

MIKE - Annex

3.5



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1. Installation	2
1.1 Accessories	2
1.2 Apparatus	3
2. Technique	4
2.1 Technical specifications.....	4
2.2 Pneumatic system	5
2.3 Spare parts	6



Please read this note!



Attention: Please read this safety instruction carefully!

1. Installation

1.1 Accessories



The following components are necessary for the function of the apparatus but are **not** supplied and must be provided by the user::

1.1.1 Personal Computer

Any standard personal computer running the operating system Microsoft-Windows 7 ... 11 (32 or 64Bit)

Graphics, monitor: resolution minimum 1024 x 768, colors minimum 16 bit
 Interface: USB (adapter USB - RS232 delivered with the MIKE)
 or RS232 (COMx)

1.1.2 Compressed air

The compressed air is required on the one hand as control air for the pneumatics and on the other hand for the dust dispersion. Nominal value = **7 bar overpressure = 8 bar absolute**.

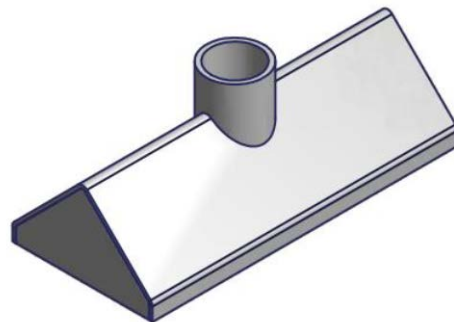
Only normal **compressor compressed air** may be used. A strongly deviating minimum ignition energy is measured with synthetic compressed air.

1.1.3 Exhaust air

Usually the MIKE is set up in a ventilated laboratory hood. In the case of direct injection into the ventilation, the pressure wave and the flame must be taken into account.

Fume hood for MIKE3 (option)
 outside diameter of the pipe = 90 mm,
 inside diameter = 75 mm

Air flow of ventilation approx. 500 m³/h



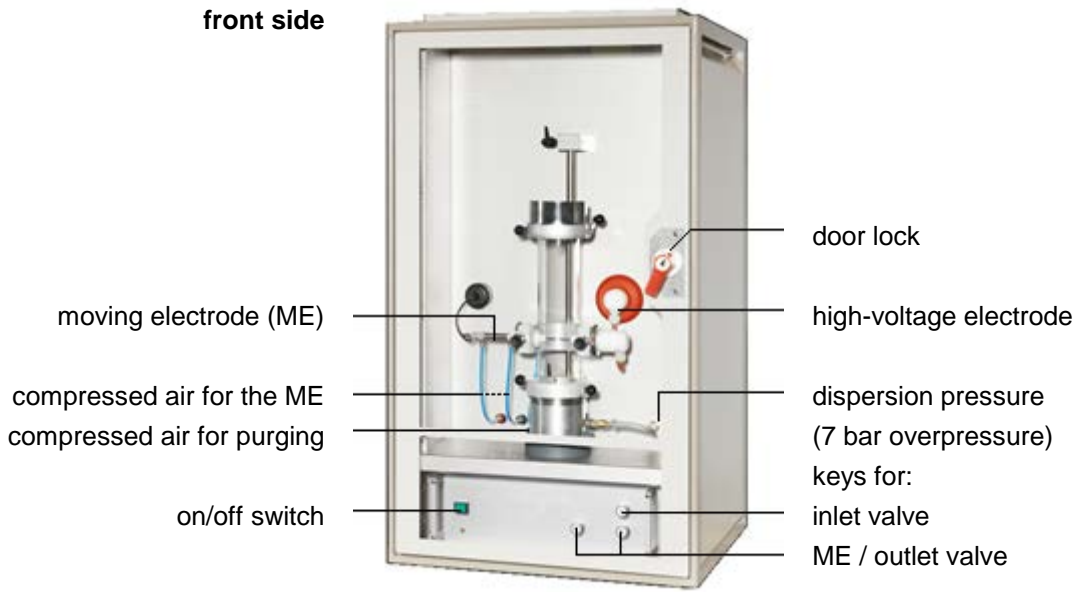
1.1.4 Mains supply

100-240 VAC / 180 VA / 50-60 Hz

1.1.5 Industrial Vacuum cleaner

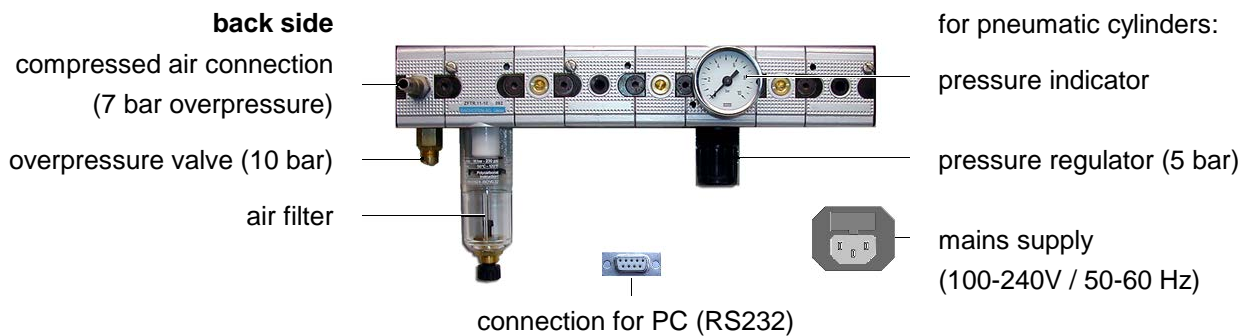
ATEX approved Examples: <https://howatec.ch/industriesauger-atex.html>
<https://www.delfinindustriesauger.de>

1.2 Apparatus



Functions of the **door lock** with 3 positions:

1. Door open (electrode adjustment and cleaning):
The high voltage is switched **off** and the keys are **enabled**.
2. Door closed (purging with air after test)
The high voltage is switched **off** and the keys are **enabled**.
3. Door closed (MIKE is ready for a test)
The high voltage is switched **on** and the keys are **disabled**.



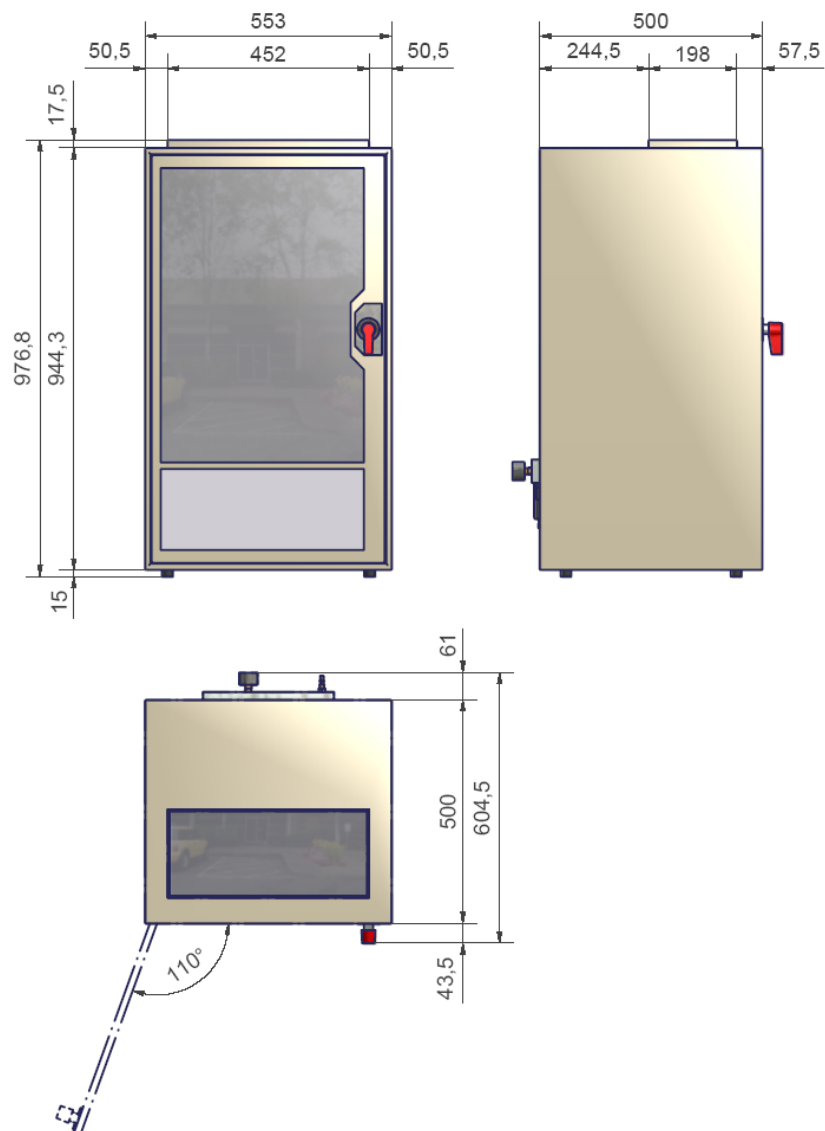
2. Technique

2.1 Technical specifications

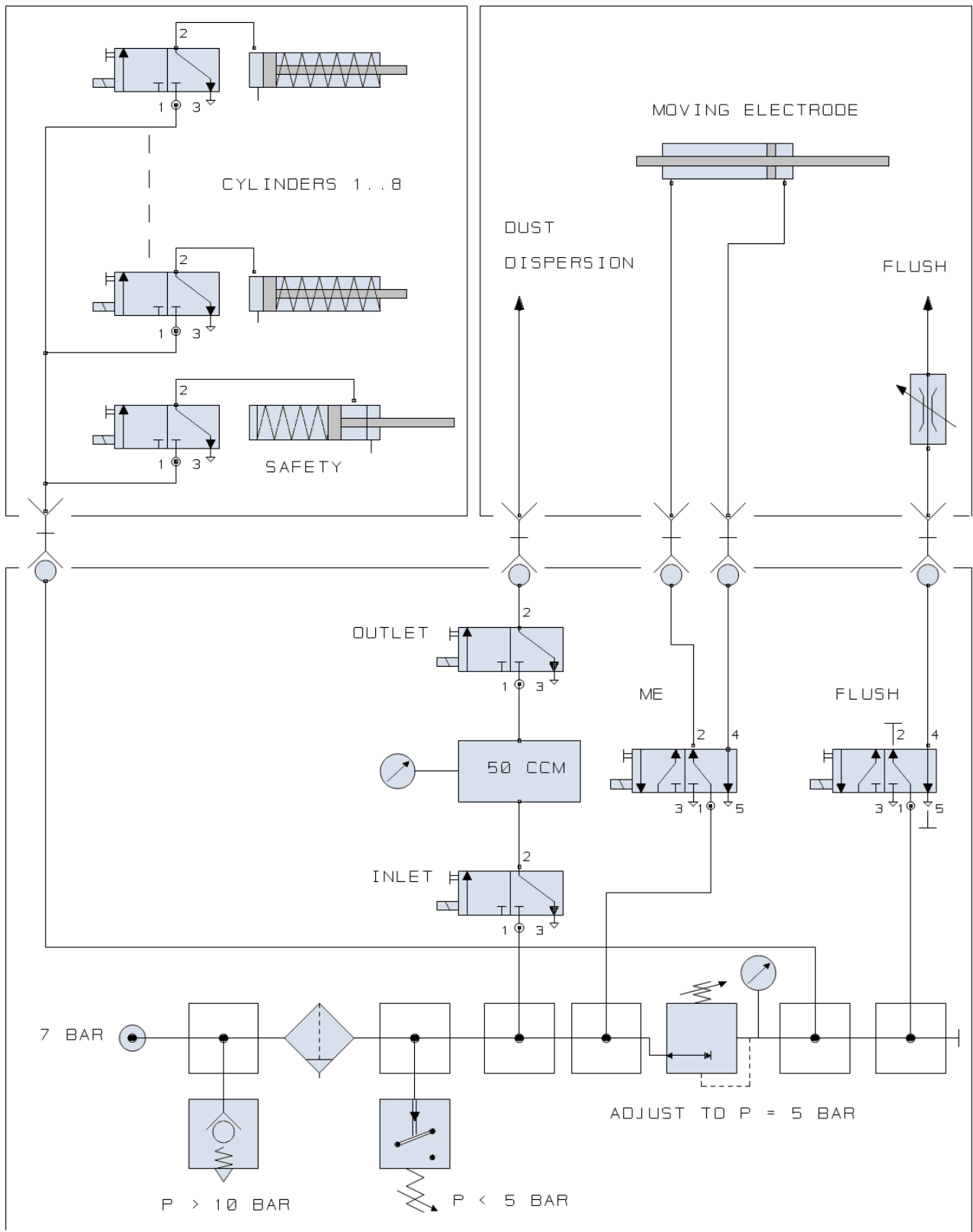
Explosion vessel:	Mod. Hartmann tube, V = 1.2 l
Dust distribution system:	Mushroom-shaped nozzle
Energy range:	1 mJ ... 1 J
Charging voltage (1mJ...10mJ):	15 kV
Charging voltage (30mJ ... 1J):	11 kV
Triggering (1mJ, 3mJ):	High-voltage relay
Triggering (10mJ ... 1J):	Moving electrode
Inductance (with):	1.0 mH
Inductance (without):	0.01 mH
Compressed air connection:	7 bar (over pressure)
Power supply:	100-240 VAC / 180 VA / 50-60 Hz

Dimensions [mm]:

Weight: 86kg



2.2 Pneumatic system



2.3 Spare parts

