ADSORPTION DRYER

COM-DRY

(Refrigerant+Adsorption dryer)

DESCRIPTION

COM-Dry dryers have been designed for continuous separation of water vapour from compressed air thus reducing dew point. Drying consist of two steps. Refrigerant dryer first eliminates large majority of water and reduces dew point down to PDP +3°C. Further reduction of dew point (down to PDP -70°C) is carried out by adsorption dryer. Operation of dryer is more simple compared to conventional heat regenerated adsorption dryer while average compressed air losses present only up to 4,6%.

DRYER RATING ACCORDING TO ISO8573-1

Solid particles[1]	Water[1],[2]	Oil[1]
2	1-3	1

[1]Typical result based on standard configuration and nominal operating conditions
[2]Depend on specific design. Class 2 when operated at nominal operating conditions.

TECHNICAL SPECIFICATIONS

Operating pressure	4 – 16 bar
Operating temperature	1,5°C to 60°C
Pressure dew points	-40°C (-25, -70)
Voltage,Frequency	230V, 50/60Hz
Power consumption	<60W
Protection class (controller)	IP 65
Filter (inlet)*	Super fine coalescing; residual oil cont. <0,01mg/m3; 0,01µm
Filter (outlet)	Dust filter; 1µm
Input for stand-by	STANDARD
Dew point dependent control	OPTIONAL
Awerage purge air consumption	Approx. 4,6% (at nominal inlet conditions, Outlet PDP -40)**

*If dryer is supplied without inlet filter compressed air class 1 (ISO 8753-1) for solid particles and oil should be provided to the inlet of the dryer.
**Purge air consumption is related with inlet temperature to the adsorption dryer (outlet temperature from refrigerant dryer). Typically inlet temperature to adsorption dryer is 10°C lower than inlet temperature to refrigerant dryer. In case inlet temperature to refrigerant dryer is lower than 35°C demand for purge air increases.

MATERIALS

Heat exchanger	Aluminium
Columns, construction, support	Steel
Column inner protection	/
Column and construction outer protection	Epoxy painted
Desiccant support screen	Stainless steel
Valves	Brass, aluminium
Sealings	NBR
Fittings, Screws, plugs	INOX, brass, steel (zinc plated)
Lubricant	Shell cassida grease RLS 2
Outside protection	Powder paint coated (Epoxy-polyester base)
Desiccant	80% Molecular sieve 4A, 20% Silica gel

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SIZES

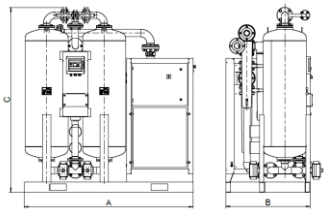
Model	Conn. IN & OUT[5]	Inlet flow [Nm³/h][3]	ADS DRYER	REF. DRYER	DIMENSIONS		Power [kW]	Mass [kg]	Volume [l]
COM-DRY 06	G 3/8"	6	A-DRY 06	OMD 20	-	-	0,15		2,60
COM -DRY 12	G 3/8"	12	A-DRY 12	OMD 20	-	-	0,15		4,33
COM -DRY 24	G 3/8"	24	A-DRY 24	OMD 35	-	-	0,16		7,78
COM -DRY 36	G 3/8"	36	A-DRY 36	OMD 35	-	-	0,16		11,22
COM -DRY 60	G 1/2"	60	A-DRY 60	OMD 65	-	-	0,21		19,91
COM -DRY 75	G 1/2"	75	A-DRY 75	OMD 100	-	-	0,29		24,32
COM -DRY 110	G 3/4"	110	B-DRY 110	OMD 135	-	-	0,39		20
COM -DRY 150	G 1"	150	B-DRY 150	OMD 175	-	-	0,48		25
COM -DRY 200	G 1"	200	B-DRY 200	OMD 235	-	-	0,71		36
COM -DRY 250	G 1"	260	B-DRY 250	OMD 280	-	-	0,79		45
COM -DRY 300	G 1"	320	B-DRY 300	OMD 330	-	-	0,82		57
COM -DRY 400	G 1 ½"	410	B-DRY 400	OMD 410	-	-	0,71		70
COM -DRY 600	G 1 ½"	590	B-DRY 600	OMD 710	-	-	1,4		102
COM -DRY 800	G 2"	770	B-DRY 800	OMD 920	-	-	1,5		134
COM -DRY 1000	G 2"	1000	B-DRY 1000	OMD 1050	-	-	2,1		164
COM -DRY 1200	DN50	1200	F-DRY 1200	OMD 1200	-	-	2,3		225
COM -DRY 1500	DN65	1500	F-DRY 1500	OMD 1900	-	-	3,6		280
COM -DRY 2000	DN65	2000	F-DRY 2000	OMD 2200	-	-	3,9		295
COM -DRY 2500	DN80	2500	F-DRY 2500	OMD 2600	-	-	5,2		470
COM -DRY 3000	DN80	3000	F-DRY 3000	OMD 3350	-	-	5,9		570
COM -DRY 3750	DN100	3750	F-DRY 3750	OMD 4400	-	-	7,1		660
COM -DRY 5000	DN100	5000	F-DRY 5000	OMD 6600	-	-	10,8		980
COM -DRY 6500	DN125	6500	F-DRY 6500	OMD 7200	-	-	11,3		1200

[3]Refers to 1bar(a) and 20°C at 7 bar operating pressure , inlet temperature 35°C and pressure dew point at outlet -40°C

[4]Outlet flow refers to typical assumption during regeneration phase for operating at nominal inlet flow conditions. Outlet flow includes average air losses of approximately 4,6 %. Maximum purge air flow during regeneration phase is up to 5,7% of nominal inlet conditions. [5]Reffers to inlet and outlet filter housing.

CORRECTION FACTORS

To calculate the correct capacity of a given filter based on actual operating conditions, multiply the nominal flow capacity by the appropriate correction factor(s). CORRECTED CAPACITY = NOMINAL FLOW CAPACITY x C_{OP} x C_{OT} x C_D



OPERATING PRESSURE

[bar]	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
[psi]	29	44	58	72	87	100	115	130	145	160	174	189	203	218	232
C_{OP}	0,38	0,5	0,63	0,75	0,88	1	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13

OPERATING TEMPERATURE

[°C]	25	30	35	40	45	50	55
[F]	77	86	95	104	113	122	131
C_{OT}	1	1	1	0,81	0,67	0,55	0,45

DEW POINT

[°C]	-25	-40	-70
[F]	-13	-40	94
C_D	-*	1	0,7

*Contact manufacturer

MAINTENANCE

For maintenance, please follow operating manual.

INFORMATION IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE

BUREAU VERITAS 1828 BUREAU VERITAS	Our quality management system is certified by BUREAU VERITAS in conformity with ISO 9001:2008 Reg. number: 200285	

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