

PRIME LINE SUPER SILENT TPS ELECTRIC





Listen to its absolute silence

The **SUPER SILENT TPS** model is specifically designed to minimise noise. It features an enhanced cooling and sound insulation system and an efficient filtering system with two Hyperfilters. Powered by an electric motor, it has four different pumping units, all in the TPS (Tropical Plus Superdry) version, and an intuitive control panel. For longer filter life, we recommend the Tornado high pressure dryer.







Technical data

Type of gas	Breathing air EN 12021 - Nitrox 40% max $\mathrm{O_2}$ - 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	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 RAL 5002 - Powder coating painting - Scratch proof

Compressor

	235 ET	315 ET	345 ET	380 ET
Charging rate	235 I/min	315 l/min	345 l/min	380 I/min
Measured during 10 liters cylinder filling from 0-200 bar	14.1 m³/h	18.9 m³/h	20.7 m ³ /h	22.8 m ³ /h
tolerance +/- 5% at + 20 ° C ambient temperature.	8.3 cfm	11.1 cfm	12.2 cfm	13.4 cfm
Purification System		Hyperfill	ter x 2	1
Cooling air flow	1.960 m³/h	2.400 m ³ /h	1.960 m³/h	2.180 m ³ /h
Weight ¹	212 kg - 467 lb 222 kg - 489 lb			
Dimensions (W x D x H) ¹	90 × 93 × 132 cm - 35.4 × 36.6 × 52 in			
Noise		Lpa 69,4 dB		

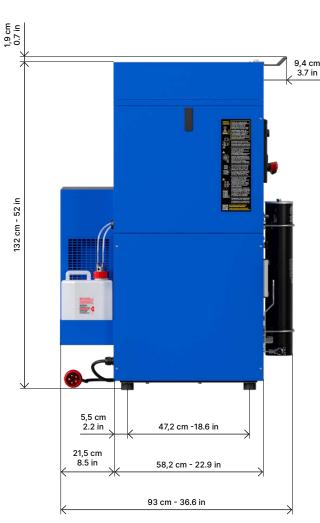
¹ Standard model. Dimensions and weight may vary depending on accessories.

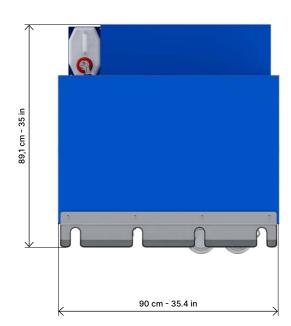
Electric motor

	235 ET	315 ET	345 ET	380 ET
Power	4 kW - 5.5 Hp	5,5 kW - 7.5 Hp	7,5 kW - 10 Hp	7,5 kW - 10 Hp
Туре	Three-phase electric			
Operating voltage/frequency Different voltage / frequency available on request.	400 V, 50 Hz			
Rated current	16,8 A 12,6 A 16,8 A			
Speed (RPM)	2.840 2.850			
Protection class		IP	55	

Dimensions







coltri.com

Components





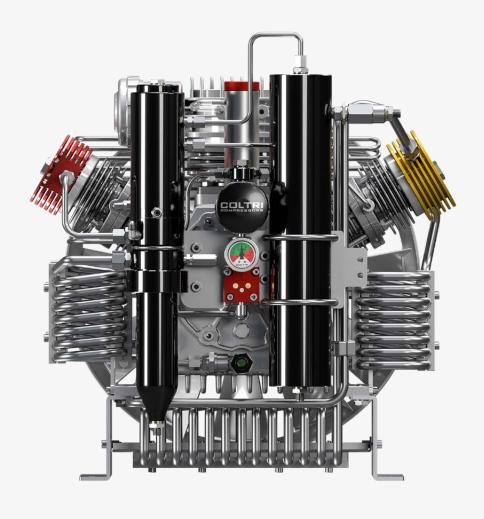


- 1 Frame
- 2 Control pannel
- 3 ON pushbutton
- Stop pushbutton
- 5 Condensate discharge pushbutton
- 6 Oil level warning light
- 7 Direction of rotation indicator light
- 8 Hour counter
- Cabinet interior / cooling air
- 9 temperature
- 10 Emergency pushbutton
- 11 Automatic shutdown pressure switch
- 12 3rd stage pressure gauge
- 13 2nd stage pressure gauge

- 14 1st stage pressure gauge
- 15 Refill hoses connection
- 16 Condensate discharge valves
- 17 Oil level
- 18 Oil discharge valves
- 19 Purifier filter
- 20 Condensate collection can
- 21 Motor
- 22 Compressor
- 23 Air filter
- 24 LP condensate separator
- 25 1st stage
- 26 2nd stage

- 27 3rd stage
- 28 Monobloc
- 29 Oil filler plug
- 30 Safety valve
- 31 Maintenance valve
- 32 Cooling fan
- 33 Belt
- 34 HP condensate separator
- 35 Oil pump
- 36 Oil filter
- HP High Efficiency condensate separator

Pumping unit MCH 16 TPS





Suction filter: 10 µ micron





Pipes, fitting and nuts in stainless steel AISI 316



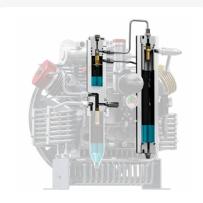
Intermediate condensate separator after the second stage



Synthetic Oil Coltri ST 755 with special formulation for HP compressors



Discover more on Coltri Oil ST 755



High pressure final condensate separator double effect



Safety valves after each stage of compression



Die-cast aluminium cylinders with barrel coating in nicasil



Forged aluminum 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

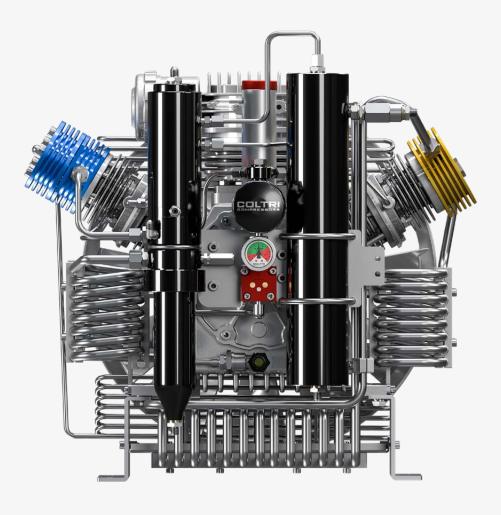


Second and third stage with pushing pistons to eliminate lateral forces on the pistons



CE certification

Pumping unit MCH 21 TPS



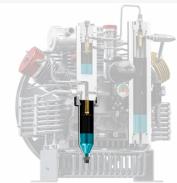


Suction filter: 10 µ micron





Pipes, fitting and nuts in stainless steel AISI 316



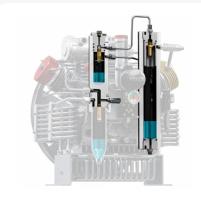
Intermediate condensate separator after the second stage



Synthetic Oil Coltri ST 755 with special formulation for HP compressors



Discover more on Coltri Oil ST 755



High pressure final condensate separator double effect





Safety valves after each stage of compression



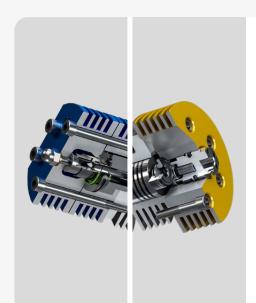
Die-cast aluminium cylinders with barrel coating in nicasil



Forged aluminum 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 pumping unit MCH 16/21 TPS

	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.	235 I/min 14.1 m³/h 8.3 cfm	315 I/min 18.9 m³/h 11.1 cfm	345 l/min 20.7 m³/h 12.2 cfm	380 I/min 22.8 m³/h 13.4 cfm
Speed (RPM)	1.270	1.600	1.240	1.400
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			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			
Amount of oil	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	Hyperfilter x 2
Operating pressure (Standard)	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/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 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.

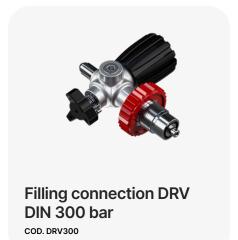
Filling connection

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



Filling connection DRV DIN 232 bar

COD. DRV232



Filling 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.



- 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
- Inside temperature cabin/cooled air
- Operating hour meter

Electronic pressure switch

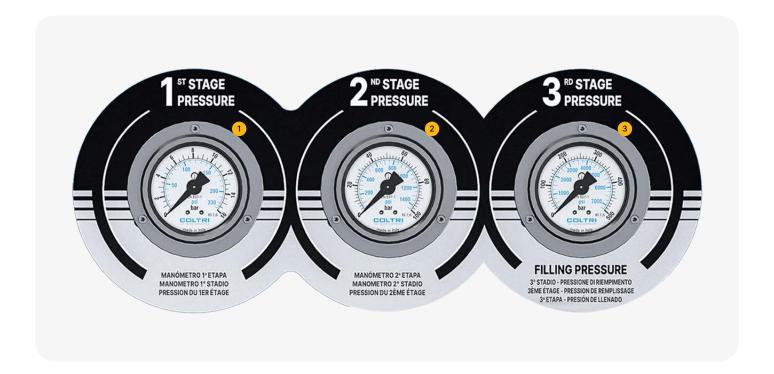
The instrument allows to visualize the pressure expressed in bar, psi or MPa.

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

Soundproof frame

Polyether-based expanded polyurethane impregnated with halogen and CFC-free flame retardant substances. Soundproofing useful in any environment that requires a strong reduction of high frequencies.



Certifications

Color	Black		
Thermal conductivity	W/mk 0,040 40° C		
Temperature resistance	-70° C - 100° C		
Density	75 / 110 Kg/m3 ISO 1855		
Hardness	> 300 N ISO 2439 (ILD% 40)		
Tensile hardness	> 85 Kpa ISO 1798		
Resistance to de-tensioning	> 85 % ISO 1798		
Self-extinguishing	Class 0 / Class 1 BS 476 Part 6 / BS 476 Part 7		

22

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



400 V three-phase electric motor

6h/380 - 415V~

50÷60 Hz

32 A

3P+

Data sheet three-phase electric motor 4 kW

	(SO)		M	FICA TE	L.	Potenza/ Power (kW)	Poli/ Poles
		901	Electric n	notor techi sheet	nical data	Data 07/09/2015	Rev. 1
No	Descrizione/Descript	Dati/Data			U.d.m.		
1	Codice Soga / ref.cod	de	124341				
2	Modello / Motor type		MT1 100LB/2				
3	Descrizione / Descrip	tion		asynchronou 230/400V 50			
4	Carcassa motore / Fi	amesize	100L				
5	Poli / Poles		2				
6	Forma di costruzione	e / Mounting	ІМ ВЗ		,		
7	Potenza nominale / F	Rated output	4	4	4,8	[kW]	
8	Fattore di servizio / s	Service factor		1.0			
9	Tipo di servizio / Dut	y type		S3-75%			
10	Tensione / Rated volt	age	230/400	230/400	440-480 Y	[V]	
11	Frequenza / Rated fre	equency	50	60	60	[Hz]	
12	Corrente nominale /	Rated current	16,8/9,7	16,8/9,7	9,7	[A]	
13	Velocità nominale / F	Rated speed	2840	3410	3410	[min ⁻¹]	
14	Fattore di potenza /	Power factor	0,85	0,85	0,85		
15	Coppia nominale mo motor torque	tore/ Rated	13,5	11,2	13,4	[Nm]	
17	Corrente avviamento nominale		5,5			lsp/ln	
18	Starting current / Rate Coppia avviamento / nominale Starting torque/Rated	Coppia		2,8		Msp/Mn	
19	Classe d'isolamento		F				
20	Grado di protezione	/ Enclosure	IP54				
21	Posizione scatola mo (motore con piedini) Terminal box position (motor with feet)	A					
22	Terminali potenza / F	Power leads M5					
23	Peso / Weight		22			[kg]	
24	Cuscinetti /bearings	Drive end	6206				
		Non drive end	6206				
	e/remarks: ga con logo Coltri Com	pressors.					

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Data sheet three-phase electric motor 5,5 kW

				FICA TEO		Potenza/ Power (kW)	Poli/ Poles
	SO					5,5	2
			Electric n	notor techr sheet	nicai data	Data 24/06/2015	Rev.
No	Descrizione/Descrip	Dati/Data			U.d.m.		
1	Codice Soga / ref.cod	de	124421				
2	Modello / Motor type		MT1 112MB/				
3	Descrizione / Descrip	otion		asynchronou s 400/690V 5			
4	Carcassa motore / F	ramesize	112M				
5	Poli / Poles		2				
6	Forma di costruzione type	e / Mounting	IM B3				
7	Potenza nominale / F	Rated output	5,5	5,5	6,5	[kW]	
8	Fattore di servizio /	Service factor		1.0			
9	Tipo di servizio / Du	ty type		S3-75%			
10	Tensione / Rated vol		400/690	400/690	Δ 440-480	[V]	
11	Frequenza / Rated fre	equency	50	60	60	[Hz]	
12	Corrente nominale /		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		7,6			lsp/ln	
	Starting current / Rate						
18	Coppia avviamento / nominale Starting torque/Rated			3,1		Msp/Mn	
		•	1_				
19	Classe d'isolamento class	Insulation	F				
20	Grado di protezione		IP55				
	Posizione scatola mo (motore con piedini)	orsettiera					
21	Terminal box position (motor with feet)		A				
22	Terminali potenza / Power leads terminal		M5				
23	Peso / Weight		28			[kg]	
	Cuscinetti /bearings Drive end Non drive end		6206				
24			6206				
	e/remarks: ga con logo Soga.						

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Data sheet three-phase electric motor 7,5 kW

				FICA TE		Potenza/ Power (kW)	Poli:
	Soga®			OTORE E		7,5	2
		90.	Electric n	notor techi sheet	nical data	^{Data} 25/06/2015	Rev.
No	Descrizione/Descrip	tion	Dati/Data			U.d.m.	•
1	Codice Soga / ref.cod	de	150777				
2	Modello / Motor type		MT1 112MC/				
3	Descrizione / Descrip	otion		asynchronou s 400/690V 5			
4	Carcassa motore / Fi	ramesize	112M				
5	Poli / Poles		2				
6	Forma di costruzione type	e / Mounting	ІМ ВЗ				
7	Potenza nominale / F	Rated output	7,5	7,5	9	[kW]	
8	Fattore di servizio /	Service factor		1.0			
9	Tipo di servizio / Dui	ty type		S3-75%			
10	Tensione / Rated volu		400/690	400/690	Δ440-480	[V]	
11	Frequenza / Rated fre	equency	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 mo motor torque	tore/ Rated	25,1	21	25,1	[Nm]	
17	Corrente avviamento nominale Starting current / Rate		8,0		lsp/In		
18	Coppia avviamento / nominale	Coppia		4,0		Msp/Mn	
19	Starting torque/Rated Classe d'isolamento		F				
00	class		IP54				
20 21	Posizione scatola me (motore con piedini) Terminal box position	osizione scatola morsettiera notore con piedini) erminal box position A					
22	(motor with feet) Terminali potenza / Power leads		M5				
23	rerminal Peso / Weight		33			[kg]	
		Drive end	6206			131	
24	Cuscinetti /bearings	Cuscinetti /bearings Non drive end					

Optional

Presec. Filter control system

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.

Filter saturation values

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



Wiring diagram for connection





C - Monitor

Final filter monitoring system, oil change and technical interface.

The interface consists of an LCD display, a button o and two indicators (O,o). 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 $(\dot{\Box}, \dot{\Box}, \textcircled{o})$. The icon o indicates an alarm condition while the symbol o indicates normal operation. Press the button o 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.



- Display
- 2 Cartridge saturation
- 3 Service indication
- Battery charge level
- Operation indicator

COD. SC001200

CO SafeGuard - Safe personal Carbon monoxide analyzer

CO SAFEGUARD can analyze carbon monoxide content in any mixture of respirable gases, including air. Can be connected on the compressor for continuous monitoring or in any environment (in diffusion mode).

Warns operators in case of hazardous concentration.

CO SAFEGUARD is easy to use and allows the user to personally verify whether the gas mixture or air is free of carbon monoxide. Indispensable for diving centers to check the air in the compressor and for divers when diving.

CO SAFEGUARD is a fully digital measuring instrument with two visual and audible alarms if the carbon monoxide value exceeds the set values. It is based on a state-of-the-art electrochemical sensor with long-term stability. The carbon monoxide sensor can be replaced and calibrated without any assistance from the manufacturer. The instrument can read 5 ppm (parts per million), in accordance with EN 12021.



- Display
- On/off button
- 3 Configuration buttons
- Fixing screws
- 5 Electronic board

Tornado refrigerator - Dryer



Used on Prime line (Mark III Silent, Super Silent) e Heavy Duty line (Silent, Open). Dryer for high pressure compressed air. Up to 3 times longer filter service life.

- Higher air quality
- Less corrosion of mechanical parts
- Refilling of cylinders with constant percentage of humidity

The **TORNADO** refrigerator is an accessory for our recharge stations dedicated to professional use that operates between the separators and the filtering system. **Available in 350 or 420 bar versions.**

How Tornado works

The incoming warm, moist air passes into the evaporator of this machine, inside which it cools. This allows the moisture to condense. Condensation is then easily removed from the separator, ensuring an overall improvement in the operation of the charging station over time and the longevity of its filters.

Multi-Gas Analysis System (SAM)

The Coltri Multi-Gas Analysis System is a measuring instrument capable of monitoring air quality. Its application includes continuous monitoring of environmental gases, hyperbaric chambers, safety, medical, air quality.

Available sensors:

- Oxygen O₂
- Carbon dioxide CO,
- Carbon Monoxide CO
- Humidity H₂O
- Gas Temperature
- VOC (Volatile Organic Compound)
- Helium in Air





General specifications

Input voltage requirement	10-35 Vdc
Internal Battery	Rechargeable lithium-ion battery. One cell 1400 mAh Li ion 3.7 V
Sensors	Up to 6 sensors
Output	Acoustic alarm
Serial Connection	1 RS232 interface. Transmission speed up to 115000 baud, on request RS485 interface
Measurement resolution	Bipolar 24-bit A/D converter. Drift in automatic temperature compensation.
Conversion rate	10 ms
Sampling time	100 ms (min) for each channel
Signal measurement accuracy	0.1% Full scale +/- ½ LSB
Input device	Rotary knob with central push
Color Display	TFT 320 × 240 dot resolution, LED backlighting
Display light intensity	600 nits (cd/m2)
Memory	Micro SD card writer/reader
Microprocessor	Cortex M4

Buzzee Alarm There is an audible warning alarm on board.

Serial Interface Standard RS232 interface for connection to PC. it is possible to read measurements remotely and to program the

instrument, software is available on request.

Non-volatile Memory SAM features non-volatile memory that retains configuration data and settings for 10 years without power.

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

Application fields













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