











TECHNOLOG YOU CAN TRUST



# Smart and Simple Compressed Air Solutions

MSS 4 - 75 kW Oil-injected Screw Compressors

MSS 7.5 kW - 75 kW Variable Speed Screw Compressors

MDS 35 CFM - 1000 CFM Refrigerated Dryers

G-C-V 45 CFM - 1500 CFM Compressed Air Filters







## 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 Required Different Types of Filters

|         | Contaminant | State of<br>matters | Filter  | Filter medium           | Filteration mechanisms     |
|---------|-------------|---------------------|---|-------------------------|----------------------------|
| *       | Dust        | Solid               | Pre-filter, Dust filter                               | Glass fibers            | Capture                    |
| 4.      | Oil aerosol | Liquid              | Coalescence filter, High efficiency coalescence filer | Glass fibers            | Capture + coalescing+drain |
| ell'or. | Oil vapor   | Gas                 | Porous activated carbon                               | Porous activated carbon | Adsorption                 |

## Degree of Purity of Air by ISO 8573.1

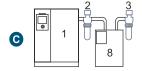
| DEGREE OF PURITY OF AIR |                        |           |                       |           |                       |  |  |  |
|-------------------------|------------------------|-----------|-----------------------|-----------|-----------------------|--|--|--|
| ISO 8573-1              | OIL<br>Concentration   | DL        | IST                   | WATER     |                       |  |  |  |
| Class                   |                        | Dimension | Concentration         | Dew point | Water content         |  |  |  |
| 1                       | 0,01 mg/m <sup>3</sup> | 0,1 μm    | 0,1 mg/m <sup>3</sup> | -70 °C    | 0,003 g/m³            |  |  |  |
| 2                       | O,1 mg/m <sup>3</sup>  | 1 µm      | 1 mg/m³               | - 40 °C   | 0,11 g/m <sup>3</sup> |  |  |  |
| 3                       | 1,0 mg/m <sup>3</sup>  | 5 µm      | 5 mg/m³               | -20°C     | 0,88 g/m³             |  |  |  |
| 4                       | 5 mg/m³                | 15 µm     | 8 mg/m³               | +3℃       | 6,0 g/m³              |  |  |  |
| 5                       | 25 mg/m³               | 40 µm     | 10 mg/m <sup>3</sup>  | + 7 ºC    | 7,8 g/m³              |  |  |  |
| 6                       | -                      |           |                       | + 10 °C   | 9,4 g/m³              |  |  |  |

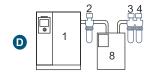


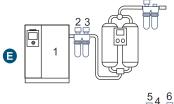
### Typical Installations

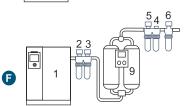








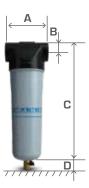




- A. General purpose protection (air purity to ISO 8573-1: G filter class 2::3 & P filter class 4::3)
- B. General purpose protection and reduced oil concentration (air purity to ISO 8573-1: class 1:-2)
- **C.** High quality air with reduced dew point (air purity to ISO 8573-1: class 1:4:2)
- D. High quality air with reduced dew point and oil concentrator (air purity to ISO 8573-1: class 1:4:1)
- E. High quality air with extremely low dew point (air purity to ISO 8573-1: class 2:2:1)
- F. High quality air with extremely low dew point (air purity to ISO 8573-1: class 1:2:1)

- 1. Compressor with after-cooler
- 2. G filter
- 3. C filter
- 4. V filter
- 5. S filter
- 6. D filter
- 7. P filter
- 8. Refrigerant dryer
- 9. Adsorption dryer

| Model      | L/min | m³/hr | CFM  | BAR | PSI | G      | Α   | В  | С   | 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 | 237 | 32 | 0.77  |
| FILTER 21  | 2100  | 126   | 74   | 16  | 232 | 3/4"   | 90  | 19 | 292 | 32 | 0.89  |
| FILTER 30  | 3000  | 180   | 106  | 16  | 232 | 1"     | 110 | 25 | 305 | 32 | 1.39  |
| FILTER 48  | 4800  | 288   | 170  | 16  | 232 | 1 1/2" | 126 | 38 | 360 | 32 | 1.67  |
| FILTER 84  | 8400  | 504   | 297  | 16  | 232 | 2"     | 155 | 51 | 465 | 32 | 3.28  |
| FILTER 114 | 11400 | 684   | 403  | 16  | 232 | 2"     | 155 | 51 | 500 | 32 | 3.63  |
| FILTER 156 | 15600 | 936   | 551  | 16  | 232 | 2"     | 155 | 51 | 545 | 32 | 3.85  |
| FILTER 216 | 21600 | 1296  | 763  | 16  | 232 | 2 1/2" | 193 | 64 | 617 | 32 | 6.11  |
| FILTER 315 | 31500 | 1890  | 1112 | 16  | 232 | 3"     | 210 | 76 | 720 | 32 | 8.75  |
| FILTER 405 | 40500 | 2430  | 1430 | 16  | 232 | 3"     | 210 | 76 | 890 | 32 | 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 coalesching 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**



- ① Double O-rings gaurantee proper sealing to reduce leakage risks and increase energy savings.
- Increased user freindliness and reliability via push-on element.
- Protection paper avoids direct contact between filter media and stainless steel filter core.
- ② Enhanced glass fiber media ensure high filter efficiency, low pressure drop and gauranteed 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 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

- 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





Care. Trust. Efficiency.







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