



## Cooling capacities 8 kW up to 200 kW. Kool°M series.

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**A chiller concept for every need.** Developed for applications in over 20 market segments and specifically for use in combination with MRI systems. Leading MRI system manufacturers rely on solutions from the market leader Riedel Cooling.

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**Future-proof.** The series was specially developed with the 'low GWP' refrigerant R513A for the global sales market. All current GWP limit values for the EU (GWP limit 750 for nominal cooling capacity > 12 kW / from 2027) and USA (GWP limit value 700 / from 2026) are already met.

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**Added value of the common parts principle.** Reduced delivery times and faster availability of spare parts for servicing.

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**Compact.** The appliance dimensions have been optimised so that little space is required for installation despite the high cooling capacity.

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**Can be used worldwide.** The appliances are already available as standard for the common mains voltages 400V / 50 Hz / 3Ph and 460V / 60 Hz / 3Ph.

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**Versatile.** Various configuration options combined with a large selection of equipment options make these chillers an all-round talent.

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**Efficient.** All chillers fulfil the current energy efficiency standards (EU) 2015/1095 and (EU) 2016/2281, which significantly reduces operating costs during the product life cycle.

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**Innovative.** Modern components from renowned manufacturers, e.g. electronic expansion valve, EC fans, microchannel condenser.

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# Kool°M. Technical Data.

## 8 kW- 30 kW | Chassis C1.

Riedel Cooling Chiller type	Kool°M 8 C1	Kool°M 12 C1	Kool°M 15 C1	Kool°M 21 C1	Kool°M 28 C1
<b>Net cooling capacity<sup>1</sup> at 20°C water outlet temperature<sup>1</sup></b>					
Ambient temperature 32°C	9 kW (50Hz) 12 kW (60 Hz)	13 kW (50Hz) 15 kW (60 Hz)	16 kW (50Hz) 20 kW (60 Hz)	22 kW (50Hz) 25 kW (60 Hz)	30 kW (50Hz) 32 kW (60 Hz)
Ambient temperature 50°C	7 kW (50Hz) 9 kW (60 Hz)	10 kW (50Hz) 12 kW (60 Hz)	13 kW (50Hz) 16 kW (60 Hz)	17 kW (50Hz) 20 kW (60 Hz)	21 kW (50Hz) 25 kW (60 Hz)
<b>Net cooling capacity<sup>1</sup> at 10°C water outlet temperature<sup>1</sup></b>					
Ambient temperature 32°C	6 kW (50Hz) 8 kW (60 Hz)	9 kW (50Hz) 11 kW (60 Hz)	11 kW (50Hz) 15 kW (60 Hz)	16 kW (50Hz) 18 kW (60 Hz)	22 kW (50Hz) 26 kW (60 Hz)
Ambient temperature 50°C	5 kW (50Hz) 6 kW (60 Hz)	7 kW (50Hz) 8 kW (60 Hz)	9 kW (50Hz) 11 kW (60 Hz)	12 kW (50Hz) 14 kW (60 Hz)	16 kW (50Hz) 20 kW (60 Hz)
Power consumption with 3 bar pump at nominal point <sup>1,4</sup>	3 kW (50 Hz) 4 kW (60 Hz)	3 kW (50 Hz) 4 kW (60 Hz)	5 kW (50 Hz) 6 kW (60 Hz)	6 kW (50 Hz) 8 kW (60 Hz)	9 kW (50 Hz) 13 kW (60 Hz)
Refrigerant	R513A				
Coolant medium	Water / water-glycol mixture				
Ambient temperature range <sup>2</sup>	- 20 °C to + 55 °C				
Coolant outlet temperature range <sup>3</sup>	- 5 °C to + 30 °C				
Temperature stability	± 1 K / (± 0,5 K)				
Coolant flow (nominal volume flow)	1.7 m <sup>3</sup> /h	2.1 m <sup>3</sup> /h	2.6 m <sup>3</sup> /h	3.5 m <sup>3</sup> /h	4.7 m <sup>3</sup> /h
Free pump pressure <sup>4</sup>	3 bar / 5 bar				
Tank volume	120l				
Cooling air volume flow	6,500 m <sup>3</sup> /h			8,400 m <sup>3</sup> /h	
Sound pressure level in 5m	66 dB(A)			67 dB(A)	
Power supply <sup>5</sup> bifrequent	3Ph / 400 V / 50 Hz 3Ph / 460V / 60 Hz				
Maximum power/current consumption: <sup>6</sup> 50Hz   60Hz	4 kW / 9A 5 kW / 9A	6 kW / 12A 8 kW / 13A	8 kW / 14A 11 kW / 15A	11 kW / 20A 13 kW / 21A	16 kW / 29A 21 kW / 30A
Maximum back-up fuse	35 A				
Coolant connections	1" IG			1 1/4" IG	
Weight (net)	240 kg	245 kg	250 kg	280 kg	285 kg
Dimensions (W x H x D)	715 x 1,685 x 715 mm				
SEPR 2016/2281 <sup>7</sup>	5.49	5.76	5.42	5.25	5.13

<sup>1</sup> Net cooling capacity without considering the pump loss capacity at the design point.

<sup>2</sup> Standard version: Ambient temperature range + 5 °C to 45 °C, indoor installation.

<sup>3</sup> Standard version: Medium temperature >15°C.

<sup>4</sup> Available pump pressure at nominal volume flow; other pumps in the standard portfolio.

<sup>5</sup> Voltage difference +/- 10 %; other voltage versions on request.

<sup>6</sup> Calculated maximum power/current consumption of all components (50 Hz/60 Hz, standard pump).

<sup>7</sup> Seasonal Energy Performance Ratio.

# Kool°M. Technical Data.

## 30 kW – 100 kW. Chassis C2 | C3 | C4.

Riedel Cooling Chiller type	Kool°M 30 C2	Kool°M 40 C2	Kool°M 50 C3	Kool°M 80 C3	Kool°M 100 C4
<b>Net cooling capacity<sup>1</sup> at 20°C water outlet temperature<sup>1</sup></b>					
Ambient temperature 32°C	34 kW (50Hz) 38 kW (60 Hz)	39 kW (50Hz) 42 kW (60 Hz)	51 kW (50Hz) 59 kW (60 Hz)	75 kW (50Hz) 82 kW (60 Hz)	90 kW (50Hz) 99 kW (60 Hz)
Ambient temperature 50°C	27 kW (50Hz) 29 kW (60 Hz)	30 kW (50Hz) 33 kW (60 Hz)	39 kW (50Hz) 48 kW (60 Hz)	56 kW (50Hz) 60 kW (60 Hz)	68 kW (50Hz) 75 kW (60 Hz)
<b>Net cooling capacity<sup>1</sup> at 10°C water outlet temperature<sup>1</sup></b>					
Ambient temperature 32°C	25 kW (50Hz) 28 kW (60 Hz)	30 kW (50Hz) 31 kW (60 Hz)	38 kW (50Hz) 42 kW (60 Hz)	55 kW (50Hz) 62 kW (60 Hz)	67 kW (50Hz) 74 kW (60 Hz)
Ambient temperature 50°C	19 kW (50Hz) 21 kW (60 Hz)	22 kW (50Hz) 23 kW (60 Hz)	28 kW (50Hz) 33 kW (60 Hz)	42 kW (50Hz) 45 kW (60 Hz)	50 kW (50Hz) 54 kW (60 Hz)
Power consumption with 3 bar pump at nominal point <sup>1,4</sup>	9 kW (50 Hz) 12 kW (60 Hz)	13 kW (50 Hz) 17 kW (60 Hz)	17 kW (50 Hz) 22 kW (60 Hz)	29 kW (50 Hz) 36 kW (60 Hz)	30 kW (50 Hz) 39 kW (60 Hz)
Refrigerant	R513A				
Coolant medium	Water / water-glycol mixture				
Ambient temperature range <sup>2</sup>	- 20 °C to + 55 °C				
Coolant outlet temperature range <sup>3</sup>	- 5 °C to + 30 °C				
Temperature stability	± 1 K / (± 0,5 K)				
Coolant flow (nominal volume flow)	5.2 m <sup>3</sup> /h	6.1 m <sup>3</sup> /h	7.8 m <sup>3</sup> /h	12.5 m <sup>3</sup> /h	15.5 m <sup>3</sup> /h
Free pump pressure <sup>4</sup>	3 bar / 5 bar				
Tank volume	200 l		300 l		
Cooling air volume flow	11,300 m <sup>3</sup> /h		12,900 m <sup>3</sup> /h	24,000 m <sup>3</sup> /h	
Sound pressure level in 5m	66 dB(A)			67 dB(A)	
Power supply <sup>5</sup> bifrequent	3Ph / 400 V 3Ph / 460V				
Maximum power/current consumption: <sup>6</sup> 50Hz   60Hz	17 kW / 30A 20 kW / 32A	24 kW / 42A 30 kW / 44A	26 kW / 47A 34 kW / 48A	44 kW / 80A 53 kW / 77A	51 kW / 95A 63 kW / 108A
Maximum back-up fuse	50 A		63 A	100 A	125 A
Coolant connections	1 1/2" IG		2" IG		
Weight (net)	451 kg	461 kg	620 kg	650 kg	780 kg
Dimensions (W x H x D)	895 x 2,037 x 1,315 mm		1,105 x 2,037 x 1,315 mm		1,105 x 2,037 x 1,595 mm
SEPR 2016/2281 <sup>7</sup>	5.55	5.06	5.49	5.06	5.45

<sup>1</sup> Net cooling capacity without considering the pump loss capacity at the design point.

<sup>2</sup> Standard version: Ambient temperature range + 5 °C to 45 °C, indoor installation.

<sup>3</sup> Standard version: Medium temperature >15°C.

<sup>4</sup> Available pump pressure at nominal volume flow; other pumps in the standard portfolio.

<sup>5</sup> Voltage difference +/- 10 %; other voltage versions on request.

<sup>6</sup> Calculated maximum power/current consumption of all components (50 Hz/60 Hz, standard pump).

<sup>7</sup> Seasonal Energy Performance Ratio.

# Kool°M. Technical Data.

## 100 kW- 200 kW | Chassis C4.3 | C4.4.

Riedel Cooling Chiller type	Kool°M 130 C4.3	Kool°M 150 C4.3	Kool°M 170 C4.3	Kool°M 200 C4.4
<b>Net cooling capacity<sup>1</sup> at 20°C water outlet temperature<sup>1</sup></b>				
Ambient temperature 32°C	136 kW (50Hz) 141 kW (60 Hz)	155 kW (50Hz) 164 kW (60 Hz)	165 kW (50Hz) 182 kW (60 Hz)	180 kW (50Hz) 198 kW (60 Hz)
Ambient temperature 50°C	105 kW (50Hz) 109 kW (60 Hz)	117 kW (50Hz) 121 kW (60 Hz)	124 kW (50Hz) 137 kW (60 Hz)	136 kW (50Hz) 150 kW (60 Hz)
<b>Net cooling capacity<sup>1</sup> at 10°C water outlet temperature<sup>1</sup></b>				
Ambient temperature 32°C	98 kW (50Hz) 105 kW (60 Hz)	111 kW (50Hz) 125 kW (60 Hz)	122 kW (50Hz) 135 kW (60 Hz)	135 kW (50Hz) 148 kW (60 Hz)
Ambient temperature 50°C	76 kW (50Hz) 79 kW (60 Hz)	86 kW (50Hz) 91 kW (60 Hz)	92 kW (50Hz) 101 kW (60 Hz)	100 kW (50Hz) 109 kW (60 Hz)
Power consumption with 3 bar pump at nominal point <sup>1,4</sup>	38 kW (50 Hz) 48 kW (60 Hz)	48 kW (50 Hz) 60 kW (60 Hz)	54 kW (50 Hz) 67 kW (60 Hz)	59 kW (50 Hz) 74 kW (60 Hz)
Refrigerant	R513A			
Coolant medium	Water / water-glycol mixture			
Ambient temperature range <sup>2</sup>	- 20 °C to + 55 °C			
Coolant outlet temperature range <sup>3</sup>	- 5 °C to + 30 °C			
Temperature stability	± 1 K / (± 0,5 K)			
Coolant flow (nominal volume flow)	21.0 m <sup>3</sup> /h	23.5 m <sup>3</sup> /h	26.0 m <sup>3</sup> /h	31.0 m <sup>3</sup> /h
Free pump pressure <sup>4</sup>	3 bar / 5 bar			
Tank volume	400 l		600 l	
Cooling air volume flow	48,000 m <sup>3</sup> /h			
Sound pressure level in 5m	67 dB(A)			
Power supply <sup>5</sup> bifrequent	3Ph / 400 V 3Ph / 460V			
Maximum power/current consumption: <sup>6</sup> 50Hz   60Hz	66 kW / 115A 80 kW / 114A	84 kW / 145A 99 kW / 143A	91 kW / 161A 109 kW / 173A	99 kW / 177A 120 kW / 204A
Maximum back-up fuse	160 A		200 A	250 A
Coolant connections	2 1/2" IG		3" IG	
Weight (net)	1,300 kg	1,350 kg	1,400 kg	1,600 kg
Dimensions (W x H x D)	1,105 x 2,037 x 2,858 mm			1,105 x 2,037 x 3,140 mm
SEPR 2016/2281 <sup>7</sup>	5.25	5.01	5.26	5.20

<sup>1</sup> Net cooling capacity without considering the pump loss capacity at the design point.

<sup>2</sup> Standard version: Ambient temperature range + 5 °C to 45 °C, indoor installation.

<sup>3</sup> Standard version: Medium temperature >15°C.

<sup>4</sup> Available pump pressure at nominal volume flow; other pumps in the standard portfolio.

<sup>5</sup> Voltage difference +/- 10 %; other voltage versions on request.

<sup>6</sup> Calculated maximum power/current consumption of all components (50 Hz/60 Hz, standard pump).

<sup>7</sup> Seasonal Energy Performance Ratio.



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