Technical Data Sheet

Series:

BOOSTER

rev.06 23/04/2018

Types:

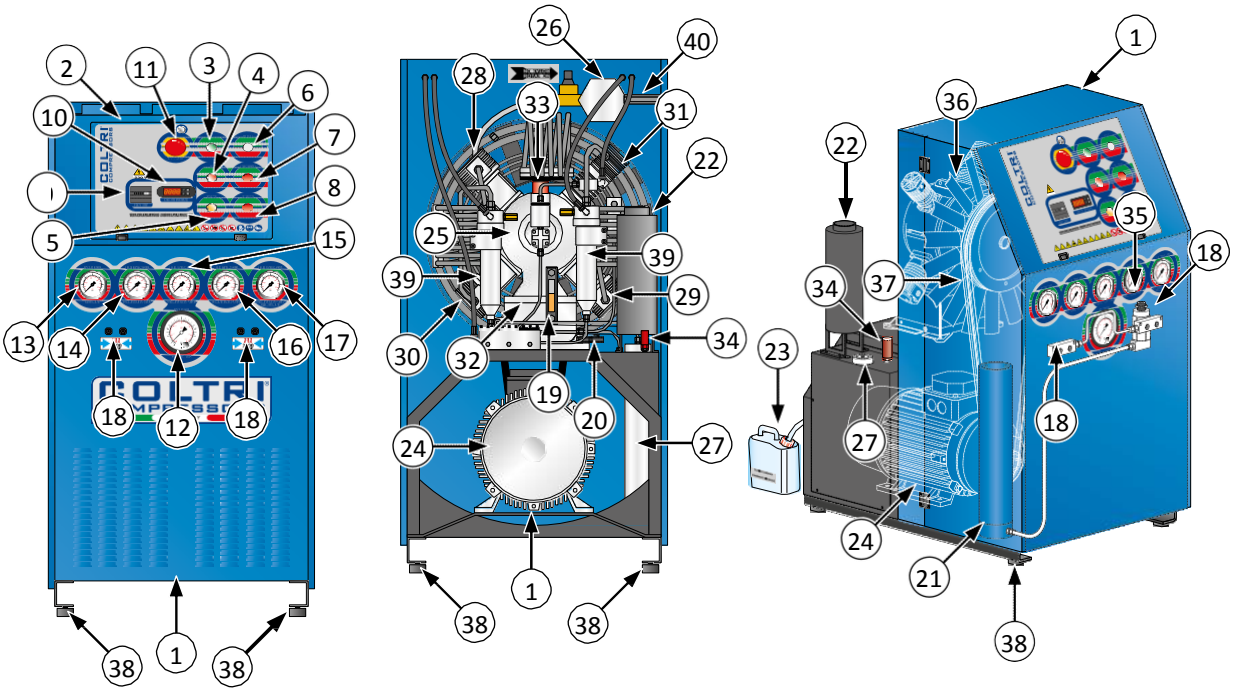
BOOSTER OPEN

BOOSTER OPEN

General	
Type of gas	Air – Nitrogen – Helium - Argon
Intake Pressure	Min 2 bar Max 5 bar
Nominal pressure	250 bar / 330 bar / 360 bar / 390 bar
Filling pressure	232 bar / 300 bar / 330 bar / 420 bar
Max working pressure	420 bar
Permissible ambient temperature range	+5 ÷ +50°C
Permissible altitude	0 ÷ 1,500 m AMSL
Max. permissible tilt	15°
System design	Semi-insonorized cabinet
Operating voltage, standard	400 V; 50 Hz
Other operating voltage	230 V; 60 Hz
Compressor oil	Coltri Oil 157
Oil change interval	every year/ 1,000 h
Frame	Steel 1,5 mm thickness -color RAL 5015 – Powder coating painting – scratch proof

Compressor system	M36B
Flow rate	250 l/min - 690 l/min
Purification System	HYPERFILTER
Cooling air flow	1,960 m³/h
Weight	375 kg
Dimensions (LxWxH)	790 x 1052 x 1530 mm

Drive system (Three-phase motor)	**BOOSTER OPEN**	
Power	11 kW	15 kW
Model	MEC 132-160	
Type of construction	B3	
Type	Three-phase Squirrel-Cage-Motor	
Operating voltage / frequency	400 V, 50 Hz	
Motor	2950 RPM	3000 RPM
Protection class	IP54	
Pumping group	1250 RPM	1400 RPM
Motor pulley diameter	140 mm	155 mm



1. Frame
2. Control pannel
3. ON pushbutton
4. Stop pushbutton
5. Condensate discharge pushbutton
6. Power indicator light
7. Direction of rotation indicator light
8. Oil level warning light
9. Hour counter
10. Cabinet interior / cooling air temperature
11. Emergency pushbutton
12. Automatic shutdown pressure switch
13. Oil pressure gauge
14. 1st stage pressure gauge
15. 2nd stage pressure gauge
16. 3rd stage pressure gauge
17. 4th stage pressure gauge/working pressure
18. Pressure gas outlet
19. Oil level
20. Oil discharge valves
21. Purifier filter
22. Condensate collection container
23. Condensate collection can
24. Motor
25. Compressor
26. Air filter
27. Final condensate separator
28. 1st stage
29. 2nd stage
30. 3rd stage
31. 4th stage
32. Monobloc
33. Oil filler plug
34. Safety valve
35. Maintenance valve
36. Cooling fan
37. Belt
38. Anti-vibration device
39. Condensate separator
40. Gas inlet 2÷5bar

› Compressor block with following features:

- Forced oil lubrification with LP gear pump.
- All coolers and pipes, stainless steel AISI 316 and SS fittings and nuts.
- Outlet temperature approx. 15 °C above cooling air temperature.
- Intermediate separators after 2nd stage and 3rd stage.
- Sealed safety valves after each stage.
- Pressure maintaining and check valve after the final air filter purification.
- Cast iron cylinders
- Aluminum conrods.
- Cast iron crankshaft.
- Stainless steel last stage valves.
- Heavy duty roller bearing.
- Tempered steel 3rd stage with 7 cast iron piston rings.
- 3rd – 4th stages with pushing pistons to eliminate side forces.

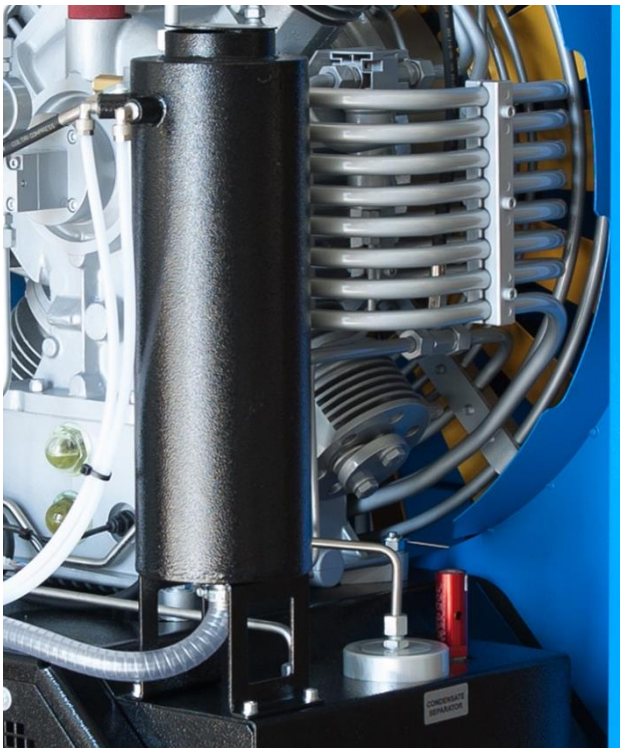
Compressor block	**M36B**
Flow rate	Min 250 l/min - Max 690 l/min
Speed	1,250 1/min 1,400 1/min
Number of stages	3 + 1
Number of cylinder	3 + 1
Cylinder bore service stage	38 mm
Cylinder bore 1st stage	60 mm
Cylinder bore 2nd stage	32 mm
Cylinder bore 3rd stage	15 mm
Stroke	50 mm
Olil pump flow rate	0,7 l/min
Direction of rotation (from flywheel side)	Left – counter clockwise
Drive type	V-belt A type
Amount of oil	4 Liters
Intake pressure	2 – 5 bar

› Purification system HYPERFILTER

- DOUBLE HYPERFILTER cartridge repackable or disposable

Purification System	**HYPERFILTER**
Operating pressure (Standard)	250 bar / 330 bar / 360 bar
Operating pressure max. (PS)	420 bar
Processable air capacity (at ambient temperature 20°C and 200 bar)[1]	880 m^3 min

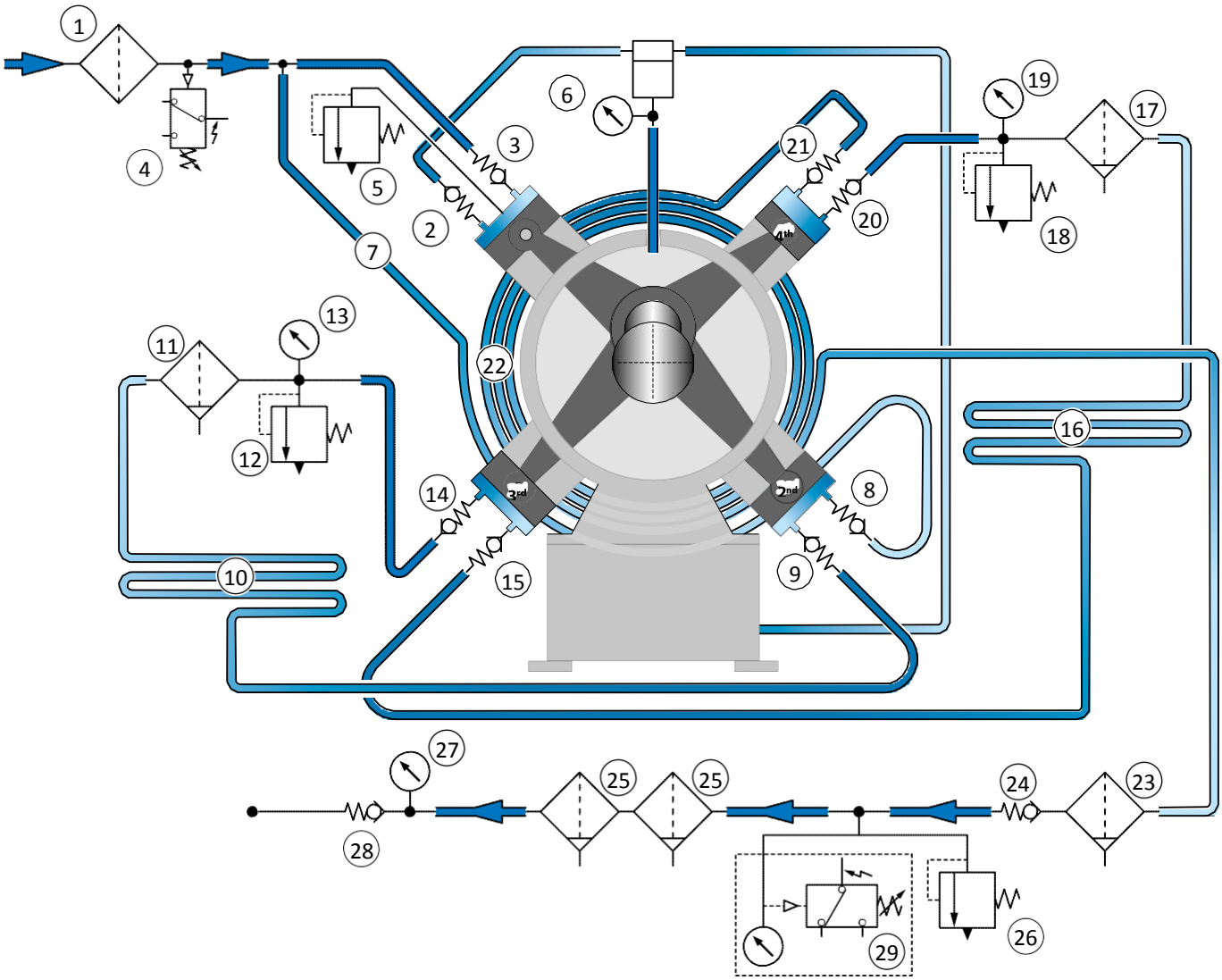
1 Depend on quality of gas at the inlet.



› Separator system

- Interstage separator after 2nd and 3rd stage, stainless steel AISI 316
- Final separator for the removal of oil-/ water condensate
- Final safety valve, fitted to separator housing
- Pressure maintaining / non return valve.

› Piping and instrumentation diagram



1. Intake filter
2. Intake valve
3. Outlet valve
4. Minimum pressure switch
5. Safety valve 1st stage
6. Pressure gauge 1st stage
7. Cooling pipe 1st-2nd stage
8. Intake valve 2nd stage
9. Outlet valve 2nd stage
10. Cooling pipe 2nd-3rd stage
11. Condensate separator
12. Safety valve 2nd stage
13. Pressure gauge 2nd stage
14. Intake valve 3rd stage
15. Outlet valve 3rd stage
16. Cooling pipe 3rd-4th stage
17. Condensate separator
18. Safety valve 3rd stage
19. Pressure gauge 3rd stage
20. Intake valve 4th stage
21. Outlet valve 4th stage
22. Final cooling pipe
23. Condensate separator HP
24. Non return valve
25. Active carbon air filter
26. Safety valve
27. Pressure gauge 4th stage
28. Pressure maintenance valve
29. Pressure switch

» Compressor control and automatic condensate drain system

system

Automatic condensate drain

Compressor control gauges

- ON/OFF Switch with protective motor switch
- Optional: Autostart at 60 Bar hysteresis
- Transformer
- Pressure switch stops the compressor unit at final pressure
- Drainage of all separators between the individual stages and also the final separator during compressor operation (standard draining interval every 15 minutes for a 6 second period)
- Timer for automatic condensate drain device
- Unloaded start integrated (automatically draining at every shut-down of the unit)
- Condensate collecting tank 5 litre, with silencer; about 3 litre capacity, for the environmentally friendly disposal of the condensate
- Interstage pressure manometers display the operating pressure for the individual compression stages. This pressure information enables the sealing tightness of the valves (intake and outlet) of each stage to be checked and potential fault sources to be rapidly identified. The interstage pressure manometers are mounted in the compressor housing.

EC DECLARATION OF CONFORMITY
According to Annex II point A of Directive 2006/42/EC,
Annex IV Directive 2014/30/EU,
Annex II Directive 2000/14/EC (adopted in Italy with D.Lgvo 4/9/02 n. 262)

The firm AEROTECNICA COLTRI S.p.A., as the manufacturer of the HIGH PRESSURE COMPRESSOR FOR Air – Nitrogen – Helium – Argon

Model	**BOOSTER**		
Type	**OPEN**		
Code			
Serial number			
Year	**2018**	**Lwa guaranteed**	**dB(A)**
Engine	**THREE PHASE**	**Lwa measured**	**dB(A)**
Power		**Lpa measured**	**dB(A)**

Hereby declares under its sole responsibility that it complies with all the relevant provisions of the Directives:

- **2006/42/EC (machinery Directive);**
- **2014/30/EU (electromagnetic compatibility Directive);**
- **2000/14/EC (Directive on noise emission in the environment by equipment for use outdoors).**

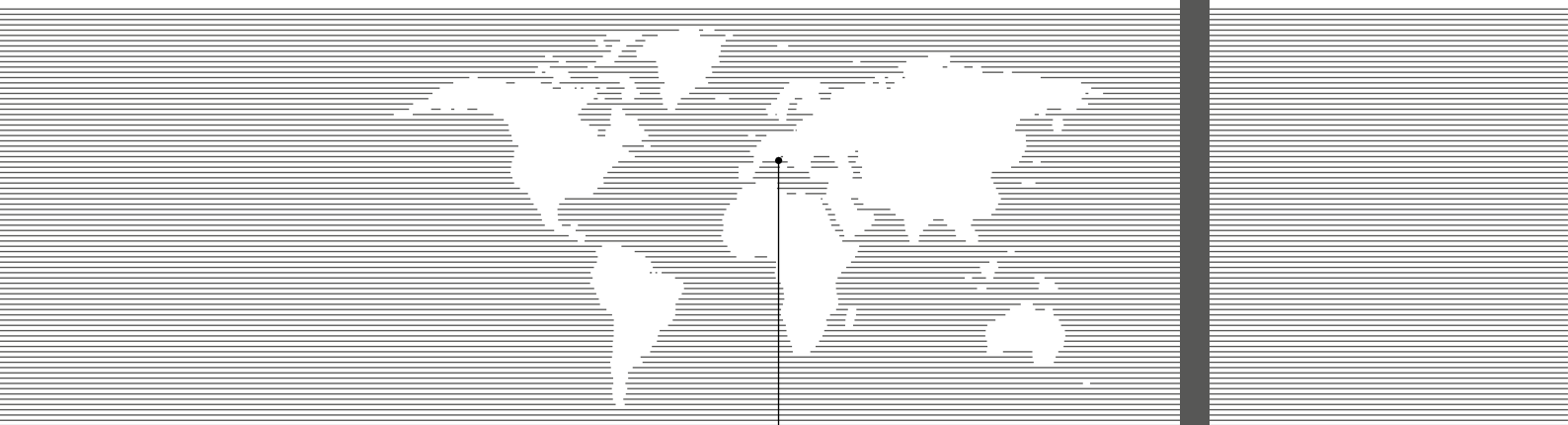
further, declares that the compressor complies with the relevant requirements described in the technical standards:

EN ISO 12100:2010, EN 1012-1:2010, EN ISO 13857:2008, CEI EN 60204-1:2006,
CEI EN 61000-6-4:2007/A1:2013, CEI EN 61000-6-2:2006

finally, declares that:

- **any modification made to the compressor without written authorization from AEROTECNICA COLTRI S.p.A. shall void this declaration;**
- **extraordinary maintenance operations and supply of spare parts must always be requested to the manufacturer;**
- **the user's manual is an integral part of the machine, and a full knowledge and understanding of it are essential for a safe use.**

Person authorized to compile the technical file according to the above mentioned Directives: eng. Marco Corsini near Aerotecnica Coltri S.p.A.



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