



HYFRA Flex Technology

Energy efficient. Flexible. Reliable.

Customized. Cooling. Solutions.



FleXX Technology

Flexibility and the ability to adapt to varied market requirements and operating conditions make our new FleXX Technology a key competitive advantage for machine manufacturers and operators. Thanks to the demand-based operation of various components, HYFRA chillers are not only highly energy-efficient, economical, and quiet; they also operate with very little wear, greatly reducing life cycle costs.

For flexible use in a range of industrial applications, the HYFRA Alpha, Gamma and Sigma with six models each and a range of cooling capacities from 3 till 64 kW are available for different media.

For cooling capacity of up to 64 kW, a range of HYFRA series featuring FleXX Technology are available:



HYFRA Alpha FleXX
oil and emulsion
circulating chillers



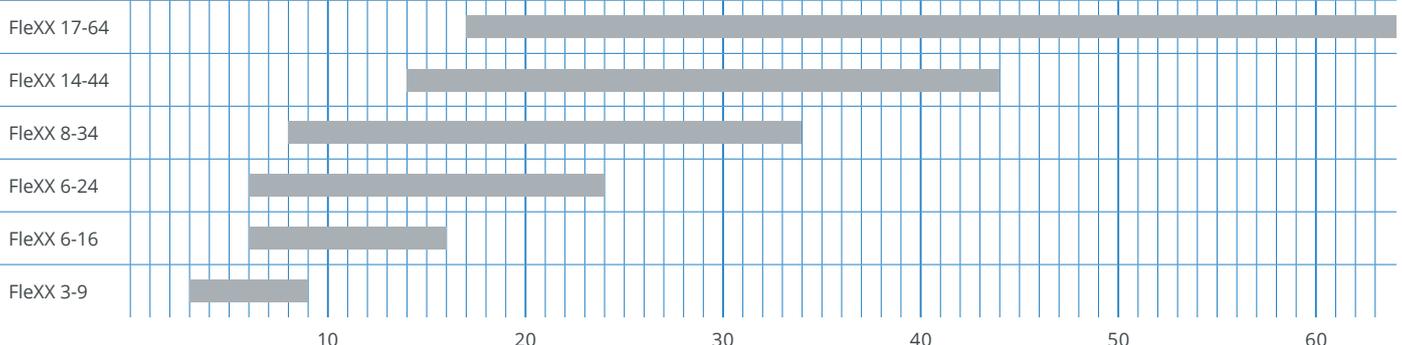
HYFRA Gamma FleXX
oil and emulsion
immersion chillers



HYFRA Sigma FleXX
water recirculating
chillers



Cooling Capacity Overview (kW)



Chillers with innovative technology

The flexibility, efficiency, and reliability of HYFRA chillers are the result of unique technical innovation. With demand-based operation and microchannel condensers, HYFRA gives intelligent answers to the challenges of tomorrow.

Freely programmable controllers

The HYFRA models with Flex Technology are equipped with a FreeAdvance controller. It is freely programmable and has an analog and digital input and output, a touchpanel and an FDO (fast digital output) interface for quickly reading out operating data.

The FreeAdvance controller offers a menu navigation in multiple languages and remote maintenance connection, for example. Of course we can flexibly integrate special customer requirements into each of the variants.

Efficiency thanks to speed control

Demand-based operation of the EC compressor (electronically commutated), EC fan, and electronic expansion valve significantly reduces the power consumption of the chiller compared to unregulated technology. For ideal chiller operation, the PLC control system reliably detects application's the heat load and precisely adjusts the relevant components. Machine manufacturers and operators can be sure that the chiller is always operating with ideal efficiency.

Flexibility for international use

HYFRA chillers are prepared for global use. They are equipped with a frequency converter for easy changeover of the power supply. The chiller will not need to be retrofitted in such a case. Warehousing and model diversity are reduced considerably for machine manufacturers, simplifying distribution and logistics.



HYFRA Alpha Flex

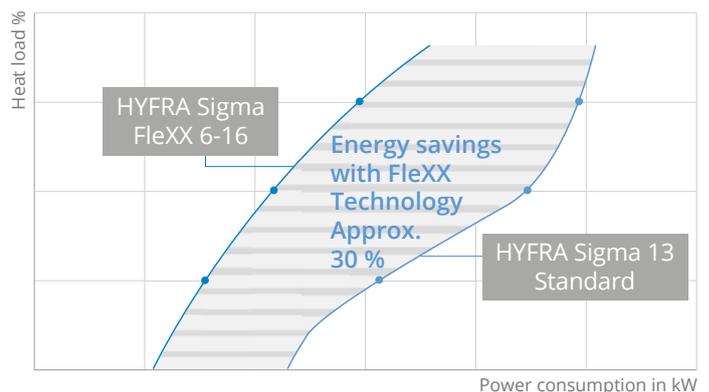
HYFRA Gamma Flex

HYFRA Sigma Flex

- ✔ Low operating costs
- ✔ Lower refrigerant requirement
- ✔ Temperature precision up to ± 0.1 K
- ✔ Operational reliability
- ✔ Operating data acquisition and evaluation
- ✔ High service time and cost transparency

Safety plus trouble-free operation

Continuously variable, smooth starting or compressor braking avoids high stress on components, preventing wear. Continuous recording of operating data enables preventive maintenance and fault rectification functions. If required, the control system can also be accessed using remote maintenance. This reduces service costs significantly and effectively prevents system downtime.



HYFRA FleXX Technology Model Overview

HYFRA FleXX model no. (kW)		3-9	6-16	6-24	8-34	14-44	17-64
Cooling capacity, T _U 32 °C	kW	9.9	16.5	24.5	34.6	44.7	64.0
Refrigerant		R410A					
Max. ambient temp.	°C	42					
Max. temperature	°C	40					
Power consumption ^{a)}	kW	2.77	5.47	7.22	12.46	14.39	17.8
Sound pressure level	dB(A)	66.4	67.1	69.3	70.1	72.6	74.4
Voltage		3 × 380–480 V +6/-10 % 50/60 Hz (depending on the pump)					
HYFRA Alpha FleXX Circulating chillers for emulsion 25 °C or oil 30 °C							
Airflow rate	m ³ /h	5,600		8,000		12,000	16,200
Flow rate	m ³ /h	3.5 / 5.0 ^{b)}		6.5 / 10.0 ^{b)}			13.0 / 20.0 ^{b)}
Pump pressure	bar	1.0					
Weight	kg	190	210	290	310	320	390
Length	mm	855		1,160			1,500
Width	mm	715		1,000			
Height	mm	1,555		2,055			
HYFRA Gamma FleXX Immersion chillers for emulsion 25 °C or oil							
Airflow rate	m ³ /h	5,600		8,000		12,000	16,200
Weight	kg	160 / 170 ^{b)}	170 / 190 ^{b)}	290 / 340 ^{b)}	310 / 390 ^{b)}	320 / 420 ^{b)}	500 / 500 ^{b)}
Length	mm	890		1,210			1,605
Width	mm	785		1,085			
Height	mm	1,420		2,000			
HYFRA Sigma FleXX Recirculating chillers for water 20 °C							
Airflow rate	m ³ /h	5,600		8,000		12,000	16,200
Max. temperature	°C	40					
Tank capacity	l	120		300			
Flow rate	m ³ /h	1.6	2.6	4.6	5.1	8.0	10.5
Pump pressure	bar	2.8	3.0	2.8	2.5		3.5
Weight	kg	200	210	350	370	380	480
Length	mm	855		1,160			1,500
Width	mm	715		1,000			
Height	mm	1,555		2,055			

a) Without pump/stirrer. Nominal conditions T_U/T_{Med}: 32 °C/20 °C water; 32 °C/25 °C emulsion; 32 °C/30 °C oil | b) Values for the medium of oil 30 °C
 Subject to technical changes. | Options: Numerous options and accessories for the HYFRA series are available on request.

For cooling capacities from 30-85 kW / 30-165 kW / 30-320 kW please contact your HYFRA sales representative or our central customer service team: +49 2687 898-998.

Customized service solutions for all requirements



Turnkey Solutions

Depend on reliability and leave the project management to our experienced experts – from system planning to acceptance. We will take on the responsibility for material procurement for system construction and carry out all of the installation work with our technicians. With our help, you will have an operational cooling system from a single source.



Training

Optimal operation and maintenance enable a cooling system to develop its full potential and work perfectly at all times. We provide customized training for your operating personnel and maintenance technicians. We will thoroughly train them to use our systems properly so that your company reaps the long-term benefits of perfect production results.



Maintenance & Service

In order to deliver top performance continuously, cooling systems must be serviced regularly. This also helps effectively avoid expensive repairs and unexpected production downtime. And maintenance measures can significantly extend your system's life cycle. At HYFRA, you can select one of several service packages with one-year terms. They include maintenance and services such as start up and training sessions as well.



Repair & Maintenance

HYFRA Service is available worldwide so we can guarantee 100 % system availability as soon as possible if a malfunction occurs. In case of failure, our own service team and our local partner's experienced cooling system technician will find a quick solution. We will provide you with transparent information on the costs and duration of service measures at any time.



Modification & Customization

We can customize HYFRA standard models to satisfy your detailed requirements. A variety of equipment and control options are available. As required, we will also provide a modification kit if your conditions change.

The HYFRA Service promise

Expert

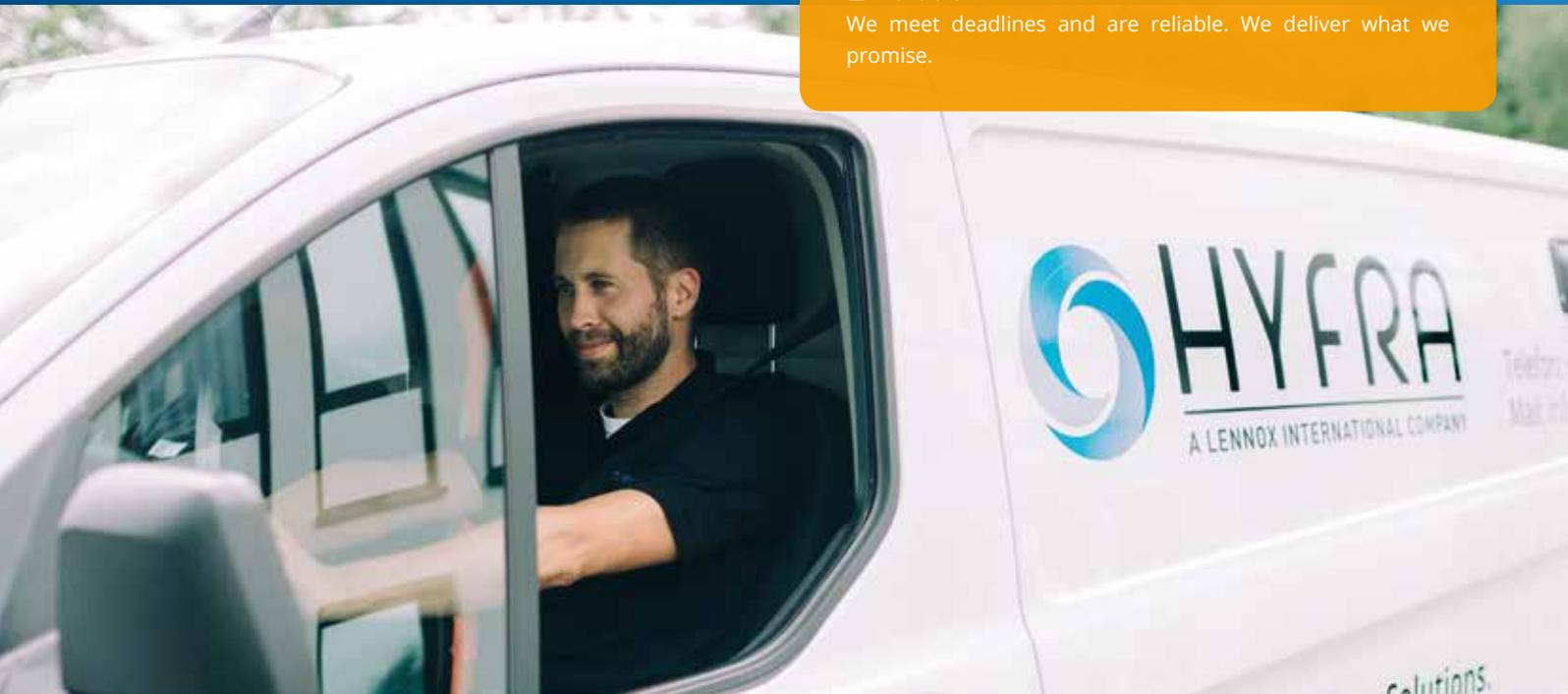
Our service team and the employees of our local partners are thoroughly qualified and regularly attend training sessions.

Efficient

We carry out orders quickly in order to facilitate fast system availability.

Reliable

We meet deadlines and are reliable. We deliver what we promise.



Customized. Cooling. Solutions.

HYFRA is one of the most experienced suppliers of customized process cooling solutions. We cover the entire range of industrial process cooling solutions from plug & play compact machines to individually developed systems with extensive services. Our highly efficient, reliable machines are the key to our customers' success.

As a LENNOX International company, we help mechanical engineers in more than 50 countries to continually set new standards of performance.

2017-12, subject to technical changes.

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