

Ultracac® 2000 Standard, Ultracac® 2000 Superplus, Mini (Typ 0005 bis 0025)

Complete purification package with heatless adsorption dryer, pre-, afterfilter and condensate drain.



**Ultracac® 2000
Standard**

Compressed air is led through the inlet of the dryer (1) and across the prefilter (2).

At this stage, the air is cleaned from particles and condensate.

The condensate is removed via the membrane condensate drain (3).

Via the lower shuttle valve (4), the air is led into desiccant cartridges (5), in which the air is dried down to the required dewpoint.

Via the upper shuttle valve (6), the air gets into an afterfilter (7), in which particles from the desiccant are retained.

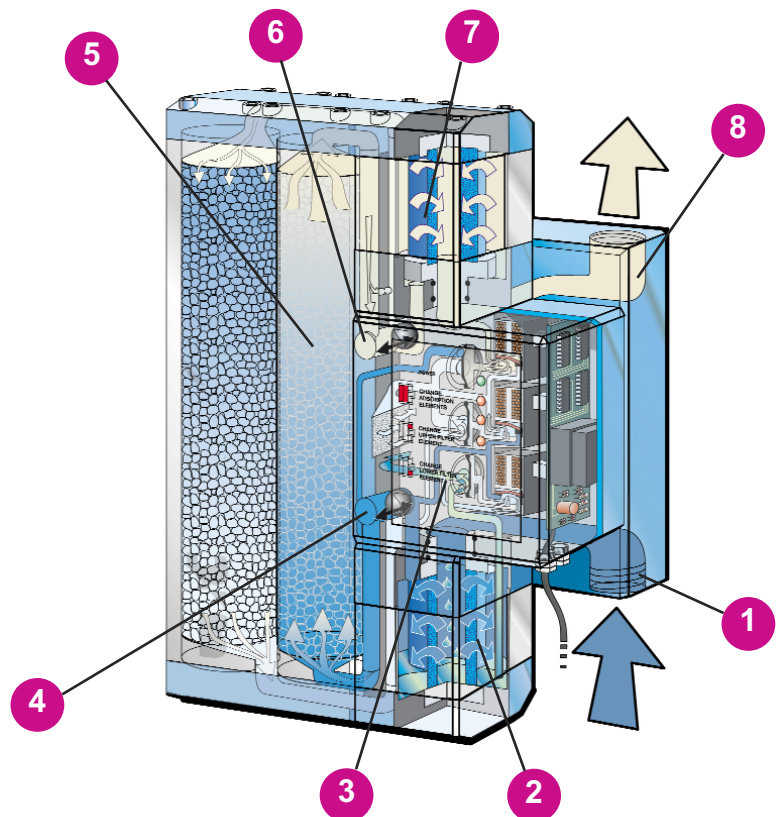
Via the outlet (8), the clean and dry air is lead into the compressed air network to the point of use.

While one vessel with desiccant cartridge is in the drying phase (adsorption), the other cartridge is being dried again (regeneration).

A partial stream of dried air is expanded via an orifice and lead across the desiccant cartridge for regeneration and via a solenoid valve and a silencer system to the atmosphere.

| Ultracac® 2000 | Volume flow in m ³ /h (1 bar, 20°C)* | Regeneration air losses (average) m ³ /h (1 bar, 20°C) | Volume flow out (min.) m ³ /h (1 bar, 20°C) | Pressure loss initial mbar | Prefilter MF | Afterfilter PE | amount of cartridges |
|----------------|---|--|---|-------------------------------------|-----------------|-------------------|----------------------------|
| 0005 | 5 | 0.85 | 3.95 | 65 | 02/05 | 02/05 | 2 |
| 0010 | 10 | 1.70 | 7.90 | 95 | 03/05 | 03/05 | 4 |
| 0015 | 15 | 2.55 | 11.85 | 115 | 04/10 | 04/10 | 6 |
| 0025 | 25 | 4.25 | 19.75 | 250 | 06/10 | 06/10 | 10 |

* Related to 1 bar (abs) and 20 °C at inlet of compressor and 7 bar (g) and 35 °C inlet temperature



Ultrapac® 2000 Standard Mini / Superplus Mini

| Features Ultrapac® 2000 series: | Benefits: |
|--|---|
| Purification package complete with pre-, afterfilter and condensate drain. | Turnkey System, no additional installation cost; all components from one hand, therefore perfect technical match |
| Desiccant in cartridges | Easy storage, transport and installation; optimum fixation of desiccant; no risk of fluidizing of desiccant |
| Compact, space saving design | Installation in smallest spaces, possible also as retrofit |
| Component exchange display | High operating safety, due to calculation of optimum exchange point for filter elements and desiccant cartridges. |
| Unique Multifunction Block | All moving parts and all electronic components integrated in a function block, therefore easy and efficient maintenance |

| Features Ultrapac® 2000 Superplus: | Benefits: |
|------------------------------------|--|
| Intermittent operation | Link between dryer and compressor possible on central applications, therefore saving of regeneration air |
| Throttle package | By means of enclosed throttle package and automatic adaptation of the control at inputted operating conditions, an optimal regeneration air consumption and a maximally possible flow according to the correction factor table within the total range of 4-16 bar (g) and 25-50°C is reached |
| Load control | Adjustment of adsorption cycles to the actual inlet water load, therefore saving of regeneration air and reduction of operating cost |
| Self-Diagnosis-System | Sensor-controlled monitoring of regeneration air flow, therefore without-gap-monitoring of dryer functions and of system pressure |
| Text Display | Display of all operating status, of fault indication and maintenance intervals in clear text messages |
| Info-Channel | Serial interface for transmission of alarm- and maintenance messages |
| Economizer-Function | Online calculation of optimum exchange point of filter elements by continuous evaluation of energy cost versus cost of replacement filter element |

| Sizing: | | | | | | | | | | | | | | |
|---------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| f | 4 bar(g) | 5 bar(g) | 6 bar(g) | 7 bar(g) | 8 bar(g) | 9 bar(g) | 10 bar(g) | 11 bar(g) | 12 bar(g) | 13 bar(g) | 14 bar(g) | 15 bar(g) | 16 bar(g) | |
| 25°C | 0.69 | 0.82 | 0.96 | 1.10 | 1.24 | 1.38 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 30°C | 0.69 | 0.82 | 0.96 | 1.10 | 1.24 | 1.38 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 35°C | 0.63 | 0.75 | 0.88 | 1.00 | 1.13 | 1.26 | 1.38 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 40°C | 0.48 | 0.58 | 0.68 | 0.77 | 0.87 | 0.96 | 1.06 | 1.16 | 1.25 | 1.35 | 1.45 | 1.50 | 1.50 | |
| 45°C | 0.38 | 0.45 | 0.53 | 0.60 | 0.68 | 0.75 | 0.83 | 0.90 | 0.98 | 1.05 | 1.13 | 1.20 | 1.28 | |
| 50°C | 0.30 | 0.36 | 0.42 | 0.48 | 0.54 | 0.60 | 0.66 | 0.72 | 0.78 | 0.84 | 0.90 | 0.96 | 1.02 | |

Example: $\dot{V}_{nom} = 22 \text{ Nm}^3/\text{h}$, Inlet temperature = 30°C, Operating pressure = 10 bar (g)

$$\dot{V}_{corr} = \frac{\dot{V}_{nom}}{f}$$

$$\dot{V}_{korr} = \frac{22 \text{ m}^3/\text{h}}{1.50} = 14.66 \text{ m}^3/\text{h}$$

Calculated dryer size: type 0015

| Product description: |
|--|
| Ultrapac® 2000 Standard and Superplus: Complete purification package, consisting of heatless adsorption dryer which works on the basis of pressure swing adsorption, with integrated pre- and after filter and electronic condensate drain |

| Medium: |
|--------------------------|
| Compressed air/ nitrogen |

| Pressure dewpoint |
|-----------------------|
| -40 °C at 100% load * |

* Pressure Dewpoint ≤ -70°C on request

| Operation pressure: |
|---------------------------------|
| min. 4 bar (g), max. 16 bar (g) |

| Medium temperature: |
|-----------------------|
| min. 5 °C, max. 50 °C |

| Ambient temperature: |
|-----------------------|
| min. 4 °C, max. 50 °C |

| Compressed air consumption: |
|-----------------------------------|
| 17% of the rated flow, in average |

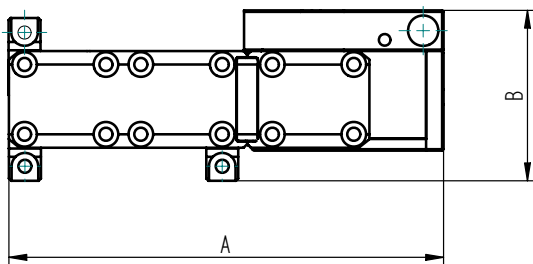
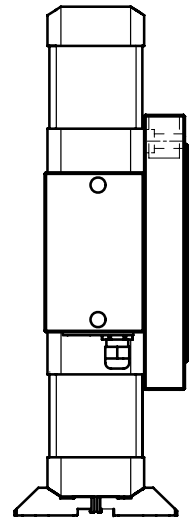
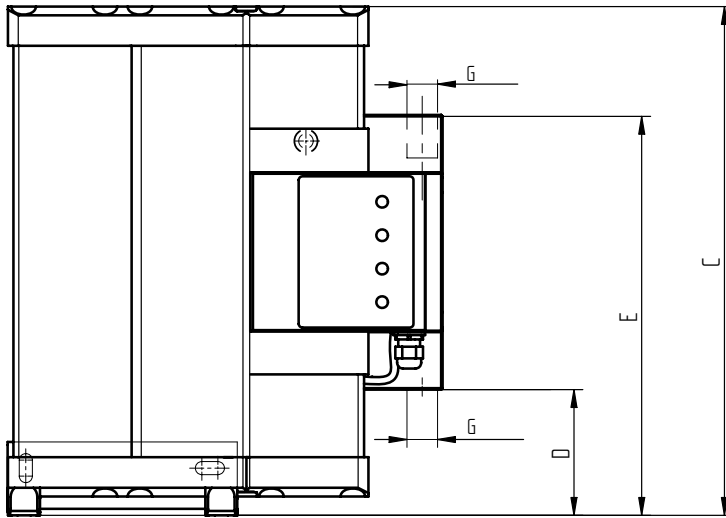
| Power supply: |
|--|
| 230 V/50 -60 Hz AC; 110 V/50 -60 Hz AC 24 V DC; 24 V AC on request |

| Power consumption: |
|--------------------|
| approx. 4 W |

| Materials: | |
|--------------------------|--------------------------------|
| Extruded Profiles | Anodized Aluminium |
| Adsorber and Filter lids | Glass fiber enforced polyamide |

| Declaration of conformity: |
|--------------------------------|
| acc. to 2006/95/EC 97/23/EC |

Ultrapac® 2000 Standard Mini Ultrapac® 2000 Superplus Mini



| Ultrapac® 2000 Mini | | | | | | |
|---------------------|--------|---------|---------|---------|---------|---------|
| Type | G " | A mm | B mm | C mm | D mm | E mm |
| 0005 | G 1/2 | 300 | 121 | 343 | 84 | 273 |
| 0010 | G 1/2 | 300 | 121 | 591 | 208 | 397 |
| 0015 | G 1/2 | 300 | 121 | 853 | 339 | 528 |
| 0025 | G 1/2 | 300 | 121 | 1377 | 601 | 789 |