



QUALITY AIR TREATMENT

Refrigeration dryers
Adsorption dryers
Filters
Oil-water separators
Accessories



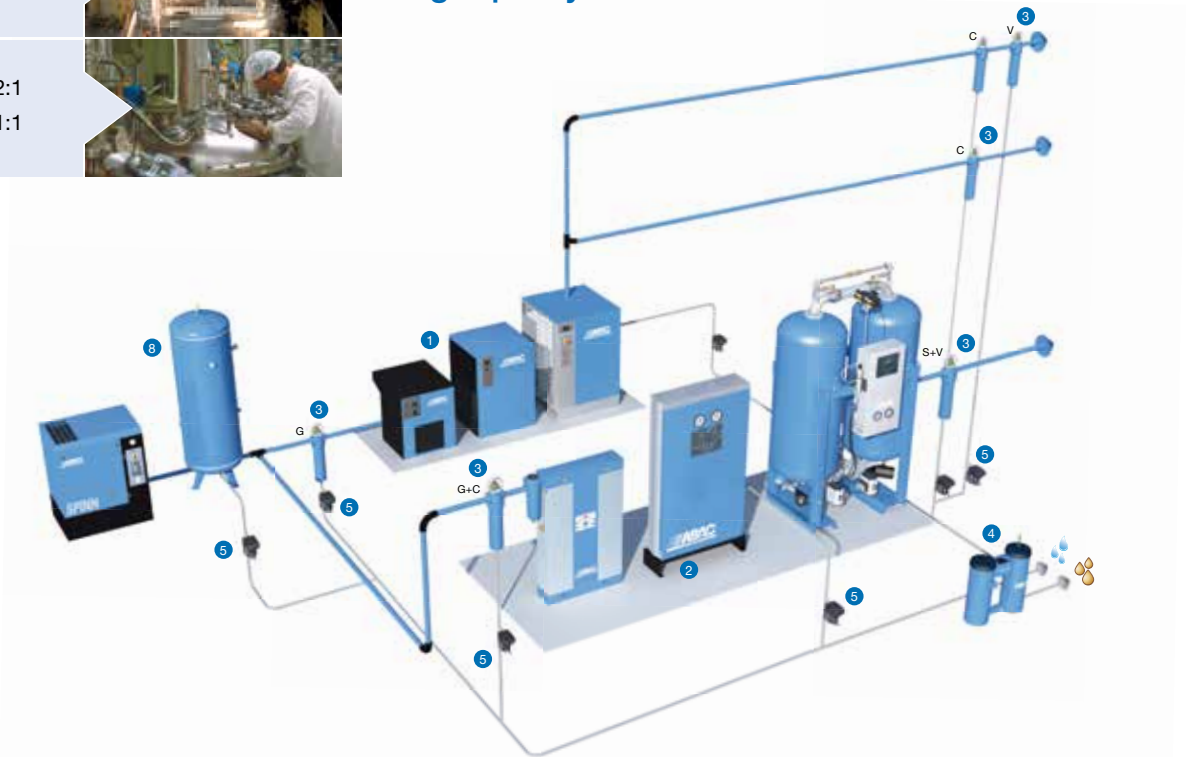
Air. Anytime. Anywhere.

ISO 8573-1 Dust-water-oil	Applications
Class 1:4:1	
Class 1:4:2	
Class 2:2:1 Class 2:1:1	

Quality air

To increase your business, your productivity, quality and efficiency.

The solution for transforming compressed air into high quality air.



A compressor collects the humidity and contaminants from the suctioned air; during compression, these particles get combined with the used oil inside the compressor. All these impurities might cause the equipment downstream to corrode, leading to potential costly downtimes and reducing the efficiency and the service life of the equipment used. To reduce this negative impact, ABAC developed a complete range of products that can ensure the quality of the air, increasing the efficiency, productivity and service life of the equipment and instruments used.

Without quality air solution	Customers benefits	With quality air solutions
The water/dust ends up in the system	The dust/water resulted from the compression process is eliminated	Immediate removal
High risk	Compressed air system clean and protected against rust	Ensured
High risk	A clean air network reduces leakage	Ensured
Shorter	The life span of your operation process (machines / equipment, etc.)	Longer
Risky	Safe use and longer service life of pneumatic equipment	Ensured
High	Cost of maintenance of your air network (corrosion), operation process and potential downtime	Reduced
Worse	Quality of the final product And possibility of product withdrawal	Better
Variable	Operating costs control	Stable
Lower	Your productivity	Higher
Potential	Freezing (in the piping/air network)	Impossible

Compressed air as per standard ISO 8573-1:2010

Purity class	Solid particles Number of particles per m ³			Water pressure dew point		Total oil * Concentration mg/m ³
	0.1 - 0.5 µm	0.5 - 1.0 µm	1.0 - 5.0 µm	°C	°F	
0	As indicated by the user or by the manufacturer of the equipment, and however higher than Class 1,					
1	≤ 20,000	≤ 400	≤ 10	≤ -70	≤ -94	≤ 0.01
2	≤ 400,000	≤ 6,000	≤ 100	≤ -40	≤ -40	≤ 0.1
3	-	≤ 90,000	≤ 1000	≤ -20	≤ -4	≤ 1
4	-	-	≤ 10,000	≤ 3	≤ 37.4	≤ 5
5	-	-	≤ 100,000	≤ 7	≤ 44.6	-
6	≤ 5 mg/m ³			≤ 10	≤ 50	-

* Liquid, aerosol and steam.

Refrigeration dryers

COOL Series

The COOL series allows reaching a pressure dew point of 5° C.



Components

- 1- Capillary tube
- 2- Refrigerant filter
- 3- Hot gas by-pass valve
- 4- Timer drain
- 5- Control panel
- 6- Air/refrigerant and air/air heat exchanger
- 7- Refrigerant compressor
- 8- Refrigerant condenser

Type	Part number	Max working pressure bars	Air treatment capacity		Electrical power W	Voltage V/Hz/ph	Gas inlet/outlet connections	Dimensions mm L x W x H	Weight Kg	Refrigeration gas type
			l/min	m³/h						
COOL 21	4102001778	16	350	21	126	230/50/1	3/4" M	233 x 559 x 561	19	R 134 a
COOL 36	4102001779	16	600	36	126	230/50/1	3/4" M	233 x 559 x 561	19	R 134 a
COOL 51	4102001780	16	850	51	163	230/50/1	3/4" M	233 x 559 x 561	19	R 134 a
COOL 72	4102001781	16	1200	72	228	230/50/1	3/4" M	233 x 559 x 561	20	R 134 a
COOL 110	4102001782	16	1825	110	293	230/50/1	3/4" M	233 x 559 x 561	25	R 134 a
COOL 129	4102001783	16	2150	129	380	230/50/1	3/4" M	233 x 559 x 561	27	R 134 a
COOL 180	4102001849	16	3000	180	419	230/50/1	1" F	233 x 559 x 561	30	R 134 a
COOL 216	4102002070	16	3600	216	664	230/50/1	1" F	310 x 706 x 994	52	R 404 A
COOL 246	4102002071	13	4100	246	767	230/50/1	1' 1/2" F	310 x 706 x 994	57	R 404 A
COOL 312	4102002072	13	5200	312	865	230/50/1	1' 1/2" F	310 x 706 x 994	59	R 404 A
COOL 390	4102002073	13	6500	390	1028	230/50/1	1' 1/2" F	310 x 706 x 994	80	R 404 A
COOL 462	4102002074	13	7700	462	1242	230/50/1	1' 1/2" F	310 x 706 x 994	80	R 404 A

Ambient temperature				
°C	25	30	35	40
A	1.00	0.92	0.84	0.80

Reference conditions:

- Working pressure: 7 bar (100 psi)
- Operating temperature: 35 °C
- Ambient temperature: 25 °C
- Pressure dewpoint: +5 °C +/-1
- Also available at 60Hz and in different voltages

Limit conditions:

- Working pressure:
 - 16 bar COOL 21-216
 - 13bar COOL 246-462
- Operating temperature: 50 °C
- min./max. ambient temperature: +5 °C; +40 °C

Operating temperature					
°C	30	35	40	45	50
A	1.24	1.00	0.82	0.69	0.58

Flow rate correction factors for different conditions than those indicated as reference

Formula for determining the correction factor: $K = A \times B \times C$

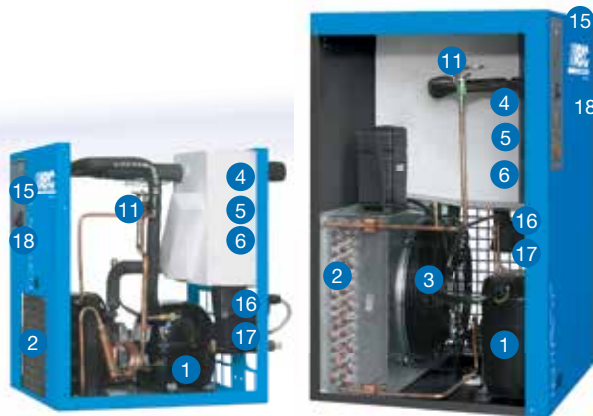
Operating pressure												
bars	5	6	7	8	9	10	11	12	13	14	15	16
C	0.90	0.96	1.00	1.03	1.06	1.08	1.10	1.12	1.13	1.15	1.16	1.17



Refrigeration dryers

DRY Series

Refrigeration dryers can remove all the humidity from the compressed air, ensuring constant efficiency.



- 1 Refrigerant compressor driven by an electric motor, cooled using refrigerant fluid and protected against overheating.
- 2 Refrigerant condenser air-cooled and with a large exchange surface for high thermal exchange.
- 3 IP 54 motor-driven ventilator for the condenser cooling air flow.
- 4 Air/refrigerant evaporator with high thermal exchange and low leakage rates.
- 5 Highly efficient condensate separator
- 6 Air-air heat exchanger with high thermal exchange and low load losses.
- 7 Refrigerant fluid separator
- 8 Maximum level pressure switch
- 9 Service valve
- 10 Fan control pressure switch
- 11 Hot gas bypass valve controls the refrigerant capacity under all load conditions preventing any formation of ice within the system.
- 12 Refrigerant fluid filter
- 13 Capillary tube
- 14 Service valve
- 15 Control panel
- 16 Filter that collects the impurities, protecting the system
- 17 Automatic eco-friendly condensate drain, that can prevent any accidental discharge of the compressed air.

Type	Part number	Max pressure bars	Flow rate		Electrical power W	Voltage V/Hz/ph	Connections gas/DIN	Dimensions mm L x W x H (mm)	Weight kg
			l/min	m ³ /h					
DRY 20	4102000740	16	333	20	130	230/50/1	3/4" M	350 x 500 x 450	19
DRY 25	4102000741	16	417	25	130	230/50/1	3/4" M	350 x 500 x 450	19
DRY 45	4102000742	16	750	45	164	230/50/1	3/4" M	350 x 500 x 450	19
DRY 60	4102000743	16	1000	60	190	230/50/1	3/4" M	350 x 500 x 450	20
DRY 85	4102000744	16	1417	85	266	230/50/1	3/4" M	350 x 500 x 450	25
DRY 130	4102000745	16	2167	130	284	230/50/1	3/4" M	350 x 500 x 450	27
DRY 165	4102000746	13	2750	165	609	230/50/1	1" F	370 x 500 x 764	44
DRY 210	4102000747	13	3500	210	673	230/50/1	1" F	370 x 500 x 764	44
DRY 250	4102002718	13	4167	250	793	230/50/1	1 1/2" F	460 x 560 x 789	53
DRY 290	4102002719	13	4833	290	870	230/50/1	1 1/2" F	460 x 560 x 789	60
DRY 360	4102002720	13	6000	360	1072	230/50/1	1 1/2" F	460 x 560 x 789	65
DRY 460	4102002721	13	7667	460	1190	230/50/1	1 1/2" F	580 x 590 x 899	80
DRY 530	4102002722	13	8833	530	1446	230/50/1	1 1/2" F	580 x 590 x 899	80
DRY 690	4102001584	13	11500	690	1319	230/50/3	2" F	735 x 898 x 962	128
DRY 830	4102001585	13	13833	830	1631	400/50/3	2" F	735 x 898 x 962	146
DRY 1040	4102001586	13	17333	1040	1889	400/50/3	2" F	735 x 898 x 962	158
DRY 1260	4102001587	13	21000	1260	2110	400/50/3	2" F	735 x 898 x 962	165

Item number	Item description
4101000653	Filter support bypass DRY20 - DRY130
4101000652	Filter support DRY20 - DRY130

Reference conditions:

Operating pressure: 7 bars

Operating temperature: 35 °C

Ambient temperature: 25 °C

Pressure dew point: +5 °C +/-1

Also available at 60Hz and in different voltages

Limit conditions:

Operating pressure:

16 bar DRY 20-130 - 13 bar DRY 165-1260

Operating temperature: 55 °C

min./max. ambient temperature: +5 °C; +45 °C

Correction factor Formula for determining the correction factor: $K = A \times B \times C$

Flow rate correction factors for different conditions than those indicated as reference

Ambient temperature					
°C	25	30	35	40	45
A	1.00	0.92	0.84	0.80	0.74 (DRY 20-DRY 530)
A	1.00	0.91	0.81	0.72	0.62 (DRY 690-DRY 1260)

Operating temperature						
°C	30	35	40	45	50	55
B	1.24	1.00	0.82	0.69	0.58	0.45 (DRY 20-DRY 530)
B	1.00	1.00	0.82	0.69	0.58	0.49 (DRY 690-DRY 1260)

Operating pressure												
bars	5	6	7	8	9	10	11	12	13	14	15	16
C	0.90	0.96	1.00	1.03	1.06	1.08	1.10	1.12	1.13	1.15	1.16	1.17 (DRY 20-DRY 530)
C	0.90	0.97	1.00	1.03	1.05	1.07	1.09	1.11	1.12 (DRY 690-DRY 1260)			



Adsorption dryers

HAD series

For the removal of condensate and steam, ABAC offers a range of adsorption dryers that are able to provide perfectly dry air and constant efficiency.

Applications



HAD 650-1300

1. Large vessels for optimum air speed and reliable drying. The unit is rather low with respect to its capacity due to the flanges that are built into the tanks.
2. Air outlet connection
3. Robust frame, including fork lift slots for easy installation.
4. Pressure Dew Point sensor (HAD/CD).
5. Pressure Dew Point digital display (HAD/CD).
6. Two manometers integrated in the control panel, indicating the pressure inside the two tanks.
7. Purge nozzle for regeneration.
8. Galvanised pipes with flanged connections.
9. Inlet valves - long service interval.

HAD 115-645

1. Base frame makes it easy to transport by fork lift.
2. Pressure gauge – tower A
3. Pressure gauge – tower B
4. Optional dew point control sensor (CD).

HAD 7-60

1. The pre-filter removes the coalescence particles and liquids from the air flow.
2. The removable front panels allow easy access for maintenance operations without having to disconnect the pipes.
3. The post-filters integrated in the dryer remove any remaining particles from the air flow.
4. The electronic controls housed in an IP65 box allow to control the:
 - regeneration cycle
 - regulation status
 - default diagnosis
 - remotely default ratio
5. Multi-port inlet and outlet



Type	Part number	Maximum working pressure		Working pressure		Air treatment capacity (in the reference conditions)		Standard dew point	G 0.1 mg/m3 oil 99.97% - 1 µm 99.97% - 0.01 µm	C 0.01 mg/m3 oil 99.999% - 1 µm 99.992% - 0.01 µm	S 99.97% - 1 µm 99.97% - 0.01 µm	discharge fittings	dimensions	Weight
		bars	bars	l/min	m³/h	°C	pre-filters included							
HAD 7 STD	8102822304	16	7.0	114	7	-40	n.d.	C 45	Built into the dryer	3/8"	S 125	gas	281 x 92 x 445	13
HAD 11 STD	8102822312	16	7.0	168	10	-40	n.d.	C 45					281 x 92 x 504	14
HAD 18 STD	8102822320	16	7.0	282	17	-40	n.d.	C 45					281 x 92 x 635	17
HAD 25 STD	8102822338	16	7.0	426	26	-40	n.d.	C 45					281 x 92 x 815	20
HAD 40 STD	8102822346	16	7.0	708	42	-40	n.d.	C 45					281 x 92 x 1065	24
HAD 60 STD	8102822353	16	7.0	990	59	-40	n.d.	C 90					281 x 92 x 1460	31
HAD 115 STD	8102327106	14.5	7.0	1920	115	-40	n.d.	C 125					550 x 242 x 998	64
HAD 145 STD	8102327114	14.5	7.0	2400	144	-40	n.d.	C 180					550 x 242 x 998	64
HAD 160 STD	8102327122	14.5	7.0	2700	162	-40	n.d.	C 180					550 x 242 x 1243	78
HAD 215 STD	8102327130	14.5	7.0	3900	234	-40	n.d.	C 290					550 x 242 x 1611	98
HAD 250 STD	8102327148	14.5	7.0	4500	270	-40	n.d.	C 290	550 x 358 x 998	133				
HAD 325 STD	8102327155	14.5	7.0	5400	324	-40	n.d.	C 505	550 x 358 x 1243	158				
HAD 360 STD	8102327163	14.5	7.0	6300	378	-40	n.d.	C 505	550 x 358 x 1611	256				
HAD 470 STD	8102327171	14.5	7.0	7800	468	-40	n.d.	C 505	550 x 358 x 1611	256				
HAD 575 STD	8102327189	14.5	7.0	9600	576	-40	n.d.	C 685	550 x 520 x 1611	310				
HAD 645 STD	8102327197	14.5	7.0	11400	684	-40	n.d.	C 685	550 x 520 x 1611	310				
HAD 650 STD 11	8102823120	11	7.0	10800	648	-40	G 685	C 685	S 685	1040 x 840 x 1760	445			
HAD 650 STD 14.5	8102823138	14.5	12.5	12900	774	-40	G 685	C 685	S 685	1040 x 840 x 1760	445			
HAD 650 CD 11	8102823146	11	7.0	10800	648	-40	G 685	C 685	S 685	1040 x 840 x 1760	445			
HAD 650 CD 16	8102824235	14.5	12.5	12900	774	-40	G 685	C 685	S 685	1040 x 840 x 1760	445			
HAD 800 STD 11	8102823153	11	7.0	13200	792	-40	G 935	C 935	S 935	1040 x 840 x 1760	445			
HAD 800 STD 14.5	8102823161	14.5	12.5	15900	954	-40	G 935	C 935	S 935	1040 x 840 x 1760	445			
HAD 800 CD 11	8102823179	11	7.0	13200	792	-40	G 935	C 935	S 935	1040 x 840 x 1760	445			
HAD 800 CD 16	8102823187	14.5	12.5	15900	954	-40	G 935	C 935	S 935	1040 x 840 x 1760	445			
HAD 1080 STD 11	8102823195	11	7.0	18000	1080	-40	G 1295	C 1295	S 1295	1046 x 894 x 1876	600			
HAD 1080 STD 16	8102823203	14.5	12.5	21600	1296	-40	G 1295	C 1295	S 1295	1046 x 894 x 1876	600			
HAD 1080 CD 11	8102823211	11	7.0	18000	1080	-40	G 1295	C 1295	S 1295	1046 x 894 x 1876	600			
HAD 1080 CD 16	8102823229	14.5	12.5	21600	1296	-40	G 1295	C 1295	S 1295	1046 x 894 x 1876	600			
HAD 1300 STD 11	8102823237	11	7.0	21600	1296	-40	C 1295	C 1295	S 1295	1100 x 923 x 1914	650			
HAD 1300 STD 16	8102823245	14.5	12.5	25800	1548	-40	C 1295	C 1295	S 1295	1100 x 923 x 1914	650			
HAD 1300 CD 11	8102823252	11	7.0	21600	1296	-40	C 1295	C 1295	S 1295	1100 x 923 x 1914	650			
HAD 1300 CD 16	8102823260	14.5	12.5	25800	1548	-40	C 1295	C 1295	S 1295	1100 x 923 x 1914	650			

Standard characteristics and options	HAD 7-60	HAD 115-645	HAD 650-1300
Flow rate at 7 bar (-40 °C)	114-990 l/min	1920-11400 l/min	10800-21600 l/min
Dew point	Standard -40 °C	Standard -40 °C	Standard -40 °C
Working pressure range	4-16 bar	4-14.5 bar	4-11 bar and 11-14.5 bar
Voltages	12-24 V - DC 50/60 Hz	115-230 V - AC 50/60 Hz	230V - AC 50/60 Hz
	100-115-230 V - AC 50/60 Hz		

Options:

Type	Model with -70 °C		Model with discharge function	
	Part number	Description	Part number	Description
HAD 115- HAD 470	0000020851	PDP -70 °C (D25 - D100)	0000020850	Model with PDP sensor (D25-D100)
HAD 650	0000020511	PDP -70 °C (D150)	Available spare parts	
HAD 800	0000020611	PDP -70 °C (D185)		
HAD 1080	0000020711	PDP -70 °C (D250)		
HAD 1300	0000020811	PDP -70 °C (D300)		

The filters are supplied unassembled, together with the dryer:

HAD 7-60: The pre-filter can be connected directly to the dryer.

HAD 115-1300: the filters must be installed on the air distribution line.

In case of different working pressure than that specified in the reference conditions, use the correction factors table.

Reference conditions:

- Working pressure: see the technical data table.
- Operating temperature: 35 °C
- Relative humidity: 100%

Limit conditions:

HAD 7-HAD 60

- Working pressure: min./max. bar 4-16
- Operating temperature: min./max. °C 1.5-50
- min./max. ambient temperature: 5-50 °C

HAD 115-HAD 645

- Working pressure: min./max. bar 4-14.5
- Operating temperature: min./max. 2-50 °C
- min./max. ambient temperature: 2-45 °C

HAD 650-HAD 1300

- Working pressure: min./max. bar 4-11 (pressure/ 11 HAD design)
11-14.5 (pressure/ 16 HAD design)
- Operating temperature: min./max. 2-50 °C
- min./max. ambient temperature: 2-40 °C

Correction factor	HAD/16 design pressure														
	4	5	6	7	8	9	10	11	12	13	14	14.5	15	16	
Input pressure - bar	4	5	6	7	8	9	10	11	12	13	14	14.5	15	16	
HAD 7-HAD 60	0.62	0.75	0.87	1	1.12	1.25	1.37	1.5	1.62	1.75	1.87	1.93	2	2.12	
HAD 115-HAD 470	0.62	0.75	0.87	1	1.12	1.25	1.37	1.5	1.62	1.75	1.87	1.93	-	-	
Correction factor	HAD/11 design pressure							HAD/16 design pressure							
	4	5	6	7	8	9	10	11	12.5	13	14	14.5	-		
Input pressure - bar	4	5	6	7	8	9	10 <td>11</td> <td>12.5</td> <td>13</td> <td>14</td> <td>14.5</td> <td>-</td>	11	12.5	13	14	14.5	-		
HAD 650-HAD 1300	0.47	0.68	0.84	1	1.11	1.2	1.3	1.38	0.89	1	1.04	1.11	1.15	-	
Correction factor															
Infeed air temperature °C	20	25	30	35	40	45	50	-	-	-	-	-	-	-	
HAD 7-HAD 60	1.07	1.06	1.04	1	0.88	0.78	0.55	-	-	-	-	-	-	-	
HAD 20-HAD 1300	1	1	1	1	0.84	0.71	0.55	-	-	-	-	-	-	-	
Correction factor															
Dew point in pressure °C	-40	-70	-	-	-	-	-	-	-	-	-	-	-	-	
HAD 7-HAD 1300	1	0.7	-	-	-	-	-	-	-	-	-	-	-	-	



Line Filters

Atmospheric air contains in its origin impurities like dust, various forms of hydrocarbons and water in form of humidity, which once sucked by the compressor is compressed and delivered to the line together with eventual oily particles. These polluting agents, interacting among each other, may generate abrasive and corrosive emulsions which can damage the distribution lines, the pneumatic devices and the product itself. To prevent this negative impact, ABAC has developed a whole range of filters to purify the air.

Applications



Applications

- Instrument systems
- Pharmaceuticals
- Food industry
- Chemical and packaging industry
- Pneumatic transport
- Industrial painting
- Control systems
- General instruments
- ...as well as any other application that implies the use of compressed air

Main benefits

- Removal of oil/dust from air
- Increased productivity and quality, which allows to prevent breakdowns instead of repairing them
- Greater performance and reliability
- Less wear of the distribution network and equipment
- Simple design and excellence performance
- Lower maintenance costs.
- Different cartridges with specific filtration qualities
- Higher final product quality



1. The unique head design allows reducing the pressure drop, increasing the savings.
2. A venting hole will give an audible alarm if the filter is dismantled under pressure.
3. Removing the filter bowl is an easy job as the external ribs allow for a firm grip on the filter.
4. No corrosion issues. The anodised die-cast aluminium housing protects the filters both on the inside and on the outside.
5. Sight-glass for easy condensate level check.
6. The periodic discharge of the filter ensures optimum performances thanks to the highly efficient condensate drains (G - C - P) and to the high quality manual drains (V-S-D).

Filter range overview



S FILTER RANGE

Particulate filters for dust protection.
Count Efficiency: 99,81% at Most Penetrating Particle Size (MPPS = 0,1 micron)

An S filter should be preceded by a dryer at all times.



G FILTER RANGE

Coalescing filters for general purpose protection, removing solid particles, liquid water and oil aerosol.

Total mass efficiency: 99%

For optimum filtration, the G filter should be preceded by a water separator.



D FILTER RANGE

High-efficiency particulate filters for dust protection.

Count Efficiency: 99,97% at Most Penetrating Particle Size (MPPS = 0,06 micron)

A D filter should be preceded by an S filter at all times and is commonly fitted after an adsorption dryer.



C FILTER RANGE

High-efficiency coalescing filters, removing solid particles, liquid water and oil aerosol.

Total Mass Efficiency: 99,9%

For optimum filtration, a C filter should be preceded by a G filter at all times.



P FILTER RANGE

Coalescing and particulate general purpose prefilter. Removing solid particles, dust, liquid water and oil aerosol.

Total mass efficiency: 90%



V FILTER RANGE

Activated carbon filter for removal of oil vapour and hydrocarbon odors with a maximum remaining oil content of 0,003 mg/m³ (0,003 ppm).

Service life 1000 hours

	S	D	P	G	C	V
Filter Type	Solid particles	Solid particles	Solid particles and oil aerosol	Solid particles and oil aerosol	Solid particles and oil aerosol	Oil vapour
Reference standards for tests	ISO 12500-3	ISO 12500-3	ISO 12500-1 / ISO 12500-3 / ISO 8573-2	ISO 12500-1 / ISO 8573-2	ISO 12500-1 / ISO 8573-2	ISO 8573-5
Inlet oil concentration (mg/m ³)	NA	NA	10	10	10	0.01
Count efficiency (% at MPPS)	(MPPS=0.1 µm) 99.81	(MPPS=0.06 µm) 99.97	(MPPS=0.1 µm) 89.45	NA	NA	NA
Count efficiency (% at 1 µm)	99.97	99.999	94.19	NA	NA	NA
Count efficiency (% at 0.01 µm)	99.87	99.992	93.63	NA	NA	NA
Max oil carry-over (mg/m ³)	NA	NA	1	0.1	0.01	0.003
Dry pressure drop (mbar)	120	140	85	NA	NA	160
Maximum pressure drop in operation (mbar)*	NA	NA	115	205	240	NA
Pressure drop in operation (mbar), in standard compressor installation	NA	NA	NA	185	200	NA
Part maintenance	After 4.000 operating hours or 1 year of use or in case of pressure drop > 350 mbar	After 4.000 operating hours or 1 year of use or in case of pressure drop > 350 mbar	After 4.000 operating hours or 1 year.	After 4.000 operating hours or 1 year.	After 4.000 operating hours or 1 year.	After 1000 operating hours (at 20 °C) or 1 year
Preceded by	-	S	-	water separator	G	G & C

Filter Type	Nominal flow rate*		Maximum pressure	Connections /port thread	Dimensions			Free space for cartridge replacement	Weight
	l/min	m ³ /h			bars	G	A mm		
FILTER 45	720	43	16	3/8"	90	21	228	75	1
FILTER 90	1500	90	16	1/2"	90	21	228	75	1.1
FILTER 125	2100	126	16	1/2"	90	21	283	75	1.3
FILTER 180	3000	180	16	3/4"	110	27.5	303	75	1.9
FILTER 180	3000	180	16	1"	110	27.5	303	75	1.9
FILTER 290	4800	288	16	1"	110	27.5	343	75	2.1
FILTER 505	8400	504	16	1 1/2"	140	34	449	100	4.2
FILTER 685	11400	684	16	1 1/2"	140	34	532	100	4.5
FILTER 935	15600	936	16	1 1/2"	140	34	532	100	4.6
FILTER 1295	21600	1296	16	2"	179	50	618	150	6.9
FILTER 1295	21600	1296	16	2 1/2"	179	50	618	150	6.9
FILTER 1890	31500	1890	16	3"	210	57	720	200	11.0
FILTER 2430	40500	2430	16	3"	210	57	890	200	12.6



*Reference conditions: Pressure 7 bar (102 psi) Maximum operating temperature 66 °C and 35 °C, only for V series.
Minimum temperature: 1 °C

Correction factor for different working pressures

For other compressed air inlet pressures, multiply the filter capacity by the following correction factors:

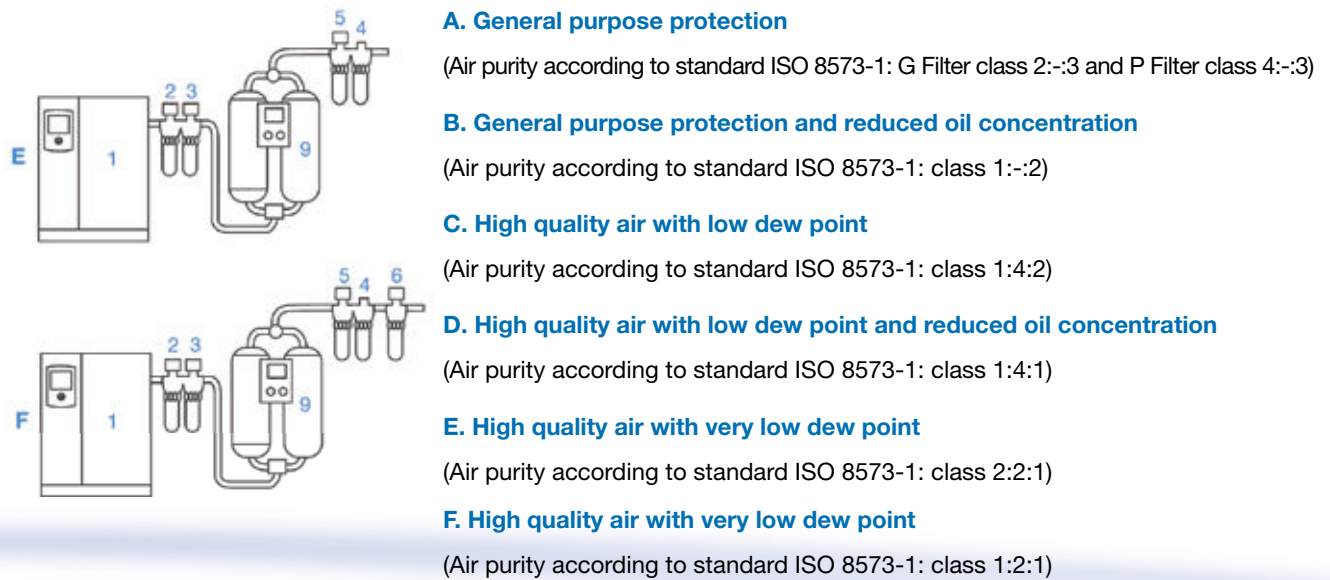
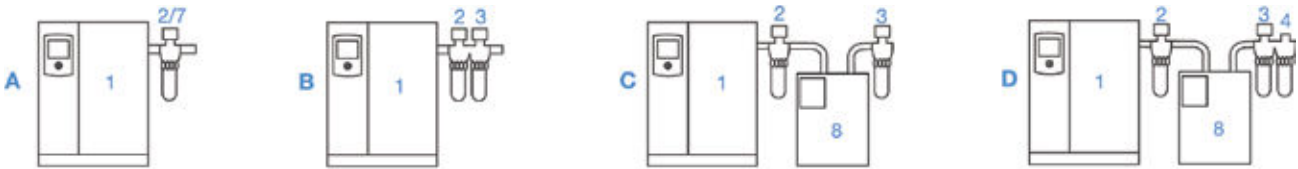
Input pressure (bar)	1	2	3	4	5	6	7	8	10	12	14	16
Correction factor	0.38	0.53	0.65	0.75	0.83	0.92	1	1.06	1.2	1.31	1.41	1.5

Complete filter

Filter Type	S	D	P	G	C	V
	Part number	Part number	Part number	Part number	Part number	Part number
FILTER 45	8102850586	8102850842	8102849828	8102849950	8102850719	8102850974
FILTER 90	8102850594	8102850859	8102849836	8102849968	8102850727	8102850982
FILTER 125	8102850602	8102850867	8102849844	8102849976	8102850735	8102850990
FILTER 180	8102850628	8102850883	8102849869	8102849992	8102850750	8102851014
FILTER 180	8102850610	8102850875	8102849851	8102849984	8102850743	8102851006
FILTER 290	8102850636	8102850891	8102849877	8102850503	8102850768	8102851022
FILTER 505	8102850644	8102850909	8102849885	8102850511	8102850776	8102851030
FILTER 685	8102850651	8102850917	8102849893	8102850529	8102850784	8102851048
FILTER 935	8102850669	8102850925	8102849901	8102850537	8102850792	8102851055
FILTER 1295	8102850685	8102850941	8102849927	8102850552	8102850818	8102851071
FILTER 1295	8102850677	8102850933	8102849919	8102850545	8102850800	8102851063
FILTER 1890	8102850693	8102850958	8102849935	8102850560	8102850826	8102851089
FILTER 2430	8102850701	8102850966	8102849943	8102850578	8102850834	8102851097

Typical filter installations

- 1. Compressor with after-cooler
- 2. G Filter
- 3. C Filter
- 4. V Filter
- 5. S Filter
- 6. D Filter
- 7. P Filter
- 8. Refrigeration dryer
- 9. Adsorption dryer



Spare cartridges for filters

Filter Type	P	G/S	C/D	V
	Kit Part number	Kit Part number	Kit Part number	Kit Part number
FILTER 45	2258290101	2258290112	2258290123	2258290134
FILTER 90	2258290102	2258290113	2258290124	2258290135
FILTER 125	2258290103	2258290114	2258290125	2258290136
FILTER 180	2258290104	2258290115	2258290126	2258290137
FILTER 180	2258290104	2258290115	2258290126	2258290137
FILTER 290	2258290105	2258290116	2258290127	2258290138
FILTER 505	2258290106	2258290117	2258290128	2258290139
FILTER 685	2258290107	2258290118	2258290129	2258290140
FILTER 935	2258290108	2258290119	2258290130	2258290141
FILTER 1295	2258290109	2258290120	2258290131	2258290142
FILTER 1295	2258290109	2258290120	2258290131	2258290142
FILTER 1890	2258290110	2258290121	2258290132	2258290143
FILTER 2430	2258290111	2258290122	2258290133	2258290144

Options for filters



- Pressure gauge
- Volt-free contact installed in the differential pressure gauge to provide a remote signal when the cartridge needs to be replaced



- Pressure gauge
- Serial connection kit: for simple filter mounting in series
- Wall mounting kit: for simple installation



- Quick coupling: for simple connection and fixing of a smart condensate drain without compressed air losses

Part number	Option	Available for
8092242968	Wall mounting kit	From filter 45 to 125
8092242976	Wall mounting kit	Filter 180 - 290
8092242984	Wall mounting kit	From filter 505 to 935
8092242992	Wall mounting kit	Filter 1295
8092243008	Wall mounting kit	Filter 1890 - 2430
8092243016	Serial connection kit	From filter 45 to 125
8092243024	Serial connection kit	Filter 180 - 290
8092243032	Serial connection kit	From filter 505 to 935
8092243040	Serial connection kit	Filter 1295
8092243057	Serial connection kit	Filter 1890 - 2430
8055216447	Potential free NO contact	(only in combination with the pressure gauge)
8055216488	Potential free NC contact	(only in combination with the pressure gauge)
1624117200	Differential pressure gauge.	From filter 45 to 2430
1617704800	Obstruction indicator	From filter 45 to 2430
2901056200	Condensate level sight-glass Kit	From filter 45 to 2430
2901056300	Automatic drain valve	From filter 45 to 2430
2901061100	Manual drain valve	From filter 45 to 2430
2901069200	Quick coupling for condensate drain (1/2" male)	From filter 45 to 2430
2901206803	Quick coupling for condensate drain (1/2" female)	From filter 45 to 2430



Condensate drains

ABAC offers a complete range of condensate drains, used in the compressed air industry to discharge the condensate from the tanks, filters, dryers and separators: automatic drains with float sensor, electronic automatic drains, timed drains.



G120 -Mechanical condensate drain

The G120 mechanical condensate drain requires no electrical connection and is recommended for areas subject to explosion or fire hazards



E200 -Timed condensate drain

The timed condensate drain works by means of a servo-controlled valve That opens periodically based on the time set



LD -Smart condensate drain

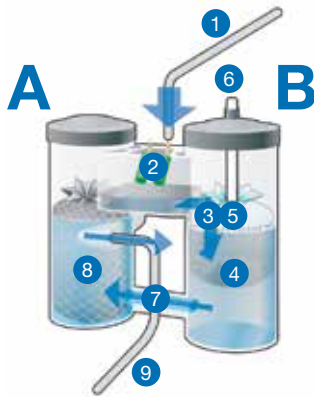
The LD capacitive drain range uses an electronic sensor that detects the level of condensate inside the drain body and controls the opening of the drain valve

Model	Part number	Working pressure range bars	Compressor capacity m ³ /h	Dryer capacity m ³ /h	Filter capacity m ³ /h	Connection Ø	Power supply Volt/Herz	Protection rating IP
Mechanical G120	0079500000	0-16	5,000	10,000	50,000	1/2"	-	IP65
Timer E200	0079520000	0-16	5,000	10,000	50,000	3/8"	230/50	IP65
Electronic LD200	4101000212	0.2-16	900	1,800	9,000	1/2"	230/50	IP65
Electronic LD202	4101000213	0.2-16	1,800	3,600	18,000	1/2"	230/50	IP65
Electronic LD203	4101000214	0.2-16	9,500	19,000	95,000	1/2"	230/50	IP65



Oil-water separators

The WS Series oil-water separators collect the separated residual oil in a suitable container allowing the water which has been cleared of impurities to be drained. They represent a valid and economical solution to separate oil from condensate and offer a solution in-line with ecological legislation.



1. For any type of condensate, including mixture of different oils
2. The condensate is collected by silencers installed in an expansion chamber in which takes place the first separation stage by depressurisation.
3. The water-oil emulsion enter column A and than passes through an oil skimmer made of fibres that absorb the oil and allow the water to flow
4. The oil skimmer floats in column A, favouring the absorption of the residual oil present at the surface
5. As the oil saturation increases, the weight of the filter increases and the oil goes near the maintenance indicator level. The unsaturated part of the filter remains in contact with the surface of the water
6. When the filter is completely saturated, the indicator shows that you need to replace the filter
7. Only the clean condensate (without oil) deposited at the bottom of column A passes into column B
8. Column B contains active carbons and absorbs any remaining residual oil from the condensate. The effectiveness of the system prevents any leaks in case of system lock or excessive condensate production
9. The oil content coming out of the system is about 15 mg/litre considering the reference conditions; this value allows discharging the condensate without affecting the environment



Model	Part number	Installation flow with dryer		Installation flow without dryer		Connections		a mm	b mm	c mm	Weight kg
		l/min	m ³ /h	l/min	m ³ /h	input 1	output 2				
WS13	8102045989	2100	126	2700	162	1 x 1/2"	1 x 1/2"	470	165	600	4
WS34	8102045997	5700	342	7083	425	2 x 1/2"	1 x 1/2"	680	255	750	13
WS52	8102046003	8700	522	10500	630	2 x 1/2"	1 x 1/2"	680	255	750	15
WS128	8102046011	21300	1278	26100	1566	2 x 3/4"	1 x 3/4"	750	546	900	25
WS218	8102046029	36300	2178	45600	2736	2 x 3/4"	1 x 3/4"	750	546	1030	26
WS297	8102046037	49500	2970	61200	3672	2 x 3/4"	1 x 3/4"	945	650	1100	28
WS425	8102046045	70800	4248	87300	5238	2 x 3/4"	1 x 3/4"	945	695	1100	30
WS850	8102046052	141600	8496	174600	10476	2 x 3/4"	1 x 1"	945	1185	1100	60

Notes

Reference conditions:									
Residual oil equivalent to 15 mg/l.									
Mild ambient temperature (25 °C with 60% relative humidity)									
Correction factors: multiply the indicated capacity by the relevant correction factor.									
Cold environment (15 °C/60% UR)	with Dryer	without Dryer							
Correction factor	1.80	2.30							
Hot environment (35 °C/70% UR)	with Dryer	without Dryer							
Correction factor	0.45	0.40							
Working cycle: hours a day	8	10	12	14	16	18	20	22	24
Correction factor	1.50	1.20	1.00	0.86	0.75	0.67	0.60	0.55	0.50
10 mg/l residual oil Correction factor 0.67									

Maintenance kit

To ensure constant performance and prompt maintenance of your system, we provide special maintenance kits. Each kit has been designed to simplify the maintenance operations and to ensure proper functioning of the system. The cartridge can be easily replaced by removing the separator cover. The filters kit comes with a container for safe removal of the old filters



There are three service kits for each type of oil-water separator:

- Service kit A contains all the items necessary to replace the oil skimmer. This kit is recommended for the first maintenance intervention after installation under normal conditions of temperature and humidity. Then we recommend the use of maintenance kit D.
- Service kit B contains all the items necessary for replacing the oil skimmer twice and the active carbon filter once. This kit is recommended for normal conditions of temperature and humidity. The active carbon filter lasts twice as much as the oil skimmer.
- Service kit D contains all the items necessary for replacing the oil skimmer and the active carbon filter once. This kit is recommended when the condensate contains a significant amount of oil, that saturates all the filters at the same time.
- Note: the maintenance kits contain a nozzle, silencers and filter holder containers.

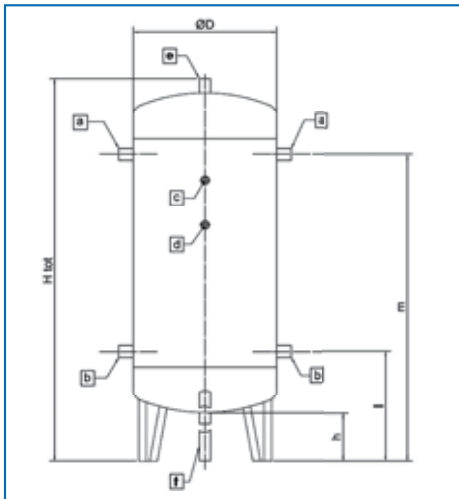


Vertical air receivers

Supplied with all necessary fittings. When using an intermittent air supply they act as a buffer and a storage medium which allows the distribution system to temporarily sustain an air consumption which can be slightly higher than the capacity of the compressor.

CAPACITY	100		200		270		500				720		900		1000									
Type	Paint.	Galv.	Paint.	Galv. Vitro.	Paint.	Galv. Vitro.	Paint.	Galv. Vitro.	Paint.	Galv. Vitro.	Paint.	Galv. Vitro.	Paint.	Galv. Vitro.	Paint.	Galv. Vitro.	Paint.	Galv. Vitro.						
Pressure (bar)	11		11		11		11				16		10.8		11		12		11.5		16			
Diameter Ø	370		446 430		500		600				600		750 790		800 790		800 790		800 790		800 790			
H tot (mm)	1172	1229	1570	1601	1668	1685	2055	2077	2055	2120	2030	1863	2120	2213	2315	2345	2315	2345	2315	2345	2315	2345		
H (mm)	124	176	174	196	170	192	155	174	155	175	150	200	130	200	115	200	115	200	115	200	115	200		
a	3/4"		1"	3/4"	1"	3/4"	1"	1 1/2"	1"	2"	1"	1 1/2"	1 1/2"	2"	2"	2"	2"	2"	2"	2"	2"	2"		
b	3/4"		1"	3/4"	1"	3/4"	1"	1 1/2"	1"	2"	1"	1 1/2"	1 1/2"	2"	2"	2"	2"	2"	2"	2"	2"	2"		
c	3/8"		3/8"	3/4"	3/8"	3/4"	3/8"	3/4"	3/8"	3/4"	3/8"	3/4"	3/8"	3/4"	3/8"	3/4"	3/8"	3/4"	3/8"	3/4"	3/8"	3/4"		
d	3/8"		3/8"		n/a	3/8"	n/a	3/8"	n/a	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"		
e	1/2"	2"	1/2"	1 1/4"	1/2"	2"	2"	1 1/4"	2"	2"	2"	1 1/4"	2"	1 1/4"	2"	1 1/4"	2"	1 1/4"	2"	1 1/4"	2"	2"		
f	1/2"	2"	1/2"	1 1/4"	1/2"	2"	2"	1 1/4"	2"	2"	2"	1 1/4"	2"	1 1/4"	2"	1 1/4"	2"	1 1/4"	2"	1 1/4"	2"	2"		
l (mm)	298	447	397		599	442	775	689	775	485	895	690	860	800	745	725	745	725	745	725	745	725		
m (mm)	998	1055	1222	1357	1304	1422	1560	1689	1560	1745	1705	1440	1780	1800	1685	1725	1685	1725	1685	1725	1685	1725		
Type of kit included in the supply	1		2/A		3		A		4		C		4		A		6		A		7		B	
Weight (kg)	37	40	51	55/50	62	66/60	127	143/130	159	176/160	180	184/167	200	209/190	204	224/204	246	308/280	246	308/280	246	308/280	246	308/280
Rules and standards	87/404/CE												97/23/CE (PED)											

CAPACITY	1500		2000		3000		4000		5000									
Type	Paint. Galv. Vitro.	Paint. Galv. Vitro.	Paint. Galv. Vitro.	Paint. Galv. Vitro.	Paint. Galv. Vitro.	Paint. Galv. Vitro.	Paint. Galv. Vitro.	Paint. Galv. Vitro.	Paint. Galv. Vitro.	Paint. Galv. Vitro.								
Pressure (bar)	11.5		11.5		16		11.5		16		11.5		16		11.5		16	
Diameter Ø	1000		1000		1200		1450		1430		1450		1430		1450		1430	
H tot (mm)	2305		2805		2810		2965		2930		3070		3110		3570		3610	
H (mm)	180		180		175		185		170		180		190		180		190	
a	2"		2"		3"		2"		3"		2"		3"		2"		3"	
b	2"		2"		3"		2"		3"		2"		3"		2"		3"	
c	3/4"		3/4"		3/4"		3/4"		3/4"		3/4"		3/4"		3/4"		3/4"	
d	3/8"		3/8"		3/8"		3/8"		3/8"		3/8"		3/8"		3/8"		3/8"	
e	1 1/4"		1 1/4"		2"		1 1/4"		2"		1 1/4"		2"		1 1/4"		2"	
f	1 1/4"		1 1/4"		2"		1 1/4"		2"		1 1/4"		2"		1 1/4"		2"	
l (mm)	590		595		565		700		645		780		765		780		765	
m (mm)	1860		2355		2340		2410		2370		2430		2450		2930		2950	
Type of kit included in the supply	B		B		C		B		C		not included		not included		not included		not included	
Weight (kg)	278/306/278		352/387/352		490/539/490		537/591/537		620/682/620		802/882/802		905/995/905		923/1025/932		1055/1160/1055	
Rules and standards	97/23/CE (PED)																	



Accessories kit composition

	KIT A	KIT B	KIT C
Pressure gauge holder tap	1	1	1
Ball valve 3/8"	-	-	-
Ball valve 3/4"	-	-	1
Manual drain tap 1 1/4"	1	1	1
Safety valve	1	1	1
Pressure gauge 50mm/100mm	1	1	1

	KIT 1	KIT 2	KIT 3	KIT 4	KIT 5	KIT 6	KIT 7	KIT 8
Tap 3/8 GAS EI C	1	1	-	1	-	1	-	-
Ball valve 1/2" MF	2	2	1	-	-	-	1	1
Ball valve 3/4" MF	-	-	1	1	1	1	-	-
Ball valve 1" MF	-	-	1	1	1	1	-	-
Reduction 1/2" M 3/8" F	1	1	1	-	-	-	-	-
Reduction 3/4" 1/2"	1	-	-	-	-	-	1	1
Reduction 1 1/2" F	-	1	-	-	-	1	-	-
Reduction 1 3/4" F	-	-	1	2	1	-	-	-
Reduction 3/4" 3/8"	-	-	-	1	1	-	-	-
Reduction 3/8" 1/4"	1	1	1	1	1	1	1	1
Elbow fitting	1	1	1	1	1	1	2	1
Safety valve	1	1	1	1	1	1	1	1
Pressure gauge 50mm/100 mm	1	1	1	1	1	1	1	1
Galvanised coupling	-	-	1	4	4	4	4	4
Test flange	-	-	-	-	-	-	1	1

Model	Part number	Litres	Bars	Kit
Painted vertical tank RAL 5015				
V100 11B	2236100970	100	11	KIT 1
V200 11B	2236100971	200	11	KIT 2
V270 11B	2236100972	270	11	KIT 3
V500 11B	2236100973	500	11	KIT 4
V720 11B	2236100974	720	10.8	KIT 4
V900 11B	2236100975	900	11	KIT 6
V1000 12B	2236100976	1000	12	KIT 7
V1500 12B	4101000924	1500	12	KIT B
V2000 12B	4101000928	2000	11.5	KIT B
V3000 12B	4101000932	3000	11.5	KIT B
V4000 12B	4101000936	4000	11.5	Not included
V5000 12B	4101000940	5000	11.5	Not included
Galvanised Vertical tank				
V100 11B GALV	2236112645	100	11	KIT 1
V200 11B GALV	4101000902	200	11	KIT A
V270 11B GALV	4101000906	270	11	KIT A
V500 11B GALV	4101000910	500	11	KIT A
V725 10.8B GALV	4101000914	725	10.8	KIT A
V900 11B GALV	4101000918	900	11	KIT A
V1000 11.5B GALV	4101000922	1000	11.5	KIT B
V1500 11.5B GALV	4101000926	1500	11.5	KIT B
V2000 11.5B GALV	4101000930	2000	11.5	KIT B
V3000 11.5B GALV	4101000934	3000	11.5	KIT B
V4000 11.5B GALV	4101000938	4000	11.5	Not included
V5000 11.5B GALV	4101000942	5000	11.5	Not included
Vitroflex Vertical Tank				
V200 11B VITROFLEX	4101000952	200	11	KIT A
V270 11B VITROFLEX	4101000953	270	11	KIT A
V500 11B VITROFLEX	4101000954	500	11	KIT A
V725 10.8B VITROFLEX	4101000955	725	10.8	KIT A
V900 11B VITROFLEX	4101000956	900	11	KIT A
V1000 11.5B VITROFLEX	4101000957	1000	11.5	KIT B
V1500 11.5B VITROFLEX	4101000958	1500	11.5	KIT B
V2000 11.5B VITROFLEX	4101000959	2000	11.5	KIT B
V3000 11.5B VITROFLEX	4101000960	3000	11.5	KIT B
V4000 11.5B VITROFLEX	4101000961	4000	11.5	Not included
V5000 11.5B VITROFLEX	4101000962	5000	11.5	Not included
High pressure Painted Vertical Tank RAL 5015				
V500 15B	2236100977	500	15	KIT 5
V1000 15B	2236100978	1000	15	KIT 8
V2000 16B	4101000950	2000	16	KIT C
V3000 16B	4101000969	3000	16	KIT C
V4000 16B	4101000972	4000	16	Not included
V5000 16B	4101000975	5000	16	Not included
High pressure Galvanised Vertical Tank				
V500 16B GALV	4101000963	500	16	KIT C
V1000 16B GALV	4101000965	1000	16	KIT C
V2000 16B GALV	4101000967	2000	16	KIT C
V3000 16B GALV	4101000970	3000	16	KIT C
V4000 16B GALV	4101000973	4000	16	Not included
V5000 16B GALV	4101000976	5000	16	Not included
High pressure Vitroflex Vertical Tank				
V500 16B VITROFLEX	4101000964	500	16	KIT C
V1000 16B VITROFLEX	4101000966	1000	16	KIT C
V2000 16B VITROFLEX	4101000968	2000	16	KIT C
V3000 16B VITROFLEX	4101000971	3000	16	KIT C
V4000 16B VITROFLEX	4101000974	4000	16	Not included
V5000 16B VITROFLEX	4101000977	5000	16	Not included



Cyclonic separators

The cyclonic separators use centrifugal force to remove condensation droplets which have condensed in the flow of compressed air due to reduction in temperature.



Model	Part number	Flow rate		Output connection	Dimensions mm			
		l/min	m ³ /h		A	B	C	D
ASA1	8973020269	2.000	120	3/8"	187	88	21	60
ASA2	8973020270	2.583	155	1/2"	187	88	21	60
ASA3	8973020271	3.917	235	3/4"	256	88	21	80
ASA4	8973020272	6.083	365	1"	262	125	33	100
ASA5	8973020273	12.833	770	1-1/2"	452	125	33	140
ASA6	8973020274	21.333	1.280	2"	695	163	48	520
ASA7	8973020275	41.000	2.460	2"-1/2"	695	163	48	520

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Care. Trust. Efficiency.

Care.

Care is what service is all about: professional service by knowledgeable people, using high-quality original parts.

Trust.

Trust is earned by delivering on our promises of reliable, uninterrupted performance and long equipment lifetime.

Efficiency.

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