

# WALKER FILTRATION

The ultimate filtration & drying technology



## PROSFD

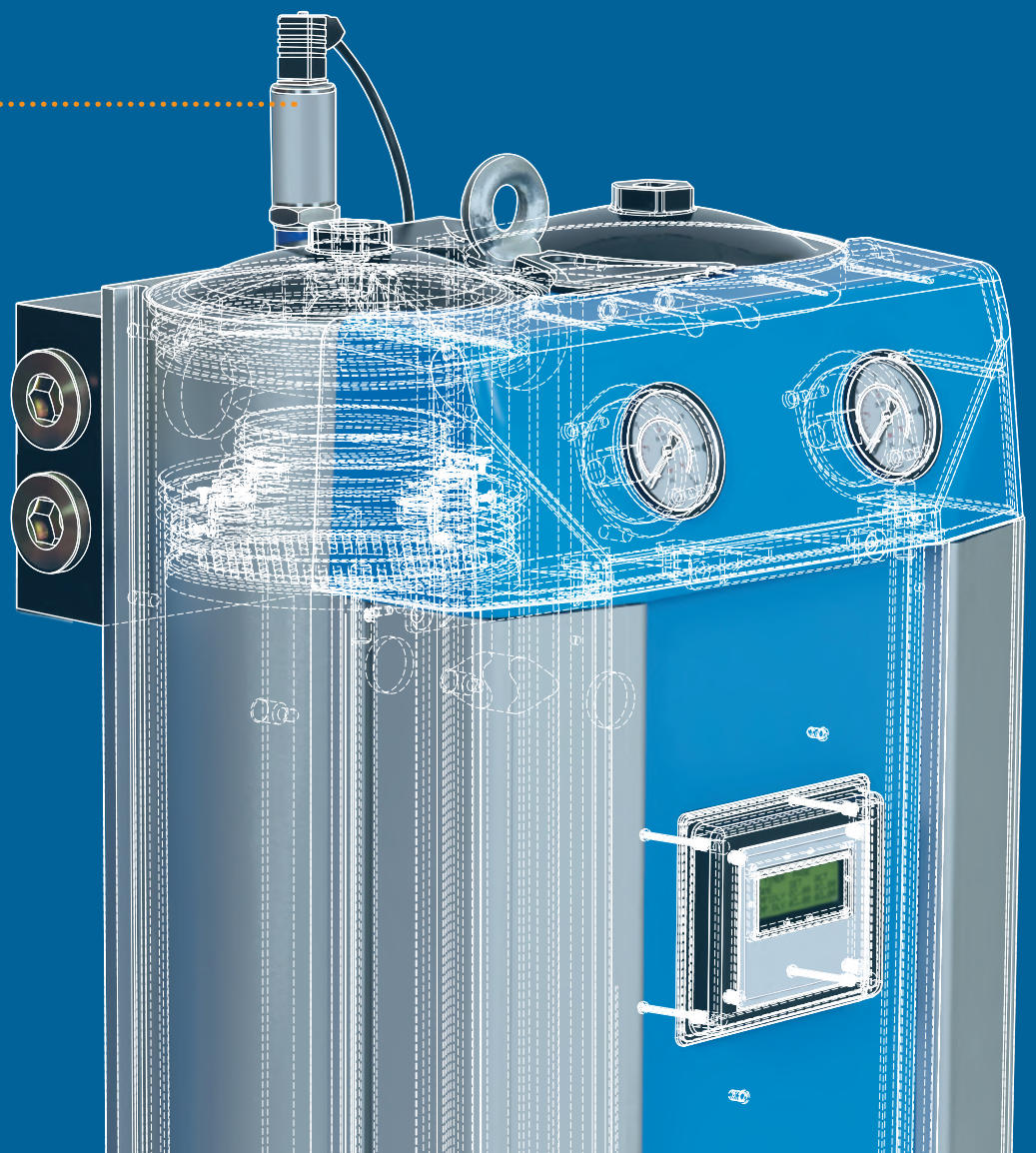
Compressed Air Desiccant Dryer Range

Innovative design. Exceptional engineering. Improved performance.



# PROSFD

Introducing a new generation of Desiccant Dryers  
with optional Dewpoint Management Control



# Whatever the application We have the dryer solution for you



Walker Filtration is one of the leading manufacturers of high efficiency compressed air filtration and drying equipment.

At Walker Filtration we take pride in our world-class reputation for designing, developing, and manufacturing products of superior technical performance. Delivering high quality, well-engineered filtration and drying solutions since 1983, all of our products are designed and manufactured on site at our state of the art 130,000 ft<sup>2</sup> headquarters in the UK.

With a portfolio encompassing both industrial and medical products, our complete product range illustrates the diverse capabilities and expertise of Walker Filtration.

## The Need for Clean and Dry Air

Compressed air is a versatile and important power source. The requirement for a compressed air supply to be clean, dry and contaminant free is crucial to ensuring safe, efficient and profitable operation and manufacturing. Any form of moisture or contamination in a compressed air line has the potential to cause costly downtime, machine damage and product spoilage. The Walker Filtration product range, designed and tested to international air quality standards, ensures that compressed air is delivered contaminant free, to exact specifications, required for the end use.

## Energy Efficiency

Compressed air filtration and drying solutions must deliver uncompromising performance and reliability. Ensuring that a compressed air system delivers the required air quality for the end application is crucial to successful daily operation. The more energy required to produce clean, dry and reliable compressed air, the greater the cost. Therefore, installing and maintaining the correct filtration and drying solutions for your compressed air system is critical to guaranteeing optimum performance and ensuring that energy costs are kept to a minimum.



## The Solution

Walker Filtration's range of PROSFD desiccant dryers deliver optimum performance and provide a compressed air drying solution you can count on. With built in energy saving features across the range, the PROSFD series of heatless regenerative dryers has been designed to incorporate an energy management system which allows the dryers to be linked with a compressor control system to reduce air consumption during periods of low demand – greatly reducing energy consumption and improving energy efficiency.

Optional Dewpoint Management Control, flexible installation and improved serviceability are central to PROSFD's design, as downtime associated with servicing and installation not only effects productivity but also directly impacts upon costs.

The PROSFD range of heatless desiccant dryers delivers uncompromising performance and air quality. Constructed using extruded aluminum towers which are fully anodized for corrosion protection, this distinguished range of high efficiency dryers has been designed and tested to meet the purity classes specified by ISO 8573-1: 2010.

All dryers are built to be fully compliant with international standards and have multiple voltage options, suitable for worldwide installation.



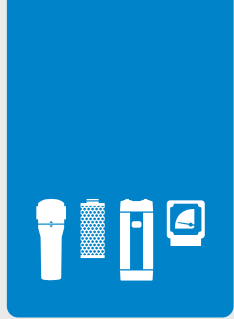


Walker Filtration products can be found in virtually any industry where compressed air is used.





# Applications

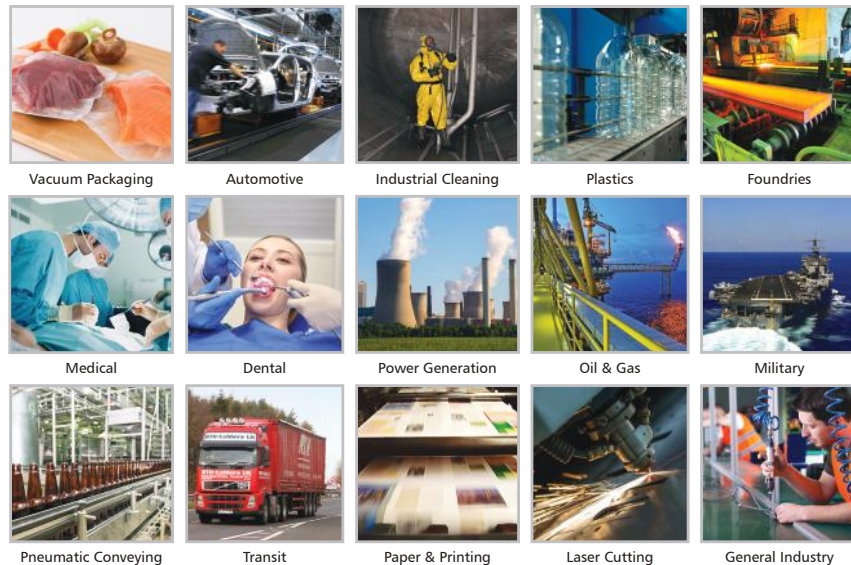


The PROSFD range of desiccant dryers, with 17 models, provides flow rates from 4 to 360 scfm (7 to 612 Nm<sup>3</sup>/hr). This modular series offers a robust and reliable compressed air drying solution.

Designed to suit various applications, the PROSFD range consists of our proven existing low flow models PD004 – PD035, and our new and improved larger flow models PD0046 – PD0360. Utilizing the latest in drying technology, this technically advanced range of highly efficient desiccant dryers delivers a compact solution to moisture removal from compressed air.

Whatever your requirement, PROSFD's exceptional performance can deliver - the features and benefits of PROSFD ensure almost every application need is met.

## High Quality Applications



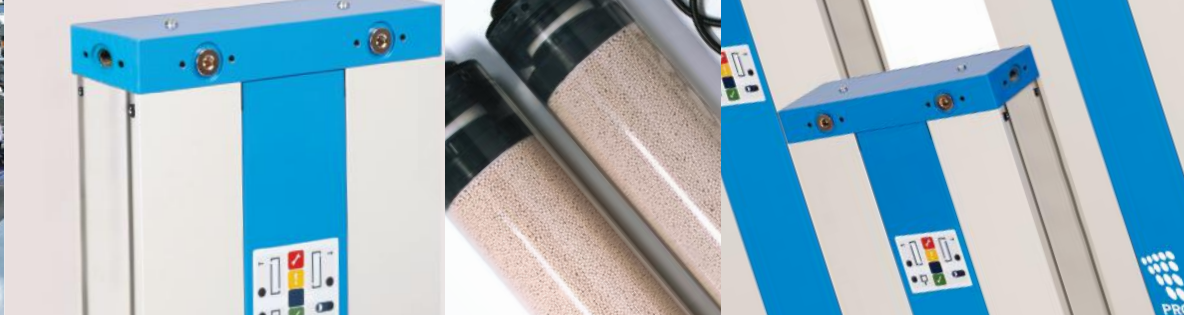
## Critical Applications



Dewpoint temperature	Application
-100°F (-74°C)	Highly critical applications (e.g.) semiconductor industry / electronic industry
-40°F (-40°C)	Effective point of use (e.g.) general industry (standard pressure dewpoint)
-4°F (-20°C)	Specialist use including some breathing air applications



## PROSFD



**With flow rates from 4 – 35 scfm, our range of lower flow PROSFD models provide a proven solution for compressed air drying and are ideal for smaller point of use applications.**

Designed to deliver optimum performance in line with the highest standards of air purity, meeting the quality classes specified in ISO 8573-1: 2010 (see pg.14 for further information on Air Quality Classifications), PROSFD models PD004 to PD035 are supplied as standard with XA grade 0.01 micron coalescing filter.

PROSFD can be installed vertically and horizontally, providing a flexible solution to your compressed air drying needs

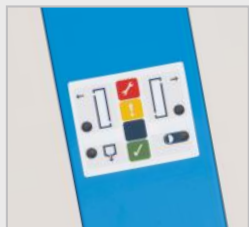
This highly reliable, high efficiency range of dryers is 100% function tested prior to despatch and is supplied with a DIN plug for a fast and efficient installation.



0.01 Micron XA Pre-filter supplied as standard



Internal Silencer



LED Controller supplied as standard



1 Micron X1 Dust Filter integrated into Desiccant Cartridge

## Benefits



**Serviceability** Ease of service is foremost to the PROSFD design - desiccant columns are easily removed, allowing access to desiccant cartridges for quick and efficient change out.

**Reliability** The PD004 – PD035 design incorporates highly reliable 12 VDC solenoid control valves which operate diaphragm exhaust valves. The control valves are set to be 'normally closed', a fail safe that ensures that the dryer will still provide compressed air – even in the event of a power failure.

**Energy Efficient Design** Energy management features are built-in into PROSFD's LED Controller (supplied as standard). The compressor can be linked to the energy management contacts, isolating the purge flow during periods of low demand for efficient use of compressed air.

**LED Controller Supplied as Standard** The PD004-PD035 dryer series come standard with an LED Controller, providing continuous updates on dryer performance via an intelligent built-in central processing unit (CPU). The LED Controller illuminates to alert in the event of low power faults, controller faults, drain valve faults, solenoid failures and when service intervals have been reached. An external alarm process is built-in offering total security and peace of mind.

**Low Cost of Ownership** Walker Filtration's dryers are designed to deliver optimum performance and financial benefits. Features such as an integral electronic drain, service interval indication and integrated condensate management are included in the standard dryer package.

**Universal Power Supply** PROSFD units PD004 to PD035 can recognize any voltage between 100 – 240 VAC, 50 or 60Hz and also any voltage between 12 to 24 VDC. Dryers feature unique multiple inlet and outlet ports enabling both left-hand and right-hand compressed air supply and greater installation flexibility.

**Quiet Operation** Internal Walker Filtration designed silencer to reduce noise levels to below 85 dBA.

**Desiccant Cartridges** Cartridge design includes an internal filtration and controlled desiccant bed geometry ensuring consistent dewpoint performance and simple maintenance.

**Integrated Condensate Management** Essential to maximizing dryer efficiency, condensate management features are supplied as standard with all PD004 to PD035 models. Units are supplied with an integral 12VDC solenoid drain valve which is controlled and operated by the CPU. Two external push-in fittings are provided on the rear panel which can be connected to the drain port of the pre-filter(s).







## NEW - PROSFD



Dewpoint Sensor (DMC)



Adjustable Purge Flow



Pressure Gauges



External Silencer

**The all new, larger flow, PROSFD models feature major design changes to include dewpoint management and provide a superior dryer with exceptional performance.**

Updated with the latest technology and performance enhancing features, models PD0046 to PD0360 are among the most economical and efficient desiccant dryers on the market today.

The new PROSFD range includes performance enhancing features, improved serviceability, and increased dryer efficiency

Larger flow models incorporate new and enhanced features that deliver significant advantages over the competition in terms of performance and reliability. All models carry an IP protection rating of IP65.



## Benefits

**Reduced Service Time** Serviceable parts have been re-designed to allow easier access for significantly reduced service downtime and improved efficiency. Each unit can be serviced without disturbing surrounding pipe-work or drains.

**Energy Efficient Design** From start to finish the new PROSFD models have been designed to incorporate the latest in energy saving features, giving lower lifetime costs and greater savings to the end user. PROSFD models PD0046 to PD0360 come standard with a digital display controller which allows dryer regeneration to be synchronized to compressed air demand, delivering optimized performance efficiencies and significant cost savings.

**Improved Performance** New improved desiccant technology optimizes air velocity through the dryer, resulting in high performance with optimized dewpoint.

**Optimized Purge Rate** Purge rate has also been reduced when compared to previous models - using less air for dryer regeneration equates to increased operating efficiency and greater lifetime savings.

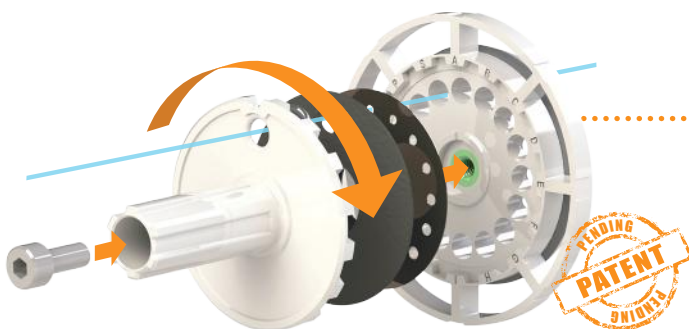
**Flexible Worldwide Installation** Multi-voltage capabilities - IEC 60529 ingress protection code (IP65 Rated). Dryers also feature multiple inlet and outlet ports for greater installation flexibility.

**Quiet Operation** Unique, Walker Filtration designed silencers are fitted externally to reduce noise levels to below 85 dBA.

**Condensate Management** Condensate management is essential to maximize dryer efficiency - a drain valve kit can be purchased alongside PROSFD models PD0046 to PD0360.

**Patent Pending Purge Valve** New unique design offers significant advantages to the user: The purge valve design incorporates multiple orifice sizes enabling the purge rate to be adjusted to suit customer requirement, eliminating the need to buy additional purge plugs and allowing optimal performance to be achieved.

**Compact Design** With a 15% reduction in size, PROSFD models offer significant space saving advantages - allowing for more flexible installation.



Digital Display Controller as standard





# Significantly Reduced Service Time

New PROSFD delivers a technically superior product with dramatically decreased service time – saving valuable time and money in maintenance and servicing. Key features that contribute to easier maintenance are:



## Servicing



**Top Loading Cartridge Design** New, 'easy access' design eliminates the need to remove desiccant columns to change desiccant cartridges. Top Caps are ergonomically designed and desiccant cartridges feature a lifting handle, enabling desiccant cartridges to be changed in minutes.



**Improved Flow Path** Desiccant cartridges are designed to minimize pressure loss and maximize performance.



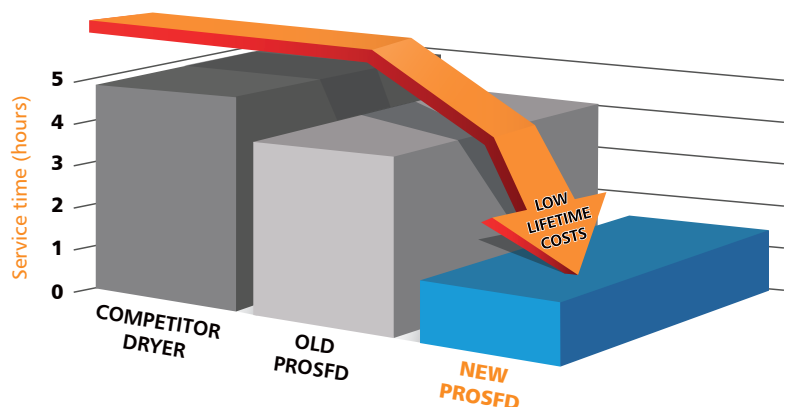
**Unique Purge Plug Design** The new, multi-orifice purge plug can be changed to suit the user requirement in minutes; dramatically reducing service time when compared to previous models.



**External Silencers** Silencers are externally fitted. No panels or extrusions need to be removed, allowing for fast and efficient servicing.



**Exhaust Shuttle and Shuttle Valve Change out** Each exhaust shuttle and shuttle valve can be changed in minutes with standard tools for servicing. No specialist tools are required.







# New Dewpoint Management Control and Monitoring

## Digital Display Controller

The new Digital Display Controller and hygrometer provides the option of additional energy saving features. With our new digital display controller, not only will your dryer come with energy management features, it will also have the ability for advanced dewpoint control with the addition of a dewpoint sensor.

## Multi-Dewpoint Selection

The Digital Display Controller provides access to a dewpoint switch (located on the exterior of the controller enclosure), enabling dewpoint to be set to application requirements. This feature allows users to choose a dewpoint of 4°F, -40°F and -100°F. Please note -100°F dewpoint cannot be achieved without the use of high performance, critical application, desiccant cartridges.

## Purge Control - Set purge to operate within specific dewpoint parameters

When purchased and used in combination with a Hygrometer, the Digital Display Controller enables moisture in the air stream to be monitored and the dryer to automatically isolate purge flow when preset dewpoint parameters are met. This significantly increases energy savings and reduces operating costs as purge cycles are only initiated when it is necessary to regenerate the desiccant bed.

## Dewpoint Selection

Dewpoint switch is located behind the front panel, allowing dewpoint to be set to:

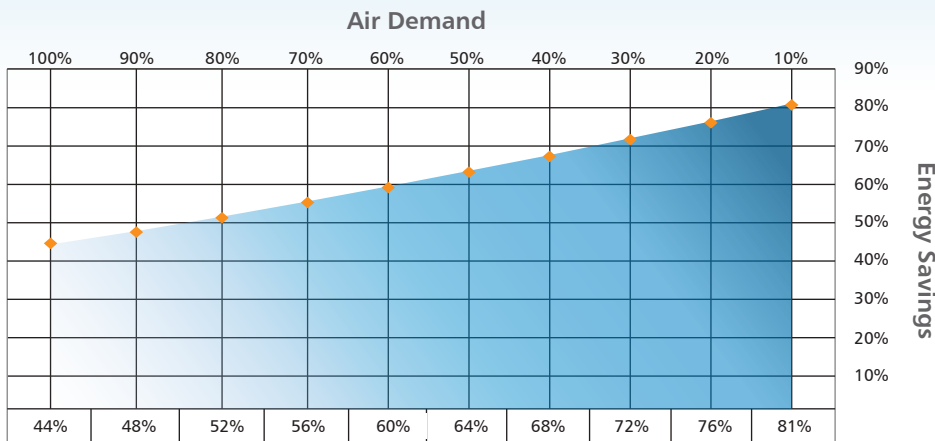
- 4°F (-20°C) (setting 1)
- 40°F (-40°C) (setting 2)
- 100°F (-74°C) (setting 3)

-100°F dewpoint selection must be used in conjunction with high performance critical application desiccant cartridges. For further information on -100°F dewpoint requirements please contact your nearest Walker Filtration sales department.



## DMC Installation Example:-

Utilizing the new dewpoint control system at \$0.07 per kWh - dewpoint management control, would save \$4,349 annually when used with a 360 scfm (612 Nm<sup>3</sup>/hr) heatless dryer operating at 60% load and an inlet temperature of 95°F (35°C) for 6000 hours.



Air Demand (%)	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%
Energy Saving (%)	44%	48%	52%	56%	60%	64%	68%	72%	76%	81%
Energy Saving P/A (KW)	44,416	50,180	54,050	58,032	62,131	66,354	70,705	75,190	78,817	84,591

Savings based upon system flow of 360 scfm (612 Nm<sup>3</sup>/hr) at 100 psig (6.9 barg) inlet pressure and 95°F (35°C) inlet temperature.

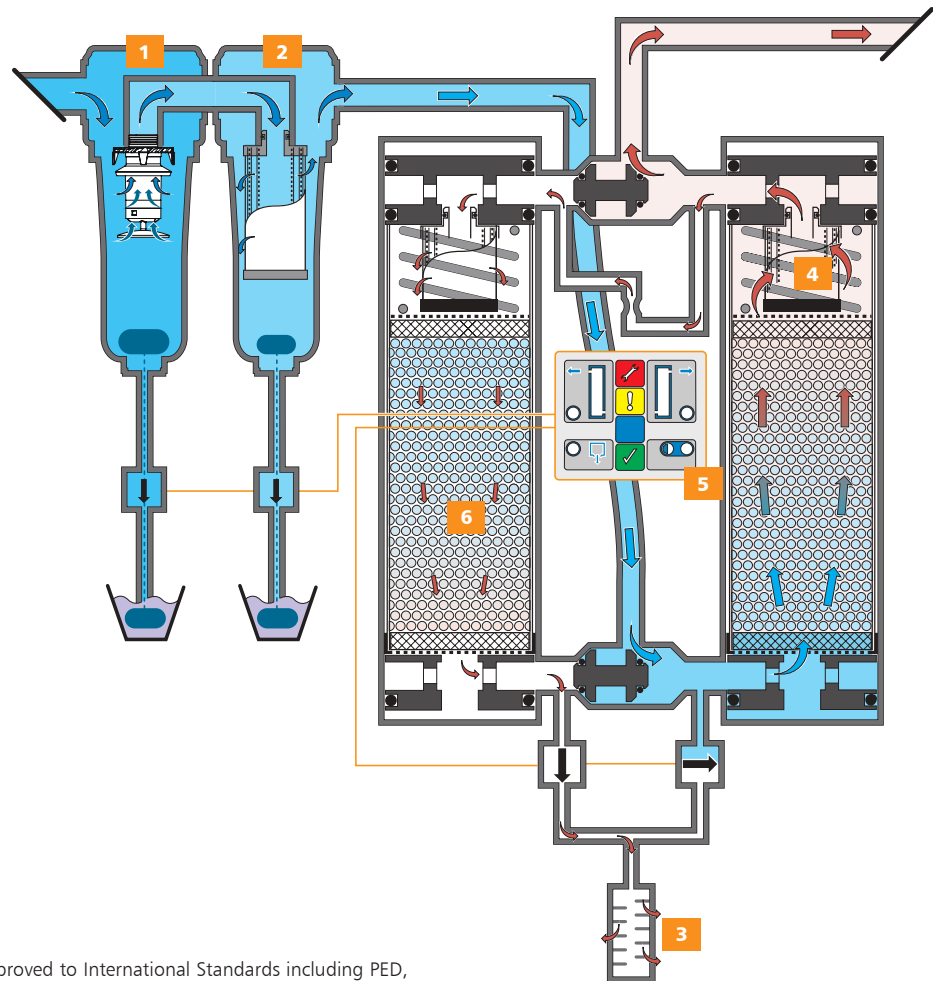
**OPTIONAL DMC CONTROLLER DELIVERS UP TO 81% INCREASE IN OPERATING EFFICIENCY**



## PD004 - PD035 Operation

PROSFD is designed to provide a smooth, controlled, uninterrupted delivery of dry compressed air.

- 1 Walker Filtration Water Separator.** Walker Filtration recommends you purchase and fit a Water Separator which removes large quantities of condensate with a centrifugal module.
- 2 Walker Filtration XA grade (0.01 micron) pre-filter.** Fitted as standard with float drain or recommended optional electronic drain. An XA grade (0.01 micron) pre-filter removes particulates and oil/liquid aerosols from the air stream. Wet air passes through the filter down to the bottom valve assembly.
- 3** Purge air passes into the atmosphere through the silencer which is fitted to the exhaust valve.
- 4** On exit from the desiccant cartridge, air passes through the integral X1 grade (1 micron) dust filter, removing particulate in the air stream.
- 5** The control system cycles the process air between the two desiccant towers.
- 6** While one chamber is on stream removing water vapor, the other is being regenerated.



Approved to International Standards including PED, EMC and LVD European directives.

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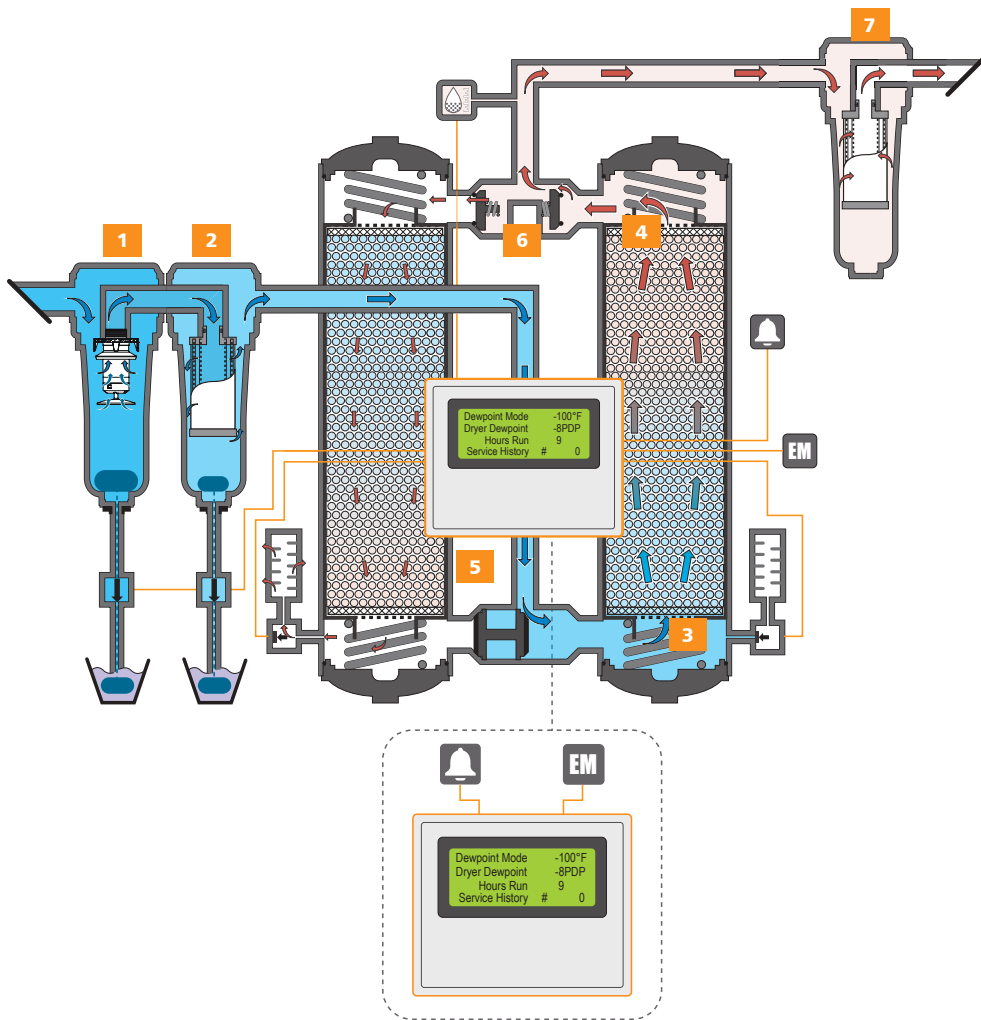
### Processor specification

DIN plug	GDS type C, Industry standard
Alarm ready relay rating	3 amp
Alarm connector	GDS type C, Industry standard
Energy management signal	5VDC
Energy management connector	GDS Type C, Industry standard



# PD0046 - PD0360 Operation

The updated larger flow models PD0046 - PD0360 utilize exactly the same operating principle. However, with an upgraded Digital Display Controller, with dewpoint management capability, additional energy savings benefits can be achieved.



- 1 Walker Filtration Water Separator.** Walker Filtration Water Separator is supplied as standard to prevent large quantities of condensate from entering the dryer.
- 2 Walker Filtration XA grade (0.01 micron) pre-filter.** Walker Filtration recommends you purchase and fit a 0.01 micron grade pre-filter to remove oil/liquid aerosols from the air stream.
- 3** Air is fed to the bottom of the desiccant bed and moves through the high performance desiccant.
- 4** Air passes via the purge non-return valves.
- 5** New digital display controller with DMC capabilities ensures that optimal dewpoint level with minimal air loss
- 6** Unique new purge plug design which offers a significant advantage to the user. The new patent pending concept incorporates a non-return valve to assure equal pressurisation within the chamber. This is an additional safety mechanism, in case of back flow, and prevents against operator error.
- 7** Recommended RXA grade (0.01 micron) dust filter downstream of the dryer to remove any particulate that may have been added to the airstream by the dryer itself.

Approved to International Standards including PED, EMC and LVD European directives.



Processor specification	
DIN plug	GDS type C, Industry standard
Alarm ready relay rating	0.5 amp
Alarm connector	GDS type C, Industry standard
Energy management signal	24VDC
Energy management connector	GDS type C, Industry standard





## Medical & Breathing Air Packages



### Whatever the application we have the dryer solution

Our PROSFD range can be adapted to suit critical applications such as Medical, Power Generation, Railway, and MOD, with specific modifications.

### Hospital and Medical Air

Hospitals around the world demand a clean, reliable, source of medical air which will deliver consistent pressure levels and flow rates. Medical air must be free from toxic contaminants, flammable or objectionable vapors, liquids, and particulate debris. It must maintain a fluctuation-free and stable oxygen content that conforms to international standards. PROSFD, used in conjunction with Walker Filtration coalescing and gas adsorption filters, can provide this – complying with industry guidelines such as HTM 02-01 and Worldwide Pharmacopoeia.

### Breathing Air Packages

The Pro BA breathing air system utilizes the dependable design of the PROSFD desiccant compressed air dryers in combination with internal high performance critical application cartridges. These proven cartridges maintain a steady flow of normal ambient oxygen/nitrogen levels and remove water vapor in line with requirements such as EN 12021.

Pro BA units include a three stage filtration system consisting of a 1 micron pre-filter, 0.01 micron coalescing filter and an outlet filter for removing odors, tastes and most crucially carbon monoxide. At the heart of the unit is a fully functional electronic controller complete with an LED control panel, built in self-monitoring diagnostics and energy management. The Pro BA range has been designed and manufactured to exceed current legislation guidelines.

### Custom Units

Dryer packages for critical applications can be tailored to specific application needs – please contact our sales team for further information.



# OEM Design & Capability



## Passionate About Original Equipment Manufacturer Partnerships

At Walker Filtration, we are known not only for our highly specified standard product ranges, but also for our customized solutions that are designed to meet exact customer needs. Our exceptional technical development allows us to meet the highest demands of OEM customers – anticipating customer needs and matching technology with market developments.

## Providing Unique, Custom Built Solutions

As a flexible, UK based, manufacturer, the filtration, drying and separation solutions we can provide are diverse. We work in complete collaboration with our OEM customers from initial concept designs and engineering, through testing and validation, to branding and aftermarket support. Our focus and dedication is straightforward – we enjoy working with our customers, offering competent advice and sound engineering, to help them realize their desired product. With an enviable reputation for our technical knowledge, and the ability to deliver solutions quickly, we have what it takes for a quick turnaround from development, to prototype, to launch.

## Working With OEM Customers to Deliver Intelligent Branding Solutions

We work with our OEM customers to provide options to customize and brand products and packaging, along with a range of supporting marketing materials, to achieve maximum brand identity and recognition. All aspects of the product are considered, including language support, unique part numbers and transport details.

## Performance and Validation

To ensure complete product assurance and performance, our OEM developments are extensively tested to the highest standards. Throughout the entire process, excellent levels of customer service are at the heart of everything we do.



OEM branding and custom packages available



# Air Quality Classification

## Dryer Operation and ISO 8573-1: 2010 Air Quality Classes

Desiccant dryers remove water vapor but not bulk liquid contamination, oil aerosols, solid particulates, oil vapors, or micro-organisms. Walker Filtration supply a range of compressed air and gas filtration solutions for the removal of these contaminants.

The ISO 8573 group of International Standards is used for the classification of compressed air. The table below summarizes the maximum contaminant levels specified in ISO 8573-1: 2010 for the various compressed air quality classes:

### Walker Filtration Product Ranges

Walker Filtration offers a comprehensive range of compressed air filtration and drying products. Our product range includes:



Water Separators



Coalescing Filters



Activated Carbon



Particulate Filters



Medical Sterile



Duplex Filters



Alternative Elements



Accessories & Spares

For our full product range and further information please visit: [www.walkerfiltration.com](http://www.walkerfiltration.com) or contact your nearest Walker Filtration sales department.

Purity class	Particle				Water		Oil
	Maximum number of particles per cubic metre as a function of particle size, d <sup>a</sup>				Vapour	Liquid <sup>a</sup>	Total oil <sup>a</sup>
	0.1µm < d ≤ 0.5µm	0.5µm < d ≤ 1.0µm	1.0µm < d ≤ 5.0µm	Mass concentration Cp mg/m <sup>3</sup>	Pressure dewpoint °F	Concentration liquid water Cw g/m <sup>3</sup>	Liquid, aerosol, vapour mg/m <sup>3</sup>
0	As specified by the equipment user or supplier and more stringent than class 1						
1	≤ 20,000	≤ 400	≤ 10	-	≤ -70	-	≤ 0.01
2	≤ 400,000	≤ 6,000	≤ 100	-	≤ -40	-	≤ 0.1
3	-	≤ 90,000	≤ 1,000	-	≤ -20	-	≤ 1
4	-	-	≤ 10,000	-	≤ +3	-	≤ 5
5	-	-	≤ 100,000	-	≤ +7	-	-
6	-	-	-	0 < Cp ≤ 5	≤ +10	-	-
7	-	-	-	5 < Cp ≤ 10	-	Cw ≤ 0.5	-
8	-	-	-	-	-	0.5 < Cw ≤ 5	-
9	-	-	-	-	-	5 < Cw ≤ 10	-
X	-	-	-	Cp > 10	-	Cw > 10	> 5

- **Water Separators** Remove up to 99% of bulk liquid contamination.
- **Coalescing Filters (Threaded and Flanged)** Designed to remove oil and water aerosols, but will also remove solid particulates.
- **Activated Carbon Filters** Removing oil vapor, smells and odors.
- **Particulate Removal Filters** Fitted down-stream of dryers where no liquid is present. Particulate Filters deliver up to 99.9999% particulate removal efficiency.
- **Medical Sterile Filters** Designed for medical compressed air plants and used in hospitals throughout the world. Designed to remove bacteria and micro-organisms.





# PROSFD Service Kits



## Models PD004 - PD035

Service Kits				
To fit dryer model	6,000 hours Silencer Service Kit	12,000 hours Cartridge and Silencer Service Kit*	18,000 hours Silencer Service Kit	24,000 hours Silencer, Cartridge and Valve Service Kit
<b>PD004</b>	PD1SK01	PD1SK01 PDC004-12000	PD1SK01	PD1SK01 PDC004-12000 VSKS01
<b>PD006</b>	PD1SK02	PD1SK02 PDC006-12000	PD1SK02	PD1SK02 PDC006-12000 VSKS01
<b>PD008</b>	PD1SK02	PD1SK02 PDC008-12000	PD1SK02	PD1SK02 PDC008-12000 VSKS01
<b>PD010</b>	PD1SK02	PD1SK02 PDC010-12000	PD1SK02	PD1SK02 PDC008-12000 VSKS01
<b>PD015</b>	PD1SK02	PD1SK02 PDC015-12000	PD1SK02	PD1SK02 PDC008-12000 VSKS01
<b>PD025</b>	PD1SK02	PD1SK02 PDC025-12000	PD1SK02	PD1SK02 PDC008-12000 VSKS01
<b>PD035</b>	PD1SK02	PD1SK02 PDC035-12000	PD1SK02	PD1SK02 PDC008-12000 VSKS01

## Models PD0046 - PD0360

Service Kits					
Voltage	To fit dryer model	6,000 hours Silencer Service Kit	12,000 hours Cartridge and Silencer Service Kit*	18,000 hours Silencer Service Kit	24,000 hours Cartridge, Silencer, Valve, and Purge Valve Service Kit*
DMC 24V	<b>PD0046</b>	PD3SK01	PDSK0046-12000	PD3SK01	PDSK0046-24000-S24
	<b>PD0056</b>		PDSK0056-12000		PDSK0056-24000-S24
	<b>PD0075</b>		PDSK0075-12000		PDSK0075-24000-S24
	<b>PD0090</b>		PDSK0090-12000		PDSK0090-24000-S24
	<b>PD0110</b>	PD3SK02	PDSK0110-12000	PD3SK02	PDSK0110-24000-S24
	<b>PD0150</b>		PDSK0150-12000		PDSK0150-24000-S24
	<b>PD0180</b>		PDSK0180-12000		PDSK0180-24000-S24
	<b>PD0220</b>	PD3SK03	PDSK0220-12000	PD3SK03	PDSK0220-24000-D24
	<b>PD0300</b>		PDSK0300-12000		PDSK0300-24000-D24
<b>PD0360</b>	PDSK0360-12000		PDSK0360-24000-D24		

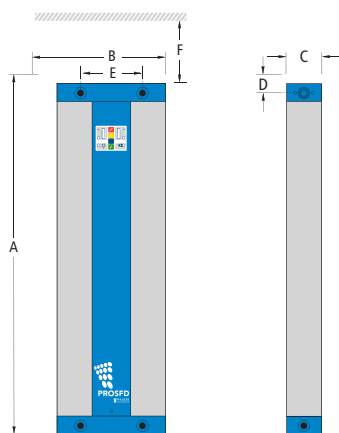
\*Information above relates to standard service kits only. For high performing cartridges for use where -100°F (-74°C) dewpoint is required please contact Walker Filtration for more information.

**Note:** For information on accessories relating to the above model numbers please see the relevant Walker Filtration Product Range and Price Guide.

## Technical Specification PD004 - PD035

Dryer model	Pipe size inches	Inlet flow rate*		Dimensions inches (mm)						Weight lb (Kg)	No. of cartridges	Included filter model
		SFCM	Nm <sup>3</sup> /hr	A	B	C	D	E	F			
PD004	3/8	4	7	17.52 (445)	11.06 (280)	3.62 (92)	0.87 (22)	6.30 (160)	16.34 (415)	29 (13)	2	A30032XA
PD006	3/8	6	10	20.00 (504)	11.06 (280)	3.62 (92)	0.87 (22)	6.30 (160)	18.70 (475)	31 (14)	2	A30032XA
PD008	3/8	8	14	22.24 (564)	11.06 (280)	3.62 (92)	0.87 (22)	6.30 (160)	21.06 (535)	33 (15)	2	A30032XA
PD010	3/8	10	17	25.00 (634)	11.06 (280)	3.62 (92)	0.87 (22)	6.30 (160)	23.82 (605)	36 (17)	2	A30032XA
PD015	3/8	15	25	32.09 (814)	11.06 (280)	3.62 (92)	0.87 (22)	6.30 (160)	30.91 (785)	43 (20)	2	A30032XA
PD025	3/8	25	42	47.93 (1204)	11.06 (280)	3.62 (92)	0.87 (22)	6.30 (160)	40.75 (1035)	53 (24)	2	A30032XA
PD035	3/8	35	59	57.56 (1596)	11.06 (280)	3.62 (92)	0.87 (22)	6.30 (160)	56.30 (1430)	68 (31)	2	A30032XA

\*Stated flow capacities based on an inlet pressure of 100 psig (7 barg), inlet temp of 95°F (35°C) and outlet pressure dewpoint of -40°F (-40°C). For capacities at other conditions, please refer to the correction factors below. Flow rates referenced to standard conditions, 68°F (20°C) at 14.7 psia (1013.25 mbara, and 0% relative water vapor).



Specification		
Standard pressure dewpoint	-40°F**	-40°C**
Optional pressure dewpoint	-94°F***	-70°C***
ISO Class (ISO 8573-1:2010)	(Class 2) -40°C	(Class 1) -70°C
Minimum inlet air pressure	58 psig	4 barg
Maximum inlet air pressure	232 psig	16 barg
Power supply	12 - 24VDC or 100 - 240VAC (50-60Hz)	
Minimum ambient air temperature	41°F	5°C
Minimum inlet temperature	35°F	1.5°C
Maximum inlet temperature	122°F	50°C

\*\* ISO Class 2 (ISO 8573-1:2010)

\*\*\* ISO Class 1 (ISO 8573-1:2010)

### Dryer correction factors

Operating pressure (PCF)														
psig	58	72	87	100	116	130	145	160	174	189	203	218	232	
barg	4	5	6	7	8	9	10	11	12	13	14	15	16	
Correction factor	0.62	0.75	0.87	1.00	1.12	1.25	1.37	1.50	1.62	1.75	1.87	2.00	2.12	

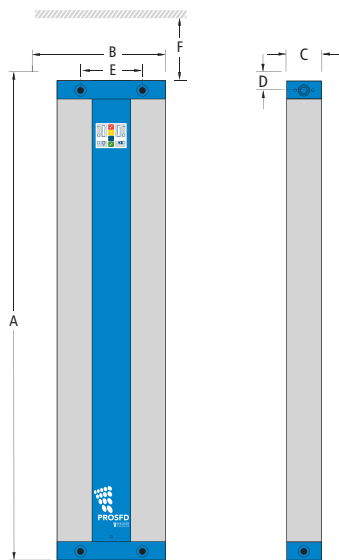
Temperature (TCF)							
Fahrenheit (°F)	68	77	86	95	104	113	122
Celsius (°C)	20	25	30	35	40	45	50
Correction factor	1.07	1.06	1.04	1.00	0.88	0.78	0.55

Pressure Dewpoint (DCF)		
Fahrenheit (°F)	-40	-94
Celsius (°C)	-40	-70
Correction factor	1.00	0.70

### PROSFD Sizing Example

To correctly select the PROSFD model suitable for your application the following information is required: Minimum Inlet Pressure, Maximum Inlet Temperature, Maximum Inlet Flow and Required Pressure Dewpoint (PDP).

Requirements	Correction Factor
Maximum compressor inlet flow	15 scfm (25 Nm <sup>3</sup> /hr)
Actual minimum inlet pressure to the dryer	87 psig (6 barg)
Maximum inlet temperature	77°F (25°C)
Pressure dewpoint (PDP)	-100°F (-70°C)
<b>Corrected dryer flow rate</b>	$\frac{\text{Inlet flow rate}}{\text{PCF} \times \text{TCF} \times \text{DCF}} = \frac{15}{(0.87 \times 1.06 \times 0.70)} = 23.2 \text{ scfm (39Nm}^3\text{/hr)}$
<b>Appropriate Dryer Size</b>	Dryer model is selected based on the corrected flow rate, i.e. PD0025.



Models PD004-PD035

### Technical notes

- PROSFD features easy removable desiccant cartridges with integral X1 grade (1 micron) dust filter.
- For additional security, Walker Filtration recommends fitting an RX1 grade (1 micron) dust filter to the outlet.
- All models are supplied together with an XA grade (0.01 micron) pre-filter.
- Additional filtration, including a Water Separator, is recommended for high loaded inlet conditions.
- Standard models operate at 100 psig (7 barg); for other pressures, please specify at time of order.



# Technical Specification PD0046 - PD0360

Dryer model	Pipe size inches	Inlet flow rate*		Dimensions inches (mm)						Weight lbs (Kg)	No. of cartridges	Recommended Filter model	Model With Dewpoint Management Control**
		SCFM	Nm <sup>3</sup> /hr	A	B	C	D	E	F				
PD0046	1	45	77	25.7 (655)	14.0 (380)	12.2 (310)	3.0 (76)	1.96 (50)	23.6 (600)	101.4 (46)	2	A30050	PD0046DMC
PD0056	1	55	94	28.9 (735)	14.0 (380)	12.2 (310)	3.0 (76)	1.96 (50)	27.5 (700)	112.4 (51)	2	A30070	PD0056DMC
PD0075	1	75	128	35.6 (905)	14.0 (380)	12.2 (310)	3.0 (76)	1.96 (50)	33.4 (850)	136.6 (62)	2	A30085	PD0075DMC
PD0090	1	90	153	40.55 (1030)	14.0 (380)	12.2 (310)	3.0 (76)	1.96 (50)	39.3 (1000)	154.3 (70)	2	A30105	PD0090DMC
PD0110	1	110	187	49.6 (1260)	14.0 (380)	12.2 (310)	3.0 (76)	1.96 (50)	27.5 (700)	187.3 (85)	4	A30105	PD0110DMC
PD0150	1	150	255	62.7 (1595)	14.0 (380)	12.2 (310)	3.0 (76)	1.96 (50)	33.4 (850)	231.4 (105)	4	A30175	PD0150DMC
PD0180	1	180	306	72.6 (1845)	14.0 (380)	12.2 (310)	3.0 (76)	1.96 (50)	39.3 (1000)	269.0 (122)	4	A30175	PD0180DMC
PD0220	1½	220	374	49.6 (1260)	14.0 (380)	19.3 (490)	3.0 (76)	2.44 (62)	27.5 (700)	339.5 (154)	8	A30280	PD0220DMC
PD0300	1½	300	510	62.7 (1596)	14.0 (380)	19.3 (490)	3.0 (76)	2.44 (62)	33.4 (850)	430.0 (195)	8	A30400	PD0300DMC
PD0360	1½	360	612	72.6 (1845)	14.0 (380)	19.3 (490)	3.0 (76)	2.44 (62)	39.3 (1000)	496.0 (225)	8	A30400	PD0360DMC

\* Stated flows are for an inlet pressure of 100 psig (7 barg) with reference to 68°F, 1 psig (abs.), 0% relative water vapor pressure. For flow at other pressures apply the appropriate correction factors, terms and dewpoint.

\*\*Model with Dewpoint Management Control includes dewpoint sensor.

Specification		
Standard pressure dewpoint	-40°F	-40°C
Optional pressure dewpoint	-4°F	-20°C
	-100°F	-74°C
Minimum working pressure	58 psig	4 barg
Maximum working pressure	188.5 psig	13 barg
Electronic control (LED)	115 or 230 VAC at 50-60Hz	
Dewpoint control (DMC)	24 VDC	
Minimum inlet temperature	35°F	1.5°C
Maximum inlet temperature	122°F	50°C

## Dryer correction factors

Operating pressure (PCF)											
psig	58	72	87	100	115	130	145	160	174	189	
barg	4	5	6	7	8	9	10	11	12	13	
Correction factor	0.62	0.75	0.87	1	1.12	1.25	1.37	1.5	1.62	1.75	

Temperature (TCF)								
Fahrenheit (°F)	68	77	86	95	104	113	122	
Celsius (°C)	20	25	30	35	40	45	50	
Correction factor	1.3	1.2	1.1	1	0.75	0.65	0.45	

Pressure dewpoint (DCF)			
Fahrenheit (°F)	-4	-22	-40
Celsius (°C)	-20	-30	-40
Correction factor	1.23	1.2	1

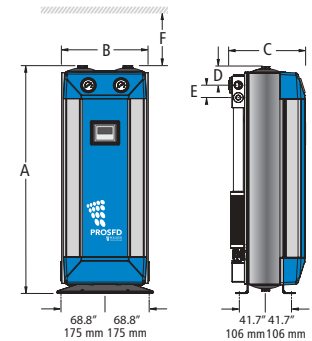
Pressure dewpoint (DCF) ***		
Fahrenheit (°F)	-94	-100
Celsius (°C)	-70	-74
Correction factor	0.8	0.77

## PROSFD Sizing Example

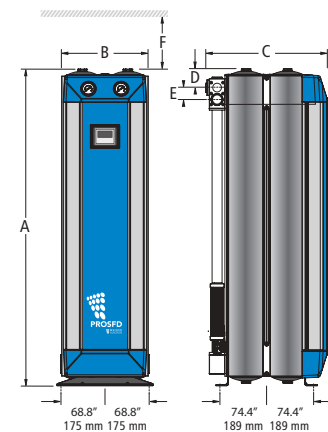
To correctly select the PROSFD model suitable for your application the following information is required: Minimum Inlet Pressure, Maximum Inlet Temperature, Maximum Inlet Flow and Required Pressure Dewpoint (PDP).

Requirements		Correction Factor
Maximum compressor inlet flow	56 scfm	-
Actual minimum inlet pressure to the dryer	87 psig	PCF = 0.87
Maximum inlet temperature	77°F (25°C)	TCF = 1.2
Pressure dewpoint (PDP)	-100°F (-74°C)	DCF = 0.77
<b>Corrected dryer flow rate</b>	$\frac{\text{Inlet flow rate}}{\text{PCF} \times \text{TCF} \times \text{DCF}} = \frac{56}{(0.87 \times 1.2 \times 0.77)} = 69.7 \text{ scfm} \text{ (118 Nm}^3\text{/hr)}$	
<b>Appropriate Dryer Size</b>	Dryer model is selected based on the corrected flow rate, i.e. PD0075.	

\*\*\* High Performance Cartridges are required for applications where -94°F and -100°F dewpoints are required.



Models PD0046-PD0180



Models PD0220-PD0360

To receive the benefits of dewpoint management, quote PD(model)DMC with hygrometer when ordering your dryer





## Technical Capability

For more than 30 years, Walker Filtration has built a reputation of high quality, well-engineered filtration and drying products. Founded on sound engineering principles, we continually invest in technology and expertise to stay at the leading edge of innovation. By utilizing the latest technology in computer aided design and combining this with the extensive knowledge of our engineering and technical team, we have become the partner of choice and are proud to work with OEM customers on an international scale.

With in-house test facilities and sophisticated on-site laboratories at our UK and USA locations, performance is guaranteed.

## Innovative Product Design

Innovation and sound engineering is at the heart of Walker Filtration and focuses all that we do. Continued investment in research and development, new technologies and the latest test standards, allows us to meet the highest demands of both the end user and the OEM customer. Our commitment to exceptional and innovative design, along with a proven track record of engineering excellence, enables us to remain at the forefront of compressed air filtration and drying technology.

## Customer Focused

At Walker Filtration our customers' needs are always paramount - we pride ourselves on our customer focused approach and exceptional levels of service. Our approach is straightforward – we enjoy what we do, working with our customers and offering competent advice and sound engineering. With dedicated technical, sales, and support teams globally, we are well placed to ensure a rapid response and fast delivery. We deliver not only highly specified standard product ranges, but also customized solutions designed specifically for our clients' needs.



PD004-PD035

PD0046-PD0360



# **W** WALKER FILTRATION

The ultimate filtration & drying technology

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