

Refrigerated Dryer

User Benefits

Reliability

- Markbrand
- Worldwide reputation of over 50 years
- Reliable components
- Largest air dryer manufacturer
- Fault alarm function

Simplicity

- Compact design
- Simple technology
- Easy maintenance
- Simple controller
- Simple timer solenoid drain
- On-off switch

Uncompromised Quality

- ISO9001/ISO 14001 quality assurance
- OHSAS 18001 quality assurance
- World renowned refrigerant compressor
- Industry proven fan motor
- In-house engineered condenser and evaporator
- International standard refrigeration gases

Easy Installation & Serviceability

- Inlet-outlet from the top
- Flexible placement allowed backside to the wall
- Easily serviceable
- Easy setting of drain intervals
- Easily removable side panels

PDP Indicator

The operation of the MDS dryer is monitored by an electronic controller indicating all relevant information:

Technical Details:

- Status of the refrigerant dryer
- Status of the fan
- Dewpoint indication

Simple Timer Operated Drain Discharge

The refrigerant dryer range is equipped with a simple timer operated condensate drain discharge. Easy to set and adjust the condensate drain interval and drain operating period. Highest quality brand in Industry, reliable and efficient.



The Smart Choice for High Reliability

Components

1 Refrigerant Compressor

Driven by an electric motor, cooled using refrigerant fluid and protected against thermal overload

2 HGB Valve

Bypass the extra capacity in low condition, sufficiently avoid ice block

3 3-in-1 Aluminum Heat Exchanger

With integrated air-to-air heat exchanger, air to refrigerant evaporator, and water separator. High efficient heat transfer & high efficient water separate, low pressure drop

4 Refrigerant Condenser

Air-cooled and with a large exchange surface for efficient thermal exchange

5 Motor-driven Fan

For the condenser cooling air flow

6 Automatic Discharge of Condensate

- User adjustable
- Timer solenoid drain
- Reliable
- Proven design

7 On/Off Switch

Reliable simple on/off switch to turn on and off the dryer

8 Control Panel

Indicating all relevant information



Technical Data - Refrigerated Air Dryer

Model	Max Working pressure	Air Treatment Capacity			Nominal Power	Electrical	Connection	Dimension	Weight	Refrigerant
										
	Bar	l/s	CFM	m ³ /hr	kW	V/Ph/Hz	G	L×W×H (mm)	kg	Gas
MDS 10	13	17	35	60	0.22	230/1/50	G3/4"	430x354x463	30	R 134a
MDS 13	13	22	46	78	0.36	230/1/50	G3/4"	548x400x615	36	R 134a
MDS 21	13	35	74	126	0.37	230/1/50	G3/4"	548x400x615	38	R 134a
MDS 40	13	67	141	240	0.7	230/1/50	G1"	600x520x750	56	R 410A
MDS 66	13	110	233	396	1.05	230/1/50	G1.5"	600x520x750	58	R 410A
MDS 85	13	142	300	510	1.1	230/1/50	G1.5"	650x650x875	75	R 410A
MDS 105	13	175	371	630	1.15	230/1/50	G2"	650x650x875	79	R 410A
MDS 140	13	233	494	840	1.4	230/1/50	G2"	752x745x960	102	R 410A
MDS 175	13	292	618	1050	1.65	230/1/50	G2"	752x800x1020	119	R 410A
MDS 220	13	367	777	1320	2.65	230/1/50	G2.5"	927x795x1126	168	R 410A
MDS 260	13	433	918	1560	2.9	230/1/50	G2.5"	927x795x1126	174	R 410A

Environmental Friendly Refrigerant Gases

A key objective in the design of the MDS dryer was to deliver a product that offers performance, reliability and safety with the lowest possible environmental impact.

Environmental friendly thanks to the use of R134a and R410A gas

- No impact on the ozone layer
- R410A gas has exceptional properties:
 - Very low global warming potential (GWP)
 - Energy saving by use of rotary refrigerant compressor



Only original parts extend your compressor's lifetime, reduce maintenance costs and maximize efficiency.



Quality Filtration for High Reliability



MARK Online Filters Guarantee Technically Oil-free Air:

- Pre-filter removes dust particles and improves air quality
- Fine coalescence filter removes oil particles from compressed air
- Activated carbon filter absorbs oil vapour ensuring 100% technically oil-free air
- Filter cartridges are easily removable resulting in quick maintenance

Principles of Filtration

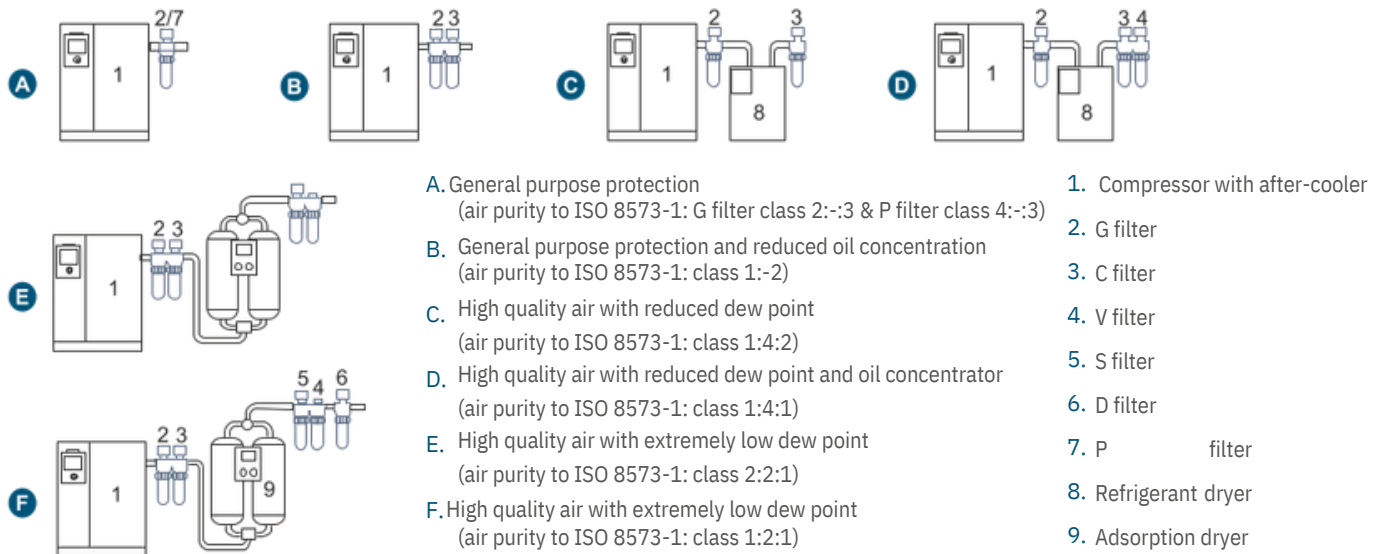
Different Types of Contamination Require Different Types of Filters

	Contaminant	State of matters	Filter	Filter medium	Filtration mechanisms
	Dust	Solid	Pre-filter, Dust filter	Glass fibers	Capture
	Oil aerosol	Liquid	Coalescence filter, High efficiency coalescence filter	Glass fibers	Capture + coalescing+drain
	Oil vapor	Gas	Porous activated carbon	Porous activated carbon	Adsorption

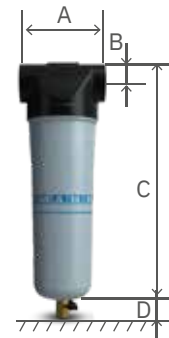
Degree of Purity of Air by ISO 8573.1

DEGREE OF PURITY OF AIR					
ISO 8573-1 Class	OIL Concentration	DUST		WATER	
		Dimension	Concentration	Dew point	Water content
1	0,01 mg/m ³	0,1 µm	0,1 mg/m ³	- 70 °C	0,003 g/m ³
2	0,1 mg/m ³	1 µm	1 mg/m ³	- 40 °C	0,11 g/m ³
3	1,0 mg/m ³	5 µm	5 mg/m ³	- 20 °C	0,88 g/m ³
4	5 mg/m ³	15 µm	8 mg/m ³	+ 3 °C	6,0 g/m ³
5	25 mg/m ³	40 µm	10 mg/m ³	+ 7 °C	7,8 g/m ³
6	-			+ 10 °C	9,4 g/m ³

Typical Installations



Model	L/min	m ³ /hr	CFM	BAR	PSI	G	A	B	C	D	kg
FILTER 7	720	43	25	16	232	3/4"	90	19	237	32	0.76
FILTER 15	1500	90	53	16	232	3/4"	90	19	32	0.77	292
FILTER 21	2100	126	74	16	232	3/4"	90	19	0.89	305	32
FILTER 30	3000	180	106	16	232	1"	110	25	1.39	360	32
FILTER 48	4800	288	170	16	232	1 1/2"	126	38	1.67	465	32
FILTER 84	8400	504	297	16	232	2"	155	51	3.28	500	32
FILTER 114	11400	684	403	16	232	2"	155	51	3.63	545	32
FILTER 156	15600	936	551	16	232	2"	155	51	3.85	617	32
FILTER 216	21600	1296	763	16	232	2 1/2"	193	64	6.11	720	32
FILTER 315	31500	1890	1112	16	232	3"	210	76	8.75	890	32
FILTER 405	40500	2430	1430	16	232	3"	210	76	10.30		



G FILTER RANGE

Coalescing filters for general purpose protection, removing solid particles, liquid water and oil aerosol.

Total Mass Efficiency: 99%.

For optimum filtration, a G filter should be preceded by a water separator

C FILTER RANGE

High-efficiency coalescing filters, removing solid particles, liquid water and oil aerosol.

Total Mass Efficiency 99.9%.

For optimum filtration, a C filter should be preceded by a G filter at all times.

V FILTER RANGE

Activated carbon filter for removal of oil vapour and hydrocarbon odors with a maximum remaining oil content of (0.003mg/m³). 1000 hour lifetime.

COMPONENTS

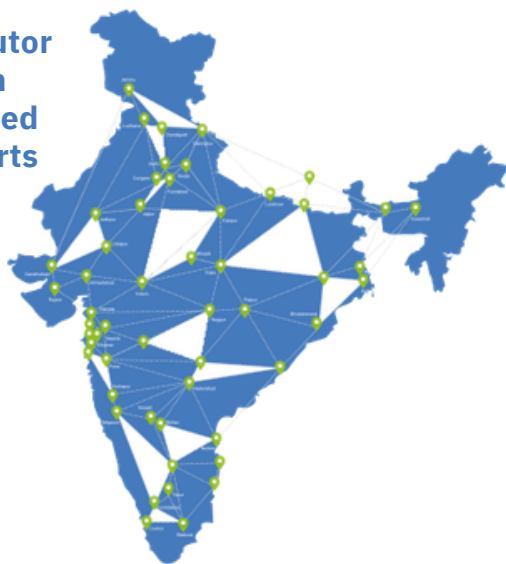


- Double O-rings guarantee proper sealing to reduce leakage risks and increase energy savings.
- Increased user friendliness and reliability via push-on element.
- Protection paper avoids direct contact between filter media and stainless steel filter core.
- Enhanced glass fiber media ensure high filter efficiency, low pressure drop and guaranteed lifetime performance. For oil coalescence filters, multiple layers are wrapped around each other to avoid the risk of early oil breakthrough.
- Enhanced high-performance stainless steel filter cores ensure ultimate strength and low risk of explosion.
- Oil coalescence filters: Double drainage layer (outer protection paper and foam) has a large drainage capacity which is ideal for variable speed compressors. Moreover, the poly-urethane foam avoids oil re-entrainment. Dust filters: Open foam acts as a pre-filter for the largest dust particles, which prolongs the filter lifetime.
- Epoxy sealed caps for reliable filtration.
- Internal ribs support the element and facilitate the route of oil droplets.

Unparalleled Expertise

-  **Availability**
-  **Reliability**
-  **Partnership**
-  **Safety**
-  **Serviceability**
-  **Simplicity**
-  **Quality**
-  **More Savings**

**Wide Distributor
Network with
Factory-trained
Service Experts**



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-  info.india@mark-compressors.com
-  Reach us at - 1800 120 110 050
-  www.mark-compressors.com/en-in

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