

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. (System separator) | 002-WW-RB500 3-101613 | 121-WW-RB500 3-101098 | 210-WW-RB500 3-101099 | 311-WW-RB500 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-RB500 3-101614 | 423-WW-RB500 3-101101 | 442-WW-RB500 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

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| Technical data | KÜHLMOBIL 16kW | KÜHLMOBIL 20kW | KÜHLMOBIL 25kW | KÜHLMOBIL 35kW |
|----------------|-------------------|-------------------|-------------------|-------------------|

| 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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