



# COMPRESSED AIR TREATMENT

- Basic Principals
- Air Filters
- Cyclone Separators
- Refrigeration Dryers
- Adsorption Dryers
- Air Receiver Tanks
- Condensate Drains
- Oil / Water Separators
- Industrial Chillers
- EPL Piping System





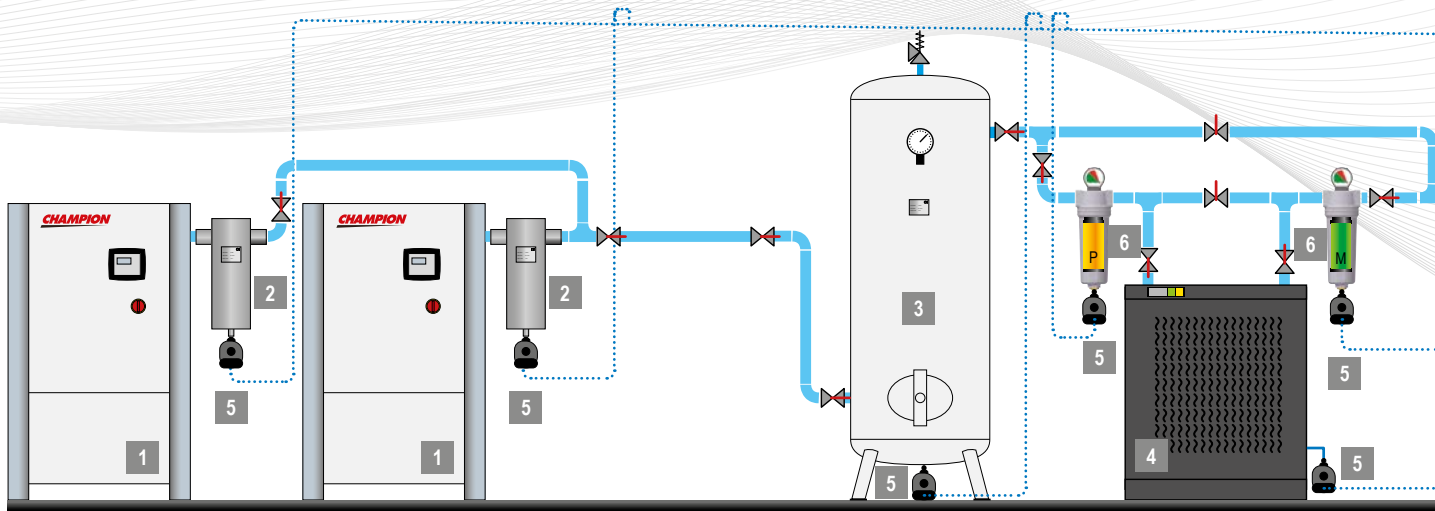
## Compressed air quality classes according to ISO 8573-1:2010

| CLASS | SOLID PARTICLES<br>MAXIMUM NUMBER OF PARTICLES PER CUBIC METER<br>AS A FUNCTION OF PARTICLE SIZE, D <sup>21</sup> |                       |                       | HUMIDITY AND LIQUID WATER<br>PRESSURE DEW POINT                            |      | OIL<br>CONCENTRATION OF TOTAL OIL <sup>21</sup><br>(LIQUID, AEROSOL AND VAPOUR) |               |
|-------|---|-----------------------|-----------------------|--|------|---|---------------|
|       | [0.1 µm < d ≤ 0.5 µm]   | [0.5 µm < d ≤ 1.0 µm] | [1.0 µm < d ≤ 5.0 µm] | [°C]   | [°F] | [mg/m <sup>3</sup> ]  | [ppm / w / w] |
| 0     | As specified by the equipment user or supplier and more stringent than class <sup>1</sup>                         |                       |                       |  |      |   |               |
| 1     | ≤ 20,000  | ≤ 400                 | ≤ 10                  | ≤ -70  | -94  | ≤ 0.01  | ≤ 0.008       |
| 2     | ≤ 400,000   | ≤ 6,000               | ≤ 100                 | ≤ -40  | -40  | ≤ 0.1   | ≤ 0.08        |
| 3     | Not specified   | ≤ 90,000              | ≤ 1,000               | ≤ -20  | -4   | ≤ 1   | ≤ 0.8         |
| 4     | Not specified   | Not specified         | ≤ 10,000              | ≤ +3   | 38   | ≤ 5   | ≤ 4           |
| 5     | Not specified   | Not specified         | ≤ 100,000             | ≤ +7   | 45   | Not specified   | Not specified |
| 6     |   |                       |                       | ≤ ±10  | 50   |   |               |
|       | MASS CONCENTRATION <sup>21</sup> - C <sub>p</sub><br>[mg/m <sup>3</sup> ]   |                       |                       | LIQUID WATER CONTENT <sup>21</sup> - C <sub>w</sub><br>[g/m <sup>3</sup> ] |      |   |               |
| 6     | 0 < C <sub>p</sub> ≤ 5  |                       |                       | Not specified  |      |   |               |
| 7     | 5 < C <sub>p</sub> ≤ 10   |                       |                       | C <sub>w</sub> ≤ 0.5   |      |   |               |
| 8     | Not specified   |                       |                       | 0.5 ≤ C <sub>w</sub> ≤ 5   |      |   |               |
| 9     | Not specified   |                       |                       | Not specified  |      |   |               |
| X     | C <sub>p</sub> > 10   |                       |                       | > 5  |      |   |               |

<sup>1</sup> To qualify for a class designation, each size range and particle number within a class shall be met.

<sup>21</sup> At reference conditions: air temperature of 20° C, absolute air pressure of 100 kPa (1 bar), 0 relative water vapour pressure.

# BASIC PRINCIPLES OF MOST TYPICAL COMPRESSED AIR APPLICATION



**1. Compressor:** The basic working principle of an air compressor is to compress atmospheric air, which is then used as per the requirements. In the process, atmospheric air is drawn in through an intake valve; more and more air is pulled inside a limited space mechanically by means of piston, impeller, or vane. Since the amount of pulled atmospheric air is increased in the receiver or storage tank, volume is reduced and pressure is raised automatically. In simpler terms, free or atmospheric air is compressed after reducing its volume and at the same time, increasing its pressure. Champion can provide many types of compressor to suit your needs.

**2. Cyclone condensate separator:** Cyclone condensate separators use centrifugal motion to force liquid water out of compressed air. The spinning causes the condensate to join together on the centrifugal separators walls when the condensate gains enough mass it falls to the bottom of the separators bowl where it pools in the sump until it is flushed out of the system by the automatic float drain valve. They are installed following aftercoolers to remove the condensed moisture.

**3. Pressure vessel:** Pressure vessel plays very important role in compressed air system:

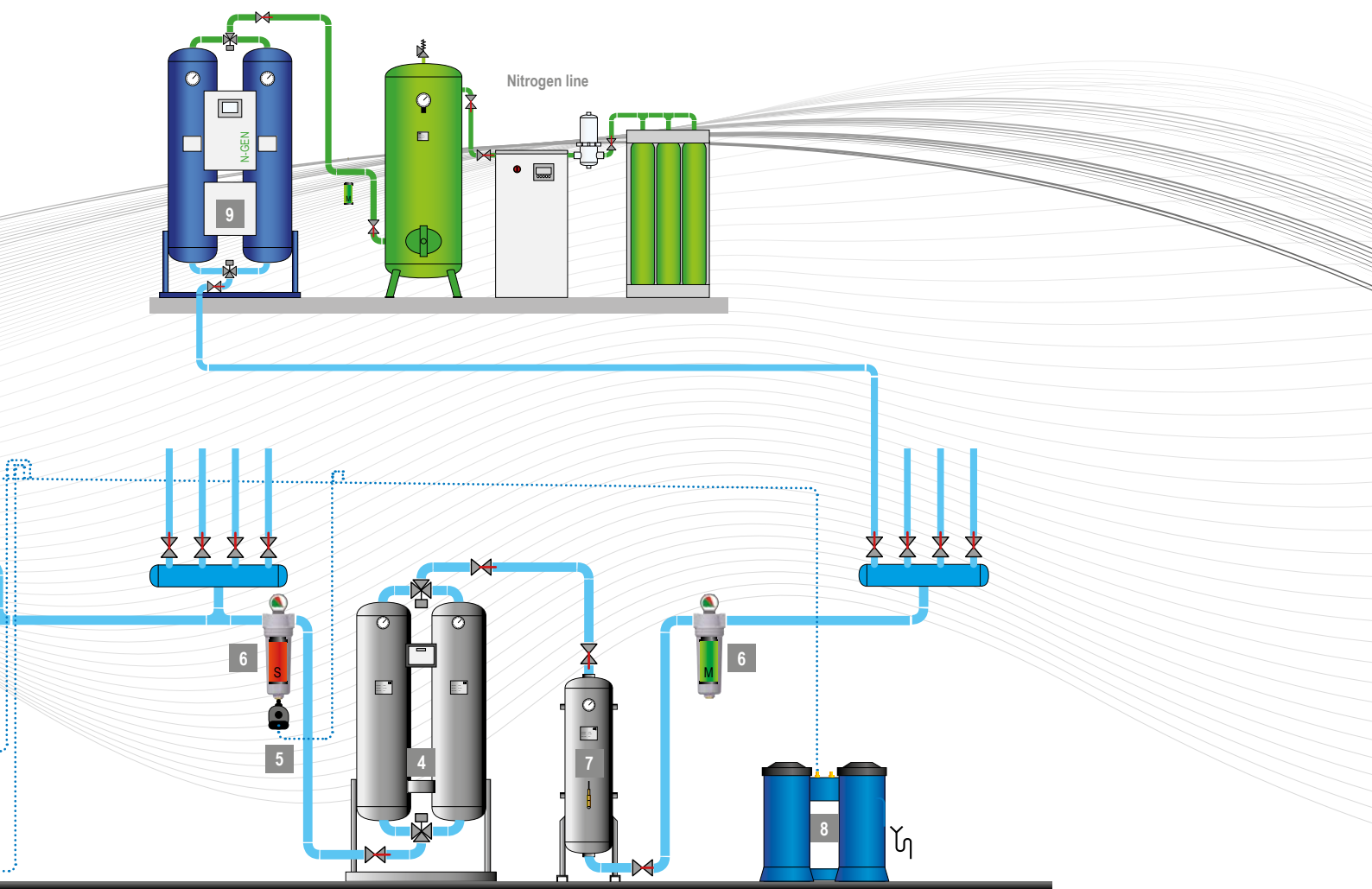
- Damping pulsations caused by reciprocating compressors
- Providing a location for free water and lubricant to settle from the compressed air stream
- Supplying peak demands from stored air without needing to run an extra compressor
- Reducing load/unload or start/stop cycle frequencies to help screw compressors run more efficiently and reduce motor starts
- Slowing system pressure changes to allow better compressor control and more stable system pressures

**4. Compressed air dryer :** Compressed air leaving the compressor aftercooler and moisture separator is normally warmer than the ambient air and fully saturated with moisture. As the air cools the moisture will condense in the compressed air lines. Excessive entrained moisture can result in undesired pipe corrosion and contamination at point of end use. For this reason some sort of air dryer is normally required.

Some end use applications require very dry air, such as compressed air distribution systems where pipes are exposed to winter conditions. Drying the air to dew points below ambient conditions is necessary to prevent ice buildup.

**Common types:**

- Refrigerant
- Dessicant
- Membrane



**5. Condensate drain:** Drains are needed at all separators, filters, dryers and receivers in order to remove the liquid condensate from the compressed air system.

Failed drains can allow slugs of moisture to flow downstream that can overload the air dryer and foul end use equipment.

**6. Filter:** Compressed air filters are used for high efficient removal of solid particles, water, oil aerosols, hydrocarbons, odour and vapours from compressed air systems.

To meet the required compressed air quality appropriate filter element must be installed into filter housing.

**7. Activated carbon tower:** Activated carbon tower eliminates hydrocarbon vapours and odours from compressed air. Towers are filled with activated carbon adsorbent that adsorbs contaminants onto the surface of its internal pores. Activated carbon towers are used at applications where content of oil vapours needs to be reduced to minimum.

Activated carbon towers can be incorporated in existing compressed air systems significantly minimising the risks of contamination.

They are able to absorb oil carry-over (both liquid and vapour) to provide the plant with technically oil-free compressed air.

**8. Oil/water separator:** Local environmental laws and regulations state that condensate drained from compressed air systems cannot be returned to the sewage system due to the content of compressor lubricating oil. Water/oil separators are one of the most effective and economical solution. Multi-stage separation process using oleophilic filters and activated carbon, ensures exceptional performance and trouble free operation.

**9. Nitrogen generator:** The nitrogen generators extract the available nitrogen in the ambient air from the other gases by applying the Pressure Swing Adsorption (PSA) technology. During the PSA process compressed, cleaned ambient air is led to a molecular sieve bed, which allows the nitrogen to pass through as a product gas, but adsorbs other gases.

#### End user advice

- Replace inappropriate end use applications with efficient models (vortex nozzles, atomizers)
- Install a flow controller to lower plant pressure and reduce artificial demand caused by higher than required pressures
- Turn off air consuming equipment, using electric solenoids or manual shutoff valves
- Avoid operation of air tools without a load, as this consumes more air than a tool under load
- Replace worn tools, as they often require higher pressure and consume excess compressed air than tools in good shape
- Lubricate air tools as recommended by the manufacturer. Keep air used by all end uses free of condensate in order to maximize tool life and effectiveness
- Where possible and practical, group end use air equipment that has similar air requirements of pressure and air quality

# CHF SERIES ALUMINUM COMPRESSED AIR FILTERS

### Applications

- General industrial applications
- Automotive
- Electronics
- Food and beverage
- Chemical
- Petrochemical
- Plastics
- Paint

### At a glance...



**Operating Pressure**  
17 bar



**Connections**  
3/8" - 3"



**Flow Rate**  
18 - 18247 cfm

The reliability of compressed air filtration is paramount to the ongoing fight against problems caused through contamination entering the air system. Contamination in the form of dirt, oil and water can lead to:

- Pipescale and corrosion within pressure vessels
- Damage to production equipment, air motors, air tools, valves and cylinders
- Premature and unplanned desiccant replacement for adsorption dryers
- Spoiled product

The Champion filtration range offers various products and grades of filtration to provide peace of mind whatever the air quality requirement. It has been designed with focus on reliability and efficiency.

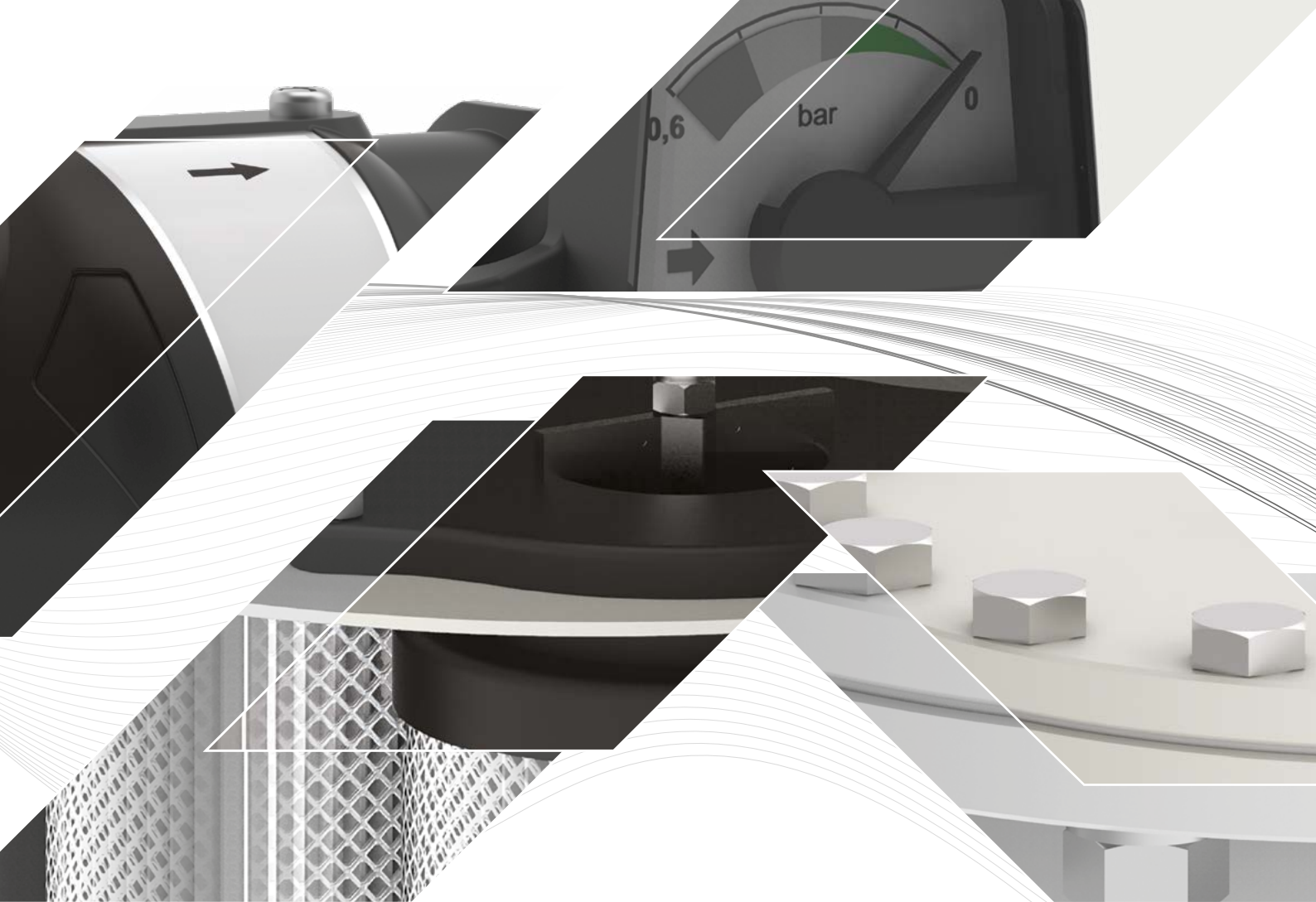
### Designed and Built for Exceptional Performance

The advanced compressed air filter range from Champion reduces contamination in your air stream to help protect your critical processes and valuable equipment. These filters are rigorously tested and engineered with superior components to provide years of reliable performance and consistently high-quality air.

### The standard for high-quality air

The Champion filter range provides clean, high-quality air as defined by ISO 8573.1:2010 and are certified by a third party under ISO 12500-1.





## Compressed Air Purification - The perfect choice!

### Water Separation – The CHF Range of water separators

The CHF-range of water separators provide bulk condensed water and liquid oil removal and are used to protect coalescing filters against bulk liquid contamination.

0.5 – 200 m<sup>3</sup>/min\*

18 – 7062 cfm\*



### Filtration – The CHF Range of compressed air filters

The CHF-range of filters efficiently removes water and oil aerosols, atmospheric dirt and solid particles, rust, pipescale and micro-organisms.

0.5 – 45 m<sup>3</sup>/min\*

18 – 1600 cfm\*



### Filtration – The CHF Range of flanged filters\*\*

For larger flowrate or higher pressure applications the flanged filters are available in the standard four filtration grades.

48 – 516 m<sup>3</sup>/min\*

1702 – 18247 cfm\*

\* Flow rate at 20° C, 7 bar

\*\* On request



Compressed air contamination will ultimately lead to:

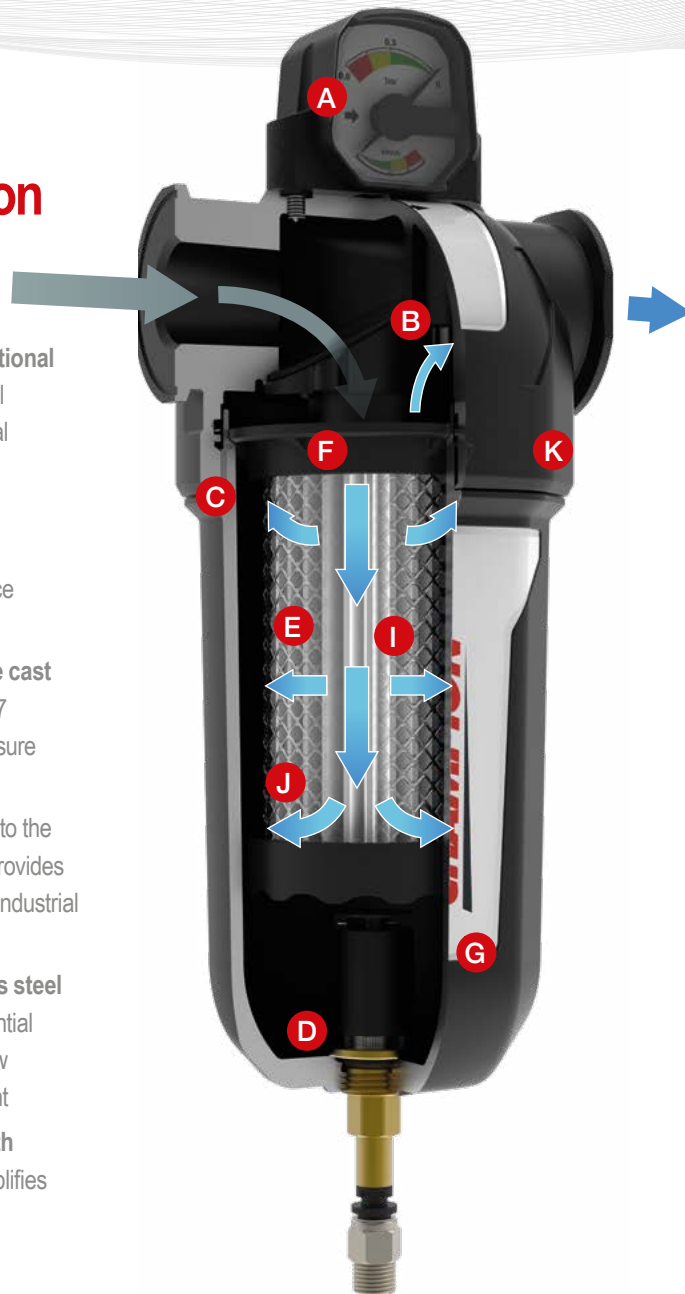
- ▼ Inefficient production processes
- ▼ Spoiled, damaged or reworked products
- ▼ Reduced production efficiency
- ▼ Increased manufacturing costs

# COMPRESSED AIR FILTERS



## Superior Filtration Technology

- A** Patented dual indicator (optional accessory) shows differential pressure drop and economical operating efficiency
- B** Patented smooth bore flow insert directs air into the filter element, minimising turbulence and pressure losses
- C** All-aluminum, precision die cast body suitable for 80°C and 17 bar g maximum working pressure applications
- D** Proprietary coating applied to the inside and outside surfaces provides corrosion protection in harsh industrial environments
- E** Filter element with stainless steel mesh withstands high differential pressure while minimizing flow restriction through the element
- F** Ergonomic bowl design with no-touch filter element simplifies element replacement



- G** Time strip label indicates when it's time to change the element (CHF Grade only)
- H** Reliable discharge The M and S grade filters and water separators are equipped with internal float drain. The Particulate (R) and Activated Carbon (A) filters have manual drain
- I** Deep-pleated filter media reduces air flow velocity to maximise filtration efficiency and minimise pressure losses
- J** High-efficiency drainage layer improves liquid drainage properties and enhances chemical compatibility
- K** Simple visual alignment of the filter head and bowl ensures accurate assembly of components and helps to improve safety

## High efficiency bulk liquid removal

Water separators remove bulk liquids such as condensate, water and liquid oil from the air flow through directional and centrifugal separation. Installed before a coalescing filter the water separator can provide added protection against bulk liquid contamination enabling the filter to operate more efficiently.

The CHF Series water separator range from Champion can operate across various flow conditions and have been optimised to reduce differential pressure with very low maintenance.



### Technical Data - Compressed Air Condensate Separators - CHF Series

| SEPARATOR MODEL | CHAMPION PART NUMBER [CCN] | CONNECTION SIZE | FLOW RATE             |       | MAX. PRESSURE |       | DIMENSIONS |        | WEIGHT [kg] |
|-----------------|----------------------------|-----------------|-----------------------|-------|---------------|-------|------------|--------|-------------|
|                 |                            |                 | [m <sup>3</sup> /min] | [cfm] | [bar]         | [psi] | W [mm]     | H [mm] |             |
| CHF005W         | 47700907001                | 3/8"            | 0.50                  | 18    | 17            | 250   | 76         | 175    | 0.6         |
| CHF007W         | 47700908001                | 1/2"            | 0.66                  | 23    | 17            | 250   | 76         | 175    | 0.6         |
| CHF018W         | 47700909001                | 3/4"            | 1.8                   | 64    | 17            | 250   | 98         | 230    | 1.2         |
| CHF040W         | 47700910001                | 1"              | 4.0                   | 141   | 17            | 250   | 129        | 268    | 2.2         |
| CHF085W         | 47700911001                | 1 1/2"          | 8.5                   | 300   | 17            | 250   | 129        | 268    | 2.1         |
| CHF170W         | 47700912001                | 2"              | 17.0                  | 600   | 17            | 250   | 170        | 467    | 5.1         |
| CHF380W         | 47700913001                | 3"              | 38.0                  | 1342  | 17            | 250   | 205        | 548    | 20          |

### Technical Data - Compressed Air Filters CHF Series - Grade M

| FILTER MODEL | PN          | CONNECTION SIZE | FLOW RATE             |       | MAX. PRESSURE |       | DIMENSIONS |        | WEIGHT [kg] |
|--------------|-------------|-----------------|-----------------------|-------|---------------|-------|------------|--------|-------------|
|              |             |                 | [m <sup>3</sup> /min] | [cfm] | [bar]         | [psi] | W [mm]     | H [mm] |             |
| CHF005LM     | 47698906001 | 3/8"            | 0.5                   | 18    | 17            | 250   | 76         | 225    | 0.55        |
| CHF007LM     | 47698907001 | 1/2"            | 0.7                   | 24    | 17            | 250   | 76         | 225    | 0.55        |
| CHF013LM     | 47698908001 | 3/4"            | 1.3                   | 44    | 17            | 250   | 98         | 280    | 1.07        |
| CHF018LM     | 47698909001 | 3/4"            | 1.8                   | 65    | 17            | 250   | 98         | 280    | 1.09        |
| CHF025LM     | 47698910001 | 1"              | 2.5                   | 88    | 17            | 250   | 129        | 319    | 2.06        |
| CHF032LM     | 47698911001 | 1"              | 3.2                   | 112   | 17            | 250   | 129        | 319    | 2.06        |
| CHF038LM     | 47698912001 | 1"              | 3.8                   | 135   | 17            | 250   | 129        | 319    | 2.06        |
| CHF067LM     | 47698913001 | 1 1/2"          | 6.7                   | 235   | 17            | 250   | 129        | 409    | 2.36        |
| CHF082LM     | 47698914001 | 1 1/2"          | 8.2                   | 288   | 17            | 250   | 129        | 409    | 2.36        |
| CHF100LM     | 47698915001 | 2"              | 10                    | 353   | 17            | 250   | 170        | 518    | 5.2         |
| CHF0133LM    | 47698916001 | 2"              | 13.3                  | 471   | 17            | 250   | 170        | 518    | 5.24        |
| CHF0167LM    | 47698917001 | 2"              | 16.7                  | 589   | 17            | 250   | 170        | 518    | 5.26        |
| CHF0200LM    | 47698918001 | 3"              | 20                    | 706   | 17            | 250   | 205        | 600    | 9.31        |
| CHF0260LM    | 47698919001 | 3"              | 26                    | 918   | 17            | 250   | 205        | 700    | 10.69       |
| CHF0305LM    | 47698920001 | 3"              | 30.5                  | 1077  | 17            | 250   | 205        | 700    | 10.69       |
| CHF0383LM    | 47698921001 | 3"              | 38.3                  | 1354  | 17            | 250   | 205        | 930    | 13.7        |
| CHF0450LM    | 47698922001 | 3"              | 45                    | 1589  | 17            | 250   | 205        | 930    | 13.7        |



# COMPRESSED AIR FILTERS



## Technical Data - Compressed Air Filters CHF Series - Grade S

| FILTER MODEL | PN          | CONNECTION SIZE | FLOW RATE |       | MAX. PRESSURE |       | DIMENSIONS |        | WEIGHT [kg] |
|--------------|-------------|-----------------|-----------|-------|---------------|-------|------------|--------|-------------|
|              |             |                 | [m³/min]  | [cfm] | [bar]         | [psi] | W [mm]     | H [mm] |             |
| CHF005LS     | 47698923001 | 3/8"            | 0.5       | 18    | 17            | 250   | 76         | 225    | 0.55        |
| CHF007LS     | 47698924001 | 1/2"            | 0.7       | 24    | 17            | 250   | 76         | 225    | 0.55        |
| CHF013LS     | 47698925001 | 3/4"            | 1.3       | 44    | 17            | 250   | 98         | 280    | 1.07        |
| CHF018LS     | 47698926001 | 3/4"            | 1.8       | 65    | 17            | 250   | 98         | 280    | 1.09        |
| CHF025LS     | 47698927001 | 1"              | 2.5       | 88    | 17            | 250   | 129        | 319    | 2.06        |
| CHF032LS     | 47698928001 | 1"              | 3.2       | 112   | 17            | 250   | 129        | 319    | 2.06        |
| CHF038LS     | 47698929001 | 1"              | 3.8       | 135   | 17            | 250   | 129        | 319    | 2.06        |
| CHF067LS     | 47698930001 | 1 1/2"          | 6.7       | 235   | 17            | 250   | 129        | 409    | 2.36        |
| CHF082LS     | 47698931001 | 1 1/2"          | 8.2       | 288   | 17            | 250   | 129        | 409    | 2.36        |
| CHF100LS     | 47698932001 | 2"              | 10        | 353   | 17            | 250   | 170        | 518    | 5.2         |
| CHF0133LS    | 47698933001 | 2"              | 13.3      | 471   | 17            | 250   | 170        | 518    | 5.24        |
| CHF0167LS    | 47698934001 | 2"              | 16.7      | 589   | 17            | 250   | 170        | 518    | 5.26        |
| CHF0200LS    | 47698935001 | 3"              | 20        | 706   | 17            | 250   | 205        | 600    | 9.31        |
| CHF0260LS    | 47698936001 | 3"              | 26        | 918   | 17            | 250   | 205        | 700    | 10.69       |
| CHF0305LS    | 47698937001 | 3"              | 30.5      | 1077  | 17            | 250   | 205        | 700    | 10.69       |
| CHF0383LS    | 47698938001 | 3"              | 38.3      | 1354  | 17            | 250   | 205        | 930    | 13.7        |
| CHF0450LS    | 47698939001 | 3"              | 45        | 1589  | 17            | 250   | 205        | 930    | 13.7        |

## Technical Data - Compressed Air Filters CHF Series - Grade A

| FILTER MODEL | PN          | CONNECTION SIZE | FLOW RATE |       | MAX. PRESSURE |       | DIMENSIONS |        | WEIGHT [kg] |
|--------------|-------------|-----------------|-----------|-------|---------------|-------|------------|--------|-------------|
|              |             |                 | [m³/min]  | [cfm] | [bar]         | [psi] | W [mm]     | H [mm] |             |
| CHF005LA     | 47698957001 | 3/8"            | 0.5       | 18    | 17            | 250   | 76         | 225    | 0.55        |
| CHF007LA     | 47698958001 | 1/2"            | 0.7       | 24    | 17            | 250   | 76         | 225    | 0.55        |
| CHF013LA     | 47698959001 | 3/4"            | 1.3       | 44    | 17            | 250   | 98         | 280    | 1.07        |
| CHF018LA     | 47698960001 | 3/4"            | 1.8       | 65    | 17            | 250   | 98         | 280    | 1.09        |
| CHF025LA     | 47698961001 | 1"              | 2.5       | 88    | 17            | 250   | 129        | 319    | 2.06        |
| CHF032LA     | 47698962001 | 1"              | 3.2       | 112   | 17            | 250   | 129        | 319    | 2.06        |
| CHF038LA     | 47698963001 | 1"              | 3.8       | 135   | 17            | 250   | 129        | 319    | 2.06        |
| CHF067LA     | 47698964001 | 1 1/2"          | 6.7       | 235   | 17            | 250   | 129        | 409    | 2.36        |
| CHF082LA     | 47698965001 | 1 1/2"          | 8.2       | 288   | 17            | 250   | 129        | 409    | 2.36        |
| CHF100LA     | 47698966001 | 2"              | 10        | 353   | 17            | 250   | 170        | 518    | 5.2         |
| CHF0133LA    | 47698967001 | 2"              | 13.3      | 471   | 17            | 250   | 170        | 518    | 5.24        |
| CHF0167LA    | 47698968001 | 2"              | 16.7      | 589   | 17            | 250   | 170        | 518    | 5.26        |
| CHF0200LA    | 47698969001 | 3"              | 20        | 706   | 17            | 250   | 205        | 600    | 9.31        |
| CHF0260LA    | 47698970001 | 3"              | 26        | 918   | 17            | 250   | 205        | 700    | 10.69       |
| CHF0305LA    | 47698971001 | 3"              | 30.5      | 1077  | 17            | 250   | 205        | 700    | 10.69       |
| CHF0383LA    | 47698972001 | 3"              | 38.3      | 1354  | 17            | 250   | 205        | 930    | 13.7        |
| CHF0450LA    | 47698973001 | 3"              | 45        | 1589  | 17            | 250   | 205        | 930    | 13.7        |



## Technical Data - Compressed Air Filters CHF Series - Grade R

| FILTER MODEL | PN          | CONNECTION SIZE | FLOW RATE |       | MAX. PRESSURE |       | DIMENSIONS |        | WEIGHT [kg] |
|--------------|-------------|-----------------|-----------|-------|---------------|-------|------------|--------|-------------|
|              |             |                 | [m³/min]  | [cfm] | [bar]         | [psi] | W [mm]     | H [mm] |             |
| CHF005LR     | 47698940001 | 3/8"            | 0.5       | 18    | 17            | 250   | 76         | 225    | 0.55        |
| CHF007LR     | 47698941001 | 1/2"            | 0.7       | 24    | 17            | 250   | 76         | 225    | 0.55        |
| CHF013LR     | 47698942001 | 3/4"            | 1.3       | 44    | 17            | 250   | 98         | 280    | 1.07        |
| CHF018LR     | 47698943001 | 3/4"            | 1.8       | 65    | 17            | 250   | 98         | 280    | 1.09        |
| CHF025LR     | 47698944001 | 1"              | 2.5       | 88    | 17            | 250   | 129        | 319    | 2.06        |
| CHF032LR     | 47698945001 | 1"              | 3.2       | 112   | 17            | 250   | 129        | 319    | 2.06        |
| CHF038LR     | 47698946001 | 1"              | 3.8       | 135   | 17            | 250   | 129        | 319    | 2.06        |
| CHF067LR     | 47698947001 | 1 1/2"          | 6.7       | 235   | 17            | 250   | 129        | 409    | 2.36        |
| CHF082LR     | 47698948001 | 1 1/2"          | 8.2       | 288   | 17            | 250   | 129        | 409    | 2.36        |
| CHF100LR     | 47698949001 | 2"              | 10        | 353   | 17            | 250   | 170        | 518    | 5.2         |
| CHF0133LR    | 47698950001 | 2"              | 13.3      | 471   | 17            | 250   | 170        | 518    | 5.24        |
| CHF0167LR    | 47698951001 | 2"              | 16.7      | 589   | 17            | 250   | 170        | 518    | 5.26        |
| CHF0200LR    | 47698952001 | 3"              | 20        | 706   | 17            | 250   | 205        | 600    | 9.31        |
| CHF0260LR    | 47698953001 | 3"              | 26        | 918   | 17            | 250   | 205        | 700    | 10.69       |
| CHF0305LR    | 47698954001 | 3"              | 30.5      | 1077  | 17            | 250   | 205        | 700    | 10.69       |
| CHF0383LR    | 47698955001 | 3"              | 38.3      | 1354  | 17            | 250   | 205        | 930    | 13.7        |
| CHF0450LR    | 47698956001 | 3"              | 45        | 1589  | 17            | 250   | 205        | 930    | 13.7        |

### Grade M - General Purpose Protection

Particle removal down to 0.1 micron including coalesced liquid, water and oil, providing a maximum remaining oil aerosol content of 0.03 mg/m³ @ 21°C

### Grade S - High Efficiency Oil Removal Filtration

Particle removal down to 0.01 micron including water and oil aerosols, providing a maximum remaining oil aerosol content of 0.01 mg/m³ @ 21°C

(Precede with Grade M filter)

### Operating Limitations:

Max Operating Pressure 17.2 bar g  
 Max Recommended Operating Temp 80°C (Grade M, S, R)

### Grade A - Activated Carbon Filtration

Oil vapor and hydrocarbon odor removal, providing a maximum remaining oil content of <0.003 mg/m³ (<0.003 ppm) @ 21°C (Precede with Grade S filter)

### Grade R - General Purpose Dust Filtration

Dust particle removal down to 1 micron

Max Recommended Operating Temp 50°C (Grade A)  
 Min Recommended Operating Temp 1°C

| LINE PRESSURE     | bar g | 1    | 2    | 3    | 5    | 7    | 9    | 11   | 13   | 15   | 17   |
|-------------------|-------|------|------|------|------|------|------|------|------|------|------|
| CORRECTION FACTOR |       | 0.38 | 0.53 | 0.65 | 0.85 | 1.00 | 1.13 | 1.25 | 1.36 | 1.46 | 1.56 |

To use correction factors, multiply the filter's capacity by the correction factor to get the new filter flow capacity at the non-standard operating pressure. For example, a 190 m³/h filter operating at 11 bar has a correction factor of 1.25. 1.25 x 190 = 237.5 m³/h capacity at 11 bar.

# FILTER ELEMENTS



## Technical Data - Compressed Air Filter Elements CHF Series - Grade M

| FILTER MODEL | FILTER ELEMENT |
|--------------|----------------|
| CHF005LM     | 47699428001    |
| CHF007LM     | 47699432001    |
| CHF013LM     | 47699436001    |
| CHF018LM     | 47699440001    |
| CHF025LM     | 47699444001    |
| CHF032LM     | 47699448001    |
| CHF038LM     | 47699452001    |
| CHF067LM     | 47699456001    |
| CHF082LM     | 47699460001    |
| CHF100LM     | 47699464001    |
| CHF0133LM    | 47699468001    |
| CHF0167LM    | 47699472001    |
| CHF0200LM    | 47699476001    |
| CHF0260LM    | 47700081001    |
| CHF0305LM    | 47700085001    |
| CHF0383LM    | 47700089001    |
| CHF0450LM    | 47700093001    |

## Technical Data - Compressed Air Filter Elements CHF Series - Grade A

| FILTER MODEL | FILTER ELEMENT |
|--------------|----------------|
| CHF005LA     | 47699431001    |
| CHF007LA     | 47699435001    |
| CHF013LA     | 47699439001    |
| CHF018LA     | 47699443001    |
| CHF025LA     | 47699447001    |
| CHF032LA     | 47699451001    |
| CHF038LA     | 47699455001    |
| CHF067LA     | 47699459001    |
| CHF082LA     | 47699463001    |
| CHF100LA     | 47699467001    |
| CHF0133LA    | 47699471001    |
| CHF0167LA    | 47699475001    |
| CHF0200LA    | 47700080001    |
| CHF0260LA    | 47700084001    |
| CHF0305LA    | 47700088001    |
| CHF0383LA    | 47700092001    |
| CHF0450LA    | 47700096001    |

## Technical Data - Compressed Air Filter Elements CHF Series - Grade S

| FILTER MODEL | FILTER ELEMENT |
|--------------|----------------|
| CHF005LS     | 47699429001    |
| CHF007LS     | 47699433001    |
| CHF013LS     | 47699437001    |
| CHF018LS     | 47699441001    |
| CHF025LS     | 47699445001    |
| CHF032LS     | 47699449001    |
| CHF038LS     | 47699453001    |
| CHF067LS     | 47699457001    |
| CHF082LS     | 47699461001    |
| CHF100LS     | 47699465001    |
| CHF0133LS    | 47699469001    |
| CHF0167LS    | 47699473001    |
| CHF0200LS    | 47700078001    |
| CHF0260LS    | 47700082001    |
| CHF0305LS    | 47700086001    |
| CHF0383LS    | 47700090001    |
| CHF0450LS    | 47700094001    |

## Technical Data - Compressed Air Filter Elements CHF Series - Grade R

| FILTER MODEL | FILTER ELEMENT |
|--------------|----------------|
| CHF005LR     | 47699430001    |
| CHF007LR     | 47699434001    |
| CHF013LR     | 47699438001    |
| CHF018LR     | 47699442001    |
| CHF025LR     | 47699446001    |
| CHF032LR     | 47699450001    |
| CHF038LR     | 47699454001    |
| CHF067LR     | 47699458001    |
| CHF082LR     | 47699462001    |
| CHF100LR     | 47699466001    |
| CHF0133LR    | 47699470001    |
| CHF0167LR    | 47699474001    |
| CHF0200LR    | 47700079001    |
| CHF0260LR    | 47700083001    |
| CHF0305LR    | 47700087001    |
| CHF0383LR    | 47700091001    |
| CHF0450LR    | 47700095001    |



# CHR SERIES REFRIGERATION AIR DRYERS

### Applications

- Compressed air systems

### At a glance...



**Operating Pressure**  
16/14 bar g



**Ambient temperature**  
25 °C (45° max)



**Inlet air temperature**  
35 °C (55° max)



The advanced design and innovative technology offered by CHR Series refrigeration dryers provides an optimised performance alongside a more efficient mode of management.

The electronic controller, complete with user-friendly interface, has been simplified to focus on the essential functions of operation and regulation, including the unique fan control (CHR6 – CHR167).

Simplicity in design, unrivalled reliability, and extraordinary value for money are the core strengths of this new family of units.

### Standard voltage

- CHR6 – CHR36: 230V/1ph/50-60Hz
- CHR47 – CHR167: 230V/1ph/50Hz
- CHR217 – CHR350: 400V/3ph/50Hz

### Available options

- Non-standard voltages  
CHR47 – CHR125 are available with 230V/1ph/60Hz  
CHR217 is available with 460V/3ph/60Hz
- All models are available with NPT connections

### Main design features

#### Variable speed fan

The only one in the market to offer a complete control of the dew point through the variable speed fan controlled by the microprocessor. Thanks to this solution we've eliminated the hot gas bypass valve and the fan pressure switch, critical components for the defects of this type of machines.

#### Multi-function control panel

It offers a wide range of parameters and alarms such as: high temperature, low temperature (antifreeze), probe failure, alarm history, etc.

#### New heat exchangers

Completely designed in our laboratories to guarantee the desired level of performances with the lowest pressure drop.

#### Energy saving and antifreeze mode

The compressor stops in case of low load and ambient temperature below 15 °C.

#### Compact and simple design

Sheet metal panels and internal components designed in order to reduce costs during assembly, maintaining the high quality guaranteed by Champion.

For higher capacities up to 45 m<sup>3</sup>/min (2,700 m<sup>3</sup>/h) please contact the Champion Sales Team

| DRYER  | PN          | AIR FLOW CLASS 5    |                       | ABSORBED POWER [kW] | POWER SUPPLY [V/PH/Hz] | MAX PRESSURE [bar g] | AIR CONNECTIONS [BSP] | REFRIGERANT | DIMENSIONS |        |        |
|--------|-------------|---------------------|-----------------------|---------------------|------------------------|----------------------|-----------------------|-------------|------------|--------|--------|
|        |             | [m <sup>3</sup> /h] | [m <sup>3</sup> /min] |                     |                        |                      |                       |             | W [mm]     | D [mm] | H [mm] |
| CHR6   | 47703069001 | 36                  | 0.60                  | 0.12                | 230/1/50-60            | 16                   | 3/8"                  | R513A       | 305        | 360    | 408    |
| CHR9   | 47703070001 | 54                  | 0.90                  | 0.17                | 230/1/50-60            | 16                   | 1/2"                  | R513A       | 325        | 430    | 445    |
| CHR12  | 47703071001 | 72                  | 1.20                  | 0.17                | 230/1/50-60            | 16                   | 1/2"                  | R513A       | 325        | 430    | 445    |
| CHR18  | 47703072001 | 108                 | 1.80                  | 0.29                | 230/1/50-60            | 16                   | 1/2"                  | R513A       | 325        | 430    | 445    |
| CHR24  | 47703073001 | 144                 | 2.40                  | 0.41                | 230/1/50-60            | 16                   | 3/4"                  | R513A       | 395        | 486    | 565    |
| CHR30  | 47703074001 | 180                 | 3.00                  | 0.47                | 230/1/50-60            | 16                   | 3/4"                  | R513A       | 395        | 486    | 565    |
| CHR36  | 47703075001 | 216                 | 3.60                  | 0.61                | 230/1/50-60            | 16                   | 3/4"                  | R513A       | 395        | 486    | 565    |
| CHR47  | 47703076001 | 280                 | 4.67                  | 0.6                 | 230/1/50               | 16                   | 1"                    | R407C       | 485        | 595    | 614    |
| CHR57  | 47703077001 | 340                 | 5.67                  | 0.6                 | 230/1/50               | 16                   | 1"                    | R407C       | 485        | 595    | 614    |
| CHR83  | 47703078001 | 500                 | 8.33                  | 0.9                 | 230/1/50               | 16                   | 1-1/2"                | R407C       | 500        | 660    | 970    |
| CHR102 | 47703079001 | 610                 | 10.17                 | 0.9                 | 230/1/50               | 16                   | 1-1/2"                | R407C       | 500        | 660    | 970    |
| CHR125 | 47703080001 | 750                 | 12.50                 | 1.23                | 230/1/50               | 14                   | 2"                    | R407C       | 520        | 800    | 1195   |
| CHR167 | 47703081001 | 1000                | 16.67                 | 1.43                | 230/1/50               | 14                   | 2-1/2"                | R407C       | 520        | 835    | 1195   |
| CHR217 | 47703082001 | 1300                | 21.67                 | 2.14                | 400/3/50               | 14                   | 2-1/2"                | R407C       | 520        | 835    | 1230   |
| CHR333 | 47703083001 | 2000                | 33.33                 | 2.78                | 400/3/50               | 14                   | 3"                    | R407C       | 806        | 1012   | 1539   |
| CHR417 | 47703084001 | 2500                | 41.67                 | 3.54                | 400/3/50               | 14                   | 3"                    | R407C       | 806        | 1012   | 1539   |
| CHR500 | 47716993001 | 3540                | 59.00                 | 6.29                | 400/3/50               | 13                   | DN125                 | R407C       | 1500       | 1500   | 1555   |
| CHR700 | 47716994001 | 4956                | 82.60                 | 7.29                | 400/3/50               | 13                   | DN125                 | R407C       | 1500       | 1500   | 1555   |
| CHR800 | 47716995001 | 5664                | 94.40                 | 9.52                | 400/3/50               | 13                   | DN150                 | R407C       | 1500       | 1500   | 1555   |
| CHR900 | 47716996001 | 6372                | 106.20                | 9.52                | 400/3/50               | 13                   | DN150                 | R407C       | 1500       | 1500   | 1555   |

Timer drain as standard, electronic no loss drain option on request on Models CHR6 - CHR217. Integrated zero loss drain as standard on Models CHR333 and CHR417.

| DRYER  | PN          | AIR FLOW CLASS 4    |                       | ABSORBED POWER [kW] | POWER SUPPLY [V/PH/Hz] | MAX PRESSURE [bar g] | AIR CONNECTIONS [BSP] | REFRIGERANT | DIMENSIONS |        |        |
|--------|-------------|---------------------|-----------------------|---------------------|------------------------|----------------------|-----------------------|-------------|------------|--------|--------|
|        |             | [m <sup>3</sup> /h] | [m <sup>3</sup> /min] |                     |                        |                      |                       |             | W [mm]     | D [mm] | H [mm] |
| CHR333 | 47703083001 | 1800                | 30.00                 | 2.78                | 400/3/50               | 14                   | 3"                    | R407C       | 806        | 1012   | 1539   |
| CHR417 | 47703084001 | 2250                | 37.50                 | 3.54                | 400/3/50               | 14                   | 3"                    | R407C       | 806        | 1012   | 1539   |
| CHR500 | 47716993001 | 3000                | 50.00                 | 6.29                | 400/3/50               | 13                   | DN125                 | R407C       | 1500       | 1500   | 1555   |
| CHR700 | 47716994001 | 4200                | 70.00                 | 7.29                | 400/3/50               | 13                   | DN125                 | R407C       | 1500       | 1500   | 1555   |
| CHR800 | 47716995001 | 4800                | 80.00                 | 9.52                | 400/3/50               | 13                   | DN150                 | R407C       | 1500       | 1500   | 1555   |
| CHR900 | 47716996001 | 5400                | 90.00                 | 9.52                | 400/3/50               | 13                   | DN150                 | R407C       | 1500       | 1500   | 1555   |

| DRYER        | PN          | AIR FLOW            |                       | ABSORBED POWER [kW] | POWER SUPPLY [V/PH/Hz] | MAX PRESSURE [bar g] | AIR CONNECTIONS [BSP] | REFRIGERANT | DIMENSIONS |        |        |
|--------------|-------------|---------------------|-----------------------|---------------------|------------------------|----------------------|-----------------------|-------------|------------|--------|--------|
|              |             | [m <sup>3</sup> /h] | [m <sup>3</sup> /min] |                     |                        |                      |                       |             | W [mm]     | D [mm] | H [mm] |
| CHR6 - NLD   | 47703438001 | 36                  | 0.60                  | 0.12                | 230/1/50-60            | 16                   | 3/8"                  | R513A       | 305        | 360    | 408    |
| CHR9 - NLD   | 47703439001 | 54                  | 0.90                  | 0.17                | 230/1/50-60            | 16                   | 1/2"                  | R513A       | 325        | 430    | 445    |
| CHR12 - NLD  | 47703440001 | 72                  | 1.20                  | 0.17                | 230/1/50-60            | 16                   | 1/2"                  | R513A       | 325        | 430    | 445    |
| CHR18 - NLD  | 47703441001 | 108                 | 1.80                  | 0.29                | 230/1/50-60            | 16                   | 1/2"                  | R513A       | 325        | 430    | 445    |
| CHR24 - NLD  | 47703442001 | 144                 | 2.40                  | 0.41                | 230/1/50-60            | 16                   | 3/4"                  | R513A       | 395        | 486    | 565    |
| CHR30 - NLD  | 47703443001 | 180                 | 3.00                  | 0.47                | 230/1/50-60            | 16                   | 3/4"                  | R513A       | 395        | 486    | 565    |
| CHR36 - NLD  | 47703444001 | 216                 | 3.60                  | 0.61                | 230/1/50-60            | 16                   | 3/4"                  | R513A       | 395        | 486    | 565    |
| CHR47 - NLD  | 47703445001 | 280                 | 4.67                  | 0.6                 | 230/1/50               | 16                   | 1"                    | R407C       | 485        | 595    | 614    |
| CHR57 - NLD  | 47703446001 | 340                 | 5.67                  | 0.6                 | 230/1/50               | 16                   | 1"                    | R407C       | 485        | 595    | 614    |
| CHR83 - NLD  | 47703447001 | 500                 | 8.33                  | 0.9                 | 230/1/50               | 16                   | 1-1/2"                | R407C       | 500        | 660    | 970    |
| CHR102 - NLD | 47703448001 | 610                 | 10.17                 | 0.9                 | 230/1/50               | 16                   | 1-1/2"                | R407C       | 500        | 660    | 970    |
| CHR125 - NLD | 47703449001 | 750                 | 12.50                 | 1.23                | 230/1/50               | 14                   | 2"                    | R407C       | 520        | 800    | 1195   |
| CHR167 - NLD | 47703450001 | 1000                | 16.67                 | 1.43                | 230/1/50               | 14                   | 2-1/2"                | R407C       | 520        | 835    | 1195   |
| CHR217 - NLD | 47703451001 | 1300                | 21.67                 | 2.14                | 400/3/50               | 14                   | 2-1/2"                | R407C       | 520        | 835    | 1230   |

**CORRECTION FACTOR FOR WORKING PRESSURE**

| OPERATING PRESSURE [bar] | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| CORRECTION FACTOR FC1    | 0.70 | 0.78 | 0.85 | 0.93 | 1.00 | 1.06 | 1.11 | 1.15 | 1.18 | 1.20 | 1.22 | 1.24 | 1.25 | 1.26 |

**CORRECTION FACTOR FOR INLET AIR TEMPERATURE CHANGES**

| TEMPERATURE [°C]      | 30   | 35   | 40   | 45   | 50   | 55   |
|-----------------------|------|------|------|------|------|------|
| CORRECTION FACTOR FC2 | 1.20 | 1.00 | 0.85 | 0.71 | 0.58 | 0.49 |

**CORRECTION FACTOR FOR AMBIENT TEMPERATURE CHANGES**

| TEMPERATURE [°C]      | 25   | 30   | 35   | 40   | 42   | 45   |
|-----------------------|------|------|------|------|------|------|
| CORRECTION FACTOR FC3 | 1.00 | 0.96 | 0.92 | 0.88 | 0.85 | 0.80 |

Calculation for correct Dryer Air flow = Nominal Dryer Air Flow x FC1 x FC2 x FC3

# MODULAR DESICCANT DRYERS

### Applications

- Automotive
- Food and beverage
- Pharmaceutical
- Chemical
- Oil & Gas

### At a glance...



**Operating Pressure**  
14 bar



**Flow Rate**  
0.08 - 5.00 m<sup>3</sup>/min



**Pressure Dew Points**  
-40°C (-25°C / -70°C)

### A-Series modular compressed air dryers - a dedicated solution for every application

By combining the proven benefits of desiccant drying with modern design, Champion provides an extremely compact and reliable system to dry and clean compressed air efficiently.

At the heart of any compressed air treatment solution is the dryer, its purpose, to remove water vapour, stop condensation, corrosion and in the case of adsorption dryers, inhibit the growth of micro-organisms.

The Champion A-Series of heatless regenerative desiccant dryers have proven to be the ideal solution for many thousands of compressed air users worldwide in a wide variety of industries.

### Advantages at a glance:

- Robust and reliable industry-proven design
- Suitable for all industries and applications - some desiccant dryer regeneration methods prevent their use in certain industries/applications
- Lower capital investment and reduced complexity compared to other dryer regeneration methods
- Lower maintenance costs in comparison to other dryer regeneration methods
- No heat, heaters, or heat-related issues

### High air quality, low cost of ownership

#### Features are your benefits

#### High Air Quality:

Delivers ISO Class 2 or Class 1 pressure dew point air for critical applications; high efficiency pre and post-filters provide constant high air quality, protecting downstream air from contamination.

#### Superior Reliability:

Proven electronic control performance indicators, extruded aluminium with anodisation and epoxy painting, and NEMA 3/IP54 Protection (also suitable for outdoor installation) make desiccant dryers durable and high-strength.



#### Total Cost of Investment:

Reduced cost of ownership with point of use design to treat only the required air, conservative pressure drop 0.2 Barg, and purge reduction on compressed air demand (on/off-load).

#### Ease of Use:

User-friendly electronic interface with alarm indicators available for models 40 and above.

#### Serviceability:

Modular dryers feature an optimised design for simplified maintenance and preventative maintenance alerts (models 40 and above).

#### Compact & Flexible Solution:

Space-saving design for optimised installation with air inlet and outlet in the back of unit and connection piping can come from right or left. Model up to 0.42 m<sup>3</sup>/min can be wall-mounted or installed horizontally

#### Performance Improvement:

Extended rated pressure range from 4 to 14 Barg and increased airflow range coverage up to 300 m<sup>3</sup>/h. Guaranteed class 2 (-40°C) and optionally class 1 (-70°C) pressure dew point.

#### Longer Cycle Life:

Modular dryers have a longer cycle time, 10 minutes, than most competitors (4 to 8 minutes maximum).

## CHA1M -40°C to CHA50M -40°C Series

| TYPE        | PART NO     | CAPACITY |        |        | MAX PRESSURE |        | PRESSURE DEW POINT | AIR IN/OUT CONNECTION | POWER SUPPLY | DIMENSIONS [MM] |     |      | WEIGHT | DESICCANT PER TOWER |
|-------------|-------------|----------|--------|--------|--------------|--------|--------------------|-----------------------|--------------|-----------------|-----|------|--------|---------------------|
|             |             | [m³/min] | [m³/h] | [SCFM] | [bar g]      | [psig] | [°C]               | [BSP (in)]            | [V/Ph/Hz]    | [W]             | [D] | [H]  | [kg]   | [kg]                |
| CHA1 -40°C  | 47700856001 | 0.08     | 5      | 3      | 14           | 203    | -40                | 3/8"                  | 230/1/50-60  | 238             | 212 | 423  | 11     | 0.7                 |
| CHA3 -40°C  | 47700857001 | 0.25     | 15     | 9      | 14           | 203    | -40                | 3/8"                  | 230/1/50-60  | 238             | 212 | 823  | 18     | 2.2                 |
| CHA4 -40°C  | 47700858001 | 0.42     | 25     | 15     | 14           | 203    | -40                | 3/8"                  | 230/1/50-60  | 238             | 212 | 1073 | 27     | 3.0                 |
| CHA7 -40°C  | 47700859001 | 0.67     | 40     | 24     | 14           | 203    | -40                | 3/4"                  | 230/1/50-60  | 475             | 405 | 968  | 44     | 6.4                 |
| CHA9 -40°C  | 47700860001 | 0.92     | 55     | 32     | 14           | 203    | -40                | 3/4"                  | 230/1/50-60  | 475             | 405 | 1118 | 50     | 8.4                 |
| CHA12 -40°C | 47700861001 | 1.17     | 70     | 41     | 14           | 203    | -40                | 3/4"                  | 230/1/50-60  | 475             | 405 | 1318 | 60     | 10.9                |
| CHA17 -40°C | 47700862001 | 1.67     | 100    | 59     | 14           | 203    | -40                | 1"                    | 230/1/50-60  | 475             | 405 | 1673 | 73     | 15.4                |
| CHA25 -40°C | 47700863001 | 2.50     | 150    | 88     | 14           | 203    | -40                | 1"                    | 230/1/50-60  | 475             | 405 | 1873 | 90     | 18.0                |
| CHA33 -40°C | 47700864001 | 3.33     | 200    | 118    | 14           | 203    | -40                | 1 1/2"                | 230/1/50-60  | 536             | 495 | 1705 | 177    | 30.8                |
| CHA42 -40°C | 47700865001 | 4.17     | 250    | 147    | 14           | 203    | -40                | 1 1/2"                | 230/1/50-60  | 536             | 495 | 1905 | 180    | 35.9                |
| CHA50 -40°C | 47700866001 | 5.00     | 300    | 177    | 14           | 203    | -40                | 1 1/2"                | 230/1/50-60  | 536             | 495 | 1905 | 188    | 35.9                |

## CHA7 -40°C DS to CHA50M -40°C ES Series

| TYPE           | PART NO     | CAPACITY |        |        | MAX PRESSURE |        | PRESSURE DEW POINT | AIR IN/OUT CONNECTION | POWER SUPPLY | DIMENSIONS [MM] |     |      | WEIGHT | DESICCANT PER TOWER |
|----------------|-------------|----------|--------|--------|--------------|--------|--------------------|-----------------------|--------------|-----------------|-----|------|--------|---------------------|
|                |             | [m³/min] | [m³/h] | [SCFM] | [bar g]      | [psig] | [°C]               | [BSP (in)]            | [V/Ph/Hz]    | [W]             | [D] | [H]  | [kg]   | [kg]                |
| CHA7 -40°C ES  | 47700867001 | 0.67     | 40     | 24     | 14           | 203    | -40                | 3/4"                  | 230/1/50-60  | 475             | 405 | 968  | 44     | 6.4                 |
| CHA9 -40°C ES  | 47700868001 | 0.92     | 55     | 32     | 14           | 203    | -40                | 3/4"                  | 230/1/50-60  | 475             | 405 | 1118 | 50     | 8.4                 |
| CHA12 -40°C ES | 47700869001 | 1.17     | 70     | 41     | 14           | 203    | -40                | 3/4"                  | 230/1/50-60  | 475             | 405 | 1318 | 60     | 10.9                |
| CHA17 -40°C ES | 47700870001 | 1.67     | 100    | 59     | 14           | 203    | -40                | 1"                    | 230/1/50-60  | 475             | 405 | 1673 | 73     | 15.4                |
| CHA25 -40°C ES | 47700871001 | 2.50     | 150    | 88     | 14           | 203    | -40                | 1"                    | 230/1/50-60  | 475             | 405 | 1873 | 90     | 18.0                |
| CHA33 -40°C ES | 47700872001 | 3.33     | 200    | 118    | 14           | 203    | -40                | 1 1/2"                | 230/1/50-60  | 536             | 495 | 1705 | 177    | 30.8                |
| CHA42 -40°C ES | 47700873001 | 4.17     | 250    | 147    | 14           | 203    | -40                | 1 1/2"                | 230/1/50-60  | 536             | 495 | 1905 | 180    | 35.9                |
| CHA50 -40°C ES | 47700874001 | 5.00     | 300    | 177    | 14           | 203    | -40                | 1 1/2"                | 230/1/50-60  | 536             | 495 | 1905 | 188    | 35.9                |

## CHA7 -70°C to CHA50M -70°C Series

| TYPE        | PART NO     | CAPACITY |        |        | MAX PRESSURE |        | PRESSURE DEW POINT | AIR IN/OUT CONNECTION | POWER SUPPLY | DIMENSIONS [MM] |     |      | WEIGHT | DESICCANT PER TOWER |
|-------------|-------------|----------|--------|--------|--------------|--------|--------------------|-----------------------|--------------|-----------------|-----|------|--------|---------------------|
|             |             | [m³/min] | [m³/h] | [SCFM] | [bar g]      | [psig] | [°C]               | [BSP (in)]            | [V/Ph/Hz]    | [W]             | [D] | [H]  | [kg]   | [kg]                |
| CHA7 -70°C  | 47700875001 | 0.53     | 32     | 19     | 14           | 203    | -70                | 3/4"                  | 230/1/50-60  | 475             | 405 | 968  | 44     | 6.4                 |
| CHA9 -70°C  | 47700876001 | 0.73     | 44     | 26     | 14           | 203    | -70                | 3/4"                  | 230/1/50-60  | 475             | 405 | 1118 | 50     | 8.4                 |
| CHA12 -70°C | 47700877001 | 0.93     | 56     | 33     | 14           | 203    | -70                | 3/4"                  | 230/1/50-60  | 475             | 405 | 1318 | 60     | 10.9                |
| CHA17 -70°C | 47700878001 | 1.33     | 80     | 47     | 14           | 203    | -70                | 1"                    | 230/1/50-60  | 475             | 405 | 1673 | 73     | 15.4                |
| CHA25 -70°C | 47700879001 | 2.00     | 120    | 71     | 14           | 203    | -70                | 1"                    | 230/1/50-60  | 475             | 405 | 1873 | 90     | 18.0                |
| CHA33 -70°C | 47700880001 | 2.67     | 160    | 94     | 14           | 203    | -70                | 1 1/2"                | 230/1/50-60  | 536             | 495 | 1705 | 177    | 30.8                |
| CHA42 -70°C | 47700881001 | 3.33     | 200    | 118    | 14           | 203    | -70                | 1 1/2"                | 230/1/50-60  | 536             | 495 | 1905 | 180    | 35.9                |
| CHA50 -70°C | 47700882001 | 4.00     | 240    | 142    | 14           | 203    | -70                | 1 1/2"                | 230/1/50-60  | 536             | 495 | 1905 | 188    | 35.9                |

## CORRECTION FACTORS

|                       |      | INLET AIR PRESSURE |      |      |      |      |      |      |      |      |      |      |    |
|-----------------------|------|--------------------|------|------|------|------|------|------|------|------|------|------|----|
|                       |      | bar g              | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14 |
| INLET AIR TEMPERATURE | 35°C | 0.63               | 0.75 | 0.88 | 1.00 | 1.14 | 1.25 | 1.37 | 1.49 | 1.64 | 1.75 | 1.89 |    |
|                       | 40°C | 0.55               | 0.66 | 0.77 | 0.88 | 1.00 | 1.00 | 1.20 | 1.32 | 1.43 | 1.54 | 1.64 |    |
|                       | 45°C | 0.45               | 0.54 | 0.63 | 0.72 | 0.81 | 0.90 | 1.00 | 1.08 | 1.18 | 1.27 | 1.35 |    |
|                       | 50°C | 0.32               | 0.39 | 0.45 | 0.52 | 0.58 | 0.65 | 0.71 | 0.78 | 0.85 | 0.91 | 0.97 |    |

|                       |       | INLET AIR PRESSURE |      |      |      |      |      |      |      |      |      |      |     |
|-----------------------|-------|--------------------|------|------|------|------|------|------|------|------|------|------|-----|
|                       |       | psi g              | 58   | 73   | 87   | 102  | 116  | 131  | 145  | 160  | 174  | 189  | 203 |
| INLET AIR TEMPERATURE | 95°F  | 0.63               | 0.75 | 0.88 | 1.00 | 1.14 | 1.25 | 1.37 | 1.49 | 1.64 | 1.75 | 1.89 |     |
|                       | 104°F | 0.55               | 0.66 | 0.77 | 0.88 | 1.00 | 1.00 | 1.20 | 1.32 | 1.43 | 1.54 | 1.64 |     |
|                       | 113°F | 0.45               | 0.54 | 0.63 | 0.72 | 0.81 | 0.90 | 1.00 | 1.08 | 1.18 | 1.27 | 1.35 |     |
|                       | 122°F | 0.32               | 0.39 | 0.45 | 0.52 | 0.58 | 0.65 | 0.71 | 0.78 | 0.85 | 0.91 | 0.97 |     |

Prefilters and Postfilter are supplied as standard on Modular Dryers.

### Prefilter

Particle removal down to 0.01 micron

- Including water and oil aerosols
- Maximum remaining oil aerosol content of 0.01 mg/m³ @ 21°C

### Postfilter

Particle removal down to 0.1 micron

- Including coalesced liquid, water and oil
- Maximum remaining oil aerosol content of 0.03 mg/m³ @ 21°C



# TWIN TOWER HEATLESS DESICCANT DRYERS

## At a glance...



**Capacity**  
400 - 8500 m<sup>3</sup>/hr



**Weight**  
285 - 4400 kg



**Connection Size**  
1½ - 3"

## Applications

- Air bearings
- Instrument Air
- Sand blasting
- Air gauging
- Spray painting
- Chemical Process - Oxidation, Ammonia Production
- Conveying, powder products
- Fluidics, sensors
- Food & beverages, direct air contact
- Micro-electronics manufacture
- Clean room processing air - blanketing
- Food & beverage - packaging, forming
- Photographic film processing



## Premium in-house air treatment manufacturing

A modern production system and process demands increasing levels of air quality, and compressed air operators need to ensure that the downstream equipment also delivers on it 100%.

The new downstream portfolio manufactured by Champion utilising the latest technology provides an energy efficient solution at the lowest life cycle costs. The same quality, performance, and efficiency standards delivered by the compressors can now be enjoyed from the air treatment range.

Investment in our manufacturing site, in addition to the support teams, ensures that compressed air operators don't need to worry about the quality of their compressed air – quality that is key to ensuring maximum production efficiency and investment protection.

| TYPE       | PART NO     | CONNECTION SIZE<br>[inch] | CAPACITY             |                      | WEIGHT<br>[kg] | DIMENSIONS |       |        |
|------------|-------------|---------------------------|----------------------|----------------------|----------------|------------|-------|--------|
|            |             |                           | [m <sup>3</sup> /hr] | [m <sup>3</sup> /hr] |                | LENGTH     | WIDTH | HEIGHT |
| CHT67F     | 47726991001 | 1 ½"                      | 400                  | 340                  | 285            | 2160       | 825   | 530    |
| CHT83F     | 47726992001 | 1 ½"                      | 500                  | 425                  | 400            | 2380       | 796   | 550    |
| CHT125F    | 47726993001 | 2"                        | 750                  | 637.5                | 520            | 2117       | 970   | 620    |
| CHT150F    | 47726994001 | 2"                        | 900                  | 765                  | 700            | 2305       | 970   | 620    |
| CHT67FS    | 47727056001 | 1 ½"                      | 400                  | 340                  | 285            | 2160       | 825   | 530    |
| CHT83FS    | 47727057001 | 1 ½"                      | 500                  | 425                  | 400            | 2380       | 796   | 550    |
| CHT125FS   | 47727058001 | 2"                        | 750                  | 637.5                | 520            | 2117       | 970   | 620    |
| CHT150FS   | 47727059001 | 2"                        | 900                  | 765                  | 700            | 2305       | 970   | 620    |
| CHT67F-70  | 47727069001 | 1 ½"                      | 400                  | 340                  | 285            | 2160       | 825   | 530    |
| CHT83F-70  | 47727070001 | 1 ½"                      | 500                  | 425                  | 400            | 2380       | 796   | 550    |
| CHT125F-70 | 47727071001 | 2"                        | 750                  | 637.5                | 520            | 2117       | 970   | 620    |
| CHT150F-70 | 47727072001 | 2"                        | 900                  | 765                  | 700            | 2305       | 970   | 620    |

CHT67F to CHT150F is standard at -40°C PDP, CHT67FS to CHT150FS is standard at -40°C PDP with Energy Management System, CHT67F-70 to CHT150F-70 is at -70°C PDP

# CHM-DRY SERIES MEMBRANE DRYERS

## At a glance...



**Operating Pressure**  
12 bar



**Flow Rate**  
0.05 - 3 m<sup>3</sup>/min



**Pipe Size**  
¼ - 1"



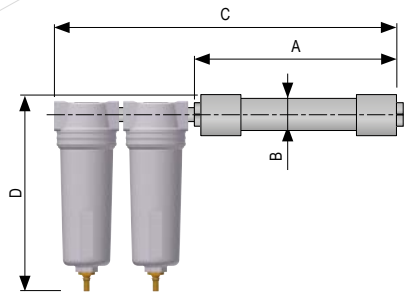
**Operating Temp. Range**  
1.5 - 60°C



## Applications

- Automotive painting
- Industrial "Point-Of-Use" drying
- Low dew point instrument air
- Pneumatics
- Medical air
- Analytical Equipment
- Pressurising electrical cabinets

CHM-DRY membrane air dryers have been developed for high efficient removal of water vapours from compressed air.



| TYPE        | PART NO   | PIPE SIZE<br>[inch] | OPERATING PRESSURE<br>[bar] | FLOW RATE *           |       | DIMENSIONS |        |        |        |
|-------------|-----------|---------------------|-----------------------------|-----------------------|-------|------------|--------|--------|--------|
|             |           |                     |                             | [m <sup>3</sup> /min] | [cfm] | A [mm]     | B [mm] | C [mm] | D [mm] |
| CHM-DRY 3   | CC1189577 | ¼                   | 12                          | 0.05                  | 1.8   | 224        | 43.7   | 325    | 175    |
| CHM-DRY 6   | CC1189578 | ¼                   | 12                          | 0.1                   | 3.5   | 325        | 43.7   | 453    | 175    |
| CHM-DRY 9   | CC1189579 | ¼                   | 12                          | 0.15                  | 5.3   | 427        | 43.7   | 555    | 175    |
| CHM-DRY 12  | CC1189580 | ¼                   | 12                          | 0.2                   | 7.1   | 503        | 43.7   | 611    | 175    |
| CHM-DRY 18  | CC1189581 | ½                   | 12                          | 0.3                   | 10.6  | 312        | 61     | 476    | 208    |
| CHM-DRY 24  | CC1189582 | ½                   | 12                          | 0.4                   | 14.1  | 376        | 61     | 540    | 208    |
| CHM-DRY 32  | CC1189583 | ½                   | 12                          | 0.6                   | 21.2  | 465        | 61     | 661    | 208    |
| CHM-DRY 44  | CC1189584 | ½                   | 12                          | 0.8                   | 28.3  | 592        | 61     | 788    | 208    |
| CHM-DRY 63  | CC1189585 | ½                   | 12                          | 1.05                  | 37.1  | 411        | 89     | 607    | 208    |
| CHM-DRY 90  | CC1189586 | ½                   | 12                          | 1.5                   | 53    | 551        | 89     | 755    | 284    |
| CHM-DRY 123 | CC1189587 | ½                   | 12                          | 2.05                  | 72.4  | 551        | 89     | 577    | 284    |
| CHM-DRY 180 | CC1189588 | ½                   | 12                          | 3                     | 106.6 | 607        | 114    | 1,805  | 290    |

\* At 7 bar, inlet dew point 35 °C, outlet dew point 15 °C.

| OPERATING PRESSURE - CORRECTION FACTORS - C |      |      |      |     |      |      |      |      |      |  |
|---|------|------|------|-----|------|------|------|------|------|--|
| OPERATING PRESSURE [bar]                    | 4    | 5    | 6    | 7   | 8    | 9    | 10   | 11   | 12   |  |
| OPERATING PRESSURE [psi]                    | 58   | 72   | 87   | 100 | 115  | 130  | 145  | 160  | 174  |  |
| CORRECTION FACTOR                           | 0.41 | 0.56 | 0.76 | 1   | 1.22 | 1.48 | 1.76 | 1.86 | 2.22 |  |

## AIRCOOLED AFTERCOOLERS

# CHRA SERIES AIR COOLED AFTERCOOLERS

### At a glance...



**Operating Pressure**  
1 - 16 bar



**Flow Rate**  
1.1 - 75 m<sup>3</sup>/min



**Operating Temp. Range**  
25 - 120°C



**Pipe Size**  
1 - 2½"

Air cooled aftercoolers series CHRA have been designed to reduce compressed air temperature and water vapour dew point in compressed air system. A high efficiency axial fan forces ambient air over the heat exchangers copper tubes supported by aluminium fins, which provides the necessary cooling effect. The compressed air is cooled down to approximately 10°C above ambient temperature. CHRA aftercoolers ensures the maximum performance and protection of all equipment, such as refrigeration dryers, adsorption dryers and filters, positioned downstream of this unit.



| TYPE  | PART NO   | FLOW RATE             |                     | AIR    |        | FAN<br>[W] | OPERATING<br>PRESSURE<br>[bar] | DIMENSIONS [mm] |        | WEIGHT<br>[kg] |
|-------|-----------|-----------------------|---------------------|--------|--------|------------|--------------------------------|-----------------|--------|----------------|
|       |           | [m <sup>3</sup> /min] | [m <sup>3</sup> /h] | [IN]   | [OUT]  |            |                                | LENGTH          | HEIGHT |                |
| RA10  | CC1246362 | 1                     | 60                  | 1"     | 1"     | 20         | 1 - 16                         | 600             | 955    | 19             |
| RA20  | CC1246504 | 2                     | 120                 | 1"     | 1"     | 20         | 1 - 16                         | 600             | 955    | 20             |
| RA30  | CC1246505 | 3                     | 180                 | 1 1/2" | 1 1/2" | 115        | 1 - 16                         | 820             | 1145   | 29             |
| RA40  | CC1246506 | 4                     | 240                 | 1 1/2" | 1 1/2" | 135        | 1 - 16                         | 1030            | 1145   | 32             |
| RA65  | CC1227381 | 6.5                   | 390                 | 2"     | 1 1/2" | 690        | 1 - 16                         | 970             | 1365   | 51             |
| RA80  | CC1246392 | 8                     | 480                 | 2"     | 1 1/2" | 690        | 1 - 16                         | 965             | 1405   | 53             |
| RA120 | CC1227462 | 12                    | 720                 | 2"     | 2"     | 760        | 1 - 16                         | 1000            | 1555   | 97             |
| RA160 | CC1246393 | 16                    | 960                 | 2 1/2" | 2 1/2" | 760        | 1 - 16                         | 1205            | 1765   | 120            |
| RA200 | CC1246514 | 20                    | 1200                | 3"     | 2 1/2" | 660        | 1 - 16                         | 1410            | 2120   | 240            |
| RA250 | CC1218222 | 25                    | 1500                | 3"     | 3"     | 660        | 1 - 16                         | 1410            | 2120   | 250            |
| RA300 | CC1246515 | 30                    | 1800                | DN100  | DN100  | 660        | 1 - 16                         | 2095            | 2060   | 280            |
| RA400 | CC1246516 | 40                    | 2400                | DN100  | DN100  | 2 x 760    | 1 - 16                         | 2415            | 2050   | 300            |
| RA500 | CC1246517 | 50                    | 3000                | DN125  | DN125  | 2 x 1300   | 1 - 12                         | 3245            | 2000   | 310            |
| RA650 | CC1246518 | 65                    | 3900                | DN125  | DN125  | 2 x 1300   | 1 - 12                         | 3245            | 2000   | 390            |
| RA700 | CC1246519 | 75                    | 4500                | DN150  | DN150  | 2 x 1300   | 1 - 12                         | 3325            | 2150   | 390            |

# CHA SERIES

## WATER COOLED AFTERCOOLERS

### At a glance...



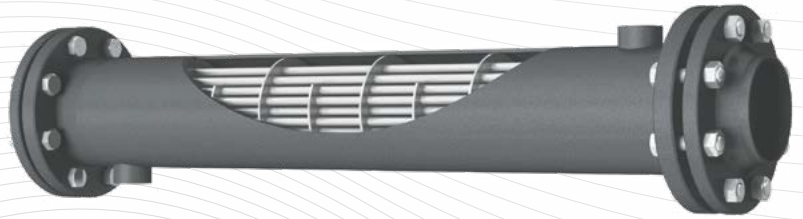
**Operating Pressure**  
1 - 12 bar



**Flow Rate**  
2.2 - 759.5 m<sup>3</sup>/min



**Operating Temp. Range**  
1.5 - 200°C



### Applications

- Automotive
- Electronics
- Food & Beverage
- Chemical
- Petrochemical
- Plastics
- Paint
- General industrial application

Water-cooled aftercoolers series CHA have been designed, to reduce compressed air temperature thus water vapour content in compressed air system. Hot compressed air/gas passes through the tubes. Cooling water passes around the tubes in counter flow. CHA aftercooler ensures the maximum performance and protection of all equipment, such as refrigeration dryers, adsorption dryers and filters, positioned downstream of this unit.

| TYPE  | PART NO   | AIR    |        | OPERATING PRESSURE<br>[bar] | FLOW RATE             |       | DIMENSIONS |        |
|-------|-----------|--------|--------|-----------------------------|-----------------------|-------|------------|--------|
|       |           | [IN]   | [OUT]  |                             | [m <sup>3</sup> /min] | [cfm] | A [mm]     | B [mm] |
| A30   | CC1246520 | 1 1/2" | 1 1/2" | 1 - 12                      | 3                     | 106   | 850        | 385    |
| A60   | CC1246521 | 2 1/2" | 1 1/2" | 1 - 12                      | 6                     | 212   | 1060       | 385    |
| A80   | CC1246523 | 2 1/2" | 1 1/2" | 1 - 12                      | 8                     | 282   | 1300       | 385    |
| A140  | CC1246524 | DN100  | DN100  | 1 - 12                      | 14                    | 494   | 1300       | 702    |
| A250  | CC1240647 | DN100  | DN100  | 1 - 12                      | 25                    | 882   | 1300       | 702    |
| A400  | CC1246525 | DN150  | DN125  | 1 - 12                      | 40                    | 1412  | 1300       | 702    |
| A500  | CC1246526 | DN175  | DN125  | 1 - 12                      | 50                    | 1765  | 1300       | 770    |
| A800  | CC1246527 | DN250  | DN150  | 1 - 12                      | 80                    | 2824  | 1300       | 845    |
| A1100 | CC1246528 | DN250  | DN150  | 1 - 12                      | 110                   | 3882  | 1300       | 845    |
| A1500 | CC1246529 | DN300  | DN200  | 1 - 12                      | 150                   | 5294  | 1300       | 925    |
| A1800 | CC1246530 | DN350  | DN200  | 1 - 12                      | 180                   | 6353  | 1300       | 925    |
| A2100 | CC1246531 | DN400  | DN200  | 1 - 12                      | 210                   | 7412  | 1500       | 925    |

# ACTIVATED CARBON TOWER CH-FT SERIES

### At a glance...



**Operating Pressure**  
13 - 15 barg



**Flow Rate**  
0.5 - 95 m<sup>3</sup>/min



**Operating Temp. Range**  
2 - 50 °C



**Pipe Size**  
3/8" to 3"  
Flange DN100 and DN150

### Applications

- Automotive
- Electronics
- Food and beverage
- Chemical
- Petrochemical
- Plastics
- Paint
- General industrial application

The activated carbon tower eliminates oil vapour and hydrocarbon odours from your operations. Available in two configurations: – aluminum extrusion and fabricated tank are easy to maintain. In critical applications like food and pharmaceutical production where oil content ISO8573-1 Class 1 air or better is crucial, this carbon adsorption technology helps achieve the highest quality “technically oil-free air”.

Extruded aluminum units are up to model CHFT58L and are lightweight (CHFT5L can be wall-mounted). As per the tank configuration, they can be used in compressed air systems or at the point of use. Rightsizing units with corrective factors ensures consistent outlet air quality over 12 months of continuous operations.

This activated carbon tower is a cost-effective, adaptable solution to your oil-free compressed air requirements from the experts at Champion. Deliver Class 0 Air when installed with upstream and downstream filters to intercept activated carbon dust.

- Virtually Oil Free Air: ISO8573-1 Class 0: 0.003 mg/m<sup>3</sup> oil content when used with inline filters
- Can be used with Oil Free and Contact Cooled Compressors
- Easy to replace lose high quality Activated Carbon Molecular Sieve
- Long service interval - media replacement every 12 months





## CH-FT ACTIVATED CARBON TOWER

| MODEL    | CODE        | GAS    | BAR | M <sup>3</sup> /MIN | CFM     | A    | B   | C   | KG  |
|----------|-------------|--------|-----|---------------------|---------|------|-----|-----|-----|
| CHFT5L   | 47745977001 | 1/2"   | 14  | 0.5                 | 17.66   | 749  | 212 | 143 | 8   |
| CHFT12L  | 47745978001 | 3/4"   | 14  | 1.25                | 44.14   | 890  | 267 | 255 | 20  |
| CHFT18L  | 47745979001 | 1"     | 14  | 1.83                | 64.63   | 1090 | 267 | 255 | 24  |
| CHFT25L  | 47745980001 | 1"     | 14  | 2.5                 | 88.29   | 1440 | 267 | 255 | 32  |
| CHFT30L  | 47745981001 | 1"     | 14  | 3                   | 105.94  | 1640 | 267 | 255 | 35  |
| CHFT58L  | 47745982001 | 1 1/2" | 14  | 5.83                | 205.88  | 1660 | 447 | 255 | 70  |
| CHFT100L | 47745983001 | 2"     | 15  | 10                  | 353.15  | 2113 | 391 | N/A | 115 |
| CHFT166L | 47745984001 | 2"     | 15  | 16.67               | 588.70  | 2148 | 436 | N/A | 245 |
| CHFT260L | 47745985001 | 3"     | 15  | 26                  | 918.18  | 2463 | 483 | N/A | 222 |
| CHFT383L | 47745986001 | 3"     | 15  | 38.33               | 1353.61 | 2693 | 595 | N/A | 379 |
| CHFT466L | 47745987001 | DN100  | 13  | 46.67               | 1648.14 | 2879 | 721 | N/A | 456 |
| CHFT950L | 47745988001 | DN150  | 13  | 95                  | 3354.90 | 3455 | 855 | N/A | 900 |

## CH-FT ACTIVATED CARBON TOWER SERVICE KITS

| MODEL                 | CODE        |
|-----------------------|-------------|
| Kit CHFT5L Champion   | 47752199001 |
| Kit CHFT12L Champion  | 47752200001 |
| Kit CHFT18L Champion  | 47752201001 |
| Kit CHFT25L Champion  | 47752202001 |
| Kit CHFT30L Champion  | 47752203001 |
| Kit CHFT58L Champion  | 47752204001 |
| Kit CHFT100L Champion | 47752205001 |
| Kit CHFT166L Champion | 47752206001 |
| Kit CHFT260L Champion | 47752207001 |
| Kit CHFT383L Champion | 47752208001 |
| Kit CHFT466L Champion | 47752209001 |
| Kit CHFT950L Champion | 47752210001 |

## CORRECTION FACTORS

| °C/BARG | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   |
|---------|------|------|------|------|------|------|------|------|------|------|------|------|
| 25°C    | 0.63 | 0.75 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 | 1.14 | 1.14 | 1.14 | 1.25 | 1.25 |
| 30°C    | 0.63 | 0.75 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 | 1.14 | 1.14 | 1.14 | 1.25 | 1.25 |
| 35°C    | 0.63 | 0.75 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 | 1.14 | 1.14 | 1.14 | 1.25 | 1.25 |
| 40°C    | 0.63 | 0.66 | 0.77 | 0.88 | 0.88 | 0.88 | 0.88 | 1    | 1    | 1    | 1.11 | 1.11 |
| 45°C    | 0.63 | 0.54 | 0.63 | 0.72 | 0.72 | 0.72 | 0.72 | 0.81 | 0.81 | 0.81 | 0.9  | 0.9  |
| 50°C    | 0.63 | 0.39 | 0.45 | 0.52 | 0.52 | 0.52 | 0.52 | 0.58 | 0.58 | 0.58 | 0.65 | 0.65 |

# CH-PP SERIES PAINTING AIR FILTRATION

## At a glance...

|  |  |   |  |
|--|--|---|--|
|  | <b>Operating Pressure</b><br>16 bar        |  | <b>Flow Rate</b><br>0.1 - 108.33 m <sup>3</sup> /min |
|  | <b>Operating Temp. Range</b><br>1.5 - 65°C |  | <b>Pipe Size</b><br>1/2"                             |

## Applications

- Chemical
- Petrochemical
- Paint
- General industrial applications
- Breathing air

CH-PP pro paint system is specifically designed for purifying compressed air from solid, liquid and partially gaseous components. Protecting air equipment in addition to providing clean air for worker health protection. PP pro paint system is easy for wall mount.

### Available modular combinations:


1. Comp. air for lower quality demands (down to 15 µm)
2. Comp. air for basic quality demands (down to 0,1 µm)
3. Comp. air for high quality demands (down to 0,01 µm)
4. Technical absolutely clean air (down to 0,1 µm, activated carbon)
5. Technical and breathable air
6. Compressed air for highest demands (all in one unit)





| TYPE      | PART NO   | PIPE SIZE<br>[inch] | FLOW RATE AT<br>7 BAR(G), 20 °C |       | DIMENSIONS |        |        | SEPARATOR CKL-PP | MICROFILTER M 0,1MM | MICROFILTER S 0,01MM | ACTIVE CARBON A | STERILE FILTER WITH<br>ACTIVE CARBON SFA | ADSORPTION DRYER<br>A-DRY 105 | PRESSURE REGULATOR | QUICK COUPLING NO. |
|-----------|-----------|---------------------|---------------------------------|-------|------------|--------|--------|------------------|---------------------|----------------------|-----------------|--|-------------------------------|--------------------|--------------------|
|           |           |                     | [m³/min]                        | [cfm] | A [mm]     | B [mm] | C [mm] |                  |                     |                      |                 |  |                               |                    |                    |
| CH-PP-107 | CC1189591 | 1/2"                | 1.3                             | 46    | 270        | 135    | 276    | ✓                |                     |                      |                 |  |                               | ✓                  | 2                  |
| CH-PP-110 | CC1189592 | 1/2"                | 2                               | 71    | 270        | 135    | 345    | ✓                |                     |                      |                 |  |                               | ✓                  | 2                  |
| CH-PP-207 | CC1189593 | 1/2"                | 1.3                             | 46    | 380        | 135    | 276    | ✓                | ✓                   |                      |                 |  |                               | ✓                  | 2                  |
| CH-PP-210 | CC1189594 | 1/2"                | 2                               | 71    | 380        | 135    | 345    | ✓                | ✓                   |                      |                 |  |                               | ✓                  | 2                  |
| CH-PP-307 | CC1189595 | 1/2"                | 1.3                             | 46    | 490        | 135    | 276    | ✓                | ✓                   | ✓                    |                 |  |                               | ✓                  | 2                  |
| CH-PP-310 | CC1189596 | 1/2"                | 2                               | 71    | 490        | 135    | 345    | ✓                | ✓                   | ✓                    |                 |  |                               | ✓                  | 2                  |
| CH-PP-407 | CC1189597 | 1/2"                | 1.3                             | 46    | 580        | 135    | 276    |                  | ✓                   | ✓                    | ✓               |  |                               | ✓                  | 4                  |
| CH-PP-410 | CC1189598 | 1/2"                | 2                               | 71    | 580        | 135    | 345    |                  | ✓                   | ✓                    | ✓               |  |                               | ✓                  | 4                  |
| CH-PP-507 | CC1189599 | 1/2"                | 1.3                             | 46    | 612        | 135    | 370    |                  | ✓                   | ✓                    |                 | ✓  |                               | ✓                  | 4                  |
| CH-PP-510 | CC1189600 | 1/2"                | 2                               | 71    | 612        | 135    | 440    |                  | ✓                   | ✓                    |                 | ✓  |                               | ✓                  | 4                  |
| CH-PP-607 | CC1189601 | 1/2"                | 1.3                             | 46    | 1150       | 335    | 917    |                  | ✓                   | ✓                    |                 | ✓  | ✓                             | ✓                  | 4                  |
| CH-PP-610 | CC1189602 | 1/2"                | 2                               | 71    | 1150       | 335    | 917    |                  | ✓                   | ✓                    |                 | ✓  | ✓                             | ✓                  | 4                  |


#### CORRECTION FACTORS

| OPERATING PRESSURE [bar] | 2    | 3    | 4    | 5    | 6    | 7   | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   |
|--------------------------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|
| OPERATING PRESSURE [psi] | 29   | 44   | 58   | 72   | 87   | 100 | 115  | 130  | 145  | 160  | 174  | 189  | 203  | 218  | 232  |
| CORRECTION FACTOR        | 0.38 | 0.50 | 0.63 | 0.75 | 0.88 | 1   | 1.13 | 1.25 | 1.38 | 1.50 | 1.63 | 1.75 | 1.88 | 2.00 | 2.13 |

| 0.1 MICRON MICROFILTER  | FILTER ELEMENT TYPE    | PART NO |
|---|------------------------|---------|
|  | Filter Cartridge F007M | 223182  |
|   | Filter Cartridge F010M | 223183  |

| 0.1 MICRON FINEFILTER   | FILTER ELEMENT TYPE    | PART NO |
|---|------------------------|---------|
|  | Filter Cartridge F007S | 223192  |
|   | Filter Cartridge F010S | 223193  |

| 0.1 MICRON A ACTIVATED CARBON   | FILTER ELEMENT TYPE    | PART NO |
|---|------------------------|---------|
|  | Filter Cartridge F007A | 223212  |
|   | Filter Cartridge F010A | 223213  |

| CKL-PP SEPARATOR  | FILTER ELEMENT TYPE          | PART NO   |
|---|------------------------------|-----------|
|  | Filter Cartridge F007-CKL-PP | CC1189457 |
|   | Filter Cartridge F010-CKL-PP | CC1189458 |



# CHB-AIR BREATHING AIR FILTER

## At a glance...



**Operating Pressure**  
16 bar



**Flow Rate**  
1.3 - 13 m<sup>3</sup>/min



**Operating Temp. Range**  
1.5 - 45°C



**Pipe Size**  
1/2 - 1/2"



## Applications

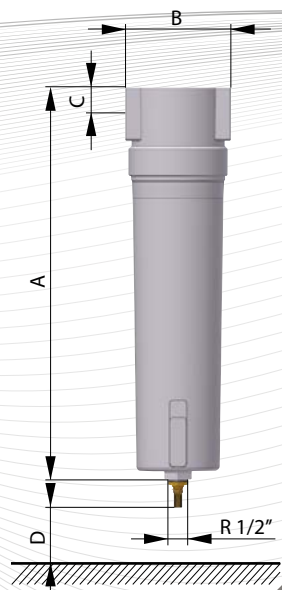
- Breathing air

CHB-AIR point of use filter set has been specifically developed for high efficient preparation of top quality breathing air. On request CHB-AIR filter set can be supplied with wall mounting brackets, pressure regulator and quick couplings.

## WARNING!

Breathing air filter set CHB-AIR is not declared as CO<sub>2</sub> and CO removal filter. Despite that CHB-AIR comprises filter element which can reduce CO content.





| TYPE        | PART NO          | PIPE SIZE<br>[inch] | FLOW RATE AT<br>7 BAR(G), 20 °C |       | DIMENSIONS |        |        |        | WEIGHT<br>[kg] | FILTER<br>ELEMENT TYPE |
|-------------|------------------|---------------------|---------------------------------|-------|------------|--------|--------|--------|----------------|------------------------|
|             |                  |                     | [m <sup>3</sup> /min]           | [cfm] | A [mm]     | B [mm] | C [mm] | D [mm] |                |                        |
| CHB-AIR 76  | <b>CC1189704</b> | 1/2"                | 1.3                             | 46    | 187        | 88     | 20     | 60     | 1.41           | F007 M/H2/A2           |
| CHB-AIR 106 | <b>CC1189705</b> | 3/4"                | 2                               | 70    | 257        | 88     | 20     | 80     | 1.8            | F010 M/H2/A2           |
| CHB-AIR 186 | <b>CC1189706</b> | 1"                  | 3.3                             | 116   | 263        | 125    | 32     | 100    | 4.71           | F018 M/H2/A2           |
| CHB-AIR 306 | <b>CC1189707</b> | 1"                  | 5.58                            | 197   | 363        | 125    | 32     | 120    | 6.6            | F030 M/H2/A2           |
| CHB-AIR 476 | <b>CC1189708</b> | 1 1/2"              | 8.5                             | 300   | 461        | 125    | 32     | 140    | 8.4            | F047 M/H2/A2           |
| CHB-AIR 706 | <b>CC1189709</b> | 1 1/2"              | 13                              | 459   | 640        | 125    | 32     | 160    | 11.7           | F070 M/H2/A2           |

#### CORRECTION FACTORS

| OPERATING PRESSURE [bar] | 2    | 3    | 4    | 5    | 6    | 7   | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   |
|--------------------------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|
| OPERATING PRESSURE [psi] | 29   | 44   | 58   | 72   | 87   | 100 | 115  | 130  | 145  | 160  | 174  | 189  | 203  | 218  | 232  |
| CORRECTION FACTOR        | 0.38 | 0.50 | 0.63 | 0.75 | 0.88 | 1   | 1.13 | 1.25 | 1.38 | 1.50 | 1.63 | 1.75 | 1.88 | 2.00 | 2.13 |

- Set includes 3 filter housings, 3 filter elements, 2 AOK16B condensate drains, 1 MCD drain and 1 PDI 16 differential pressure indicator.

| FM | FILTER ELEMENT TYPE    | PART NO       |
|----|------------------------|---------------|
|    | Filter Cartridge F007M | <b>223182</b> |
|    | Filter Cartridge F010M | <b>223183</b> |
|    | Filter Cartridge F018M | <b>223184</b> |
|    | Filter Cartridge F030M | <b>223185</b> |
|    | Filter Cartridge F047M | <b>223186</b> |
|    | Filter Cartridge F070M | <b>223187</b> |

| FH <sup>2</sup> | FILTER ELEMENT TYPE     | PART NO          |
|-----------------|-------------------------|------------------|
|                 | Filter Cartridge F007H2 | <b>CC1189441</b> |
|                 | Filter Cartridge F010H2 | <b>CC1189442</b> |
|                 | Filter Cartridge F018H2 | <b>CC1189443</b> |
|                 | Filter Cartridge F030H2 | <b>CC1189454</b> |
|                 | Filter Cartridge F047H2 | <b>CC1189455</b> |
|                 | Filter Cartridge F070H2 | <b>CC1189456</b> |

| FA <sup>2</sup> | FILTER ELEMENT TYPE     | PART NO          |
|-----------------|-------------------------|------------------|
|                 | Filter Cartridge F007A2 | <b>CC1189354</b> |
|                 | Filter Cartridge F010A2 | <b>CC1189434</b> |
|                 | Filter Cartridge F018A2 | <b>CC1189435</b> |
|                 | Filter Cartridge F030A2 | <b>CC1189437</b> |
|                 | Filter Cartridge F047A2 | <b>CC1189438</b> |
|                 | Filter Cartridge F070A2 | <b>CC1189439</b> |

# CHB-AIR PLUS BREATHING AIR FILTER

### At a glance...



**Operating Pressure**  
16 bar



**Flow Rate**  
1.3 - 13 m<sup>3</sup>/min



**Operating Temp. Range**  
1.5 - 45°C



**Pipe Size**  
1/2"

### Applications

- Breathing air

CHB-AIR PLUS system has been specifically designed for applications where high quality breathing air and monitoring of breathing air supply are needed. CHB-AIR PLUS is a combination of our CHB-AIR PLUS 0106 breathing air filter set combined with gas concentration analysers, fitted with pressure regulator and quick couplings, all packed in a compact and robust casing.

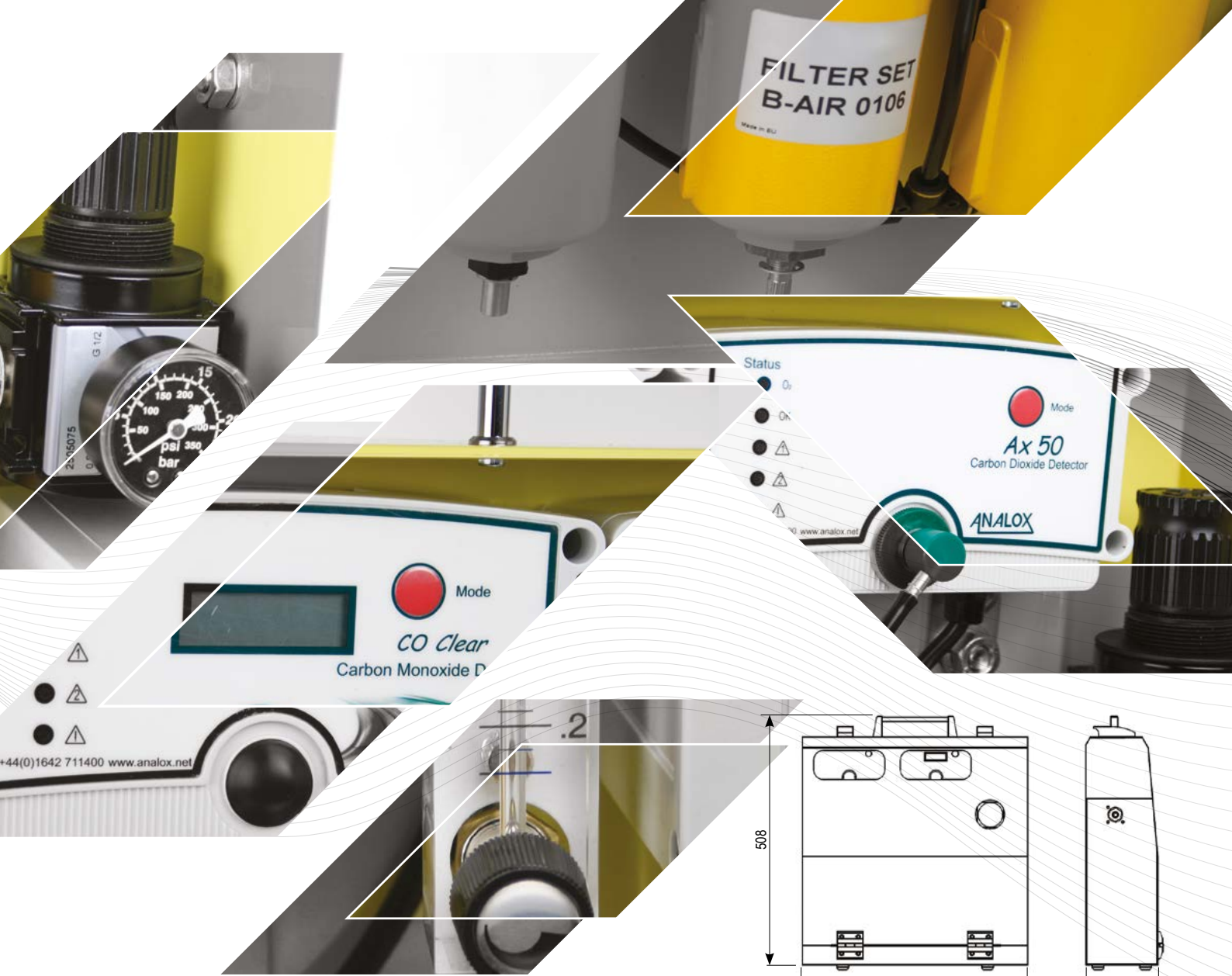
Gas concentration analysers constantly monitor CO, CO<sub>2</sub> and O<sub>2</sub> concentrations and trigger an alarm if concentrations exceed the EN12021 and BS4275:1997 standard compliant values. In this way CHB-AIR PLUS can safely provide high quality breathing air for up to 5 people.

Small dimensions and low weight enable the use of CHB-AIR PLUS in many applications as it can be transported and set up with ease.

### Advantages


- High quality breathing air for up to 5 people
- Air quality monitoring (EN 12021, BS 4275:1997)
- Compact & light weight





| TYPE         | PART NO   | PIPE SIZE | FLOW RATE AT 7 BAR(G), 20 °C |                       | DIMENSIONS |        |        | WEIGHT [kg] | FILTER ELEMENT TYPE |
|--------------|-----------|-----------|------------------------------|-----------------------|------------|--------|--------|-------------|---------------------|
|              |           |           | [inch]                       | [m <sup>3</sup> /min] | [cfm]      | A [mm] | B [mm] |             |                     |
| CHB-AIR PLUS | CC1189710 | 1/2"      | 2                            | 71                    | 508        | 460    | 160    | 12          |                     |

| CORRECTION FACTORS       |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|
| OPERATING PRESSURE [bar] | 2    | 3    | 4    | 5    | 6    | 7   | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   |
| OPERATING PRESSURE [psi] | 29   | 44   | 58   | 72   | 87   | 100 | 115  | 130  | 145  | 160  | 174  | 189  | 203  | 218  | 232  |
| CORRECTION FACTOR        | 0.38 | 0.50 | 0.63 | 0.75 | 0.88 | 1   | 1.13 | 1.25 | 1.38 | 1.50 | 1.63 | 1.75 | 1.88 | 2.00 | 2.13 |

| FM   | FILTER ELEMENT TYPE    | PART NO |
|--|------------------------|---------|
|  | Filter Cartridge F007M | 223182  |

| FH <sup>2</sup>   | FILTER ELEMENT TYPE     | PART NO   |
|---|-------------------------|-----------|
|  | Filter Cartridge F007H2 | CC1189441 |

| FA <sup>2</sup>   | FILTER ELEMENT TYPE     | PART NO   |
|---|-------------------------|-----------|
|  | Filter Cartridge F007A2 | CC1189354 |

# CH-AIRWATT SERIES HEAT RECOVERY UNITS

## At a glance...



**Operating Pressure**  
1 - 16 bar



**Flow Rate**  
1.3 - 13 m<sup>3</sup>/min



**Operating Temp. Range**  
5 - 120°C



**Ambient Air Temp. Range**  
5 - 45°C

## Applications

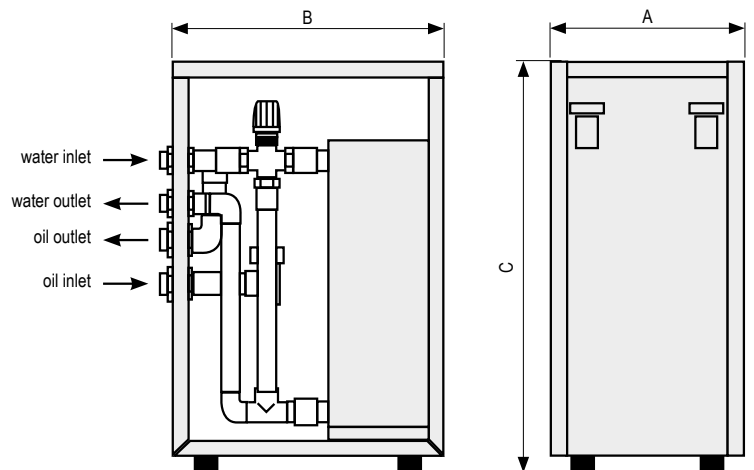
- Heat recovery in oil lubricated rotary screw compressors

External heat recovery unit - CH-AIRWATT is designed to efficiently exploit the waste heat, generated during compression of air in rotary screw compressors.

Sometimes this represents more than 70% of energy consumed by the rotary screw compressor for the operation. This heat can then be used to heat domestic water or for heating, at almost no additional costs. This does not only help save money, but is also environmentally friendly. Unit has two separate piping systems with counter flow. Energy exchange from compressor to sanitary water occurs in plate heat exchanger, where compressor oil and sanitary water meets. Unit is controlled by thermostatic valve, which prevents compressor system getting to cold and damaging compressor.



|                               |                     |
|-------------------------------|---------------------|
| OPERATING PRESSURE (OIL)      | 1 - 16 bar          |
| MAXIMUM WATER PRESSURE        | 10 bar              |
| OPERATING TEMPERATURE         | 5°C - 120°C         |
| MAX. OUTLET WATER TEMPERATURE | 70°C                |
| PRESSURE DROP (OIL)           | ~ 100 mbar          |
| AMBIENT TEMPERATURE           | 5°C - 45°C          |
| WATER TEMPERATURE INDICATOR   | Analogue mechanical |



| TYPE           | PART NO   | MOTOR POWER [kW] | HEAT CAPACITY [kW] | OIL CONNECTION [G] | WATER CONNECTION [G] | DIMENSIONS |        |        | WEIGHT [kg] |
|----------------|-----------|------------------|--------------------|--------------------|----------------------|------------|--------|--------|-------------|
|                |           |                  |                    |                    |                      | A [mm]     | B [mm] | C [mm] |             |
| CH-AIRWATT 22  | CC1189573 | 15 - 22          | 12 - 17.6          | 1 1/4"             | 1"                   | 360        | 500    | 760    | 33          |
| CH-AIRWATT 37  | CC1189574 | 26 - 37          | 20.8 - 29.6        | 1 1/4"             | 1"                   | 360        | 500    | 760    | 35          |
| CH-AIRWATT 75  | CC1189575 | 45 - 75          | 36 - 60            | 1 1/4"             | 1"                   | 360        | 500    | 760    | 42          |
| CH-AIRWATT 100 | CC1189576 | 90 - 132         | 72 - 100           | 2"                 | 2"                   | 450        | 600    | 860    | 58          |

# VERTICAL AIR RECEIVERS

## At a glance...



**Operating Pressure**  
11 - 16 bar



**Capacity**  
100 - 10000l

Air receivers are an important part of the compressed air system, evening out peaks and troughs in air demand, minimising pulsations from piston compressors and protecting your air compressor from over frequent load/unload or start stop cycles.

| VERTICAL TANKS <sup>1)</sup> | CODE       | DIRECTIVE        | SIZE    | PRESSURE | AIR OUTLET |
|------------------------------|------------|------------------|---------|----------|------------|
|                              |            |                  | [litre] | [bar]    | [inch]     |
| TANK 100L-11                 | CC1214969K | 2014/29/EU       | 100     | 11       | 3/4        |
| TANK 150L-11                 | CC1214973K | 2014/29/EU       | 150     | 11       | 1          |
| TANK 200L-11                 | CC1215044K | 2014/29/EU       | 200     | 11       | 1          |
| TANK 200L-11                 | CC1215045K | 2014/29/EU       | 200     | 11       | 2          |
| TANK 270L-11                 | 220662K    | 2014/29/EU       | 270     | 11       | 1          |
| TANK 270L-11                 | CC1215046K | 2014/29/EU       | 270     | 11       | 2          |
| TANK 500L-11                 | 220663K    | 2014/29/EU       | 500     | 11       | 1          |
| TANK 500L-11                 | CC1215047K | 2014/29/EU       | 500     | 11       | 2          |
| TANK 720L-11                 | CC1229498K | 2014/29/EU       | 720     | 11       | 2          |
| TANK 900L-11                 | CC1120428K | 2014/29/EU       | 900     | 11       | 1.5        |
| TANK 900L-11                 | CC1215049K | 2014/29/EU       | 900     | 11       | 2          |
| TANK 1000L-12                | 220664K    | 2014/68/UE (PED) | 1000    | 12       | 2          |
| TANK 1500L-12                | CC1120429K | 2014/68/UE (PED) | 1500    | 12       | 2          |
| TANK 2000L-12                | 220665CK   | 2014/68/UE (PED) | 2000    | 12       | 2          |
| TANK 2000L-12                | CC1215050K | 2014/68/UE (PED) | 2000    | 12       | 3          |
| TANK 3000L-12                | 220668CK   | 2014/68/UE (PED) | 3000    | 12       | 2          |
| TANK 3000L-12                | CC1215051K | 2014/68/UE (PED) | 3000    | 12       | 3          |
| TANK 100L-16                 | CC1215052K | 2014/29/EU       | 100     | 16       | 3/4        |
| TANK 150L-16                 | CC1215055K | 2014/29/EU       | 150     | 16       | 1          |
| TANK 200L-15                 | CC1215056K | 2014/29/EU       | 200     | 15       | 1          |
| TANK 270L-16                 | CC1215057K | 2014/29/EU       | 270     | 16       | 1          |
| TANK 500L-16                 | CC1215058K | 2014/29/EU       | 500     | 16       | 1          |
| TANK 1000L-16                | CC1215059K | 2014/68/UE (PED) | 1000    | 16       | 2          |
| TANK 1500L-16                | CC1215060K | 2014/68/UE (PED) | 1500    | 16       | 2          |
| TANK 2000L-16                | CC1109207K | 2014/68/UE (PED) | 2000    | 16       | 2          |
| TANK 3000L-16                | CC1215061K | 2014/68/UE (PED) | 3000    | 16       | 2          |
| TANK 5000L-8                 | CC1215062K | 2014/68/UE (PED) | 5000    | 8        | 3          |
| TANK 8000L-8                 | CC1215063K | 2014/68/UE (PED) | 8000    | 8        | 3          |
| TANK 10000L-8                | CC1215064K | 2014/68/UE (PED) | 10000   | 8        | 3          |
| TANK 5000L-12                | CC1215065K | 2014/68/UE (PED) | 5000    | 12       | 3          |
| TANK 8000L-12                | CC1215066K | 2014/68/UE (PED) | 8000    | 12       | 3          |
| TANK 10000L-12               | CC1215067K | 2014/68/UE (PED) | 10000   | 12       | 3          |

<sup>1)</sup> Including paint, support legs, pressure gauge, safety valve and inlet and outlet nozzles.

# GALVANISED VERTICAL AIR RECEIVERS

## At a glance...



### Operating Pressure

11 - 16 bar



### Capacity


100 - 3000l

Air receivers are an important part of the compressed air system, evening out peaks and troughs in air demand, minimising pulsations from piston compressors and protecting your air compressor from over frequent load/unload or start stop cycles.

| VERTICAL TANKS <sup>1)</sup> | CODE       | DIRECTIVE        | SIZE<br>[litre] | PRESSURE<br>[bar] | AIR OUTLET<br>[inch] |
|------------------------------|------------|------------------|-----------------|-------------------|----------------------|
| TANK 100L-11                 | CC1215039K | 2014/29/EU       | 100             | 11                | 3/4                  |
| TANK 150L-11                 | CC1215040K | 2014/29/EU       | 150             | 11                | 1                    |
| TANK 200L-11                 | CC1215041K | 2014/29/EU       | 200             | 11                | 1                    |
| TANK 270L-11                 | CC1215042K | 2014/29/EU       | 270             | 11                | 1                    |
| TANK 500L-11                 | CC1080281K | 2014/29/EU       | 500             | 11                | 2                    |
| TANK 720L-11                 | CC1215043K | 2014/29/EU       | 720             | 11                | 2                    |
| TANK 900L-11                 | CC1215094K | 2014/29/EU       | 900             | 11                | 1 1/2                |
| TANK 900L-11                 | CC1215095K | 2014/29/EU       | 900             | 11                | 2                    |
| TANK 1000L-12                | CC1103058K | 2014/68/UE (PED) | 1000            | 12                | 2                    |
| TANK 1500L-12                | CC1215096K | 2014/68/UE (PED) | 1500            | 12                | 2                    |
| TANK 2000L-12                | CC1103060K | 2014/68/UE (PED) | 2000            | 12                | 2                    |
| TANK 2000L-12                | CC1215097K | 2014/68/UE (PED) | 2000            | 12                | 3                    |
| TANK 3000L-12                | CC1215098K | 2014/68/UE (PED) | 3000            | 12                | 2                    |
| TANK 3000L-12                | CC1215099K | 2014/68/UE (PED) | 3000            | 12                | 3                    |
| TANK 100L-16                 | CC1215100K | 2014/29/EU       | 100             | 16                | 3/4                  |
| TANK 150L-16                 | CC1215101K | 2014/29/EU       | 150             | 16                | 1                    |
| TANK 200L-15                 | CC1215102K | 2014/29/EU       | 200             | 15                | 1                    |
| TANK 270L-16                 | CC1215103K | 2014/29/EU       | 270             | 16                | 1                    |
| TANK 500L-16                 | CC1190548K | 2014/29/EU       | 500             | 16                | 1                    |
| TANK 1000L-16                | CC1190550K | 2014/68/UE (PED) | 1000            | 16                | 2                    |
| TANK 1500L-16                | CC1215104K | 2014/68/UE (PED) | 1500            | 16                | 2                    |
| TANK 2000L-16                | CC1215105K | 2014/68/UE (PED) | 2000            | 16                | 2                    |
| TANK 3000L-16                | CC1215106K | 2014/68/UE (PED) | 3000            | 16                | 2                    |

<sup>1)</sup> Including paint, support legs, pressure gauge, safety valve and inlet and outlet nozzles.

## Notes



A page of lined paper with a decorative graphic. The graphic consists of many thin, overlapping, curved lines that create a wavy, wave-like pattern across the page. The lines are light gray and vary in curvature and density, creating a sense of movement and depth. The lines are most prominent in the upper half of the page and gradually fade out towards the bottom. The page is otherwise blank, with horizontal lines for writing.



# CONDENSATE DRAINS

## At a glance...



**Operating Pressure**  
0-80 bar



**Environmental Protection**  
IP54, IP65



Champion drains can be applied in both oil-lubricated and oil-free compressor applications. Champion products carry globally recognised approvals, and each product is 100% tested before dispatch.

Champion drains are robust and designed for long life industrial applications.

The Champion direct-acting valve construction with a large orifice has proven to be the most reliable option for condensate draining applications, avoiding potential blockages. In addition, we apply stainless steel moving parts that offer an extended life guarantee and are less sensitive to aggressive particles found in the condensate.

Champion valves are constructed from robust brass or stainless steel, ensuring no damage occurs during transportation, installation, functional operation and subsequent maintenance throughout the drain's working life.

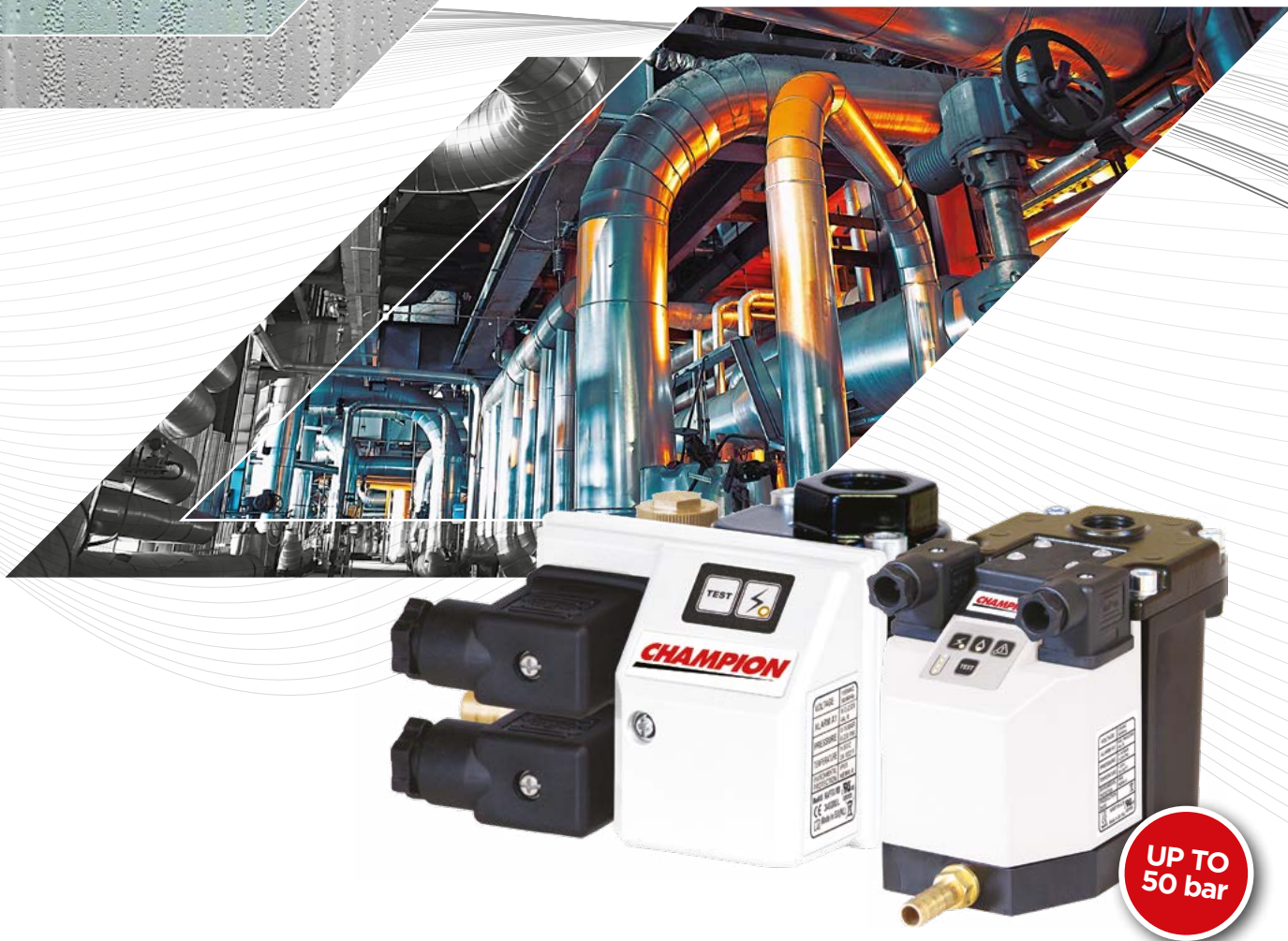
Drains are also installed outdoors. IP65 (NEMA4) insulation protection is, therefore, a minimum requirement. High-grade coil insulation protects the copper wire from overheating, and top brand PCB components are applied to our electronic modules.

Servicing Champion drains is quick and easy. Their service-friendly design ensures short maintenance intervals.

Based on their high and low-temperature operation characteristics, FPM seals have been specifically selected and used in all Champion CHTDC, CHTDV and CHCNL drains. In addition, FPM seals are chosen as this material has proven to be the best choice for compressed air condensate draining applications.

## CHTDV & CHTDC ELECTRONIC TIMER-CONTROLLER CONDENSATE DRAINS

| TECHNICAL DATA        | CHTDV 230V 1/4"               | CHTDV 115V 1/4" | CHTDV 230V 1/2" | CHTDV 115V 1/2" | CHTDV 230V 3/8" | CHTDV 115V 3/8" | CHTDC 230V 16bar 1/2" | CHTDC 115V 16bar 1/2" |
|-----------------------|-------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------------|-----------------------|
| SUPPLY VOLTAGE        | 230V                          | 115V            | 230V            | 115V            | 230V            | 115V $\dot{a}$  | 230V                  | 115V                  |
| OPERATING TEMP. RANGE | 1 - 55°C (34 - 131°F)         |                 |                 |                 |                 |                 |                       |                       |
| OPERATING PRESSURE    | 0 - 16 bar (0 - 232 psi)      |                 |                 |                 |                 |                 |                       |                       |
| PROTECTION CLASS      | IP65 (NEMA4)                  |                 |                 |                 |                 |                 |                       |                       |
| COIL POWER            | 10 W                          | 13 W            | 10 W            | 13 W            | 10 W            | 13 W            | 10 W                  | 13 W                  |
| MASS                  | 0.4 kg                        |                 |                 |                 |                 |                 | 0.6 kg                |                       |
| TIME ON               | 0.5 - 10 s                    |                 |                 |                 |                 |                 |                       |                       |
| TIME OFF              | 0.5 - 45 m                    |                 |                 |                 |                 |                 |                       |                       |
| INLET CONNECTION      | 1/4"                          |                 | 1/2"            |                 | 3/8"            |                 | 1/4" & 1/2"           |                       |
| OUTLET CONNECTION     | 1/4"                          |                 | 1/2"            |                 | 3/8"            |                 | 1/2"                  |                       |
| FLOW RATE KVS         | 7 m <sup>3</sup> /h           |                 |                 |                 |                 |                 |                       |                       |
| DIMENSIONS LXBXH(MM)  | 50x89x114 mm                  |                 |                 |                 |                 |                 | 94x89x127 mm          |                       |
| MEDIUM                | Condensate (air, water & oil) |                 |                 |                 |                 |                 |                       |                       |
| INTEGRAL STRAINER     | No                            |                 |                 |                 |                 |                 | Yes                   |                       |
| INTEGRAL BALL VALVE   | No                            |                 |                 |                 |                 |                 | Yes                   |                       |
| PART NUMBER           | 47803936001                   | 47803935001     | 47774991001     | 47774993001     | 47774990001     | 47774992001     | 47775260001           | 47775262001           |



## CHCNL 10 & 100 ELECTRONIC ZERO AIR LOSS DRAIN WITH ALARM

| TECHNICAL DATA                  | CHCNL10 230V            | CHCNL10 115V | CHCNL10 230V ALARM | CHCNL10 115V ALARM | CHCNL100 230V | CHCNL100 115V |
|---------------------------------|-------------------------|--------------|--------------------|--------------------|---------------|---------------|
| SUPPLY VOLTAGE                  | 230V                    | 115V         | 230V               | 115V               | 230V          | 115V          |
| FREQUENCY                       | 50-60 Hz                |              |                    |                    |               |               |
| OPERATING PRESSURE              | 16bar (232psi)          |              |                    |                    |               |               |
| DRAIN CAPACITY (@16BAR/232 PSI) | 45 l/h                  |              |                    |                    | 665 l/h       |               |
| OPERATING TEMP. RANGE           | 1 - 50 °C (34 - 122 °F) |              |                    |                    |               |               |
| INLET CONNECTION                | 1/2"                    |              |                    |                    |               |               |
| OUTLET CONNECTION               | 1/4"                    |              |                    |                    |               |               |
| ALARM FUNCTION                  | No                      |              | Yes N/O            |                    |               |               |
| INLET STRAINER                  | Yes                     |              |                    |                    |               |               |
| PROTECTION CLASS                | IP65 (NEMA4)            |              |                    |                    |               |               |
| MASS                            | 0.5 kg                  |              |                    |                    | 1.5 kg        |               |
| DIMENSIONS (LXBXH)              | 123x74x92 mm            |              |                    |                    | 179x114x87 mm |               |
| PART NUMBER                     | 47775257001             | 47775258001  | 47775263001        | 47775264001        | 47775259001   | 47775261001   |

# CONDENSATE DRAINS

## IED SERIES ELECTRONIC CONDENSATE DRAINS



| TECHNICAL DATA                    | IED                                   |          |
|-----------------------------------|---------------------------------------|----------|
| VOLTAGE                           | 230 VAC                               | 115 VAC  |
| FREQUENCY                         | 50-60 Hz                              | 50-60 Hz |
| INTERNAL FUSE                     | 5 x 20 1A T                           |          |
| POWER                             | 10 VA                                 |          |
| OPERATING PRESSURE RANGE          | 0-16 bar [0-232 psi]                  |          |
| DRAIN CAPACITY [AT 7 bar/101 PSI] | 8 l/h at 7 bar [0,005 cfm at 101 psi] |          |
| OPERATING TEMPERATURE RANGE       | 1.5-65 °C [35-149°F]                  |          |
| INLET CONNECTION                  | G 1/2" parallel thread                |          |
| PROTECTION CLASS                  | IP54                                  |          |
| MASS [kg]                         | 0.3                                   |          |
| OPERATING TEMPERATURE RANGE       | 1.5 to 65°C                           |          |
| DIMENSIONS [L x B x H]            | 61 x 60 x 161 mm                      |          |
| SERVICE NETWORK CONNECTION        | -                                     | -        |
| ALARM OUTPUT                      | -                                     | -        |
| PART NUMBER                       | CC1182025                             |          |

## EMD SERIES ELECTRONIC CONDENSATE DRAINS



| TECHNICAL DATA                    | EMD12<br>230 V              |
|-----------------------------------|-----------------------------|
| SERVICE NETWORK CONNECTION        | -                           |
| ALARM OUTPUT                      | -                           |
| VOLTAGE                           | 230 VAC, 50-60 Hz           |
| INTERNAL FUSE                     | 5 x 20 1A T                 |
| POWER                             | 10 VA                       |
| OPERATING PRESS. RANGE            | 0-16 bar [0-232 psi]        |
| DRAIN CAPACITY [AT 7 bar/101 PSI] | 12 l/h [0.007cfm]           |
| OPERATING TEMP. RANGE             | 1.5-65°C [35-149°F]         |
| INLET CONNECTION                  | G 1/2"                      |
| OUTLET CONNECTION                 | Push connection for tube ø8 |
| PROTECTION CLASS                  | IP54                        |
| MASS [kg]                         | 0.55                        |
| DIMENSIONS A x B x C [mm]         | 133 x 76 x 147              |
| PART NUMBER                       | CC1112242                   |

## SAC 120 AUTOMATED CONDENSATE DRAINS



| TECHNICAL DATA                        |                              |
|---------------------------------------|------------------------------|
| OPERATING TEMP. RANGE                 | 1.5 - 65 °C [35-149 °F]      |
| OPERATING PRESSURE                    | 20 bar [290 psi]             |
| MASS                                  | 0.6 kg                       |
| DISCHARGE CAPACITY [AT 7 bar/101 PSI] | 167 l/h                      |
| INLET CONNECTION                      | G 1/2" (NPT option)          |
| OUTLET CONNECTION                     | G 1/2" (NPT option)          |
| DIMENSIONS A x B x C                  | 135 x 110 x 130 mm           |
| MEDIUM                                | Condensate (air, water, oil) |
| PART NUMBER                           | 222394                       |

### Recommendations

Install ball valve between pressure vessel and inlet connection. Install strainer element between pressure vessel and inlet connection. Install nipple with venting tube to avoid generation of air bubbles. Nipple is screwed on inlet connection.





**SAC 70**  
**AUTOMATED CONDENSATE DRAIN**



| TECHNICAL DATA        |                              |
|-----------------------|------------------------------|
| OPERATING TEMP. RANGE | 1.5 - 65 °C [35-149 °F]      |
| OPERATING PRESSURE    | 0 - 16 bar [0 - 232 psi]     |
| MASS                  | 0.04 kg                      |
| CONNECTION            | G 1/2"                       |
| OUTLET CONNECTION     | ø8                           |
| DIMENSIONS H x D      | 90 x ø38.5 mm                |
| MEDIUM                | Condensate (air, water, oil) |
| PART NUMBER           | 223120                       |

**MCD**  
**MANUAL CONDENSATE DRAIN**



| TECHNICAL DATA        |                              |         |
|-----------------------|------------------------------|---------|
| OPERATING TEMP. RANGE | 1.5 - 65 °C [35-149 °F]      |         |
| OPERATING PRESSURE    | 0-20 bar [290 psi]           |         |
| MASS                  | 0.06 kg                      |         |
| CONNECTION            | G 1/2"                       |         |
| DIMENSIONS            | H                            | 38.2 mm |
|                       | E                            | 24.0 mm |
| MEDIUM                | Condensate [air, water, oil] |         |
| MATERIAL              | Brass                        |         |
| PART NUMBER           | CC1183830                    |         |

# CH SERIES OIL/WATER SEPARATORS

## At a glance...



### Capacity

2.5 - 60 m<sup>3</sup>/min



### Outlet Connection

1/2" - 3/4"



### Inlet Connection

1/2" - 2 x 3/4"

## Unrivalled performance and efficiency

Environmental regulations strictly prohibit the discharge of oily wastes and chemicals, including the condensate drained from a compressed air system. This mixture of oil and water is classified as hazardous industrial waste, and the discharge of untreated compressor condensate into foul sewers is prohibited.

Compressor condensate must be either collected or treated before disposal using an oil water separator. Oil water separators remove lubricants from compressed air condensate ensuring environmentally friendly disposal. Considering that compressor condensate consists of approximately 95% water, it makes financial sense to separate the oil from the condensate before disposing of waste. Untreated condensate disposal is costly as it is charged by volume.

Every end-user that operates a compressed air system should have a condensate waste management program in place, not only to abide by laws and regulations but also to practice environmental and ecological responsibility. Champion oil water separators are a reliable, efficient, cost-effective, and environmentally friendly solution for on-site discharge of condensate from air compressors.

## Modular design for enhanced performance

Modern industrial working environments present a host of challenges for effective and long-lasting oil water separation including ambient humidity and extreme temperatures, different coolant types, excessive operating hours, equipment age, compressor loading and residual oil.

To meet these challenges, Champion separators offer different sizes to match the customers needs. They feature adsorption media that withdraws and permanently adsorbs the lubricants.



## Features are your benefits

### Pre-filter removes contaminants

No fouling and clogging

### Meets compressor flow requirements

Up to 60 m<sup>3</sup>/min

### Complies with environmental regulations

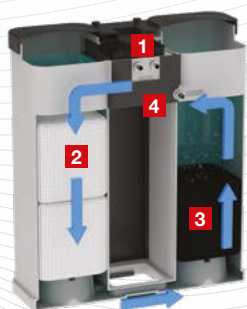
Minimised fluid disposal costs

### Streamlined design

Reliable operation with reduced maintenance



## How it works



1. Oily water flows through the diffuser
2. First chamber, multiple Polypropylene media captures oil
3. Second chamber, Carbon media further removes oil
4. Clean water exits separator

## The responsible choice

By minimising the cost associated with the disposal of fluids, and keeping them out of the environment, Champion oil water separators help you to stay compliant with environmental regulations and avoid costly fines. The separator is also designed to operate with minimal maintenance or downtime, resulting in no mess or overflow.

Champion separators provide condensate discharge levels < 10 ppm at standard conditions.

## Guaranteed adsorption of a variety of coolants

Polypropylene and carbon media are effective on a big variety of polyalphaolefins lubricants and mineral oils available in the market.

## Multiple sizing options

Champion oil water separators come in 10 standard sizes, handling air flow from 2.5 to 60 m<sup>3</sup>/min. The media is designed to last up to 6 months at 8,000 hours/year of operation and up to 12 months at 4,000 hours/year. Each model has standardised, modular media bags.


### TECHNICAL DATA

|                      |   |
|----------------------|---|
| OPERATING TEMP.RANGE | 2 - 50°C  |
| OPERATING MEDIA      | Condensate (water - oil; Non aggressive)<br>Not suitable for stabile condensate emulsion and polyglycol   |
| DESIGN CONDITIONS    | 4 ppm Oil Carryover from compressor, 75% compressor loading, 20°C ambient and 70% RH  |
| RESIDUAL OIL CONTENT | <15 ppm   |
| SERVICE INTERVALS    | When first of the following parameters appears:<br>> 3 - 6 months if 8000 operating hours of compressor<br>> 6 - 12 months if 4000 operating hours of compressor<br>> when prefilter has oil built up |

| MODEL    | CODE        | CAPACITY<br>[M <sup>3</sup> /MIN] | DIMENSIONS |      |      | WEIGHT<br>[kg] |
|----------|-------------|-----------------------------------|------------|------|------|----------------|
|          |             |                                   | [mm]       | [mm] | [mm] |                |
| CHSEP020 | 47810927001 | 2                                 | 270        | 239  | 251  | 4.1            |
| CHS35    | 47716460001 | 3.5                               | 590        | 200  | 245  | 7              |
| CHS50    | 47716461001 | 5                                 | 645        | 510  | 170  | 9.5            |
| CHS100   | 47716462001 | 10                                | 830        | 700  | 206  | 17.5           |
| CHS150   | 47716463001 | 15                                | 830        | 700  | 206  | 20             |
| CHS200   | 47716464001 | 20                                | 830        | 700  | 206  | 22.5           |
| CHS300   | 47716465001 | 30                                | 1050       | 950  | 350  | 44.5           |
| CHS400   | 47716466001 | 40                                | 1050       | 950  | 350  | 50             |
| CHS500   | 47716467001 | 50                                | 1240       | 1065 | 410  | 65             |
| CHS600   | 47716468001 | 60                                | 1240       | 1065 | 410  | 78             |

# INDUSTRIAL CHILLERS

## At a glance...

 Cooling Capacity  
0.8 - 365 kW

Contact the Champion Sales Team for more information, prices and brochure.

Champion can now offer a range of chillers and coolers including Water Chillers, Oil Chillers, Liquid Coolers and Air to Water Coolers

## The Range



### Water Chillers

**CHW 09 - 3652**

Cooling Capacity 1.1 - 365 kW

Especially designed for welders, inductors, food-packaging machinery, laser cutters, tooling machines, die-casting processes, molding and extruding processes of plastic materials, aerodynamic pumps and wine-making industry.

### Low Temperature Water Chillers

**CHG 08-1260**

Cooling Capacity 0.8 - 126 kW

The low temperature liquid water chillers were designed to meet the needs of the chemical and food industries, to process and preserve products at temperatures near or below 0°C and are finding new industrial uses every day.





### Liquid Coolers

**CHA 99 - 150**

Cooling Capacity: 1.3 - 150kW

Ideal for systems where an intermediate stage between the refrigerant circuit and the user one is necessary, equipped with pump and tank.

### Air to Water Coolers

**CHR 08 - 174**

Cooling Capacity 0.8 - 174 kW

Air water liquid coolers, equipped with pump and tank, are suitable for cooling welders and spot welders, spindle and for all industrial applications that require liquid cooling at a temperature not lower than ambient one. Utilising forced air from the fan it is able to supply the outlet water at 5°C higher than the ambient temperature.



### Oil Chillers

**CHO 29 - 149**

Cooling Capacity: 2.9 - 14.9 kW

The CHO series line is entirely dedicated to the sector of remote control machinery or those with hydraulic cooling. These machines constitute the best solution for the cooling of precision tooling machinery in a simple and prompt way.