

# Air-oil heat-exchangers



## Introduction

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

## Compatible fluids

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

## Technical specification of Cooler Element

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

## Installation

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

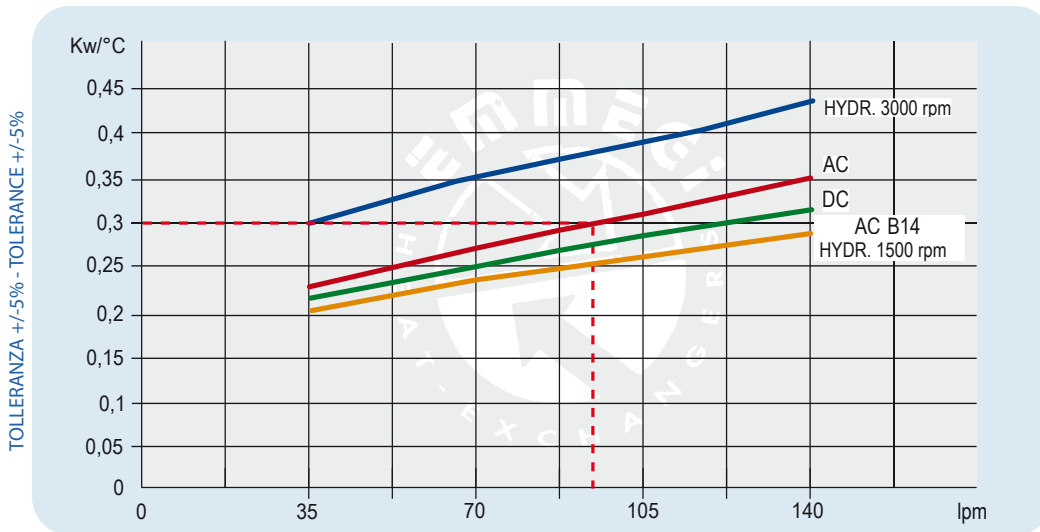


# Example Technical Data



P/N	V	Hz	kW(±10%)	A (±10%)	rpm	ø Fan	dB(A)	(m³/h)	IP	lt	Kg
253001 ###	230 AC	50/60	0,23 - 0,35	1,1 - 1,55	2700/3000	300	78	2220	44		
253003 ###	230-400 AC	50	0,21	0,62 - 0,36	2580	300	76	2500	44		
253004 ###	230-400 AC B14	50	0,37	2,1 - 1,1	1370	300	70	1850	55	1,6	15
253012 ###	265-460 AC B14	60	0,43	2,1 - 1,1	1650						
253024 ###	12 DC	/	0,16	13,3	2660	287	80	1675	68		20
253024 ###	24 DC	/	0,18	7,4	300		83	1880	68		
253056 ###	Prepared for Gr.2 hydraulic					300			/		14

## Diagramma rendimento Performance diagram



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

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

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

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

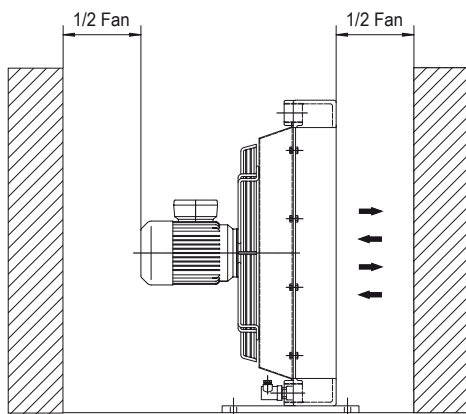


Fig.1

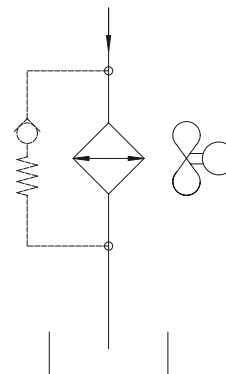
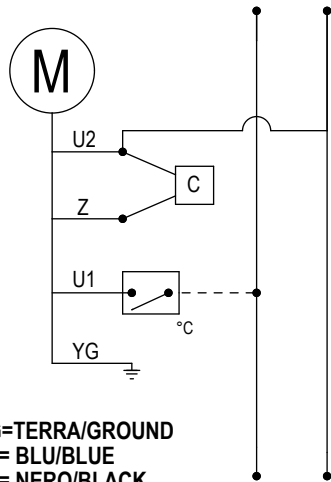


Fig.2

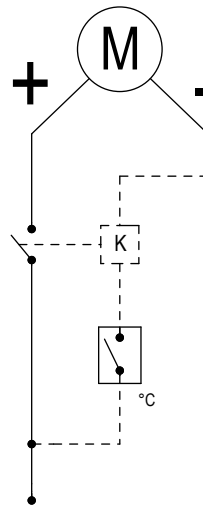
## COLLEGAMENTO ELETTRICO 230V MON. AC 230V AC MON. ELECTRIC WIRING



YG=TERRA/GROUND  
U1= BLU/BLEUE  
U2= NERO/BLACK  
Z = MARRONE/BROWN  
C = CONDENSATORE/CAPACITOR  
°C= TERMOSTATO/THERMOSTAT

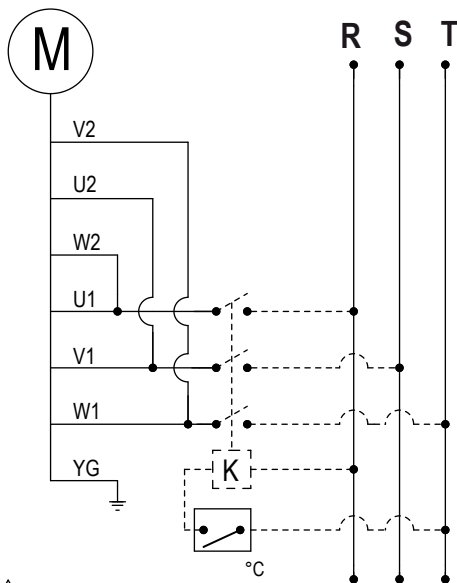
**COLORAZIONE CAVI SOLO PER ELETTROVENTOLE EBM-PAPST  
WIRES COLORS ONLY FOR EBM-PAPST AXIAL MOTOR FANS**

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



K= RELE'/RELAY  
°C TERMOSTATO/THERMOSTAT

## COLLEGAMENTO ELETTRICO 230V AC TRIF. 230V AC THREEPHASE ELECTRIC WIRING

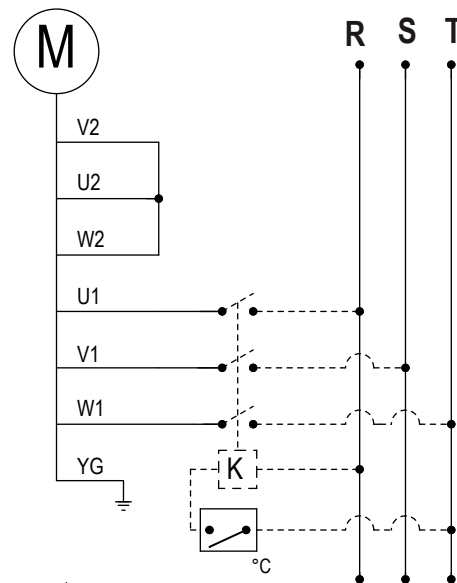


 230V AC 3 PHASE

U1= NERO/BLACK  
V1= BLU/BLEUE  
W1= MARRONE/BROWN  
YG= TERRA/GROUND  
°C TERMOSTATO/THERMOSTAT  
U2= VERDE/GREEN  
V2= BIANCO/WHITE  
W2= GIALLO/YELLOW  
K= RELE'/RELAY

**COLORAZIONE CAVI SOLO PER ELETTROVENTOLE EBM-PAPST  
WIRES COLORS ONLY FOR EBM-PAPST AXIAL MOTOR FANS**

## COLLEGAMENTO ELETTRICO 400V AC TRIF. 400V AC THREEPHASE ELECTRIC WIRING



 400V AC 3 PHASE

U1= NERO/BLACK  
V1= BLU/BLEUE  
W1= MARRONE/BROWN  
YG= TERRA/GROUND  
°C TERMOSTATO/THERMOSTAT  
U2= VERDE/GREEN  
V2= BIANCO/WHITE  
W2= GIALLO/YELLOW  
K= RELE'/RELAY

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# Modulo richiesta dati

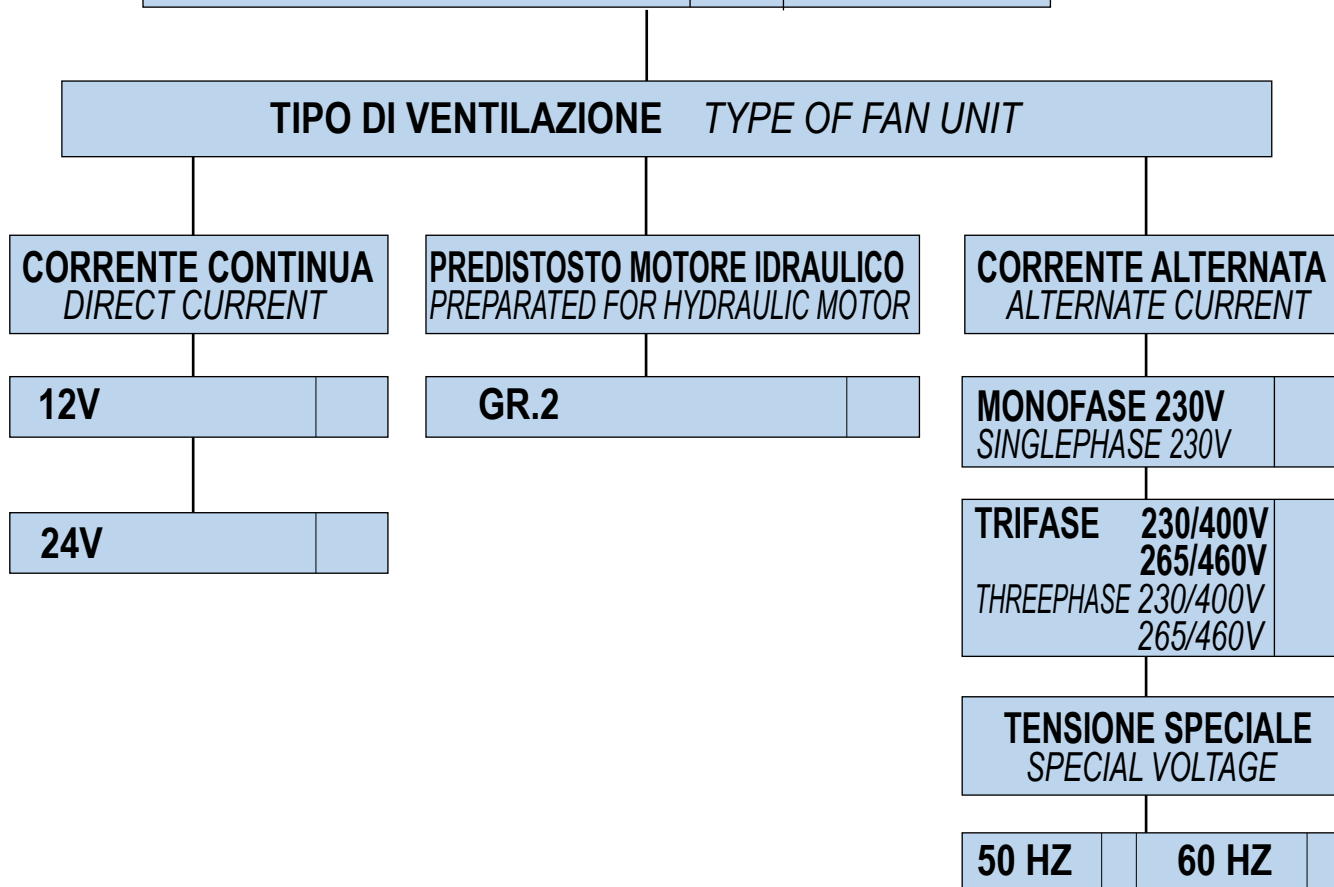
## Sheet for cooler selection

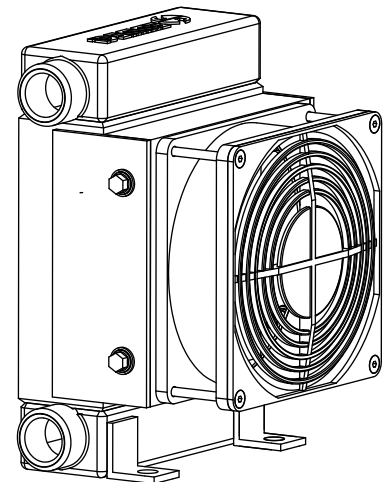
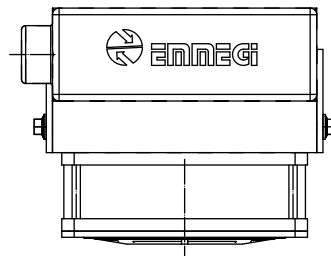
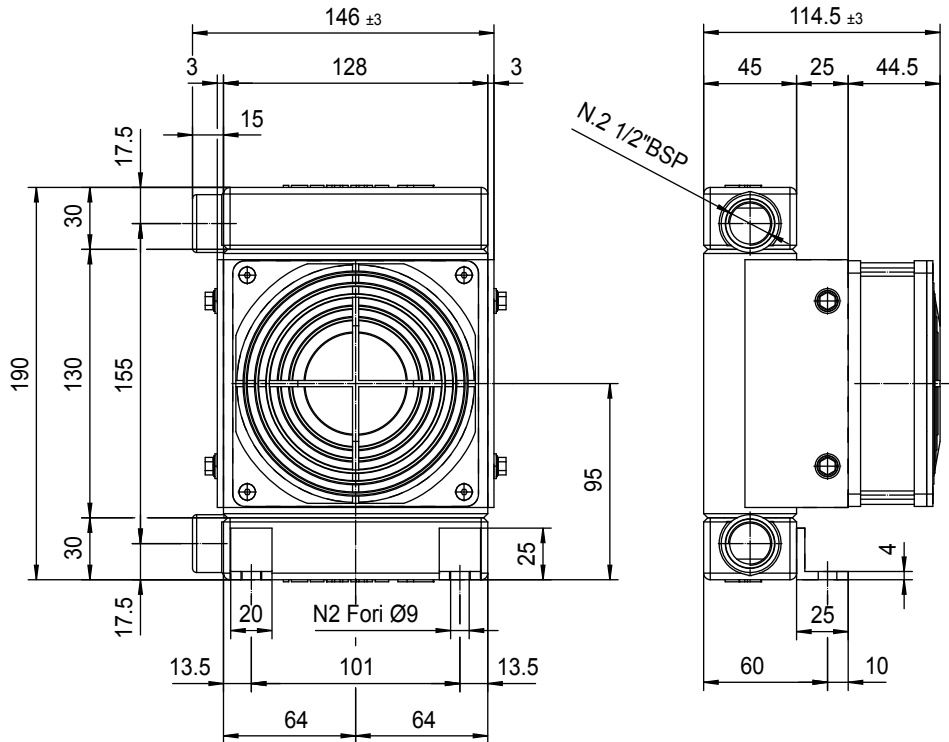


<b>CLIENTE COMPANY</b>	
<b>RICHIEDENTE NAME</b>	

### ARIA-OLIO AIR-OIL

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





The overall dimensions and technical characteristics they are only as examples

SAMER has become a preferred Hydraulic Supplier with many Manufacturers because offers the best of what really matters: the hardware at the internal core of the Machine Application.

**SAMER offers following services:**

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- Sale of hydraulic components and electronic devices
- Commissioning and start up on machinery
- Repair of hydraulic components

**SAMER S.r.l.**

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