

## System separator (water to water chiller)

### Economical, offering value and sustainability



Many institutes have in-house cooling water supply. This cooling water is usually too cold, e.g. to cool a laser or an electron microscope or the water is often poor quality, has an inconsistent flow and/or temperature.

The KÜHLMOBIL system separator offers the ideal solution to these problems and has very small dimensions. It works without a compressor and therefore without refrigerant - energy expenditure is necessary only for the delivery pump, since the cooling capacity of the domestic water system is used. The sketch on the following page shows the basic operating principle. The purchase price of such a device with this higher performance is far below that of a compressor-cooled device.

Water to water chillers from Van der Heijden-Labortechnik GmbH are available in the same performance variants as the standard KÜHLMOBIL. All models are specially designed according to the existing cooling water network and can be supplied up to a power of 150 kW. The standard models are all equipped with a bypass, pressure gauge and flow monitor.

In the case of faults of any kind, the device will be switched off. The temperature control is carried out on the secondary side by a valve on the primary side automatically regulating the amount of domestic water. The stepper motor works in fine steps, so that a high temperature stability is achieved.

This type of cooler is lower in price compared to refrigeration systems with compressors, but with the higher benefits or lower energy consumption, size and noise levels, being extremely compact, particularly well soundproofed and relatively quiet at high power. Waste heat to the surrounding area is almost negligible. There are no condensation problems, as the primary side is essentially isolated.

If these types of KÜHLMOBIL are rigged, feet instead of casters are available.

This device works with a 3-way motor valve. The analogue control signals (0-10 V) allow constant temperatures to be achieved and temperature fluctuations to be quickly compensated. The unit is also

available with an engine valve, which is controlled by a microprocessor-controlled PID controller.

## Technical data

Technical data	KÜHLMOBIL 1kW	KÜHLMOBIL 2.1kW	KÜHLMOBIL 3.2kW	KÜHLMOBIL 4.3kW
Model and part no.	002-WW-B400	121-WW-B400	210-WW-B400	311-WW-B400
(System separator)	3-101097	3-101098	3-101099	3-101145
Cooling power @ 20°C water supply tempera-ture and max. 10°C primary side	1000 watt	2100 watt	3200 watt	4300 watt
Nominal capacity	4 l/min. @ 2.2 bar	4 l/min. @ 2.2 bar	5 l/min. @ 4.0 bar	5 l/min. @ 4.0 bar
Max. capacity	10 l/min.	10 l/min.	40 l/min.	40 l/min.
Max. pressure	3.5 bar	3.5 bar	4.5 bar	4.5 bar
Dimensions W x D x H	360 x 470 x 590 mm	360 x 470 x 590 mm	430 x 470 x 695 mm	430 x 470 x 695 mm
Current	230 V/50 Hz/1 PH	230 V/50 Hz/1 PH	230 V/50 Hz/1 PH	230 V/50 Hz/1 PH
Sound pressure level	approx. ≤ 49 dB(A) Measurement on the front side at a distance of 2 m	approx. ≤ 49 dB(A) Measurement on the front side at a distance of 2 m	approx. ≤ 51 dB(A) Measurement on the front side at a distance of 2 m	approx. ≤ 51 dB(A) Measurement on the front side at a distance of 2 m
Weight	32 kg	32 kg	41 kg	41 kg





## Technical data

Technical data	KÜHLMOBIL 5kW	KÜHLMOBIL 7kW	KÜHLMOBIL 9.5kW	KÜHLMOBIL 14.5kW
Model and part no. (System separator)	312-WW-B400 3-101100	423-WW-B400 3-101101	442-WW-B400 3-101102	534-WW-B400 3-101104
Cooling power @ 20°C water supply tempera-ture and max. 10° C primary side	5000 watt	7000 watt	9500 watt	14500 watt
Nominal capacity	5 l/min. @ 4.0 bar	1200 l/h @ 5.0 bar	1200 l/h @ 5.0 bar	1200 l/h @ 5.0 bar
Max. capacity	40 l/min.	4000 l/h	4000 l/h	4000 l/h
Max. pressure	4.5 bar	5.6 bar	5.6 bar	5.6 bar
Dimensions W x D x H	470 x 560 x 690 mm	580 x 660 x 820 mm	580 x 660 x 820 mm	590 x 620 x 1205 mm
Current	230 V/50 Hz/1 PH	230 V/50 Hz/1 PH	230 V/50 Hz/1 PH	230 V/50 Hz/1 PH
Sound pressure level	approx. ≤ 52 dB(A) Measurement on the front side at a distance of 2 m	approx. ≤ 53 dB(A) Measurement on the front side at a distance of 2 m	approx. ≤ 53 dB(A) Measurement on the front side at a distance of 2 m	approx. ≤ 53 dB(A) Measurement on the front side at a distance of 2 m
Weight	49 kg	84 kg	85 kg	98 kg



## Technical data

Technical data	KÜHLMOBIL 16kW	KÜHLMOBIL 20kW	KÜHLMOBIL 25kW	KÜHLMOBIL 35kW
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Technical data	KÜHLMOBIL 16kW	KÜHLMOBIL 20kW	KÜHLMOBIL 25kW	KÜHLMOBIL 35kW
Model and part no. (System separator)	543-WW-B400 3-101105	549-WW-B400 3-101107	625-WW-B400 3-101108	635-WW-B400 3-101110
Cooling power @ 20°C water supply tempera-ture and max. 10° C primary side	16000 watt	20000 watt	25000 watt	35000 watt
Nominal capacity	3000 l/h @ 5.4 bar	3000 l/h @ 5.4 bar	3000 l/h @ 5.4 bar	3000 l/h @ 5.4 bar
Max. capacity	6200 l/h	6200 l/h	6200 l/h	6200 l/h
Max. pressure	5.8 bar	5.8 bar	5.8 bar	5.8 bar
Dimensions W x D x H	680 x 730 x 1520 mm	680 x 730 x 1520 mm	680 x 730 x 1520 mm	800 x 850 x 1665 mm
Current	400 V/50 Hz/3 PH	400 V/50 Hz/3 PH	400 V/50 Hz/3 PH	400 V/50 Hz/3 PH
Sound pressure level	approx. ≤ 55 dB(A) Measurement on the front side at a distance of 2 m	approx. ≤ 55 dB(A) Measurement on the front side at a distance of 2 m	approx. ≤ 55 dB(A) Measurement on the front side at a distance of 2 m	approx. ≤ 55 dB(A) Measurement on the front side at a distance of 2 m
Weight	155 kg	160 kg	162 kg	193 kg





## Technical data

Technical data	KÜHLMOBIL 50kW	KÜHLMOBIL 80kW	KÜHLMOBIL 100kW	KÜHLMOBIL 150kW
Model and part no. (System separator)	650-WW-B400 3-101112	680-WW-B400 3-101115	700-WW-B400 3-101116	750-WW-B400 3-101119
Cooling power @ 20°C water supply tempera-ture and max. 10° C primary side	50000 watt	80000 watt	100000 watt	150000 watt
Nominal capacity	4000 l/h @ 5.5 bar	7000 l/h @ 4.1 bar	9000 l/h @ 4.7 bar	14000 l/h @ 2.9 bar
Max. capacity	6200 l/h	15000 l/h	22000 l/h	30000 l/h
Max. pressure	6.5 bar	4.7 bar	5.0 bar	3.7 bar
Dimensions W x D x H	800 x 850 x 1665 mm	980 x 820 x 1770 mm	980 x 820 x 1770 mm	980 x 820 x 1770 mm
Current	400 V/50 Hz/3 PH	400 V/50 Hz/3 PH	400 V/50 Hz/3 PH	400 V/50 Hz/3 PH
Sound pressure level	approx. ≤ 56 dB(A) Measurement on the front side at a distance of 2 m	approx. ≤ 58 dB(A) Measurement on the front side at a distance of 2 m	approx. ≤ 60 dB(A) Measurement on the front side at a distance of 2 m	approx. ≤ 60 dB(A) Measurement on the front side at a distance of 2 m
Weight	207 kg	270 kg	290 kg	352 kg



## **Information required**

**To design such a cooler, the following in-house water data are required:**

- Water outlet temperature of the domestic water side or inlet temperature into the cooler
- Pressure difference of the domestic water network
- What quantity of water is available?

Give us a call.

We are happy to design a suitable device for you!

## **Product request**

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