

## UNPARALLELED EXPERTISE:



**Availability:** High performance compressor ensures compressed air availability at all times.



**Serviceability:** The best after-sales support to keep your business up and running.  
Easy access to internal machine parts due to user-friendly design with front-facing opening.



**Reliability:** Quality electrical components, expertise in manufacturing and a worldwide reputation of 49 years make us the most reliable choice.



**Simplicity:** Simple with compact base-mounted design that doesn't require a special foundation.  
Easy installation and a simple controller make Mark a plug & play solution, extremely easy to use.



**Partnership:** Strong dealer network within your vicinity.



**Quality:** World-renowned screw element + refrigerant compressor and industry-proven motors give you lasting performance. ISO 9001 & ISO 14001 certifications and OHSAS 18001 quality assurance.

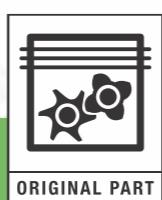


**Safety:** Multiple alarms and fault shut down functions keep your operators and workplace safe from accidents.



**More savings:** Compact design and smart components engineered for more energy savings.

# MARK



Contact Your Local Mark Representative Now!



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# MARK



MSS  
Oil-Injected Screw  
Air Compressor

MDS  
Refrigerated  
Compressed  
Air Dryer

## MARK MSS OIL INJECTED SCREW AIR COMPRESSORS.



49  
YEARS

Established in 1970 in Brendola, Italy, Mark began operations in manufacturing and selling piston compressors to the international market. The success of the export business paved the way for rapid development and expansion. By 1988, Mark had over 10,000 screw compressors in operation within Europe and 10,000 more worldwide.

Today, Mark has a global customer base, with local customer centres around the world. Mark air compressors are tailored to the needs of various industries and assembly production. With a flourishing dealer network, you are never too far away from a Mark service centre.

### OIL-INJECTED SCREW COMPRESSORS:

Mark's oil-injected screw compressors are ideal for various industries and assembly production. Our compressors have a capacity starting from 4.5kW. With a simple LCD display control system, user-friendly design, top-of-the-line quality and durability, we guarantee lasting performance.

### SMART TECHNICAL ADVANTAGES



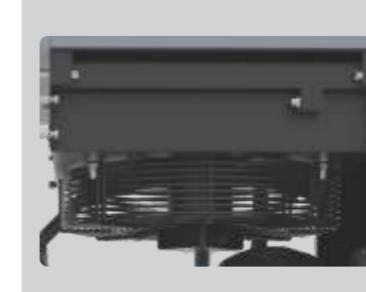
**Asymmetric profile rotors mounted on high quality ball and roller bearings**

**High degree of sealing and fine tolerance guarantees**

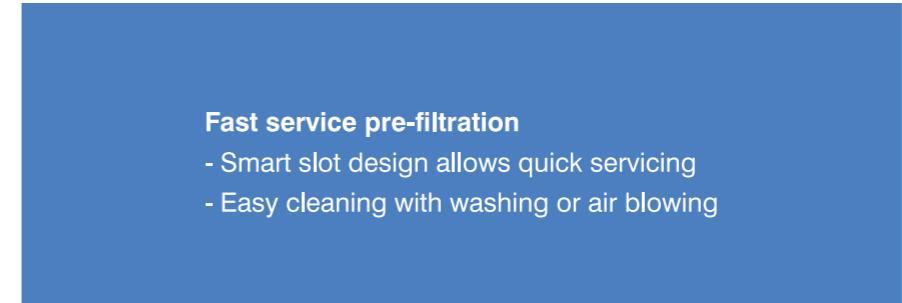
- Greater yield
- Long life & reliability
- High efficiency
- Lasting performance

**Simple user friendly controller with outstanding functions**

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



**Horizontal design brings high efficiency internal cooling**



**Fast service pre-filtration**

- Smart slot design allows quick servicing
- Easy cleaning with washing or air blowing



### ADDITIONAL FEATURES:

- ISO 9001, ISO 14001 Quality Assurance.
- World Renowned Screw Element.

### TECHNICAL DATA

| Model      | Working Pressure<br>BAR (G) | Motor Power |     | Capacity |     |        | Noise Level<br>dB(A) | Weight<br>kg | Connection<br>Ø G | Dimensions |          |           |
|------------|-----------------------------|-------------|-----|----------|-----|--------|----------------------|--------------|-------------------|------------|----------|-----------|
|            |                             | kW          | HP  | l/s      | cfm | m³/min |                      |              |                   | Length mm  | Width mm | Height mm |
| MSS 4 TM   | 10                          | 4           | 5   | 8        | 17  | 0.47   | 66                   | 200          | 1/2"              | 1366       | 675      | 1348      |
| MSS 5.5 TM | 10                          | 5.5         | 7.5 | 9.4      | 21  | 0.55   | 66                   | 230          | 1/2"              | 1686       | 675      | 1348      |
| MSS 7.5    | 8                           | 7.5         | 10  | 18       | 40  | 1.5    | 68                   | 235          | 3/4"              | 885        | 795      | 970       |
|            | 10                          | 7.5         | 10  | 12       | 28  | 0.7    |                      |              |                   |            |          |           |
| MSS 11     | 8                           | 11          | 15  | 27       | 60  | 1.6    | 70                   | 235          | 3/4"              | 650        | 850      | 930       |
|            | 10                          | 11          | 15  | 20       | 45  | 1.2    |                      |              |                   |            |          |           |
| MSS 15     | 8                           | 15          | 20  | 34.5     | 75  | 2.0    | 70                   | 235          | 3/4"              | 650        | 850      | 930       |
|            | 10                          | 15          | 20  | 30.6     | 65  | 1.8    |                      |              |                   |            |          |           |
| MSS 18.5   | 8                           | 18.5        | 25  | 51       | 110 | 3.0    | 70                   | 345          | 1"                | 710        | 740      | 1275      |
|            | 10                          | 18.5        | 25  | 42       | 95  | 2.5    |                      |              |                   |            |          |           |
| MSS 22     | 8                           | 22          | 30  | 58.1     | 125 | 3.3    | 70                   | 350          | 1"                | 710        | 740      | 1275      |
|            | 10                          | 22          | 30  | 49       | 105 | 2.8    |                      |              |                   |            |          |           |
| MSS 30     | 7                           | 30          | 40  | 86.1     | 185 | 4.9    | 75                   | 500          | 1 1/2"            | 860        | 850      | 1345      |
|            | 10                          | 30          | 40  | 65.1     | 140 | 3.7    |                      |              |                   |            |          |           |
| MSS 37     | 7                           | 37          | 50  | 94       | 205 | 5.6    | 75                   | 530          | 1 1/2"            | 860        | 850      | 1375      |
|            | 10                          | 37          | 50  | 89       | 185 | 5.3    |                      |              |                   |            |          |           |
| MSS 45     | 7                           | 45          | 60  | 116      | 250 | 6.96   | 75                   | 650          | 1 1/2"            | 1320       | 970      | 1380      |
|            | 10                          | 45          | 60  | 93       | 200 | 5.58   |                      |              |                   |            |          |           |
| MSS 55     | 7                           | 55          | 75  | 150      | 320 | 8.60   | 78                   | 875          | 2"                | 1574       | 1159     | 1718      |
|            | 10                          | 55          | 75  | 116      | 245 | 6.90   |                      |              |                   |            |          |           |
| MSS 75     | 7                           | 75          | 100 | 205      | 450 | 11.90  | 79                   | 1107         | 2"                | 1574       | 1159     | 1718      |
|            | 10                          | 75          | 100 | 161      | 340 | 9.61   |                      |              |                   |            |          |           |

## MDS REFRIGERANT AIR DRYERS:

Mark is the largest air dryer manufacturer in the world with a 49-year legacy serving various industries. Our dryers have a capacity starting from 0.36KW. With an easy to operate on-off controller, 3-in-1 heat exchanger and a durable refrigerant with environment-friendly gases, we guarantee energy efficiency and longer runtime. Mark air dryers have ISO 9001, ISO 14001 Quality Assurance.

## MARK MDS REFRIGERATED COMPRESSED AIR DRYER



- 1 REFRIGERANT COMPRESSOR**  
Driven by an electric motor, cooled using refrigerant fluid and protected against thermal overload.
- 2 REFRIGERANT CONDENSER**  
Air-cooled and with a large exchange surface for efficient thermal exchange.
- 3 MOTOR-DRIVEN FAN**  
For the condenser cooling air flow.
- 4 AIR/REFRIGERANT EVAPORATOR**  
With high thermal exchange and low leakage.
- 5 CONDENSATE SEPARATOR**  
High-efficiency separator for optimum performance.
- 6 AIR-AIR EXCHANGER**  
With high thermal exchange and low load losses.
- 7 ON/OFF SWITCH**  
Reliable simple on/off switch to turn on and off the dryer.
- 8 AUTOMATIC DISCHARGE OF CONDENSATE**  
User adjustable, Timer solenoid drain, Reliable and timely, Proven design
- 9 CONTROL PANEL**  
Indicates all relevant information.



### 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 & drain operating period. Highest quality brand in industry, reliable & efficient.



## 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:

- High or low dewpoint alarm.
- Fan failure.
- Low or high refrigerant pressure.

## TECHNICAL DATA

| Model   | Working Pressure<br>BAR | Air Treatment Capacity |       |        | Nominal Power<br>kW | Electrical<br>V/Ph/Hz | Connection<br>Ø G | Dimension<br>L*W*H mm | Weight<br>kg | Refrigerant |
|---------|-------------------------|------------------------|-------|--------|---------------------|-----------------------|-------------------|-----------------------|--------------|-------------|
|         |                         | I/s                    | cfm   | m³/min |                     |                       |                   |                       |              |             |
| MDS 10  | 13                      | 16.6                   | 36.3  | 1.0    | 0.21                | 230/1/50              | 3/4"              | 362x430x446           | 30           | R134a       |
| MDS 13  | 13                      | 21.6                   | 46.9  | 1.3    | 0.36                | 230/1/50              | 3/4"              | 550x370x704           | 30           | R134a       |
| MDS 21  | 13                      | 36.0                   | 74.1  | 2.1    | 0.36                | 230/1/50              | 3/4"              | 550x370x704           | 34           | R134a       |
| MDS 40  | 13                      | 66.6                   | 141.2 | 4.0    | 0.70                | 230/1/50              | 1"                | 520x500x809           | 55           | R410A       |
| MDS 66  | 13                      | 110.0                  | 233.0 | 6.6    | 0.96                | 230/1/50              | 1 1/2"            | 520x500x809           | 60           | R410A       |
| MDS 85  | 13                      | 141.6                  | 300.2 | 8.5    | 0.98                | 230/1/50              | 1 1/2"            | 550x600x958           | 68           | R410A       |
| MDS 105 | 13                      | 176.0                  | 370.8 | 10.5   | 1.00                | 230/1/50              | 2"                | 550x600x958           | 75           | R410A       |
| MDS 140 | 13                      | 233.3                  | 494.4 | 14.0   | 1.67                | 230/1/50              | 2"                | 900x750x1009          | 110          | R410A       |
| MDS 175 | 13                      | 291.6                  | 618.0 | 17.5   | 1.75                | 230/1/50              | 2"                | 900x750x1009          | 126          | R410A       |
| MDS 220 | 13                      | 366.3                  | 776.6 | 22.0   | 2.86                | 230/1/50              | 2 1/2"            | 1050x660x1130         | 140          | R410A       |
| MDS 260 | 13                      | 433.0                  | 917.8 | 26.0   | 2.96                | 230/1/50              | 2 1/2"            | 1050x660x1130         | 162          | R410A       |

## FULL FILTER RANGE

Allowing unclean or contaminated compressed air to enter your air network holds several risks. In almost all applications, this can cause a considerable decrease in performance as well as an increase in maintenance costs both related to actual repairs as well as a loss in productivity. Mark's innovative filters are engineered to cost-effectively provide the best air quality and meet today's ever increasing quality demands. They are fully developed and tested according to ISO standards.

## COMPONENTS



- 1** Double O-rings guarantee proper sealing to reduce leakage risks and increase energy savings.
- 2** Increased user friendliness and reliability via push-on element.
- 3** Protection paper avoids direct contact between filter media and stainless steel filter core.
- 4** 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.
- 5** Enhanced high-performance stainless steel filter cores ensure ultimate strength and low risk of implosion.
- 6** 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.
- 7** Dust filters: Open foam acts as a pre-filter for the largest dust particles, which prolongs the filter lifetime.
- 8** Epoxy sealed caps for reliable filtration.
- Internal ribs support the element and facilitate the route of oil droplets.**

## 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.

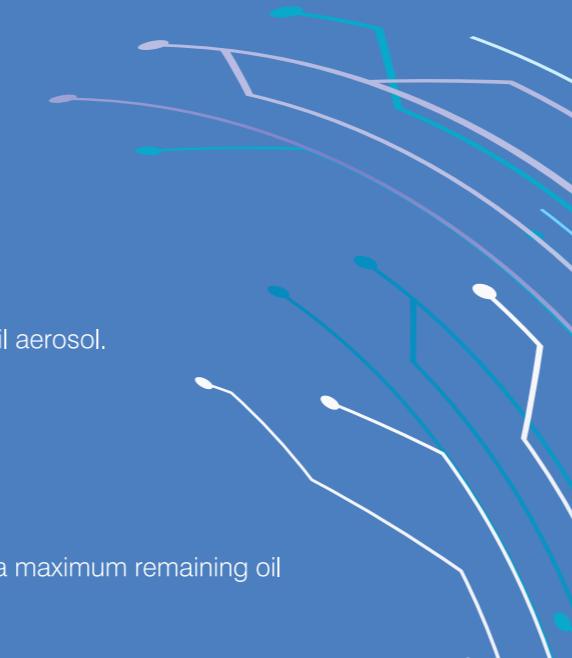
Total Mass Efficiency: 99.9%.

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/m<sup>3</sup> (0.003ppm). 1000 hour lifetime.

The quality of air required throughout a typical compressed air system varies. Offering an extensive filter range, Mark can always match your precise requirements, ensuring that all types of contamination are avoided and costs are reduced to an absolute minimum.



|  | S   | D   | G                                     | C                                     | P   | V          |
|--|---|---|---------------------------------------|---------------------------------------|---|------------|
| Filter type  | Solid particles   | Solid particles   | Oil aerosol & solid particles         | Oil aerosol & solid particles         | Oil aerosol & solid particles                   | Oil vapor  |
| Test method  | ISO 12500-3   | ISO 12500-3   | ISO 12500-1<br>ISO8573-2              | ISO 12500-1<br>ISO8573-2              | ISO 12500-1<br>ISO 12500-3<br>ISO 8573-2        | ISO 8573-5 |
| Inlet Oil Concentration(mg/m)                                | NA  | NA  | 10                                    | 10                                    | 10  | 0.01       |
| Court efficiency (% at MPPS)                                 | (MPPS=0.1μm)<br>99.81   | (MPPS=0.06μm)<br>99.97  | NA                                    | NA                                    | (MPPS=0.1μm)<br>89.45                           | NA         |
| Court efficiency (% at 1μm)                                  | 99.97   | 99.999  | NA                                    | NA                                    | 94.19   | NA         |
| Court efficiency (% at 0,01μm)                               | 99.87   | 99.992  | NA                                    | NA                                    | 93.63   | NA         |
| Max oil carry-over (mg/m)                                    | NA  | NA  | 0.1                                   | 0.01                                  | 1   | 0.003      |
| Dry pressure drop (m bar)                                    | 120   | 140   | NA                                    | NA                                    | 85  | 160        |
| Wet pressure drop (mbar)*                                    | NA  | NA  | 205                                   | 240                                   | 115   | NA         |
| Wet pressure drop (mbar), in typical compressor installation | NA  | NA  | 185                                   | 200                                   | NA  | NA         |
| Element service  | After 4,000 operating hours or 1 year or pressure drop>350 mbar | After 4,000 operating hours or 1 year or pressure drop>350 mbar | After 4,000 operating hours or 1 year | After 4,000 operating hours or 1 year | After 1,000 operating hours (at 20°C) or 1 year |            |
| Precede with   | -   | S   | Water separator                       | G                                     | -   | G&C        |

\*inlet oil concentration=10mg/m

## AUTOMATIC DRAINS

| Model  | Inlet | Outlet | Max Pressure | Min Temp | Max Temp | Nominal Discharge | Capacity |
|--------|-------|--------|--------------|----------|----------|-------------------|----------|
| MFD85  | 1/2"  | 6mm    | 16bar        | 1.5°C    | 85°C     | 22ml              | 84 L-Hr  |
| MZD800 | 1/2"  | 1/2"   | 16bar        | 1.5°C    | 85°C     | 90 ml             | 800 L-Hr |



| Model  | Inlet | Outlet | Max Pressure | Min Temp | Max Temp | Voltage         |
|--------|-------|--------|--------------|----------|----------|-----------------|
| MED320 | 1/2"  | 6mm    | 15bar        | 1.5°C    | 55°C     | 230V/1P/50-60Hz |

supply with 1.2 meter lead

## A SOLUTION FOR EVERY AIR QUALITY

### Technical Table

|            | Nominal Capacity |                   |      | Maximum Pressure |     | Connections/<br>Port thread | Dimensions |      |     | Free Space<br>for Cartridge<br>Replacement | Weight |
|------------|------------------|-------------------|------|------------------|-----|-----------------------------|------------|------|-----|--|--------|
|            | l/min            | m <sup>3</sup> /h | cfm  | bar              | psi |                             | A          | B    | C   | D  |        |
| FILTER 7   | 720              | 43                | 25   | 16               | 232 | 3/8"                        | 90         | 21   | 228 | 75   | 1      |
| FILTER 15  | 1500             | 90                | 53   | 16               | 232 | 1/2"                        | 90         | 21   | 228 | 75   | 1.1    |
| FILTER 21  | 2100             | 126               | 74   | 16               | 232 | 1/2"                        | 90         | 21   | 283 | 75   | 1.3    |
| FILTER 30  | 3000             | 180               | 106  | 16               | 232 | 3/4"                        | 110        | 27.5 | 303 | 75   | 1.9    |
| FILTER 30  | 3000             | 180               | 106  | 16               | 232 | 1"                          | 110        | 27.5 | 303 | 75   | 1.9    |
| FILTER 48  | 4800             | 288               | 170  | 16               | 232 | 1"                          | 110        | 27.5 | 343 | 75   | 2.1    |
| FILTER 84  | 8400             | 504               | 297  | 16               | 232 | 1 1/2"                      | 140        | 34   | 449 | 100  | 4.2    |
| FILTER 114 | 11400            | 684               | 403  | 16               | 232 | 1 1/2"                      | 140        | 34   | 532 | 100  | 4.5    |
| FILTER 156 | 15600            | 936               | 551  | 16               | 232 | 1 1/2"                      | 140        | 34   | 532 | 100  | 4.6    |
| FILTER 216 | 21600            | 1296              | 763  | 16               | 232 | 2"                          | 179        | 50   | 618 | 150  | 6.9    |
| FILTER 216 | 21600            | 1296              | 763  | 16               | 232 | 2 1/2"                      | 179        | 50   | 618 | 150  | 6.9    |
| FILTER 315 | 31500            | 1890              | 1112 | 16               | 232 | 3"                          | 210        | 57   | 720 | 200  | 11.0   |
| FILTER 405 | 40500            | 2430              | 1430 | 16               | 232 | 3"                          | 210        | 57   | 890 | 200  | 12.6   |

\*Reference Condition : Pressure 7 bar, (102psi), Maximum operating temperature of 66°C, and 35°C,only for V series  
Minimum operating temperature of 1°C

| Inlet Pressure (bar) | 1    | 2    | 3    | 4    | 5    | 6    | 7   | 8    | 10  | 12   | 14   | 16  |
|----------------------|------|------|------|------|------|------|-----|------|-----|------|------|-----|
| Inlet Pressure (sig) | 15   | 29   | 44   | 58   | 72.5 | 87   | 102 | 116  | 145 | 174  | 203  | 232 |
| Correction Factor    | 0.38 | 0.53 | 0.65 | 0.75 | 0.83 | 0.92 | 1   | 1.06 | 1.2 | 1.31 | 1.41 | 1.5 |

For other compressed air inlet pressures, multiply the filter capacity by the following correction factors



## OIL WATER SEPARATORS

| Model   | Nominal Flow |                   |      | Inlet | Outlet | Dimensions |             |
|---------|--------------|-------------------|------|-------|--------|------------|-------------|
|         | l/min        | m <sup>3</sup> /h | cfm  |       |        | "          | mm          |
| OSD 20  | 2000         | 120               | 71   | 1/4"  |        | 10         | 140x140x240 |
| OSD 35  | 3500         | 210               | 124  | 1/2"  |        | 20         | 215x257x500 |
| OSD 105 | 10500        | 630               | 371  | 1/2"  |        | 20         | 345x282x654 |
| OSD 255 | 25500        | 1530              | 901  | 1/2"  |        | 20         | 432x495x989 |
| OSD 365 | 36500        | 2190              | 1289 | 1/2"  |        | 20         | 432x495x989 |
| OSD 510 | 51000        | 3060              | 1801 | 1/2"  |        | 20         | 990x520x989 |
| OSD 710 | 71000        | 4260              | 2507 | 1/2"  |        | 20         | 990x520x989 |



## COMPLETE COMPRESSOR ROOM SOLUTIONS

