

Portable High Pressure Compressor for Compressing Air and Breathing Air

Types:
BASIC EM - BASIC ET - BASIC SH



General	
Type of gas	Air
Intake pressure	Atmospheric
Filling pressure	PN200 / PN300
Pressure setting, final pressure	230 bar / 330 bar
Working pressure	220 bar / 320 bar
Permissible ambient temperature range	+5...+45°C
Permissible altitude	0...2000 m AMSL
Max. permissible tilt	5°
System type	Open
Other operating voltage	On request
Compressor oil, standard	Synthetic
Oil change interval	Synthetic : every 1 years / 50 h
Frame painting	Powder coating blue, RAL 5015

Technical Data Sheet



Series:

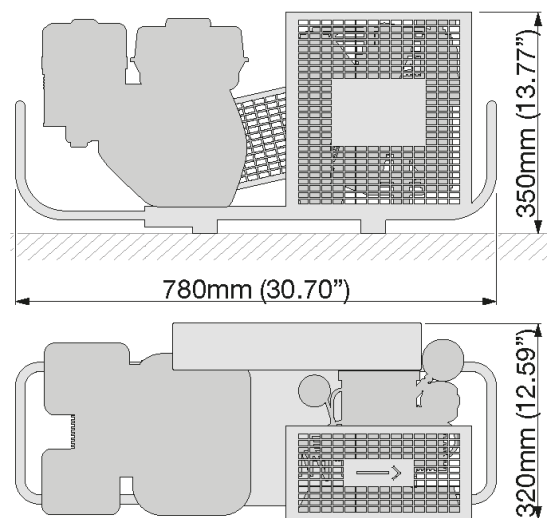
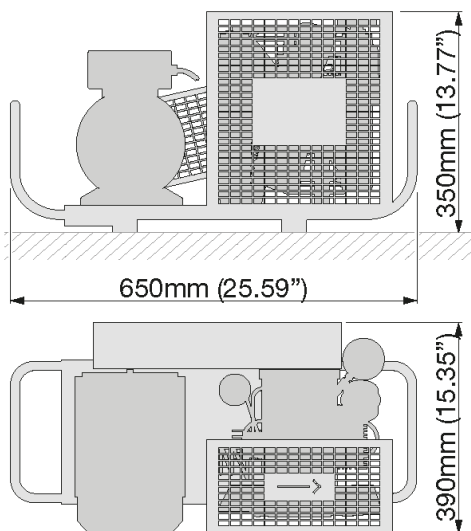
MCH 6

rev.03 15/01/2018

Compressor system	BASIC EM	BASIC ET	BASIC SH
Charging rate ¹	80 l/min	100 l/min	100 l/min
Purification System	BASIC FILTER		
Cooling air flow, min.	792 m ³ /h	990 m ³ /h	990 m ³ /h
Sound pressure level Lpa	68 dB(A)	71 dB(A)	82 dB(A)
Weight ²	42 kg	41 kg	39 kg
Dimensions (LxWxH) ²	650 x 350 x 390 m	650 x 350 x 390 m	780 x 350 x 320 mm

¹ Measured during cylinder filling from 0-200 bar tolerance +/- 5% at + 20°C ambient temperature.

² Standard model. Weight and dimensions may vary depending on accessories.



Drive system	BASIC EM	BASIC ET	BASIC SH
Motor	Single-phase	Three-phase	Petrol 4-Stroke
Power	2.2 kW	3 kW	4.2 kW
Operating voltage/frequency ¹	230 V, 50 Hz	400 V, 50 Hz	-
Rated current	13.2 A (at 230 V/50 Hz)	4.6 A (at 400 V/50 Hz)	-
Speed	2,850 1/min	2,850 1/min	3,600 1/min
Protection class	IP55 (TEFC)		-

¹ Different voltage / different frequency available on request.

› Compressor block with following features

- Splash lubrication with oil thrower pin on 2nd stage conrod.
- Micronic intake filter: 10 µm
- All coolers and pipes, stainless steel AISI 316 and s.s fittings and nuts.
- Outlet temperature approx. 15 °C above cooling air temperature.
- Sealed safety valves after each stage.
- Forged aluminum conrods.
- Forged steel crankshaft.
- Sealed safety valves after 3rd stage and 4th stage
- Final separator for oil and water condensate after last stage



Compressor block	MCH 6	
Charging rate ¹	80 l/min	100 l/min
Speed	2,300 1/min	2,800 1/min
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)	Right - clockwise	
Drive type	V-belt	
Intermediate pressure 1st stage	4.5 bar	
Intermediate pressure 2nd stage	16 bar	
Intermediate pressure 3rd stage	75 bar	
Amount of oil	0.36 l	
Intake pressure	1.0 bar _a	

¹ Measured during cylinder filling from 0-200 bar tolerance +/- 5% at + 20°C ambient temperature.

Series:

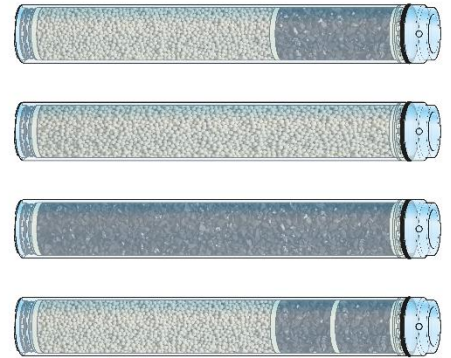
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» Purification system BASIC-FILTER

» Air filter cartridge with:

- molecular sieve an activated carbon _____
- molecular sieve _____
- activated carbon _____
- molecular sieve , activated carbon and co-catalyst _____



Purification System	BASIC-FILTER
Operating pressure (Standard)	230 bar / 300 bar
Operating pressure max. (PS)	360 bar
Processable air capacity (at ambient temperature 20°C and 200 bar) ¹	150 m ³

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

» Separator system

- Final separator for the removal of oil-/ water condensate
- final safety valve, fitted to separator housing

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

¹ Only with special filter cartridge with hopcalite 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!

* Measured at our facility using ASCO HORA 160 ANALYZER

Technical Data Sheet

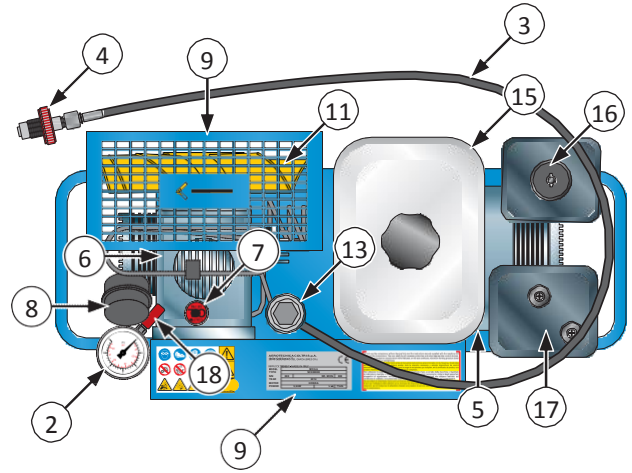
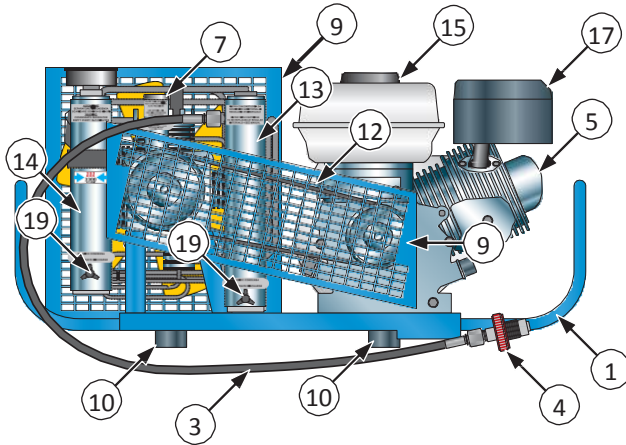


Series:

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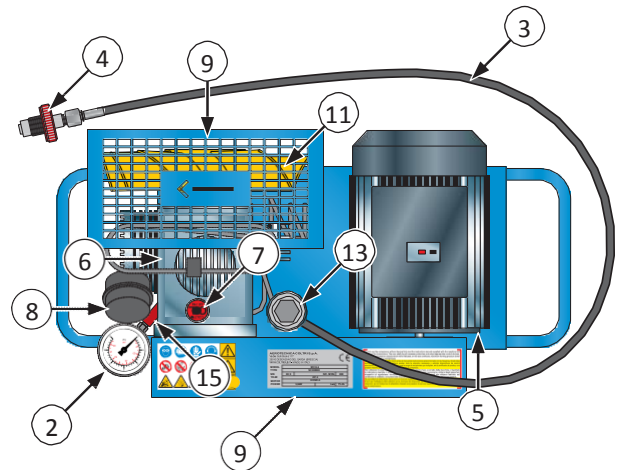
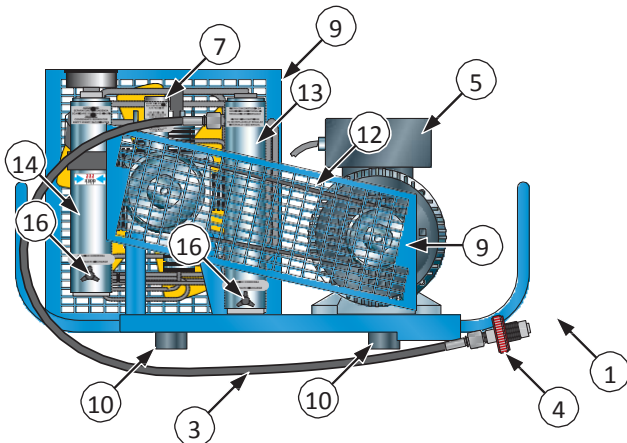
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MCH-6/SH - MCH-6/SR



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|----|------------------------|----|---------------------------------------|
| 1 | Frame | 11 | Cooling fan |
| 2 | Pressure gauge | 12 | Belt |
| 3 | Hose | 13 | Purifier filter |
| 4 | Refill valve | 14 | Condensate separator |
| 5 | Internal combustion | 15 | Fuel tank |
| 6 | Compressor | 16 | Internal combustion engine air filter |
| 7 | Oil filler cap | 17 | Internal combustion engine exhaust |
| 8 | Air filter | 18 | Safety valve |
| 9 | Safety mesh | 19 | Condensate discharge |
| 10 | Anti-vibration devices | | |

MCH-6/EM - MCH-6/ET



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|----|------------------------|----|----------------------|
| 1 | Frame | 9 | Safety mesh |
| 2 | Pressure gauge | 11 | Cooling fan |
| 3 | Hose | 12 | Belt |
| 4 | Refill valve | 13 | Purifier filter |
| 5 | Electric motor | 14 | Condensate separator |
| 6 | Compressor | 15 | Safety valve |
| 7 | Oil filler cap | 16 | Condensate discharge |
| 8 | Air filter | | |
| 10 | Anti-vibration devices | | |

Technical Data Sheet



Series:

MCH 6

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› **PN230 filling device**



Filling device	PN 230
Nominal pressure (PN)	230 bar
Valve design	1 filling valve with integrated ventilation, with German cylinder connector G 5/8" DIN 477 and manometer, PN230
Filling hose	1 Unimam high pressure filling hose, 1 m length
International cylinder connector	1 international cylinder connector

Or



› **Cylinder connection yoke clamp**

Filling device	PN 230
Nominal pressure (PN)	300 bar
Valve design	1 filling valve with integrated ventilation, with German cylinder connector G 5/8" DIN 477 and manometer, PN300
Filling hose	1 Unimam high pressure filling hose, 1 m length

Or



› **PN300 filling device**

Filling device	PN 300
Nominal pressure (PN)	300 bar
Valve design	1 filling valve with integrated ventilation, with German cylinder connector G 5/8" DIN 477 and manometer, PN300
Filling hose	1 Unimam high pressure filling hose, 1 m length

» Automatic condensate drain with timer (EM - ET)

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

Consisting of:

- 1x timer
- 1x solenoid valve



» Autostop

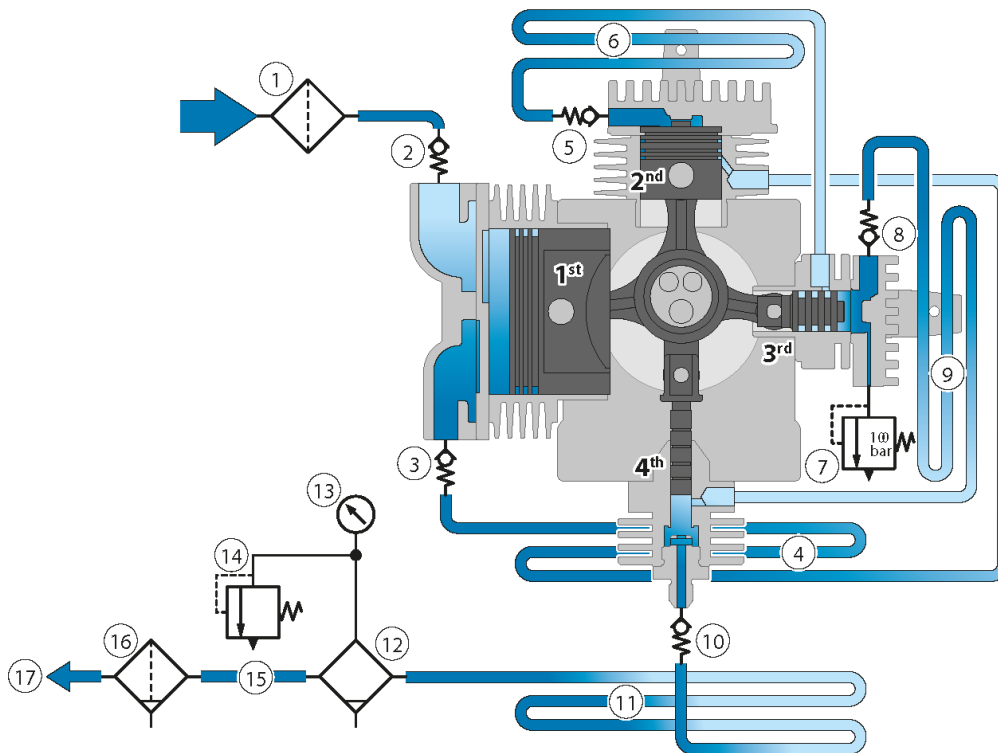
The compressor is switched off automatically when the final pressure is reached.

Consisting of:

- 1x pressure switch
 - 230 bar - SC000521/232
 - 300 bar - SC000521/300



» **Flow diagram**



- | | | | |
|----|----------------------------|----|---------------------------------|
| 1 | Intake filter | 12 | Condensate separator |
| 2 | Intake valve 1st stage | 13 | Pressure gauge |
| 3 | Outlet valve 1st stage | 14 | Safety valve |
| 4 | Cooling pipe 1st-2nd stage | 15 | Cooling pipe separator / filter |
| 5 | Outlet valve 2nd stage | 16 | Purifier filter |
| 6 | Cooling pipe 2nd-3rd stage | 17 | Flex hose |
| 7 | Safety valve | | |
| 8 | Outlet valve 3rd stage | | |
| 9 | Cooling pipe 3rd-4th stage | | |
| 10 | Outlet valve 4th stage | | |
| 11 | Final cooling pipe | | |