

Oil-injected screw
compressor
Refrigeration
air dryer

Range MSS/MDS



Care. Trust. Efficiency.

Care.

Care is what service is all about: professional service by knowledgeable people, using high-quality original parts.

Trust.

Trust is earned by delivering on our promises of reliable, uninterrupted performance and long equipment lifetime.

Efficiency.

Equipment efficiency is ensured by regular maintenance. Efficiency of the service organization is how Original Parts and Service make the difference.



Contact your local Mark representative now!



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7.5 - 37 kW

Oil-injected screw
Compressors

MDS

13 - 175

Refrigerant dryers

Smart & Simple
Compressed Air Solutions
with Outstanding Value





User benefits

Reliability

- Mark brand
- Worldwide reputation over 45 years
- Reliable components
- Quiet and trouble-free operation
- Independent cooling fan
- Asymmetric profile rotors

Uncompromised Quality

- ISO 9001 · ISO 14001 quality assurance
- OHSAS 18001 quality assurance
- World renowned screw element
- Industry proven electric motor
- Vertical separator tank

Simplicity

- Base mounted design
- 8 & 10 bar variants
- Simple controller
- Belt drive
- Offers a simple plug-and-play solution
- Easy installation
- No special foundation needed

Easy Serviceability

- Easy access from front side
- Vertical cooler easy cleaning
- Service indication on electronic controller
- Service and cleaning is a one person job
- Spin on spin off filters

Safety

- Emergency stop
- General alarm
- Fault shut down & alarm function
- Reverse rotation protection
- Maintenance alarm
- Motor overload protection

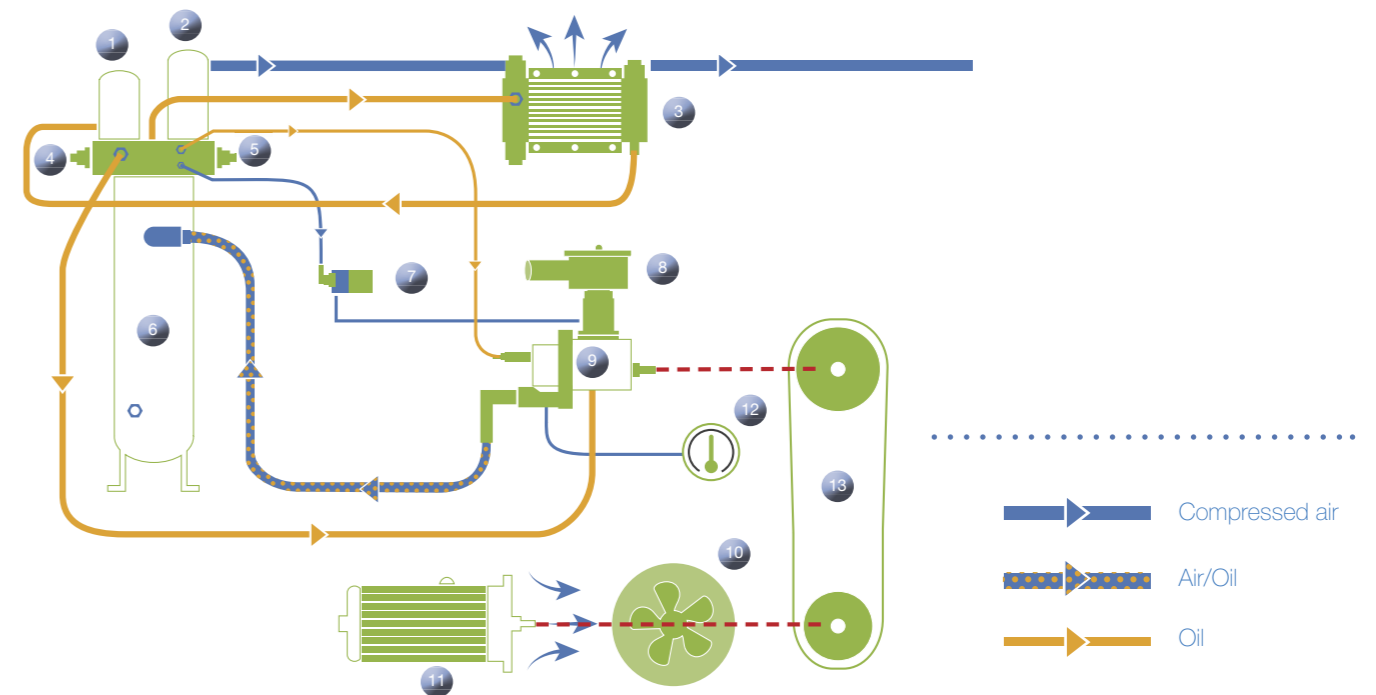
MARK HISTORY

1970 Establishment of the company MARK, in 1974 start of exportation of piston compressors, the launch got very successful and the company grew quickly. In 1988 more than 10.000 screw compressors in operating in Europe. More than 100.000 piston compressors in operation all over the world. Today, MARK has a global customer base, with local customer centers around the world. MARK air compressors are tailored to the needs of the light industry and assembly production. Every day we develop and manufacture new products that are meant to meet your demands not only today, but tomorrow as well.



OPTIMISED OPERATING FLOW

The flow diagram below illustrates the operating process which makes the MSS range into a compact and efficient compressor.



COMPONENTS

- | | | |
|----------------------|------------------------------|---------------------------------|
| 1 oil filter | 6 oil vessel | 11 electric motor |
| 2 air-oil separator | 7 air suction solenoid valve | 12 temperature probe/thermostat |
| 3 oil-air cooler | 8 air suction filter | 13 transmission unit |
| 4 thermostatic valve | 9 screw compressor | 14 compressed air receiver |
| 5 safety valve | 10 Independent cooling fan | 15 refrigerant dryer |



Oil injected screw compressors and refrigerant dryers plant: Wuxi



Oil injected screw compressors and refrigerant dryers plant: Wuxi



Spare parts distribution center: Belgium & Shanghai



Oil and water injected screw compressors plant: Belgium



Asymmetric profile rotors mounted on high quality ball and roller bearings
High degree of sealing and the fine tolerances guarantees

- Greater yield
- High efficiency
- Long life & reliability
- Lasting performance

Simple user friendly controller with outstanding functions

- Color coded on/off buttons
- LCD display
- Service warnings
- Fault indication & re-set function
- Reverse rotation protection



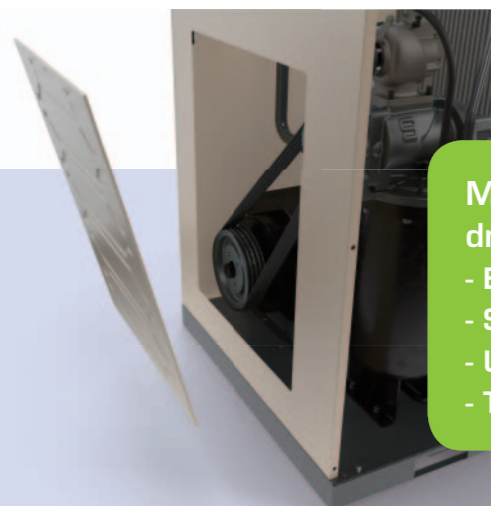
Quality electrical components

- High shock resistance
- Long life
- Handle unstable voltages
- Proven reliability



High efficiency cooling

- Large oversize design for demanding conditions
- Vertical design for easy access and cleaning
- Ability to handle 45deg inlet temp



Mark compressors have an in-house designed belt drive system that offers

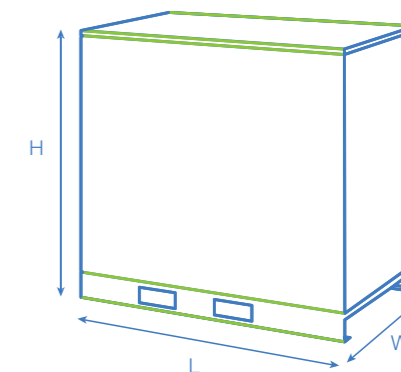
- Easy maintenance
- Simple installation
- User-friendly low noise operation
- The standard in the industry

TECHNICAL DATA

Model	Working Pressure	Motor Power	FAD			Noise Level	Weight	Connection
	Mpa	kW hp	l/s	CFM	m ³ /min	dB(A)	kg	G
MSS 7.5	0.8	7.5 10	17.7	37.5	1.1	68	235	3/4"
	1.0		12.0	25.5	0.7	68	235	
MSS 11	0.8	11 15	26.7	56.5	1.6	68	255	3/4"
	1.0		19.7	41.7	1.2	68	255	
MSS 15	0.8	15 20	30.2	64.0	1.8	68	270	3/4"
	1.0		21.8	46.2	1.3	68	270	
MSS 18.5	0.8	18.5 25	46.9	99.3	2.8	74	410	1"
	1.0		41.7	88.3	2.5	74	410	
MSS 22	0.8	22 30	52.0	110.2	3.1	74	420	1"
	1.0		46.1	97.6	2.8	74	420	
MSS 30	0.8	30 40	76.7	162.5	4.6	73	580	1 1/2"
	1.0		59.9	126.9	3.6	73	580	
MSS 37	0.8	37 50	87.6	185.6	5.3	73	600	1 1/2"
	1.0		81.5	172.7	4.9	73	600	

Dimensions

Model	Length mm	Width mm	Height mm
MSS 7.5	885	795	970
MSS 11	885	795	970
MSS 15	885	795	970
MSS 18.5	1025	930	1280
MSS 22	1025	930	1280
MSS 30	1280	1035	1380
MSS 37	1280	1035	1380



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

User benefits

Reliability

- Mark brand
- Worldwide reputation over 45 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

- ISO 9001· 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
- Easy removable side panels
- Easily serviceable
- Easy setting of drain intervals

»» 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

Alarm display:

- Alarm about high or low dewpoint
- Fan Failure
- Low or high refrigerant Pressure

»» SIMPLE TIMER OPERATED DRAIN DISCHARGE



The refrigerant dryer range is equipped with a simple timer operated condensate drain discharge. Easy two setting to adjust the condensate drain interval & drain operating period.

Highest quality brand in Industry, reliable & efficient.

»» COMPONENTS

- REFRIGERANT COMPRESSOR**
Driven by an electric motor, cooled using refrigerant fluid and protected against thermal overload
- REFRIGERANT CONDENSER**
Air-cooled and with a large exchange surface for efficient thermal exchange
- MOTOR-DRIVEN FAN**
For the condenser cooling air flow
- AIR/REFRIGERANT EVAPORATOR**
With high thermal exchange and low leakage
- CONDENSATE SEPARATOR**
High-efficiency



- AIR-AIR EXCHANGER**
With high thermal exchange and low load losses
- HOT GAS BYPASS VALVE**
Controls the refrigerant capacity under all load conditions preventing any formation of ice within the system
- AUTOMATIC DISCHARGE OF CONDENSATE**
User adjustable
Timer solenoid drain
Reliable and time Proven design
- CONTROL PANEL**
Indicating all relevant information

Technical table

Model	Max Working Pressure	Air Treatment Capacity			Nominal Power	Electrical	Connection	Dimension	Weight	Refrigerant
	Mpa	l/s	CFM	m ³ /min	kW	V/Ph/Hz	G	L * W * H mm	kg	
MDS 13	13	21.6	45.9	1.3	0.36	230/1/50	3/4"	550 x 370 x 704	30	R 134a
MDS 21	13	35.0	74.1	2.1	0.36	230/1/50	3/4"	550 x 370 x 704	34	R 134a
MDS 40	13	66.6	141.2	4.0	0.70	230/1/50	1"	520 x 500 x 809	55	R 410A
MDS 66	13	110.0	233.0	6.6	0.95	230/1/50	1 1/2"	520 x 500 x 809	60	R 410A
MDS 85	13	141.6	300.2	8.5	0.98	230/1/50	1 1/2"	550 x 600 x 958	68	R 410A
MDS 105	13	175.0	370.8	10.5	1.00	230/1/50	2"	550 x 600 x 958	75	R 410A
MDS 140	13	233.3	494.4	14.0	1.67	230/1/50	2"	900 x 750 x 1009	110	R 410A
MDS 175	13	291.6	618.0	17.5	1.75	230/1/50	2"	900 x 750 x 1009	126	R 410A

Correction factor · for conditions differing from the project $K = A \times B \times C$

Room temperature (A)					
Environment temperature (°C)	30	35	40	45	
Correction factor	1	0.91	0.81	0.72	

Operating temperature (B)							
Intake temperature (°C)	30	35	40	45	50	55	60
Correction factor	1	1	1	0.82	0.69	0.58	0.49

Operating pressure (C)					
Intake pressure (bar)	6	7	8	10	13
Correction factor	0.96	1	1.03	1.08	1.13

· MDS design working condition: environment temperature 30°C, intake temperature 40°C

· The maximum pressure drop: less than 0.3 bar

· The new flow rate value can be obtained by dividing the current or real flow rate by the correction factor related to the real operation conditions.

Correction factor of MDS series refrigeration dryer dewpoint

Outlet pressure dew point	Correction factor
10°C	1
7°C	0.85
3°C	0.7

»» 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.

- Environmentally 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

