

PRIME LINE

ERGO TPS

ELECTRIC

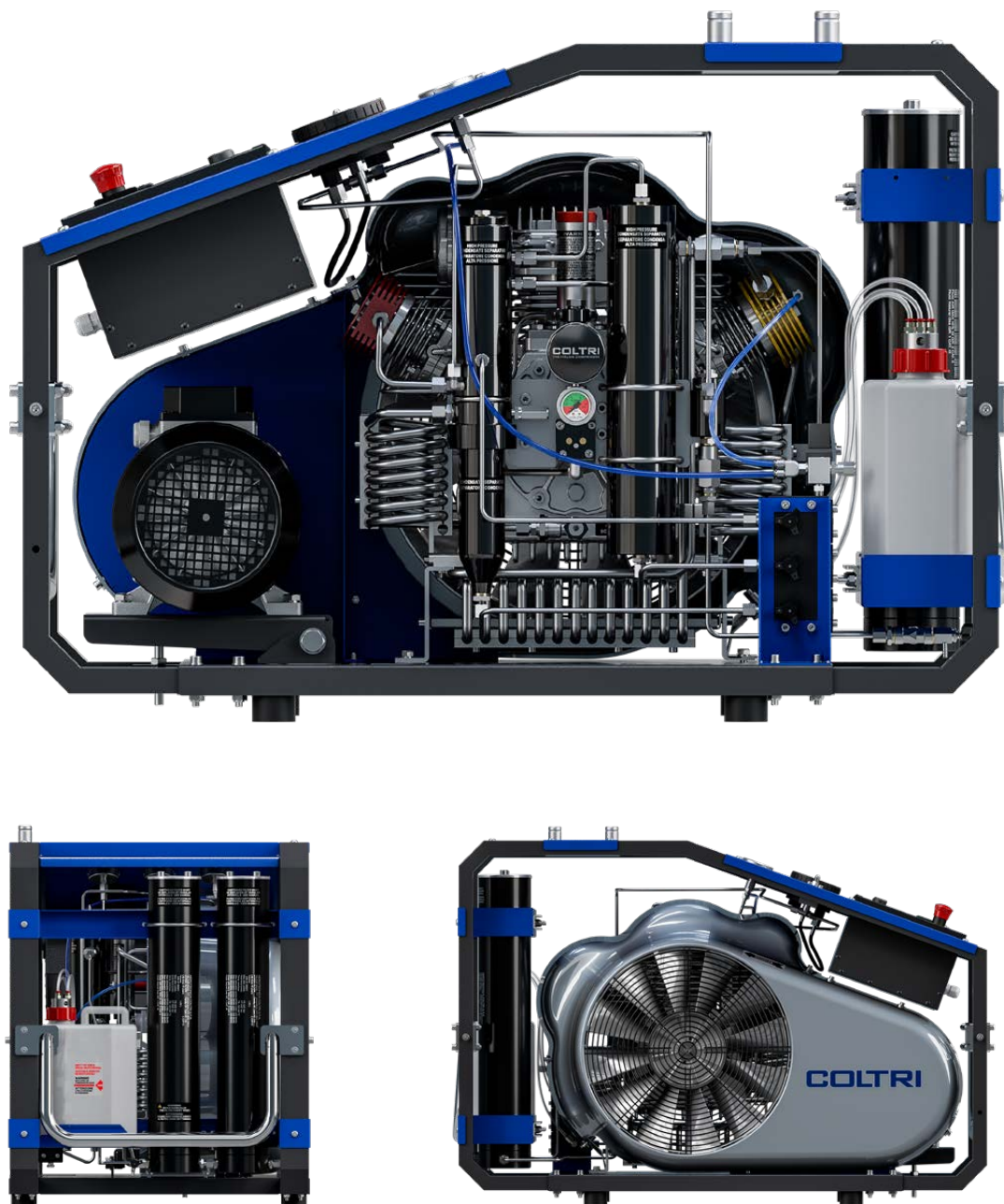


AUTHORISED RESELLER

NORTHERN DIVER
COMMERCIAL SUITS & EQUIPMENT

Less is more

ERGO TPS is the best solution for those who want a compact breathing air compressor without compromising on high performance. Equipped with four different TPS (Tropical Plus Superdry) pumping units, ERGO TPS is powered by electric motors or engines (Honda for the petrol version, Kohler for the diesel compressors). It has a panel with a monitoring system complete with pressure gauges, autostop with adjustable electronic pressure switch, automatic condensate drain and rotation direction control. It also has two connections for high pressure hoses and an improved filtering system with two Hyperfilters. The remote charging panel is available as an option.



Technical data

Type of gas	Breathing air EN 12021 - Nitrox 40% max O ₂ - Helium - Nitrogen
Intake pressure	Atmospheric max 300 bar
Nominal pressure	250 bar / 330 bar / 360 bar
Working pressure	232 bar / 300 bar / 330 bar
Max working pressure	232 bar / 420 bar
Permissible ambient temperature range	-10° C ÷ +40° C
Permissible altitude	0 ÷ 1.500 m SLM
Max permissible tilt	15°
Design	Open
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 RAL 5002 - powder coating painting - scratch proof

Compressor

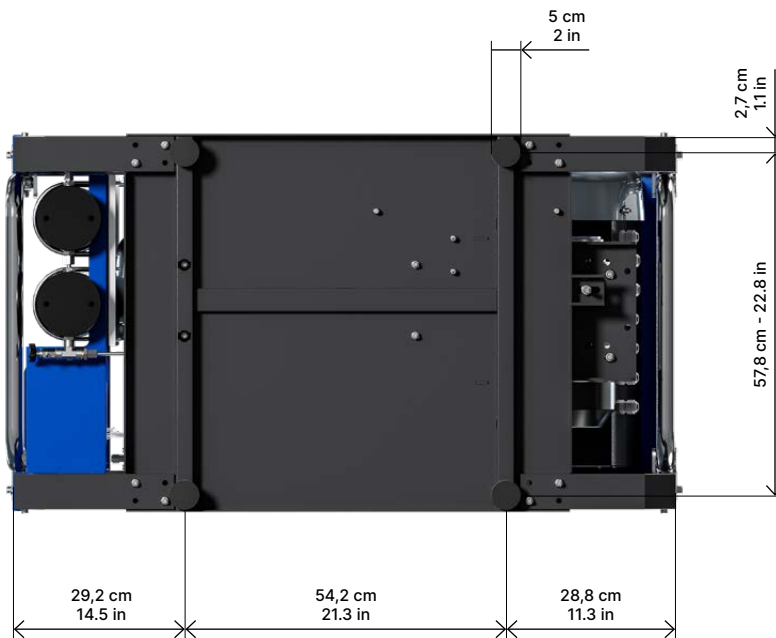
	270 EM	235 ET	315 ET	345 ET	380 ET
Charging rate Measured during 10 liters cylinder filling from 0-200 bar tolerance +/- 5% at + 20 ° C ambient temperature.	270 l/min 16,2 m ³ /h 9.5 cfm	235 l/min 14,1 m ³ /h 8.3 cfm	315 l/min 18,9 m ³ /h 11. cfm	345 l/min 20,7 m ³ /h 12.2 cfm	380 l/min 22,8 m ³ /h 13.4 cfm
Purification System	Hyperfilter x 2				
Cooling air flow	2.400 m ³ /h	1.960 m ³ /h	2.400 m ³ /h	1.960 m ³ /h	2.180 m ³ /h
Weight¹	184 kg - 406 lb	174 kg - 384 lb	184 kg - 406 lb		
Dimensions (W x D x H)¹	112 × 63 × 77 cm - 44.1 × 24.8 × 30.3 in				
Noise	LpA 72 dB				

¹ Modello standard. Le dimensioni possono variare a seconda degli accessori.

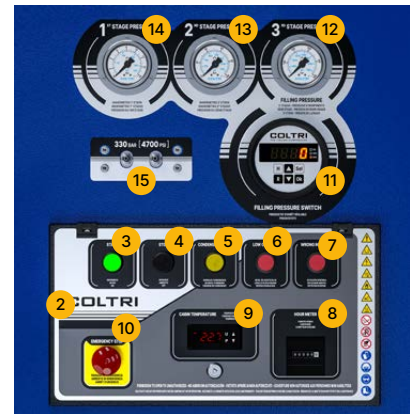
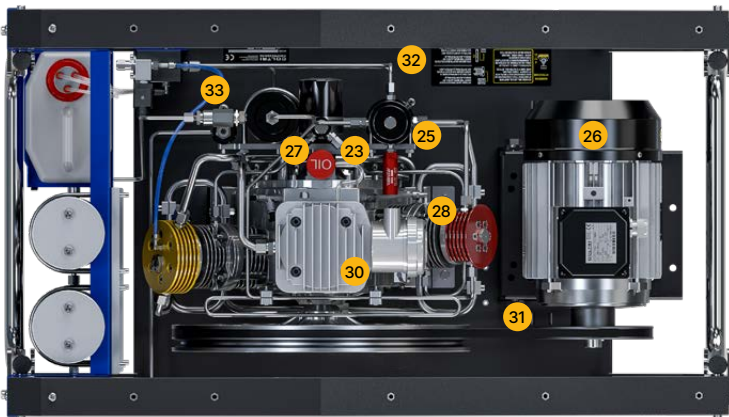
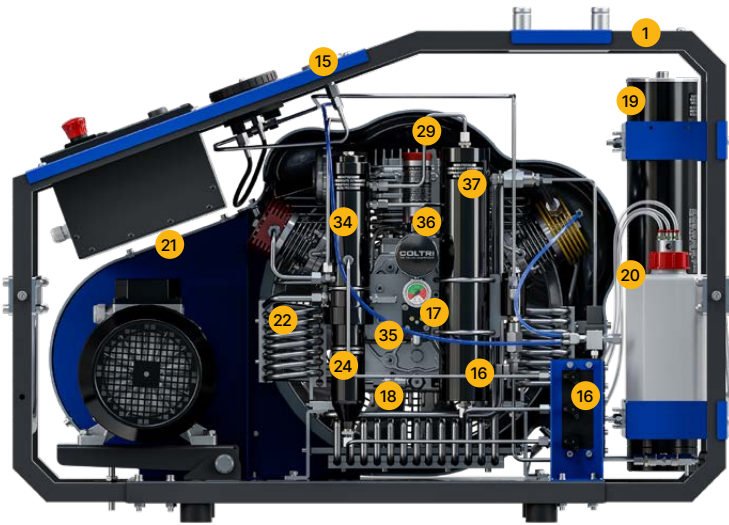
Electric motor

	270 EM	235 ET	315 ET	345 ET	380 ET
Power	5,5 kW - 7.5 Hp	4 kW - 5.5 Hp	5,5 kW - 7.5 Hp	7,5 kW - 10 Hp	
Type	El. monofase	Elettrico trifase			
Operating voltage/frequency Different voltage / frequency available on request.	230 V, 50 Hz	400 V, 50 Hz			
Rated current	28,5 A	16,8 A	12,6 A	16,8 A	
Speed (RPM)	2.890	2.840	2.850		
Protection class	IP55				

Dimensions

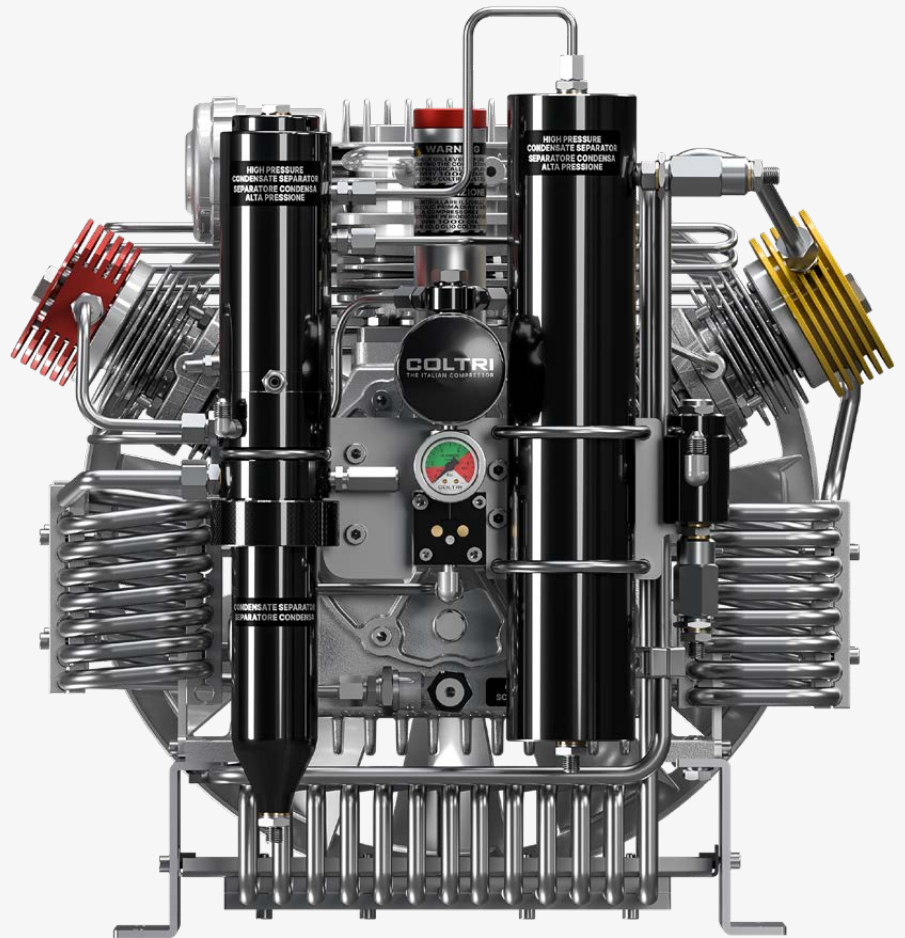


Components



- | | | |
|--|--------------------------------|--|
| 1 Frame | 14 1st stage pressure gauge | 28 Monoblock crankcase |
| 2 Control panel | 15 Refill hoses connection | 29 Oil filler plug |
| 3 ON pushbutton | 16 Condensate discharge valves | 30 Safety valve |
| 4 Stop pushbutton | 17 Oil level | 31 Pressure maintenance valve |
| 5 Condensate discharge pushbutton | 18 Oil discharge valves | 32 Cooling fan |
| 6 Oil level warning light | 19 Purification system | 33 Belt |
| 7 Direction of rotation indicator light | 20 Condensate collection can | 34 HP condensate separator |
| 8 Hour counter | 21 Electric motor | 35 Oil pump |
| 9 Cabinet interior / cooling air temperature | 22 Pumping unit | 36 Oil filter |
| 10 Emergency pushbutton | 23 Intake air filter | 37 HP High Efficiency condensate separator |
| 11 Automatic shut off pressure switch | 24 LP condensate separator | |
| 12 3rd stage pressure gauge | 25 1st stage | |
| 13 2nd stage pressure gauge | 26 2nd stage | |
| | 27 3rd stage | |

Compressor block GP 315 TPS



Forced lubrication with low pressure gear pump

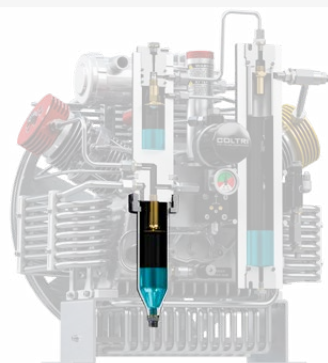
Suction filter:
10 μ micron



Pipes, fitting and nuts in
stainless steel AISI 316

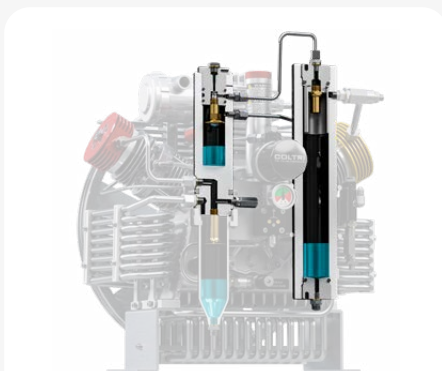


Intermediate condensate
separator after the second
stage

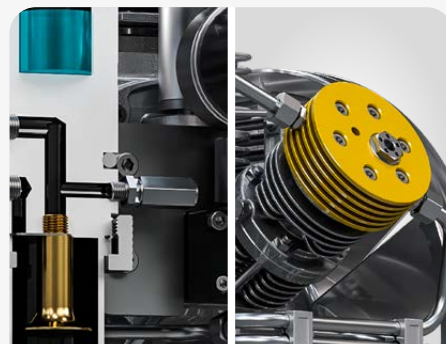


Synthetic Oil Coltri ST 755
with special formulation
for HP compressors





High pressure final condensate separator double effect



Safety valves after each stage of compression



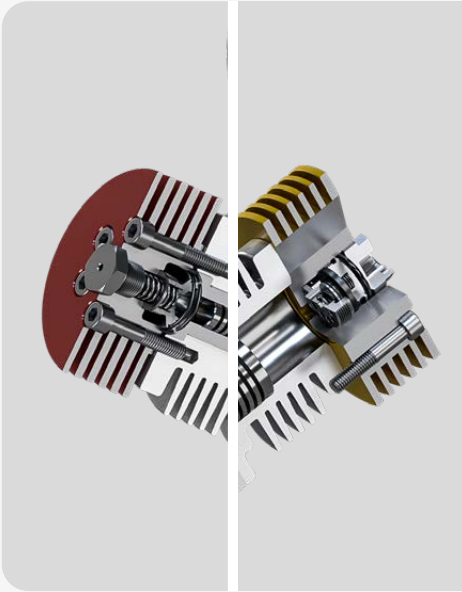
Die-cast aluminium cylinders with barrel coating in nicasil



Forged aluminium connecting rods



Forged steel crankshaft



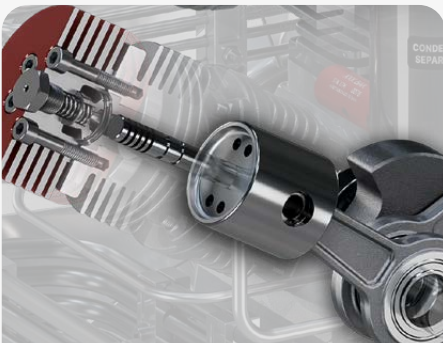
Stainless steel second and third stage valves



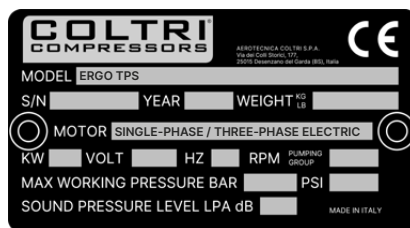
Roller Bearings for intensive work



Third stage in tempered steel with 5 piston rings in special cast iron

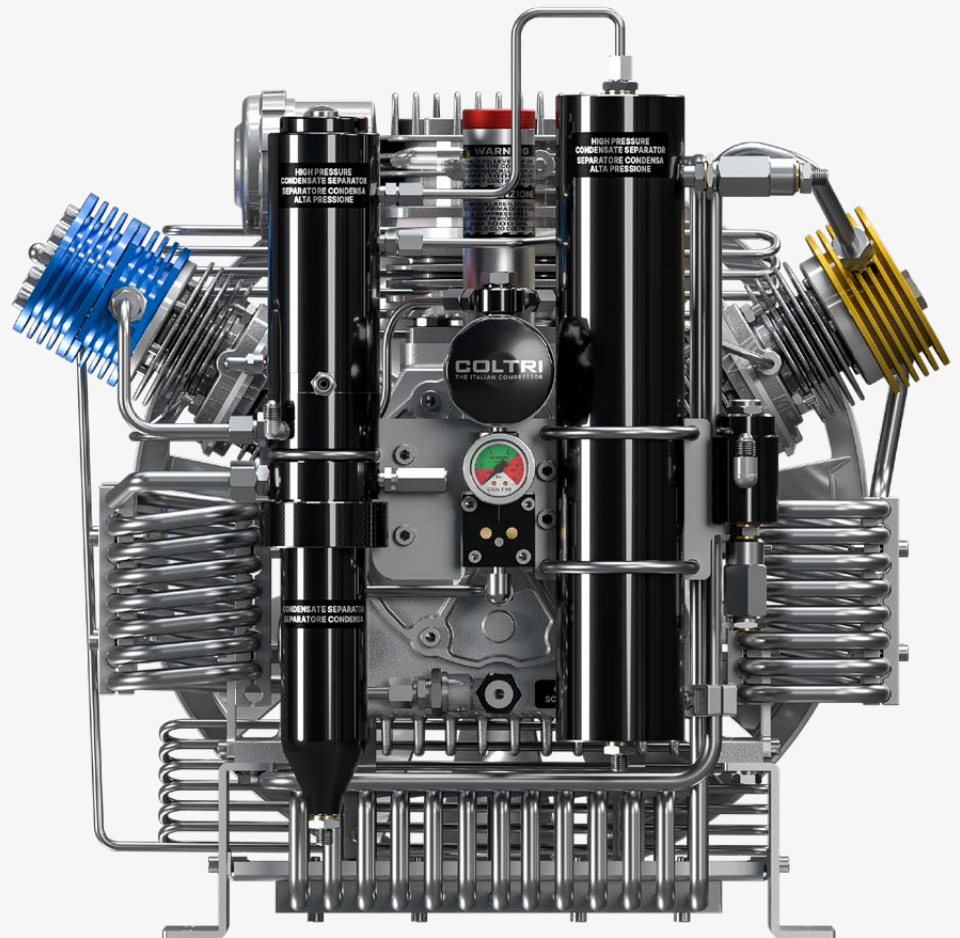


Second and third stage with pushing pistons to eliminate lateral forces on the pistons



CE certification

Compressor block GP 380



Forced lubrication with low pressure gear pump

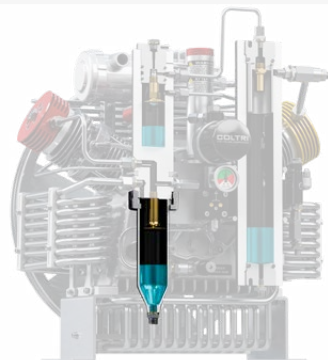
Suction filter:
10 μ micron



Pipes, fitting and nuts in
stainless steel AISI 316

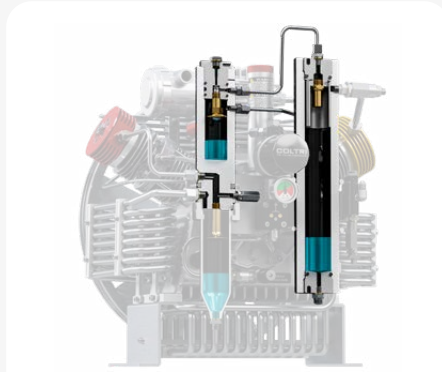


Intermediate condensate
separator after the second
stage

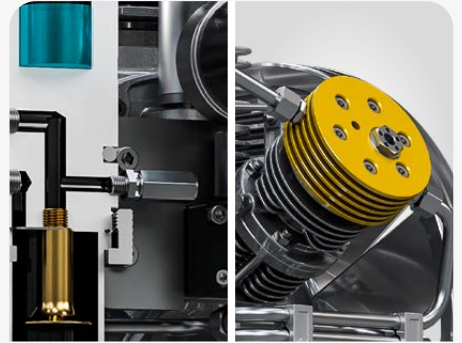


Synthetic Oil Coltri ST 755
with special formulation
for HP compressors





High pressure final condensate separator double effect



Safety valves after each stage of compression



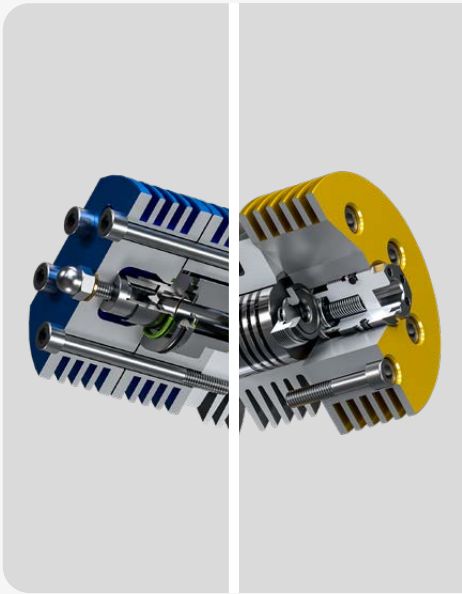
Die-cast aluminium cylinders with barrel coating in nicasil



Forged aluminium connecting rods



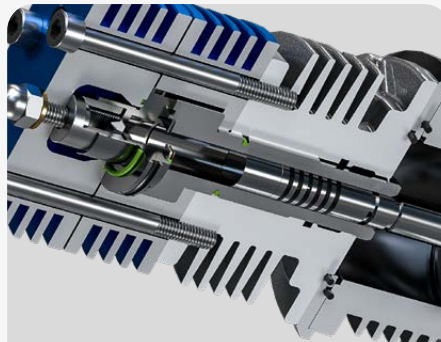
Forged steel crankshaft



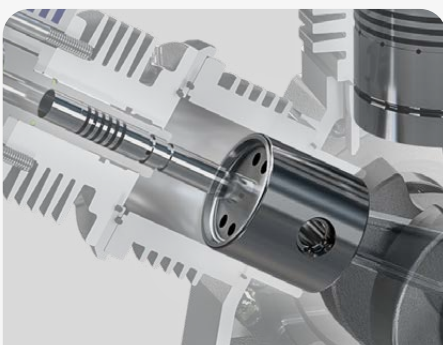
Stainless steel second and third stage valves



Roller Bearings for intensive work



Third stage in tempered steel with 5 piston rings in special cast iron



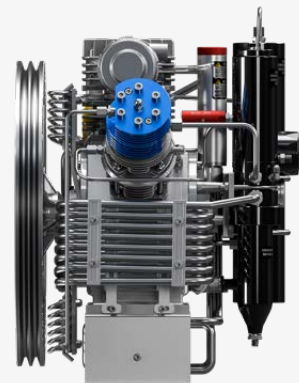
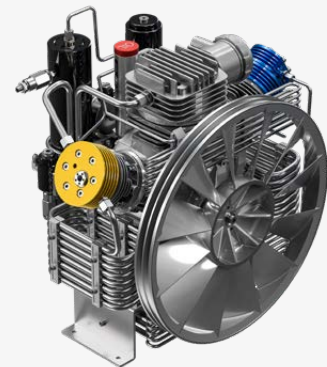
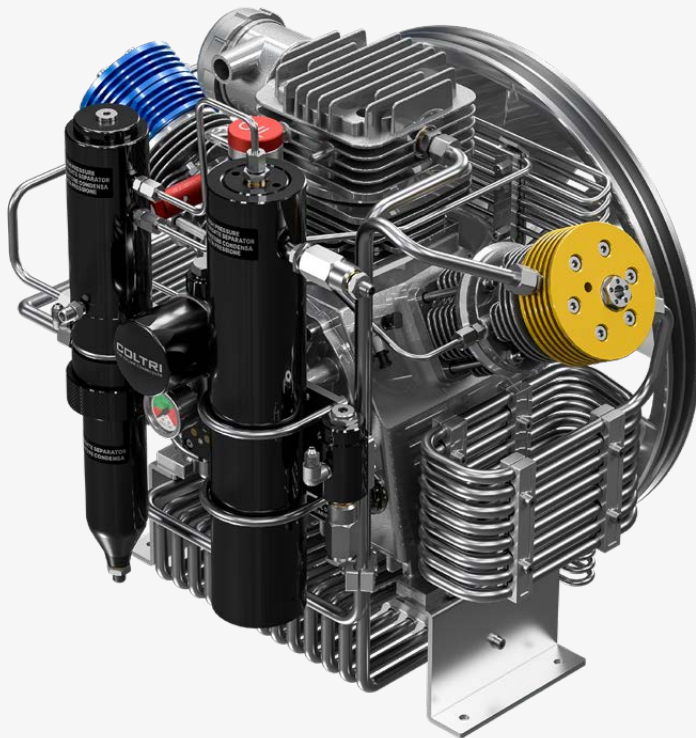
Second and third stage with pushing pistons to eliminate lateral forces on the pistons



CE certification

Technical data Compressor block

	GP 315 TPS			GP 380 TPS	
	270 EM	235 ET	315 ET	345 ET	380 ET
Charging rate Measured during 10 liters cylinder filling from 0-200 bar tolerance +/- 5% at + 20 ° C ambient temperature.	270 l/min 16,2 m ³ /h 9.5 cfm	235 l/min 14,1 m ³ /h 8.3 cfm	315 l/min 18,9 m ³ /h 11. cfm	345 l/min 20,7 m ³ /h 12.2 cfm	380 l/min 22,8 m ³ /h 13.4 cfm
Speed (RPM)	1.240	1.050	1.250		
Number of stages	3				
Number of cylinders	3				
Cylinder bore 1st stage	95 mm				
Cylinder bore 2nd stage	38 mm				
Cylinder bore 3rd stage	14 mm			15 mm	
Stroke	40 mm			50 mm	
Direction of rotation (from flywheel side)	Counter clockwise (left)				
Drive type	V-belt A type				
Intermediate pressure 1st stage	~ 6 bar				
Intermediate pressure 2nd stage	~ 45 bar				
Oil sump capacity	1,8 liters				
Max intake pressure	1,3 bar _a – 300 millibar				



Standard equipment

Purification system Hyperfilter

DOUBLE HYPERFILTER regenerable or disposable cartridge



Purification system

Operating pressure (Standard)

Hyperfilter x 2

250 bar / 330 bar / 360 bar

Operating pressure max. (PS)

420 bar

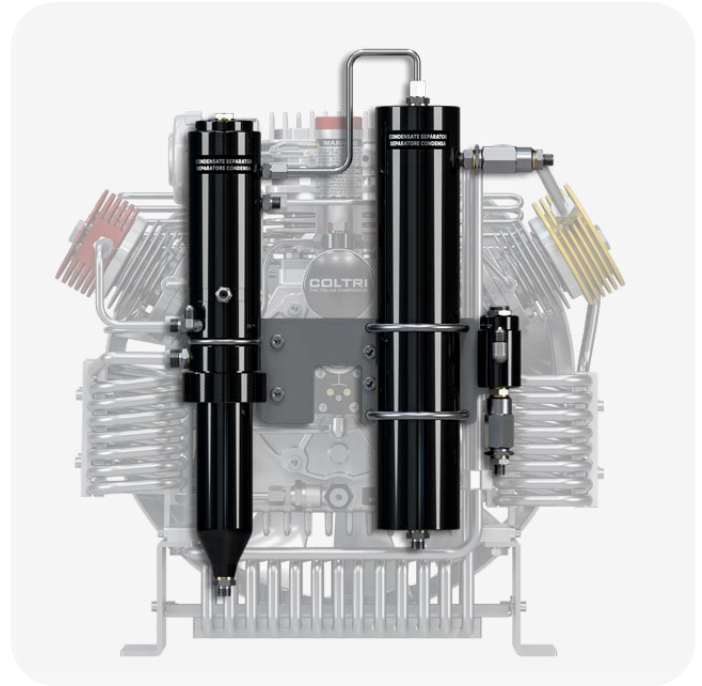
**Processable air capacity
(air inlet temperature in the filter 20° C at 300 bar)¹**

3.050 m³

¹ When using a filter cartridge without HOPCALITE CO CATALYST.
When using a cartridge with CO-removal, the processable air capacity is reduced by ca. 20%.

Separator 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 ₂ O	25 mg/m ³	≤ 10 mg/m ³
CO	5 ppm(v)	≤ 4
CO ₂	500 ppm(v)	≤ 500
Oil	0,5 mg/m ³	≤ 0,5 mg/m ³

* Measured at our facility using ASCO HORA 160 ANALYZER.

1 Only with special filter cartridge with HOPCALITE CO CATALYST, and up to a maximum concentration of 25 ppm CO in intake air. The compressed clean breathing air then contains a maximum of 5 ppm CO.

2 The level of CO₂ in the intake air must not exceed the maximum level of CO₂ as per EN 12021:2014

3 Reported values exceed ISO 8573-1 standards.

Filling connection

2 Filling connection to choose from: DRV DIN 232 bar and DRV DIN 300 bar.



**Filling connection DRV
DIN 232 bar**
COD. DRV232



**Filling connection DRV
DIN 300 bar**
COD. DRV300

Filling device	DRV DIN 232	DRV DIN 300
Nominal pressure (PN)	250 bar	330 bar
Technical Specifications	Filling valve with integrated ventilation, with connection for G 5/8" cylinders to EN 144-2 and 477 PN232	Filling valve with integrated ventilation, with cylinder connector G 5/8" according to EN 144-2 and 477 PN300

Filling hose

1200 mm stainless steel fittings - max working pressure 420 bar



Compressor control and automatic condensate drain system

- ON/OFF switch with motor protection switch.
- Optional: autostart at 60 bar hysteresis.
- 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 | 4 Oil level warning light | 7 Emergency button |
| 2 Stop button | 5 Wrong direction indicator light | 8 Inside temperature cabin/cooled air |
| 3 Condensate drain button | 6 Voltage presence indicator light | 9 Operating hour meter |

Electronic pressure switch

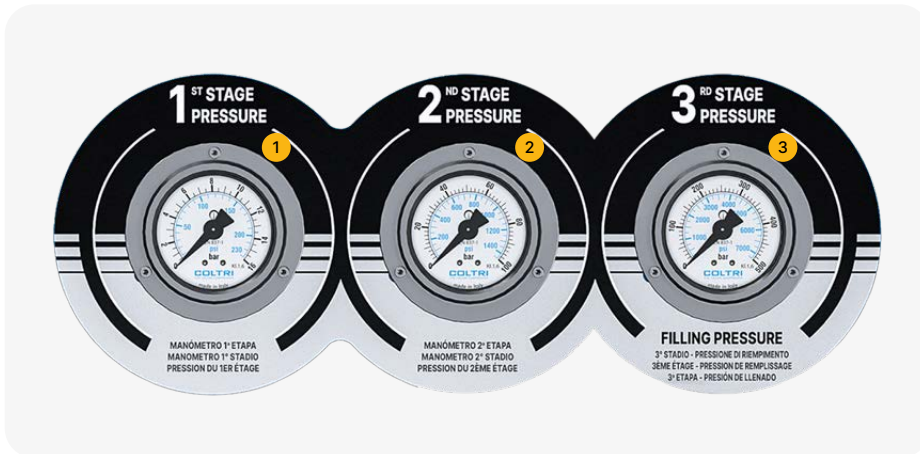
The instrument allows to visualize the pressure expressed in bar, psi or MPa.

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.



- 2 1st stage pressure gauge
- 3 2nd stage pressure gauge
- 4 3rd stage pressure gauge

Plugs available according to electric motor



230 V single-phase electric motor

6h/200 - 250V~

50÷60 Hz

32 A

2P+⏏



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


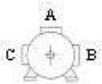
6h/380 - 415V~

50÷60 Hz


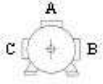
32 A

3P+⏏


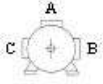
Data sheet single-phase electric motor 5.5 kW

		SPECIFICA TECNICA MOTORE EL. <i>Electric motor technical data sheet</i>		Potenza/ Power (kW)	Poli/ Poles
				5,5	2
		Data	16/05/2018	Rev.	0
No	Descrizione/Description	Dati/Data			U.d.m.
1	Codice Soga / ref.code	167343			
2	Modello / Motor type	MME1 112MA/2			
3	Descrizione / Description	Single-phase motor with starting capacitor 5,5kW 2 Poles 230V 50Hz			
4	Carcassa motore / Framesize	112M			
5	Poli / Poles	2			
6	Forma di costruzione / Mounting type	IM B3			
7	Potenza nominale / Rated output	5,5			[kW]
8	Fattore di servizio / Service factor	1.0			
9	Tipo di servizio / Duty type	S1			
10	Tensione / Rated voltage	230			[V]
11	Frequenza / Rated frequency	50			[Hz]
12	Corrente nominale / Rated current	28,5			[A]
13	Velocità nominale / Rated speed	2890			[min ⁻¹]
14	Fattore di potenza / Power factor	0,98			
15	Coppia nominale motore/ Rated motor torque	18,2			[Nm]
17	Corrente avviamento / Corrente nominale Starting current / Rated current	5,6			Isp/In
18	Coppia avviamento / Coppia nominale Starting torque/Rated torque	1,6			Msp/Mn
19	Classe d'isolamento / Insulation class	F			
20	Grado di protezione / Enclosure	IP54			
21	Posizione scatola morsettiera (motore con piedini) Terminal box position (motor with feet)				A
22	Terminali potenza / Power leads terminal	M5			
23	Peso / Weight	31			[kg]
24	Cuscinetti /bearings	Drive end	6206		
		Non drive end	6206		
Note/remarks: Motore con due condensatori permanenti in parallelo da 50µF e disgiuntore elettronico con condensatore di spunto da 150µF. Motor with two 50µF permanent capacitors connected in parallel and electronic switch with 150µF starting capacitor. Targa con logo Coltri Compressors.					


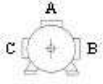
Data sheet three-phase electric motor 4 kW

		SPECIFICA TECNICA MOTORE EL. <i>Electric motor technical data sheet</i>			Potenza/ Power (kW)	Poli/ Poles
					4	2
		Data	07/09/2015		Rev.	1
No	Descrizione/Description	Dati/Data			U.d.m.	
1	Codice Soga / ref.code	124341				
2	Modello / Motor type	MT1 100LB/2				
3	Descrizione / Description	Three-phase asynchronous motor 4kW 2 Poles 230/400V 50Hz				
4	Carcassa motore / Framesize	100L				
5	Poli / Poles	2				
6	Forma di costruzione / Mounting type	IM B3				
7	Potenza nominale / Rated output	4	4	4,8	[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	440-480 Y	[V]	
11	Frequenza / Rated frequency	50	60	60	[Hz]	
12	Corrente nominale / Rated current	16,8/9,7	16,8/9,7	9,7	[A]	
13	Velocità nominale / Rated speed	2840	3410	3410	[min ⁻¹]	
14	Fattore di potenza / Power factor	0,85	0,85	0,85		
15	Coppia nominale motore/ Rated motor torque	13,5	11,2	13,4	[Nm]	
17	Corrente avviamento / Corrente nominale Starting current / Rated current	5,5			Isp/In	
18	Coppia avviamento / Coppia nominale Starting torque/Rated torque	2,8			Msp/Mn	
19	Classe d'isolamento / Insulation class	F				
20	Grado di protezione / Enclosure	IP54				
21	Posizione scatola morsettiera (motore con piedini) Terminal box position (motor with feet)				A	
22	Terminali potenza / Power leads terminal	M5				
23	Peso / Weight	22			[kg]	
24	Cuscinetti /bearings	Drive end	6206			
		Non drive end	6206			
Note/remarks: Targa con logo Coltri Compressors.						

Data sheet three-phase electric motor 5,5 kW

		SPECIFICA TECNICA MOTORE EL. <i>Electric motor technical data sheet</i>			Potenza/ Power (kW)	Poli/ Poles
					5,5	2
		Data	Rev.			
		24/06/2015	0			
No	Descrizione/Description	Dati/Data			U.d.m.	
1	Codice Soga / ref.code	124421				
2	Modello / Motor type	MT1 112MB/2				
3	Descrizione / Description	Three-phase asynchronous motor 5,5kW 2 Poles 400/690V 50Hz				
4	Carcassa motore / Framesize	112M				
5	Poli / Poles	2				
6	Forma di costruzione / Mounting type	IM B3				
7	Potenza nominale / Rated output	5,5	5,5	6,5	[kW]	
8	Fattore di servizio / Service factor	1.0				
9	Tipo di servizio / Duty type	S3-75%				
10	Tensione / Rated voltage	400/690	400/690	Δ 440-480	[V]	
11	Frequenza / Rated frequency	50	60	60	[Hz]	
12	Corrente nominale / Rated current	12,6/7,3	12,6/7,3	12,6	[A]	
13	Velocità nominale / Rated speed	2850	3420	3420	[min ⁻¹]	
14	Fattore di potenza / Power factor	0,86	0,86	0,86		
15	Coppia nominale motore/ Rated motor torque	18,4	15,4	18,2	[Nm]	
17	Corrente avviamento / Corrente nominale Starting current / Rated current	7,6			Isp/In	
18	Coppia avviamento / Coppia nominale Starting torque/Rated torque	3,1			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	M5				
23	Peso / Weight	28			[kg]	
24	Cuscinetti /bearings	Drive end	6206			
		Non drive end	6206			
Note/remarks: Targa con logo Soga.						

Data sheet three-phase electric motor 7,5 kW

		SPECIFICA TECNICA MOTORE EL. <i>Electric motor technical data sheet</i>			Potenza/ Power (kW)	Poli/ Poles
					7,5	2
		Data	Rev.			
		25/06/2015	0			
No	Descrizione/Description	Dati/Data			U.d.m.	
1	Codice Soga / ref.code	150777				
2	Modello / Motor type	MT1 112MC/2				
3	Descrizione / Description	Three-phase asynchronous motor 7,5kW 2 Poles 400/690V 50Hz				
4	Carcassa motore / Framesize	112M				
5	Poli / Poles	2				
6	Forma di costruzione / Mounting type	IM B3				
7	Potenza nominale / Rated output	7,5	7,5	9	[kW]	
8	Fattore di servizio / Service factor	1.0				
9	Tipo di servizio / Duty type	S3-75%				
10	Tensione / Rated voltage	400/690	400/690	Δ440-480	[V]	
11	Frequenza / Rated frequency	50	60	60	[Hz]	
12	Corrente nominale / Rated current	16,8/9,7	16,8/9,7	16,8	[A]	
13	Velocità nominale / Rated speed	2850	3420	3420	[min ⁻¹]	
14	Fattore di potenza / Power factor	0,86	0,86	0,86		
15	Coppia nominale motore/ Rated motor torque	25,1	21	25,1	[Nm]	
17	Corrente avviamento / Corrente nominale Starting current / Rated current	8,0			Isp/In	
18	Coppia avviamento / Coppia nominale Starting torque/Rated torque	4,0			Msp/Mn	
19	Classe d'isolamento / Insulation class	F				
20	Grado di protezione / Enclosure	IP54				
21	Posizione scatola morsettiera (motore con piedini) Terminal box position (motor with feet)				A	
22	Terminali potenza / Power leads terminal	M5				
23	Peso / Weight	33			[kg]	
24	Cuscinetti /bearings	Drive end	6206			
		Non drive end	6206			
Note/remarks: Targa con logo Coltri Compressors.						

Optional

Presec. Sistema di controllo del filtro

Includes:

Filter cap with sensor + control unit + cartridge.

To be installed with the Hyperfilter filter system filter system on the compressor.

If you choose the Presec system, you cannot also install the the SAM Multigas Analysis System.

The Presec system is connected through a probe with the first filter cartridge and detects its saturation status transmitting to the indicator the relevant switching signals according to the status. If the filter cartridge is exhausted, the compressor is switched off and cannot be started until the cartridge is replaced. The presec system displays 4 levels of cartridge saturation through 3 relays connected to 3 leds:

Stable green light (a):

- The system is operational; OK cartridge

Yellow light button (b):

- Pre-alarm; cartridge is running low and must be replaced soon.

Red light button (c):

- Alarm; remove cartridge, replace immediately.

Red light button (c):

- Alarm; filter cartridge is missing or filter system is interrupted; compressor shuts down and cannot be turned back on without inserting a new cartridge or discovering the source of the alarm.

While the yellow light is pulsing (b), the steady green light (a) will still be on because the filter cartridge will not be fully saturated. If no LED lights up, it means that the PRESEC lacks power or that the electrical system is faulty.

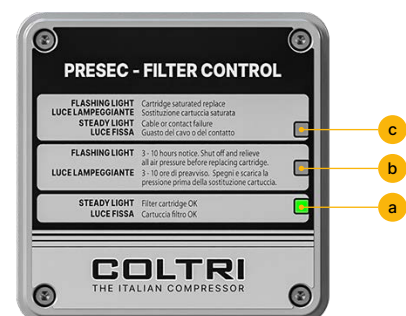


PRESEC SENSOR

COD. SC000550










Filter saturation values

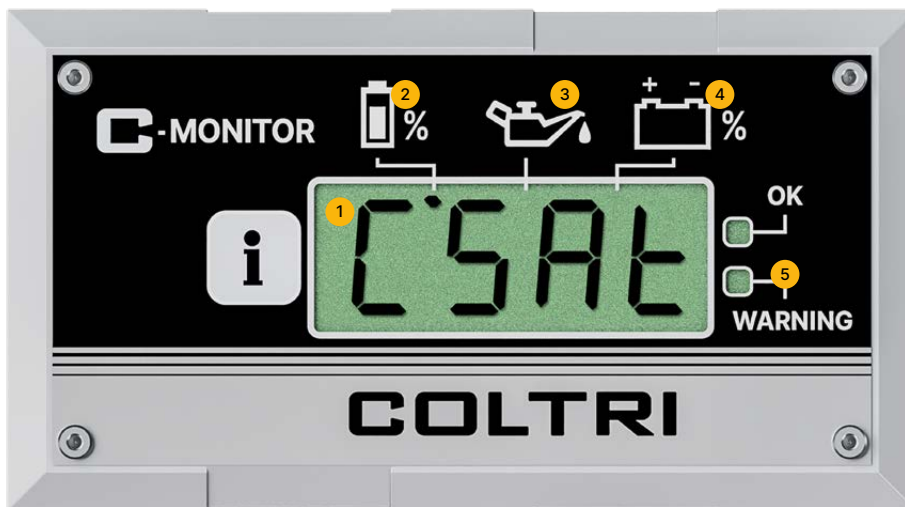
Light	Humidity (mg/m³)
Green	15 - 20
Yellow	20 - 25
Red	> 25



C - Monitor

Final filter monitoring system, oil change and technical interface.

The interface consists of an LCD display, a button  and two indicators (, ). The decimal points next to the digits are indicator lights to indicate alarms or warnings in progress. Each dot is associated with an explanatory icon (, , ). The icon  indicates an alarm condition while the symbol  indicates normal operation. Press the button  to scroll through the different functions of the menu. When pressed, the function is displayed the function and after two 2 seconds the related data.



COD. SC001200

- | | |
|---|--|
|  Display |  Battery charge level |
|  Cartridge saturation |  Operation indicator |
|  Service indication | |

Remote charging panels with lever



COD. SC000327/N

Single pressure

- 4 Lever taps
- 1 Gauge
- 4 HP hoses 1.20 m - 3.9 ft DIN 232 bar or DIN 300 bar or INT/YOKE
- 1 HP hose 3 m - 9.8 ft from compressor



COD. SC000331/N

Double pressure

- 4 Lever taps
- 2 Gauges
- 1 Pressure regulator
- 2 HP hoses 1.20 m - 3.9 ft DIN 232 bar or INT/YOKE
- 2 HP hoses 1.20 m - 3.9 ft DIN 300 bar
- 1 HP hose 3 m - 9.8 ft from compressor



Filling connection 232 bar for lever tap with safety pin

COD. SC000936



Filling connection 300 bar for lever tap with safety pin

COD. SC000937



Filling connection INT/YOKE for lever tap with safety pin

COD. SC000935

Remote charging panels



COD. SC000325/N

Single pressure Charging panel

- 4 DRV DIN 232 bar or DRV DIN 300 bar
- 1 Gauge
- 4 HP hoses 1.20 m - 3.9 ft
- 1 HP hose 3 m - 9.8 ft from compressor



COD. SC000329/N

Double pressure Charging panel

- 2 DRV DIN 232 bar
- 2 DRV DIN 300 bar
- 2 Gauges
- 1 Pressure regulator
- 4 HP hoses 1.20 m - 3.9 ft
- 1 HP hose 3 m - 9.8 ft from compressor



Filling connection DRV
DIN 232 bar

COD. DRV232



Filling connection DRV
DIN 300 bar

COD. DRV300

Filling collection optional



DRV DIN 232 bar with gauge

COD. DRV232/MANOM



DRV DIN 300 bar with gauge

COD. DRV300/MANOM

Hoses



Width	COD.
1,5 m / 4.9 ft	SC000461-1500-AIR
2,0 m / 6.5 ft	SC000461-2000-AIR
3,0 m / 9.8 ft	SC000461-3000-AIR
4,0 m / 13.1 ft	SC000461-4000-AIR
5,0 m / 16.4 ft	SC000461-5000-AIR
8,0 m / 26.2 ft	SC000461-8000-AIR
10,0 m / 32.8 ft	SC000461-10000-AIR