

COMPRESSED AIR TREATMENT



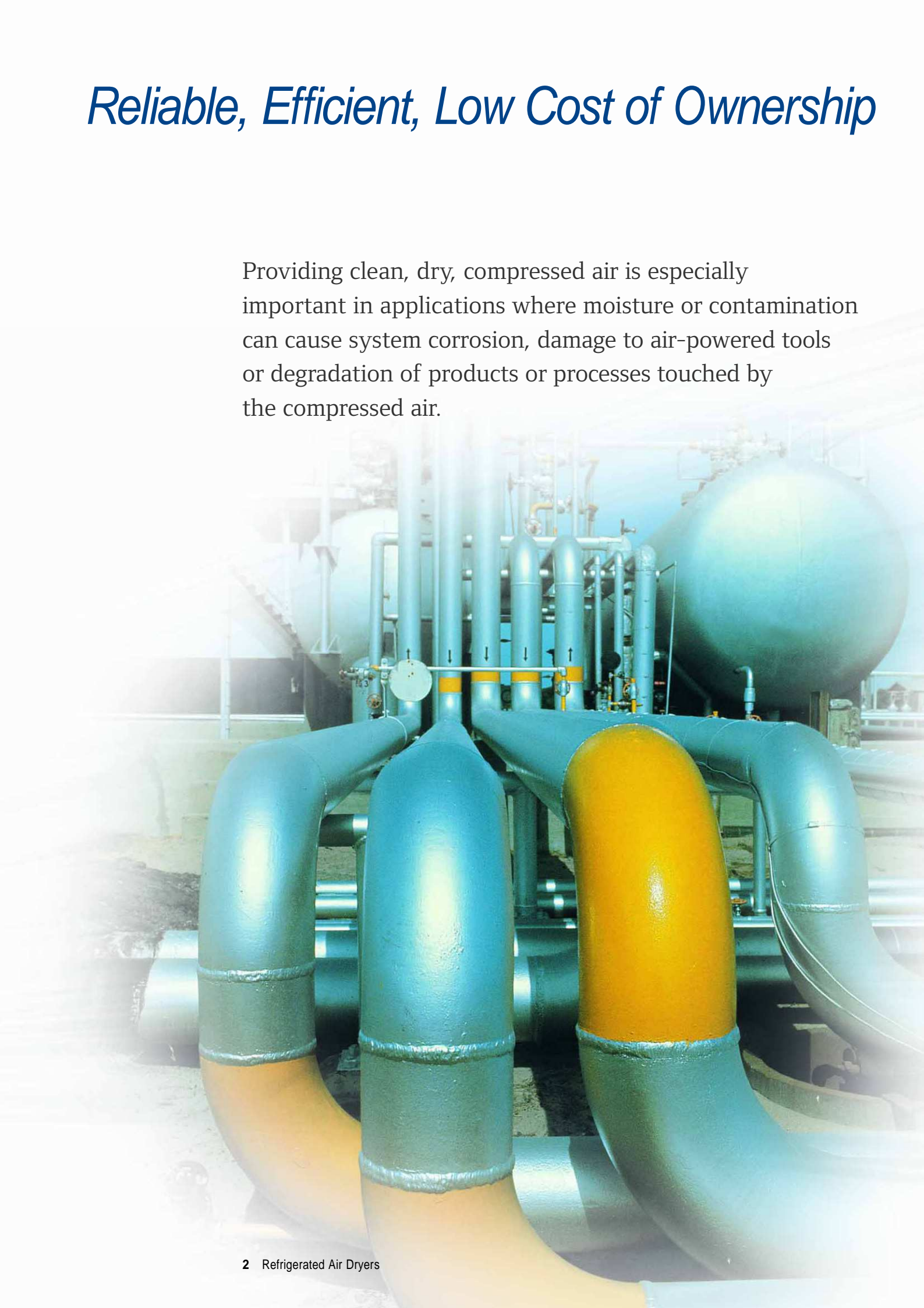
Quality by choice



ED SERIES
REFRIGERATION AIR DRYERS

Reliable, Efficient, Low Cost of Ownership

Providing clean, dry, compressed air is especially important in applications where moisture or contamination can cause system corrosion, damage to air-powered tools or degradation of products or processes touched by the compressed air.



Refrigerated dryers from OMI offer multiple design features to ensure a constant dew point at all load levels and will deliver a continuous dry air performance that satisfies ISO 7183 industry standards.

Clean, Reliable, Refrigerated Air

These units provide complete, affordable solutions for a wide selection of applications, including:

- Dry Cleaning.
- Light Processing.
- Petrochemical.
- Automotive.
- Manufacturing.
- Oil and Gas.

Designed for Optimum Efficiency

Multi-stage filtering helps remove residual contaminants. Using refrigerated dryers from OMI will provide clean, dry air which means less corrosion in the air distribution system, less damage to air-powered tools and reduced potential for contamination in production process.

OMI offer multiple design features to ensure constant dew point at all load levels and will deliver continuous dry air performance that satisfies ISO 7183 industry standards.

Low Cost of Ownership

OMI's refrigerated dryers provide the very best combination of high efficiency, low pressure drop and small footprint which reduces power consumption, reduces installation time and facilitates maintenance.



Corrosion



Spoiled Paint Finish

Optimise your Choice

The 'ED' Refrigerated Dryer Range - one range for all applications. These units provide a small footprint with complete, affordable solutions for applications ranging from dry cleaning to automotive body shops, to light processing and manufacturing applications. The high capacity units are designed for large-scale industrial, automotive and petrochemical applications.

Control Panel : ED 18 to ED 480

- Energy Saving mode ESA – shuts dryer off during low loads.
- Full feature, multi-function control panel.
- Anti freeze mode – shuts dryer off to avoid icing.
- Alarm display:
 - High and very high dew point.
 - Low dew point.
 - Probe failure.
- Fan speed indication.
- Remote alarm contact.
- History of last 10 alarms.



Electronic Drain Valve : ED 18 to ED 480

The programmable electronic drain valve is fully adjustable to help minimise air loss.

- Easily adjusted from the dryer control panel to match all possible working conditions.
- Proven reliability – thousands in service.
- Includes a strainer for quick maintenance.

Control Panel : ED 660 to ED 1000

Includes all the main functions to control and monitor the unit:

- Anti freeze mode – shuts dryer off to avoid icing.
- Alarm display:
 - Dew Point – high/low temperature.
 - High ambient temperature.
- Terminal for remote alarm signal.
- Terminal for remote alarm for no-loss drain (optional).
- History of last 10 alarms.



Control Panel : ED 2700 to ED 6800

This range has all the main functions you would expect to control and monitor the unit:

- Anti freeze mode – shuts dryer off to avoid icing.
- Alarm display:
 - Dew Point – high/low temperature.
 - High ambient temperature.
- Terminal for remote alarm signal.
- Terminal for remote alarm for no-loss drain (optional).
- Remote ON/OFF.
- History of the last 50 alarms.



Reliable Design

Scroll compressors with corrosion resistant materials deliver cost efficient, long-life performance. They feature fewer moving parts, are fully-instrumented and monitored for reliability and are protected by IP42-rated electrical enclosures.

This makes them the optimum investment for high-volume needs with a lot at stake – and the bigger, the better!

Every unit delivers advanced microprocessor control with multi-level menus, password protection and alarms.

Control Panel : ED 8800 to ED 24000

This range has all the main functions you would expect to control and monitor the unit:

- Anti freeze mode – shuts dryer off to avoid icing.
- Alarm display:
 - Dew Point – high/low temperature.
 - High ambient temperature.
- Terminal for remote alarm signal.
- Terminal for remote alarm for no-loss drain.
- Remote ON/OFF.

History of the last 50 alarms.

Electronic No-loss Drain : ED 8800 to ED 24000

The powerful no loss electronic drain eliminates the need for pre-setting the unit.

- Using state-of-the-art software and combined with a special transducer interface to measure the presence of condensate, it is released only when needed.
- Continuous monitoring ensures fast, effective discharge

of the condensate with no deficit of compressed air.

Reliable Design

Scroll compressors with corrosion resistant materials deliver cost efficient, long-life performance. They feature fewer moving parts, are fully-instrumented and monitored for reliability and are protected by IP42-rated electrical enclosures.

This makes them the optimum investment for high-volume needs with a lot at stake – and the bigger, the better!

Every unit delivers advanced microprocessor control with multi-level menus, password protection and alarms.



Technical Specifications

| Model | Flow-rate | | | Max pressure | Connections | Power supply | Power consumption | Power supply (60 Hz option) | Power consumption (60 Hz option) | Width | Length | Height | Weight |
|----------------------------|-----------|--------|---|--------------|-------------|--------------|-------------------|-----------------------------|----------------------------------|-------|--------|--------|--------|
| | l/min | m³/h | CFM | | | | | | | | | | |
| ED 18 | 300 | 18 | 11 | 16 | 3/8" | 230/1/50 | 0,12 | 230/1/60 | 0,13 | 305 | 360 | 408 | 19 |
| ED 24 | 400 | 24 | 14 | 16 | 3/8" | 230/1/50 | 0,12 | 230/1/60 | 0,13 | 305 | 360 | 408 | 19 |
| ED 54 | 900 | 54 | 32 | 16 | 1/2" | 230/1/50 | 0,14 | 230/1/60 | 0,24 | 390 | 432 | 453 | 26 |
| ED 72 | 1.200 | 72 | 42 | 16 | 1/2" | 230/1/50 | 0,17 | 230/1/60 | 0,24 | 390 | 432 | 453 | 28 |
| ED 108 | 1.800 | 108 | 64 | 16 | 3/4" | 230/1/50 | 0,41 | 230/1/60 | 0,49 | 420 | 516 | 563 | 36 |
| ED 144 | 2.400 | 144 | 85 | 16 | 3/4" | 230/1/50 | 0,41 | 230/1/60 | 0,49 | 420 | 516 | 563 | 42 |
| ED 180 | 3.000 | 180 | 106 | 16 | 3/4" | 230/1/50 | 0,50 | 230/1/60 | 0,58 | 420 | 516 | 563 | 44 |
| ED 225 | 3.750 | 225 | 132 | 16 | 1" | 230/1/50 | 0,60 | 230/1/60 | 0,71 | 485 | 595 | 614 | 48 |
| ED 260 | 4.333 | 260 | 153 | 16 | 1" | 230/1/50 | 0,60 | 230/1/60 | 0,71 | 485 | 595 | 614 | 49 |
| ED 360 | 6.000 | 360 | 212 | 16 | 1 1/2" | 230/1/50 | 0,90 | 230/1/60 | 1,00 | 500 | 718 | 980 | 79 |
| ED 480 | 8.000 | 480 | 282 | 16 | 1 1/2" | 230/1/50 | 1,24 | 230/1/60 | 1,73 | 500 | 718 | 980 | 85 |
| ED 660 | 11.000 | 660 | 388 | 16 | 2" | 230/1/50 | 1,24 | 230/1/60 | 1,73 | 779 | 720 | 1360 | 134 |
| ED 780 | 13.000 | 780 | 459 | 16 | 2" | 400/3/50 | 1,90 | 460/3/60 | 2,40 | 779 | 720 | 1360 | 164 |
| ED 1000 | 16.667 | 1.000 | 588 | 13* | 2" | 400/3/50 | 1,90 | 460/3/60 | 2,40 | 779 | 720 | 1360 | 168 |
| ED 1300 | 21.667 | 1.300 | 765 | 16 | 3" | 400/3/50 | 2,78 | 460/3/60 | 3,34 | 785 | 1365 | 1555 | 274 |
| ED 1700 | 28.333 | 1.700 | Not available. See new models ED.1500 + 1800 - 2250 | | | | | | | 785 | 1365 | 1555 | 274 |
| ED 2200 | 36.667 | 2.200 | 1.294 | 16 | 3" | 400/3/50 | 4,55 | 460/3/60 | 5,36 | 785 | 1365 | 1555 | 304 |
| ED 2700 | 45.000 | 2.700 | 1.588 | 16 | DN 100 | 400/3/50 | 4,99 | 460/3/60 | 5,93 | 905 | 1390 | 1555 | 351 |
| ED 3600 | 60.000 | 3.600 | 2.118 | 16 | DN 125 | 400/3/50 | 6,29 | 460/3/60 | 7,56 | 1510 | 1500 | 1555 | 560 |
| ED 4200 | 70.000 | 4.200 | 2.471 | 16 | DN 125 | 400/3/50 | 7,29 | 460/3/60 | 8,73 | 1510 | 1500 | 1555 | 590 |
| ED 5300 | 88.333 | 5.300 | 3.118 | 16 | DN 150 | 400/3/50 | 9,52 | 460/3/60 | 11,57 | 1510 | 1500 | 1555 | 665 |
| ED 6000 | 100.000 | 6.000 | 3.529 | 16 | DN 150 | 400/3/50 | 9,52 | 460/3/60 | 11,57 | 1510 | 1500 | 1555 | 700 |
| ED 6800 | 113.333 | 6.800 | 4.002 | 16 | DN 150 | 400/3/50 | 10,99 | 460/3/60 | 13,26 | 1510 | 1500 | 1555 | 715 |
| ED 8800 | 146.667 | 8.800 | 5.176 | 13 | DN 150 | 400/3/50 | 14,96 | 460/3/60 | 18,54 | 2270 | 1590 | 1570 | 1058 |
| ED 10000 | 166.667 | 10.000 | 5.882 | 13 | DN 200 | 400/3/50 | 14,96 | 460/3/60 | 18,54 | 2270 | 1590 | 1570 | 1128 |
| ED 12000 | 200.000 | 12.000 | 7.059 | 13 | DN 200 | 400/3/50 | 18,16 | 460/3/60 | 22,14 | 2270 | 1590 | 1570 | 1205 |
| ED 13600 | 226.667 | 13.600 | 8.000 | 13 | DN 200 | 400/3/50 | 22,32 | 460/3/60 | 27,06 | 3025 | 1590 | 1570 | 1360 |
| ED 17600 | 293.334 | 17.600 | 10.353 | 13 | 2 x DN 150 | 400/3/50 | 29,92 | 460/3/60 | 37,08 | 4600 | 1590 | 1570 | 2116 |
| ED 20000 | 333.334 | 20.000 | 11.765 | 13 | 2 x DN 200 | 400/3/50 | 29,92 | 460/3/60 | 37,08 | 4600 | 1590 | 1570 | 2256 |
| ED 24000 | 400.000 | 24.000 | 14.118 | 13 | 2 x DN 200 | 400/3/50 | 36,32 | 460/3/60 | 44,28 | 4600 | 1590 | 1570 | 2720 |
| Water cooled models | | | | | | | | | | | | | |
| ED 660 W | 11.000 | 660 | 388 | 16 | 2" | 230/1/50 | 1,12 | 230/1/60 | 1,67 | 791 | 720 | 1273 | 134 |
| ED 780 W | 13.000 | 780 | 459 | 16 | 2" | 400/3/50 | 1,68 | 460/3/60 | 2,11 | 791 | 720 | 1273 | 170 |
| ED 1000 W | 16.667 | 1.000 | 588 | 16 | 2" | 400/3/50 | 1,68 | 460/3/60 | 2,11 | 791 | 720 | 1273 | 174 |
| ED 1300 W | 21.667 | 1.300 | 765 | 16 | 3" | 400/3/50 | 2,42 | 460/3/60 | 3,77 | 790 | 1365 | 1440 | 265 |
| ED 1700 W | 28.333 | 1.700 | Not available. See new models ED.1500 + 1800 - 2250 | | | | | | | 790 | 1365 | 1440 | 265 |
| ED 2200 W | 36.667 | 2.200 | 1.294 | 16 | 3" | 400/3/50 | 4,18 | 460/3/60 | 4,92 | 790 | 1365 | 1440 | 345 |
| ED 2700 W | 45.000 | 2.700 | 1.588 | 16 | DN 100 | 400/3/50 | 4,48 | 460/3/60 | 5,34 | 905 | 1390 | 1440 | 380 |
| ED 3600 W | 60.000 | 3.600 | 2.118 | 16 | DN 125 | 400/3/50 | 5,62 | 460/3/60 | 6,78 | 1510 | 1500 | 1440 | 540 |
| ED 4200 W | 70.000 | 4.200 | 2.471 | 16 | DN 125 | 400/3/50 | 6,50 | 460/3/60 | 7,83 | 1510 | 1500 | 1440 | 585 |
| ED 5300 W | 88.333 | 5.300 | 3.118 | 16 | DN 150 | 400/3/50 | 8,51 | 460/3/60 | 10,39 | 1510 | 1500 | 1440 | 633 |
| ED 6000 W | 100.000 | 6.000 | 3.529 | 16 | DN 150 | 400/3/50 | 8,51 | 460/3/60 | 10,39 | 1510 | 1500 | 1440 | 668 |
| ED 6800 W | 113.333 | 6.800 | 4.002 | 16 | DN 150 | 400/3/50 | 9,84 | 460/3/60 | 11,93 | 1510 | 1500 | 1440 | 685 |
| ED 8800 W | 146.667 | 8.800 | 5.176 | 13 | DN 150 | 400/3/50 | 13,52 | 460/3/60 | 16,79 | 2270 | 1590 | 1440 | 990 |
| ED 10000 W | 166.667 | 10.000 | 5.882 | 13 | DN 200 | 400/3/50 | 13,52 | 460/3/60 | 16,79 | 2270 | 1590 | 1440 | 1060 |
| ED 12000 W | 200.000 | 12.000 | 7.059 | 13 | DN 200 | 400/3/50 | 16,26 | 460/3/60 | 20,02 | 2270 | 1590 | 1440 | 1117 |
| ED 13600 W | 226.667 | 13.600 | 8.000 | 13 | DN 200 | 400/3/50 | 20,17 | 460/3/60 | 24,53 | 2270 | 1590 | 1440 | 1222 |
| ED 17600 W | 293.334 | 17.600 | 10.353 | 13 | 2 x DN 150 | 400/3/50 | 27,04 | 460/3/60 | 33,58 | 4600 | 1590 | 1440 | 1980 |
| ED 20000 W | 333.334 | 20.000 | 11.765 | 13 | 2 x DN 200 | 400/3/50 | 27,04 | 460/3/60 | 33,58 | 4600 | 1590 | 1440 | 2234 |
| ED 24000 W | 400.000 | 24.000 | 14.118 | 13 | 2 x DN 200 | 400/3/50 | 40,34 | 460/3/60 | 40,04 | 4600 | 1590 | 1440 | 2444 |

STANDARD REFERENCE CONDITIONS

- Ambient temperature: 25 °C (45° max)
- Working pressure: 7 bar
- Inlet air temperature: 35 °C (55° max)
- Dew point: CLASS 4
- Cooling water temperature: 29,4°C (35° max) - Only for water cooled models

Features

| Features | Air cooled | | | | | Water cooled | | |
|----------------------------------|-----------------|------------------|-------------------|--------------------|---------------------|----------------------|------------------------|-------------------------|
| | ED 18 to ED 180 | ED 225 to ED 480 | ED 660 to ED 1000 | ED 1300 to ED 6800 | ED 8800 to ED 24000 | ED 66 W to ED 1000 W | ED 1300 W to ED 6800 W | ED 8800 W to ED 24000 W |
| Dew Point Indication | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| On/off Switch | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Terminal for Remote Alarm Signal | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Remote Control (Option) | | | | ✓ | ✓ | | ✓ | ✓ |
| Anti Freeze Mode | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Remote ON/OFF Switch | | | | ✓ | ✓ | | ✓ | ✓ |
| High Pressure Switch | | | | ✓ | ✓ | | ✓ | ✓ |
| Variable Speed Fan | ✓ | ✓ | | | | | | |
| Fan Pressure Switch | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| History of Last 10 Alarms | ✓ | ✓ | ✓ | | | ✓ | | |
| History of Last 50 Alarms | | | | ✓ | ✓ | | ✓ | ✓ |
| Hot Gas By-pass Valve | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Electronic No-loss Drain | | | | | ✓ | | | ✓ |
| Electronic Drain Valve | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | |

Main available options

- No loss drain
- Sea water cooled
- Different voltages
- ANSI/NPT air connections
- Remote control
- Different gas

Maintaining air quality is so important that the International Standards Organisation (ISO) developed six compressed air quality classes, as defined by ISO 8573-1:2001.

ISO 8573-1:2001 Air Quality Classes

| Quality Class | Solid - Maximum Number of Particles per m ³ | | | Water cooled Dew Point °C | Oil & Oil Vapour mg/m ³ |
|---------------|--|--------------|------------|---------------------------|------------------------------------|
| | 0.1-0.5 micron | 0.5-1 micron | 1-5 micron | | |
| 0 | As specified by the end-user or manufacturer and more stringent than Class 1 | | | | |
| 1 | 100 | 1 | 0 | -70°C | 0,01 |
| 2 | 100,000 | 1000 | 10 | -40°C | 0,1 |
| 3 | N/A | 10,000 | 500 | -20°C | 1 |
| 4 | N/A | N/A | 1,000 | 3°C | 5 |
| 5 | N/A | N/A | 20,000 | 7°C | N/A |
| 6 | N/A | N/A | N/A | -10°C | N/A |

To determine which industry classification you require, ask yourself these simple questions:

- Does compressed air quality affect my production process and the quality of my end products?
- Will poor compressed air quality decrease my productivity, cost savings and product quality standards?
- What internal and external ambient conditions affect the quality of my compressed air produced by my system?

Energy and Environmental

The ED 18 to ED 24000 units are rated for 45°C ambient air conditions – which covers a large range of applications.

Environmental Friendly Refrigerant

| | |
|------------------------|-------|
| ED 18 to ED 180 | R134A |
| ED 225 to ED 24000 | R407C |
| ED 660 W to ED 24000 W | R407C |



Correction factors

| Correction factor for working pressure | | | | | | | | | | | | | | |
|--|-----|------|------|------|---|------|------|------|------|-----|------|------|------|------|
| bar | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| FC1 | 0,7 | 0,78 | 0,85 | 0,93 | 1 | 1,06 | 1,11 | 1,15 | 1,18 | 1,2 | 1,22 | 1,24 | 1,25 | 1,26 |

| Correction factor for inlet air temperature | | | | | | |
|---|-----|----|------|------|------|------|
| °C | 30 | 35 | 40 | 45 | 50 | 55 |
| FC2 | 1,2 | 1 | 0,85 | 0,71 | 0,58 | 0,49 |

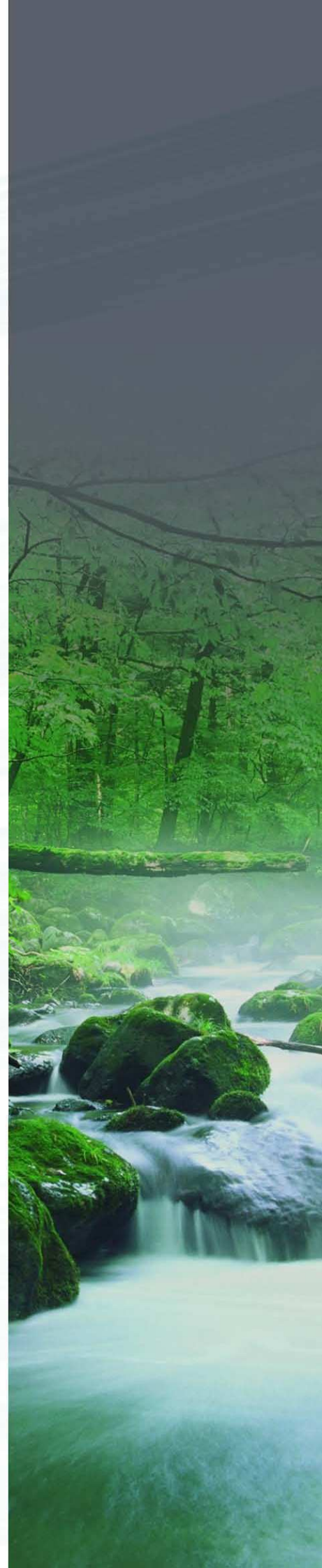
| Correction factor for dew point temperature | | | | | | | | | |
|---|---|------|------|------|------|------|-----|------|--|
| °C | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| FC3 | 1 | 1,04 | 1,09 | 1,14 | 1,18 | 1,25 | 1,3 | 1,33 | |

| Correction factor for ambient temperature (for air cooled version) | | | | | | |
|--|----|------|------|------|------|-----|
| °C | 25 | 30 | 35 | 40 | 42 | 45 |
| FC4 | 1 | 0,96 | 0,92 | 0,88 | 0,85 | 0,8 |

| Correction factors for different water inlet temperature (for water cooled version) | | | | | | | | |
|---|------|------|------|------|------|------|------|------|
| °C | 15 | 20 | 25 | 29,4 | 30 | 35 | 38 | 40 |
| FC4 | 1,08 | 1,06 | 1,03 | 1 | 0,99 | 0,95 | 0,91 | 0,88 |

Calculation of the dryers real flow rate:

$$\text{REAL FLOW RATE} = \text{Nominal dryer flow rate} \times \text{FC1} \times \text{FC2} \times \text{FC3} \times \text{FC4}$$



OMI reserves the right to change the following data without prior notice.



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Cod. 712.0028.00.00-15
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