

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 5 to 320 kW, HYFRA Sigma models are dimensioned to meet the major challenges of laser and machine tool applications.



Key data HYFRA Sigma

- ✓ **Power range:**
5 – 320 kW
- ✓ **Medium:**
Water
- ✓ **Footprint:**
5 – 28 kW on footprint of 0.5 m²
Up to 160 kW power in only 1 m²
Up to 320 kW power in only 2 m²
- ✓ **Optimized:**
Equipped with HYFRA FleXX Technology and various control options
- ✓ **Application:**
Machine tool applications

Technical data HYFRA Sigma



| HYFRA Sigma model no. (kW) | | 5 | 7 | 9 | 13 | 16 | 18 | 22 | 28 | 34 | 42 | 52 | 56 | 67 | 80 | 104 | 134 | 160 | 210 | 270 | 320 | | | | | | | | | | |
|--|---------------------|---------------------|-----|-----|------|------|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|----|----|-------|-------|-----|-----|--|--|
| Performance data | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ambient °C | Refrigerant °C | Cooling capacity kW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Water ^{c)} | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32 | 15 | 4.0 | 6.2 | 7.8 | 11.5 | 13.9 | 16.6 | 20.0 | 25.3 | 29.9 | 37.0 | 45.5 | 50.7 | 59.9 | 71.3 | 91.0 | 119.8 | 142.6 | 182.0 | 239.6 | 285.2 | | | | | | | | | | |
| | 20 | 4.5 | 6.9 | 8.7 | 12.6 | 15.4 | 18.3 | 21.7 | 28.0 | 33.5 | 41.5 | 51.8 | 56.0 | 67.1 | 79.8 | 103.6 | 134.2 | 159.6 | 207.2 | 268.4 | 319.2 | | | | | | | | | | |
| 37 | 15 | 3.6 | 6.1 | 7.2 | 10.7 | 13.0 | 15.7 | 19.2 | 23.9 | 28.2 | 34.9 | 42.1 | 47.8 | 56.5 | 67.2 | 84.2 | 113.0 | 134.4 | 168.4 | 226.0 | 268.8 | | | | | | | | | | |
| | 20 | 4.1 | 6.7 | 7.9 | 11.8 | 14.4 | 17.2 | 20.5 | 26.2 | 31.1 | 37.9 | 49.0 | 52.4 | 62.4 | 73.0 | 98.0 | 124.8 | 146.0 | 196.0 | 249.6 | 292.0 | | | | | | | | | | |
| 42 | 15 | 3.4 | 5.7 | 7.1 | 10.2 | 11.4 | 15.4 | 18.5 | 22.9 | 27.4 | 30.9 | 40.2 | 45.8 | 54.9 | 59.7 | 80.4 | 109.8 | 119.4 | 160.8 | 219.6 | 238.8 | | | | | | | | | | |
| | 20 | 3.9 | 6.4 | 7.9 | 11.2 | 13.0 | 17.0 | 20.1 | 26.6 | 30.2 | 35.0 | 47.3 | 51.3 | 60.6 | 67.4 | 94.6 | 121.2 | 134.8 | 189.2 | 242.4 | 269.6 | | | | | | | | | | |
| Technical data | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Refrigerant | | R134a | | | | | | | | | | R410A | | | | | | | | | | | | | | | | | | | |
| Refrigerant charge | kg | 1.3 | 1.2 | 1.2 | 1.4 | 1.6 | 2.0 | 2.0 | 2.5 | 2.8 | 3.0 | 5.3 | 5.5 | 6.5 | 6.6 | 11.0 | 11.8 | 13.2 | 22.0 | 23.6 | 24.0 | | | | | | | | | | |
| Sound pressure level ^{a)} user side | dB(A) | 68 | | | | | 66 | | | | | 64 | 71 | | | | | 72 | | | | | 77 | 79 | 80 | | | | | | |
| 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 | m ³ /h | 4500 | | | | | 5000 | | | | | 5500 | 10000 | 10800 | 15500 | | | | | 21600 | 31000 | | | | | 53000 | 64800 | | | | |
| Tank capacity | l | 120 | | | | | | | | | | 330 | | | | | | | | | | 450 | | | | | 470 | | | | |
| Water pressure | bar | 3.2 | 3.1 | 3.0 | 3.5 | 3.3 | 3.0 | 2.5 | 2.8 | 2.8 | 2.5 | 2.5 | 4.0 | 3.2 | 3.9 | 3.0 | | | | | 3.2 | 3.0 | 2.8 | | | | | | | | |
| Nominal water flow | m ³ /h | 0.8 | 1.2 | 1.5 | 2.1 | 2.6 | 2.9 | 3.5 | 4.3 | 5.1 | 6.5 | 7.0 | 8.0 | 10.3 | 12.7 | 20.5 | | | | | 36.0 | 40.0 | 46.0 | | | | | | | | |
| Water connection | inch | 3/4 | | | | | 1 1/4 | | | | | 1 1/2 | | | | | 2 | 2 1/2 | | | | | 4 | 4 | 4 | | | | | | |
| Fresh water connection | inch | 3/4 | | | | | | | | | | 3/8 | | | | | | | | | | 3/8 | | | | | 3/8 | 3/8 | 3/8 | | |
| Dimensions and weight | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Length | mm | 715 | | | | | | | | | | 1000 | | | | | | | | | | 2000 | | | | | 2200 | | | | |
| Width | mm | 715 | | | | | | | | | | 1000 | | | | | | | | | | 2000 | | | | | 2000 | | | | |
| Height | mm | 1554 | | | | | | | | | | 2000 | | | | | | | | | | 2000 | | | | | 2000 | | | | |
| Empty weight | kg | 170 | 180 | 190 | 200 | | | | | 210 | 340 | 350 | 370 | 380 | 420 | 440 | 810 | 830 | 880 | 1800 | 1900 | 1980 | | | | | | | | | |

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

b) at 42 °C ambient temperature and 20 °C medium temperature

c) For outlet temperatures below 15 °C 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:**
5 – 16 kW
- ✓ **Medium:**
Water
- ✓ **Footprint:**
5 – 16 kW 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. (kW) | | c 5 | c 7 | c 9 | c 13 | c 16 |
|------------------------------|----------------|---------------------|-----|-----|------|------|
| Performance data | | | | | | |
| Ambient °C | Refrigerant °C | Cooling capacity kW | | | | |
| | Water °C | | | | | |
| 32 | 15 | 4.4 | 6.4 | 7.4 | 10.7 | 12.7 |
| | 20 | 5.3 | 7.3 | 8.7 | 12.7 | 14.7 |
| 37 | 15 | 3.7 | 5.4 | 6.4 | 9.1 | 11.1 |
| | 20 | 4.7 | 6.7 | 8.0 | 10.7 | 13.3 |
| 42 | 15 | 3.1 | 4.7 | 5.8 | 7.7 | 10.4 |
| | 20 | 4.0 | 6.0 | 7.5 | 9.3 | 12.7 |

| | | | | | | |
|--|-------------------|-------|-------|-----|------|------|
| Technical data | | | | | | |
| Refrigerant | | R134a | R410A | | | |
| Refrigerant charge | kg | 1.1 | | | | |
| Sound pressure level ^{a)} user side | dB(A) | 68 | | | | 71 |
| Power consumption max. ^{b)} | kW | 3.2 | 4.2 | 4.8 | 6.0 | 7.1 |
| Current consumption max. ^{b)} | A | 6.0 | 7.8 | 8.1 | 10.5 | 13.4 |
| Condenser | | 1 | | | | |
| Max. airflow rate | m ³ /h | 3300 | | | | 4500 |
| Tank capacity | l | 26 | | | | |
| Water pressure | bar | 3.4 | 3.3 | 3.2 | 3.1 | 3.0 |
| Nominal water flow | m ³ /h | 1.2 | 1.5 | 1.8 | 2.1 | 2.4 |
| Water connection | Zoll | 3/4 | | | | |
| Fresh water connection | Zoll | 3/4 | | | | |

| | | | | | | |
|-----------------------|----|-----|-----|-----|-----|--|
| Dimensions and weight | | | | | | |
| Length | mm | 710 | | | | |
| Width | mm | 820 | | | | |
| Height | mm | 930 | | | | |
| Empty weight | kg | 114 | 117 | 119 | 130 | |

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

b) at 42 °C ambient temperature and 20 °C medium temperature

c) For outlet temperatures below 15 °C please contact your HYFRA sales representative.