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positive displacement



CATALOG
#1

CYCLONE SEPARATORS
FOR COMPRESSED AIR LINES
DFS-series

This Catalogue is valid from May 2021. 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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CYCLONE SEPARATORS

for compressed air lines DFS-series

DFS-series Separators supplied ready-to-use, assembled with a separation element, and are a reliable and cost effective method of removing liquid condensate from compressed air.



Technical data

T

Min. / Max. operating temperature

+2°C / +60°C

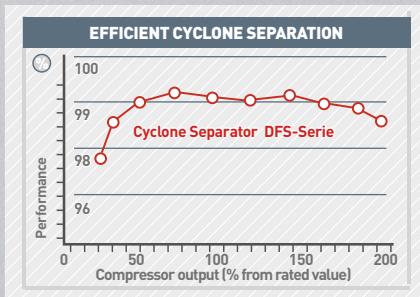
P

Min. / Max. operating pressure

1 bar / 16 bar



Efficient cyclone separation



As a rule, centrifugal separators show the maximum separation efficiency at constant maximum compressed air consumption. When the compressed air flow rate varies (e.g. a variable frequency compressor), so does the separation efficiency.

Thanks to the unique design of the centrifugal separation element, the DFS series separators operate at a constant high efficiency at 20–120% of the flow rate.

Advantages



Modular construction. New filter head design enables in-line installation of filters and separators to achieve the required ISO filtration class according to ISO 8573-1:2010.

New cyclone separators design: aluminum body (A), separating element (B), drain valve (C), air flow direction arrow (D), wide range of thread sizes from 3/8" to 1.1/2", reliable sealing with O-rings.

Aluminum body (A)

- Light aluminum body with optimized Dynamic Flow shape for minimum pressure loss.
- Durable powder coating.
- Special internal shape to prevent air eddies. Condensate does not exude back to the line by vortex flow.

Separating element (B)

Drain valve (C)

Air flow direction arrow (D)



Unique centrifugal separating element with modern design and minimal pressure loss: efficient removal 99% of fluid condensate, optimal for use with variable speed compressors - full degree of separation between 20% and 120% of the flow rate, no replacement components required, reliable sealing with O-rings.

Built-in reliable maintenance-free float drain valve.

Air flow direction arrow for correct installation in the compressed air line.

Separators specification



Ready-to-use centrifugal water separators DFS
Centrifugal separation of condensate in the liquid phase with an efficiency of over 99%.

Standard delivery:

Internal automatic drain valve.

Optional equipment:

WIN - water presence indicator.

To be preceded by:

Compressed air aftercooler.

Technical data	Description
Grade	-
Operating principle	Centrifugal separation
Separation grade by water content in liquid phase, %	> 99
Maximum operating temperature, °C	65
Pressure loss at nominal air flow, mbar	55

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

Table of models DFS-series

Article	Model	Screw connection	Air flow (m³/min)*
13200201	DFS-012	3/8"	1,2
13200202	DFS-016	1/2"	1,6
13200203	DFS-025	1/2"	2,5
13200204	DFS-036	3/4"	3,6
13200205	DFS-047	1"	4,7
13200206	DFS-072	1.1/4"	7,2
13200207	DFS-125	1.1/2"	12,5
13200208	DFS-230 Twin	3"	23,0
13200209	DFS-360 Twin	3"	36,0

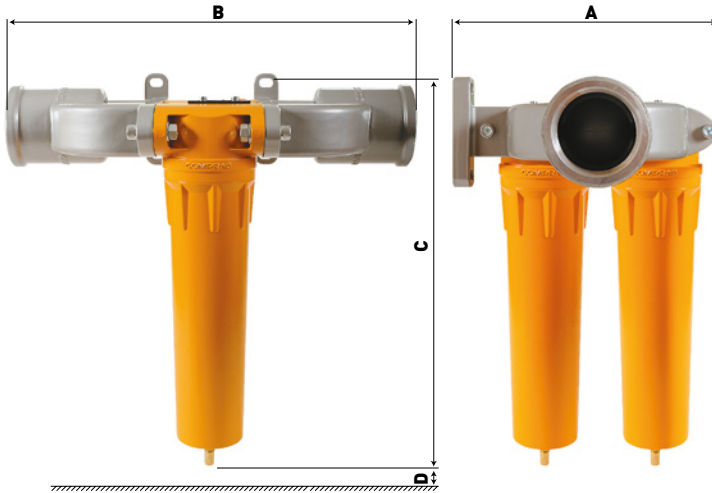
* Nominal conditions and test procedures according to ISO 8573

General information

Dimensions and weight



Article	Model	Screw connection	Dimensions (mm)				Weight (kg)
			A	B	C	D	
13200201	DFS-012	3/8"	88	88	187	80	0,7
13200202	DFS-016	1/2"	88	88	256	80	0,8
13200203	DFS-025	1/2"	106	106	278	100	1,3
13200204	DFS-036	3/4"	106	106	278	100	1,3
13200205	DFS-047	1"	125	125	252	120	2,1
13200206	DFS-072	1.¼"	125	125	252	140	2,4
13200207	DFS-125	1.½"	160	160	450	160	3,4



Article	Model	Screw connection	Dimensions (mm)				Weight (kg)
			A	B	C	D	
13200208	DFS-230 Twin	3"	330	530	395	140	11,6
13200209	DFS-360 Twin	3"	330	530	530	160	13,5

Optional equipment and accessories

WATER INDICATOR WIN

The WIN indicator is designed to monitor the liquid phase condensate content in compressed air.

Any condensate (water, oil, emulsion) in the compressed air causes a change in the silica gel color from orange to green.



Change in the silica gel color

Indicative values of relative humidity and absolute humidity at the standard inlet conditions (inlet pressure. 1 bar(a) and inlet temperature 20°C):

Silica gel color	Relative humidity [%]	Absolute humidity [g/m³]
Orange	min. 0	0
Yellow-Brown	min. 20	3,5
Brown-Green	min. 50	8,6
Green	min. 90	15,6

If the indicated condensate content is above the permissible level, additional equipment as refrigeration dryers or adsorption dryers must be used.

Technical data WIN

Article	Model	Description
51202200	WIN	WIN water indicator, with throttle silencer, G1/4"
51202098		Adapter mounting set for DFF/DFS 012 – 025
51202099		Adapter mounting set for DFF/DFS 036 – 125 end ADM

WALL MOUNTING SETS



Technical data

Article	Description
14200181	Wall mounting set 012-016
14200182	Wall mounting set 025-036
14200183	Wall mounting set 047-125

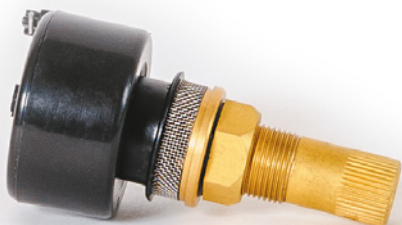
CONNECTION SETS



Technical data

Article	Description
14200184	Connection sets 012-016
14200185	Connection sets 025-036
14200186	Connection sets 047-125

AUTOMATIC CONDENSATE DRAIN



Technical data

Article	Description
13300035	DRA Automatic condensate drain, internal

ADAPTER SET, for external condensate drain valve connection



Technical data

Article	Description
14200190	Adapter set, with ball valve, 1/2" inner thread



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