

# **Airpol**

COMPRESSORS Ltd.



**RECIPROCATING  
BOOSTERS**

## AIRPOL RECIPROCATING BOOSTERS

Designed for those users for whom it is important not only to be able to work with compressed air up to a pressure of 40 bar when choosing a device, but also the quality and durability of the device.

### Application of ADP air boosters:

- production of PET bottles,
- control and process air,
- tightness measurement of devices, pneumatic and hydraulic machines,
- as a starter compressor for large diesel engines,
- in inert gas extinguishing systems.

The task of ADP boosters is to compress the air to a pressure of 20 bar ÷ 40 bar.

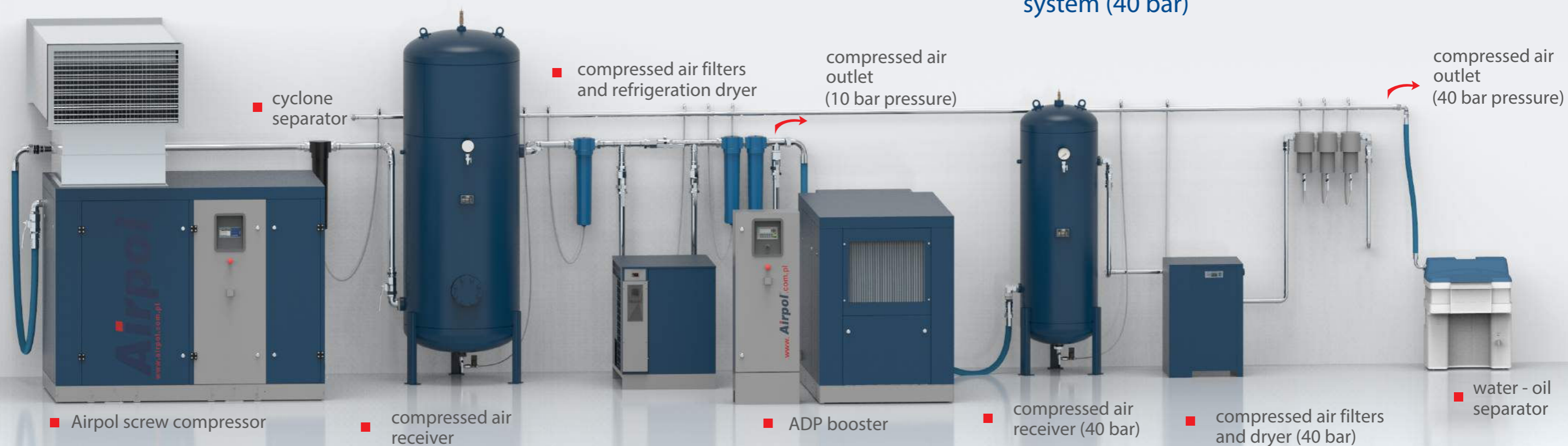
In a high-pressure air production system, the booster is the second compression stage, since the air feeding the booster should be pre-pressurized to the required inlet pressure.

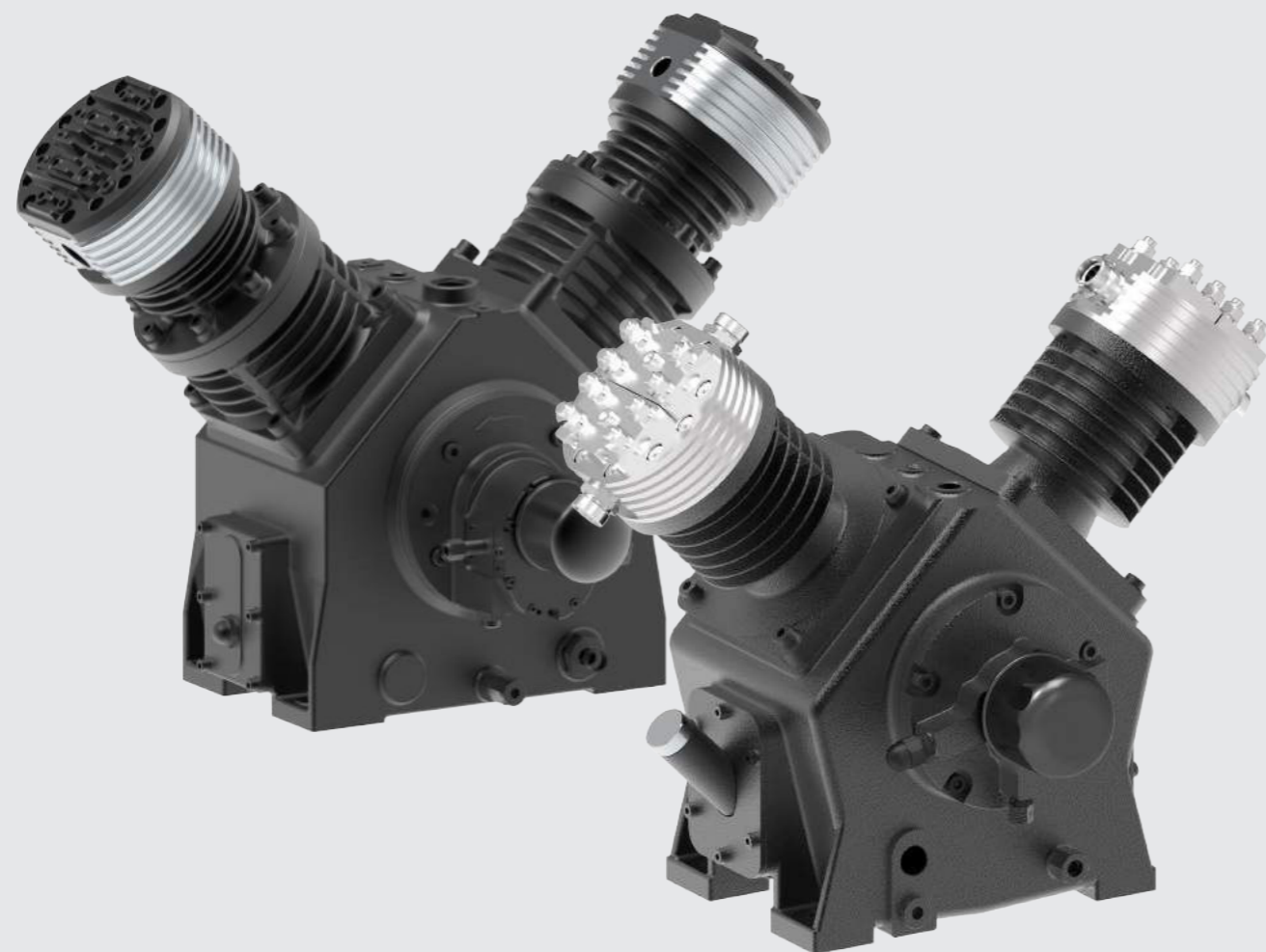


### ADP boosters

- work in a low-speed mode that guarantees durability and reliability of the device,
- two-cylinder single-stage compressor made of high durability of cast iron, adapted to work continuously 24 h / day,
- lubrication system of connecting rod bearings under pressure which significantly increases durability,
- end air cooler that guarantees low outlet air temperature,
- automatic device operation, requiring no special supervision,
- microprocessor controller with the possibility of setting the basic operating parameters (within the range of values allowed by the manufacturer),
- full protection with pressure sensors monitoring inlet and outlet air pressure and oil pressure,
- work system ensuring automatic switching of the device to idle run - this ensures strain relief before stopping it and prevents the occurrence of excessive number of switching cycles, which increases the durability of the device.

### High pressure air compression system (40 bar)





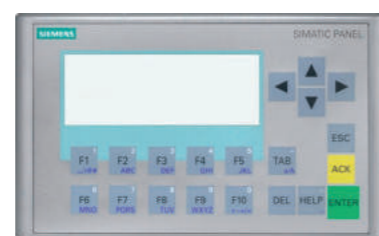
### V series high-pressure compressors in ADP boosters

- compressor carter made as a cast iron, characterized by high durability,
- crankshaft cast of spheroidal cast iron with increased impact strength,
- cylinders and heads suitably ribbed to provide a more intense heat dissipation,
- gaskets in the cylinder-cylinder-oring type cartridges guarantee high tightness and durability,
- access to working valves without the need to disassemble the heads, which greatly simplifies periodic service.

### Siemens microprocessor controller in Airpol boosters

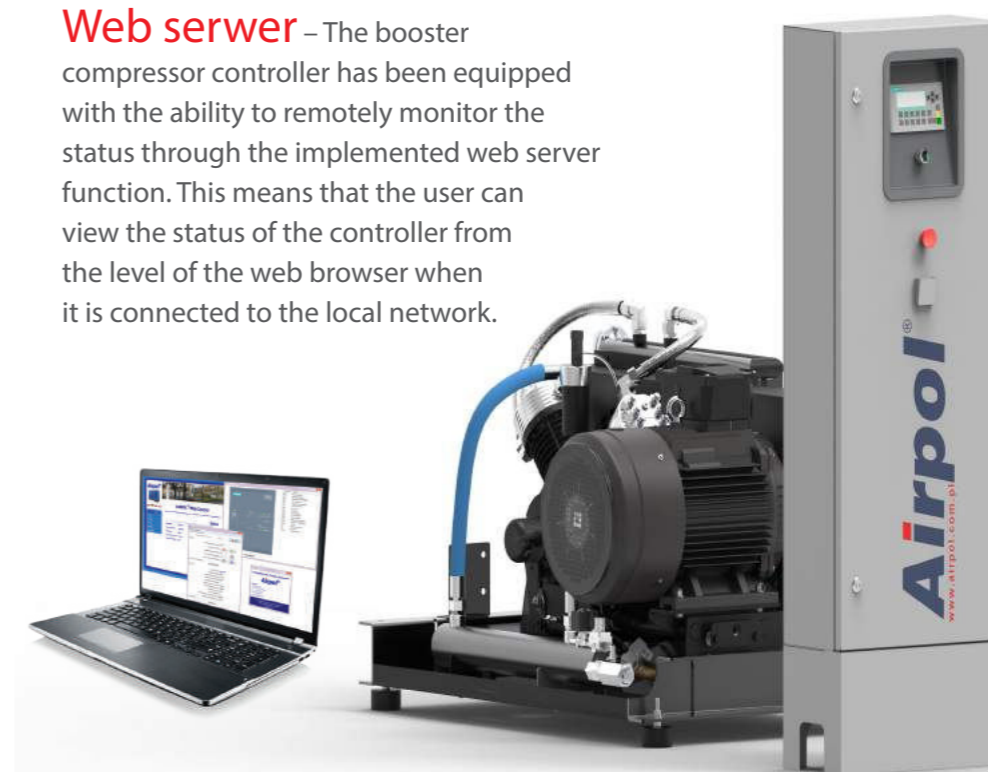
#### Tasks implemented by the controller:

- power control,
- overload protection of the motor,
- control of oil pressure,
- suction pressure control (binary or analog),
- protection against too high air pressure,
- compressor switching on and off,
- controlling the operation of solenoid valves,
- measurement of air pressure.



**SUPERVISION  
AND SAFETY  
OF THE BOOSTER  
OPERATION**

**Web server** – The booster compressor controller has been equipped with the ability to remotely monitor the status through the implemented web server function. This means that the user can view the status of the controller from the level of the web browser when it is connected to the local network.



## ADP boosters with direct drive designed for 24/7 operation under heavy load

Energy-saving direct drive  
without loss of power transmission

High-quality, durable and reliable single-stage V compressor unit

Spherical type bearings  
adapted to the highest loads

Increased durability of the crank system  
due to the use of a crosshead piston

Lubrication of crankshaft bearings  
under pressure with the use of oil pump,  
keeping it full controlled by pressure sensors

Lossless pneumatic air inlet valve provides better  
pressure equalization in the cylinders when idling,  
preventing excessive oil consumption



Effective cooling system provided  
by a highly efficient radial fan  
and aftercooler

Low noise level due to the effective  
sound insulation and optimally designed  
ventilation system

Fully automatic work, quick adjustment  
of the pressure value and compressed air flow amount  
to the operating conditions

High-quality electric motor  
with IE3 energy efficiency class

Reduction of energy costs – due to optimal  
heat recovery options (ventilating ducts)



### Complete, high-performance, system compressing air from 10 bar to 40 bar, mounted on a common support frame

- compressed air receiver (10 bar)
- ADP booster
- main control panel
- high pressure refrigeration dryer
- high pressure filter set
- compressed air receiver (40 bar)






The whole set is equipped with all needed installations elements,  
and ready for operation after providing a supply pressure of 10 bar  
e.g. when using of Airpol PRT series screw compressor

Intelligent superordinate control of the booster system

We make projects  
fit to the individual  
Customer  
requirements

Compressed air systems dedicated for production  
of polyethylene (PET) bottles



Reciprocating boosters		ADP 7				ADP 15		ADP 18	ADP 22	ADP 45		ADP 55	
Overpressure	bar	25		30		35	40	40	40	40		40	
Suction pressure	bar	7	10	7	10	8	10	12	10	10	12	10	12
Capacity	m <sup>3</sup> /h	100	140	90	130	140	180	250	300	560	670	750	900
Dimensions (L x W x H)	mm	1550 x 600 x 1240				1240 x 810 x 830		1240 x 810 x 830	1240 x 810 x 830	2000 x 1050 x 1460		2000 x 1050 x 1460	
Electrical box dimensions (L x W x H)	mm	500 x 265 x 1500				500 x 265 x 1500		500 x 265 x 1500	500 x 265 x 1500	500 x 265 x 1500		500 x 265 x 1500	
Suction air connection		G <sup>3</sup> / <sub>4</sub>				G <sup>3</sup> / <sub>4</sub>		G <sup>3</sup> / <sub>4</sub>	G 1	G 2		G 2	
Compressed air connection		G <sup>1</sup> / <sub>2</sub>				G <sup>3</sup> / <sub>4</sub>		G <sup>3</sup> / <sub>4</sub>	G <sup>3</sup> / <sub>4</sub>	G 1 <sup>1</sup> / <sub>4</sub>		G 1 <sup>1</sup> / <sub>4</sub>	
Weight	kg	320				460		470	510	1700		1750	
Air receiver volume	l	150				-		-	-	-		-	
Quantity of cylinders / stage		2/1				2/1		2/1	2/1	2/1		2/1	
Drive transmission type		belt drive				belt drive		belt drive	belt drive	direct drive		direct drive	
Nominal motor power	kW	7,5				15		18,5	22	45		55	
Electrical supply data	V/ph/Hz	400/3/50				400/3/50		400/3/50	400/3/50	400/3/50		400/3/50	
													



## 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
- refrigeration dryers
- nitrogen generators
- container compressor stations
- compressed air treatment systems (filters, dryers, water separators, oil water separators)
- compressed air installations
- service support (factory service and developed network of authorised service centres)



ISO 9001

over  
**50** years  
of experience  
in compressor  
industry

[www.airpol.com.pl](http://www.airpol.com.pl)

# Airpol

Compressors Ltd.

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