



Ultraclean®/Ultraconstant®

Air-Conditioning Units and Components for Clean Room Applications and Experimental Chambers

Clean room applications for your requirements

Are you looking for a tailored solution for a clean room project? Do you want to have suitable equipment and systems to optimise your production? Or are your plans within a project for high-grade and cost-efficient clean room installations?

If so, then Weiss Klimatechnik is the right address for you. For over 50 years Weiss Klimatechnik has been concerned with manufacturing units and systems for generating optimum air-conditioning environments.

Weiss Klimatechnik has one of the most extensive ranges for clean room applications and experimental chambers that you can turn to. We develop optimum solutions for your requirements based on these product lines.

Tailored solutions

Weiss air-conditioning systems have admirably proven themselves in many fields across the world and are ideally suited for clean-zone applications.

Depending on requirements, the systems are fitted with partial or full air-conditioning involving heating, cooling, humidifying and dehumidifying. Top quality filters ensure clean air for sophisticated clean room air-conditioning.

We provide our customers with integrated systems and components for all clean room classes and applications.

Your benefit:

Weiss Klimatechnik is one of the few companies worldwide that provide systems, air-conditioning units and process technology from a single source.

In working together with Weiss Klimatechnik, our customers particularly value the sound advice given in developing systems, support shown in design planning, close cooperation with installation and startup as well as the service and training.

- **Food Industry**
- **Beverage Industry**
- **Medical technology**
- **Genetic and bio engineering**
- **Laboratories**
- **Pharmaceutics**
- **Pharmacies**
- **Optoelectronics**
- **Microelectronics**
- **Micromechanics**
- **Automotive engineering**
- **Nanotechnology**





Weiss compact air-conditioning units

- Single-module compact air-conditioning units for universal use in clean rooms and experimental chambers
- Compact design with innovative technology
- Air volume flows from 2,000 to 22,000 m³/h
- Temperature constancy: ± 0.5 K
- Humidity constancy: $\pm 2\%$ r.h.



Weiss precision air-conditioning units

- Guarantee ultra-clean and ultra-constant air-conditioning
- Application focus on all fields placing stringent requirements on temperature and humidity
- Air volume flows from 1,000 to 6,000 m³/h
- Temperature constancy: ± 0.2 K
- Humidity constancy: $\pm 2\%$ r.h.



Weiss air-conditioning chamber systems

- For maximum demands on precision air-conditioning and clean room technology, customer-specific construction and design
- Temperature constancy: ± 0.05 K
- Humidity constancy: $\pm 1\%$ r.h.

Compact air-conditioning units

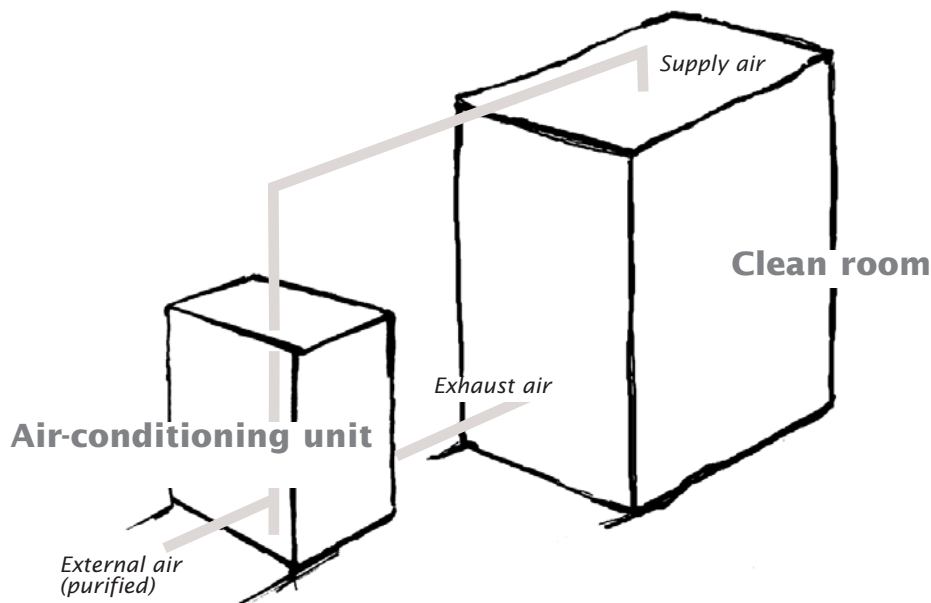
Universal, dependable, compact

The new generation of compact air-conditioning units has been specially developed for universal use for differing air-conditioning and clean room requirements. Compact design combined with innovative technology ensure significant operating cost benefits.

- Nominal volume flow from 2,000 to 22,000 m³/h
- Up- and downflow designs
- Full air-conditioning function with heating, cooling, humidifying and dehumidifying
- Complies with VDI 6022
- Filter class: F7 standard, F9 possible as second stage
- Pumped cold water or active cooling
- Integrated control cabinet
- Temperature constancy: ± 0.5 K
- Humidity constancy: $\pm 2\%$ r.h.



Compact solution



Design variant (upflow) as circulating air appliance with external air proportion

Benefits at a glance

- Set-up possible near the clean room
- Minimum floor space needed
- Short duct and supply stretches
- Easy, rapid installation
- Lateral inspection opening of the heat exchanger
- Service-friendly
- Good cleanability as per VDI 6022

Compact air-conditioning units

| SIZE COMPACT AIR-CONDITIONING UNIT | | 35.3 | 55.3 | 75.3 | 90.3 | 120.3 | 160.3 | 220.3 |
|--|-------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|
| NOMINAL VOLUME FLOW | | | | | | | | |
| Volume flow with max. ext. pressure loss m ³ /h | | 3,500 | 5,500 | 7,500 | 9,000 | 12,000 | 16,000 | 22,000 |
| Max. external pressure loss Pa | | 600 | 900 | 620 | 580 | 900 | 700 | 750 |
| HOUSING DIMENSIONS | | | | | | | | |
| Width | mm | 1,090 | 1,090 | 1,355 | 1,610 | 2,140 | 2,405 | 2,405 |
| Depth | mm | 650 | 850 | 850 | 850 | 850 | 1,100 | 1,100 |
| Height | mm | 1,950 | 1,950 | 1,950 | 1,950 | 1,950 | 1,950 | 1,950 |
| Partial type code (width, depth) | | 10.6 | 10.8 | 13.8 | 16.8 | 21.8 | 24.11 | 24.11 |
| COOLING – COOLING CIRCUIT, AIR-COOLED, EXTERNAL | | | | | | | | |
| Cooling capacity (tc=50 °C) as per EUROVENT | | | | | | | | |
| Suction temp. +27 °C/46% r.h. - total/sens. kW | | 13.4/11.5 | 18.4/17.9 | 29.2/26.2 | 34.9/31.4 | 45.4/41.7 | 54.4/52.3 | 73.1/71.0 |
| Partial type code (DX=direct evaporator) | | DX | DX | DX | DX | DX | DX | DX |
| COOLING – COLD WATER 7/12.5 °C * | | | | | | | | |
| Cooling capacity as per EUROVENT | | | | | | | | |
| Suction temp. +27 °C/46% r.h. - total/sens.kW | | 11.6/9.8 | 26.1/20.4 | 36.6/28.5 | 42.9/33.5 | 60.6/46.8 | 75/58.9 | 106/82.7 |
| Partial type code (CW=cold water) | | CW | CW | CW | CW | CW | CW | CW |
| *other temperatures on request | | | | | | | | |
| OPTIONS | | | | | | | | |
| HEATING – ELECTRIC HEATING | | | | | | | | |
| Product type | | plain tubular heaters, continuously controlled | | | | | | |
| Max. heating capacity | kW | 7.5 | 15 | 15 | 21 | 21 | 21 | 30 |
| Current consumption | A | 10.8 | 21.7 | 21.7 | 30.3 | 30.3 | 30.3 | 43.4 |
| Electrical connected load | kVA | 7.5 | 15 | 15 | 21 | 21 | 21 | 30 |
| HEATING – HOT WATER 70/50 | | | | | | | | |
| Heating capacity at suction temp. 15 °C kW | | 15.9 | 23.9 | 32.4 | 36.2 | 49.2 | 66.5 | 79.2 |
| Hot water volume | m ³ /h | 0.7 | 1 | 1.4 | 1.6 | 2.2 | 2.9 | 3.5 |
| HEATING – HOT WATER 70/50 (PREHEATER)* | | | | | | | | |
| Heating capacity at suction temp. -15 °C kW | | 22 | 34.7 | 47.2 | 57.6 | 79 | 114.6 | 138.5 |
| Hot water volume | m ³ /h | 1 | 1.5 | 2.1 | 2.5 | 3.5 | 5 | 6.1 |
| * Preheater in top-mounted box (only downflow) | | | | | | | | |
| HUMIDIFYING – STEAM GENERATOR | | | | | | | | |
| Product type | | electrode steam humidifier, internal; accuracy +/- 6% | | | | | | |
| Current consumption | A | 4.7 | 7.4 | 10 | 11.9 | 15.9 | 21.1 | 29.1 |
| Rated input | kW | 3.2 | 5 | 6.8 | 8.1 | 10.8 | 14.4 | 19.8 |
| Electrical connected load | kVA | 3.2 | 5 | 6.8 | 8.1 | 10.8 | 14.4 | 19.8 |
| Max. steam output | kg/h | 4.2 | 6.6 | 9 | 10.8 | 14.4 | 19.2 | 26.4 |
| Water supply | bar | 1 - 10 | 1 - 10 | 1 - 10 | 1 - 10 | 1 - 10 | 1 - 10 | 1 - 10 |
| Water conductivity | µS/cm | 125-900 | 125-900 | 125-900 | 125-900 | 125-900 | 125-900 | 125-900 |
| On request | | external humidifier type MK5 P (resistance heating principle); accuracy +/- 2%; also for preheated water | | | | | | |
| FAN MOTOR UNIT | | | | | | | | |
| Product type | | directly driven, free running | | | | | | |
| Nominal motor power | kW | 2.9 | 7.4 | 7.4 | 7.4 | 2 x 7.4 | 2 x 7.4 | 3 x 7.4 |
| Current consumption, max. | A | 4.6 | 12.7 | 12.7 | 12.7 | 2 x 12.7 | 2 x 12.7 | 3 x 12.7 |
| Electrical connected load | kVA | 3.2 | 8.8 | 8.8 | 8.8 | 17.6 | 17.6 | 26.4 |
| Partial type code (D=Downflow/U=Upflow) | | D/U | D/U | D/U | D/U | D/U | D/U | D/U |
| FREQUENCY CONVERTER | | | | | | | | |
| Product type | | static frequency converter | | | | | | |

Compact air-conditioning units

| SIZE COMPACT AIR-CONDITIONING UNIT | 35.3 | 55.3 | 75.3 | 90.3 | 120.3 | 160.3 | 220.3 | |
|---|--|--------------|--------------|--------------|--------------|---------------|----------------|----------------|
| FILTER F7 SUCTION SIDE | | | | | | | | |
| Product type | cassette filter, pocket filter (only downflow), as per DIN EN 779 | | | | | | | |
| FILTER F9 SUCTION SIDE (OPTION) | | | | | | | | |
| Product type | cassette filter, pocket filter (only downflow), as per DIN EN 779. Also available as second filter stage | | | | | | | |
| STANDARD UNIT, COMPLETE | | | | | | | | |
| Complete weight DX/CW | kg | 325/286 | 384/312 | 534/471 | 628/523 | 890/778 | 1153/1038 | 1284/1086 |
| Sound power level at nominal volume flow and ext. pressure loss | Pa | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Exhaust air connection | db (A) | 74 | 70 | 76 | 83 | 76 | 84 | 86 |
| Supply air connection | db (A) | 81 | 77 | 83 | 90 | 83 | 91 | 93 |
| Housing radiation | db (A) | 68 | 58 | 64 | 71 | 64 | 70 | 72 |
| Sound pressure level in free field (1 m distance) | db (A) | 64 | 54 | 59 | 66 | 59 | 66 | 68 |
| Supply voltage | | | | V/Ph/Hz | 400/3/50 | | | |
| Electrical connected load* | kVA | 9.9 | 12.1 | 20.7 | 21.1 | 32.6 | 33.2 | 45.3 |
| Full type code (ex.) | | 35.3DXD10.6N | 55.3DXD10.8N | 75.3DXD13.8N | 90.3DXD16.8N | 120.3DXD21.8N | 160.3DXD24.11N | 220.3DXD24.11N |

*without condenser

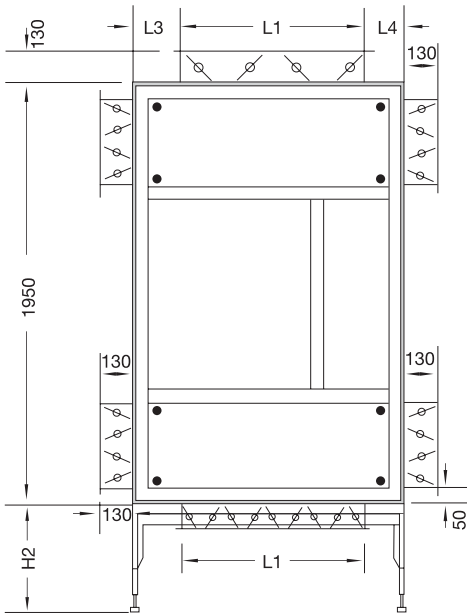
| CONDENSER, AIR-COOLED, EXTERNAL, TYPE KLDR | | | | | | |
|---|-------------------|----------------------|--------|---------|---------|---------|
| TYPE (TA= 35 °C/TC= 50 °C) | | KLDR 2 | KLDR 3 | KLDR 4 | KLDR 5 | KLDR 6 |
| Product type | | axial fan condenserr | | | | |
| Cooling air volume flow, continuous | m ³ /h | 6,700 | 8,500 | 12,400 | 18,000 | 18,400 |
| Max. sound pressure level at 5 m distance | db (A) | 57 | 56 | 60 | 59 | 59 |
| Number of motors | pcs. | 1 | 1 | 2 | 2 | 2 |
| Supply voltage | V | 230 | 230 | 230 | 230 | 230 |
| Capacity | kW | 17 | 27 | 38 | 49 | 71 |
| Current consumption | A | 3.0 | 3.3 | 2 x 3.0 | 2 x 3.3 | 2 x 3.3 |
| Electrical connected load | kVA | 1.3 | 1.3 | 2 x 1.3 | 2 x 1.3 | 2 x 1.3 |
| Overall length | mm | 1,190 | 1,415 | 1,420 | 2,130 | 2,680 |
| Width, vertical air flow | mm | 790 | 1,120 | 1,120 | 1,120 | 1,120 |
| Width, horizontal air flow | mm | 450 | 563 | 540 | 563 | 563 |
| Height, vertical air flow | mm | 885 | 1,105 | 1,105 | 1,105 | 1,105 |
| Height, horizontal air flow | mm | 1,155 | 1,615 | 1,615 | 1,615 | 1,615 |
| Weight | kg | 73 | 109 | 132 | 160 | 217 |

| CONDENSER, AIR-COOLED, EXTERNAL, TYPE KLI | | | | | | |
|--|-------------------|---------------------|----------|----------|----------|---------|
| TYPE (TA= 45 °C/TC= 52 °C) | | KLI | KLI 3 | KLI 4 | KLI 5 | KLI 6 |
| Product Type | | axial fan condenser | | | | |
| Cooling air volume flow, continuous | m ³ /h | 8,280 | 18,360 | 27,720 | 27,000 | 44,064 |
| Max. sound pressure level at 5 m distance | db (A) | 55 | 58 | 60 | 60 | 56 |
| Number of motors | pcs. | 1 | 2 | 3 | 3 | 3 |
| Supply voltage | V | 400 | 400 | 400 | 400 | 400 |
| Capacity | kW | 17.6 | 26.4 | 39.8 | 49.7 | 72.9 |
| Current consumption | A | 1.25 | 2 x 1.25 | 3 x 1.25 | 3 x 1.25 | 3 x 3.1 |
| Electrical connected load | kVA | 1.0 | 1.73 | 2.6 | 2.6 | 6.4 |
| Length | mm | 1,340 | 2,490 | 3,640 | 3,640 | 3,908 |
| Width, vertical air flow | mm | 980.5 | 980.5 | 980.5 | 980.5 | 1,158 |
| Width, horizontal air flow | mm | 800 | 800 | 800 | 800 | 1,225 |
| Height, vertical air flow | mm | 870 | 870 | 870 | 870 | 1,225 |
| Height, horizontal air flow | mm | 920.5 | 920.5 | 920.5 | 920.5 | 1,158 |
| Weight | kg | 113 | 158 | 226 | 235 | 490 |

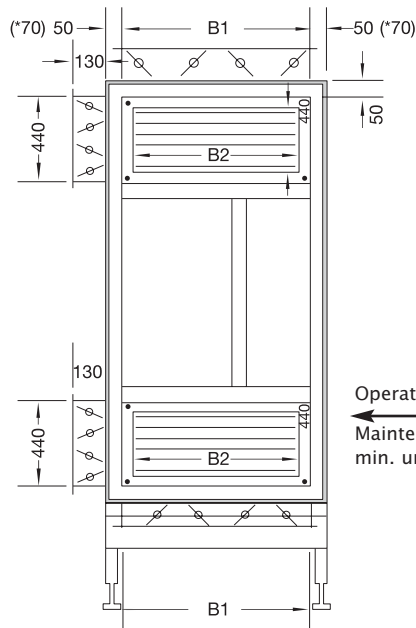
We reserve the right to make technical changes due to product improvements.

Compact air-conditioning units

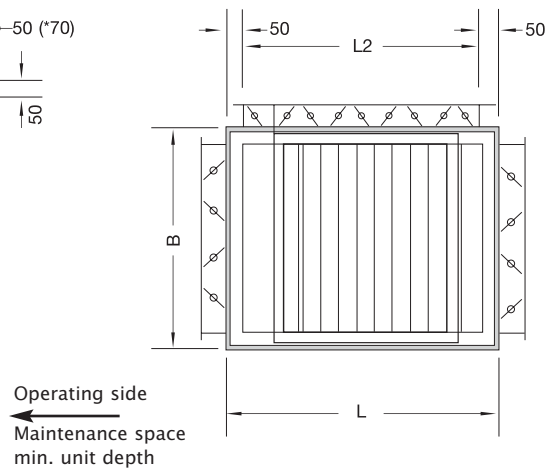
Front view of unit



**Left view of unit
(symmetrical arrangement of connections)**



View of unit from above

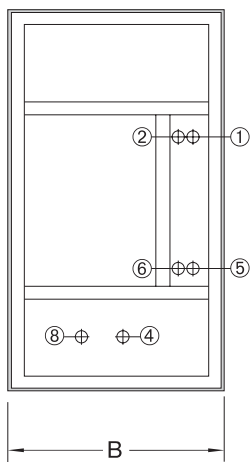


Options

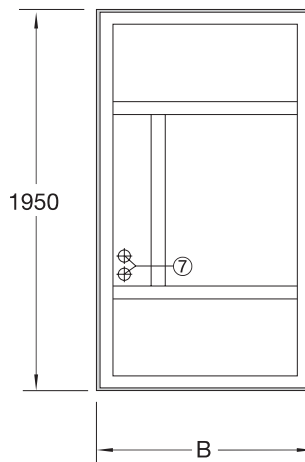
- All dampers also implementable as connections
- 300 to 840 mm high top-mounted and base boxes can be supplied
- 150 to 650 mm high base frames can be supplied
- Max. air volume flow for each lateral connection: 9,000 m³/h
- Media connections: left side (top, bottom or at the side)
- Electrical connections: right side (top, bottom or at the side)
- Intake/blowoff honeycomb grid possible at the side and front when no duct system is needed and the unit is directly in the room

Supply connections

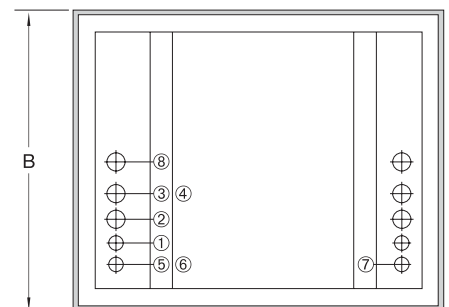
Side view from left



Side view from right



Partial plan view from above and below



1. PHW heater supply flow
2. PHW heater return flow
3. Humidifier supply
4. Humidifier discharge
5. PCW supply flow/
Refrigerant/Liquid line
6. PCW return flow/
Refrigerant/Hot gas line
7. El. line inlets
8. Condensate discharge

| Unit | L | B | L1 | L2 | L3 | L4 | B1 | B2 | H2 |
|-------|-------|-------|-------|-------|-----|-----|-------------|-------|---------|
| 35.3 | 1,090 | 650 | 765 | 1,000 | 177 | 147 | 550 | 550 | 150-650 |
| 55.3 | 1,090 | 850 | 765 | 1,000 | 177 | 147 | 750 | 750 | 150-650 |
| 75.3 | 1,355 | 850 | 1,030 | 1,255 | 172 | 152 | 750 | 750 | 150-650 |
| 90.3 | 1,610 | 850 | 1,260 | 1,505 | 192 | 157 | 750 | 750 | 150-650 |
| 120.3 | 2,140 | 850 | 1,790 | 2,035 | 192 | 157 | 710* | 750 | 150-650 |
| 160.3 | 2,405 | 1,100 | 2,035 | 2,300 | 212 | 157 | 1000 (960*) | 1,000 | 150-650 |
| 220.3 | 2,405 | 1,100 | 2,035 | 2,300 | 212 | 157 | 1000 (960*) | 1,000 | 150-650 |

Precision air-conditioning units

For high demands – compact solution

Weiss precision air-conditioning units guarantee ultra-clean and constant air-conditioning and are suitable for all clean rooms and experimental chambers. The units are successfully in use throughout the world. Application is focussed on process air-conditioning.

- Nominal volume flow from 1,000 to 6,000 m³/h
- Upflow design
- Full air-conditioning function with heating, cooling, humidifying and dehumidifying (process humidification)
- VDI 6022
- Filter classes F7, second stage externally possible
- Optional supply air filter
- Temperature constancy: ± 0.2 K
- Humidity constancy: $\pm 2\%$ r.h.



Fields of use

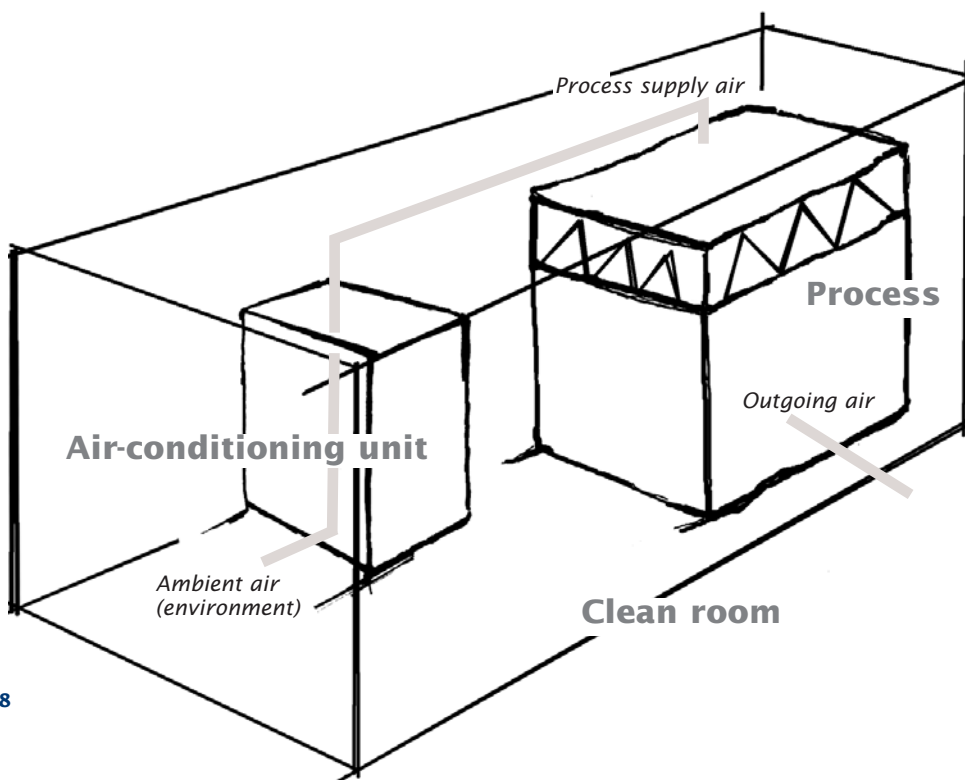
The main fields of use are in manufacturing processes where constant air-conditioning of a high consistency is needed within a process. An outstanding feature of the units is their high precision temperature and humidity control.

The units are fitted with a compact refrigeration system with water-cooled condensers (air-cooled condenser optional). Humidification is provided by process humidifying systems.

Benefits at a glance

- Plug and play
- Very high availability rates (up to 99.99%)
- Compact design
- Minimum floor space needed
- Insensitive to the power frequency
- Optionally also with reheat system
- Set-up possible in the clean room

ideal for precision air-conditioning



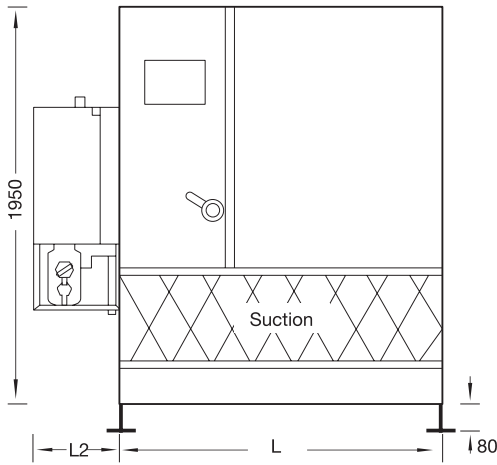
Design variant as process air-conditioning unit with unimpeded intake from the environment and unimpeded out-flow from the process area

Precision air-conditioning units

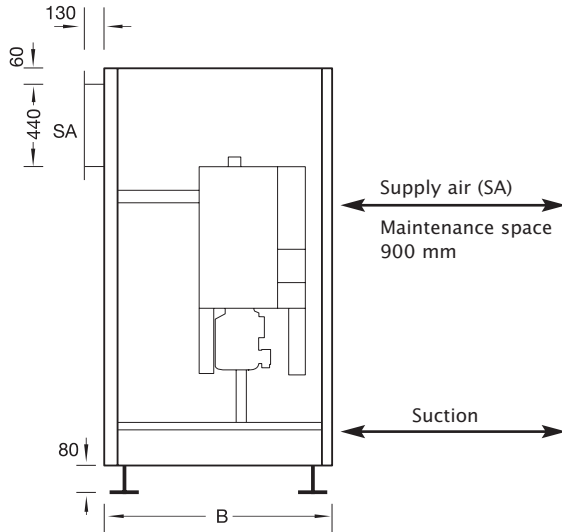
| SIZE PRECISION AIR-CONDITIONING UNIT | | 10.3 X1 | 20.3 X1 | 40.3 X1 | 60.3 X1 | 60.3 X2 |
|---|-------------------|---|---------|---------|---------|---------|
| NOMINAL VOLUME FLOW | | | | | | |
| Volume flow with max. ext. pressure loss | m ³ /h | 1,000 | 2,000 | 4,000 | 6,000 | 6,000 |
| Max. external pressure loss* | Pa | 700 | 540 | 500 | 400 | 400 |
| * enhanced motor unit on request | | | | | | |
| HOUSING DIMENSIONS | | | | | | |
| Width | mm | 1,090 | 1,355 | 1,355 | 1,605 | 1,605 |
| Depth | mm | 850 | 850 | 1,100 | 1,100 | 1,100 |
| Height | mm | 1,950 | 1,950 | 1,950 | 1,950 | 1,950 |
| COOLING – COOLING CIRCUIT | | | | | | |
| Cooling capacity (tc=50 °C) as per EUROVENT | | | | | | |
| Suction temp. +24 °C/60% r.h. - total/sens. kW | | 10.2 | 21.8 | 40.3 | 44.5 | 60 |
| HUMIDIFYING – STEAM GENERATOR | | | | | | |
| Product type | | resistance steam humidifier, accuracy +/- 2% | | | | |
| Current consumption | A | 8.7 | 11 | 26.2 | 32.3 | 32.3 |
| Rated input | kW | 6 | 7.5 | 18.1 | 22.3 | 22.3 |
| Electrical connected load | kVA | 6 | 7.6 | 18 | 22.3 | 22.3 |
| Max. steam output | kg/h | 8 | 10 | 24 | 30 | 30 |
| HEATING – ELECTRIC HEATING | | | | | | |
| Product type | | plain tubular heaters, continuously controlled | | | | |
| Max. heating capacity | kW | 10.5 | 14 | 28 | 28 | 28 |
| Current consumption | A | 15.2 | 23 | 48 | 48 | 48 |
| Electrical connected load | kVA | 10.5 | 15.9 | 28 | 28 | 28 |
| FAN MOTOR UNIT | | | | | | |
| Product type | | directly driven, free running, IP 54, Iso class F | | | | |
| Nominal motor power | kW | 1.15 | 1.15 | 3.2 | 3.2 | 3.2 |
| Current consumption, max. | A | 2.82 | 2.82 | 5 | 5 | 5 |
| Electrical connected load | kVA | 1.95 | 1.95 | 3.46 | 3.46 | 3.46 |
| FILTER SUCTION SIDE | | | | | | |
| Product type | | cassette filter, class F7 as per DIN EN 779 | | | | |
| PLATE CONDENSER, WATER COOLED, INTERNAL* | | | | | | |
| Water volume flow at T=27/32 °C | m ³ /h | 3 | 5.8 | 6.4 | 6.4 | 6.4 |
| Capacity | kW | 17.5 | 30.7 | 58 | 58 | 58 |
| Pressure loss on water side | kPa | 10 | 13 | 35 | 35 | 35 |
| * design with air-cooled condenser on request | | | | | | |
| REHEAT AS HEAT EXCHANGER | | | | | | |
| Max. heating capacity | kW | optional, on request | | | | 26 |
| Control | | | | | | ein/aus |
| STANDARD UNIT, COMPLETE | | | | | | |
| Complete weight | kg | 500 | 620 | 710 | 900 | 1,000 |
| Supply voltage | V/Ph/Hz | 400/3/50-60 | | | | |
| Electrical connected load | kVA | 25.0 | 43.0 | 79.0 | 85.0 | 90.0 |

Precision air-conditioning units

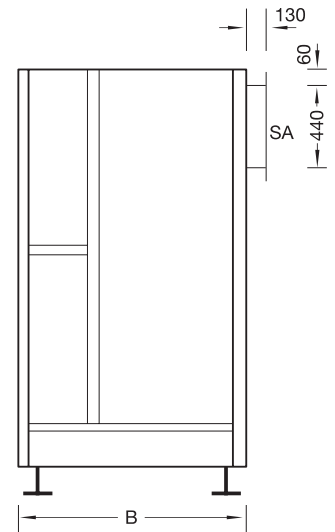
Front view of unit



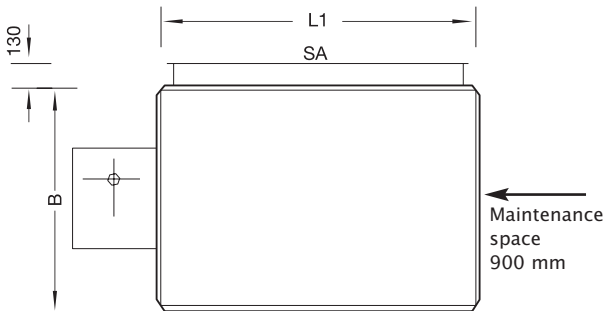
View of unit from left



View of unit from right



View of unit from top

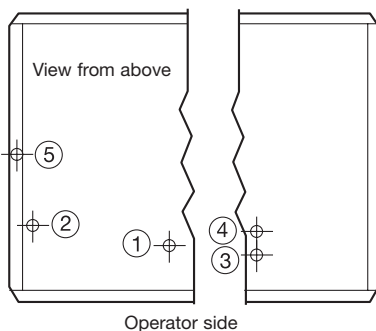


| Gerät | L | L1 | L2 | B |
|-----------------------|----------|----------|--------|----------|
| Ultraconstant 10.3 X1 | 1,090 mm | 990 mm | 437 mm | 850 mm |
| Ultraconstant 20.3 X1 | 1,355 mm | 1,255 mm | 437 mm | 850 mm |
| Ultraconstant 40.3 X1 | 1,355 mm | 1,255 mm | 392 mm | 1,100 mm |
| Ultraconstant 60.3 X1 | 1,610 mm | 1,505 mm | 392 mm | 1,100 mm |
| Ultraconstant 60.3 X2 | 1,610 mm | 1,505 mm | 392 mm | 1,100 mm |

Options

- Duct connection (incoming air above)
- Increased pressing
- Condensate lift pump
- HEPA filter as channel filter
- External air-cooled condenser
- Reheat
- Integration in building control system
- Alternative control systems

Supply connections



| Gerät | 1° Electrical Connection | 2° Electrical Connection | 3 Cooling water Supply flow | 4 Cooling water Supply flow | 5 Condensate Discharge/side |
|-----------------------|--------------------------|--------------------------|-----------------------------|-----------------------------|-----------------------------|
| Ultraconstant 10.3 X1 | 64 mm | 38 mm | 1" | 1" | 40 mm |
| Ultraconstant 20.3 X1 | 64 mm | 38 mm | 1 3/4" | 1 3/4" | 40 mm |
| Ultraconstant 40.3 X1 | 64 mm | 38 mm | 1 3/4" | 1 3/4" | 40 mm |
| Ultraconstant 60.3 X1 | 64 mm | 38 mm | 1 3/4" | 1 3/4" | 40 mm |
| Ultraconstant 60.3 X2 | 64 mm | 38 mm | 1 3/4" | 1 3/4" | 40 mm |
| Position | above | above | above | above | above |

1* supply connection 2* control systems

Control with pcs+

Weiss air-conditioning units for clean room applications are fitted as standard with a pcs+ control. Other controller makes on request.



Operating terminal

- LCD display, 8 lines, 22 characters
- 6 keys with LED feedback
- Warning horn
- Front installation
- IP 65 protection class

Inputs and outputs

- 8/14/18 digital inputs
- 8/13/18 digital outputs
- 2/2/4 sensor inputs
- 3/6/6 universal inputs
- 4/4/6 analogue outputs

Controller

- Microprocessor 16 bit, 16 MHz,
- 256 kB RAM
- Clock, battery-buffered
- RS485 interface for pLAN
- Display connection
- Programme storage on non-volatile flash memory

Control with PC 3

Weiss precision air-conditioning units are fitted as standard with a PC 3 control unit. Other controller makes on request.

The PC 3 control is implemented via an industry controller on a PC basis with 200 MHz processor and 64 MB RAM.

Equipment:

- Battery-buffered system clock
- 2 PC-104 extension socket for data point extension of the base board or connection to building control systems using appropriate interface types
- CAN field bus for networking multiple controllers and for connecting system components via remote field bus modules

- Ethernet network connection 10/100 MBit for connection to Intranet/ Internet

- 2 USB interfaces

- RS 232 interface

- Parallel interface

- PS/2 interfaces

- Display connection

- Compact flash extension for operating data recording

- Data and programme storage on non-volatile flash memory

- Data points (can be extended via PC-104 cards)

- 16 digital inputs, 12 digital outputs

- 4 analogue inputs, 0-10 V, 0 (4)-20 mA, 12 bit resolution

- 4 analogue outputs, 0-10 V, 12 bit resolution



Perfect for precise and ultra-clean processes

Efficient solution

Weiss air-conditioning chamber systems are the ideal solution where clean room-compliant conditions for precise and ultra-clean processes are needed.

This is where the highest demands placed on clean room technology and adherence to environment conditions encounter economical implementation.

The Weiss air-conditioning chamber systems comprise, for example, a high-capacity air-conditioning unit with process control, a filter area and a self-contained process area.

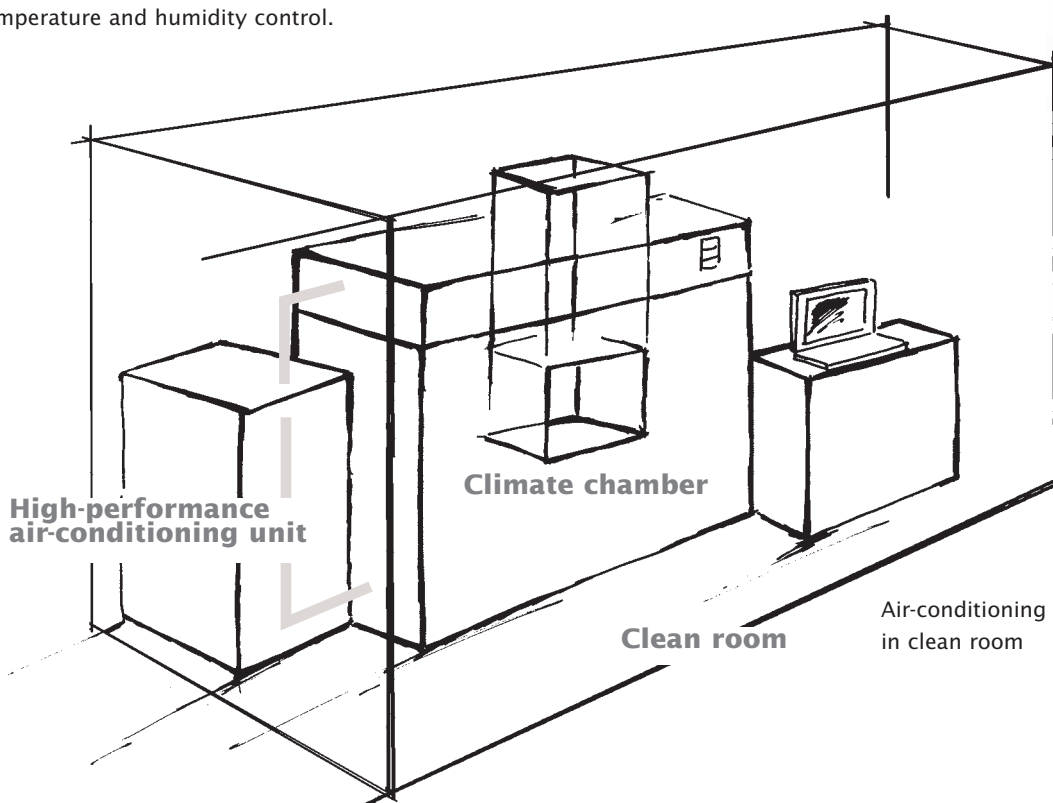
Air-conditioning chamber systems are for keeping the air temperature, air humidity and air pressure constant as well as for keeping the process air particle-free. Their most important property is the very high precision of temperature and humidity control.

- DIN EN ISO 14644-1:
- Clean room classes 5, 4, 3, 2, 1
- Temperature constancy: ± 0.05 K
- Humidity constancy: ± 1 % r.h.

With quality assurance procedures, e.g. in the microelectronic and optoelectronic industries, among others high-accuracy measuring systems are used. These measurements and instruments must be protected from any environmental effects on readings.

To this end, we develop tailored air-conditioning solutions in close cooperation with our customers and optimised to both process area and floor space.

High performance air-conditioning units including process control





Application example:
Microscope control

Climate chamber with filter unit

Benefits at a glance

- Plug and play
- Integration possible in process equipment
- Clean room and experimental chamber technology at the highest level
- Materials selected to reflect the use: stainless steel, aluminium, powder-coated
- Compact design
- Minimal floor space
- Certification in accordance with SEMI
- Customer-specific control system

Products and Components



Central air-conditioning units for interior and exterior location

Laminar flow units, standard and customer-specific



Safety workbenches



Clean rooms and experimental chambers in modular construction. Economical and space-saving



Filter fan units with computer-assisted control system

Complete clean room services

System consulting / Project planning / Designing

- Feasibility studies
- Concept planning
- Profitability analyses
- Financing management
- Implementation planning
- Cooperation in approval processes
- General contractor, cooperations, partnerships

Production

- Equipment manufacturing
- Plant construction
- Clean room components
- Monitoring systems
- Special designs
- Special equipment
- System solutions

Installation / Commissioning

- Worldwide supervising and commissioning network
- Extensive network of bases
- Acceptance inspection measurements/ clean room measurements
- Documentation
- Qualification/requalification (DQ, IQ, OQ, PQ)

Training

- Clean room technology
- Air-conditioning technology
- Systems / products
- Clean room behaviour

After-sales service

- Spare parts management / consignment warehouse
- Maintenance / service worldwide
- Dial-up data transfer
- Technical facility management for small and medium-sized systems
- Qualification and requalification
- ISO 9001: 2000 certified
- Hygiene test as per VDI 6022



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Switzerland
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Turkey
Ukraine
USA

Competent, immediate information

We would be glad to advise you on:

- Air-conditioning units and components for clean room applications and experimental chambers
- Complete clean room systems
- Complete experimental chambers as per VDI/VDE 2627
- Clean room wall, ceiling, floor and illumination systems
- Protective systems/high containment/barrier systems
- Mobile clean room containers, cells, cabins and tents
- Clean workbenches and microbiological safety workbenches
- Barrier systems
- Filter fan modules
- Miniature environments
- Hot air sterilizers and tunnels
- Air showers
- Personnel and material barrier systems
- Qualification/validation
- Training

References

- 3D-MICROMAC
- ABB CALOR EMAG
- ACIBADEM
- ANTIBIOTICE
- APOSAN
- ASML
- ASTA MEDICA
- ASTRA ZENECA
- SANOFI-AVENTIS
- BASF
- BAYER
- BOSCH
- BRITA MANUFACTURING
- CARL ZEISS
- CELANESE CHEMICALS
- CONTI TEMIC
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- ROCHE
- RODENSTOCK
- SCHOTT
- SENSITEC
- SINGULUS
- SIEMENS
- SOLVAY PHARMACEUTICALS
- SPIMACO
- STEAG
- TDK
- TICONA
- TRW
- UMICORE
- UNTERLAND
- URSAPHARM
- VARTA
- VISTEC
- W.C. HERAEUS
- WESERGOLD
- ZF LENKSYSTEME

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