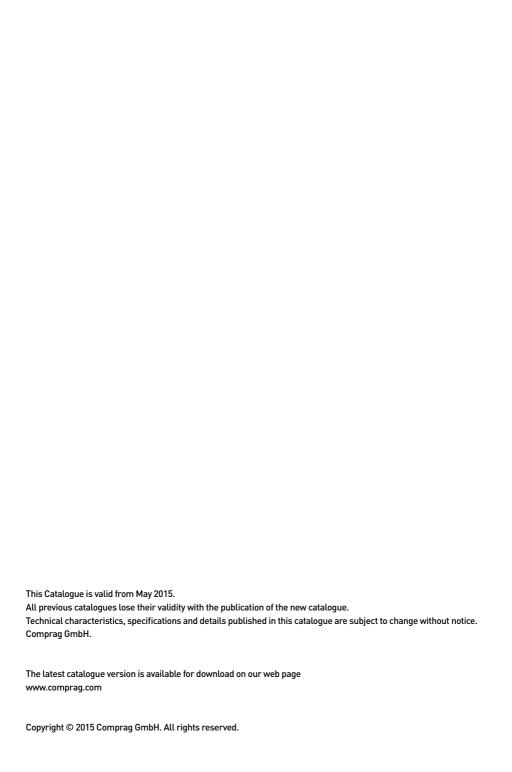




Compressed air preparation
Compressed air storage
Moisture management

Catalog #1





### Refrigerated dryers RDX with 0.4-18.0 m<sup>3</sup>/min capacity

RDX series dehumidifiers feature 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

Refrigerated dryers of the RDX-series with 0.4–18.0 m³/min capacity are equipped with a stainless steel plate heat exchanger (model RDX-04 to RDX-18) or with an aluminum plate-fin heat exchanger (model RDX-24 to RDX-180), each with an integrated stainless steel condensate separator.

Low pressure loss because of an integrated condensate separator and efficient thermal insulation ensure energy-efficient operation.



The integrated stainless steel coalescence condensate separator provides constant performance even under conditions with variable compressed air flow and separates up to 98% of liquid condensate.

### 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





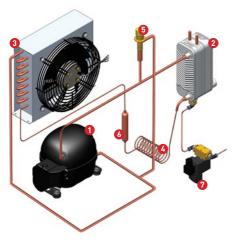
The refrigerant compressor (1) condenses the gaseous refrigerant in the condenser (3), where most of the refrigerant passes into the liquid phase. The liquefied refrigerant is directed through the filter-dryers (6), injected via the capillary pipe (4) and evaporated in the evaporator (2), where it absorbs 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-18

Functional block diagram



### Refrigerated dryers RDX-24 to RDX-180



### Main component

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

Capacity<sub>[air compressor]</sub>  $\times F_1 \times F_2 \times F_3 = \text{Capacity}_{[drver]}$ 

### Example:

For an air compressor capacity of 1.6 m<sup>3</sup>/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 drver is calculated as follows:

### **Correction coefficients:**

Working pressure (bar)	0	1	2	4	6	7	8	10	12	14	16
F <sub>1</sub>	Χ	Χ	Χ	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 <sub>2</sub>	0,85	1,00	1,18	1,39	1,67	2,1					
T°C Ambient	22	25	30	35	40	45	50	60			
F <sub>3</sub>	0,92	1	1,07	1,14	1,22	1,35	1,50				

Capacity (dryer) = 1.6 x 1.25 x 1.39 x 1.14 = 3.169 m<sup>3</sup>/min.



### Technical data

Article	Model	<b>Air flow∗</b> (m³/min)	Max.working pressure (bar)	Screw	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 1/2"	1/230/50	0,2
14310003	RDX-12	1,20	16	G 1/2"	1/230/50	0,3
14310004	RDX-18	1,80	16	G 1/2"	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"	3/380/50	2,1
14310013	RDX-120	12,00	14	G 2 1/2"	3/380/50	2,2
14310014	RDX-150	15,00	14	G 2 1/2"	3/380/50	2,4
14310015	RDX-180	18,00	14	G 2 1/2"	3/380/50	3,0

<sup>\*</sup>Measured according to ISO 7183



### **Dimensions of RDX-series**

Model	Height H (mm)	Width W (mm)	Depth D (mm)	Weight (kg)
RDX-04	501	360	518	34
RDX-06	501	360	518	35
RDX-09	501	360	518	36
RDX-12	501	360	518	36
RDX-18	501	360	518	38
RDX-24	808	508	554	47
RDX-30	808	508	554	52
RDX-36	808	508	554	60
RDX-41	808	508	554	65
RDX-52	890	512	562	72
RDX-65	890	512	562	75
RDX-77	890	512	562	86
RDX-100	1150	850	800	177
RDX-120	1150	850	800	182
RDX-150	1150	850	800	185
RDX-180	1150	850	800	188



### Adsorption dryer ADX with a capacity from 2.0 - 25.0 m<sup>3</sup>/min



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

Comprag ADX adsorption dryers are a highly efficient solution for dehumidifying compressed air. They can keep the pressure dew point at -40 °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.

### Properties:

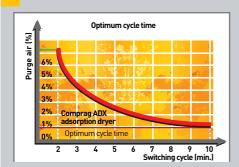
- Fully automatic operation
- Dew point at constant pressure from -40 °C for efficient dehumidification
- High-grade drying agent with high specific surface
- Optimum cycle of 10 min.
- Adjustable purge air flow

### Performance data according to DIN ISO 7183:

Working pressure: 7 bar
 Compressed air temperature: 35°C
 Ambient temperature: 25°C
 Pressure dew point: -40°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).

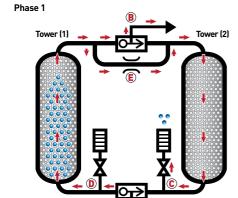
The pressure in the tower (1) rises to the compressor's working pressure. The drying agent in the tower (1) removes moisture from the inflowing compressed air. The dried compressed air is fed through the directional control valve (B) into the compressed-air system.

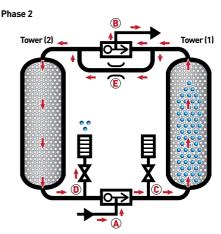
Tower [2] is in the regeneration cycle. A small amount of dried compressed air [E] (purge air) is fed through the tower [2]. The blow out valve [C] is opened and the purge air together with the moisture accumulated in the tower [2] is discharged through the blow-out valve and the silencer.

### 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.





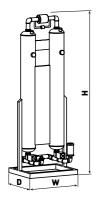


### Technical data

Article	Model	Model  Air flow* (m³/min)  Max. working  pressure (bar)		Screw	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	DN 50	1/230/50
14400057	ADX-160	16,00	10	DN 50	1/230/50
14400058	ADX-200	20,00	10	DN 65	1/230/50
14400059	ADX-250	25,00	10	DN 65	1/230/50

<sup>\*</sup>Measured according to ISO 7183

### **Dimensions of ADX-series**



Model	Height H (mm)	Width W (mm)	Depth D (mm)	Weight (kg)
ADX-20	1220	800	600	90,0
ADX-30	1500	800	600	111,0
ADX-40	1850	800	800	175,0
ADX-50	2130	800	800	200,0
ADX-70	1950	1040	800	250,0
ADX-90	2200	1040	800	300,0
ADX-125	2320	1275	1000	500,0
ADX-160	2320	1320	1000	565,0
ADX-200	2320	1430	1000	720,0
ADX-250	2630	1430	1000	800,0



### Air Receivers RV with up to 30.0 m<sup>3</sup>/min capacity

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



## SV safery valves



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. Comprag delivers SV safety valves for the entire compressor programme.

### Choosing the correct size of air receiver

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

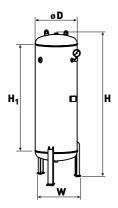
Compressor power (kW)	Air receiver capacity (Liter)
7,5-11	270
15-22	500
Mehr als 30	900 (one or several)

Pictured.: Air receivers RV-500, RV-900



### Table of models

Article	Model	Air receiver capacity [Liter]	Max. working pressure (bar)	Screw
13100101	RV-270	270	10	G1.1/4"
13100102	RV-500	500	10	G1.1/4"
13100103	RV-900	900	10	G2"



### **Dimensions RV Air receivers**

Model	Height H (mm)	Height H1 (mm)	Diameter Ø 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 with capacity 1,2-46,0 m<sup>3</sup>/min

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



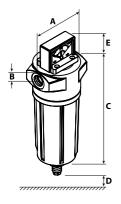
Dictured AF-016, AF-025, AF-060, AF-085

# Advantages: 2. Light aluminium body Durable powder coating. cartridge. back to the line by vortex flow. 4. Drain valve 1. Differential manometer Visual indicator of filter status.

Easily removable filter bowl. Quick and simple system for replacing filter Special internal shape to prevent air eddies. Condensate does not exude 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. Integrated internal-type drain valve. Integrated internal-type drain valve.



### Table of models filter housings (without filter elements)



		E	>=		Dime	ensions	(mm)		_
Article	Model	Screw	Air flow (m³/min)	Α	В	С	D	E	Weight (kg)
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"	6,0	125	32	352	140	65	2,56
14200007	AF-072	1 1/4"	7,2	125	32	352	140	65	2,56
14200008	AF-085	1 1/2"	8,5	125	32	450	160	65	3,36
14200009	AF-125	1 1/2"	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 1/2"	24,0	160	43	685	200	65	6,46
14200013	AF-328	3"	32,8	240	60	800	300	65	13,06
14200014	AF-460	3"	46,0	240	60	800	300	65	13,06

### Filter elements for AF-series

### Specification of filter elements

	Coarse Filtration	Fine Filtration	Micro Filtration	Oil Removal	Active Carbon
Filtering grade	Р	R	М	S	А
Particle retention size, µm	3	1	0,1	0,01	0,005
Max. residual oil content, mg/m³	-	-	<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
Max. permissible pressure loss, mbar	350	350	350	350	350
Colour of filter element	yellow	blue	green	red	gray











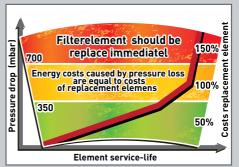


### Life span of filter elements

### 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 F	iltration	Fine Fil	tration	Micro Fi	ltration	Oil Rei	moval	Active (	Active Carbon		
Model filter housing	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		

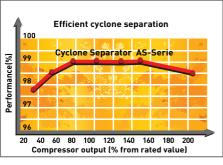
### Operating pressure correction

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	1,0	1,13	1,25	1,38	1,5	1,63	1,75	1,88	2,0	2,13



### Cyclone Separators for compressed air lines, AS-series with capacity 1,2-46,0 m<sup>3</sup>/min



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: 3 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

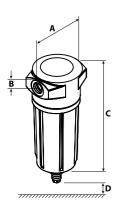
- One of the condensate pre-separation stages.
- Guides air flow along walls of separator's bowl.

### 5. Drain valve

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



### Table of models



		e E	. 6 5g		Dimensions (mm)						
Article	Model	Screw	Air flow (m³/min)	A	В	С	D	Weight (kg)			
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			

### 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.

### Filters AF-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.

### Separators AS-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.

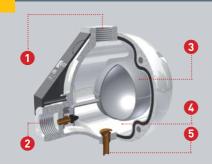
### Advantages:

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



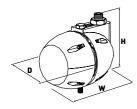
Pictured FD

### **Features**



Drain is installed bellow pressure vessel, filter element, dryer, cyclone separator or similar pressure system element. Through G ½" 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 ½" output connection (2). When condensate level drops floater drops with it and blocks the discharge orifice. This operation prevents air loss.

### Table of models



		5		Ē.	Dimensions		ns			
Article	Model	Screw	Air flow (m³/min)	Max. worki pressure (bar)	Height H (mm)	Width W (mm)	Depth D	Weight (kg)		
13300025	FD	1/2"	60	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.

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

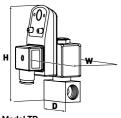
It is Equipped with a "TEST" button to verify functionality and drain condensate manually.



### Advantages:

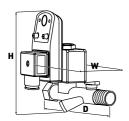
- Optional positioning
- Compact size
- IP65 rated for outdoor use
- Easy installation
- Reliable and durable design

### Table of models



Model TD

		E	>-	ing	age <sup>(z)</sup>	Dir	nensio	ns	
Article	Model	Screw connecti	Air flow (m³/min)	Max. working pressure (bar)	Rated voltag (Phase/V/Hz)	Height H (mm)	Width W (mm)	Depth D (mm)	Weight (kg)
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



Model TD COMBI



# Process Water/Oil Separator, WOS-series For compressed air lines with capacity up to 30 m<sup>3</sup>/min

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 multistage 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 impuri-

ties 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



			a, d				
Article	Model	Air flow (m³/min)	Service Pack No.	Height H (mm)	Width W (mm)	Depth D (mm)	Weight (kg)
13400001	WOS-1	10,00	132101	750	650	240	16,6
13400002	WOS-2	20,00	132102	900	780	305	30,0
13400003	W0S-3	30,00	132103	900	970	380	43,0

### **Comprag GmbH**

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