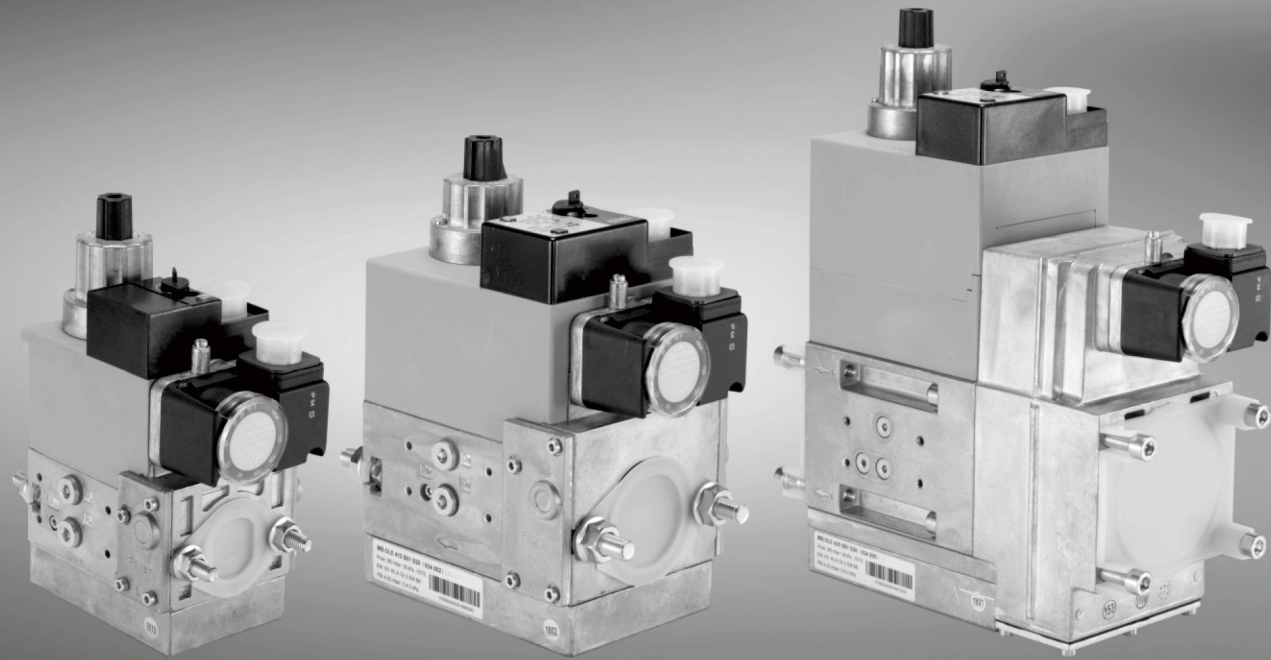


Multi-functional Gas Combined Control Valve MB-DLE



Overview

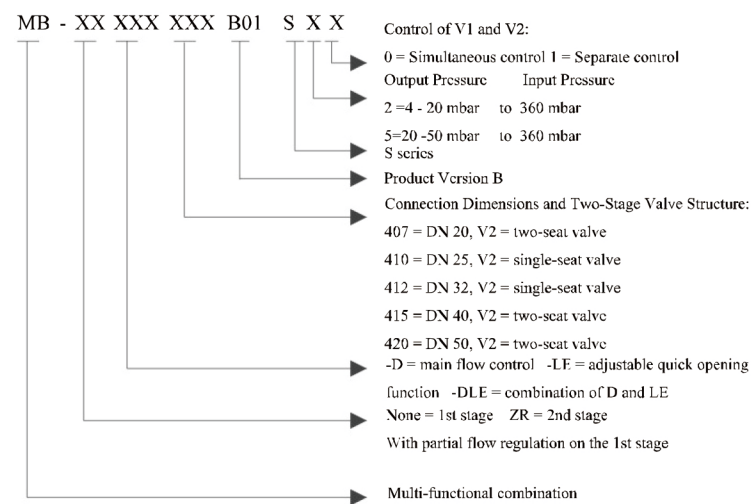
The MB-DLE multi-functional gas combined control valve is a compact assembly of a filter, pressure regulator, valve, and pressure monitor. Different system configurations can be achieved through various combination methods:

- Sediment Collector: Fine filter
- Regulator and Two Valves: B01
- Two-Stage Valve: One one-stage valve and one two-stage valve
- Quick-Opening Valve: One quick-opening valve and one quick/slow-opening valve
- Adjustable Output Pressure: Adjustable output pressure
- High Flow Capacity: High flow output under low pressure differential
- Main Flow Throttling: Adjustable and partially adjustable main flow for V2
- Hydraulic Slow Opening: Hydraulic slow opening
- Easy Installation: Simple installation, compact size, lightweight

Applications

This combined system provides specialized solutions for gas safety and regulation technologies. It is suitable for gas types 1, 2, and 3, as well as other neutral gaseous media.

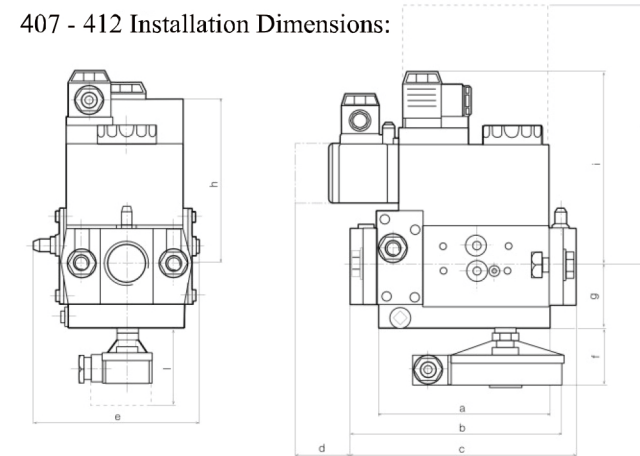
Product Model Description



Technical Specifications

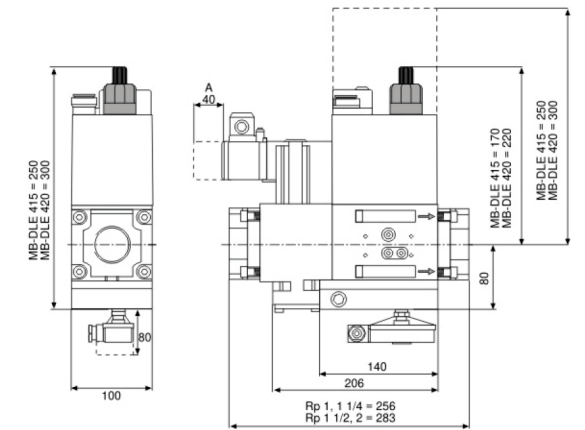
Nominal inner diameter	MB-DLE...407	MB-DLE...410/420	MB-DLE...415/420
Flange with pipe thread to ISO7/1 (DIN 2999)	Rp1/2, 3/4	Rp3/4, 1, 1 - 1/4	Rp1-1/2, Rp2
	And other combinations	And other combinations	And other combinations
Max working pressure	360mbar(36KPa)		
Output Pressure Range	MB...S20/S22; Pa:4mbar to 20mbar		
	MB...S50/S52; Pa:4mbar to 50mbar		
Medium	1,2,3 Gas Series and Other Neutral Gaseous Media		
Ambient Temperature	-15°C to +70°C (when used in liquefied gas equipment, MB-D... shall not operate below 0°C. Only suitable for gaseous liquefied gas, liquefied carbon dioxide with damaged sealing material)		
Dirt Deposition Device	0.8mm mesh sieve, unordered fiber filter, precision filter, two-layer filter replacement can be done without disassembling equipment		
Pressure Monitoring Device	Can be installed with our factory-produced GW...A5 type		
Pressure Regulating Unit	Pressure regulator balances input pressure, when disconnected, valve V1 can achieve tight closure		
	Fixed setting spring fixed device (spring cannot be replaced)		
	No need for top exhaust pipe settings, with built-in pulse branch head		
Solenoid Valve V1	Quick opening, quick closing		
Solenoid Valve V2	Slow opening, quick closing, with main flow restrictor		
Test and Ignition Gas Connection	G 1/8		
Burner and Pressure Monitoring Pbr	Installed after valve V2, pressure monitor can be mounted on the side fitting		
Voltage/Frequency	AC50-60Hz, 220-230V, ±15%+10%, ,		
	preferred voltage AC240V		
Electrical Connection	AC110-120V, DC48VDC24-28V		
	Plug connection for valves and pressure monitors compliant with DINEN175301-803		
Power/Energy Consumption VA	AC230; +20°C		
MB410/412S2050	MB 415S20 50 MB 420S20 80		
MB407S5036	MB 410/412S50 50 MB 415S50 50 MB 420S50 80		
	MB 410/412S22 96 MB 415S22 96 MB 420S22 100		
Starting Time	MB 410/412S52 96 MB 415S52 96 MB 420S52 100		
	100%ED		
Protection Degree	IP54		
Radio Interference	Interference level N		
Materials in Contact with Gas	Housing	Die-cast aluminum	
	Diaphragm, Sealing Parts	NBR-based material, silicone rubber	
	Electromagnetic Drive Device	Steel, brass, aluminum	
Installation Position	Vertical, magnet vertically upward or horizontal, magnet in horizontal state, or between the two positions		

Product External Dimensions (Unit: mm)



d = Location requirements for the pressure monitoring gas
 k = Location requirements for replacing the solenoid
 l = Location requirements for installing the terminal contact K01/1

415 - 420 Installation Dimensions (mm)

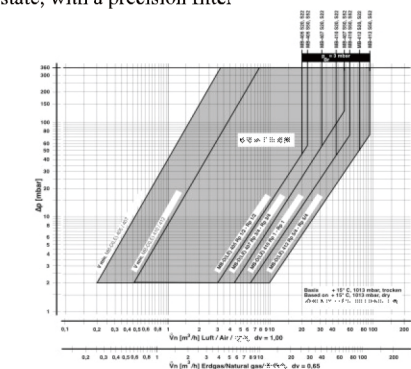


Model	Connection	Installation Dimensions										Weight [kg]		
		110	151	155	40	120	50	46	115	140	150		185	80
MB-DLE407S20	Rp3/4	2.35												
MB-DLE407S50		2.35												
MB-DLE410S20/S22	Rp1-1/4	140	181	185	40	145	50	55	135	160	162	145	80	4.65
MB-DLE410S50/S52		4.75												
MB-DLE412S20/S22		4.75												
MB-DLE412S50/S52		4.75												
MB-DLE415S20/S22	Rp1-1/2	6.6												
MB-DLE415S50/S52		6.6												
MB-DLE420S20/S22	Rp2	7.8												
MB-DLE420S50/S52		7.8												

Pressure and Flow Curve Chart

Volume flow rate - pressure differential - characteristic curve in the regulated state, with a precision filter

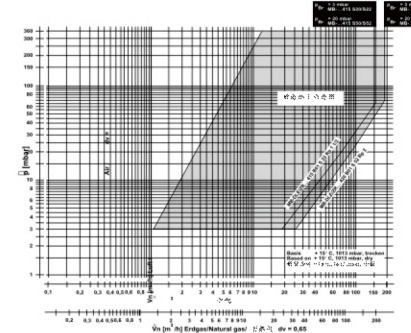
407 - 412



$$f = \sqrt{\frac{\text{Spec. Weight air}}{\text{Spec. weight of the gas used}}}$$

Air Types	Spec. Gravity	dv	f
Natural	0.81	0.65	1.24
Gas	0.58	0.47	1.46
Town Gas	2.08	1.67	0.77
LPG	1.24	1.00	1.00
Air			

415 - 420



$$f = \sqrt{\frac{\text{Dichte Luft}}{\text{Dichte des verweirten Gases}}}$$

Air Types	Spec. Gravity	dv	f
Natural	0.81	0.65	1.24
Gas	0.58	0.47	1.46
Town Gas	2.08	1.67	0.77
LPG	1.24	1.00	1.00
Air			