

## MIKE3-CAN - Annex



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Please read this note!



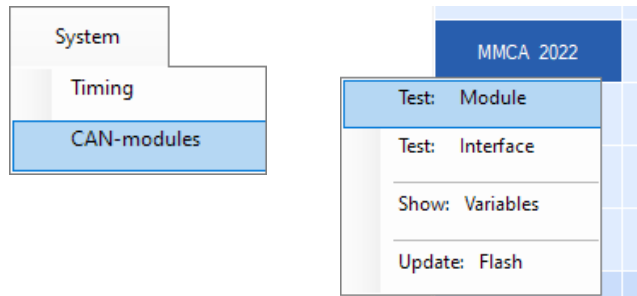
Attention: Please read this safety instruction carefully!

## 1. CAN - Programs

CAN programs require administrator or service rights.

### 1.1 Test: Module

The MIKE contains a powerful tool for self-diagnosis, troubleshooting and calibration.



Designations:

**MMCA:**

**MIKE Main Controller Version A**

*revision e.g. 2022:*

Year / calendar week

**inputs**

I_1J	<input type="checkbox"/>
I_300mJ	<input type="checkbox"/>
I_100mJ	<input type="checkbox"/>
I_30mJ	<input type="checkbox"/>
I_10mJ	<input type="checkbox"/>
I_3mJ	<input type="checkbox"/>
I_HESW	<input type="checkbox"/>
I_IND	<input type="checkbox"/>
I_SAF	<input type="checkbox"/>
I_PBM	<input type="checkbox"/>
I_PBI	<input type="checkbox"/>
I_PBO	<input type="checkbox"/>
I_HC	<input type="checkbox"/>
I_LC	<input type="checkbox"/>
I_PRE	<input checked="" type="checkbox"/>
I_DL **	<input checked="" type="checkbox"/>

must be on \*\*

**outputs**

<input type="radio"/> O_Flush		75
<input type="radio"/> O_1J		74
<input type="radio"/> O_300mJ		75
<input type="radio"/> O_100mJ		74
<input type="radio"/> O_30mJ		74
<input type="radio"/> O_10mJ		75
<input type="radio"/> O_3mJ		75
<input type="radio"/> O_HESW		74
<input type="radio"/> O_IND		75
<input type="radio"/> O_SAF		74
<input type="radio"/> O_ME		115
<input checked="" type="radio"/> O_IN	336	337
<input type="radio"/> O_OUT		336
<input type="radio"/> O_LESW		132
<input type="radio"/> O_Charge		133
<input type="radio"/> O_15kV		18
<input type="radio"/> O_24S **		11
<input type="radio"/> Beep	measured [ mA ]	typical [ mA ]
<input type="radio"/> off		

**MIKE - Setup**

Serial no	22001	unit	1
first setup	23.02.2019	by	CC
Calibrated	22.01.2023	by	CC
Pcb - revision	1901	number	1

**Pressure 0 - Calibration**

actual	@ 4mA	@ 20mA	
P0 [bar]	6.44	0	10

☐ calibration of 20mA (do this once for a new module)

**I, U - Calibration**

actual	new
I load [mA]	64
*** U24S [V]	0.09

\*\*\* O\_24S and I\_DL must be switched on

**MMC - Status + Parameters**



ok

Calibration has already been carried out at the factory.

Follow-up document (on request): [P081\\_100.pdf](#) „MMC81A - Endprüfung“

### Current measurement

The MIKE has a built-in current measurement. For a new device, we recommend measuring and saving the current typical values for future troubleshooting:

1. Activate all outputs *O\_1J ... O\_24S* one after the other.
2.  Copy from "*measured*" to "*typical*".
3.  Save the typical values in the MIKE.



### Troubleshooting

If the typical values have already been saved, the current measured values can be compared with them later for troubleshooting. Deviations of more than 30% are displayed in red.



### Parameters

All parameters are saved in MIKE and not in the PC program. These parameters can be saved in a file. It is advisable to save the parameters before a new calibration, as you can restore the old status at any time in the event of problems by transferring the old parameters from the file back to MIKE. Caution: old values will naturally be overwritten.

#### Save parameters

1.  Transfer parameters from the MIKE to the PC program.
2.  Save parameters in a file.  
Automatically generated proposal for the file name: e.g. *P081\_103.par*  
Key for this: *P081 = product code, 1 = MMC, 03 = Pcb-number*

#### Load parameters

1.  Transfer parameters from a *par*-file to the PC program
2.  Save parameters in MIKE. Attention: old values will be overwritten.

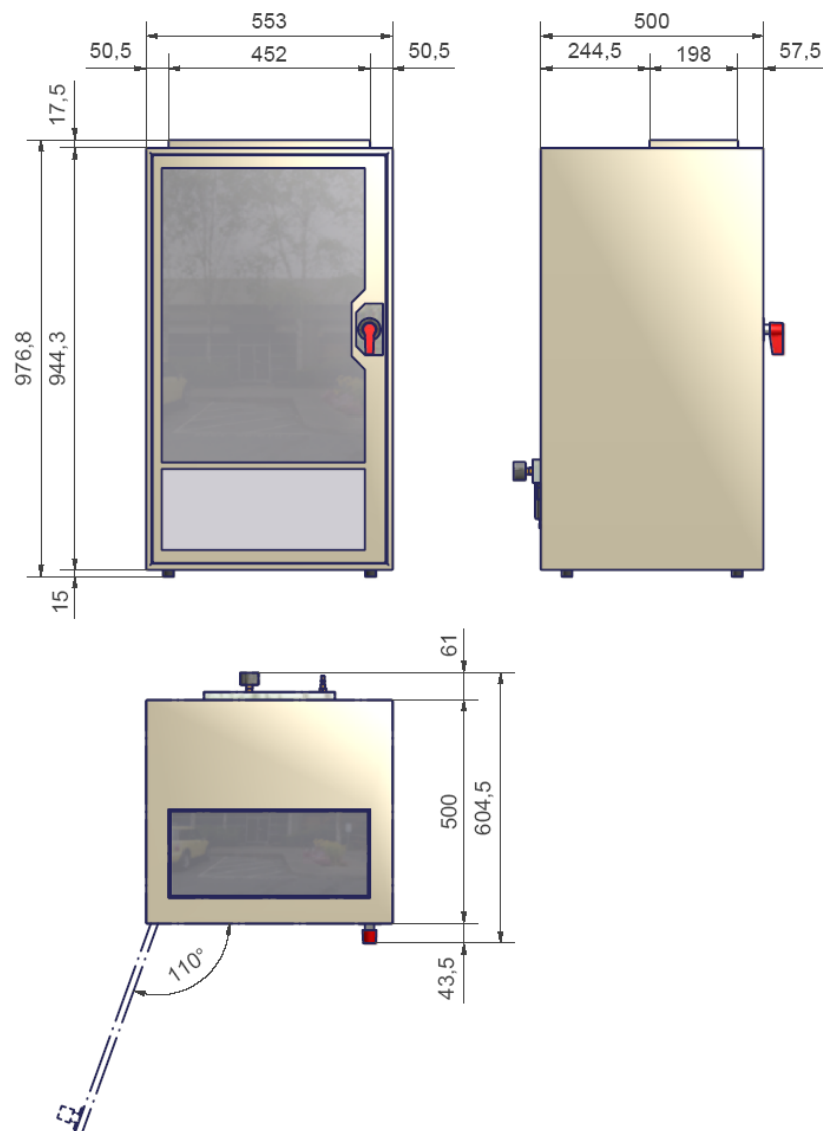
## 2. Technology

### 2.1 Technical specifications

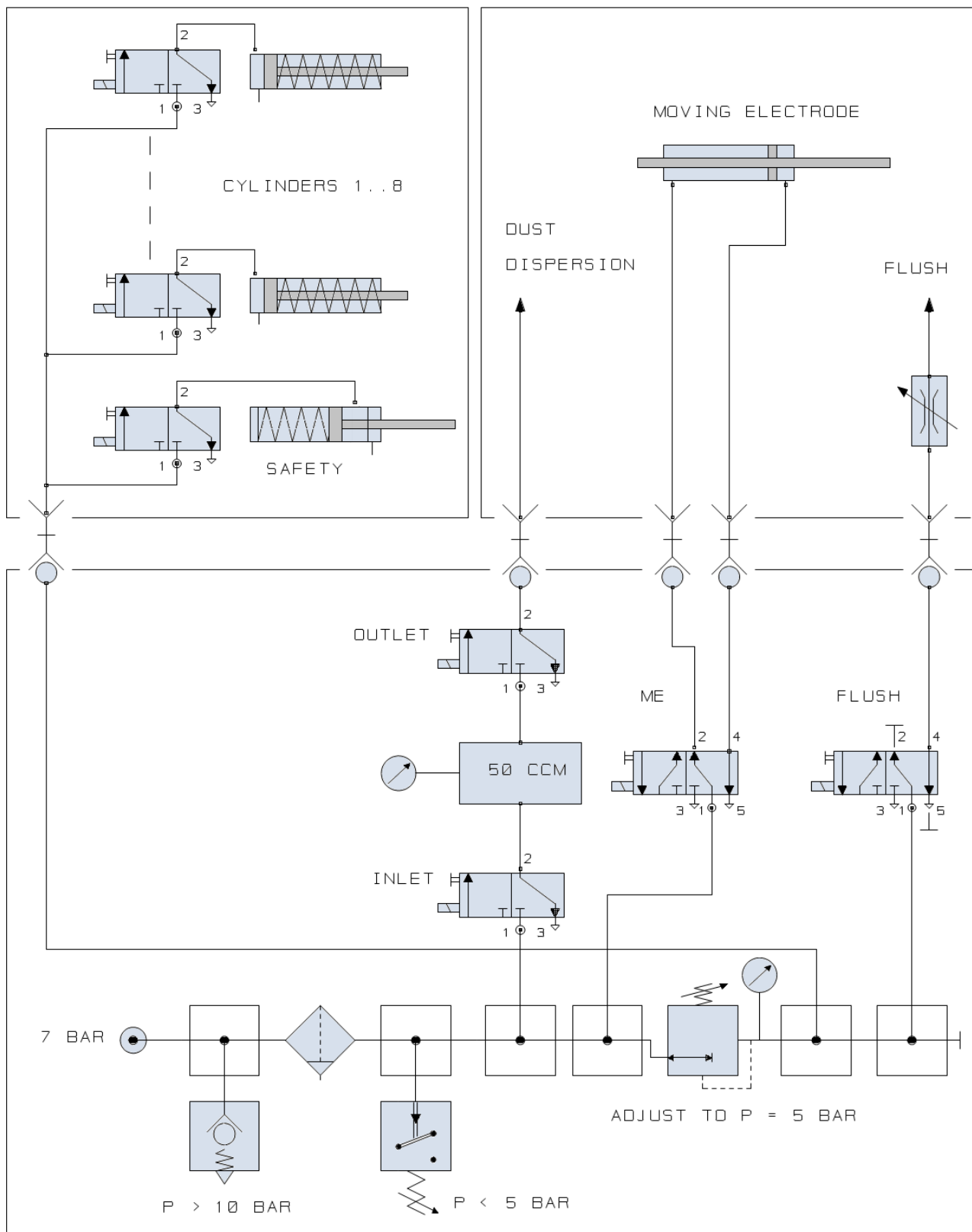
Explosion vessel:	Mod. Hartmann tube, V = 1.2 l
Dust distribution system:	Mushroom-shaped nozzle
Energy range:	1 mJ ... 1 J
Charging voltage (1mJ...10mJ):	15 kV
Charging voltage (30mJ ... 1J):	11 kV
Triggering (1mJ, 3mJ):	High-voltage relay
Triggering (10mJ ... 1J):	Moving electrode
Inductance (with):	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

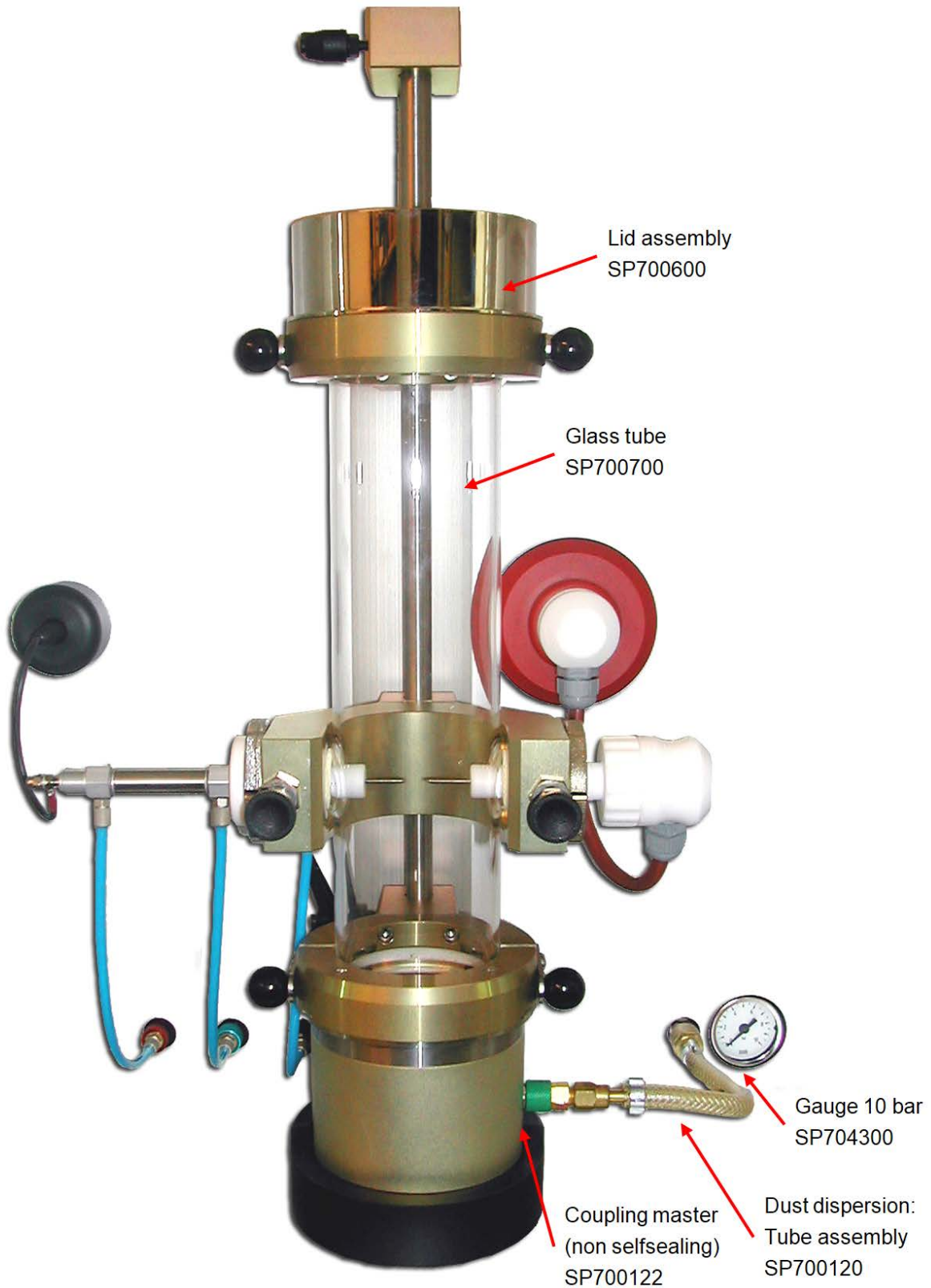


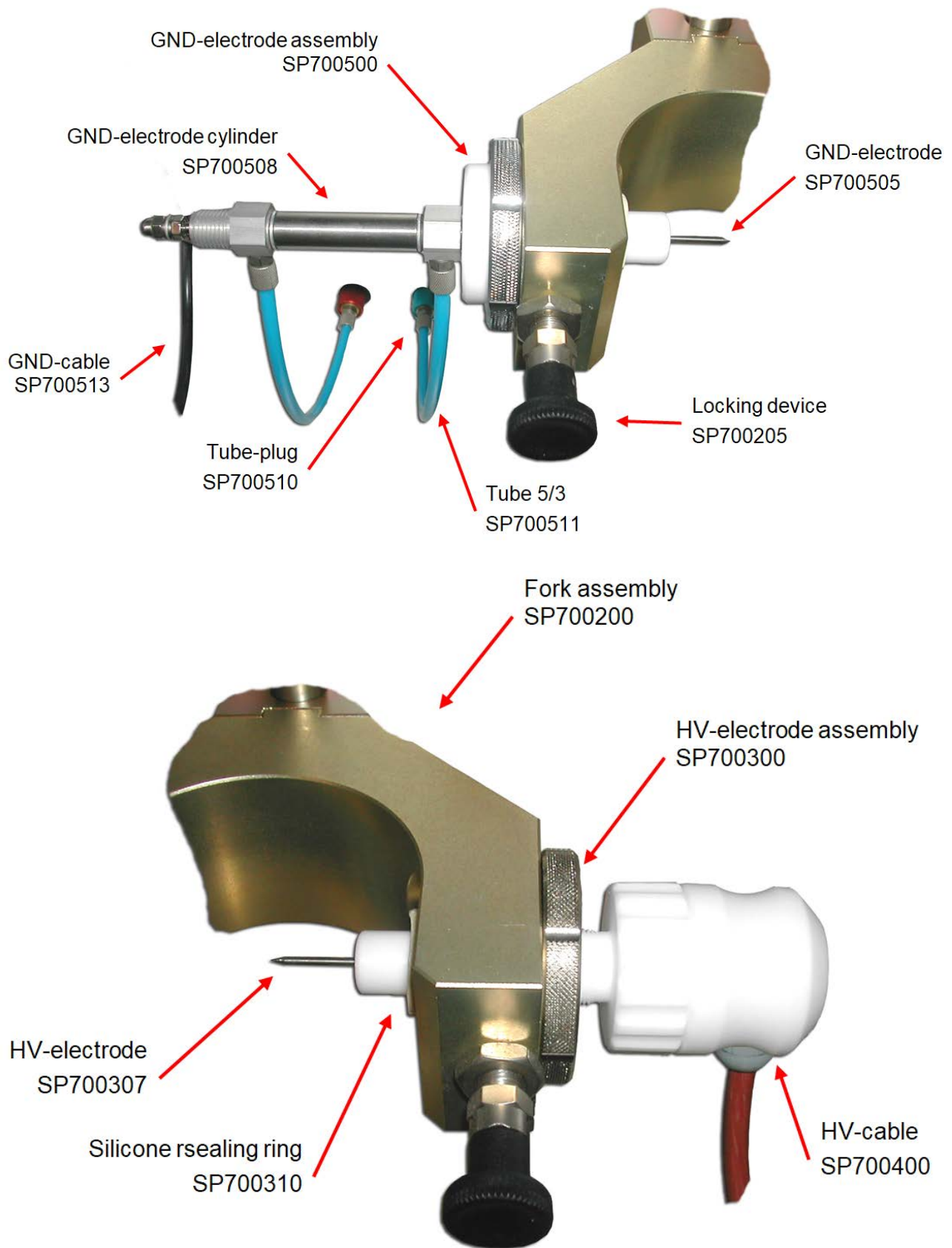
## 2.2 Pneumatic system



### 3. Spare parts

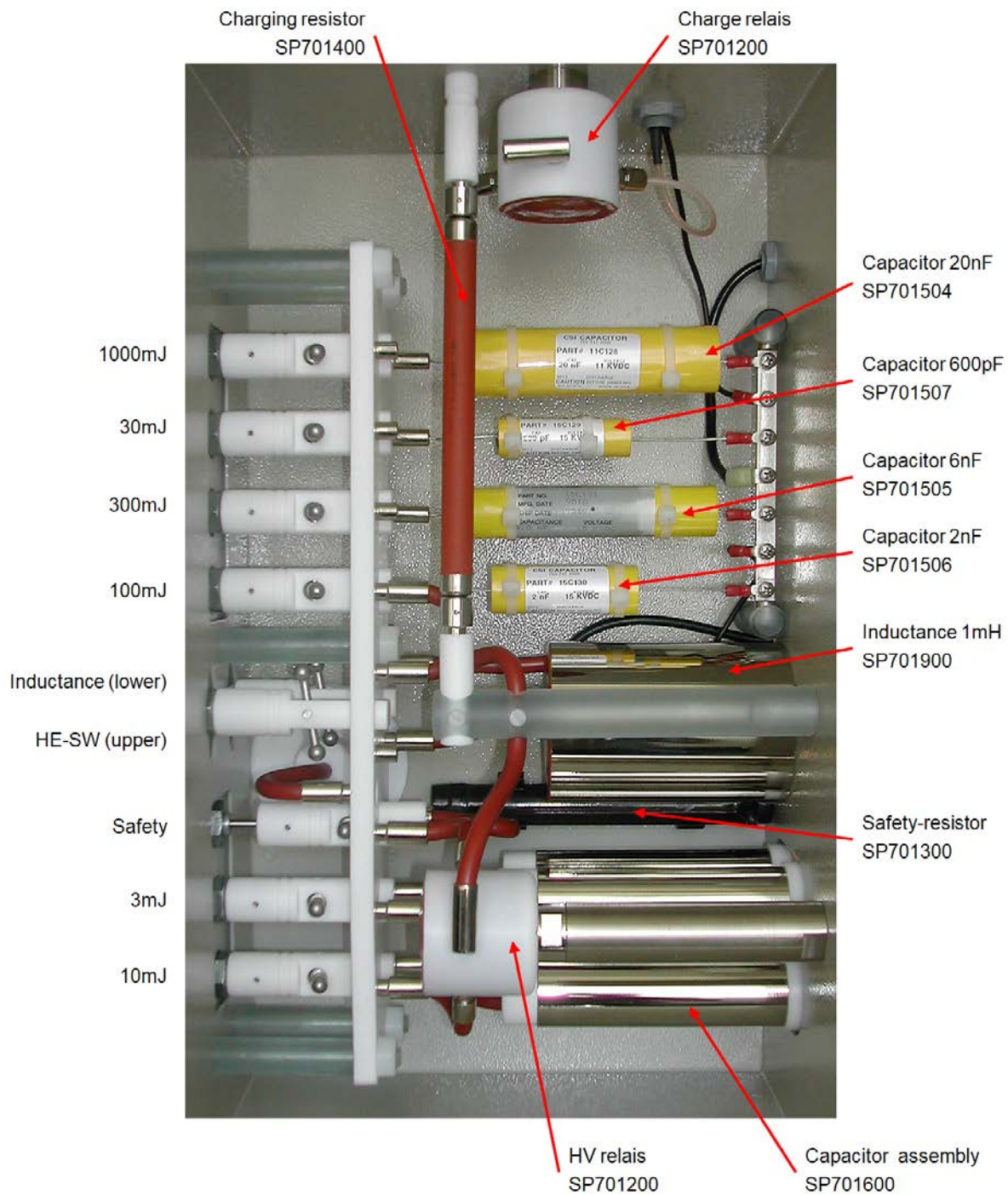
#### 3.1 Front view





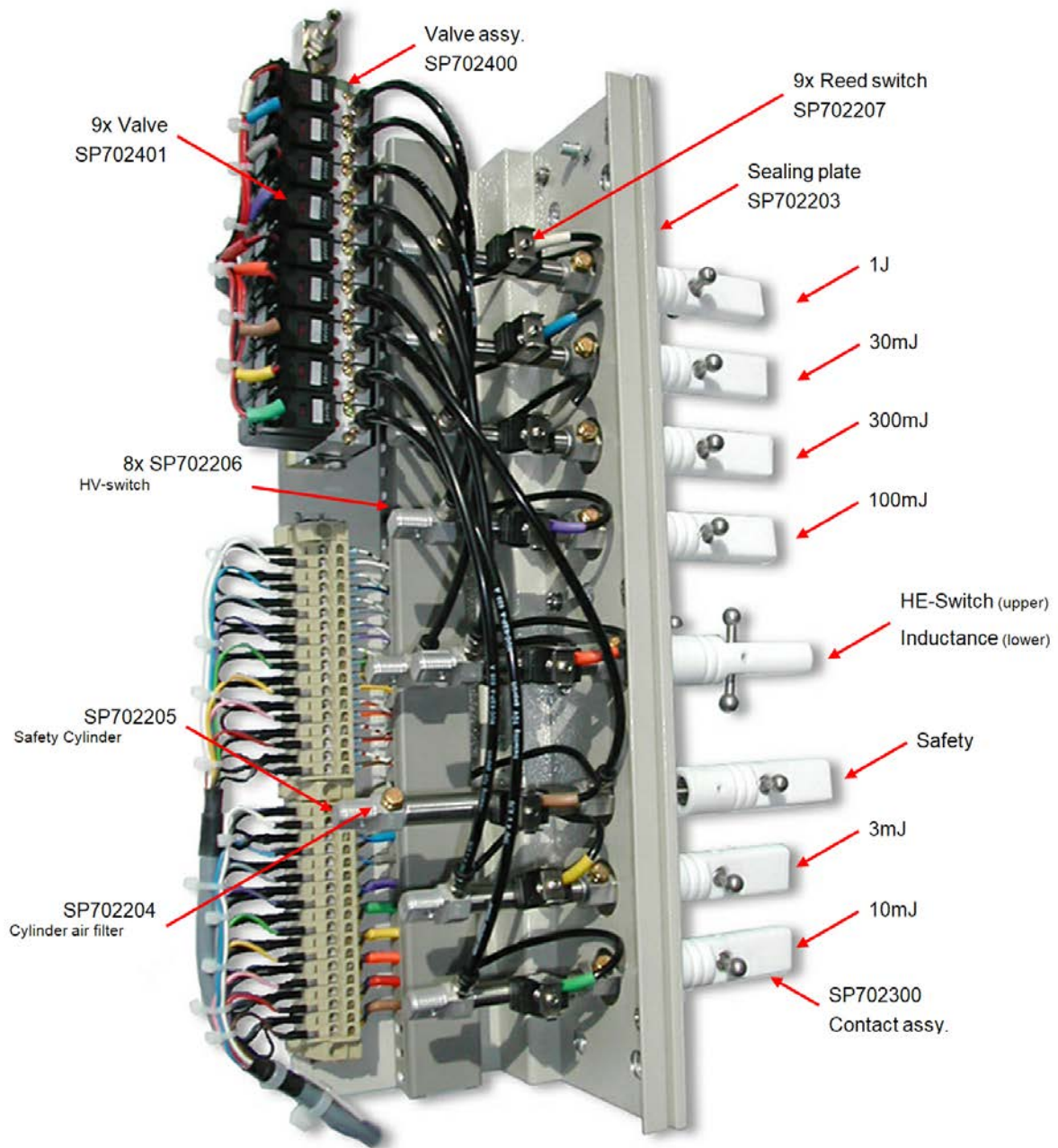


### 3.2 High-voltage unit





### 3.3 Cylinder unit



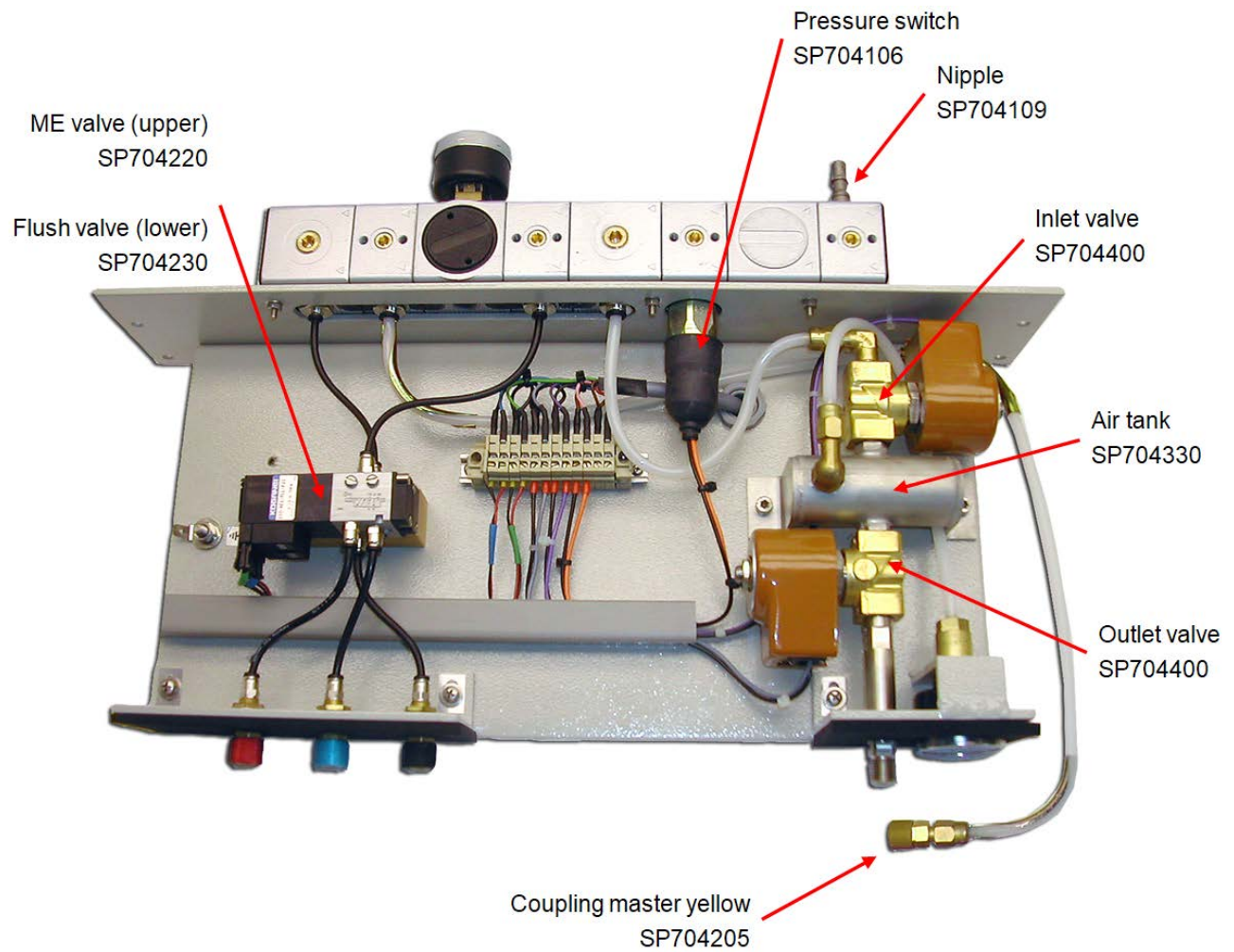
### 3.4 Valve battery

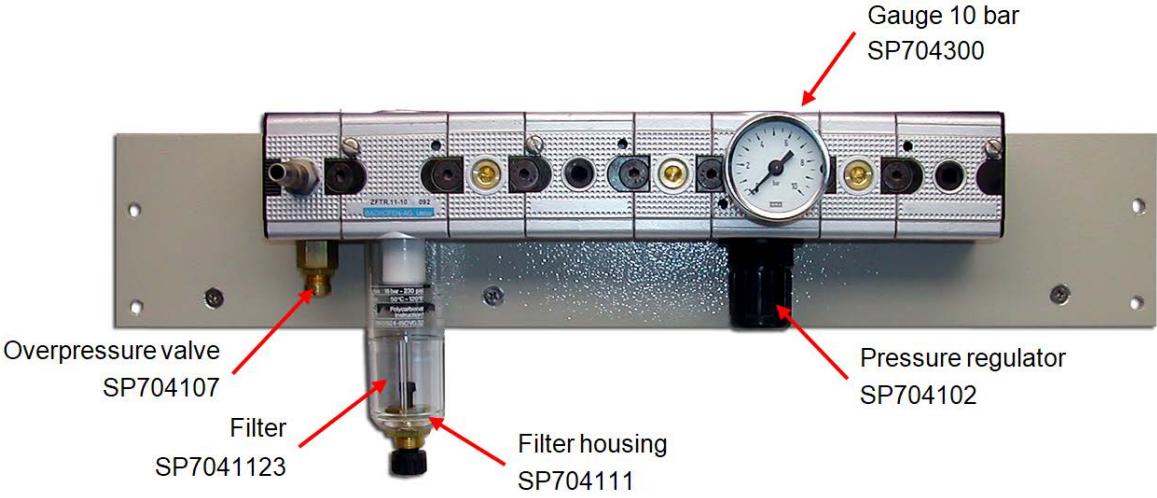
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### 3.5 Pneumatic unit

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### 3.6 List of spare parts

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SP700010	Safety door lock (switch)	
SP700100	Dust dispersion: base assembly	
SP700107	Alu-holder, bottom, front	
SP700109	Alu-holder, bottom, rear	
SP700120	Dust dispersion: tube assembly	
SP700122	Coupling master (non selfsealing) light green	
SP700200	Fork assembly	
SP700205	Fork: locking device	
SP700208	Throttle-valve assy.	

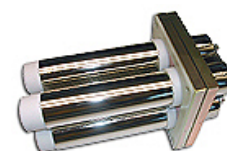
SP700300	HV-electrode assembly
SP700307	HV-electrode
SP700310	HV/GND-electrode: silicone sealing ring
SP700311	HV guide bush assy.
SP700313	Screwing insulator HS electrode holder
SP700400	HV-cable assembly
SP700500	GND-electrode assembly
SP700505	GND-electrode
SP700508	GND-electrode: cylinder
SP700509	GND-electrode: tube union 50.007



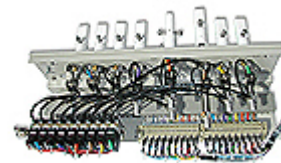
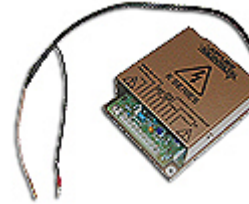


SP700510	GND-electrode: tube-plug 50.065	
SP700511	GND-electrode: tube 5/3	
SP700513	GND-cable assembly (ME)	
SP700516	Isolator B	
SP700520	GND-electrode holder assy.	
SP700600	Lid assembly	
SP700603	Alu-holder, top, rear	
SP700604	Alu-holder, top, front	
SP700608	Cover	

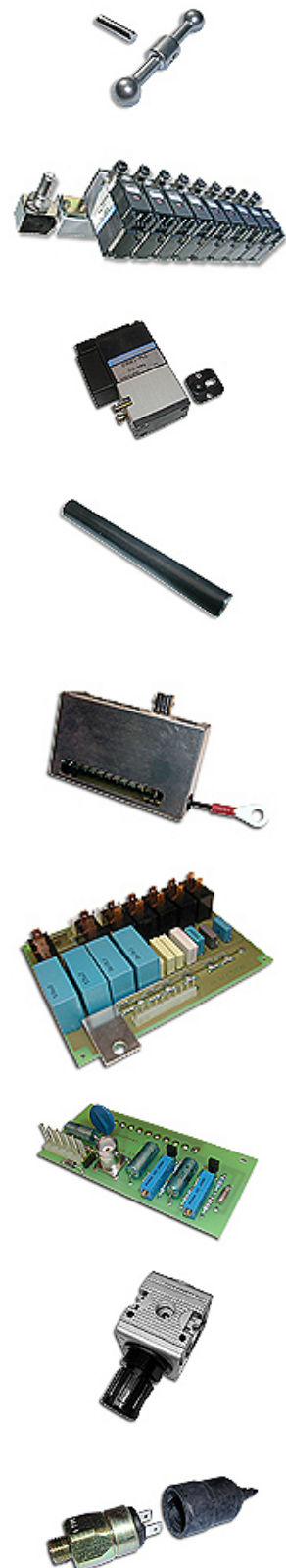
SP700610	Hinge-bow
SP700700	Glass tube
SP700800	Teflon ring
SP701002	Sealing rubber profile (HV-unit)
SP701200	Charge / LE-SW Relay assy.
SP701300	Safety-resistor 15K
SP701400	Charging resistor 10M
SP701504	Capacitor 20nF
SP701505	Capacitor 6nF
SP701506	Capacitor 2nF
SP701507	Capacitor 600pF
SP701600	Capacitor assembly 20/20/50/50pF
SP701800	GND-connector assy.



SP701900	Inductance assembly 1mH
SP702100	HV-Supply KS20P
SP702200	Valve / cylinder unit assembly
SP702204	Cylinder air filter
SP702205	Cylinder CRSM10CVN025 (safety)
SP702206	Cylinder CRRM08CVN025 (all others)
SP702207	Cylinder: reed-switch XRCC1
SP702300	Cylinder: contact assembly
SP702301	Cylinder: Tapped bushing



SP702304	Cylinder: contact
SP702400	Cylinder: valve assembly
SP702401	Cylinder: valve 030E1-PL-L
SP702407	Cylinder: tube 4/2.5
SP703000	PCB M3CTC, charge transfer comparators
SP703100	PCB M3CTR, charge transfer relays
SP703200	PCB M3HVS, HV-Switch
SP704102	Pressure regulator
SP704106	Pressure switch



SP704107	Overpressure valve
SP704109	Compressed air: nipple
SP704110	Compressed air: coupler
SP704111	Air filter housing
SP704112	Air filter
SP704220	ME valve
SP704230	Flush valve
SP704203 SP704204 SP704206	Coupling master (selfsealing) red Coupling master (selfsealing) blue Coupling master (selfsealing) black
SP704300	Gauge 10 bar
SP704400	Valve E121K03



SP081021	MMC81A Microprocessor for MIKE4
SP081012	CAN81 CAN-Interface
SP081014	Adapter CAN-USB opto

