ultra.dry compact adsorption dryer

ULTRAFILTER
THE FILTRATION MANUFACTURER
ultra.air ultrafilter ®

Why drying compressed air?

■ Compressed air is used in almost all areas of industrial manufacturing as a source of energy or processing. Compressed air needs to be dry, free of particles and oil to avoind cost expensive production downtimes. The atmospheric air drwan in contains harmful substances, , dirt particles and moisture in the form of water vapour, which condenses out in compressed air pipes and can lead to considerable costs (corrosion, freezing etc.). These costs are avoided by using an ultra.dry compact. As a complete system, the ultra.dry compact consists of a prefilter with automatic condensate drain, adsorption dryer and an integrated dust filter.

ultra.dry compact

■ The ultra.dry compact covers with 17 sizes for volume flows between 7 m^3/h to 620 m^3/h a wide range for central and decentral purification applications.

■ Particles and and condensates are retained by a prefilter up to a residual oil content of 0,03 ppm. Condensates are drained securely and efficiently by an integrated condensate drain.

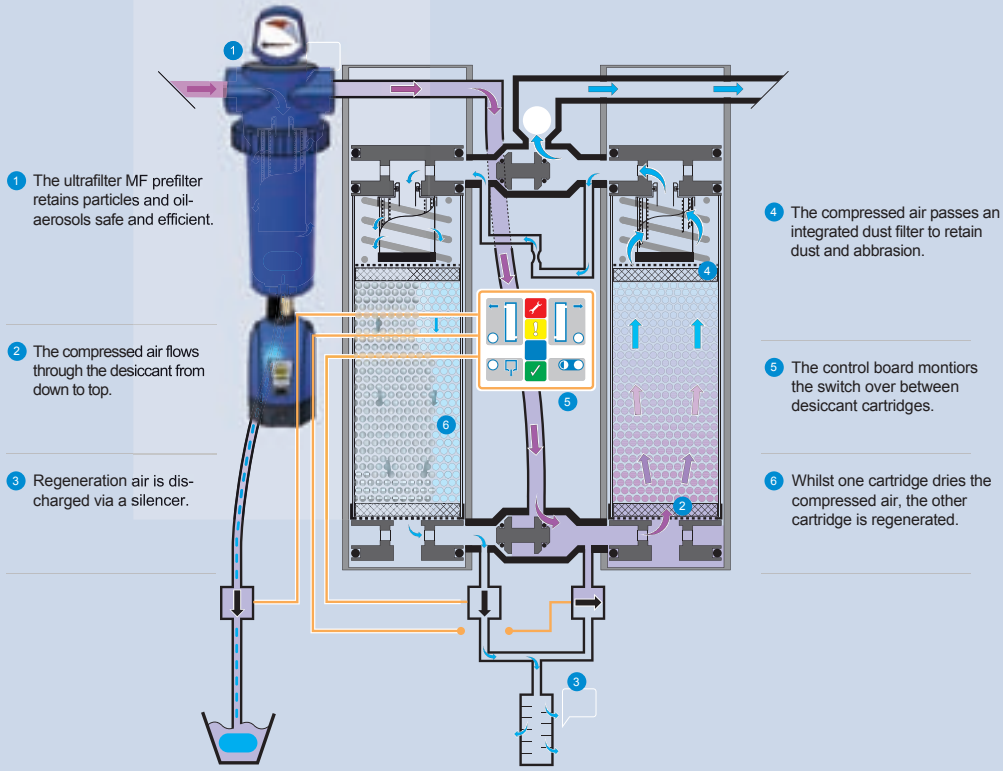
■ The subsequent adsorption dryer removes moisture from the compressed air up to a pressure dew point of -40°C. Regeneration and drying is made in two parallel installed vessels.

■ Dust particles out of the desiccant is retained in the included afterfilter.

■ The ultra.dry compact control contains a a self-diagnostic mode, indicating forthcoming service intervals and function monitoring.

■ Extremely compact, space-saving construction. Installation on smallest foot prints. Due to the multi-port connections (up to UDC 038) the ultra. dry compact can be installed in vertical and horizontal position.

Function scheme ultra.dry compact:



■ Wall mounting fixing and stand feets can be obtained as an accesorie (UDC 007 - UDC 0076).

■ The compresed air quality equals ISO 8753-1.

Desiccant cartridges

It is easy and quick to exchange the desiccant cartridges – without disconnecting compressed air connection.

The cartridges are fitted with integrated dust filter. Springs inside the cartridge ensure that the desiccant is fixed in all operation cycles.

The desiccant can be checked easyily by the transparent cartridges. Oil-overload can be dedected soon so a dowsntime of the unit can be prevented.

Features and advantages

■ Complete purification package with pre- and afterfilter and conensate drain.

■ All components are buil in one housing, ready to connect and to operate.

■ Spring-loaded fixture of desiccant in the cartridges. Therefore easy to serve and no risk of abbrasion of desiccant.

■ Function monitoring and control by an intelligent processor. Fault indication are monitored on the control board.

■ Memory-function: All operaitng data are stored. In case of power supply breakdown, the dryer restarts with the last cycling mode.

■ Compact and space saving construciton. Instlattion in smallest spece possible. The installation can be made in vertical and horizontal direction.

■ Integrated broadband for power supply 100–240 VAC, 12–24 VDC, 50– 60 Hz.

■ Anodized aluminium profiles secure protection against dirt and particles and ensure long operation safety.

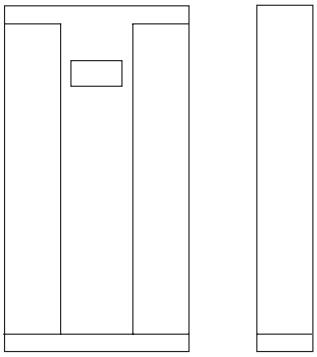
■ Easy access to all parts via an demountable front panel.

■ The rengeration air is discharged via an integrated silencer.

Technical data ultra.dry compact

type UDC	volume flow 7 bar g m³/h	connection	dimensions in mm			prefilter MF size	weight in kg
			height	width	depth		
007	7	3/8"	445	281	92	03/05	13
010	10	3/8"	504	281	92	03/05	14
014	14	3/8"	565	281	92	03/05	15
017	17	3/8"	635	281	92	03/05	16,5
026	26	3/8"	815	281	92	03/05	19,5
038	38	3/8"	1065	281	92	03/05	24
056	56	3/8"	1460	281	92	03/05	31
076	76	3/4"	700	520	164	05/20	47
093	93	3/4"	800	520	164	05/20	55
110	110	1/2"	900	520	164	05/20	61
144	144	1"	1100	520	164	05/20	64
178	178	1"	1410	520	164	05/20	69
229	229	1 1/4"	1610	520	164	07/25	81
297	297	1 1/4"	2010	520	164	07/25	87
365	364	1 1/2"	1410	520	328	07/30	96
467	467	1 1/2"	1610	520	328	07/30	108
620	620	2"	3010	520	328	10/30	122

In accordance with ISO 7183 related to 1 bar, 20° C, operating pressure 7 bar g, compressed air inlet temperature of 35° C, ambient temperature of 25°C and pressure dewpoint of -40°C.



Operation data:

Operating pressure min.:	4 bar
Operating pressure max.:	16 bar
Ambient temperature max.:	50°C
Inlet temperature max.:	50°C.
electr. connection:	12VDC to 24 VDC 100VAC to 240 VAC.

Dryer correction factors:
Flow = nom. flow (7 bar) / K1 x K2 x K3 x K4.

operating pressure	bar	5	6	7	**8**	9	10	11	12	13	14	15	16
conversion factor	K1	0,62	0,75	0,87	**1**	1,12	1,25	1,37	1,5	1,62	1,75	1,87	2,0

temperature	°C	25	30	**35**	40	45	50
conversion factor	K2	1,07	1,06	**1,04**	1,00	0,93	0,78

dewpoint	°C	-40	-70
conversion factor	K3	1	0,7

Example:

volume flow : (operating pressure / (K1 x K2 x K3)

Operating pressure: 7 bar
Inlet temperature: 25 °C
Dewpoint: - 70 °C

$$\frac{\text{volume flow}}{\text{K1 x K2 x K3}} = \frac{70}{0{,}9 \times 1{,}06 \times 0{,}7} = 105\ \text{Nm}^3/\text{h}$$

Your compressed air specialist:

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