Airpol

COMPRESSORS Ltd.

SCREW COMPRESSORS

Airpol – SCREW COMPRESSORS

The screw compressors are ready for operation and fully automatic units designed for continuous operation in harsh operating conditions.

The units are made in the sound-proof housing in a version with or without air receiver. They are equipped with the belt drive or direct drive.

All compressors are manufactured in accordance with the standards and requirements specified in the directives concerning machines, pressure and electrical equipment and electromagnetic compatibility. The implemented quality management system for the design, production and service of screw compressors ensures a selection of the highest quality compressor.

High quality of compressed air

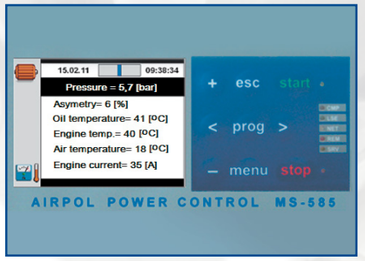
Oil content in the compressed air at the level of 3 ppm (in the standard compressor version, without additional filters) is achieved owing to the use of efficient double oil separation.

The compressed air temperature is 10^{0}C above ambient temperature owing to effective selection of fans and air coolers installed in the compressors.

Synthetic oil – longer periods between inspections

The oil used has optimum properties to ensure appropriate protection of the compressors, maintain technical parameters and extend service life, in all work conditions.

The Airpol synthetic oil helps to maintain the constant compressed air delivery necessary for efficient system operation by, among other things, over five times faster air removal (which improves lubrication and increases the efficiency of oil separation) and over two times faster water separation by oil (which ensures effective protection and lubrication).



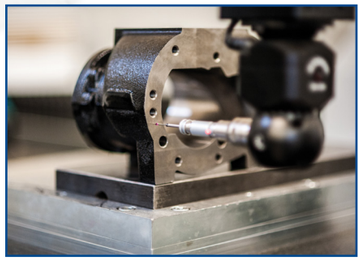
Microprocessor Controller

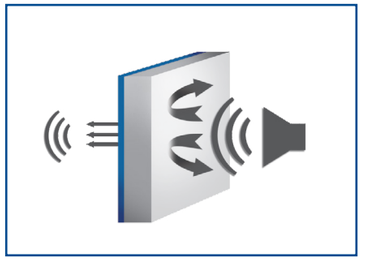
Easy to read display and user friendly user menu enables an effective control and supervision of the compressor or compressor group operation.

Proven high quality

The detailed quality control is carried out at every production stage.

High quality of the products was confirmed by the ISO 9001 quality certificate that was awarded to the company in 1998.





Low level of sound intensity

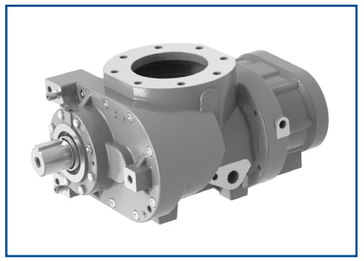
All screw compressors casings are lined internally with noise dampening material, whose ability to absorb sound is 80% on average.

The specially formed ventilation ducts lined with the foam characterized by a high acoustic insulation coefficient effectively reduce sound intensity.

Reliable vibration isolators additionally reduce noise and suppress the compressor vibration.

High service life of the screw air end

Designed and manufactured by Airpol, ASU airend assemblies with optimized rotor profile, have high efficiency and long service life provided by appropriately oversized bearings (their first regeneration is performed no sooner than after 30,000–50,000 hours of operation).



Reliable and thought out design

The compressor design, protection and regulation methods used ensure full working safety and user comfort.
A good access to all elements improves and shortens service operations.

Daily maintenance and service is simple and not requiring the specialised tools.

SCREW COMPRESSORS WITH BELT DRIVE

SIMPLE DESIGN, EASY TO USE

motor power from 3 kW to 55 kW

Effective cooling system

Suitably selected air coolers with the carefully thought out air flow system enable the compressors to operate at ambient temperature up to 40^{0}C and ensure appropriate compressed air cooling.

Control system protection

The microprocessor controller including electrical installation is located in the separated, cooled space with the increased ingress protection (IP) rating. It ensures better ventilation, safety and protection against heat and pollution.

Good access to subassemblies

The elements to be maintained and serviced are optimally accessible, which shortens service down time.

Easy installation

The compressors are the complete compressed air stations ready for operation. It is enough to connect the compressor to power supply and compressed air network, and no additional installation work is required. All compressors are equipped with a standard connector, and in the case of a version on the receiver (Airpol K and Airpol KT series) there is no need to install equalizing tanks.

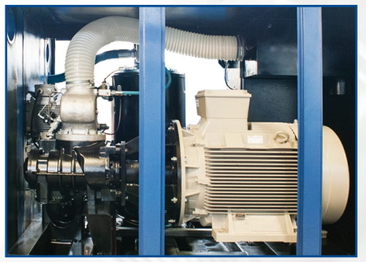
According to the operating conditions, the screw compressors with belt drive and direct drive compressors can be additionally equipped with:

- frequency inverter (Airpol PR series compressors with motor power from 5,5 kW)
- water/oil exchanger,
- heating system,
- water cooling,
- soft start,
- stainless steel or galvanized air receiver,
- compressed air treatment system (Airpol KT, Airpol T series).

DIRECT DRIVE SCREW COMPRESSORS

motor power from 30 kW to 315 kW

HIGH-EFFICIENCY DRIVE

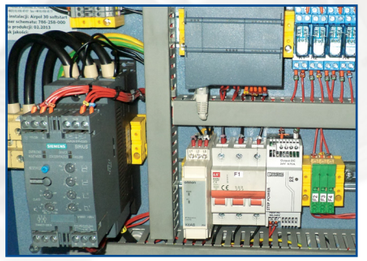


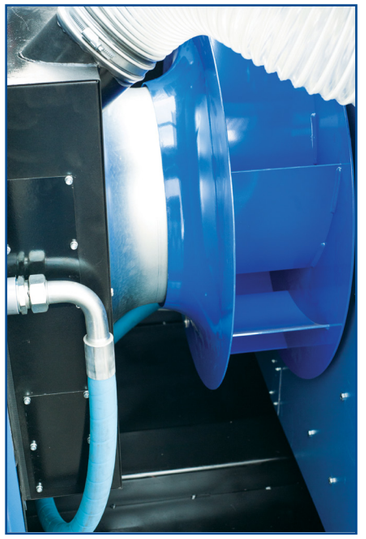
Direct drive 1:1

The most efficient drive option, where the screw unit is coupled directly to an electric motor, using the flexible coupling. Owing to such a solution, there are no energy losses when a torque is transferred from the motor to the block. Power consumption is considerably reduced.

Soft start

The Airpol NB compressors can be equipped with the soft start system that effectively prevents peak currents during start owing to the regulated current limitation function.





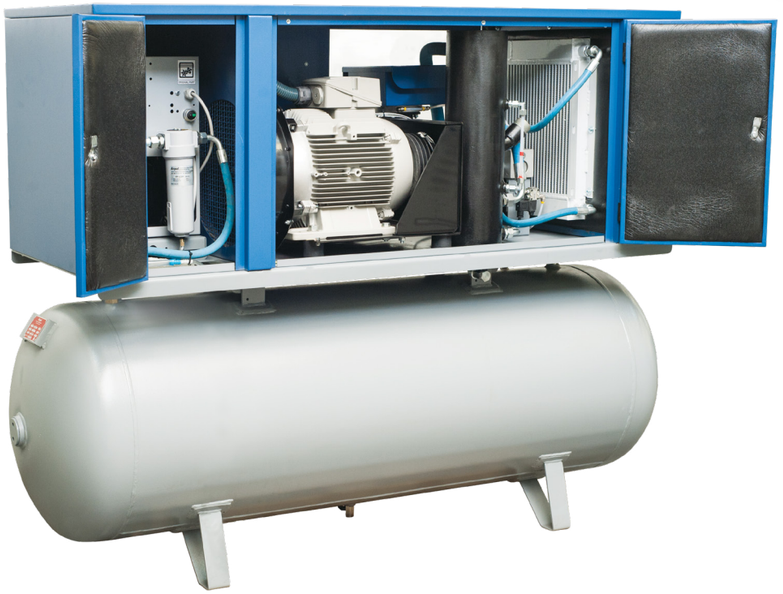
Centrifugal fan

The high-efficiency fan with a higher compression ratio ensures effective cooling throughout the entire compressor operation time. High compression ratio ensures an appropriate, even flow of sucked ambient air, through the cooler, also in the case of cooler fouling. Centrifugal fan is driven by low-speed electrical motor, which considerably influences the compressor noise level.

SCREW COMPRESSORS WITH COMPRESSED AIR TREATMENT SYSTEM

Airpol KT Airpol T

The compact design equipment dedicated to the users who have a small working area and are looking for an efficient compressor station with increased cleanliness class.



Individual approach to every Customer

According to the operating conditions, the compressors type Airpol T can be additionally equipped with:

- frequency inverter (Airpol PRT, Airpol KTPR),
- water/oil exchanger,
- stainless steel or galvanized air receiver,
- automatic condensate drain mounted under the air receiver,
- additional end filters.

HIGH QUALITY OF COMPRESSED AIR

3in1

COMPRESSION ■ FILTRATION ■ DRYING

Compact design

The refrigerant dryer together with two compressed air filters are located in one housing with the entire compressor.

It eliminates the necessity of providing an additional operating space and spending installation costs of the compressed air treatment system.

Good access to components

The elements to be maintained and serviced are optimally accessible, which shortens service down time.

Daily maintenance and service is simple and does not require specialised tools.

Safe design

The compressed air treatment system is located in a separated chamber to ensure better ventilation, safety of the dryer operation and protection of the compressed air treatment equipment against a heat stream coming from the compressor cooling.

Integrated compressed air treatment system

Prefilter – high porosity of the nonwoven fabric, which the filter element is made of, ensures high ability to store dust. It guarantees removal of 99% of solid particles and liquid ones larger than 3 µm.

Refrigeration dryer – removes moisture from compressed air to the required dew point of +3°C. The air relative humidity, that upstream the dryer is 100%, is reduced to only 21%.

Fine filter – element is made of high density multilayer microfibre. By using the single fibre diffusion and coalescence phenomena, 99.9% of solid particles larger than 1 µm are removed and the residual oil content downstream the filter not higher than 0,1 mg/m^3 is achieved.

Both compressed air filters and refrigeration dryer are equipped with automatic drain valves.

SCREW COMPRESSORS WITH FREQUENCY INVERTER

Airpol PR Airpol KPR Airpol PRT Airpol KTPR with motor power from 5,5 kW to 315 kW

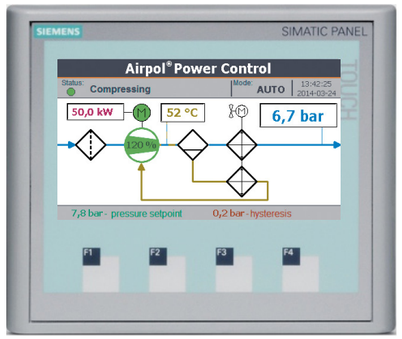
INTELLIGENT DRIVE TECHNOLOGY

New ULTRA SPEED function

The controllers of the Airpol PR screw compressors (with motor power from 30 kW to 315 kW) are provided with the new control function that enable the compressor capacity to be increased up to 150% of the machine nominal capacity. The capacity increase is possible when the compressor drive motor is not fully loaded. This is the case when the compressor works below nominal pressure.

An additional PID regulator continuously monitors pressure and power input from inverter and on this basis it increases the motor rotation.

A user may switch off or on the Ultra Speed function with one button on the touch operator panel.



Infinite rotation adjustment and constant pressure in the compressed air network

The Airpol PR series compressors have infinite rotation adjustment from 50% to 100%, (in special versions of screw compressors - from 20% to 100%).

If air consumption is lower than 50% of the maximum compressor capacity, a signal that stops the machine is sent from the frequency inverter.

The operation control system with the frequency inverter tries to maintain the compressor motor rotations at the level that ensures constant pressure in the compressed air system i.e. at the set level. When the network pressure decreases, the inverter increases the motor rotational speed, which results in the compressor capacity increase, and when pressure increases, the motor rotational speed decreases.

ENERGY SAVING close to 40% of electric energy saving when compared to the compressors with traditional control

Airpol PR+ version
Even higher saving
Faster return on investment

- higher motor efficiency up to 7%, further reduces the peripheral equipment losses connected with compressed air production,
- depreciation even in 18 months (in continuous running), and on average within 30 months from purchase,
- the compressor is equipped with the class C1 filter enabling its use in the household environment/ network,
- V1000 series inverter,
- permanent magnet synchronous motor with the highest protection class of IE4+
- even higher environmental protection.

Longer life and higher reliability

Smoothly controlled acceleration and deceleration reduces load of mechanical and electrical elements. The moving structural elements operate at lower rotations.

Operation safety

The frequency inverter is located in the separate and effectively cooled switchgear, which ensures good ventilation and protection against an influence of heat emitted by the compression module operation.

Airpol

The Airpol Power Control controllers, based on the modern technologies (microprocessor with the Cortex core), meet the recent industrial requirements with simultaneous minimum power consumption and correct, failure-free compressor operation.

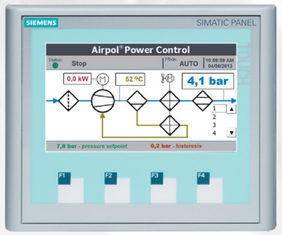
EASY USE AND CLEAR WAY OF PARAMETER CHANGES

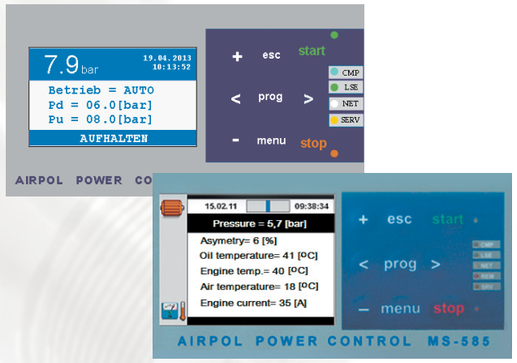
Easy to read display, information diodes and clear keyboard provide easy and fast configuration of operating parameters, diagnosis of the compressor operation state, as well as an operation mode selection.

ECONOMIC WAY OF THE COMPRESSOR OPERATION CONTROL

THE LEDS ON THE CONTROLLER INFORM THE OPERATING PERSONNEL ABOUT:

- compressor operation mode,
- motor operation status,
- occurrence of any events.





Touch operator panel

The intelligent algorithm for automatic control of the motor idle running time - AutoTIse, limits considerably the power consumption.

Possibility of selecting the operation mode and precise programming of the compressor operation time according to calendar and time needs, which additionally provides the economic machine operation.

The extended supervision and self-control mode that monitors the most important compressor and motor parameters and reminds of worn mechanical consumables and service dates.

The event identification mode that signals the event occurrence with suitable messages.

The circuit-breaker and overvoltage protection systems used in the power supply circuit.

The short-circuit detection module in the 24VDC circuit, prevents damage of the controller electronic elements (in MS-585 and Siemens S7-1200).

Possibility of co-operation with the external power supply asymmetry and phase sequence monitoring module ASKF3B or two-state power supply monitoring module. When a phase is missing or phase sequence is incorrect, an error message will prevent the compressor from starting, protecting it against damage.

Enhanced communication capabilities: Modbus, CanOpen, Ethernet.

MICROPROCESSOR CONTROL

Web Server gives the opportunity to monitor the current compressor status and its parameters, view settings and counter indications and check the activity of recorded events. Everything is done in a standard web browser - there is no need to install special software.

MASTER CONTROLLER OF SCREW COMPRESSOR GROUP

Master control unit RC is responsible for:

- control of the start and stop system of the compressors installed in one compressed air network,
- monitoring and ensuring correct pressure in the system,
- optimum load distribution between individual compressors,
- possibility of selecting the leading compressor,
- setting pressure start and stop thresholds;
- entering the parameters of the system regulation,
- collection of information from the supervised system and its processing, visualisation, archiving and signalling (in RC-S),
- remote monitoring of the supervised system status by means of the installed interface operated in the web browser or/and by means of the Modbus TCP communication protocol (in Modbus RTU option via RS485), (in RC-S).

The use of the RC-control unit of the compressor group eliminates the necessity of the machine operator intervention into settings and enables equal load distribution between compressors.

Control of the screw compressor group is possible in the sequence or cascade mode.

The sequence control is recommended for the compressors of comparable size. Their operation time is usually equalized.

The cascade control is dedicated to the machines of different sizes, where the one operates in a continuous way and the others operate only during peak demands for compressed air.

HEAT RECOVERY FROM SCREW COMPRESSORS

Every screw compressor converts 100% of the supplied electrical energy into heat energy.

Only 4% of heat energy remains in the compressed air, and 96% may be effectively recovered and used again.

System of ventilating ducts

Almost 96% of the energy supplied to the compressor may be recovered in a form of hot air stream.

The suitable ventilation ducts together with the damper system make it possible to appropriately direct an air stream and use it directly for forced air heating of the rooms adjacent to the compressor station e.g. production or store halls.

The heated air stream is dosed through the dampers (electrically driven and thermostatically controlled), which enables constant temperature to be maintained at the heated room.

When there is no demand for heating, air is directed outside through the dampers.

HEATING ENERGY SAVING

Water/oil exchanger

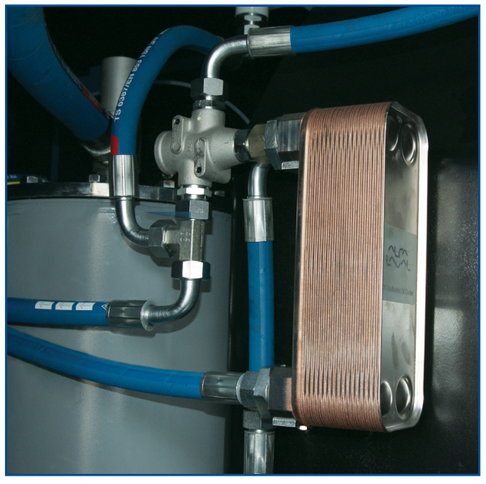
Approx. 78% of energy may be recovered by installation of the water/oil exchanger in the compressor. Heated water is used in the water central heating system or domestic hot water system.

The plate heat exchanger system is anticipated for standard applications.

The use of thin plates, effective use of heat exchange surface and possibilities of achieving very high turbulence of liquids flowing through the exchanger enable superb heat transfer coefficients between oil and cooling water to be achieved.

It is possible to heat water up to temperature of approx. 60^{0}C at full-load of the compressor.

The depreciation period of the heat recovery system purchase (installation of the water/oil exchanger) is max. 1 year.



CONTAINER COMPRESSOR STATIONS

The container compressor stations are used wherever there is a need for the source of compressed air or nitrogen and there is no possibility of building a compressor room. They provide high mobility and use at any location by a user.

The professionally made container compressor station ensures protection of the inside equipment against any external factors and optimum conditions for the equipment operation at the same time. The entire station equipment is configured according to individual needs of a customer.

The container size depends on the type and number of units installed inside such as: screw compressors, boosters, air receivers, separators, filters and air dryers. The construction of the container together with the units installed is placed on a common supporting frame, which enables easy transport and installation at any location.

Owing to the use of the suitable ventilation and heating system, the container station is completely independent of prevailing weather conditions.

Power is supplied into the container switchgear from the power network or generating sets through the cable entries.

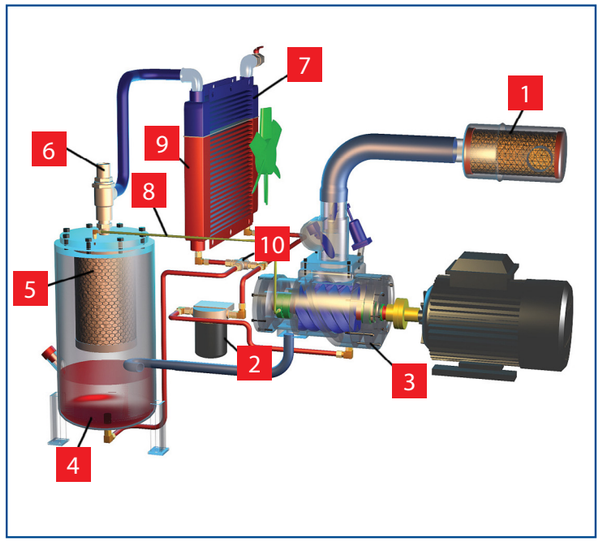
OPERATION PRINCIPLE OF SCREW COMPRESSORS

Ambient air is sucked through the filter 1 and then it flows through the suction regulator equipped with the variable control valve adapting to instantaneous demand for compressed air.

The suction regulator operation is controlled by the electrical unit connected to the pressure sensor.

Oil previously treated in the filter 2 is injected into the air compressed in the screw air end 3.

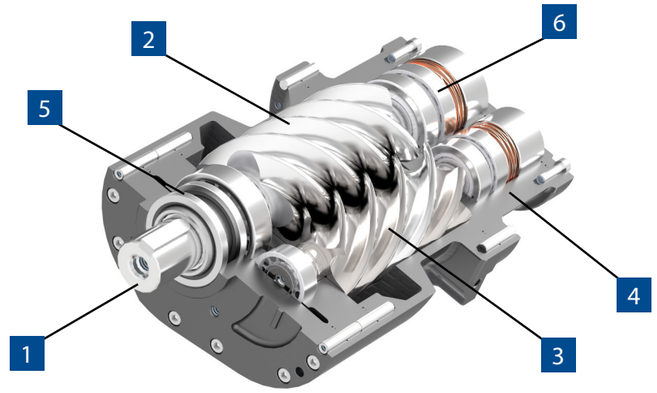
The oil injection ensures lubrication, sealing and cooling of the screw air end. The oil and air mixture is compressed in spaces between the screw impellers and then flows into the oil separator tank 4, where most of the oil is precipitated from the mixture.
From the separator tank, air flows through the fine filter 5, minimum pressure valve 6, to the aftercooler 7, where it is cooled to a temperature 10ºC higher than the ambient temperature.



The oil collected in the oil separator is carried away with the pipe 8 to the screw air end. The oil flow through the cooler 9 is controlled by the thermostat 10.

The suction and oil filters are equipped with the pollution sensors.

Construction of screw air end



1. Drive shaft
2. Impeller with external teeth
3. Impeller with internal teeth
4. Bearing cap
5. Shaft sealing
6. Bearings

SCREW COMPRESSORS WITH BELT DRIVE – ON THE AIR RECEIVER

Model	Discharge overpressure	Capacity *)	Capacity *)	Nominal motor power	Air receiver volume	Overall dimensions (L x D x H)	Compressed air connection	Weight	Noise level **)
	MPa	m³/h	m³/min	kW	L	mm		kg	db(A)
	Airpol K3	0,8	25	0,42	3	240	1430x510x1470	G 1/2	250	72
		0,8	25	0,42		500	1920x610x1540		340	
		1,0	20	0,33		240	1430x510x1470		250	
		1,0	20	0,33		500	1920x610x1540		340	
	Airpol K4	0,8	34	0,57	4	240	1430x510x1470	G 1/2	255	72
		0,8	34	0,57		500	1920x610x1540		340	
		1,0	28	0,47		240	1430x510x1470		255	
		1,0	28	0,47		500	1920x610x1540		340	
		1,3	22	0,37		240	1430x510x1470		330	
		1,3	22	0,37		500	1920x610x1540		410	
	Airpol K5	0,8	50	0,83	5,5	500	1922x660x1450	G 3/4	360	72
		1,0	40	0,66						
		1,3	33	0,55					440	
		1,5	20	0,33						
	Airpol K7	0,8	68	1,13	7,5	500	1922x660x1450	G 3/4	370	72
		1,0	57	0,95						
		1,3	47	0,78					450	
		1,5	35	0,58						
	Airpol K11	0,8	108	1,80	11	500	1922x660x1450	G 3/4	410	72
		1,0	87	1,45						
		1,3	70	1,16					480	
		1,5	55	0,91						
	Airpol K15	0,8	150	2,50	15	500	1922x660x1450	G 3/4	420	72
		1,0	120	2,00						
		1,3	96	1,60					490	
		1,5	85	1,41						

*) Capacity measured acc. to EN ISO 1217:2006 and EN ISO 5167-2.
**) Noise level acc. to EN ISO 2151.

SCREW COMPRESSORS WITH BELT DRIVE – WITHOUT AIR RECEIVER

Model	Discharge overpressure	Capacity *)	Capacity *)	Nominal motor power	Overall dimensions (L x D x H)	Compressed air connection	Weight	Noise level **)
	MPa	m³/h	m³/min	kW	mm		kg	db(A)
	Airpol 3	0,8	25	0,42	3	1000x645x935	G 1/2	270	70
		1,0	20	0,33					
	Airpol 4	0,8	34	0,57	4	1000x645x935	G 1/2	270	70
		1,0	28	0,47					
		1,3	22	0,37					
	Airpol 5	0,8	50	0,83	5,5	650x900x1380	G 1/2	280	70
		1,0	40	0,66					
		1,3	33	0,55					
		1,5	20	0,33					
	Airpol 7	0,8	68	1,13	7,5	650x900x1380	G 1/2	290	70
		1,0	57	0,95					
		1,3	47	0,78					
		1,5	35	0,58					
	Airpol 11	0,8	108	1,80	11	650x900x1380	G 1/2	320	70
		1,0	87	1,45					
		1,3	70	1,16					
		1,5	55	0,91					
	Airpol 15	0,8	150	2,50	15	690x1070x1450	G 3/4	350	70
		1,0	120	2,00					
		1,3	96	1,60					
		1,5	85	1,41					
	Airpol 18	0,8	190	3,16	18,5	690x1070x1450	G 3/4	370	70
		1,0	160	2,66					
		1,3	132	2,20					
		1,5	90	1,50					
	Airpol 22	0,8	220	3,66	22	690x1070x1450	G 3/4	430	70
		1,0	190	3,16					
		1,3	162	2,70					
		1,5	120	2,00					
	Airpol 30	0,75	320	5,33	30	1000x1170x1467	G 1 1/2	720	76
		1,0	265	4,41					
		1,3	200	3,33					
		1,5	190	3,17					
	Airpol 37	0,75	385	6,41	37	1000x1170x1467	G 1 1/2	760	76
		1,0	325	5,41					
		1,3	290	4,83					
		1,5	245	4,08					
	Airpol 45	0,75	465	7,75	45	1060x1350x1570	G 1 1/2	1100	76
		1,0	420	7,00					
		1,3	350	5,83					
		1,5	280	4,66					
	Airpol 55	0,75	595	9,91	55	1060x1350x1570	G 1 1/2	1140	76
		1,0	510	8,50					
		1,3	400	6,67					
		1,5	350	5,83					

	Model	Discharge overpressure	Capacity *)	Capacity *)	Nominal motor power	Fan motor power	Overall dimensions (L x D x H)	Compressed air connection	Weight	Noise level **)
		MPa	m³/h	m³/min	kW	kW	mm		kg	db(A)
SCREW COMPRESSORS WITH DIRECT DRIVE 1:1										
	Airpol NB 110	0,75	1155	19,25	110	5,5	2550x1485x2130	G 2	2800	83
		1,0	1015	16,92						
		1,3	850	14,16						
	Airpol NB 132	0,75	1380	23,00	132	5,5	3300x1600x1800	G 2 1/2	3200	83
		1,0	1235	20,58						
		1,3	995	16,58						
	Airpol NB 160	0,75	1800	30,00	160	11	3300x1600x1800	G 2 1/2	3600	83
		1,0	1475	24,58						
		1,3	1360	22,66						
	Airpol NB 200	0,75	2080	34,66	200	15	4000x1900x2180	DN 100	5500	85
		1,0	1865	31,08						
		1,3	1570	26,16						
	Airpol NB 250	0,75	2400	40,00	250	15	4000x1900x2180	DN 100	5700	85
		1,0	2160	36,00						
		1,3	1800	30,00						
	Airpol NB 315	0,75	2990	49,83	315	22	4000x1900x2180	DN 100	6100	85
		1,0	2460	41,00						
		1,3	2280	38,00						

NOTE: for screw compressors with direct drive and 30–90 kW electric motor, the manufacturer offers extended, energy-saving version with a frequency converter (p. 22–23).

	Model	Discharge overpressure	Capacity *)	Capacity *)	Nominal motor power	Air receiver volume	Overall dimensions (L x D x H)	Compressed air connection	Weight	Noise level **)
		MPa	m³/h	m³/min	kW	L	mm		kg	db(A)
SCREW COMPRESSORS WITH AIR DRYER AND COMPRESSED AIR FILTERS – ON THE AIR RECEIVER										
	Airpol KT 3	0,8	25	0,42	3	240	1430x510x1530	G 1/2	310	70
		0,8	25	0,42		500	1920x610x1600		390	
		1,0	20	0,33		240	1430x510x1530		310	
		1,0	20	0,33		500	1920x610x1600		390	
	Airpol KT 4	0,8	34	0,57	4	240	1430x510x1530	G 1/2	310	70
		0,8	34	0,57		500	1920x610x1600		390	
		1,0	28	0,47		240	1430x510x1530		310	
		1,0	28	0,47		500	1920x610x1600		390	
		1,3	22	0,37		240	1430x510x1530		385	
		1,3	22	0,37		500	1920x610x1600		465	
	Airpol KT 5	0,8	50	0,83	5,5	500	1950x660x1450	G 3/4	395	72
		1,0	40	0,66						
		1,3	33	0,55					470	
		1,5	20	0,33						
	Airpol KT 7	0,8	68	1,13	7,5	500	1950x660x1450	G 3/4	405	72
		1,0	57	0,95						
		1,3	47	0,78					480	
		1,5	35	0,58						
	Airpol KT 11	0,8	108	1,80	11	500	1950x660x1450	G 3/4	440	72
		1,0	87	1,45						
		1,3	70	1,16					515	
		1,5	55	0,91						
	Airpol KT 15	0,8	150	2,50	15	500	1950x660x1450	G 3/4	450	72
		1,0	120	2,00						
		1,3	96	1,60					525	
		1,5	85	1,41						

*) Capacity measured acc. to EN ISO 1217:2006 and EN ISO 5167-2.
**) Noise level acc. to EN ISO 2151.

In screw compressors Airpol KT and Airpol T series:
- pressure dew point of the refrigeration air dryer: +3°C
- 2.4.2 compressed air quality class, acc. to ISO 8573.1 (in standard version of screw compressors KT and T).
On Customer request - possible individual compressor version, depending on the required air quality class.

	Model	Discharge overpressure	Capacity *)	Capacity *)	Nominal motor power	Fan motor power	Overall dimensions (L x D x H)	Compressed air connection	Weight	Noise level **)
		MPa	m³/h	m³/min	kW	kW	mm		kg	db(A)
SCREW COMPRESSORS WITH AIR DRYER AND COMPRESSED AIR FILTERS – WITHOUT AIR RECEIVER										
	Airpol T 3	0,8	25	0,42	3	-	650x1200x1380	G 1/2	290	70
		1,0	20	0,33						
	Airpol T 4	0,8	34	0,57	4	-	650x1200x1380	G 1/2	290	70
		1,0	28	0,47						
		1,3	22	0,37						
	Airpol T 5	0,8	50	0,83	5,5	-	650x1200x1380	G 1/2	300	70
		1,0	40	0,66						
		1,3	33	0,55						
		1,5	20	0,33						
	Airpol T 7	0,8	68	1,13	7,5	-	650x1200x1380	G 1/2	310	70
		1,0	57	0,95						
		1,3	47	0,78						
		1,5	35	0,58						
	Airpol T 11	0,8	108	1,80	11	-	650x1200x1380	G 1/2	360	70
		1,0	87	1,45						
		1,3	70	1,16						
		1,5	55	0,91						
	Airpol T 15	0,8	150	2,50	15	-	690x1350x1760	G 3/4	440	70
		1,0	120	2,00						
		1,3	96	1,60						
		1,5	85	1,41						
	Airpol T 18	0,8	190	3,16	18,5	-	690x1350x1760	G 3/4	485	70
		1,0	160	2,66						
		1,3	132	2,20						
		1,5	90	1,50						
	Airpol T 22	0,8	220	3,66	22	-	690x1350x1760	G 3/4	515	70
		1,0	190	3,16						
		1,3	162	2,70						
		1,5	120	2,00						
	Airpol T 110	0,75	1155	19,25	110	5,5	3750x1485x2130	G 2	3530	83
		1,0	1015	16,92						
		1,3	850	14,16						
	Airpol T 132	0,75	1380	23,00	132	5,5	4500x1600x1800	G 2 1/2	3800	83
		1,0	1235	20,58						
		1,3	995	16,58						

	Airpol T 160	0,75	1800	30,00	160	11	4500x1600x1800	G 2 1/2	4200	83
		1,0	1475	24,58						
		1,3	1360	22,66						
	Airpol T 200	0,75	2080	34,66	200	15	5200x2300x2200	DN 100	6150	85
		1,0	1865	31,08						
		1,3	1570	26,16						
	Airpol T 250	0,75	2400	40,00	250	15	5200x2300x2200	DN 100	6550	85
		1,0	2160	36,00						
		1,3	1800	30,00						
	Airpol T 315	0,75	2990	49,83	315	22	5200x2300x2200	DN 100	6950	85
		1,0	2460	41,00						
		1,3	2280	38,00						

NOTE: for screw compressors with air dryer, compressed air filters and 30–90 kW electric motor, the manufacturer offers extended, energy-saving version with a frequency converter (p. 25–26).

	Model	Discharge overpressure	Capacity *) min-max	Capacity *) min-max	Nominal motor power	Air receiver volume	Overall dimensions (L x D x H)	Compressed air connection	Weight	Noise level **)
		MPa	m³/h	m³/min	kW	L	mm		kg	db(A)
SCREW COMPRESSORS WITH FREQUENCY CONVERTER – ON THE AIR RECEIVER										
	Airpol KPR 5	0,8	25 - 50	0,41 - 0,83	5,5	500	1922x660x1450	G 3/4	370	72
		1,0	20 - 40	0,33 - 0,66						
		1,3	17 - 33	0,28 - 0,55					450	
		1,5	10 - 20	0,16 - 0,33						
	Airpol KPR 7	0,8	34 - 68	0,56 - 1,13	7,5	500	1922x660x1450	G 3/4	380	72
		1,0	29 - 57	0,48 - 0,95						
		1,3	24 - 47	0,4 - 0,78					460	
		1,5	18 - 35	0,30 - 0,58						
	Airpol KPR 11	0,8	54 - 108	0,90 - 1,80	11	500	1922x660x1450	G 3/4	430	72
		1,0	44 - 87	0,73 - 1,45						
		1,3	35 - 70	0,58 - 1,16					500	
		1,5	28 - 55	0,46 - 0,92						
	Airpol KPR 15	0,8	75 - 150	1,25 - 2,50	15	500	1922x660x1450	G 3/4	480	72
		1,0	60 - 120	1,00 - 2,00						
		1,3	48 - 96	0,80 - 1,60					550	
		1,5	43 - 85	0,71 - 1,42						

*) Capacity measured acc. to EN ISO 1217:2006 and EN ISO 5167-2.
**) Noise level acc. to EN ISO 2151.

In screw compressors Airpol KT and Airpol T series:
- pressure dew point of the refrigeration air dryer: +3°C
- 2.4.2 compressed air quality class, acc. to ISO 8573.1 (in standard version of screw compressors KT and T).
On Customer request - possible individual compressor version, depending on the required air quality class.

	Model	Discharge overpressure	Capacity *) min-max	Capacity *) min-max	Nominal motor power	Fan motor power	Overall dimensions (L x D x H)	Compressed air connection	Weight	Noise level **)
		MPa	m^3/h	m^3/min	kW	kW	mm		kg	db(A)
SCREW COMPRESSORS WITH FREQUENCY CONVERTER – WITHOUT AIR RECEIVER										
	Airpol PR 5	0,8	25 - 50	0,41 - 0,83	5,5	-	650x900x1380	G 1/2	290	70
		1,0	20 - 40	0,33 - 0,66						
		1,3	17 - 33	0,28 - 0,55						
		1,5	10 - 20	0,16 - 0,33						
	Airpol PR 7	0,8	34 - 68	0,56 - 1,13	7,5	-	650x900x1380	G 1/2	300	70
		1,0	29 - 57	0,48 - 0,95						
		1,3	24 - 47	0,4 - 0,78						
		1,5	18 - 35	0,30 - 0,58						
	Airpol PR 11	0,8	54 - 108	0,90 - 1,80	11	-	650x900x1380	G 1/2	340	70
		1,0	44 - 87	0,73 - 1,45						
		1,3	35 - 70	0,58 - 1,16						
		1,5	28 - 55	0,46 - 0,92						
	Airpol PR 15	0,8	75 - 150	1,25 - 2,50	15	-	690x1070x1450	G 3/4	360	70
		1,0	60 - 120	1,00 - 2,00						
		1,3	48 - 96	0,80 - 1,60						
		1,5	43 - 85	0,71 - 1,42						
	Airpol PR 18	0,8	95 - 190	1,58 - 3,16	18,5	-	690x1070x1450	G 3/4	390	70
		1,0	80 - 160	1,33 - 2,66						
		1,3	66 - 132	1,10 - 2,20						
		1,5	45 - 90	0,75 - 1,50						
	Airpol PR 22	0,8	110 - 220	1,83 - 3,66	22	-	690x1070x1450	G 3/4	470	70
		1,0	95 - 190	1,58 - 3,16						
		1,3	81 - 162	1,35 - 2,70						
		1,5	60 - 120	1,00 - 2,00						
	Airpol PR 30	0,75	160 - 320	2,66 - 5,33	30	1,5	1740x950x1500	G 1 1/2	880	75
		1,0	132 - 265	2,22 - 4,42						
		1,3	100 - 200	1,66 - 3,33						
	Airpol PR 37	0,75	192 - 385	3,20 - 6,41	37	1,5	1740x950x1500	G 1 1/2	910	75
		1,0	162 - 325	2,70 - 5,41						
		1,3	145 - 290	2,41 - 4,83						

	Airpol PR 45	0,75	232 - 465	3,87 - 7,75	45	1,5	2000x1100x1580	G 1 1/2	1420	75
		1,0	210 - 420	3,50 - 7,00						
		1,3	175 - 350	2,91 - 5,83						
	Airpol PR 55	0,75	297 - 595	4,95 - 9,91	55	1,5	2000x1100x1580	G 1 1/2	1530	75
		1,0	255 - 510	4,25 - 8,50						
		1,3	200 - 400	3,33 - 6,67						
	Airpol PR 75	0,75	410 - 820	6,83 - 13,70	75	4	2800x1415x1550	G 2	1950	75
		1,0	370 - 740	6,17 - 12,33						
		1,3	282 - 565	4,70 - 9,42						
	Airpol PR 90	0,75	487 - 975	8,12 - 16,25	90	5,5	2550x1485x2130	G 2	2400	83
		1,0	410 - 820	6,83 - 13,67						
		1,3	342 - 685	5,70 - 11,42						
	Airpol PR 110	0,75	577 - 1155	9,62 - 19,25	110	5,5	2550x1485x2130	G 2	3000	83
		1,0	507 - 1015	8,45 - 16,92						
		1,3	425 - 850	7,10 - 14,17						
	Airpol PR 132	0,75	690 - 1380	11,50 - 23,00	132	5,5	3300x1600x1800	G 2 1/2	3430	83
		1,0	618 - 1235	10,30 - 20,60						
		1,3	498 - 995	8,30 - 16,58						
	Airpol PR 160	0,75	900 - 1800	15,00 - 30,00	160	11	3300x1600x1800	G 2 1/2	3850	83
		1,0	738 - 1475	12,25 - 24,58						
		1,3	680 - 1360	11,33 - 22,67						
	Airpol PR 200	0,75	1040 - 2080	17,33 - 34,67	200	15	4000x1900x2180	DN 100	5750	85
		1,0	933 - 1865	15,55 - 31,10						
		1,3	785 - 1570	13,10 - 26,17						
	Airpol PR 250	0,75	1200 - 2400	20,00 - 40,00	250	15	4000x1900x2180	DN 100	5950	85
		1,0	1080 - 2160	18,00 - 36,00						
		1,3	900 - 1800	15,00 - 30,00						
	Airpol PR 315	0,75	1495 - 2990	24,92 - 49,83	315	22	4000x1900x2180	DN 100	6350	85
		1,0	1230 - 2460	20,50 - 41,00						
		1,3	1140 - 2280	19,00 - 38,00						

*) Capacity measured acc. to EN ISO 1217:2006 and EN ISO 5167-2.
**) Noise level acc. to EN ISO 2151.

Model	Discharge overpressure	Capacity *) min-max	Capacity *) min-max	Nominal motor power	Air receiver volume	Overall dimensions (L x D x H)	Compressed air connection	Weight	Noise level **)
	MPa	m³/h	m³/min	kW	L	mm		kg	db(A)
SCREW COMPRESSORS WITH FREQUENCY CONVERTER AND AIR DRYER – ON THE AIR RECEIVER									
 Airpol KT PR5	0,8	25 - 50	0,41 - 0,83	5,5	500	2200x660x1450	G ¾	410	72
	1,0	20 - 40	0,33 - 0,66						
	1,3	17 - 33	0,28 - 0,55					485	
	1,5	10 - 20	0,16 - 0,33						
 Airpol KT PR7	0,8	34 - 68	0,56 - 1,13	7,5	500	2200x660x1450	G ¾	420	72
	1,0	29 - 57	0,48 - 0,95						
	1,3	24 - 47	0,40 - 0,78					495	
	1,5	18 - 35	0,30 - 0,58						
 Airpol KT PR11	0,8	54 - 108	0,90 - 1,80	11	500	2200x660x1450	G ¾	460	72
	1,0	44 - 87	0,73 - 1,45						
	1,3	35 - 70	0,58 - 1,16					525	
	1,5	28 - 55	0,46 - 0,92						
 Airpol KT PR15	0,8	75 - 150	1,25 - 2,50	15	500	2200x660x1450	G ¾	470	72
	1,0	60 - 120	1,00 - 2,00						
	1,3	48 - 96	0,80 - 1,60					545	
	1,5	43 - 85	0,71 - 1,42						

*) Capacity measured acc. to EN ISO 1217:2006 and EN ISO 5167-2.
**) Noise level acc. to EN ISO 2151.

In screw compressors Airpol KTPR and Airpol PRT series:
- pressure dew point of the refrigeration air dryer: +3°C
- 2.4.2 compressed air quality class, acc. to ISO 8573.1 (in standard version of screw compressors KTPR and PRT).
On Customer request - possible individual compressor version, depending on the required air quality class.

Model	Discharge overpressure	Capacity *) min-max	Capacity *) min-max	Nominal motor power	Fan motor power	Overall dimensions (L x D x H)	Compressed air connection	Weight	Noise level **)
	MPa	m³/h	m³/min	kW	kW	mm		kg	db(A)
SCREW COMPRESSORS WITH FREQUENCY CONVERTER AND AIR DRYER – WITHOUT AIR RECEIVER									
 Airpol PRT 5	0,8	25 - 50	0,41 - 0,83	5,5	-	650x1200x1380	G ½	300	70
	1,0	20 - 40	0,33 - 0,66						
	1,3	17 - 33	0,28 - 0,55						
	1,5	10 - 20	0,16 - 0,33						
 Airpol PRT 7	0,8	34 - 68	0,56 - 1,13	7,5	-	650x1200x1380	G ½	310	70
	1,0	29 - 57	0,48 - 0,95						
	1,3	24 - 47	0,40 - 0,78						
	1,5	18 - 35	0,30 - 0,58						
 Airpol PRT 11	0,8	54 - 108	0,90 - 1,80	11	-	650x1200x1380	G ½	380	70
	1,0	44 - 87	0,73 - 1,45						
	1,3	35 - 70	0,58 - 1,16						
	1,5	28 - 55	0,46 - 0,92						
 Airpol PRT 15	0,8	75 - 150	1,25 - 2,50	15	-	690x1350x1760	G ¾	460	70
	1,0	60 - 120	1,00 - 2,00						
	1,3	48 - 96	0,80 - 1,60						
	1,5	43 - 85	0,71 - 1,42						
 Airpol PRT 18	0,8	95 - 190	1,58 - 3,16	18,5	-	690x1350x1760	G ¾	505	70
	1,0	80 - 160	1,33 - 2,66						
	1,3	66 - 132	1,10 - 2,20						
	1,5	45 - 90	0,75 - 1,50						
 Airpol PRT 22	0,8	110 - 220	1,83 - 3,66	22	-	690x1350x1760	G ¾	545	70
	1,0	95 - 190	1,58 - 3,16						
	1,3	81 - 162	1,35 - 2,70						
	1,5	60 - 120	1,00 - 2,00						
 Airpol PRT 30	0,75	160 - 320	2,66 - 5,33	30	1,5	2200x950x1500	G 1½	1220	75
	1,0	132 - 265	2,22 - 4,42						
	1,3	100 - 200	1,66 - 3,33						
 Airpol PRT 37	0,75	192 - 385	3,20 - 6,41	37	1,5	2200x950x1500	G 1½	1290	75
	1,0	162 - 325	2,70 - 5,41						
	1,3	145 - 290	2,41 - 4,83						

	Model	Discharge overpressure	Capacity *) min-max	Capacity *) min-max	Nominal motor power	Fan motor power	Overall dimensions (L x D x H)	Compressed air connection	Weight	Noise level **)
		MPa	m^3/h	m^3/min	kW	kW	mm		kg	db(A)
SCREW COMPRESSORS WITH FREQUENCY CONVERTER AND AIR DRYER – WITHOUT AIR RECEIVER										
	Airpol PRT 45	0,75	232 - 465	3,87 - 7,75	45	1,5	2750x1100x1580	G 1 1/2	1750	75
		1,0	210 - 420	3,50 - 7,00						
		1,3	175 - 350	2,91 - 5,83						
	Airpol PRT 55	0,75	297 - 595	4,95 - 9,91	55	1,5	2750x1100x1580	G 1 1/2	1910	75
		1,0	255 - 510	4,25 - 8,50						
		1,3	200 - 400	3,33 - 6,67						
	Airpol PRT 75	0,75	410 - 820	6,83 - 13,70	75	4	3300x1415x1550	G 2	2350	75
		1,0	370 - 740	6,17 - 12,33						
		1,3	282 - 565	4,70 - 9,42						
	Airpol PRT 90	0,75	487 - 975	8,12 - 16,25	90	5,5	3750x1485x2130	G 2	3000	83
		1,0	410 - 820	6,83 - 13,67						
		1,3	342 - 685	5,70 - 11,42						
	Airpol PRT 110	0,75	577 - 1155	9,62 - 19,25	110	5,5	3750x1485x2130	G 2	3730	83
		1,0	507 - 1015	8,45 - 16,92						
		1,3	425 - 850	7,10 - 14,17						
	Airpol PRT 132	0,75	690 - 1380	11,50 - 23,00	132	5,5	4500x1640x1870	G 2 1/2	4030	83
		1,0	618 - 1235	10,30 - 20,60						
		1,3	498 - 995	8,30 - 16,58						
	Airpol PRT 160	0,75	900 - 1800	15,00 - 30,00	160	11	4500x1600x1800	G 2 1/2	4500	83
		1,0	738 - 1475	12,25 - 24,58						
		1,3	680 - 1360	11,33 - 22,67						
	Airpol PRT 200	0,75	1040 - 2080	17,33 - 34,67	200	15	5200x2300x2200	DN 100	6300	85
		1,0	933 - 1865	15,55 - 31,10						
		1,3	785 - 1570	13,10 - 26,17						
	Airpol PRT 250	0,75	1200 - 2400	20,00 - 40,00	250	15	5200x2300x2200	DN 100	6950	85
		1,0	1080 - 2160	18,00 - 36,00						
		1,3	900 - 1800	15,00 - 30,00						
	Airpol PRT 315	0,75	1495 - 2990	24,92 - 49,83	315	22	5200x2300x2200	DN 100	7300	85
		1,0	1230 - 2460	20,50 - 41,00						
		1,3	1140 - 2280	19,00- 38,00						

The manufacturer reserves the right to make changes and/or improvements in designs and dimensions without notice and without incurring obligation.

Airpol

Airpol Ltd. is the largest Polish manufacturer of compressors, delivering modern and efficient compressed air production and treatment systems. We offer a complete service from design to turnkey compressor room and adapt our products to meet individual customer's requirements.

The company was established in 1991, after restructuring a factory with over 30 years of tradition in compressors manufacturing. At present it employs nearly 150 people, including the experienced team of engineers and technicians who continuously improves our products, develops innovative design solutions and offers extensive help in development of individual energy-saving solutions.

Over 50 years of experience in the compressor industry led to extending our offer with our own air ends, designed and manufactured with the highest precision using the latest technology.

The detailed quality control at every stage of the production process gives the certainty of selecting the products with the highest quality and utility features.

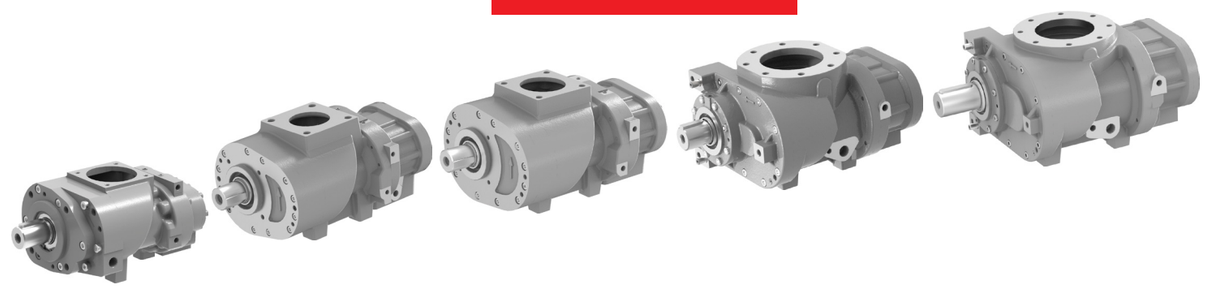
Many years of experience in compressors production, high quality product and wide company's offer together with an individual approach to every customer has ensured the company a strong competitor position in the compressor industry both on the Polish and foreign market.

WE OFFER

- oil-free and oil-injected screw compressors
- oil lubricated and oil-free reciprocating compressors for air and other gases
- scroll compressors
- screw air ends
- blowers
- air receivers
- adsorption dryers
- nitrogen generators
- bag filters
- container compressor stations
- compressed air treatment systems (filters, refrigerant dryers, water separators, oil water separators)
- compressed air installations
- permanent service support of compressors (through factory service in Poznan, Warsaw, Rzeszow and Gliwice and developed network of authorised service centres)

ISO 9001

Screw air ends
ASU
with optimized rotors profile



Designed and manufactured by AIRPOL

Airpol

COMPRESSORS Ltd.

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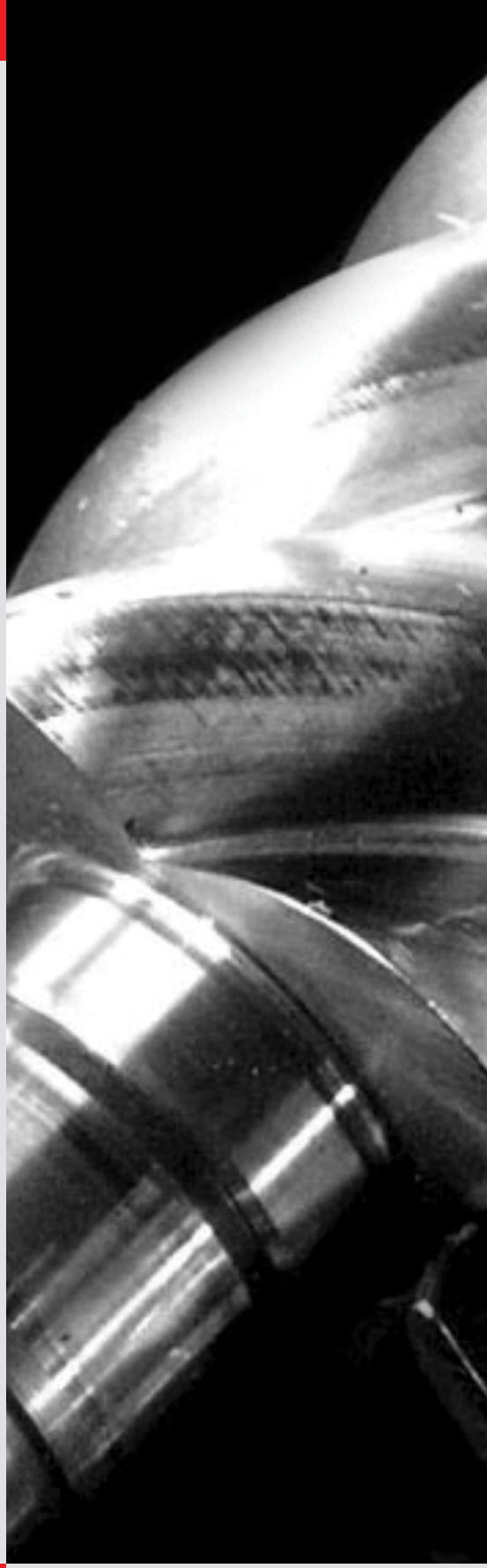

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