

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.

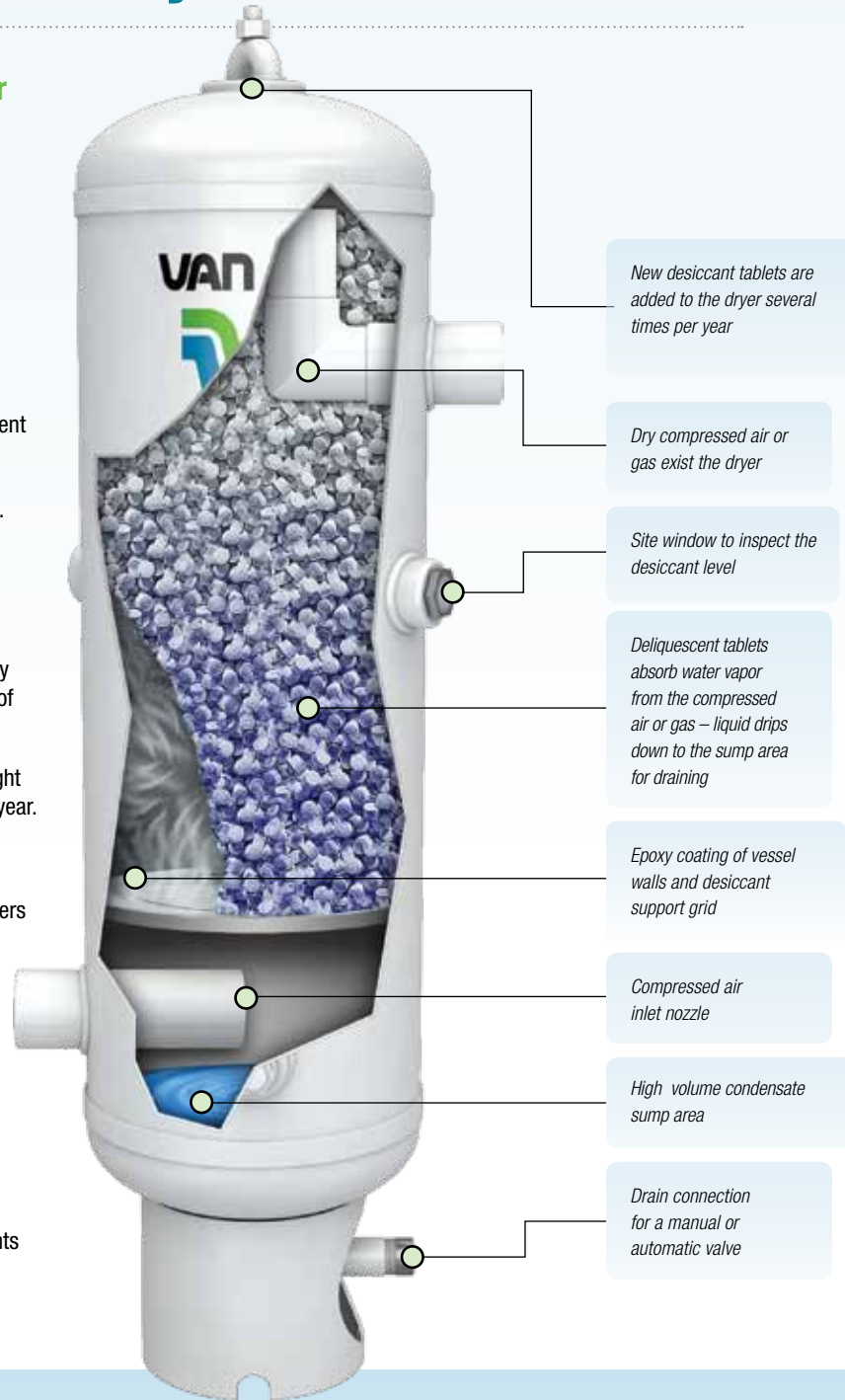
Maintenance is easy. Drain liquid from the dryer at least once per eight hours of operation. Add new Dry-O-Lite desiccant several times per year.

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.



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



Dryer accessories



After-cooler



Automatic Drain Valves



Filters

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 – D156

- 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-D156)
- Combined pressure/temperature gauge for models (D12-D156)
- Ultrasonic Level Switch for models (D12-D156)

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 11/16	35	3 5/8	9	1/2" NPT	200	13.8	4	2	50	23
D4	27 3/4	77	4 1/2	11	3/4" NPT	250	17.2	30	14	50	23
D8	35 1/16	95	8 5/8	22	3/4" NPT	250	17.2	60	27	50	23
D12	51	130	12 3/4	32	2" NPT	250	17.2	130	59	150	68
D16	54 9/16	139	16	41	2" NPT	250	17.2	145	65	250	113
D20	55 13/16	142	20	51	2" NPT	200	13.8	210	95	350	159
D24	58 11/16	149	24	61	2" NPT	200	13.8	285	128	500	227
D30	63 7/16	161	30	72	3" NPT	200	13.8	640	290	700	317
D36	69 5/16	176	36 5/8	93	3" FLG	175	12	780	353	1100	498
D42	85 5/8	217	42 3/4	109	4" FLG	150	10.3	1275	580	1700	770
D48	91 1/4	232	48 3/4	124	4" FLG	150	10.3	2150	975	2200	997
D54	94 1/4	239	54 3/4	139	4" FLG	150	10.3	2640	1195	2800	1268
D60	97 1/4	247	60 3/4	154	4" FLG	150	10.3	2850	1225	3500	1586
D66	100 1/4	255	66 3/4	170	6" FLG	150	10.3	3200	1450	4200	1093
D72	109 1/2	278	73	185	6" FLG	125	8.6	4500	1850	6000	2718
D78	114 3/4	291	79	201	6" FLG	125	8.6	5000	2165	7000	3171
D84	123 9/16	314	85	216	6" FLG	125	8.6	6000	2585	8200	3715
D90	126 7/8	322	91	231	6" FLG	125	8.6	7200	3265	11000	4983
D96	129 13/16	330	97	246	6" FLG	125	8.6	7800	3540	13000	5889
D102	137	348	103	262	8" FLG	125	8.6	9000	4080	14000	6342
D108	139	353	109	277	8" FLG	125	8.6	10300	4670	16000	7248
D114	142	361	115	292	8" FLG	125	8.6	12440	5645	18000	8154
D120	145	368	121	307	8" FLG	125	8.6	12900	5850	20000	9060
D126	148	376	127	323	8" FLG	125	8.6	15800	7165	22000	9966
D132	157	399	133	338	10" FLG	125	8.6	16700	7575	24000	10872
D138	155	394	140	356	10" FLG	125	8.6	17800	8075	27000	12231
D144	158	401	146	371	10" FLG	125	8.6	18900	8570	29000	13137
D156	168	427	158	401	10" FLG	125	8.6	21000	9525	34000	15402

MAXIMUM CAPACITIES SCFM / Nm3hr

Model No.	10 PSIG .7 BARG		25 PSIG 1.7 BARG		50 PSIG 3.4 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	
	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
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	3.5	5.6	5.6	9	10	16.1	12.2	19.6	14.4	23.1	19	31	23	37
D8	11	18	17	27	28	45	50	80	61	98	72	116	94	151	115	185
D12	22	35	35	56	56	90	100	161	122	196	144	232	187	301	231	371
D16	33	53	54	87	87	140	155	249	189	304	223	359	290	466	358	576
D20	54	87	87	140	141	227	250	402	304	490	359	577	468	753	-	-
D24	81	130	130	209	212	341	375	603	457	734	538	865	702	1129	-	-
D30	135	217	216	347	353	568	625	1005	761	1224	897	1442	1170	1881	-	-
D36	183	294	294	473	479	770	850	1367	1035	1664	1221	1963	-	-	-	-
D42	269	433	433	696	705	1134	1250	2010	1522	2448	1795	2886	-	-	-	-
D48	323	519	519	835	846	1360	1500	2412	1827	2937	2154	3464	-	-	-	-
D54	431	693	692	1113	1128	1814	2000	3216	2436	3916	2872	4618	-	-	-	-
D60	538	865	865	1391	1410	2268	2500	4020	3045	4895	-	-	-	-	-	-
D66	646	1039	1038	1669	1692	2721	3000	4824	3654	5874	-	-	-	-	-	-
D72	754	1212	1211	1947	1974	3174	3500	5628	4263	6853	-	-	-	-	-	-
D78	861	1384	1384	2225	2256	3628	4000	6432	4872	7832	-	-	-	-	-	-
D84	969	1558	1558	2505	2538	4081	4500	7236	5481	8812	-	-	-	-	-	-
D90	1184	1904	1904	3062	3102	4988	5500	8844	6699	10770	-	-	-	-	-	-
D96	1292	2078	2077	3340	3384	5441	6000	9648	7308	11749	-	-	-	-	-	-
D102	1507	2423	2423	3896	3949	6350	7000	11256	8526	13707	-	-	-	-	-	-
D108	1615	2597	2596	4174	4231	6803	7500	12060	9135	14686	-	-	-	-	-	-
D114	1830	2943	2942	4731	4795	7710	8500	13668	10353	16644	-	-	-	-	-	-
D120	2046	3290	3288	5287	5359	8617	9500	15276	11571	18602	-	-	-	-	-	-
D126	2261	3636	3634	5844	5923	9524	10500	16884	12789	20560	-	-	-	-	-	-
D132	2476	3981	3980	6400	6487	10431	11500	18492	14007	22518	-	-	-	-	-	-
D138	2692	4329	4327	6958	7051	11338	12500	20100	15224	24476	-	-	-	-	-	-
D144	2907	4674	4673	7514	7615	12245	13500	21708	16442	26435	-	-	-	-	-	-
D156	3446	5541	5538	8905	9025	14512	16000	25728	19487	31330	-	-	-	-	-	-

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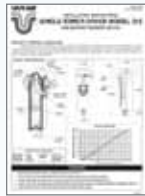
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Installation, Operation and Maintenance Manuals

D2



D4 – D8



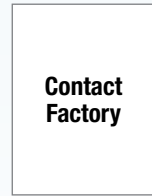
D12 – D36



D42 – D84



D90 – D156



Sales Drawings

D2



D4



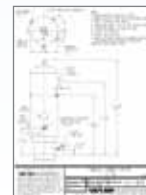
D8



D12



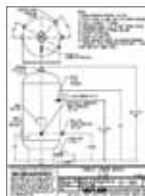
D16



D20



D24



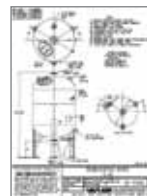
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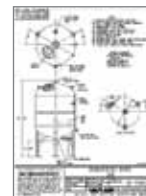
D36



D42



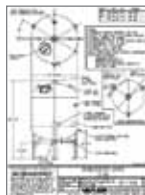
D48



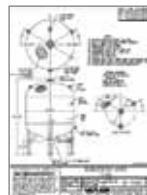
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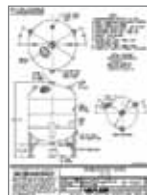
D60



D66



D72



D78 – D156



Instructional Video

Single Tower Dryer Video

