Technical Data Sheet

COLTRI COMPRESSORS

BOOSTER LINE

ACE V ZERO LOSS

ELECTRIC

Contact

When you demand the best

Technical data

Type of gas	Air - Nitrogen
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	Semi-soundproof cabinet with sound absorbing
Operating voltage, standard	400 V, 50 Hz
Other operating voltage	230 V, 50 Hz / 440 V, 60 Hz / 230 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 V 11 KW ZERO LOSS	ACE V 15 KW ZERO LOSS
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	3.960 m^3/h	4.450 m^3/h
Weight[1]	365 kg - 804 lb	455 kg - 1.004 lb
Dimensions (W x D x H)[1]	90,5 × 105,2 × 153 cm - 35.6 × 41.4 × 60.2 in	

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

Electric motor

	ACE V 11 KW ZERO LOSS	ACE V 15 KW ZERO LOSS
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	

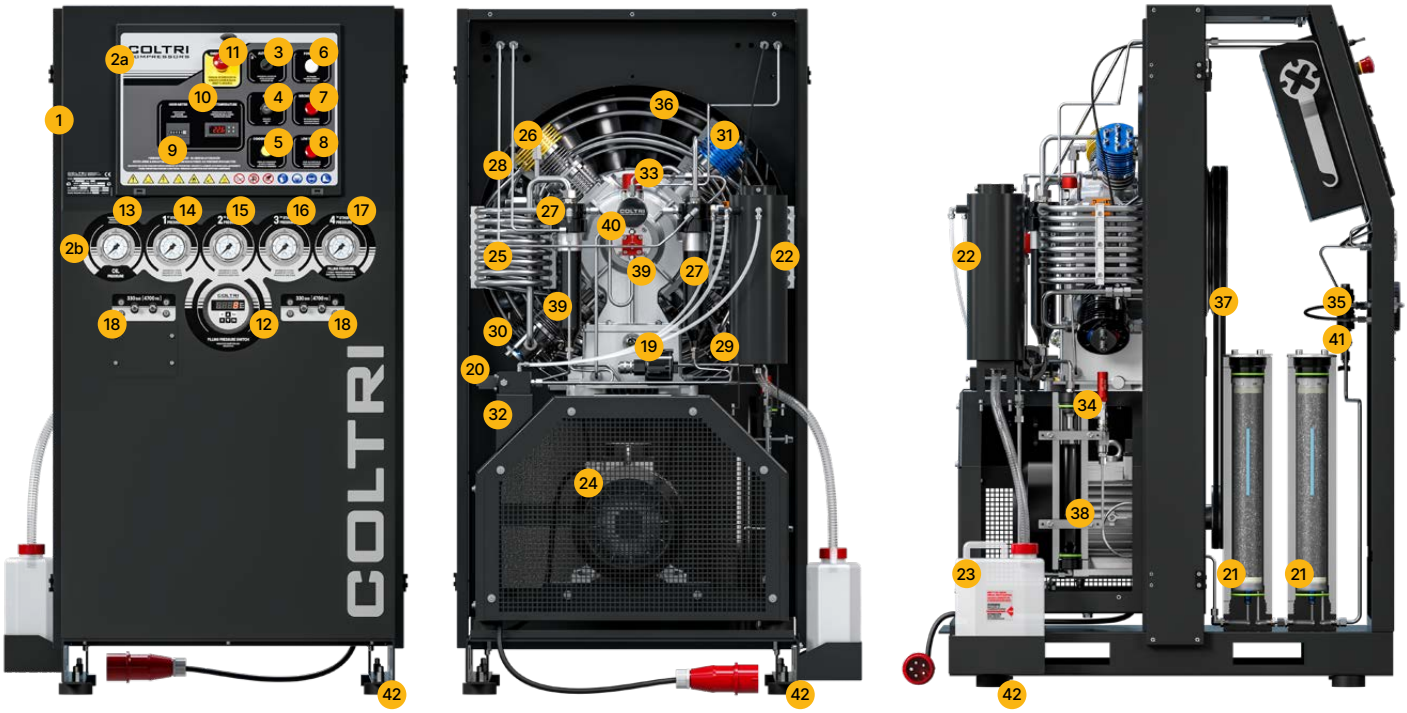
Dimensions

COLTRI
COMPRESSORS
COLTRI
10 cm
3.9 in
5,5 cm
2.2 in
68 cm - 26.7 in
11,5 cm
4.5 in
79 cm - 31.1 in
90,5 cm - 35.6 in

153 cm - 60.2 in
85,2 cm - 33.5 in
10,15 cm
4 in
2,5 cm
1 in
105,2 cm - 41.4 in

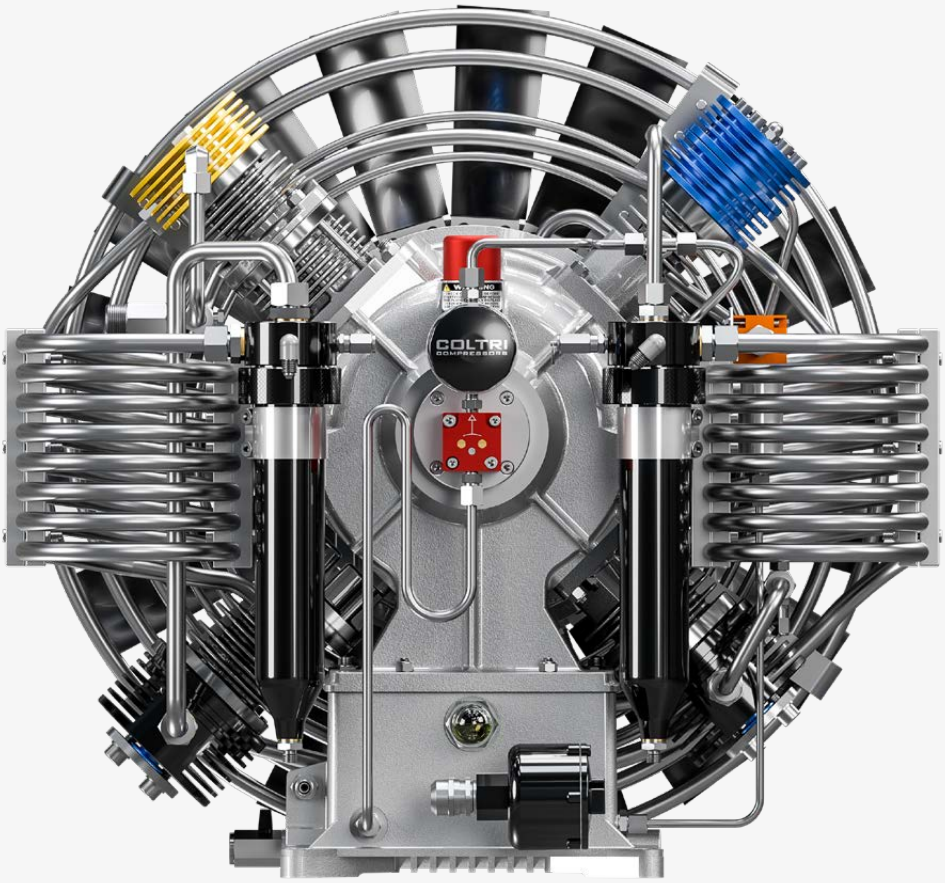
24 cm
9.45 in
OIL

Components

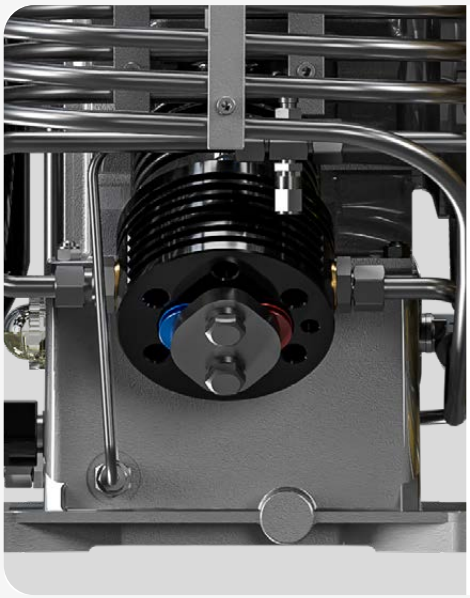


1. Frame
2. Control panel
3. ON pushbutton
4. Stop pushbutton
5. Condensate discharge pushbutton
6. Power indicator light
7. Direction of rotation indicator light
8. Oil level warning light
9. Hour counter
10. Cabinet interior / cooling air temperature
11. Emergency pushbutton
12. Automatic shut off 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. Purification system
22. Condensate collection container
23. Condensate collection tank
24. Electric motor
25. Pumping unit
26. Gas inlet: ¾" male - 2÷5 bar
27. Condensate separator
28. 1st stage gas recovery
29. 2nd stage
30. 3rd stage
31. 4th stage
32. Condensate discharge valves
33. Oil filler plug
34. Safety valve
35. Pressure maintenance valve
36. Cooling fan
37. Belt
38. Final condensate separator
39. Oil pump
40. Oil filter
41. Circuit pressure discharge valve
42. Anti-vibration device

Pumping unit MCH 36

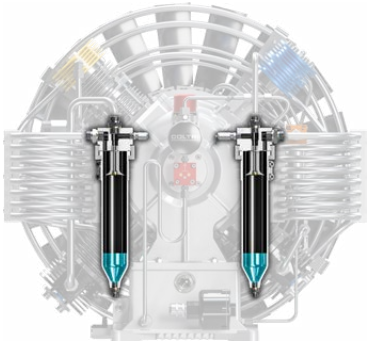


Forced lubrification with low pressure gear pump



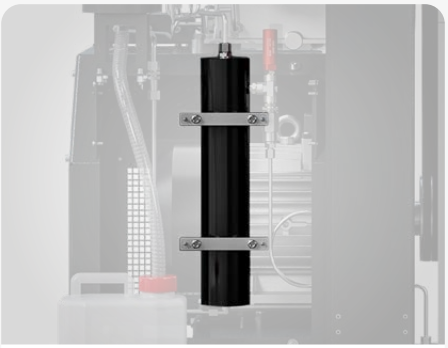
First stage for gas recovery

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



High pressure final condensate separators double effect

Safety valves after each stage of compression

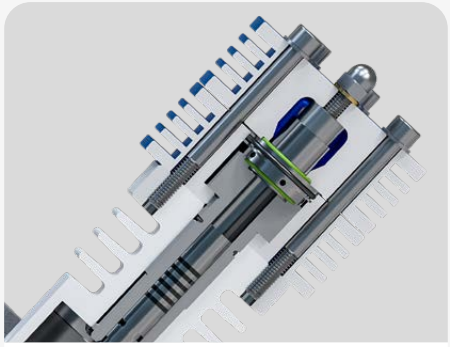
Special cast iron cylinders with low roughness lapping

Forged aluminum connecting rods

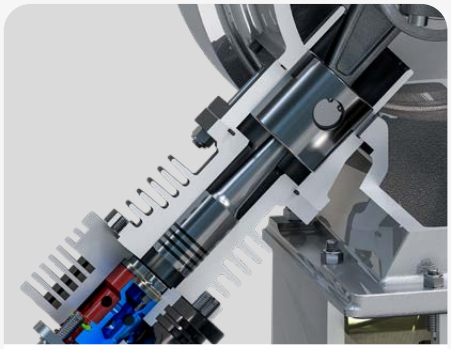
Forged steel crankshaft

High-flow first, second and third stage valves

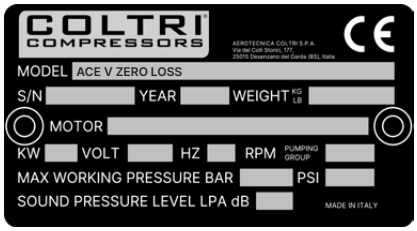
Roller Bearings for intensive work



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



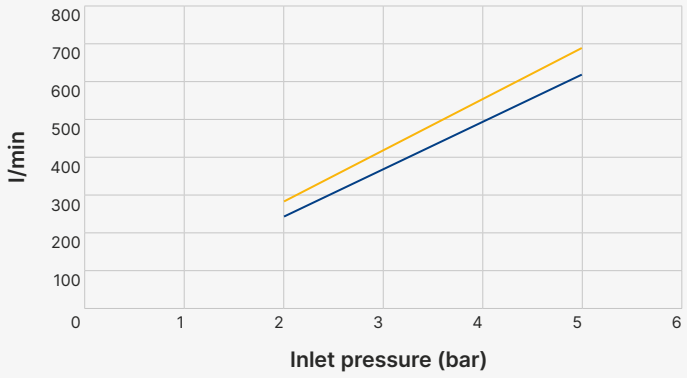
Second and third stage with pushing pistons to eliminate lateral forces on the pistons

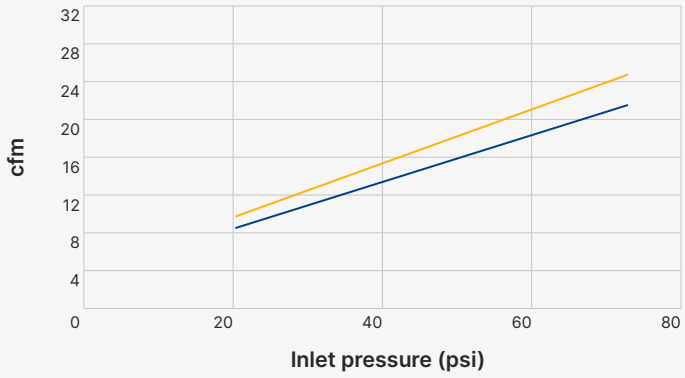


CE certification

Technical data pumping unit MCH 36

	ACE V 11 KW ZERO LOSS	ACE V 15 KW ZERO LOSS
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 V 11 KW ZERO LOSS

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

ACE V 15 KW ZERO LOSS

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

Standard equipment

Purification system Hyperfilter for nitrogen

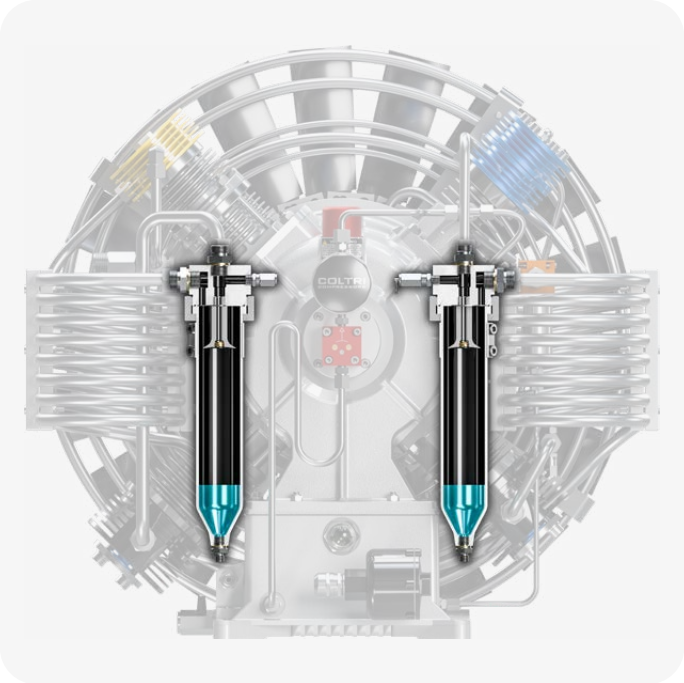
DOUBLE HYPERFILTER regenerable or disposable cartridge

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.	52.500 m^3

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*
Oil	0,5 mg/m³	≤ 0,5 mg/m³

* Measured at our facility using ASCO HORA 160 ANALYZER.
1. Reported values exceed ISO 8573-1 standards.

Filling hose

1200 mm stainless steel fittings - max working pressure 420 bar

Plugs available according to electric motor

400 V three-phase electric motor

6h/200/346 - 240/415V~
50÷60 Hz
32 A
3P+N+⏚

Compressor control and automatic condensate drain system

- ON/OFF switch with motor protection switch.
- Autostart.
- Transformer.
- Pressure switch stops compressor at final pressure.
- 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.
- Integrated vacuum start-up (automatic drain when the unit is switched off).
- Condensate collection tank 5 liters, with silencer; capacity approx. 3 liters, for environmentally friendly disposal of condensate.
- 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. Condensate drain button
4. Oil level warning light
5. Wrong direction indicator light
6. Voltage presence indicator light
7. Emergency button
8. Inside temperature cabin/cooled air
9. Operating hour meter

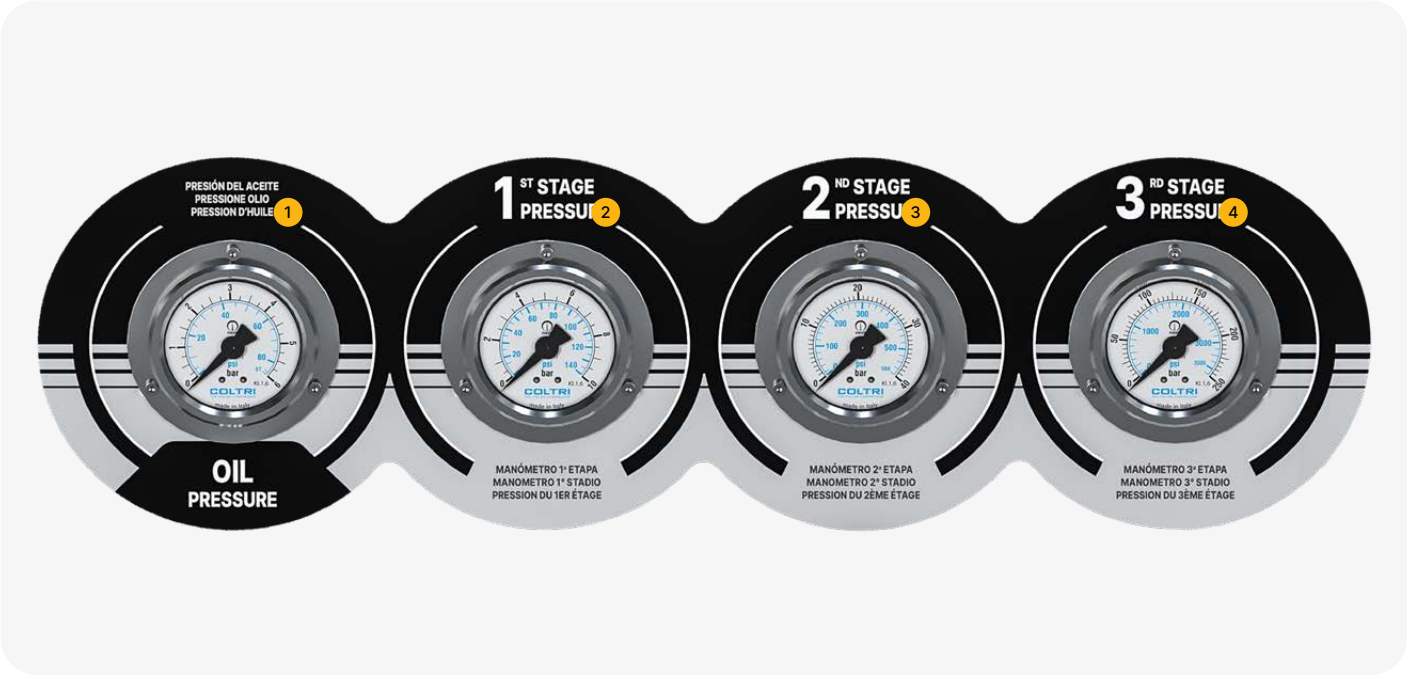
Electronic pressure switch

The instrument allows to visualize the pressure expressed in bar, psi or MPa.

Through the programming buttons it allows to set the intervention pressure of the relay contact (SPDT) and hysteresis. The settings are protected by passwords at 3 levels: manufacturer, customer and end user. The instrument also has the function of hours counter and no. of cycles of separator intervention, ensuring a general improvement of the operation of the recharge station over time and the longevity of its filters.

Interstage pressure gauges

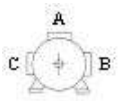
The function of the interstage pressure gauges is to show the operating pressure of the individual compression levels. This information is indispensable because it allows to quickly recognize a possible error by checking the tightness of the respective level valves (inlet and outlet). The interstage pressure gauges are mounted on the control panel of the compressor.



1. Oil pressure gauge
2. 1st stage pressure gauge
3. 2nd stage pressure gauge
4. 3rd stage pressure gauge

Data sheet three-phase electric motor 11 kW

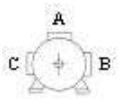
soga®	**SPECIFICA TECNICA MOTORE EL.** *Electric motor technical data sheet*	**Potenza/** *Power* (kW) **11**	**Poli/** Poles **2**
		Data 25/06/2015	Rev. 0

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			
		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.

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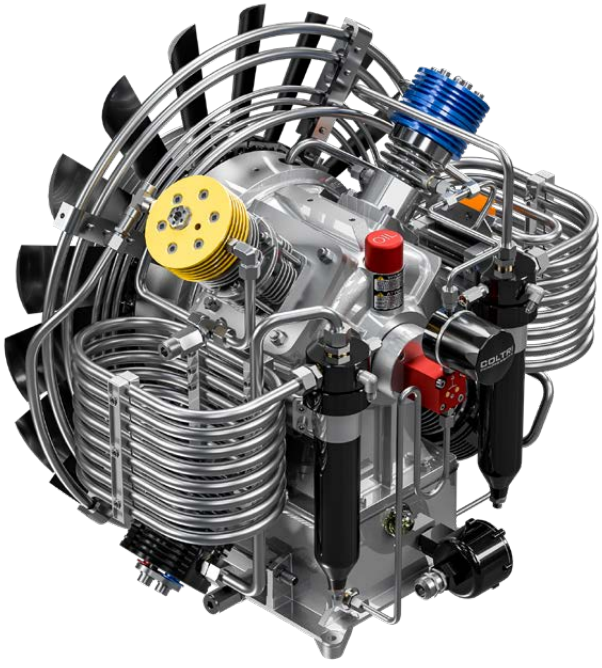

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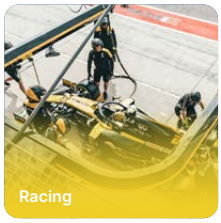

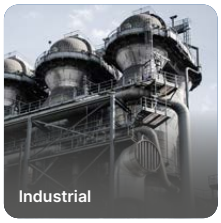

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DT-TDS-ACEV-25-V4

QUALITY SYSTEM CERTIFICATION DNV ISO 9001

ENVIRONMENTAL SYSTEM CERTIFICATION DNV ISO 14001

SAFETY SYSTEM CERTIFICATION DNV ISO 45001

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