

COMPRAG®

positive displacement



CATALOG
#3.1

COMPRESSED AIR PREPARATION
COMPRESSED AIR STORAGE
moisture management

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All previous catalogues lose their validity with the publication of the new catalogue.

Technical characteristics, specifications and details published in this catalogue are subject to change without notice.

Comprag GmbH.

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Refrigerated dryers RDX

For complete drying of compressed air, it is necessary to use refrigerated dryers. RDX series dehumidifiers are a robust design with low pressure loss and high efficiency.

Constant low dew point for efficient moisture removal even in the case of variable compressed air flow conditions



Pictured: RDX-06, RDX-240, RDX-24, RDX-52

RDX-series refrigerated dryers with a capacity of 0.4–36.0 m³/min are equipped with an efficient cast-aluminium heat exchanger and an inbuilt coalescence separator. The low degree of pressure loss due to the inbuilt separator and the reliable outer insulation of the heat exchanger facilitate a high level of energy efficiency for the system. The coalescence separator is insensitive to pressure fluctuations in the case of varying load and reliably removes up to 98% of condensed moisture.

Combined 3-in-1 heat exchanger

The combined heat exchanger in an RDX refrigerated dryer consists of three functional units: an air/air heat exchanger, an air/refrigerant heat exchanger and a coalescence separator.

The air/air heat exchanger pre-cools hot compressed air. This saves up to 50% in energy in the subsequent refrigerant cooling process. At the same time, cold dry air leaving the dryer is heated to a suitable temperature for subsequent use. The air/refrigerant heat exchanger brings the temperature of the compressed air to dew point. The coalescence separator removes condensate from the compressed air. The separated condensate is periodically discharged by the condensate drain valve.



Features:

- Operation and failure LED indication
- Dew point indicator with a colour scale
- Hot-gas bypass regulation for an adjustment of refrigeration capacity
- Reliable drain valve and electronic timer to control periodic operation
- Environmentally and ozone-friendly refrigerants R134a and R404a
- Efficient thermally insulated heat exchanger
- Modern and reliable refrigerant compressors

Functional block diagram refrigerated dryers RDX

The refrigerant compressor (1) condenses the gaseous refrigerant in the condenser (3), where most of the refrigerant passes into the liquid phase. The liquefied refrigerant is directed through the filter-dryers (6) and injected via the capillary pipe (4) and evaporated in the evaporator (2), where it absorbs the heat of the compressed air.

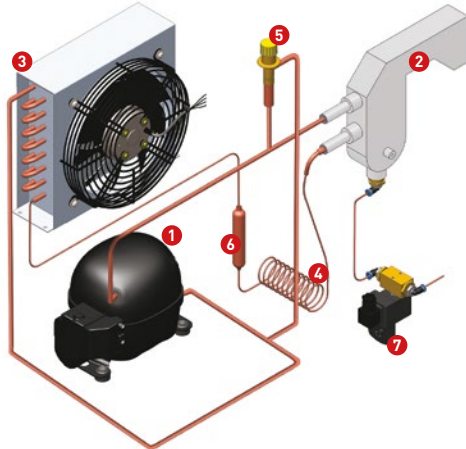
Due to the heat exchange between the compressed air and the refrigerant, the refrigerant passes into the gaseous state. This cycle is continuously repeated. The cooling circuit

is equipped with hot-gas bypass regulation for providing refrigeration that is adjusted to the variable compressed air flow.

When demand for compressed air falls, the hot-gas bypass valve opens and allows the hot air to flow from the high-pressure side to the low-pressure side. The pressure in the evaporator is held constant and ensures the pressure dew point never falls below +3° C in order to prevent icing of the evaporator.

Refrigerated dryers RDX-04 to RDX-77

Functional block diagram

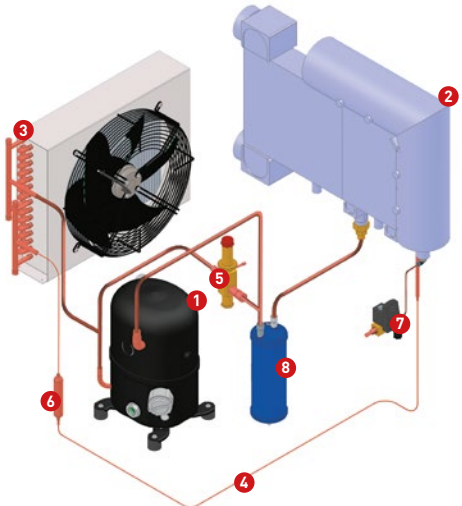


Main component

1. Refrigerant compressor
2. Evaporator
3. Condenser
4. Capillary pipe

Refrigerated dryers RDX-100 to RDX-360

Functional block diagram



5. Hot-gas bypass valve
6. Filter-dryer
7. Time-controlled drain valve
8. Liquid separator

Adjusting dryer's capacity for different operating conditions

The capacity applies to a working pressure of 7 bar, a compressed air temperature at the dryer's inlet of 35°C and an ambient temperature of 25°C, according to DIN ISO 7183. In order to calculate the dryer's capacity for real operating conditions at the dryer's inlet, please use the following correction coefficients:

$$\text{Capacity}_{(\text{air compressor})} \times F_1 \times F_2 \times F_3 = \text{Capacity}_{(\text{dryer})}$$

Example:

For an air compressor capacity of 1.6 m³/min, a working pressure of 4 bar, a compressed air temperature at the dryer's inlet of 45°C and an ambient temperature of 35°C, the required capacity of the refrigerated dryer is calculated as follows:

Correction coefficients:

Working pressure (bar)	0	1	2	4	6	7	8	10	12	14	16
F ₁	X	X	X	1,25	1,06	1,00	0,96	0,90	0,86	0,82	0,8
T°C Compressed air inlet	30	35	40	45	50	60	70				
F ₂	0,85	1,00	1,18	1,39	1,67	2,1					
T°C Ambient	22	25	30	35	40	45	50	60			
F ₃	0,92	1	1,07	1,14	1,22	1,35	1,50				

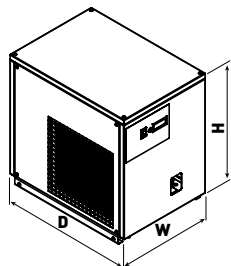
$$\text{Capacity (dryer)} = 1.6 \times 1.25 \times 1.39 \times 1.14 = 3.169 \text{ m}^3/\text{min.}$$

Technical data refrigerated dryers RDX

Article	Model	Air flow* (m ³ /min)	Max. working pressure (bar)	Screw connection	Rated voltage (Phase/V/Hz)	Drive power (kW)
14310000	RDX-04	0,40	16	G 1/2"	1/230/50	0,1
14310001	RDX-06	0,60	16	G 1/2"	1/230/50	0,2
14310002	RDX-09	0,90	16	G 3/4"	1/230/50	0,2
14310003	RDX-12	1,20	16	G 3/4"	1/230/50	0,3
14310004	RDX-18	1,80	16	G 3/4"	1/230/50	0,3
14310005	RDX-24	2,40	14	G 1"	1/230/50	0,5
14310006	RDX-30	3,00	14	G 1"	1/230/50	0,6
14310007	RDX-36	3,60	14	G 1"	1/230/50	0,7
14310008	RDX-41	4,10	14	G 1"	1/230/50	0,8
14310009	RDX-52	5,20	14	G 1.1/2"	1/230/50	1,0
14310010	RDX-65	6,50	14	G 1.1/2"	1/230/50	1,1
14310011	RDX-77	7,70	14	G 1.1/2"	1/230/50	1,5
14310012	RDX-100	10,00	14	G 2.1/2"	3/400/50	2,1
14310013	RDX-120	12,00	14	G 2.1/2"	3/400/50	2,2
14310014	RDX-150	15,00	14	G 2.1/2"	3/400/50	2,4
14310015	RDX-180	18,00	14	G 2.1/2"	3/400/50	3,0
14310016	RDX-200	20,00	14	DN80	3/400/50	3,0
14310017	RDX-240	24,00	14	DN80	3/400/50	3,7
14310018	RDX-300	30,00	14	DN80	3/400/50	4,7
14310019	RDX-360	36,00	14	DN80	3/400/50	5,4

*Measured according to ISO 7183

Dimensions of RDX-series



Model	Height H (mm)	Width W (mm)	Depth D (mm)	Weight (kg)
RDX-04	500	370	540	34
RDX-06	500	370	540	35
RDX-09	500	370	540	36
RDX-12	500	370	540	36
RDX-18	500	370	540	38
RDX-24	810	510	555	47
RDX-30	810	510	555	52
RDX-36	810	510	555	60
RDX-41	810	510	555	65
RDX-52	890	515	565	72
RDX-65	890	515	565	75
RDX-77	890	515	565	86
RDX-100	1063	750	841	135
RDX-120	1063	750	841	151
RDX-150	1063	750	841	162
RDX-180	1063	750	841	180
RDX-200	1150	1200	970	275
RDX-240	1150	1200	970	295
RDX-300	1150	1200	970	315
RDX-360	1150	1200	970	335



Adsorption dryer ADX

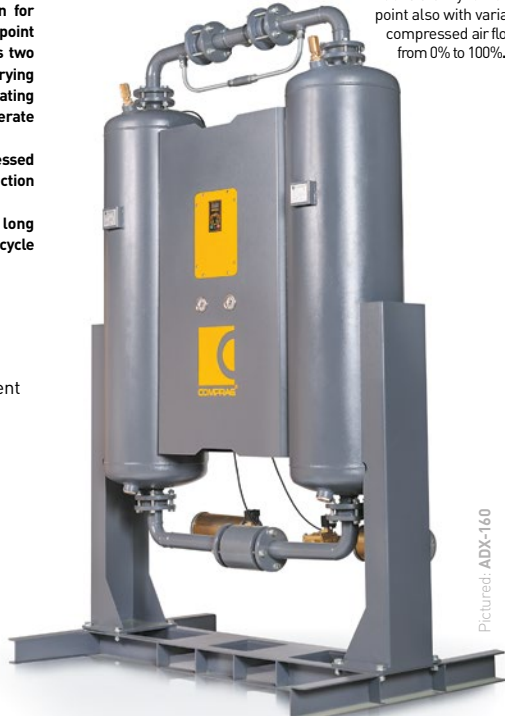
fixed cycle time controlled

Comprag ADX adsorption dryers are a highly efficient solution for dehumidifying compressed air. They can keep the pressure dew point at $-40\text{ }^{\circ}\text{C}$ at constant pressure. The adsorption dryer comprises two towers, which contain the optimum amount of dehumidifying drying agent. Compressed air is fed into the two towers in an alternating manner and brought into contact with the drying agent at a moderate speed, whereby the air is dehumidified.

If the drying agent of the first tower is too moist, the flow of compressed air switches over to the second tower, which then takes on the function of moisture uptake.

ADX adsorption dryers feature high-quality control valves with long service life. Switching between the drying cycle and regeneration cycle is controlled electronically with a switching cycle of 10 minutes.

Consistently low dew point also with variable compressed air flow from 0% to 100%.



Pictured: ADX-160

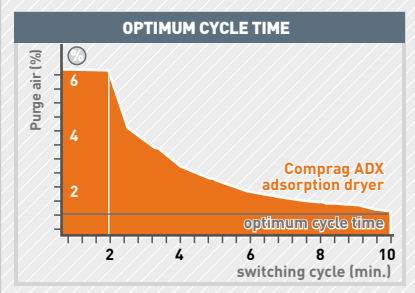
Properties:

- Fully automatic operation
- Dew point at constant pressure from $-40\text{ }^{\circ}\text{C}$ for efficient dehumidification
- High-grade drying agent with high specific surface
- Optimum cycle of 10 min.
- Adjustable purge air flow
- ADX-F with installed pre- and after-filters

Performance data according to DIN ISO 7183:

- Working pressure: 7 bar
- Compressed air temperature: $35\text{ }^{\circ}\text{C}$
- Ambient temperature: $25\text{ }^{\circ}\text{C}$
- Pressure dew point: $-40\text{ }^{\circ}\text{C}$

Optimum cycle time of 10 minutes



Comprag adsorption dryers operate at optimum performance with a cycle time of 10 minutes. Reducing the regeneration cycles lowers the operational load of the towers, the valves and the drying agent.

Furthermore, a long cycle reduces pressure loss if the working pressure in the tower is restored after a regeneration cycle.

Operation of the ADX-series adsorption dryer

Phase 1 Tower (1) is in the drying cycle. Moist air flows out of the compressor via the bottom shuttle valve (A) into the tower (1).

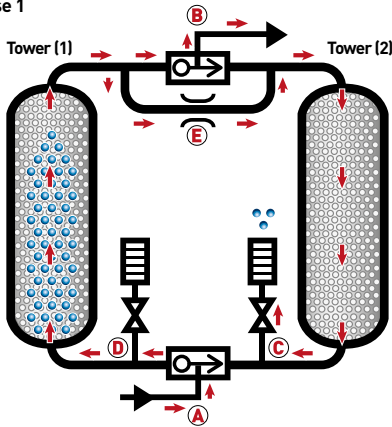
The pressure in the tower (1) rises to the compressor's working pressure. The drying agent in the tower (1) removes moisture from the inflowing compressed air. The dried compressed air is fed through the directional control valve (B) into the compressed-air system.

Tower (2) is in the regeneration cycle. A small amount of dried compressed air (E) (purge air) is fed through the tower (2). The blow out valve (C) is opened and the purge air together with the moisture accumulated in the tower (2) is discharged through the blow-out valve and the silencer.

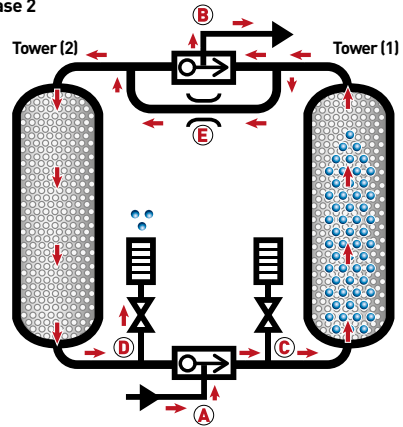
Phase 2 The towers alternate functions in a 10-minute cycle. The blow-out valve (C) of the tower (2) is closed, and the blow-out valve (D) of the tower (1) is opened.

The shuttle valve (A) switches simultaneously, and the moist air flows out of the compressor into the tower (2) that is switching into the drying cycle. Tower (1) switches into the regeneration cycle and discharges the accumulated moisture.

Phase 1



Phase 2



Technical data adsorption dryer ADX

Article	Model	Air flow* (m ³ /min)	Max. working pressure (bar)	Screw connection	Rated voltage (Phase/V/Hz)
14400050	ADX-20	2,00	10	G 1"	1/230/50
14400051	ADX-30	3,00	10	G 1"	1/230/50
14400052	ADX-40	4,00	10	G 1.1/4"	1/230/50
14400053	ADX-50	5,00	10	G 1.1/4"	1/230/50
14400054	ADX-70	7,00	10	G 1.1/2"	1/230/50
14400055	ADX-90	9,00	10	G 1.1/2"	1/230/50
14400056	ADX-125	12,50	10	G 2"	1/230/50
14400057	ADX-160	16,00	10	G 2"	1/230/50
14400058	ADX-200	20,00	10	G 2.1/2"	1/230/50
14400059	ADX-250	25,00	10	G 2.1/2"	1/230/50

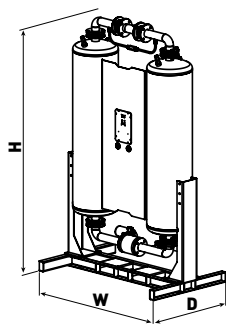
*Measured according to ISO 7183

Technical data adsorption dryer ADX-F with installed pre-and after-filters

Article	Model	Air flow* (m ³ /min)	Pre-filters	After-filters	Max. working pressure (bar)	Screw connection	Rated voltage (Phase/V/Hz)
14400201	ADX-20-F	2,00	AF-047/EL-047S	AF-047/EL-047P	10	G 1"	1/230/50
14400202	ADX-30-F	3,00	AF-047/EL-047S	AF-047/EL-047P	10	G 1"	1/230/50
14400203	ADX-40-F	4,00	AF-072/EL-072S	AF-072/EL-072P	10	G 1.1/4"	1/230/50
14400204	ADX-50-F	5,00	AF-072/EL-072S	AF-072/EL-072P	10	G 1.1/4"	1/230/50
14400205	ADX-70-F	7,00	AF-085/EL-085S	AF-085/EL-085P	10	G 1.1/2"	1/230/50
14400206	ADX-90-F	9,00	AF-085/EL-085S	AF-085/EL-085P	10	G 1.1/2"	1/230/50
14400207	ADX-125-F	12,50	AF-148/EL-148S	AF-148/EL-148P	10	G 2"	1/230/50
14400208	ADX-160-F	16,00	AF-148/EL-148S	AF-148/EL-148P	10	G 2"	1/230/50
14400209	ADX-200-F	20,00	AF-240/EL-240S	AF-240/EL-240P	10	G 2.1/2"	1/230/50
14400210	ADX-250-F	25,00	AF-240/EL-240S	AF-240/EL-240P	10	G 2.1/2"	1/230/50

*Measured according to ISO 7183

Dimensions of ADX / ADX-F



Model	Height H (mm)	Width W (mm)	Depth D (mm)	Weight (kg)
ADX-20 / ADX-20-F	1220	800	600	90,0 / 95,0
ADX-30 / ADX-30-F	1500	800	600	111,0 / 116,0
ADX-40 / ADX-40-F	1850	800	800	175,0 / 185,0
ADX-50 / ADX-50-F	2130	800	800	200,0 / 215,0
ADX-70 / ADX-70-F	1950	1040	800	250,0 / 260,0
ADX-90 / ADX-90-F	2200	1040	800	300,0 / 320,0
ADX-125 / ADX-125-F	2320	1275	1000	500,0 / 520,0
ADX-160 / ADX-160-F	2320	1320	1000	565,0 / 590,0
ADX-200 / ADX-200-F	2320	1430	1000	720,0 / 750,0
ADX-250 / ADX-250-F	2630	1430	1000	800,0 / 840,0

Adsorption dryer ADX-F-PDP

with dew-point control - maximum drying efficiency, minimum costs



with dew-point control

The ADX-F-PDP series, equipped with the most advanced control systems and comprising a modern LCD display controller, a measuring chamber for constant flow and a precise dew-point sensor, provides the highest quality compressed-air drying at the lowest possible cost.

Features:

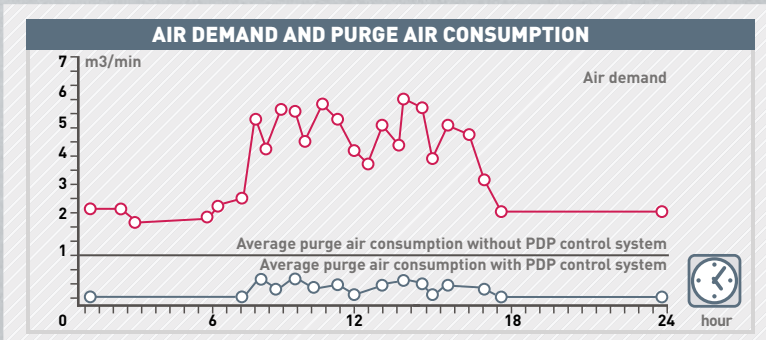
- LCD display controller
- Precise dew-point sensor
- Measuring chamber
- Installed pre- and after-filters



Pictured: ADX-90-F-PDP

Air demand and purge air consumption

The air demand and the load situation for an adsorption dryer fluctuate constantly on a daily basis.



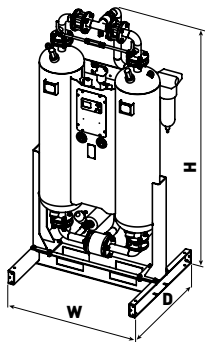
The Comrag dew-point-dependent control system significantly reduces energy costs while ensuring a constant and reliable dew point. Using the specially developed controller in combination with the accurate and reliable dew-point sensor, the DPD control system keeps the regeneration time constant, while the adsorption time is adjusted strictly proportionally to the load situation. As a result, only the actually required quantity of purge air is used. An investment in the PDP control system has a very short return on investment — as early as within six months.

Technical data adsorption dryer ADX-F-PDP

Article	Model	Air flow* (m ³ /min)	Pre-filters	After-filters	Max. working pressure (bar)	Screw connection	Rated voltage (Phase/V/Hz)
14400301	ADX-20-F-PDP	2,00	AF-047/EL-047S	AF-047/EL-047P	10	G 1"	1/230/50
14400302	ADX-30-F-PDP	3,00	AF-047/EL-047S	AF-047/EL-047P	10	G 1"	1/230/50
14400303	ADX-40-F-PDP	4,00	AF-072/EL-072S	AF-072/EL-072P	10	G 1.1/4"	1/230/50
14400304	ADX-50-F-PDP	5,00	AF-072/EL-072S	AF-072/EL-072P	10	G 1.1/4"	1/230/50
14400305	ADX-70-F-PDP	7,00	AF-085/EL-085S	AF-085/EL-085P	10	G 1.1/2"	1/230/50
14400306	ADX-90-F-PDP	9,00	AF-085/EL-085S	AF-085/EL-085P	10	G 1.1/2"	1/230/50
14400307	ADX-125-F-PDP	12,50	AF-148/EL-148S	AF-148/EL-148P	10	G 2"	1/230/50
14400308	ADX-160-F-PDP	16,00	AF-148/EL-148S	AF-148/EL-148P	10	G 2"	1/230/50
14400309	ADX-200-F-PDP	20,00	AF-240/EL-240S	AF-240/EL-240P	10	G 2.1/2"	1/230/50
14400310	ADX-250-F-PDP	25,00	AF-240/EL-240S	AF-240/EL-240P	10	G 2.1/2"	1/230/50

*Measured according to ISO 7183

Dimensions of ADX-F-PDP



Model	Height H (mm)	Width W (mm)	Depth D (mm)	Weight (kg)
ADX-20-F-PDP	1220	800	600	95,0
ADX-30-F-PDP	1500	800	600	116,0
ADX-40-F-PDP	1850	800	800	185,0
ADX-50-F-PDP	2130	800	800	215,0
ADX-70-F-PDP	1950	1040	800	260,0
ADX-90-F-PDP	2200	1040	800	320,0
ADX-125-F-PDP	2320	1275	1000	520,0
ADX-160-F-PDP	2320	1320	1000	590,0
ADX-200-F-PDP	2320	1430	1000	750,0
ADX-250-F-PDP	2630	1430	1000	840,0

Air Receivers RV-series

The dimensions of air receivers are determined according to the compressor's capacity and the compressed air consumption. The air receivers are also used in designing a storage capacity.

The compressed-air consumption can be intermittently covered by the storage capacity. The stored compressed-air capacity is used to offset fluctuations in the system when compressed air is drawn and to cover peak demand.

Features

- Reduced occurrence of regime change reduces wear of the compressor screw block, electric motor and drive system.
- Significant energy savings. The greatest amount of energy is consumed by frequent regime changes of the compressor.
- The large volume of compressed air stored in Air Receivers RV acts as a buffer against pressure fluctuations induced by increasing the number of consumers.
- Separation of condensate. A large surface area of the air receiver helps cool the compressed air and condenses the vapor in the air.

In standard delivery included:

- Pressure gauge
- Safety valve
- Drain ball valve



Pictured: RV-500, RV-900

SV safety valves



Choosing the correct size of air receiver

Size is determined by the capacity of the compressor and the compressed air consumption profile. Comrag recommends dimensioning your air receiver according to the following table:

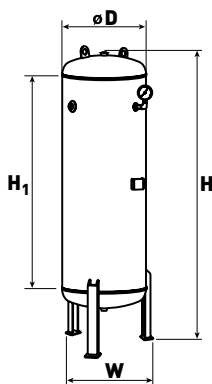
Compressor power (kW)	Air receiver capacity (Liter)
7,5-11	270
15-22	500
Mehr als 30	900 (one or several)

For safe operation of air receivers it is necessary to use an appropriate safety valve which is adapted to the compressor used and the pressure of the air line. Comrag delivers SV safety valves for the entire compressor programme.

Table of models RV-series

Article	Model	Air receiver capacity (Liter)	Max. working pressure (bar)	Safety valve	Screw connection
13100101	RV-270	270	10	SV 1/2" (3.6 м³/мин)	Rp 1.1/4"
13100102	RV-500	500	10	SV 3/4" (12 м³/мин)	Rp 1.1/4"
13100103	RV-900	900	10	SV 1" (16м3/мин)	Rp 2"

Dimensions RV Air receivers



Model	Height H (mm)	Height H1 (mm)	Diameter $\varnothing D$ (mm)	Width W (mm)	Weight (kg)
RV-270	1730	1200	500	540	92
RV-500	2100	1500	600	640	142
RV-900	2200	1400	800	840	190

Filters for compressed air lines AF-series

AF series Air Filters are a reliable and cost effective method for the preparation of compressed air.

Features:

- Filter elements are manufactured using high quality materials from leading suppliers
- Wide range of degrees of purification for all applications
- Connections in a wide range of sizes from 3/8" to 3"
- Differential pressure gauge to monitor the condition of the filter element
- Automatic condensate drain

Technical data:

- Max. operating pressure: 16 bar
- Max. operating temperature: 65°C
- Min. operating temperature: 2°C

Standard delivery:

- Status indicator element (model AF-012-025)
- Differential manometer (model AF-036-460)
- Automatic condensate drain



Pictured: AF-016, AF-025, AF-060, AF-085

Advantages:



2. Light aluminium body

- Durable powder coating.
- Easily removable filter bowl. Quick and simple system for replacing filter cartridge.
- Special internal shape to prevent air eddies. Condensate does not exude back to the line by vortex flow.
- Replaceable sealing gasket for dependable air-tight sealing.

3. Quality filter cartridge

- High filtration level with minimal pressure loss.
- Top-quality filtering medium.
- Outer foam rubber layer for absorbing condensate.
- Reliable thread connection with filter body.
- Air-tight gasket connections.
- Full degree of filtration, starting from 5% of nominal pressure.

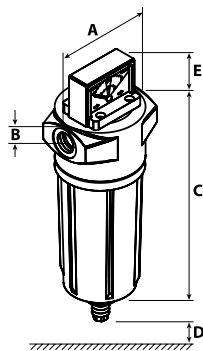
4. Drain valve AS/AF (apn.13300026)

- Integrated internal-type drain valve.
- Integrated internal-type drain valve.

1. Differential manometer

- Visual indicator of filter status.

Table of models filter housings (without filter elements)



Article	Model	Screw connection	Air flow (m ³ /min)	Dimensions (mm)					Weight (kg)
				A	B	C	D	E	
14200001	AF-012	3/8"	1,2	88	20	187	80	35	0,86
14200002	AF-016	1/2"	1,6	88	20	256	80	35	0,96
14200003	AF-025	1/2"	2,5	106	25	278	100	35	1,46
14200004	AF-036	3/4"	3,6	106	25	278	100	65	1,46
14200005	AF-047	1"	4,7	125	32	252	120	65	2,26
14200006	AF-060	1"	6	125	32	352	140	65	2,56
14200007	AF-072	1.¼"	7,2	125	32	352	140	65	2,56
14200008	AF-085	1.½"	8,5	125	32	450	160	65	3,36
14200009	AF-125	1.½"	12,5	160	32	450	160	65	3,36
14200010	AF-148	2"	14,8	160	43	605	180	65	5,26
14200011	AF-196	2"	19,6	160	43	605	180	65	5,26
14200012	AF-240	2.½"	24	160	43	685	200	65	6,46
14200013	AF-328	3"	32,8	240	60	800	300	65	13,06
14200014	AF-460	3"	46	240	60	800	300	65	13,06
13300026	Drain valve	-	-	-	-	-	-	-	-

Filter elements for AF-series Specification of filter elements

	Coarse Filtration	Fine Filtration	Micro Filtration	Micro Filtration	Active Carbon
Filtering grade	P	R	M	S	A
Particle retention size, µm	3	1	0,1	0,01	0,005
Max. residual oil content, mg/m ³	-	-	<0,1	<0,01	<0,005
Max. operating temperature, °C	65	65	65	65	45
Pressure loss of new filter element, mbar	10	20	50	80	60
Change filter element at pressure drop, mbar	350	350	350	350	350
Colour of filter element	yellow	blue	green	red	gray



Life span of filter elements

A pressure drop of 400 mbar increases energy costs commensurate with the cost of a new filter element. When the pressure is 700 mbar (maximum) a replacement of filter element is required.

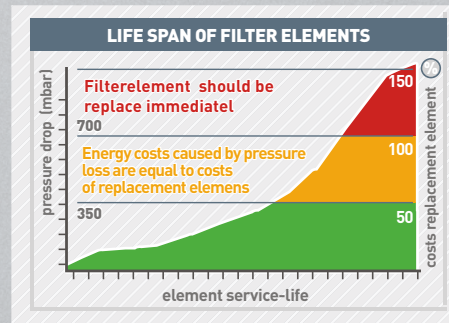


Table of models filter elements

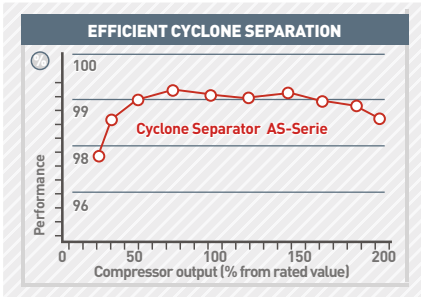
Grade	Coarse Filtration		Fine Filtration		Micro Filtration		Micro Filtration		Active Carbon	
Model filter housing	Article Filter element	Model filter element	Article Filter element	Model filter element	Article Filter element	Model filter element	Article Filter element	Model filter element	Article Filter element	Model filter element
AF-012	14222101	EL-012P	14222201	EL-012R	14222301	EL-012M	14222401	EL-012S	14222501	EL-012A
AF-016	14222102	EL-016P	14222202	EL-016R	14222302	EL-016M	14222402	EL-016S	14222502	EL-016A
AF-025	14222103	EL-025P	14222203	EL-025R	14222303	EL-025M	14222403	EL-025S	14222503	EL-025A
AF-036	14222104	EL-036P	14222204	EL-036R	14222304	EL-036M	14222404	EL-036S	14222504	EL-036A
AF-047	14222105	EL-047P	14222205	EL-047R	14222305	EL-047M	14222405	EL-047S	14222505	EL-047A
AF-060	14222106	EL-060P	14222206	EL-060R	14222306	EL-060M	14222406	EL-060S	14222506	EL-060A
AF-072	14222107	EL-072P	14222207	EL-072R	14222307	EL-072M	14222407	EL-072S	14222507	EL-072A
AF-085	14222108	EL-085P	14222208	EL-085R	14222308	EL-085M	14222408	EL-085S	14222508	EL-085A
AF-125	14222109	EL-125P	14222209	EL-125R	14222309	EL-125M	14222409	EL-125S	14222509	EL-125A
AF-148	14222110	EL-148P	14222210	EL-148R	14222310	EL-148M	14222410	EL-148S	14222510	EL-148A
AF-196	14222111	EL-196P	14222211	EL-196R	14222311	EL-196M	14222411	EL-196S	14222511	EL-196A
AF-240	14222112	EL-240P	14222212	EL-240R	14222312	EL-240M	14222412	EL-240S	14222512	EL-240A
AF-328	14222113	EL-328P	14222213	EL-328R	14222313	EL-328M	14222413	EL-328S	14222513	EL-328A
AF-460	14222114	EL-460P	14222214	EL-460R	14222314	EL-460M	14222414	EL-460S	14222514	EL-460A

Operating pressure correction

The above table is designed based on the performance of the filters at 7 bar working pressure. To calculate the performance of the filter with a different operating pressure, please use the following correcting coefficients:

Operating pressure, bar	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Correction coefficient	0,38	0,5	0,63	0,75	0,88	1	1,13	1,25	1,38	1,5	1,63	1,75	1,88	2,00	2,13

Cyclone Separators for compressed air lines AS-series



AS Series Separators work with minimal network air pressure loss and ensure a high constant efficiency of the separation process.

Features:

- Efficient removal 99% of fluid condensate
- Low maintenance

Technical data:

- Maximum operating pressure: 16 bar
- Max. operating temperature: 65 °C
- Min. operating temperature: 2 °C

Standard delivery:

- Automatic drain valve



Pictured: AS-036, AS-085, AS-240

Advantages:



1. Thread connection
 - Wide range of thread sizes from 3/8" to 3".

2. Light aluminium body

- Built into drain valve.
- Durable powder coating.
- Easily removable filter bowl.
- Special internal shape to prevent air eddies. Condensate does not exude back to the line by vortex flow.
- Replaceable sealing gasket for dependable air-tight sealing.

3. Air flow swirl vane

- Generates cyclonic swirl of air inside separator.

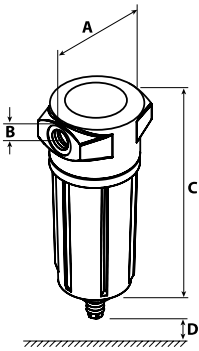
4. Air flow guide

- One of the condensate pre-separation stages.
- Guides air flow along walls of separator's bowl.

5. Drain valve AS/AF (apt.13300026)

- Internal-type drain valve.
- Reliable maintenance-free float drain valve system.

Table of models AS-series

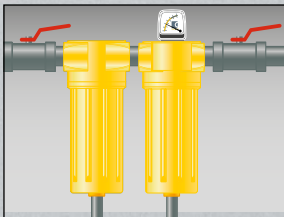


Article	Model	Screw connection	Air flow (m ³ /min)	Dimensions (mm)				Weight (kg)
				A	B	C	D	
13200101	AS-012	3/8"	1,2	88	20	187	80	0,7
13200102	AS-016	1/2"	1,6	88	20	256	80	0,8
13200103	AS-025	1/2"	2,5	106	25	278	100	1,3
13200104	AS-036	3/4"	3,6	106	25	278	100	1,3
13200105	AS-047	1"	4,7	125	32	252	120	2,1
13200110	AS-072	1.1/4"	7,2	125	32	252	140	2,4
13200106	AS-085	1.1/2"	8,5	125	32	450	160	3,2
13200107	AS-148	2"	14,8	160	43	605	180	5,1
13200108	AS-240	2.1/2"	24	160	43	685	300	6,3
13200109	AS-460	3"	46	240	60	800	300	12,9
13300026	Drain valve	-	-	-	-	-	-	-

Level of filtration for any fields of application

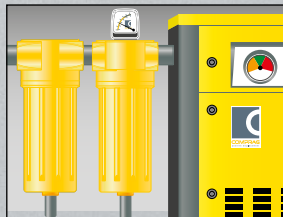
AS series separators can be combined together with RDX refrigerant dryers, ADX adsorption dryers and AF-Filters. The filter combination determines the quality of compressed air in the system. AF series filters provide a wide range of filtration levels for any field of application: from utility air to the pharmaceutical and food industries.

Separators AS-series



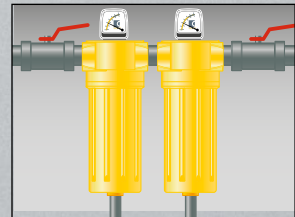
Can be used in combination with compressed air line filters.

RDX refrigerated dryers and ADX adsorption dryers



Can be used in combination with compressed air line filters and AS separators.

Filters AF-series



The required quality of compressed air is achieved by means of combining AF filters.

Operating pressure correction

The above table is designed based on the performance of the separators at 7 bar working pressure. To calculate the performance of the separators with a different operating pressure, please use the following correcting coefficients:

Operating pressure, bar	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Correction coefficient	0,38	0,5	0,63	0,75	0,88	1	1,13	1,25	1,38	1,5	1,63	1,75	1,88	2,00	2,13

Mechanical Float Drain Valve FD series

Works without loss of compressed air.

A FD floating drain valve is the most effective of all solutions to the conclusion of the condensate system. It works without any loss of compressed air, is easy to install and requires no power connection.

Equipped with a valve for flushing the system and functional testing and control.

Advantages:

- Works with oil contaminated condensate
- Works without loss of compressed air
- Does not require a power connection
- Easy installation
- Reliable and durable design



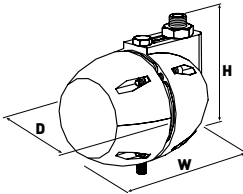
Pictured: FD

Features



Drain is installed below pressure vessel, filter element, dryer, cyclone separator or similar pressure system element. Through G 1/2" upper inlet port (1) on the top condensate accumulates in the drain reservoir (4). Increasing water level rise the floating buoyancy. When the condensate level is high enough the floater unblocks the discharge orifice and the condensate is purged out through G 1/2" output connection (2). When condensate level drops floater drops with it and blocks the discharge orifice. This operation prevents air loss.

Table of models FD-series



Article	Model	Screw connection	Air flow (m ³ /min)	Max. working pressure (bar)	Dimensions			Weight (kg)
					Height H (mm)	Width W (mm)	Depth D (mm)	
13300025	FD	1/2"	2,8	16	130	135	110	0,6

Timed Solenoid Drain Valve TD-series



A TD drain valve is the most popular and the cheapest solution for the condensate removal process. It features a compact design and can be installed in any position in the compressed air line.

Advantages:

- Optional positioning
- Compact size
- IP65 rated for outdoor use
- Easy installation
- Reliable and durable design



Pictured: TD (слева),
TD COMBI (справа)

Manufactured using a solid brass casing and reliable solenoid valve with and electronic timer to control periodic operation.

It is Equipped with a „TEST“ button to verify functionality and drain condensate manually.

VERSION:

TD condensate drain valves with separate ball valve / dirt strainer.

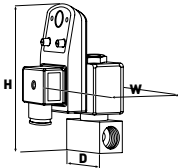
TD COMBI condensate drain valves with inbuilt ball valve / dirt strainer.

- Service kit drain valve TD/ TD-COMBI >>

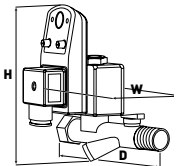


Table of models TD & TD COMBI

Model TD



Model TD COMBI



Article	Model	Screw connection	Air flow (m ³ /min)	Max. working pressure (bar)	Rated voltage (Phase/V/Hz)	Dimensions			Weight (kg)
						Height H (mm)	Width W (mm)	Depth D (mm)	
13300010	TD	1/2"	60,00	16	1/230/50	110	88	47	0,42
13300015	TD COMBI	1/2"	60,00	16	1/230/50	125	88	92	0,55
Article		Description							
13300016		Service kit drain valve TD TD-COMBI							

Process Water/Oil Separator WOS-series

WOS-Series Process Condensate Separators are used to separate oils and other impurities from the water in the condensate lines. This impurities should be disposed lawful. WOS separators efficiently separate oil through a multi-stage separation process.

Features

- No power supply needed .
- Reliable construction with no moving parts.
- Easy to install, operate and maintain.



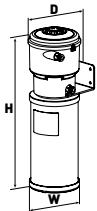
Why are separators for process condensate needed?

Air contains water vapour and atmospheric impurities, which can enter the air end of the compressor. Air is mixed there with compressor oil, needed for lubricating and cooling the unit. After the compression process, air is cooled in the compressor's heat exchanger, aftercooler, refrigerated dryer, etc. During the cooling process, water vapour and impurities are condensed and extracted by condensate drain valves,

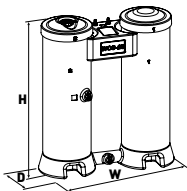
which are installed at all key components of the compressed-air line. Local technical norms regulate the degree of condensate cleaning for discharge into sewage systems. Water-oil separators for process condensate are designed to adsorb oil and recycle condensate to a degree.

Table of models WOS-series

WOS-1-3



WOS-5-30



Article	Model	Air flow (m ³ /min)	Service Pack No.	Dimensions			Weight (kg)
				Height H (mm)	Width W (mm)	Depth D (mm)	
13400011	WOS-1	1,00	13400111	475	106	133	1,6
13400012	WOS-3	3,00	13400112	810	106	133	2,0
13400013	WOS-5	5,00	13400113	411	416	243	6,0
13400014	WOS-10	10,00	13400114	680	730	343	17,0
13400015	WOS-20	20,00	13400115	940	820	366	21,0
13400016	WOS-30	30,00	13400116	1137	960	386	28,0

In standard delivery included:

WOS-1-3 PP polypropylen and AK activated carbon cartridge, wall mounting bracket

WOS-5-30 PP polypropylen and AK activated carbon bags, water quality test WQT

Water Quality Test WQT, set



WQT water quality test should be performed at least once per month, to control the contamination level of disposed condensate.
If oil concentration is reached, WOS cartridges must be changed.

Table of models WQT

Article	Model	Description
10170600	WQT	Water quality test set



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