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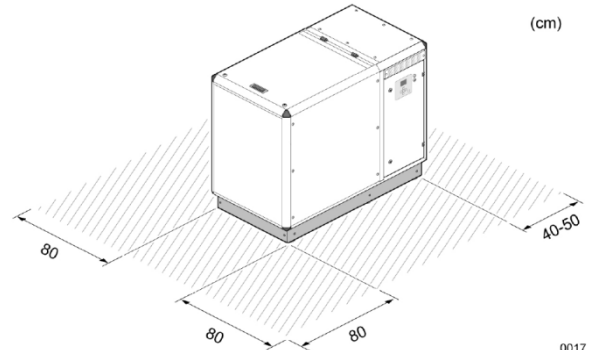
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Installation

Installation area (floor): Horizontal and smooth
 Dimension, LxWxH: 1450x700x1000 (mm)

Clearance:

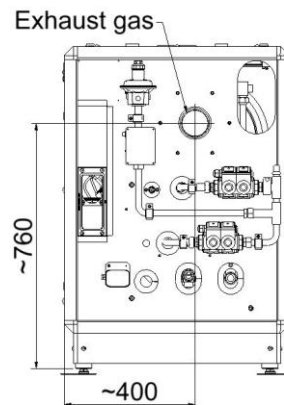
Front:	min 800 mm
Side:	min 800 mm
Top:	min 900 mm
Back:	min 400 mm



Placement: Indoors, protected from wind and rain. E.g. in a container or a suitable house.
 Ventilation system: min air intake capacity 40m³/hour

Connections:

Fuel gas, IN:	Rp 1/2 (female), (use flexible hose)
External working gas:	6 mm Swagelok Tube Fitting, (use flexible hose)
Water connection, IN:	G 1-11 (male), (use flexible hose)
Water connection, OUT:	G 1-11 (male), (use flexible hose)
Exhaust gas:	ø 80 mm (inner diameter)



Temperatures:

Operational ambient:	+5°C to +35°C
Storage:	-40°C to +60°C

Gas quality

Fuel gas:

Gas type:	Natural/LNG/ Bio/ LPG
Sulfur, with exhaust heat exchanger:	max 100 ppm
Sulfur, without exhaust heat exchanger:	max 200 ppm
Max. Temperature:	+40 °C
Max. Rel. Humidity:	80 % (at gas intake)
Condensate:	0 (no condensation allowed at unit gas intake)
Methane concentration:	45-100%
Supply pressure:	45-200 mbar (depending on gas quality)

Exhaust gas:

Gas flow rate:	100 kg/h
Gas back pressure:	max 2 mbar
Gas temperature:	max 300°C without exhaust heat exchanger, 100°C with heat exchanger

Working gas:

Gas type:	Helium
Gas quality:	4.6 or balloon gas
Gas pressure:	max 230 bar (bottle pressure)
Gas consumption:	100-300 ml/h (operational mode) 0-100 ml/h (idle mode)

Power

Power supply:

Power:	3x400V, 50Hz
Fuse:	25A diazed fuse/ 32A automatic fuse char. D

Power output:

Electrical:	2-9 kW
Thermal:	8-25kW

Operational load:

The CHP engine is not designed for continuous operation at more than 80% load. Continuous use at higher than 80% load increases the risk for short service intervals and engine failures.

Oil

Oil type: Fully synthetic engine oil. Mobile 1, 5W-30 or 0W 40SHC
Volym: 1,7l

Water

Internal cooling water

Volume: 4,2 l
Anti Freeze mix: 50%
Anti Freeze media: Polypropylene glycol

External cooling water

Water temp in, min: 35°C
Water temp in, max: 60°C

Water pressure, with exhaust heat exchanger: max 3 bar
Water pressure, without exhaust heat exchanger: max 5 bar

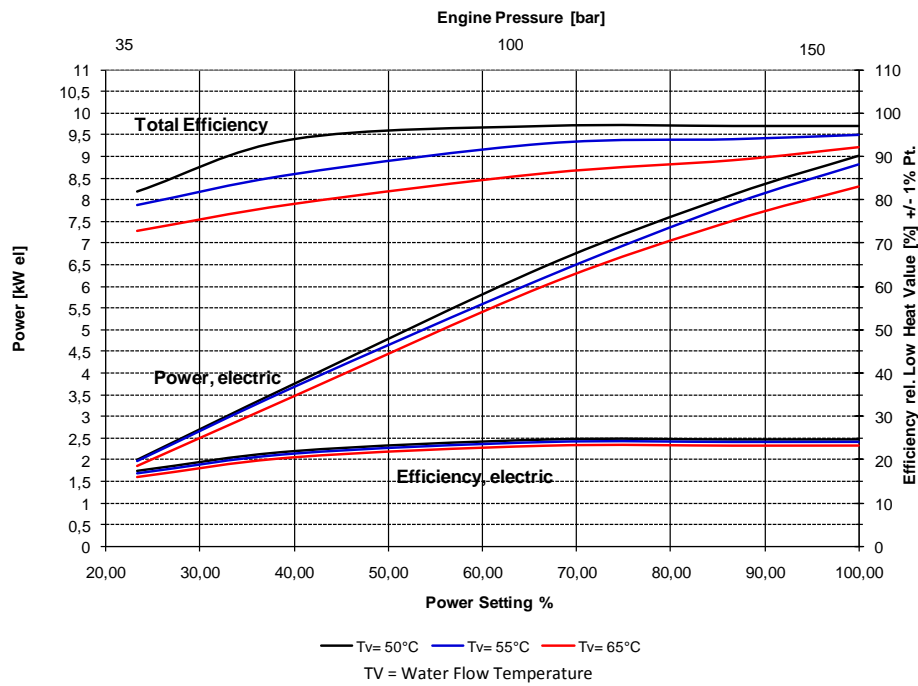
8kW electrical

Water flow: min 1,5 m³/h
Water temp in: max 55°C

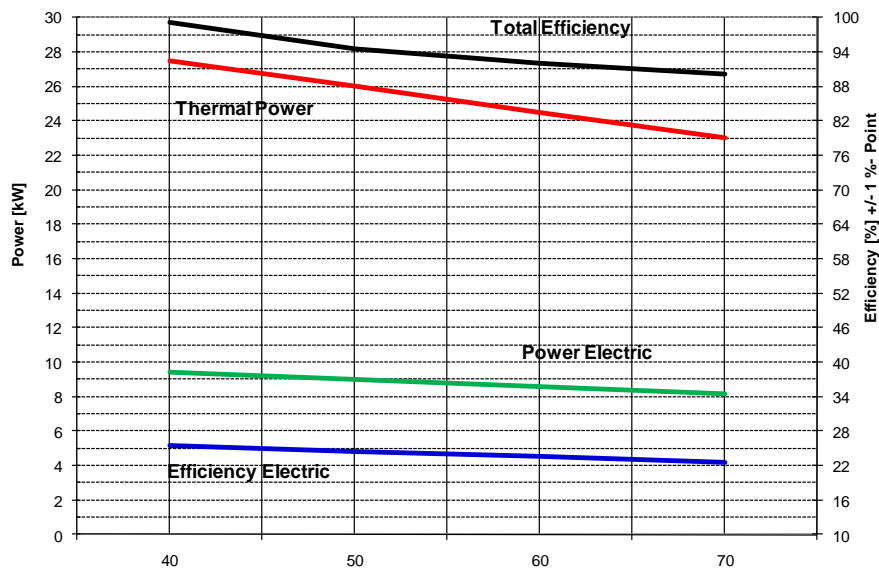
9kW electrical

Water flow: min 1,5 m³/h
Water temp in: max 40°C

Water Flow Temperature on Power and Efficiency over Engine Pressure



Power and Efficiency over Water Flow Temperature



Water Flow Temperature [°C], Water Flow 1,6 m³/h