

RCF-SD



FLUID COOLERS

FOR MACHINE MANUFACTURERS

MADE IN ITALY

Cutting fluid coolers

RCFE for emulsion - RCFO for oil

ISO 9001:2015
certified Quality Management System



Main features

- Available in seven power ratings for oil cooling + seven 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	2140	3575	5302	6886	8140	10681	15961	
Fan	Air flow	mc/h	2700	4060	4060	4060	4060	8060	8060
	Max. absorbed power	W	130	220	220	220	220	2 x 220	2 x 220
Condenser		Air condenser (copper/aluminium)							
Evaporator		Direct expansion							
Electronic thermoregulator		Setting range from +25 to +35°C							
Pump (**)	Flow rate	l/min	25	25	50	50	50	100	150
	Head	bar	2	2	1	1	1	1	2
	Absorbed power	W	345	345	932	843	932	4660	4660
Refrigerant gas HFC		R407C							
Noise level (at 1 m distance)	db (A)	64	70	70	70	70	70	70	
Frame colour		RAL 7035							
Frame type (Without pump)		ECP2-B	ECP3-B	D2-1C	D2-2C	D2-2C	D3-2C	D3-2C	
Frame type (With pump)		ECP2-B	ECP3-B	D2-1C	D2-2C	D2-2C	D3-2C	D3H-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	570 x 520 x 1080	670 x 660 x 1180	750 x 790 x 1380			750 x 1410 x 1380	
Dimensions (W x D x H) (With pump)	mm	570 x 520 x 1080	670 x 660 x 1180	750 x 790 x 1380			750 x 1410 x 1380	750 x 1410 x 1760
Packaging dim. (W x D x H) (***) (Without pump)	mm	755 x 630 x 1200	1020 x 800 x 1580	800 x 1000 x 1580			1000 x 1595 x 1580	
Packaging dim. (W x D x H) (***) (With pump)	mm	755 x 630 x 1200	1020 x 800 x 1580	800 x 1000 x 1580			1000 x 1595 x 1580	1000 x 1595 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 Technical 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
Kcf	1	0.9	0.8

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	2140	3575	5302	6886	8140	10681	15961	
Fan	Air flow	mc/h	2700	4060	4060	4060	4060	8060	8060
	Max. absorbed power	W	130	220	220	220	220	2 x 220	2 x 220
Condenser		Air condenser (copper/aluminium)							
Evaporator		Direct expansion							
Electronic thermoregulator		Setting range from +25 to +35°C							
Pump (**)	Flow rate	l/min	35	50	50	75	90	100	150
	Head	bar	2.5	1.5	1.5	2.5	1.5	2	3
	Absorbed power	W	1385	1385	1385	2665	3715	4700	4700
Refrigerant gas HFC		R407C							
Noise level (at 1 m distance)	db (A)	64	70	70	70	70	70	70	
Frame colour		RAL 7035							
Frame type (Without pump)		ECP2-B	ECP3-B	D2-1C	D2-2C	D2-2C	D3-2C	D3-2C	
Frame type (With pump)		ECP2-B	ECP3-B	D2-1C	D2-2C	D2H-2C	D3-2C	D3H-2C	

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Dimensions (W x D x H) (With pump)	mm	570 x 520 x 1080	670 x 660 x 1180	750 x 790 x 1380		750 x 790 x 1790	750 x 1410 x 1380	750 x 1410 x 1760
Packaging dim. (W x D x H) (***) (Without pump)	mm	755 x 630 x 1200	1020 x 800 x 1580	800 x 1000 x 1580			1595 x 1000 x 1580	
Packaging dim. (W x D x H) (***) (With pump)	mm	755 x 630 x 1200	1020 x 800 x 1580	800 x 1000 x 1580		800 x 1000 x 1960	1000 x 1595 x 1580	1000 x 1595 x 1960

Notes

(*) Performance data refers to inlet cutting fluid at +35°C and ambient temperature +32°C - Performance data refer to uses with a 22 cst (centistok) viscosity oil at +40°C - For different viscosity values, please contact our Technical Department

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