



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





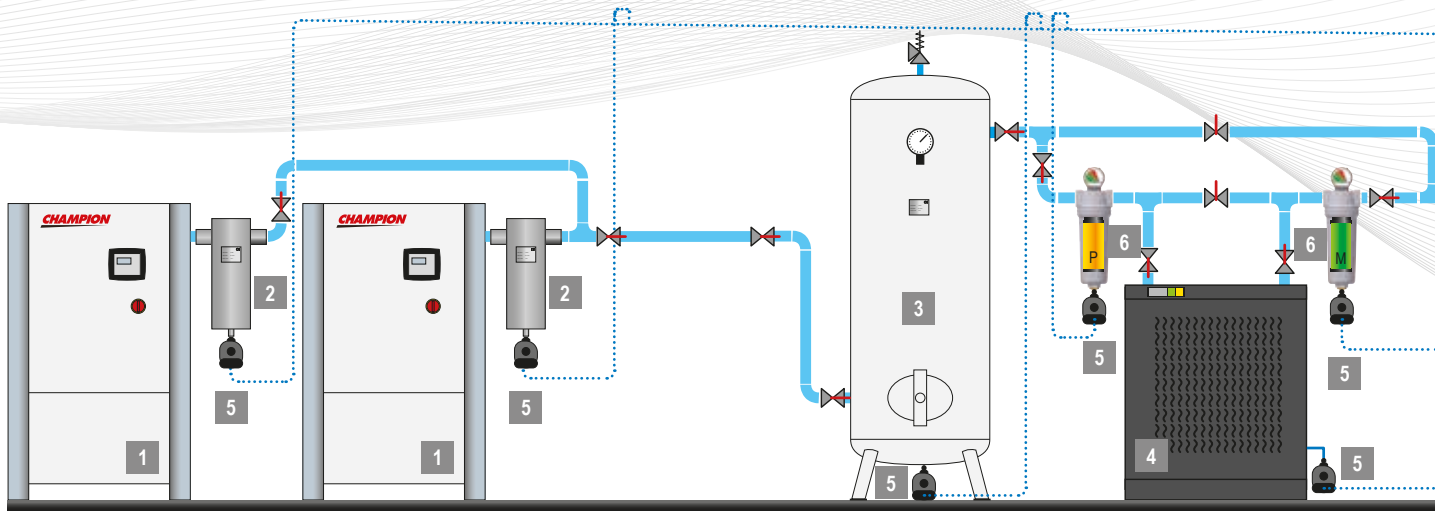
Compressed air quality classes according to ISO 8573-1:2010

CLASS	SOLID PARTICLES MAXIMUM NUMBER OF PARTICLES PER CUBIC METER AS A FUNCTION OF PARTICLE SIZE, D ²¹			HUMIDITY AND LIQUID WATER PRESSURE DEW POINT		OIL CONCENTRATION OF TOTAL OIL ²¹ (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 ³]	[ppm / w / w]
0	As specified by the equipment user or supplier and more stringent than class ¹¹						
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 ²¹ - C _p [mg/m ³]			LIQUID WATER CONTENT ²¹ - C _w [g/m ³]			
6	0 < C _p ≤ 5			Not specified			
7	5 < C _p ≤ 10			C _w ≤ 0.5			
8	Not specified			0.5 ≤ C _w ≤ 5			
9	Not specified			Not specified			
X	C _p > 10			> 5			

¹¹ To qualify for a class designation, each size range and particle number within a class shall be met.

²¹ 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:

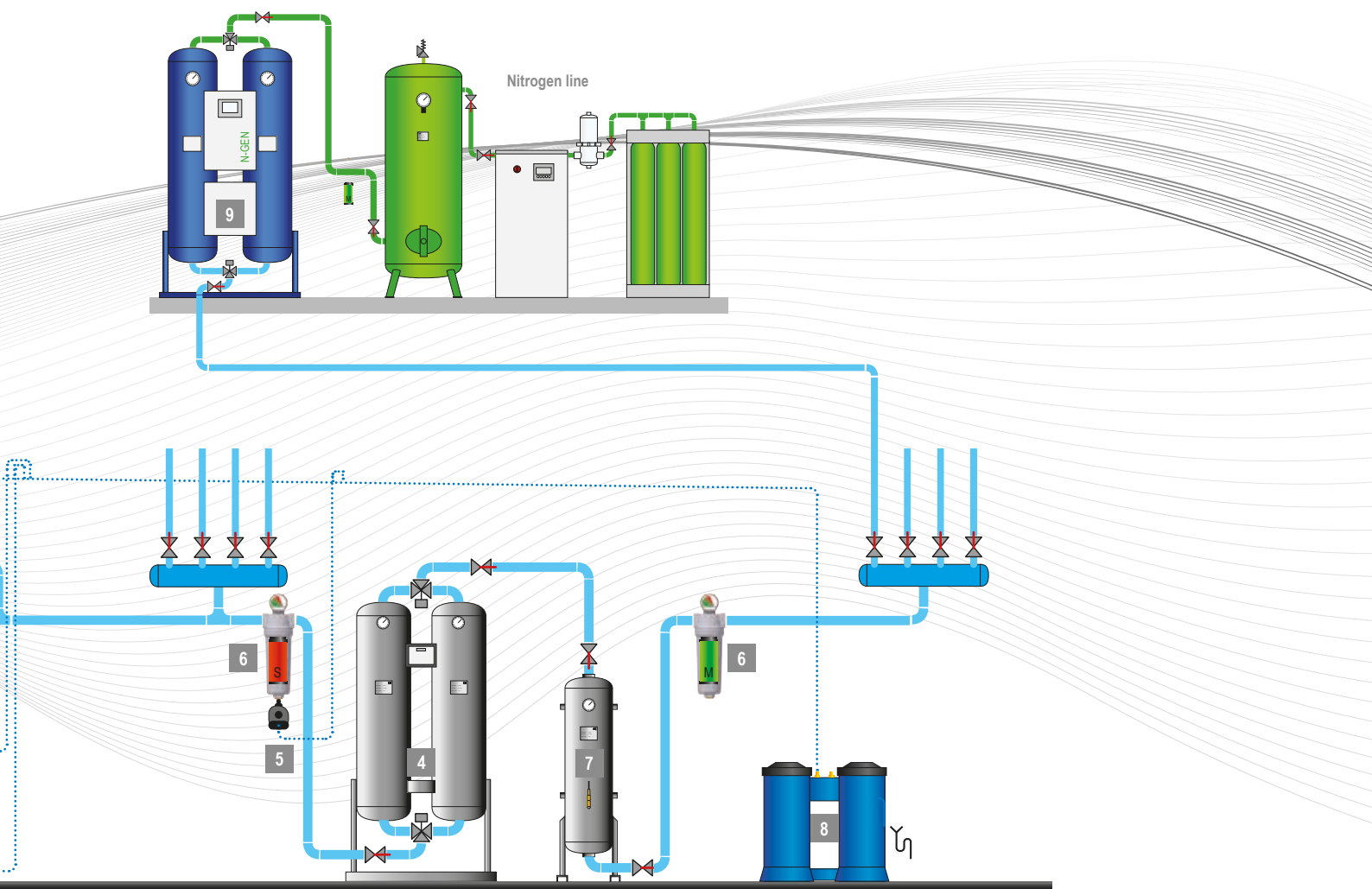
- Damping pulsations caused by reciprocating compressors
- Providing a location for free water and lubricant to settle from the compressed air stream
- Supplying peak demands from stored air without needing to run an extra compressor
- Reducing load/unload or start/stop cycle frequencies to help screw 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.

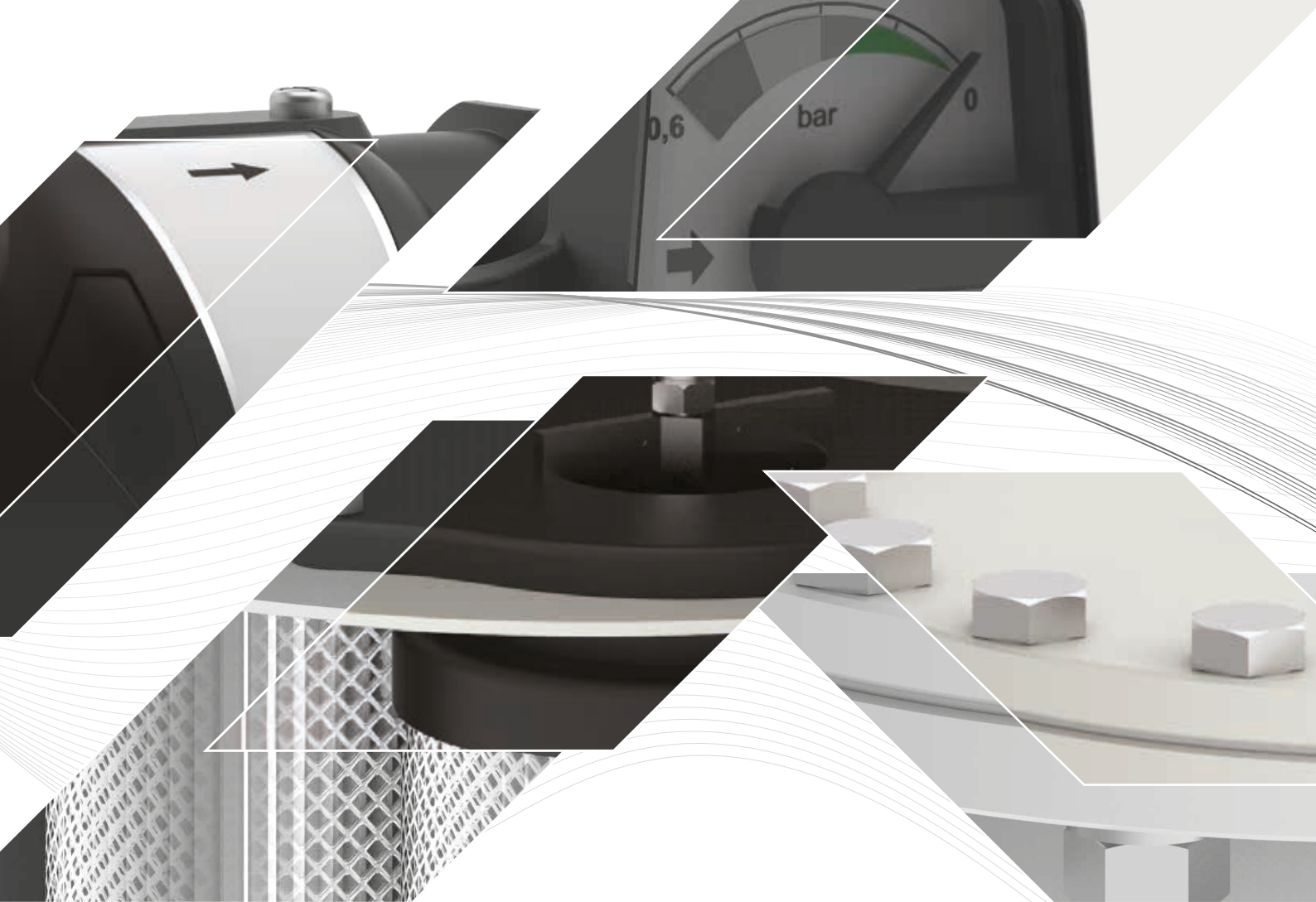
Designed and Built for Exceptional Performance

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 m³/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 m³/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 m³/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 ³ /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]	FILTER ELEMENT
			[m ³ /min]	[cfm]	[bar]	[psi]	W [mm]	H [mm]		
CHF005M	47698906001	3/8"	0.5	18	17	250	76	225	0.55	47699428001
CHF007M	47698907001	1/2"	0.7	24	17	250	76	225	0.55	47699432001
CHF013M	47698908001	3/4"	1.3	44	17	250	98	280	1.07	47699436001
CHF018M	47698909001	3/4"	1.8	65	17	250	98	280	1.09	47699440001
CHF025M	47698910001	1"	2.5	88	17	250	129	319	2.06	47699444001
CHF032M	47698911001	1"	3.2	112	17	250	129	319	2.06	47699448001
CHF038M	47698912001	1"	3.8	135	17	250	129	319	2.06	47699452001
CHF067M	47698913001	1 1/2"	6.7	235	17	250	129	409	2.36	47699456001
CHF082M	47698914001	1 1/2"	8.2	288	17	250	129	409	2.36	47699460001
CHF100M	47698915001	2"	10	353	17	250	170	518	5.2	47699464001
CHF0133M	47698916001	2"	13.3	471	17	250	170	518	5.24	47699468001
CHF0167M	47698917001	2"	16.7	589	17	250	170	518	5.26	47699472001
CHF0200M	47698918001	3"	20	706	17	250	205	600	9.31	47699476001
CHF0260M	47698919001	3"	26	918	17	250	205	700	10.69	47700081001
CHF0305M	47698920001	3"	30.5	1077	17	250	205	700	10.69	47700085001
CHF0383M	47698921001	3"	38.3	1354	17	250	205	930	13.7	47700089001
CHF0450M	47698922001	3"	45	1589	17	250	205	930	13.7	47700093001

COMPRESSED AIR FILTERS



Technical Data - Compressed Air Filters CHF Series - Grade S

FILTER MODEL	PN	CONNECTION SIZE	FLOW RATE		MAX. PRESSURE		DIMENSIONS		WEIGHT [kg]	FILTER ELEMENT
			[m³/min]	[cfm]	[bar]	[psi]	W [mm]	H [mm]		
CHF005S	47698923001	3/8"	0.5	18	17	250	76	225	0.55	47699429001
CHF007S	47698924001	1/2"	0.7	24	17	250	76	225	0.55	47699433001
CHF013S	47698925001	3/4"	1.3	44	17	250	98	280	1.07	47699437001
CHF018S	47698926001	3/4"	1.8	65	17	250	98	280	1.09	47699441001
CHF025S	47698927001	1"	2.5	88	17	250	129	319	2.06	47699445001
CHF032S	47698928001	1"	3.2	112	17	250	129	319	2.06	47699449001
CHF038S	47698929001	1"	3.8	135	17	250	129	319	2.06	47699453001
CHF067S	47698930001	1 1/2"	6.7	235	17	250	129	409	2.36	47699457001
CHF082S	47698931001	1 1/2"	8.2	288	17	250	129	409	2.36	47699461001
CHF100S	47698932001	2"	10	353	17	250	170	518	5.2	47699465001
CHF0133S	47698933001	2"	13.3	471	17	250	170	518	5.24	47699469001
CHF0167S	47698934001	2"	16.7	589	17	250	170	518	5.26	47699473001
CHF0200S	47698935001	3"	20	706	17	250	205	600	9.31	47700078001
CHF0260S	47698936001	3"	26	918	17	250	205	700	10.69	47700082001
CHF0305S	47698937001	3"	30.5	1077	17	250	205	700	10.69	47700086001
CHF0383S	47698938001	3"	38.3	1354	17	250	205	930	13.7	47700090001
CHF0450S	47698939001	3"	45	1589	17	250	205	930	13.7	47700094001

Technical Data - Compressed Air Filters CHF Series - Grade A

FILTER MODEL	PN	CONNECTION SIZE	FLOW RATE		MAX. PRESSURE		DIMENSIONS		WEIGHT [kg]	FILTER ELEMENT
			[m³/min]	[cfm]	[bar]	[psi]	W [mm]	H [mm]		
CHF005A	47698957001	3/8"	0.5	18	17	250	76	225	0.55	47699431001
CHF007A	47698958001	1/2"	0.7	24	17	250	76	225	0.55	47699435001
CHF013A	47698959001	3/4"	1.3	44	17	250	98	280	1.07	47699439001
CHF018A	47698960001	3/4"	1.8	65	17	250	98	280	1.09	47699443001
CHF025A	47698961001	1"	2.5	88	17	250	129	319	2.06	47699447001
CHF032A	47698962001	1"	3.2	112	17	250	129	319	2.06	47699451001
CHF038A	47698963001	1"	3.8	135	17	250	129	319	2.06	47699455001
CHF067A	47698964001	1 1/2"	6.7	235	17	250	129	409	2.36	47699459001
CHF082A	47698965001	1 1/2"	8.2	288	17	250	129	409	2.36	47699463001
CHF100A	47698966001	2"	10	353	17	250	170	518	5.2	47699467001
CHF0133A	47698967001	2"	13.3	471	17	250	170	518	5.24	47699471001
CHF0167A	47698968001	2"	16.7	589	17	250	170	518	5.26	47699475001
CHF0200A	47698969001	3"	20	706	17	250	205	600	9.31	47700080001
CHF0260A	47698970001	3"	26	918	17	250	205	700	10.69	47700084001
CHF0305A	47698971001	3"	30.5	1077	17	250	205	700	10.69	47700088001
CHF0383A	47698972001	3"	38.3	1354	17	250	205	930	13.7	47700092001
CHF0450A	47698973001	3"	45	1589	17	250	205	930	13.7	47700096001



Technical Data - Compressed Air Filters CHF Series - Grade R

FILTER MODEL	PN	CONNECTION SIZE	FLOW RATE		MAX. PRESSURE		DIMENSIONS		WEIGHT [kg]	FILTER ELEMENT
			[m ³ /min]	[cfm]	[bar]	[psi]	W [mm]	H [mm]		
CHF005R	47698940001	3/8"	0.5	18	17	250	76	225	0.55	47699430001
CHF007R	47698941001	1/2"	0.7	24	17	250	76	225	0.55	47699434001
CHF013R	47698942001	3/4"	1.3	44	17	250	98	280	1.07	47699438001
CHF018R	47698943001	3/4"	1.8	65	17	250	98	280	1.09	47699442001
CHF025R	47698944001	1"	2.5	88	17	250	129	319	2.06	47699446001
CHF032R	47698945001	1"	3.2	112	17	250	129	319	2.06	47699450001
CHF038R	47698946001	1"	3.8	135	17	250	129	319	2.06	47699454001
CHF067R	47698947001	1 1/2"	6.7	235	17	250	129	409	2.36	47699458001
CHF082R	47698948001	1 1/2"	8.2	288	17	250	129	409	2.36	47699462001
CHF100R	47698949001	2"	10	353	17	250	170	518	5.2	47699466001
CHF0133R	47698950001	2"	13.3	471	17	250	170	518	5.24	47699470001
CHF0167R	47698951001	2"	16.7	589	17	250	170	518	5.26	47699474001
CHF0200R	47698952001	3"	20	706	17	250	205	600	9.31	47700079001
CHF0260R	47698953001	3"	26	918	17	250	205	700	10.69	47700083001
CHF0305R	47698954001	3"	30.5	1077	17	250	205	700	10.69	47700087001
CHF0383R	47698955001	3"	38.3	1354	17	250	205	930	13.7	47700091001
CHF0450R	47698956001	3"	45	1589	17	250	205	930	13.7	47700095001

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)

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

Operating Limitations:

Max Operating Pressure 17.2 bar g

Max Recommended Operating Temp 80°C (Grade M, S, R)

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.

CHR SERIES REFRIGERATION AIR DRYERS

Applications

- Compressed air systems

At a glance...



Operating Pressure
16/14 bar g



Inlet air temperature
35 °C (55° max)



Ambient temperature
25 °C (45° 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

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.



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

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 m³/min (2,700 m³/h) please contact the Champion Sales Team

DRYER	PN	AIR FLOW		ABSORBED POWER [kW]	POWER SUPPLY [V/PH/HZ]	MAX PRESSURE [bar g]	AIR CONNECTIONS [BSP]	REFRIGERANT	DIMENSIONS		
		[m ³ /h]	[m ³ /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.

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 m³/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 m³/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 m³/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 AX50M -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 AX50M -40°C DS 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 m³/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 [inch]	CAPACITY		WEIGHT [kg]	DIMENSIONS		
			[m ³ /hr]	[m ³ /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 m³/min



Pipe Size
¼ - 1"



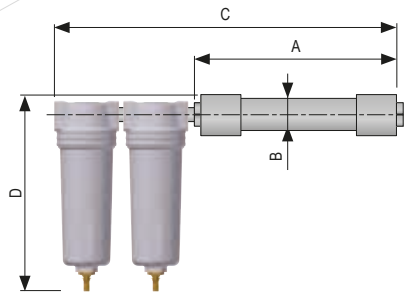
Operating Temp. Range
1.5 - 60°C



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 [inch]	OPERATING PRESSURE [bar]	FLOW RATE *		DIMENSIONS			
				[m ³ /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.

Prices includes complete kit.

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

CHACA SERIES

AIR COOLED AFTERCOOLERS

At a glance...



Operating Pressure
7 - 15 bar



Flow Rate
1.1 - 75 m³/min

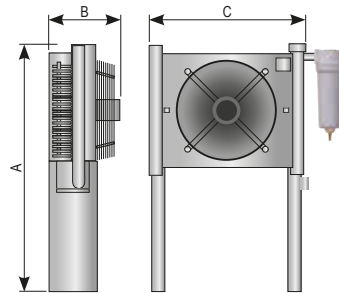


Operating Temp. Range
25 - 120°C



Pipe Size
1 - 2½"

Air cooled aftercoolers series CHACA 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. CHACA 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		PIPE SIZE	POWER SUPPLY	FAN	DIMENSIONS			WEIGHT
		[m ³ /min]	[cfm]				A [mm]	B [mm]	C [mm]	
CHACA 3	ON REQUEST	1.1	39	G 1"	1/230/50	ø250-45W	850	300	715	19
CHACA 7	ON REQUEST	2.1	74	G 1"	1/230/50	ø250-45W	850	300	715	20
CHACA 10	ON REQUEST	3.7	131	G 1 1/2"	3/400/50	ø350-110W	990	310	845	27
CHACA 18	ON REQUEST	4.9	173	G 1 1/2"	3/400/50	ø400-130W	990	310	845	29
CHACA 30	ON REQUEST	6.5	230	G 2"	3/400/50	ø500-750W	1175	440	980	44
CHACA 47	ON REQUEST	8.7	307	G 2"	3/400/50	ø500-750W	1175	440	980	48
CHACA 70	ON REQUEST	12.9	456	G 2"	3/400/50	ø600-370W	1325	490	1130	61
CHACA 94	ON REQUEST	16.5	583	G 2 1/2"	3/400/50	ø600-370W	1325	490	1130	66
CHACA 150	ON REQUEST	21	742	DN100	3/400/50	ø800-1470W	1800	660	1590	127
CHACA 175	ON REQUEST	26	918	DN100	3/400/50	ø800-1470W	1800	660	1590	143
CHACA 240	ON REQUEST	31.5	1112	DN100	3/400/50	ø800-1470W	1800	790	1560	148
CHACA 300	ON REQUEST	42	1483	DN100	3/400/50	ø800-1470W	2000	795	1740	166
CHACA 450	ON REQUEST	51.5	1819	DN125	3/400/50	2 x ø800-1470W	2090	830	1850	212
CHACA 600	ON REQUEST	75	2649	DN125	3/400/50	2 x ø800-1470W	2300	850	2010	315

CHACW SERIES

WATER COOLED AFTERCOOLERS

At a glance...



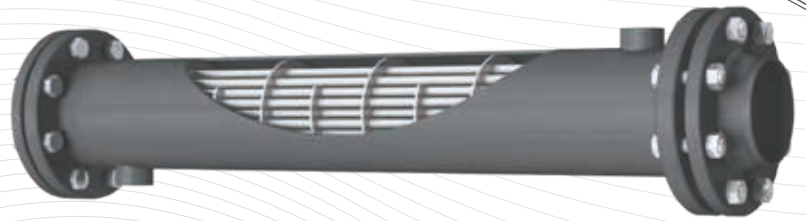
Operating Pressure
0 - 16 bar



Flow Rate
2.2 - 759.5 m³/min

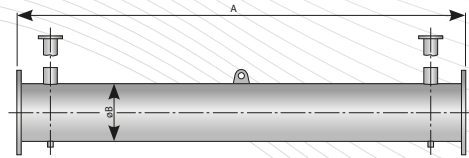


Operating Temp. Range
1.5 - 200°C



Applications

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



Water-cooled aftercoolers series CHACW 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. CHACW 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	CONNECTIONS		OPERATING PRESSURE [bar]	FLOW RATE		DIMENSIONS	
		[Air]	[Water]		[m ³ /min]	[cfm]	A [mm]	B [mm]
CHACW 10	ON REQUEST	DN50	DN20	0 - 16	2.2	78	806	60.3
CHACW 18	ON REQUEST	DN50	DN20	0 - 16	3.92	138	816	60.3
CHACW 30	ON REQUEST	DN50	DN20	0 - 16	6.12	216	816	60.3
CHACW 47	ON REQUEST	DN50	DN20	0 - 16	11.02	389	870	60.3
CHACW 70	ON REQUEST	DN50	DN20	0 - 16	15.92	562	870	60.3
CHACW 94	ON REQUEST	DN80	DN20	0 - 16	22.05	779	1500	88.9
CHACW 150	ON REQUEST	DN80	DN20	0 - 16	36.75	1298	1510	88.9
CHACW 200	ON REQUEST	DN100	DN40	0 - 16	44.17	1560	1500	114.3
CHACW 240	ON REQUEST	DN125	DN32	0 - 16	51.45	1817	1300	139.7
CHACW 300	ON REQUEST	DN125	DN32	0 - 16	66.15	2336	1300	139.7
CHACW 375	ON REQUEST	DN150	DN65	0 - 16	86.67	3060	1300	168.3
CHACW 450	ON REQUEST	DN200	DN50	0 - 16	117.6	4153	1300	219
CHACW 600	ON REQUEST	DN200	DN65	0 - 16	149.45	5278	1300	219
CHACW 900	ON REQUEST	DN250	DN80	0 - 10	183.75	6489	1300	273
CHACW 1200	ON REQUEST	DN300	DN80	0 - 10	269.5	9517	1300	323.9
CHACW 1500	ON REQUEST	DN400	DN100	0 - 10	367.5	12978	1300	406
CHACW 1800	ON REQUEST	DN400	DN150	0 - 10	441	15574	1300	406
CHACW 2500	ON REQUEST	DN450	DN200	0 - 10	563.5	19900	1300	457
CHACW 3000	ON REQUEST	DN500	DN200	0 - 10	759.5	26821	1300	508

QUALITY CLASS - SOLIDS (ISO 8573-1)	-
QUALITY CLASS - WATER (ISO 8573-1)	-
QUALITY CLASS - OIL (ISO 8573-1)	0/1
PRESSURE DROP - NEW ELEMENT-DRY [MBAR/PSI]	20/0.29
FILTER MEDIA	Activated Carbon
RESIDUAL OIL VAPOUR CONTENT (NOMINAL) [MG/M ³]	<0.003

ACTIVATED CARBON TOWER CH-TAC SERIES

At a glance...



Operating Pressure
16 bar



Flow Rate
0.1 - 108.33 m³/min



Operating Temp. Range
1.5 - 45°C



Pipe Size
¾ - 2"

Applications

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

CH-TAC activated carbon towers have been developed for separating oil vapours from compressed air (dry type separation).

CH-TAC is made from high quality carbon steel. CH-TACm series is made from aluminium. Flow distributors ensure uniform distribution of air flow through activated carbon bed. Oil vapours as well as some other hydrocarbons are separated due to adsorption process.

Super fine coalescing filter is required upstream TAC and 1µm dust filter is recommended downstream to intercept activated carbon dust. High pressure version is available on request.

Stainless steel version available on request.

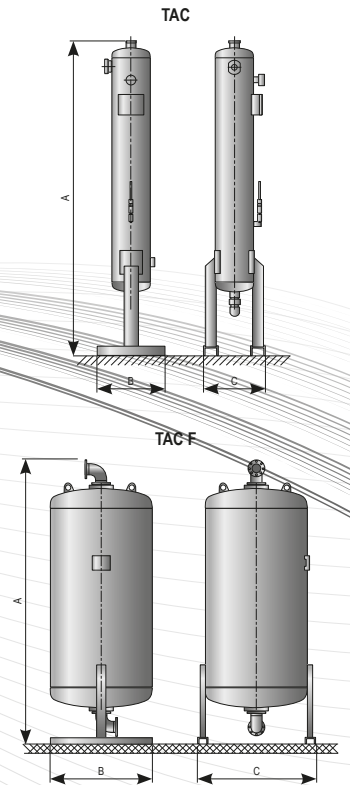
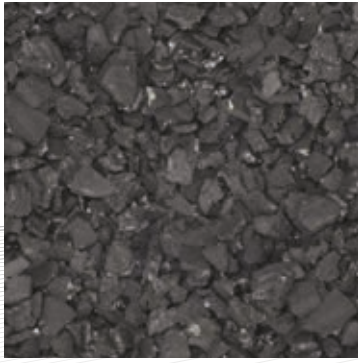
High pressure version is available on request.

QUALITY CLASS - SOLIDS (ISO 8573-1)	-
QUALITY CLASS - WATER (ISO 8573-1)	-
QUALITY CLASS - OILS (ISO 8573-1)	0/1
PRESSURE DROP - NEW ELEMENT-DRY [MBAR / PSI]	20 / 0.29
FILTER MEDIA	act. carbon
RESIDUAL OIL VAPOUR CONTENT (NOMINAL) [MG/M ³]	<0.003



TACm

TAC



TAC SERIES

TAC Service Kits

TYPE	PART NO	PIPE SIZE	OPERATING PRESSURE [bar]	FLOW RATE AT 7 BAR(G), 20 °C		DIMENSIONS			WEIGHT [kg]
				[m³/min]	[cfm]	A [mm]	B [mm]	C [mm]	
CH-TACm 6	CC1189549	3/8"	16	0.1	3.5	404	188	100	3.5
CH-TACm 12	CC1189550	3/8"	16	0.2	7.0	638	188	100	5.3
CH-TACm 23	CC1189551	3/8"	16	0.4	14.1	1106	188	100	6.5
CH-TACm 35	CC1189552	3/8"	16	0.6	21.1	1574	188	100	12
CH-TACm 56	CC1189553	1/2"	16	1	35.3	1106	270	148	15
CH-TACm 70	CC1189554	1/2"	16	1.25	44.1	1340	270	148	18
CH-TACm 105	CC1189555	1/2"	16	1.75	61.8	1808	270	148	22
CH-TAC 110	CC1189556	1"	16	1.83	86	1522	350	252	45
CH-TAC 150	CC1189557	1"	16	2.5	117	1766	350	252	52
CH-TAC 200	CC1189558	1"	16	3.33	157	1532	400	303	71
CH-TAC 250	CC1189559	1"	16	4.33	204	1784	400	303	83
CH-TAC 300	CC1189560	1 1/2"	16	5.33	251	1551	450	357	97
CH-TAC 400	CC1189561	1 1/2"	16	6.83	321	1798	450	357	114
CH-TAC 600	CC1189562	1 1/2"	16	9.83	462	1893	650	424	160
CH-TAC 800	CC1189563	2"	16	12.83	603	1877	650	468	201
CH-TAC 1000	CC1189564	2"	16	16.67	784	1961	650	506	242
CH-TAC 1200	CC1189565	DN50	16	20	936	2170	550	550	280
CH-TAC 1500	CC1189566	DN65	16	25	1170	2210	620	620	355
CH-TAC 2000	CC1189567	DN65	16	33.33	1560	2330	700	700	420
CH-TAC 2500	CC1189568	DN80	16	41.67	1950	2260	760	760	510
CH-TAC 3000	CC1189569	DN80	16	50	2340	2400	800	800	595
CH-TAC 3750	CC1189570	DN100	16	62.5	2925	2490	920	920	745
CH-TAC 5000	CC1189571	DN100	16	83.33	3900	2600	1050	1050	960
CH-TAC 6500	CC1189572	DN125	16	108.33	5070	2730	1150	1150	1300

TYPE	PART NO
CH-TACm 6	CC1189474
CH-TACm 12	CC1189475
CH-TACm 23	CC1189476
CH-TACm 35	CC1189477
CH-TACm 56	CC1189478
CH-TACm 70	CC1189479
CH-TACm 105	CC1189480
CH-TAC 110	CC1189481
CH-TAC 150	CC1189482
CH-TAC 200	CC1189483
CH-TAC 250	CC1189484
CH-TAC 300	CC1189485
CH-TAC 400	CC1189486
CH-TAC 600	CC1189487
CH-TAC 800	CC1189488
CH-TAC 1000	CC1189489
CH-TAC 1200	CC1189490
CH-TAC 1500	CC1189491
CH-TAC 2000	CC1189492
CH-TAC 2500	CC1189493
CH-TAC 3000	CC1189494
CH-TAC 3750	CC1189495
CH-TAC 5000	CC1189496
CH-TAC 6500	CC1189497

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	0.5	0.63	0.75	0.88	1	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.0	2.13

CORRECTION FACTORS						
OPERATING TEMPERATURE [°C]	20	25	30	35	40	45
CORRECTION FACTOR	1	0.98	0.97	0.92	0.86	0.75

Replace activated carbon every 12 months or sooner if required. Check residual oil content with oil indicator monthly.

CH-PP SERIES PAINTING AIR FILTRATION

At a glance...



Operating Pressure
16 bar



Flow Rate
0.1 - 108.33 m³/min



Operating Temp. Range
1.5 - 65°C



Pipe Size
1/2"

Applications

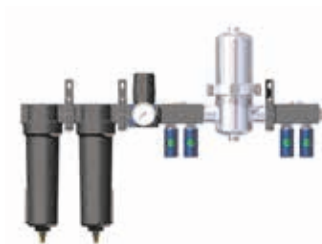
- Chemical
- Petrochemical
- Paint
- General industrial applications
- Breathing air



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 [inch]	FLOW RATE AT 7 BAR(G), 20 °C		DIMENSIONS			SEPARATOR CKL-PP	MICROFILTER M 0,1MM	MICROFILTER S 0,01MM	ACTIVE CARBON A	STERILE FILTER WITH ACTIVE CARBON SFA	ADSORPTION DRYER 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 m³/min



Operating Temp. Range
1.5 - 45°C



Pipe Size
1/2 - 1/2"



Applications

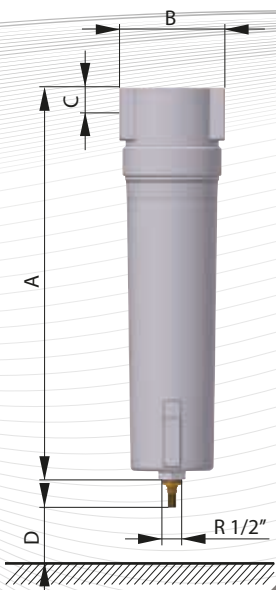
- Breathing air

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 CO₂ and CO removal filter. Despite that CHB-AIR comprises filter element which can reduce CO content.





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

Prices are for complete set.

- 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	223182
	Filter Cartridge F010M	223183
	Filter Cartridge F018M	223184
	Filter Cartridge F030M	223185
	Filter Cartridge F047M	223186
	Filter Cartridge F070M	223187

FH ²	FILTER ELEMENT TYPE	PART NO
	Filter Cartridge F007H2	CC1189441
	Filter Cartridge F010H2	CC1189442
	Filter Cartridge F018H2	CC1189443
	Filter Cartridge F030H2	CC1189454
	Filter Cartridge F047H2	CC1189455
	Filter Cartridge F070H2	CC1189456

FA ²	FILTER ELEMENT TYPE	PART NO
	Filter Cartridge F007A2	CC1189354
	Filter Cartridge F010A2	CC1189434
	Filter Cartridge F018A2	CC1189435
	Filter Cartridge F030A2	CC1189437
	Filter Cartridge F047A2	CC1189438
	Filter Cartridge F070A2	CC1189439

CHB-AIR PLUS BREATHING AIR FILTER

At a glance...



Operating Pressure
16 bar



Flow Rate
1.3 - 13 m³/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, CO₂ and O₂ 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⁽¹⁾.

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	FILTER ELEMENT TYPE
			[inch]	[m ³ /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

Prices are for complete set.

FM	FILTER ELEMENT TYPE	PART NO
	Filter Cartridge F007M	223182

FH ²	FILTER ELEMENT TYPE	PART NO
	Filter Cartridge F007H2	CC1189441

FA ²	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 m³/min



Operating Temp. Range
5 - 120°C



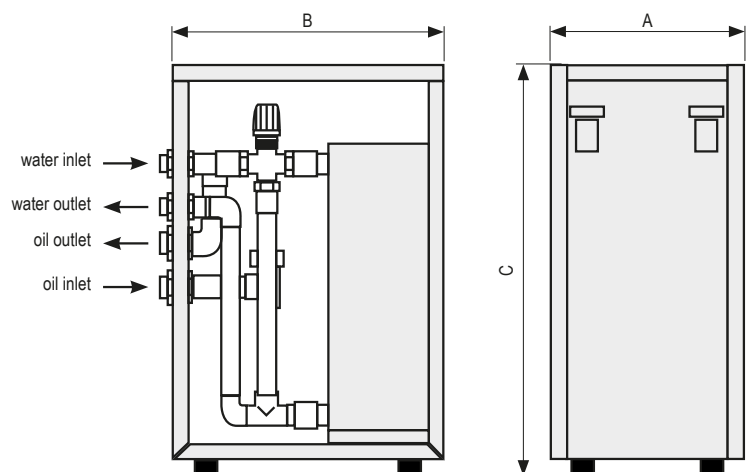
Ambient Air Temp. Range
5 - 45°C

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	Analog 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 ¹	CODE	DIRECTIVE	SIZE [litre]	PRESSURE [bar]	AIR OUTLET [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	220713K	2014/29/EU	720	11	1
TANK 720L-11	CC1215048K	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

¹ 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 ¹⁾	CODE	DIRECTIVE	SIZE [litre]	PRESSURE [bar]	AIR OUTLET [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	1
TANK 720L-11	CC1215043K	2014/29/EU	720	11	1
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

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

