

D Series

Single Tower Deliquescent Dryers



F E A T U R E S

No power required

No moving parts

Low pressure drop

20°F to 63°F dew point suppression

BENEFITS OF THE D SERIES

No moving parts // Energy free // 10-year warranty

vanairsystems.com

The D Series from Van Air Systems

D is for Durable. D is for Dependable. D is for Deliquescent. D Series dryers are the time-proven workhorse of industrial air and gas dryers. Generations of operators have turned to the D Series for clean, dry compressed air and gas.

Think simple.

A compressed air dryer doesn't have to be complicated. Keeping compressed air lines moisture free is easy with a D Series deliquescent dryer from Van Air Systems. D Series dryers are simple to install, operate, and service. No power required. No moving parts. D Series dryers are the simplest, toughest, longest lasting air dryers available.

How it works.

Wet compressed air enters the bottom of the dryer vessel and flows through a bed of Dry-O-Lite desiccant. Dry-O-Lite acts like a sponge and absorbs water vapor from the air. Over time the desiccant slowly deliquesces, or dissolves, and forms a liquid that falls to the bottom of the vessel. Dry compressed air exists the top of the dryer.

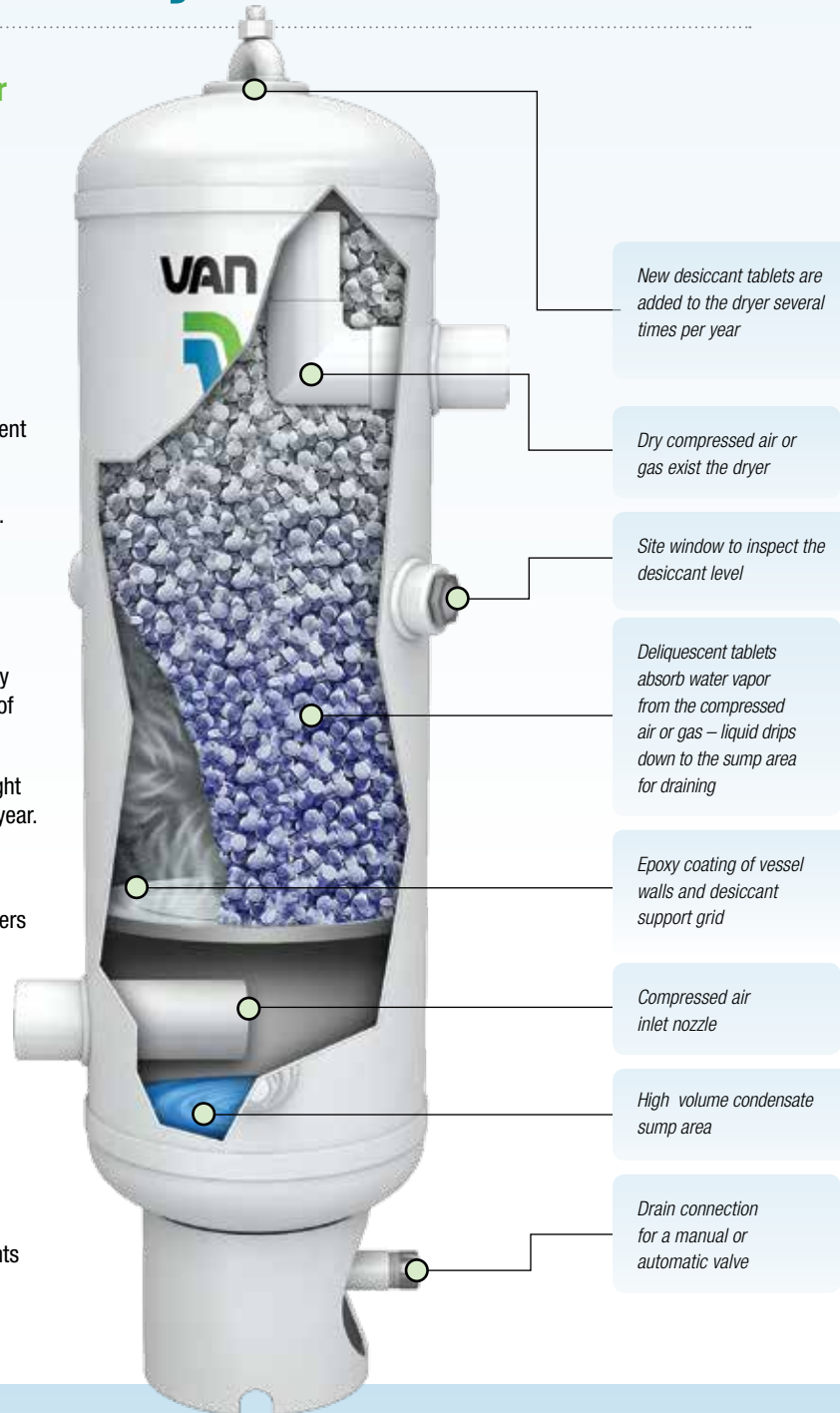
Maintenance is easy. Drain liquid from the dryer at least once per eight hours of operation. Add new Dry-O-Lite desiccant several times per year.

Application versatility.

Install a D Series deliquescent dryer virtually anywhere. D Series dryers are installed indoors or outside. For portability, D Series dryer mount easily to trucks, trailers, and skid-packaged equipment. With no electrical components D Series dryers operate safely in areas where explosive vapors are present. D Series dryers are ideal for drying low pressure air, intermittent flows, and point-of-use applications.

D series dryers are commonly used for:

- Paint booths
- Blast rooms
- Rail yards
- Landfill gas and digester gas
- Saw mills
- Ready mix, cement and asphalt plants



D Series dryers go with the flow!





Dual D54 dryers (left) are used at a landfill to remove moisture from low pressure methane. A **D36 dryer** (right) is used to remove moisture from compressed air on a steel grit recycling trailer.



D8

D12

D4

Dryer accessories



After-cooler



Automatic Drain Valves



Filters

Dew point performance

Dew point is the temperature where liquid starts to condense. Cooling compressed air below its dew point causes condensation.

Dry-O-Lite desiccant suppresses dew point by 20°F. For example:

80°F Inlet dew point (saturated)
 -20°F Suppression
 60°F Outlet dew point

50°F Inlet dew point (saturated)
 -20°F Suppression
 30°F Outlet dew point

For even better dew point suppression use 10BF desiccant. High performance 10BF suppresses dew point by up to 63°F

Remember, as long as the temperature of the compressed air never falls below the dew point, no liquid will form in the air line.



10BF for up to 63°F dew point suppression



Application tips

Cooling is critical. Install the D Series dryer at a point where the compressed air is coolest. For top performance, install the D Series dryer downstream of an AC Series after-cooler.

D Series dryers must be drained regularly. Install an MDV400 series drain valve for reliable automatic draining.

Install an F200 series coalescing pre-filter before the dryer to remove compressor lubricant. Install an F200 series particulate filter after the dryer to remove pipe scale and fine particles.

Pressure is good. Install the D Series dryer at the highest practical pressure. If using the dryer in a point-of-use application, install it before any pressure regulator.

STANDARD EQUIPMENT

D2

- Manual drain valve
- Sight window (to check desiccant levels)
- Epoxy powder coat interior finish
- PVC plastic bed support grid
- Epoxy powder coat exterior finish
- 10-year prorated warranty

D4 and D8

- Manual drain valve
- Sight window (to check desiccant)
- Vessel fabricated to ASME Code
- Epoxy interior coating
- Epoxy coated carbon steel bed support grid
- Primer & enamel exterior finish
- 10-year prorated warranty

D12 – D36

- Manual drain valve
- Sight windows (to check desiccant)
- Elliptical direct entry hatch cover
- Pressure relief coupling
- Vessel fabricated to ASME Code
- Epoxy interior coating
- Epoxy coated carbon steel bed support grid
- Primer & enamel exterior finish
- 10-year prorated warranty

D42 – D138

- Manual drain valve
- Sight windows (to check desiccant)
- Elliptical direct entry hatch cover
- Pressure relief connection
- Vessel fabricated to ASME Code
- Epoxy and polyurethane interior coating
- ABS plastic bed support grid
- Primer & enamel exterior finish
- 10-year prorated warranty

OPTIONAL EQUIPMENT

- AC Series after-cooler with liquid separator
- F200 Series coalescing pre-filter
- MDV400 Series automatic drains
- PDV- 500T Series automatic drains
- F200 Series particulate after-filter
- F101 or F102 filters for flow rates above 1200 SCFM
- Series particulate after-filter
- Pressure gauge kit
- Temperature gauge kit a (D12-D138)
- Combined pressure/temperature gauge for models (D12-D138)
- Ultrasonic Level Switch for models (D12-D138)

DIMENSIONS & SPECIFICATIONS

Model No.	Height		Width		In/Out Conn.	Max Working Pressure		Weight Empty		Dry-O-Lite Qty Per Unit	
	in	cm	in	cm		PSIG	BARG	lbs	kg	lbs	kg
D2	13 1/2	34	3 5/8	9	1/2" NPT	200	13.8	4	2	2	1
D4	32 7/8	84	4 1/2	11	3/4" NPT	250	17.2	30	14	7	3
D8	40 3/16	102	8 5/8	22	3/4" NPT	250	17.2	60	27	35	16
D12	51	130	12 3/4	32	2" NPT	250	17.2	130	59	150	68
D16	55	140	16	41	2" NPT	250	17.2	145	65	250	113
D20	56	142	20	51	2" NPT	200	13.8	210	95	350	159
D24	59	150	24	61	2" NPT	200	13.8	285	128	500	227
D30	64	163	30	72	3" NPT	200	13.8	640	290	700	318
D36	70	178	36 5/8	93	3" FLG	175	12	780	353	1100	499
D42	86	218	42 3/4	109	4" FLG	150	10.3	1275	580	1700	771
D48	91	231	48 3/4	124	4" FLG	150	10.3	2150	975	2200	998
D54	94	239	54 3/4	139	4" FLG	150	10.3	2640	1195	2800	1270
D60	97	246	60 3/4	154	4" FLG	150	10.3	2850	1225	3500	1588
D66	100	254	66 3/4	170	6" FLG	150	10.3	3200	1450	4200	1905
D72	110	279	73	185	6" FLG	125	8.6	4500	1850	6000	2722
D84	124	315	85	216	6" FLG	125	8.6	6000	2585	8200	3719
D102	137	348	103	262	8" FLG	125	8.6	9000	4080	14000	6350
D120	145 1/2	370	121	307	8" FLG	125	8.6	12900	5850	20000	9072
D138	154 3/4	393	140	356	10" FLG	125	8.6	17800	8075	27000	12247

MAXIMUM CAPACITIES SCFM / Nm3hr

Model No.	10 PSIG .7 BARG		20 PSIG 1.4 BARG		60 PSIG 4.1 BARG		100 PSIG 6.9 BARG		125 PSIG 8.6 BARG		150 PSIG 10.3 BARG		200 PSIG 13.8 BARG		250 PSIG 17.2 BARG	
	SCFM	Nm3hr	SCFM	Nm3hr	SCFM	Nm3hr	SCFM	Nm3hr	SCFM	Nm3hr	SCFM	Nm3hr	SCFM	Nm3hr	SCFM	Nm3hr
D2	1.5	2.4	2.4	3.9	3.9	6.3	7	11.3	8.5	13.7	10.1	16.2	13.1	21	16.2	26
D4	2.2	3.5	3	4.8	6.5	10.5	10	16	12.2	19.6	14.4	23.2	18.7	30.1	23.1	37.1
D8	11	17.7	15	24.1	33	53	50	80	61	98	72	116	94	151	115	185
D12	22	37	30	51	65	111	100	170	122	207	144	244	187	318	231	392
D16	33	57	47	80	101	172	155	263	189	321	223	378	290	493	358	608
D20	54	91	76	128	163	277	250	425	304	517	359	610	468	795	-	-
D24	81	137	113	193	244	415	375	637	457	776	538	915	702	1193	-	-
D30	135	229	189	321	407	692	625	1062	761	1293	897	1525	1170	1988	-	-
D36	183	311	257	437	554	941	850	1444	1035	1759	1221	2074	-	-	-	-
D42	269	457	378	642	814	1383	1250	2124	1522	2587	1795	3050	-	-	-	-
D48	323	549	454	771	977	1660	1500	2549	1827	3104	2154	3659	-	-	-	-
D54	431	732	605	1028	1303	2213	2000	3398	2436	4139	2872	4879	-	-	-	-
D60	538	915	756	1285	1628	2766	2500	4248	3045	5173	-	-	-	-	-	-
D66	646	1098	908	1542	1954	3319	3000	5097	3654	6208	-	-	-	-	-	-
D72	754	1281	1059	1799	2279	3873	3500	5947	4263	7243	-	-	-	-	-	-
D84	969	1646	1361	2313	2931	4979	6000	7646	5481	9312	-	-	-	-	-	-
D102	1507	2423	2423	3896	3949	6350	8800	11256	8526	13707	-	-	-	-	-	-
D120	2046	3290	3288	5287	5359	8617	12000	15276	11571	18602	-	-	-	-	-	-
D138	2692	4329	4327	6958	7051	11338	16000	20100	15224	24476	-	-	-	-	-	-

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D Series - PDF Downloads

Installation, Operation and Maintenance Manuals

D2



D4 – D8



D12 – D36



D42 – D84



D102 – D138



Sales Drawings

D2



D4



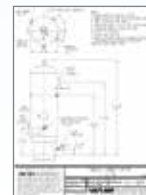
D8



D12



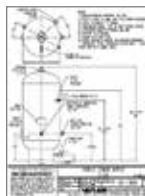
D16



D20



D24



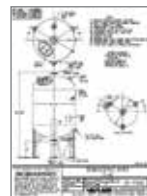
D30



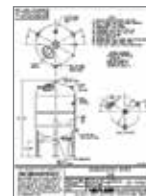
D36



D42



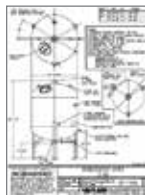
D48



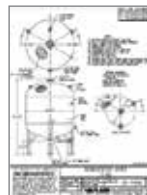
D54



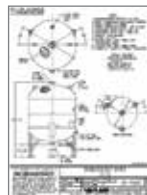
D60



D66



D72



D84 – D138



Instructional Video

Single Tower Dryer Video

