

# Solenoid butterfly valve MC+HTB



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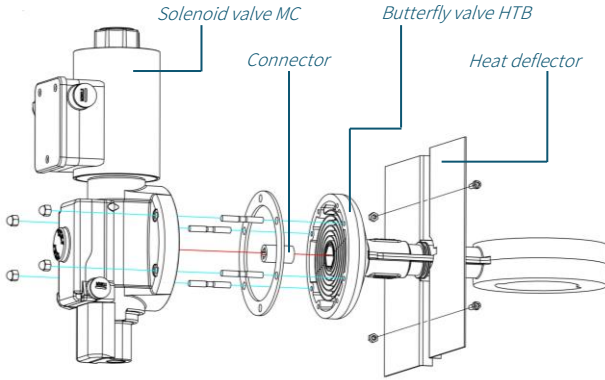
## CHARACTERISTICS

- Used for high/low control or on/off control.
- It consists of a solenoid actuator MC and a butterfly valve HTB.
- Open or closed position can be adjusted independently by a mechanical limit device.
- Quick opening and quick closing or slow opening and quick closing.
- With valve disc position indicator, and on/off position feedback is optional (dry contact signal).
- The temperature of applicable gas is up to 450 °C.

## APPLICATIONS

In combustion system of automatic control, MC+HTB mostly be used to adjust the air for on/off or high/low control. It can also be used for on/off control of flue gas not exceeding 450 °C.

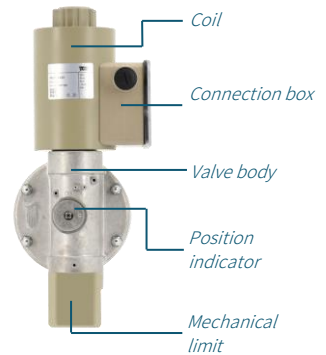
## CONFIGURATION



### Solenoid valve MC

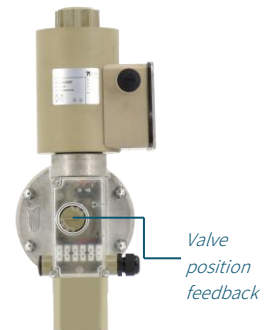
#### Basic version

- Driven by solenoid coil. The time of quick opening or slow opening can choose (quick opening:  $<1$  s; slow opening: adjustable).
- The control board, terminals and power indicator are installed in connection box.
- The valve body is made of die-cast aluminum.
- The valve position can be observed by a valve position indicator.
- The max. opening position and closed position of valve can be manually restricted by a mechanical limit slider.



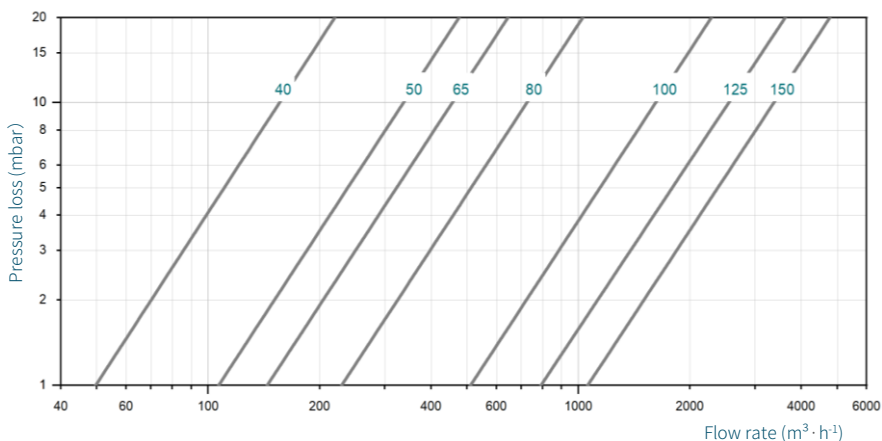
#### Upgrade version MC..F

MC..F adds a new function of valve position feedback on the basis of original valve. The feedback is a dry contact signal, which is normally open or normally closed.



# SPECIFICATION

## Pressure loss (HTB)



- The valve pressure loss when the valve is fully opened as shown above, the air temperature is 20 °C.
- Generally, the flow velocity of pipeline does not exceed 30 m/s, otherwise it may cause the vibration of pipeline.

## Type table

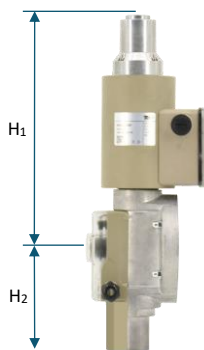
Type	MC	5	Q	/220	F
Nominal Diameter	5: DN40~DN65 (HTB) 6: DN80~DN125(HTB) 8: DN150 (HTB)				
Opening speed	Q: quick opening    S: slow opening				
Main voltage	220: 220VAC				
Feedback	F: valve position feedback				

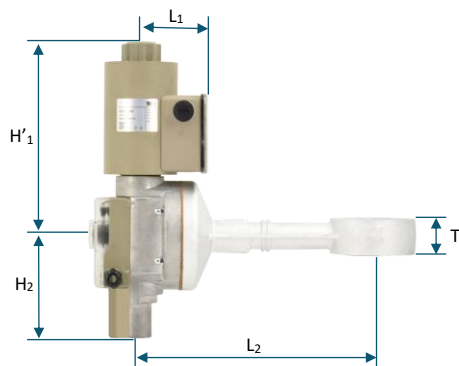
Type	MC 5/220	MC 6/220	MC 8/220
Power/W	65	84	107

## Dimensions

Slow opening, quick closing:



Quick opening, quick closing:

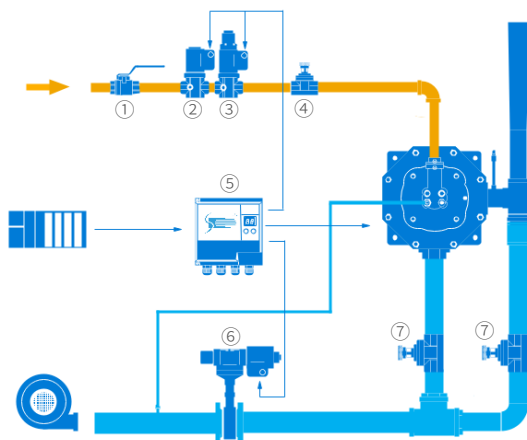


Type	L <sub>1</sub> /mm	L <sub>2</sub> /mm	T /mm	H <sub>1</sub> /mm	H <sub>1</sub> ' /mm	H <sub>2</sub> /mm	Max. inlet pressure/mbar
DN 40	286	77	42	265	228	121	150
DN 50	286	77	42	265	228	121	150
DN 65	286	77	42	265	228	121	150
DN 80	286	77	42	265	228	121	150
DN 100	296	100	42	316	278	121	150
DN 125	308	100	50	316	278	121	150
DN 150	321	100	50	348	-	121	150

*The butterfly valve is fitting between two flanges, and the flanges are PN 1.6 MPa plate flat welded steel pipe series I flanges in GB/T9119-2010.*

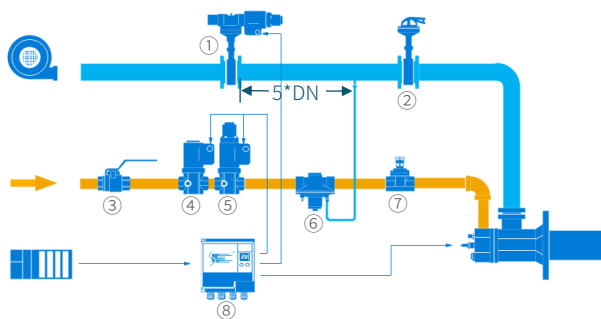
## Solutions

For combustion system with on/off pulse control:



- ① Manual shut-off gas valve
- ② Gas solenoid valve SG..Q
- ③ Gas solenoid valve SG..S
- ④ Linear flow control valve KV
- ⑤ Burner controller SCU 4.1
- ⑥ Air solenoid valve MC+HTB (if nominal diameter < DN40, use the solenoid valve SA series as air shut-off valve)
- ⑦ Manual air valve

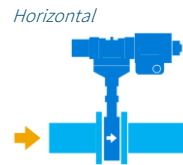
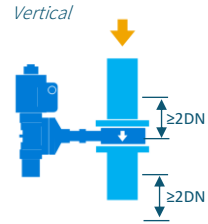
For combustion system with high/low pulse control:



- ① Air solenoid valve MC+HTB
- ② Air valve HK
- ③ Manual shut-off gas valve
- ④ Gas solenoid valve SG..Q
- ⑤ Gas solenoid valve SG..S
- ⑥ Ratio control valve GRC
- ⑦ Linear flow control valve KV
- ⑧ Burner controller SCU 4.1

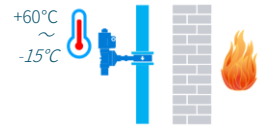
## INSTALLATION

- Installation position: in vertical pipeline or horizontal pipeline. In vertical pipeline, MC must face up, and in horizontal pipeline, MC must be on the top, not upside-down.
- The arrow on valve body indicates the flow direction. Ensure that the length of straight pipe section in front of and behind the valve is longer than  $2 \times DN$ .
- Ambient temperature:  $-15 \sim 60^{\circ}\text{C}$ . Keep away from heat source as much as possible when installing.
- Once the medium temperature exceeds  $250^{\circ}\text{C}$ , a heat deflector(optional) must be installed.



## Wiring

- Connect live wire and neutral wire according to the marks on terminals, and use a BVR wire of  $1 \sim 2.5 \text{ mm}^2$  with withstand voltage over 500 V.
- The feedback of MC..F is dry contact signal, and the normally open or normally closed contact signal can be selected as needs.



*Valve position feedback*



## Attention

- Actuator MB 7 and butterfly valve BVHM must be installed in correct direction. MB 7 and BVHM are supplied separately.
- Do not weld the pipes or flanges after installation to prevent welding melt or other impurities from blocking or damaging the butterfly valve.
- The flange gasket must be correctly positioned when it is installed.

