

RCF-SD



FLUID COOLERS
FOR MACHINE MANUFACTURERS
MADE IN ITALY

Cutting fluid coolers

RCFE for emulsion - RCFO for oil

ISO 9001:2008 & 10014:2007
certified Quality Management System



Main features

- Available in 8 power ratings for oil cooling + 8 power ratings for emulsion.
- Air condensed.
- Direct exchange coaxial evaporator.
- High performance rotary vane or scroll compressors with low energy consumption.
- Electronic microprocessor thermoregulator for cutting fluid temperature control and display.
- Cooler malfunction signals on display.
- Low-noise axial fans.
- Protective metal frame made of S235 steel painted with epoxy powder and with a semi-gloss textured effect.
- Eco-friendly refrigerant gas (HFC).

Accessories

- Cutting fluid circulation pump with special sealing.
- Differential electronic thermoregulator equipped with a tenth of a degree resolution ambient sensor.
- Pressure gauges on the hydraulic circuit and/or on the cooling circuit.
- Caster wheels.
- Metal washable air filters for condenser protection.
- Cooler remote malfunction signal.
- Electric connectors upon client's request.
- Electric connector for cutting fluid circulation with an external pump.
- Special power supply voltages.
- Configuration for an ambient temperature up to +55°C.
- Configuration for an ambient temperature down to -15°C.
- Frame available upon request in every type of RAL finish or in polished stainless steel.
- Minimum electric water level, with remote alarm.

RCF-SD is a new series of Euro Cold coolers designed to cool cutting fluids, cooling and lubricating fluids that contain impurities, even though they have been filtered. Careful design and experimentation allowed us to deploy an innovative solution thanks to a special evaporator:

thanks to a wide cross-section, it can cool with direct exchange of the fluid through a cooling gas.

The attention placed in the technical solution adopted for this series of machines ensures a considerably lower risk of clogging compared to an ordinary exchanger with braze-welded plates. Its constant top efficiency levels over time ensure greater energy efficiency and reliability, which results in lower potential machine downtime. The new SD series coolers stand out for their compact design and smaller surface area, along with their significantly smaller weight – thanks to the fact that it does not come with the circulation pump we recommend installing on the filtering system. It can be installed in the cooler upon request.

The skills and the experience gained by Euro Cold during its 25 years of experience in the field are at your disposal. Our power is our ability to respond to the needs of mechanical and industrial systems' manufacturers which are rapidly and constantly changing. Do not hesitate to contact us in order that we may provide you with the most adequate solution to your specific temperature control needs.

Technical data

MODEL		RCFE						
		45	60	95	160	200	300	350
Nominal cooling capacity (*)	W	5300	8150	12440	20250	24880	32550	37920
Power supply		400V / 3ph / 50Hz						
Compressor (Max. absorbed power)	W	1780	2380	4030	5210	6170	8190	12020
Fan	Air flow	2700	4060	4060	4060	4060	8060	8060
	Max. absorbed power	130	260	260	260	260	2 x 260	2 x 260
Condenser		Air condenser (copper/aluminium)						
Evaporator		Direct expansion						
Electronic thermoregulator		Setting range from +20 to +35°C						
Pump (**)	Flow rate	25	25	50	50	70	100	100
	Head	0.5	0.5	0.5	0.5	0.5	0.5	1
	Absorbed power	840	840	1950	1950	2650	4660	4660
Refrigerant gas HFC		R407C						
Noise level (at 1 m distance)	db (A)	64	64	64	69	70	70	70
Frame colour		RAL 7035						
Frame type (Without pump)		ECP2-B	ECP3-C	D2-1C	D2-2C	D2-2C	D3-2C	D3-2C
Frame type (With pump)		ECP2H-B	ECP3H-C	D2H-1C	D2H-2C	D2H-2C	D3-2C	D3-2C

Technical drawings available in the **DOWNLOAD** area of our Web site

Weights & dimensions

Empty weight (approx.)	kg	70	100	190	190	190	340	340
Packaging weight (approx.)	kg	80	110	200	200	200	360	360
Dimensions (W x D x H) (Without pump)	mm	562 x 512 x 1073	665 x 655 x 1180	750 x 786 x 1380			750 x 1410 x 1380	
Dimensions (W x D x H) (With pump)	mm	562 x 512 x 1375	665 x 655 x 1486	750 x 786 x 1781			750 x 1410 x 1756	
Packaging dim. (W x D x H) (***) (Without pump)	mm	755 x 630 x 1200	800 x 1020 x 1580	1000 x 800 x 1580			850 x 1655 x 1580	
Packaging dim. (W x D x H) (***) (With pump)	mm	755 x 630 x 1500	800 x 1020 x 1890	1000 x 800 x 1960			850 x 1655 x 1960	

Notes

(*) Performance data refers to inlet cutting fluid at +35°C and ambient temperature +32°C

(**) Optional: circulation pump for cutting fluid not included in the standard supply. Available on request if fluid impurity is lower than 100 u.

In models where the pump is included, the distance between the cooler and the cutting fluid tank shall not exceed 3 metres

Use anti-crash tubes, with a diameter wider than the cooler connections

The cooler and its cutting fluid pump should be placed on the floor and not above the tank of the filtration machine

(***) Standard packaging: cardboard box placed on pallet

Maximum temperature of the inlet cutting fluid +45°C - Maximum and minimum ambient temperature: from +10 to +40°C

For ambient temperature above +40°C and for the use of antifreeze please contact our Engineering Department

Minimum and maximum ambient relative humidity (without condensation): from 10 to 85% - Maximum ambient altitude: 2000 m

Minimum and maximum stocking temperature: from +5 to +45°C

Cooling capacity data is based on ASHRAE graphs supplied by the compressor manufacturers

Hydraulic connections: see technical drawings available in the **DOWNLOAD** area of our website

All measures on technical drawings are in millimetres unless otherwise specified

EURO COLD reserves the right to carry out modifications without prior notice

Cooling capacity correction factor based on cutting fluid temperature: Kcf

Inlet temperature	35°C	30°C	25°C	20°C
Kcf	1	0.9	0.8	0.7

Technical data

MODEL		RCFO						
		45	60	95	160	200	300	350
Nominal cooling capacity (*)	W	5300	8150	12440	20250	24880	32550	37920
Power supply		400V / 3ph / 50Hz						
Compressor (Max. absorbed power)	W	1780	2380	4030	5210	6170	8190	12020
Fan	Air flow	2700	4060	4060	4060	4060	8060	8060
	Max. absorbed power	130	260	260	260	260	2 x 260	2 x 260
Condenser		Air condenser (copper/aluminium)						
Evaporator		Direct expansion						
Electronic thermoregulator		Setting range from +20 to +35°C						
Pump (**)	Flow rate	50	50	50	75	90	150	150
	Head	1.5	1.5	1.5	2	1.5	2	3.5
	Absorbed power	1950	1950	1950	2650	2650	4660	4660
Refrigerant gas HFC		R407C						
Noise level (at 1 m distance)	db (A)	64	64	64	69	70	70	70
Frame colour		RAL 7035						
Frame type (Without pump)		ECP2-B	ECP3-C	D2-1C	D2-2C	D2-2C	D3-2C	D3-2C
Frame type (With pump)		ECP2H-B	ECP3H-C	D2H-1C	D2H-2C	D2H-2C	D3-2C	D3-2C

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