



REFRIGERATED DRYERS 7-2000 SCFM
MODULAR DESICCANT DRYERS 3-177 SCFM | FILTRATION | OIL-WATER SEPARATORS

Air Treatment





Air Treatment Portfolio

DV Systems enhanced air treatment portfolio delivers the perfect balance between sustainable performance, technology and simplicity offering stable ISO 8573-1 Air Quality for the most demanding of compressed air systems.



DVNA Series

- Non-Cycling Refrigerated Dryer
- 7-1200 SCFM
- ISO8573-1 Class 5-6 pressure dew point

DVEA Series

- Energy Savings Refrigerated Dryer
- 75-2000 SCFM
- ISO8573-1 Class 4-5 pressure dew point

DVHA Series

- High Temperature Refrigerated Dryer
- 15-100 SCFM
- ISO8573-1 Class 4-5 pressure dew point



DVMLA Series

- Modular Heatless Desiccant Dryer
- 3-177 SCFM
- ISO8573-1 Class 1-2 pressure dew point

DVF Series

- High Efficiency Filtration Available in 5 Grades
- 20-21,250 SCFM
- ISO8573-1 Class 1-5

Ecoplus Series

- 3-stage Water/Oil Separator
- 71-2,119 CFM
- OSHA-compliant element handling



ISO 8573.1 Quality Classes

ISO 8573.1 was developed in 1992 by ISO (International Organization for Standardization) to help plant engineers specify desired compressed air quality globally by providing “Quality Classes” for solid particulates, humidity and oil. Quality classes provide engineers with an internationally accepted unit of measure. A typical pharmaceutical plant, for example, would have a compressed air specification of ISO Quality Classes 1.2.1. This is equivalent to 0.1 micron solid contaminants, -40°F (-40°C) dew point, and 0.008 ppm (0.01 mg/m³) oil content filtration.

No matter what language is spoken and what unit of measure is used, using ISO 8573.1 Air Quality Classes ensures that your factory will get the compressed air quality you specified.

QUALITY CLASSES	SOLID CONTAMINANTS (MAX. PARTICLE SIZE)	MAXIMUM PRESSURE DEW POINTS		MAXIMUM OIL CONTENT (DROPLETS, AEROSOLS, VAPOR)	
	MICRONS	°F	°C	PPM W/W	PPM MG/M ³
1	0.1	-94	-70	0.008	0.01
2	1	-40	-40	0.08	0.1
3	5	-4	-20	0.8	1
4	15	38	3	4	5
5	40	45	7	21	25
6	-	50	10	-	-





DVNA Series Refrigerated Global Design

DVNA Series refrigerated air dryers offer the perfect balance between technology and simplicity to dry compressed air systems to a stable ISO 8573-1 Air Quality, Class 5-6 pressure dew points. They combine advanced control and environmentally responsible R513A refrigerant to deliver reliable, energy-efficient performance across a wide range of industrial applications.



Copper "Tube-on-Tube"
Heat Exchanger

Design Features

DVNA 7-15 SCFM

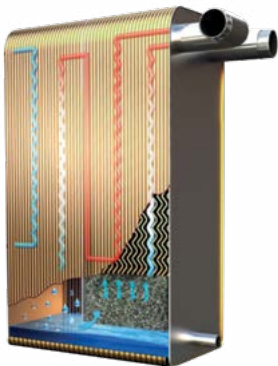
- Smooth bore, copper tube-on-tube heat exchangers
- Centrifugal separator efficiently captures condensate
- Static condenser design provides trouble free, quiet operation
- Electronic drain valve

DVNA 25-50 SCFM

- Microprocessor Controller, with alarm display and record history
- Compact three-in-one heat exchanger
- Electronic drain valve with controller test capabilities

DVNA 75-1200 SCFM

- Stainless steel, cross flow heat exchangers optimize heat transfer and service life
- Compact design saves floor space
- Stainless steel inlet/outlet connections to prevent corrosion
- Timed electric condensate drain
- Integral demister/separator

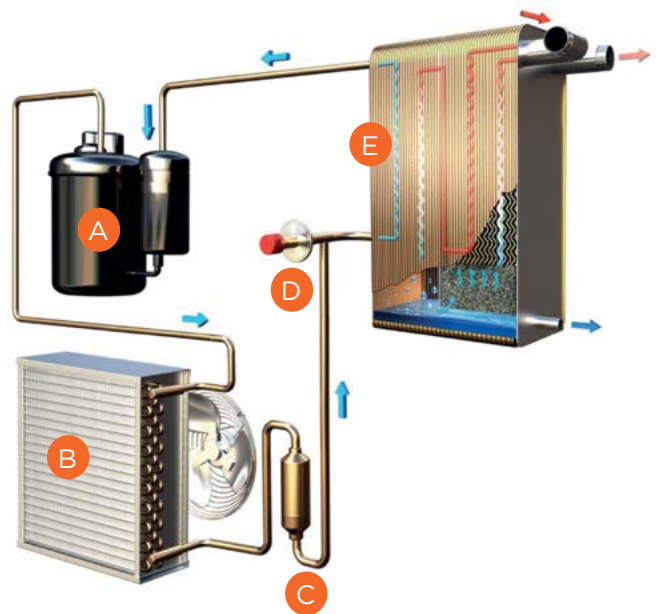


Stainless Steel Demister/Separator

How it Works

Refrigeration Circuit

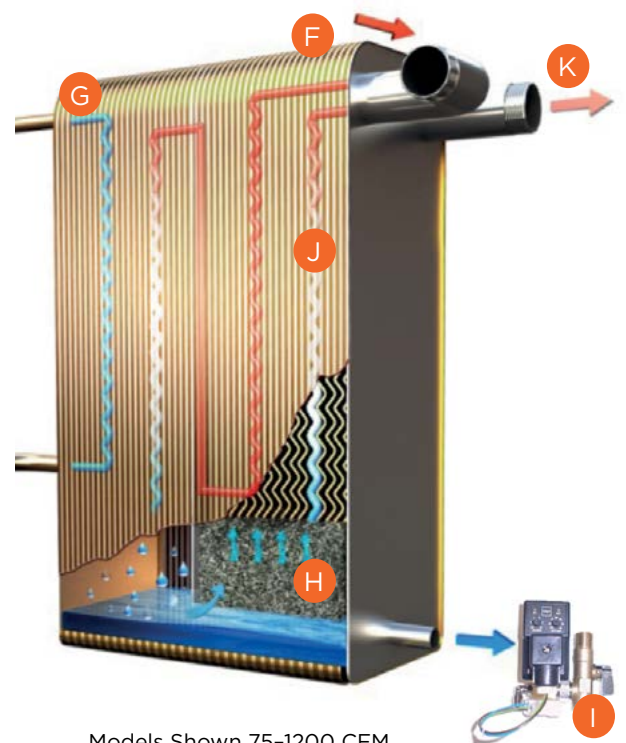
A hermetically sealed refrigerant compressor (A) takes in evaporated refrigerant and compresses it to a higher pressure. The air cooled condenser (B) turns the high pressure gas into a high pressure refrigerant. An in-line filter dryer (C) removes contaminants from the high pressure refrigerant gas. A constant pressure valve (D) reduces the pressure and regulates the flow of refrigerant into the heat exchanger (E).



Models Shown 75-1200 CFM

Air Circuit

Warm, saturated compressed air enters the air to air heat exchanger (F) and is cooled by the exiting air. The precooled air (G) then enters the air to refrigerant heat exchangers and is further chilled causing water vapor to condense. Condensed moisture is collected from the air stream by an integral separator (H) with stainless steel demister. Liquid condensate is removed from the separator by a (I) high performance drain. Cold air is then reheated in the air-to-air heat exchanger (J) to eliminate pipe line sweat. Clean dry air exits (K) the dryer and is now conditioned for use.



Models Shown 75-1200 CFM

Safety First – Environmentally Friendly

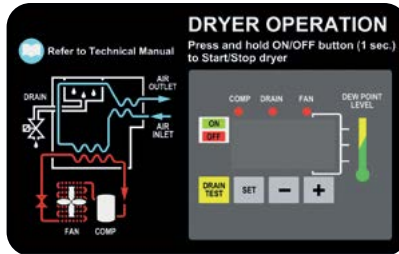
- All models 7-1200 scfm are using R513A refrigerant
- Performance Testing: ISO Guidelines, CAGI ADF 100
- Electrical: Listed to UL 60335-1 & 60335-2-40

Take Control



Models 10-150 SCFM

- Illuminated on/off switch
- Dew point temperature display to monitor inlet load conditions



Models 25-50 SCFM

- LED Indicator for refrigerant compressor, drain, and fan power
- Drain Test Button
- Alarm Display & History Record



Models 200-1200 SCFM

- Illuminated on/off switch
- Digital Control Board
- Dewpoint Level Monitoring
- Drain Timer Control



DVNA SERIES PRODUCT SPECIFICATIONS

MODEL	INLET FLOW		VOLTAGES	IN/OUT AIR CONNECT SIZE	POWER CONSUMPTION	REFRIGER- ANT	OVERALL DIMENSIONS HEIGHT × WIDTH × DEPTH		SHIP WEIGHT	
	SCFM	NM ³ /H					IN.	MM	LBS.	KG
DVNA7A100	7	11.9	115/1/60	3/8" MNPT	0.15	R513A	15.3 × 12.6 × 12.6	389 × 320 × 320	45	21
DVNA11A100	11	18.7	115/1/60	3/8" MNPT	0.16	R513A	15.3 × 12.6 × 12.6	389 × 320 × 320	45	21
DVNA15A100	15	25.5	115/1/60	3/8" MNPT	0.16	R513A	15.3 × 12.6 × 12.6	389 × 320 × 320	45	21
DVNA25A100	25	42.5	115/1/60	1/2" FNPT	0.27	R513A	17.5 × 15.4 × 16.9	445 × 392 × 430	58	27
DVNA32A100	32	54.4	115/1/60	1/2" FNPT	0.27	R513A	17.5 × 15.4 × 16.9	445 × 392 × 430	58	27
DVNA42A100	42	71.4	115/1/60	1/2" FNPT	0.51	R513A	17.5 × 15.4 × 16.9	445 × 392 × 430	69	32
DVNA50A100	50	85.0	115/1/60	1/2" FNPT	0.52	R513A	17.5 × 15.4 × 16.9	445 × 392 × 430	69	32
DVNA75A100	75	127.4	115/1/60	1" FPT	0.48	R513A	32.3 × 19.3 × 37.2	821 × 491 × 945	123	56
DVNA100A100	100	169.9	115/1/60	1" NPT	0.61	R513A	32.3 × 19.3 × 37.2	821 × 491 × 945	129	59
DVNA125A100	125	212.4	115/1/60	1" NPT	0.97	R513A	32.3 × 19.3 × 37.2	821 × 491 × 945	135	62
DVNA150A100	150	254.9	115/1/60	1" NPT	1.12	R513A	32.3 × 19.3 × 37.2	821 × 491 × 945	152	69
DVNA200A400	200	339.8	460/3/60	2" NPT	1.49	R513A	36.3 × 24.4 × 41.5	922 × 620 × 1,055	196	89
DVNA250A400	250	424.8	460/3/60	2" NPT	1.51	R513A	36.3 × 24.4 × 41.5	922 × 620 × 1,055	204	93
DVNA300A400	300	509.7	460/3/60	2" NPT	1.87	R513A	38.2 × 24.4 × 48.7	971 × 620 × 1,237	252	115
DVNA400A400	400	679.6	460/3/60	2" NPT	1.99	R513A	38.2 × 24.4 × 48.7	971 × 620 × 1,237	279	127
DVNA500A400	500	849.5	460/3/60	2" NPT	2.70	R513A	38.2 × 24.4 × 48.7	971 × 620 × 1,237	328	149
DVNA600A400	600	1,019.4	460/3/60	2" NPT	3.01	R513A	38.5 × 26.1 × 48.7	978 × 663 × 1,237	467	212
DVNA800A400	800	1,359.2	460/3/60	3" FLG	4.18	R513A	64.6 × 34.9 × 49.2	1,641 × 887 × 1,250	836	380
DVNA1000A400	1,000	1,699.0	460/3/60	4" FLG	5.73	R513A	68.9 × 34.9 × 49.2	1,751 × 887 × 1,250	889	404
DVNA1200A400	1,200	2,038.8	460/3/60	4" FLG	6.69	R513A	68.9 × 34.9 × 53.1	1,751 × 887 × 1,349	961	436

Maximum Inlet Air Temperature: 120°F (49°C) Maximum Operating Pressure: 250 psig (Models DVNA25-50), 232 psig (Models DVNA75-500).
Above conditions tested at 100°F inlet air temperature, 100% saturated inlet air, 100 psig operating pressure and 100°F ambient air temperature.

OPERATING CONDITIONS

MODEL	MAX INLET AIR PRESSURE		MIN INLET AIR PRESSURE		MAX INLET AIR TEMPERATURE		MIN INLET AIR TEMPERATURE		MAX AMBIENT AIR TEMPERATURE		MIN AMBIENT AIR TEMPERATURE	
SCFM	PSIG	BARG	PSIG	BARG	°F	°C	°F	°C	°F	°C	°F	°C
5-10 to 50	250	17	30	2	120	49	40	4	110	43	45	7
75-500	232	16	10	1	120	49	40	4	110	43	45	7
600-1200	232	16	43	3	120	49	45	7	110	43	34	1

*Premium
Warranty*

2 Years—Standard
3 Years—Extended
5 Years—Total

Parts and
labor included.
Contact your
local distributor
for more details.



Sustainable Energy Saving Solutions

DV Systems is a place where innovation is constant and the real-world needs of our customers are understood. We transform market-inspired ideas into actioned solutions enabling our global customers to meet their sustainability goals and thrive in a complex, ever-changing marketplace.

Utilizing the latest advancements in heat transfer technology, DVEA Series refrigerated dryers deliver reliable, energy-efficient moisture removal across a 75–2000 SCFM range using low GWP refrigerants (R513A or R454C).

The DVEA Series with Phase Change Material Thermal Storage

The DVEA Series uses Phase Change Material (PCM) to transfer heat energy through a change of state. As the PCM shifts between solid and liquid, its temperature remains constant, known as latent heat transfer. A temperature probe monitors the media and automatically engages the refrigeration compressor to power on or off based on inlet load conditions. Because the PCM stores and releases heat energy without a change in temperature, the refrigerant compressor cycles less frequently, reducing energy use while maintaining a stable dew point.

The DVEA Series requires fewer components than conventional cycling designs and no circulation pump, storage tank, or glycol-to-refrigerant heat exchanger required. All cooling is accomplished within a compact stainless steel brazed plate heat exchanger integrated with PCM thermal storage.

The PCM is non-toxic, never requires replacement, and maintains its thermal properties regardless of age. In the frozen state, it will not thermally expand, preserving the long-term integrity of the heat exchanger assembly.

Energy Saving Sustainability

The DVEA Series lowers air system power costs and improves productivity by matching power consumption to compressed air demand.

In a typical manufacturing facility, up to 30% of electricity consumed is for generating and treating compressed air. To reduce total cost of operation and qualify for utility company incentive programs, proper air treatment equipment selection and application is required.

Load Matching Performance

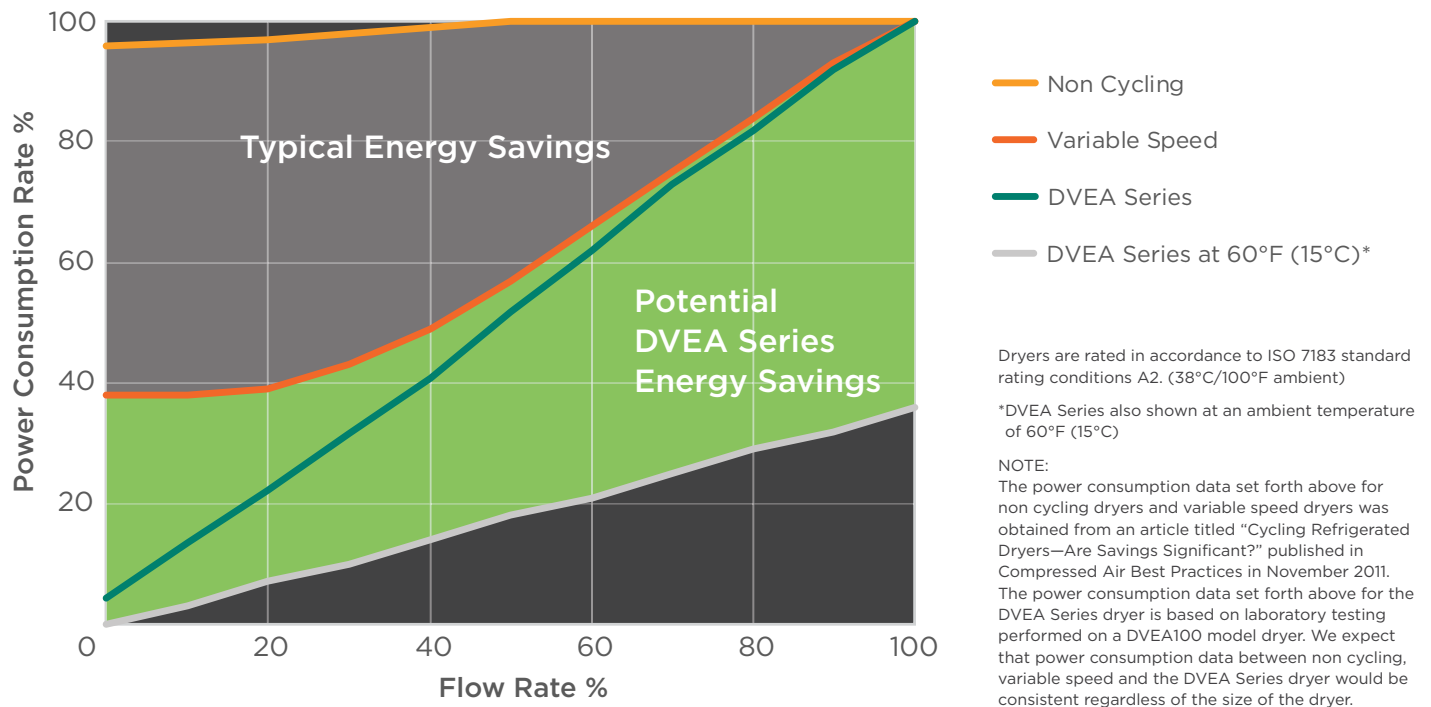
Compressed air load profiles in most manufacturing facilities fluctuate. The DVEA Series provides cost-effective energy savings by matching electrical power consumed in direct proportion to air demand. Linear load matching is achieved from 0% up to 100% demand.

Non-cycling dryers operate with the refrigeration compressor running continuously, regardless of inlet load conditions. Minimal energy savings are realized from 100% down to 0% inlet air load.

Linear Energy Savings

DVEA Series dryers automatically power (on/off) the refrigeration compressor in response to inlet load conditions. As the inlet air load is reduced, the power requirement to dry the air is matched in proportion to the demand. For example, at 60% inlet air load, a non-cycling dryer consumes 96% of the full load power consumption, a 4% energy savings. By comparison, at 60% inlet air load, the DVEA Series consumes only 60 % of the full load power, a 40% energy savings.

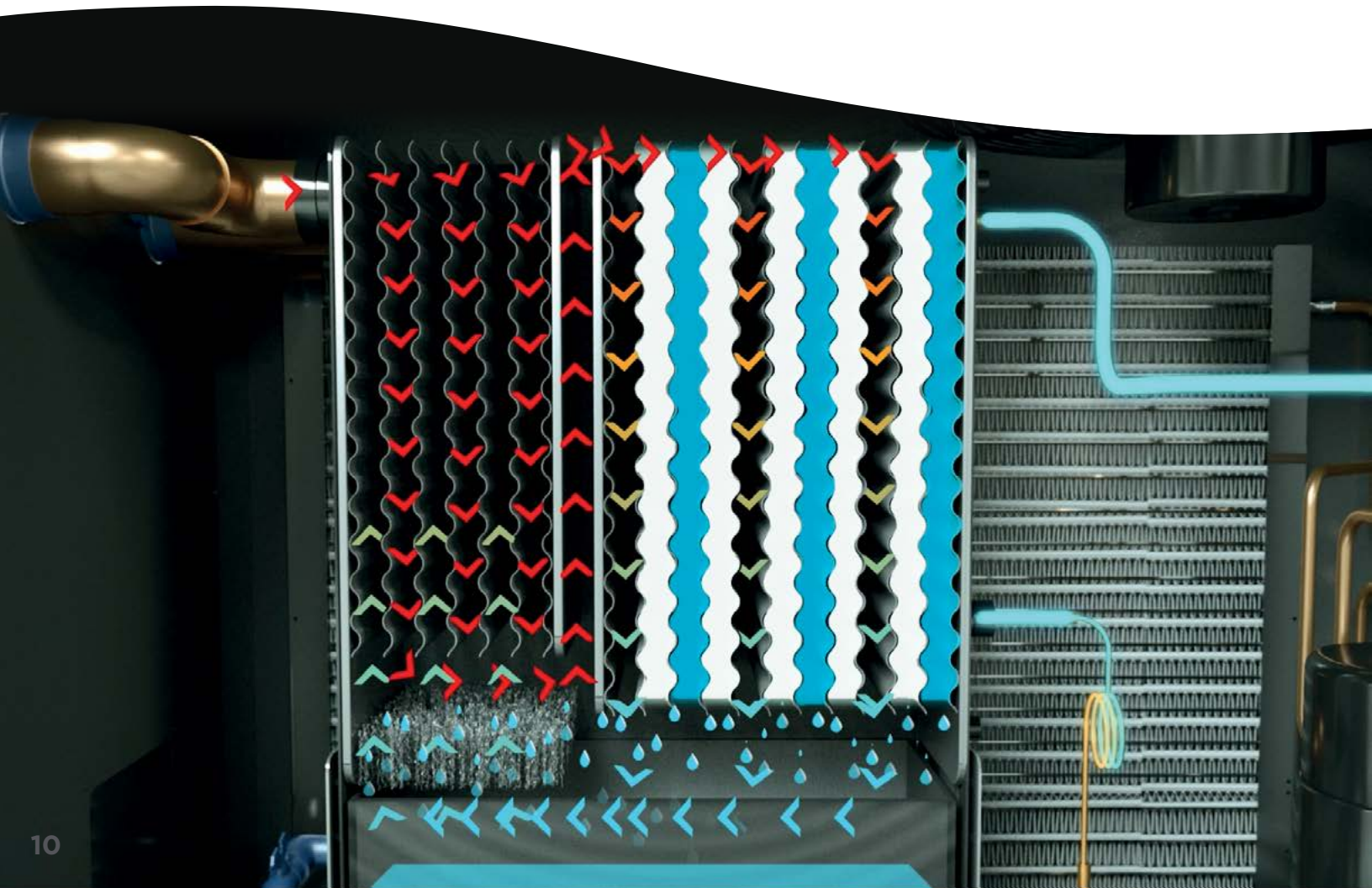
ENERGY SAVINGS COMPARISON



DVEA SERIES

How It Works

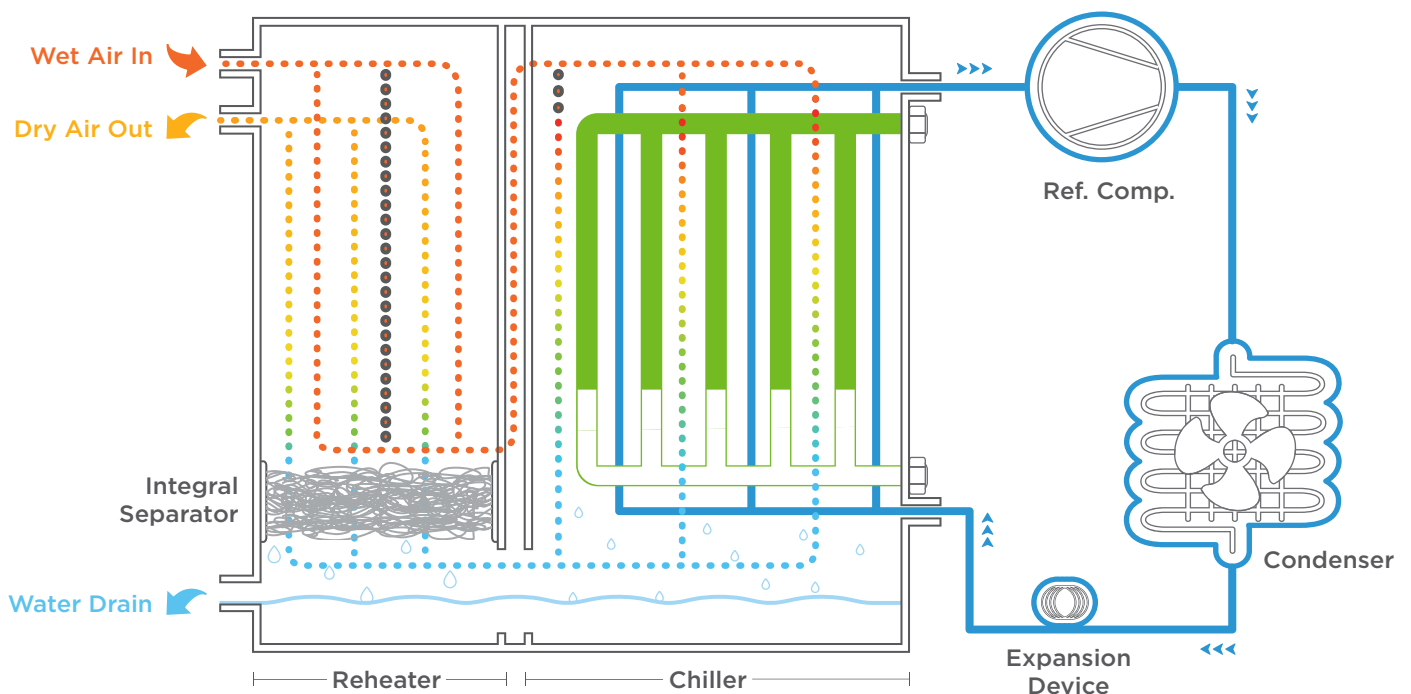
- 1** The DVEA Series utilizes an ESS that allows for heat to transfer medium between the refrigeration and compressed air circuits that serves as a reservoir for thermal storage.
- 2** The thermal reservoir is comprised of a stainless steel brazed plate heat exchanger filled with a media that efficiently transfers heat energy through a “change of state”.
 - Thermal Change: changing from liquid to solid back to liquid in a continuous cycle.
- 3** The refrigeration circuit operates to cool down the medium until it forms into a solid at which time the refrigeration system powers off.
 - Thermal Change: changing from liquid to solid back to liquid in a continuous cycle.



4 As the compressed air enters the ESS, the media absorbs heat from the airstream and begins to melt the media at a constant temperature.

5 When most of the media has turned to liquid the refrigeration system powers on to again cool down the media turning it back into a solid.

6 This process repeats as required to meet the corresponding compressed air load on the DVEA Series dryer.



Better by Design

DVEA Energy Saving Series 75-2000 scfm

The DVEA Series is the ideal solution to reliably and economically dry compressed air using low-GWP refrigerants (R513A or R454C). The innovative technology does not require a recirculating pump and associated piping. This results in a simpler, more energy efficient design.

- 1** Stainless steel brazed plate 3-in-1 heat exchanger, with Energy Saving System
 - The PCM thermal reservoir operates at a precise temperature to deliver a stable pressure dew point
 - Smooth, non-fouling stainless steel surfaces promote low resistance to flow, optimizing air system efficiency
- 2** No-air-loss, demand drain efficiently removes condensate without loss of compressed air
 - Condensate drain lines terminate at discharge connections conveniently located on the side of the dryer
 - Failure-to-discharge alarm on the operator interface enhances system reliability
- 3** High-efficiency, up-flow aluminum air-cooled condenser
 - Pulls ambient air through the condenser and releases out the top of the dryer condenser
 - Provides cooler condensing air and greater efficiency

- 4** Reliable, semi-hermetic refrigerant compressor
 - Low-GWP refrigerants (R513A or R454C) for reduced environmental impact
 - Rugged design, for long-term operation
- 5** Controller with LCD display provides ease-of-monitoring and operating status
 - DVEA75-DVEA200
 - On/Off switch
 - Energy Saving and Dew Point Level Display
 - Dryer / Ref. Compressor Operating Light
 - Dry Alarm Contact
 - DVEA300-DVEA550
 - All features above, plus:
 - RS-485 Communication Port
 - DVEA800-DVEA2000
 - All features above, plus:
 - High Pressure Sensor
 - Temperature Sensor
 - RDS Sensing



Simple
Reliable
Energy Efficient





Premium Warranty

2 Years—Standard

3 Years—Extended

5 Years—Total

Parts and labor included.
Contact your local distributor for more details.

DVEA SERIES PRODUCT SPECIFICATIONS

Dryer Model	Inlet Flow		Pressure Drop	Voltage	In/Out Connections	Power Consumption	Refrigerant	Dimensions H x W x D		Weight	
	SCFM	NM³/H	PSI			kW		In	MM	LBS	KG
Air-Cooled Condenser											
DVEA75A100	75	127.4	3.4	115/1/60	1" NPT	0.48	R513A	32.3 x 18.5 x 27.9	821 x 470 x 709	148	68
DVEA100A100	100	169.9	2.9	115/1/60	1" NPT	0.60	R513A	35.0 x 18.5 x 34.6	889 x 470 x 879	168	77
DVEA150A100	150	212.4	1.8	115/1/60	2" NPT	1.11	R513A	36.6 x 21.7 x 40.6	930 x 552 x 1,032	240	109
DVEA200A400	200	339.8	2.3	460/3/60	2" NPT	1.28	R513A	36.6 x 21.7 x 42.9	930 x 552 x 1,090	269	122
DVEA300A400	300	509.7	2.1	460/3/60	2" NPT	1.86	R513A	42.5 x 23.6 x 48.8	1,080 x 600 x 1,240	353	161
DVEA450A400	450	764.6	3.0	460/3/60	2" NPT	2.75	R513A	47.2 x 23.6 x 54.3	1,199 x 600 x 1,380	443	201
DVEA550A400	550	934.4	3.3	460/3/60	2" NPT	2.91	R513A	47.2 x 23.6 x 54.3	1,199 x 600 x 1,380	474	215
DVEA800A400	800	1,359.2	4.4	460/3/60	3" FLG	4.90	R454C	53.5 x 63.5 x 27.6	1,359 x 1,613 x 701	1,012	459
DVEA1000A400	1,000	1,699.0	4.3	460/3/60	3" FLG	5.70	R454C	53.5 x 63.5 x 27.6	1,359 x 1,613 x 701	1,135	515
DVEA1250A400	1,250	2,123.8	4.6	460/3/60	4" FLG	7.60	R454C	59.4 x 63.5 x 27.6	1,509 x 1,613 x 701	1,290	586
DVEA1500A400	1,500	2,548.5	5.3	460/3/60	6" FLG	7.70	R454C	87.9 x 90.8 x 33.9	2,233 x 2,307 x 862	2,469	1,120
DVEA2000A400	2,000	3,398.0	5.8	460/3/60	6" FLG	10.10	R454C	87.9 x 90.8 x 33.9	2,233 x 2,307 x 862	2,535	1,150
Water-Cooled Condenser											
DVEA800W400	800	1,359.2	4.4	460/3/60	FLG 3"	3.5	R454C	53.5 x 58.3 x 27.6	1,359 x 1,481 x 701	1,014	460
DVEA1000W400	1,000	1,699.0	4.3	460/3/60	FLG 3"	4.2	R454C	53.5 x 58.3 x 27.6	1,359 x 1,481 x 701	1,149	522
DVEA1250W400	1,250	2,123.8	4.6	460/3/60	FLG 4"	6.1	R454C	59.4 x 58.3 x 27.6	1,509 x 1,481 x 701	1,296	588
DVEA1500W400	1,500	2,548.5	5.3	460/3/60	FLG 6"	6.2	R454C	87.9 x 72.5 x 33.9	2,233 x 1,842 x 862	2,624	1,191
DVEA2000W400	2,000	3,398.0	5.8	460/3/60	FLG 6"	9.3	R454C	87.9 x 72.5 x 33.9	2,233 x 1,842 x 862	2,690	1,221

Performance data presented in accordance with ISO 7183 (Option A2) conditions: 100°F inlet temperature, 100°F ambient temperature and 100 psig conditions.

CAPACITY CORRECTION FACTORS

To adjust the dryer capacity for non-standard conditions, use the Capacity Correction Factors (multipliers) from Tables 1, 2 & 3.

TABLE 1: INLET AIR PRESSURE	75 PSIG 5.2 BAR	100 PSIG 6.9 BAR	120 PSIG 8.3 BAR	150 PSIG 10.3 BAR	225 PSIG 15.5 BAR
MULTIPLIER	0.86	1.00	1.04	1.09	1.15
TABLE 2: INLET AIR TEMPERATURE	80°F / 27°C	90°F / 32°C	100°F / 38°C	110°F / 43°C	120°F / 49°C
MULTIPLIER	1.12	1.06	1.00	0.83	0.68
TABLE 3: AMBIENT AIR TEMPERATURE	80°F / 27°C	90°F / 32°C	100°F / 38°C	110°F / 43°C	120°F / 49°C
MULTIPLIER	1.46	1.23	1.00	0.82	0.68

High Inlet Temperature Refrigerated Compressed Air Dryers



Space-Saving Design for Use with Reciprocating Compressors up to 25 HP

DV Systems specializes in delivering the best air quality for all working environments. Designed to work with reciprocating compressors, the DVHA Series is ideally suited for auto body shops, auto service centers, and light industrial facilities with 5 to 25 horsepower compressors. Now featuring environmentally responsible R513A refrigerant, a low GWP solution that delivers reliable drying performance with reduced environmental impact. A unique heat exchanger allows the dryer to accept high inlet temperatures, up to 200°F (93°C). This allows compressed air users to send high temperature air straight from their compressor directly to the DVHA Series refrigerated dryer. Separate aftercooler and separator installations are no longer necessary. This provides important savings in installation space and installation time. The models match to most reciprocating compressor sizes and can also be easily sized if the compressor already has a tank-mounted air-cooled aftercooler.



15-35 SCFM



60-100 SCFM

DVHA Series Features

- Warm, moist compressed air enters the main pre-cooler/re-heat section where most of the bulk moisture is removed from the airstream. The cooled air then enters the dual heat exchanger assembly where the air is dried down to an average 50°F pressure dewpoint
- Low GWP R513A refrigerant, environmentally responsible alternative to legacy refrigerants
- Adjustable timed electric drain—valve open and closed time—reliably discharges condensate from the dryer
- Widely spaced Inlet/Outlet connections, flow direction stamped into cabinet, for ease of installation and filter mount
- 15-35 SCFM Controls: Instrumentation with lighted compressor On/Off switch, dew point temperature indicator and fault light
- 60-100 SCFM Controls: Advanced microprocessor controller that lets you easily maintain and manage operation
- Top mount fan, upward condenser air flow allows installation in tight spaces
- Quick release front panel for ease of access to dryer internals for routine maintenance

Reduce Overhead Costs

Removing water, solid particulates and oil from your compressed air system has many benefits which all lead to increased productivity and reduced overhead costs.

One typical use for compressed air is for painting. Modern refinish materials and spray guns deliver superior paint finishes. Moisture and oil in the compressed air will result in paint rejects and lead to unnecessary purchases of extra unthinned color-coat paints, thinners and hardeners.

CALCULATE THE COST OF PAINT REJECTS

COST OF LABOR, MATERIALS & THROUGH-PUT DELAYS		PAINT REJECTS PER WEEK × NUMBER OF WEEKS	COST OF PAINT REJECTS
\$150	×	1 × 52	= \$7,800
\$150	×	2 × 52	= \$15,600
\$200	×	1 × 52	= \$10,400
\$200	×	2 × 52	= \$20,800

SPECIFICATIONS

MODEL	FLOW CAPACITY	POWER REQUIREMENTS		IN/OUT CONNECTIONS	REFRIGERANT TYPE**	DIMENSIONS H×W×D		WEIGHT	
	SCFM*	V/PH/HZ	kW	NPT		IN	MM	LBS	KG
DVHA15A100	15	115/1/60	0.48	3/4" MNPT	R513A	29.7 × 14.6 × 16.9	905 × 366 × 610	110	47
DVHA25A100	25	115/1/60	0.51	3/4" MNPT	R513A	29.7 × 14.6 × 16.9	905 × 366 × 610	110	47
DVHA35A100	35	115/1/60	0.64	3/4" MNPT	R513A	29.7 × 14.6 × 16.9	905 × 366 × 610	117	50
DVHA60A100	60	115/1/60	0.61	3/4" FNPT	R513A	30.0 × 16.6 × 22.4	930 × 455 × 679	123	64
DVHA80A100	80	115/1/60	0.77	3/4" FNPT	R513A	30.0 × 16.6 × 22.4	930 × 455 × 679	128	64
DVHA100A100	100	115/1/60	1.16	1" FNPT	R513A	30.0 × 16.6 × 22.4	930 × 455 × 679	132	68

*Rating conditions are 180°F inlet temperature, 125 psig inlet pressure, 100% inlet relative humidity, 100°F ambient temperature.

**Refer to dryer data plate for refrigerant charge.

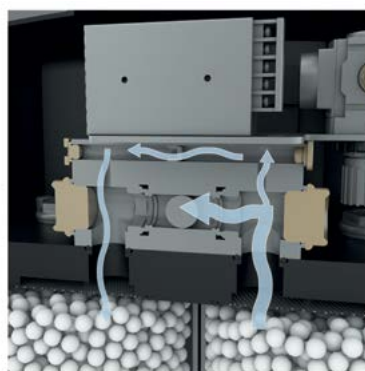
***To ensure optimal performance, do not operate continuously in conditions below or above max/min specifications.

*Premium
Warranty*

2 Years—Standard
3 Years—Extended
5 Years—Total

Parts and
labor included.
Contact your
local distributor
for more details.

DVMLA Series Modular Desiccant Dryers



Improve Air Quality Output, Reduce Operating Costs

Innovative modular air dryers by DV Systems make it easier and more affordable than ever to deliver high-quality compressed air for instrumentation, process equipment, or production lines—virtually wherever it is needed:

- High-efficiency filtration and desiccant bed adsorption provide clean, dry air
- Compact, fully integrated units install at point-of-use, so you pay for drying only the air required
- Conservative pressure drop lowers power costs
- Optional energy management system for larger units reduces purge air during partial loads
- -40°F and -100°F PDP models



Enhance Productivity

Our dryers feature standard ISO Class 2 dewpoint performance, with optional ISO Class 1 to meet the most stringent requirements. This helps prevent corrosion and minimizes production disruptions or losses due to moisture or contamination. And easy on-site maintenance—less than 15 minutes after 12,000 hours of use—gets you back on line quickly.

Extend Performance Reliability

In addition to being efficient, these simple and easy-to-maintain modular dryers are also an excellent long-term investment:

- Extruded aluminum construction with Alocrom and epoxy painting prevents corrosion
- Compact, modular designs have few moving parts
- Proven, reliable electronic controls, with control panel indication for preventive maintenance, help ensure long-lasting performance
- Warranty coverage you can trust: 12 months from start up or 18 months from shipment

Promote Environmental Safety

Because noise levels (<75 dB) are so low, DV Systems modular dryers can be installed right in the work environment. In addition, the dryer's remote exhaust feature offers further enhanced noise suppression. These refrigerant-free units are also designed with a NEMA 1 enclosure and in accordance with ASME, PED, CSA, UL, and CRN standards.

SPECIFICATIONS: DVMLA SERIES | MODULAR AIR DRYERS

MODEL	CAPACITY		INLET/OUTLET CONNECTION	MAX. PRESSURE		DIMENSIONS W × D × H		WEIGHT	
	SCFM	M ³ /HR		PSIG	BARG	INCHES	MM	LB	KG
DVMLA3	3	5	3/8"	203	14	9.4 × 8.3 × 16.7	238 × 212 × 423	24.2	11
DVMLA9	9	15	3/8"	203	14	9.4 × 8.3 × 32.4	238 × 212 × 823	39.7	18
DVMLA15	15	25	3/8"	203	14	9.4 × 8.3 × 42.2	238 × 212 × 1,073	59.5	27
DVMLA24	24	40	3/4"	203	14	18.7 × 15.9 × 38.1	475 × 405 × 968	97.0	44
DVMLA32	32	55	3/4"	203	14	18.7 × 15.9 × 44.0	475 × 405 × 1,118	110.2	50
DVMLA41	41	70	3/4"	203	14	18.7 × 15.9 × 51.9	475 × 405 × 1,318	132.2	60
DVMLA59	59	100	1"	203	14	18.7 × 15.9 × 65.9	475 × 405 × 1,673	160.9	73
DVMLA88	88	151	1"	203	14	18.7 × 15.9 × 73.7	475 × 405 × 1,873	198.4	90
DVMLA118	118	200	1 1/2"	203	14	21.1 × 19.5 × 67.1	536 × 495 × 1,705	390.1	177
DVMLA147	147	251	1 1/2"	203	14	21.1 × 19.5 × 75.0	536 × 495 × 1,905	396.7	180
DVMLA177	177	300	1 1/2"	203	14	21.1 × 19.5 × 75.0	536 × 495 × 1,905	414.4	188

DVMLA Benefits

- Minimize contaminants, corrosion, energy use
- Reduce costs by treating only the air you need
- Deliver quiet performance on the spot
- Sustain high efficiency with easy maintenance





DVMLA Series
for Your Critical Applications

World Class Filtration



DVF Series Filters provide your compressed air system with premium quality filtration for the three typical contaminant types:

- 1** Solid particles come from ambient air contaminants like dust and from rusted, oxidized pipework. They will cause pneumatic equipment to malfunction, cause instrument and control failures, and contaminate end products.
- 2** Condensed water droplets come from the humidity in ambient air. Water will oxidize pipework and pneumatic equipment, ruin paint finishes and end products.
- 3** Liquid oil and oil vapors are introduced by compressor lubricants and by hydrocarbon vapors present in ambient air. Oil-free compressed air is particularly important in food and pharmaceutical processes.

International Standards for Test & Measurement

ISO 12500 defines a universal method for manufacturers to test and rate compressed air filters. Critical performance parameters are specified for inlet oil challenge and solid particulate size distribution.

- ISO 12500-1 defines the testing of coalescing filters for oil aerosol removal performance.
- ISO 12500-2 quantifies vapor removal capacity of adsorption filters.
- ISO 12500-3 outlines requirements to test particulate filters for solid contaminant removal.

The DVF Series is tested to ISO 12500. Test results provide certifiable performance data based on defined challenge concentrations.

DVF SERIES FILTRATION PERFORMANCE

ELEMENT GRADE	S	DP	GP	HE	AC
Particle Retention Size² (Per ISO 12500-3)	3.0 µm	1.0 µm	0.01 µm	0.01 µm	0.01 µm
Particle Removal Efficiency (Per ISO 12500-3)	—	99.999+%	99.999+%	99.9999+%	99.999+%
Oil Removal Efficiency (Per ISO 12500-1)	50%	80%	99.9+%	99.99+%	—
Remaining Oil Content² (Per ISO 12500-1)	5.0 mg/m ³	2.0 mg/m ³	< 0.01 mg/m ³	< 0.001 mg/m ³	< 0.004 mg/m ³ (as a vapor)

¹ Solid particulate size distribution 0.01 to 5.0 µm; ² Inlet oil challenge concentration 10 mg/m³

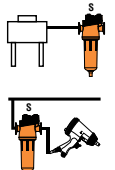
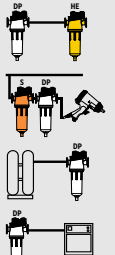
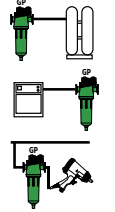
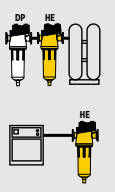
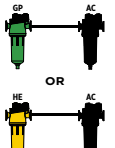
Total System Protection

The DVF Series provides protection for the entire compressed air system. A wide range of filters exceeds customer requirements for ISO Quality Class performance, service life and optimal energy savings.

Compressed air contamination exists in three states: solid, liquid and gaseous.

- Ingested contaminants appear in the form of water, hydrocarbons and particulates.
- The compression process introduces lubricant and wear particles into the system.
- Piping distribution and storage tanks foster contaminants in the form of rust, pipe scale and bacteria.

DVF SERIES ELEMENT SPECIFICATIONS

ELEMENT GRADE	DESCRIPTION	ISO PERFORMANCE DATA	WHERE APPLIED
 Grade S Bulk Liquid Separator/Filter	Separator/filter removes bulk liquid and solids.	■ Removes solids 3 micron and larger ■ Remaining oil content 5 mg/m³ ISO 8573.1: 2009 Air Quality Class: ■ Solid Particles - Class 3 ■ Remaining Oil Content - Class 5	■ Downstream of aftercoolers ■ At point-of-use if no aftercooler/separator installed upstream 
 Grade DP General Purpose Filter	General purpose filtration to protect pneumatically operated tools, motors and cylinders.	■ Removes solids 1.0 micron and larger ■ Remaining oil content 2.0 mg/m³ ISO 8573.1: 2009 Air Quality Class: ■ Solid Particles - Class 2 ■ Remaining Oil Content - Class 4	■ Upstream of ultra high efficiency oil removal filters ■ At point-of-use if aftercooler/separator installed upstream ■ Downstream of heatless desiccant dryers ■ Upstream of refrigerated dryers 
 Grade GP High Efficiency Oil Removal Filter	Fine coalescer provides oil free air for industrial applications such as spray painting, injection molding, instrumentation and control valves.	■ Removes 99.999+% of solids 0.01 micron and larger ■ Remaining oil content <0.01 mg/m³ ISO 8573.1: 2009 Air Quality Class: ■ Solid Particles - Class 1 ■ Remaining Oil Content - Class 1	■ Upstream of desiccant dryers ■ Downstream of refrigerated dryers ■ At point-of-use if aftercooler/separator installed upstream 
 Grade HE Ultra High Efficiency Oil Removal Filter	Ultra fine coalescer delivers oil free air for critical applications including, conveying, electronics manufacturing and nitrogen replacement.	■ Removes 99.9999+% of solids 0.01 micron and larger ■ Remaining oil content <0.001 mg/m³ ISO 8573.1: 2009 Air Quality Class: ■ Solid Particles - Class 1 ■ Remaining Oil content - Class 1	■ Upstream of desiccant dryers ■ Upstream of membrane dryers (Use a PF Grade as a prefilter if heavy liquid loads are present) ■ Downstream of refrigerated dryers 
 Grade AC Oil Vapor Removal Filter	Activated carbon filter removes oil vapor and provides oil free air for food and drug manufacturing, breathing air and gas processing.	■ Removes solids 0.01 micron and larger ■ Remaining oil content <0.004 mg/m³ (as a vapor) ISO 8573.1: 2009 Air Quality Class: ■ Solid Particles - Class 1 ■ Remaining Oil Content - Class 1	■ Downstream of high efficiency oil removal filters 

Patented Venturi-Wave™ Element



1 Patented Filter Element Design

- The venturi profile promotes a turbulent-free transition for compressed air entering the element
- Optimized flow distribution through the element minimizes pressure loss and reduces system operating cost
- Unique backside contour assists smooth movement of air exiting the filter housing

2 Deep Bed Pleated, High Performance Media

- Increased effective filtration surface area, reduces pressure drop by 50%
- 96% voids-volume ratio optimizes dirt loading capacity
- HEPA grade micro fiberglass media maximizes efficiency
- Thermally bonded polyester support layers minimize media migration
- Low wetted pressure drop for the life of the element
- Seam welded, stainless steel inner and outer support cores enhance dimensional stability of the element
- Chemically inert, non-aging polyester drain layer expedites removal of liquid
- All materials of construction are silicone free

3 Element Grade Identification

- Color coded end caps promote ease of element grade identification
- Bottom end caps pad printed with genuine DV Systems filter element replacement part number

ELEMENT: MATERIALS OF CONSTRUCTION

Filter Media	HEPA grade borosilicate fiberglass
Inner/Outer Support Cores	400 Series stainless steel
Drainage Layer	Filtration grade polyester
End Caps	Fiberglass reinforced polyamide resin
Bonding Agent	Polyurethane
End Cap Seal	Nitrile

Optimized Housing Design

4 Sculpted Design

- Covers flow ranges 20 scfm to 1500 scfm (34 to 2549 nm³/h)
- Flanged inlet and outlet connections make installation easy
- Thirteen flow models, with multiple port sizes, 1/4" to 3" NPT, allow for greater application flexibility
- Sculpted housing designs, with large unrestricted flow paths, reduce pressure drop

5 Safety Built-In

- Die cast aluminium housings provide a cost effective solution in the 1030 to 1500 scfm (1750 to 2549 nm³/h) flow range
- Chromated housings, with a polyester epoxy powder coating for corrosion resistance
- Internally ribbed bowls facilitate condensate draining
- Audible alarm when attempting bowl removal under pressure

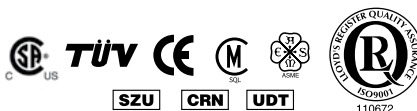
HOUSING: MATERIALS OF CONSTRUCTION

Filter Head	Aluminum
Filter Housing	Aluminum
Seals	Nitrile
Chromating Process	Hexavalent-free trivalent
Exterior Coating	Polyester epoxy powder
Manual Drain	Brass body, Viton® seal
Internal Float Drain	Polyacetal float, Brass body, Viton® seal and stainless steel springs

NOTE: Images representative of 20-1500 SCFM filters.

Comply with Pressure Vessel Directives Worldwide

DVF Series Filters utilize housings which conform to most major pressure vessel directives in the Americas, Europe, and Asia.



*Standard
Warranty*

12 Months from Start-up

18 Months from Date
of Shipment

Parts only.
Contact your
local distributor
for more details.

ISO QUALITY CLASS 8573.1: 2010

ELEMENT GRADE	ISO QUALITY CLASS SOLIDS	ISO QUALITY CLASS OIL
S	3	5
DP	2	4
GP	1	1
HE	1	1
AC	1	1 (as a vapor)



DVF series elements are performance validated to ISO12500 ensuring air quality delivered is in accordance to ISO 8573.1: 2010 classifications.

AIR QUALITY CLASS	SOLID PARTICLES			WATER VAPOR PRESSURE		OIL	
	MAXIMUM NUMBER OF PARTICLES PER M ³			DEW POINT		TOTAL OIL CONCENTRATION: AEROSOL, LIQUID & VAPOR	
	0.10-0.5 MICRON	0.5-1.0 MICRON	1.0-5.0 MICRON	°C	°F	MG / M ³	PPM W/W
0	As specified by the equipment user or supplier and more stringent than class 1						
1	≤20,000	≤400	≤10	≤-70	≤-94	0.01	0.008
2	≤400,000	≤6,000	≤100	≤-40	≤-40	0.1	0.08
3	-	≤90,000	≤1,000	≤-20	≤-4	1	0.8
4	-	-	≤10,000	≤+3	≤+37	5	4
5	-	-	≤100,000	≤+7	≤+45	-	-

DVF SERIES PRESSURE DROP PERFORMANCE*

ELEMENT GRADE	FILTER DESCRIPTION	DRY ΔP		WETTED ΔP	
		PSIG	BAR	PSIG	BAR
 S	Bulk Liquid Separator/Filter	0.8	0.06	1.0	0.07
 DP	General Purpose Filter	0.6	0.04	1.4	0.10
 GP	High Efficiency Oil Removal Filter	0.6	0.04	1.8	0.12
 HE	Ultra High Efficiency Oil Removal Filter	0.8	0.06	2.0	0.14
 AC	Oil Vapor Removal Filter	1.0	0.07	-	-

*Pressure drop not to exceed stated values at ISO 12500 test conditions

SPECIFICATIONS

MODEL	CAPACITY		CONNECTIONS	STANDARD FEATURES		MAX PRESSURE PSIG [BAR] & TEMP °F (°C)	DIMENSIONS				WEIGHT		ELEMENT - LESS GRADE	
	@ 100 PSIG		NPT/ ANSI FLG.	FILTER GRADES			HEIGHT		WIDTH					
	SCFM	NM³/ HR					IN	MM	IN	MM				
MODULAR TYPE HOUSINGS														
DVF20	20	34	1/4" NPTF	D P1		250 psig /17.2 bar 150°F /66°C	8.10	206	4.50	114	1.8	1	DVF20	1
DVF35	35	59	3/8" NPTF	D P1			8.10	206	4.50	114	1.8	1	DVF35	
DVF50	50	85	½" NPTF	D P1			9.90	251	4.50	114	1.9	1	DVF50	
DVF75	75	127	3/4" NPTF	D P1			10.30	262	5.20	132	3.1	2	DVF75	
DVF103	103	175	3/4" NPTF	D P1			10.30	262	5.20	132	3.1	2	DVF103	
DVF157	157	267	1" NPTF	D G1			12.80	325	5.20	132	3.5	2	DVF157	
DVF257	257	437	1½" NPTF	D G1			13.30	338	7.90	201	8.4	4	DVF257	
DVF360	360	612	1½" NPTF	D G1			17.10	434	7.90	201	10.0	5	DVF360	
DVF401	401	681	2" NPTF	D G1			22.30	566	7.90	201	12.0	6	DVF401	
DVF584	584	993	2½" NPTF	X G1			24.90	632	9.10	231	19.0	9	DVF584	
DVF775	775	1,317	2½" NPTF	X G1			24.90	632	9.10	231	19.0	9	DVF775	
DVF1030	1,030	1,750	3" NPTF	X G1			24.90	632	9.10	231	19.0	9	DVF1030	
DVF1200	1,200	2,039	3" NPTF	X G1			32.20	818	9.10	231	28.0	13	DVF1200	
DVF1500	1,500	2,549	3" NPTF	X G1			42.70	1,245	9.10	231	41.0	19	DVF1500	
PRESSURE VESSEL														
DVF2500	2,500	4,247	4" FLG.	T G1		225 psig /15.5 bar 150°F /66°C	52.25	1,327	20.00	508	179	82	DVF2500	4
DVF3125	3,125	5,309	4" FLG.	T G1			52.25	1,327	20.00	508	182	83	DVF3125	5
DVF5000	5,000	8,495	6" FLG.	T G1			54.63	1,387	24.00	610	271	123	DVF5000	8
DVF6875	6,875	11,681	6" FLG.	T G1			62.56	1,589	28.00	711	518	235	DVF6875	11
DVF8750	8,750	14,866	6" FLG.	T G1			62.56	1,589	28.00	711	527	239	DVF8750	14
DVF11875	11,875	20,176	8" FLG.	T G1			69.13	1,756	33.00	838	709	322	DVF11875	19
DVF16250	16,250	27,690	8" FLG.	T G1			67.94	1,726	39.00	991	918	416	DVF16250	26
DVF21250	21,250	36,104	10" FLG.	T G1			70.94	1,802	45.88	1,165	1,412	640	DVF21250	34

(1) Drain plugs standard. Externally mounted automatic drains are available.

D - Internal Automatic Drain, G1 - Differential Pressure Gauge, P1 - Differential Pressure Slide, T - Drain Plug, X - External Drain Adapter

SIZING CORRECTION FACTORS

To find the maximum flow at pressures other than 100 psig [7 kgf/cm²], multiply the flow by the Correction Factor corresponding to the minimum pressure at the inlet of the filter. Do not select filters by pipe size; use flow rate and operating pressure.

EG: DVF360 nominal rated capacity
360 SCFM. Inlet Operating Pressure:
120 PSIG. Corrected filter flow capacity:
360 SCFM × 1.17 = 421.20 SCFM

PSIG	20	30	40	60	80	100	120	150	200	250	300	60*	100*	125*	150*	175*	200*	250*	300*
KG/CM ²	1.4	2.1	2.8	4.1	5.6	6.9	8.3	10.3	13.8	17.2	20.7	4.2	6.9	8.8	10.6	12.3	14.1	17.6	21
CORRECTION FACTOR	0.30	0.39	0.48	0.65	0.83	1.00	1.17	1.44	1.87	2.31	2.74	0.65	1.00	1.22	1.43	1.65	1.87	2.31	2.74

* Denotes correction factor for filters ≥2500 SCFM only.

EG: use correction factor of .48 for all filter sizes @ 40 PSIG, no * denotes common value for all filter sizes

Ecoplus Series Oil-Water Separators

Space-Saving Design for Use with Reciprocating Compressors up to 25 HP

A typical compressed air system will produce thousands of liters of oily, contaminated condensate every year. Environmental regulations strictly prohibit disposing of this condensate without proper treatment to remove the oil.

Traditional solutions for condensate disposal have been to:

- Collect the condensate and have it trucked away periodically by a waste disposal company. This not only requires storage of the hazardous condensate on site, posing a health and safety risk, it is very costly as disposal charges can be high.
- Use a settling tank to separate the oil and water by gravity, then use a carbon filter for the remaining water. Advances in compressor lubricants have made this technology obsolete. Modern compressor lubricants have a specific gravity similar to water and because of this, they form an emulsified oil/water mixture that cannot be separated by gravity.

Other than that, considering that compressor condensate consists of approximately 95% water, it makes financial sense to separate the oil from the condensate prior to the waste is disposed. Our condensate separators work anywhere, anytime, with virtually any condensate, and with any type of drain. Free yourself from outdated water/oil separators that are health hazards, provide limited performance and are costly to operate. Experience the difference of our advanced technology.

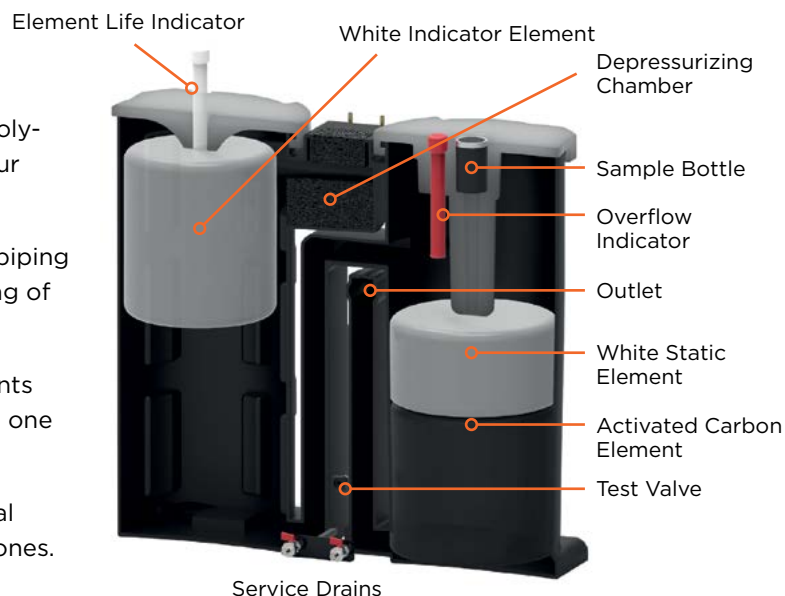
How is Ecoplus made?

The robust rotor-die-casted housing is made from Poly-Ethylene (PE) material and the design is based on our familiar two tower principle.

We apply brass threaded inserts to ensure a secure piping installation without running the risk of easy damaging of the threads, typical when using plastic threads.

Ecoplus models have three high performance elements consisting of two poly-propylene fiber elements and one activated carbon element.

There is an element life indicator offering you a visual guide as to when to replace the elements with new ones.



High performance elements

The clever lubricant adsorbing elements of the Ecoplus are designed to perform in the widest range of applications.

The chosen element fibers have been specially selected and treated to maximize its supreme adsorbing performance.

We have been able to design the Ecoplus elements in to a multistage configuration, offering an increased filtration efficiency and easy servicing procedures.

Ergonomic laws and legislation have been taken into account during the R&D of the elements.

Element life indicator

One unique feature of the EcoPlus separators is the element life indicator. This indicator gives instant visual confirmation of the condition of the elements in the separator and when they need to be replaced.

When the primary white indicator element is new, it floats on top of the water level in the first tower.

As condensate enters the separator over time, the oil becomes adsorbed on the fibres of the polypropylene filter element. This additional weight will cause the element to sink. As it sinks the element life indicator begins to lower.

When the element is fully saturated with oil, the element life indicator will be all the way down. This indicates that it is time to replace all three elements. Contact DV Systems for a comprehensive service kit.



Indicator is up:
element is clean



Indicator at half:
element is half
saturated



Indicator down:
replace element



Main features and benefits

- The depressurizing chamber is filled with a foam filter allowing for complete depressurization of the condensate. The benefit is that any type of drain can therefore be applied.
- Three stages of treatment, two polypropylene adsorbers and a carbon polisher for optimum outlet water quality.
- Strong, corrosion proof cast poly-ethylene construction and brass thread inserts for secure piping connections.
- Element life indicator (white) for confident on-time filter replacement.
- Overflow indicator (red) to prevent a spill in the event of a blockage.
- Multiple lightweight filter elements complying to OSHA lifting regulations.

SPECIFICATIONS

MODEL	FLOW-RATE			MAXIMUM OIL ADSORPTION l	CONNECTIONS		DIMENSIONS W × D × H MM	WEIGHT KG
	m ³ /h	l/min	CFM		BSP (IN)	BSP (OUT)		
ECOPLUS 20	120	2,000	71	2.0	½"	½"	270 × 239 × 251	5
ECOPLUS 45	270	4,500	159	4.5	½"	½"	392 × 199 × 569	10
ECOPLUS 100	600	10,000	353	10.0	½"	1"	670 × 260 × 750	17
ECOPLUS 200	1,200	20,000	706	15.0	½"	1"	800 × 320 × 900	28
ECOPLUS 300	1,800	30,000	1,059	25.0	½"	1"	990 × 400 × 900	42
ECOPLUS 600	3,600	60,000	2,119	50.0	½"	1"	1,150 × 480 × 1,040	78

TECHNICAL DATA

MODELS	OPERATING PRESSURE	AMBIENT TEMPERATURE			
		MIN		MAX	
		°C		°F	
All models	Atmospheric pressure	1.0	33.8	50.0	122.0

Lubricated Rotary
Screw Compressor



Grade DP

QUALITY CLASS

1.6.1

Pneumatic Tools
Spray Painting

QUALITY CLASS

1.4.1

Food & Beverage
Laboratories

QUALITY CLASS

1.2.1 or 1.1.1

Food & Beverage
Laboratories
Semiconductor

Create a Custom Air Treatment System

Wet Air
Receiver



High Temp.
Refrigerated Dryers



Grade GP



Wet Air
Receiver



Refrigerated
Dryers



Grade HE & AC



Wet Air
Receiver



Desiccant
Dryers



Grade AC



Maximize system
air quality by choosing
the combination of
DV Systems air treatment
products which perfectly
match your applications'
requirements.





Sales & Service Distributors Across Canada

An Extensive Network

By leveraging the extensive network of DV Systems factory-trained authorized local distributors, your sales, service, parts and technical support needs can be handled quickly and easily.

To find a distributor visit:
www.dvsystems.com



We manufacture reliable **industrial
compressed air solutions** built to perform in
demanding environments.

FOR MORE INFORMATION VISIT [DVSYSTEMS.COM](https://dvsystems.com)

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