Technical Data Sheet

COLTRI COMPRESSORS

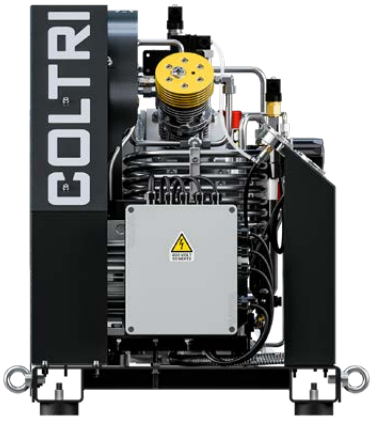
BOOSTER LINE

ACE VII ZERO LOSS

ELECTRIC

Contact

Big performance, small consumption



Technical data

Type of gas	Air - Helium - Nitrogen - Argon
Intake pressure	Min. 2 bar Max. 5 bar
Nominal pressure	250 bar / 330 bar
Working pressure	232 bar / 300 bar
Max working pressure	420 bar
Permissible ambient temperature range	-10° C ÷ +40° C
Permissible altitude	0 ÷ 1.500 m SLM
Max permissible tilt	15°
Design	Basic
Operating voltage, standard	400 V, 50 Hz
Other operating voltage	230 V, 50 Hz / 230 V, 60 Hz / 400 V, 60 Hz
Oil	Synthetic Coltri Oil ST 755
Oil change interval	1 year / 1.000 h
Frame	Steel - Colour Black RAL 9005 - Powder coating painting - Scratch proof

Compressor

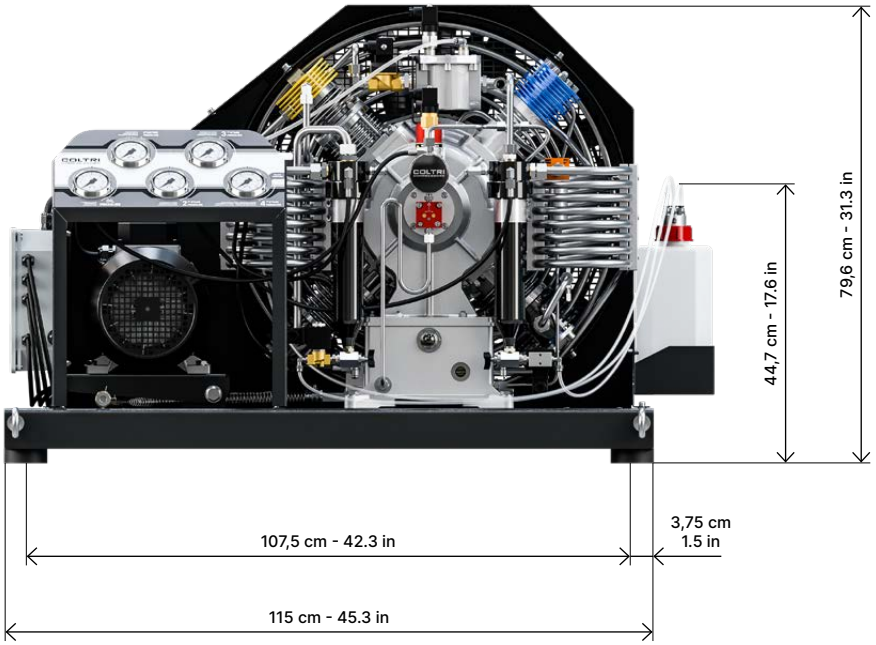
	ACE VII ZERO LOSS 11 KW	ACE VII ZERO LOSS 15 KW
Flow rate	Min. 250 - Max. 620 l/min Min. 15 - Max. 37 m^3/h Min. 8.8 - Max. 21.9 cfm	Min. 280 - Max. 690 l/min Min. 17 - Max. 41.4 m^3/h Min. 9.9 - Max. 24.4 cfm
Purification System	2 Hyperfilter with activated carbon	
Cooling air flow	1.960 m^3/h	
Weight[1]	210 kg - 463 lb	
Dimensions (W x D x H)[1]	115 × 60 × 79,6 cm - 45.3 × 23.6 × 31.3 in	

1 Standard model. Dimensions and weight may vary depending on accessories.

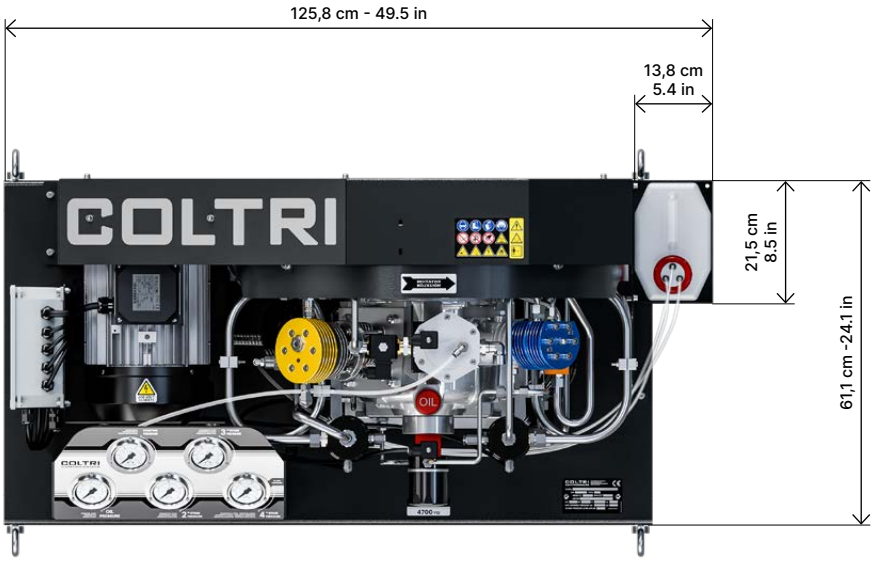
Electric motor

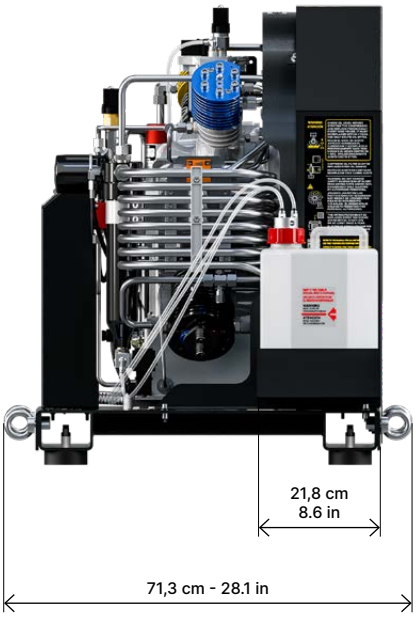
	ACE VII ZERO LOSS 11 KW	ACE VII ZERO LOSS 15 KW
Power	11 kW - 15 Hp	15 kW - 20 Hp
Type	Three-phase electric	
Operating voltage/frequency Different voltage / frequency available on request.	400 V, 50 Hz	
Rated current	23 A	31 A
Speed (RPM)	2.910	2.920
Protection class	IP55	

Dimensions

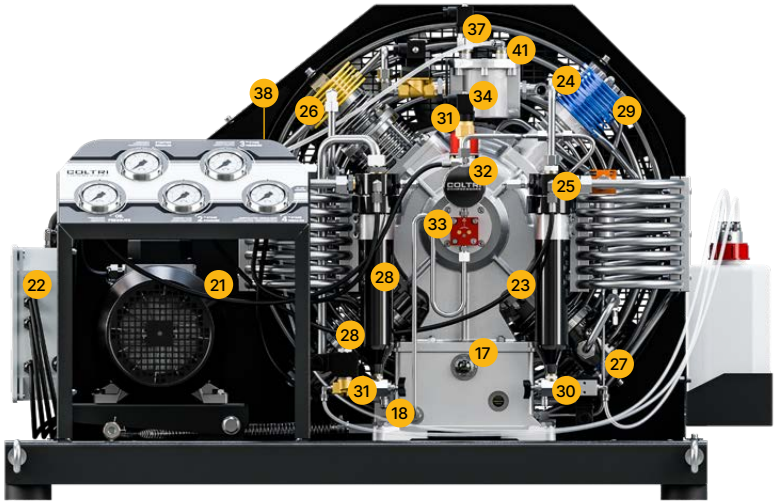

79,6 cm - 31.3 in
44,7 cm - 17.6 in
3,75 cm
1.5 in
107,5 cm - 42.3 in
115 cm - 45.3 in

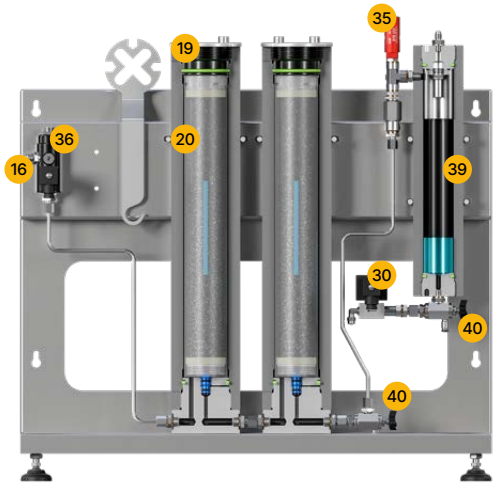
COLTRI
50,2 cm - 19.7 in
60 cm - 26.3 in

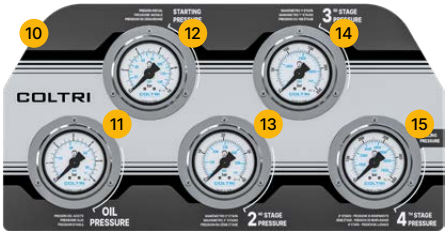

125,8 cm - 49.5 in
13,8 cm
5.4 in
21,5 cm
8.5 in
61,1 cm -24.1 in
COLTRI
OIL


21,8 cm
8.6 in
71,3 cm - 28.1 in

Components

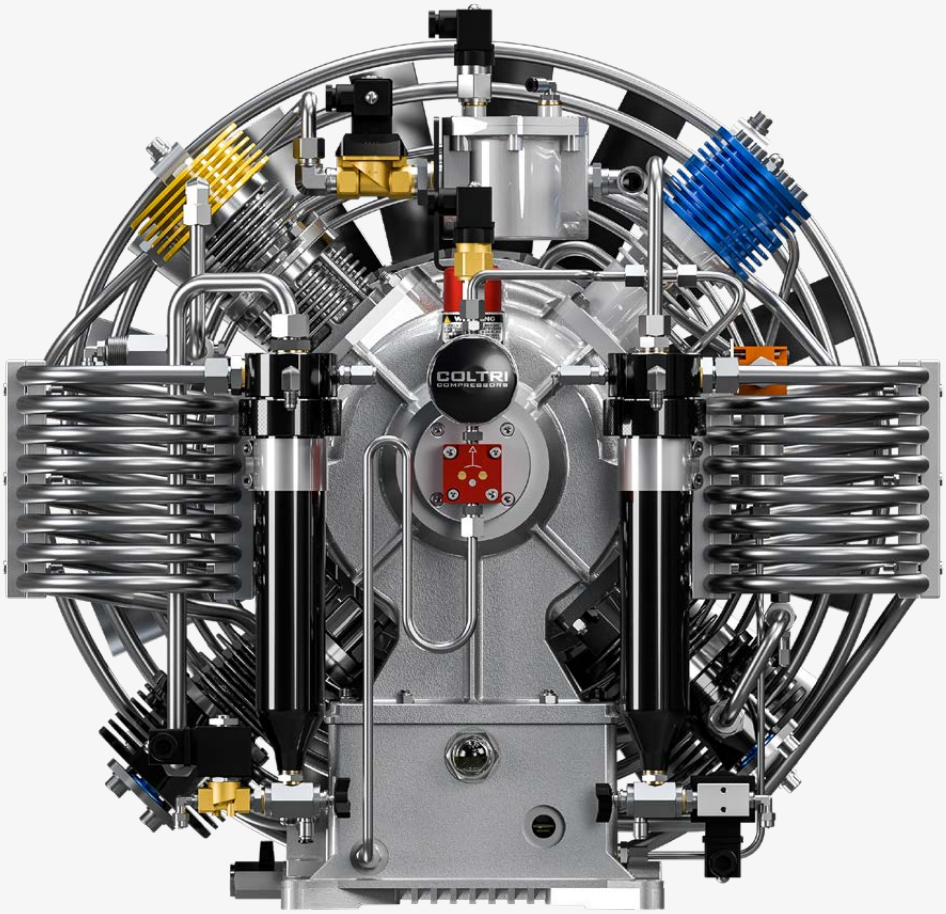






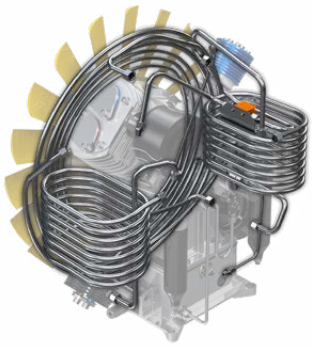
1. Control pannel
2. Main switch
3. ON switch
4. Stop pushbutton
5. Condensate discharge pushbutton
6. Power indicator light
7. Direction of rotation indicator light
8. Oil level warning light
9. Hour meter
10. Control Panel
11. Oil pressure gauge
12. 1st stage pressure gauge
13. 2nd stage pressure gauge
14. 3rd stage pressure gauge
15. 4th stage pressure gauge/ working pressure
16. Pressure gas outlet
17. Oil level
18. Oil discharge valves
19. Purification system
20. Filter cartridge Hyperfilter x nitrogen
21. Electric motor
22. Electrical cabinet
23. Pumping unit
24. Gas inlet 2÷5bar
25. Condensate separator
26. 1st stage gas recovery
27. 2nd stage
28. 3rd stage
29. 4th stage
30. Condensate discharge valve
31. Oil filler plug
32. Oil filter
33. Oil pump
34. Minimum oil pressure switch
35. Safety valve
36. Maintenance valve pressure
37. Cooling fan
38. Belt
39. Final condensate separator
40. Circuit pressure discharge valve
41. Suction filter

Pumping unit MCH 36

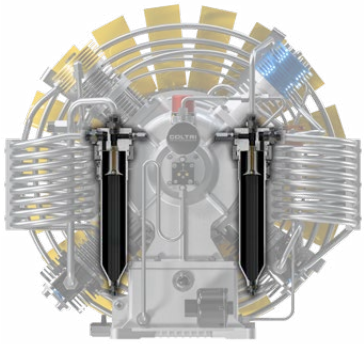


Forced lubrification with low pressure gear pump

First stage for gas recovery



Pipes, fitting and nuts in stainless steel AISI 316



Intermediate condensate separator after the second and third stage

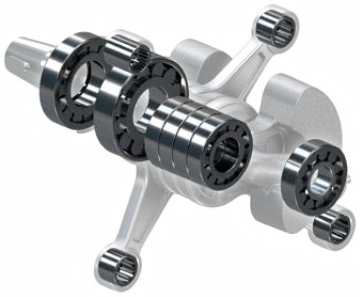
Synthetic Oil Coltri ST 755 with special formulation for HP compressors

Discover more on Coltri Oil ST 755

High pressure final condensate separators double effect

Safety valves after each stage of compression

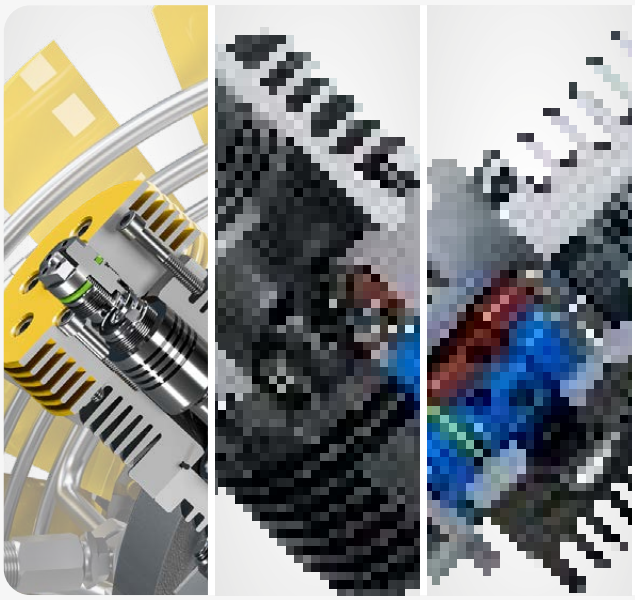
Special cast iron cylinders with low roughness lapping



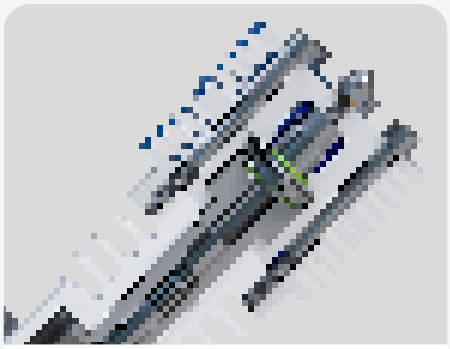
Roller Bearings for intensive work

Forged aluminum connecting rods

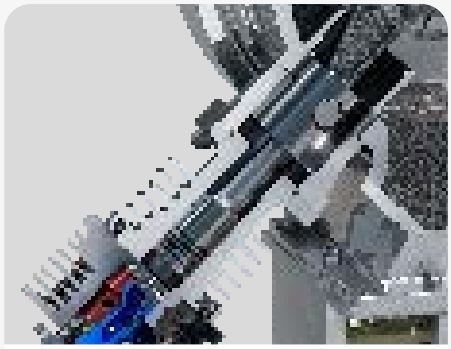
Forged steel crankshaft



High-flow first, second and third stage valves



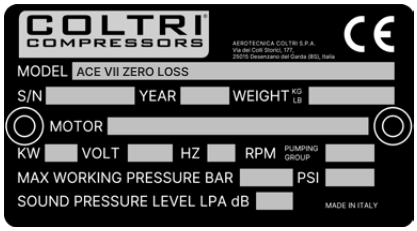
Fourth stage in tempered steel with 6 piston rings in special cast iron



Second and third stage with pushing pistons to eliminate lateral forces on the pistons

Low oil pressure switch

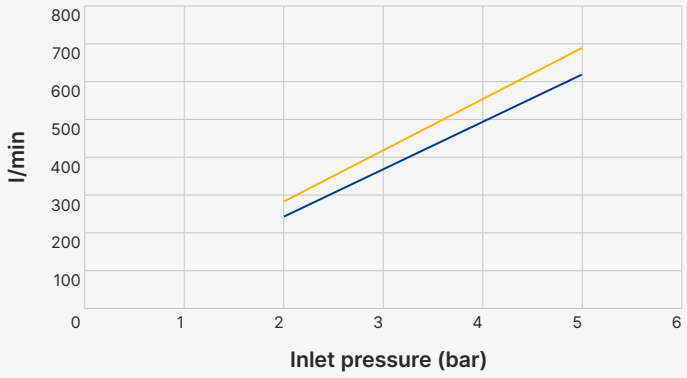
It ensures that the compressor only works if the oil pressure, downstream of the pump, is higher than 1.5 bar.

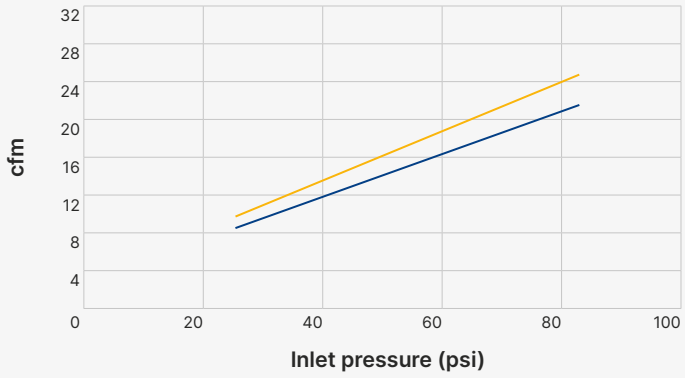


CE certification

Technical data pumping unit MCH 36

	ACE VII ZERO LOSS 11 KW	ACE VII ZERO LOSS 15 KW
Intake pressure	Min. 2 bar Max. 5 bar	
Flow rate	Min. 250 - Max. 620 l/min Min. 15 - Max. 37 m³/h Min. 8.8 - Max. 21.9 cfm	Min. 280 - Max. 690 l/min Min. 17 - Max. 41.4 m³/h Min. 9.9 - Max. 24.4 cfm
Speed (RPM)	1.250	1.400
Number of stages	3 + 1 service	
Number of cylinders	3 + 1 service	
Cylinder bore 2nd stage	60 mm	
Cylinder bore 3rd stage	32 mm	
Cylinder bore 4th stage	15 mm	
Stroke	50 mm	
Direction of rotation from flywheel side	Counter clockwise (left)	
Drive type	V-belt A type	
Oil sump capacity	4 liters	





ACE VII 11 KW ZERO LOSS

l/min	Min. 250 - Max. 620
cfm	Min. 8,8 - Max. 21,9

ACE VII 15 KW ZERO LOSS

l/min	Min. 280 - Max. 690
cfm	Min. 9,9 - Max. 24,4

Standard equipment

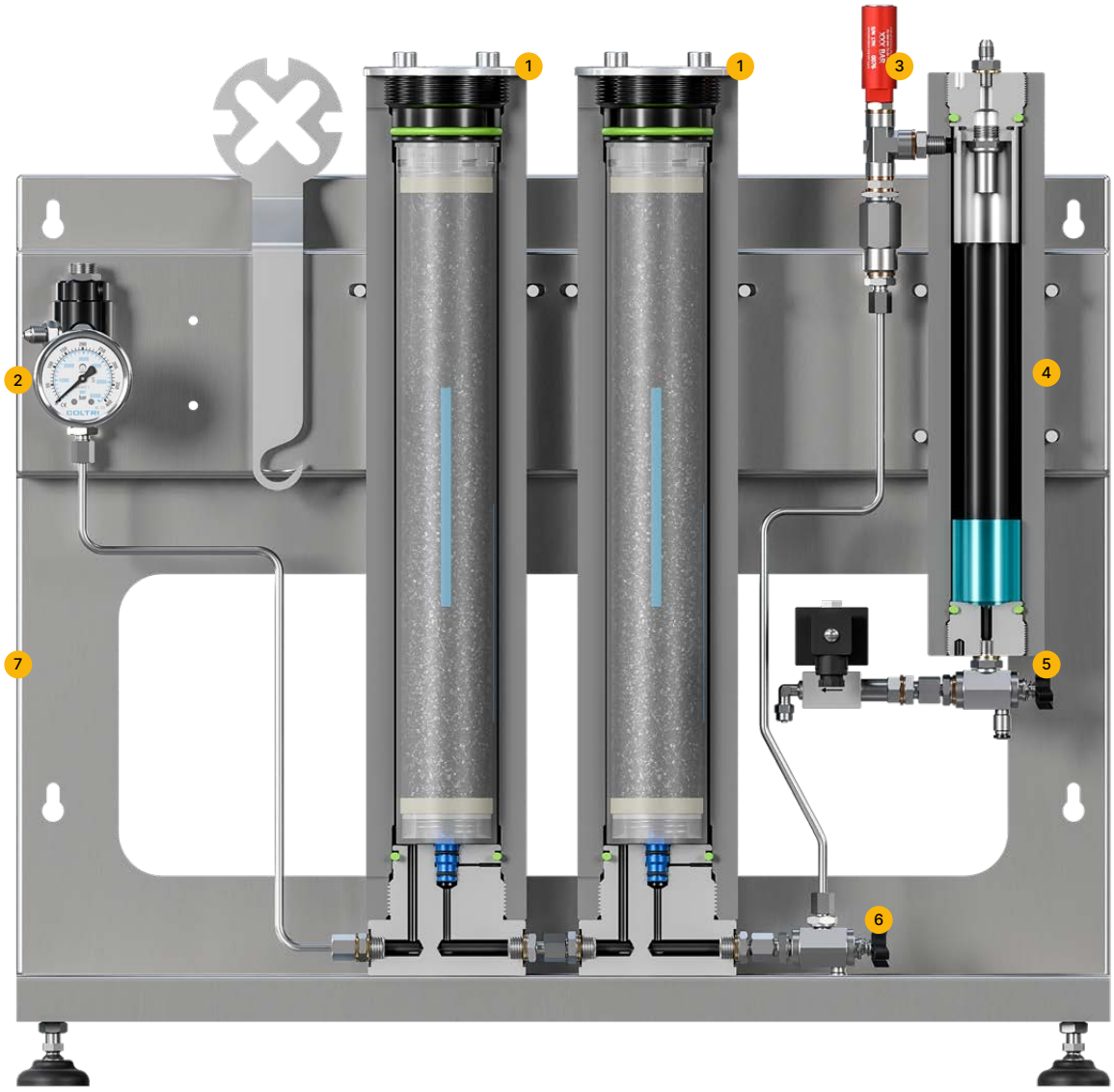
Purification system Hyperfilter for nitrogen

DOUBLE HYPERFILTER regenerable or disposable cartridge

1. Hyperfilter body
2. Upper cap
3. O-Ring
4. Cartridge spring
5. Hyperfilter cartridge
6. Fitting
7. Lower cap
8. Stainless hook
9. Upper cap
10. Upper cap
11. Felt disc

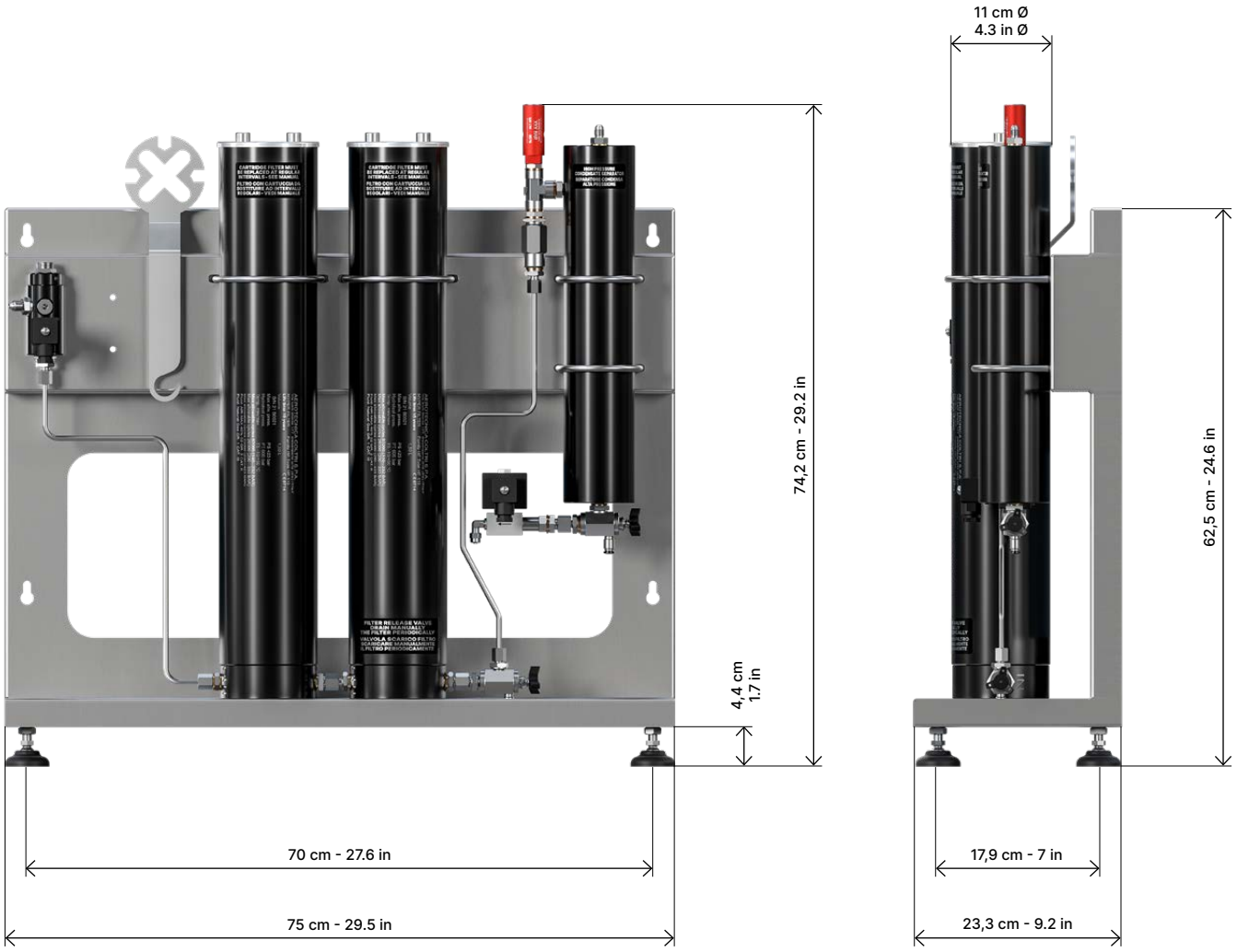
Purification system	**Hyperfilter x 2**
Operating pressure (Standard)	250 bar / 330 bar / 360 bar
Operating pressure max. (PS)	420 bar
Filtered gas volume (nitrogen) When using a filter cartridge of the type shown in the figure.	30.000 m^3

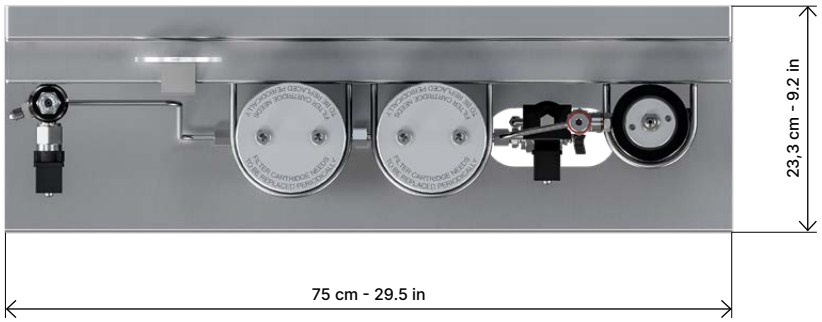
Stand-alone kit with Hyperfilter



1. Purification system
2. Pressure gauge
3. Safety valve
4. Condensate separator
5. Automatic condensate drain for external separator*
6. Manual filter discharge
7. Stainless steel frame with provision for wall mounting

Dimensions


11 cm Ø
4.3 in Ø
74,2 cm - 29.2 in
4,4 cm
1.7 in
62,5 cm - 24.6 in
70 cm - 27.6 in
75 cm - 29.5 in
17,9 cm - 7 in
23,3 cm - 9.2 in


23,3 cm - 9.2 in
75 cm - 29.5 in

Additional purification system with Hyperfilter

Safety valve
(variable according to customer request)

Pressure maintenance valve

External Hyperfilter separator and filters kit

Ground or stand-alone stainless steel support

Automatic condensate drain

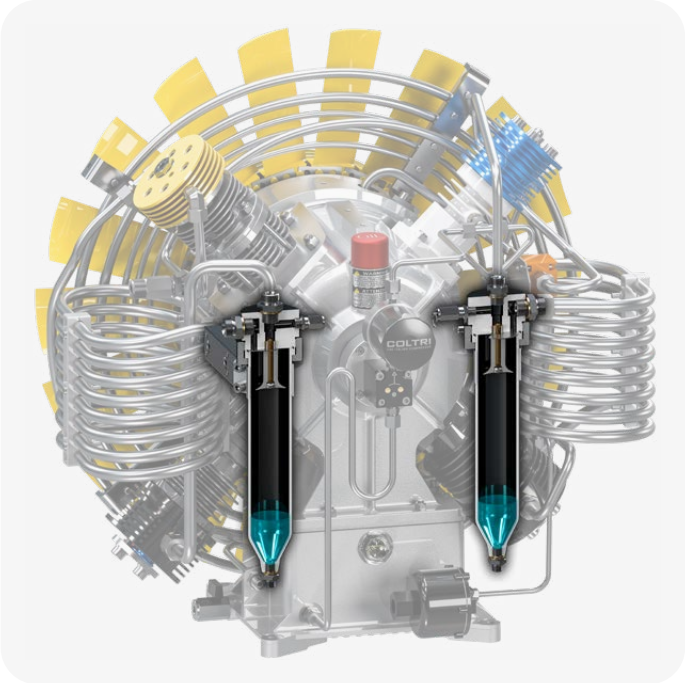
High pressure final condensate separator double effect

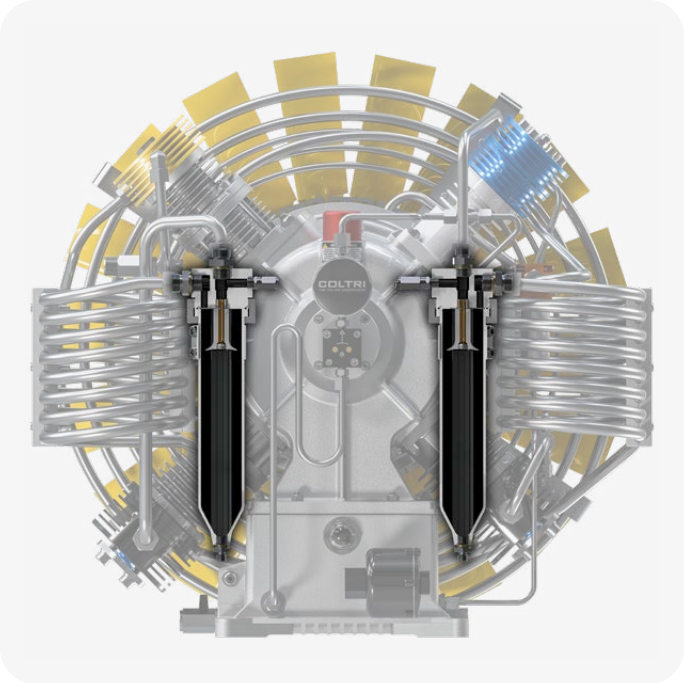
The automatic condensate drain removes water from the intermediate separator and the final separator automatically during operation (every 7 minutes).

Consists of: 1 x solenoid valve

Condensate separation system

- Interstage separator after 2nd stage, forged and anodized aluminum
- Double final separator for removal of oil/water condensate
- Final safety valve, mounted on the separator housing
- Pressure maintenance valve / non-return valve





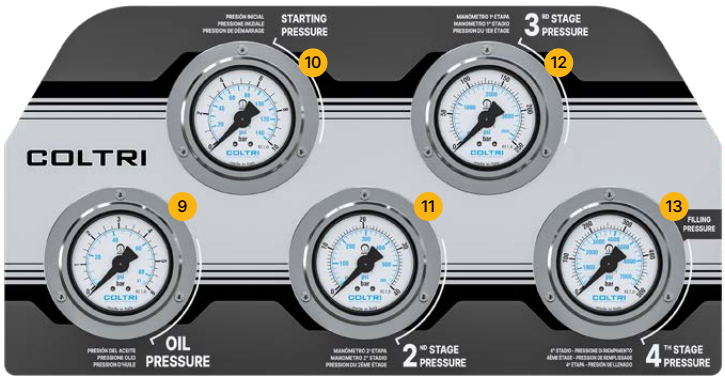
Contamination	Maximum content as per DIN EN 12021:2014	Air quality*
H_2O	25 mg/m³	≤ 10 mg/m³
CO	5 ppm(v)	≤ 4
CO_2	500 ppm(v)	≤ 500
Oil	0,5 mg/m³	≤ 0,5 mg/m³

* Measured at our facility using ASCO HORA 160 ANALYZER.
1 The level of CO2 in the intake air must not exceed the maximum level of CO2 as per EN 12021:2014
2 Reported values exceed ISO 8573-1 standards.

Compressor control and automatic condensate drain system

- Motor protection switch.
- Pressure switch with fixed setting 232 or 300 bar.
- Autostart.
- Transformer.
- Drainage of all separators between the individual stages and also of the final separator during compressor operation (standard drain interval every 15 minutes for a period of 6 seconds).
- Timer for automatic condensate drainage device.
- Interstage pressure gauges display the operating pressure for the individual compression stages. This pressure information allows you to check the tightness of the valves (inlet and outlet) of each stage and quickly identify potential sources of failure.

The interstage pressure gauges are mounted in the compressor frame.



1. Power button
2. Stop button
3. Voltage presence warning light
4. Oil level warning light
5. Fault motor light
6. Condensate drain light
7. Operating hours counter
8. Main switch
9. Oil pressure
10. 1st stage pressure gauge
11. 2nd stage pressure gauge
12. 3rd stage pressure gauge
13. 4th stage pressure gauge

Plugs available according to electric motor

230 V three-phase electric motor

9h/200 - 250V~

50÷60 Hz

32 A

3P+⏚

400 V three-phase electric motor

6h/380 - 415V~

50÷60 Hz

16 A

3P+⏚

400 V three-phase electric motor

6h/200/346 - 240/415V~

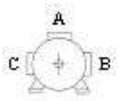
50÷60 Hz

32 A

3P+N+⏚

Data sheet three-phase electric motor 11 kW

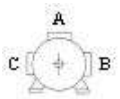
soga®	**SPECIFICA TECNICA MOTORE EL.** *Electric motor technical data sheet*	**Potenza/** *Power* (kW) **11**	**Poli/** Poles **2**
		Data 25/06/2015	Rev. 0

No	Descrizione/*Description*	Dati/Data			*U.d.m.*
1	**Codice Soga** / *ref.code*	150784			
2	**Modello /** *Motor type*	MT1 132MC/2			
3	**Descrizione** / *Description*	Three-phase asynchronous motor 11kW 2 Poles 400/690V 50Hz			
4	**Carcassa motore** / *Framesize*	132M			
5	**Poli** / *Poles*	2			
6	**Forma di costruzione** / *Mounting type*	IM B3			
7	**Potenza nominale** / *Rated output*	11	11	13	[kW]
8	**Fattore di servizio** / *Service factor*	1.0			
9	**Tipo di servizio** / *Duty type*	S3-75%			
10	**Tensione** / *Rated voltage*	230/400	230/400	440-480Y	[V]
11	**Frequenza** / *Rated frequency*	50	60	60	[Hz]
12	**Corrente nominale** / *Rated current*	39,8/23	36,5/21,1	23	[A]
13	**Velocità nominale** / *Rated speed*	2910	3500	3500	[min^{-1}]
14	**Fattore di potenza** / *Power factor*	0,87	0,91	0,87	
15	**Coppia nominale motore**/ *Rated motor torque*	36,1	30	35,5	[Nm]
17	**Corrente avviamento / Corrente nominale** *Starting current / Rated current*	6,8			Isp/In
18	**Coppia avviamento / Coppia nominale** *Starting torque/Rated torque*	2,7			Msp/Mn
19	**Classe d'isolamento** / *Insulation class*	F			
20	**Grado di protezione** / *Enclosure*	IP55			
21	**Posizione scatola morsettiera** (motore con piedini) *Terminal box position (motor with feet)* 	A			
22	**Terminali potenza** / *Power leads terminal*	M6			
23	**Peso /** Weight	51			[kg]
24	**Cuscinetti** /bearings — Drive end	6308			
	Cuscinetti /bearings — Non drive end	6308			

Note/remarks:
Targa con logo Coltri Compressors.

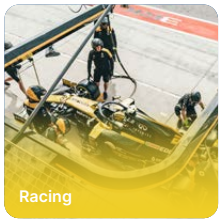
Data sheet three-phase electric motor 15 kW

soga®	**SPECIFICA TECNICA MOTORE EL.** *Electric motor technical data sheet*	**Potenza/** *Power* (kW) **15**	**Poli/** Poles **2**
		Data 25/06/2015	Rev. 0

No	Descrizione/*Description*		Dati/Data			*U.d.m.*
1	**Codice Soga** / *ref.code*		150790			
2	**Modello /** *Motor type*		MT1 132MD/2			
3	**Descrizione** / *Description*		Three-phase asynchronous motor 15kW 2 Poles 230/400V 50Hz			
4	**Carcassa motore** / *Framesize*		132M			
5	**Poli** / *Poles*		2			
6	**Forma di costruzione** / *Mounting type*		IM B3			
7	**Potenza nominale** / *Rated output*		15	15	18	[kW]
8	**Fattore di servizio** / *Service factor*		1.0			
9	**Tipo di servizio** / *Duty type*		S3-75%			
10	**Tensione** / *Rated voltage*		230/400	230/400	440-480Y	[V]
11	**Frequenza** / *Rated frequency*		50	60	60	[Hz]
12	**Corrente nominale** / *Rated current*		53,7/31	53,7/31	31	[A]
13	**Velocità nominale** / *Rated speed*		2920	3500	3500	[min^{-1}]
14	**Fattore di potenza** / *Power factor*		0,86	0,91	0,86	
15	**Coppia nominale motore**/ *Rated motor torque*		49	41	49,1	[Nm]
17	**Corrente avviamento / Corrente nominale** *Starting current / Rated current*		7,2			Isp/In
18	**Coppia avviamento / Coppia nominale** *Starting torque/Rated torque*		2,5			Msp/Mn
19	**Classe d'isolamento** / *Insulation class*		F			
20	**Grado di protezione** / *Enclosure*		IP55			
21	**Posizione scatola morsettiera** (motore con piedini) *Terminal box position (motor with feet)* 		A			
22	**Terminali potenza** / *Power leads terminal*		M6			
23	**Peso /** Weight		59			[kg]
24	**Cuscinetti** /bearings	Drive end	6308			
		Non drive end	6308			

Note/remarks:
Targa con logo Coltri Compressors.

Application fields



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+39 030 9910297

info@coltri.com

DT-TDS-ACEVII-25-V2

QUALITY SYSTEM CERTIFICATION DNV ISO 9001

ENVIRONMENTAL SYSTEM CERTIFICATION DNV ISO 14001

SAFETY SYSTEM CERTIFICATION DNV ISO 45001

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