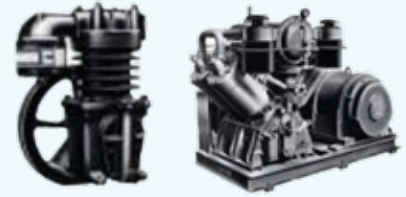


MARK factory has been established in 1970 and started the piston compressor production in 1974. It was the first company to introduce two years later the screw compressors on the Italian Market. Today, MARK is a worldwide leader in the

production and distribution of compressed air products and solutions with 4 factories based in Europe. MARK goal is to keep developing cutting-edge technologies, but with an 'eye' for simplicity, as suggested by its motto: "TECHNOLOGY YOU CAN TRUST"!



Screw Compressors

Interior permanent magnet (iPM) technology: RMD 45-75 IVR PM VARIABLE SPEED RANGE

- Highly efficient drive train with Interior Permanent Magnet (iPM) motor technology:
 - oil-cooled,
 - IE4 rated
 - IP66 protection class
- New generation in-house designed screw elements
- Imperium variable speed technology
- ENERGY SAVINGS of up to 45%
- ICONS connected
- Rated up to 46°C ambient temperature

| Power (kW) | Pressure (bar) | FAD (l/min) | Noise level dB (A) | Vessel size (L) | Transmission | Controller |
|------------|----------------|-------------|--------------------|-----------------|---------------|----------------------------------|
| 45-55-75 | 4-13 | 1680-13200 | 69-71 | Base-mounted | Direct driven | ES 4000 ^T touchscreen |



Belt Driven Technology

Fixed Speed: 2,2 - 75 kW

MARK Belt driven compressors have an in-house designed belt that connects the electric motor to the air compressors pump with pulleys. They offer greater flexibility to adjust the air flow and pressure as needed. Additional advantages are: high quality and long lasting belts; highly reliable belt tension-

ing system for excellent performance; easy installation and maintenance.

Fixed speed control: Load – unload regulation: A load/unload compressor delivers a constant air capacity. The net pressure is controlled by an inlet valve operating the compressor in a load/

unload cycle. In case the set pressure is reached, the compressor turns into unload mode (by closing the inlet valve). When the pressure value drops below a specific level, the compressor starts up the same routine.

| | MSM MINI 2,2-7 | MSA 4-15 | MSM MAXI 5,5-15 | MSM 16-30 |
|-------------------|-------------------|-----------------|--------------------|---------------|
| Power (kW) | 2,2-3-4-5,5-7,5 | 4-5,5-7,5-11-15 | 5,5-7,5-11-15 | 15-18,5-22-30 |
| Pressure (bar) | 8-10 | 8-10-13 | 7,5-9,5-12,5 | 8-10-13 |
| FAD (l/min) | 294-1062 | 485-2000 | 696-1860 | 1872-4332 |
| Noise Level dB(A) | 61-68 | 60-65 | 64-71 | 67-71 |
| Vessel size (L) | 0-200-270-500 | 0-270-500 | 0-270-500 | 0-500 |
| Controller | ES 4000 Basic | ES 3000 | ES 4000 Basic | ES 4000 Basic |





Gear Driven Technology Fixed Speed

15-160 kW

Gear drive provides a better accuracy in transmission between the element and the motor. Choosing the heavy duty gearbox solution offers:

higher performance for less energy consumption; lower maintenance cost, no transmission losses, no belt tensioning, no coupling maintenance,

silent design thanks to standard radial cooling fan on some of the models.

| | RMB 15-25 | RMB 22-26 | RMC 30-45 | RMM 30-45 | RMD 55-75 | RME 75-110 | RMF 111-160 |
|-------------------|---|---|--------------------|--------------------|--------------------|--------------------|-------------|
| Power (kW) | 15-18,5-22-26 | 22-26 | 30-37-45 | 30-37-45 | 55-75 | 75-90-110 | 110-132-160 |
| Pressure (bar) | 7,5-8,5-10-13 | 7,5-8,5-10-13 | 7,5-8,5-10-13 | 7,5-8,5-10 | 7-8-9,5-12,5 | 7-8-9,5-12,5 | 7-8,5-10-13 |
| FAD (l/min) | 1946-4210 | 2880-4500 | 4422-8178 | 4560-7560 | 7200-12780 | 10140-20040 | 906-1718 |
| Noise Level dB(A) | 67-71 | 68-69 | 67-72 | 71,5-74,5 | 71-75 | 71-74 | 77-78 |
| Vessel size (L) | 0-500 | 0 | 0 | 0 | 0 | 0 | 0 |
| Controller | ES 4000 Standard ES 4000 Advanced optional | ES 4000 Standard ES 4000 Advanced optional | ES 4000 T optional | ES 4000 T optional | ES 4000 T optional | ES 4000 T optional | ES 4000 T |



Gear and Direct Driven Technology Variable Speed:

7,5-160 kW

Direct driven compressors have the motor directly connected to the crankshaft of the compressor. They have the ability to operate at lower temperatures and provide high-energy efficiency.

Frequency driven compressors have a working pattern with lower peaks and a smoother air profile. This is achieved by controlling the air delivery and producing only the amount of air required for the customer's application

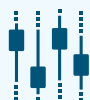
at a specific moment. The net pressure is maintained by the use of a frequency inverter. This results in considerable energy and cost savings preventing energy losses at the load and unload cycles.

| | RMA IVR 7,5-15 DD | RMB IVR 15-25 DD | RMB IVR 22-26 DD | RMC IVR 30-45* | RMM IVR 30-45 GD | RME IVR 75-110 GD | RMF IVR 111-160 GD |
|-------------------|--|--|--|----------------|--------------------|-------------------|--------------------|
| Power (kW) | 7,5-11-15 | 15-18,5-22-26 | 22-26 | 30-37-45 | 30-37-45 | 75-90-110 | 110-132-160 |
| Pressure (bar) | 5,5-12,5 | 5,5-13 | 5,5-13 | 4-13 | 4-10 | 4-13 | 4-10 |
| FAD (l/min) | 258-2287 | 780-4158 | 780-4860 | 1080-8100 | 1440-7440 | 2760-19080 | 1116-1806 |
| Noise Level dB(A) | 62-65 | 68-72 | 68-69 | 67-72 | 71,5-74,5 | 71-74 | 77-78 |
| Vessel size (L) | 0-270-500 | 0-500 | 0 | 0 | 0 | 0 | 0 |
| Controller | ES 4000 std. ES 4000 Advanced optional | ES 4000 std. ES 4000 Advanced optional | ES 4000 std. ES 4000 Advanced optional | ES 4000 T | ES 4000 T optional | ES 4000 T | ES 4000 T |

* RMC IVR 30: DD

RMC IVR 37-45: GD





Controllers

ES 4000 BASIC



- Advanced monitoring
- Simple day-to-day configuration and control
- Icon based display
- Running hours, load hours
- Pressure and temperature readings
- Remote start stop
- Automatic restart after a power failure
- Maintenance service warnings
- Fault management
- Fast pressure setting, directly on the controller

ES 4000 STANDARD



- Icon based display action
- Led status visualization
- Digital I/O
- Remote start stop, load-unload, emergency stop
- Automatic restart after a power failure
- Service indicator and fault management provide comprehensive messages to ease service diagnostics
- Visualization through web browser using a simple Ethernet connection

ES 4000 ADVANCED



- User-friendly graphic screens, data logging and storage on a memory card
- Stop/start timers do not rely on the operator's action to save energy, but program the ES 4000 ADVANCED controller to operate as your factory operates
- Dual pressure band time scheduling for operation with different pressure bands, leading to energy savings

ES 4000 T TOUCHSCREEN



- Easy to use large 4,3" full-colour graphical touchscreen display
- In-house designed
- Integrated connectivity helps optimizing and save energy
- Warning indications
- Graphical indication service plan
- Integrated ECO6i available as option to central control up to 6 compressors limiting the energy consumption and equalizing running hours across your whole system
- Online visualization of running conditions

ECONTROL 6



- Simple, central control to reduce system pressure and energy consumption in installations of up to 6 compressors
- Single pressure measurement point
- Minimized pressure band
- Stable system pressure
- Equalization of running hours
- Multiple IVR speed control
- Clear and visual graphical display
- Online monitoring and controlling possible
- Touchscreen display



Professional Piston Compressors

STORMY PRO & STORMY H PRO (15 bar)

Belt driven Single & Double stage



FONOSTOP

Belt driven Double stage, Base plate



STORMY PRO SILENT

Belt driven Single & Double stage, Silent



CTS Aftermarket products & service

Original spare parts, service kits, lubricants; Energy box - energy recovery system; AIRnet - Piping system; ICONS - Connectivity system



Care. Trust. Efficiency.



Refrigeration Dryers

| | MDX 400-84000 | COOL 400-7700 |
|------------------------------|----------------------------------|--------------------------------|
| FAD (l/min) | 350-84000 | 350-7700 |
| Power (kW) | 0,13-12,3 | 0,13-1,24 |
| Max operation pressure (bar) | 16 (400-1800) 14 (2400-84000) | 16 (400-3600) 13(4100-7700) |
| Pressure dew point (°C) | 4 | 5 |
| Weight (kg) | 19 – 650 | 19 – 80 |



| | |
|-------------|-----------|
| FAD (m³/h) | 10-2550 |
| Size (SCFM) | 6-1500 |
| Weight (kg) | 0,25-12,5 |

Air filters

FG: coalescing filters for general purpose protection
 FC: High-efficiency coalescing filters
 FV: Activated carbon filter

FS: Particulate filters for dust protection
 FD: High-efficiency particulate filters for dust protection
 FP: coalescing and particulate general purpose pre-filter.

LD - Electronic Condensate Drains

| | PRESSURE (Bar) | Compressor capacity (m³/h) | Dryer capacity (m³/h) | Filter capacity (m³/h) | Weight (kg) |
|-------------------|----------------|----------------------------|-----------------------|------------------------|-------------|
| Electronic LD 200 | 16 | 900 | 1800 | 9000 | 0,7 |
| Electronic LD 202 | 16 | 1800 | 3600 | 18000 | 1,2 |
| Electronic LD 203 | 16 | 9500 | 19000 | 95000 | 2,8 |



AIR RECEIVERS

| TYPOLOGY | STANDARD | | | HIGH PRESSURE | | |
|----------------|--|------------|-----------|------------------------------|------------|-----------|
| | PAINTED | GALVANIZED | VITROFLEX | PAINTED | GALVANIZED | VITROFLEX |
| PRESSURE (Bar) | 11 | 11 | 11 | 16 | 16 | 16 |
| CAPACITY (L) | 100; 200; 270; 500; 720; 900; 1000; 1500; 2000; 3000; 4000; 5000 | | | 500-1000-2000-3000-4000-5000 | | |
| DIAMETER (mm) | 370-1450 | 370-1450 | 430-1450 | 600-1430 | 600-1430 | 600-1430 |
| Weight (kg) | 37-923 | 40-1025 | 50-932 | 159-1055 | 176-1160 | 160-1055 |



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Adsorption Dryers ADS 1-10 & 15-156 & 110-215

| | |
|----------------|-----------|
| FAD (l/min) | 114-25800 |
| Pressure (bar) | 7; 12,5 |
| Weight (kg) | 13-650 |



Oil-Water Separators D-ES 54-11250

| | |
|--------------------------|-----------|
| FAD with dryer (m³/h) | 43-8998 |
| FAD without dryer (m³/h) | 54-11250 |
| Weight (kg) | 1,2-171,9 |