

## Mehrer Diaphragm Compressors SERIES MRx, MLx, MHx



# Our Experience – YOUR BENEFITS

## ■ Technical Data

Series Description	MRx 300, MLx 300, MHx 300 1- and 2-stage	MRx 400, MLx 400, MHx 400 1- and 2-stage	MRx 500, MHx 500 1- and 2-stage
Max. compression ratio per stage	1:10	1:10	1:10
Min. suction pressure	1,0 bara	1,0 bara	1,0 bara
Max. final pressure	1200 bara	1000 bara	1000 bara
Max. drive power on the shaft	11	30	55
Speed range	~400	~400	~400
Arrangement of the cylinders	Vertical, Horizontal, L-design	Vertical, Horizontal, L-design	Vertical, Horizontal
Type of drive	Belt driven	Belt driven	Belt driven
Compression of toxic and flammable gases	Possible	Possible	Possible
Compressor cooling *	Air or water cooled	Water cooled	Water cooled

\* Compressor cooling depends on application case

### COMPRESSOR HEAD

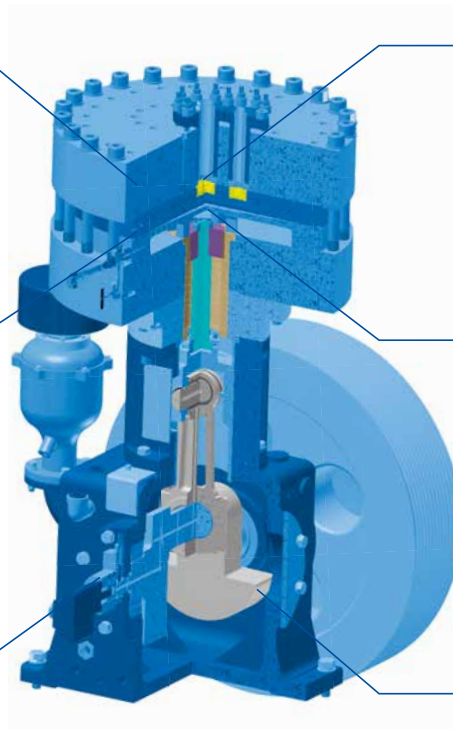
- Resistant against corrosive and aggressive gases due to stainless steel

### OIL DISTRIBUTION PLATE

- For the stabilization of the diaphragm within the suction mode
- For the ideal oil-flow distribution within the compression mode

### OIL COMPENSATION PUMP

- Assures an ideal oil pressure in the hydraulic part of the compressor



### GAS VALVES

- Spring-loaded plate valves made of stainless steel
- Customized to your specific application

### DIAPHRAGM

- Triple sandwich diaphragm
- With integrated sensors
- 100% barrier between the gas and hydraulic part of the compressor
- Avoidance of gas leakage at any time

### CRANK CASE

- Extremely robust and oil lubricated
- Crank shaft mounted on anti-friction bearing

**MRx 1300, MHx 1300**  
1- and 2-stage

1:10

1,0 bara

1000 bara

160

~ 400

Vertical, Horizontal

Belt driven

Possible

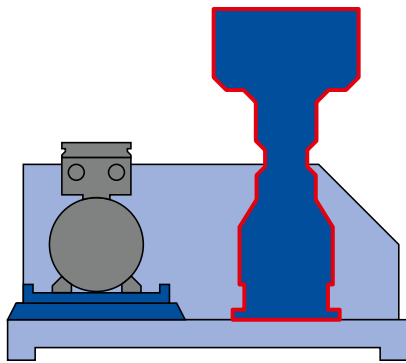
Water cooled

■ **Your Benefits**

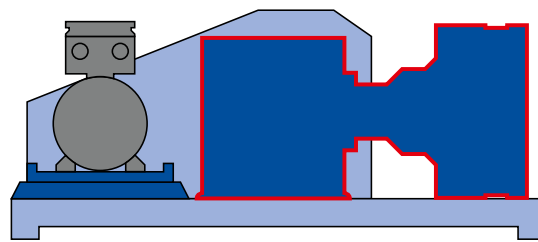
- 100% oil-free compression without the use of filters
- Leakage rate  $< 10^{-5}$  mbar l/s
- Suitable for all gases
- Low noise level
- Durable, efficient and robust compressors
- Low compression temperature

■ **Functional Basics**

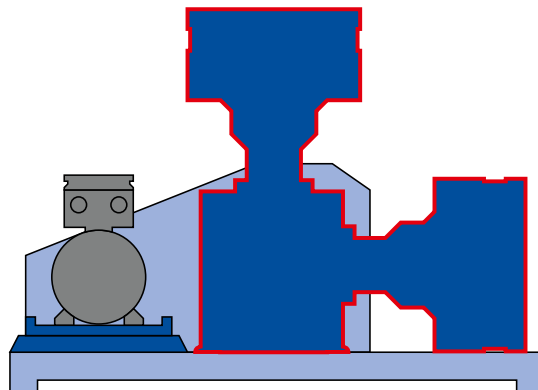
- Piston stroke transmission to the triple sandwich diaphragm on hydromechanical basis
- Diaphragm and gas valves follow the rhythm of the piston stroke
- Oil compression pump assures an ideal oil volume between piston and diaphragm
- Oil recirculation for piston lubrication adjusted by a pressure regulation valve



Vertical design (MRx)



Horizontal design (MHx)



L-design (MLx)

## Mehrer Compressors – IN USE WORLDWIDE

### ■ Competence in Compression for TRAILER AND BOTTLE FILLING

Compressor type	MHE 400-22Ex
Year of construction	2017
Type of gas	Hydrogen
Delivery capacity	173 Nm <sup>3</sup> /h
Suction pressure	40–100 bar (ü)
Final pressure	350 bar (ü)
Drive power	22 kW



### ■ Competence in Compression of INFLAMMABLE AND HIGHLY TOXIC GASES up to 1000 bar

Compressor type	MRE 400-18,5Ex
Year of construction	2017
Type of gas	SiH <sub>4</sub>
Delivery capacity	130 Nm <sup>3</sup> /h
Suction pressure	2,4 bar (g)
Final pressure	9–11,5 bar (g)
Drive power	18,5 kW



### ■ Competence in Compression of HYDROGEN

Compressor type	MRE 300-7,5Ex
Year of construction	2017
Type of gas	Hydrogen
Delivery capacity	10 Nm <sup>3</sup> /h
Suction pressure	9–10 bar (g)
Final pressure	60 bar (g)
Drive power	11,5 kW

