Technical Data Sheet

COLTRI COMPRESSORS

EFFICIENT LINE

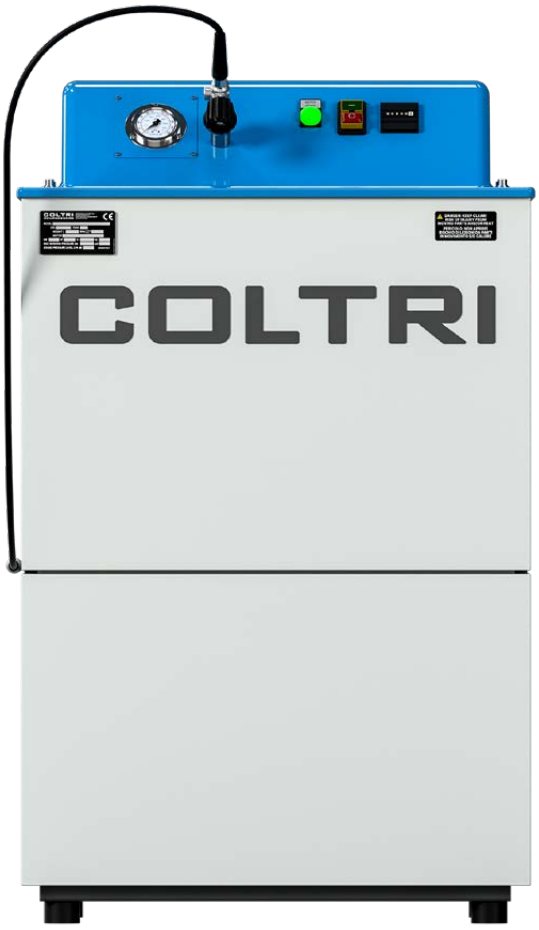
MINI SILENT 100

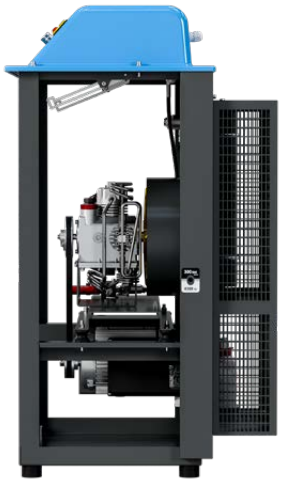
ELECTRIC

Contact

Small, quiet and powerful

Coltri's breathing air compressors of the **MINI SILENT** series, equipped with 100 l/min pumping unit MCH 6, are characterized by extreme silence, obtained without sacrificing performance. The large space offered by the frame allows the use of a filtering system with Maxifilter. These compressors are available with single-phase or three-phase electric motor and integrated control panel with hour meter, they have automatic condensate drain and autostop as standard. The equipment includes a filling connection for flexible hose with working pressure from 232 to 330 bar.





Technical data

Type of gas	Breathing air EN 12021 - Nitrox 40% max O_2 - Helium - Nitrogen
Intake pressure	Atmospheric max 300 mbar
Nominal pressure	250 bar / 330 bar / 360 bar
Working pressure	232 bar / 300 bar / 330 bar
Max working pressure	330 bar
Permissible ambient temperature range	-10° C ÷ +40° C
Permissible altitude	0 ÷ 1.500 m SLM
Max permissible tilt	6°
Design	Fully protective cage - Soundproof frame
Operating voltage, standard	230 V, 60 Hz / 400 V, 50 Hz
Other operating voltage	230 V, 50 Hz / 440 V, 60 Hz
Oil	Synthetic Coltri Oil ST 755
Oil change interval	1 year / 50 h
Frame	Steel - Colour Blue RAL 5015 - Powder coating painting - Scratch proof

Compressor

	100 EM	100 ET
Charging rate Measured during 10 liters cylinder filling from 0-200 bar tolerance +/- 5% at + 20 ° C ambient temperature.	100 l/min 6 m^3/h 3.5 cfm	
Purification System	Maxifilter	
Cooling air flow	792 m^3/h	990 m^3/h
Weight[1]	84,5 kg - 186 lb	105 kg - 231.5 lb
Dimensions (W x D x H)[1]	71,5 × 67 × 110 - 28.1 × 26.4 × 43.3 in	
Noise		LpA 70,3 dB

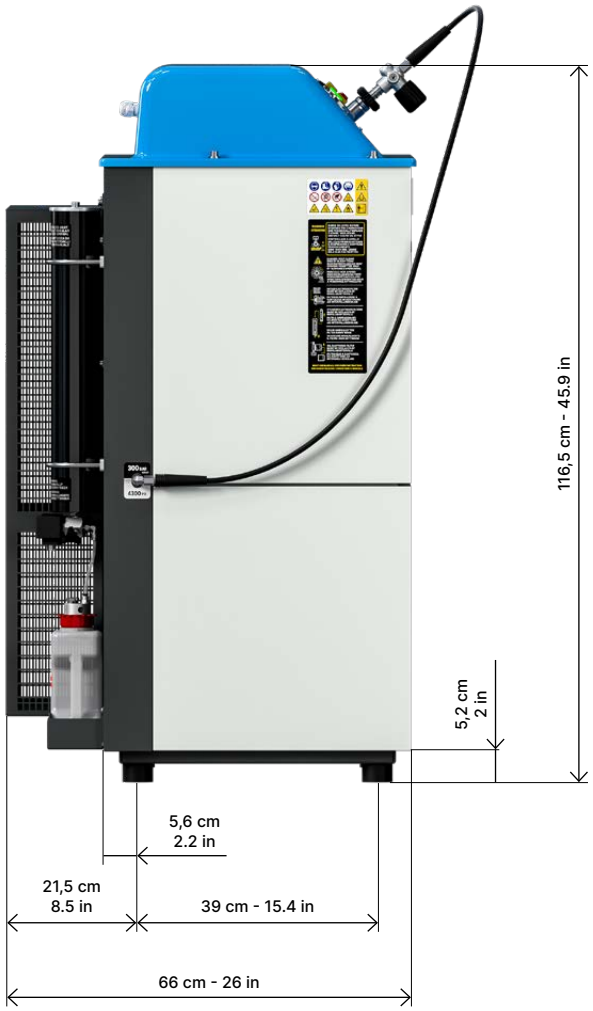
1 Standard model. Dimensions and weight may vary depending on accessories.

Electric motor

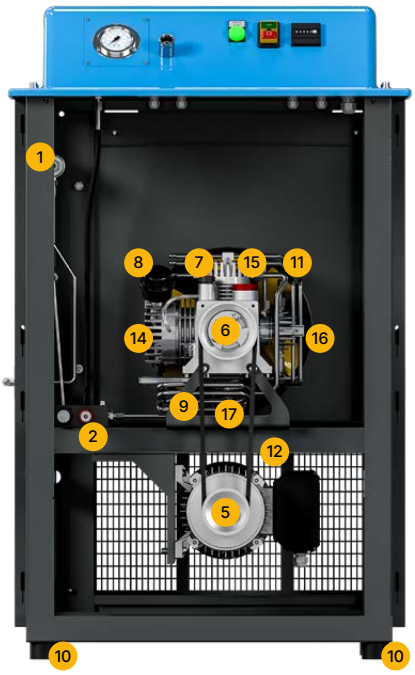
	100 EM	100 ET
Power	2,2 kW - 3 Hp	3 kW - 4 Hp
Type	Single-phase electric	Three-phase electric
Operating voltage/frequency Different voltage / frequency available on request.	230 V, 60 Hz	400 V, 50 Hz
Rated current	16,5 A	7,7 A
Speed (RPM)	2.800	2.840
Protection class	IP54	

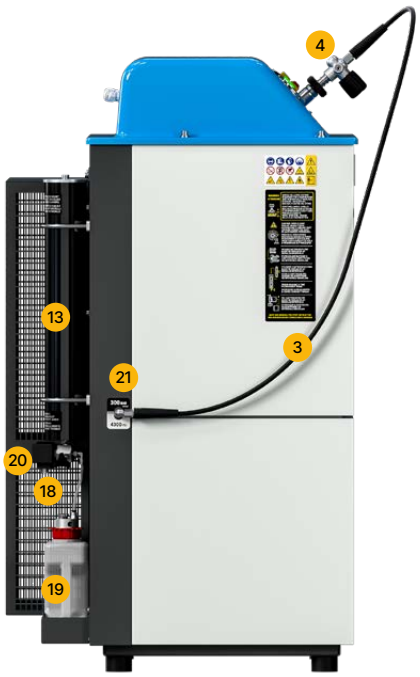
Dimensions

COLTRI
59 cm - 23.2 in
5,7 cm
2.2 in
70 cm - 27.3 in
72,5 cm - 28.5 in


116,5 cm - 45.9 in
5,2 cm
2 in
5,6 cm
2.2 in
21,5 cm
8.5 in
39 cm - 15.4 in
66 cm - 26 in

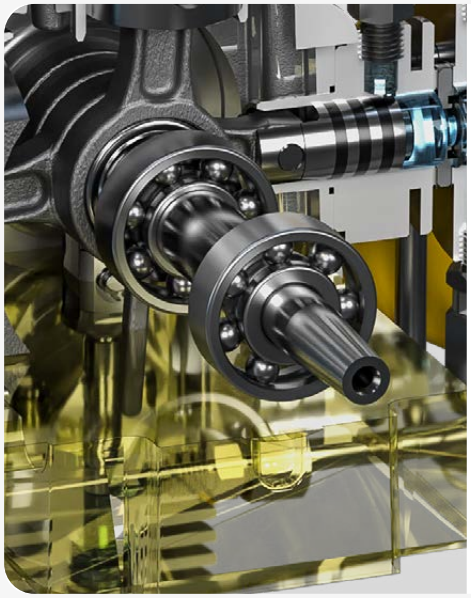
Components





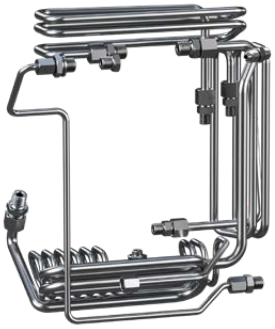
1. Frame
2. Safety valve
3. Hose
4. Refill valve
5. Engine
6. Compressor
7. Oil filler cap
8. Intake air filter
9. Oil discharge plug
10. Anti-vibration devices
11. Cooling fan
12. Belt
13. Purifier filter
14. 1st Stage
15. 2nd Stage
16. 3rd Stage
17. 4th Stage
18. Condensate discharge valve
19. Condensate collection can
20. Automatic condensate discharge
21. Refill hoses connection
22. Working pressure gauge
23. ON pushbutton
24. STOP pushbutton
25. Condensate discharge pushbutton
26. Emergency pushbutton
27. Hour counter
28. Selector switch ON/OFF
29. Power indicator light

Pumping unit MCH 6



Splash lubrification with conrod pin immersed in oil

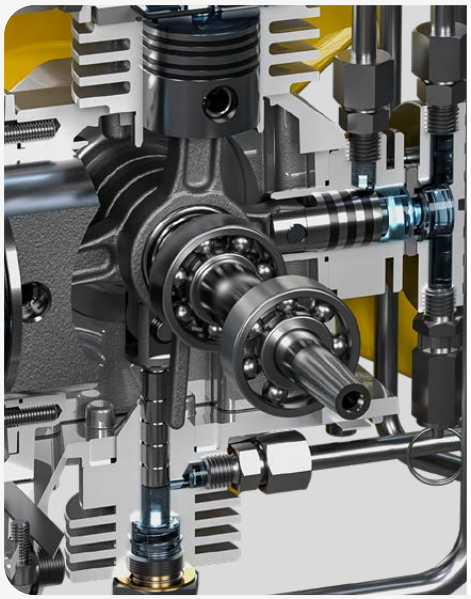
Suction filter:
10 µm



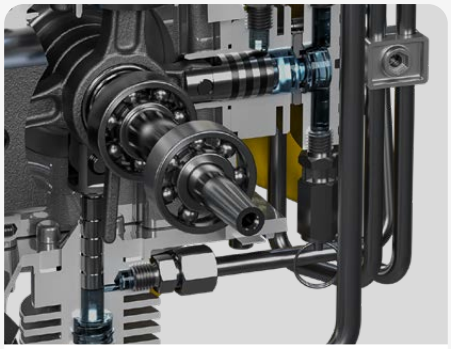
Pipes, fitting and nuts in stainless steel AISI 316

Forged aluminium connecting rods

Aluminium crankcase machined on horizontal CNC machine to ensure maximum precision



Forged steel cranckshaft with hardened rings



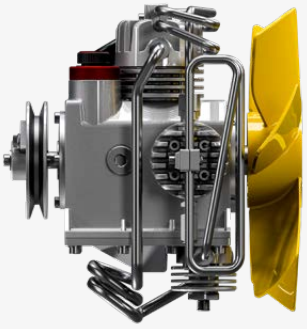
Safety valve on the third stage

Final safety valve PED certified

CE certification

Technical data pumping unit MCH 6

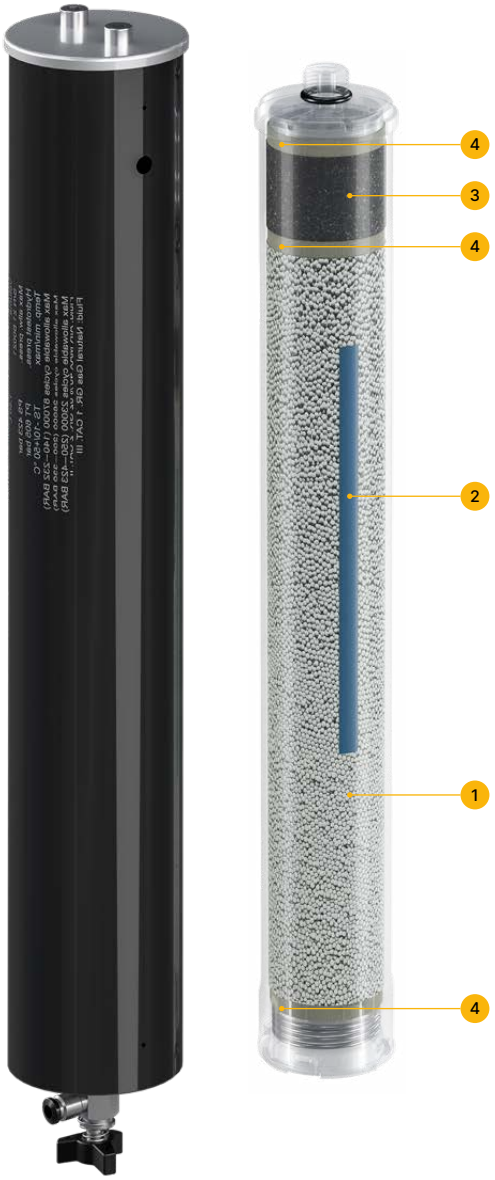
	100 EM	100 ET
Charging rate Measured during 10 liters cylinder filling from 0-200 bar tolerance +/- 5% at + 20 ° C ambient temperature.	100 l/min 6 m^3/h 3.5 cfm	
Speed (RPM)	2.250	2.800
Number of stages	4	
Number of cylinders	4	
Cylinder bore 1st stage	78 mm	
Cylinder bore 2nd stage	38 mm	
Cylinder bore 3rd stage	19 mm	
Cylinder bore 4th stage	9,7 mm	
Stroke	13,5 mm	
Direction of rotation (from flywheel side)	Clockwise (right)	
Drive type	V-belt A type	
Intermediate pressure 1st stage	~ 4,5 bar	
Intermediate pressure 2nd stage	~ 16 bar	
Intermediate pressure 3rd stage	~ 75 bar	
Oil sump capacity	600 cc/ml	
Max intake pressure	1,3 bar_a – 300 mbar	



Standard equipment

Purification system Maxifilter

MAXIFILTER polypropylene cartridge repackable or disposable



1. Moisture saturation indicator stripe
2. Molecular sieve
3. Activated carbon
4. Felt disc

Purification system	Maxifilter
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]	890 m^3

1 When using a cartridge with CO-removal, the processable air capacity is reduced by ca. 20%.

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

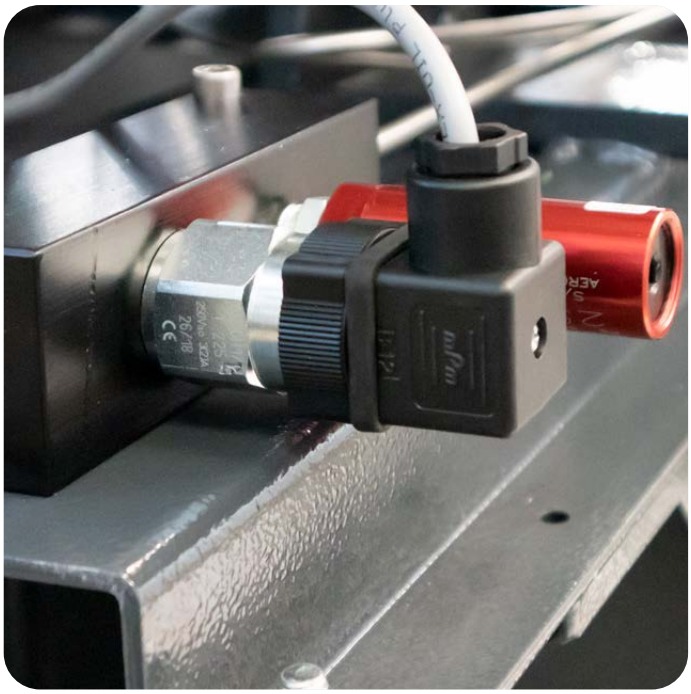
Filling device	DRV DIN 232	DRV DIN 300
Nominal pressure (PN)	250 bar	330 bar
Technical Specifications	Filling valve with integrated ventilation, with connection for G 5/8" cylinders to EN 144-2 and 477 PN232	Filling valve with integrated ventilation, with cylinder connector G 5/8" according to EN 144-2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

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

Autostop



Compressor automatically shuts off when it reaches final pressure.

Composed of:
1 x Pressure switch
- 230 bar - COD. SC000521/232 (safety valve 250 bar)
- 300 bar - COD. SC000521/300 (safety valve 330 bar)

Automatic condensate drain

Condensate accumulates inside the condensate separator and must be drained every 10-15 minutes that the compressor is in use. Condensate is automatically drained every 7 minutes. The condensate is collected in a tank.

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~

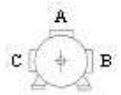
50÷60 Hz

32 A

3P+⏚

Data sheet single-phase electric motor 2,2 kW

soga®	**SPECIFICA TECNICA MOTORE EL.** *Electric motor technical data sheet*	**Potenza/** *Power* (kW) **2,2**	**Poli/** Poles **2**
		Data 24/06/2015	Rev. 0

No	Descrizione/*Description*	Dati/Data			*U.d.m.*
1	**Codice Soga** / *ref.code*	159500			
2	**Modello /** *Motor type*	MMD1 90LA/2			
3	**Descrizione** / *Description*	Single-phase motor with starting capacitor 2,2kW 2 Poles 230V 50Hz			
4	**Carcassa motore** / *Framesize*	90L			
5	**Poli** / *Poles*	2			
6	**Forma di costruzione** / *Mounting type*	IM B3			
7	**Potenza nominale** / *Rated output*	2,2			[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*	16,5			[A]
13	**Velocità nominale** / *Rated speed*	2800			[min^{-1}]
14	**Fattore di potenza** / *Power factor*	0,97			
15	**Coppia nominale motore**/ *Rated motor torque*	7,5			[Nm]
17	**Corrente avviamento / Corrente nominale** *Starting current / Rated current*	4,0			Isp/In
18	**Coppia avviamento / Coppia nominale** *Starting torque/Rated torque*	2,1			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*	CAVO CON PRESA SCHUKO/ *CABLE WITH SCHUKO PLUG*			
23	**Peso /** Weight	18			[kg]
24	**Cuscinetti** /bearings	Drive end	6205		
		Non drive end	6205		

Note/remarks:
Motore con condensatore permanente 60μF e disgiuntore elettromeccanico e condensatore di spunto 100μF. Il motore è anche provvisto di interruttore a pulsanti rosso-verde con protezione termica e contaore analogico.
Motor with 60μF permanent capacitor and centrifugal switch plus 100μF starting capacitor. The motor is also provided with switch (red-green push-buttons), thermal protectors and analogic hour meter.
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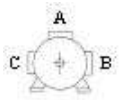
Data sheet three-phase electric motor 3 kW

soga®	**SPECIFICA TECNICA MOTORE EL.** *Electric motor technical data sheet*	**Potenza/** *Power* (kW) **3**	**Poli/** Poles **2**
		Data 24/06/2015	Rev. 0

No	Descrizione/*Description*		Dati/Data			*U.d.m.*
1	**Codice Soga** / *ref.code*		124297			
2	**Modello /** *Motor type*		MT1 90LC/2			
3	**Descrizione** / *Description*		Three-phase asynchronous motor 3kW 2 Poles 400V 50Hz			
4	**Carcassa motore** / *Framesize*		90L			
5	**Poli** / *Poles*		2			
6	**Forma di costruzione** / *Mounting type*		IM B3			
7	**Potenza nominale** / *Rated output*		3	3	3,6	[kW]
8	**Fattore di servizio** / *Service factor*		1.0			
9	**Tipo di servizio** / *Duty type*		S3-75%			
10	**Tensione** / *Rated voltage*		400 Y	400 Y	440-480 Y	[V]
11	**Frequenza** / *Rated frequency*		50	60	60	[Hz]
12	**Corrente nominale** / *Rated current*		7,7	7,7	7,7	[A]
13	**Velocità nominale** / *Rated speed*		2840	3410	3410	[min^{-1}]
14	**Fattore di potenza** / *Power factor*		0,84	0,84	0,84	
15	**Coppia nominale motore**/ *Rated motor torque*		10	8,4	10	[Nm]
17	**Corrente avviamento / Corrente nominale** *Starting current / Rated current*		7,4			Isp/In
18	**Coppia avviamento / Coppia nominale** *Starting torque/Rated torque*		3,5			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*		CAVO / *CABLE*			
23	**Peso /** Weight		18			[kg]
24	**Cuscinetti** /bearings	Drive end	6205			
		Non drive end	6205			

Note/remarks:
MOTORE PROVVISTO DI INTERRUTTORE MAGNETOTERMICO 3P REGOLABILE 6,3-10A CON BOBINA DI MINIMA TENSIONE 380-400V
MOTOR PROVIDED WITH 3P CIRCUIT BREAKER (6,3-10A ADJUSTABLE) WITH MINIMUM VOLTAGE COIL (380-400V)
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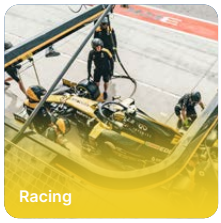
Application fields



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DT-TDS-MINISILENT100-25-V2

QUALITY SYSTEM CERTIFICATION DNV ISO 9001

ENVIRONMENTAL SYSTEM CERTIFICATION DNV ISO 14001

SAFETY SYSTEM CERTIFICATION DNV ISO 45001

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