

Cooling water recooling chillers HYFRA Sigma

Trouble-free. Flexible. Efficient.

A range of optional equipment allows the HYFRA Sigma series to adapt optimally to customer requirements. With a cooling capacity of 1.4 to 91 Tons, HYFRA Sigma models are dimensioned to meet the major challenges of laser and machine tool applications.



Key data HYFRA Sigma

- ✓ **Power range:**
1.4 to 91 Tons
- ✓ **Medium:**
Water
- ✓ **Footprint:**
1.4 – 8 Tons on footprint of 0.5 m²;
9.7 – 22.8 Tons power in only 1 m²;
Up to 45.5 Tons power in only 2 m²;
Up to 91 Tons power in only 4 m²
- ✓ **Optimized:**
Equipped with HYFRA FleXX Technology and various control options
- ✓ **Application:**
Machine tool applications

Technical data HYFRA Sigma



HYFRA Sigma model no.		5	7	9	13	16	18	22	28	34	42	52	56	67	80	104	134	160	210	270	320																																																																	
Performance data																																																																																						
Ambient °F	Refrigerant °F	Cooling capacity Tons																																																																																				
	Water ^{c)}																																																																																					
89.6	59	1.1	1.8	2.2	3.3	4.0	4.7	5.7	7.2	8.5	10.5	12.9	14.4	17.0	20.3	25.9	34.1	40.5	51.8	68.1	81.1																																																																	
	68	1.3	2.0	2.5	3.6	4.4	5.2	6.2	8.0	9.5	11.8	14.7	15.9	19.1	22.7	29.5	38.2	45.4	58.9	76.3	90.8																																																																	
98.6	59	1.0	1.7	2.0	3.0	3.7	4.5	5.5	6.8	8.0	9.9	12.0	13.6	16.1	19.1	23.9	32.1	38.2	47.9	64.3	76.4																																																																	
	68	1.2	1.9	2.2	3.4	4.1	4.9	5.8	7.4	8.4	10.8	13.9	14.9	17.7	20.8	27.9	35.5	41.5	55.7	71.0	83.0																																																																	
107.6	59	1.0	1.6	2.0	2.9	3.2	4.4	5.3	6.5	7.8	8.8	11.4	13.0	15.6	17.0	22.9	31.2	34.0	45.7	62.4	67.9																																																																	
	68	1.1	1.8	2.2	3.2	3.7	4.8	5.7	7.6	8.6	10.0	13.4	14.6	17.2	19.2	26.9	34.5	38.3	53.8	68.9	76.6																																																																	
Technical data																																																																																						
Refrigerant		R134a										R410A																																																																										
Refrigerant charge	lbs	2.9	2.6	2.6	3.1	3.5	4.4	4.4	5.5	6.2	6.6	11.7	12.1	14.3	14.6	24.3	26.0	29.1	48.5	52.0	52.9																																																																	
Sound pressure level ^{a)} user side	B	6.8					6.6					6.4					7.1					7.2					7.7					7.9					8.0																																																	
Power consumption max. ^{b)}	kW	3.4	4.4	5.0	6.4	7.3	7.3	9.2	12.0	13.3	17.8	19.5	20.9	27.3	31.1	40.5	53.9	61.6	81.8	107.0	135.0																																																																	
Current consumption max. ^{b)}	A	6.6	8.4	8.7	11.7	14.0	14.0	19.1	23.0	22.6	30.4	34.4	36.6	46.8	52.0	70.6	92.1	102.5	160.0	200.0	250.0																																																																	
Condenser		1					2					1					2					4					8																																																											
Max. airflow rate	gpm	19813					22014.4					24215.8					44028.8					47551.1					68244.7					95102.2					136489.3					233352.7					285307																																							
Tank capacity	gal	31.7										87.2										118.9										124.2																																																						
Water pressure	psi	46.4	45	43.5	50.8	47.9	43.5	36.3	40.6	40.6	36.3	36.3	58	46.4	56.6	43.5					46.4	43.5	40.6																																																															
Nominal water flow	gpm	3.5	5.3	6.6	9.2	11.4	12.8	15.4	18.9	22.5	28.6	30.8	35.2	45.3	55.9	90.3					158.5	176.1	202.5																																																															
Water connection	inch	3/4					1 1/4					1 1/2					2					2 1/2					4					4					4																																																	
Dimensions and weight																																																																																						
Length	inch	28.1										39.4										78.7										86.6																																																						
Width	inch	28.1										39.4										78.7										78.7																																																						
Height	inch	61.2										78.7										78.7										78.7																																																						
Empty weight	lbs	374.8					396.8					418.9					440.9					463					749.6					771.6					815.7					837.8					925.9					970					1785.7					1829.8					1940.1					3968.3					4188.8					4365.2				

a) Sound pressure level measured in free field at 1 m distance and 1.2 m (tolerance +/- 0.1 B) incl. compressor operation without start / stop phase

b) at 107.6 °F ambient temperature and 68 °F medium temperature

c) For outlet temperatures below 59 °F please contact your HYFRA sales representative.

Cooling water recooling chillers HYFRA Sigma c

Compact. Cost-optimized. Plug-in.

Up to 40 % height reduction for improved integration into various plant layouts.



Key data HYFRA Sigma c

- ✓ **Power range:**
1.4 – 4.5 Tons
- ✓ **Medium:**
Water
- ✓ **Footprint:**
1.4 – 4.5 Tons on footprint of 0.5 m²
- ✓ **Optimized:**
Up to 40 % height reduction
- ✓ **Application:**
Machine tool applications

Technical data HYFRA Sigma c



HYFRA Sigma c model no.		c 5	c 7	c 9	c 13	c 16
Performance data						
Ambient °F	Refrigerant °F	Cooling capacity Tons				
	Water °C					
89.6	59	1.3	1.8	2.1	3.0	3.6
	68	1.5	2.1	2.5	3.6	4.2
98.6	59	1.1	1.5	1.8	2.6	3.2
	68	1.3	1.9	2.3	3.0	3.8
107.6	59	0.9	1.3	1.6	2.2	3.0
	68	1.1	1.7	2.1	2.6	3.6

Technical data						
Refrigerant		R134a	R410A			
Refrigerant charge	lbs	2.4				
Sound pressure level ^{a)} user side	B	6.8				7.1
Power consumption max. ^{b)}	Tons	0.9	1.2	1.4	1.7	2.0
Current consumption max. ^{b)}	A	6.0	7.8	8.1	10.5	13.4
Condenser		1				
Max. airflow rate	gpm	14529.5				19813
Tank capacity	gal	6.9				
Water pressure	bar	49.3	47.9	46.4	45.0	43.5
Nominal water flow	gpm	0.3	0.4	0.5	0.6	0.7
Water connection	Zoll	3/4				
Fresh water connection	Zoll	3/4				

Dimensions and weight						
Length	inch	28.0				
Width	inch	32.3				
Height	inch	36.6				
Empty weight	lbs	251.3	257.9	262.4	286.6	

a) Sound pressure level measured in free field at 1 m distance and 1.2 m (tolerance +/- 0.1 B) incl. compressor operation without start / stop phase

b) at 107.6 °F ambient temperature and 68 °F medium temperature

c) For outlet temperatures below 59 °F please contact your HYFRA sales representative.