

Smart Refrigeration

sigma



sigma water chiller 5 kW – 320 kW, plug and play or specified for customer needs. Micro-channel technology for highest efficiency.

gamma



Immersion chiller 5 kW – 80 kW for oil or emulsion to be fitted directly into the coolant tank. Stainless steel evaporator with optimal usage of the ground floor.

alpha



Circulation chiller plug and play 5 kW – 80 kW with plate heat exchanger or shell in tube evaporator for easy maintenance and cleaning.

chilly



Table or small chiller 0,8 – 6 kW, big capacity in ultra compact housing with digital thermostat.

Details, pictures and drawings without obligation and subject to changes - 09/13

Liquid Chiller

Plug and Play package chiller



sigma series

- Plug and Play unit, easy to connect
- Compact design due to micro-channel technology
- Optimized footprint: 160kW cooling capacity in a 2 m² package
- Energy efficient: reduced power consumption
- Low noise level: for indoor factory hall usage
- Environmental friendly: up to 60% less refrigerant gas



5 160 kW

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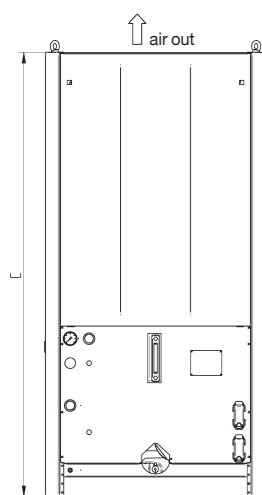
efficient process cooling – made in Germany

TECHNICAL DATA

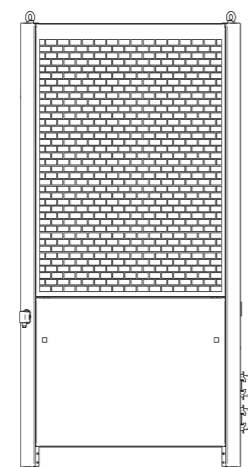
	sigma	5	7	9	13	16	18	22	28	
ambient temp. °C	water out °C	cooling capacity kW								
	10	3,2	5,2	6,6	9,7	11,8	14,1	16,9	21,4	
32	15	4,0	6,2	7,8	11,5	13,9	16,6	20,0	25,3	
	20	4,5	6,9	8,7	12,6	15,4	18,3	21,7	28,0	
	10	2,8	5,1	6,0	9,1	10,9	13,1	16,4	20,2	
37	15	3,6	6,1	7,2	10,7	13,0	15,7	19,2	23,9	
	20	4,1	6,7	7,9	11,8	14,4	17,2	20,5	26,2	
	10	3,2	4,7	5,9	8,7	9,1	12,9	15,6	19,6	
42	15	3,4	5,7	7,1	10,2	11,4	15,4	18,5	22,9	
	20	3,9	6,4	7,9	11,2	13,0	17,0	20,1	26,6	
	refrigerant	type	R134a		R410A					
refrigerant charge	kg	1,3	1,2	1,2	1,4	1,6	2,0	2,0	2,5	
sound pressure level *(1) user side	dB(A)	71				64				
power consumption max. *(2)	kW	4,0	4,4	5,0	6,6	7,3	7,2	8,9	11,9	
current consumption max. *(2)	A	7,6	8,4	8,7	10,0	14,0	14,1	18,8	22,9	
condenser		1								
air flow rate max.	m³/h	4500				6000				
tank capacity	ltr.	120								
water pressure	bar	3,2	3,1	3,0	3,5	3,3	3	2,5	3,2	
nominal water flow	m³/h	0,8	1,2	1,5	2,1	2,6	2,9	3,5	4,3	
water connection	inch	3/4				1 1/4				
fresh water connection	inch	3/4				3/8				
A / B / C	mm	715 / 715 / 1545				1000 / 1000 / 2000				
net weight (approx.)	kg	170		180	190	320		330		

*(1) sound pressure level measured in free field at a distance of 1m and 1,2 m height with tolerance of +/- 1dB(A)
 *(2) at 42°C ambient temperature and 20°C medium temperature

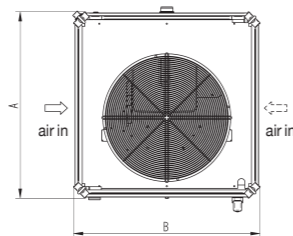
Technical data temporarily



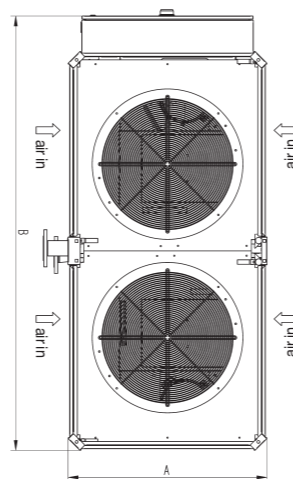
Drawing: Rear view



Drawing: Side view



Drawing: Top view (1 circuit system)



Drawing: Top view (2 circuit system)

TECHNICAL DESCRIPTION:

- Frame and Coax evaporator made in stainless steel
- Economical and low-noise Scroll compressor
- Micro channel condenser made in Aluminum
- Water tank incl. level measurement device
- Bypass valve for pump protection
- Protection against dry running of pump
- External starting function of chiller
- Potential free collected failure alarm
- Star/Delta speed control
- Free programmable temperature control with digital thermostat +/- 1,0 K
- Individual housing color (optional, RAL color)

OPTIONS:

- Speed-controlled compressor, fan or pump
- DC control voltage
- All common power supplies possible
- More powerful air fan for higher exhaust air pressure
- Harting- or Wieland connectors
- Exact temperature control, e.g. +/- 0,1 K
- Ambient temperature > 42° C
- Refrigerant R134a or R404A
- Differential control
- Water cooled condenser
- Winter start up kit for outside installation
- Application specific pump
- Split systems with external condenser
- Additional options on demand

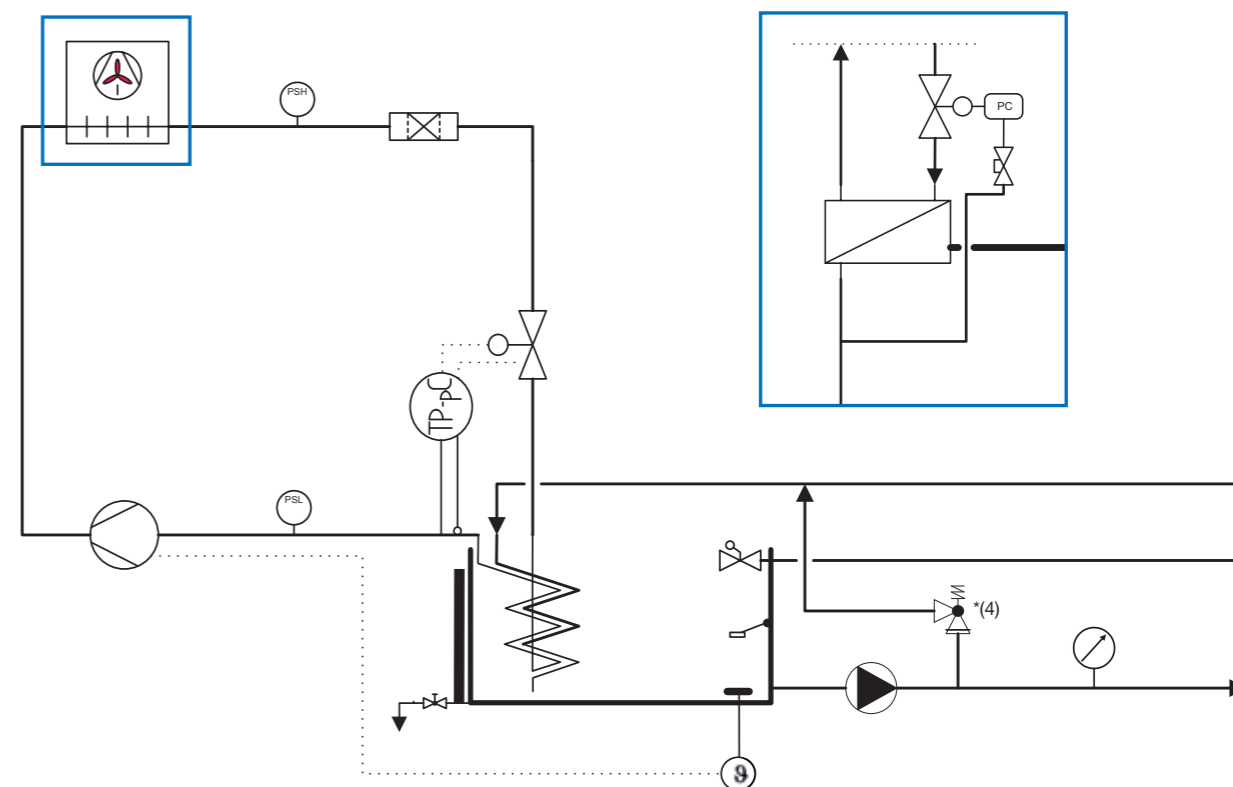
TECHNICAL DATA

	sigma	34	42	52	56	67	80	104	134	160	
ambient temp. °C	water out °C	cooling capacity kW									
	10	25,7	31,4	38,9	42,9	51,4	60,7	77,8	102,8	121,4	
32	15	29,9	37,0	45,5	50,7	59,9	71,3	91,0	119,8	142,6	
	20	33,5	41,5	51,8	56,0	67,1	79,8	103,6	134,2	159,6	
	10	23,9	29,6	35,2	40,5	47,9	57,1	70,4	95,8	114,2	
37	15	28,2	34,9	42,1	47,8	56,5	67,2	84,2	113,0	134,4	
	20	31,1	37,9	49,0	52,4	62,4	73,0	98,0	124,8	146,0	
	10	22,9	25,0	33,3	39,3	45,8	48,4	66,6	91,6	96,8	
42	15	27,4	30,9	40,2	45,8	54,9	59,7	80,4	109,8	119,4	
	20	30,2	35,0	47,3	51,3	60,6	67,4	94,6	121,2	134,8	
	refrigerant	type	R410A								
refrigerant charge	kg	2,8	3,0	4,5	5,5	6,5	6,6	11,0	11,8	12,0	
sound pressure level *(1) user side	dB(A)	64	71				72				
power consumption max. *(2)	kW	14,0	17,9	19,7	20,9	27,3	31,1	41,1	53,9	61,5	
current consumption max. *(2)	A	26,8	30,4	34,4	36,6	46,8	52,0	71,7	92,1	102,5	
condenser		1			2			4			
air flow rate max.	m³/h	6800	10000	10800	15500			32000	31000		
tank capacity	ltr.	330									
water pressure	bar	2,8	2,5	2,5	4,0	3,2	2,9	3,0			
nominal water flow	m³/h	5,1	6,5	7,0	8,0	10,3	12,7	20,5			
water connections	inch	1 1/4		1 1/2			2	2 1/2			
fresh water connection	inch	3/8									
A / B / C	mm	1000 / 1000 / 2000						1000 / 2000 / 2000			
net weight (approx.)	kg	340	350	370	380	430	440	700	830	850	

*(1) sound pressure level measured in free field at a distance of 1m and 1,2 m height with tolerance of +/- 1dB(A)
 *(2) at 42°C ambient temperature and 20°C medium temperature

Technical data temporarily

Flow chart with air cooled condenser



Flow chart with water cooled condenser

