

SCREW  
COMPRESSOR

**Airpol**  
compressors

# EnergySmart **5** DRY

INTELLIGENT COMPRESSOR DRIVE TECHNOLOGY

HIGH QUALITY COMPRESSED AIR



- ✓ ENERGY SAVINGS
- ✓ DRY AIR
- ✓ QUIET OPERATION
- ✓ NO REQUIREMENTS TO REGISTER AT THE TECHNICAL SUPERVISION OFFICE (ACC. TO THE POLISH LAW)
- ✓ WORKSPACE SAVINGS

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## Airpol EnergySmart 5 DRY

Screw compressor

Design version	<ul style="list-style-type: none"> <li>• with compressed air treatment system (refrigeration dryer and two air filters)</li> <li>• with frequency converter and Ultra Speed function</li> </ul>	
Max overpressure	MPa	1.0
Min- max capacity [0.65 MPa]	m <sup>3</sup> /h	10 - 54
Min- max capacity [0.75 MPa]	m <sup>3</sup> /h	10 - 52
Min-max capacity [0.8 MPa]	m <sup>3</sup> /h	10 - 50
Min-max capacity [0.9 MPa]	m <sup>3</sup> /h	10 - 45
Min-max capacity [1.0 MPa]	m <sup>3</sup> /h	10 - 40
Dimensions (LxWxH)	mm	950x700x1702
Air receivers volume	l	2 x 70
Compressed air connection		G 3/4
Weight	kg	410
Ambient temperature	°C	from +5 up to +40
Cooling air demand	m <sup>3</sup> /h	1200
Compressed air temperature	°C	approx. 10°C above ambient temperature
Sounds level	dB(A)	62
Power transmission system		belt drive
Nominal motor power	kW	5.5
Nominal fan motor power	kW	0.13
Motor energy efficiency class		IE3
Motor IP code		IP55
Power supply	V/Ph/Hz	400/3/50
Recommended power feed cable	mm <sup>2</sup>	5x2.5
Protection fuse	A	20
Dew point	°C	+3
Compressed air quality class in accordance with ISO 8573.1		2.4.2
Microprocessor controller		AIRPOL POWER CONTROL series
Supervision of the Technical Supervision Office		shall not be subject to (ref. to the Polish law)

## FREQUENCY CONVERTER

A frequency converter provides smooth speed control in the range from 20% to 100% (depending on the pressure set on the controller) and therefore gives many benefits for the user, especially:

- adjustment of the compressor capacity to the actual demand for compressed air,
- reducing compressor pressure hysteresis, thereby reducing pressure variations in the pneumatic network (keeping the electric motor's rotation so that there is constant pressure in the compressed air system, at the set value),
- energy saving,
- return on investment in a shorter period of time.

## ULTRA SPEED FUNCTION

The Ultra Speed function gives the user ability to change the operating pressure settings in the range of 0.65 - 1.0 MPa and thus achieve the compressor performance relevant to the pressure. With this function, it is possible to obtain even greater energy savings.

The Ultra Speed function provides the maximum possible compressor capacity at a given operating pressure, adjusting the speed ratio so that the power current input, is similar to the nominal motor power.

Function Ultra Speed is particularly useful at times of increased demand for compressed air. With this function, the customer has possibility to adjust the compressor pressure / capacity within the range permitted by the manufacturer.

## EFFICIENT COOLING SYSTEM

A high-efficiency centrifugal fan with higher compression provides effective cooling throughout the compressor's operation lifetime. The fan is driven by a separate low-speed motor, which significantly reduces the compressor's sound emissions and, above all, guarantees a high energy efficiency rating for the entire unit.

## AIRPOL POWER CONTROL MICROPROCESSOR CONTROLLER

MS-AIRPOL POWER CONTROL microprocessor controller designed specifically for use in Airpol screw compressors ensures efficient operation and safety of the entire system, as well as continuous monitoring of compressor operating parameters.

Very easy-to-use and intuitive controller provides many operating options: selection of the operating mode, settings modification, compressor parameters current values observation, working time counters status, energy consumption and many others.

## SAFE REMOTE MONITORING IN ENERGYSMART COMPRESSORS WITH NEWLY LAUNCHED MS-286 CONTROLLER

Webserver hosted from the controller (no cloud), regardless of Internet access.

No need to send data outside the LAN structure.

Eliminating the risk of compressor spying and cyberattacks.

## INTEGRATED COMPRESSED AIR TREATMENT SYSTEM

Refrigeration dryer with a pressure dew point temperature of +3°C, as well as compressed air pre- and fine- filters provide the compressed air quality of 2.4.2 purity class according to ISO 8573.1.

Higher compressed air purity class means:

- longer service life of machines and pneumatic devices,
- protection against corrosion of compressed air installation,
- minimizing the risk of damage to the final product, such as paint coating.

Refrigeration dryer, along with the compressed air filters, are housed in a common compressor casing, that eliminates the need for additional working space and the cost of installing a compressed air treatment system, namely:

- Pre filter - provides high dust elimination capacity (removes 99% of solid and liquid particles larger than 3  $\mu\text{m}$ ).
- Refrigeration dryer – removes moisture from compressed air to the required dew point of +3°C.
- Fine filter – its cartridge made of multilayer dense microfiber removes 99% of particulates larger than 1  $\mu\text{m}$  and ensures that the residual oil content after the filter does not exceed 0.1 mg/m<sup>3</sup>.

## ASU SCREW AIR ENDS

ASU screw air-end with optimized rotors profile has bearings with increased load carrying capacity and durability to ensure high performance through the entire compressor operating lifetime. The ASU screw air ends are entirely designed and manufactured by Airpol.

## MORE THEN 60 YEARS EXPERIENCE IN COMPRESSOR INDUSTRY

Airpol ol EnergySmart are screw compressors that provides durability and reliability due to superior design and high quality components. Airpol, applying its vast experience in compressor manufacturing gained over 60 years in the pneumatic industry, has developed energy-efficient solutions that combine top quality with low operating costs.

## SERVICE AND SPARE PARTS ACCESS

The use of original spare parts is a key factor that significantly affects the compressor's operation safety, reliability and high performance throughout its lifetime. Airpol as a manufacturer guarantees the possibility to purchase spare parts and consumables for many years of compressor use.