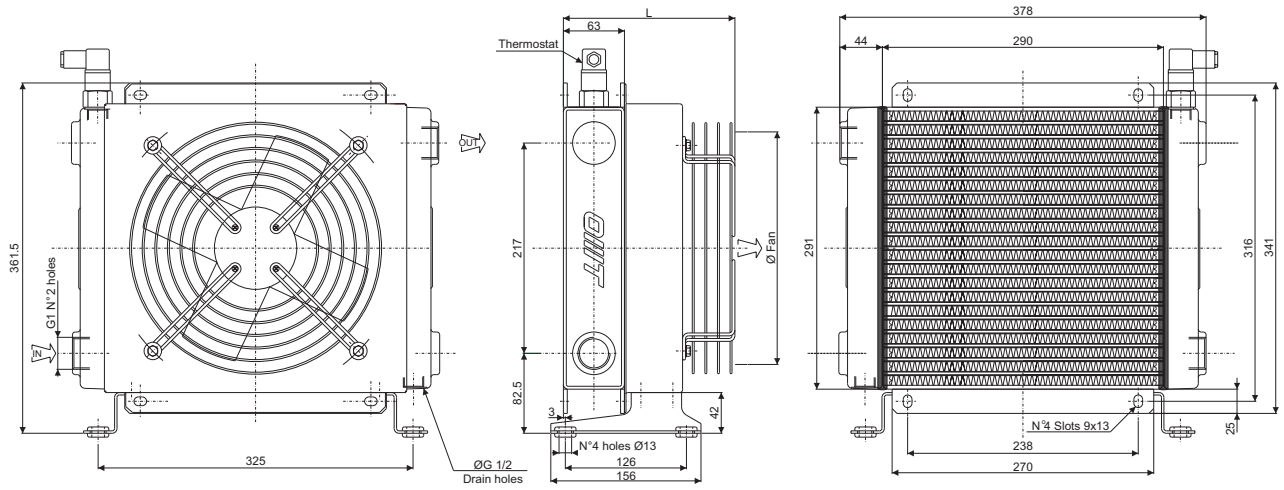
SOCAH HYDRAULIQUE

Type SS24

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	2400/2750	0.080/0.090	250	62	178	1080	0.9	11	44
03	50/60	400	1400/1650	0.055/0.052	250	58	178	830	0.9	11	44
14	50 60	230/400 276/480	1350 1620	0.25 0.30	250	68	364	1500	0.9	15.5	55
12	DC	12	3005	0.106	280	74	175	1404	0.9	10	68
24	DC	24	3005	0.106	280	74	175	1477	0.9	10	68
G2	-	-	-	-	250	-	217.5	-	0.9	10	-

Portata olio consigliata da 40 a 120 (lt/min)
Suggested oil flow from 40 to 120 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

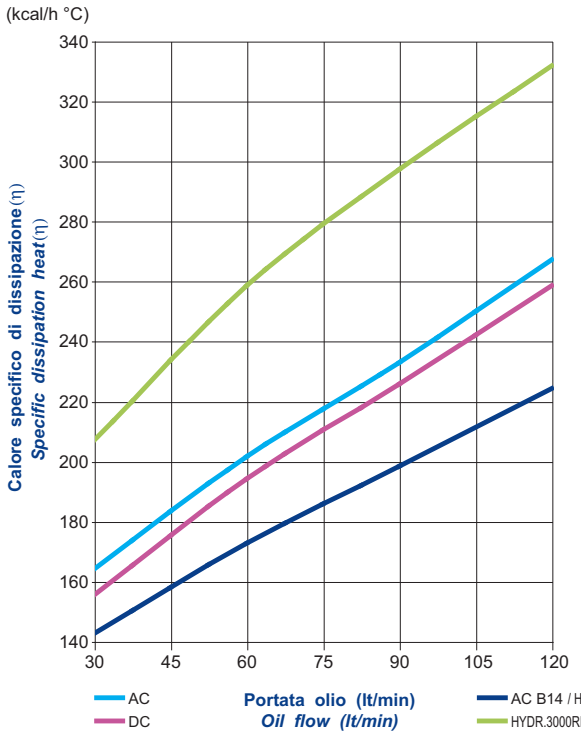
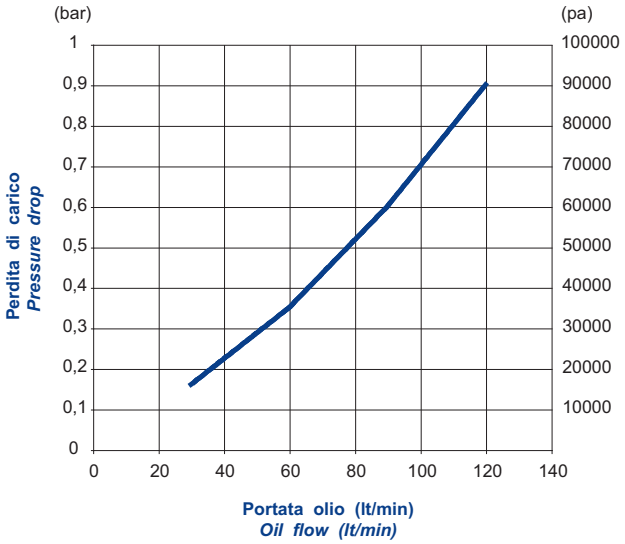


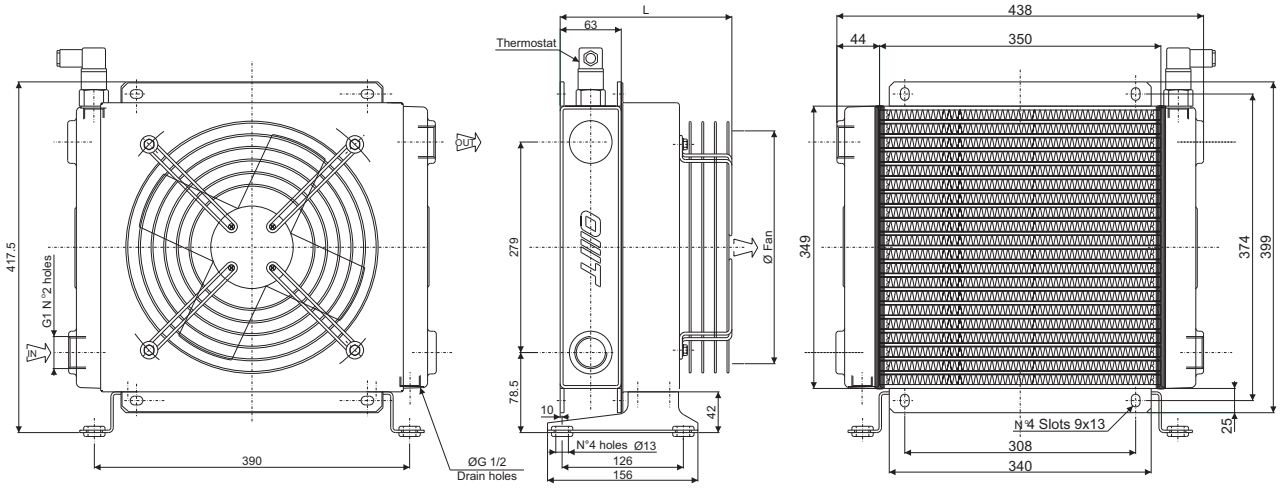
Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)



CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	2300/2250	0.145/0.175	300	62	213	2010	1.5	15	44
03	50/60	380	1380/1550	0.075/0.095	300	64	213	1870	1.5	15	44
14	50 60	230/400 276/480	1370 1640	0.37 0.44	300	69	408	2000	1.5	20	55
12	DC	12	3090	0.218	305	82	217	2617	1.5	14	68
24	DC	24	3090	0.218	305	82	217	2324	1.5	14	68
G2	-	-	-	-	300	-	226.5	-	1.5	14.5	-

Portata olio consigliata da 35 a 140 (lt/min)
Suggested oil flow from 35 to 140 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

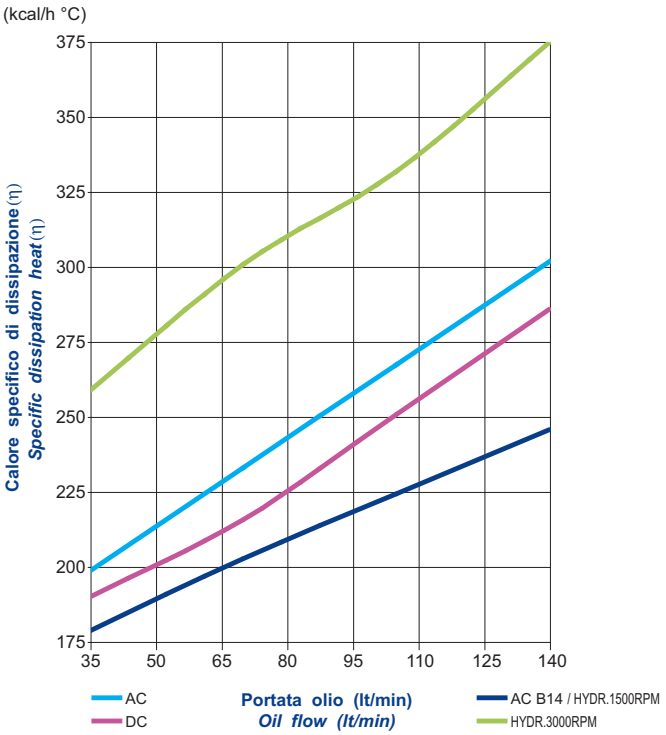
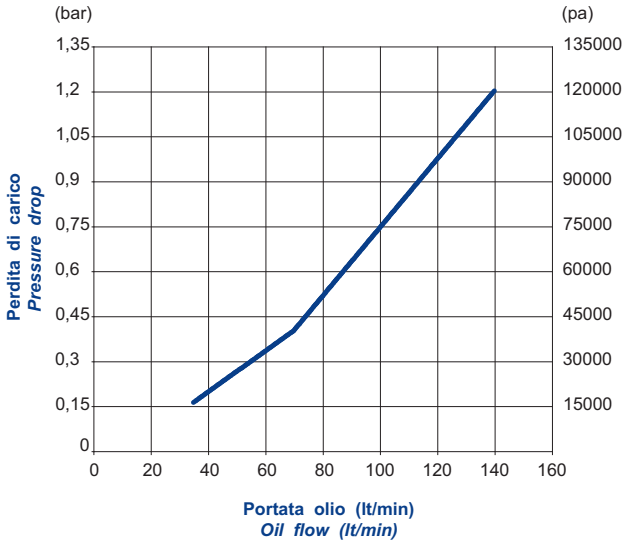


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)

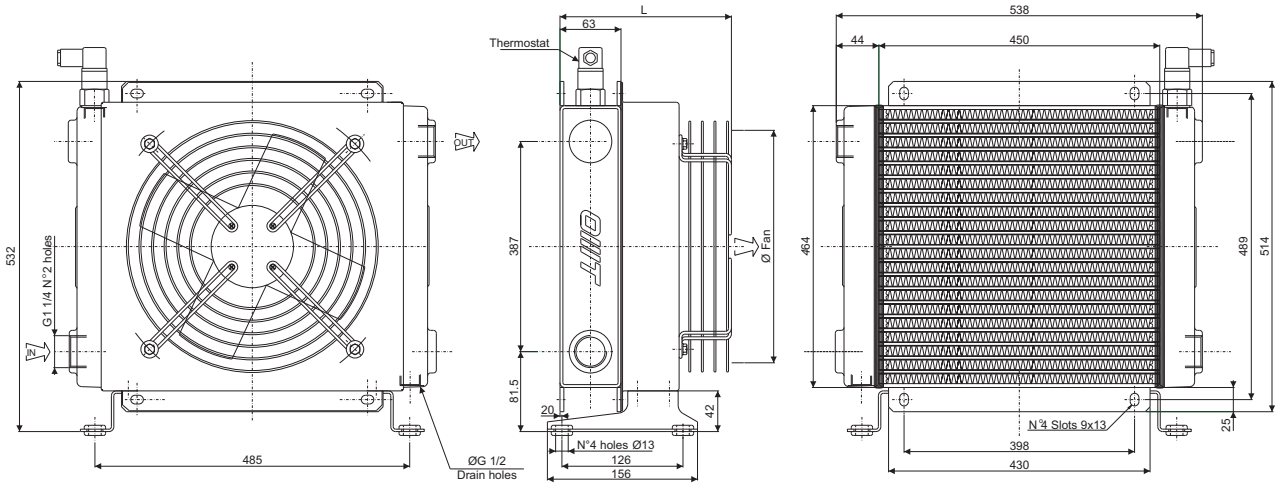


Type SS40

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	1380/1550	0.18/0.25	400	62	233	4000	2.6	21	44
03	50/60	380	1380/1520	0.18/0.25	400	70	233	4375	2.6	21	44
14	50 60	230/400 276/480	1390 1685	0.55 0.66	400	71	438	4000	2.6	25	55
12	DC	12	2248	0.151	385	77	206	2950	2.6	20	68
24	DC	24	2248	0.151	385	77	206	3101	2.6	20	68
G2	-	-	-	-	400	-	235.5	-	2.6	19	-

Portata olio consigliata da 40 a 160 (lt/min)
Suggested oil flow from 40 to 160 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

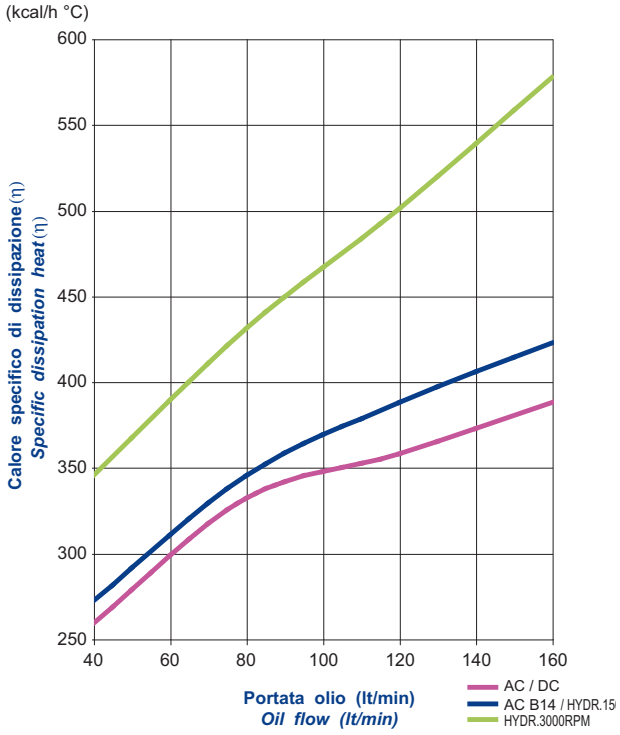
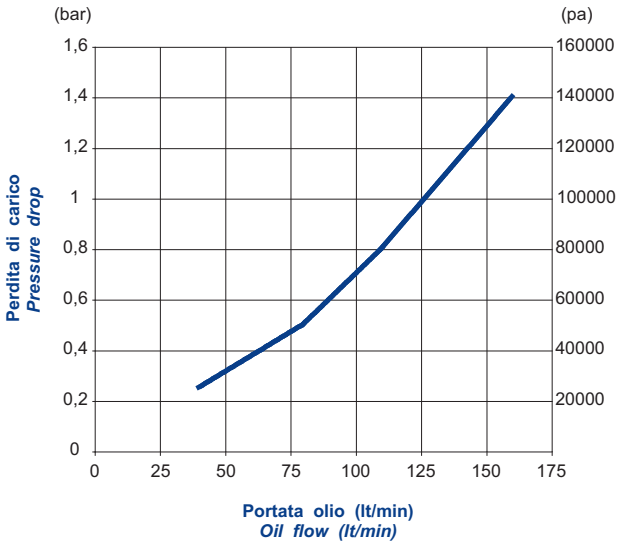


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)

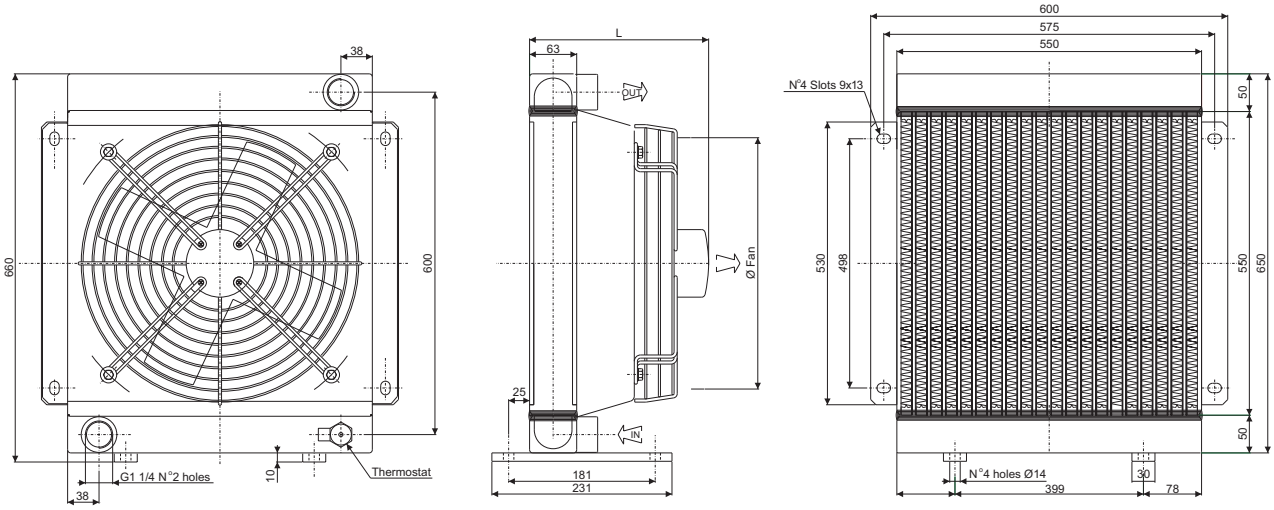


CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
03	50/60	230/400	1380/1540	0.2/0.28	450	75	183	6040	4.9	27	44
14	50 60	230/400 276/480	1390 1685	0.75 0.90	450	73	445	6830	4.9	30	55
12	DC	12	3005	0.106	280	74	237,5	4200	4.9	24	68
24	DC	24	3005	0.106	280	74	237.5	4200	4.9	24	68
G2	-	-	-	-	450	-	243.5	-	4.9	23	-

Portata olio consigliata da 50 a 180 (lt/min)
Suggested oil flow from 50 to 180 (lt/min)

(x2) = doppio motore
(x2) = double engine



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

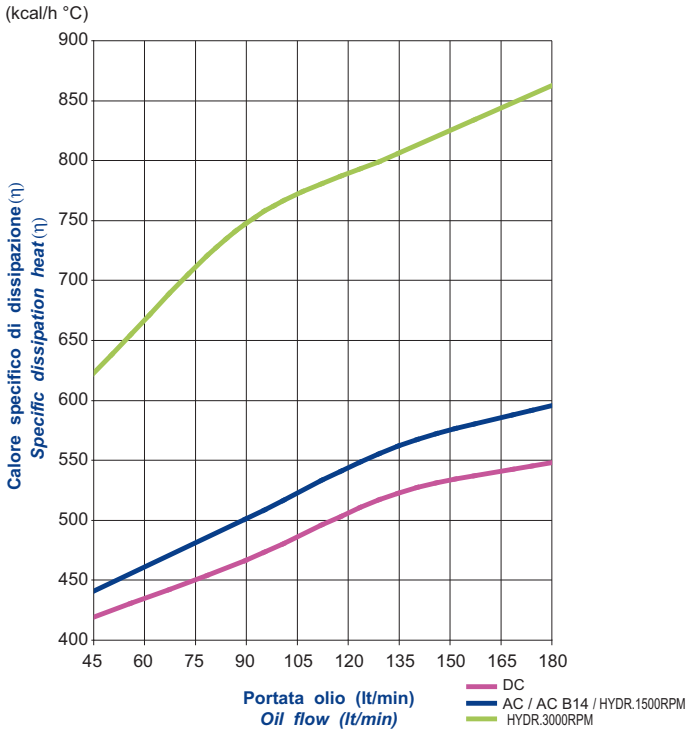
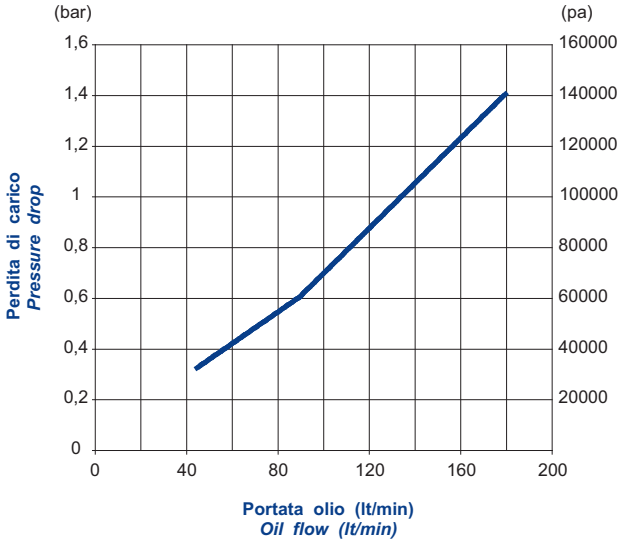


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)

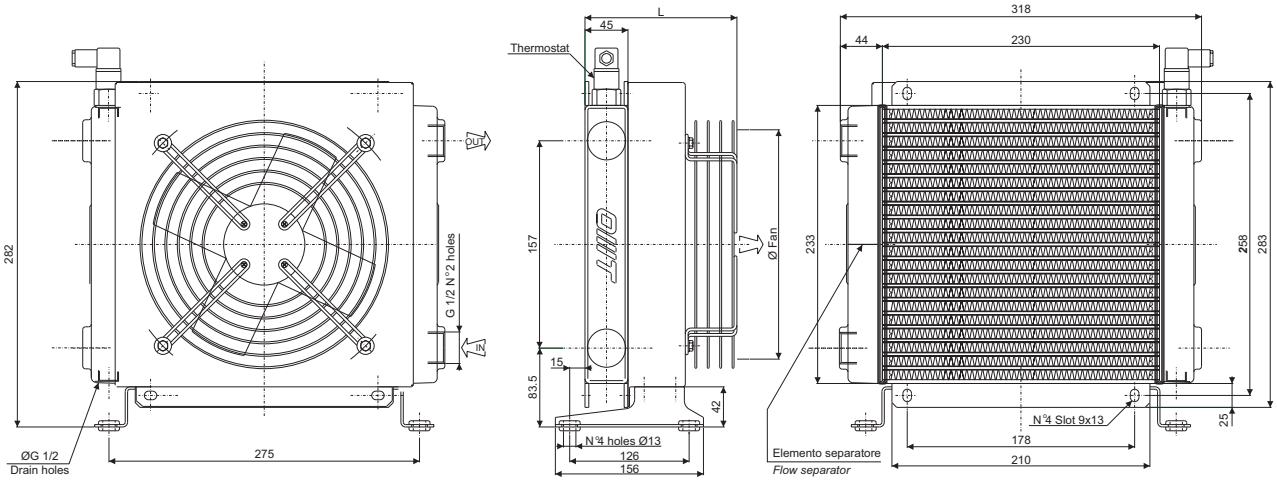


Type SS215-2PASS

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	2500/2700	0.055/0.060	200	55	188.5	715	0.48	7	44
03	50/60	380	1400/1650	0.035/0.030	200	50	188.5	340	0.48	7	44
14	50 60	230/400 276/480	1350 1620	0.25 0.30	200	67	347	700	0.48	10	55
12	DC	12	3305	0.087	225	75	175	999	0.48	6.5	68
24	DC	24	3305	0.087	225	75	175	994	0.48	6.5	68
G2	-	-	-	-	200	-	200.5	-	0.48	6	-

Portata olio consigliata da 5 a 40 (lt/min)
Suggested oil flow from 5 to 40 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

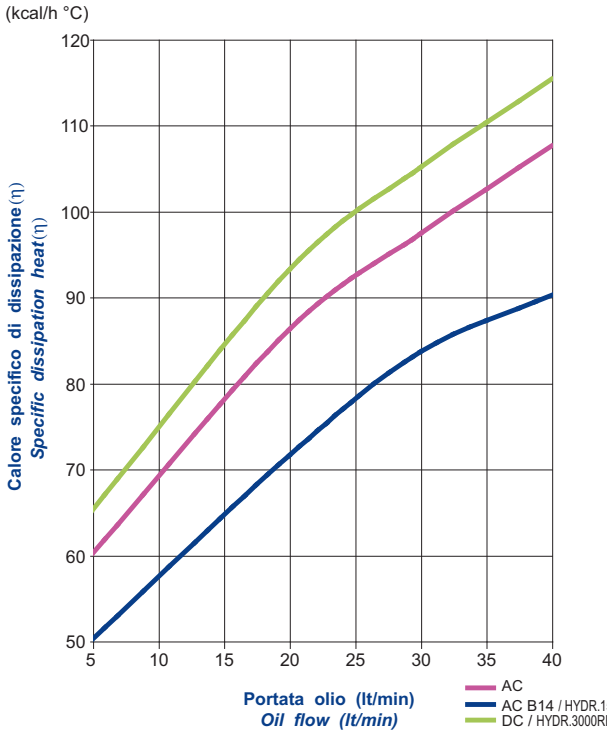
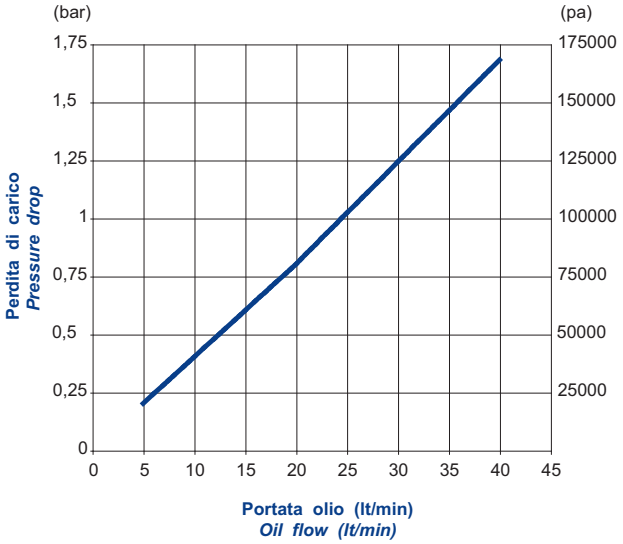


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)



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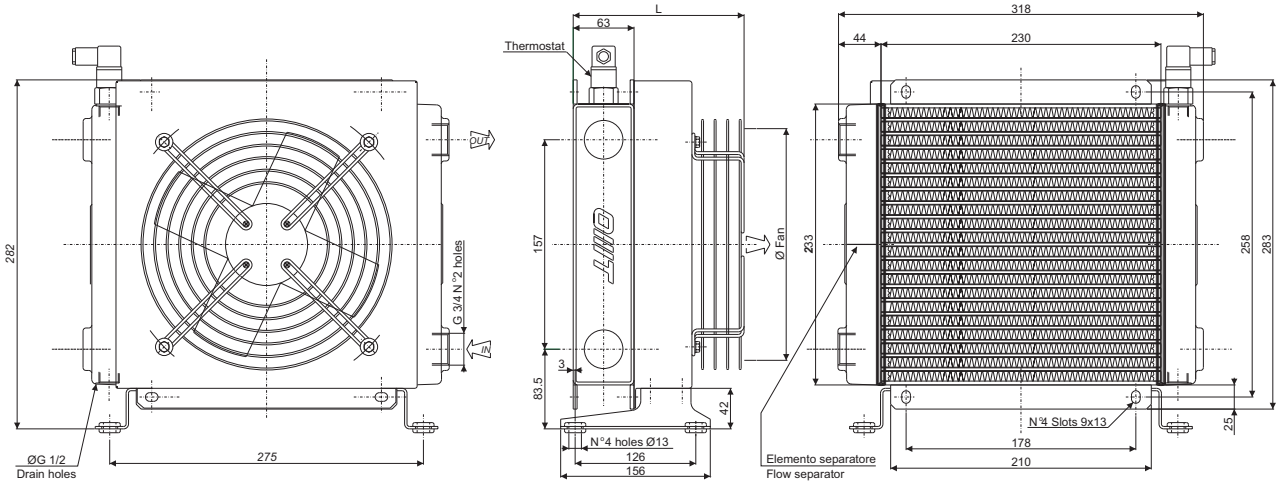
CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	2500/2700	0.055/0.060	200	55	188.5	715	0.68	8	44
03	50/60	380	1400/1650	0.035/0.030	200	50	188.5	340	0.68	8	44
14	50 60	230/400 276/480	1350 1620	0.25 0.30	200	67	365	700	0.68	11	55
12	DC	12	3305	0.087	225	75	175	999	0.68	7	68
24	DC	24	3305	0.087	225	75	175	994	0.68	7	68
G2	-	-	-	-	200	-	218.5	-	0.68	7	-

Portata olio consigliata da 5 a 40 (lt/min)
Suggested oil flow from 5 to 40 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

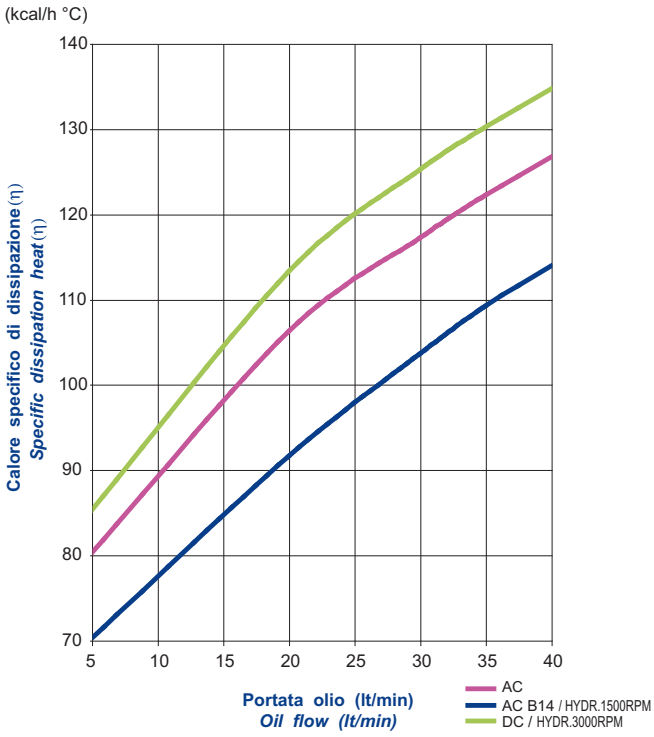
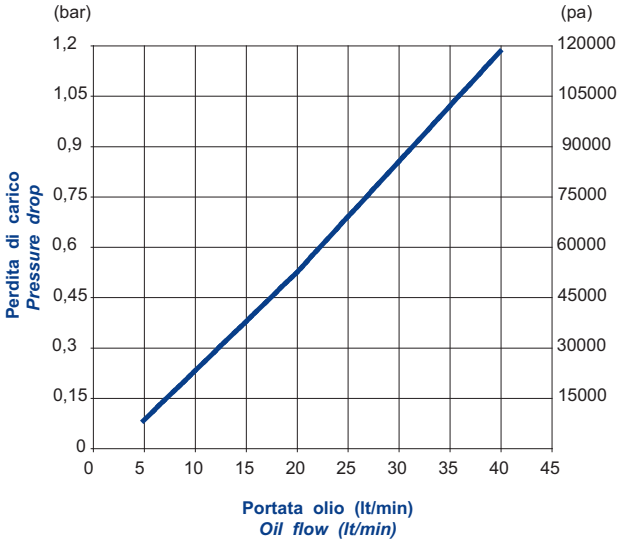


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)



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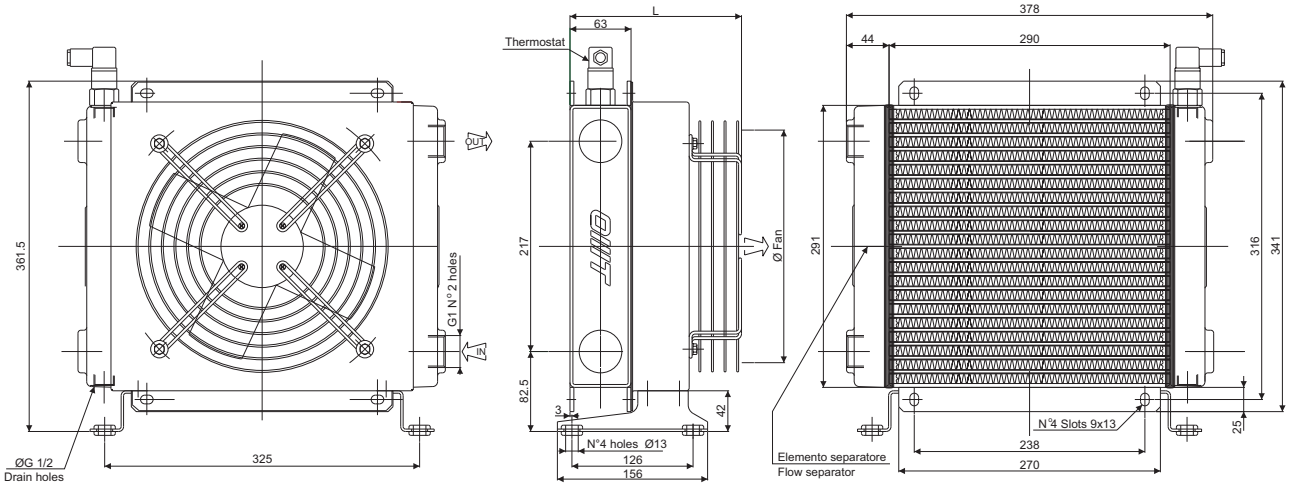
Type SS224-2PASS

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	2400/2750	0.080/0.090	250	62	178	1080	0.9	11	44
03	50/60	400	1400/1650	0.055/0.030	250	58	178	830	0.9	11	44
14	50 60	230/400 276/480	1350 1620	0.25 0.30	250	67	364	1500	0.9	15,5	55
12	DC	12	3005	0.106	280	74	175	1404	0.9	10	68
24	DC	24	3005	0.106	280	74	175	1477	0.9	10	68
G2	-	-	-	-	250	-	217.5	-	0.9	10	-

Portata olio consigliata da 10 a 60 (lt/min)
Suggested oil flow from 10 to 60 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

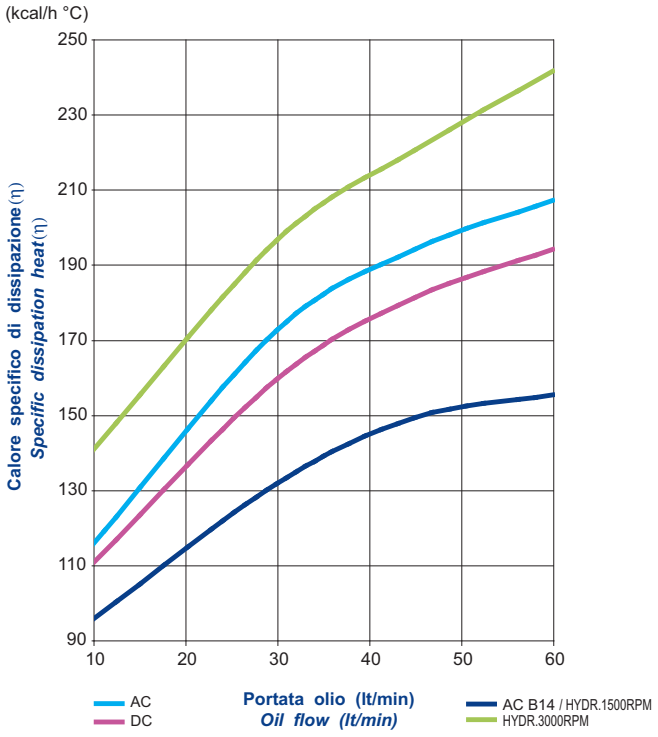
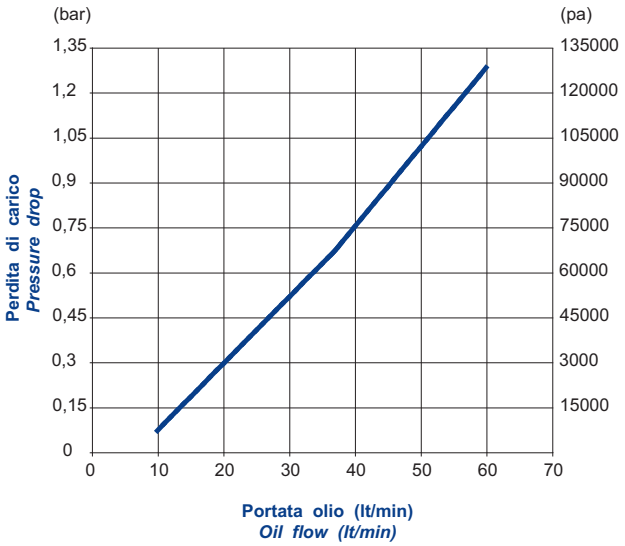


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)



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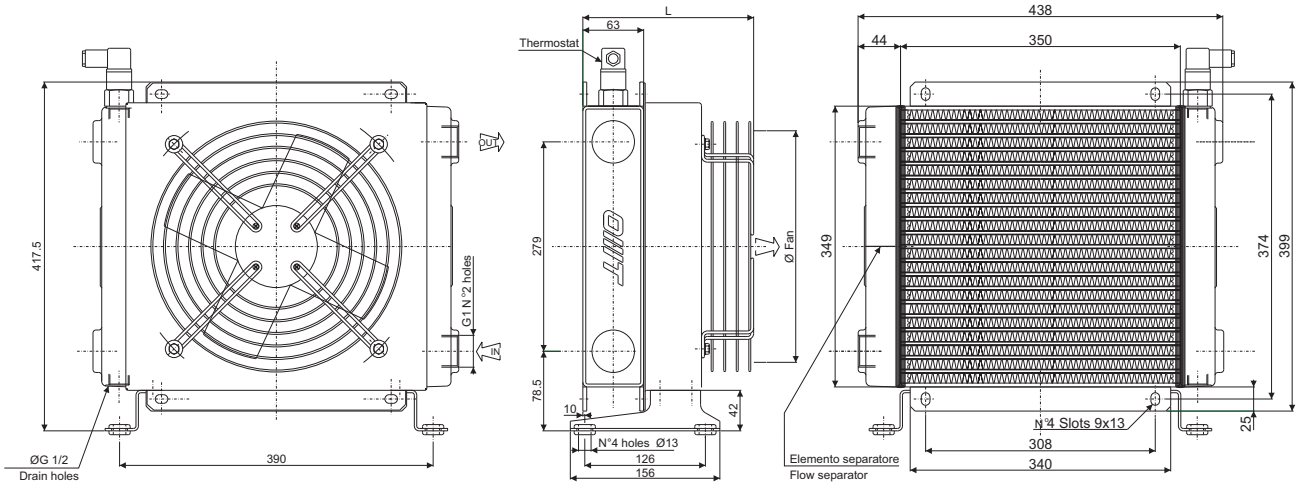
Type SS230-2PASS

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	2300/2250	0.145/0.175	300	62	213	2010	1.5	15	44
03	50/60	380	1380/1550	0.075/0.095	300	64	213	1870	1.5	15	44
14	50 60	230/400 276/480	1370 1640	0.37 0.44	300	69	408	2000	1.5	20	55
12	DC	12	3090	0.218	305	82	217	2616	1.5	14	68
24	DC	24	3090	0.218	305	82	217	2324	1.5	14	68
G2	-	-	-	-	300	-	226.5	-	1.5	14.5	-

Portata olio consigliata da 15 a 60 (lt/min)
Suggested oil flow from 15 to 60 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)

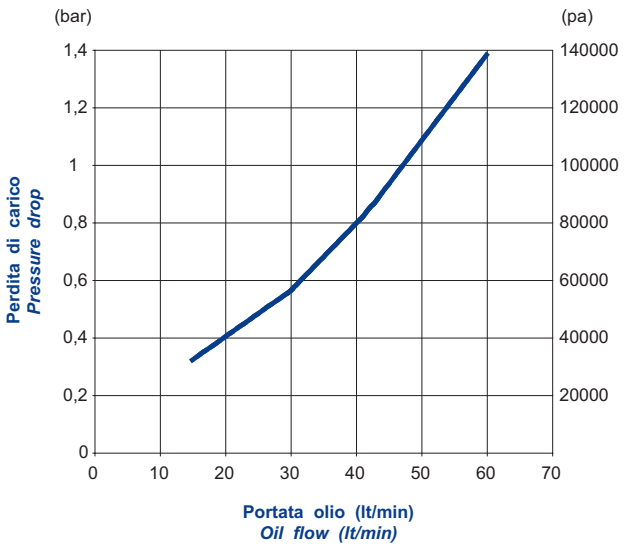
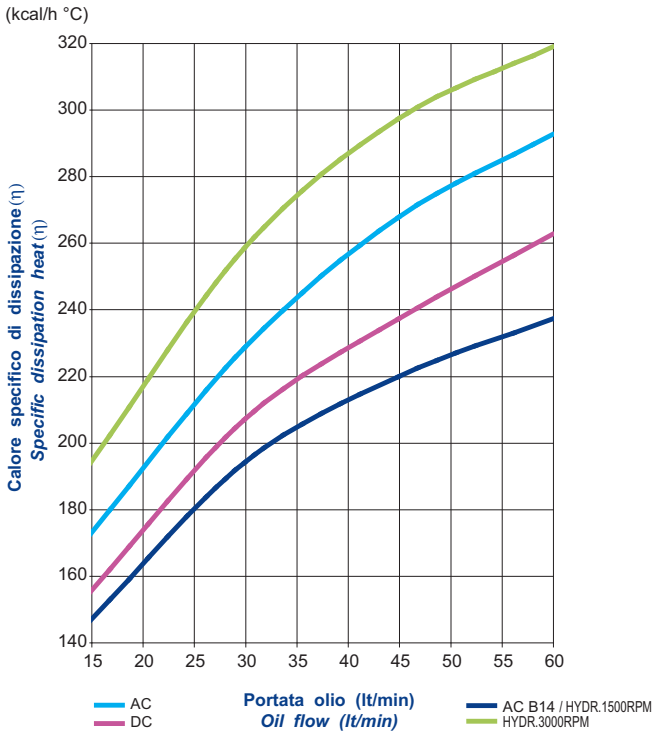


Diagramma di rendimento
Performance diagram



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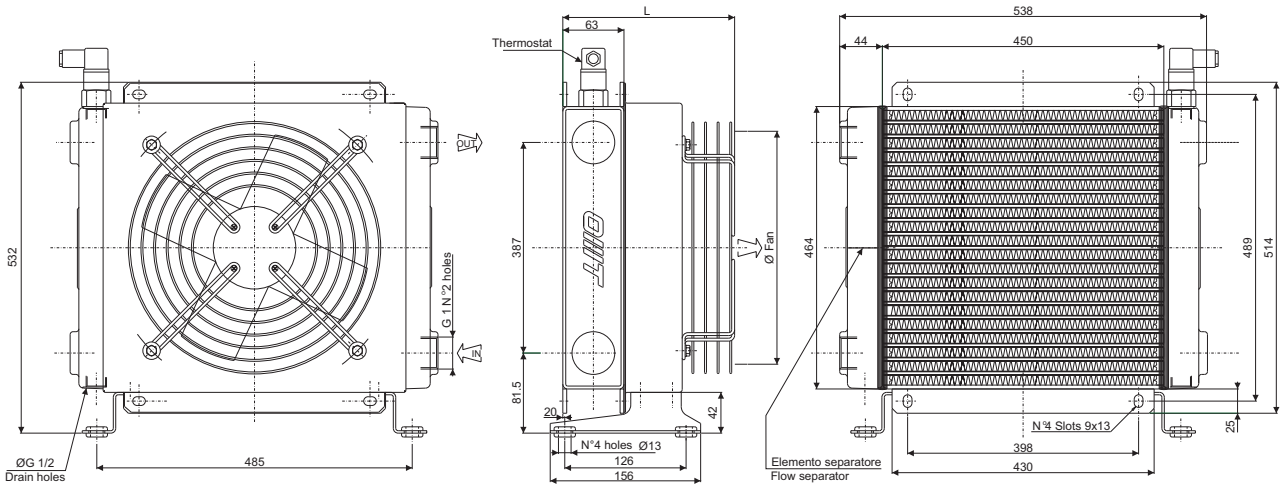
Type SS240-2PASS

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	1380/1550	0.18/0.25	400	62	233	4000	2.6	21	44
03	50/60	380	1380/1520	0.18/0.25	400	70	233	4375	2.6	21	44
14	50 60	230/400 276/480	1390 1685	0.55 0.66	400	71	438	4000	2.6	25	55
12	DC	12	2248	0.151	385	77	206	2950	2.6	20	68
24	DC	24	2248	0.151	385	77	206	3101	2.6	20	68
G2	-	-	-	-	400	-	236.5	-	2.6	19	-

Portata olio consigliata da 20 a 80 (lt/min)
Suggested oil flow from 20 to 80 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

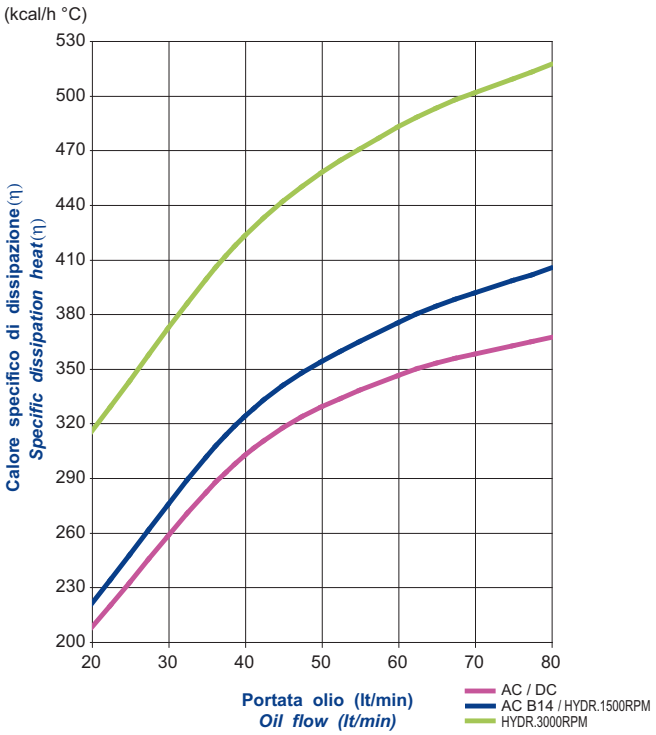
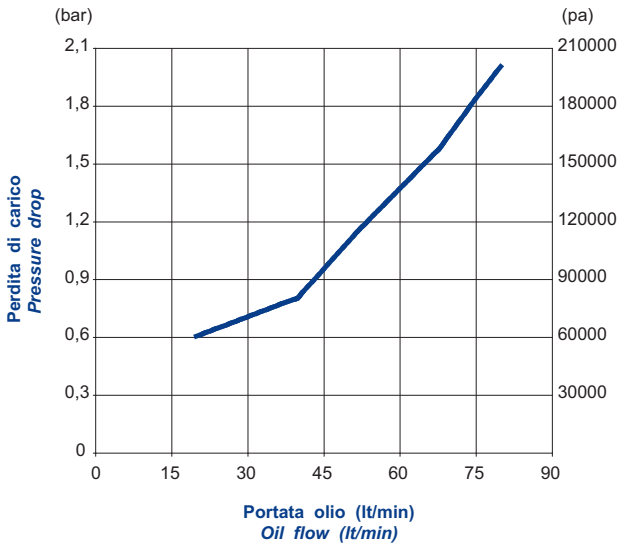


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)



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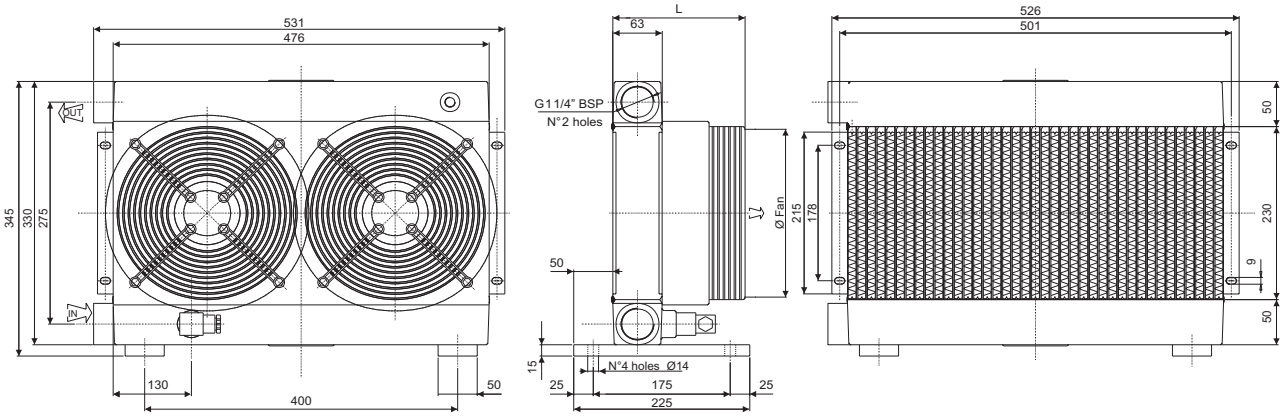
CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	2500/2600	0.055/0.060	200	55	188.5	1430	1.3	17	44
03	50/60	380	1400/1650	0.035/0.030	200	50	188.5	680	1.3	17	44
14	50 60	230/400 276/480	1350 1620	0.25 0.30	200	67	365	1400	1.3	23	55
12	DC	12	3305	0.087	225	75	175	1998	1.3	15	68
24	DC	24	3305	0.087	225	75	175	1988	1.3	15	68
G2	-	-	-	-	200	-	218.5	-	1.3	17	-

Portata olio consigliata da 60 a 180 (lt/min)
Suggested oil flow from 60 to 180 (lt/min)

(x2) = doppio motore
(x2) = double engine



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

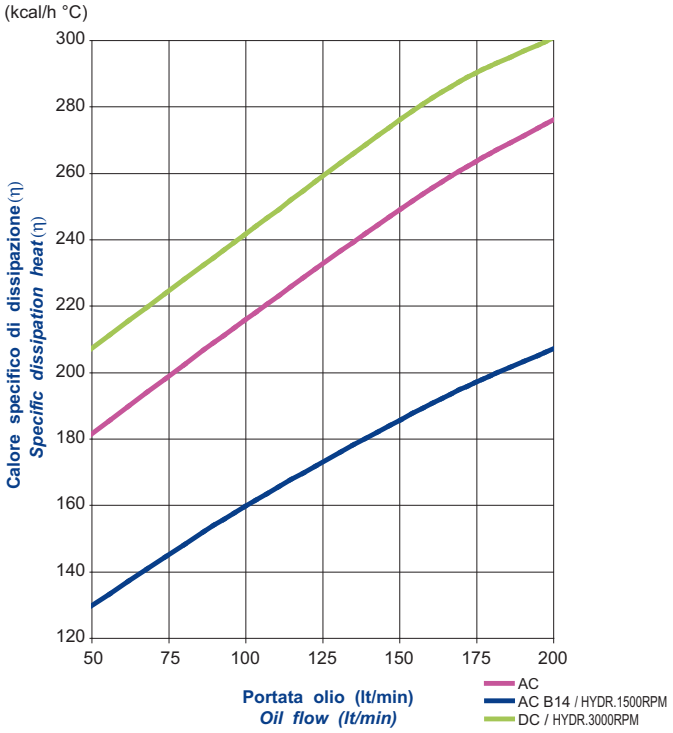
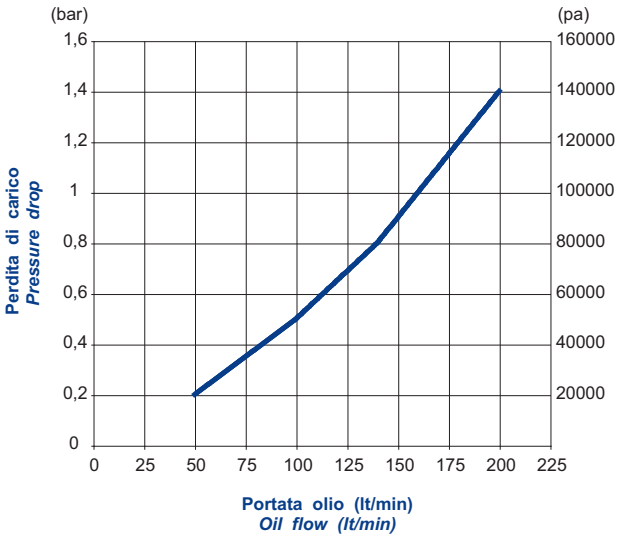


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)



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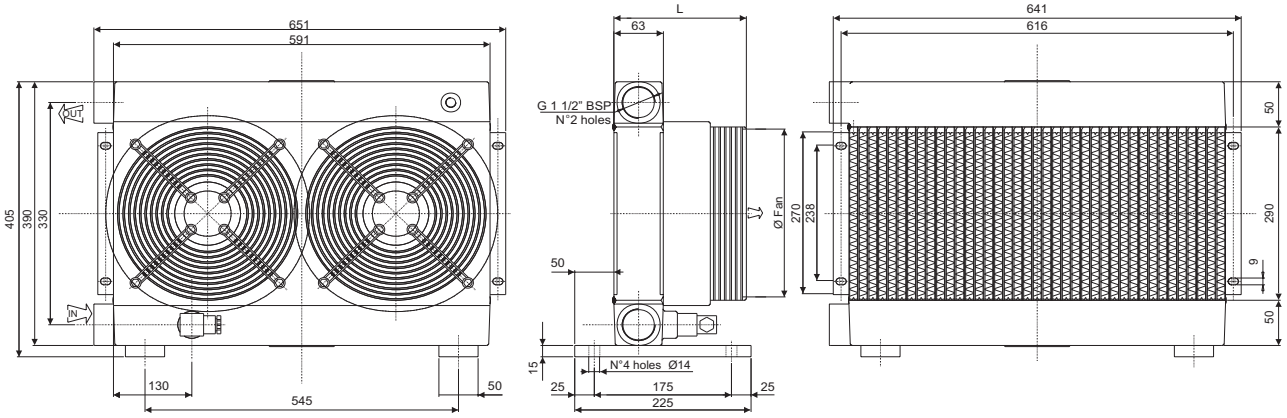
Type SD24

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m³/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	2400/2750	0.080/0.090	250	62	178	2160	1.9	23	44
03	50/60	400	1400/1650	0.055/0.052	250	58	178	1660	1.9	23	44
14	50 60	230/400 276/480	1350 1620	0.25 0.30	250	68	364	3000	1.9	34	55
12	DC	12	3005	0.106	280	74	175	2808	1.9	21	68
24	DC	24	3005	0.106	280	74	175	2954	1.9	21	68
G2	-	-	-	-	250	-	217.5	-	1.9	23	-

Portata olio consigliata da 80 a 220 (lt/min)
Suggested oil flow from 80 to 220 (lt/min)

(x2) = doppio motore
(x2) = double engine



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)

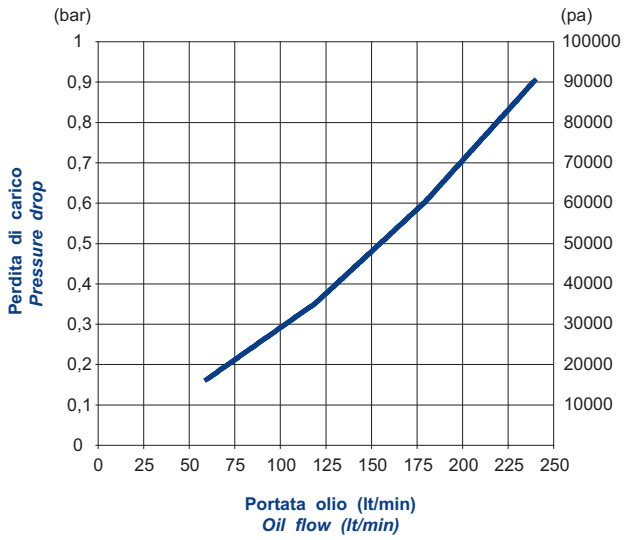
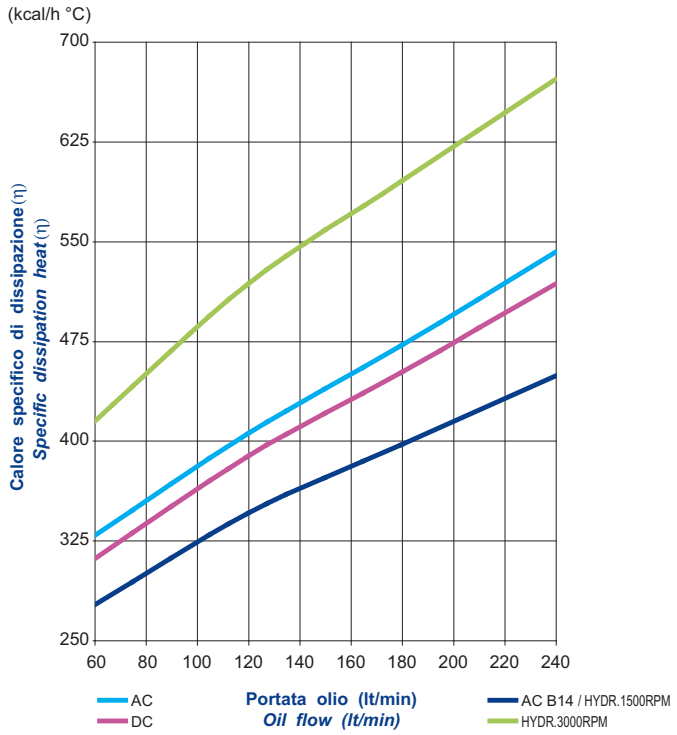


Diagramma di rendimento
Performance diagram



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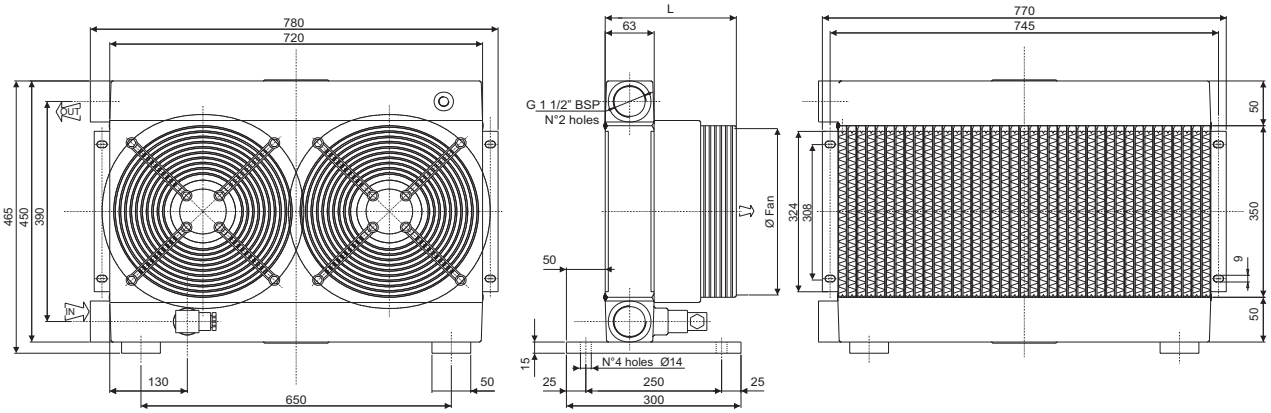
CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	2300/2250	0.145/0.175	300	62	213	4020	3.1	31	44
03	50/60	380	1380/1550	0.075/0.095	300	64	213	3740	3.1	31	44
14	50 60	230/400 276/480	1370 1640	0.37 0.44	300	69	408	4000	3.1	42	55
12	DC	12	3090	0.218	305	82	217	5234	3.1	29	68
24	DC	24	3090	0.218	305	82	217	4648	3.1	29	68
G2	-	-	-	-	300	-	226.5	-	3.1	30	-

Portata olio consigliata da 80 a 260 (lt/min)
Suggested oil flow from 80 to 260 (lt/min)

(x2) = doppio motore
(x2) = double engine



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)

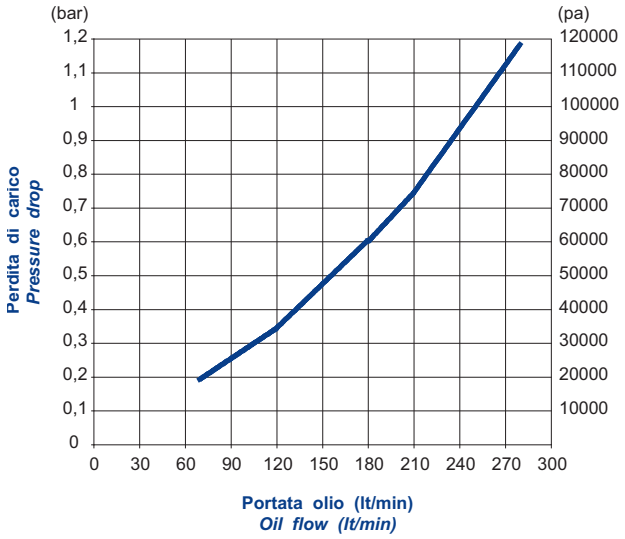
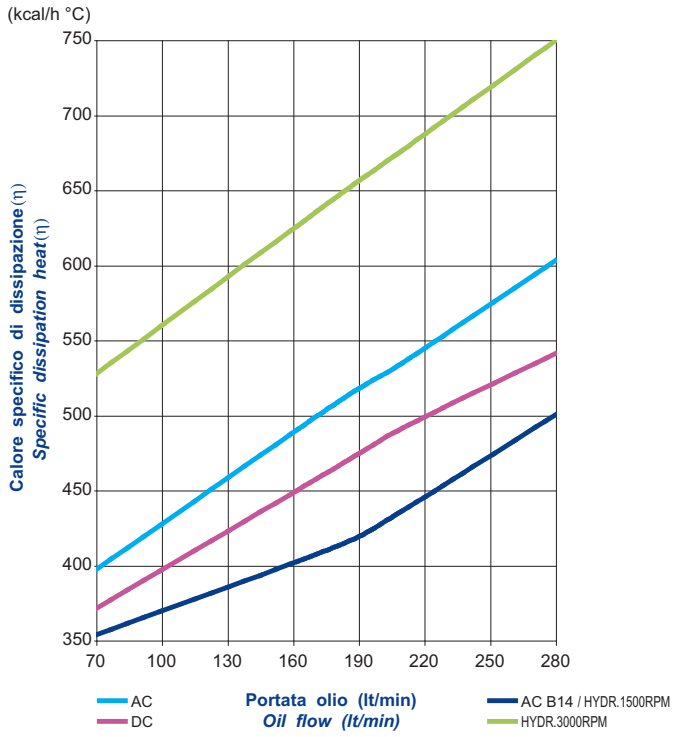


Diagramma di rendimento
Performance diagram



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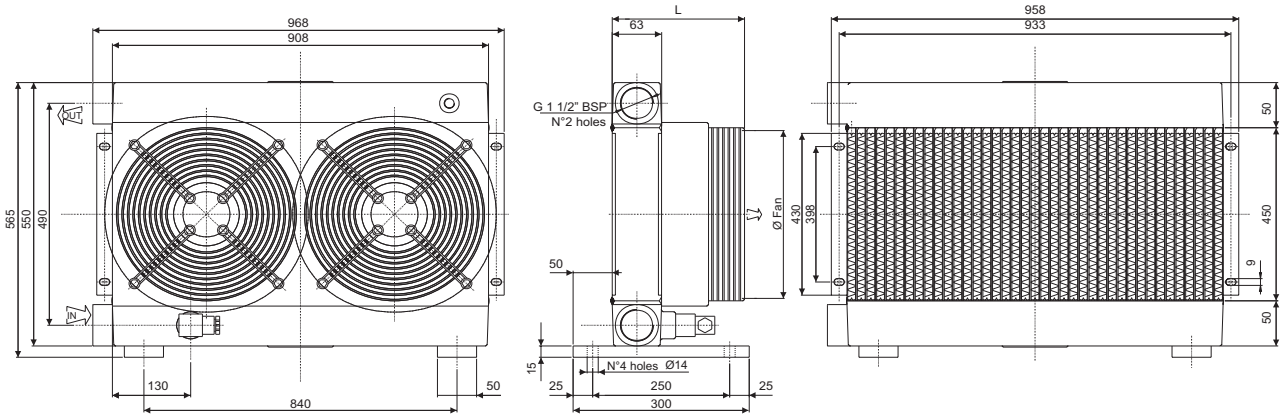
Type SD40

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	1380/1550	0.18/0.25	400	62	233	8000	5.3	42	44
03	50/60	380	1380/1520	0.18/0.25	400	70	233	8750	5.3	42	44
14	50 60	230/400 276/480	1390 1685	0.55 0.66	400	71	438	8000	5.3	50	55
12	DC	12	2248	0.151	385	77	206	5900	5.3	41	68
24	DC	24	2248	0.151	385	77	206	6202	5.3	41	68
G2	-	-	-	-	400	-	236.5	-	5.3	39	-

Portata olio consigliata da 80 a 300 (lt/min)
Suggested oil flow from 80 to 300 (lt/min)

(x2) = doppio motore
(x2) = double engine



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

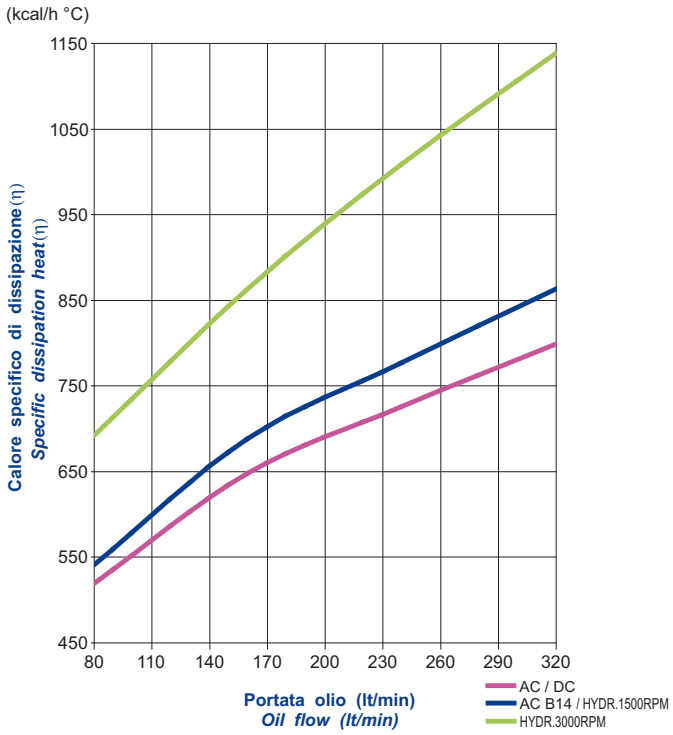
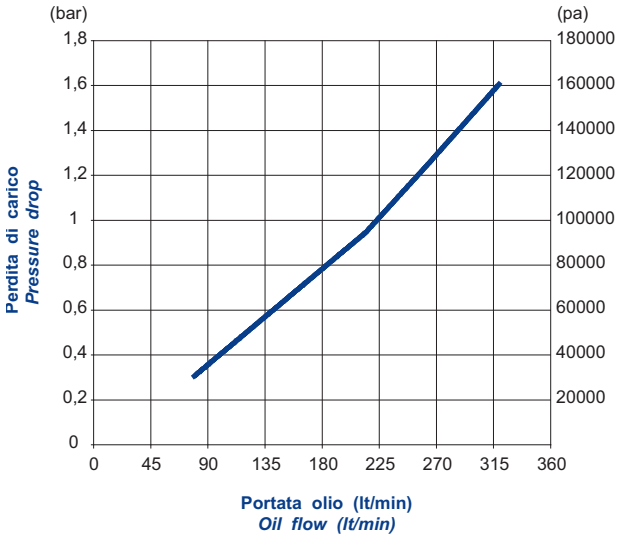


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)



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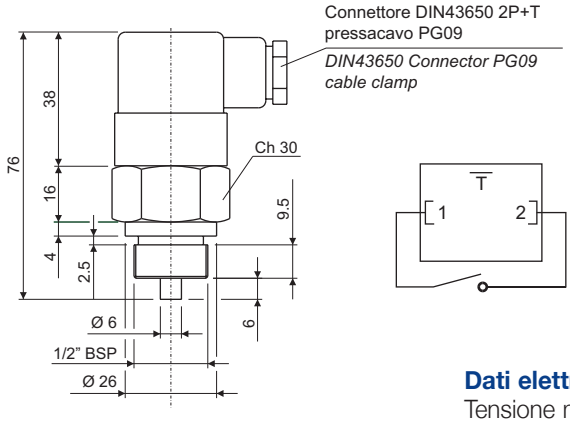
TERMOSTATO BIMETALLICO FISSO / BIMETALLIC FIXED TEMPERATURE SWITCH



N.B.: Assemblare il termostato allo scambiatore con una rondella piana in rame.

Codice termostato Switch part number	Temperatura d'intervento Working temperature	Contatto Contact
T01	36-26°C	
T02	43-33°C	
T03	52-42°C	
T04	65-55°C	NA/NO
T05	75-65°C	
T06	85-75°C	
T07	95-85°C	

NA = normalmente aperto
NO = normally open

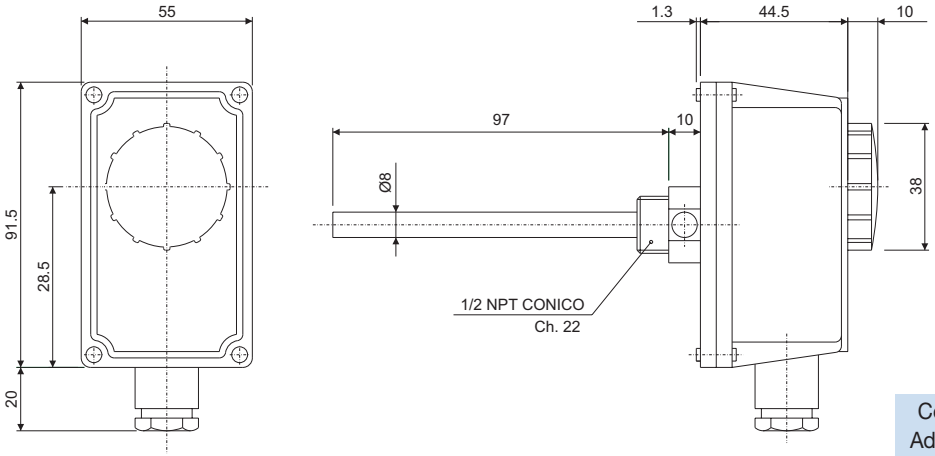
Dati elettrici / Electrical data

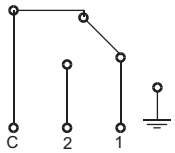
Tensione max. / Max. voltage	250Vca
Corrente max. / Max. current	10A
Tolleranza intervento / Tolerance	±5°C
Differenziale fisso max. / Max. fixed hysteresis	15°C
Connessione elettrica / Electrical connection	DIN43650
Protezione elettrica / Protection degree	IP65
Temperatura max. / Max. temperature	130°C

Materiali / Materials

Corpo / Body	Ottone / Brass
Contatti / Contacts	Argentati / Silver plated

TERMOSTATO REGOLABILE / TEMPERATURE SWITCH





Morsetto 1: apre il circuito all'aumentare della temperatura
Morsetto 2: chiude il circuito all'aumentare della temperatura
Comune: entrata comune

Codice termostato regolabile Adjustable switch part number
T08

Dati elettrici / Electrical data

Campo di regolaz. temp. / Temperature range	0°±90°C
Tolleranza / Tolerance	±5k
Differenziale / Temperature differential	6±2k
Grado di protezione / Degree of protection	IP 40
Classe di isolamento / Insulation class	I
Gradiente termico / Temp. rate of change	<1k/min
Temperatura max. testa / Max. head temperature	80°C
Temperatura max. bulbo / Max. sensing bulb temp.	125°C
Temperatura di stoccaggio / Storage temperature	-15°C 55°C
Costante di tempo / Time constant	<1'
Portata sui contatti / Contacts rating	C-1:10(2.5)A/250V~ C-2:6(2.5)A/250V~
Uscita / Output	contatti in interruzione o in commutazione cutoff or switching contacts
Tipo di azione / Switch action	1B
Situazione di installaz. / Installation location	ambiente normale / normal environment
Passacavo / Fairlead type	M20x1.5

Codes de commande

SS20 14 02 A - P

Tipologia di scambiatore Type
SS10
SS15
SS20
SS24
SS30
SS40
SS50
SS215 (2pass)
SS220 (2pass)
SS224 (2pass)
SS230 (2pass)
SS240 (2pass)
SD20
SD24
SD30
SD40

Termostati bimetallici fissi Bimetallic fixed temperature switches	
00	Senza termostato No switch
01	Termostato fisso 36-26 °C Fixed switch 36-26 °C
02	Termostato fisso 43-33 °C Fixed switch 43-33 °C
03	Termostato fisso 52-42 °C Fixed switch 52-42 °C
04	Termostato fisso 65-55 °C Fixed switch 65-55 °C
05	Termostato fisso 75-65 °C Fixed switch 75-65 °C
06	Termostato fisso 85-75 °C Fixed switch 85-75 °C
07	Termostato fisso 95-85 °C Fixed switch 95-85 °C

Termostato regolabile Adjustable switch	
08	Termostato regolabile 0-90 °C Adjustable switch 0-90 °C

Staffe / Cablaggio Foot flanges / Electric connection	
P	Con staffe di fissaggio With foot flanges
E	Con cablaggio elettrico With electric connection
PE	Con staffe di fissaggio e con cablaggio elettrico With foot flanges and with electric connection

P - PE
valida solo per / applicable only for SS10; SS15; SS20; SS24; SS30; SS40; SS215; SS220; SS224; SS230; SS240.

E
valida solo per / applicable only for SS50; SD20; SD30; SD40.

Tipi di ventilazione Fans	
A	Aspirante Drawing

Tipi di ventilazione Fan Motor	
01	230V 50/60 Hz monofase 230V 50/60 Hz single phase
03	400V 50/60 Hz trifase *** 400V 50/60 Hz three phase ***
14	230/400V 50/60 Hz trifase B14 230/400V 50/60 Hz three phase B14
12	12V CC
24	24V CC
G2	Predisposto per motore idraulico GR.2 Arranged for hydraulic motor GR.2

*** SS50 230/400V 50/60 Hz trifase - Three phase

APPLICAZIONI SPECIALI

Per tutte le applicazioni che non rientrano nei casi normali specificati in questo catalogo contattare l'ufficio commerciale della OMT per un eventuale studio di fattibilità.

SPECIAL APPLICATIONS

For special solutions or particular applications, please contact OMT commercial department for informations.

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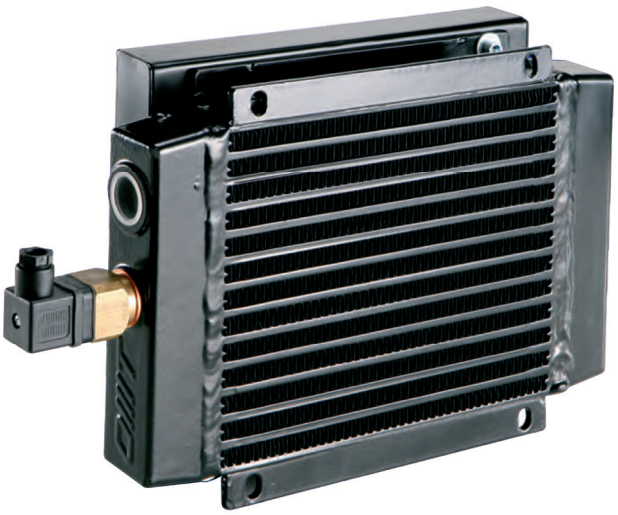
SOCAH HYDRAULIQUE

ÉCHANGEURS DE TEMPÉRATURE

Série ST



Édition Juin 2020

Sommaire

Présentation du produit

Gli scambiatori ARIA-OLIO della OMT, nascono per essere installati sulle linee di ritorno dei circuiti oleodinamici.
La speciale conformazione del pacco radiante, realizzato in lega di alluminio che ne esalta le qualità di conducibilità ed il processo di saldobrasatura dei turbinatori e dei condotti, hanno permesso di ottenere un elevato coefficiente di scambio termico e una buona resistenza alla pressione, qualità ottenuta tramite l'utilizzo di materiali altamente qualificati.

OMT air/oil heat exchangers have been designed to be used on the return line of the hydraulic systems.
The special structure of the cooler element in alu-alloy increases the conductivity quality, and the brase welding process of the conduits allows a high thermic exchange and a good resistance to pressure, obtained by using qualified materials.

CARATTERISTICHE TECNICHE

Specifiche pacco radiante

Materiale	Alluminio
Pressione di esercizio	25 bar
Pressione di collaudo	35 bar
Temperatura max d'esercizio	120 °C

Compatibilità con i fluidi

Oli minerali, hl, hlp, emulsioni acqua-olio.

Installazione

È consigliabile installare in parallelo allo scambiatore una valvola di By-pass, per proteggerlo durante la fase di avviamento.
Inoltre assicurarsi di non interporre ostacoli alla portata dell'aria.

Manutenzione

Pulizia lato olio
Lo sporco potrà essere eliminato con il flussaggio di un prodotto detergente o sgrassante compatibile con l'alluminio. Alla fine di tale operazione bisognerà ricorrere all'aria compressa per eliminare i residui che restano all'interno.

Pulizia lato aria
La pulizia dovrà essere effettuata mediante aria compressa o acqua.
Durante tale operazione bisognerà prestare particolare attenzione alla direzione del getto per non rovinare le alette.
Se lo sporco è causato da olio o da grasso, la pulizia potrà essere effettuata con un getto di vapore o di acqua calda.
Durante tali operazioni il motore elettrico dovrà essere scollegato e adeguatamente protetto.

TECHNICAL FEATURES

Radiating mass data

Material	Aluminium
Nominal pressure	25 bar
Test pressure	35 bar
Max temperature	120 °C

Fluid compatibility

Mineral oils, hl, hlp, water-oil emulsion.

Installation

We recommend to install a by-pass valve in parallel to the heat exchanger, for its protection during the starting up.
Make sure there is no obstacle to the air flow.

Maintenance

Oil side cleaning
Flushing with a detergent or a degreasing product compatible with aluminium, eliminates the dirt.
To remove the residuals, use compressed air.

Air side cleaning
It can be done by using compressed air or water and paying attention to the jet direction for not spoiling the vanes.
If oil or grease has to be removed, clean with a jet of steam or hot water.
Make sure that the electric motor is disconnected and properly protected.

MATERIALI UTILIZZATI

Ventola	Plastica rinforzata
Convogliatore	Lamiera
Griglia di protezione	Plastica rinforzata

MATERIALS

Fan	Hard plastic
Fan case	Iron sheet
Fan protection	Hard plastic

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Détermination d'un échangeur série ST

Di seguito sono riportati tre differenti tipi di scambiatori:
- **serie "ST"** standard
- **serie "ST2"** con doppio passaggio per portate ridotte, ma con maggiore potenzialità di scambio termico
- **serie "SDT"** per portate elevate.

Sull'asse delle ascisse viene indicata la portata d'olio che attraversa lo scambiatore, espressa in (lt/min), mentre sulle ordinate è indicato il rendimento di dissipazione per ogni grado centigrado, espresso in (kcal/h °C).
Il calore specifico di dissipazione (h) è dato dal rapporto tra la potenzialità termica (Q) dello scambiatore e la differenza di temperatura tra l'olio in entrata e la temperatura ambiente (T° olio -T° aria), con la seguente formula:

$$\eta = \frac{Q\ (kcal/h)}{T°\,olio\ -\ T°\,aria\ (°C)}$$

Supponendo che lo scambiatore possa dissipare 3000 (kcal/h) e si abbia una differenza di temperatura (T°olio-T°aria) = 30 (°C):

$$\eta = \frac{3000\ (kcal/h)}{30\ (°C)} = 100\ (kcal/h\ °C)$$

Nel caso in cui non sia nota la potenzialità termica (Q) dello scambiatore è possibile calcolarla empiricamente con la seguente formula:

$Q = 0{,}40\ V\ \Delta to$

Dove:
V = portata olio in (lt/h)
Δto = differenza temp. tra olio in entrata e in uscita

0,40 è un valore approssimato o utilizzabile per olio idraulico (nel caso non se ne conoscano il peso specifico e il calore specifico).

$0{,}40\ (kcal/lt\ °C) = c \cdot y$

dove:
C = calore specifico (kcal/kg °C)
Y = peso specifico (kg/dm^3)

Supponendo di avere una portata di 6000 (lt/h) e una differenza di temperatura tra olio in ingresso e olio in uscita (Δto) di 8 (°C) la potenzialità termica dello scambiatore è:

$Q = 0{,}40 \cdot 6000 \cdot 8 = 19200\ kcal/h$

Here you can find three different series of exchangers:
- **series "ST"** standard
- **series "ST2"** with double passage for reduced flows, but with bigger power of heat exchange
- **series "SDT"** for high flows.

On the abscissas you can find the oil flow going through the exchanger, expressed in (lt/min), while on the ordinates you can find the dissipation performance for each centigrade degree, expressed in (kcal/h°C).
The specific dissipation heat (h) is the result of the ratio between thermic power (Q) of the exchanger and the difference of the temperature between oil input and the ambient temperature (oil T°- air T°), using the following formula:

$$\eta = \frac{Q\ (kcal/h)}{oil\,T°\text{-}\ air\,T°\ (°C)}$$

Supposing the exchanger can dissipate 3000 (kcal/h) and you have a temperature difference (oil T°- air T°) = 30 (°C):

$$\eta = \frac{3000\ (kcal/h)}{30\ (°C)} = 100\ (kcal/h\ °C)$$

When the thermic power (Q) of the exchanger is unknown, it is possible to calculate it empirically using the following formula:

$Q = 0{,}40\ V\ \Delta to$

Where:
V = oil flow in (lt/h)
Δto = temperature difference between oil in and out

0,40 is an approximate value or it can be used for hydraulic oil (when specific weight and specific heat are unknown).

$0{,}40\ (kcal/lt\ °C) = c \cdot y$

where:
C = specific heat (kcal/kg °C)
Y = specific weight (kg/dm^3)

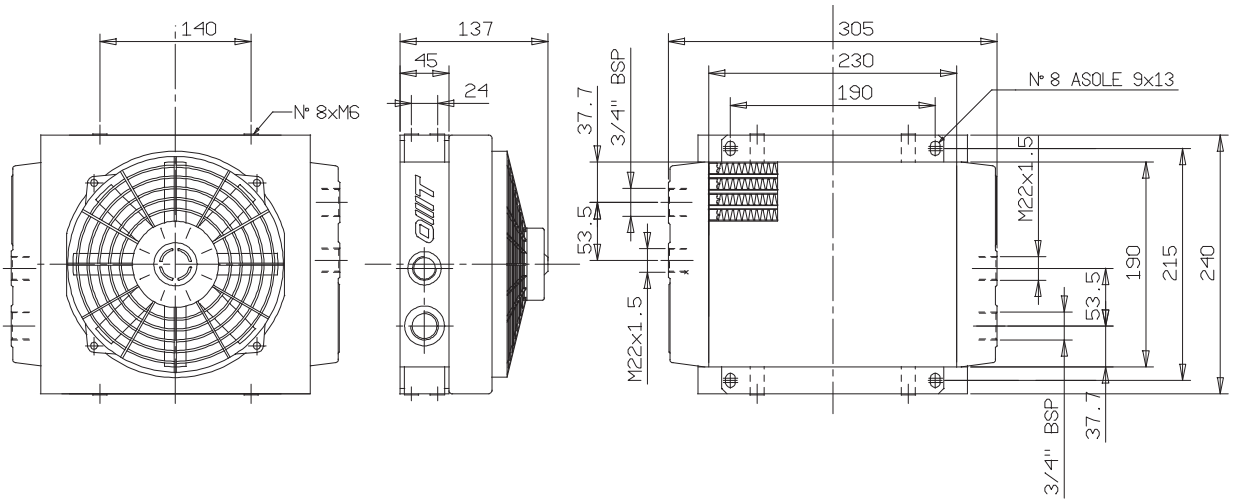
Supposing the flow is 6000 (lt/h) and the difference between oil in and out (Δto) is 8 (°C) the thermic power of the exchanger is:

$Q = 0{,}40 \cdot 6000 \cdot 8 = 19200\ kcal/h$

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	Giri/min RPM N.°	Potenza Power kW	Ø ventola Ø FAN (mm)	dB (A)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
12	DC	12	3790	0.08	190	73.8	722	0.48	6.5	68
24	DC	24	3790	0.08	190	73.8	714	0.48	6.5	68

Portata olio consigliata da 10 a 80 (lt/min)
Suggested oil flow from 10 to 80 (lt/min)



COEFFICIENTE DI CORREZIONE
CORRECTION FACTOR

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

DIAGRAMMA DI RENDIMENTO
PERFORMANCE DIAGRAM

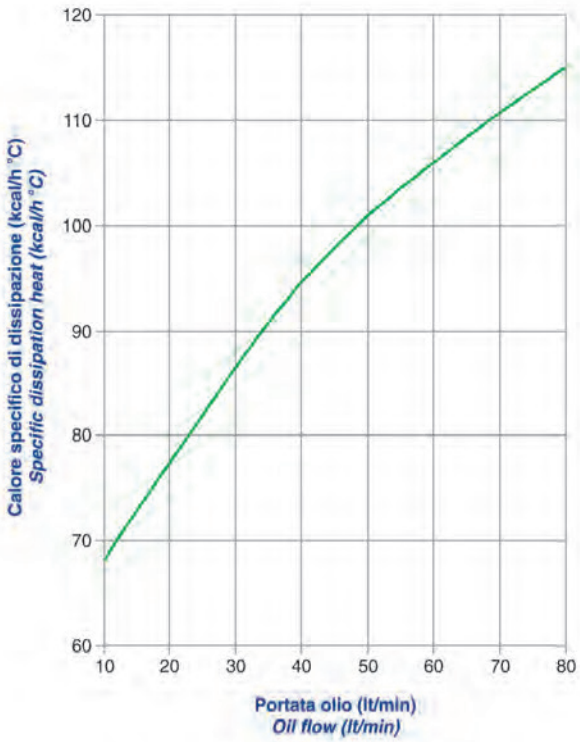
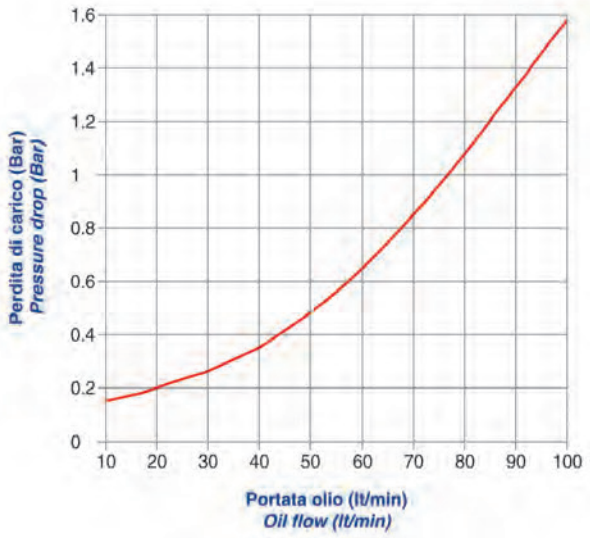


DIAGRAMMA PERDITE DI CARICO (32 cst)
PRESSURE DROP DIAGRAM (32 cst)



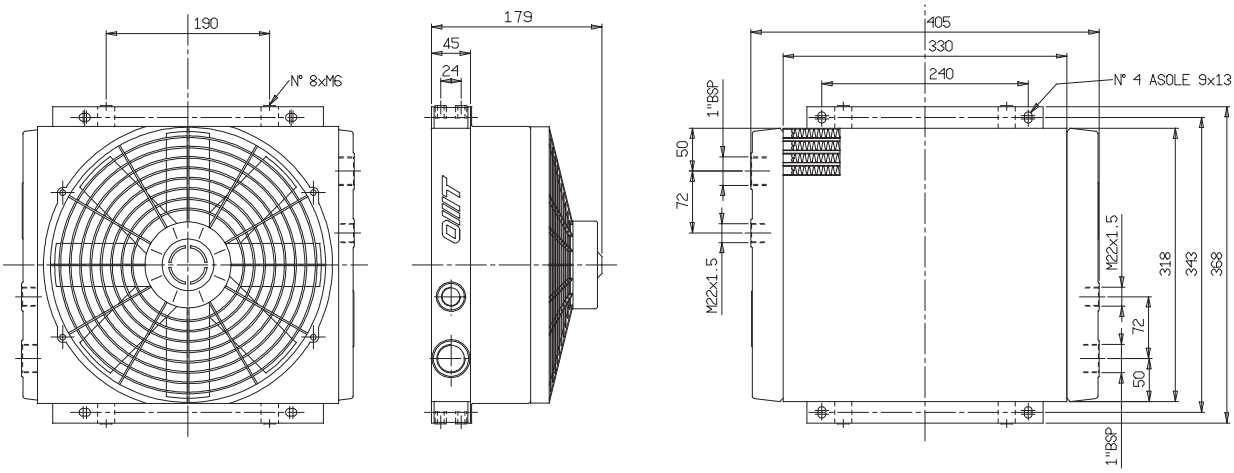
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

Type ST60

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	Giri/min RPM N.°	Potenza Power kW	Ø ventola Ø FAN (mm)	dB (A)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
12	DC	12	3090	0.218	305	82.67	2617	1.5	7.5	68
24	DC	24	3090	0.218	305	82.67	2324	1.5	7.5	68

Portata olio consigliata da 20 a 130 (lt/min)
Suggested oil flow from 20 to 130 (lt/min)



COEFFICIENTE DI CORREZIONE
CORRECTION FACTOR

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

DIAGRAMMA PERDITE DI CARICO (32 cst)
PRESSURE DROP DIAGRAM (32 cst)

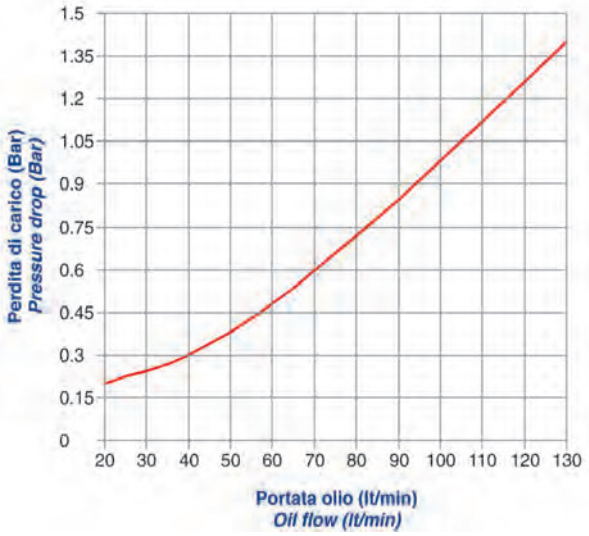
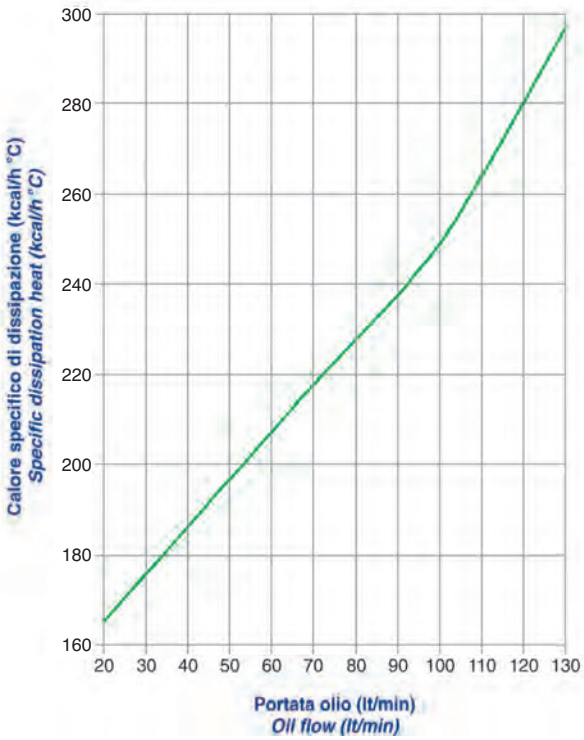


DIAGRAMMA DI RENDIMENTO
PERFORMANCE DIAGRAM

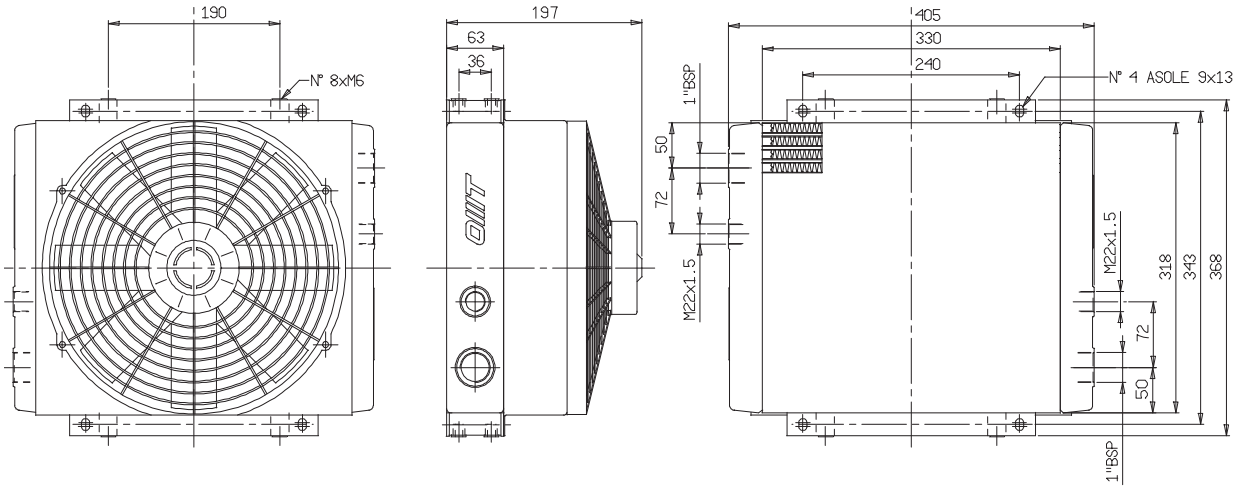


Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	Giri/min RPM N.°	Potenza Power kW	Ø ventola Ø FAN (mm)	dB (A)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
12	DC	12	3090	0.218	305	82.67	2617	1.5	7.5	68
24	DC	24	3090	0.218	305	82.67	2324	1.5	7.5	68

Portata olio consigliata da 30 a 140 (lt/min)
Suggested oil flow from 30 to 140 (lt/min)



COEFFICIENTE DI CORREZIONE
CORRECTION FACTOR

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

DIAGRAMMA PERDITE DI CARICO (32 cst)
PRESSURE DROP DIAGRAM (32 cst)

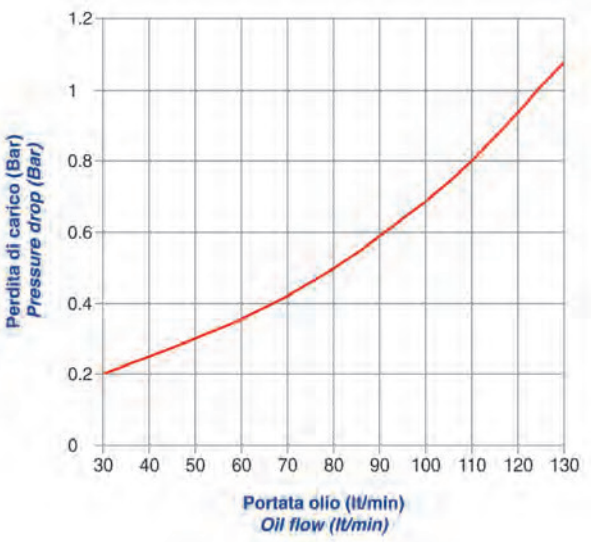
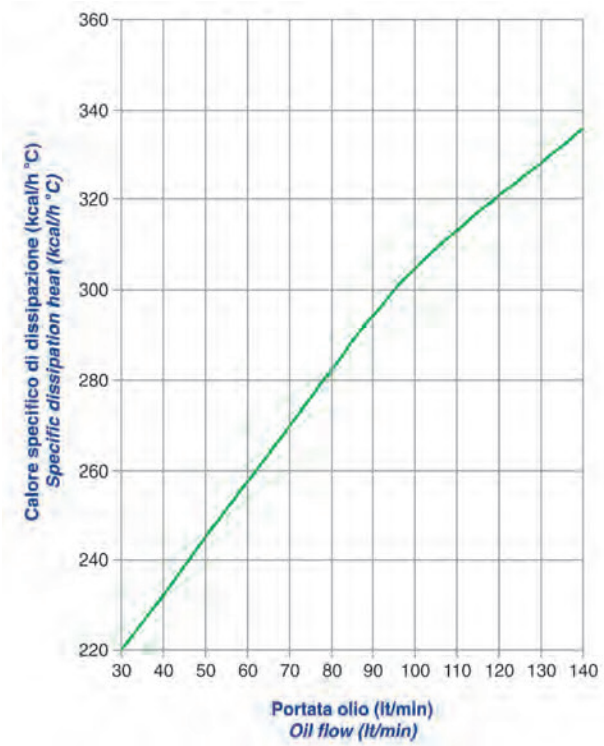


DIAGRAMMA DI RENDIMENTO
PERFORMANCE DIAGRAM



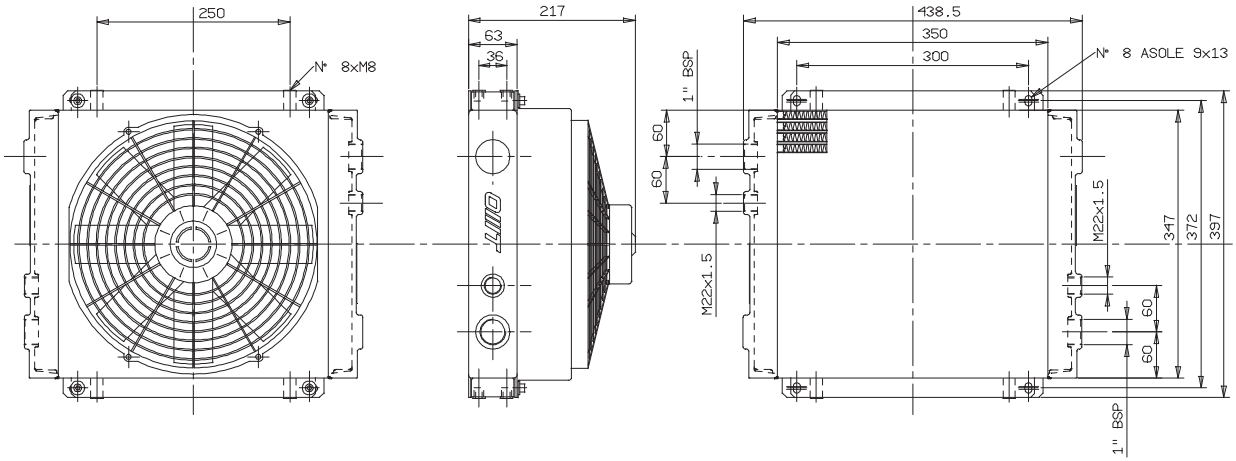
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

Type ST150

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	Giri/min RPM N.°	Potenza Power kW	Ø ventola Ø FAN (mm)	dB (A)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
12	DC	12	3090	0.218	305	82.67	2617	1.5	14	68
24	DC	24	3090	0.218	305	82.67	2324	1.5	14	68

Portata olio consigliata da 35 a 140 (lt/min)
Suggested oil flow from 35 to 140 (lt/min)



COEFFICIENTE DI CORREZIONE
CORRECTION FACTOR

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

DIAGRAMMA DI RENDIMENTO
PERFORMANCE DIAGRAM

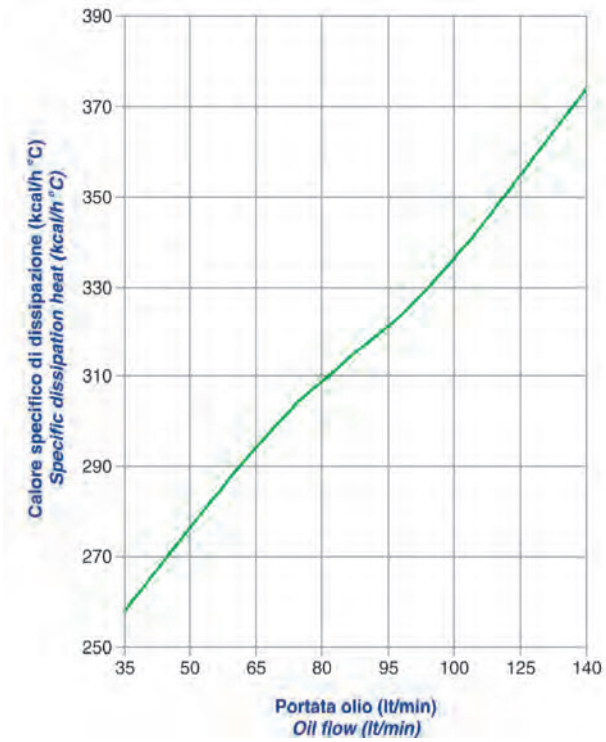
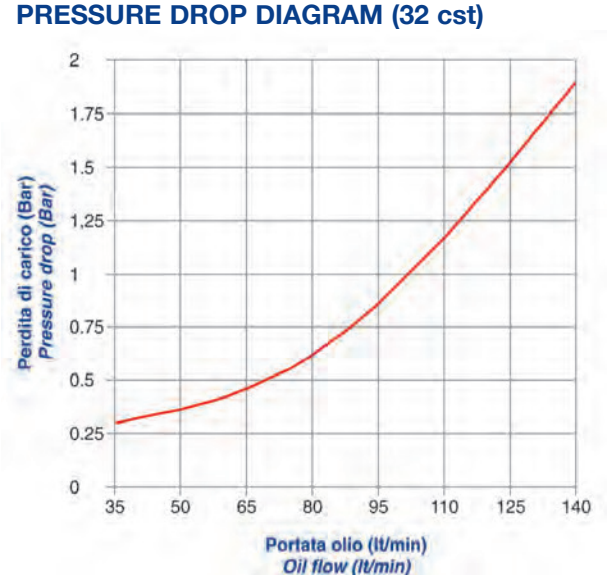


DIAGRAMMA PERDITE DI CARICO (32 cst)
PRESSURE DROP DIAGRAM (32 cst)

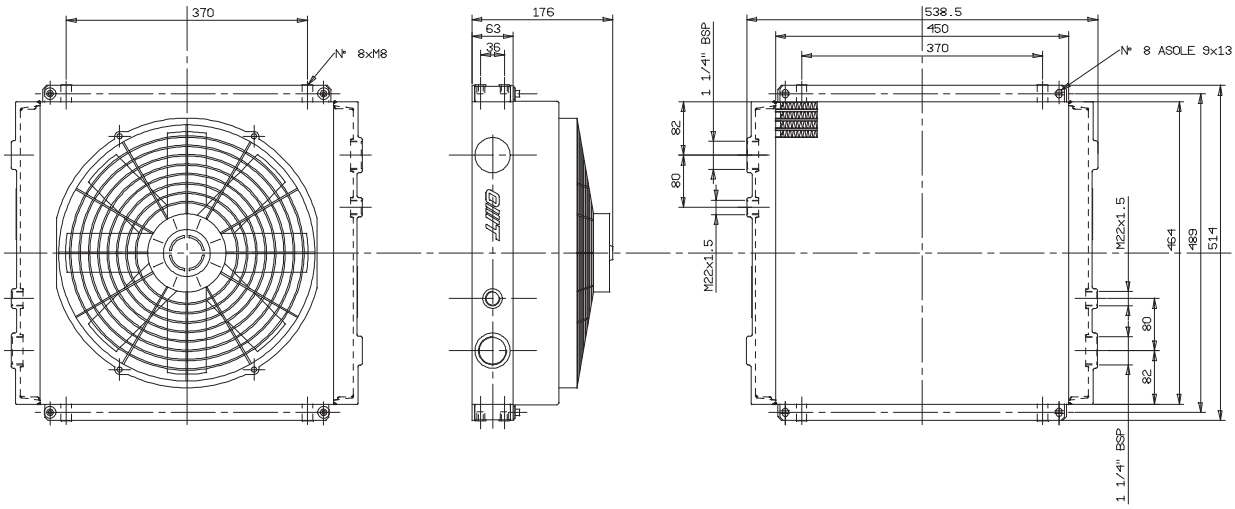


Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	Giri/min RPM N.°	Potenza Power kW	Ø ventola Ø FAN (mm)	dB (A)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
12	DC	12	2248	0.151	385	77	2950	2.6	20	68
24	DC	24	2248	0.151	385	77	3101	2.6	20	68

Portata olio consigliata da 80 a 180 (lt/min)
Suggested oil flow from 80 to 180 (lt/min)



COEFFICIENTE DI CORREZIONE
CORRECTION FACTOR

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

DIAGRAMMA DI RENDIMENTO
PERFORMANCE DIAGRAM

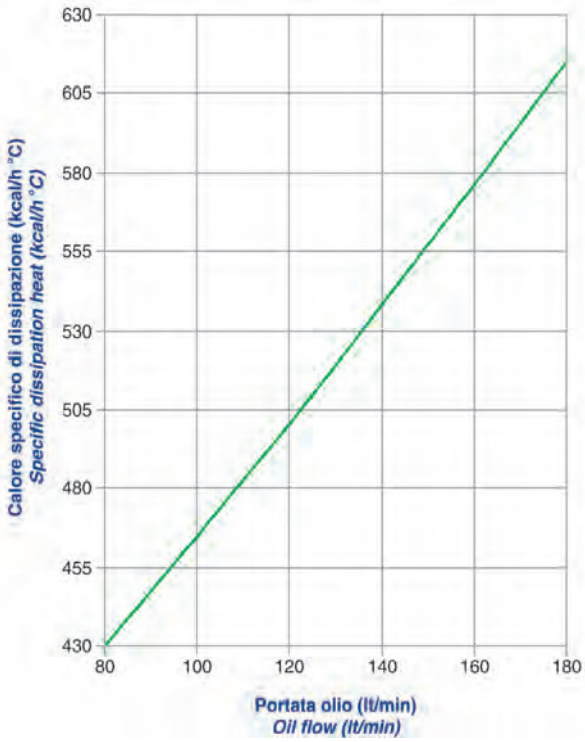
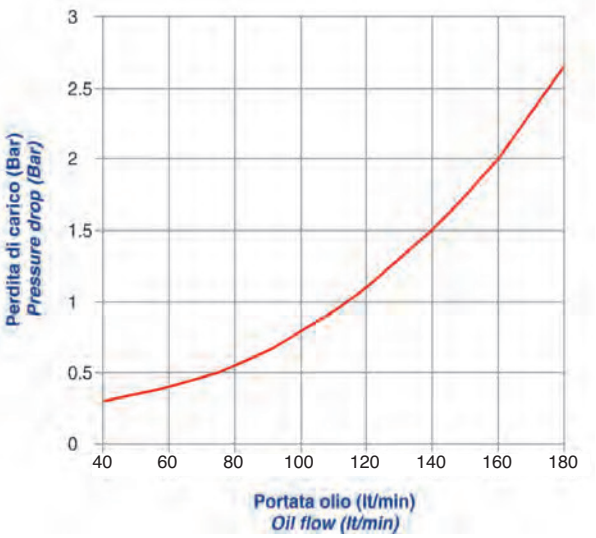


DIAGRAMMA PERDITE DI CARICO (32 cst)
PRESSURE DROP DIAGRAM (32 cst)



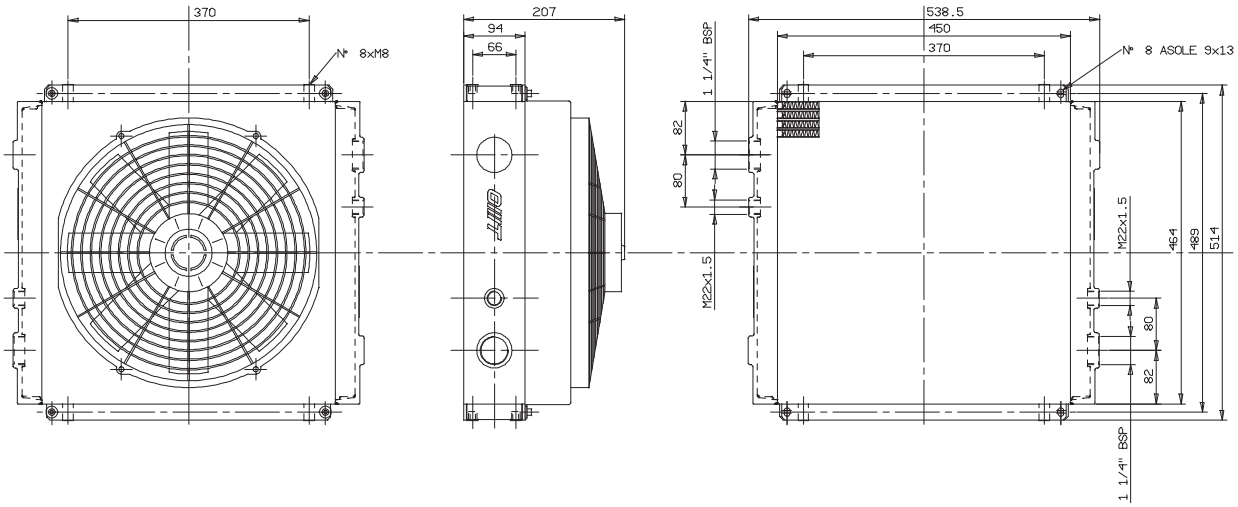
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

Type ST210

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	Giri/min RPM N.°	Potenza Power kW	Ø ventola Ø FAN (mm)	dB (A)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
12	DC	12	2248	0.151	385	77	2950	2.6	26	68
24	DC	24	2248	0.151	385	77	3101	2.6	26	68

Portata olio consigliata da 80 a 260 (lt/min)
Suggested oil flow from 80 to 260 (lt/min)



COEFFICIENTE DI CORREZIONE
CORRECTION FACTOR

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

DIAGRAMMA PERDITE DI CARICO (32 cst)
PRESSURE DROP DIAGRAM (32 cst)

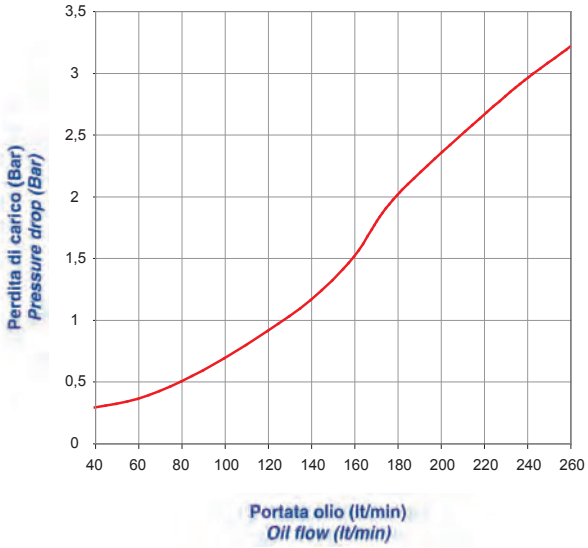
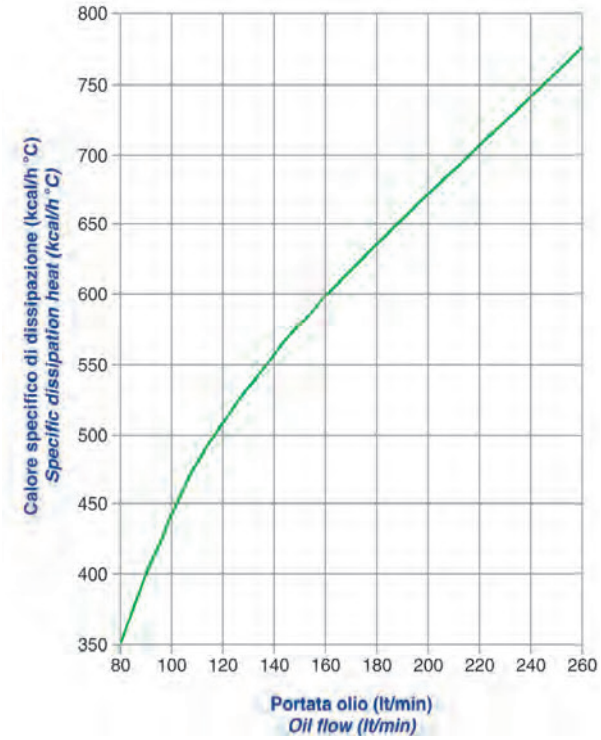


DIAGRAMMA DI RENDIMENTO
PERFORMANCE DIAGRAM

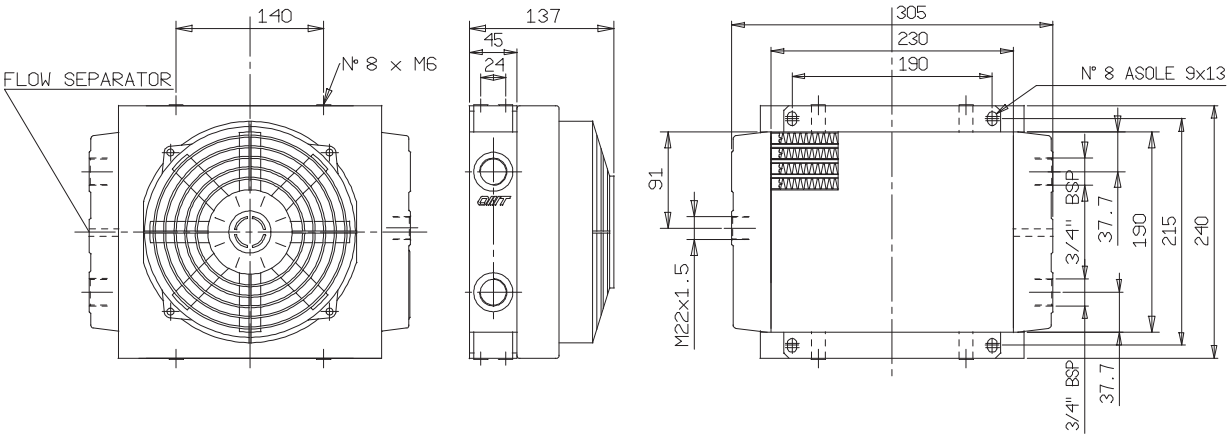


Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	Giri/min RPM N.°	Potenza Power kW	Ø ventola Ø FAN (mm)	dB (A)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
12	DC	12	3790	0.08	190	73.8	722	0.48	6.5	68
24	DC	24	3790	0.08	190	73.8	714	0.48	6.5	67

Portata olio consigliata da 5 a 40 (lt/min)
Suggested oil flow from 5 to 40 (lt/min)



COEFFICIENTE DI CORREZIONE
CORRECTION FACTOR

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

DIAGRAMMA DI RENDIMENTO
PERFORMANCE DIAGRAM

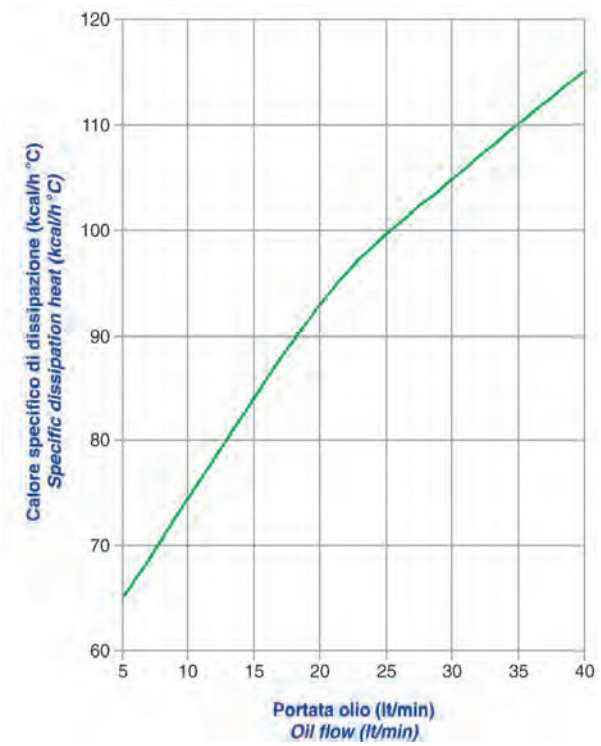
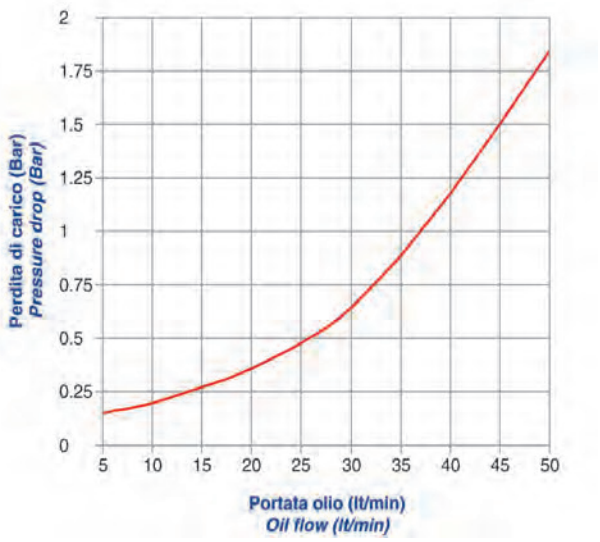


DIAGRAMMA PERDITE DI CARICO (32 cst)
PRESSURE DROP DIAGRAM (32 cst)



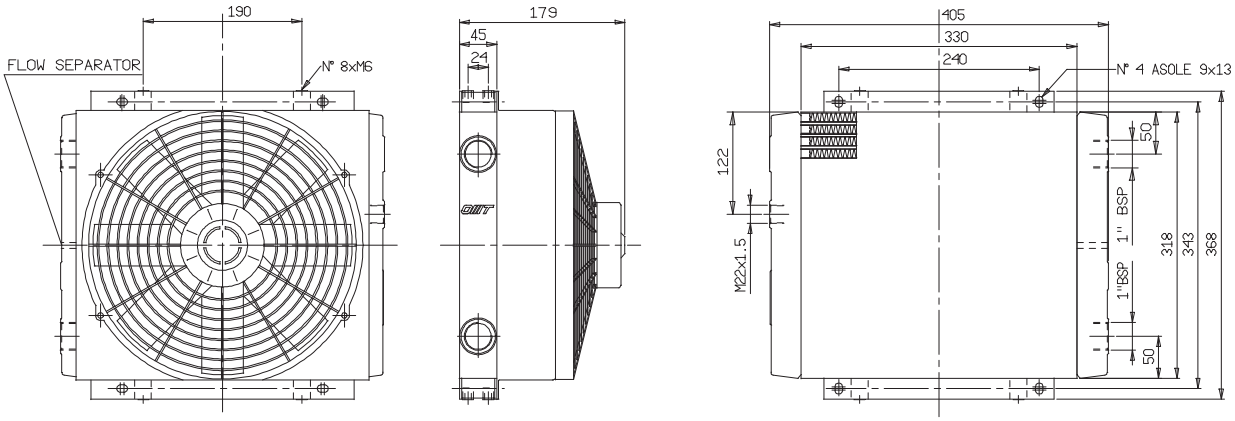
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

Type ST260

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	Giri/min RPM N.°	Potenza Power kW	Ø ventola Ø FAN (mm)	dB (A)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
12	DC	12	3090	0.218	305	82.67	2617	1.5	7.5	68
24	DC	24	3090	0.218	305	82.67	2324	1.5	7.5	68

Portata olio consigliata da 10 a 65 (lt/min)
Suggested oil flow from 10 to 65 (lt/min)



COEFFICIENTE DI CORREZIONE
CORRECTION FACTOR

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

DIAGRAMMA PERDITE DI CARICO (32 cst)
PRESSURE DROP DIAGRAM (32 cst)

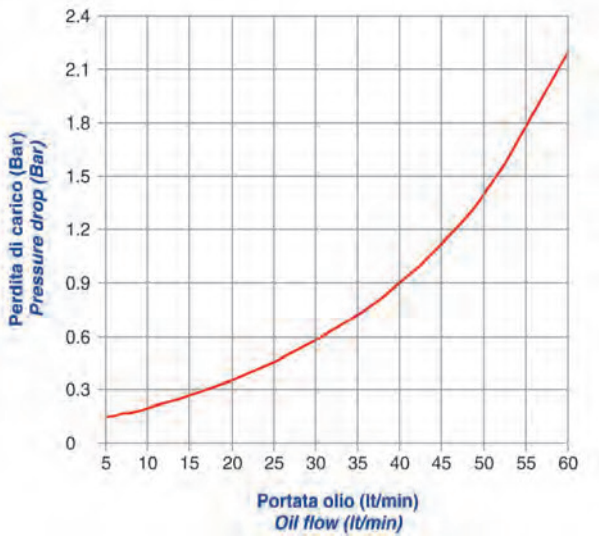
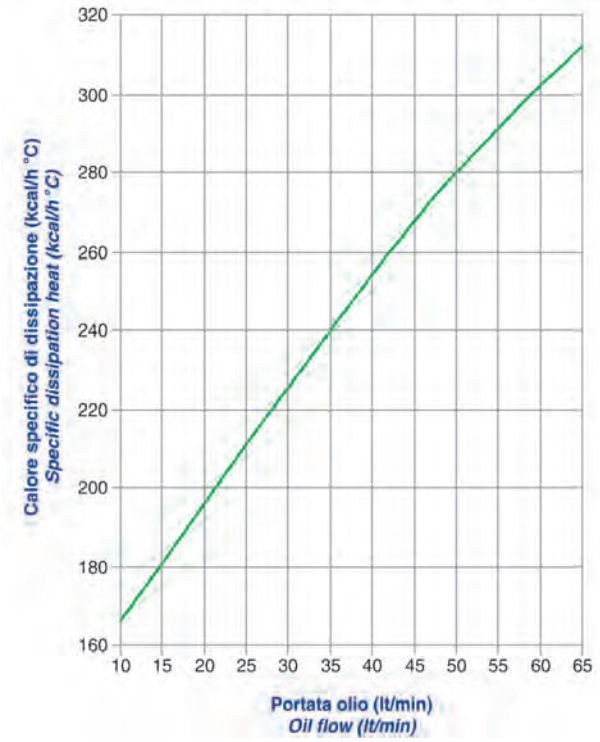


DIAGRAMMA DI RENDIMENTO
PERFORMANCE DIAGRAM

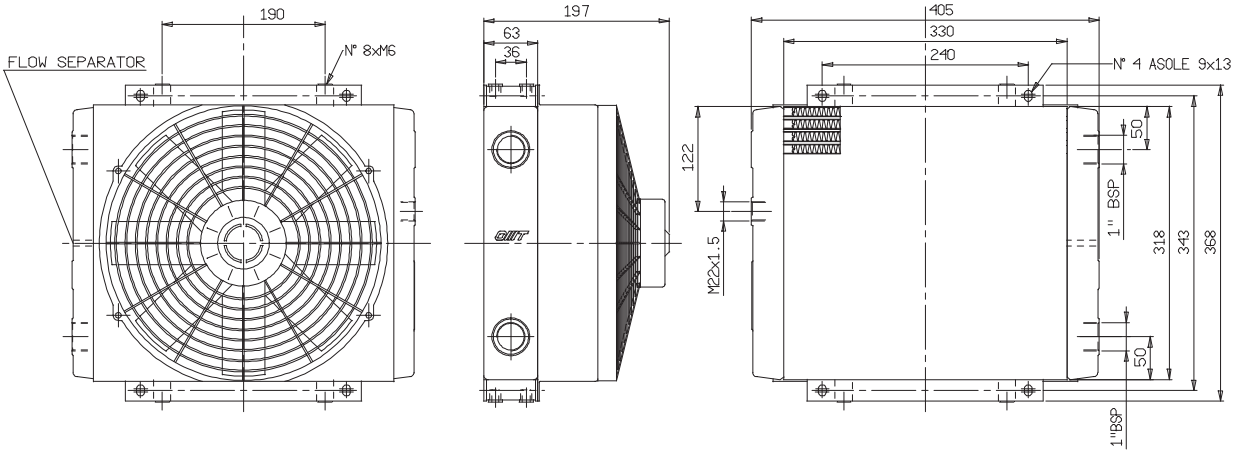


Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	Giri/min RPM N.°	Potenza Power kW	Ø ventola Ø FAN (mm)	dB (A)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
12	DC	12	3090	0.218	305	82.67	2617	1.5	8.5	68
24	DC	24	3090	0.218	305	82.67	2324	1.5	8.5	68

Portata olio consigliata da 15 a 70 (lt/min)
Suggested oil flow from 15 to 70 (lt/min)



COEFFICIENTE DI CORREZIONE
CORRECTION FACTOR

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

DIAGRAMMA DI RENDIMENTO
PERFORMANCE DIAGRAM

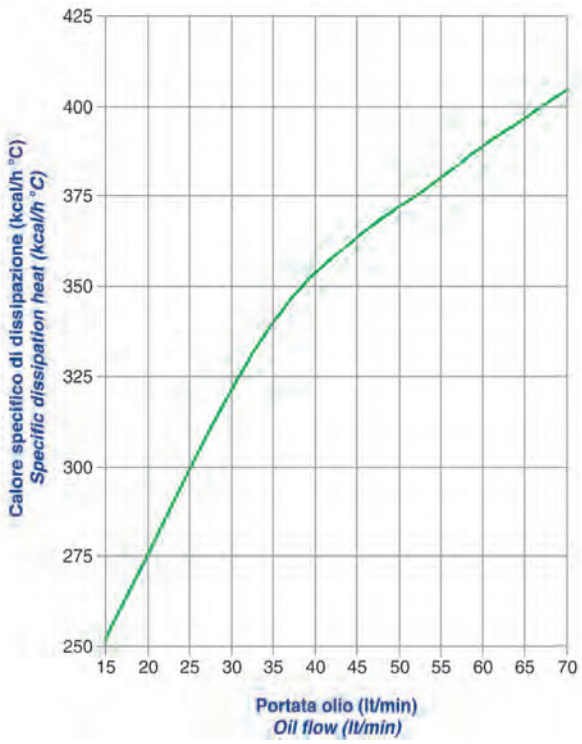
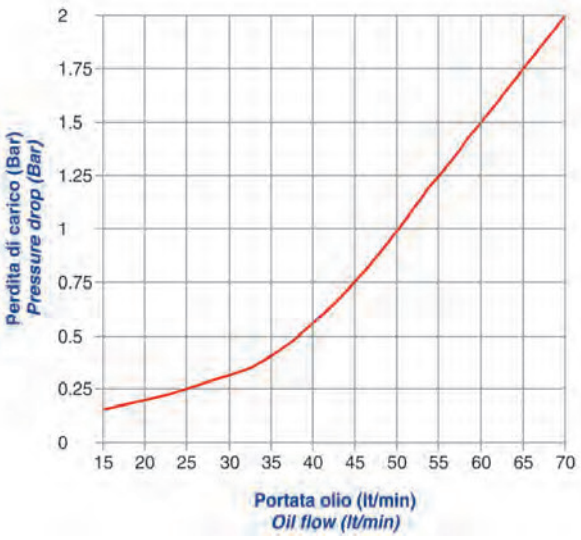


DIAGRAMMA PERDITE DI CARICO (32 cst)
PRESSURE DROP DIAGRAM (32 cst)



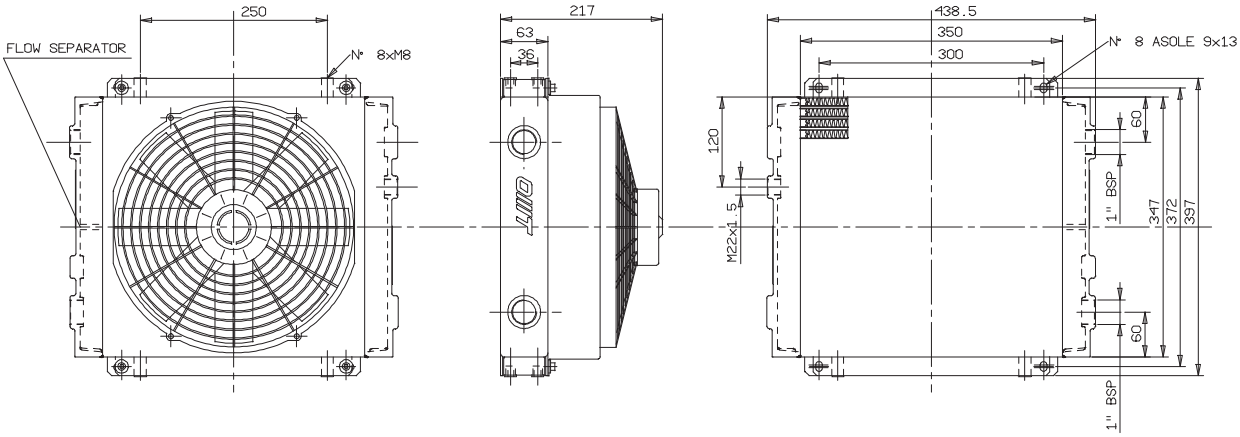
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

Type ST2150

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	Giri/min RPM N.°	Potenza Power kW	Ø ventola Ø FAN (mm)	dB (A)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
12	DC	12	3090	0.218	305	82.67	2617	1.5	14	68
24	DC	24	3090	0.218	305	82.67	2324	1.5	14	68

Portata olio consigliata da 20 a 70 (lt/min)
Suggested oil flow from 20 to 70 (lt/min)



COEFFICIENTE DI CORREZIONE
CORRECTION FACTOR

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

DIAGRAMMA DI RENDIMENTO
PERFORMANCE DIAGRAM

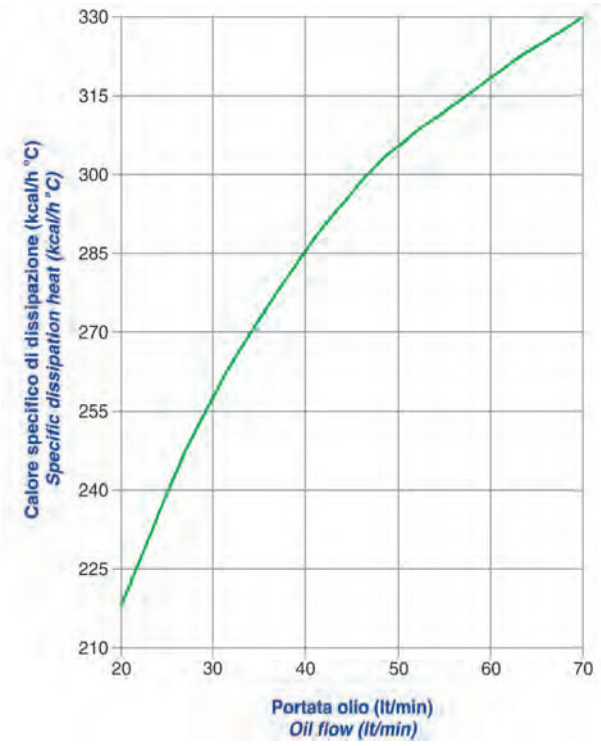
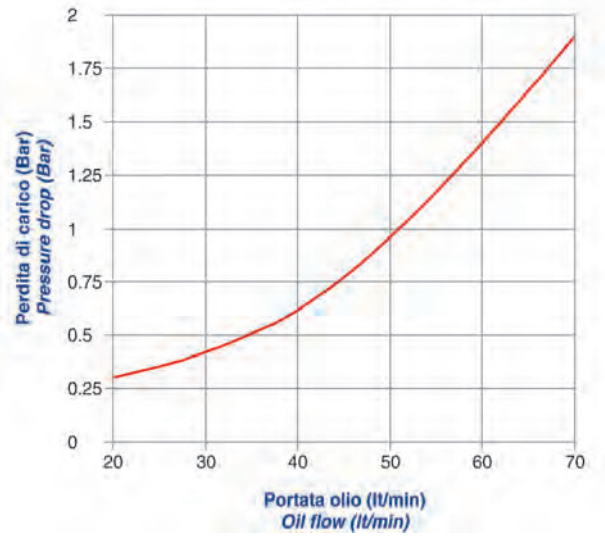


DIAGRAMMA PERDITE DI CARICO (32 cst)
PRESSURE DROP DIAGRAM (32 cst)

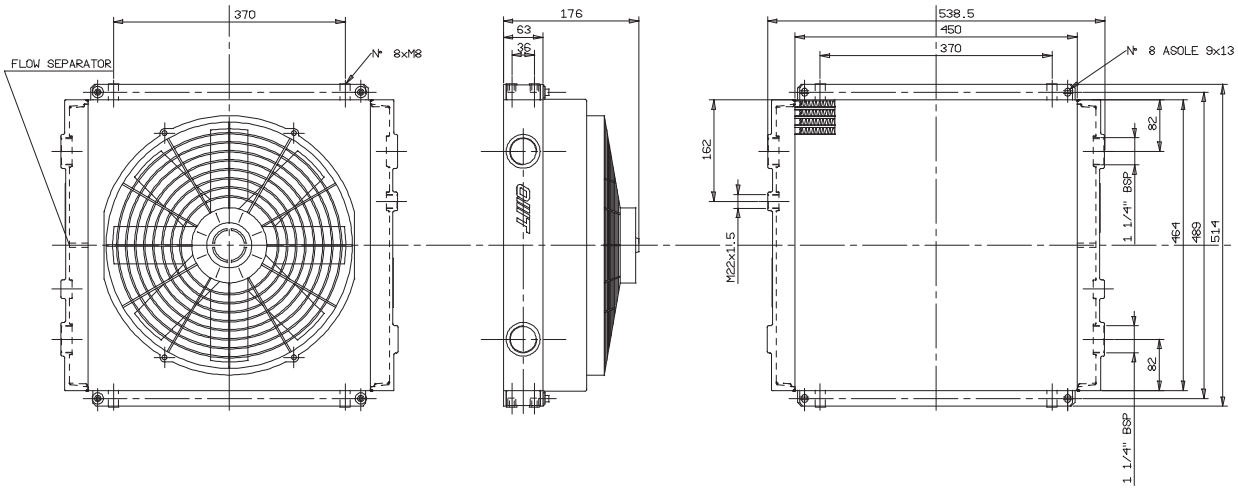


Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	Giri/min RPM N.°	Potenza Power kW	Ø ventola Ø FAN (mm)	dB (A)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
12	DC	12	2248	0.151	385	77	2950	2.6	20	68
24	DC	24	2248	0.151	385	77	3101	2.6	20	68

Portata olio consigliata da 40 a 100 (lt/min)
Suggested oil flow from 40 to 100 (lt/min)



COEFFICIENTE DI CORREZIONE
CORRECTION FACTOR

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

DIAGRAMMA DI RENDIMENTO
PERFORMANCE DIAGRAM

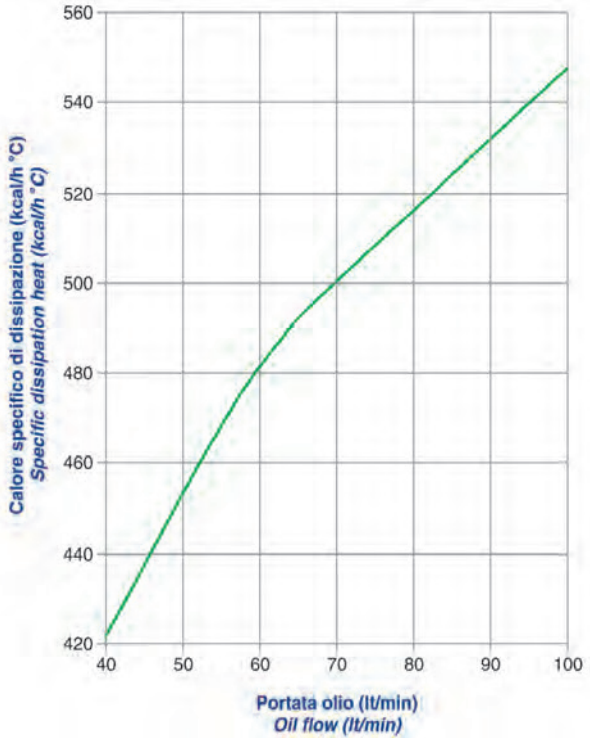
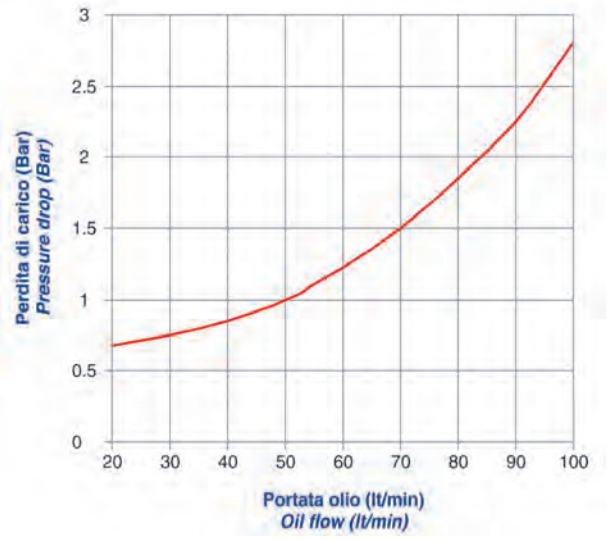


DIAGRAMMA PERDITE DI CARICO (32 cst)
PRESSURE DROP DIAGRAM (32 cst)



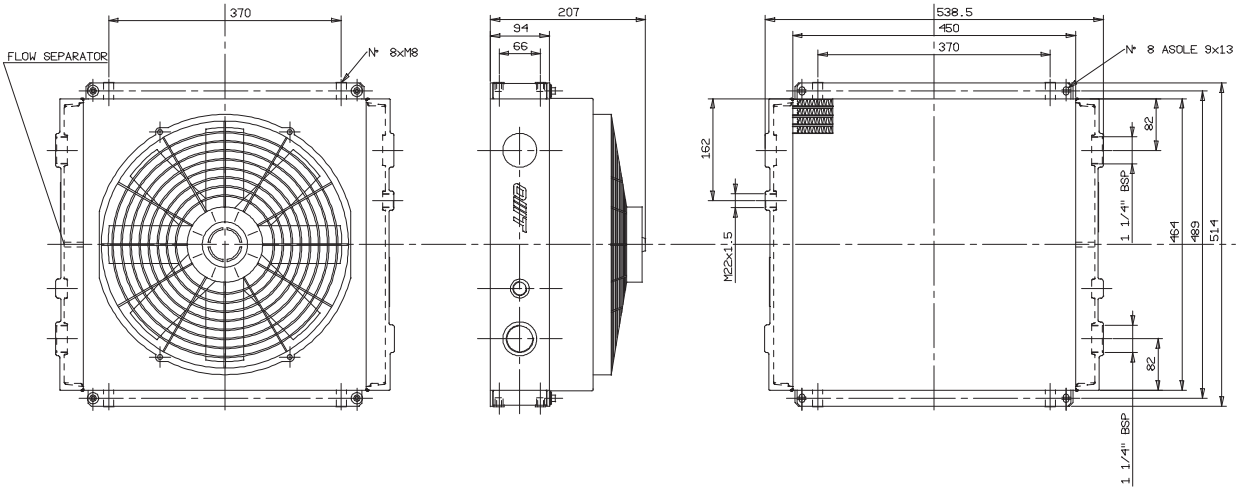
Le dimensioni di ingombro e le caratteristiche tecniche non sono impegnative
Over-all dimensions and technical characteristic are not binding

Type ST2210

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	Giri/min RPM N.°	Potenza Power kW	Ø ventola Ø FAN (mm)	dB (A)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
12	DC	12	2248	0.151	385	77	2950	2.6	26	68
24	DC	24	2248	0.151	385	77	3101	2.6	26	68

Portata olio consigliata da 40 a 140 (lt/min)
Suggested oil flow from 40 to 140 (lt/min)



COEFFICIENTE DI CORREZIONE
CORRECTION FACTOR

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

DIAGRAMMA DI RENDIMENTO
PERFORMANCE DIAGRAM

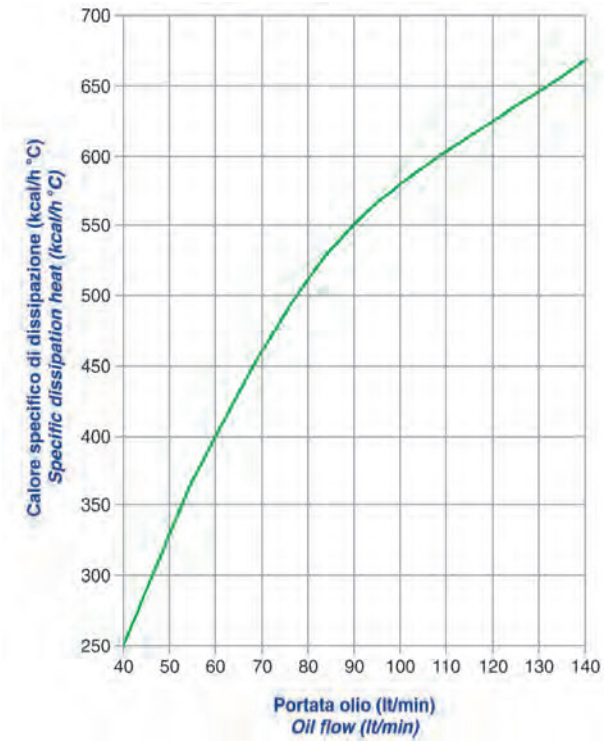
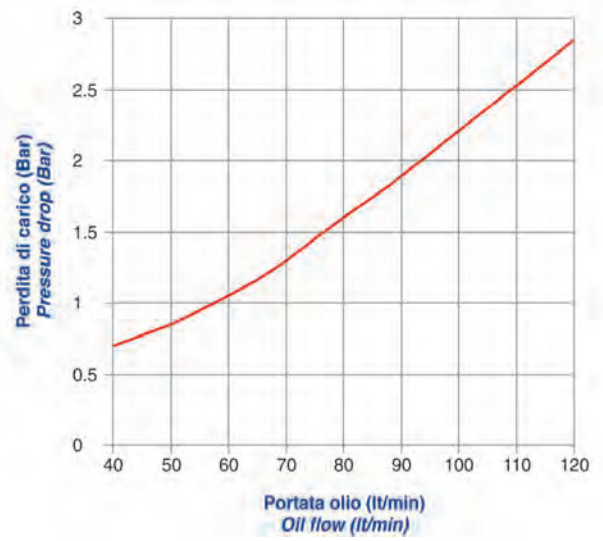


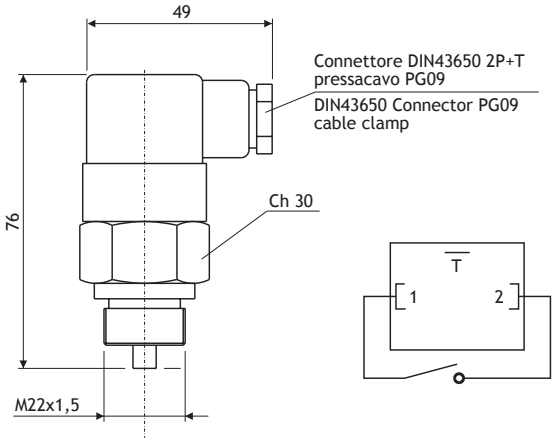
DIAGRAMMA PERDITE DI CARICO (32 cst)
PRESSURE DROP DIAGRAM (32 cst)



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

SOCAH HYDRAULIQUE
Z.I. du Plessis Beucher - Rue de la croix Guillemet - 35220 CHÂTEAUBOURG - France
Tél : 02 99 000 84 00 - email : contact@socah-hydraulique.fr - Web : www.socah-hydraulique.fr

TERMOSTATO BIMETALLICO FISSO - BIMETALLIC FIXED TEMPERATURE SWITCH



Codice termostato Switch part number	Temperatura d'intervento Working temperature	Contatto Contact
T01 - M22x1,5	36-26°C	NA/NO
T02 - M22x1,5	42-33°C	NA/NO
T03 - M22x1,5	52-42°C	NA/NO
T04 - M22x1,5	65-55°C	NA/NO
T05 - M22x1,5	75-65°C	NA/NO
T06 - M22x1,5	85-75°C	NA/NO
T07 - M22x1,5	95-85°C	NA/NO

NA=normalmente aperto / NO=normally open

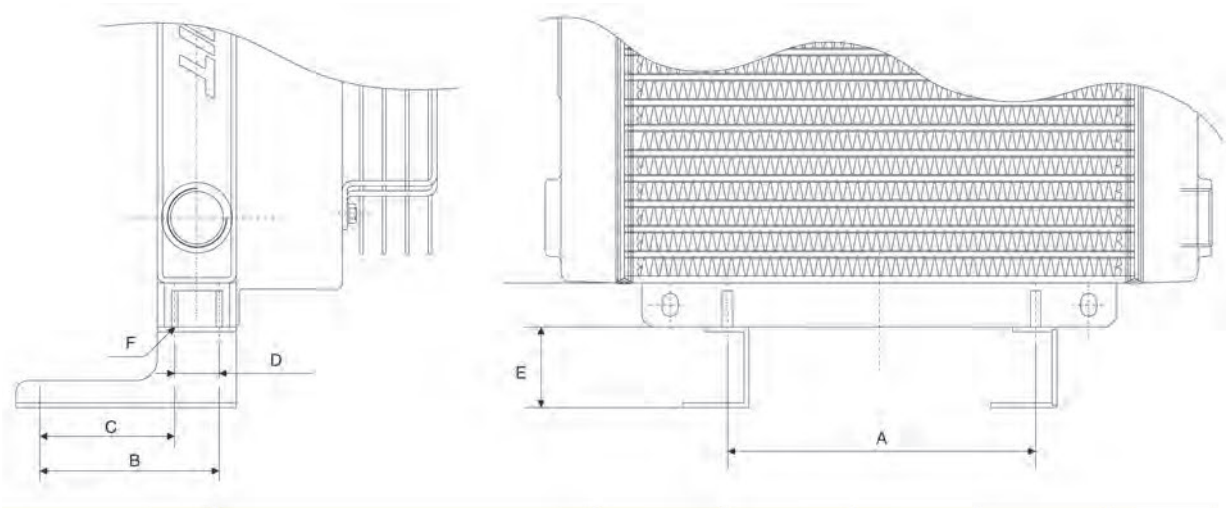
Dati elettrici / Electrical data

Tensione max. / Max. voltage	250Vca
Corrente max. / Max. current	10A
Tolleranza intervento / Tolerance	±5°C
Differenziale fisso max. / Fixed hysteresis max.	15°C
Connessione elettrica / Electrical connection	DIN43650
Protezione elettrica / Protection degree	IP65
Temperatura max. / Max temperature	130°C

Materiali / Materials

Corpo / Body	Ottone / Brass
Contatti / Contacts	Argentati / Silver plated

STAFFE DI FISSAGGIO - FOOT FLANGES



Tipo Type	Staffe di fissaggio Foot flanges	A	B	C	D	E	F
ST50	P-SSA50 - VN	140	125	101	24	45	M6
ST60	P-SSA50 - VN	190	125	101	24	45	M6
ST100	P-SSA100 - VN	190	127	91	36	50	M6
ST150	P-SSA100 - VN	250	127	91	36	50	M8
ST180	P-SSA100 - VN	370	127	91	36	50	M8
ST210	P-SSA210 - VN	370	144	78	66	50	M8

Codes de commande

ST50 12 02 A - P

Tipologia di scambiatore Type
ST50
ST60
ST100
ST150
ST180
ST210
ST250
ST260
ST2100
ST2150
ST2180
ST2210

Termostati bimetallici fissi Bimetallic fixed temperature switches	
00	Senza termostato / No switch
01	Termostato fisso / Fixed switch 36-26 °C
02	Termostato fisso / Fixed switch 43-33 °C
03	Termostato fisso / Fixed switch 52-42 °C
04	Termostato fisso / Fixed switch 65-55 °C
05	Termostato fisso / Fixed switch 75-65 °C
06	Termostato fisso / Fixed switch 85-75 °C
07	Termostato fisso / Fixed switch 95-85 °C

Optionals	
P	Con staffe di fissaggio With foot flanges

Tipi di ventilazione Fans	
A	Aspirante / Drawing
S	Soffiante / Blower

Tipi di ventilazione Fan Motor	
12	12V CC
24	24V CC

APPLICAZIONI SPECIALI

Per tutte le applicazioni che non rientrano nei casi normali specificati in questo catalogo contattare l'ufficio commerciale della OMT per un eventuale studio di fattibilità.

SPECIAL APPLICATIONS

For special solutions or particular applications, please contact OMT commercial department for informations.

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SOCAH HYDRAULIQUE

ECHANGEURS DE TEMPERATURE AIR/HUILE SERIE **SSPV**

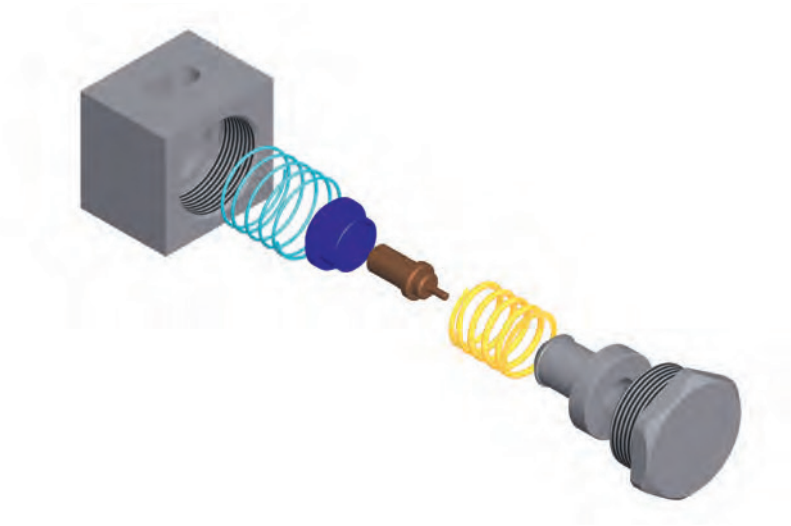
ÉCHANGEURS DE TEMPÉRATURE

Série SSPV

Édition Juin 2020

Sommaire

Cooler with the valve thermostatic by-pass incorporate



Incorporation of the valve thermostatic by-pass in the cooler

Continuous research and technical development lead to the **SSPV heat exchanger** series which consider the needs of the market.

Customers expressed many times dissatisfaction whit the process of assembling heat exchangers.

The main complain was about the obligation of adding an external bypass valve which was able to outflow any high pressure, mainly caused by the variation of oil viscosity and/or multiplication of the flow.

The **SSPV series** can simplify this process of assembly and marking it cheaper :

1. In fact, the SSPV series integrates the by-pass valve and thermostatic valve together in the same heat exchanger. So, it controls any peaks of pressure.

2. The presence of the thermostatic valve is strategic in case of freezing temperatures of the oil as it by-passes the oil outside the core until the oil temperature reaches 40°C

This new series is original because it eliminates many problems such as the loss of load when the oil viscosity is higher. It also allows to increase the temperature inside the pipes, grantig the best control on the oil temperature inside them.

Caractéristiques techniques

Core data

Material	Aluminium
Max Working Pressure	25 bar
Test pressure	35 bar
Max temperature	120 °C

Fluid compatibility

Mineral oils, hl, hlp, water-oil emulsion.

Installation

We recommend to install a by-pass valve in parallel to the heat exchanger, for its protection during the starting up.
Make sure there is no obstacle to the air flow.

Maintenance

Oil side cleaning
LFlushing with a detergent or a degreasing product compatible with aluminium, eliminates the dirt.
To remove the residuals, use compressed air.

Air side cleaning
It can be done by using compressed air or water and paying attention to the jet direction for not spoiling the vanes. If oil or grease has to be removed, clean with a jet of steam or hot water. Make sure that the electric motor is disconnected and properly protected.

MATERIALS

Fan	Steel or hard plastic
Fan case	Steel
Fan protection	Steel or hard plastic

Détermination d'un échangeur SSPV

EXAMPLE

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

Power to dissipate	P_{req}	=	25 [kW]
Oil flow	V_{oil}	=	105 [lpm]
Oil input temperature	T_{oil}	=	65 [°c]
Ambient temperature	T_{amb}	=	35 [°c]

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

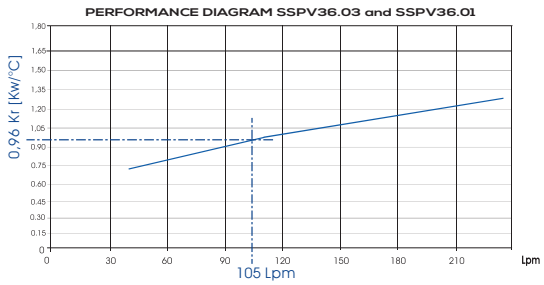
You can then calculate the specific heat exchange power KW/°C if you know the power to dissipate and the ΔT (the difference between the oil input temperature and the ambient temperature).

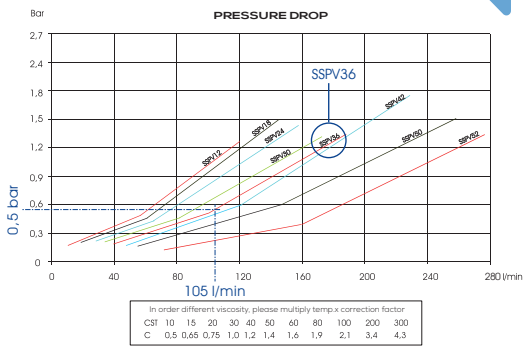
$$Kr = \frac{25\ kW}{65° - 35°} = 0{,}833\ kW/°C$$

Note the oil flow (105 lpm) and specific exchange power (0,833 kW/°C), product research is made by referring to the graph in the catalogue which is relevant to each model.

Oil temperature difference

ΔT_{oil} **[°C] = 33 x** P_{sel} **[kW] /** V_{oil} **[Lpm]**





Results :

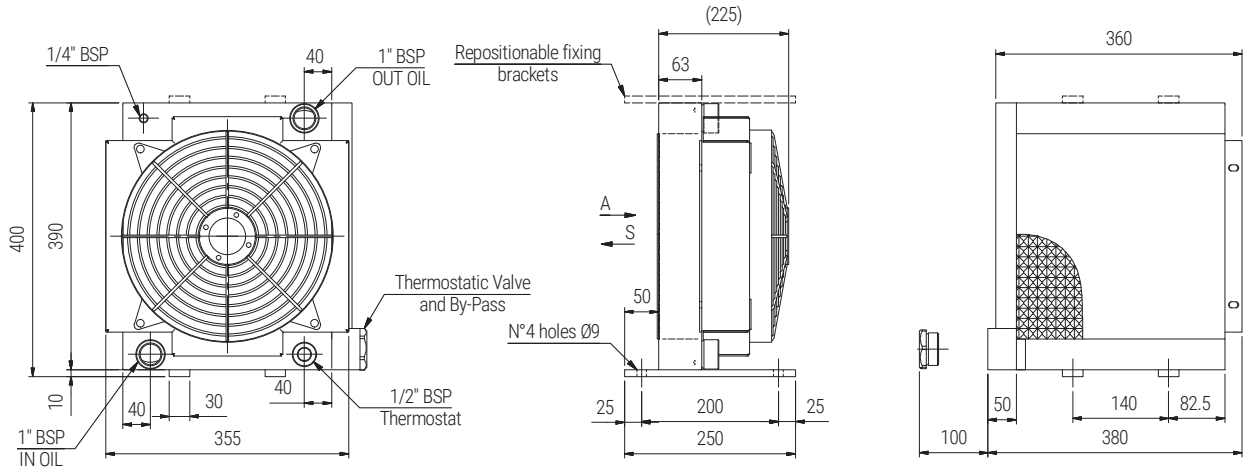
Selected cooler : SSPV36.03

Heat rejecting : 0,96 x 30 = 28,8 [kW]

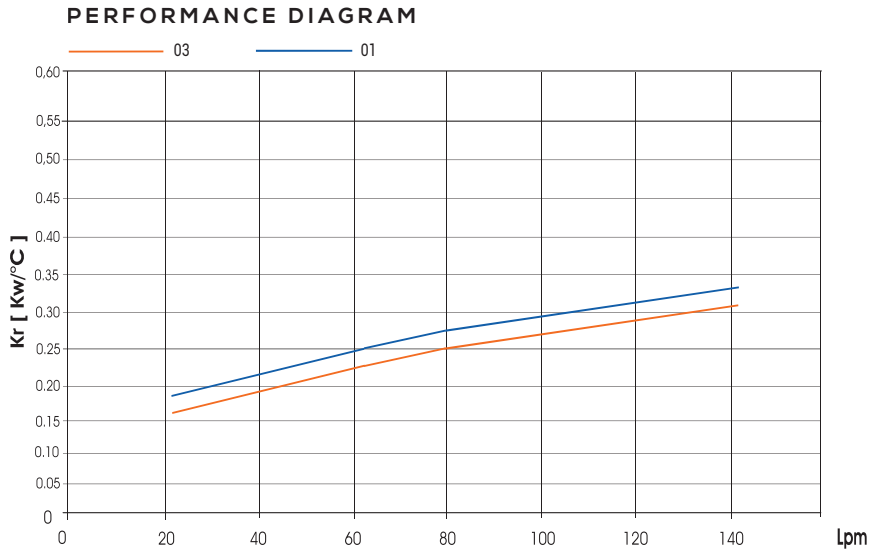
Pressure drop : 0,55 [bar]

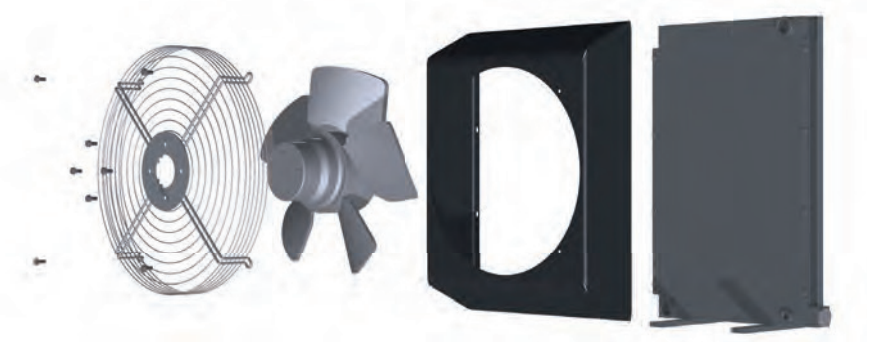
Oil temperature difference : ΔT_{oil} [°C] = 33 x 28,8 [kW] / 105 [Lpm] = 9,05 [°C]

Types SSPV12.01 / SSPV12.03



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	230	2300/2250	0,145/0,175	300	64	2010	1,8	16	44
03	50/60	400	1380/1550	0,075/0,095		62	1870			





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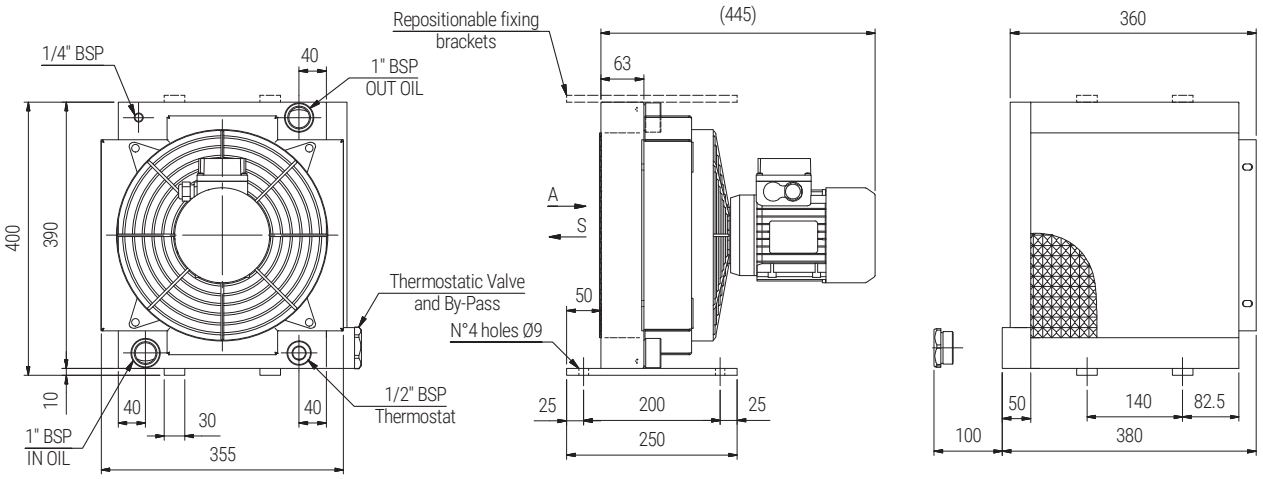
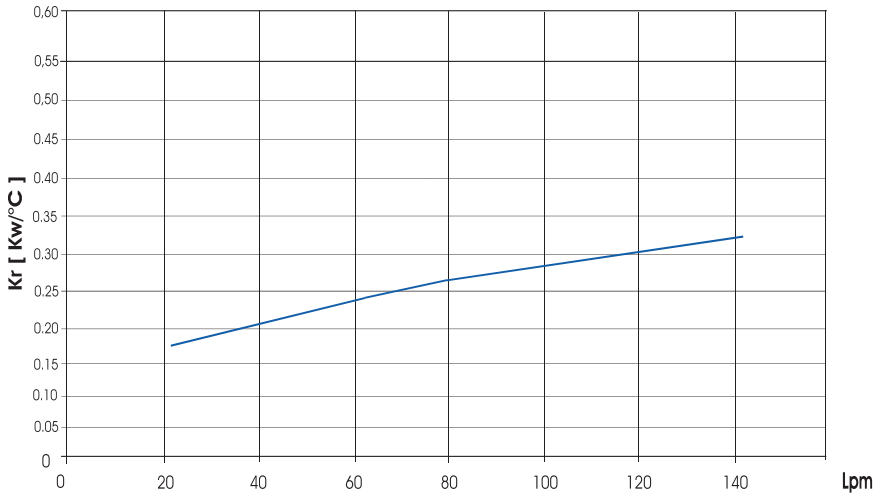
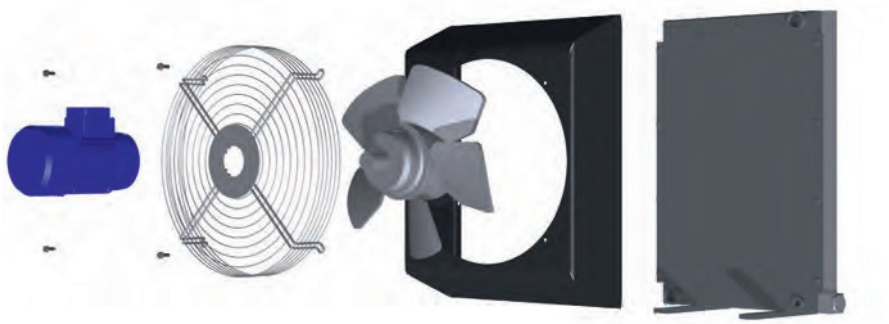
Type SSPV12.14



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	1390	0.370	315	71	2200	1,8	18	55
	60	276/480	1685	0,440		72	2300			

PERFORMANCE DIAGRAM





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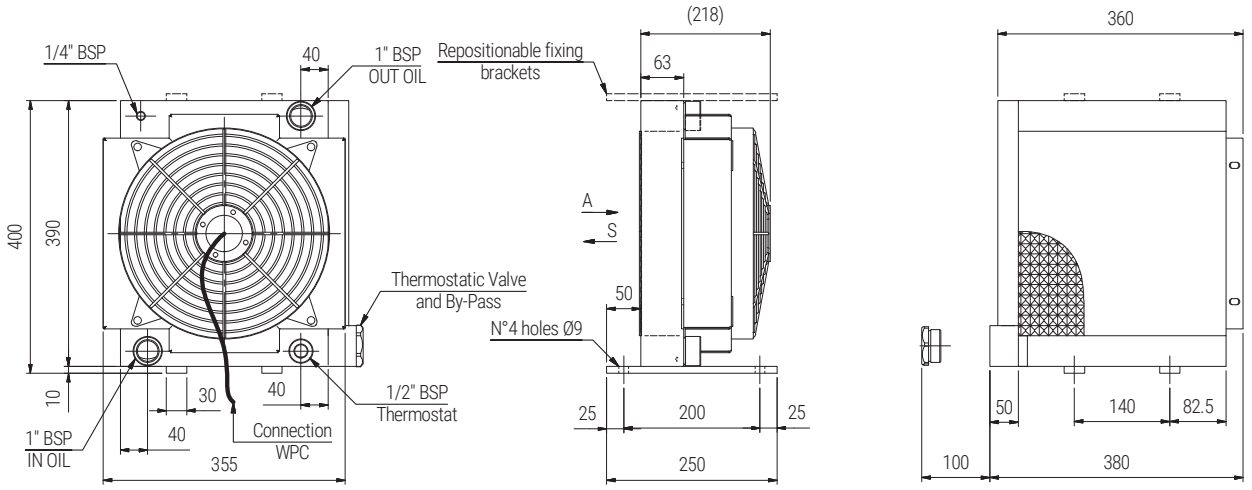
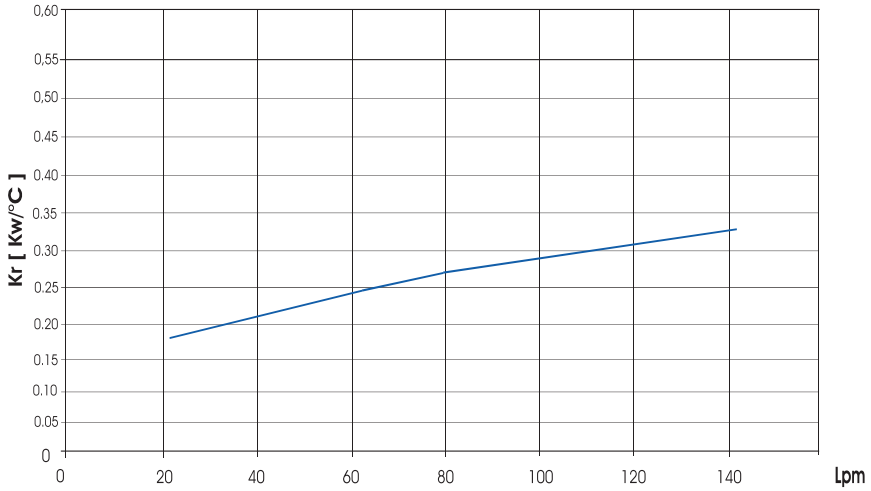
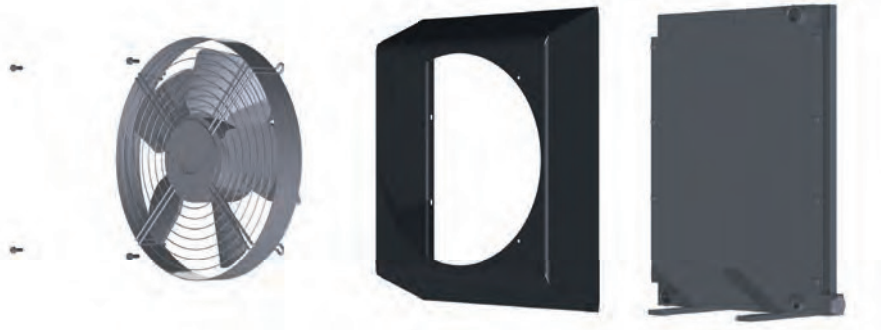
Types SSPV12.12 / SSPV12.24



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
12	DC	12	3090	0,218	305	68	2600	1,8	15	68
24		24					2350			

PERFORMANCE DIAGRAM





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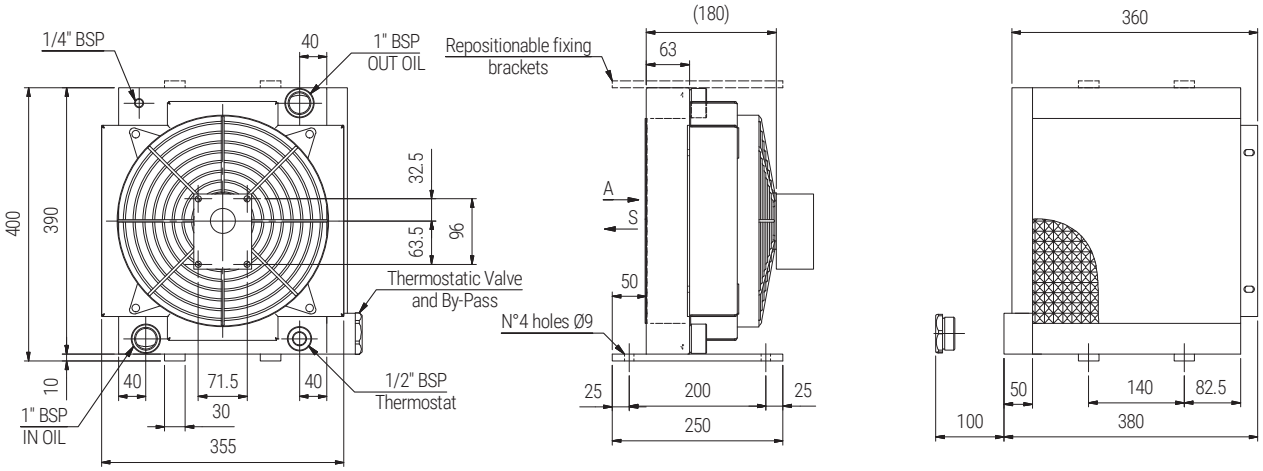
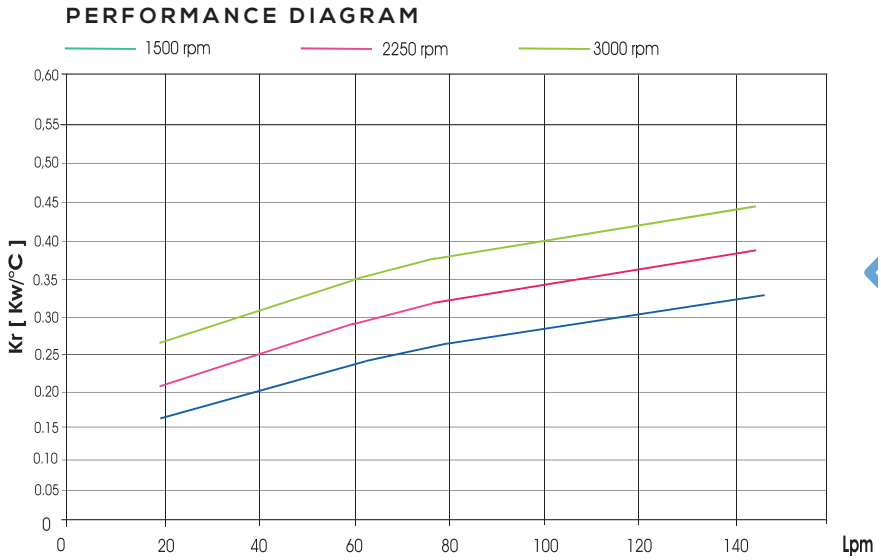
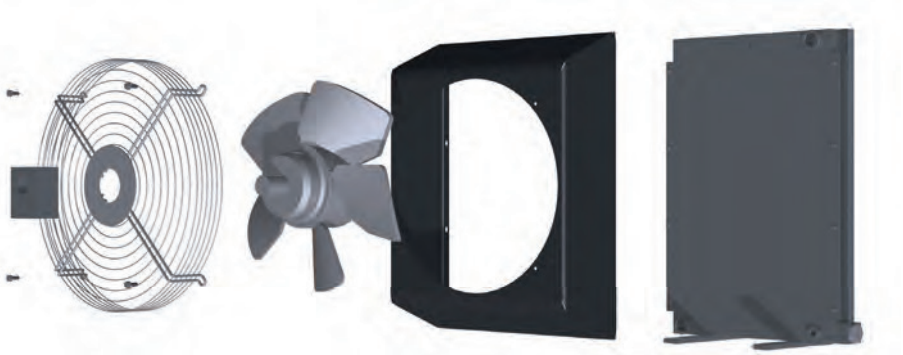
Type SSPV12.G2



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/3000		300			1,8	14	





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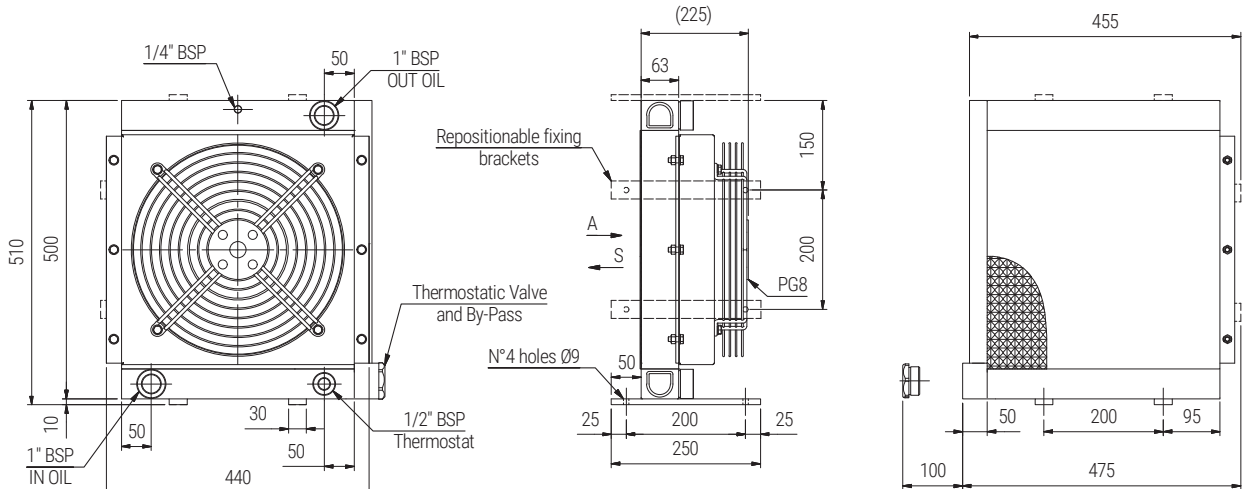
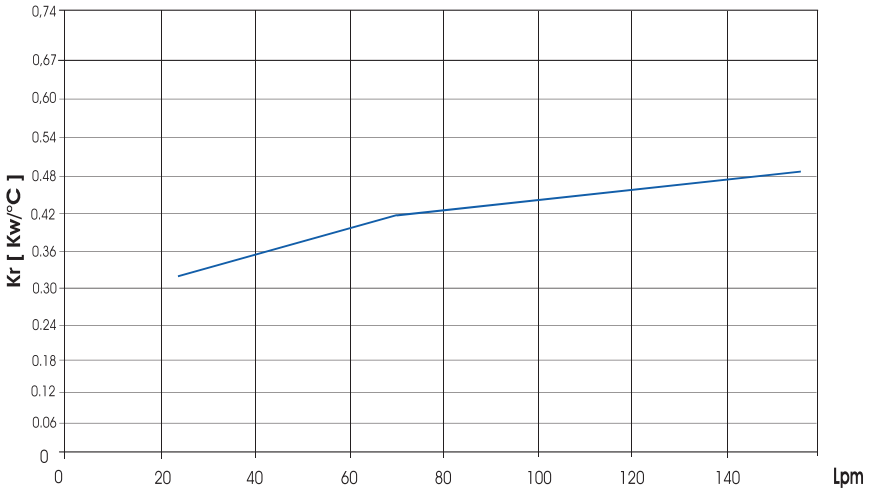
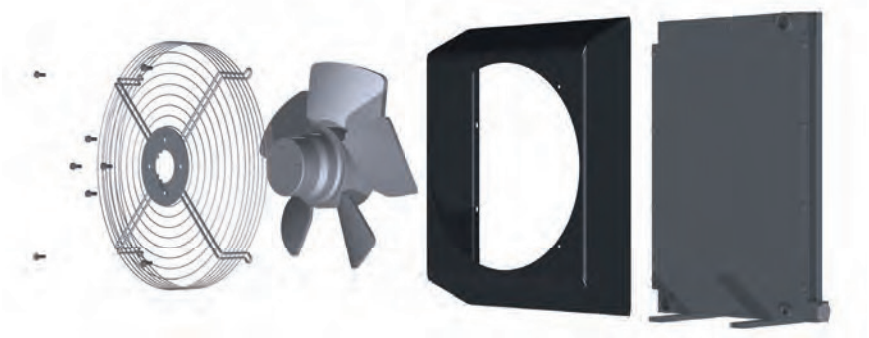
Types SSPV18.01 / SSPV18.03



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	230	1380/1550	0,180/0,250	400	68	4000	2,8	19	44
03	50/60	400	1380/1520	0,180/0,250		68	4300			

PERFORMANCE DIAGRAM





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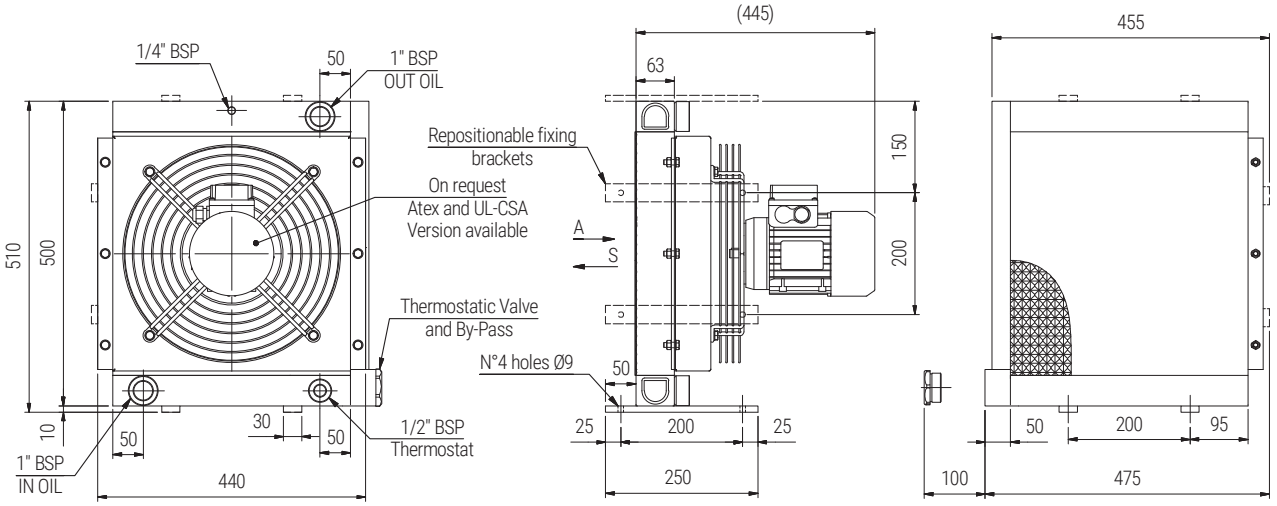
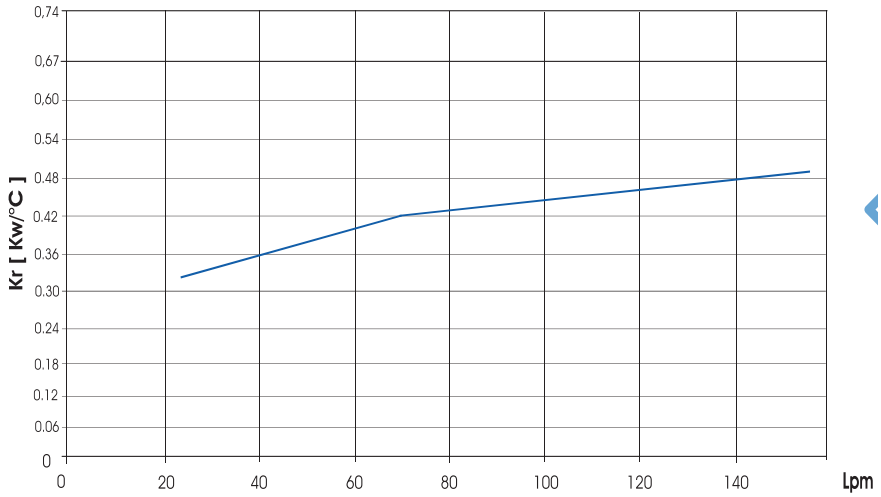
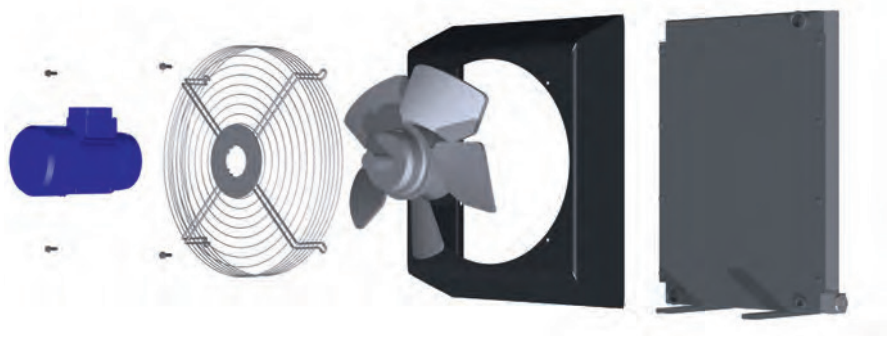
Type SSPV18.14



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	1390	0.550	400	70	4000	2,8	21	55
	60	276/480	1685	0,660		71	4230			

PERFORMANCE DIAGRAM





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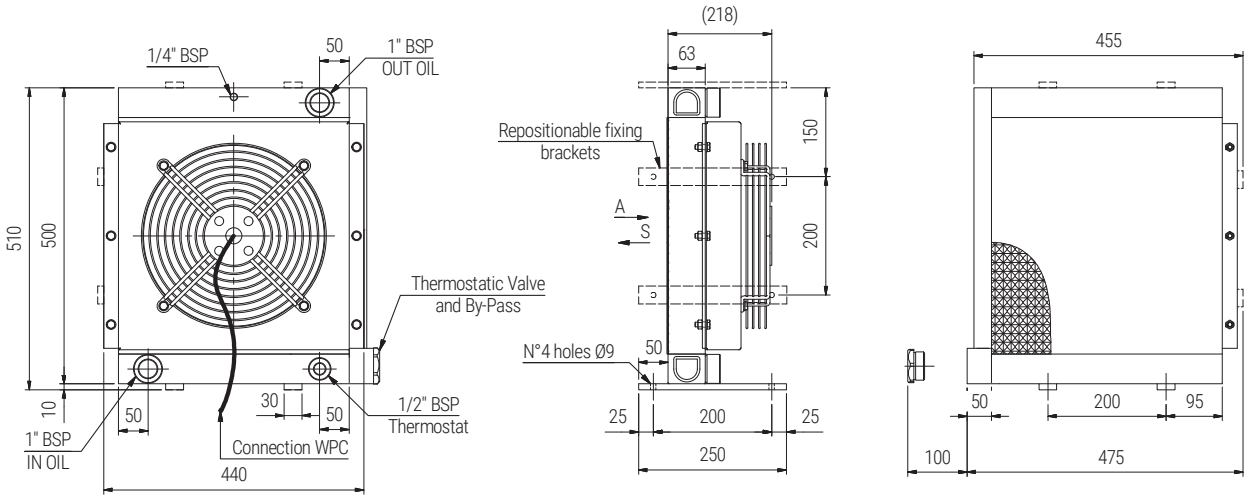
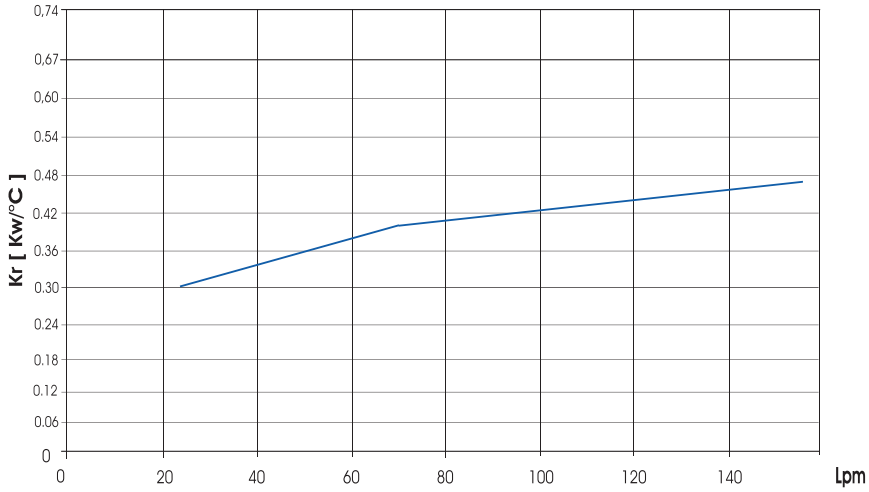
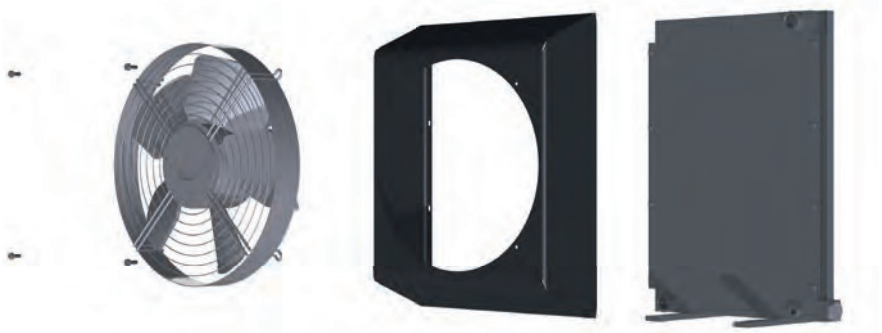
Types SSPV18.12 / SSPV18.24



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
12	DC	12	2248	0,151	385	77	2950	3,1	18	68
24		24					3100			

PERFORMANCE DIAGRAM





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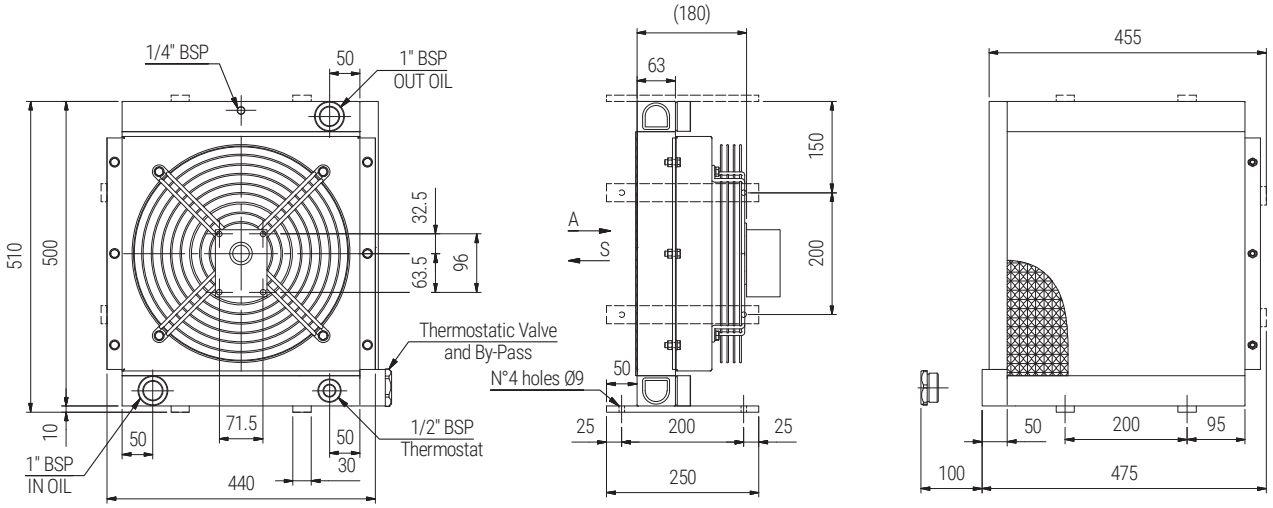
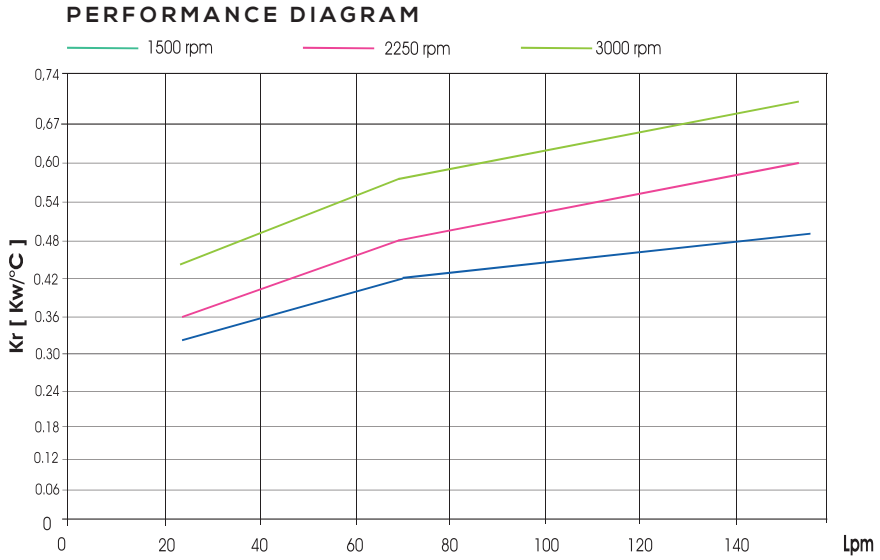
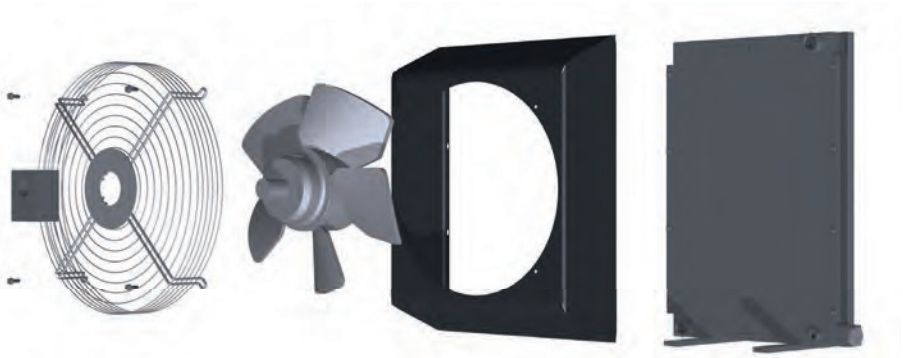
Type SSPV18.G2



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/3000		400			2,8	20	





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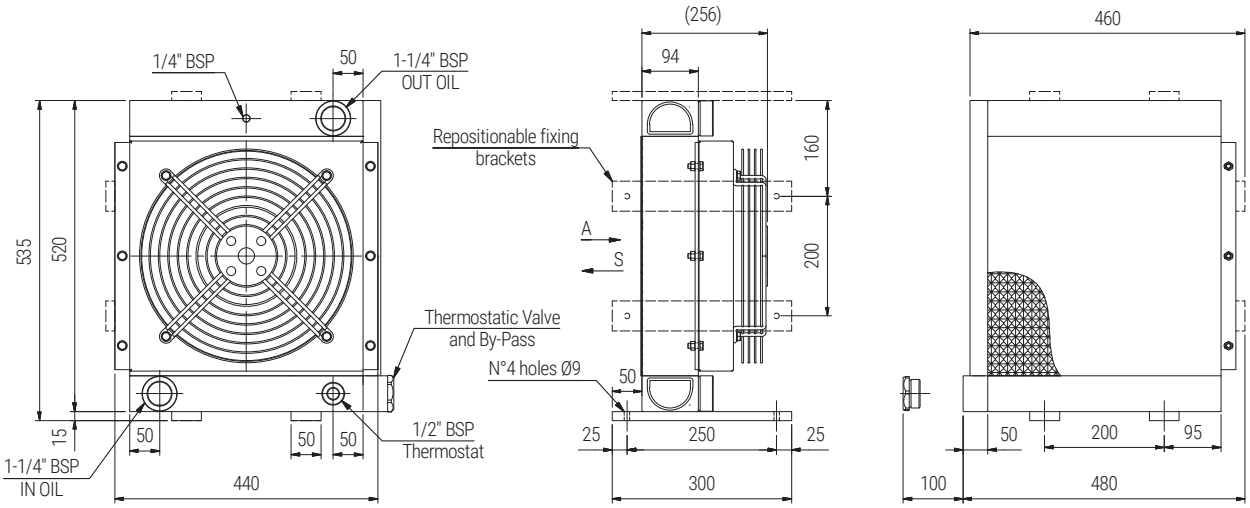
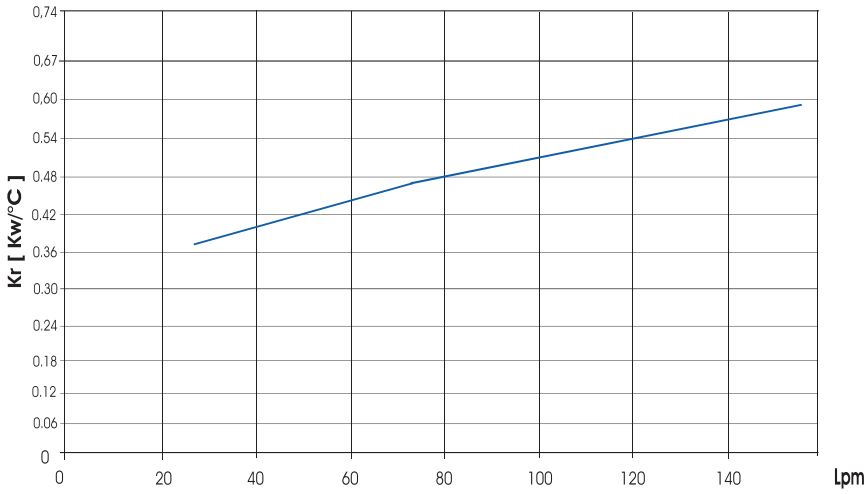
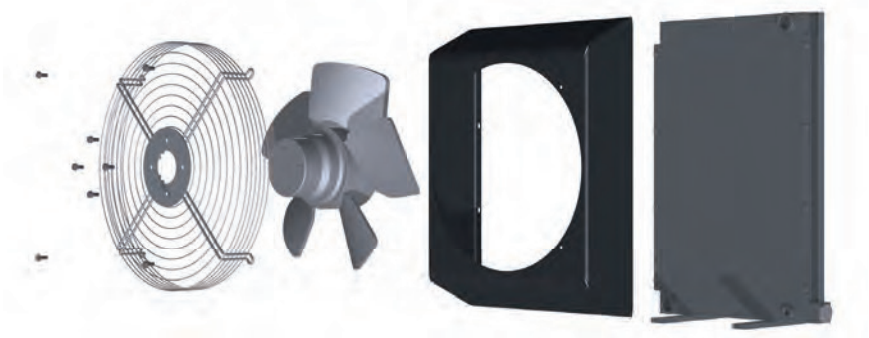
Types SSPV24.01 / SSPV24.03



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	230	1380/1550	0,180/0.250	400	68	3900	3,1	22	44
03	50/60	400	1380/1520	0,180/0,250		68	4100			

PERFORMANCE DIAGRAM





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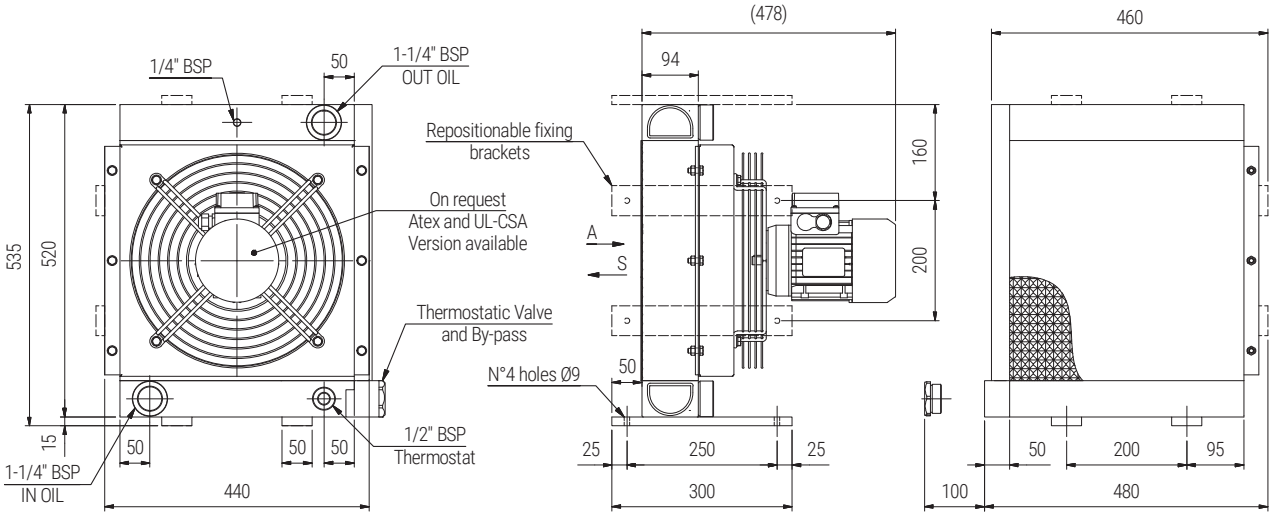
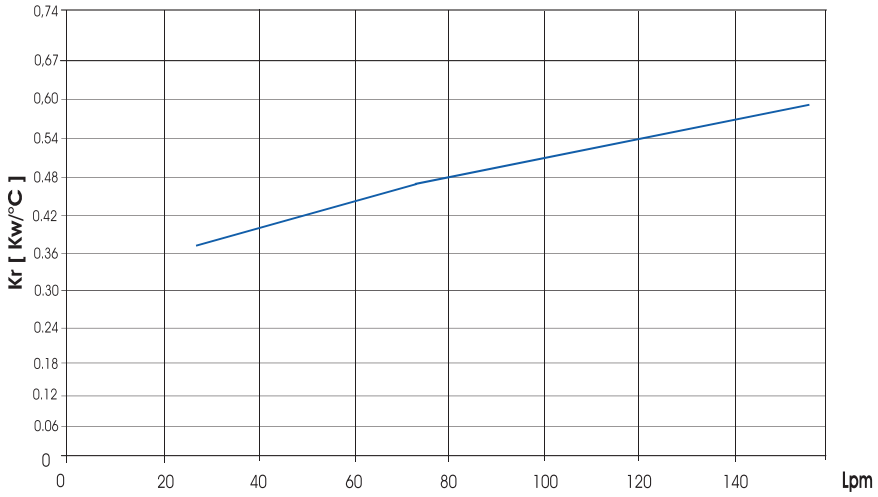
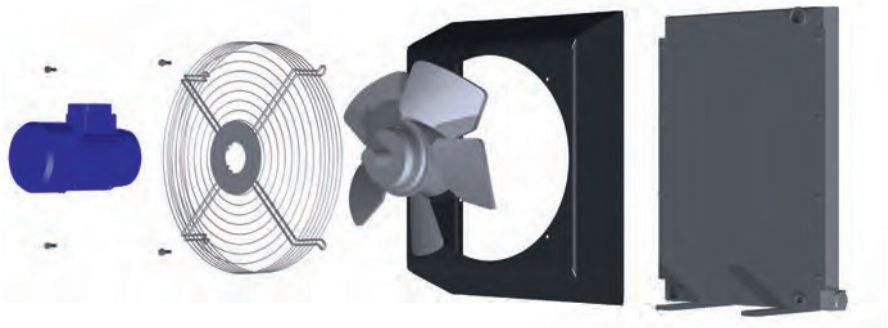
Type SSPV24.14



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	1390	0.550	400	70	3850	3,1	27	55
	60	276/480	1685	0,660		71	4030			

PERFORMANCE DIAGRAM





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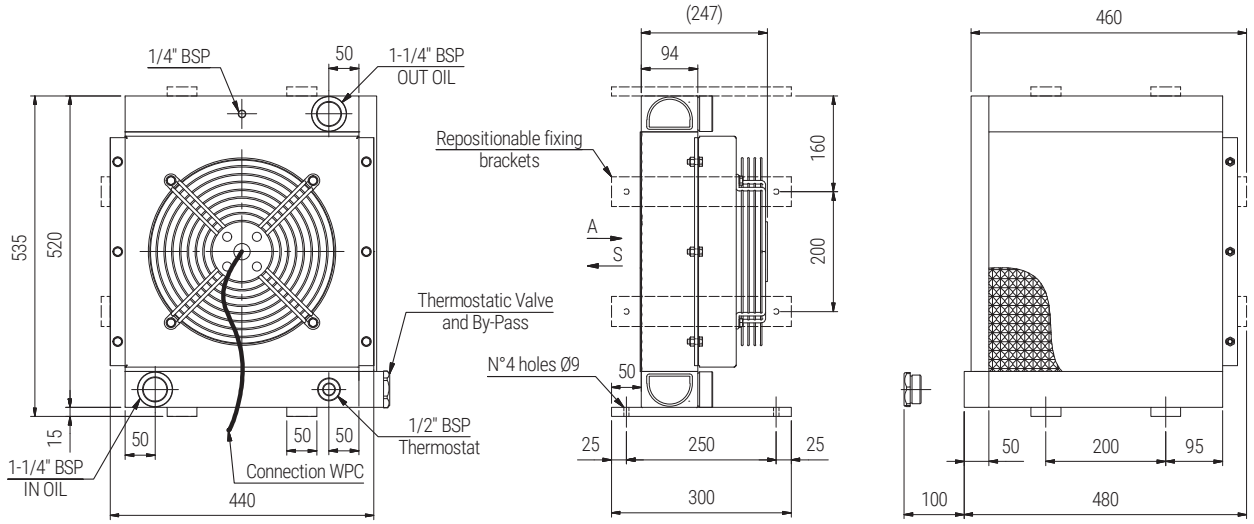
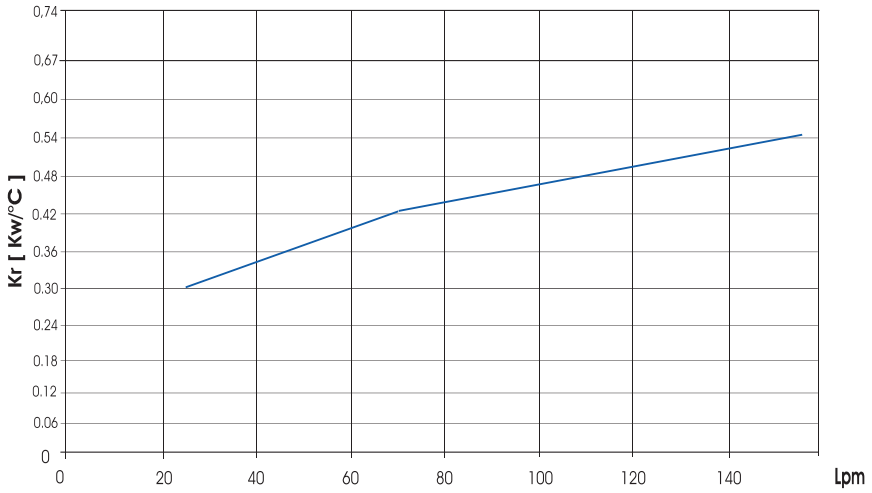
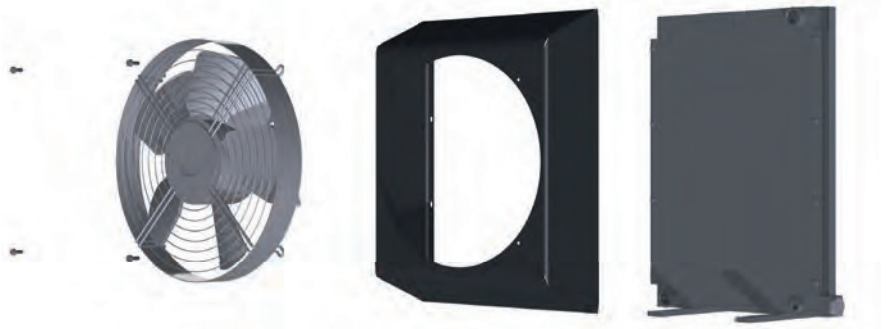
Types SSPV24.12 / SSPV24.24



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
12	DC	12	2248	0,151	385	77	2850	2,8	21	68
24		24					3000			

PERFORMANCE DIAGRAM





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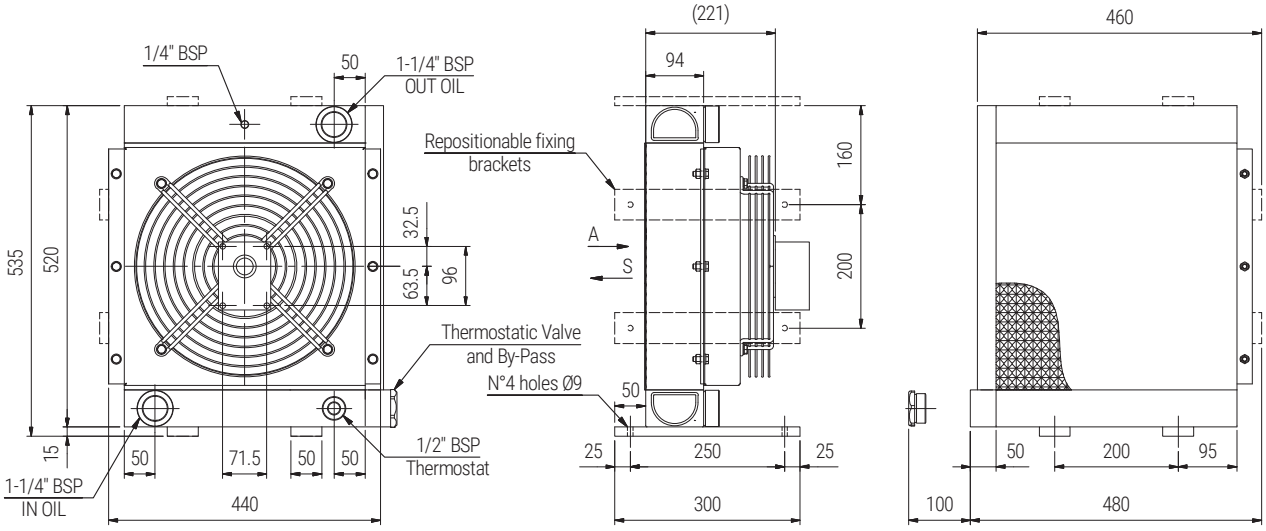
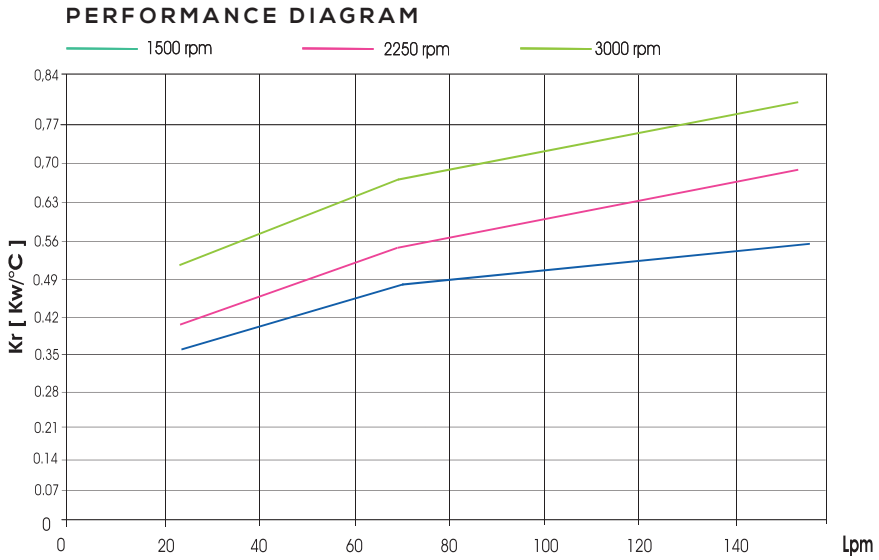
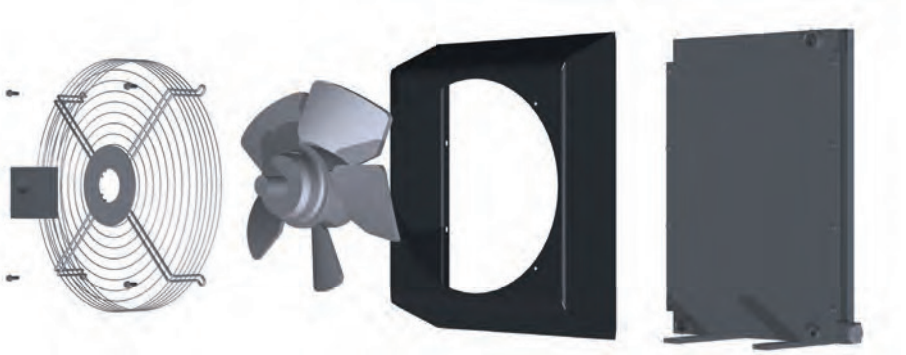
Type SSPV24.G2



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/3000		400			3,1	23	





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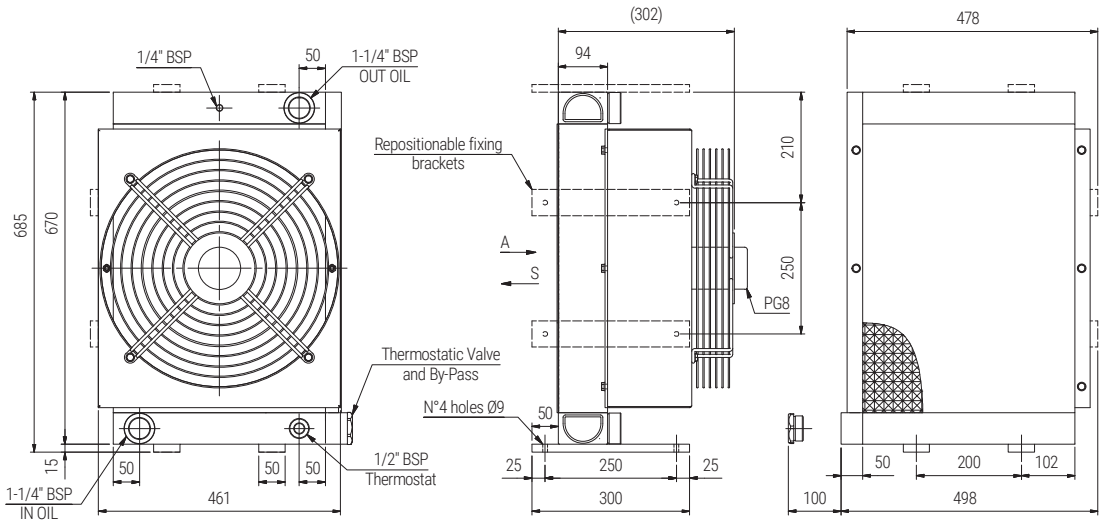
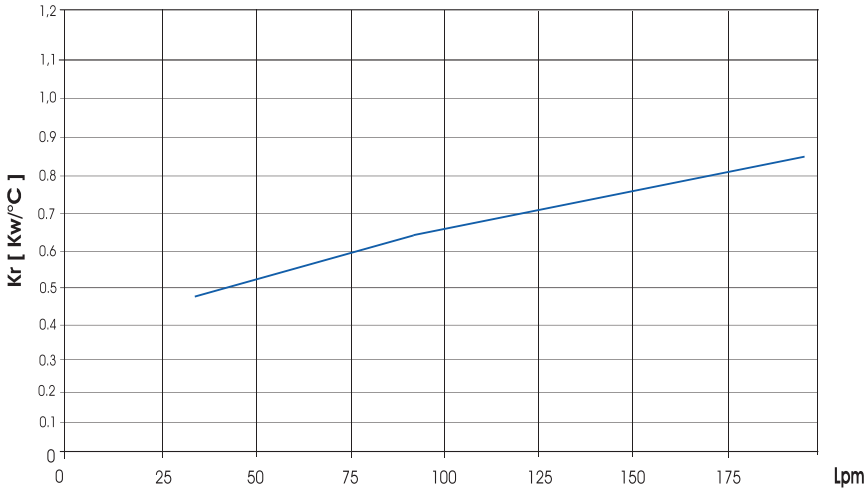
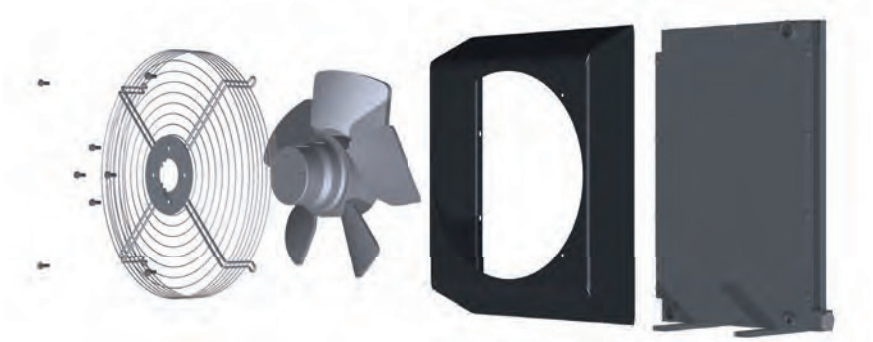
Types SSPV30.01 / SSPV30.03



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	230	1600/1750	0,660/0,800	450	73	6200	6,7	32	44
03	50/60	400	1600/1750	0,660/0,800		73	6200			

PERFORMANCE DIAGRAM





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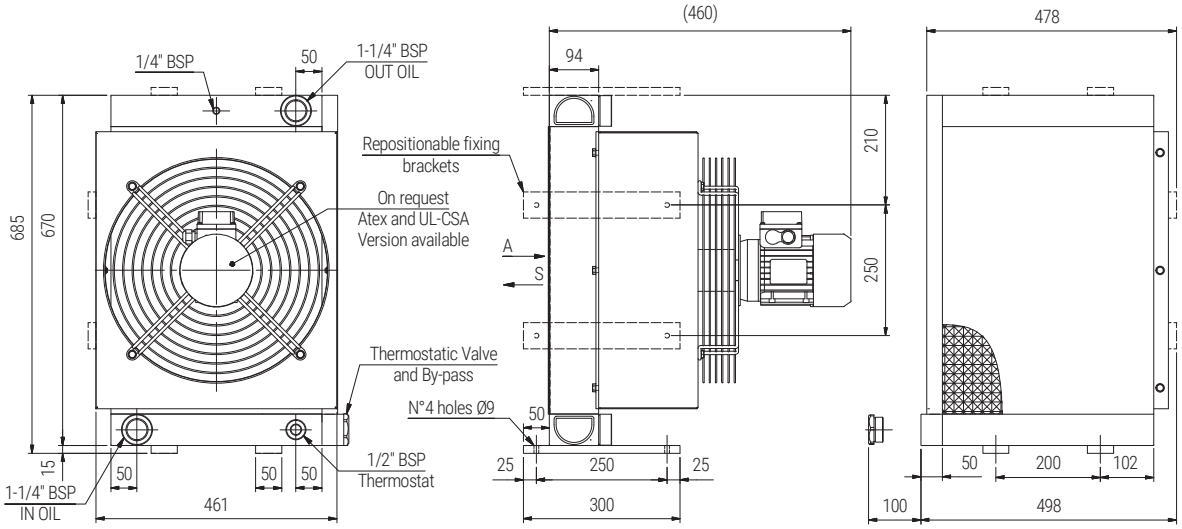
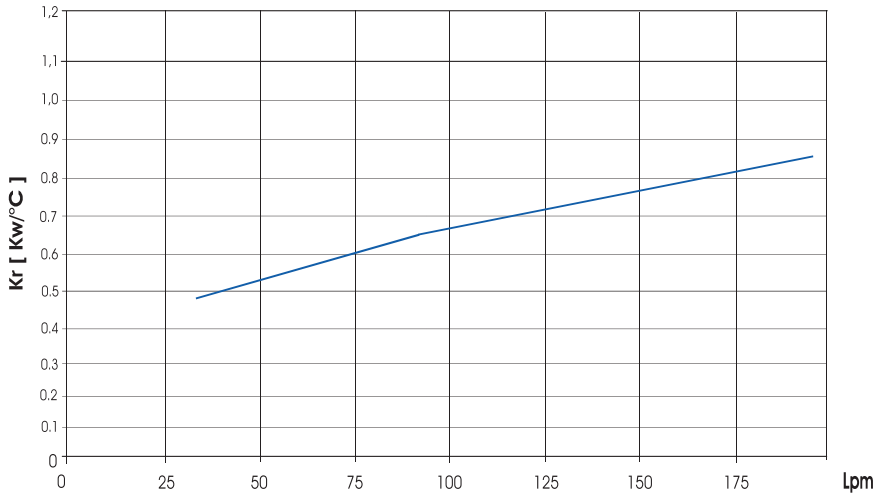
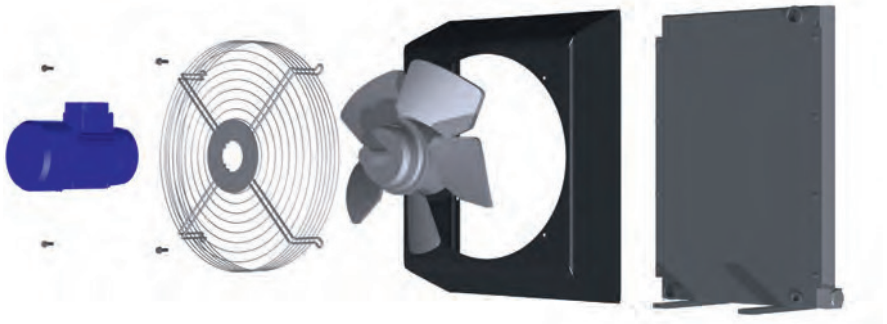
Type SSPV30.14



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	1390	0,750	450	73	6830	6,7	36	55
	60	276/480	1685	0.900		74	6980			

PERFORMANCE DIAGRAM





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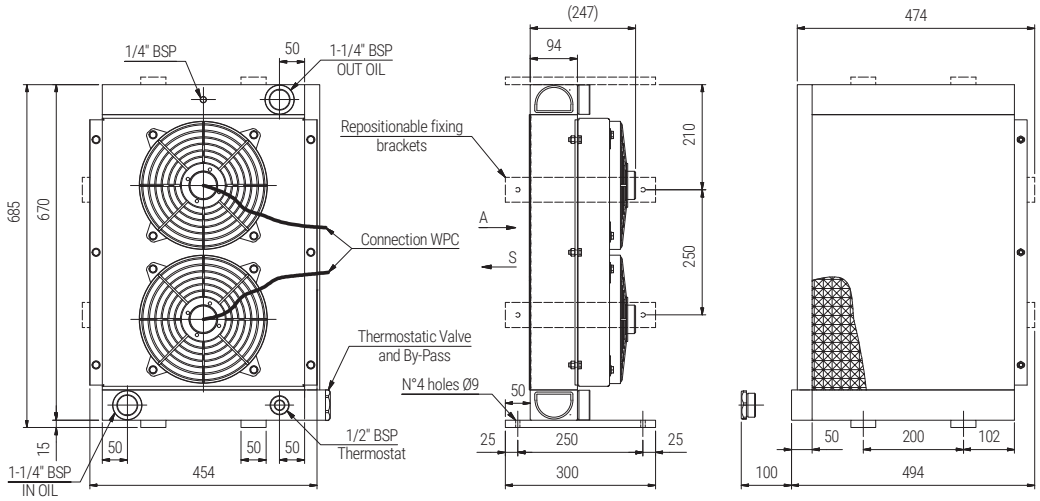
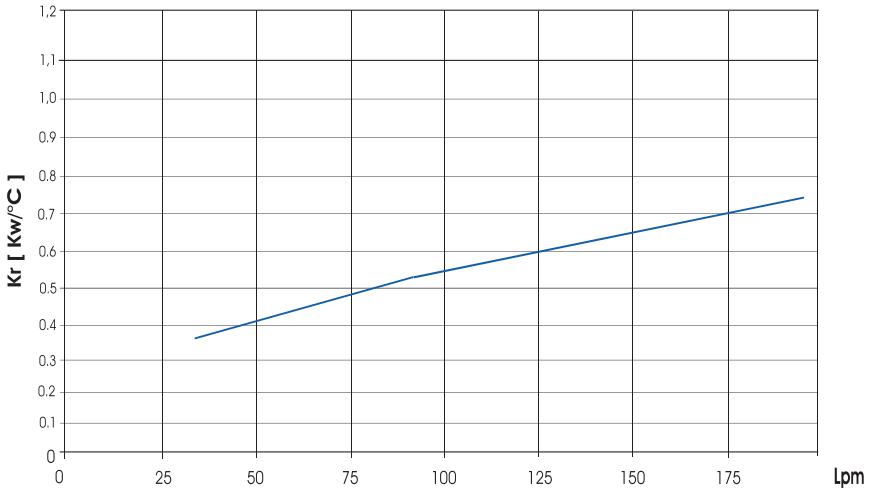
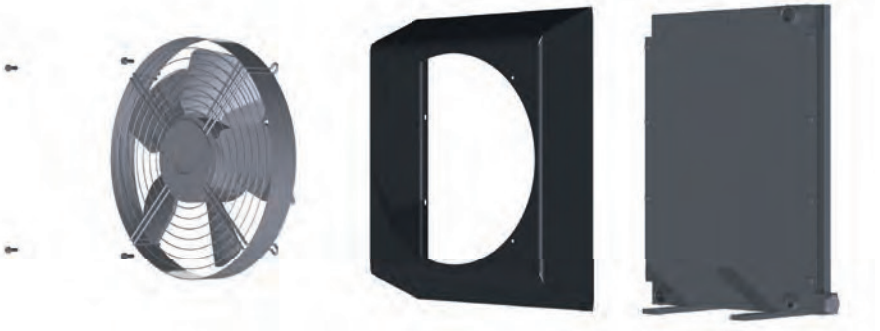
Types SSPV30.12 / SSPV30.24



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
12	DC	12	3005	0,106x2	280	74	2800	6,7	31	68
24		24					2900			

PERFORMANCE DIAGRAM





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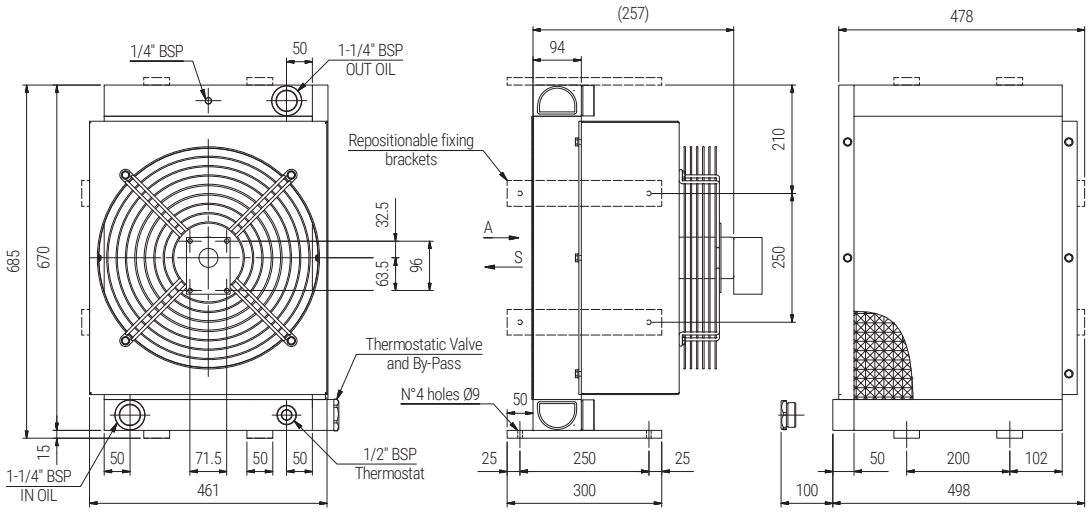
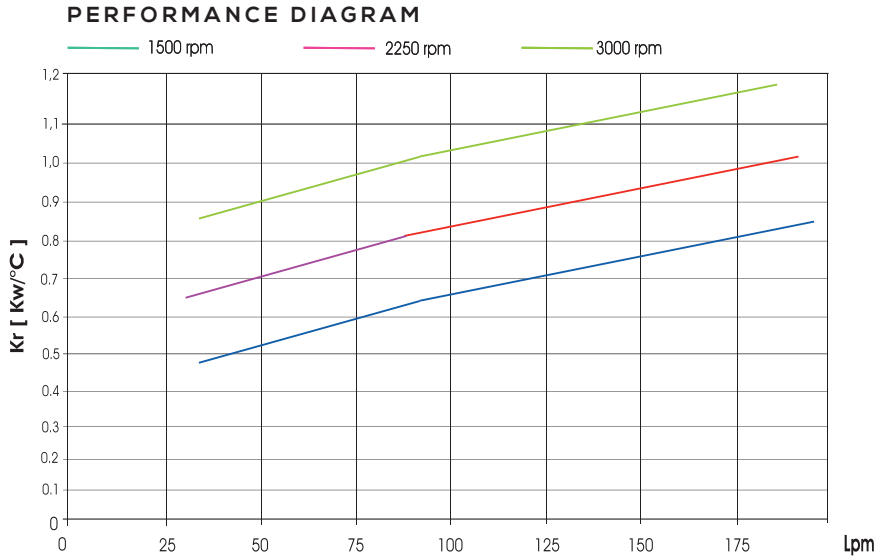
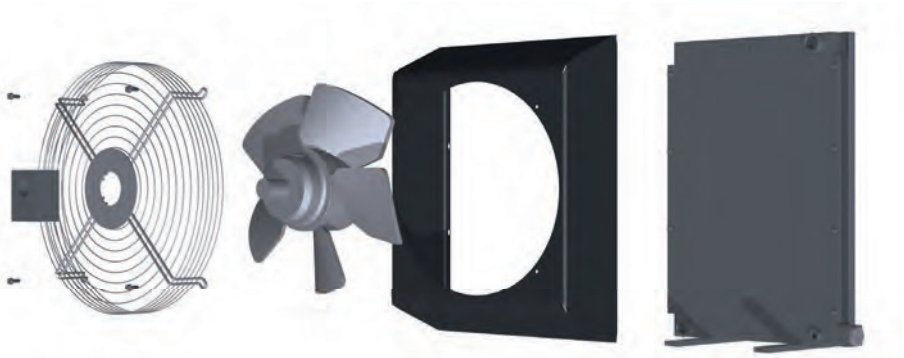
Type SSPV30.G2



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/3000		450			6,7	33	





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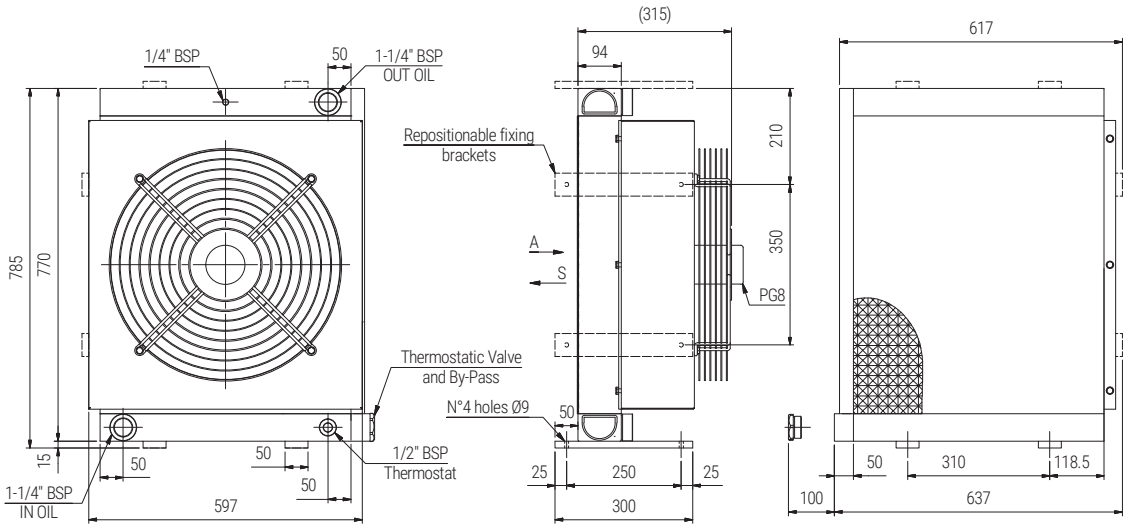
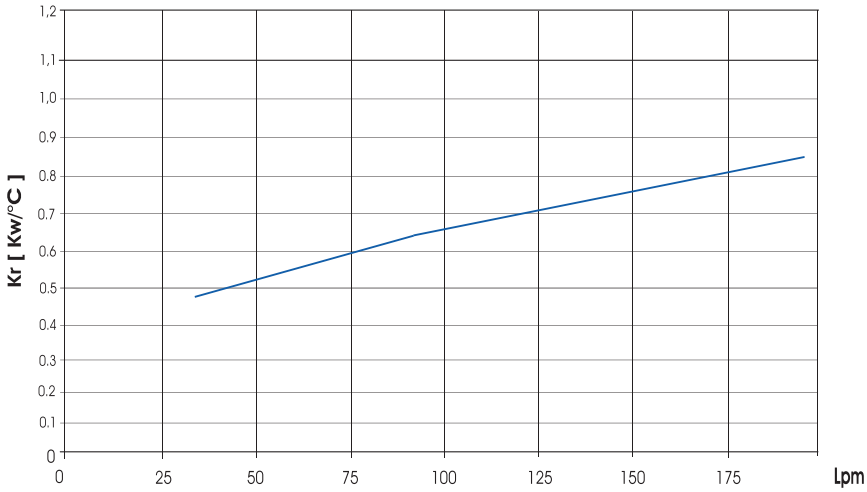
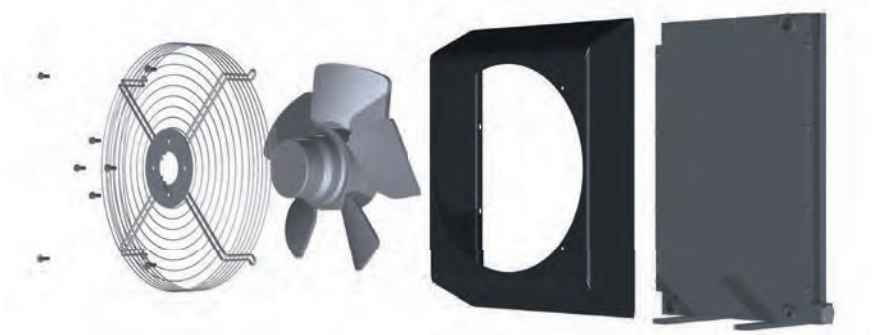
Types SSPV36.01 / SSPV36.03



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	230	1480/1620	0,670/0,800	500	83	6200	9,5	51	54
03	50/60	400	1480/1620	0,100/0,130		83	6200			

PERFORMANCE DIAGRAM





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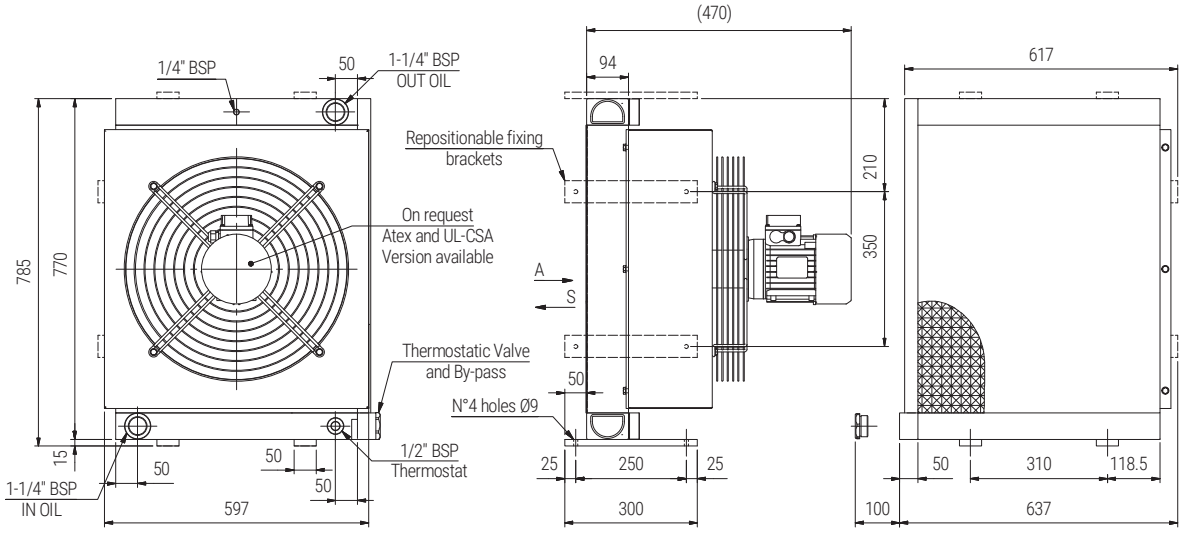
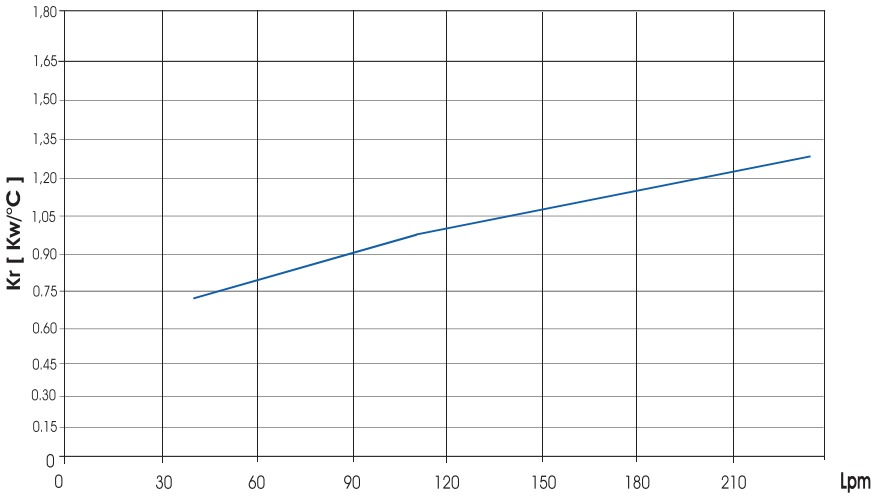
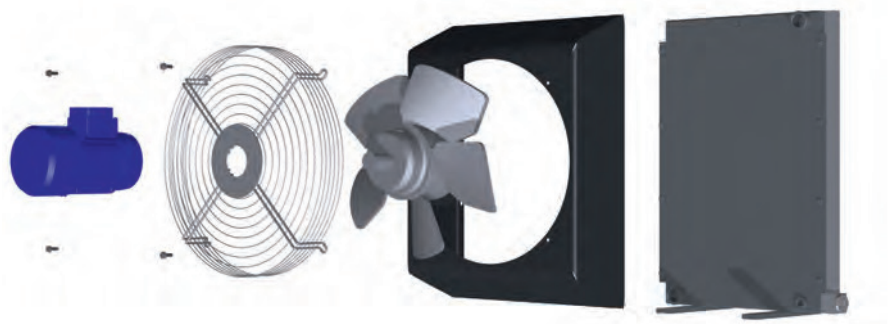
Type SSPV36.14



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	1390	1,100	500	83	6100	9,5	59	55
	60	276/480	1685	1,120		84	6300			

PERFORMANCE DIAGRAM





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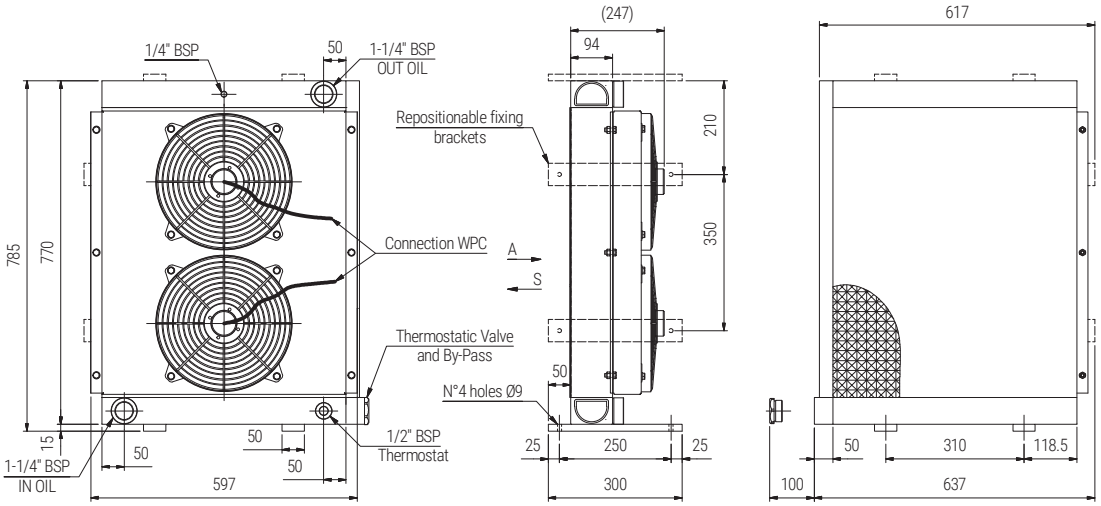
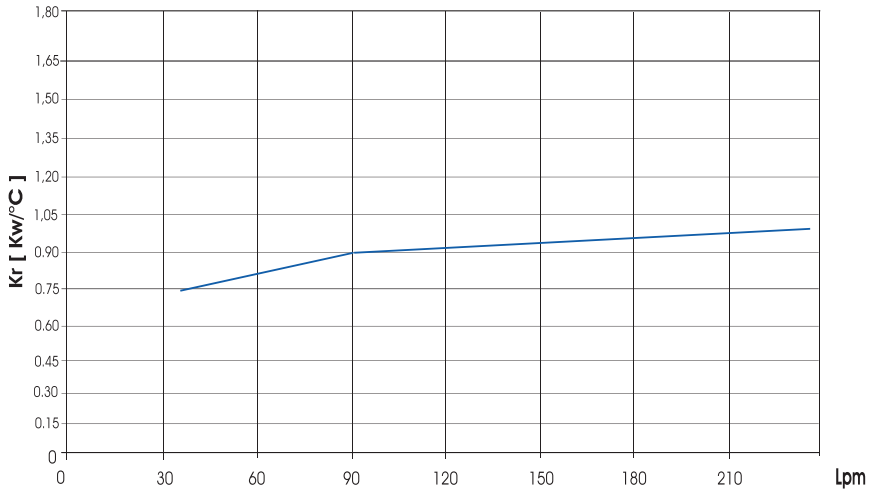
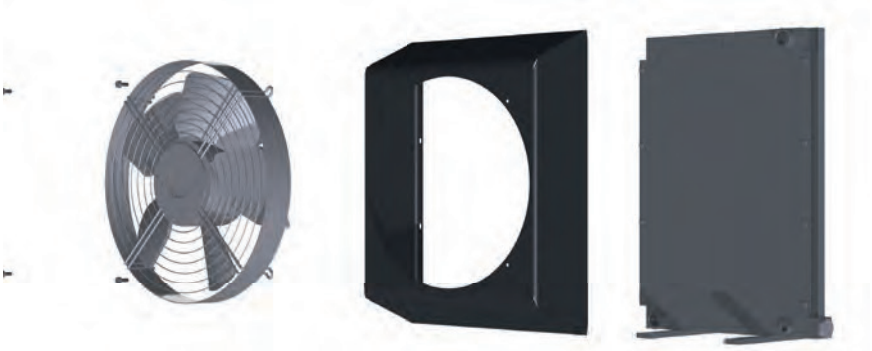
Types SSPV36.12 / SSPV36.24



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
12	DC	12	3090	0,218x2	305	84	5100	9,5	50	68
24		24					5050			

PERFORMANCE DIAGRAM





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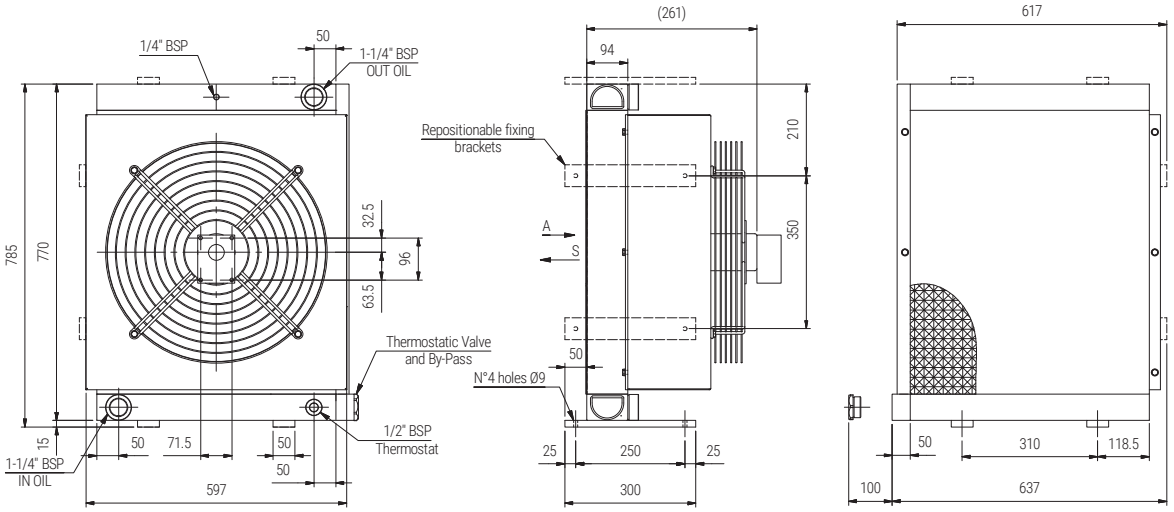
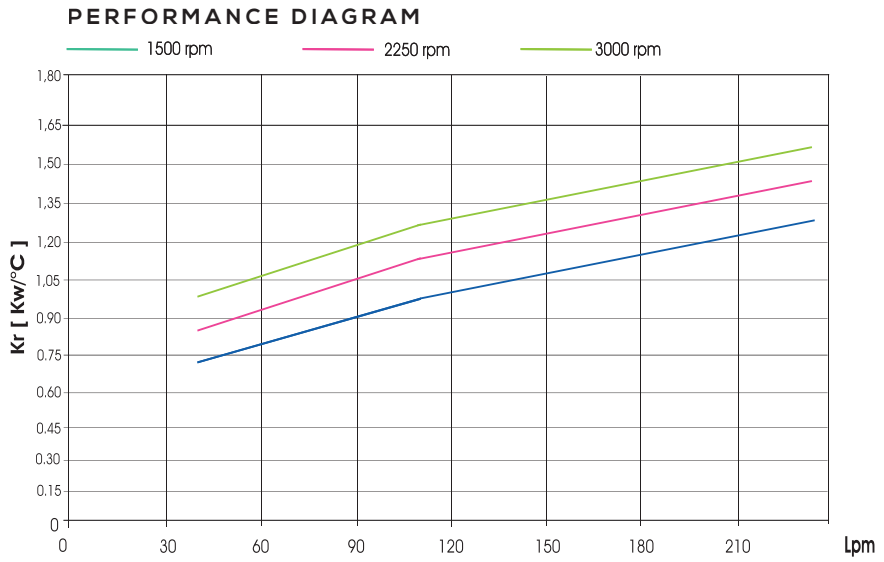
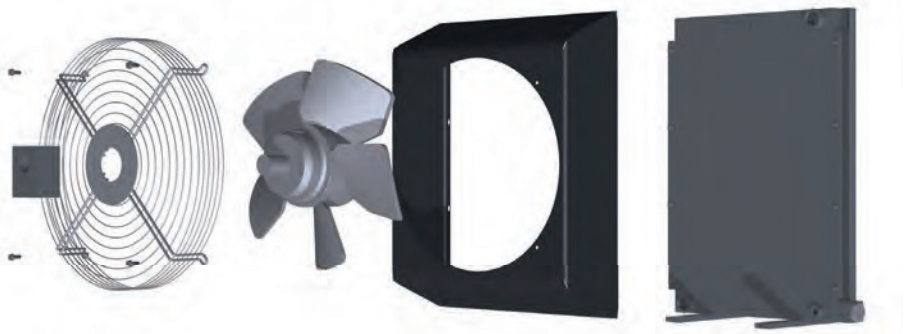
Type SSPV36.G2



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/3000		500			9,5	52	





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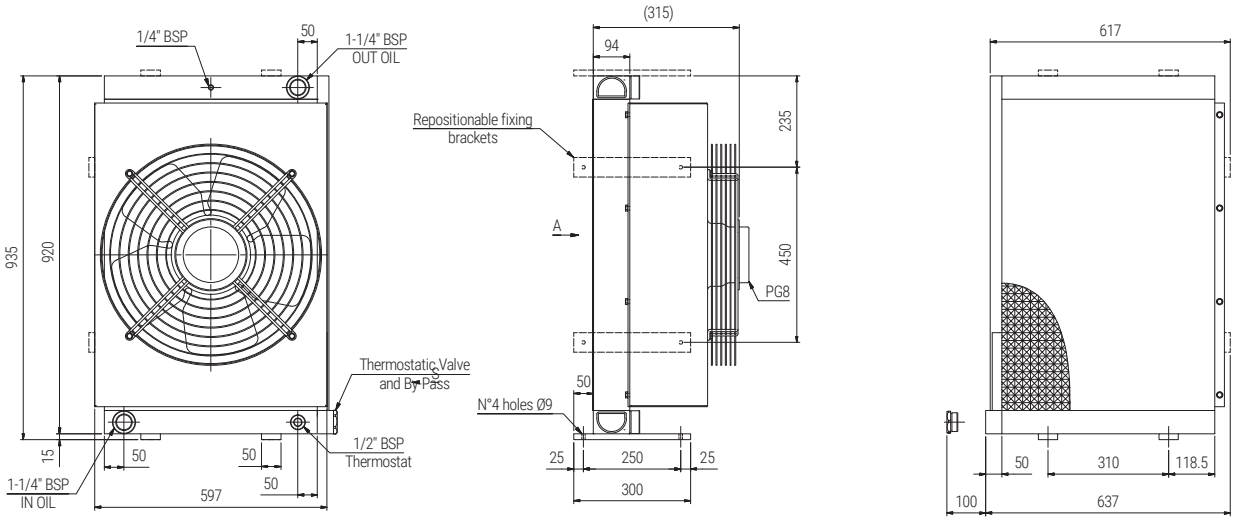
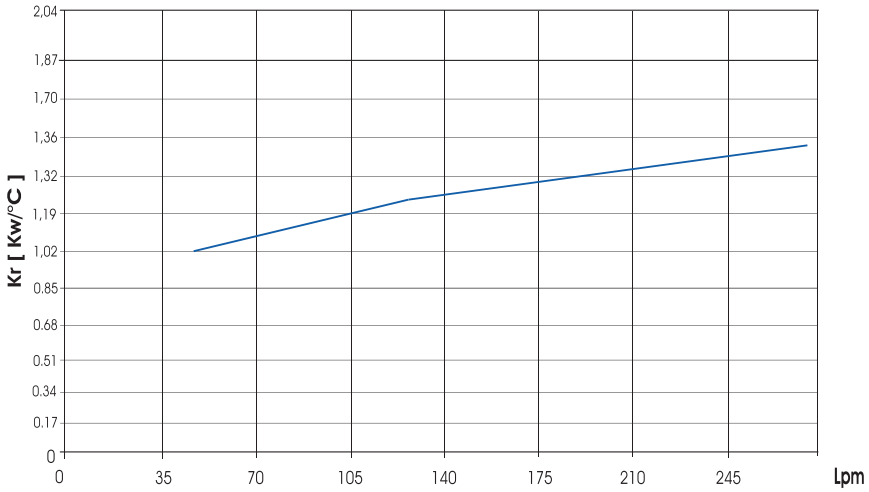
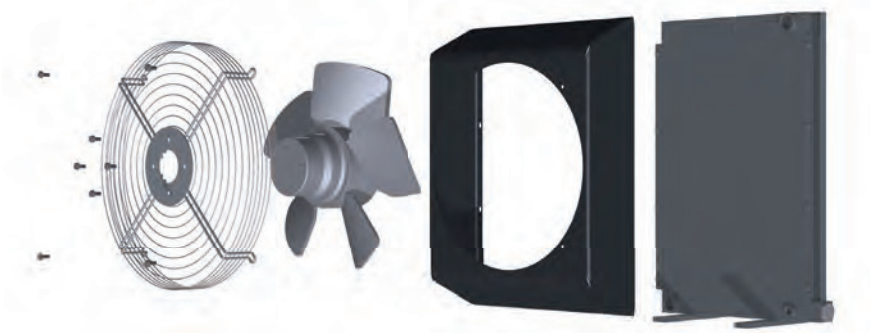
Types SSPV42.01 / SSPV42.03



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	230	1360/1520	0,750/0,980	560	84	7250	10,5	59	54
03	50/60	400	1369/1520	1,07/0,125		84	7250			

PERFORMANCE DIAGRAM





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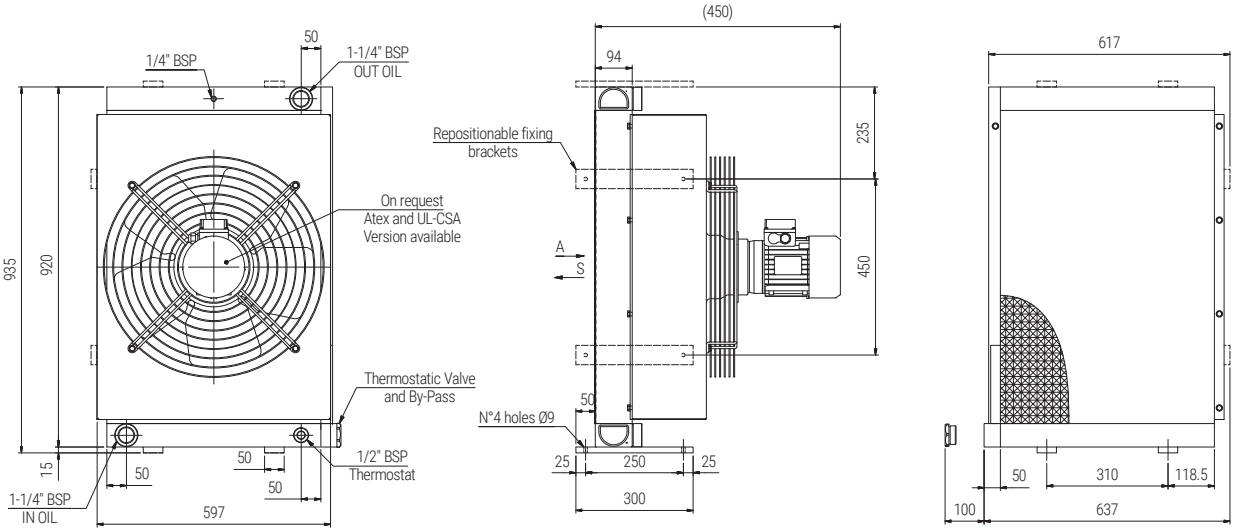
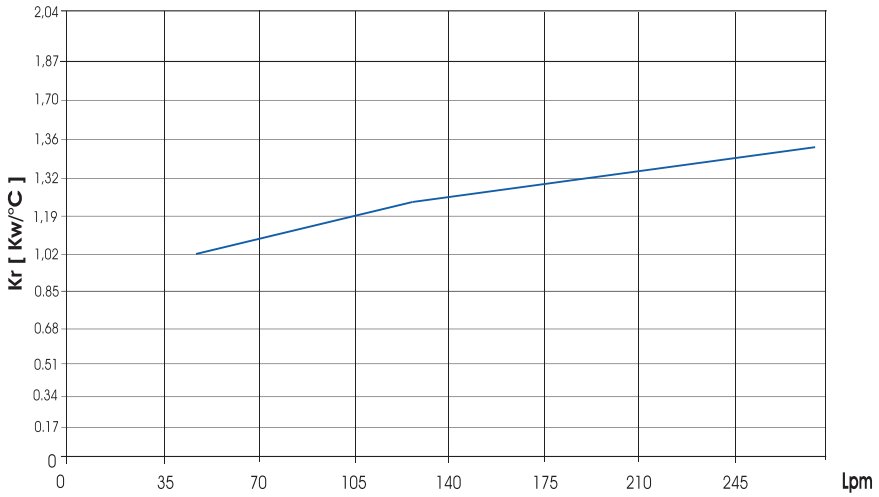
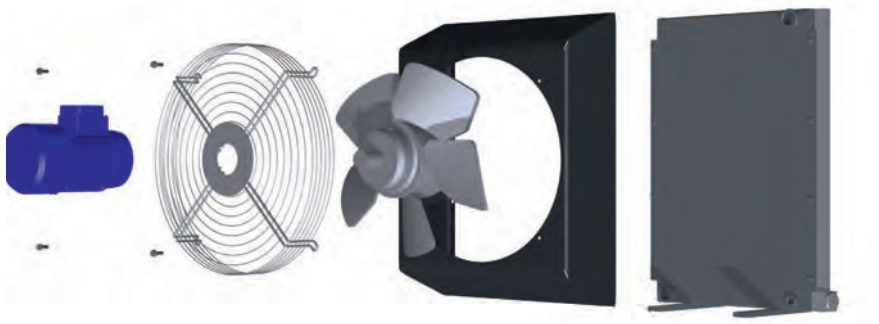
Type SSPV42.14



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	1440	1,100	560	83	7500	10,5	64	55
	60	276/480	1730	1,300		84	7500			

PERFORMANCE DIAGRAM





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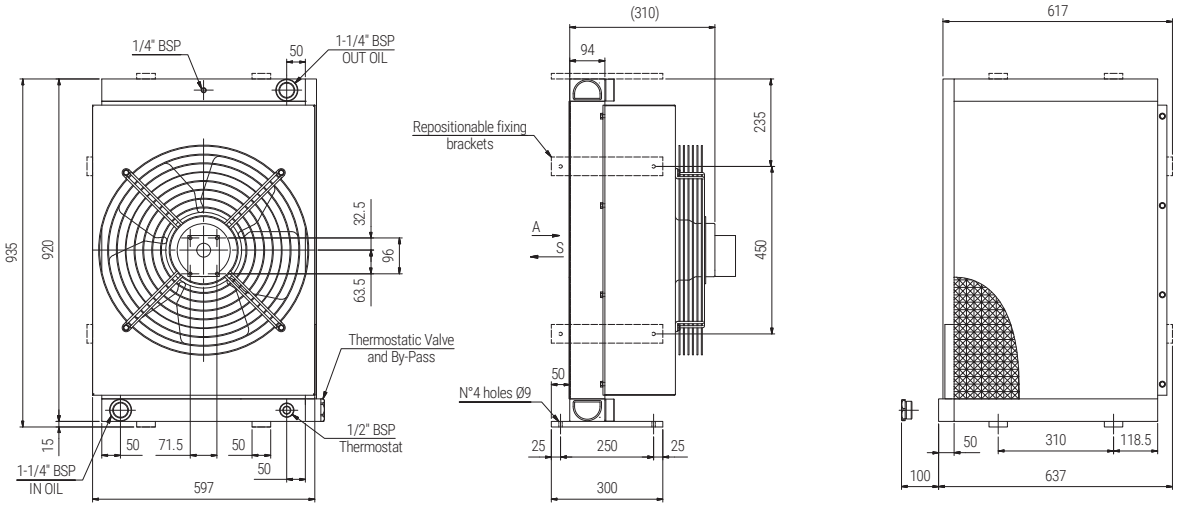
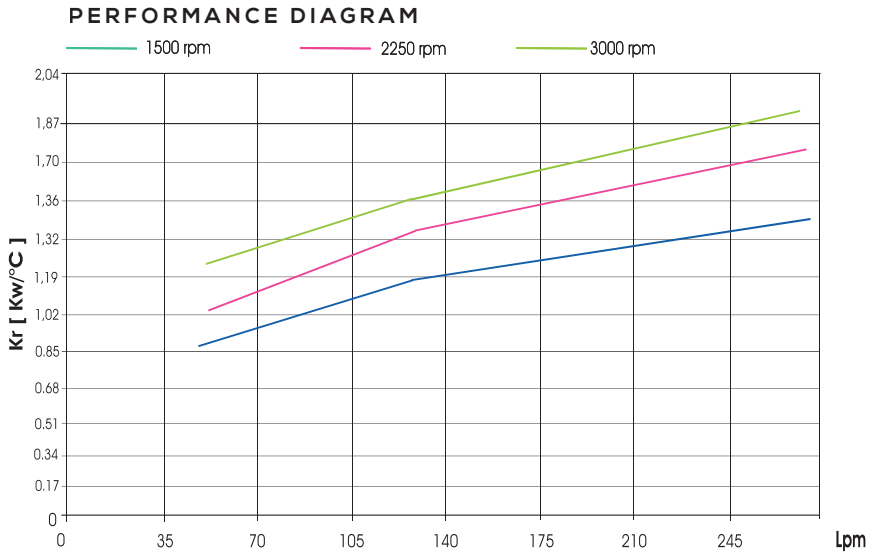
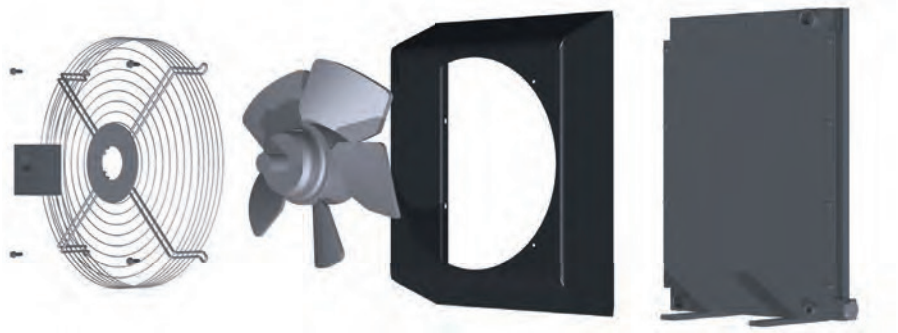
Types SSPV42.G2



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/3000		560			10,5	60	





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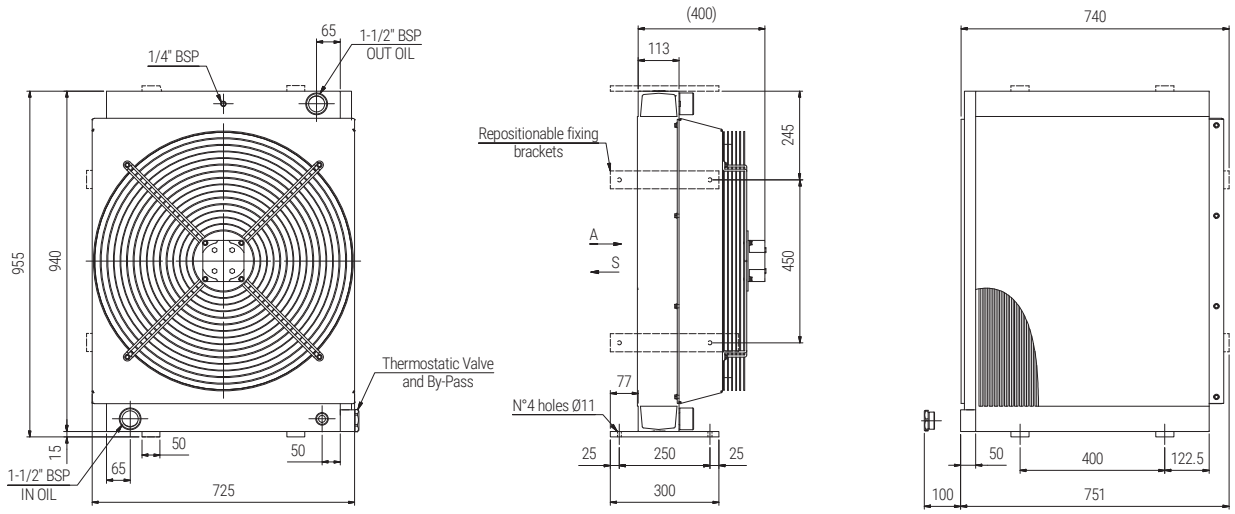
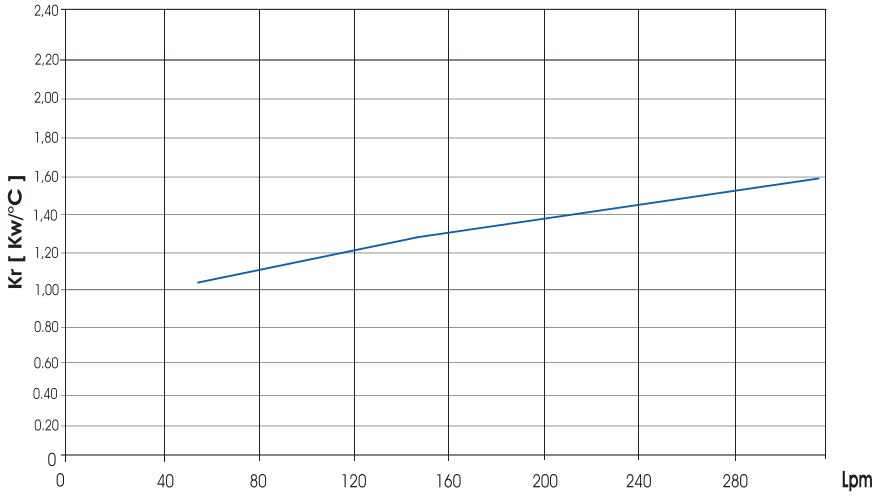
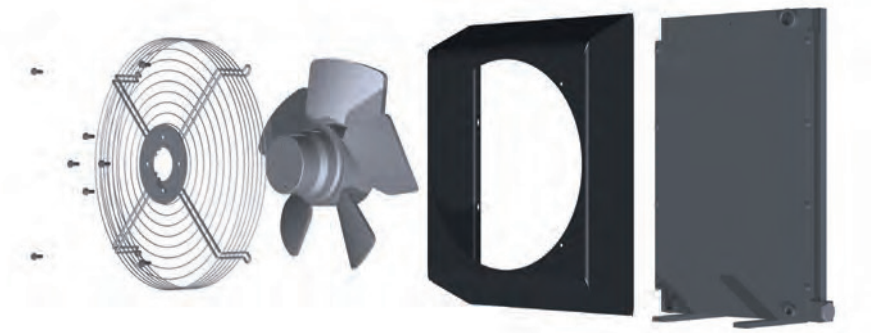
Type SSPV50.01/SSPV50.03



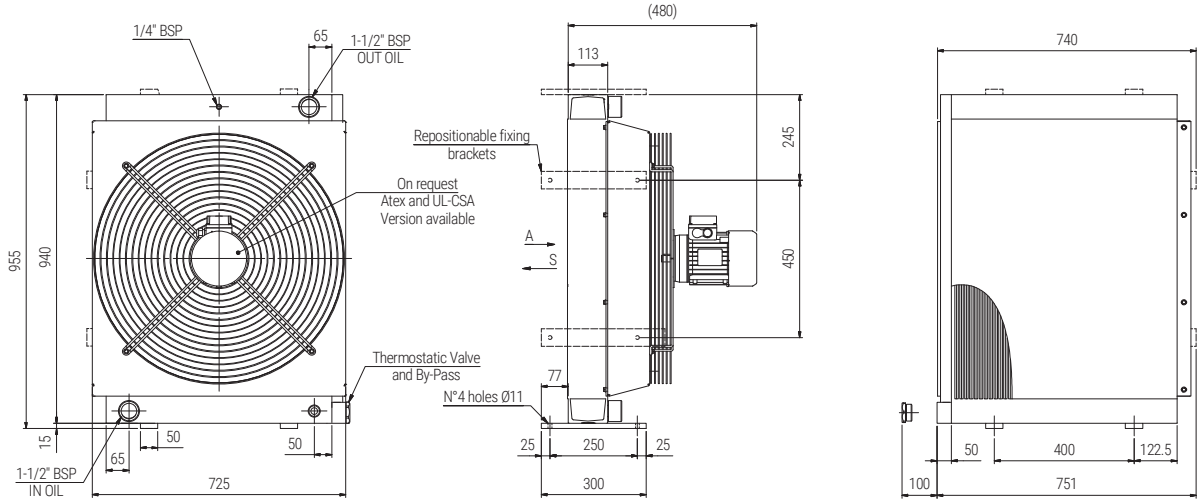
Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	230	910/1050	0,750/0,980	630	82	7900	14	90	54
03	50/60	400	910/1050	0,700/0,930		82	7950			

PERFORMANCE DIAGRAM



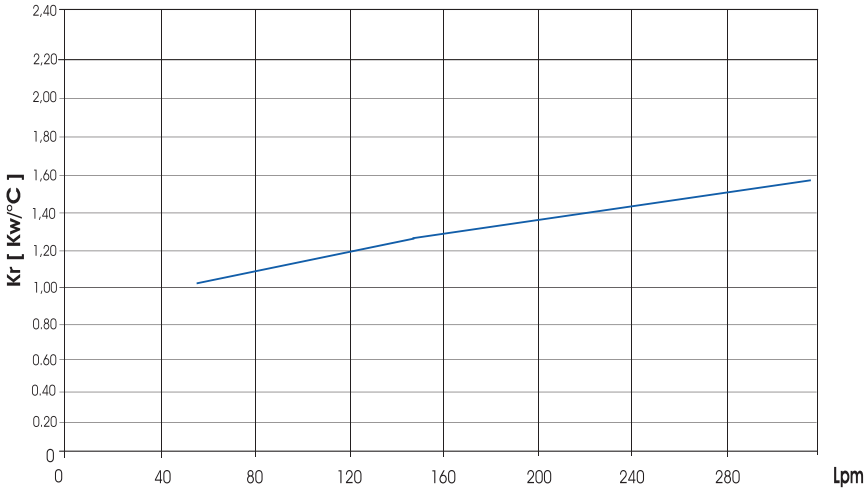


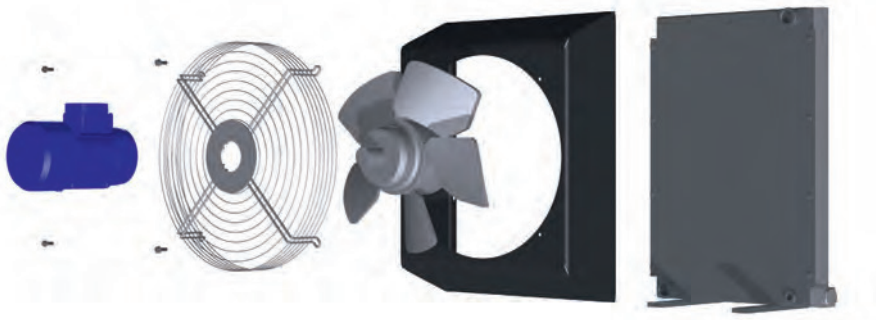
Types SSPV50.14



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	840	1,100	630	88	7900	14	90	55
	60	276/480	1125	1,300		88	8100			

PERFORMANCE DIAGRAM





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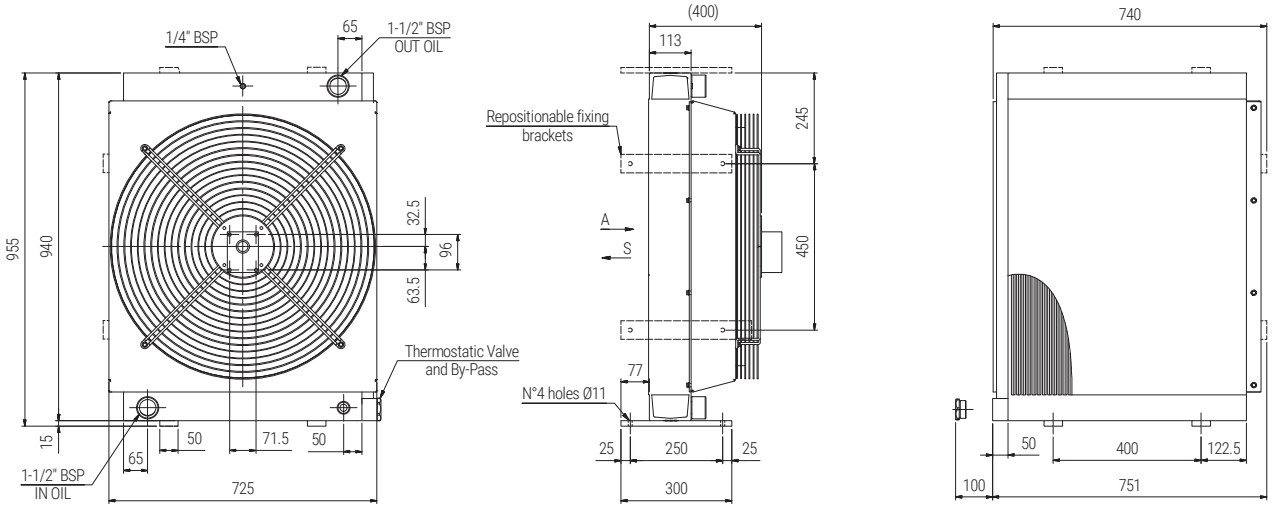
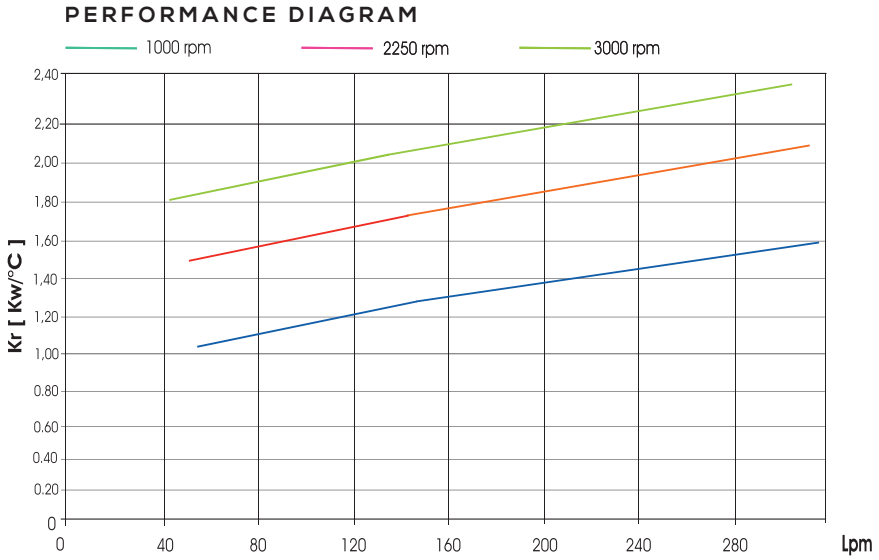
Type SSPV50.G2



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/2800		630			14	90	



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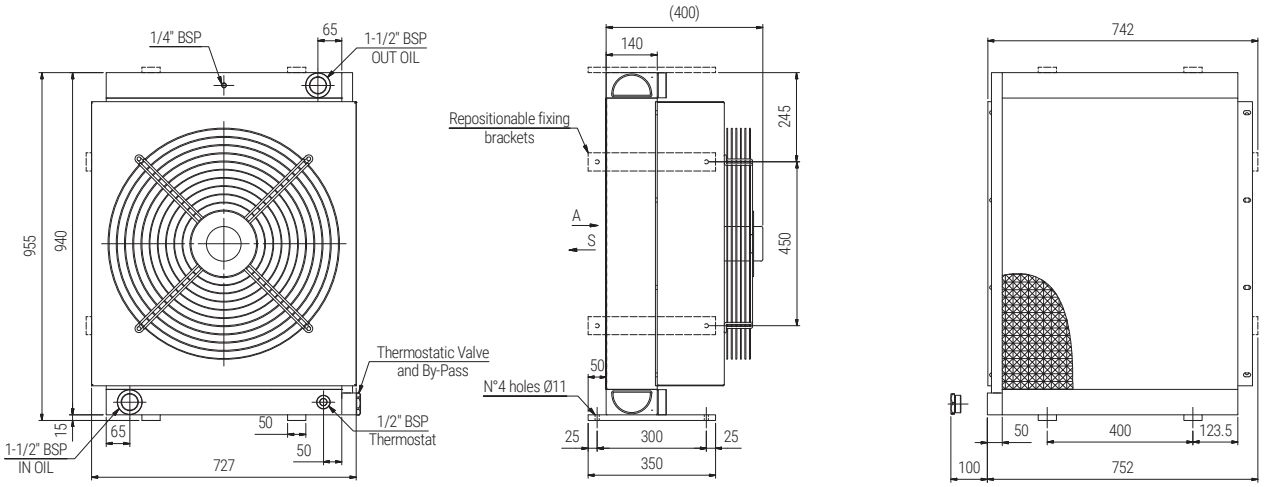
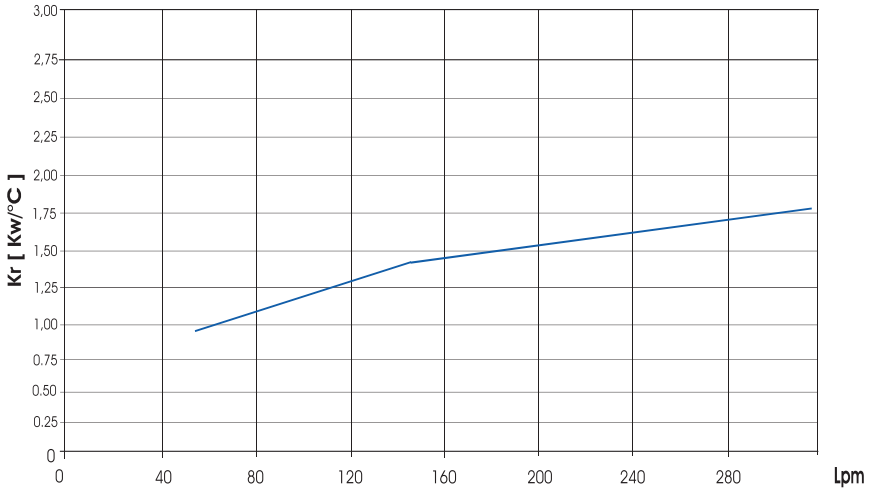
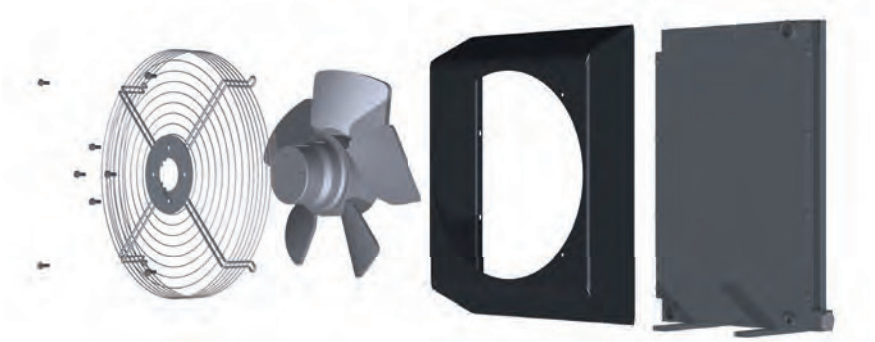
Types SSPV52.01/SSPV52.03



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	230	910/1050	0,750/0,980	630	82	7900	17,5	96	54
03	50/60	400	910/1050	0,700/0,930		82	7950			

PERFORMANCE DIAGRAM





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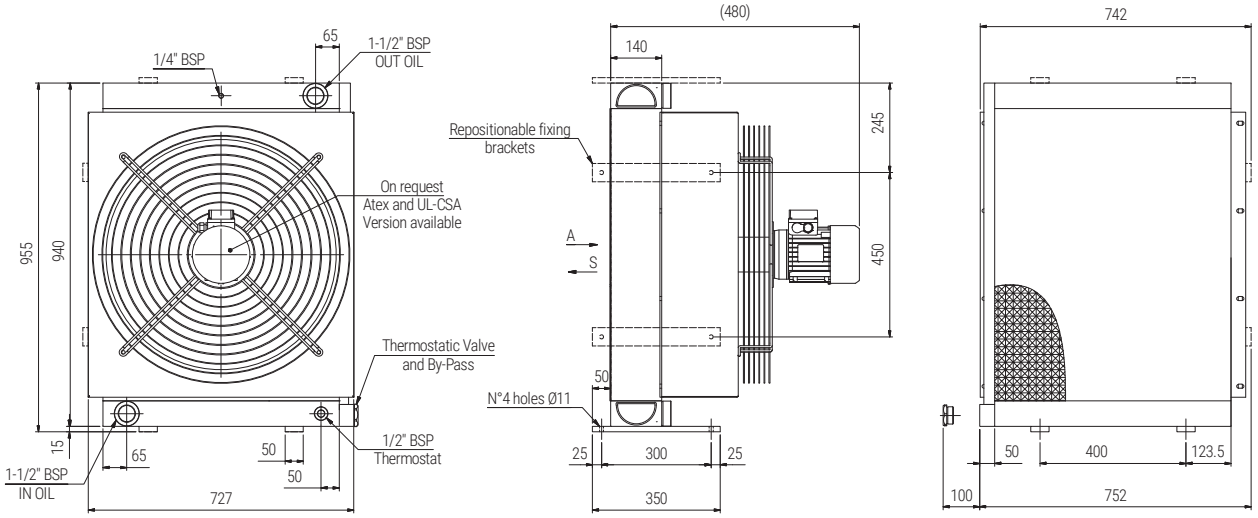
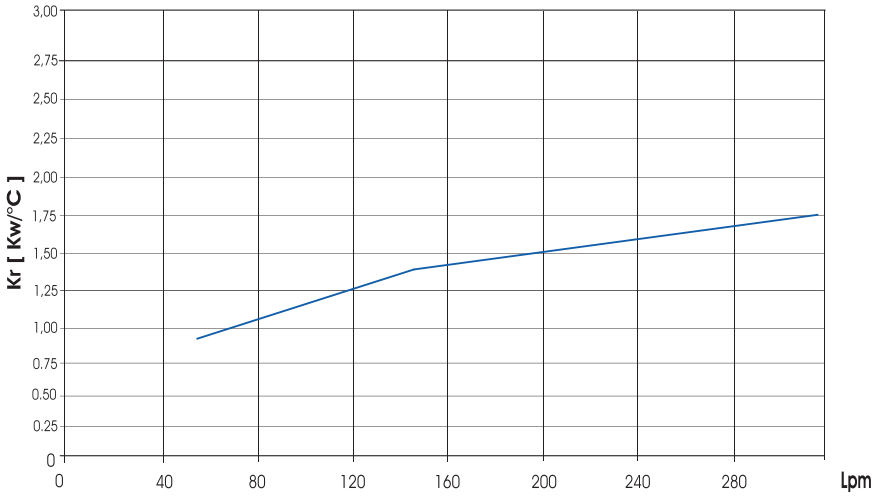
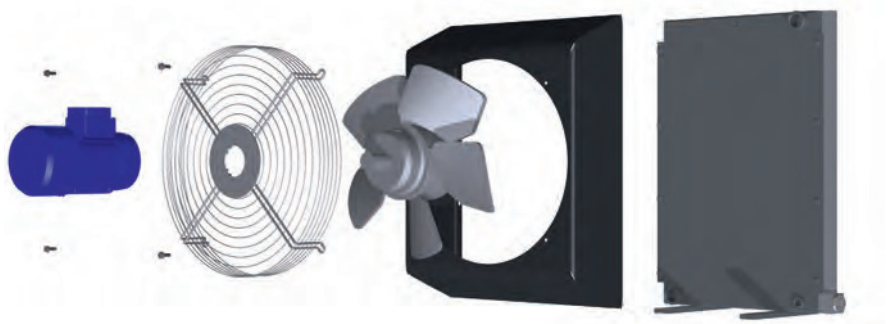
Type SSPV52.14



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	840	1,100	630	88	7900	17,5	98	55
	60	276/480	1125	1,300		88	8100			

PERFORMANCE DIAGRAM





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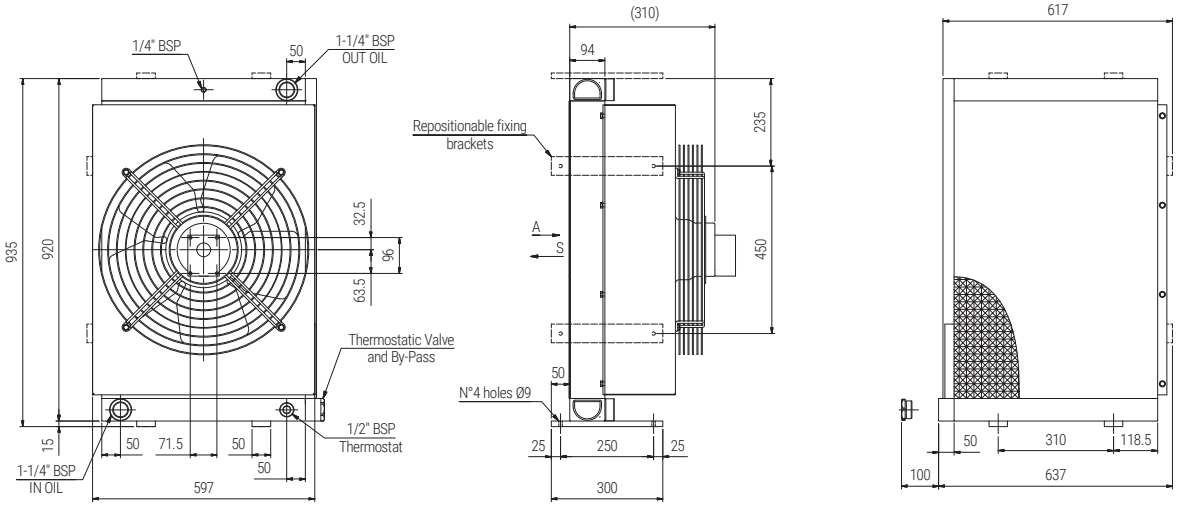
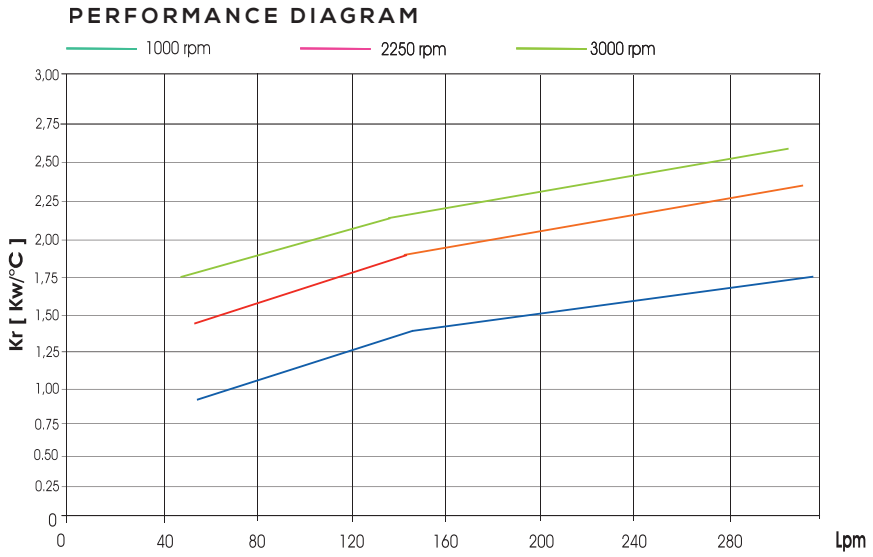
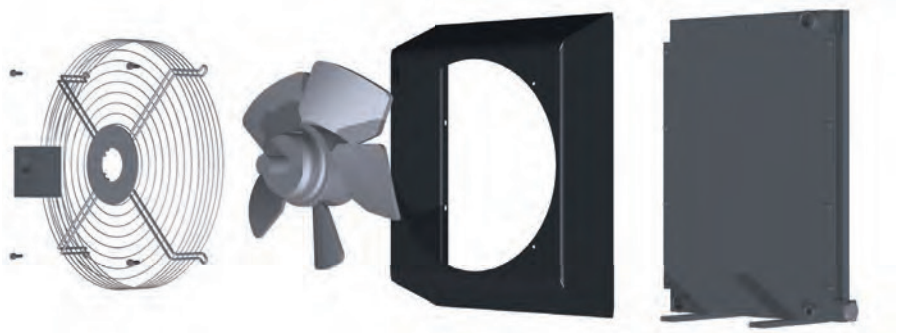
Types SSPV52.G2



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/2800		630			17,5	95	





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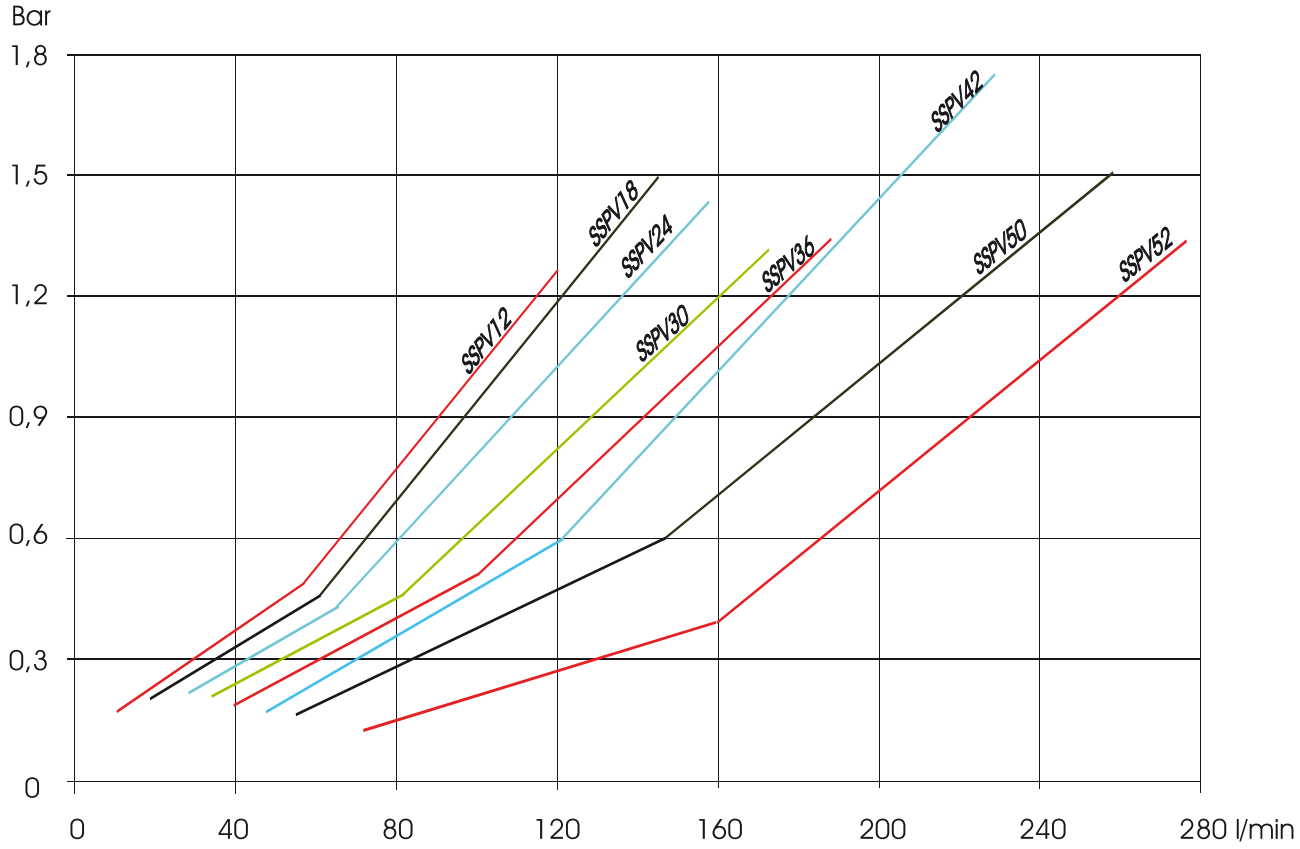
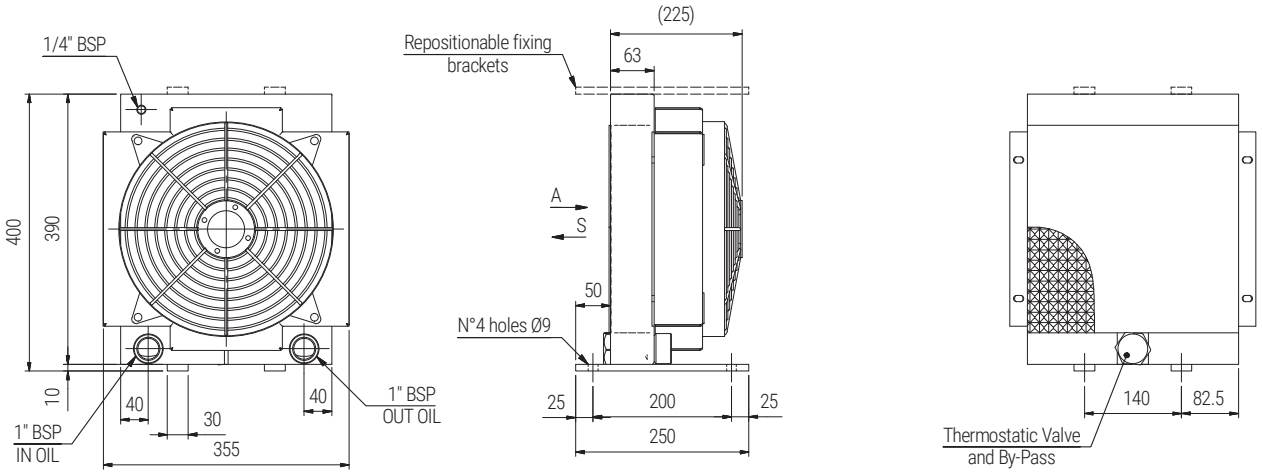
Pertes de charge SSPV12 à SSPV52



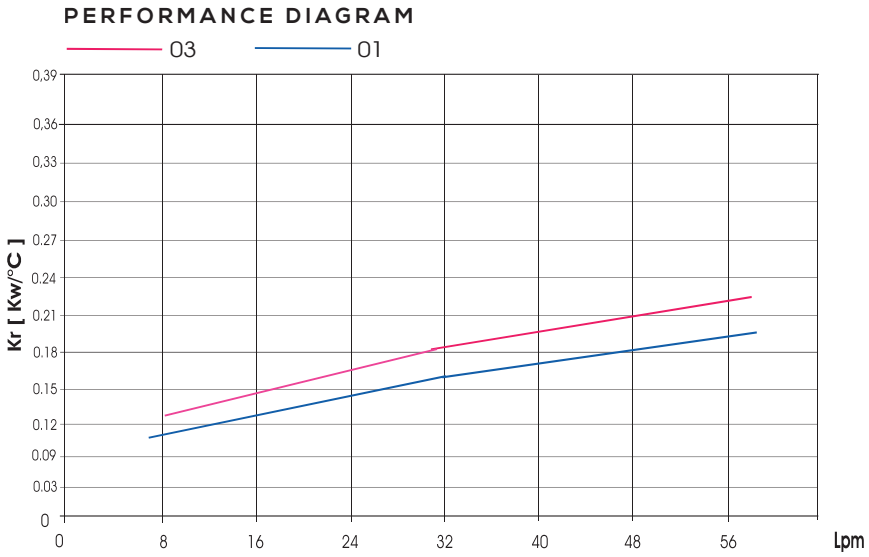
In order different viscosity, please multiply temp.x correction factor

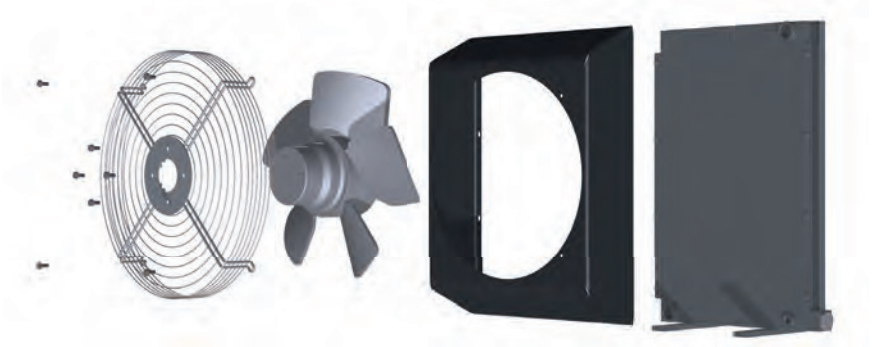
CST	10	15	20	30	40	50	60	80	100	200	300
C	0,5	0,65	0,75	1,0	1,2	1,4	1,6	1,9	2,1	3,4	4,3

Types SSPV212.01/SSPV212.03 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	230	2300/2250	0,145/0,175	300	64	2010	1,8	16	44
03	50/60	400	1380/1550	0,075/0,095		62	1870			





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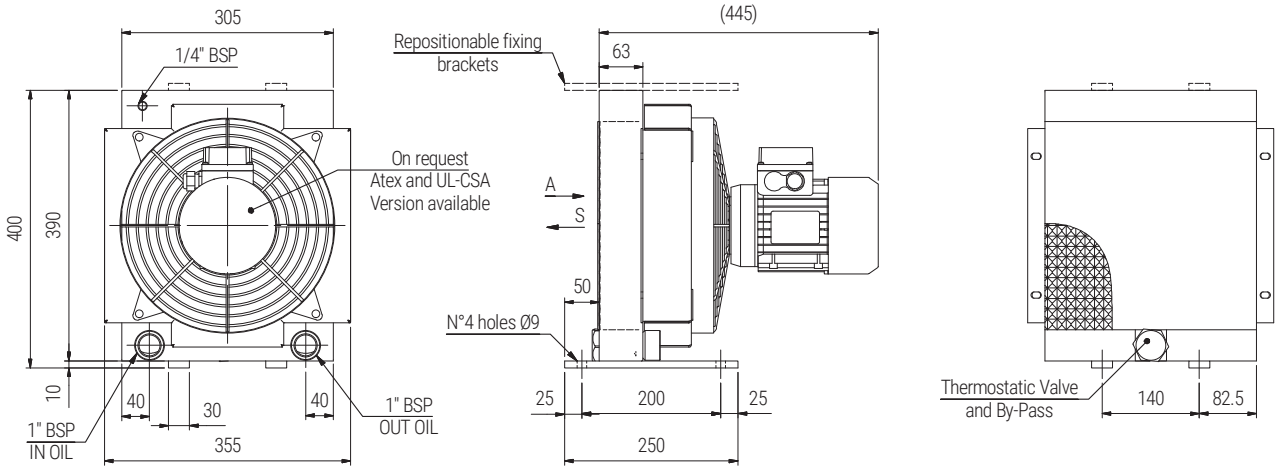
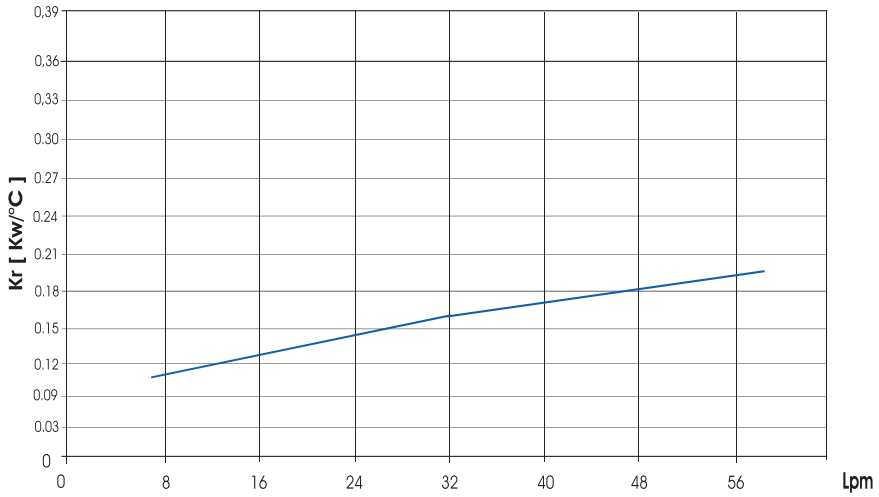
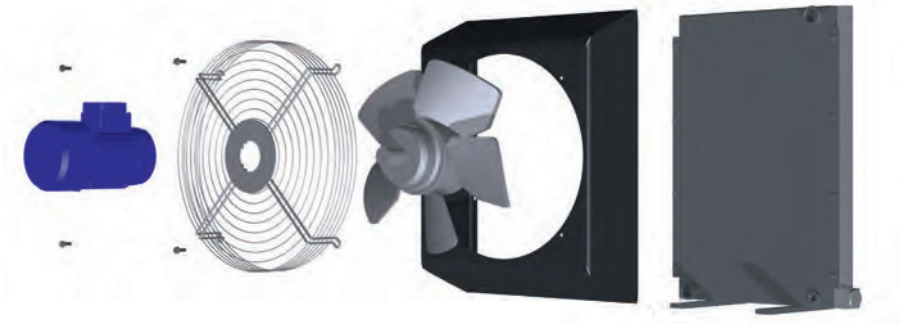
Type SSPV212.14 (2 PASS)



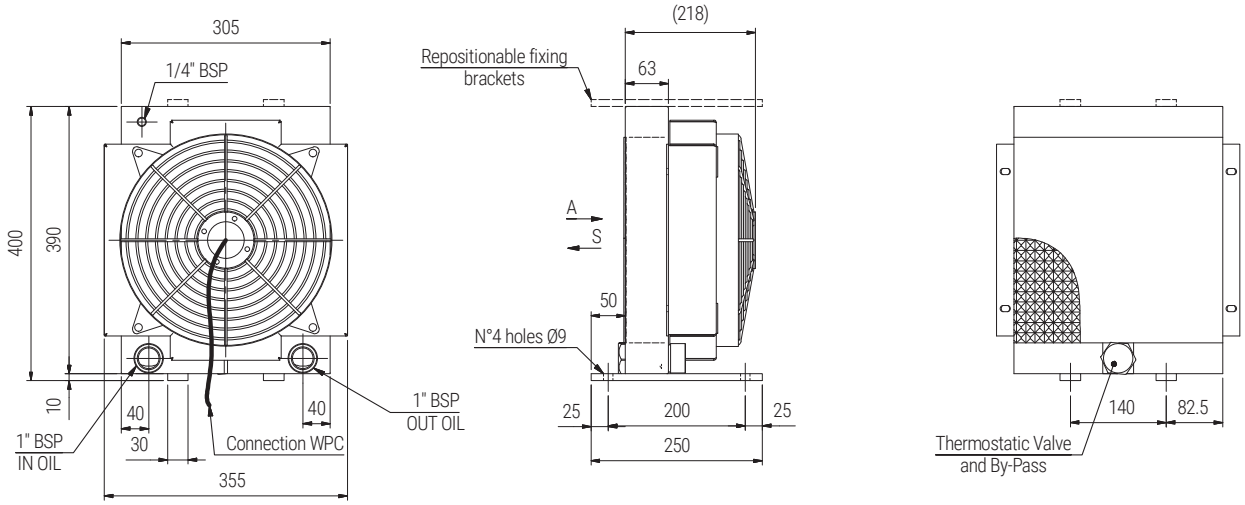
Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	1390	0.370	315	71	2200	1,8	18	55
	60	276/480	1685	0,440		72	2300			

PERFORMANCE DIAGRAM



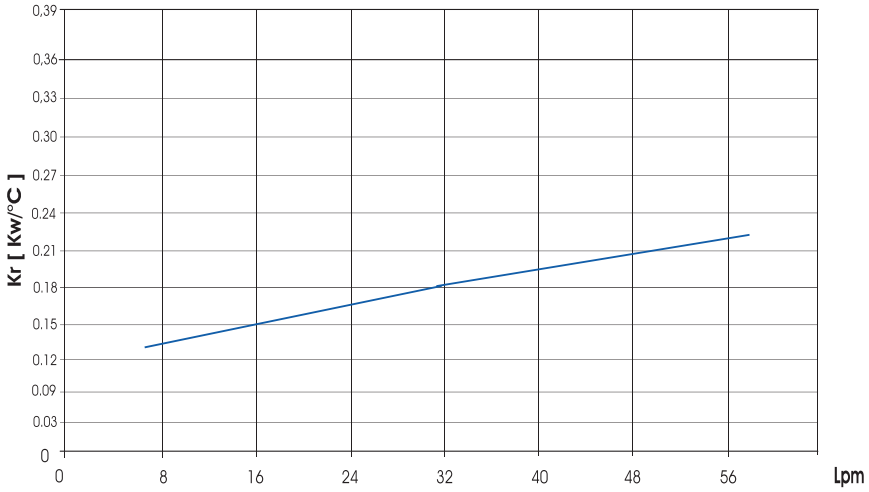


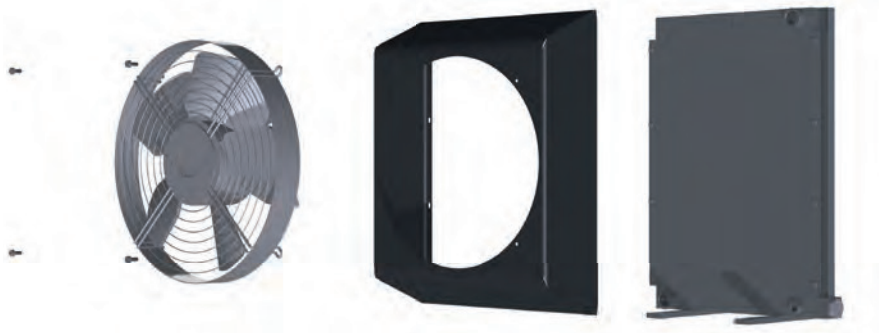
Types SSPV212.12/SSPV212.24 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
12	DC	12	3090	0,218	305	68	2600	1,8	15	68
24		24					2350			

PERFORMANCE DIAGRAM





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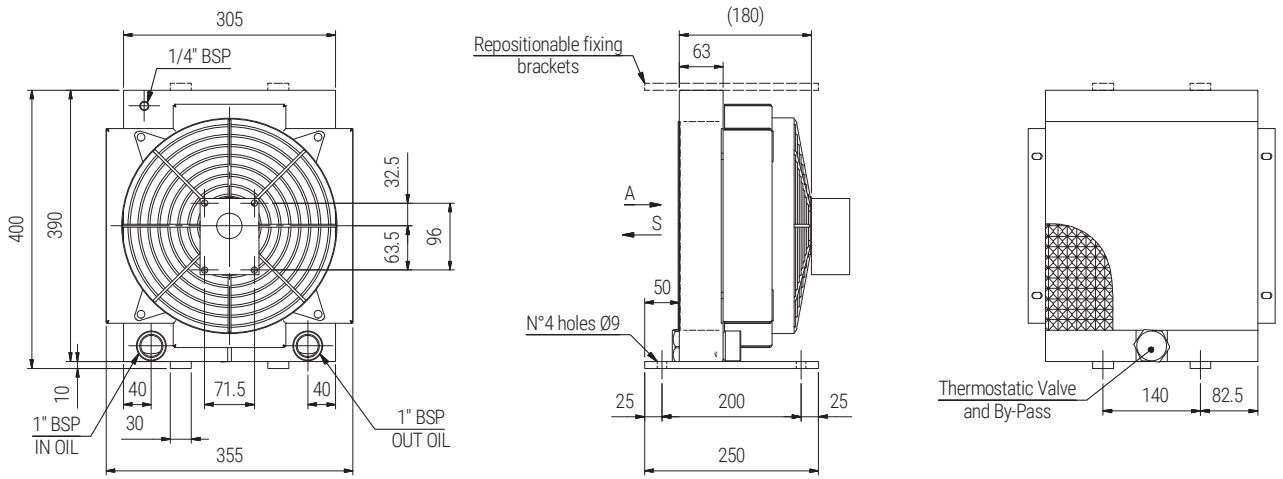
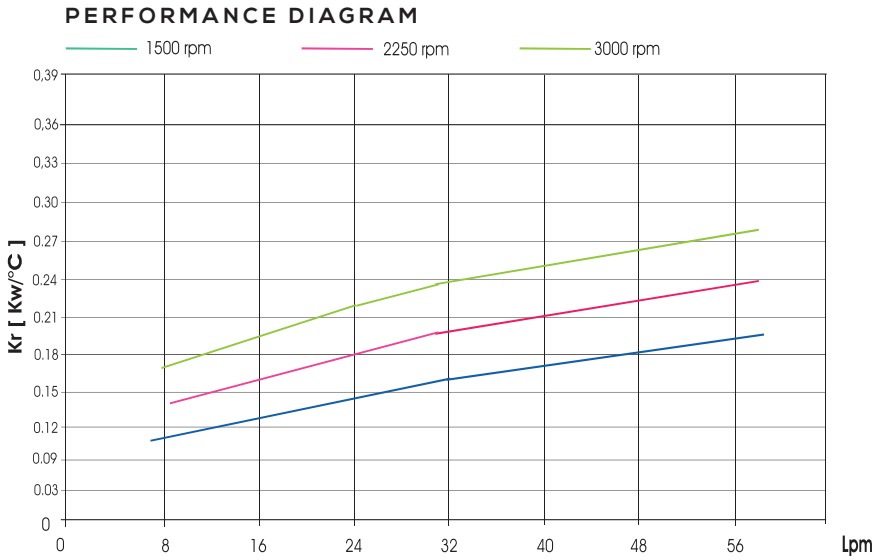
Type SSPV212.G2 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/3000		300			1,8	14	



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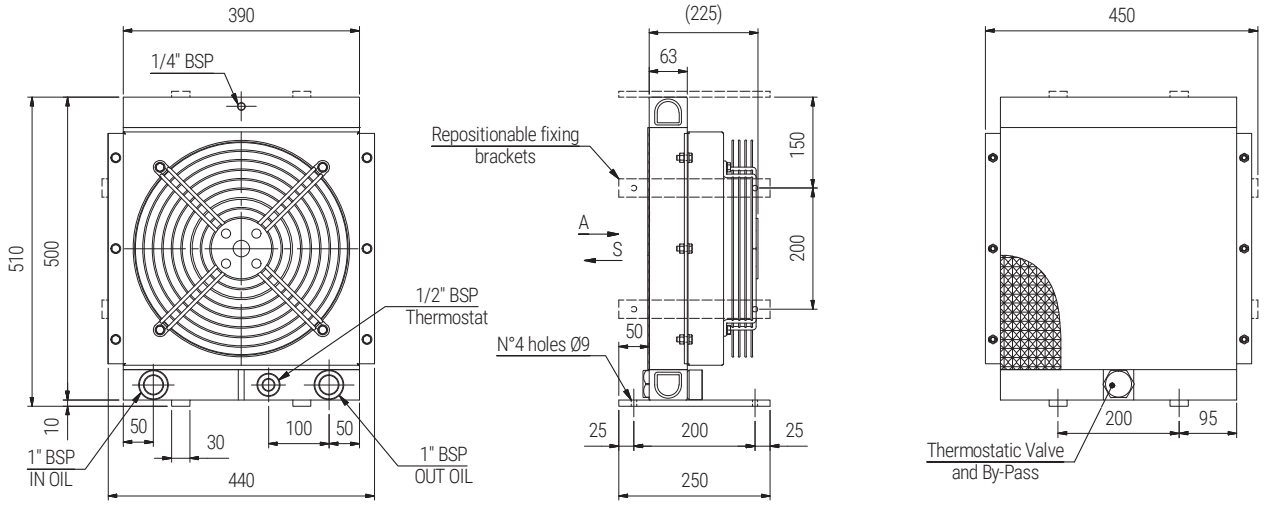
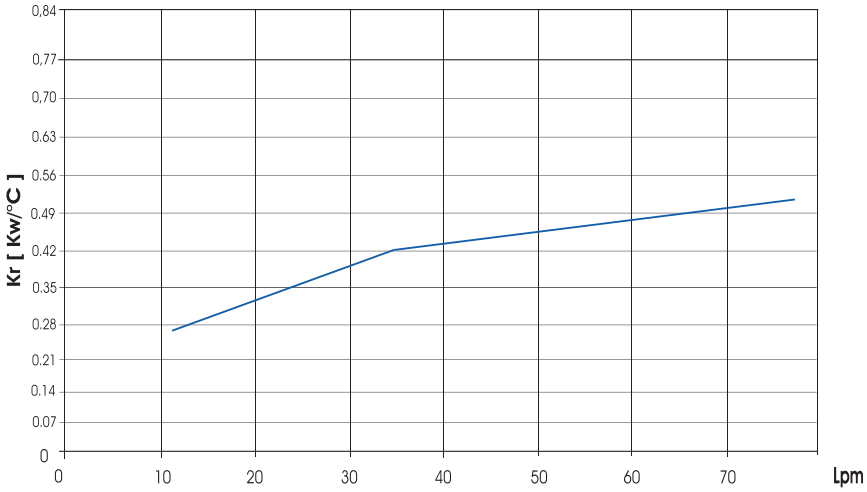
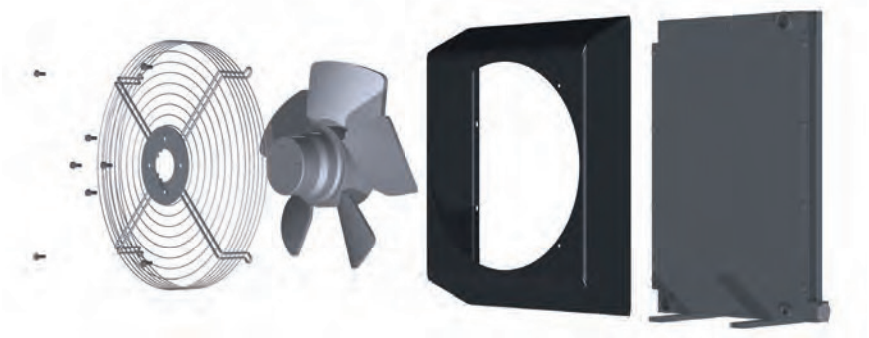
Types SSPV218.01/SSPV218.03 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	230	1380/1550	0,180/0,250	400	68	4000	2,8	19	44
03	50/60	400	1380/1520	0,180/0,250		68	4300			

PERFORMANCE DIAGRAM





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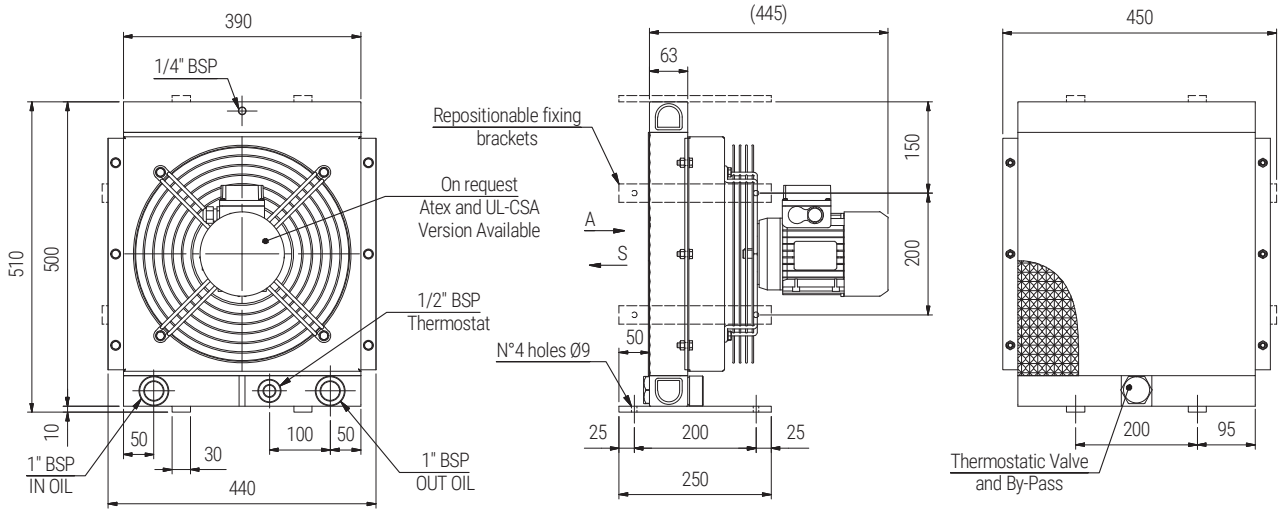
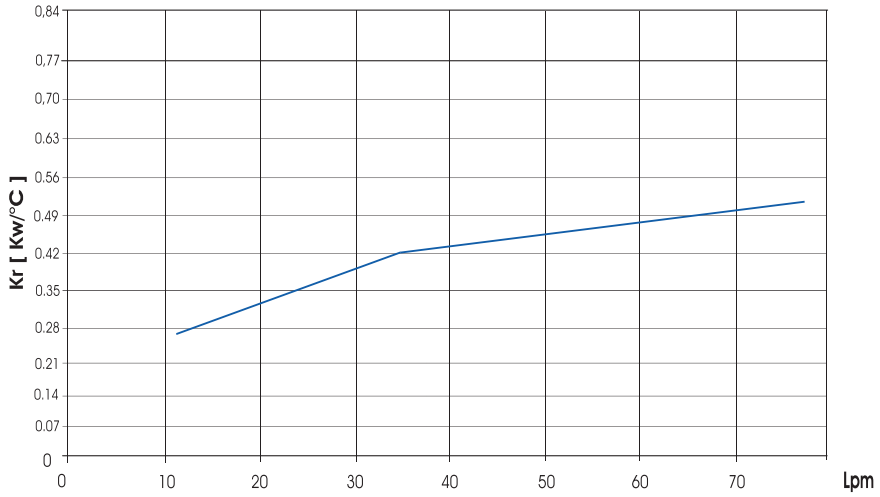
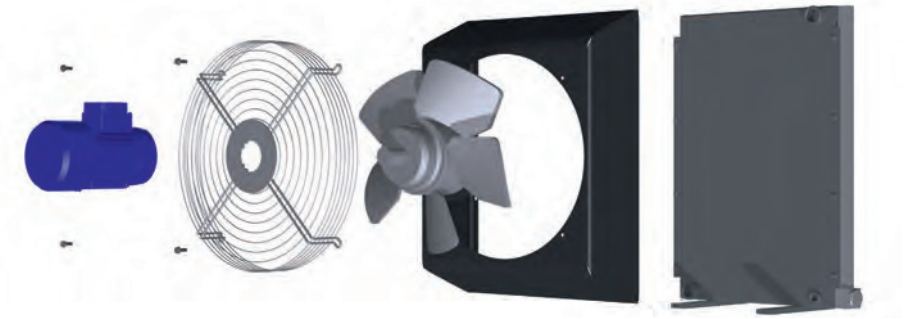
Type SSPV218.14 (2 PASS)



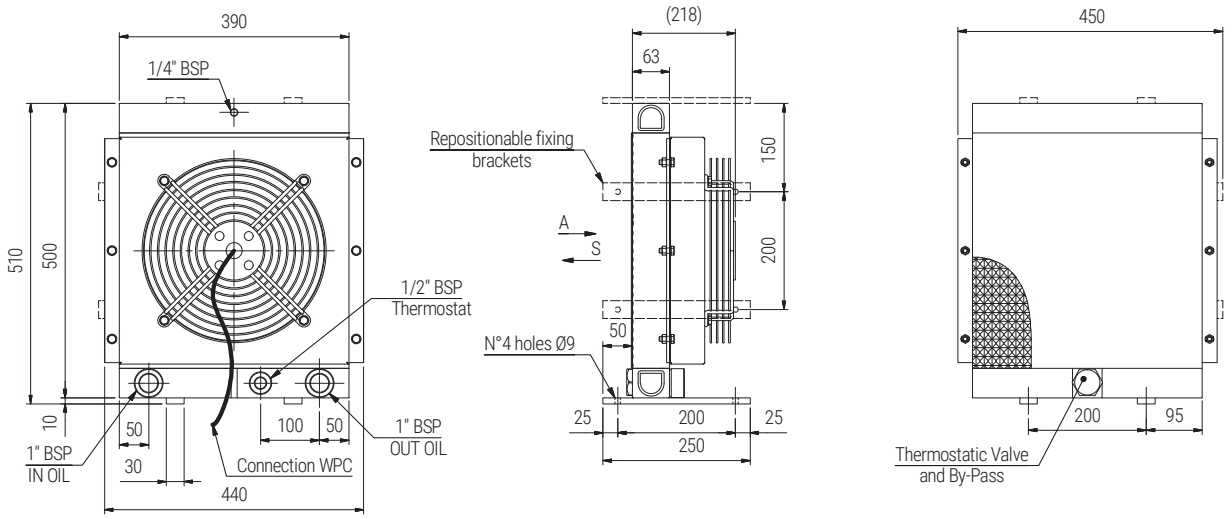
Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	1390	0.550	400	70	4000	2,8	21	55
	60	276/480	1685	0,660		71	4230			

PERFORMANCE DIAGRAM



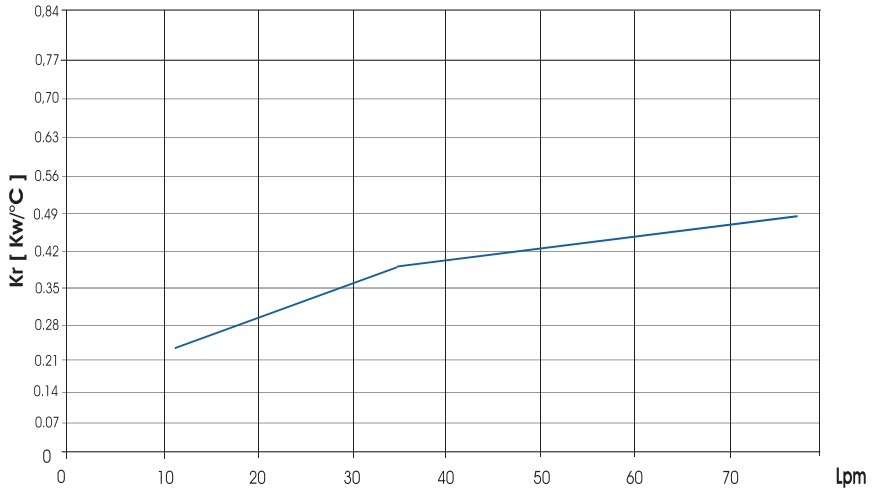


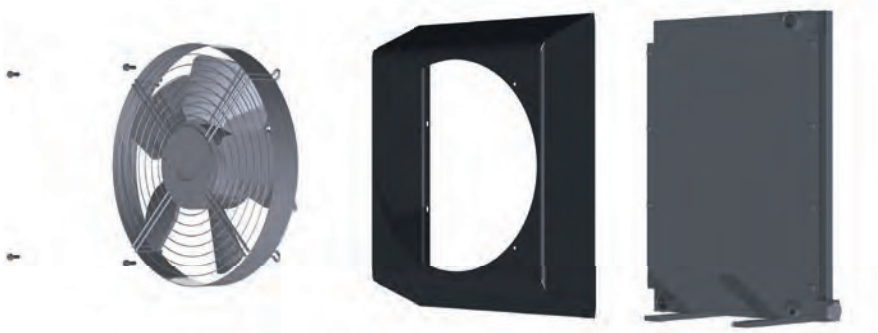
Types SSPV218.12/SSPV218.24 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
12	DC	12	2248	0,151	385	77	2950	3,1	18	68
24		24					3100			

PERFORMANCE DIAGRAM





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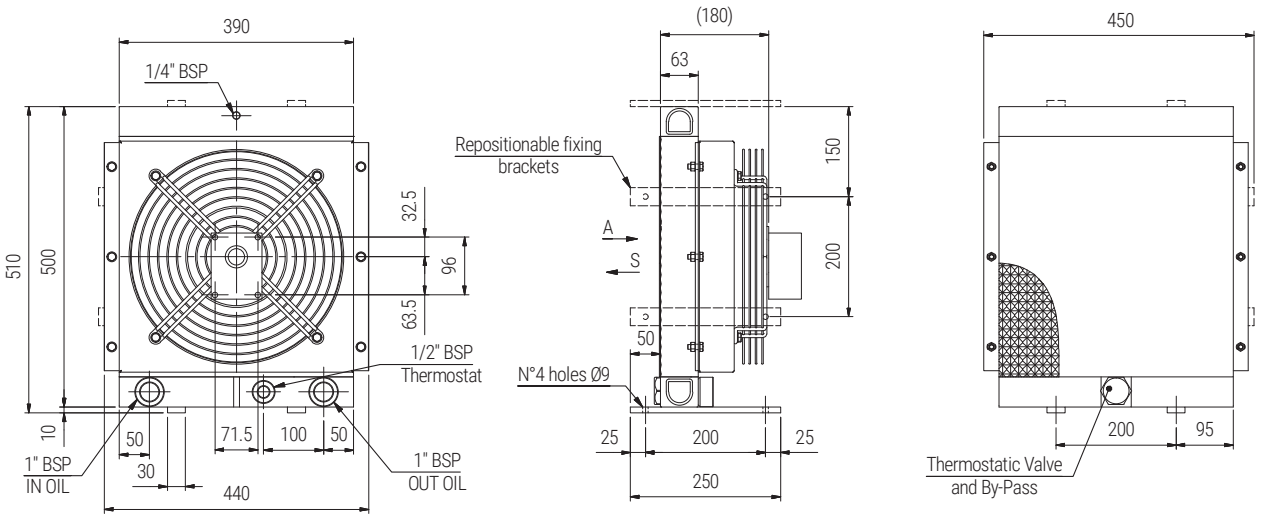
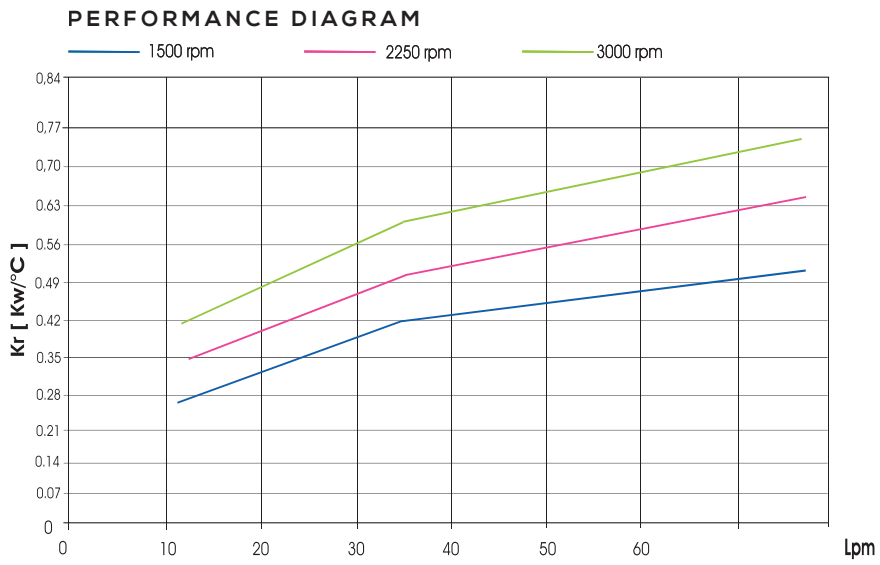
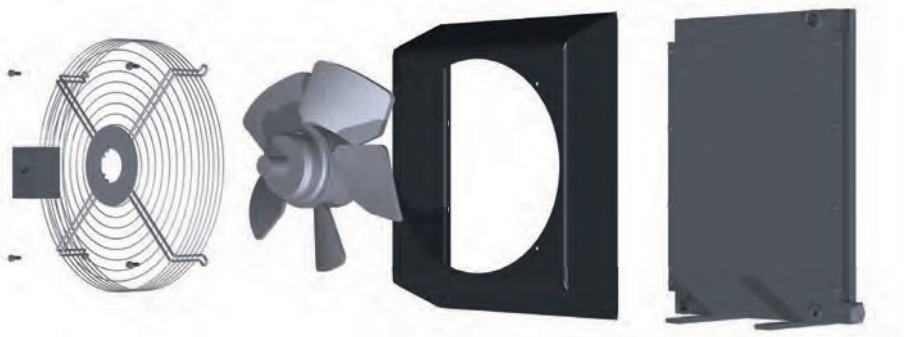
Type SSPV218.G2 (2 PASS)



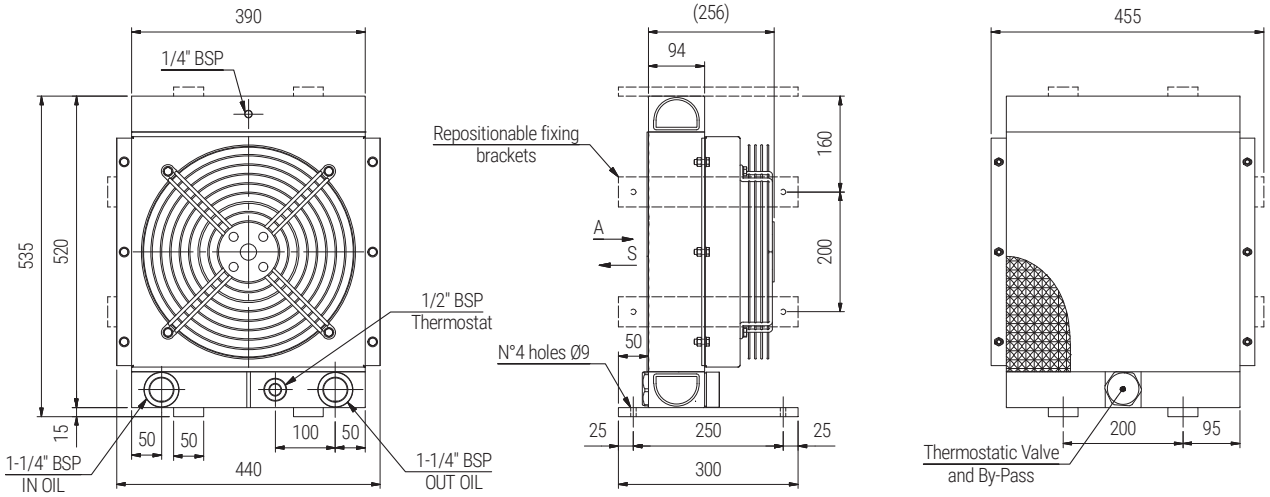
Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/3000		400			2,8	20	





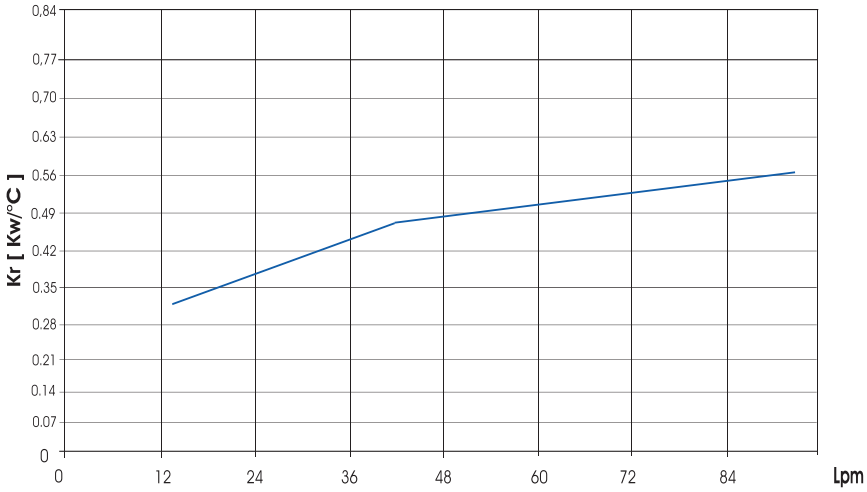
ECHANGEURS DE TEMPERATURE AIR/HUILE SERIE **SSPV**

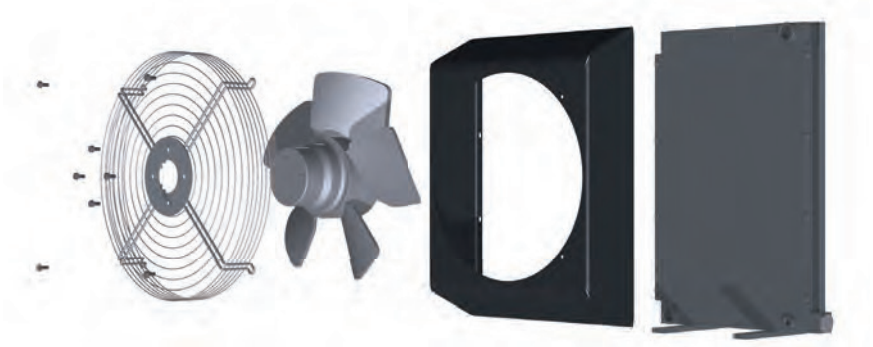
Types SSPV224.01/SSPV224.03 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	230	1380/1550	0,180/0.250	400	68	3900	3,1	22	44
03	50/60	400	1380/1520	0,180/0,250		68	4100			

PERFORMANCE DIAGRAM





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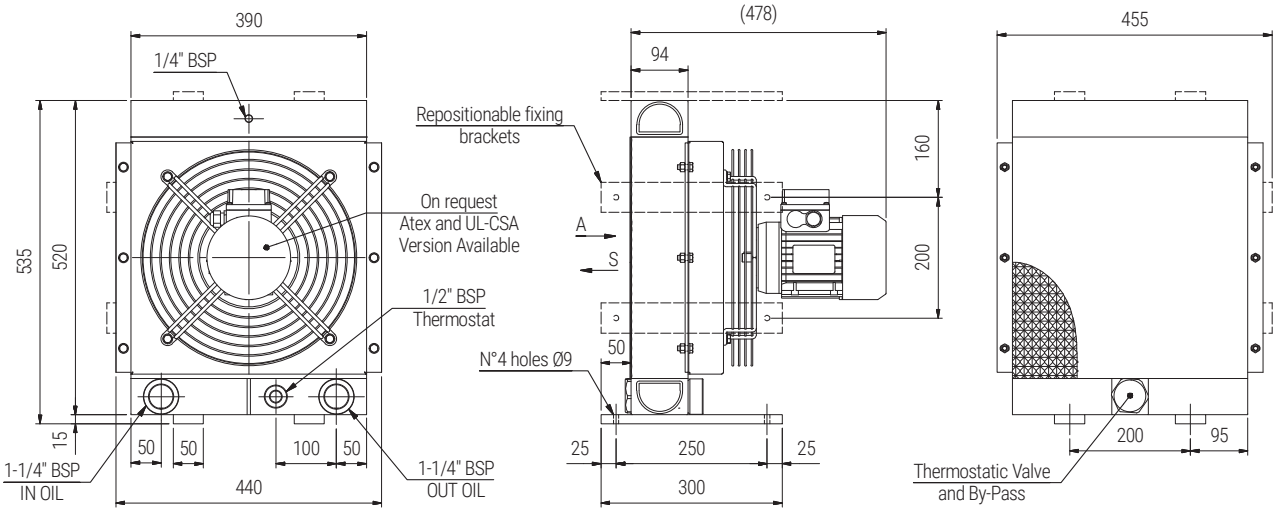
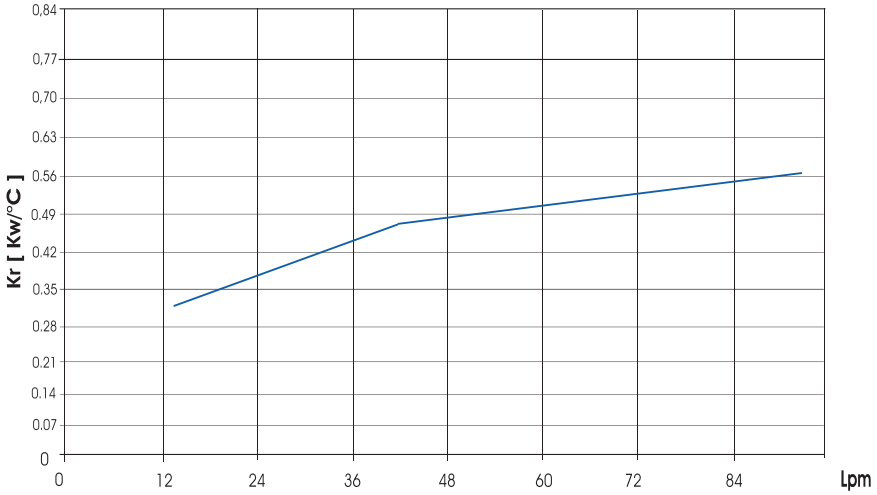
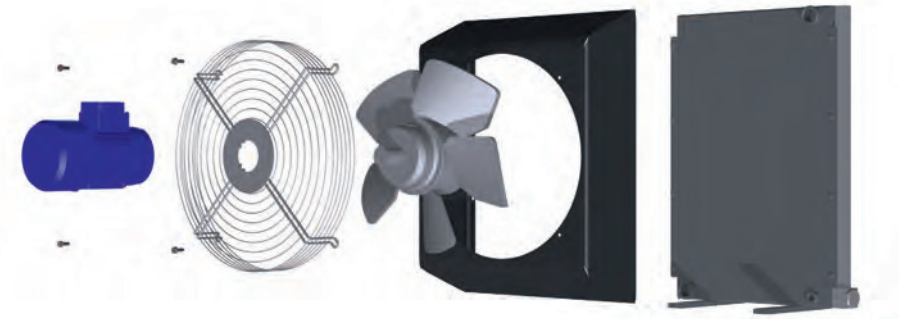
Type SSPV224.14 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	1390	0.550	400	70	3850	3,1	27	55
	60	276/480	1685	0,660		71	4030			

PERFORMANCE DIAGRAM





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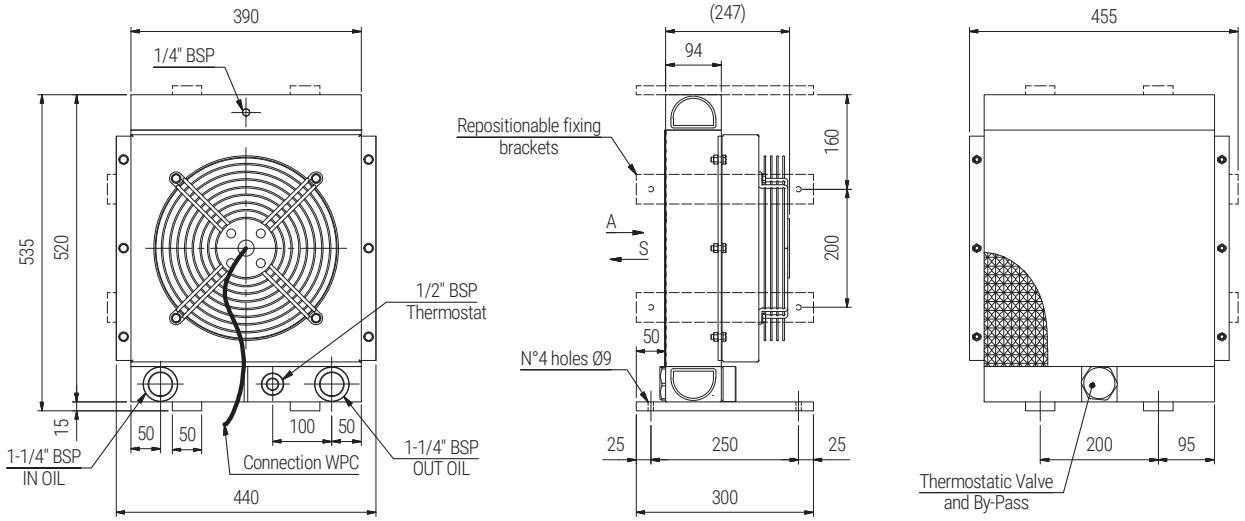
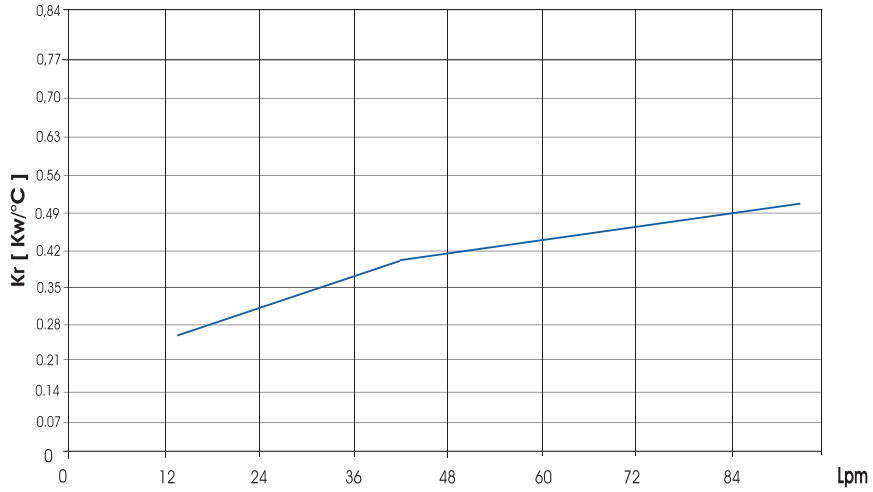
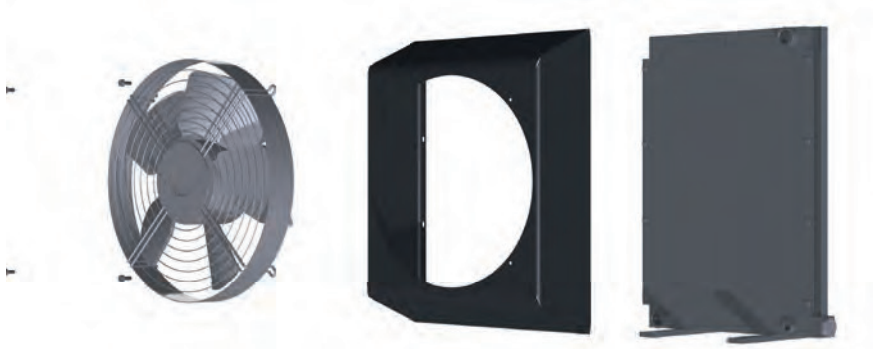
Types SSPV224.12/SSPV224.24 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
12	DC	12	2248	0,151	385	77	2850	2,8	21	68
24		24					3000			

PERFORMANCE DIAGRAM





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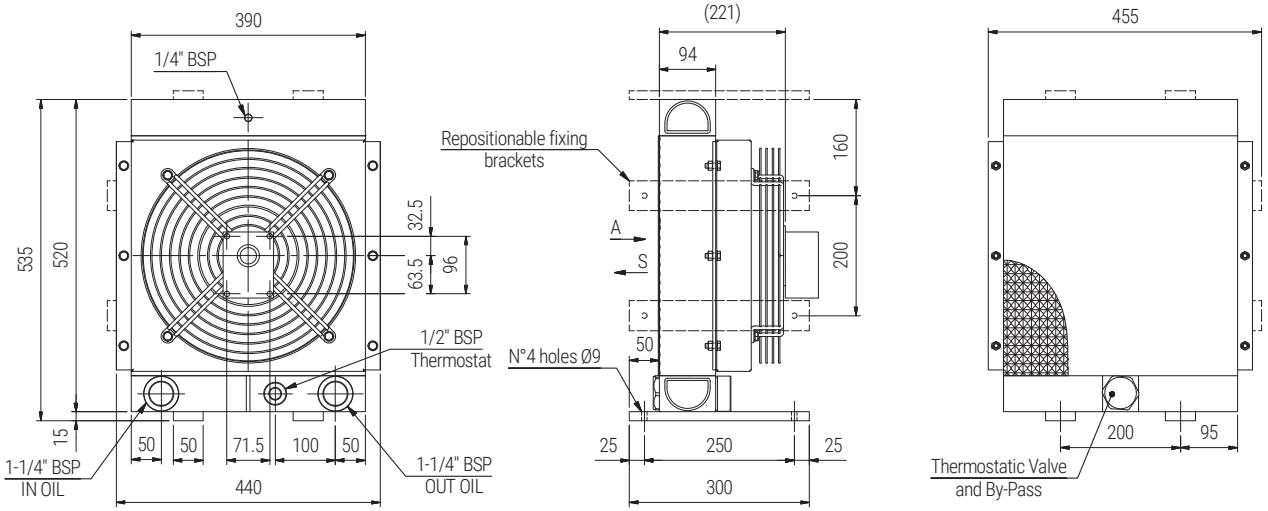
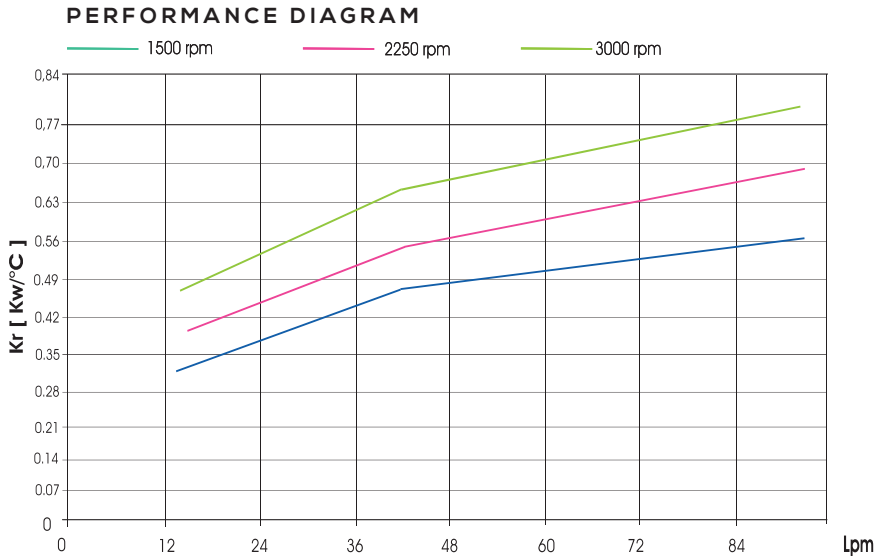
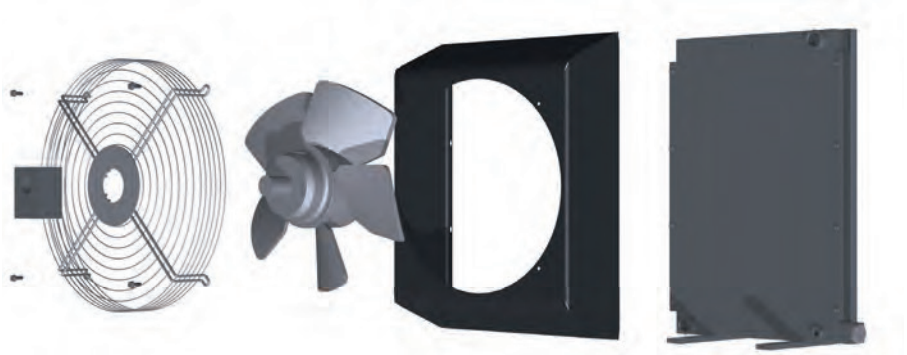
Type SSPV224.G2 (2 PASS)

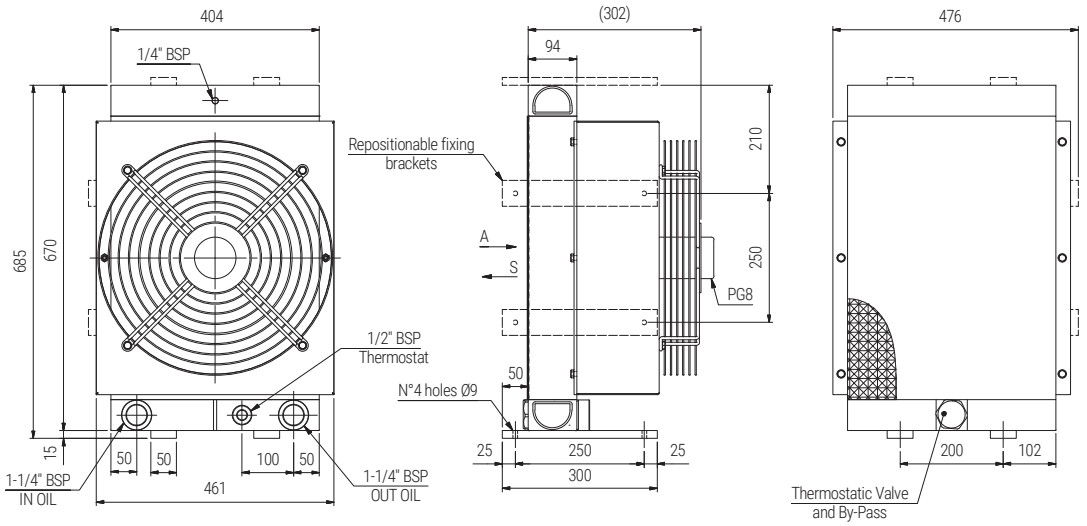


Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/3000		400			3,1	23	



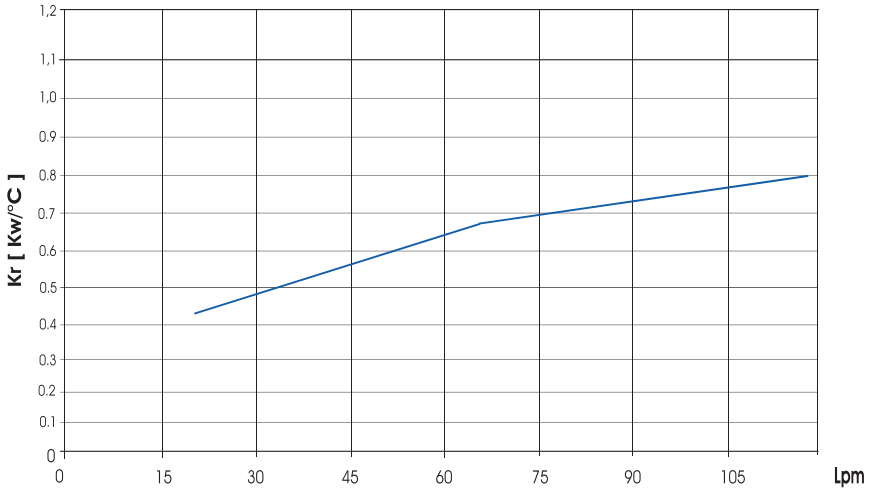


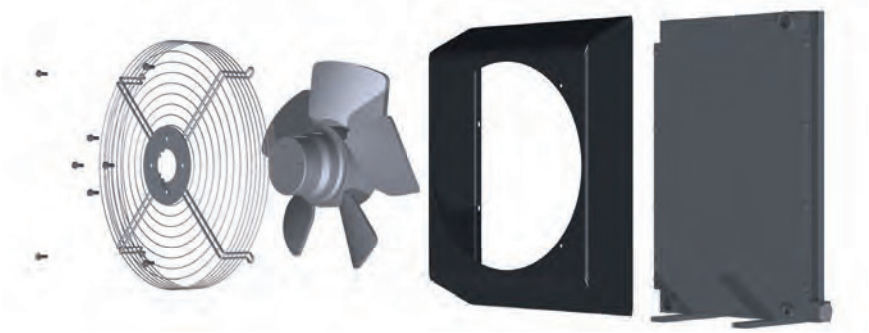
Types SSPV230.01/SSPV230.03 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	230	1600/1750	0,660/0,800	450	73	6200	6,7	32	44
03	50/60	400	1600/1750	0,660/0,800		73	6200			

PERFORMANCE DIAGRAM





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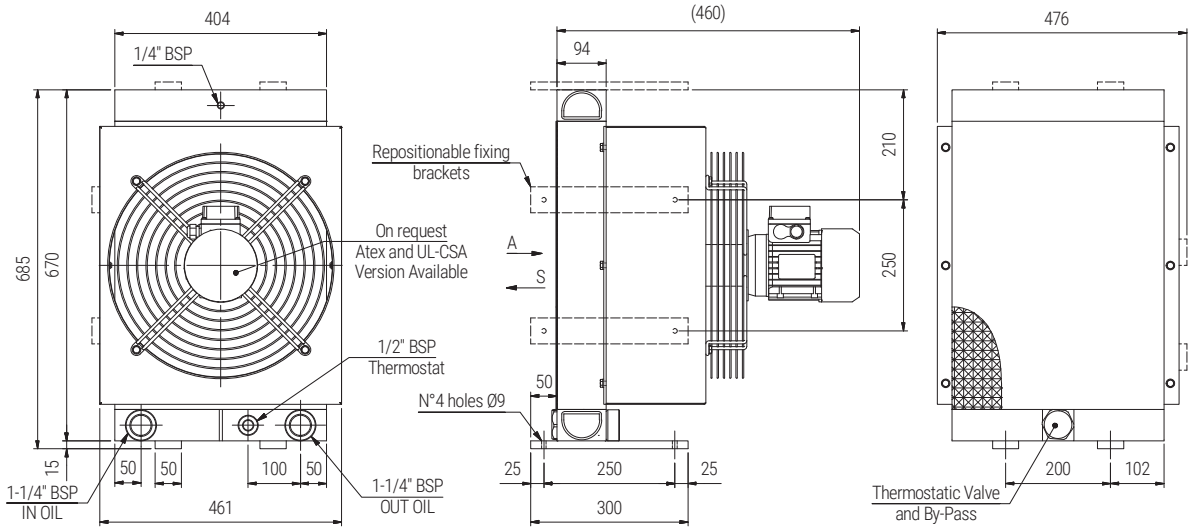
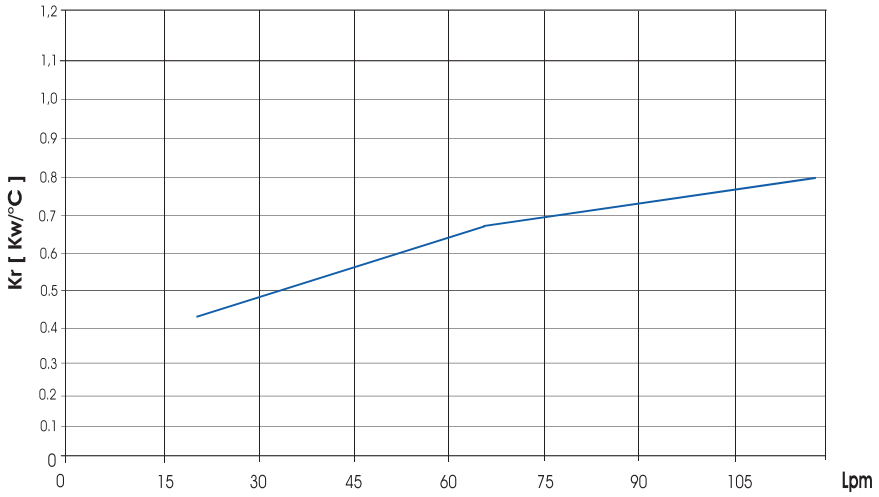
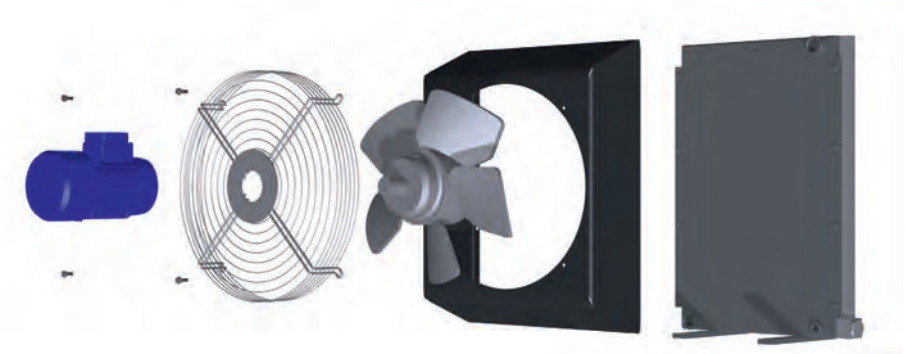
Type SSPV230.14 (2 PASS)



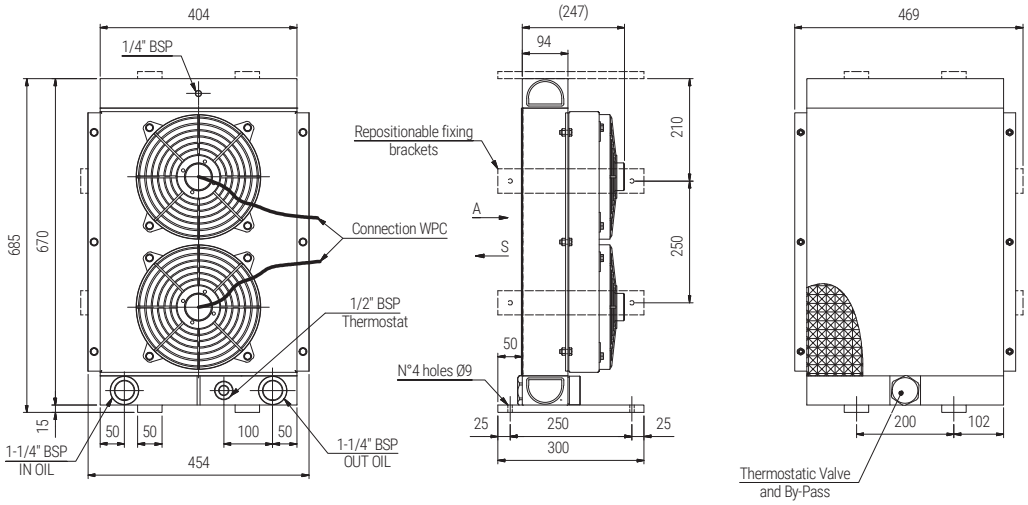
Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	1390	0,750	450	73	6830	6,7	36	55
	60	276/480	1685	0.900		74	6980			

PERFORMANCE DIAGRAM



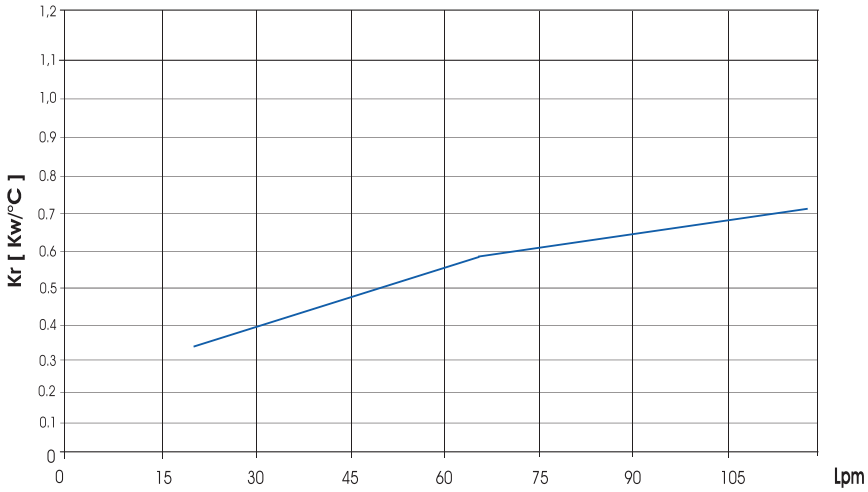


Types SSPV230.12/SSPV230.24 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
12	DC	12	3005	0,106x2	280	74	2800	6,7	31	68
24		24					2900			

PERFORMANCE DIAGRAM



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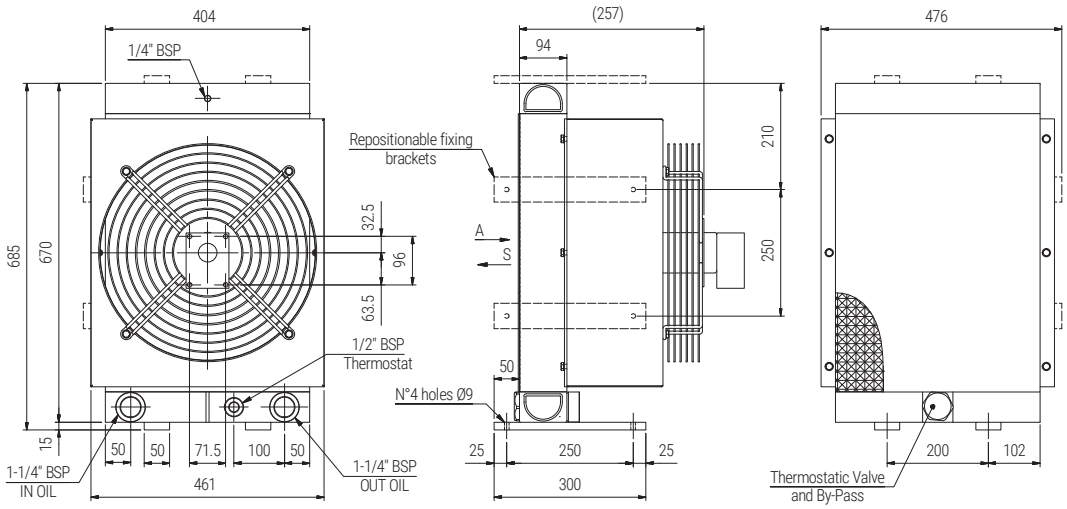
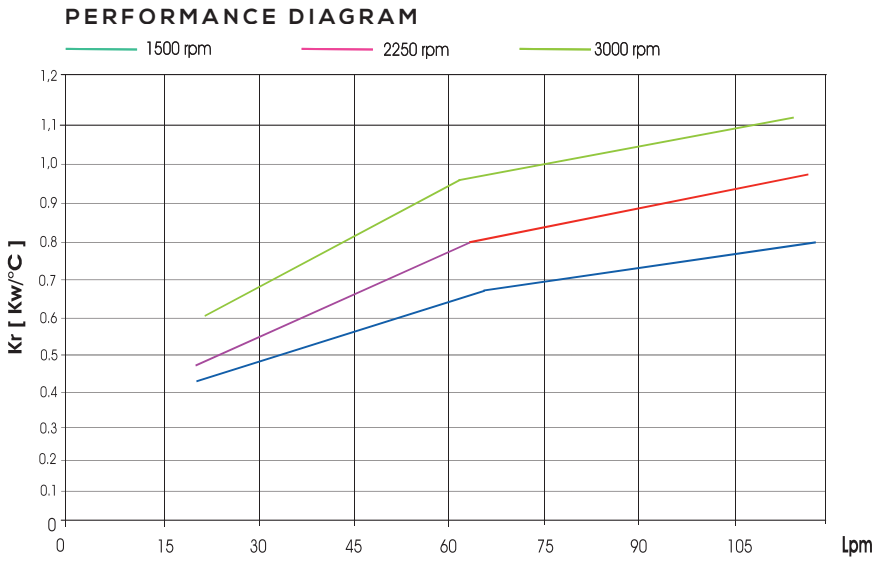
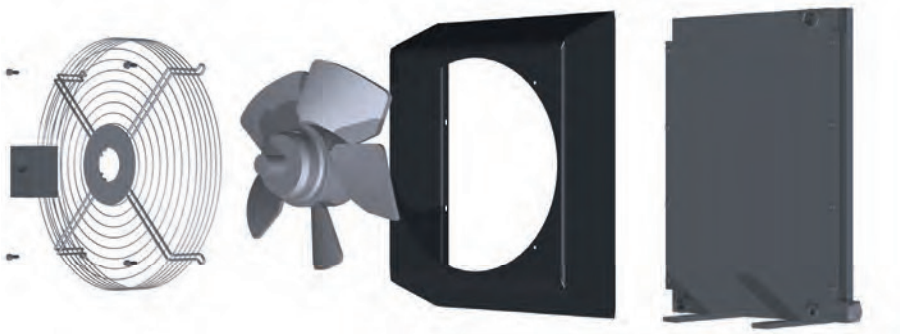
Type SSPV230.G2 (2 PASS)

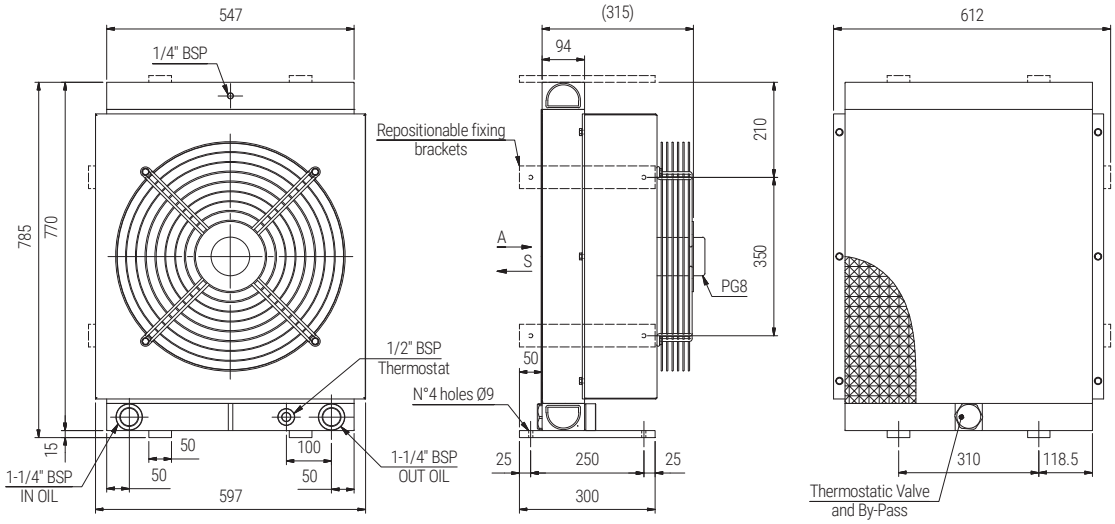


Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/3000		450			6,7	33	



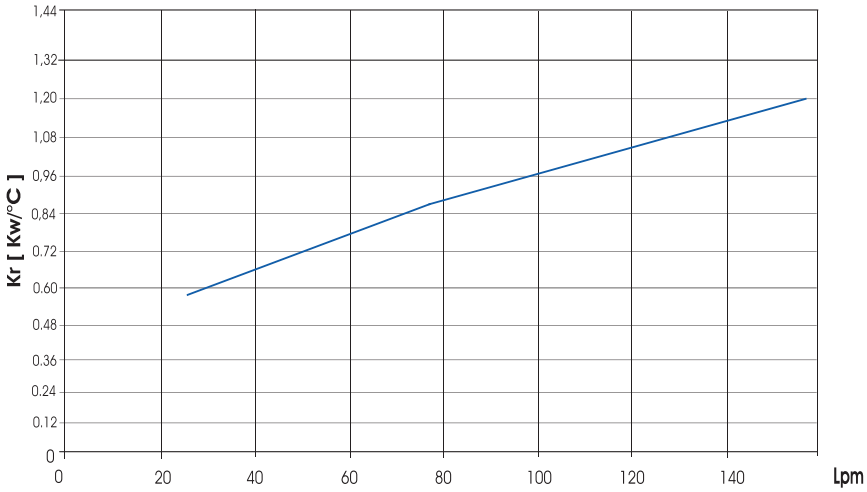


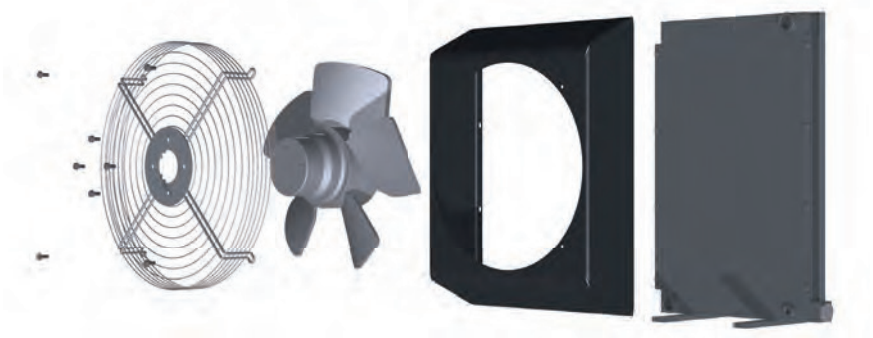
Types SSPV236.01/SSPV236.03 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	230	1480/1620	0,670/0,800	500	83	6200	9,5	51	54
03	50/60	400	1480/1620	0,100/0,130		83	6200			

PERFORMANCE DIAGRAM





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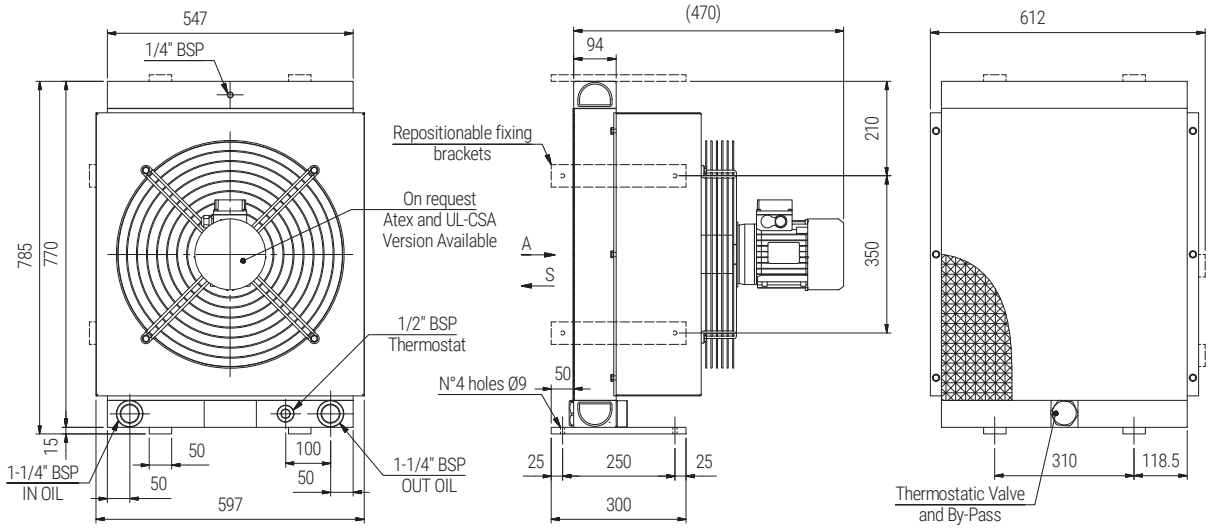
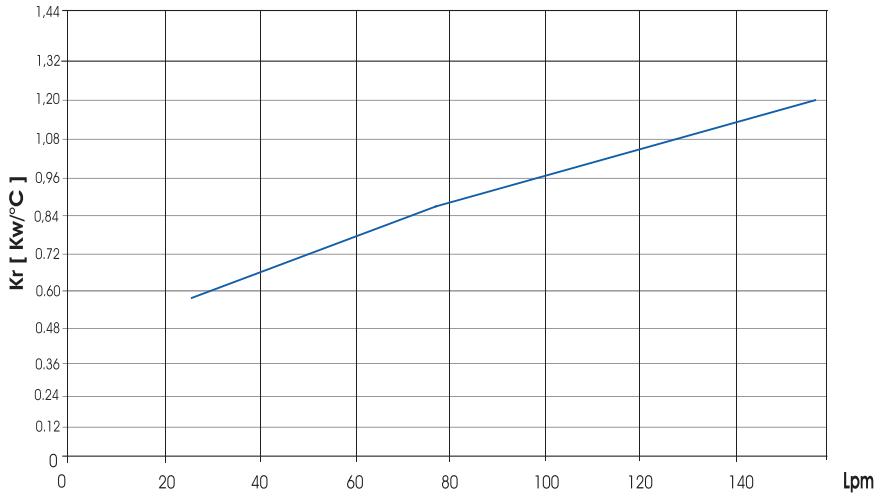
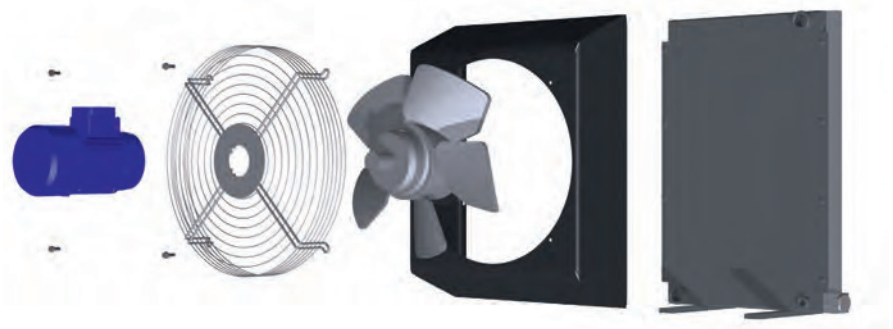
Type SSPV236.14 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	1390	1,100	500	83	6100	9,5	59	55
	60	276/480	1685	1,120		84	6300			

PERFORMANCE DIAGRAM





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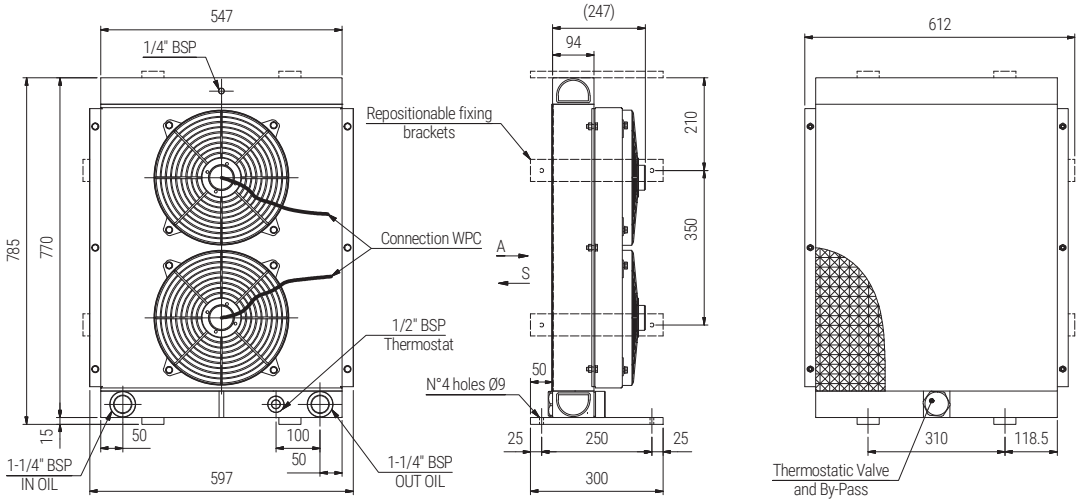
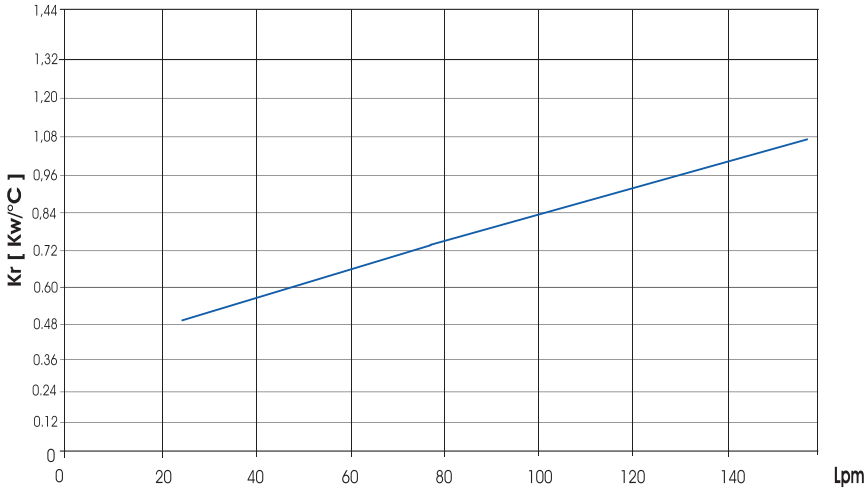
ECHANGEURS DE TEMPERATURE AIR/HUILE SERIE **SSPV**

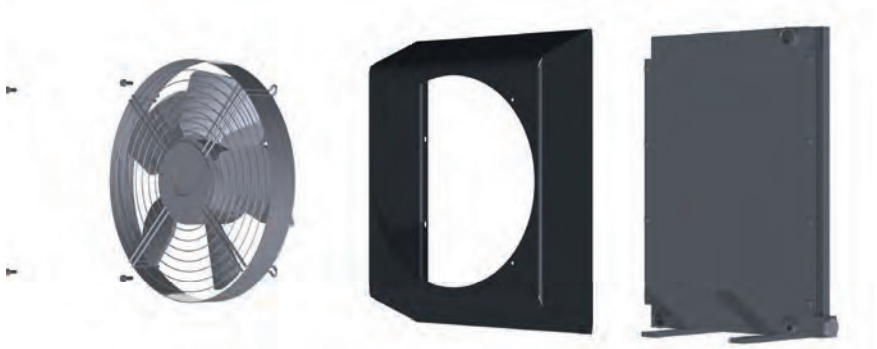
Types SSPV236.12/SSPV236.24 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
12	DC	12	3090	0,218x2	305	84	5100	9,5	50	68
24		24					5050			

PERFORMANCE DIAGRAM





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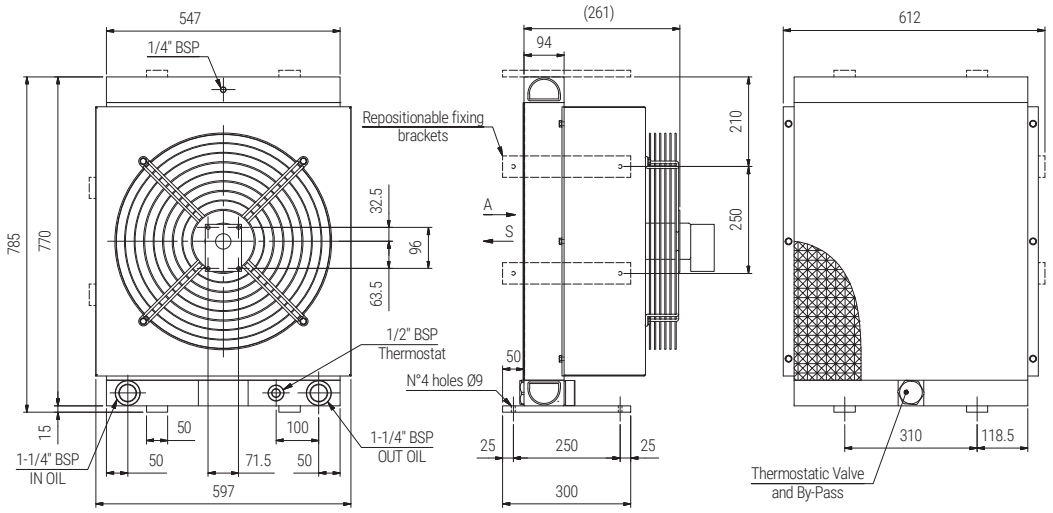
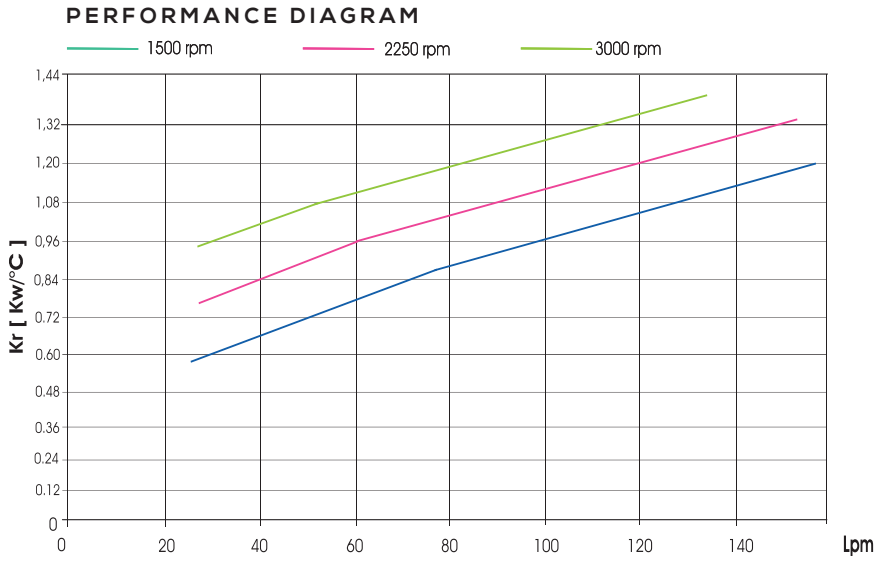
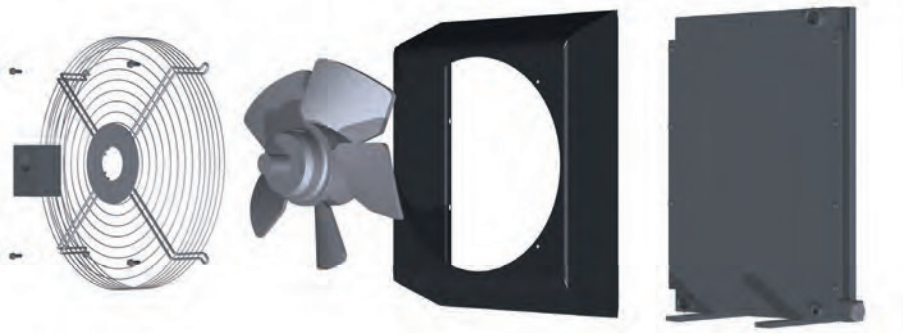
Type SSPV236.G2 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/3000		500			9,5	52	





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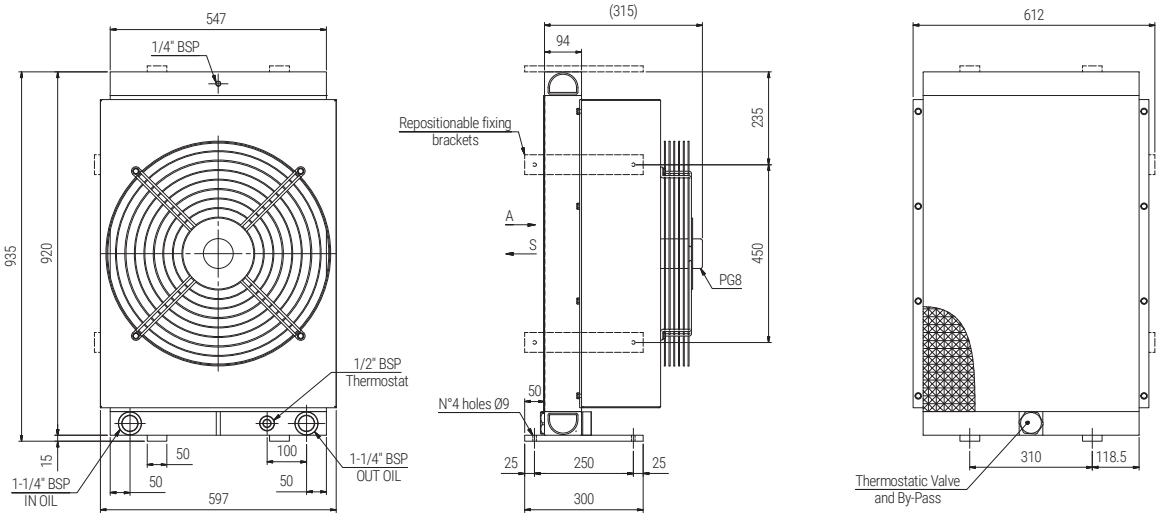
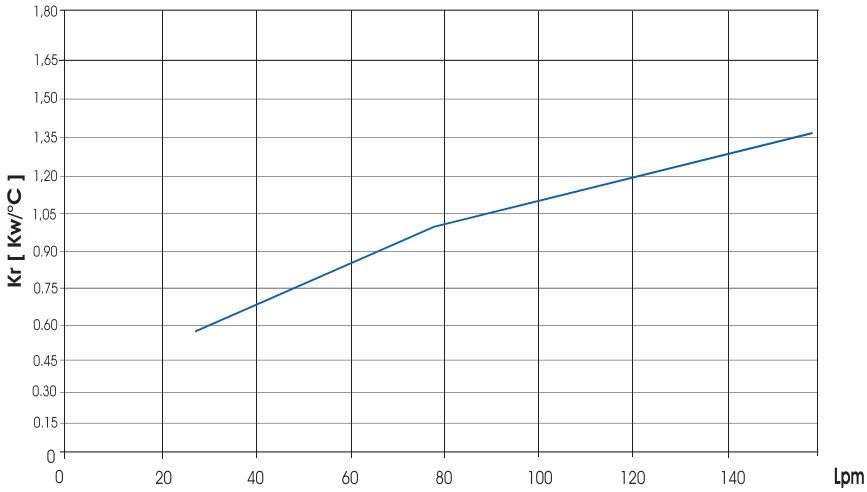
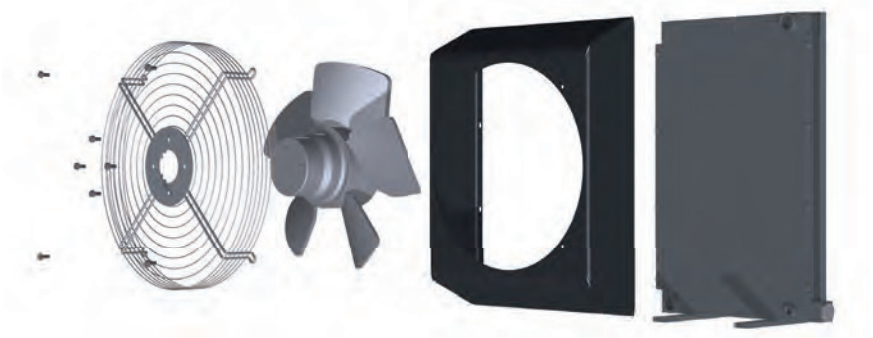
Types SSPV242.01/SSPV242.03 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	320	1360/1520	0,750/0,980	560	84	7250	10,5	59	54
03	50/60	400	1369/1520	1,07/0,125		84	7250			

PERFORMANCE DIAGRAM





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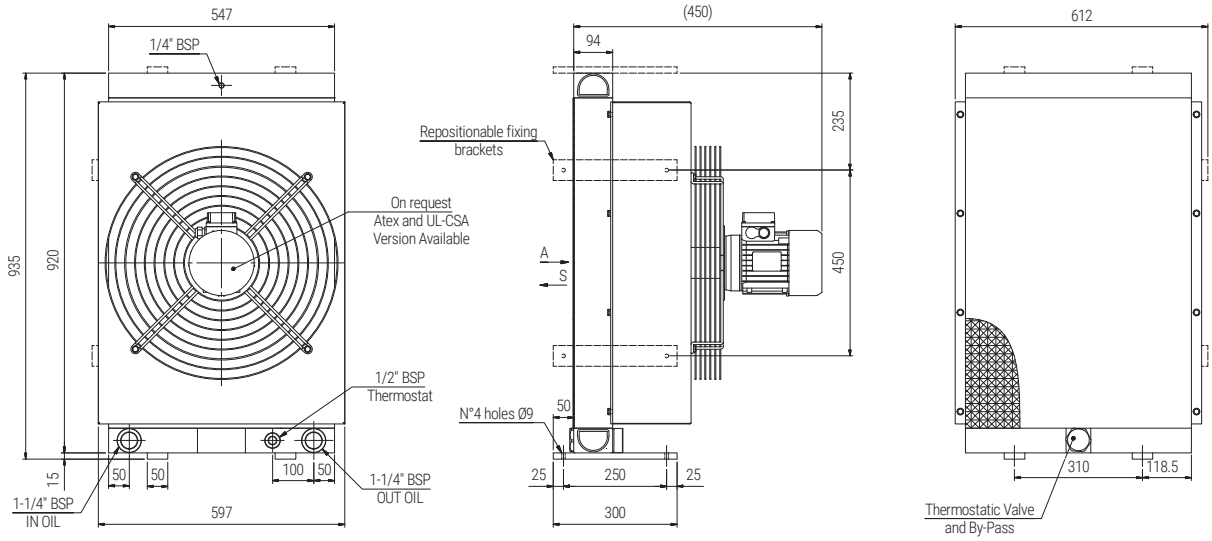
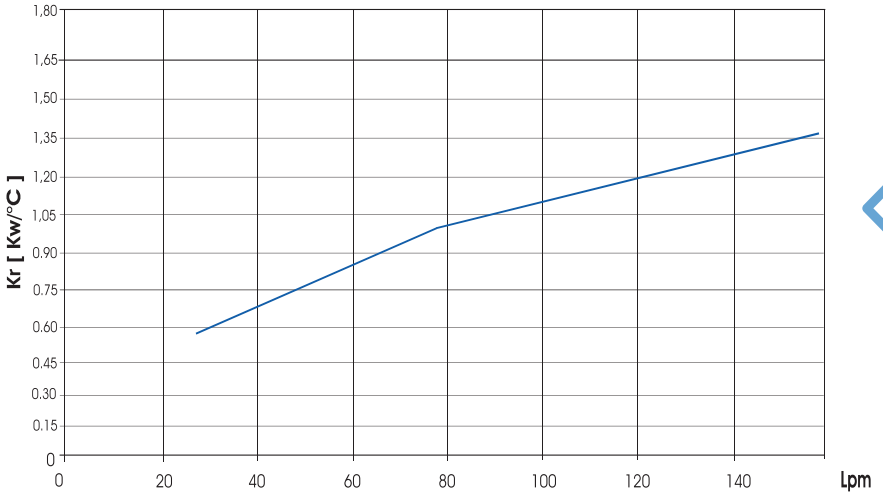
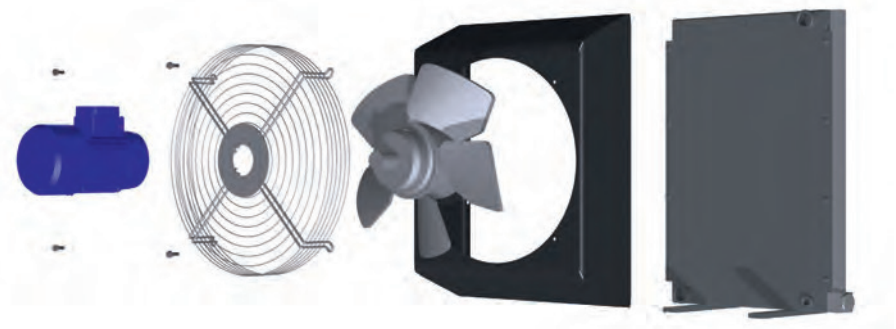
Type SSPV242.14 (2 PASS)



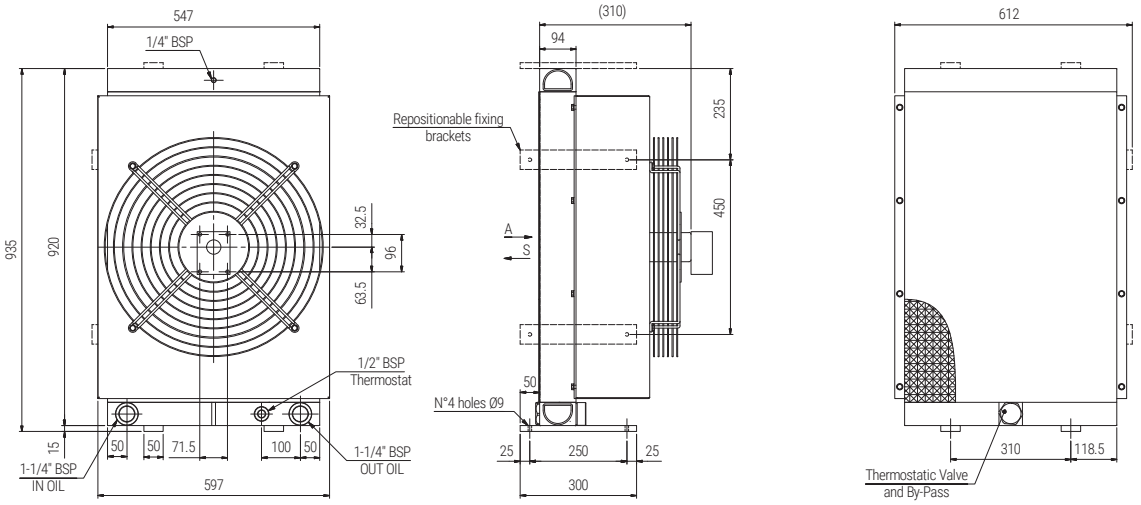
Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	1440	1,100	560	83	7500	10,5	64	55
	60	276/480	1730	1,300		84	7500			

PERFORMANCE DIAGRAM

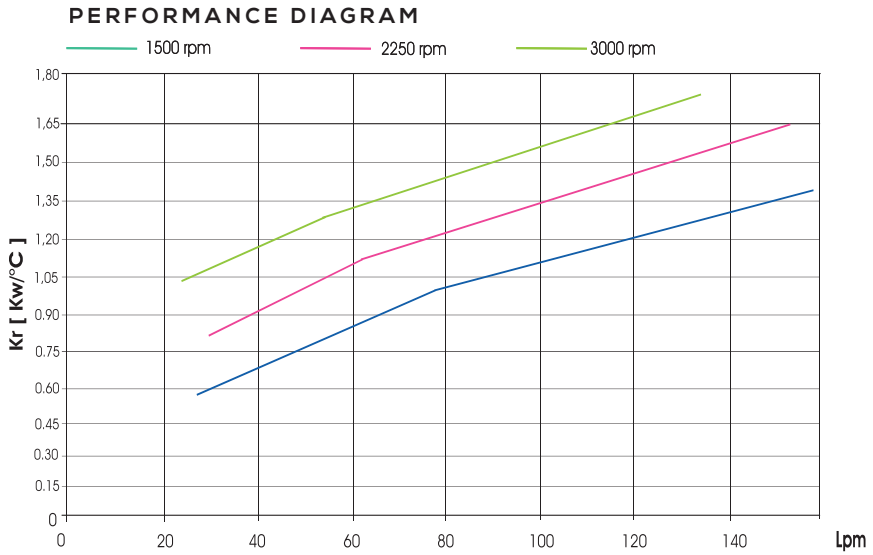


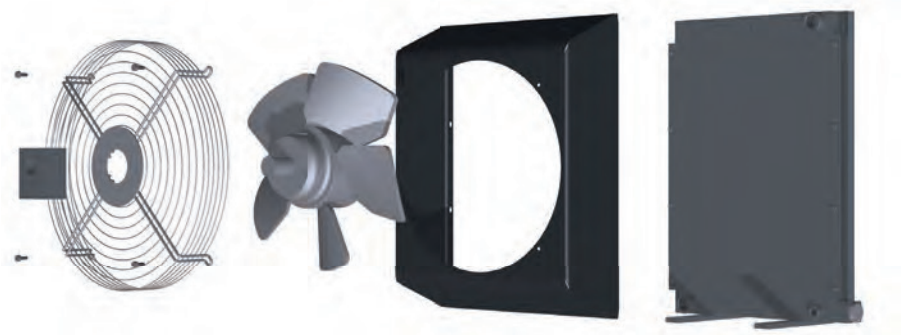


Type SSPV242.G2 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/3000		560			10,5	60	





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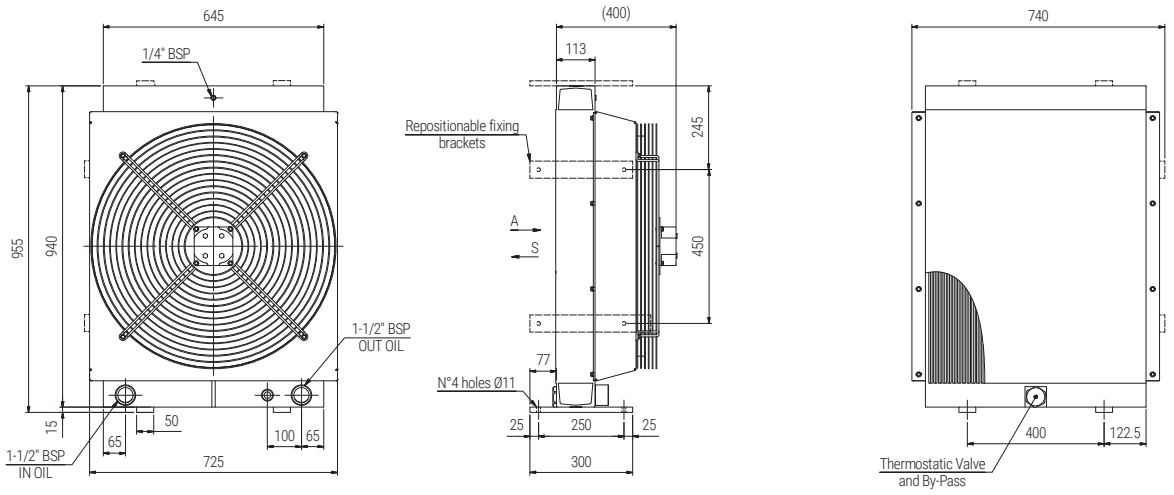
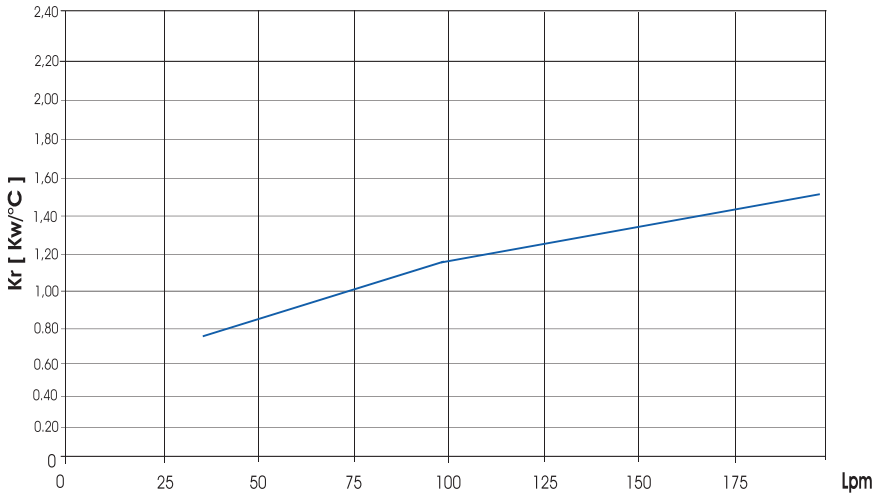
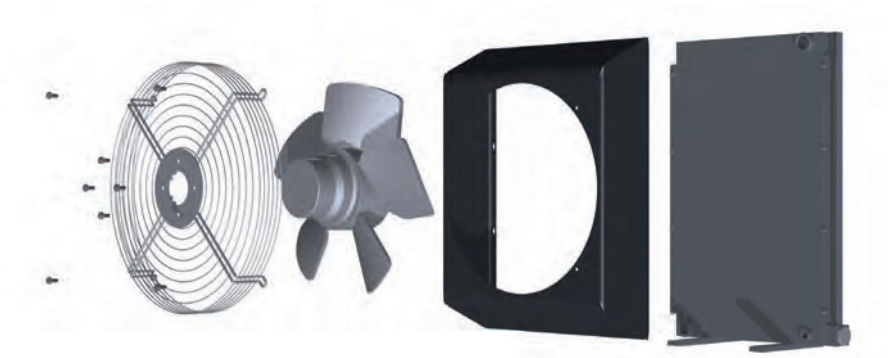
Types SSPV250.01/SSPV250.03 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	230	910/1050	0,750/0,980	630	82	7900	14	90	54
03	50/60	400	910/1050	0,700/0,930		82	7950			

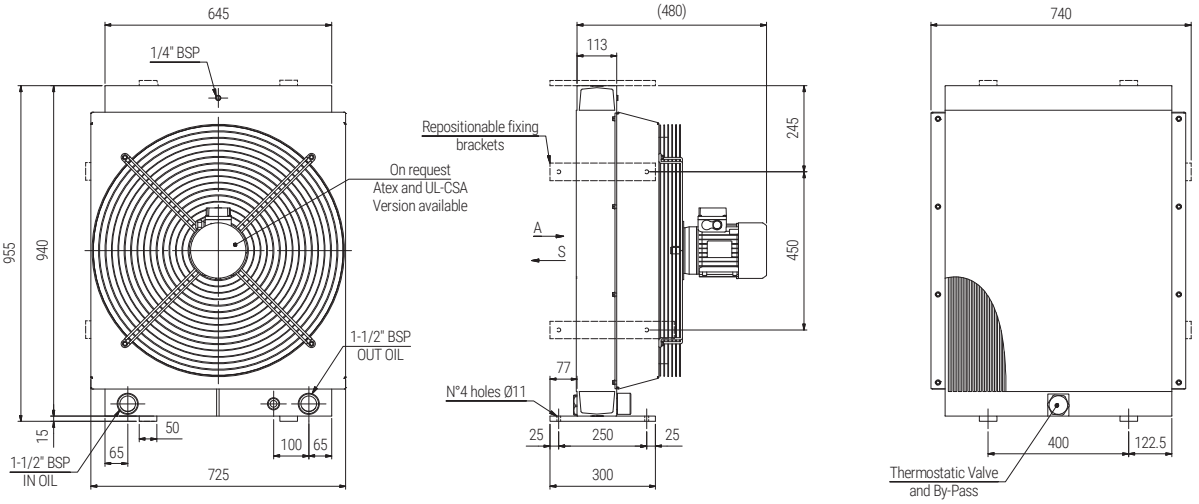
PERFORMANCE DIAGRAM





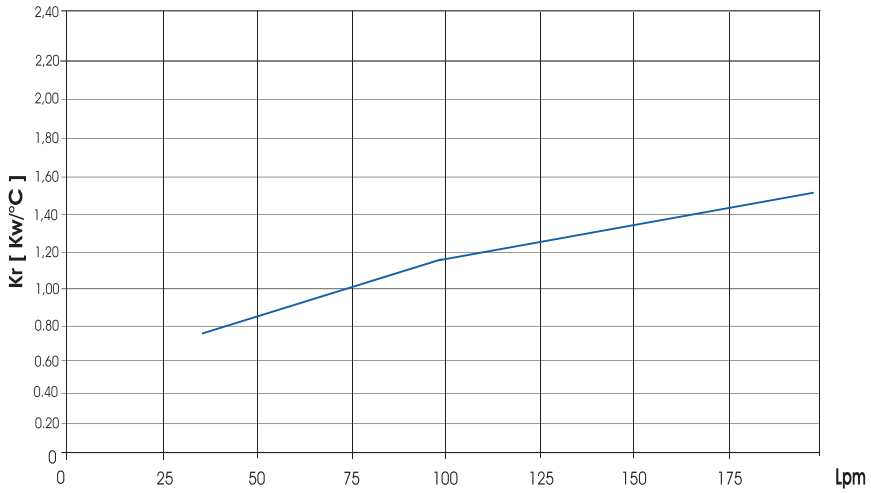
ECHANGEURS DE TEMPERATURE AIR/HUILE SERIE **SSPV**

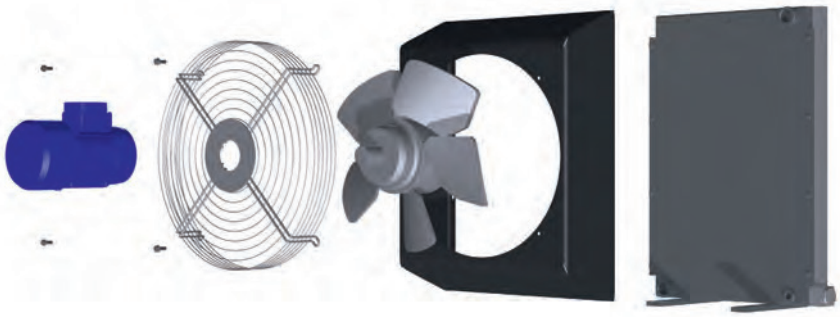
Type SSPV250.14 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	840	1,100	630	88	7900	14	90	55
	60	276/480	1125	1,300		88	8100			

PERFORMANCE DIAGRAM





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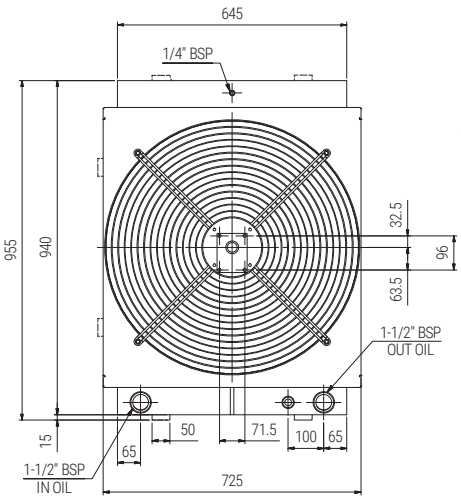
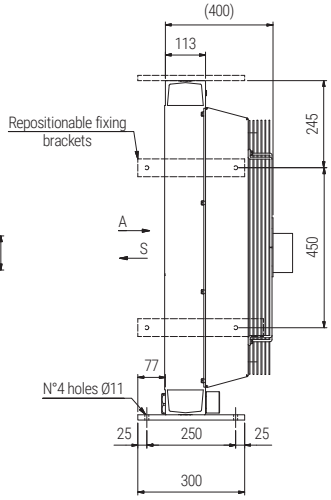
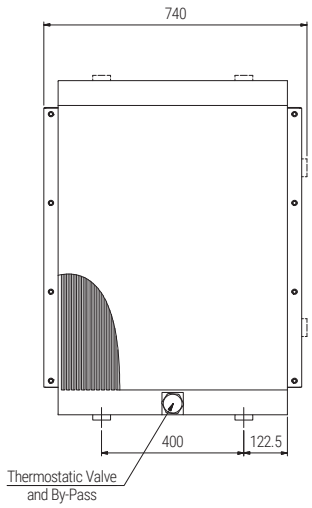
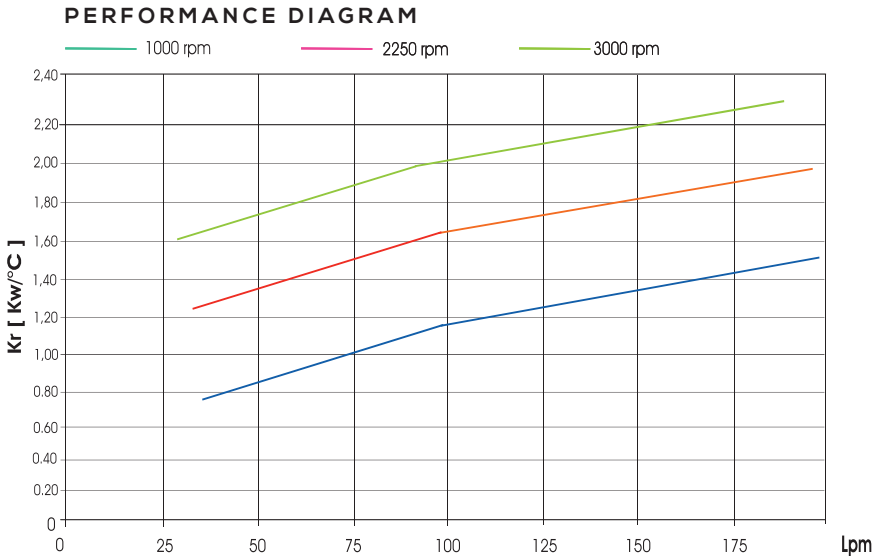
Type SSPV250.G2 (2 PASS)

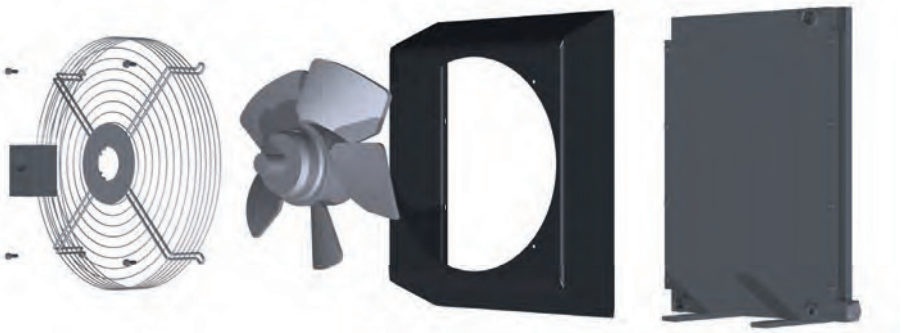




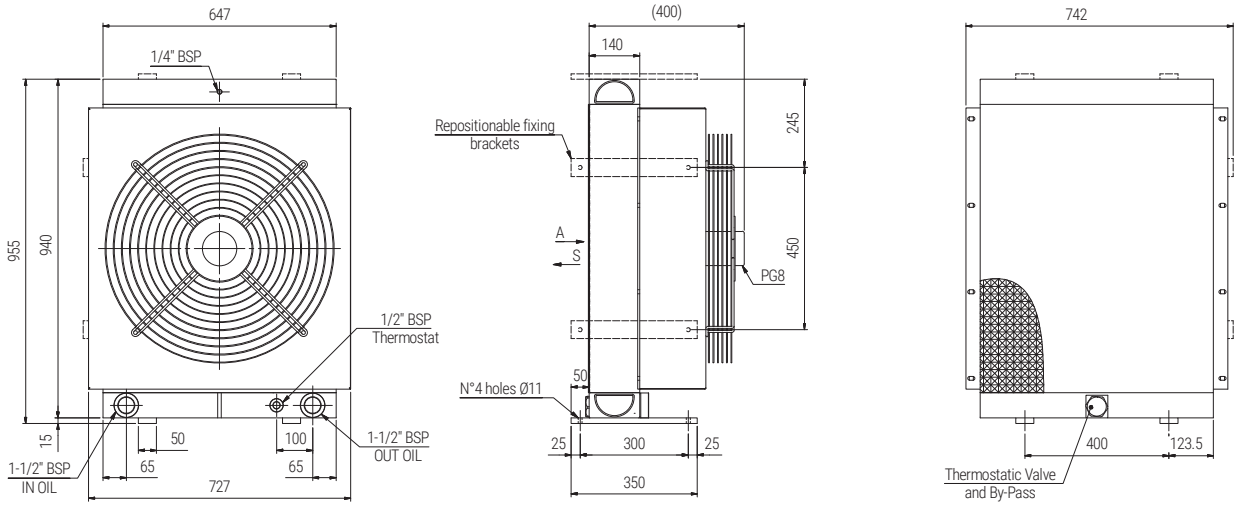


Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/2800		630			14	90	



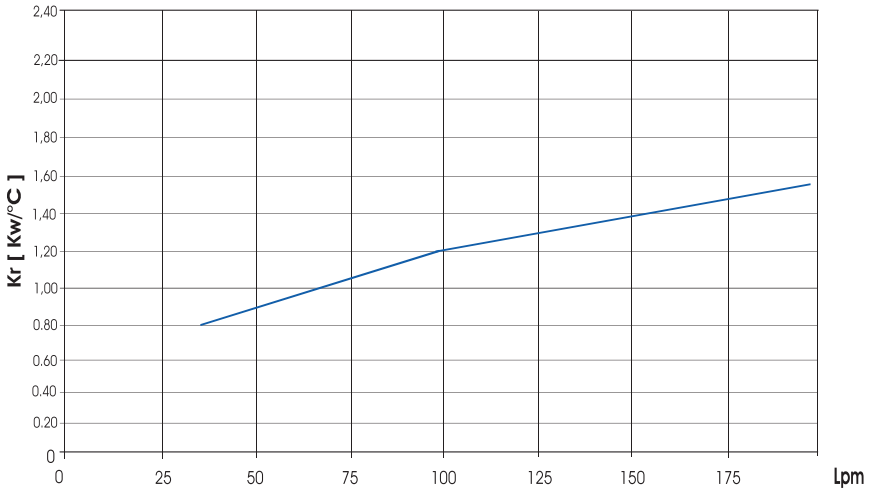


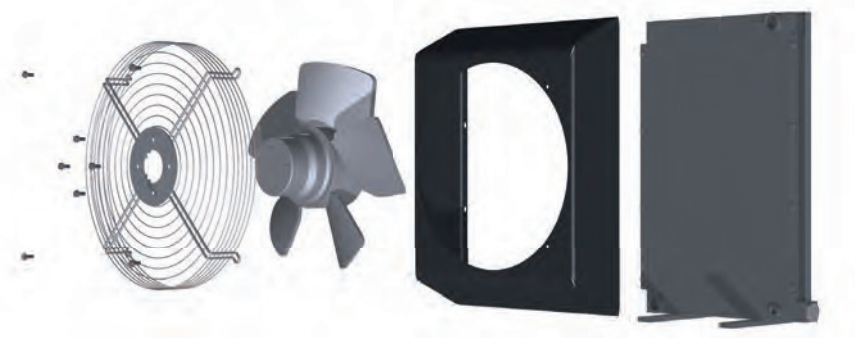
Type SSPV252.01/SSPV252.03 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
01	50/60	230	910/1050	0,750/0,980	630	82	7900	17,5	96	54
03	50/60	400	910/1050	0,700/0,930		82	7950			

PERFORMANCE DIAGRAM





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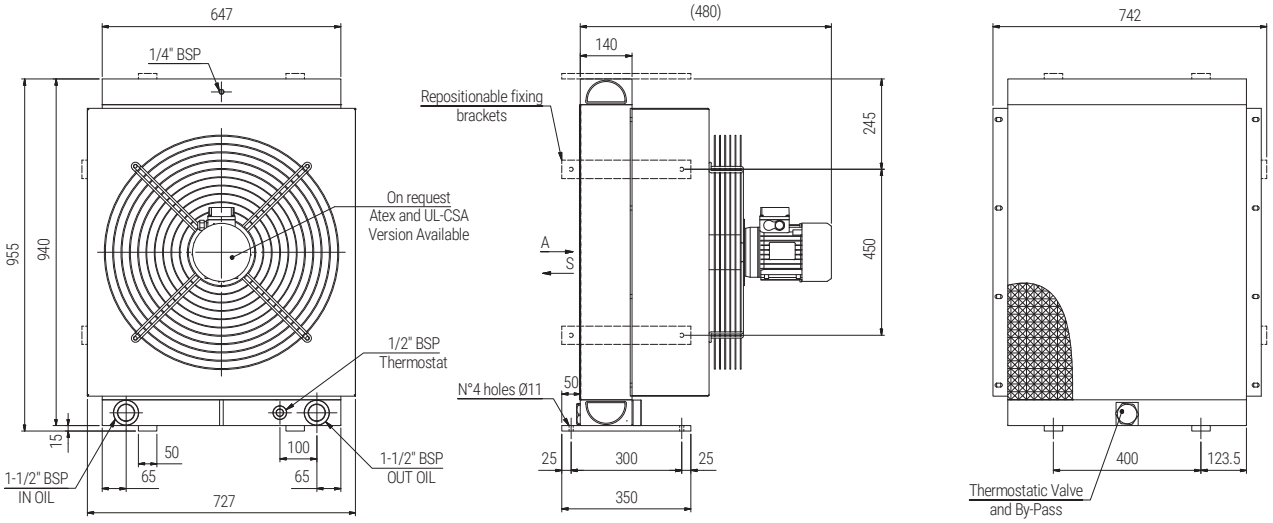
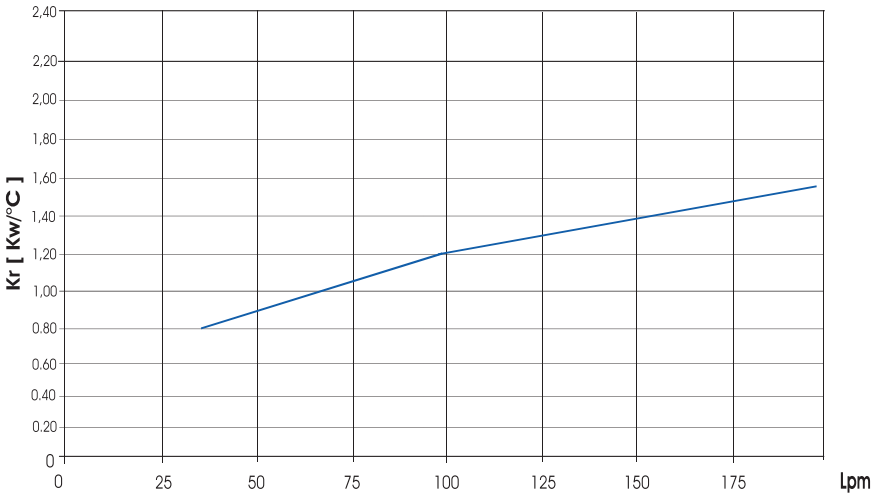
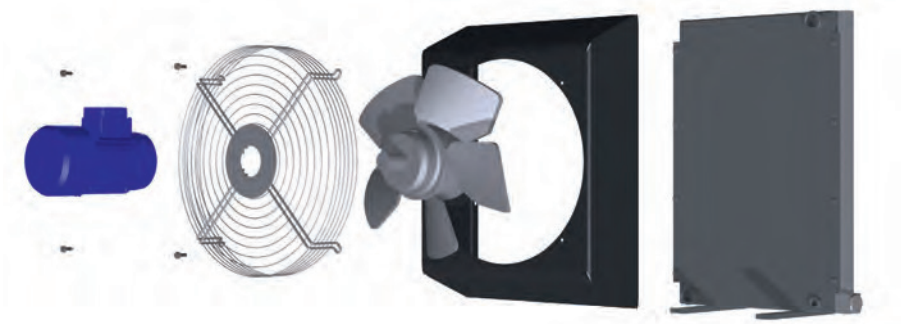
Type SSPV252.14 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
14	50	230/400	840	1,100	630	88	7900	17,5	98	55
	60	276/480	1125	1,300		88	8100			

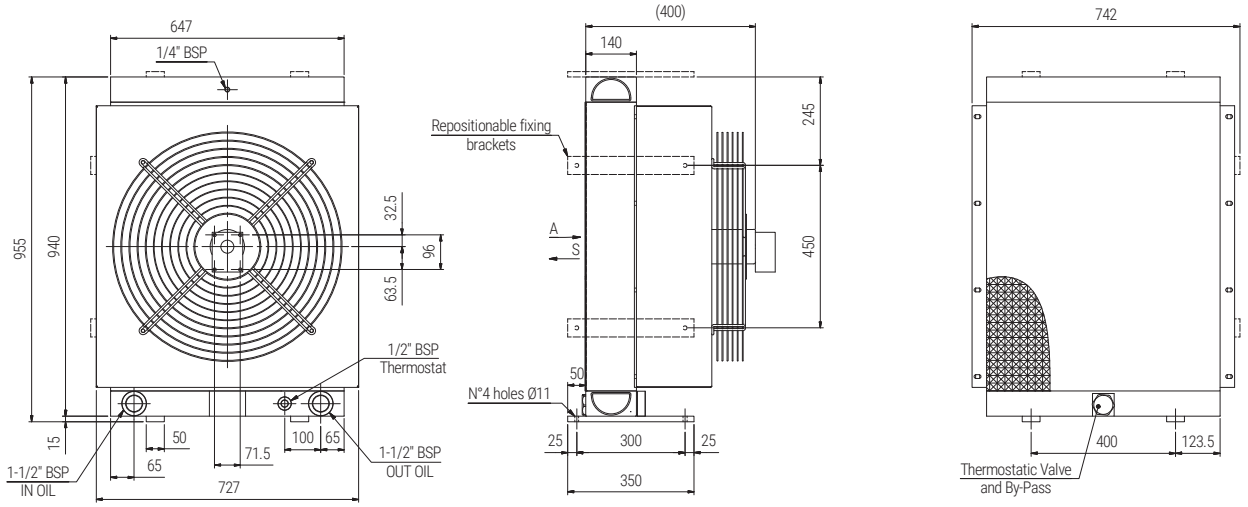
PERFORMANCE DIAGRAM



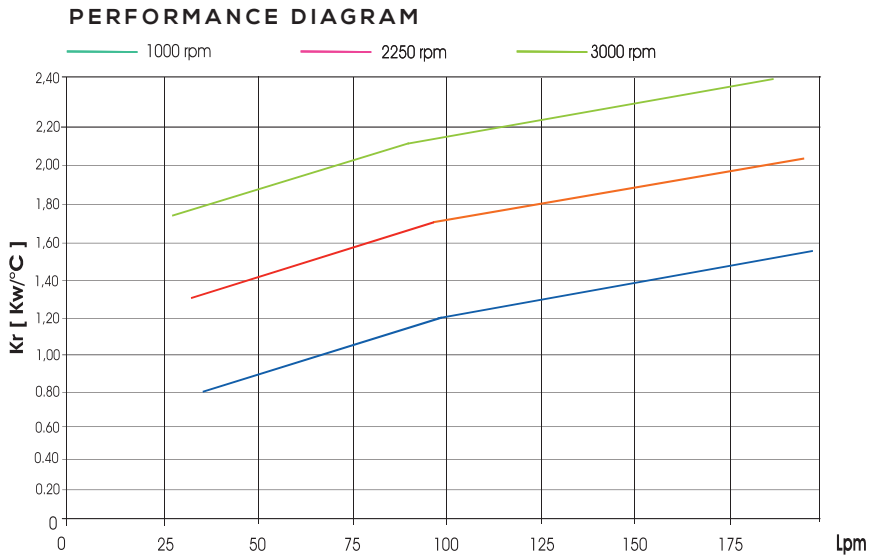


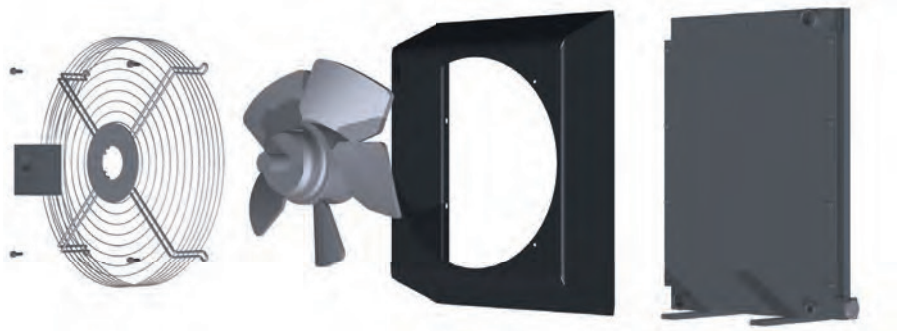
ECHANGEURS DE TEMPERATURE AIR/HUILE SERIE **SSPV**

Type SSPV252.G2 (2 PASS)



Type	Frequency HZ	Voltage V	RPM	Power KW	Fan Diameter mm	Noice level dB (A)	Air flow rate m³/h	Capacity lt	Weight KG	IP
G2			800/2800		630			17,5	95	





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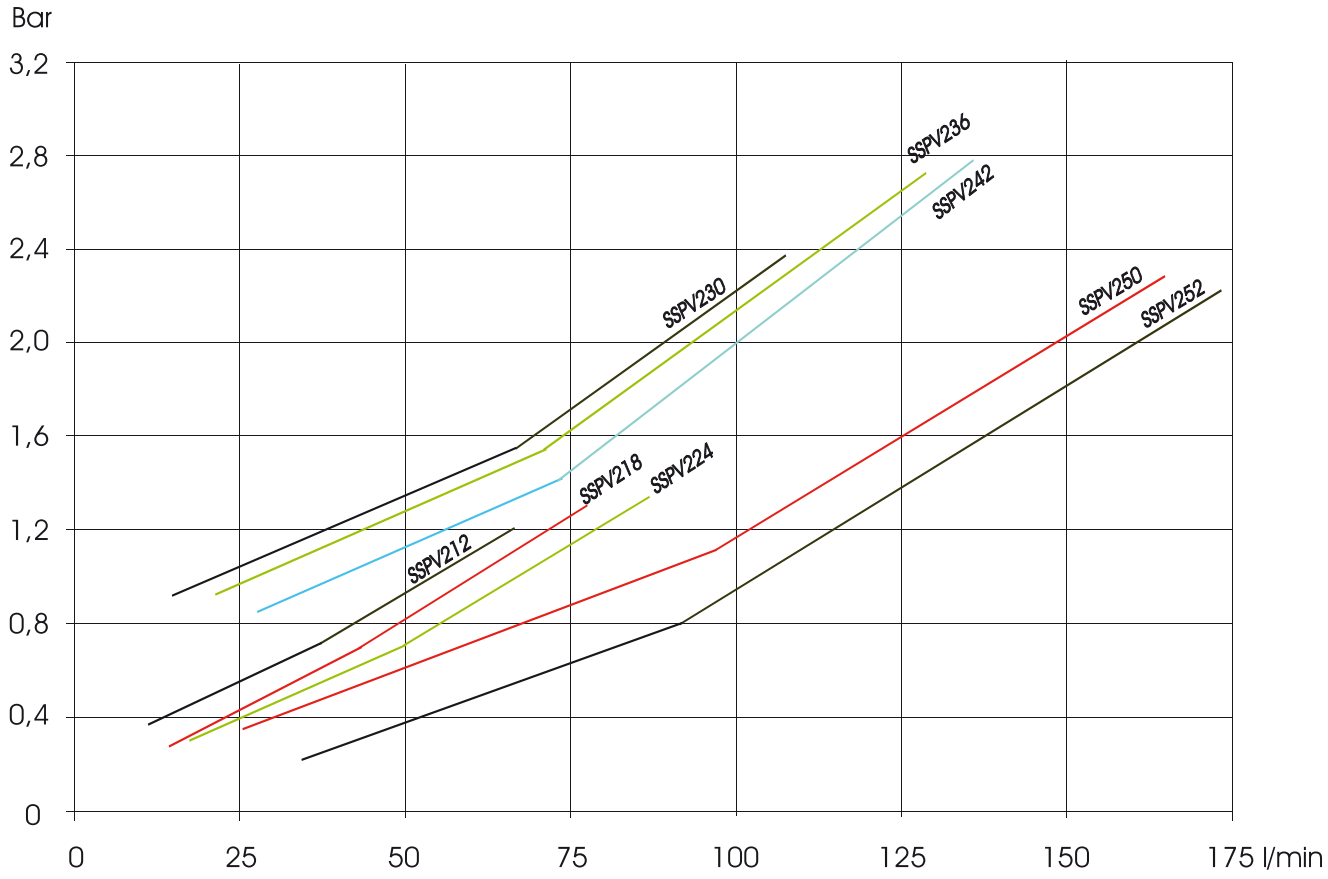
Pertes de charge SSPV212 à SSPV252

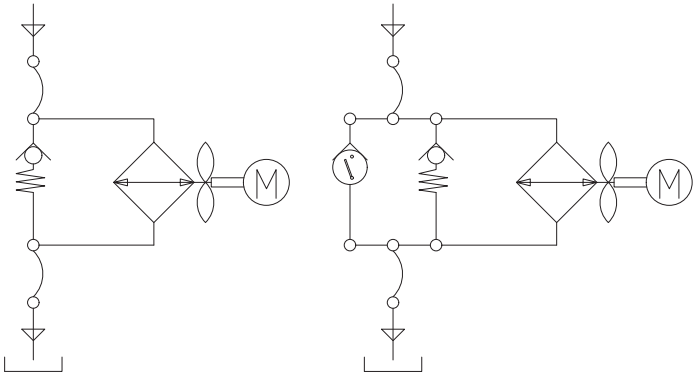


In order different viscosity, please multiply temp.x correction factor

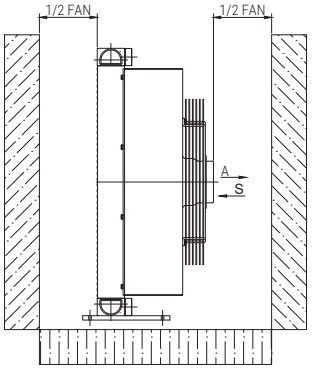
CST	10	15	20	30	40	50	60	80	100	200	300
C	0,5	0,65	0,75	1,0	1,2	1,4	1,6	1,9	2,1	3,4	4,3

Installation / Branchement électrique

SCHEME N°1



SCHEME N°2

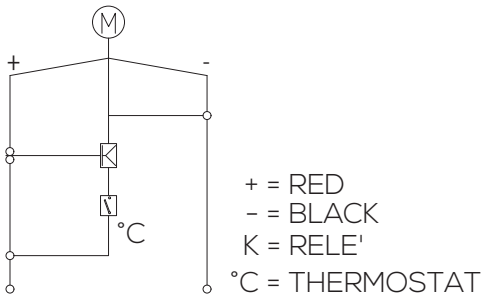


ATTENTION › THE SSPV VERSION, CAN BE PROVIDED AS FOLLOWS :

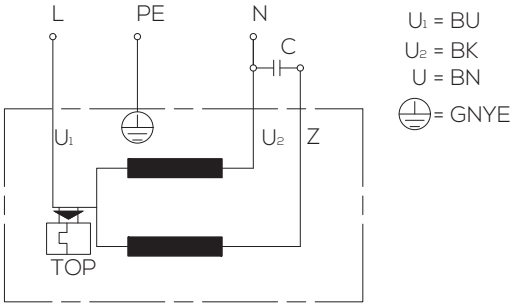
- › Complete with the thermostatic valve and by-pass
- › With only by-pass element
- › With only thermostatic valve element

SCHEME N°3

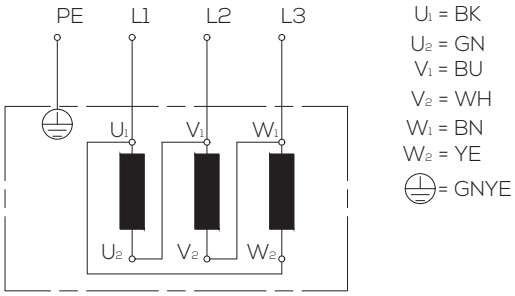
CONNECTION 12-24V DC



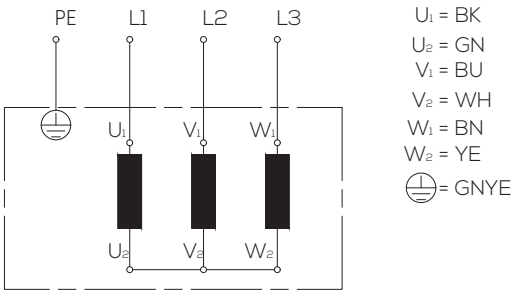
CONNECTION 230V MONOPHASE



CONNECTION DELTA (3~ 230 VAC)



CONNECTION STAR (3~ 400 VAC)



Série SSPV - Composition des codes

SSPV30 14 02 A 0 0

Type	
SSPV12	**SSPV212 (2 pass)**
SSPV18	**SSPV218 (2 pass)**
SSPV24	**SSPV224 (2 pass)**
SSPV30	**SSPV230 (2 pass)**
SSPV36	**SSPV236 (2 pass)**
SSPV42	**SSPV242 (2 pass)**
SSPV50	**SSPV250 (2 pass)**
SSPV52	**SSPV252 (2 pass)**

Bimetallic fixed temperature switches	
00	No switch
01	Fixed switch 36-26 °C
02	Fixed switch 43-33 °C
03	Fixed switch 52-42 °C
04	Fixed switch 65-55 °C
05	Fixed switch 75-65 °C
06	Fixed switch 85-75 °C
07	Fixed switch 95-85 °C
08	**Adjustable** switch 0-90 °C

Termostatic valve	
0	Without By-pass
3	Value 40°C

By-pass	
0	Without By-pass
3	3 bar
6	6 bar
8	8 bar

Fan Motor	
01	230V 50/60Hz Angle phase
03	400V 50/60Hz Three phase
14	230V 50/60Hz AnglTree phase B14
12	12V CC
24	24V CC
G2	Arranged for hydraulic motor GR2.
G3	Arranged for hydraulic motor GR2.

Fans	
A	Suction
S	Blowing

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SOCAH HYDRAULIQUE

ÉCHANGEURS DE TEMPÉRATURE

Série SSV

Édition Décembre 2023

Sommaire

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Caractèristiques techniques

SCAMBIATORI DI CALORE TIPO ARIA-OLIO
HEAT EXCHANGER AIR-OIL VERSION

Specifiche pacco radiante

Materiale	Alluminio
Pressione di esercizio	25 bar
Pressione di collaudo	35 bar
Temperatura max d'esercizio	120°C

Radiating mass data

Material	Aluminium
Nominal pressure	25 bar
Test pressure	35 bar
Max temperature	120°C

Compatibilità con i fluidi

Oli minerali, hl, hlp, emulsioni acqua-olio.

Fluid compatibility

Mineral oils, hl, hlp, water-oil emulsion.

Installazione

È consigliabile installare in parallelo allo scambiatore una valvola di By-pass, per proteggerlo durante la fase di avviamento.

Inoltre assicurarsi di non interporre ostacoli alla portata dell'aria.

Installation

We recommend to install a by-pass valve in parallel to the heat exchanger, for its protection during the starting up. Make sure there is no obstacle to the air flow.

Manutenzione

Pulizia lato olio

Lo sporco potrà essere eliminato con il flussaggio di un prodotto detergente o sgrassante compatibile con l'alluminio. Alla fine di tale operazione bisognerà ricorrere all'aria compressa per eliminare i residui che restano all'interno.

Pulizia lato aria

La pulizia dovrà essere effettuata mediante aria compressa o acqua. Durante tale operazione bisognerà prestare particolare attenzione alla direzione del getto per non rovinare le alette. Se lo sporco è causato da olio o da grasso, la pulizia potrà essere effettuata con un getto di vapore o di acqua calda. Durante tali operazioni il motore elettrico dovrà essere scollegato e adeguatamente protetto.

Maintenance

Oil side cleaning

LFlushing with a detergent or a degreasing product compatible with aluminium, eliminates the dirt.
To remove the residuals, use compressed air.

Air side cleaning

It can be done by using compressed air or water and paying attention to the jet direction for not spoiling the vanes. If oil or grease has to be removed, clean with a jet of steam or hot water. Make sure that the electric motor is disconnected and properly protected.

MATERIALI UTILIZZATI

Ventola	Acciaio o plastica rinforzata
Convogliatore	Acciaio o plastica rinforzata
Griglia di protezione	Acciaio o plastica rinforzata

MATERIALS

Fan	Steel or hard plastic
Fan case	Steel or hard plastic
Fan protection	Steel or hard plastic

Di seguito sono riportati tre differenti famiglie di scambiatori:
- **serie "SSV"** standard

Sull'asse delle ascisse viene indicata la portata d'olio che attraversa lo scambiatore, espressa in (lt/min), mentre sulle ordinate è indicato il rendimento di dissipazione per ogni grado centigrado, espresso in (kcal/h oC); oppure in (kW/ oC).
Il calore specifico di dissipazione (h) è dato dal rapporto tra la potenzialità termica (Q) dello scambiatore e la differenza di temperatura tra l'olio in entrata e la temperatura ambiente (T°olio - T°aria), con la seguente formula:

$$\eta = \frac{Q\ (kcal/h)}{T^{o}olio - T^{o}aria\ (^{o}C)}$$

Supponendo che lo scambiatore possa dissipare 3000 (kcal/h) e si abbia una differenza di temperatura ($T^{o}olio - T^{o}aria$) = 30(°C):

$$\eta = \frac{3000\ (kcal/h)}{30\ (^{o}C)} = 100\ (kcal/h\ ^{o}C)$$

Nel caso in cui non sia nota la potenzialità termica (Q) dello scambiatore è possibile calcolarla empiricamente con la seguente formula:

$Q = 0\ ,40 \cdot V \cdot \Delta to$

Dove:
V = portata olio in (lt/h)
Δto = differenza temp. tra olio in entrata e in uscita

0,40 è un valore approssimato o utilizzabile per olio idraulico (nel caso non se ne conoscano il peso specifico e il calore specifico).

[0,40 (kcal/lt°C) = c·y
dove:
C = calore specifico (kcal/kg°C)
Y = peso specifico (kg/dm³)]

Supponendo di avere una portata di 6000 (lt/h) e una differenza di temperatura tra olio in ingresso e olio in uscita (Δto) di 8 (°C) la potenzialità termica dello scambiatore è:

$Q = 0{,}40 \cdot 6000\ 8 = 19200$ kcal/h

Here you can find three different series of exchangers:
- **series "SSV"** standard

On the abscissas you can find the oil flow going through the exchanger, expressed in (lt/min), while on the ordinates you can find the dissipation performance for each centigrade degree, expressed in (kcal/h oC); or in (kW/ oC).
The specific dissipation heat (h) is the result of the ratio between thermic power (Q) of the exchanger and the difference of the temperature between oil input and the ambient temperature (oil T° - air T°), using the following formula:

$$\eta = \frac{Q\ (kcal/h)}{oil\ T^{o} - air\ T^{o}\ (^{o}C)}$$

Supposing the exchanger can dissipate 3000 (kcal/h) and you have a temperature difference (oil T° - air T°) = 30 (°C):

$$\eta = \frac{3000\ (kcal/h)}{30\ (^{o}C)} = 100\ (kcal/h\ ^{o}C)$$

When the thermic power (Q) of the exchanger is unknown, it is possible to calculate it empirically using the following formula:

$Q = 0\ ,40 \cdot V \cdot \Delta to$

Where:
V = oil flow in (lt/h)
Δto = temperature difference between oil in and out

0,40 is an approximate value or it can be used for hydraulic oil (when specific weight and specific heat are unknown).

[0,40 (kcal/lt°C) = c·y
dove:
C = specific heat (kcal/kg°C)
Y = specific weight (kg/dm³)]

Supposing the flow is 6000 (lt/h) and the difference between oil in and out (Δto) is 8 (°C) the thermic power of the exchanger is:

$Q = 0{,}40 \cdot 6000\ 8 = 19200$ kcal/h

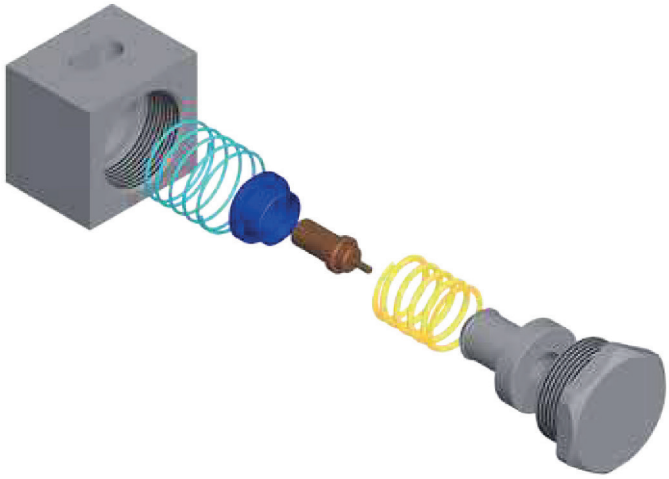
Le curve riportate a catalogo sono valide dal momento in cui si aziona il gruppo di raffreddamento.

La gamma OMT Group prevede diversi tipi di motorizzazione.
Spazia dal motore in C.A. monofase, trifase e trifase unificato B14, a quello in C.C. 12-24V, oltre alla possibilità della predisposizione per il motore idraulico.
È consigliato l'utilizzo della tipologia B14 nel momento in cui l'apparecchio ha un funzionamento continuo.

The above curves are valid when the cooler element is activated.

OMT Group range offers various types of motors. It ranges from C.A. single-phase, three-phase and B14 standardized three-phase motor to C.C. 12-24V motor, in addition to the possibility of the prearrangement for hydraulic motor.
We advice the use of B14 type when the equipment runs continuously.

Valve thermostatique by-pass



INCORPORAZIONE VALVOLA TERMOSTATICA BY-PASS NELLO SCAMBIATORE

La ricerca continua e lo sviluppo tecnico portano alle serie di **scambiatori di calore SSV** che tengono conto delle esigenze del mercato.

I clienti hanno espresso molte volte insoddisfazione per il processo di assemblaggio degli scambiatori di calore.

La lamentela principale riguardava l'obbligo di aggiungere una valvola di bypass esterna che era in grado di superare qualsiasi alta pressione, principalmente causata dalla variazione della viscosità dell'olio e / o dalla moltiplicazione del flusso.

La **serie SSV** può semplificare questo processo di assemblaggio e contrassegnarlo in modo più economico:

1 Infatti, la serie SSV integra la valvola di by-pass e la valvola termostatica nello stesso scambiatore di calore. Così da controllare eventuali picchi di pressione.

2 La presenza della valvola termostatica è strategica in caso di temperature di congelamento dell'olio in quanto by-passa l'olio all'esterno del nucleo fino a quando la temperatura dell'olio raggiunge i 40 ° C.

Questa nuova serie è originale perché elimina molti problemi come la perdita di carico quando la viscosità dell'olio è maggiore. Permette inoltre, di aumentare la temperatura all'interno dei tubi, garantendo il miglior controllo della temperatura dell'olio al loro interno.

INCORPORATION OF THE VALVE THERMOSTATIC BY-PASS IN THE COOLER

Continuous research and technical development lead to the **SSV heat exchanger** series which consider the needs of the market.

Customers expressed many times dissatisfaction whit the process of assembling heat exchangers.

The main complain was about the obligation of adding an external bypass valve which was able to outflow any high pressure, mainly caused by the variation of oil viscosity and/or multiplication of the flow.

The **SSV series** can simplify this process of assembly and marking it cheaper:

1 In fact, the SSV series integrates the by-pass valve and thermostatic valve together in the same heat exchanger. So, it controls any peaks of pressure.

2 The presence of the thermostatic valve is strategic in case of freezing temperatures of the oil as it by-passes the oil outside the core until the oil temperature reaches 40°C.

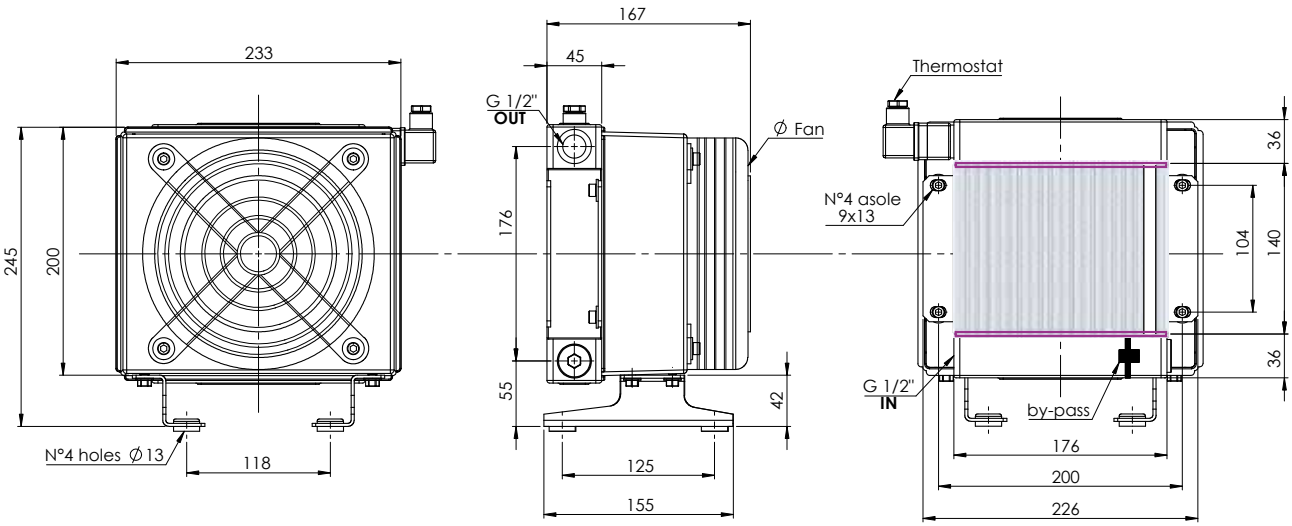
This new series is original because it eliminates many problems such as the loss of load when the oil viscosity is higher. It also allows to increase the temperature inside the pipes, grantig the best control on the oil temperature inside them.

SCAMBIATORE TIPO ARIA-OLIO
HEAT EXCHANGER AIR-OIL VERSION

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50	220	2600	0.023/0.026	170	52	122	640	0.28	6	54
03	50	380	2490	0.032/0.027	170	52	122	670	0.28	6	54
12	DC	12	4101	0.076	167	71	167	569	0.28	5	68
24	DC	24	4101	0.076	167	71	167	560	0.28	5	68

Portata olio consigliata da 5 a 40 (lt/min) Suggested oil flow from 5 to 40 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

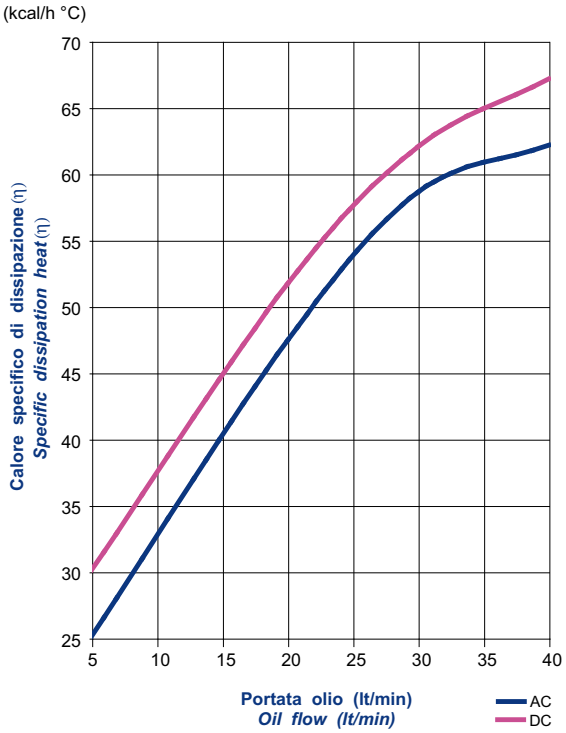
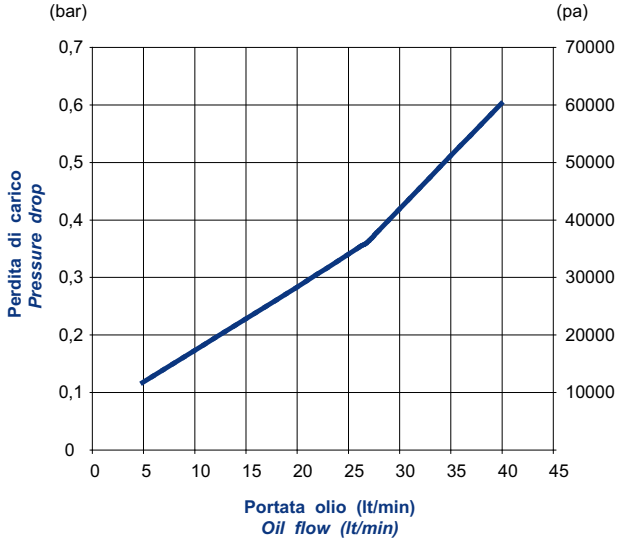


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)



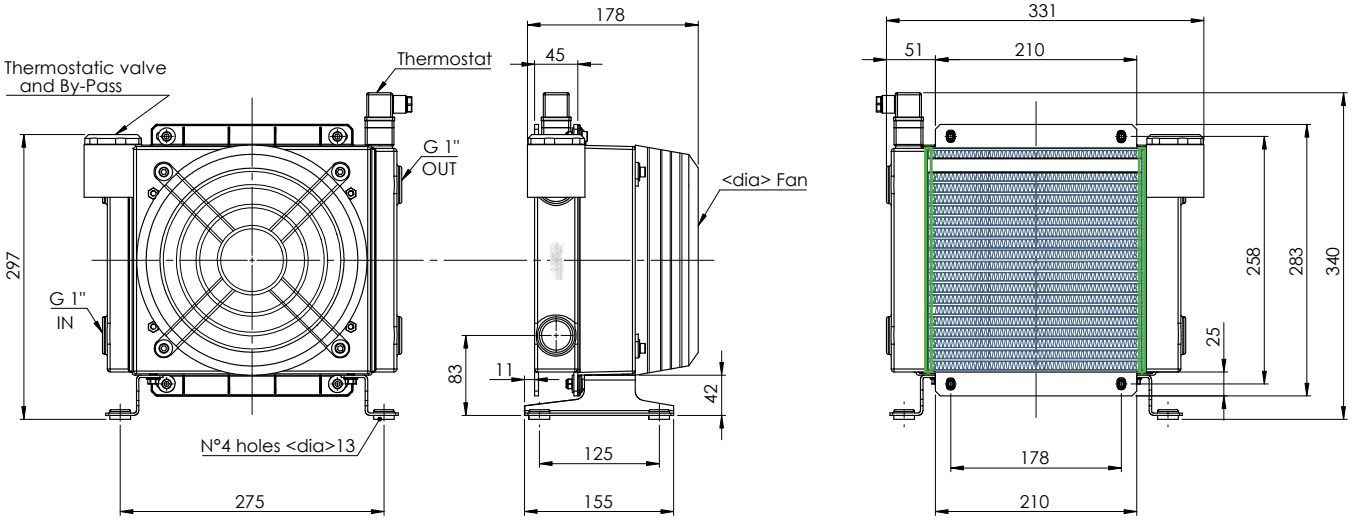
Type SSV15

SCAMBIATORE TIPO ARIA-OLIO
HEAT EXCHANGER AIR-OIL VERSION

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50	220	2500	0.055/0.060	200	52	170.5	715	0.48	7	54
03	50	380	2300	0.035/0.030	200	52	170.5	660	0.48	7	54
14	50 60	230/400 276/480	1350 1620	0.25 0.30	200	67	347	700	0.48	10	55
12	DC	12	3305	0.087	225	75	157	999	0.48	6.5	68
24	DC	24	3305	0.087	225	75	157	994	0.48	6.5	68
G2	-	-	-	-	200	-	200.5	-	0.48	6	-

Portata olio consigliata da 20 a 80 (lt/min) Suggested oil flow from 20 to 80 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

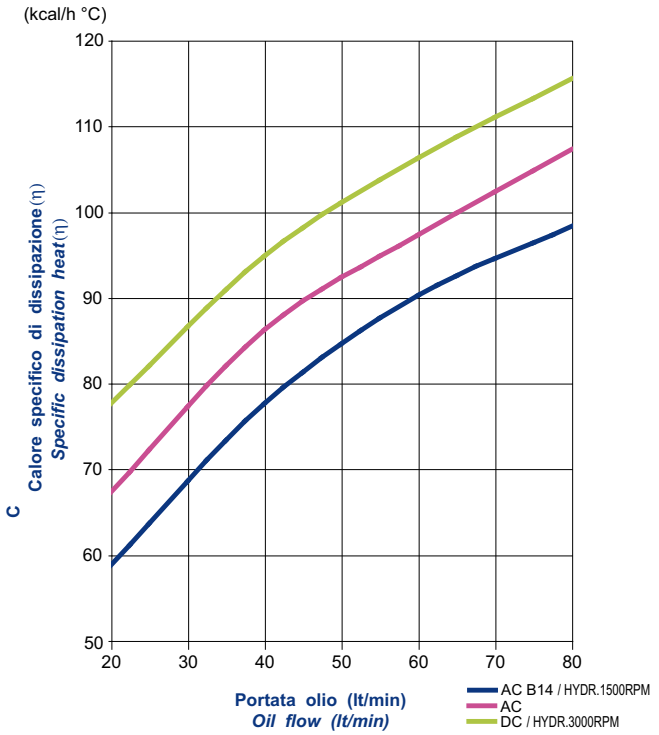
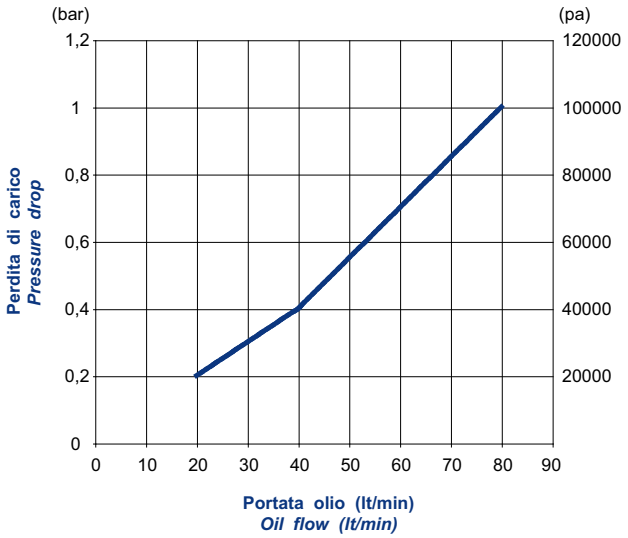


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)



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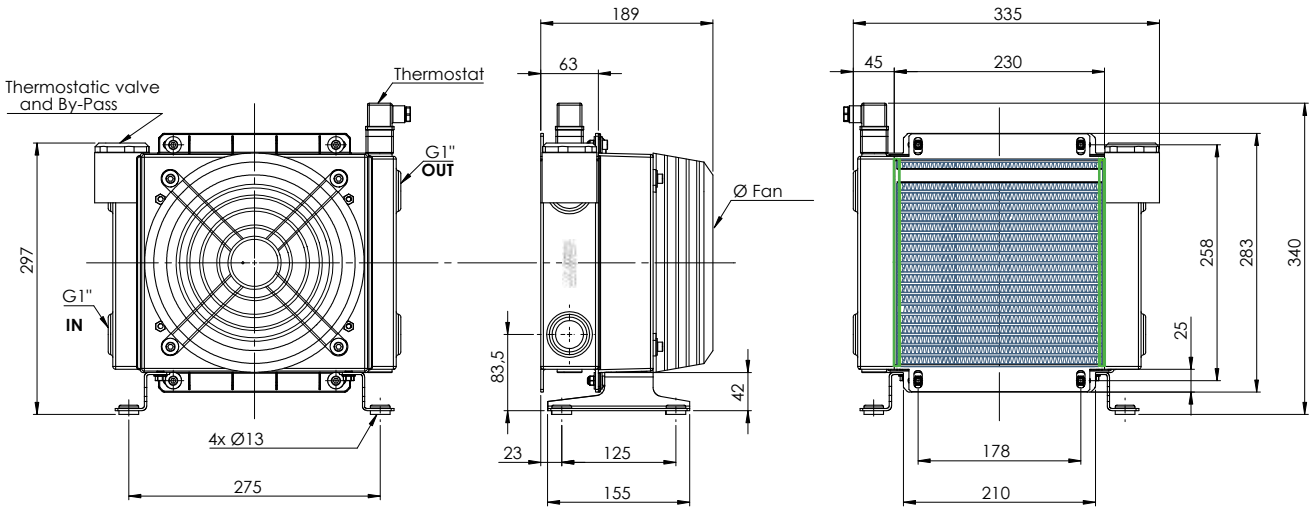
SCAMBIATORE TIPO ARIA-OLIO
HEAT EXCHANGER AIR-OIL VERSION

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50	220	2500	0.055/0.060	200	52	188.5	715	0.68	8	54
03	50	380	2300	0.035/0.030	200	52	188.5	660	0.68	8	54
14	50 60	230/400 276/480	1350 1620	0.25 0.30	200	67	365	700	0.68	11	55
12	DC	12	3305	0.087	225	75	175	999	0.68	7	68
24	DC	24	3305	0.087	225	75	175	994	0.68	7	68
G2	-	-	-	-	200	-	218.5	-	0.68	7	-

Portata olio consigliata da 30 a 100 (lt/min) Suggested oil flow from 30 to 100 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

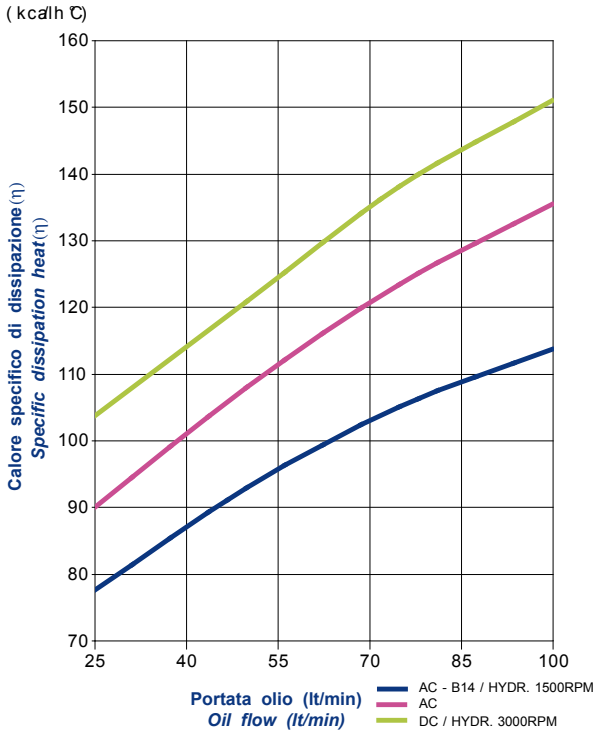
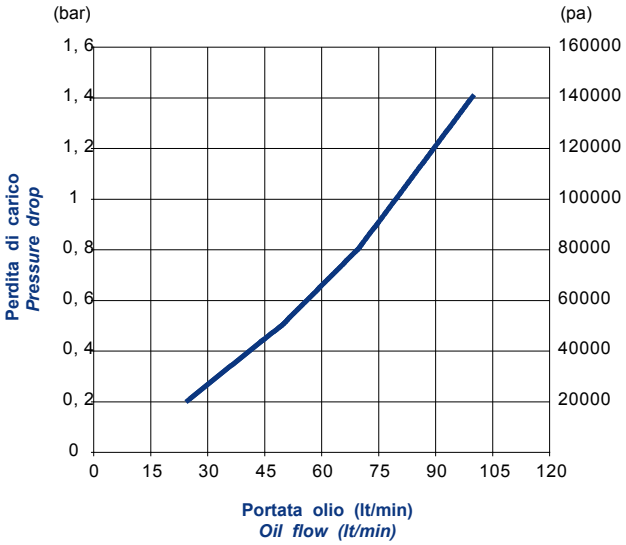


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)



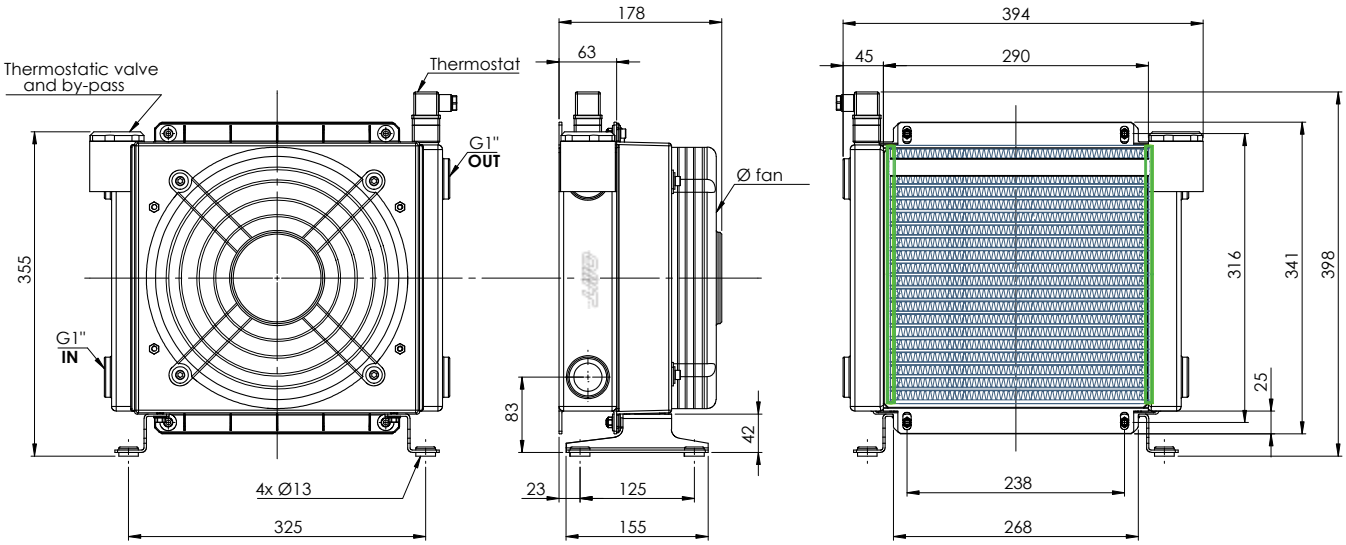
Type SSV24

SCAMBIATORE TIPO ARIA-OLIO
HEAT EXCHANGER AIR-OIL VERSION

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50	220	2400	0.080/0.090	250	60	178	1310	0.9	11	54
03	50	380	2400	0.055/0.052	250	60	178	1440	0.9	11	54
14	50 60	230/400 276/480	1350 1620	0.25 0.30	250	68	364	1500	0.9	15.5	55
12	DC	12	3005	0.106	280	74	175	1404	0.9	10	68
24	DC	24	3005	0.106	280	74	175	1477	0.9	10	68
G2	-	-	-	-	250	-	217.5	-	0.9	10	-

Portata olio consigliata da 40 a 120 (lt/min) Suggested oil flow from 40 to 120 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

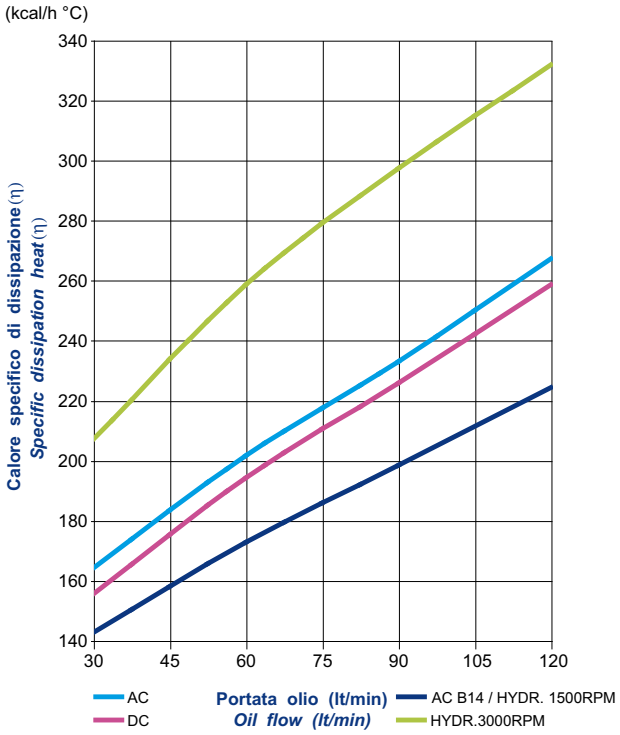
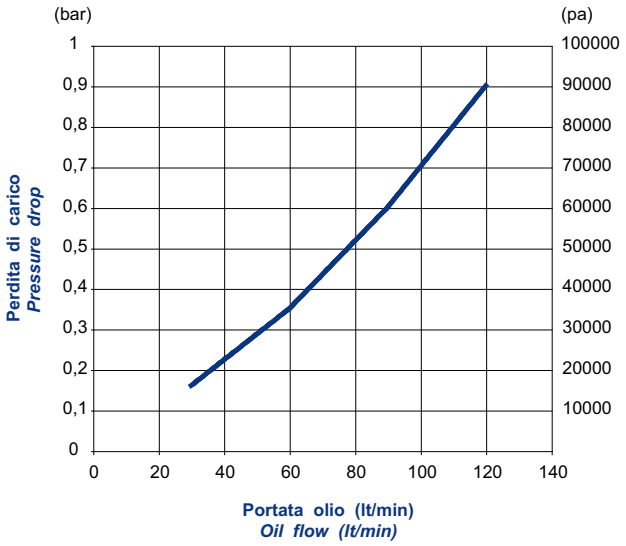


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)



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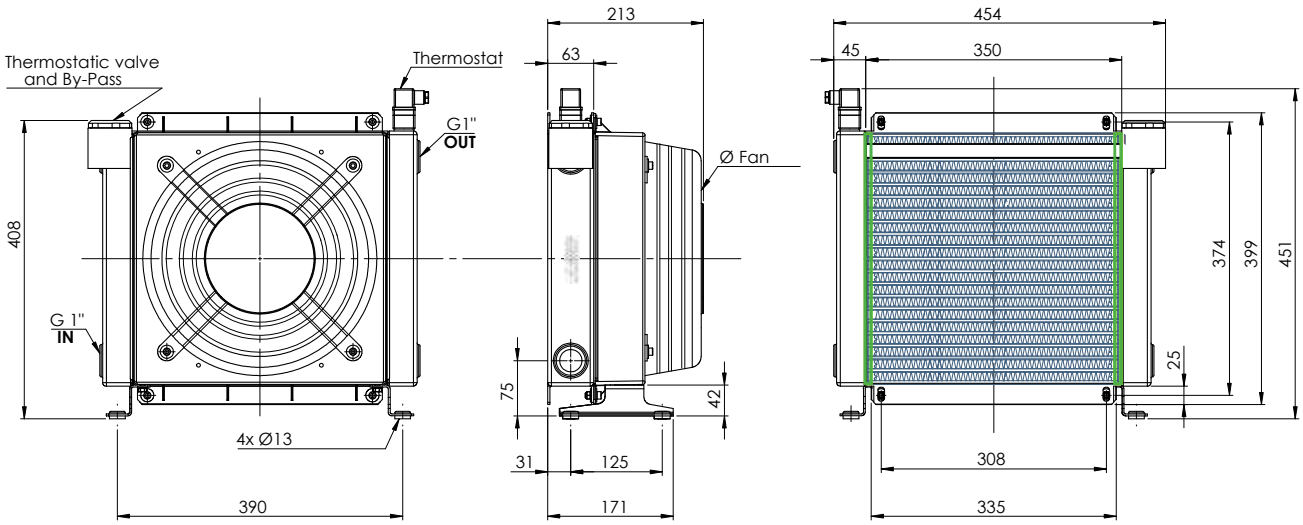
SCAMBIATORE TIPO ARIA-OLIO
HEAT EXCHANGER AIR-OIL VERSION

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50	220	2300	0.145/0.175	300	62	213	2200	1.5	15	54
03	50	380	2340	0.075/0.095	300	62	213	1910	1.5	15	54
14	50 60	230/400 276/480	1370 1640	0.37 0.44	300	69	408	2000	1.5	20	55
12	DC	12	3090	0.218	305	82	217	2617	1.5	14	68
24	DC	24	3090	0.218	305	82	217	2324	1.5	14	68
G2	-	-	-	-	300	-	226.5	-	1.5	14.5	-

Portata olio consigliata da 35 a 140 (lt/min) Suggested oil flow from 35 to 140 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

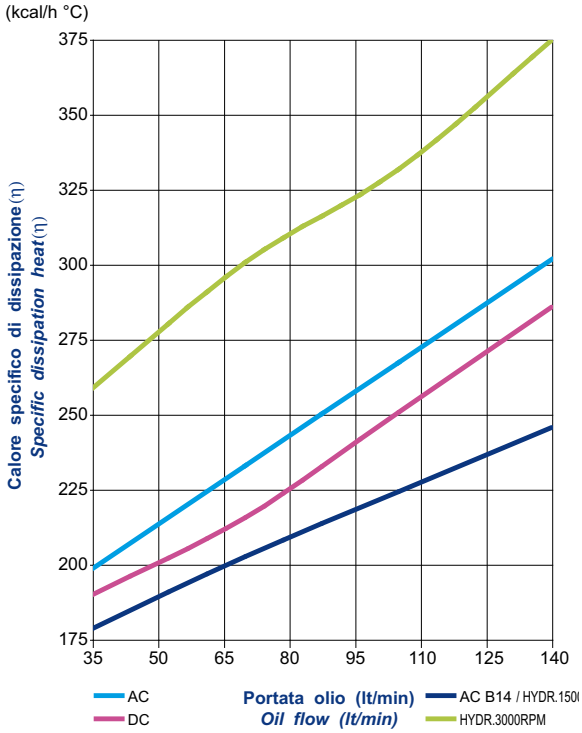
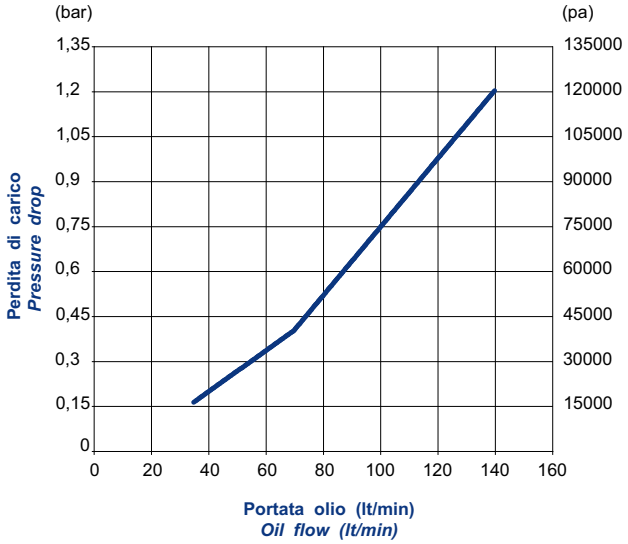


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)



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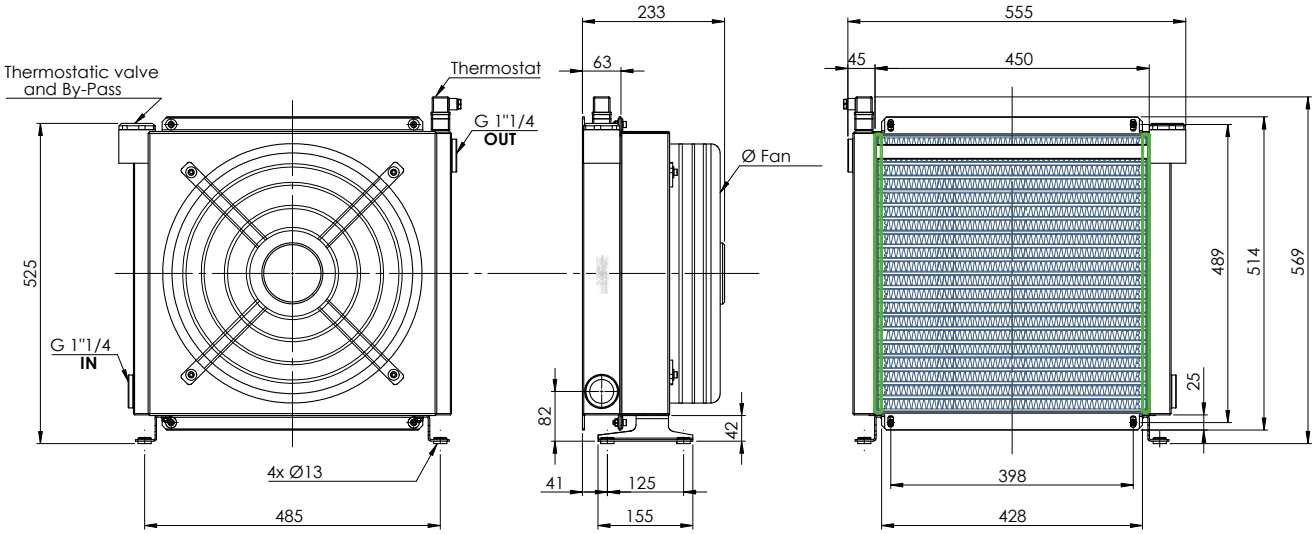
Type SSV40

SCAMBIATORE TIPO ARIA-OLIO
HEAT EXCHANGER AIR-OIL VERSION

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
01	50/60	230	1380/1550	0.18/0.25	400	62	233	4000	2.6	21	44
03	50/60	380	1380/1520	0.18/0.25	400	70	233	4375	2.6	21	44
14	50 60	230/400 276/480	1390 1685	0.55 0.66	400	71	438	4000	2.6	25	55
12	DC	12	2248	0.151	385	77	206	2950	2.6	20	68
24	DC	24	2248	0.151	385	77	206	3101	2.6	20	68
G2	-	-	-	-	400	-	235.5	-	2.6	19	-

Portata olio consigliata da 40 a 160 (lt/min) - Suggested oil flow from 40 to 160 (lt/min)



Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

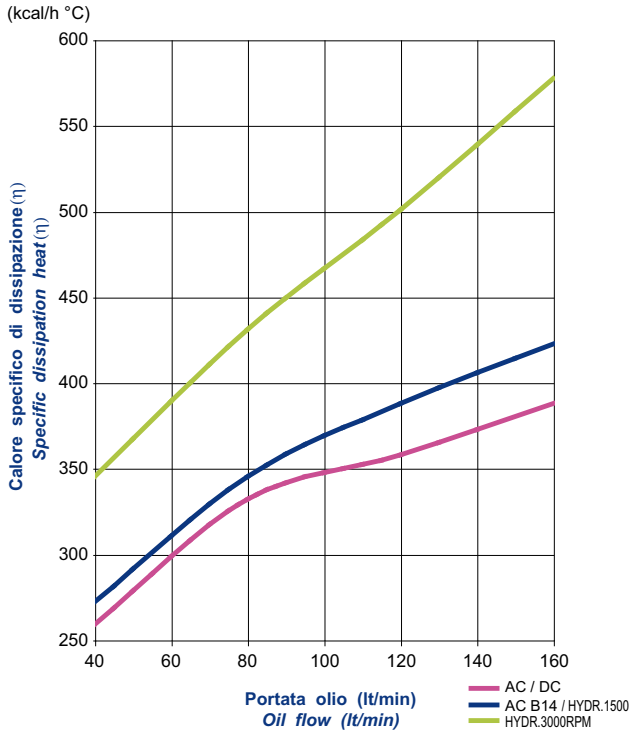
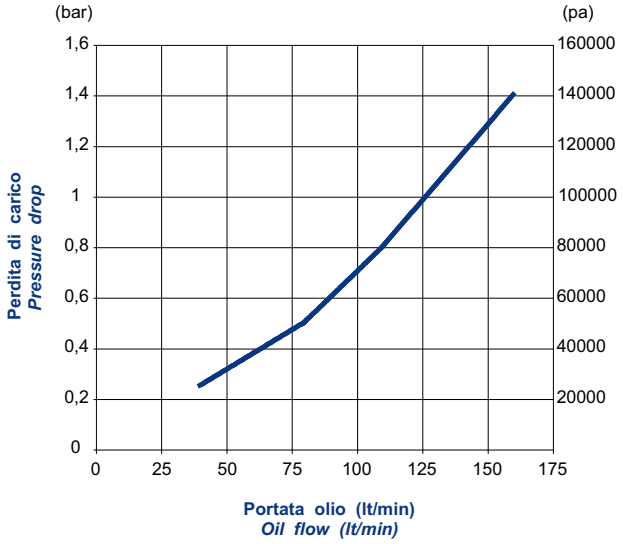


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)



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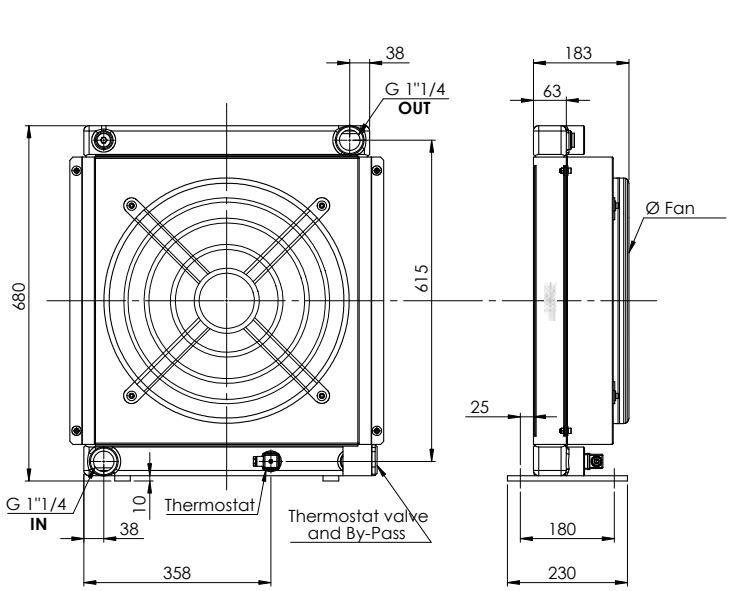
SCAMBIATORE TIPO ARIA-OLIO
HEAT EXCHANGER AIR-OIL VERSION

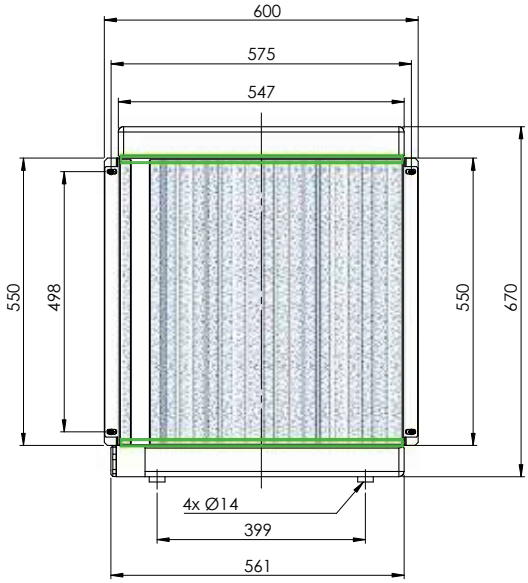
CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	N° Giri/min RPM	Potenza Power kW	Diam. Ventola Ø FAN (mm)	dB (A)	L (mm)	Q air (m^3/h)	Cap. (lt)	Peso Weight (kg)	IP
03	50/60	230/400	1380/1540	0.2/0.28	450	75	183	6040	4.9	27	44
14	50 60	230/400 276/480	1390 1685	0.75 0.90	450	73	445	6830	4.9	30	55
12	DC	12	3005	0.106 x 2	280	74	237,5	4200	4.9	24	68
24	DC	24	3005	0.106 x 2	280	74	237.5	4200	4.9	24	68
G2	-	-	-	-	450	-	243.5	-	4.9	23	-

Portata olio consigliata da 50 a 200 (lt/min) Suggested oil flow from 50 to 200 (lt/min)

(x2) = doppio motore
(x2) = double engine





Coefficiente di correzione
Correction factor

CST	10	15	20	32	40	50	60	80	100	200
F	0.51	0.66	0.76	1	1.22	1.4	1.6	1.9	2.1	3.4

Diagramma di rendimento
Performance diagram

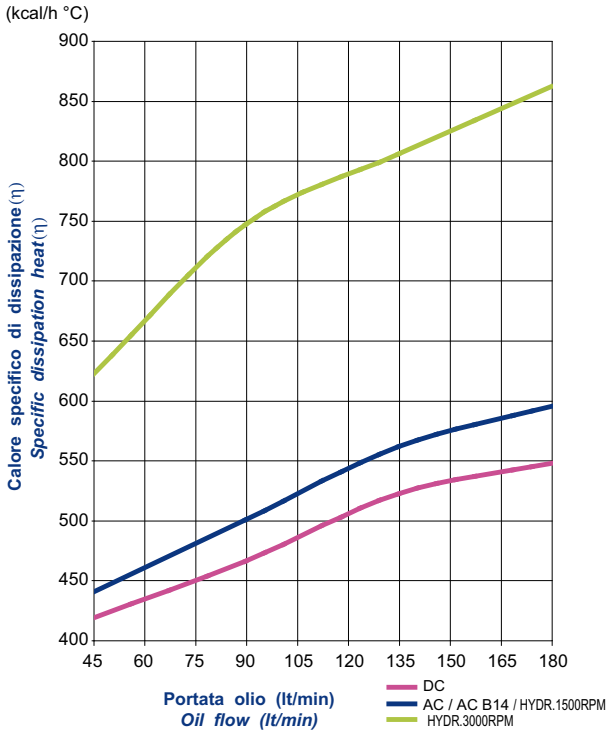
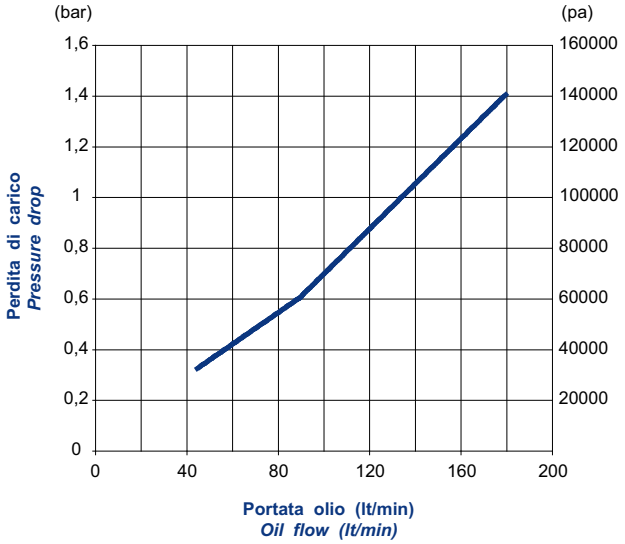


Diagramma perdite di carico (32 cst)
Pressure drop diagram (32 cst)



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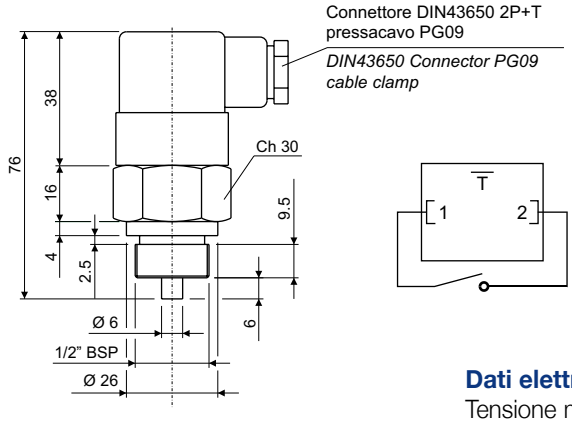
Accessoires

TERMOSTATO BIMETALLICO FISSO / BIMETALLIC FIXED TEMPERATURE SWITCH



Codice termostato Switch part number	Temperatura d'intervento Working temperature	Contatto Contact
T01	36-26°C	
T02	43-33°C	
T03	52-42°C	
T04	65-55°C	NA/NO
T05	75-65°C	
T06	85-75°C	
T07	95-85°C	

NA = normalmente aperto
NO = normally open

N.B.: Assemblare il termostato allo scambiatore con una rondella piana in rame.

Note: Assemble switch to the heat exchanger with a copper flat washer

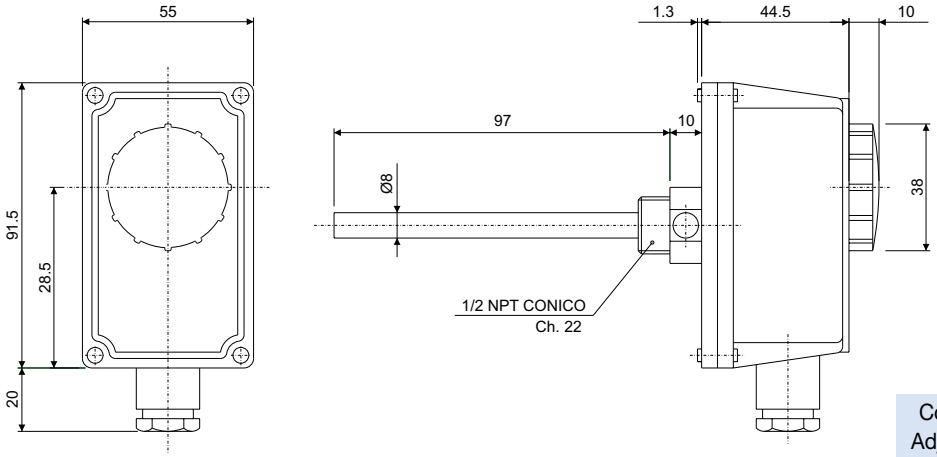
Dati elettrici / Electrical data

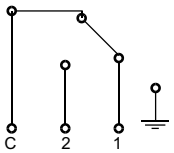
Tensione max. / Max. voltage	250Vca
Corrente max. / Max. current	10A
Tolleranza intervento / Tolerance	±5°C
Differenziale fisso max. / Max. fixed hysteresis	15°C
Connessione elettrica / Electrical connection	DIN43650
Protezione elettrica / Protection degree	IP65
Temperatura max. / Max. temperature	130°C

Materiali / Materials

Corpo / Body	Ottone / Brass
Contatti / Contacts	Argentati / Silver plated

TERMOSTATO REGOLABILE / TEMPERATURE SWITCH





Morsetto 1: apre il circuito all'aumentare della temperatura
Morsetto 2: chiude il circuito all'aumentare della temperatura
Comune: entrata comune

Codice termostato regolabile Adjustable switch part number
T08

Dati elettrici / Electrical data

Campo di regolaz. temp. / Temperature range	0°±90°C
Tolleranza / Tolerance	±5k
Differenziale / Temperature differential	6±2k
Grado di protezione / Degree of protection	IP 40
Classe di isolamento / Insulation class	I
Gradiente termico / Temp. rate of change	<1k/min
Temperatura max. testa / Max. head temperature	80°C
Temperatura max. bulbo / Max. sensing bulb temp.	125°C
Temperatura di stoccaggio / Storage temperature	-15°C 55°C
Costante di tempo / Time constant	<1'
Portata sui contatti / Contacts rating	C-1:10(2.5)A/250V~ C-2:6(2.5)A/250V~
Uscita / Output	contatti in interruzione o in commutazione cutoff or switching contacts
Tipo di azione / Switch action	1B
Situazione di installaz. / Installation location	ambiente normale / normal environment
Passacavo / Fairlead type	M20x1.5

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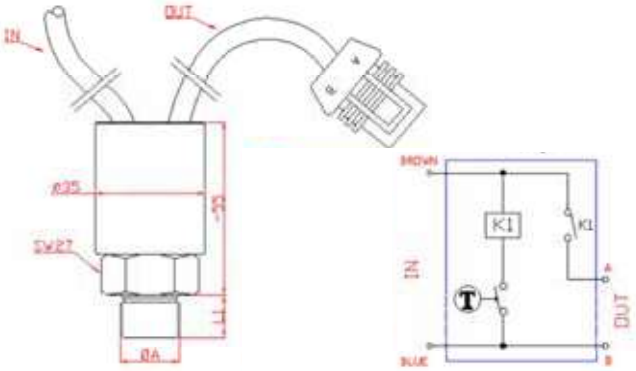
TERMOSTATO REGOLABILE CON RELÈ INTEGRATO
TEMPERATURE SWITCH WITH INTEGRATED RELAY



Codice termostato Switch part number	A	Descrizione Description	
T10	1/2" BSP	70-60 24V	Termostato con relè
T11		60-50 24V	
T12		50-40 24V	
T13		70-60 12V	Temperature switch with relay
T14		60-50 12V	
T15		50-40 12V	

Connettore standard
Standard connector

Opzionale / Optional

Codice OMT Group / OMT Group Code:
KIT-WPC-M

Dati elettrici / Electrical data

Portata elettrica / Electrical rating	30 @ 12VDC / 30 @ 24VDC
Temperatura utilizzo / Fluid temperature range	-30/+130 °C (-22/+266°F)
Contatti elettrici / Electrical contact	Placcato argento / Silver plated
Configurazione elettrica / Electrical configuration	Apertura normale / Normal open
Protezione elettrica / Protection degree	Standard IP67
Tolleranza di commutazione / Intervention tolerance	±4,5 °C
Isteresi / Hysteresis	~15 °C

TERMOSTATO ELETTRONICO CON CONTROLLO SOFT STARTER INTEGRATO PER CARICHI IN CORRENTE CONTINUA.

Connessione elettrica con cavo logica di controllo ON/OFF 12 ÷ 24VDC / 20A

ELECTRONIC THERMOSTAT WITH INTEGRATED SOFT STARTER CONTROL FOR DIRECT CURRENT LOADS.

Cable electrical connection. Logic ON/OFF control 12 ÷ 24VDC / 20A

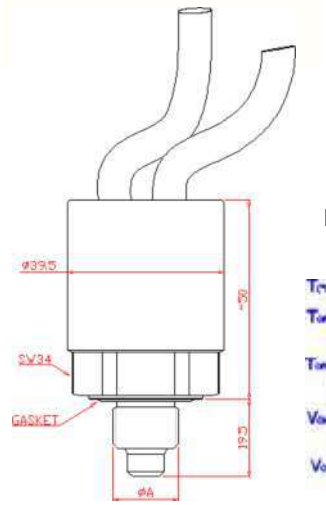
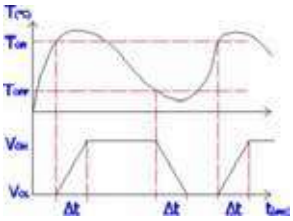


Diagramma temperatura
Timing diagram



Codice termostato Switch part number	A	Descrizione Description	
T16	1/2" BSP	50-40 12-24V	Termostato con controllo soft starter
T17		60-50 12-24V	Temperature switch with soft start

Connettore standard
Standard connector

Opzionale / Optional

Codice OMT Group / OMT Group Code:
KIT-WPC-M

Dati elettrici / Electrical data

Configurazione elettrica / Electrical configuration	NO (standard) - NC (a richiesta/on request)
Tensione alimentazione / Supply voltage	12÷24Vdc
Massima corrente / Maximum load	20A
Protezione elettrica / Electrichal protection	IP67 - DIN40050
Temperatura impiego / Environmental temperature	-20÷ +80°C
Temperatura di stoccaggio / Stocking temperature	-30÷ +90°C
Tolleranza di commutazione / Switching tolerance	±3.5°C withΔT ~1°C/min and environmental temperature 20÷25°C
Pressione massima/ Max pressure	200 bar
Housing / Housing	Ottone / Brass
Guarnizione OR / OR gasket	NBR
Connessione elettrica / Electrical connection	Alimentazione: cavo bipolare L=70cm (marrone: positivo / blu: negativo) Carico: cavo bipolare L=25cm con connettore Metripack S280 porta femmina (terminale A: positivo / B: negativo) Supply: bipolar wire lenght = 70cm (brown: positive / blu: negative) Load: bipolar wire lenght = 25cm with Metripack S280 female connector (terminal A: positive / B: negative)

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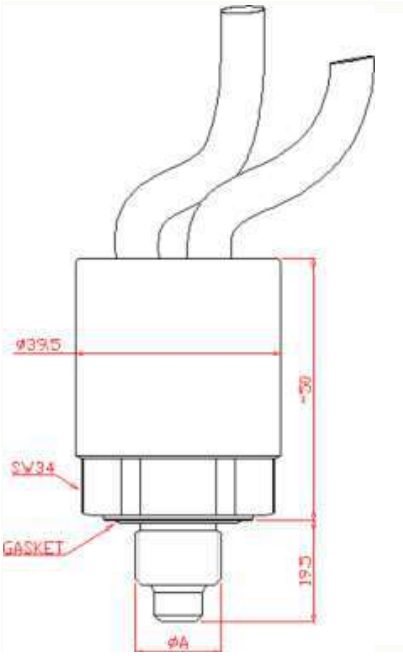
Accessoires

TERMOSTATO CON REGOLAZIONE DI VELOCITA' E INVERSIONE PROGRAMMATA DELLA ROTAZIONE
THERMOSTAT WITH SPEED REGULATOR AND REVERSE ROTATION PROGRAM



Codice termostato Switch part number	A		Descrizione Description
T18	1/2" BSP	60-45 12-24V	Termostato con regolatore di velocità e inversione di rotazione
T19		65-50 12-24V	Thermostat with speed regulator and reverser on rotation

Connettore standard
Standard connector

Opzionale / Optional

Codice OMT Group / OMT Group Code:
KIT-WPC-M

Caratteristiche Tecniche / Technical Features

Temperatura d'impiego Working temperature	-20°C ÷ +100°C
Precisione d'intervento Switching accuracy	± 2°C
Peso/ Weight	0,3 Kg
Corpo Body	in ottone esagonale CH34 con guarnizione DIN integrata in brass hexagonal, KEY34 with integral seal DIN
Caratteristiche Elettriche Electric features	Comando diretto al motore elettrico limitando la coppia di spunto e l'eccessiva energia in fase di avviamento Tensione di alimentazione esecuzioni standard: 12-24 VDC Massimo carico ammesso sui contatti: 25A Protezione elettrica secondo norme DIN 40050, IP67 Direct control to the electric engine for limiting the starting torque and the excessive energy during starting Standard execution power supply: 12-24 VDC Max load on contacts: 25A Electric protection according to DIN 40050, IP67
Cablaggio standard	Alimentazione: cavo bipolare da 1m Segnale: cavo bipolare da 0.35m senza connettore
Standard electric wiring	Power supply: bipolar wire 1mm Signal: bipolar wire 0.35mm without connector
Garanzia/ Warranty	vedi pagina dedicata / see dedicated page
Parti di ricambio / Spare parts	vedi pagina dedicata / see dedicated page
Disponibile Also Available	Connessioni elettriche speciali Lunghezze cavi diverse dallo standard CU-TR per mercato russo Different wire length Special electrical connection CU-TR for Russian market

On the instrument are settled the value of engine's start and the value at which the engine reaches the max speed. Within these values of temperature the engine speed adapts automatically to every temperature variations. The electric engine starts in a "soft-start" condition, with a progressive increase of the rotation during 30" or following a specific request indicated by the customer before the order. In addition this series includes a timed program that reverses the rotation of the engine: after 9 minutes of operative direction of rotation the engine stops, within 15" restarts and rotate for 60" with the opposite direction of rotation, then stops again and restart with the operative direction for 9 minutes. The instrument is made in one part in Brass that will be connected directly in contact with the fluid that need to be checked.

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MANUALE DI USO E MANUTENZIONE SCAMBIATORI DI CALORE SS – ST – SD – SSPV - SSV

INSTALLAZIONE

Gli scambiatori di calore aria/olio vengono normalmente utilizzati per il raffreddamento di impianti oleodinamici collegati sulla linea di scarico dove la pressione di esercizio non supera i 25 bar (massima ammessa per gli scambiatori aria/olio).
Nel caso in cui la pressione di scarico superi i 25 bar (moltiplicazione di portata, viscosità olio), gli scambiatori vengono inseriti nei Sistemi di Raffreddamento Autonomo dotati di pompa di ricircolo e by-pass.
E' consigliabile montare gli scambiatori su antivibrati ed effettuare il collegamento di ingresso e uscita olio con tubi flessibili.
Gli scambiatori dovranno essere installati in modo che non vi siano ostacoli alla potata dell'aria: pertanto la distanza posteriore e quella anteriore deve essere pari o superiore al raggio della ventola montata (schema 2).
Se l'impianto oleodinamico è posto in ambienti dove la temperatura dell'olio è soggetta ad elevata escursione termica è consigliabile montare una valvola by-pass in considerazione che con basse temperature la viscosità dell'olio aumenta sensibilmente provocando forti perdite di carico che, nella maggior parte dei casi, supera la pressione massima ammessa (schema 1).

COLLEGAMENTO PARTE ELETTRICA

Assicurarsi che la tensione V, la fequenza Hz e il senso di rotazione dell'elettroventola siano come indicato nella targhetta posta in modo visibile sugli scambiatori. Seguire attentamente quanto descritto nello schema elettrico allegato. (schema n.3)

MANUTENZIONE LATO ARIA

Scollegare elettricamente lo scambiatore.
Smontare il convogliatore, l'elettroventola e l'eventuale termostato.
Tutte le impurità possono essere rimosse con un getto d'acqua calda facendo attenzione che la direzione dello stesso sia parallelo alle alette per facilitare la fuoriuscita dello sporco.

MANUTENZIONE LATO OLIO

Scollegare idraulicamente lo scambiatore; flussare contro corrente lo scambiatore con sostanze sgrassanti non aggressive per l'alluminio.
L'intensità dello sporco deteminerà la durata di tale.
Nel caso non fosse sufficiente ripetere più volte l'operazione.

USE AND MAINTENANCE HEAT EXCHANGER SS – ST – SD – SSPV - SSV

INSTALLATION

Air/oil heat exchanges are generally used for cooling oleodynamic equipments linked on the exhaust line where the exercise pressure isn't over 25 bar (max pressure admited for air/oil heat exchangers). If the exhaust pressure is over 25 bar (flow multiplication, oil viscosity) the heat exchangers are placed into indipendent cooling systems with recirculation pump and by-pass.
It' s advisable to mount the heat exchangers on anti-vibrants and to link inlets and outlets with flexible tubing.
The heat exchangers must be installed in order that there aren't obstacles to the air flow: the anterior and posterior distance has to be as much or superior to the radius of the fan mounted (scheme 2).
If he oleodynamic equipment is placed in environments where the oil temperature is subject to hight temperature range it's advisable to mount a byv-pass valve since with low temperatures oil viscosity rises considerably causing hight pressure drops that, in most cases, are bigger than the max pressure allowed. (scheme 1)

ELECTRIC PART LINKING

Please be sure that Tension V, frequency Hz and rotation direction of the electric fan are as shown by the plate mounted on the heat exchangers. Follow accurately what's written in the electric scheme attached (scheme 3).

AIR SIDE MAINTENANCE

Disconnect electrically the heat exchanger.
Disassemble the conveyor, electric fan and thermosta (if present). All the impurities can be removed with a warm water jet paying attention that its direction is parallel to the fins to help with the discharge of the dirt.

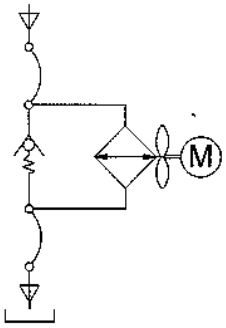
OIL SIDE MAINTENANCE

Disconnect hydraulically he heat exchanger; flux against the flow the heat exchanger with degreasing substances not aggressive for aluminium.
The intensity of the dirt will determine the duration of this operation that usually lasts from 15 to 30 minutes.
In case the desired clening isn't achieved repeat the operation as many times ad needed.

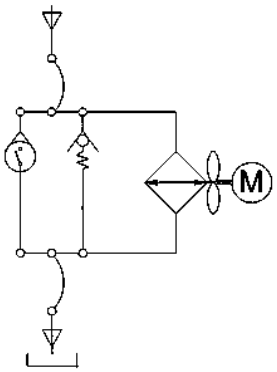
Branchement électrique

SCHEMA / SCHEME 1

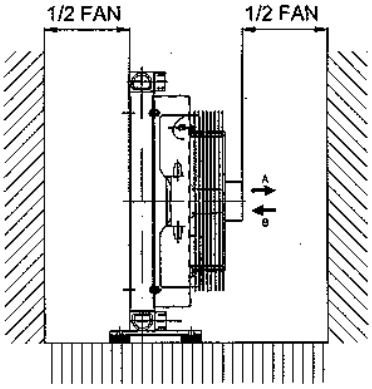
SSV / SSPV



SSV / SSPV

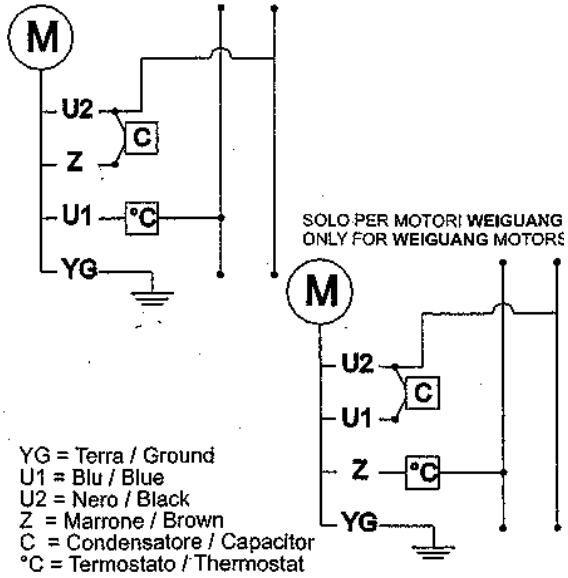


SCHEMA / SCHEME 2

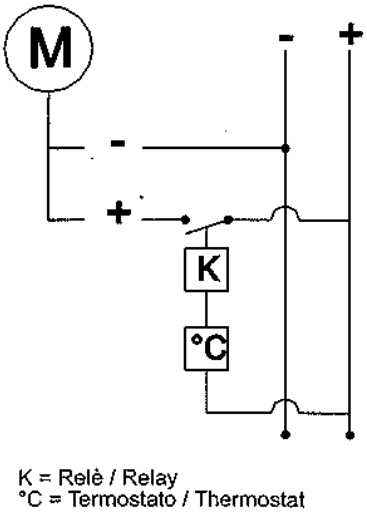


SCHEMA / SCHEME 3

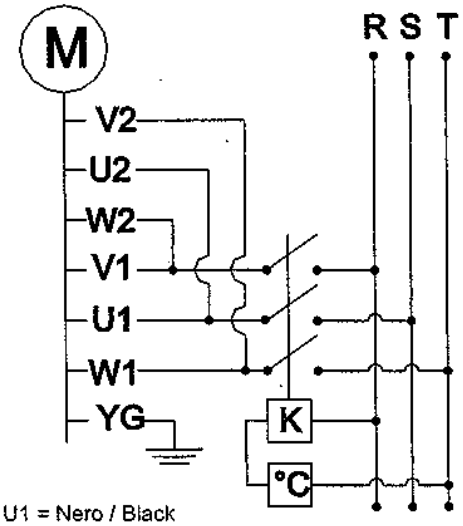
COLLEGAMENTO ELETTRICO 230 V MONOFASE AC
230 V AC MON. ELECTRIC WIRING



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



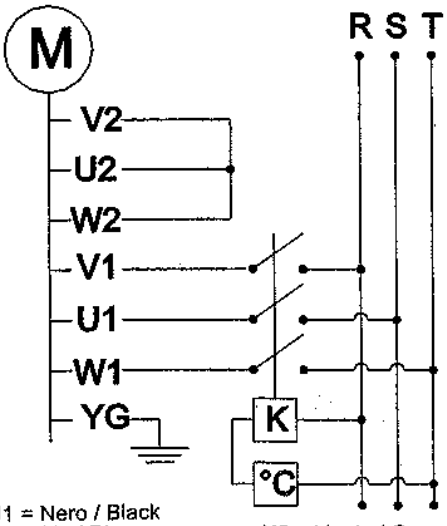
COLLEGAMENTO ELETTRICO 230V AC TRIFASE
230V AC THREEPHASE ELECTRIC WIRING



U1 = Nero / Black
V1 = Blu / Blue
W1 = Marrone / Brown
YG = Terra / Ground
°C = Termostato / Thermostat

U2 = Verde / Green
V2 = Bianco / White
W2 = Giallo / Yellow
K = Relè / Relay

COLLEGAMENTO ELETTRICO 400V AC TRIFASE
400V AC THREEPHASE ELECTRIC WIRING



U1 = Nero / Black
V1 = Blu / Blue
W1 = Marrone / Brown
YG = Terra / Ground
°C = Termostato / Thermostat

U2 = Verde / Green
V2 = Bianco / White
W2 = Giallo / Yellow
K = Relè / Relay

Codes de commande

SSV20 14 00 A 0 0

Tipologia di scambiatore Type
SSV10
SSV15
SSV20
SSV24
SSV30
SSV40
SSV50

Termostati bimetallici fissi Bimetallic fixed temperature switches	
00	Senza termostato No switch

Per la scelta del termostato
vedi pagine 67 - 68 - 69
To choose switch
see pages 67 - 68 - 69

Tipo di ventilazione Fans	
A	Aspirante Suction
S	Soffiante Blower

Taratura By-pass By-pass tarature	
0	Senza By-pass Without By-pass
3	3 bar
6	6 bar
8	8 bar

Tipo di ventilazione Fan Motor	
01	230V 50/60 Hz monofase 230V 50/60 Hz single phase
03	400V 50/60 Hz trifase 400V 50/60 Hz thres phase
14	230/400V 50/60 Hz trifase B14 230/400V 50/60 Hz three phase B14
12	12V CC
24	24V VV
G2	Predisposto per motore idraulico GR.2 Arranged for hydraulic motor GR.2
G3	Predisposto per motore idraulico GR.3 Arranged for hydraulic motor GR.3

Valvola termostatica Thermostatic valve	
0	Senza valvola Without valve
4	Valore / Value 40 °C

APPLICAZIONI SPECIALI

Per tutte le applicazioni che non rientrano nei casi normali specificati in questo catalogo contattare l'ufficio commerciale della OMT Group per un eventuale studio di fattibilità.

SPECIAL APPLICATIONS

For special solutions or particular applications, please contact OMT Group commercial department for informations.

SOCAH HYDRAULIQUE

ÉCHANGEURS DE TEMPÉRATURE AVEC RESERVOIR INTÉGRÉ POUR CIRCUITS FERMÉS

Série SPP

Édition Juin 2020

Type SSP12-SER15

CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	Giri/min RPM N.°	Potenza Power kW	Ø ventola Ø FAN (mm)	dB (A)	Q air (m^3/h)	Cap. (lt)	IP
SSP12S151200A	DC	12	3000	0.175	305	67	2300	15	64
SSP12S152400A	DC	24	3000	0.175	305	67	2300	15	64

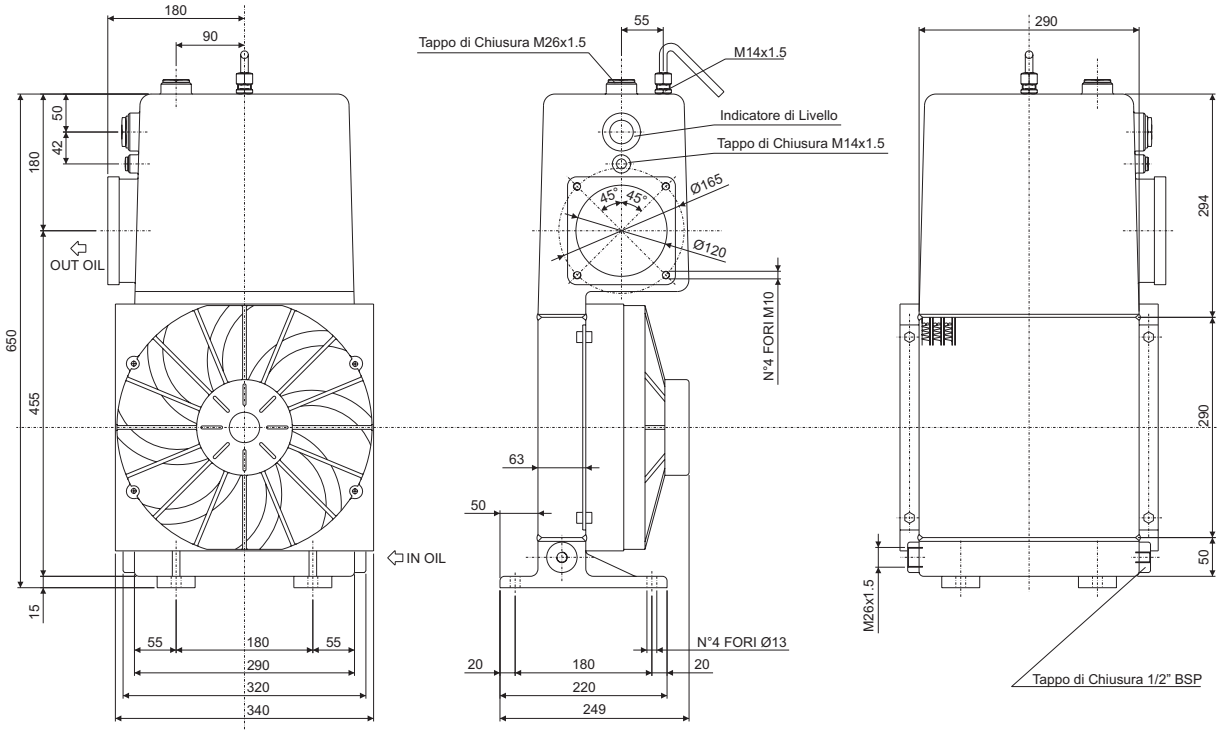


DIAGRAMMA PERDITE DI CARICO (32 cst)
PRESSURE DROP DIAGRAM (32 cst)

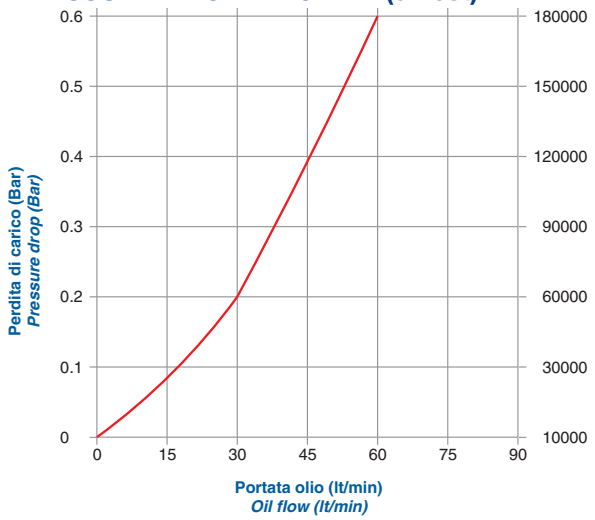
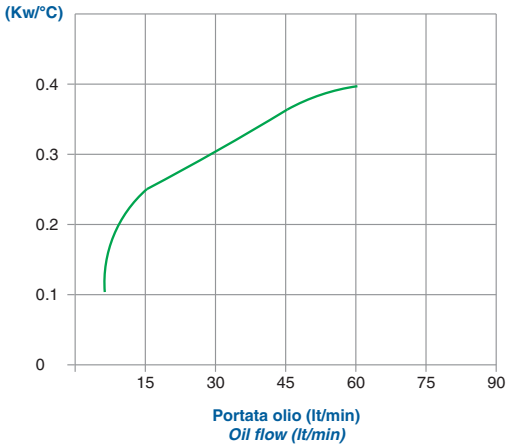


DIAGRAMMA DI RENDIMENTO
PERFORMANCE DIAGRAM



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CARATTERISTICHE TECNICHE DEL GRUPPO DI VENTILAZIONE
TECHNICAL FEATURES

Tipologia Type	Frequenza Frequency Hz	Tensione Voltage V	Giri/min RPM N.°	Potenza Power kW	Ø ventola Ø FAN (mm)	dB (A)	Q air (m^3/h)	Cap. (lt)	IP
SSP12S181200A	DC	12	2500	0.2	385	67	3500	18	64
SSP12S182400A	DC	24	2500	0.2	385	67	3500	18	64

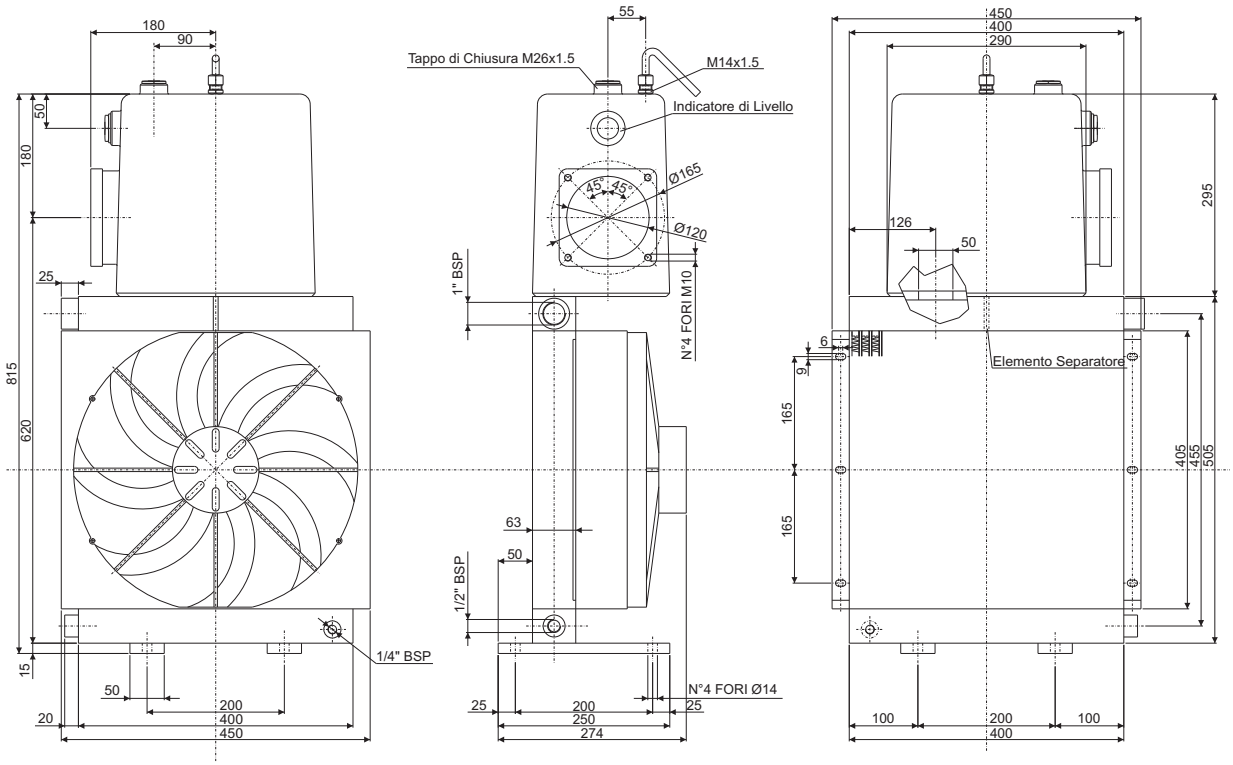


DIAGRAMMA PERDITE DI CARICO (32 cst)
PRESSURE DROP DIAGRAM (32 cst)

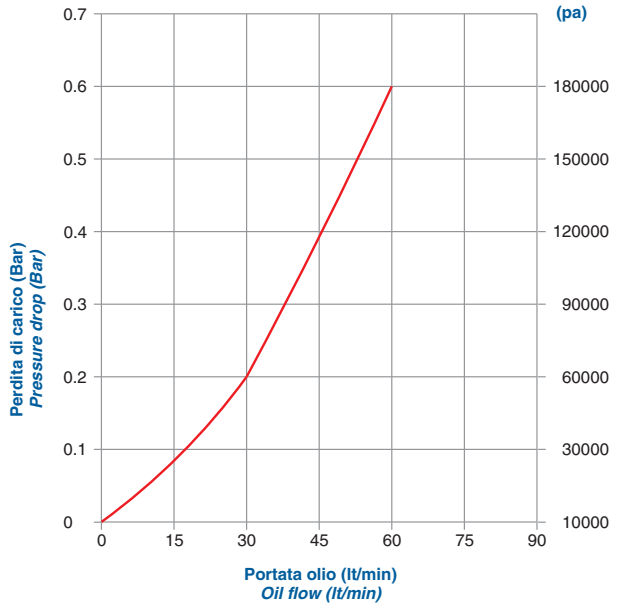
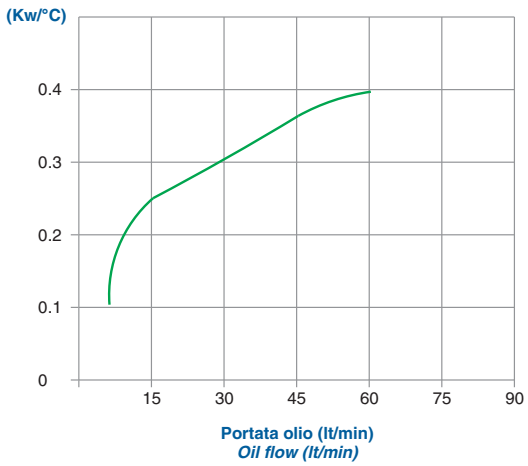


DIAGRAMMA DI RENDIMENTO
PERFORMANCE DIAGRAM



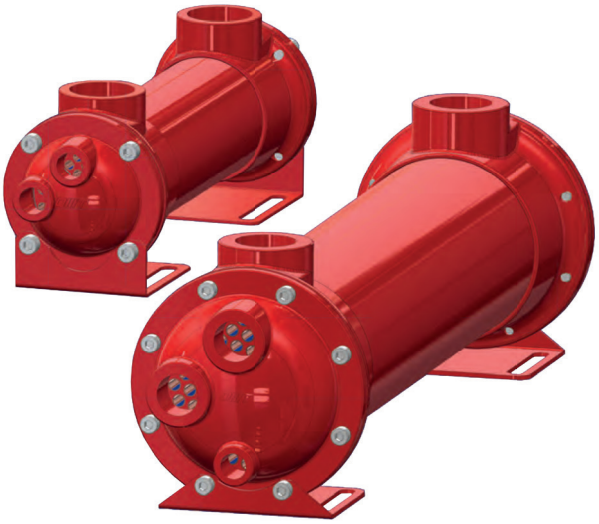
SOCAH HYDRAULIQUE

ECHANGEURS DE TEMPERATURE EAU/HUILE SERIE **SA**

ÉCHANGEURS DE TEMPÉRATURE EAU/HUILE

Série SA

140



Édition Juin 2020

Sommaire

Présentation du produit

Gli scambiatori acqua olio serie “SA” a fascio tubiero sono realizzati mediante le tecnologie costruttive più moderne ed affidabili per uso in condizioni termomeccaniche anche gravose.
La portata d’olio di tali scambiatori varia dai 20 L/min ai 550 L/min e le superfici di scambio termico vanno da 0,26 m² a 7,057 m².

I tubi in rame mandrinati sulle piastre garantiscono una maggiore resistenza e tenuta anche in presenza di vibrazioni.

La fitta conformazione del fascio tubiero consente di avere un’ottima resa termica fino a 75 kW con consumi d’acqua ridotti e dimensioni contenute; inoltre il circuito d’acqua è ispezionabile.

La gamma si articola in due diverse tipologie di prodotto: quella standard con tubi in CuDHP (Rame), per impiego con ogni tipo di acqua industriale, e la versione per utilizzo in ambiente marino, con tubi in CuproNichel 90/10.

OMT è in grado di valutare e realizzare versioni speciali su richiesta del cliente.

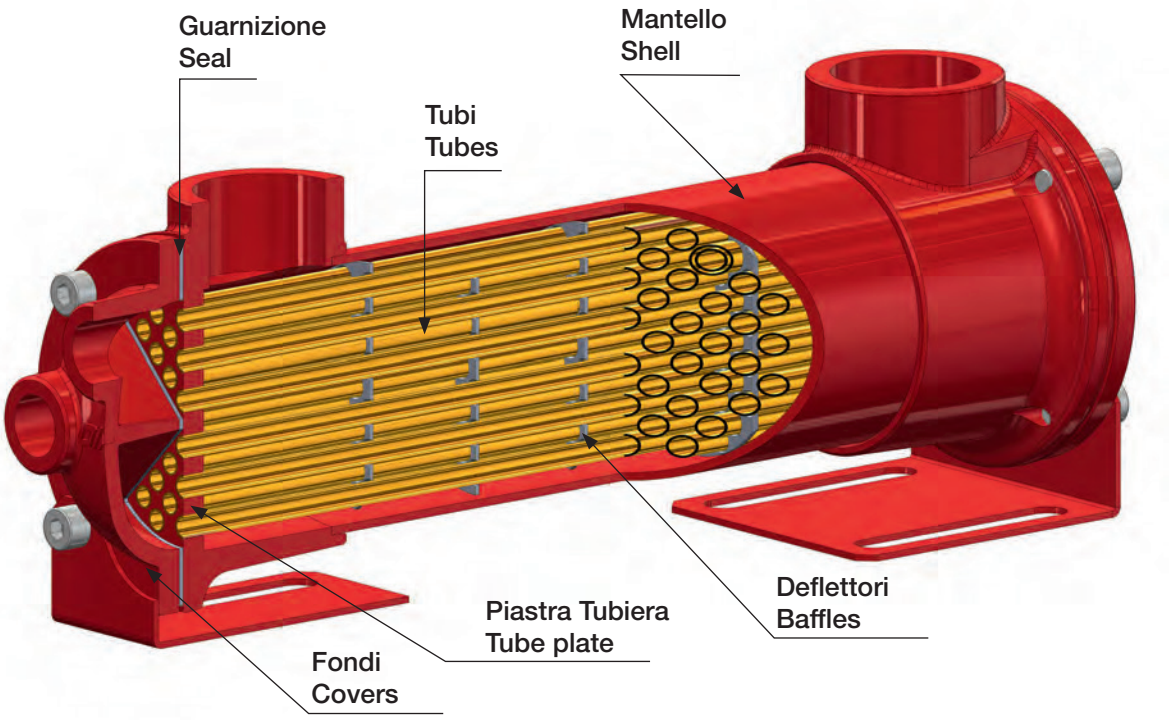
The new WATER – OIL heat exchangers SA series “shell and tube” are manufactured based on the most advanced technologies in order to make them very reliable even in hard working conditions.
They are suitable for oil flows from 20 lt/min to 550 lt/min; thermal exchange surfaces range from 0,26 m² to 3,67m².

The water circuit is inspectable and designed to get the maximum water saving.

The tube bundle is made of a very high number of thin tubes to optimize the thermal yield until 75kW within a compact layout; all the copper tubes are rolled into the tube plates to achieve the best performance even if vibrations take place.

The SA series has two subseries: the standard one made of CuDHP (copper) tubes for all industrial applications and the sea water one using CuproNichel 90/10 tubes.

On demand special solutions can be provided.



Déterminez voutre échangeur de température série SA

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]

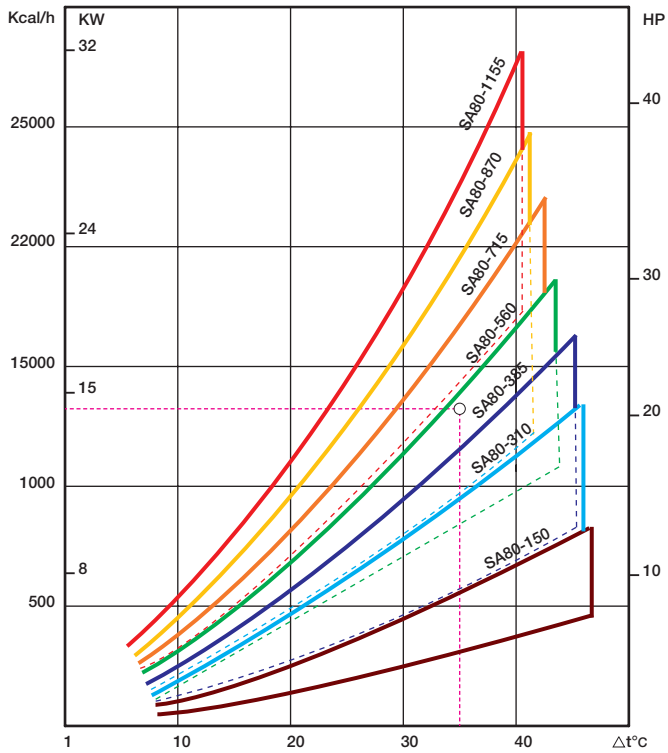
Conoscendo la portata dell' olio, la potenza da dissipare, e stabilito il T, ovvero la differenza tra la temperatura ingresso olio e la temperatura ingresso acqua, si può ricercare sui diagrammi riportati a catalogo lo scambiatore idoneo.

Data relating to 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 fluidity and flow rate of the oil, cooling power and stability of T (IN runnig temperature of oil - water temperature) you can adjust these calculations to the specifications given in our catalogue.

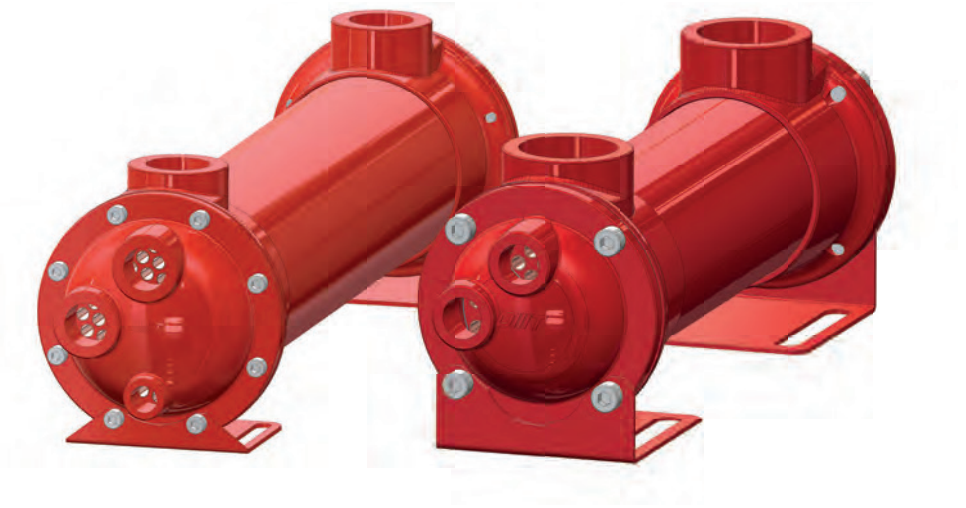


TIPO TYPE	PORTATA OLIO OIL FLOW (lt/min)	HP DISPERS CON OLIO HP DISSIPATED WITH OIL -55°C H20-20°C
SA 080-150-...	25 - 75	4 - 8
SA 080-310-...	25 - 80	7 - 14
SA 080-385-...	25 - 80	9 - 17
SA 080-560-...	25 - 80	12 - 20
SA 080-715-...	40 - 100	15 - 24
SA 080-870-...	40 - 110	18 - 29
SA 080-1155-...	40 - 130	22 - 36

Lo scambiatore selezionato risulta il modello SA080-870-S4.
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 SA080-870-S4.
The marked dissipation on the exchange diagram expressed in HP will be arrived, with a viscosity of 32 cst and water flow as indicated in our following table A:

Caractéristiques techniques



A)

N° PASSAGGI LATO ACQUA n° of water circuits	LT/MIN X OGNI HP DA DISSIPARE l/min x any HP to be dissipated
2	2
4	1

Nel caso ci siano variazioni di temperatura e portata d' acqua, considerare i seguenti coefficenti:

In the case where there are substantial in temperature and flow of water, consider the following coefficents:

B)

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 CORREZIONEA CORRECTION FACTOR	1	0.86	0.71	0.62

C)

Fattore di correzione scambio termico
Cooling powe 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 CORREZIONEA CORRECTION FACTOR	1	1,2	1,4

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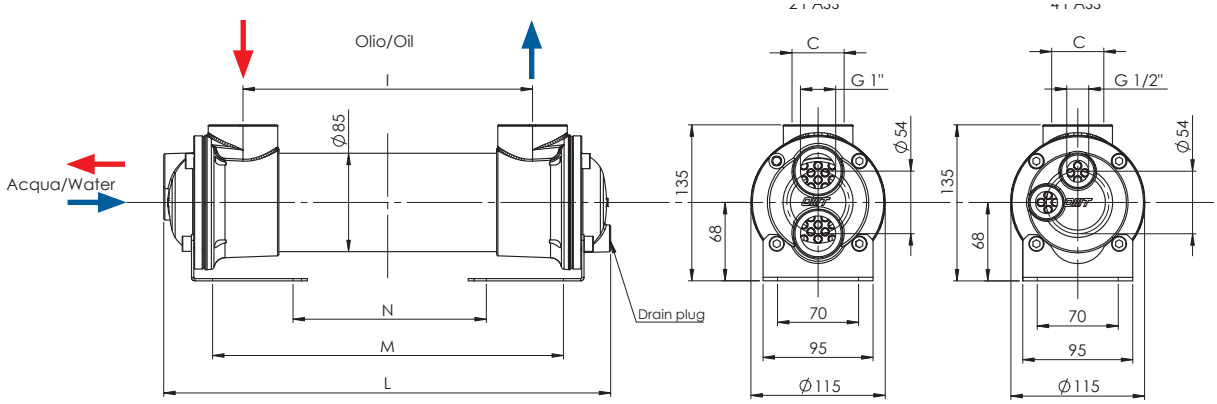
Série SA080



* Su ordinazione è possibile avere lo scambiatore con attaccco a 2 vie -
On request it is possible to have the exchanger with 2-way hook

Tab. A

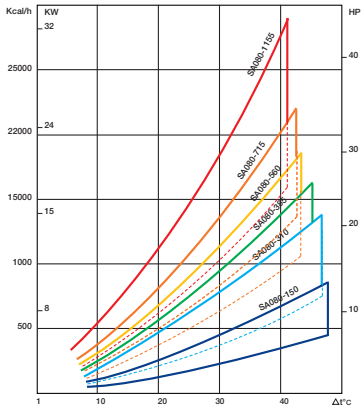
Codice/Code	C (BSP)	I (mm)	L (mm)	M (mm)	N (mm)	L/min (Oil)	KW (***)	Capacità (lt)	Superficie m^2	Peso Kg
SA080-150-S4	1"	150	285	202	66	25 - 75	3 - 5,5	0,6	0,23	4,5
SA081-250-S4	1"1/2	250	386	303	167	25 - 75	4 - 7	0,8	0,35	5,5
SA081-250-L4	1"1/2	250	386	303	167	20 - 80	4 - 9	0,8	0,35	5,5
SA080-310-S4	1"	310	445	362	226	25 - 80	5 - 10	1	0,41	6
SA081-310-L4	1"1/2	310	445	362	226	50 - 120	8 - 13	1	0,41	6
SA080-385-S4	1"	385	521	438	302	25 - 80	6 - 12,5	1,2	0,50	7
SA081-500-S4	1"1/2	500	636	533	417	25 - 80	8 - 14	1,6	0,63	7,5
SA080-560-S4	1"	560	695	609	473	25 - 80	9 - 15	1,8	0,70	8
SA081-560-L4	1"1/2	560	695	609	473	60 - 150	12 - 18	1,8	0,70	8
SA081-715-S4	1"1/2	715	850	767	631	40 - 100	11 - 19	2,2	0,88	10
SA081-870-S4	1"1/2	870	1005	922	786	50 - 130	13 - 20	2,7	1,05	12
SA080-1155-S4	1"	1155	1291	1188	1072	40 - 130	16 - 26	3,6	1,38	15
SA081-1155-L4	1"1/2	1155	1291	1188	1072	75 - 180	21 - 30	3,6	1,38	15

*** Olio / Oil = 55 °C, 32 CST, H2O = 20 °C

Materiali / Materials

Fondi /Covers	Guarnizioni/ Seals	Piastra Tubiera Tubes plate	Deflettori/Baffles	Tubi/Tubes	Mantello/Shell
Alluminio/Aluminium	EWP 207	Acciao/Steel	Acciao/Steel	CuDHP	Acciao/Steel

Diagramma di Rendimento
Performance diagram



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

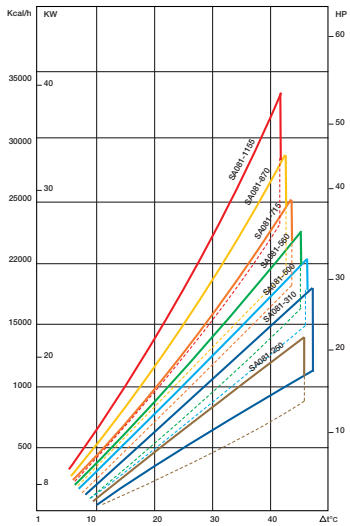
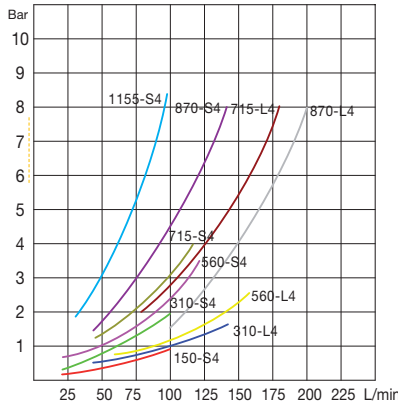


Diagramma perdite
di carico/Pressure drop



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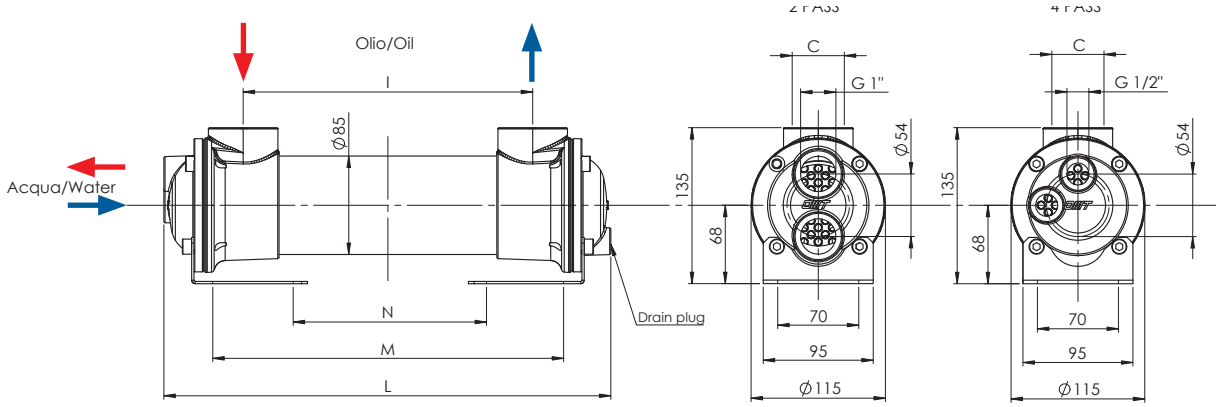
Série SAW080



* Su ordinazione è possibile avere lo scambiatore con attaccco a 2 vie -
On request it is possible to have the exchanger with 2-way hook

Tab. A

Codice/Code	C (BSP)	I (mm)	L (mm)	M (mm)	N (mm)	L/min (Oil)	KW (***)	Capacità (lt)	Superficie m²	Peso Kg
SAW080-150-S4	1"	150	285	202	66	25 - 75	3 - 5,5	0,6	0,23	4,5
SAW081-250-S4	1"1/2	250	386	303	167	25 - 75	4 - 7	0,8	0,35	5,5
SAW081-250-L4	1"1/2	250	386	303	167	20 - 80	4 - 9	0,8	0,35	5,5
SAW080-310-S4	1"	310	445	362	226	25 - 80	5 - 10	1	0,41	6
SAW081-310-L4	1"1/2	310	445	362	226	50 - 120	8 - 13	1	0,41	6
SAW080-385-S4	1"	385	521	438	302	25 - 80	6 - 12,5	1,2	0,50	7
SAW081-500-S4	1"1/2	500	636	533	417	25 - 80	8 - 14	1,6	0,63	7,5
SAW080-560-S4	1"	560	695	609	473	25 - 80	9 - 15	1,8	0,70	8
SAW081-560-L4	1"1/2	560	695	609	473	60 - 150	12 - 18	1,8	0,70	8
SAW081-715-S4	1"1/2	715	850	767	631	40 - 100	11 - 19	2,2	0,88	10
SAW081-870-S4	1"1/2	870	1005	922	786	50 - 130	13 - 20	2,7	1,05	12
SAW080-1155-S4	1"	1155	1291	1188	1072	40 - 130	16 - 26	3,6	1,38	15
SAW081-1155-L4	1"1/2	1155	1291	1188	1072	75 - 180	21 - 30	3,6	1,38	15

*** Olio / Oil = 55 °C, 32 CST, H2O = 20 °C

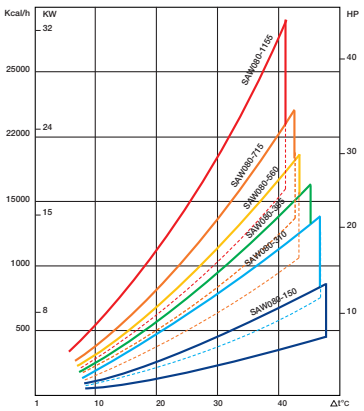
Materiali / Materials

Fondi /Covers	Guarnizioni/ Seals	Piastra Tubiera Tubes plate	Deflettori/Baffles	Tubi/Tubes	Mantello/Shell
Alluminio/Aluminium	EWP 207	Acciao/Steel	Acciao/Steel	CuDHP	Acciao/Steel

Diagramma di Rendimento
Performance diagram

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



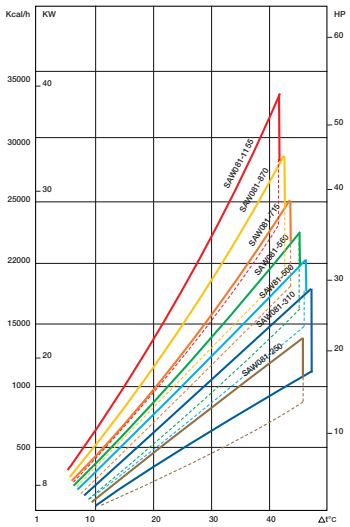
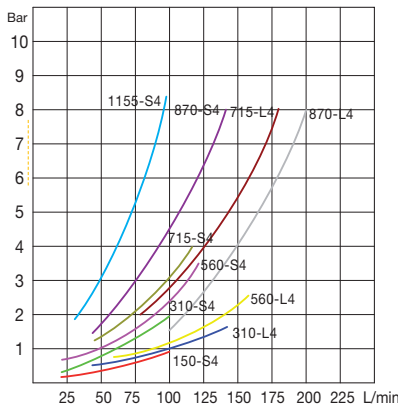


Diagramma perdite di carico/Pressure drop



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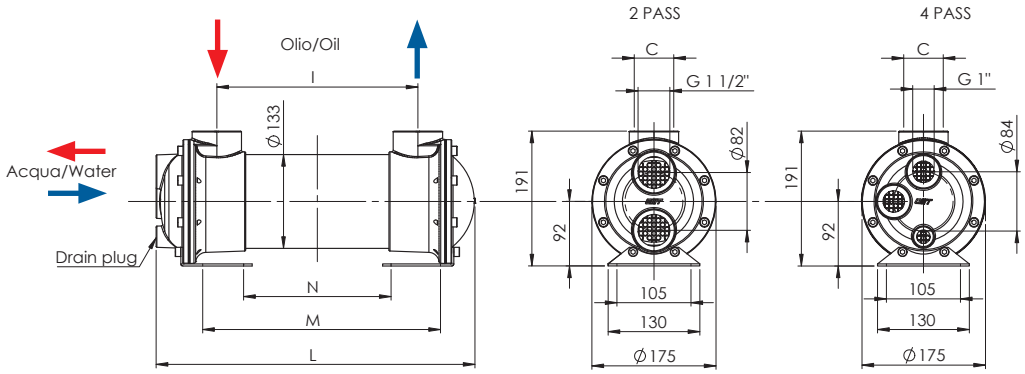


* Su ordinazione è possibile avere lo scambiatore con attaccco a 2 vie -
On request it is possible to have the exchanger with 2-way hook

Tab. A

Codice/Code	C (BSP)	I (mm)	L (mm)	M (mm)	N (mm)	L/min (Oil)	KW (***)	Capacità (lt)	Superficie m^2	Peso Kg
SA130-285-S4	1" 1/2	285	452	350	210	30 - 100	12 - 27	2,7	1,01	16,5
SA130-535-S4	1" 1/2	535	702	600	460	40 - 130	17 - 46	4,6	1,73	22,5
SA131-520-L4	2"	520	687	585	445	120 - 250	29 - 60	4,5	1,69	23
SA130-845-S4	1" 1/2	845	1012	910	770	80 - 250	41 - 70	7	2,63	31
SA131-830-L4	2"	830	997	895	755	200 - 400	56 - 88	6,9	2,59	30,5
SA130-1145-S4	1" 1/2	1145	1312	1210	1070	30 - 170	62- 97	9,1	3,50	40
SA131-1130-L4	2"	1130	1297	1195	1055	200 - 500	75 - 112	9	3,46	39,5

*** Olio / Oil = 55 °C, 32 CST, H2O = 20 °C

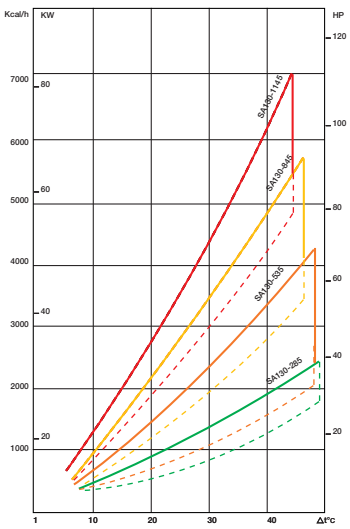
Materiali / Materials

Fondi /Covers	Guarnizioni/ Seals	Piastra Tubiera Tubes plate	Deflettori/Baffles	Tubi/Tubes	Mantello/Shell
Alluminio/Aluminium	EWP 207	Acciao/Steel	Acciao/Steel	CuDHP	Acciao/Steel

Diagramma di Rendimento
Performance diagram

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



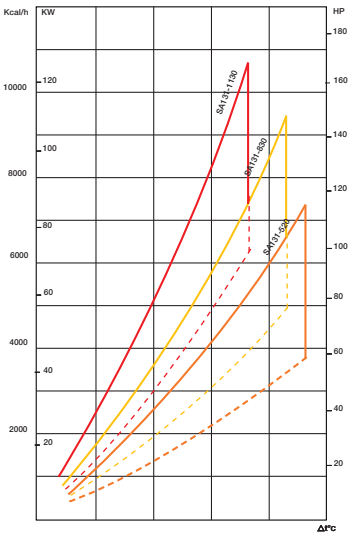
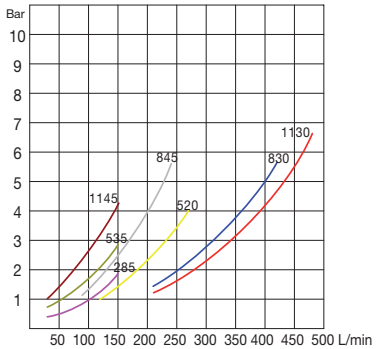
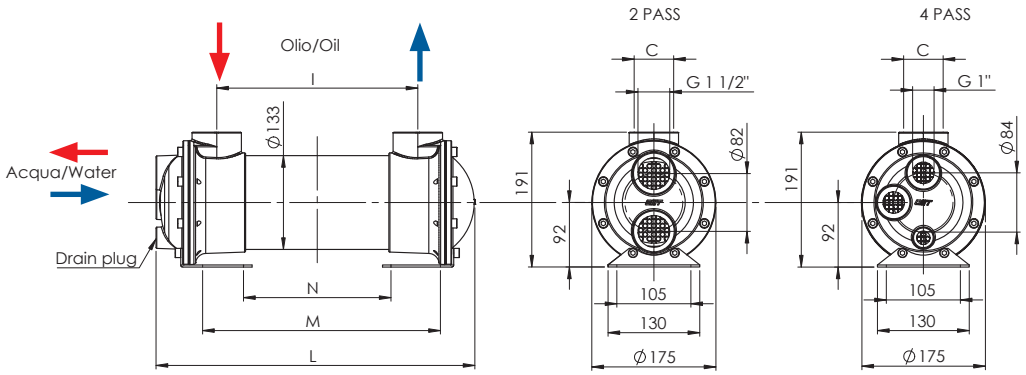


Diagramma perdite di carico/Pressure drop



Série SAW130



* Su ordinazione è possibile avere lo scambiatore con attaccco a 4 vie -
On request it is possible to have the exchanger with 4-way hook

Tab. A

Codice/Code	C (BSP)	I (mm)	L (mm)	M (mm)	N (mm)	L/min (Oil)	KW (***)	Capacità (lt)	Superficie m^2	Peso Kg
SAW130-285-S2	1" 1/2	285	452	350	210	30 - 100	12 - 27	2,7	1,01	16,5
SAW130-535-S2	1" 1/2	535	702	600	460	40 - 130	17 - 46	4,6	1,73	22,5
SAW131-520-L2	2"	520	687	585	445	120 - 250	29 - 60	4,5	1,69	23
SAW130-845-S2	1" 1/2	845	1012	910	770	80 - 250	41 - 70	7	2,63	31
SAW131-830-L2	2"	830	997	895	755	200 - 400	56 - 88	6,9	2,59	30,5
SAW130-1145-S2	1" 1/2	1145	1312	1210	1070	30 - 170	62- 97	9,1	3,50	40
SAW131-1130-L2	2"	1130	1297	1195	1055	200 - 500	75 - 112	9	3,46	39,5

*** Olio / Oil = 55 °C, 32 CST, H2O = 20 °C

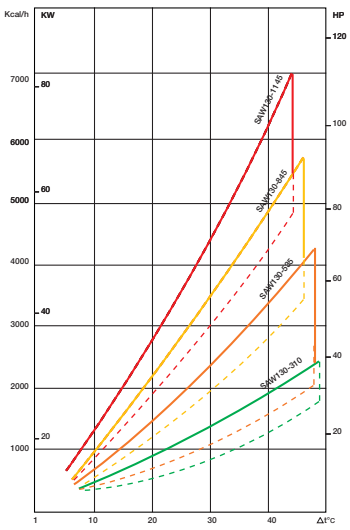
Materiali / Materials

Fondi /Covers	Guarnizioni/ Seals	Piastra Tubiera Tubes plate	Deflettori/Baffles	Tubi/Tubes	Mantello/Shell
CuZn40	EWP 207	CuZn40	Ottone/Brass	CuNi10	Acciao/Steel

Diagramma di Rendimento
Performance diagram

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



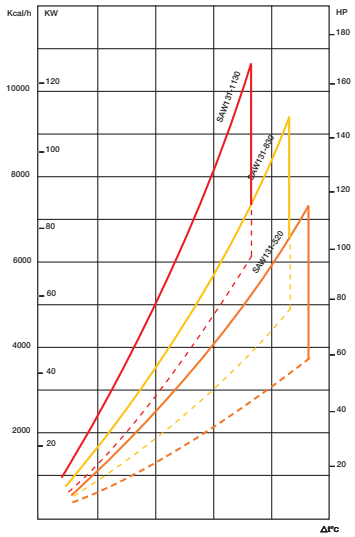
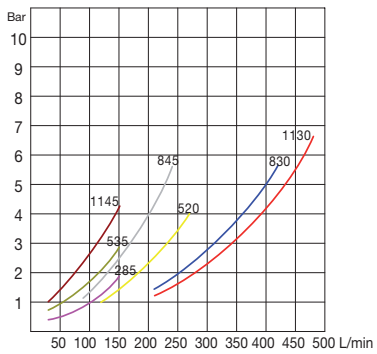


Diagramma perdite di carico/Pressure drop



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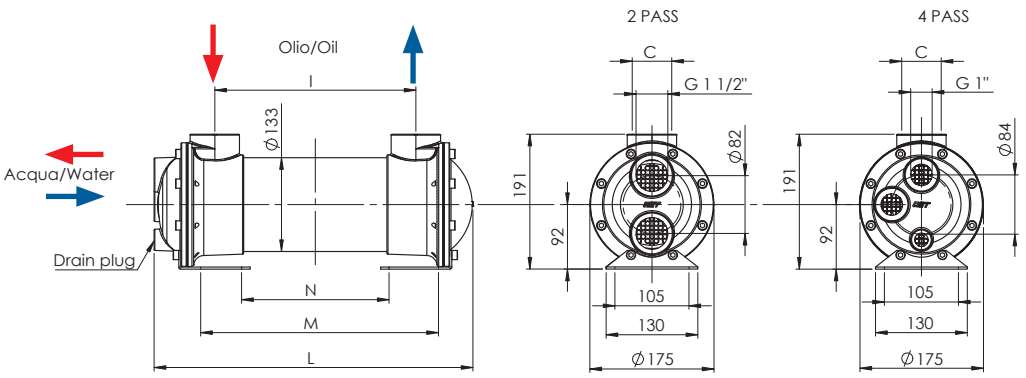
Série SAB130 (économique)



* Su ordinazione è possibile avere lo scambiatore con attaccco a 2 vie -
On request it is possible to have the exchanger with 2-way hook

Tab. A

Codice/Code	C (BSP)	I (mm)	L (mm)	M (mm)	N (mm)	L/min (Oil)	KW (***)	Capacità (lt)	Superficie m²	Peso Kg
SAB130-285-S4	1"1/2	285	452	350	210	60 - 160	8 - 22	2,7	0,79	16
SAB130-535-S4	1" 1/2	535	702	600	460	80 - 200	13 - 35	4,6	1,36	21
SAB131-520-L4	2"	520	687	585	445	140 - 250	16 - 50	4,5	1,32	20,5
SAB130-845-S4	1" 1/2	845	1012	910	770	80 - 250	41 - 70	7	2,06	29
SAB131-830-L4	2"	830	997	895	755	200 - 400	30 - 60	6,9	2,02	28,5
SAB130 -1145-S4	1" 1/2	1145	1312	1210	1070	120 - 280	36 - 66	9,1	2,74	37
SAB131-1130-L4	2"	1130	1297	1195	1055	240 - 450	45 - 88	9	2,71	36,5

*** Olio / Oil = 55 °C, 32 CST, H2O = 20 °C

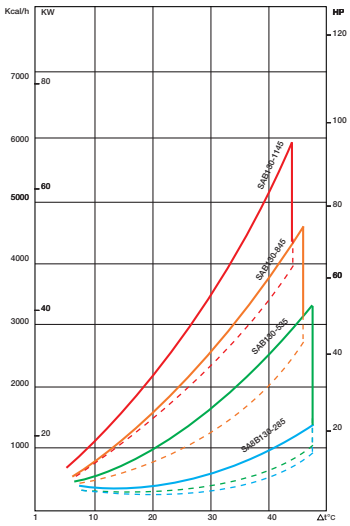
Materiali / Materials

Fondi /Covers	Guarnizioni/ Seals	Piastra Tubiera Tubes plate	Deflettori/Baffles	Tubi/Tubes	Mantello/Shell
Alluminio/Aluminium	EWP 207	Acciao/Steel	Acciao/Steel	CuDHP	Acciao/Steel

Diagramma di Rendimento
Performance diagram

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



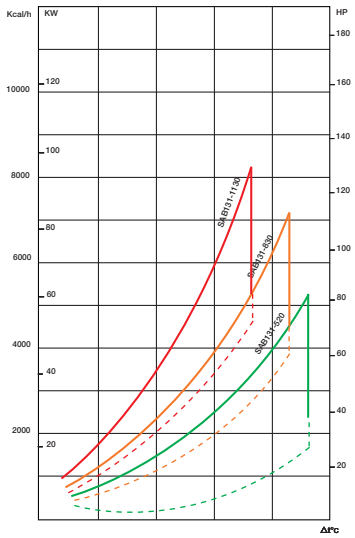
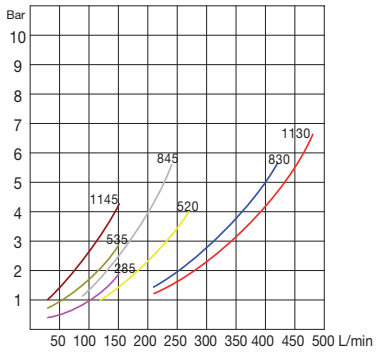


Diagramma perdite di carico/Pressure drop



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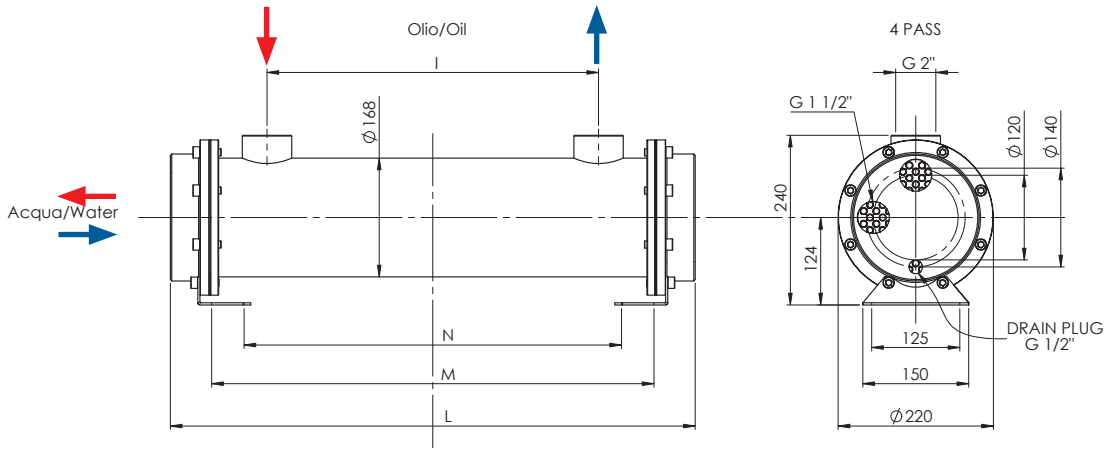
Série SAB168



Tab. A

Codice/Code	I (mm)	L (mm)	M (mm)	N (mm)	L/min (Oil)	KW (***)	Capacità (lt)	Superficie m^2	Peso Kg
SAB168-470-S4	470	744	627	535	100 - 450	23 - 53	8,1	2,03	36
SAB168-775-S4	775	1049	932	840	120 - 500	33 - 77	12,3	3,08	44
SAB168-1080-S4	1080	1354	1237	1145	150 - 550	40 - 105	16,5	4,08	51
SAB168-1385-S4	1385	1659	1542	1450	150 - 550	51 - 126	20,8	5,15	58

*** Olio / Oil = 55 °C, 32 CST, H2O = 20 °C

Materiali / Materials

Fondi /Covers	Guarnizioni/ Seals	Piastra Tubiera Tubes plate	Deflettori/Baffles	Tubi/Tubes	Mantello/Shell
Alluminio/Aluminium	EWP 207	Acciao/Steel	Acciao/Steel	CuDHP	Acciao/Steel

Diagramma di Rendimento
Performance diagram

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

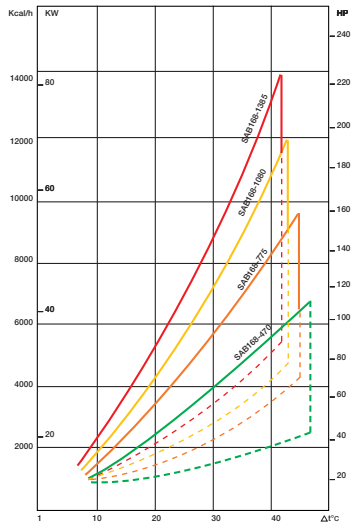
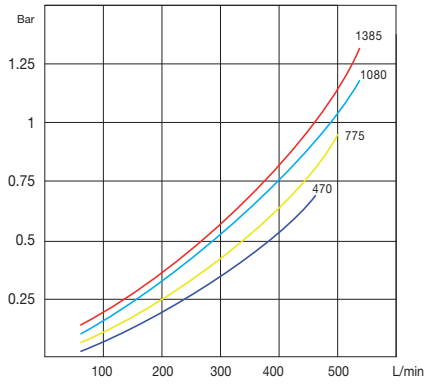


Diagramma perdite di carico/Pressure drop



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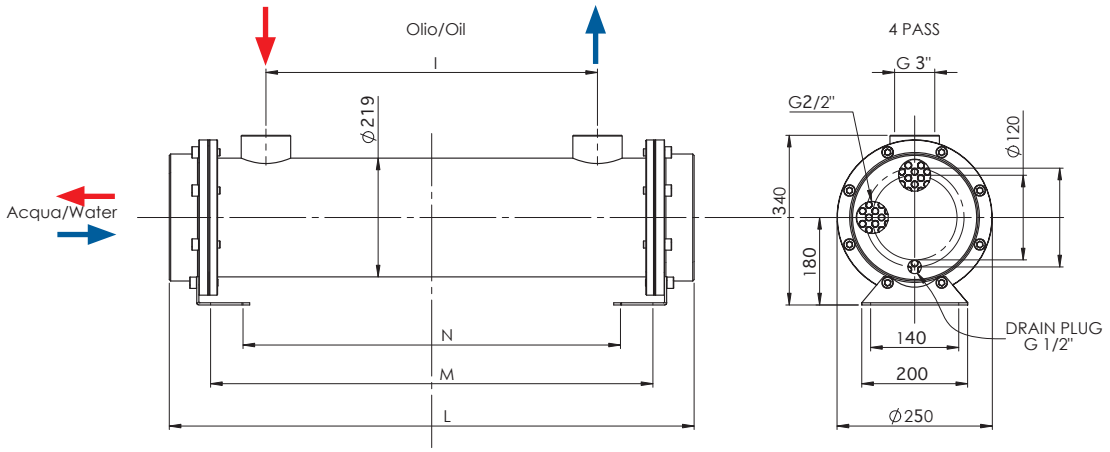
Série SAB219



Tab. A

Codice/Code	I (mm)	L (mm)	M (mm)	N (mm)	L/min (Oil)	KW (***)	Capacità (lt)	Superficie m²	Peso Kg
SAB219-435-S4	435	790	624	524	80 - 600	65 - 165	11	2,68	47
SAB219-740-S4	740	1095	906	651	100 - 750	100 - 245	16,9	4,06	81
SAB219-1045-S4	1045	1400	1188	651	120 - 800	135 - 340	22,3	5,39	109
SAB219-1350-S4	1350	1705	1470	651	120 - 800	170 - 435	27,9	6,79	120
SAB219-1660-S4	1660	2010	1752	651	120 - 800	205 - 530	33,7	8,18	144

*** Olio / Oil = 55 °C, 32 CST, H2O = 20 °C

Materiali / Materials

Fondi /Covers	Guarnizioni/ Seals	Piastra Tubiera Tubes plate	Deflettori/Baffles	Tubi/Tubes	Mantello/Shell
Alluminio/Aluminium	EWP 207	Acciao/Steel	Acciao/Steel	CuDHP	Acciao/Steel

Diagramma di Rendimento
Performance diagram

Fattore di correzione (F)-Perdite di carico
Correction Factor (F)-Pressure drop

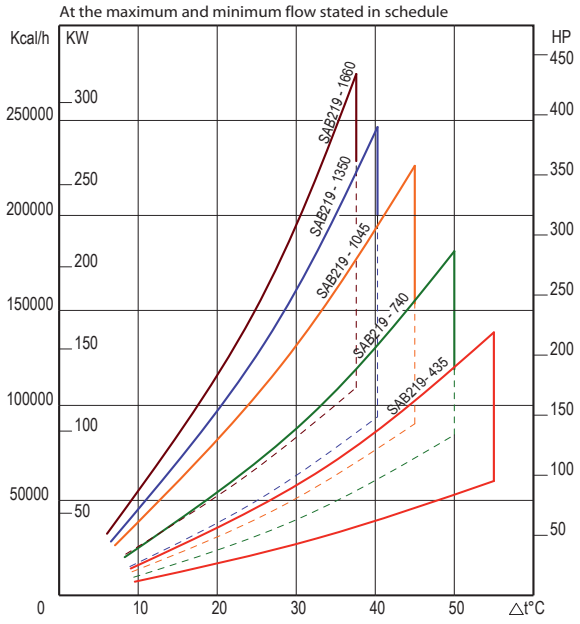
CST	10	15	20	30	40	50	60	80	100	200	300
F	0,5	0,65	0,77	1	1,2	1,4	1,6	1,9	2,1	3,3	4,3

DIAGRAMMA RENDIMENTO

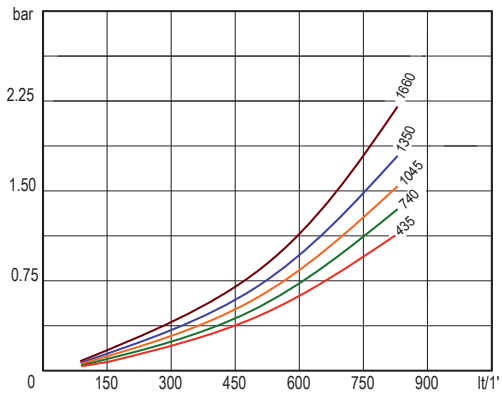
Alla portata massima e minima indicata in tabella

PERFORMANCE DIAGRAM

At the maximum and minimum flow stated in schedule



PERDITE DI CARICO (32 cst) PRESSURE DROP (32 cst)



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5 ENTREPRISES

12 ACTIVITÉS

CABSOC GROUP
UN GROUPE À TAILLE HUMAINE

1 PROJET COMMUN

CABSOC Group réunit 5 PME indépendantes, expertes et complémentaires, proposant une offre globale de qualité qui couvre les métiers et marchés de l'hydraulique en France et à l'étranger : SOCAH Hydraulique, Luce Hydro, EDH, ID System, SOCAH Connectic.

Chacune a son histoire, et toutes sont porteuses de valeurs communes, orientées service clients : engagement, réactivité, entraide, simplicité.

Ces valeurs guident les actions de notre modèle économique et humain, qui met au cœur de ses préoccupations toutes ses parties prenantes : clients, co-équipiers, fournisseurs, société civile…

Ce modèle privilégie la liberté d'entreprendre de nos PME, soutenues par la stratégie et la force d'un Groupe.

LES CHIFFRES CLÉS

35M€ de CA en 2022

185 Co-équipiers

5 sites de production

NOS ACTIVITÉS

La fabrication

Le Négoce

Le dépannage au comptoir

NOS MOYENS

Équipes conseil & technique

Stock permanent

Livraison rapide

NOS 5 PME SONT ATTACHÉES À :

- entretenir des relations durables, de proximité, personnalisées, avec clients, co- équipiers, et fournisseurs ;
- incarner sur le terrain nos valeurs partagées ;
- cultiver chacune ses spécificités, ses atouts distinctifs.

LE GROUPE EST LÀ POUR :

- renforcer la performance globale : qualité produits / services, disponibilité, tarifs ;
- mutualiser les services supports ;
- partager les fruits de la R&D ;
- sécuriser la solidité financière ;
- et œuvrer en acteur engagé sur les territoires où ses PME sont implantées.

Aujourd'hui, dirigé par Benoît CABANIS, petit-fils du fondateur, CABSOC Group est une entreprise française, avec une dimension internationale, importatrice de composants et exportatrice d'équipements mécatroniques.

Edition : Décembre 2023

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SOCAH Hydraulique, une marque de cabsoc Group