RCF-SD

CUTTING FLUID COOLERS

FLUID COOLERS
FOR MACHINE MANUFACTURERS

ISO 9001:2015 certified Quality Management System

MADE IN ITALY

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 over 30 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.

MAIN FEATURES

- 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 (available up to the RCF-SD 350 model included).
- Minimum electric water level, with remote alarm.

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RCFE FOR EMULSION
RCFO FOR OIL

RCF-SD

TECHNICAL DATA

		RCFE									
MODEL		**45**	**60**	**95**	**160**	**200**	**300**	**350**	**450**	**580**	**620**
Nominal cooling capacity (*) **W**		5300	8150	12440	20250	24880	32550	37920	50470	67270	81680
Power supply		400V / 3ph / 50Hz									
Compressor (Max. absorbed power) **W**		1740	3040	5302	6886	8140	10681	15961	17440	24000	28900
Fan	Air flow **mc/h**	2550	4660			6400	9330	12800	22000		
	Max. absorbed power **W**	120	220			450	2 x 220	2 x 450	2 x 620		
Condenser		Air condenser (copper/aluminium)							Aluminium MCHE		
Evaporator		Direct expansion							Direct expansion/shell-and-tube		
Electronic thermoregulator		Setting range from +20 to +35°C									
Pump (**)		For further information on the pumps available, please contact our Sales Department									
Refrigerant gas HFC		R407C - R410A		R407C					R410A		
Noise level (at 1 m distance unless otherwise specified) **db (A)**		64	70						49#	52#	
Frame colour		RAL 7035							RAL 9002		
Frame type (Without pump) (***)		ECP2-B	ECP3-B	D2-1C	D2-2C		D3-2C		D4-2V		
Frame type (With pump) (***)		ECP2-B	ECP3-B	D2-1C	D2-2C		D3-2C	D3H-2C	D4-2V		
WEIGHTS & DIMENSIONS											
Empty weight (approx.) **kg**		90	130	190			340		450	550	600
Packaging weight (approx.) **kg**		100	150	200			360		500	600	650
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		950 x 2000 x 1460		
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 1380	950 x 2000 x 1460		
Packaging dimensions (W x D x H) (****) without pump **mm**		755 x 630 x 1200	1020 x 800 x 1580	800 x 1020 x 1580			800 x 1595 x 1580		1100 x 2600 x 1600		
Packaging dimensions (W x D x H) (****) with pump **mm**		755 x 630 x 1200	1020 x 800 x 1580	800 x 1020 x 1580			800 x 1595 x 1580		950 x 2000 x 1460		

NOTES

(#) Sound pressure at a distance of 10 m in free field and directionality factor 2. (*) 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 µ. 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. (***) Technical drawings of structures available for download in the DOWNLOAD area of our website. (****) 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 +50°C. Cooling capacity data is based on 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. Please ask to our Sales Department for the correct dimensions of the RCF-SD series.

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

Inlet temperature	35°C	30°C	25°C
Kcf	1	0,9	0,8

Cooling capacity correction factor based on cutting fluid temperature: Kcf

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	Max. absorbed power **W**	120	220			450	2 x 220	2 x 450	2 x 620		
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Evaporator		Direct expansion							Direct expansion/shell-and-tube		
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Pump (**)		For further information on the pumps available, please contact our Sales Department									
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NOTES

(#) Sound pressure at a distance of 10 m in free field and directionality factor 2. (*) 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. (**) Optional: circulation pump for cutting fluid not included in the standard supply. Available on request if fluid impurity is lower than 100 µ. 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. (***) Technical drawings of structures available for download in the DOWNLOAD area of our website. (****) 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 +50°C. Cooling capacity data is based on 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. Please ask to our Sales Department for the correct dimensions of the RCF-SD series. **EURO COLD reserves the right to carry out modifications without prior notice.**

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Cooling capacity correction factor based on cutting fluid temperature: Kcf

EURO COLD srl (Headquarters)
Via Aldo Moro, 11/E - 41030 Bomporto (MO) Italy
Tel. +39.059.817.8138
info@eurocold.it - eurocold@hersypec.it
www.eurocold.it

EURO COLD C.S. GmbH
Im Speiterling 12 - Keltern 75210, Germany
Tel. +49.7236.981.048 - Fax +49.7236.981.113
vertrieb@eurocold.de
www.eurocold.de

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