

rotork®

Keeping the World Flowing
for Future Generations

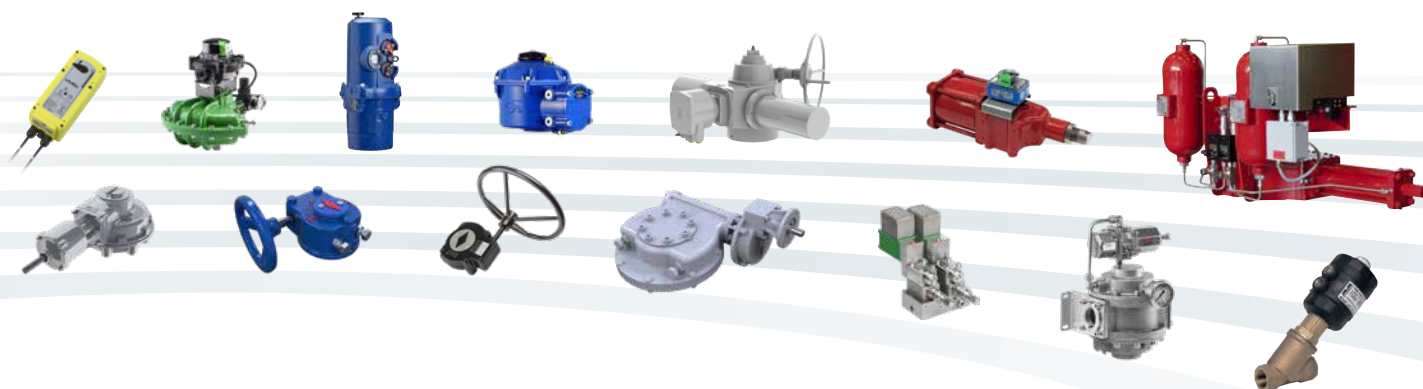
Solenoid Valves



m&m
international

A rotork® Brand

Reliability in critical flow control applications



› **Reliable operation** when it matters

Assured reliability for critical applications and environments. Whether used 24/7 or infrequently, Rotork products will operate reliably and efficiently when called upon.

› **Quality-driven** global manufacturing

Products designed with 60 years of industry and application knowledge. Research and development across all our facilities ensures cutting edge products are available for every application.

› **Customer-focused service** worldwide support

Solving customer challenges and developing new solutions. From initial enquiry through to product installation, long-term after-sales care and Client Support Programmes (CSP).

› **Low cost** of ownership

Long-term reliability prolongs service life. Rotork helps to reduce long term cost of ownership and provides greater efficiency to process and plant.

Solenoid Valves

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Comprehensive product range serving multiple industries

Improved efficiency, assured safety and environmental protection.

Rotork products and services are used throughout industry inclusive of Power, Oil & Gas, Water & Wastewater, HVAC, Marine, Mining, Pulp & Paper, Food & Beverage, Pharmaceutical and Chemical industries around the world.

Market leader technical innovator

The recognised market leader for 60 years.

Our customers have relied upon Rotork for innovative solutions to safely manage the flow of liquids, gases and powders.

Global presence local service

Global company with local support.

Manufacturing sites, service centres, sales offices and *Centres of Excellence* throughout the world provide unrivalled customer services and fast delivery.

Corporate social responsibility

A responsible business leads to being the best business.

We are socially, ethically, environmentally responsible and committed to embedding CSR across all our processes and ways of working.



Rotork are specialist manufacturers of products for flow control, pressure control, flow measurement and pressure measurement. Our solutions are trusted wherever there is a need for high precision and reliability, including oil and gas, pharmaceutical, biomedical and manufacturing industries.

We have production facilities throughout the world, complemented by a large network of distribution and support centres.

A full listing of our worldwide sales and service network is available on our website at www.rotork.com



Worldwide Industry and Application Experience

With over 60 years of extensive knowledge and experience, Rotork has provided products and services worldwide for virtually every industrial actuator application.

Rotork offers a range of precision control and valve accessory products through our prestigious brands, including Fairchild, YTC, Soldo®, Midland-ACS™, Bifold®, Orange, M&M and Alcon:

Instrument Valves

- Valve actuation accessories
- Solenoid valves
- Piston valves
- Instrument valves
- Medium pressure valves
- Subsea valves and connectors

Controllers

- Valve positioners
- Rail systems
- I/P and E/P converters
- Fire protection

Measurement

- Valve position sensors
- Transmitters and switches

Instrument Pumps

- Pumps
- Intensifiers and accumulators

Rotork is proud to offer a diverse range of products which serve many different duties in a wide variety of applications. We also offer a factory customisation service to create one-off units to meet specific needs.



Instrumentation and Control



A **rotork** Brand

Rotork Italy are leading manufacturers of industrial solenoid valves, made under the M&M brand. Whether designing solutions for stand-alone valves or a customised OEM installation we have developed an enviable reputation for quality products, reliability and innovation.

With facilities based in Italy and sales offices worldwide, we can provide solenoid valves to operate a wide variety of applications anywhere in the world.

Our product line covers a full range of valves for general and special-purpose including:

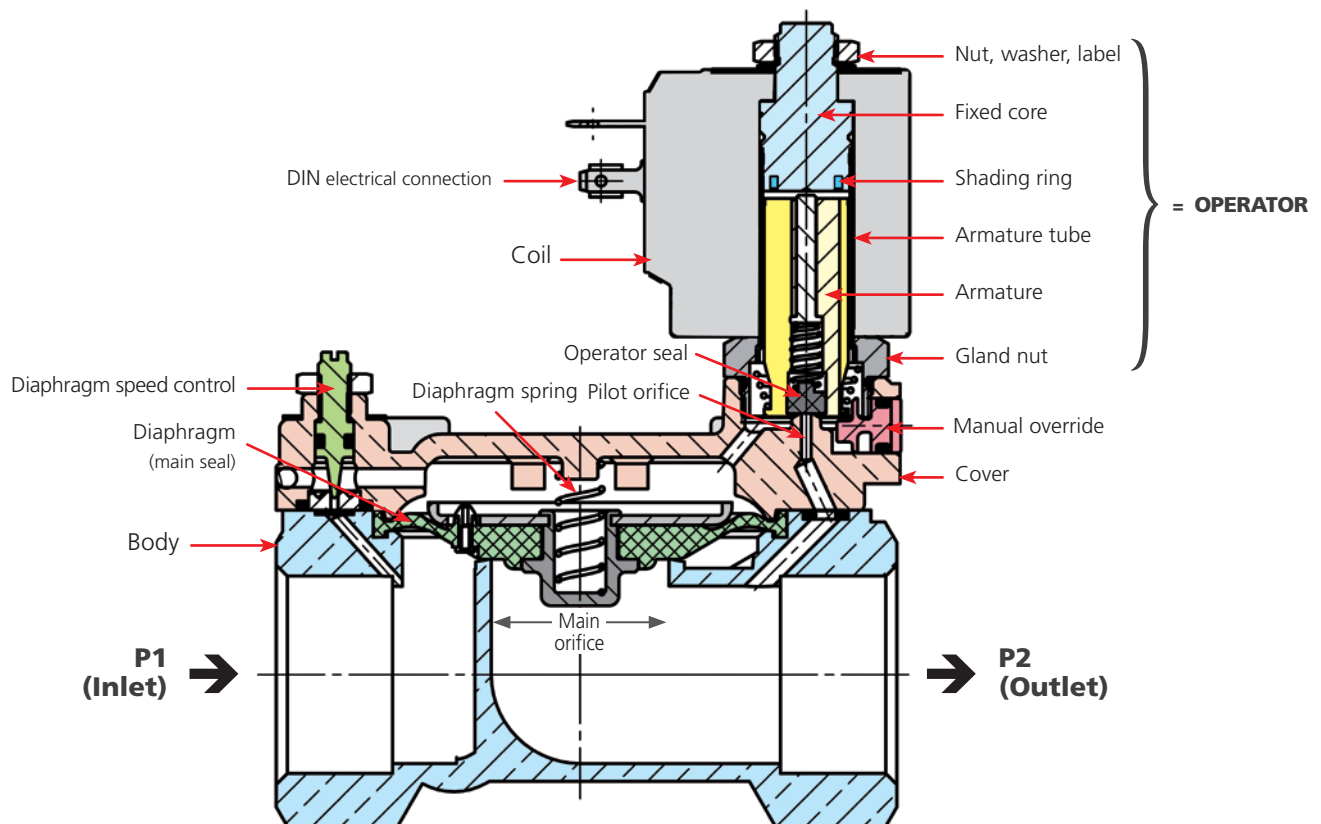
- Air
- Water
- Steam
- Automation
- Actuation
- High Pressure
- Aggressive Media
- Vacuum

Our solenoid valves can be manufactured with coils and enclosures covered by UL to meet application demands.

The advantages of solenoid valves manufactured under the M&M brand include:

- Robust construction for industrial applications featuring stainless steel orifice on most models
- Stainless steel operators with low residual magnetism according to 1.4105 EN 10088 (AISI 430F)
- High quality seal materials
NBR, FKM, EPDM, PTFE, Sigodur (filled PTFE), Ruby, Kalrez®
- Fully interchangeable coils* with a wide range of AC and DC voltages. Coil orientation possible through 360°
- Coils tested 100% in compliance with the current EC directives compliance to RoHS directive and to relevant international standards upon request
- Development and realisation of special projects

*where applicable



Scheme of components of M&M International solenoid valves

Product Index

Valve	Code	Type of Connection	Page
	B298- (2/2 way direct acting) Normally closed	G 1/8" to ISO 228-1	10
	D298/299- (2/2 way direct acting) Normally closed	G 1/8" & 1/4" to ISO 228-1	11
	RD298/299- (2/2 way direct acting) Normally open	G 1/8" & 1/4" to ISO 228-1	12
	B297 & RB297- (2/2 way direct acting) Normally closed and normally open	G 1/8" to ISO 228-1	13
	D262/263- (2/2 way direct acting) Normally closed	G 1/8" & 1/4" to ISO 228-1	14
	RD262/263- (2/2 way direct acting) Normally open	G 1/8" & 1/4" to ISO 228-1	15
	D249- (2/2 way direct acting) Normally closed	G 1/4" to ISO 228-1	16
	D237/238/239- (2/2 way direct acting) Normally closed	G 1/4" to 1/2" to ISO 228-1	17
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	RB214- (2/2 way direct acting) Normally open	G 1/8" to ISO 228-1	19
	RD213- (2/2 way direct acting) Normally open	G 1/8" to ISO 228-1	20
	RD236- (2/2 way direct acting) Normally open	G 1/4" to ISO 228-1	21

Product Index

Valve	Code	Type of Connection	Page
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	B397 & RB397 & SB397- (3/2 way direct acting) Normally closed and normally open	G 1/8" to ISO 228-1	24
	D362/363 & RD-SD-DD-GD362/363- (3/2 way direct acting) Normally closed and normally open	G 1/8" & 1/4" to ISO 228-1	25
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	D884/885/886- (2/2 way pilot operated with assisted lift) Normally closed	G 1/4" to 1/2" to ISO 228-1	28
	D204 - 222 & RD204 - 222- (2/2 way pilot operated) Normally closed and normally open	G 3/8" to 1" to ISO 228-1	29
	B203 - B222 & RB203 - RB222- (2/2 way pilot operated) Normally closed and normally open	G 1/4" to 1" to ISO 228-1	30
	D223 - D225 & RD223 - RD225- (2/2 way pilot operated) Normally closed and normally open	G 1 1/4" to 2" to ISO 228-1	31
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	D634 - D636- (2/2 way pilot operated) Normally closed	G 1/4" to 1/2" to ISO 228-1	33
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Product Index

Valve	Code	Type of Connection	Page
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	LC203 – LC205- (2/2 way latching) Normally closed	G 1/4" to 1/2" to ISO 228-1	36
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	D211- (2/2 way dry armature) Normally closed	G 3/8" to ISO 228-1	38
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Pilot operated

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D264/265/266	32

Latching

LC203/204/205	36
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Automation

Direct acting

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D201 / RD201	18
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SD362/363 / DD362/363 / GD362/363	25
D301 / RD301	27

High pressure

Direct acting

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Pilot operated

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D232/233/234DTW / RD232/233/234DTW	34

Steam

Direct acting

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D237/238/239DL	17
RD236DL	21
D398/399CL	23

Pilot operated

D634/365/636DTT	33
D606/622DTY / RD606/622DTY	35

Compressed air

Direct acting

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Pilot operated

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ADV with solenoid valves	39

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Chemical industry

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Aggressive fluids

Pilot operated

D204-222 / RD204-222	29
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Vacuum

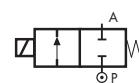
Various part numbers	44
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2/2 way direct acting solenoid valve, G 1/8"

Common features

Body material: stainless steel (1.4305 EN 10088/AISI 303)
 Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
 Operator material: stainless steel
 Protection class: IP 65 (with connector and gasket)

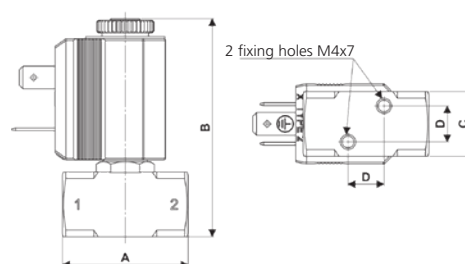
TYPE: B298



Normally Closed



Dimensions & weights		B298
G connection	[ISO 228]	1/8"
A	[mm]	35
B	[mm]	60.6
C	[mm]	18
D	[mm]	10
weight	[kg]	0.1



Flow direction overseat 1 → 2

General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC		
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
B298DVC	1.5	1.3	0	22	18	2250	24 VDC
B298DVE	2.0	1.9	0	18	8	2200	24 V 50/60 Hz
B298DVG	2.5	2.7	0	13	2.5	2400	110 V 50 Hz - 120 V 60 Hz
B298DVH	3.0	3.5	0	8	1	2600	200 V 50 Hz - 220 V 60 Hz
						2700	230 V 50 Hz - 240 V 60 Hz

B298 - FKM seal, NC -

Media: water, oil, air and aggressive fluids
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Seal material: foodgrade FKM
 Coil power: AC 10 VA (holding)
 AC 16 VA (inrush)
 DC 7 W

Chemical industry

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC		
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
B298DKC	1.5	1.3	0	24	24	2250	24 VDC
B298DKE	2.0	1.9	0	18	15	2200	24 V 50/60 Hz
B298DKG	2.5	2.7	0	15	3	2400	110 V 50 Hz - 120 V 60 Hz
						2600	200 V 50 Hz - 220 V 60 Hz
						2700	230 V 50 Hz - 240 V 60 Hz

B298 - Kalrez® seal, NC -

Media: chemicals
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Seal material: Kalrez® Spectrum™ 6375
 Coil power: AC 10 VA (holding)
 AC 16 VA (inrush)
 DC 7 W

Options

Protective treatment (e.g. code B298DKCE)

2/2 way direct acting solenoid valve, G 1/8" – G 1/4"

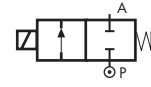
Common features

Body material: stainless steel (1.4305 EN 10088/AISI 303)
Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
Operator material: stainless steel
Protection class: IP 65 (with connector and gasket)

Options

Available with body thread connection 1/8" (e.g. code D298DVC), performance ratings remain the same as D299DVC.
Silver shading ring (e.g. code D299DVCA)
NPT connection on request, minimum batch may be required (e.g. code D299DVCN)

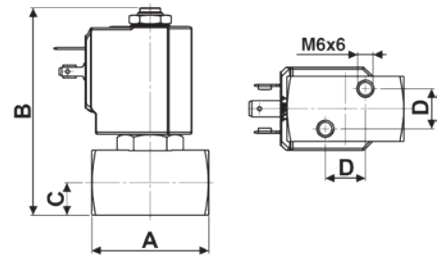
TYPE: D298/299



Normally Closed



Dimensions & weights		D298	D299
G connection	[ISO 228]	1/8"	1/4"
A	[mm]	45	45
B	[mm]	80	80
C	[mm]	12.5	12.5
D	[mm]	15.4	15.4
weight	[kg]	0.36	0.36



Flow direction overseat 1 → 2

General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
D299DVC	1.5	1.2	0	24	24	7250	24 VDC
D299DVG	2.5	3.3	0	18	18	7200	24 V 50/60 Hz
D299DVH	3.0	4.5	0	15	10	7400	110 V 50 Hz - 120 V 60 Hz
D299DVL	4.0	6.0	0	10	5.5	7600	200 V 50 Hz - 220 V 60 Hz
D299DVN	5.0	7.5	0	5	2.5	7700	230 V 50 Hz - 240 V 60 Hz

D298/299 - FKM seal, NC -

Media: water, oil, air and aggressive fluids
Media temperature: -10 to +130 °C
Ambient temperature: -10 to +50 °C
Seal material: foodgrade FKM
Coil power: AC 18 VA (holding)
AC 36 VA (inrush)
DC 14 W

Options

EPDM seal, temperature max. 120 °C
(e.g. code D298DEH)

Chemical industry

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
D299DKE	2.0	2.3	0	20	20	7250	24 VDC
D299DKG	2.5	3.3	0	18	16	7200	24 V 50/60 Hz
D299DKH	3.0	4.5	0	15	8	7400	110 V 50 Hz - 120 V 60 Hz
						7600	200 V 50 Hz - 220 V 60 Hz
						7700	230 V 50 Hz - 240 V 60 Hz

D298/299 - KALREZ® seal, NC -

Media: chemicals
Media temperature: -10 to +130 °C
Ambient temperature: -10 to +50 °C
Seal material: Kalrez® Spectrum™ 6375
Coil power: AC 18 VA (holding)
AC 36 VA (inrush)
DC 14 W

Options

Protective treatment (e.g. code D299DKEF)

High pressure

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	high power - class 'H' only	
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/ Hz]
D299DRB1	1.2	0.7	0	200	110	72Z1	24 VDC
D299DRC1	1.5	1.2	0	200	80	72K1	24 V 50/60 Hz
D299DRE1	2.0	2.3	0	140	30	74K1	110 V 50 Hz - 120 V 60 Hz
D299DRG1	2.5	3.3	0	90	23	77K1	230 V 50 Hz - 240 V 60 Hz
D299DRH1	3.0	4.5	0	50	14		

D298/299 - RUBY seal, NC -

Media¹: water, oil, air and aggressive fluids
Media temperature: -10 to +130 °C
Ambient temperature: -10 to +50 °C
Seal material: Ruby
Coil power: AC 25 VA (holding)
AC 50 VA (inrush)
DC 22 W

Notes

Seamless tube as standard

¹ Not 100% leak-proof when used with air/gases.
Approximate leak rate is 1,5 ml/min at max. OPD.

ATTENTION: When high pressure valves are supplied without a coil, their nameplates display the max. OPD of the valve when equipped with an AC (25 VA) and DC (22 W) coil (as shown in the table above). **When using alternative coil power ratings please ensure to request separately the appropriate nameplate at time of order.**

2/2 way direct acting solenoid valve, G 1/8" – G 1/4"

Common features

Body material: stainless steel (1.4305 EN 10088/AISI 303)
 Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
 Operator material: stainless steel
 Protection class: IP 65 (with connector and gasket)

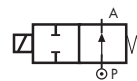
Options

Available with body thread connection 1/8" (e.g. code RD298DVA), performance ratings remain the same as RD299DVA
 Silver shading ring (e.g. code RD299DVCA)
 NPT connection on request, minimum batch may be required (e.g. code RD298DVGJN)

Notes

Normally open version not available for orifice > Ø 3 mm
 Protective treatment of operators is recommended, minimum batch may be required

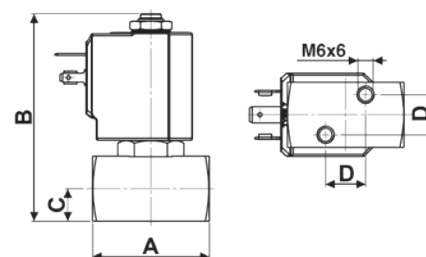
TYPE: RD298/299



Normally Open



Dimensions & Weights		RD298	RD299
G connection	[ISO 228]	1/8"	1/4"
A	[mm]	45	45
B	[mm]	77.5	77.5
C	[mm]	12.5	12.5
D	[mm]	15.4	15.4
weight	[kg]	0.36	0.36



Flow direction overseat 1 → 2

General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils class 'H' only	
			min.	max. AC	max. DC	normally closed and normally open	
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/ Hz]
RD299DVA	1.0	0.6	0	30	30	7251	24 VDC
RD299DVG	2.5	3.3	0	14	14	7201	24 V 50/60 Hz
RD299DVH	3.0	4.5	0	9	9	7401	110 V 50 Hz - 120 V 60 Hz
						7601	200 V 50 Hz - 220 V 60 Hz
						7701	230 V 50 Hz - 240 V 60 Hz

RD298/299 - FKM seal, NO -

Media: water, oil, air and aggressive fluids
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Seal material: foodgrade FKM
 Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Options

EPDM seal, temperature max. 120 °C
 (e.g. code RD299DEG)

High pressure

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils class 'H' only	
			min.	max. AC	max. DC	normally closed and normally open	
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/ Hz]
RD299DRA	1.0	0.6	0	100	100	7251	24 VDC
RD299DRB	1.2	0.7	0	85	85	7201	24 V 50/60 Hz
RD299DRC	1.5	1.2	0	55	55	7401	110 V 50 Hz - 120 V 60 Hz
RD299DRE	2.0	2.3	0	25	25	7601	200 V 50 Hz - 220 V 60 Hz
RD299DRG	2.5	3.3	0	19	19	7701	230 V 50 Hz - 240 V 60 Hz
RD299DRH	3.0	4.5	0	10	10		

RD298/299 - RUBY SEAL, NO -

Media²: water and liquids
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Seal material: Ruby
 Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Notes

² Not 100% leak-proof when used with air/gases.
 Approximate leak rate is 1,5 ml/min at max. OPD.

2/2 way direct acting solenoid valve, G 1/8"

Common features

Media¹: water, oil, air
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Body material: brass (CW719R EN 12165) low lead content
 Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
 Operator material: stainless steel
 Seal material: foodgrade FKM
 Protection class: IP 65 (with connector and gasket)

Options

EPDM seal, temperature max. 120 °C (e.g. code RB297DEC)
 NPT connection on request, minimum batch may be required (e.g. code RB297DVCN)

Notes

¹ Valve suitable for contact with food media as per the EEC Directives and Regulations.
 For more specific information, please contact Rotork Sales Department.

Dimensions & weights		B297	RB297
G connection	[ISO 228]	1/8"	1/8"
A	[mm]	30	30
B	[mm]	65	67.5
C	[mm]	18	18
D	[mm]	7	7
weight	[kg]	0.15	0.15

Automation

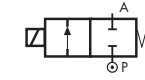
Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
B297DVA	1.0	0.5	0	30	28	2250	24 VDC
B297DVB	1.2	0.7	0	25	22	2200	24 V 50/60 Hz
B297DVC	1.5	1.0	0	22	18	2400	110 V 50 Hz - 120 V 60 Hz
B297DVE	2.0	1.7	0	18	9	2600	200 V 50 Hz - 220 V 60 Hz
B297DVG	2.5	2.3	0	13	3	2700	230 V 50 Hz - 240 V 60 Hz
B297DVH	3.0	3.0	0	8	1		

Automation

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
RB297DVA	1.0	0.5	0	25	25	2250 ¹	24 VDC
RB297DVB	1.2	0.7	0	20	20	2200	24 V 50/60 Hz
RB297DVC	1.5	1.0	0	15	15	2400	110 V 50 Hz - 120 V 60 Hz
RB297DVE	2.0	1.7	0	10	10	2600	200 V 50 Hz - 220 V 60 Hz
RB297DVG	2.5	2.3	0	5	5	2700	230 V 50 Hz - 240 V 60 Hz
RB297DVH	3.0	3.0	0	4.5	4.5		

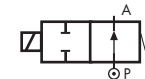
¹ For continuous service in DC we recommend the use of M&M coils 10 Watt, class H (see options on page 41)

TYPE: B297

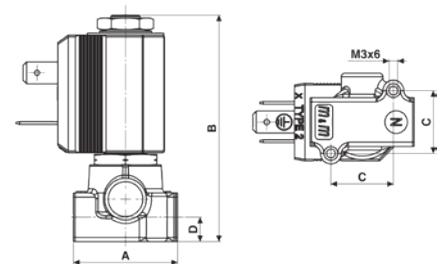


Normally Closed

TYPE: RB297



Normally Open



Flow direction overseat 1 → 2

B297 - FKM seal, NC -

Coil power: AC 10 VA (holding)
 AC 16 VA (inrush)
 DC 7 W

Options

Manual override (e.g. code B297DVCM)
 Electroless nickel plating treatment (e.g. code B297DVEK)

RB297 - FKM seal, NO -

Coil power: AC 10 VA (holding)
 AC 16 VA (inrush)
 DC 7 W

2/2 way direct acting solenoid valve, G 1/8" – G 1/4"

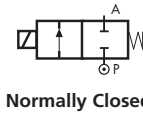
Common features

Body material: brass (CW617N EN 12165)
Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
Operator material: stainless steel
Protection class: IP 65 (with connector and gasket)

Options

Available with body thread connection 1/8" (e.g. code D262DVH), performance ratings remain the same as D263DVH.
Manual override (e.g. code D262DVCM).

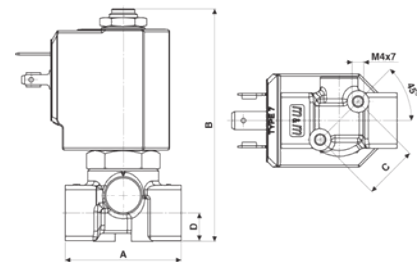
TYPE: D262/263



Normally Closed



Dimensions & Weights		D262	D263
G connection	[ISO 228]	1/8"	1/4"
A	[mm]	40	40
B	[mm]	77.5	77.5
C	[mm]	18.5	18.5
D	[mm]	9.5	9.5
weight	[kg]	0.26	0.26



Flow direction overseat 1 → 2

General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC		
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
D263DVA	1.0	0.5	0	30	30	7250	24 VDC
D263DVC	1.5	1.3	0	24	24	7200	24 V 50/60 Hz
D263DVG	2.5	3.4	0	18	16	7400	110 V 50 Hz - 120 V 60 Hz
D263DVH	3.0	4.5	0	15	10	7600	200 V 50 Hz - 220 V 60 Hz
D263DVL ¹	4.0	6.0	0	10	5	7700	230 V 50 Hz - 240 V 60 Hz
D263DVN ¹	5.0	7.5	0	5	2,5		
D263DVP ¹	6.0	8.0	0	3	1		

¹ Manual override not available for orifice > Ø 3 mm

D262/263 - FKM seal, NC -

Media: water, oil, air
Media temperature: -10 to +130 °C
Ambient temperature: -10 to +50 °C
Seal material: foodgrade FKM
Coil power: AC 18 VA (holding)
AC 36 VA (inrush)
DC 14 W

Options

EPDM seal, temperature max. 120 °C (e.g. code D262DEH)
For vacuum see page 37

Steam

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC		
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
D263DLA	1.0	0.5	0	9	9	7251	24 VDC
D263DLC	1.5	1.3	0	9	9	7201	24 V 50/60 Hz
D263DLG	2.5	3.4	0	9	8	7401	110 V 50 Hz - 120 V 60 Hz
D263DLH	3.0	4.5	0	9	5	7601	200 V 50 Hz - 220 V 60 Hz
						7701	230 V 50 Hz - 240 V 60 Hz

D262/263 - FILLED PTFE seal, NC -

Media: steam
Media temperature: -10 to +180 °C
Ambient temperature: -10 to +70 °C
Seal material: Sigodur (filled PTFE)
Coil power: AC 18 VA (holding)
AC 36 VA (inrush)
DC 14 W

Notes

Seamless tube as standard

High pressure

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC		
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
D263DRB1	1.2	0.7	0	200	60	72Z1	24 VDC
D263DRC1	1.5	1.3	0	200	35	72K1	24 V 50/60 Hz
D263DRE1	2.0	2.2	0	120	25	74K1	110 V 50 Hz - 120 V 60 Hz
D263DRH1	3.0	4.5	0	50	11	77K1	230 V 50 Hz - 240 V 60 Hz

D262/263 - RUBY seal, NC -

Media²: water, oil, liquids
Media temperature: -10 to +130 °C
Ambient temperature: -10 to +50 °C
Seal material: Ruby
Coil power: AC 25 VA (holding)
AC 50 VA (inrush)
DC 22 W

Notes

Seamless tube as standard

² Not 100% leak-proof when used with air/gases.

Approximate leak rate is 1,5 ml/min at max. OPD.

ATTENTION: When high pressure valves are supplied without a coil, their nameplates display the max. OPD of the valve when equipped with an AC (25 VA) and DC (22 W) coil (as shown in the table above). **When using alternative coil power ratings please ensure to request separately the appropriate nameplate at time of order.**

2/2 way direct acting solenoid valve, G 1/8" – G 1/4"

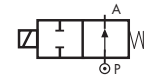
Common features

Body material: brass (CW617N EN 12165)
 Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
 Operator material: stainless steel
 Protection class: IP 65 (with connector and gasket)

Options

Available with body thread connection 1/8" (e.g. code RD262DVA), performance ratings remain the same as RD263DVA.
 For steam version with filled PTFE seal (Sigodur) see valve model **RD236DL** on page 21
 For high pressure version with Ruby seal see valve model **RD236DR-1** on page 21

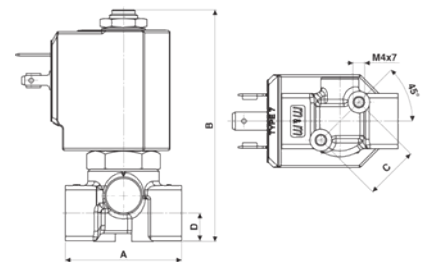
TYPE: RD262/263



Normally Open



Dimensions & Weights		RD262	RD263
G connection	[ISO 228]	1/8"	1/4"
A	[mm]	40	40
B	[mm]	77.7	77.7
C	[mm]	18.5	18.5
D	[mm]	9.5	9.5
weight	[kg]	0.26	0.26



Flow direction overseat 1 → 2

General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	class 'H' only
code	[mm]	[l/min]	[barg]	[barg]	[barg]		[Volts/Hz]
RD263DVA	1.0	0.5	0	30	30	7251	24 VDC
RD263DVC	1.5	1.3	0	24	24	7201	24 V 50/60 Hz
RD263DVG	2.5	3.4	0	16	16	7401	110 V 50 Hz - 120 V 60 Hz
RD263DVH	3.0	4.5	0	10	10	7601	200 V 50 Hz - 220 V 60 Hz
						7701	230 V 50 Hz - 240 V 60 Hz

RD262/263 - FKM seal, NO -

Media: water, oil, air
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Seal material: foodgrade FKM
 Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Options

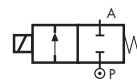
EPDM seal, temperature max. 120 °C (e.g. code RD262DEH)

2/2 way direct acting solenoid valve, G 1/4"

Common features

Media: water, oil, air
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Body material: brass (CW617N EN 12165)
 Operator material: stainless steel
 Protection class: IP 65 (with connector and gasket)

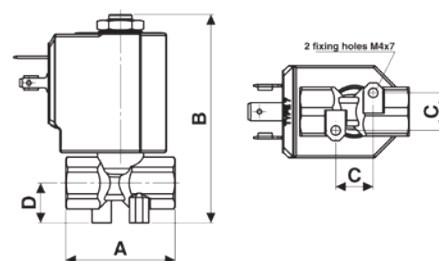
TYPE: D249



Normally Closed



Dimensions & Weights		D249
G connection	[ISO 228]	1/4"
A	[mm]	38
B	[mm]	72.1
C	[mm]	13
D	[mm]	13.8
weight	[kg]	0.18



Flow direction overseat 1 → 2

Compressed air

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC		
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
D249DVD	1.7	1.5	0	25	24	7250	24 VDC
D249DVF	2.2	2.4	0	18	16	7200	24 V 50/60 Hz
D249DVH*	3.0	4.5	0	15	10	7400	110 V 50 Hz - 120 V 60 Hz
						7600	200 V 50 Hz - 220 V 60 Hz
						7700	230 V 50 Hz - 240 V 60 Hz

* Minimum batch may be required

D249 - FKM seal, NC -

Seal material: FKM
 Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Options

EPDM seal, temperature max. 120 °C (e.g. code D249DEF)

2/2 way direct acting solenoid valve, G 1/4" – G 1/2"

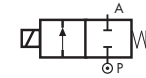
Common features

Body material: brass (CW617N EN 12165)

Operator material: stainless steel

Protection class: IP 65 (with connector and gasket)

TYPE: D237/238/239



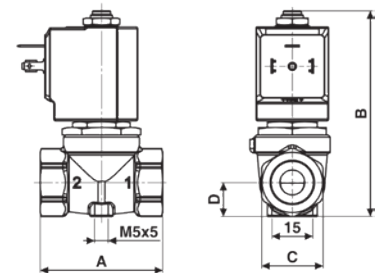
Normally Closed



Dimensions & Weights		D237	D238	D239
G connection	[ISO 228]	1/4"	3/8"	1/2"
A	[mm]	54	54	54
B	[mm]	89	89	89
C	[mm]	Hex 27	Hex 27	Hex 27
D	[mm]	15	15	15
weight	[kg]	0.45	0.4	0.4

Automation

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
D237DVU	10.5	21	0	0.4	0.2	7250	24 VDC
D238DVU	10.5	25	0	0.4	0.2	7200	24 V 50/60 Hz
D239DVU	10.5	25	0	0.4	0.2	7400	110 V 50 Hz - 120 V 60 Hz
						7600	200 V 50 Hz - 220 V 60 Hz
						7700	230 V 50 Hz - 240 V 60 Hz



Flow direction overseat 1 → 2

D237/238/239DVU - FKM seal, NC -

Media: water, oil, air

Media temperature: -10 to +130 °C

Ambient temperature: -10 to +50 °C

Seal material: FKM

Coil power: AC 18 VA (holding)

AC 36 VA (inrush)

DC 14 W

Options

NBR seal, temperature max. 90 °C (e.g. code D237DBU)

EPDM seal, temperature max. 120 °C (e.g. code D239DEU)

Automation

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
D238DVL	4.0	6	0	8	5	7250	24 VDC
D238DVN	5.0	7.5	0	5	2	7200	24 V 50/60 Hz
D238DVP	6.0	8.5	0	3.5	1.1	7400	110 V 50 Hz - 120 V 60 Hz
D239DVL	3.0	4.5	0	17	12	7600	200 V 50 Hz - 220 V 60 Hz
D239DVH	4.0	6	0	8	5	7700	230 V 50 Hz - 240 V 60 Hz
D239DVN	5.0	7.5	0	5	2		
D239DVP	6.0	8.5	0	3.5	1.1		

D238/239 - FKM seal, NC -

Media: water, oil, air

Media temperature: -10 to +130 °C

Ambient temperature: -10 to +50 °C

Orifice material: stainless steel (1.4305 EN 10088/AISI 303)

Seal material: FKM

Coil power: AC 18 VA (holding)

AC 36 VA (inrush)

DC 14 W

Options

NBR seal, temperature max. 90 °C (e.g. code D239DBP)

EPDM seal, temperature max. 120 °C (e.g. code D238DEP)

Notes

Same operator as D262/263DL-

Steam

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
D238DLH	3.0	4.5	0	9	8	7251	24 VDC
D238DLN	5.0	7.5	0	5	2	7201	24 V 50/60 Hz
D239DLI	3.5	5.0	0	9	5	7401	110 V 50 Hz - 120 V 60 Hz
						7601	200 V 50 Hz - 220 V 60 Hz
						7701	230 V 50 Hz - 240 V 60 Hz

D238/239 - FILLED PTFE seal, NC -

Media: steam

Media temperature: -10 to +180 °C

Ambient temperature: -10 to +70 °C

Orifice material: stainless steel (1.4305 EN 10088/AISI 303)

Seal material: Sigodur (filled PTFE)

Coil power: AC 18 VA (holding)

AC 36 VA (inrush)

DC 14 W

Notes

Seamless tube as standard

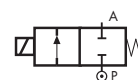
Same operator as D262/263DL-

2/2 way direct acting solenoid valve, flange 32x32

Common features

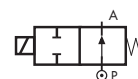
Body material: brass (CW617N EN 12165)
Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
Operator material: stainless steel
Protection class: IP 65 (with connector and gasket)

TYPE: D201



Normally Closed

TYPE: RD201



Normally Open

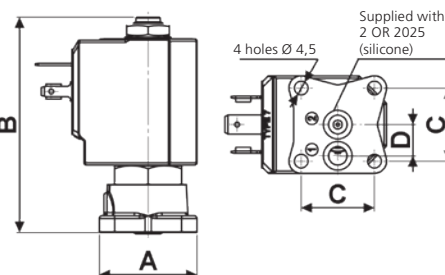


Dimensions & Weights		D201	RD201
G connection	[ISO 228G]	/	/
A	[mm]	Ø 32	Ø 32
B	[mm]	70.6	68.4
C	[mm]	24	24
D	[mm]	10.25	10.25
weight	[kg]	0.25	0.3

Automation

Valve	Nominal Ø	Flow rate Kvs	OPD		
			min.	max. AC	max. DC
code	[mm]	[l/min]	[barg]	[barg]	[barg]
D201DVC	1.5	1.3	0	24	24
D201DVE	2.0	2.2	0	20	20
D201DVG	2.5	3.4	0	18	18
D201DVH	3.0	4.5	0	15	10

Coils	
code	[Volts/Hz]
7250	24 VDC
7200	24 V 50/60 Hz
7400	110 V 50 Hz - 120 V 60 Hz
7600	200 V 50 Hz - 220 V 60 Hz
7700	230 V 50 Hz - 240 V 60 Hz



Flow direction overseat 1 → 2

D201 - FKM seal, NC -

Media: water, oil, air
Media temperature: -10 to +130 °C
Ambient temperature: -10 to +50 °C
Seal material: foodgrade FKM
Coil power: AC 18 VA (holding)
AC 36 VA (inrush)
DC 14 W

Options

EPDM seal, temperature max. 120 °C (e.g. code D201DEC)
Manual override (e.g. code D201DVGM)

Automation

Valve	Nominal Ø	Flow rate Kvs	OPD		
			min.	max. AC	max. DC
code	[mm]	[l/min]	[barg]	[barg]	[barg]
RD201DVC	1.5	1.3	0	24	24
RD201DVG	2.5	3.4	0	16	16
RD201DVH	3.0	4.5	0	10	10

Coils class 'H' only	
code	[Volts/Hz]
7251	24 VDC
7201	24 V 50/60 Hz
7401	110 V 50 Hz - 120 V 60 Hz
7601	200 V 50 Hz - 220 V 60 Hz
7701	230 V 50 Hz - 240 V 60 Hz

RD201 - FKM seal, NO -

Media: water, oil, air
Media temperature: -10 to +130 °C
Ambient temperature: -10 to +50 °C
Seal material: foodgrade FKM
Coil power: AC 18 VA (holding)
AC 36 VA (inrush)
DC 14 W

Options

EPDM seal, temperature max. 120 °C (e.g. code RD201DEG)

High pressure

Valve	Nominal Ø	Flow rate Kvs	OPD		
			min.	max. AC	max. DC
code	[mm]	[l/min]	[barg]	[barg]	[barg]
RD201DRC	1.5	1.3	0	55	55
RD201DRE	2.0	2.2	0	25	25
RD201DRH	3.0	4.5	0	10	10

Coils class 'H' only	
code	[Volts/Hz]
7251	24 VDC
7201	24 V 50/60 Hz
7401	110 V 50 Hz - 120 V 60 Hz
7601	200 V 50 Hz - 220 V 60 Hz
7701	230 V 50 Hz - 240 V 60 Hz

RD201 - RUBY seal, NO -

Media: water, oil, liquids
Media temperature: -10 to +130 °C
Ambient temperature: -10 to +50 °C
Seal material: Ruby
Coil power: AC 18 VA (holding)
AC 36 VA (inrush)
DC 14 W

Notes

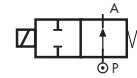
¹ Not 100% leak-proof when used with air/gases.
Approximate leak rate is 1,5 ml/min at max. OPD

2/2 way direct acting solenoid valve, G 1/8"

Common features

Media: water, oil, air
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Body material: brass (CW617N EN 12165)
 Operator material: stainless steel
 Protection class: IP 65 (with connector and gasket)

TYPE: RB214



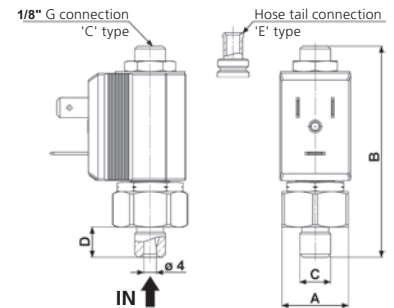
Normally Open



Dimensions & Weights		RB214
G connection	[ISO 228]	1/8"
A	[mm]	21
B	[mm]	66.5
C	[mm]	1/8"
D	[mm]	9.5
weight	[kg]	0.06

Compressed air

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
RB214CVD	1.7	1.2	0	14	14	2250	24 VDC
						2200	24 V 50/60 Hz
						2400	110 V 50 Hz - 120 V 60 Hz
						2600	200 V 50 Hz - 220 V 60 Hz
						2700	230 V 50 Hz - 240 V 60 Hz



RB214 - FKM seal, NO -

Seal material: foodgrade FKM
 Coil power: AC 10 VA (holding)
 AC 16 VA (inrush)
 DC 7 W

Options

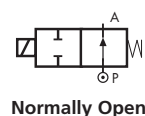
Armature tube with hose tail Ø 6 mm (e.g. code RB214EVD)
 EPDM seal, temperature max. 120 °C (e.g. code RB214CED)

2/2 way direct acting solenoid valve, G 1/8"

Common features

Media: water, oil, air
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Body material: brass (CW617N EN 12165)
 Operator material: stainless steel
 Protection class: IP 65 (with connector and gasket)

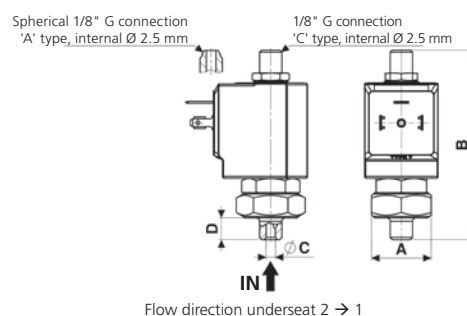
TYPE: RD213



Dimensions & Weights		RD213
G connection	[ISO 228]	1/8"
A	[mm]	Hex 26
B	[mm]	82.5
C	[mm]	4
D	[mm]	9.5
weight	[kg]	0.1

Compressed air

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC		
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
RD213CVG	2.5	2.4	0	16	16	7250	24 VDC
						7200	24 V 50/60 Hz
						7400	110 V 50 Hz - 120 V 60 Hz
						7600	200 V 50 Hz - 220 V 60 Hz
						7700	230 V 50 Hz - 240 V 60 Hz



RD213 - FKM seal, NO -

Seal material: foodgrade FKM
 Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Options

EPDM seal, temperature max. 120 °C (e.g. code RD213CEG)
 Armature tube with spherical 1/8" G connection
 (e.g. code RD213AVG)

2/2 way direct acting solenoid valve, G 1/4"

Common features

Body material: brass (CW617N EN 12165)
Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
Operator material: stainless steel
Protection class: IP 65 (with connector and gasket)

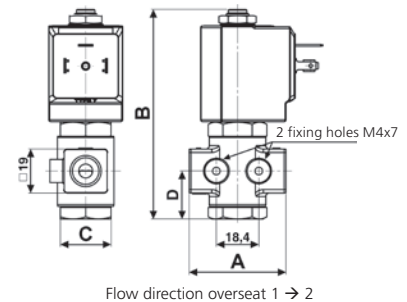
TYPE: RD236

Normally Open



Dimensions & Weights		RD236
G connection	[ISO 228]	1/4"
A	[mm]	47*
B	[mm]	91
C	[mm]	Hex 22
D	[mm]	20.75
weight	[kg]	0.25

*Since July 2014



General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
RD236DVA	1.0	0.5	0	25	25	7250	24 VDC
RD236DVC	1.5	1.3	0	20	20	7200	24 V 50/60 Hz
RD236DVE	2.0	2.0	0	18	18	7400	110 V 50 Hz - 120 V 60 Hz
RD236DVG	2.5	2.8	0	15	15	7600	200 V 50 Hz - 220 V 60 Hz
RD236DVH	3.0	3.5	0	12	12	7700	230 V 50 Hz - 240 V 60 Hz
RD236DVM	4.5	5.5	0	5	5		
RD236DVP	6.0	8.5	0	2	2		

RD236 - FKM seal, NO -

Media: water, oil, air
Media temperature: -10 to +130 °C
Ambient temperature: -10 to +50 °C
Seal material: foodgrade FKM
Coil power: AC 18 VA (holding)
AC 36 VA (inrush)
DC 14 W

Steam

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
RD236DLA	1.0	0.5	0	9	9	7251	24 VDC
RD236DLC	1.5	1.3	0	9	9	7201	24 V 50/60 Hz
RD236DLE	2.0	2.0	0	9	9	7401	110 V 50 Hz - 120 V 60 Hz
RD236DLH	3.0	3.5	0	9	9	7601	200 V 50 Hz - 220 V 60 Hz
						7701	230 V 50 Hz - 240 V 60 Hz

RD236 - FILLED PTFE seal, NO -

Media: steam
Media temperature: -10 to +180 °C
Ambient temperature: -10 to +70 °C
Seal material: Sigodur (filled PTFE)
Coil power: AC 18 VA (holding)
AC 36 VA (inrush)
DC 14 W

Notes

Seamless tube as standard

High pressure

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
RD236DRA1	1.0	0.5	0	180	180	7221	24 VDC
RD236DRC1	1.5	1.3	0	150	150	72K1	24 V 50/60 Hz
RD236DRE1	2.0	2.0	0	60	60	74K1	110 V 50 Hz - 120 V 60 Hz
RD236DRG1	2.5	2.8	0	37	37	77K1	230 V 50 Hz - 240 V 60 Hz
RD236DRH1	3.0	3.5	0	28	28		

RD236 - RUBY seal, NO -

Media¹: water, oil, liquids
Media temperature: -10 to +130 °C
Ambient temperature: -10 to +50 °C
Seal material: Ruby
Coil power: AC 25 VA (holding)
AC 50 VA (inrush)
DC 22 W

Notes

Seamless tube as standard

¹ Not 100% leak-proof when used with air/gases.
Approximate leak rate is 1,5 ml/min at max. OPD.

3/2 way direct acting solenoid valve, G 1/8"

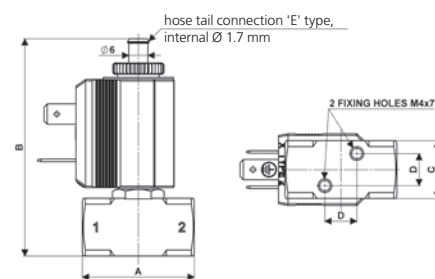
Common features

Media: water, oil, air and aggressive fluids
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Body material: stainless steel (1.4305 EN 10088/AISI 303)
 Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
 Operator material: stainless steel
 Seal material: foodgrade FKM
 Protection class: IP 65 (with connector and gasket)

TYPE: B398



Dimensions & weights		B398
G connection	[ISO 228]	1/8"
A	[mm]	35
B	[mm]	68
C	[mm]	18
D	[mm]	10
weight	[kg]	0.1



Flow direction underseat 2 → 1

General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC		
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
B398EVB	1.2	0.7	0	15	15	2250	24 VDC
B398EVC	1.5	1.0	0	10	10	2200	24 V 50/60 Hz
B398EVE	2.0	1.9	0	5	5	2400	110 V 50 Hz - 120 V 60 Hz
B398EVG	2.5	2.7	0	3	3	2600	200 V 50 Hz - 220 V 60 Hz
						2700	230 V 50 Hz - 240 V 60 Hz

B398 - FKM seal, NC -

Coil power: AC 10 VA (holding)
 AC 16 VA (inrush)
 DC 7 W

3/2 way direct acting solenoid valve, G 1/8" – G 1/4"

Common features

Body material: stainless steel (1.4305 EN 10088/AISI 303)
Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
Operator material: stainless steel
Protection class: IP 65 (with connector and gasket)

Options

Available with body thread connection 1/8" (e.g. code D398DVC), performance ratings remain the same as D399DVC.
NPT connection on request, minimum batch may be required (e.g. code RD399CVGN)

TYPE: D398/399



Normally Closed

TYPE: RD398/399



Normally Open

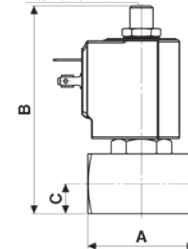


Dimensions & weights		D398	D399
G connection	[ISO 228]	1/8"	1/4"
A	[mm]	45	45
B	[mm]	87	87
C	[mm]	12.5	12.5
D	[mm]	15.4	15.4
weight	[kg]	0.35	0.35

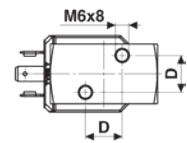
General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
D399CVC	1.5	1.3	0	18	18	7250	24 VDC
D399CVE	2.0	2.2	0	10	10	7200	24 V 50/60 Hz
D399CVG	2.5	3.4	0	7	7	7400	110 V 50 Hz - 120 V 60 Hz
D399CVH	3.0	4.5	0	5	5	7600	200 V 50 Hz - 220 V 60 Hz
						7700	230 V 50 Hz - 240 V 60 Hz

1/8" G connection "C" type, internal Ø 2.5 mm



Spherical 1/8" G connection "A" type, internal Ø 2.5 mm



D398/399 - FKM seal, NC -

Media: water, oil, air and aggressive fluids
Media temperature: -10 to +130 °C
Ambient temperature: -10 to +50 °C
Seal material: foodgrade FKM
Coil power: AC 18 VA (holding)
AC 36 VA (inrush)
DC 14 W

Options

Armature tube with spherical 1/8" G connection (e.g. code D398AVC)
Silver shading ring (e.g. code D398CVGA)
UL approved coils (e.g. code 770R)

Steam

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
D399CLC	1.5	1.3	0	9	9	7251	24 VDC
D399CLE	2.0	2.2	0	9	9	7201	24 V 50/60 Hz
D399CLH	3.0	4.5	0	5	5	7401	110 V 50 Hz - 120 V 60 Hz
						7601	200 V 50 Hz - 220 V 60 Hz
						7701	230 V 50 Hz - 240 V 60 Hz

D398/399 - Sigodur seal, NC -

Media: steam
Media temperature: -10 to +180 °C
Ambient temperature: -10 to +70 °C
Seal material: Sigodur (filled PTFE)
Coil power: AC 18 VA (holding)
AC 36 VA (inrush)
DC 14 W

Options

Silver shading ring (e.g. code D398CLCA)

Notes

Seamless tube as standard

General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
RD399CVC	1.5	1.3	0	15	15	7251	24 VDC
RD399CVE	2.0	2.2	0	10	10	7201	24 V 50/60 Hz
RD399CVH	3.0	4.5	0	4	4	7401	110 V 50 Hz - 120 V 60 Hz
						7601	200 V 50 Hz - 220 V 60 Hz
						7701	230 V 50 Hz - 240 V 60 Hz

RD398/399 - FKM seal, NO -

Media: water, oil, air and aggressive fluids
Media temperature: -10 to +130 °C
Ambient temperature: -10 to +50 °C
Seal material: foodgrade FKM
Coil power: AC 18 VA (holding)
AC 36 VA (inrush)
DC 14 W

Notes

Protective treatment of operators is recommended, minimum batch may be required.

3/2 way direct acting solenoid valve, G 1/8"

Common features

Media¹: water, oil, air
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Body material: brass (CW719R EN 12165) low lead content
 Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
 Operator material: stainless steel
 Seal material: foodgrade FKM
 Protection class: IP 65 (with connector and gasket)

Options

EPDM seal, temperature max. 120 °C (e.g. code RB397CEC)
 Electroless nickel plating treatment (e.g. code B397CVCK)

Notes

¹ Valve suitable for contact with food media as per the EEC Directives and Regulations.
 For more specific information, please contact Rotork Sales Department.

Dimensions & weights		B397	RB397	SB397
G connection	[ISO 228]	1/8"	1/8"	1/8"
A	[mm]	30	30	30
B	[mm]	67.8	72.5	67.8
C	[mm]	18	18	18
D	[mm]	7	7	7
weight	[kg]	0.15	0.16	0.15

General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC		
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
B397CVA	1.0	0.5	0	18	18	2250	24 VDC
B397CVB	1.2	0.7	0	15	15	2200	24 V 50/60 Hz
B397CVC	1.5	1.0	0	10	10	2400	110 V 50 Hz - 120 V 60 Hz
B397CVE	2.0	1.9	0	5	5	2600	200 V 50 Hz - 220 V 60 Hz
B397CVH	3.0	3.5	0	2	2	2700	230 V 50 Hz - 240 V 60 Hz

Automation

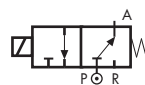
Valve	Nominal Ø		Flow rate Kvs	OPD			Coils	
	1 → 2	1 → 3		min.	max. AC	max. DC		
code	[mm]	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
SB397CVB	1.2	1.7	0.7	0	6	3	2250	24 VDC
SB397CVC	1.5	1.7	1.0	0	4.5	2	2200	24 V 50/60 Hz
							2400	110 V 50 Hz - 120 V 60 Hz
							2600	200 V 50 Hz - 220 V 60 Hz
							2700	230 V 50 Hz - 240 V 60 Hz

Automation

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC		
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
RB397CVA	1.0	0.5	0	15	12	2250 ¹	24 VDC
RB397CVB	1.2	0.7	0	15	12	2200	24 V 50/60 Hz
RB397CVC	1.5	1.0	0	10	8	2400	110 V 50 Hz - 120 V 60 Hz
RB397CVE	2.0	1.9	0	8	6	2600	200 V 50 Hz - 220 V 60 Hz
RB397CVG	2.5	2.5	0	4	4	2700	230 V 50 Hz - 240 V 60 Hz
RB397CVH	3.0	3.5	0	3.5	3.5		

¹ For continuous service in DC we recommend the use of M&M coils 10 Watt, class H (see options on page 41)

TYPE: SB397



Normally Open

TYPE: B297

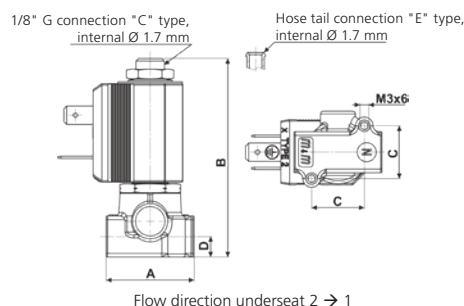


Normally Closed

TYPE: RB397



Normally Open



B397 - FKM seal, NC

Coil power: AC 10 VA (holding)
 AC 16 VA (inrush)
 DC 7 W

Options

Manual override (e.g. code B397CVBM)
 Armature tube with hose tail Ø 6 mm (e.g. code B397EVE)
 UL approved coils (e.g. code 270R)

SB397 - FKM seal, 2nd SERVICE -

Coil power: AC 10 VA (holding)
 AC 16 VA (inrush)
 DC 7 W

Options

Manual override (e.g. code SB397CVCMM).

Notes

Flow direction: **OFF 3 → 1 - ON 1 → 2**

RB397 - FKM seal, NO

Coil power: AC 10 VA (holding)
 AC 16 VA (inrush)
 DC 7 W

3/2 way direct acting solenoid valve, G 1/8" – G 1/4"

Common features

Media: water, oil, air
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Body material: brass (CW617N EN 12165)
 Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
 Operator material: stainless steel
 Seal material: foodgrade FKM
 Protection class: IP 65 (with connector and gasket)

Options

Available with body thread connection 1/8" (e.g. code D362CVA), performance ratings remain the same as D363CVA.

NPT connection on request, minimum batch may be required (e.g. code RD363CVCN)

TYPE: D362/363



Normally Closed

TYPE: RD362/363



Normally Open



Dimensions & weights		D362	D363	RD362	RD363
G connection	[ISO 228]	1/8"	1/4"	1/8"	1/4"
A	[mm]	40	40	40	40
B	[mm]	87	87	87	87
C	[mm]	13	13	13	13
D	[mm]	9.5	9.5	9.5	9.5
weight	[kg]	0.26	0.26	0.26	0.26

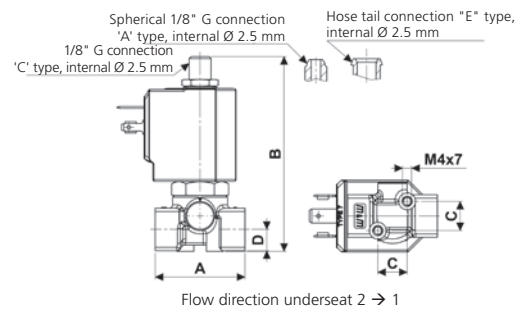
General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
D363CVC	1.5	1.3	0	18	18	7250	24 VDC
D363CVE	2.0	2.2	0	10	10	7200	24 V 50/60 Hz
D363CVG	2.5	3.4	0	7	7	7400	110 V 50 Hz - 120 V 60 Hz
D363CVH	3.0	4.5	0	5	5	7600	200 V 50 Hz - 220 V 60 Hz
D363CVL ¹	4.0	6.0	0	3.5	3.5	7700	230 V 50 Hz - 240 V 60 Hz
D363CVN ¹	5.0	7.5	0	2.5	2.5		
D363CVP ¹	6.0	8.0	0	1.5	1.5		

¹ Manual override not available for orifice > Ø 3 mm

General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
RD363CVC	1.5	1.3	0	16	13	7251	24 VDC
RD363CVE	2.0	2.2	0	10	10	7201	24 V 50/60 Hz
RD363CVG	2.5	3.4	0	7	7	7401	110 V 50 Hz - 120 V 60 Hz
RD363CVH	3.0	4.5	0	4	4	7601	200 V 50 Hz - 220 V 60 Hz
						7701	230 V 50 Hz - 240 V 60 Hz



D362/363 - FKM seal, NC -

Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Options

EPDM seal, temperature max. 120 °C (e.g. code D363CEC)
 Manual override (e.g. code D362CVGM)
 Armature tube with hose tail connection (e.g. code D362EVG)
 Armature tube with spherical 1/8" G connection (e.g. code D362AVC)
 For vacuum see page 37
 UL approved coils (e.g. code 770R)

RD362/363 - FKM seal, NO -

Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

3/2 way direct acting solenoid valve, G 1/8" – G 1/4"

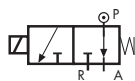
Common features

Media: water, oil, air
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Body material: brass (CW617N EN 12165)
 Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
 Operator material: stainless steel
 Seal material: foodgrade FKM
 Protection class: IP 65 (with connector and gasket)

Options

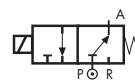
Available with body thread connection 1/8" (e.g. code SD362CVC), performance ratings remain the same as SD363CVC.
 Armature tube with spherical 1/8" G connection (e.g. code SD362AVC)

TYPE: DD362/363



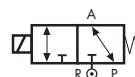
Normally Open - Diverting

TYPE: SD362/363



Normally Open - 2nd Service

TYPE: GD362/363



Universal Service

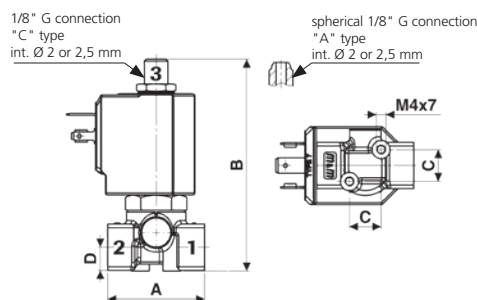


Dimensions & weights		SD362	SD363	DD362	DD363	GD362	GD363
G connection	[ISO 228]	1/8"	1/4"	1/8"	1/4"	1/8"	1/4"
A	[mm]	40	40	40	40	40	40
B	[mm]	87	87	87	87	87	87
C	[mm]	13	13	13	13	13	13
D	[mm]	9.5	9.5	9.5	9.5	9.5	9.5
weight	[kg]	0.26	0.26	0.26	0.26	0.26	0.26

Automation

Valve	Nominal Ø 1 → 2 1 → 3		Flow rate Kvs	OPD		
code	[mm]	[mm]	[l/min]	min. [barg]	max. AC [barg]	max. DC [barg]
SD363CVC	1.5	1.5	1.3	0	15	15
SD363CVE	2.0	2.0	2.2	0	15	15
SD363CVG	2.5	2.5	3.4	0	13	13

Coils	
code	[Volts/Hz]
7250	24 VDC
7200	24 V 50/60 Hz
7400	110 V 50 Hz - 120 V 60 Hz
7600	200 V 50 Hz - 220 V 60 Hz
7700	230 V 50 Hz - 240 V 60 Hz



SD362/363 - FKM seal, 2nd SERVICE -

Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Notes

Flow direction: OFF 3 → 1 - ON 1 → 2

Automation

Valve	Nominal Ø 1 → 2 1 → 3		Flow rate Kvs	OPD		
code	[mm]	[mm]	[l/min]	min. [barg]	max. AC [barg]	max. DC [barg]
DD363CVC	1.5	2.5	1.3	0	20	20
DD363CVE	2.0	2.5	2.2	0	20	20

Coils	
code	[Volts/Hz]
7250	24 VDC
7200	24 V 50/60 Hz
7400	110 V 50 Hz - 120 V 60 Hz
7600	200 V 50 Hz - 220 V 60 Hz
7700	230 V 50 Hz - 240 V 60 Hz

DD362/363 - FKM seal, DIVERTING -

Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Notes

Flow direction: OFF 1 → 3 - ON 1 → 2

Automation

Valve	Nominal Ø 1 → 2 1 → 3		Flow rate Kvs	OPD		
code	[mm]	[mm]	[l/min]	min. [barg]	max. AC [barg]	max. DC [barg]
GD363CVE	2.0	2.0	2.2	0	8	7

Coils	
code	[Volts/Hz]
7250	24 VDC
7200	24 V 50/60 Hz
7400	110 V 50 Hz - 120 V 60 Hz
7600	200 V 50 Hz - 220 V 60 Hz
7700	230 V 50 Hz - 240 V 60 Hz

GD362/363 - FKM seal, UNIVERSAL SERVICE -

Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Notes

Pressure can be connected to all ports:

- from 2 like D362,
- from 1 like DD362,
- from 3 like SD362.

3/2 way direct acting solenoid valve, flange 32x32

Common features

Media: water, oil, air
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Body material: brass (CW617N EN 12165)
 Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
 Operator material: stainless steel
 Seal material: foodgrade FKM
 Protection class: IP 65 (with connector and gasket)

TYPE: D301



Normally Closed

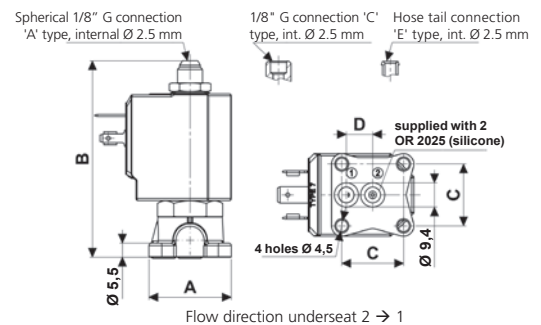
TYPE: RD301



Normally Open



Dimensions & weights		D301	RD301
G connection	[ISO 228]	/	/
A	[mm]	∅ 32	∅ 32
B	[mm]	77	77.7
C	[mm]	24	24
D	[mm]	10.25	10.25
weight	[kg]	0.25	0.26



Automation

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
D301CVC	1.5	1.3	0	18	18	7250	24 VDC
D301CVE	2.0	2.2	0	10	10	7200	24 V 50/60 Hz
D301CVG	2.5	3.4	0	7	7	7400	110 V 50 Hz - 120 V 60 Hz
D301CVH	3.0	4.5	0	5	5	7600	200 V 50 Hz - 220 V 60 Hz
						7700	230 V 50 Hz - 240 V 60 Hz

D301 - FKM seal, NC -

Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Options

Armature tube with spherical 1/8" G connection (e.g. code D301AVE)
 Armature tube with hose tail connection (e.g. code D301EVC)
 Ruby seal for increased chemical resistance (e.g. code D301ABC)

Automation

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
RD301CVC	1.5	1.3	0	15	15	7251	24 VDC
RD301CVE	2.0	2.2	0	10	10	7201	24 V 50/60 Hz
RD301CVH	3.0	4.5	0	4	4	7401	110 V 50 Hz - 120 V 60 Hz
						7601	200 V 50 Hz - 220 V 60 Hz
						7701	230 V 50 Hz - 240 V 60 Hz

RD301 - FKM seal, NO -

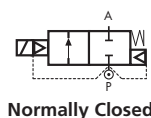
Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

2/2 way pilot operated solenoid valve with assisted lift, G 1/4" – G 1/2"

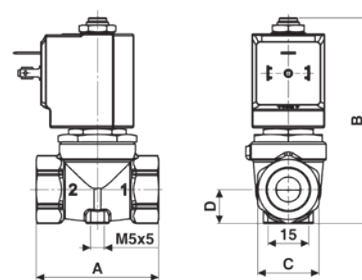
Common Features

Media: water, oil, air
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Body material: brass (CW617N EN 12165)
 Operator material: stainless steel
 Operator seal material: FKM
 Main seal and diaphragm material: FKM
 Protection class: IP 65 (with connector and gasket)

TYPE: D884/885/886



Dimensions & weights		D884	D885	D886
G connection	[ISO 228]	1/4"	3/8"	1/2"
A	[mm]	54	54	54
B	[mm]	89	89	89
C	[mm]	Hex 27	Hex 27	Hex 27
D	[mm]	15	15	15
weight	[kg]	0.45	0.4	0.4



Flow direction overseat 1 → 2

General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
D884DVU	10.5	21	0	16	6	7250	24 VDC
D885DVU	10.5	24	0	16	6	7200	24 V 50/60 Hz
D886DVU	10.5	25	0	16	6	7400	110 V 50 Hz - 120 V 60 Hz
						7600	200 V 50 Hz - 220 V 60 Hz
						7700	230 V 50 Hz - 240 V 60 Hz

D884/885/886 - FKM seal, NC -

Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

2/2 way pilot operated solenoid valve, G 3/8" – G 1"

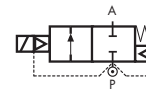
Common features

Media: water, oil, air and aggressive fluids
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Body material: AISI 316L (ASME SA351/351M GRADE CF3M)
 Operator material: stainless steel
 Operator seal and diaphragm material: FKM
 Silver shading ring as standard
 Protection class: IP 65 (with connector and gasket)

Options

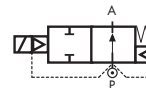
EPDM seal, temperature max. 120 °C (e.g. code D204DEZI)
 NBR seal, temperature max. 90 °C (e.g. code D206DGYI)
 NPT connection on request, minimum batch may be required (e.g. code D204DVZIN)

TYPE: D204–D222



Normally Closed

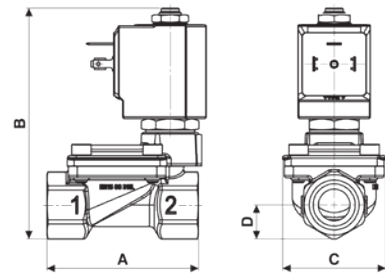
TYPE: RD204–RD222



Normally Open



Dimensions & weights		D204	D205	D206	D222	RD204	RD205	RD206	RD222
G connection	[ISO 228]	3/8"	1/2"	3/4"	1"	3/8"	1/2"	3/4"	1"
A	[mm]	67	67	96	96	67	67	96	96
B	[mm]	102	102	125	125	100	100	123	123
C	[mm]	45.6	45.6	72	72	45.6	45.6	72	72
D	[mm]	15	15	24	24	15	15	24	24
weight	[kg]	0.49	0.49	1.1	1.1	0.49	0.49	1.1	1.1



Flow direction overseat 1 → 2

Aggressive fluids

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
D204DVZI	13	55	0.3	16	16	7250	24 VDC
D205DVZI	13	63	0.3	16	16	7200	24 V 50/60 Hz
D206DVYI	25	140	0.3	16	16	7400	110 V 50 Hz - 120 V 60 Hz
D222DVYI	25	160	0.3	16	16	7600	200 V 50 Hz - 220 V 60 Hz
						7700	230 V 50 Hz - 240 V 60 Hz

D204 – D222 - FKM seal, NC -

Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Options

Manual override (e.g. code D205DBZIM)
 UL approved coil (e.g. code 770R)

Notes

Seamless tube as standard

Aggressive fluids

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
RD204DVZI	13	55	0.3	16	16	7251	24 VDC
RD205DVZI	13	63	0.3	16	16	7201	24 V 50/60 Hz
RD206DVYI	25	140	0.3	16	16	7401	110 V 50 Hz - 120 V 60 Hz
RD222DVYI	25	160	0.3	16	16	7601	200 V 50 Hz - 220 V 60 Hz
						7701	230 V 50 Hz - 240 V 60 Hz

RD204 – RD222 - FKM seal, NO -

Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Notes

Protective treatment of operators is recommended,
 minimum batch may be required (e.g. code RD204DVZIE)

2/2 way pilot operated solenoid valve, G 1/4" – G 1"

Common features

Media: water, oil, air
 Media temperature: -10 to +90 °C
 Ambient temperature: -10 to +50 °C
 Body material: brass (CW617N EN 12165)
 Operator material: stainless steel
 Operator seal and diaphragm material: NBR
 Protection class: IP 65 (with connector and gasket)

Options

FKM seal, temperature max. 130 °C (e.g. code B205DVZ)
 EPDM seal, temperature max. 120 °C (e.g. code B204DEZ)
 Electroless nickel plating treatment (e.g. code B205DBZK)
 NPT connection on request, minimum batch may be required (e.g. code RB205DBZN)
 UL approved coils (e.g. code 220R)
 Speed control screw only for type B206-, B222-, RB206- and RB222-
 (e.g. code B206DBYV / RB222DBYV)

Dimensions & weights		B203 B204	B205	B206 compact	B206	B222	RB203 RB204	RB205	RB206 compact	RB206	RB222
G connection	[ISO 228]	1/4" 3/8"	1/2"	3/4"	3/4"	1"	1/4" 3/8"	1/2"	3/4"	3/4"	1"
A	[mm]	67	67	82	96	96	67	67	82	96	96
B	[mm]	90	90	105	115	115	92.5	92.5	107.5	117.5	117.5
C	[mm]	45.6	45.6	51.6	72	72	45.6	45.6	51.6	72	72
D	[mm]	15	15	20.25	23	23	15	15	20.25	23	23
weight	[kg]	0.4	0.4	0.6	1.2	1.2	0.4	0.4	0.6	1.2	1.2

General purpose

Valve code	Nominal Ø [mm]	Flow rate Kvs [l/min]	OPD			Coils	
			min. [barg]	max. AC [barg]	max. DC [barg]		
B203DBZ	13	26	0.3	16	16	2250	24 VDC
B204DBZ	13	55	0.3	16	16	2200	24 V 50/60 Hz
B205DBZ	13	63	0.3	16	16	2400	110 V 50 Hz - 120 V 60 Hz
B206DBX comp.	21	100	0.3	16	16	2600	200 V 50 Hz - 220 V 60 Hz
B206DBY ¹	25	140	0.3	16	16	2700	230 V 50 Hz - 240 V 60 Hz
B222DBY	25	160	0.3	16	16		

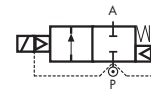
General purpose

Valve code	Nominal Ø [mm]	Flow rate Kvs [l/min]	OPD			Coils	
			min. [barg]	max. AC [barg]	max. DC [barg]		
RB203DBZ	13	26	0.3	16	16	2250 ²	24 VDC
RB204DBZ	13	55	0.3	16	16	2200	24 V 50/60 Hz
RB205DBZ	13	63	0.3	16	16	2400	110 V 50 Hz - 120 V 60 Hz
RB206DBX comp.	21	100	0.3	16	16	2600	200 V 50 Hz - 220 V 60 Hz
RB206DBY ¹	25	140	0.3	16	16	2700	230 V 50 Hz - 240 V 60 Hz
RB222DBY	25	160	0.3	16	16		

¹ Product subject to phase-out, please contact Rotork Sales Department for availability

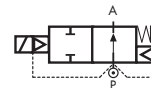
² For continuous service in DC we recommend the use of M&M coils 10 Watt, class H (see options on page 41)

TYPE: B203-B222

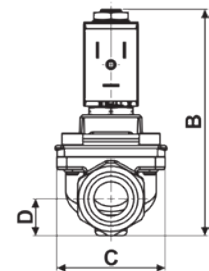
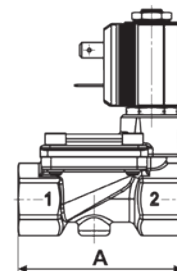


Normally Closed

TYPE: RB203-RB222



Normally Open



Flow direction overseat 1 → 2

B203 – B222 - NBR seal, NC -

Coil power: AC 10 VA (holding)
 AC 16 VA (inrush)
 DC 7 W

Options

Manual override (e.g. code B204DBZM)

RB203 – RB222 - NBR seal, NO -

Coil power: AC 10 VA (holding)
 AC 16 VA (inrush)
 DC 7 W

2/2 way pilot operated solenoid valve, G 1 1/4" – G 2"

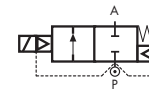
Common features

Media: water, oil, air
 Media temperature: -10 to +90 °C
 Ambient temperature: -10 to +50 °C
 Body material: brass (CW617N EN 12165)
 Operator material: stainless steel
 Operator seal and diaphragm material: NBR
 Silver shading ring as standard
 Protection class: IP 65 (with connector and gasket)
 Speed control screw as standard

Options

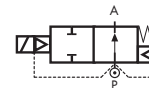
FKM seal, temperature max. 130 °C (e.g. code D223DVK)
 EPDM seal, temperature max. 120 °C (e.g. code RD223DEK)
 Electroless nickel plating treatment (e.g. code D222DVYK)
 NPT connection on request, minimum batch may be required (e.g. code D223DBKN)

TYPE: D223–D225



Normally Closed

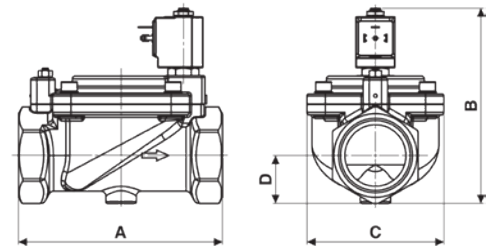
TYPE: RD223–RD225



Normally Open



Dimensions & weights		D223	D224	D225	RD223	RD224	RD225
G connection	[ISO 228]	1 1/4"	1 1/2"	2"	1 1/4"	1 1/2"	2"
A	[mm]	140	140	168	140	140	168
B	[mm]	140	140	158	140	140	158
C	[mm]	96	96	112	96	96	112
D	[mm]	31	31	39	31	31	39
weight	[kg]	2.8	2.8	3.9	2.8	2.8	3.9



Flow direction overseat 1 → 2

General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
D223DBK	40	370	0.5	16	16	7250	24 VDC
D224DBK	40	400	0.5	16	16	7200	24 V 50/60 Hz
D225DBJ	50	540	0.5	16	16	7400	110 V 50 Hz - 120 V 60 Hz
						7600	200 V 50 Hz - 220 V 60 Hz
						7700	230 V 50 Hz - 240 V 60 Hz

D223/224/225 - NBR seal, NC -

Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Options

Manual override (e.g. code D223DBKM)
 For vacuum see page 37
 UL approved coils (e.g. code 725R)

General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
RD223DBK	40	370	0.5	16	16	7251	24 VDC
RD224DBK	40	400	0.5	16	16	7201	24 V 50/60 Hz
RD225DBJ	50	540	0.5	16	16	7401	110 V 50 Hz - 120 V 60 Hz
						7601	200 V 50 Hz - 220 V 60 Hz
						7701	230 V 50 Hz - 240 V 60 Hz

D223/224/225 - NBR seal, NO -

Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

2/2 way pilot operated solenoid valve, G 1/4" – G 1/2"

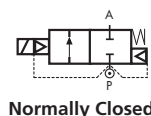
Common features

Media: water, oil, air
 Ambient temperature: -10 to +50 °C
 Body material: brass (CW617N EN 12165)
 Operator material: stainless steel
 Protection class: IP 65 (with connector and gasket)

Options

EPDM seal, temperature max. 120 °C (e.g. code D266DEU)
 NPT connection on request, minimum batch may be required (e.g. code D264DBUN)

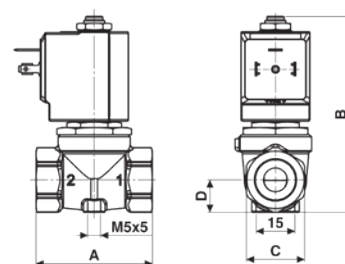
TYPE: D264/265/266



Normally Closed



Dimensions & weights		D264	D265	D266
G connection	[ISO 228]	1/4"	3/8"	1/2"
A	[mm]	54	54	54
B	[mm]	89	89	89
C	[mm]	Hex 27	Hex 27	Hex 27
D	[mm]	15	15	15
weight	[kg]	0.45	0.4	0.4



Flow direction overseat 1 → 2

Compressed air

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils
			min.	max. AC	max. DC	
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code [Volts/Hz]
D264DBU	10.5	21	0.1	16	7	7250 24 VDC
D265DBU	10.5	24	0.1	16	7	7200 24 V 50/60 Hz
D266DBU	10.5	25	0.1	16	7	7400 110 V 50 Hz - 120 V 60 Hz
						7600 200 V 50 Hz - 220 V 60 Hz
						7700 230 V 50 Hz - 240 V 60 Hz

D264/265/266 - NBR seal, NC -

Media temperature: -10 to +90 °C
 Operator seal and diaphragm material: NBR
 Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

General purpose

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils
			min.	max. AC	max. DC	
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code [Volts/Hz]
D264DYU	10.5	21	0.1	16	7	7250 24 VDC
D265DYU	10.5	24	0.1	16	7	7200 24 V 50/60 Hz
D266DYU	10.5	25	0.1	16	7	7400 110 V 50 Hz - 120 V 60 Hz
						7600 200 V 50 Hz - 220 V 60 Hz
						7700 230 V 50 Hz - 240 V 60 Hz

D264/265/266 - FKM seal, NC -

Media temperature: -10 to +130 °C
 Operator seal and diaphragm material: FKM
 Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

2/2 way pilot operated solenoid valve, G 1/4" – G 1/2"

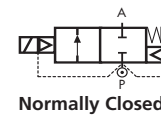
Common features

Body material: brass (CW617N EN 12165)
Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
Operator material: stainless steel
Seal material: PTFE
Protection class: IP 65 (with connector and gasket)

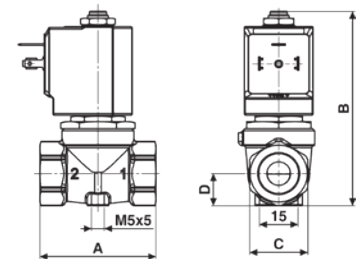
Notes

Seamless tube as standard

TYPE: D634–D636



Dimensions & weights		D634	D635	D636
G connection	[ISO 228]	1/4"	3/8"	1/2"
A	[mm]	54	54	54
B	[mm]	100	100	100
C	[mm]	Hex 27	Hex 27	Hex 27
D	[mm]	15	15	15
weight	[kg]	0.5	0.45	0.45



Flow direction overseat 1 → 2

High pressure

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	high power - class 'H' only	
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
D634DTT1	10	21	0.3	140	35	72Z1	24 VDC
D635DTT1	10	24	0.3	140	35	72K1	24 V 50/60 Hz
D636DTT1	10	25	0.3	140	35	74K1	110 V 50 Hz - 120 V 60 Hz
						77K1	230 V 50 Hz - 240 V 60 Hz

ATTENTION: When high pressure valves are supplied without a coil, their nameplates display the max. OPD of the valve when equipped with an AC (25 VA) and DC (22 W) coil (as shown in the table above). **When using alternative coil power ratings please ensure to request separately the appropriate nameplate at time of order.**

D634–636DTT1 - PTFE seal, NC -

Media¹: water, oil, liquids
Media temperature: -10 to +130 °C
Ambient temperature: -10 to +50 °C
Coil power: AC 25 VA (holding)
AC 50 VA (inrush)
DC 22 W

Notes

¹ Not 100% leak-proof when used with air/gases.
Approximate leak rate is 1,5 ml/min at max. OPD

Steam

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	class 'H' only	
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
D634DTT	10	21	0.3	9	9	72Z1	24 VDC
D635DTT	10	24	0.3	9	9	7201	24 V 50/60 Hz
D636DTT	10	25	0.3	9	9	7401	110 V 50 Hz - 120 V 60 Hz
						7601	200 V 50 Hz - 220 V 60 Hz
						7701	230 V 50 Hz - 240 V 60 Hz

D634–636DTT - PTFE seal, NC -

Media: steam
Media temperature: +80 °C² to +180 °C
Ambient temperature: -10 to +70 °C
Coil power: AC 18 VA (holding)
AC 36 VA (inrush)
DC 22 W

Notes

² For a correct functioning, the minimum working temperature of the solenoid valve cannot be below 80 °C

2/2 way pilot operated solenoid valve, G 3/8" – G 3/4"

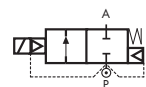
Common features

Media: water¹, oil, air²
 Media temperature: -10 to +130 °C
 Ambient temperature: -10 to +50 °C
 Body material: brass (CW617N EN 12165)
 Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
 Operator material: stainless steel
 Protection class: IP 65 (with connector and gasket)

Notes

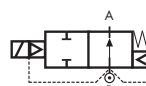
- ¹ When using liquid fluids waterhammer and pressures higher than 20 barg can cause the diaphragm to tear
² Not 100% leak-proof when used with air/gases.
 Approximate leak rate is 1,5 ml/min at max. OPD

TYPE: D232–D234



Normally Closed

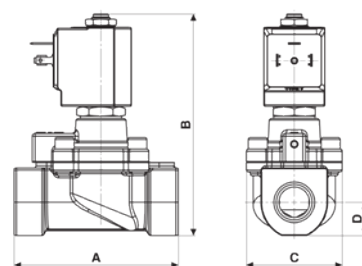
TYPE: RD232–RD234



Normally Open



Dimensions & weights		D232	D233	D234	RD232	RD233	RD234
G connection	[ISO 228]	3/8"	1/2"	3/4"	3/8"	1/2"	3/4"
A	[mm]	86	86	86	86	86	86
B	[mm]	116.5	116.5	116.5	114	114	114
C	[mm]	50.2	50.2	50.2	50.2	50.2	50.2
D	[mm]	17.5	17.5	17.5	17.5	17.5	17.5
weight	[kg]	1	0.9	0.9	1	0.9	0.9



Flow direction overseat 1 → 2

High pressure

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC		
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
D232DTW	16.5	42	1	50	50	7250	24 VDC
D233DTW	16.5	46	1	50	50	7200	24 V 50/60 Hz
D234DTW	16.5	48	1	50	50	7400	110 V 50 Hz - 120 V 60 Hz
						7600	200 V 50 Hz - 220 V 60 Hz
						7700	230 V 50 Hz - 240 V 60 Hz

D232/233/234 - PTFE seal, NC -

Operator seal material: Ruby
 Diaphragm material: FKM
 Main seal material: PTFE
 Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Notes

Seamless tube as standard

High pressure

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC		
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
RD232DTW	16.5	42	1	50	50	7251	24 VDC
RD233DTW	16.5	46	1	50	50	7201	24 V 50/60 Hz
RD234DTW	16.5	48	1	50	50	7401	110 V 50 Hz - 120 V 60 Hz
						7601	200 V 50 Hz - 220 V 60 Hz
						7701	230 V 50 Hz - 240 V 60 Hz

RD232/233/234 - PTFE seal, NO -

Operator seal material: Ruby
 Diaphragm material: FKM
 Main seal material: PTFE
 Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Options

FKM seal version (e.g. code RD232DW).
 Temperature max. 130 °C - OPD max.: 25 barg AC/DC.
 Minimum batch may be required

Compressed air

Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC		
code	[mm]	[l/min]	[barg]	[barg]	[barg]	code	[Volts/Hz]
D232DW	16.5	42	1	25	25	7250	24 VDC
D233DW	16.5	46	1	25	25	7200	24 V 50/60 Hz
D234DW	16.5	48	1	25	25	7400	110 V 50 Hz - 120 V 60 Hz
						7600	200 V 50 Hz - 220 V 60 Hz
						7700	230 V 50 Hz - 240 V 60 Hz

D232/233/234 - FKM seal, NC -

Operator seal material: foodgrade FKM
 Diaphragm material: FKM
 Main seal material: FKM
 Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

2/2 way pilot operated solenoid valve, G 3/4" – G 1"

Common features

Media¹: steam
 Media temperature: +80 °C² to +180 °C
 Ambient temperature: -10 to +70 °C
 Body material: brass (CW617N EN 12165)
 Operator material: stainless steel
 Orifice material: stainless steel (1.4305 EN 10088/AISI 303)
 Operator seal material: PTFE
 Main seal and diaphragm material: PTFE
 Protection class: IP 65 (with connector and gasket)

Options

NPT connection on request, minimum batch may be required (e.g. code D622DTYN)

Notes

¹ Water & high content of condensate can damage the diaphragm.

² For a correct functioning, the minimum working temperature of the solenoid valve cannot be below 80 °C.

Dimensions & weights		D606 RD606	D622 RD622
G connection	[ISO 228]	3/4"	1"
A	[mm]	96	96
B	[mm]	126	126
C	[mm]	72	72
D	[mm]	24	24
weight	[kg]	1.3	1.3

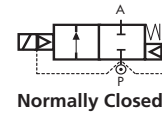
Steam

Valve code	Nominal Ø [mm]	Flow rate Kvs [l/min]	OPD			Coils class 'H' only	
			min. [barg]	max. AC [barg]	max. DC [barg]	code	[Volts/Hz]
D606DTY	24	120	1	9	9	7151	12 VDC
D622DTY	24	120	1	9	9	7251	24 VDC
						7201	24 V 50/60 Hz
						7401	110 V 50 Hz - 120 V 60 Hz
						7601	200 V 50 Hz - 220 V 60 Hz
						7701	230 V 50 Hz - 240 V 60 Hz

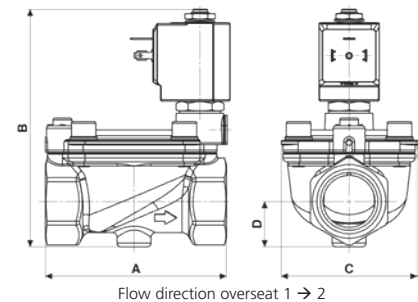
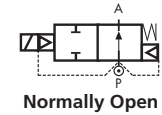
Steam

Valve code	Nominal Ø [mm]	Flow rate Kvs [l/min]	OPD			Coils class 'H' only	
			min. [barg]	max. AC [barg]	max. DC [barg]	code	[Volts/Hz]
RD606DTY	24	120	1	9	9	7151	12 VDC
RD622DTY	24	120	1	9	9	7251	24 VDC
						7201	24 V 50/60 Hz
						7401	110 V 50 Hz - 120 V 60 Hz
						7601	200 V 50 Hz - 220 V 60 Hz
						7701	230 V 50 Hz - 240 V 60 Hz

TYPE: D606/622



TYPE: RD606/622



D606/D622 - PTFE seal, NC -

Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Notes

Seamless tube as standard

RD606/RD622 - PTFE seal, NO -

Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

2/2 way latching solenoid valve (pilot operated), G 1/4" – G 1/2"

Common features

Media: water, oil, air

Ambient temperature: -10 to +50 °C

Body material: brass (CW617N EN 12165)

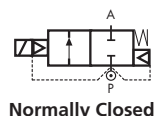
Operator material: stainless steel tube, brass plunger

Protection class: IP 65 (with connector and gasket)

Notes

Special operator with reduced stroke for low power coils

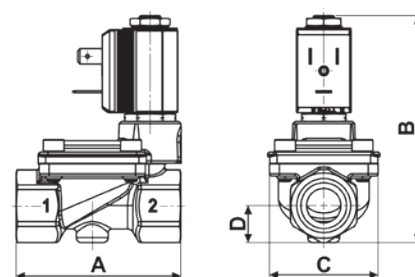
TYPE: LC203–LC205



Dimensions & weights		LC203	LC204	LC205
G connection	[ISO 228]	1/4"	3/8"	1/2"
A	[mm]	67	67	67
B	[mm]	90	90	90
C	[mm]	45.6	45.6	45.6
D	[mm]	15	15	15
weight	[kg]	0.4	0.4	0.4

General purpose

Valve code	Nominal Ø [mm]	Flow rate Kvs [l/min]	OPD			Coils low power only	
			min. [barg]	max. AC [barg]	max. DC [barg]	code	[Volts/Hz]
LC203DBZ	13	26	0.3	—	5	20Q0	6 VDC
LC204DBZ	13	55	0.3	—	5	21Q0	12 VDC
LC205DBZ	13	63	0.3	—	5	22Q0	24 VDC



LC203 – LC205 - NBR seal -

Media temperature: -10 to +90 °C
Operator seal and diaphragm material: NBR
Coil power: DC 3 W
Absorption (20 °C): 500mA for **20Q0**
250mA for **21Q0**
125mA for **22Q0**

General purpose

Valve code	Nominal Ø [mm]	Flow rate Kvs [l/min]	OPD			Coils low power only	
			min. [barg]	max. AC [barg]	max. DC [barg]	code	[Volts/Hz]
LC203DYZ	13	26	0.3	—	5	20Q0	6 VDC
LC204DYZ	13	55	0.3	—	5	21Q0	12 VDC
LC205DYZ	13	63	0.3	—	5	22Q0	24 VDC

LC203 – LC205 - FKM seal -

Media temperature: -10 to +130 °C
Operator seal and diaphragm material: FKM
Coil power: DC 3 W
Absorption (20 °C): 500mA for **20Q0**
250mA for **21Q0**
125mA for **22Q0**

General purpose

Valve code	Nominal Ø [mm]	Flow rate Kvs [l/min]	OPD			Coils low power only	
			min. [barg]	max. AC [barg]	max. DC [barg]	code	[Volts/Hz]
LC203DEZ	13	26	0.3	—	5	20Q0	6 VDC
LC204DEZ	13	55	0.3	—	5	21Q0	12 VDC
LC205DEZ	13	63	0.3	—	5	22Q0	24 VDC

LC203 – LC205 - EPDM seal -

Media temperature: -10 to +120 °C
Operator seal and diaphragm material: EPDM
Coil power: DC 3 W
Absorption (20 °C): 500mA for **20Q0**
250mA for **21Q0**
125mA for **22Q0**

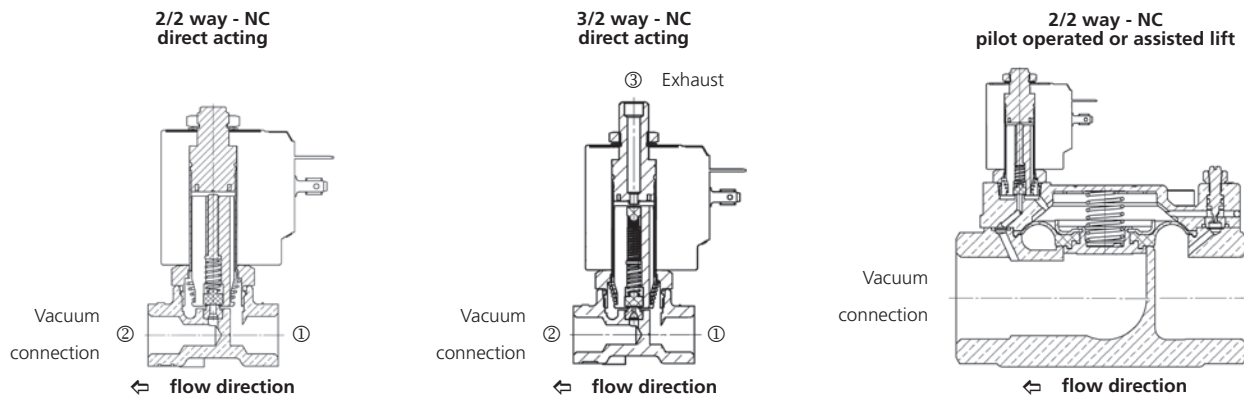
Solenoid valves for vacuum

The following solenoid valves are also available with a configuration suitable for vacuum (the general technical features are listed on the individual single pages of solenoid valves):

- D262/D263** – see page 14
- D237/238/239** – see page 17
- C D237/238/239** – see page 17
- D362/D363** – see page 25
- D223–225** – see page 31
- D203–D222** – individual datasheet on request



CONNECTION SCHEME ACCORDING TO VALVE TYPES:



Valve	Nominal Ø	Flow rate Kvs	min.	OPD max. AC	max. DC	Coils	
Code	[mm]	[l/min]	[barg]	[barg]	[barg]	Code	[Volts/Hz]
D203DBZL	13	26	-0.2	-0.95	-0.95	7400	110 V 50 Hz - 120 V 60 Hz
D205DBZL	13	63	-0.2	-0.95	-0.95	7600	200 V 50 Hz - 220 V 60 Hz
D205DEZL	13	63	-0.2	-0.95	-0.95	7700	230 V 50 Hz - 240 V 60 Hz
D225DBJL	50	540	-0.5	-0.95	-0.95		
D263DBPL	6	8	-0.9	1	1		
D362CVGL	2.5	3.4	0	-0.95	-0.95		
D363CVGL	2.5	3.4	0	-0.95	-0.95		
D363CVHL	3	4.5	0	-0.95	-0.95		

Various part numbers

Coil power: AC 18 VA (holding)
AC 36 VA (inrush)
DC 14 W

Options

Class 'H' insulation coils (e.g. code 7701)

Valve	Nominal Ø	Flow rate Kvs	min.	OPD max. AC	max. DC	Coils high power - class 'H' only	
Code	[mm]	[l/min]	[barg]	[barg]	[barg]	Code	[Volts/Hz]
D237DBU1	10.5	21	0	-0.95	—	72K1	24 V 50/60 Hz
D238DBU1	10.5	24	0	-0.95	—	74K1	110 V 50 Hz - 120 V 60 Hz
D239DBU1	10.5	25	0	-0.95	—	77K1	230 V 50 Hz - 240 V 60 Hz

D237 – 239DBU1 - NBR seal, AC -

Seal material: NBR 60 shore
Coil power: AC 25 VA (holding)
AC 50 VA (inrush)

Notes

Minimum batch may be required

Valve	Nominal Ø	Flow rate Kvs	min.	OPD max. AC	max. DC	Coils high power - class 'H' only	
Code	[mm]	[l/min]	[barg]	[barg]	[barg]	Code	[Volts/Hz]
C D237DBU1	10.5	21	0	—	-0.95	72Z1	24 VDC
C D238DBU1	10.5	24	0	—	-0.95		
C D239DBU1	10.5	25	0	—	-0.95		

C D237 – 239DBU1 - NBR seal, DC -

Seal material: NBR 60 shore
Coil power: DC 22 W

Notes

Minimum batch may be required

2/2 way direct acting "dry armature" solenoid valve, G 3/8"

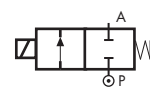
Common features

Media: water and beverages
 Media temperature: -10 to +95 °C
 Ambient temperature: -10 to +50 °C
 Body material: brass (CW617N EN 12165)
 Operator material: stainless steel
 Seal material: silicone FDA compliant
 Protection class: IP 65 (with connector and gasket)

Notes

TOTAL SEPARATION BETWEEN INTERNAL PARTS AND MEDIUM

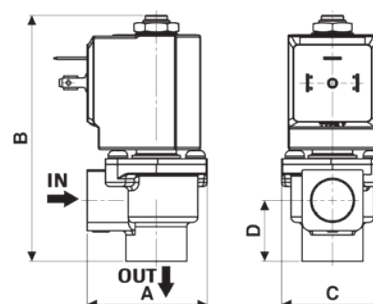
TYPE: 211



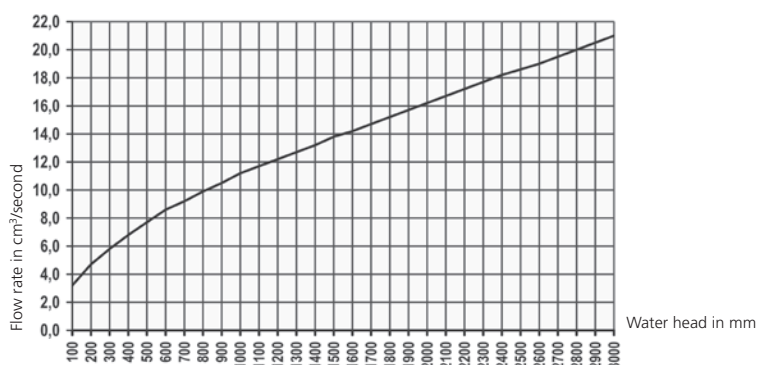
Normally Closed



Dimensions & weights		D211	C D211
G connection	[ISO 228]	3/8"	3/8"
A	[mm]	43.4	43.4
B	[mm]	88.8	88.8
C	[mm]	36	36
D	[mm]	22	22
weight	[kg]	0.34	0.34



Flow rate chart



Valve	Nominal Ø	Flow rate Kvs	OPD			Coils	
			min.	max. AC	max. DC	code	[Volts/Hz]
code	[mm]	[l/min]	[barg]	[barg]	[barg]		
D211DSU	11	see flow chart	0	0.3	—	7250	24 VDC
C D211DSU	11	see flow chart	0	—	0.2	7200	24 V 50/60 Hz
						7400	110 V 50 Hz - 120 V 60 Hz
						7600	200 V 50 Hz - 220 V 60 Hz
						7700	230 V 50 Hz - 240 V 60 Hz

D211 - Silicone FDA seal, NC -

Coil power: AC 18 VA (holding)
 AC 36 VA (inrush)
 DC 14 W

Options

Electroless nickel plating treatment (e.g. code D211DSUK)

Automatic drain valve systems with solenoid valves

Preassembled systems consisting of solenoid valve, timer and connector for time adjusted condensate discharge of tanks with compressed air, separators, mains drainage, dryers and filters.

Common features

Media: water, oil, air and inert gases

Media temperature: -10 to +130 °C

Ambient temperature: -10 to +50 °C

Seal material: FKM

Coil power: AC 18 VA (holding)

AC 36 VA (inrush)

DC 14 W

Protection class: IP 65 (with connector and gasket)

Discharge time: 0.5 to 10 seconds

Interval time: 30 seconds to 45 minutes

Test switch: manual

Options

UL approved coils

Valve with NPT connection upon request, minimum batch may be required (e.g. code D249DVF^N)

Available with analogue timer (see page 41)

Notes

For more detailed information about the various components (solenoid valve/timer/connector), please refer to individual datasheet



USERS BENEFITS:

- Adjustable to suit your system requirements
- Indoor / outdoor installations
- Reliable, long life
- Cost effective
- Visual indication of operation
- Manual override – test button

Compressed air

ADV	Timer	Connector	Valve	G connection	nominal Ø	flow rate Kvs	OPD min. max. AC max. DC			Voltage
with <u>direct acting</u> solenoid valves									serie 7000 coils	
code	code	code	code	[ISO 228]	[mm]	[l/min]	[barg]	[barg]	[barg]	[Volts/Hz]
888 120 00-	AT2000C02I	600011-	D249DVF	1/4"	2.2	2.4	0	18	—	110 V 50 Hz - 120 V 60 Hz
888 121 00-							0	18	—	230 V 50 Hz - 240 V 60 Hz
888 122 00-							0	—	16	24 VDC
with <u>pilot operated</u> solenoid valves									serie 7000 coils	
888 123 00-	AT2000C02I	600011-	D264DVU	1/4"	10.5	21	0.1	16	—	110 V 50 Hz - 120 V 60 Hz
888 124 00-							0.1	16	—	230 V 50 Hz - 240 V 60 Hz
888 125 00-							0.1	—	7	24 VDC
888 126 00-			D265DVU	3/8"	10.5	24	0.1	16	—	110 V 50 Hz - 120 V 60 Hz
888 127 00-							0.1	16	—	230 V 50 Hz - 240 V 60 Hz
888 128 00-							0.1	—	7	24 VDC
888 129 00-			D266DVU	1/2"	10.5	25	0.1	16	—	110 V 50 Hz - 120 V 60 Hz
888 130 00-							0.1	16	—	230 V 50 Hz - 240 V 60 Hz
888 131 00-							0.1	—	7	24 VDC

Analogue electronic timer

Ideal for: Automatic Drain Valves - Sampling Valves - Lubrication System - Air Dryers.

TYPE: AT2000

Features

Supply voltage: UL 120 – 240 VAC/VDC - 50/60 Hz (Code **AT2000C02I**)

CE 24 – 240 VAC/VDC - 50/60 Hz

Absorption: 4 mA max.

Operation temperature: -10 to +50 °C

Protection class: IP 65 (according to EN60529) with connector and gasket

Switch holding voltage: 400 V max.

Switch capacity: 1A

Inrush current: 10A for 10 ms

Duty cycle: 100% ED

Switch life: $3 \cdot 10^8$

Repeat accuracy: $\pm 1\%$

Timing temperature coefficient: $\pm 0.005\% - ^\circ\text{C}$

Time ON: ■ from 0.5 to 10 seconds

Time OFF: ■ from 30 seconds to 45 minutes

Set/Reset/Test: membrane key

Circuit: UL 94 V0

Indicators: GREEN LED for 'power ON'

RED LED for 'valve open'

Manual override: Test

Colour: Black

Notes

In case of DC supply, polarity should be reversed: left fast-on positive (+), right fast-on negative (-). Please refer to product instructions for use

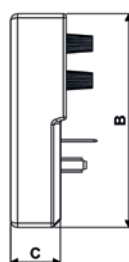
Timers are supplied in single boxes with two squared gaskets and M3x50 fixing screw (see assembling scheme)



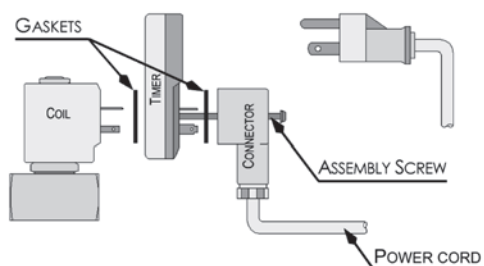
UL file number
E200580



Dimensions & weights		AT2000
A	[mm]	44
B	[mm]	77
C	[mm]	20
weight	[kg]	0.077



Assembling scheme



Coils for M&M branded solenoid valves

M&M International coils are designed for continuous duty in conformity to the EN 60730 safety standards. They are encapsulated in a self-extinguishing synthetic material and offer high mechanical protection and excellent thermal dissipation. They are fully interchangeable on all M&M International solenoid valves, thereby reducing warehouse inventories.

Common features

Electrical connection: fast on connection 6,3x0,8

Protection class: IP 65 (according to EN60529) - NEMA 4 (UL 50) with connector and gasket

Operation: continuous (ED 100%)

Voltage tolerance: AC +10% to -15%

DC +10% to -5%

Notes

All coils manufactured under M&M brand comply with the RoHS Directive (2011/65/EU)

Insulation class according to EN 60730-1 see the below table

All windings are realised with class 'H' wires (180 °C)

Custom voltages and low power consumption available: please contact Rotork Sales Department

Minimum batch quantity required for some voltage ratings

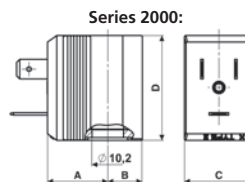


SERIES: 2000

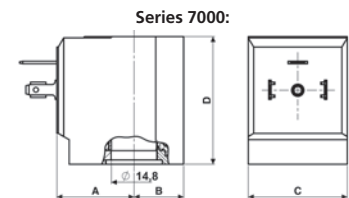


SERIES: 7000

Dimensions & weights		Series 2000	Series 7000
A	(mm)	19.5	25
B	(mm)	11.2	16
C	(mm)	22.3	32
D	(mm)	33.7	41.4
Weight	(kg)	0.060	0.146



Series 2000:



Series 7000:

Coils	Voltage	Power		Class	Ambient Temperature		Media Temperature ¹	
		Holding	Inrush		Min.	Max.	Min.	Max.
2150	12 VDC	7 W	—	F 155 °C	-10 °C	+50 °C	-10 °C	+130 °C
2250	24 VDC	7 W	—					
2750	230 VDC	7 W	—					
2100	12 V / 50/60 Hz	10 VA	16 VA					
2200	24 V / 50/60 Hz	10 VA	16 VA					
2300	48 V / 50/60 Hz	10 VA	16 VA					
2400	110 V / 50 Hz - 120 V / 60 Hz	10 VA	16 VA					
2600	200 V / 50 Hz - 220 V / 60 Hz	10 VA	16 VA					
2700	230 V / 50 Hz - 240 V / 60 Hz	10 VA	16 VA					
215R	12 VDC	6 W	—	F 155 °C	-10 °C	+60 °C	-10 °C	+130 °C
225R	24 VDC	6 W	—					
220R	24 V / 50 Hz	9 VA	14 VA					
226R	24 V / 60 Hz	9 VA	14 VA					
240R	110 V / 50 Hz - 120 V / 60 Hz	9 VA	14 VA					
270R	230 V / 50 Hz - 240 V / 60 Hz	9 VA	14 VA					
B150	12 VDC	7 W	—	F 155 °C	-10 °C	+50 °C	-10 °C	+130 °C
B250	24 VDC	7 W	—					
B200	24 V / 50/60 Hz	10 VA	16 VA					
B400	110 V / 50 Hz - 120 V / 60 Hz	10 VA	16 VA					
B700	230 V / 50 Hz - 240 V / 60 Hz	10 VA	16 VA					
21V1	12 VDC	10 W	—	H 180 °C	-10 °C	+70 °C	-10 °C	+130 °C
22V1	24 VDC	10 W	—					

Series 2000 - Standard

Connection: to DIN 46244

Series 200R - UL approved

UL approved coils recognized component, file number E193928

Series B000 - Impregnated

Impregnated coils for humid environments (e.g. code B400)

Series 2001 - Class 'H'

¹ Some valve configurations allow a max. fluid temperature up to 180 °C, please check valve datasheets.

Coils for M&M branded solenoid valves

Coils	Voltage	Power		Class	Ambient Temperature		Media Temperature ¹	
		Holding	Inrush		Min.	Max.	Min.	Max.
7150	12 VDC	14 W	—	F 155 °C	-10 °C	+50 °C	-10 °C	+130 °C
7250	24 VDC	14 W	—					
7750	230 VDC	14 W	—					
7100	12 V / 50/60 Hz	18 VA	36 VA					
7200	24 V / 50/60 Hz	18 VA	36 VA					
7300	48 V / 50/60 Hz	18 VA	36 VA					
7400	110 V / 50 Hz - 120 V / 60 Hz	18 VA	36 VA					
7600	200 V / 50 Hz - 220 V / 60 Hz	18 VA	36 VA					
7700	230 V / 50 Hz - 240 V / 60 Hz	18 VA	36 VA					
725R	24 VDC	10 W	—	F 155 °C	-10 °C	+60 °C	-10 °C	+130 °C
720R	24 V / 50 Hz	15 VA	30 VA					
740R	110 V / 50 Hz - 120 V / 60 Hz	15 VA	30 VA					
770R	230 V / 50 Hz - 240 V / 60 Hz	15 VA	30 VA					
7251	24 VDC	14 W	—	H 180 °C	-10 °C	+70 °C	-10 °C	+130 °C
7201	24 V / 50/60 Hz	18 VA	36 VA					
7401	110 V / 50 Hz - 120 V / 60 Hz	18 VA	36 VA					
7701	230 V / 50 Hz - 24 V / 60 Hz	18 VA	36 VA					
7121	12 VDC	22 W	—	H 180 °C	-10 °C	+70 °C	-10 °C	+130 °C
7221	24 VDC	22 W	—					
72K1	24 V / 50/60 Hz	25 VA	50 VA					
74K1	110 V / 50 Hz - 120 V / 60 Hz	25 VA	50 VA					
77K1	230 V / 50 Hz - 240 V / 60 Hz	25 VA	50 VA					

Series 7000 - Standard
Connection: to DIN EN 175301-803 form A (ex DIN 43650-A)

OPTIONS
Impregnated coils for humid environments (e.g. code D400)

Series 700R - UL approved
UL approved coils recognized component, file number E193928

Series 7001 - Class 'H'
OPTIONS
Impregnated coils for humid environments (e.g. code D701)

Series 7000 - High Power
OPTIONS
Impregnated coils for humid environments (e.g. code D7K1)

¹ Some valve configurations allow a max. fluid temperature up to 180 °C, please check valve datasheets.

DIN connectors for M&M branded solenoid valves

Coil connectors provide the safest flexible system for connecting M&M International solenoid valves and give a protection class of IP65. They are designed and made of synthetic material offering a high level of electrical insulation. Compliance with UL 1977 and VDE Regulations.

Common Features

Rated voltage (max.): 250 VAC / 300 VDC
 Nominal current: 10 A (Rated) / 16A (max.)
 Wire cross-section: 1.5 mm² (max.)
 Cable entry: PG9 (6 to 8 mm)
 Protection class: IP 65 (only with gasket)
 Insulation class: group C - VDE 0110
 Housing colour: black

Options

Connectors with protection circuits
 Connectors with LED
 Connectors with flying leads
 Other versions available upon request and depending on quantity:
 please contact Rotork Sales Department

Notes

Connectors are supplied with thermoplastic rubber bordered gasket, fixing screw and preinstalled position with ground H 12 (the connector can be spinned when connected)



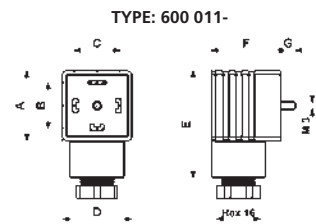
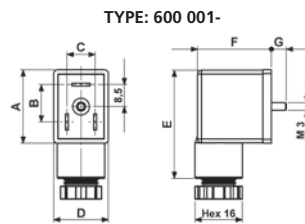
TYPE: 600 001-



TYPE: 600 011-



Dimensions & weights		600001-	600011-
A	(mm)	28.5	27.7
B	(mm)	14.5	18
C	(mm)	11	18
D	(mm)	21.5	27.7
E	(mm)	41.2	41
F	(mm)	28.8	26.8
G	(mm)	5.5	5.5
weight	(kg)	0.019	0.020

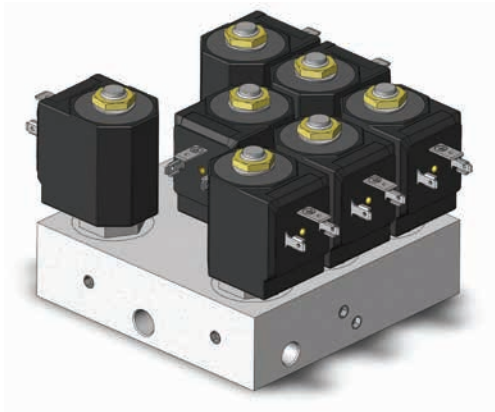


Customised products

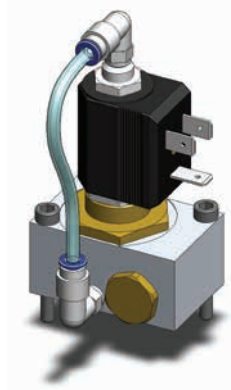
Rotork is constantly evolving and developing new products, enabling us to remain competitive in an ever changing market and keeping at the forefront of technological advances. For many years our team has operated in the most diverse industrial sectors and therefore acquired vast experience with a multitude of specialist applications. Our experience enables us to understand, design and manufacture to our customers' specific requirements.

We can develop new customised solenoid valve solutions according to the customers' technical requirements and needs, concentrating on increasing functionality, optimising space and reducing costs of existing systems.

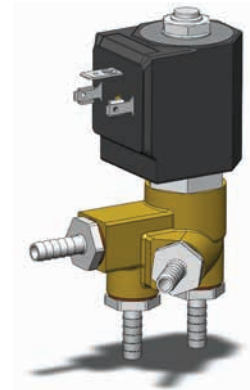
Please find below some examples:



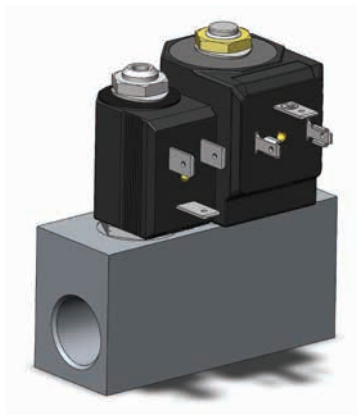
CAR AIR CONDITIONING REFILLER



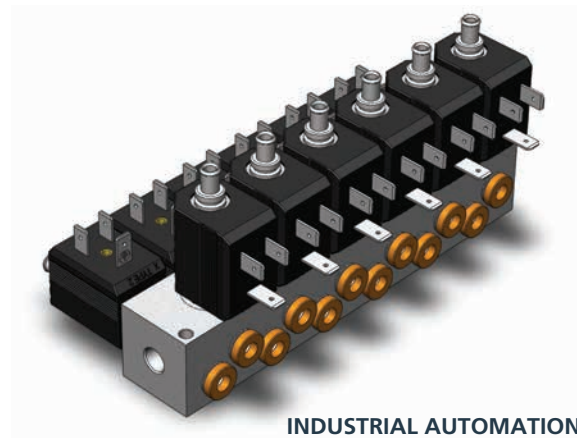
COMPRESSED AIR TREATMENT



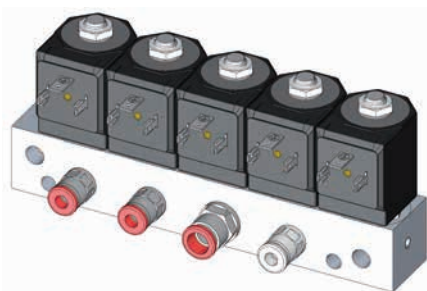
STERILISERS



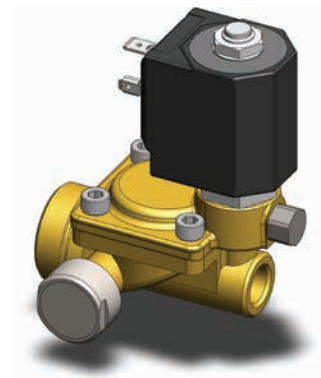
**PACKAGING WITH
VACUUM SYSTEMS FOR INDUSTRY**



INDUSTRIAL AUTOMATION



COOLING SYSTEM



FIREFIGHTING SYSTEMS

Valve selection

Valve Selection

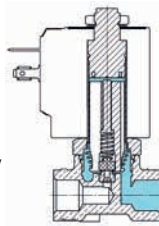
A solenoid valve should be chosen whenever the following conditions are met:

- ✓ Media without dirt particles
- ✓ Moderate flow volumes
- ✓ Average differential pressures
- ✓ High speed in operation
- ✓ Media with a viscosity not higher than 21 cST(3°E)

Valve Types

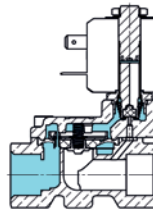
Direct acting solenoid valves 2/2 and 3/2 way NC or NO

When energised the coil electrically generates a magnetic force attracting the armature towards the fixed core. Inside the armature is a seal that acts upon the main orifice, either when the coil is de-energised (normally closed) or when the coil is energised (normally open). By revealing the orifice allows the fluid to pass. Average response time 5 – 25 ms.



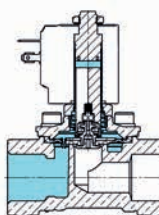
Pilot operated solenoid valves 2/2 way NC or NO

This solenoid valve uses the force of the fluid to operate the valve via a suitable integral pilot valve. The inlet pressure must always be at least the same as the minimum ΔP figure shown on the datasheets. Using the same coils as direct acting valves much higher fluid volumes and pressures can be controlled with this solenoid valve. Average response time 50 – 500 ms.



Pilot operated solenoid valves with assisted lift 2/2 way NC

These solenoid valves are a combination of the pilot operated valves and the direct acting valves. The armature is mechanically connected to the diaphragm on which there is a pilot orifice. With minimal pressures the solenoid valve acts like a direct acting valve. Total opening as well as full flow do not occur at low pressures. With higher pressures it works as a pilot operated valve with full opening. Average response time 50 – 500 ms.



Function Types

2/2 way function indicates valves with inlet and outlet connections, whilst valves with 3/2 way functions have 3 connections and 2 flow passages. One orifice always remains open and one closed. Connections and flow direction are shown in the symbols on each technical datasheet (DIN-ISO 1219).

At rest valves can be either normally closed (NC) or normally open (NO):

- Normally closed (NC): the valve opens when the coil is energised.
- Normally open (NO): the valve closes when the coil is energised.

Optional Features

Manual Override (M)

Normally closed direct acting and pilot operated solenoid valves can be supplied with a manual override which allows the valve to be opened independently of electrical current.

Waterhammer Control (V)

Pilot operated solenoid valves (only versions specified in each datasheet) can be supplied with a system that regulates the closing speed of the diaphragm in order to control waterhammer.

The seal closing speed is operated by the adjusting screw: by screwing it clockwise (in the "+" direction) when using liquid, the valve will close slower reducing any waterhammer effect that may occur in the solenoid valve and the upstream pipes.

In the case of larger valves (1 1/4", 1 1/2" and 2"), please adjust the anti-waterhammer screw to ensure that that valve closes as slowly as possible in order to avoid causing any damage that may affect the functioning of the equipment and valve due to the waterhammer effect.

Technical information

The following points should be considered to ensure a correct choice of valve:

Connections and Nominal Diameters

Threaded connections are either "G"- inches (ISO 228) or metric. Nominal diameters (DN) are expressed in millimetres and correspond to the diameter of the valve's main orifice.

Performances (OPD)

Pressure values shown in this catalogue are the max values expressed in relative bar with no pressure at outlet.

For 3/2 way solenoid valves the pressure range can vary when used in other functions or systems.

The maximum pressure (PN) that the valve can tolerate is tested to 1.5 times the maximum value of the operating pressure differential (OPD).

Pressure (units of measurement)

The SI unit of pressure is the pascal (Pa), defined as 1 newton of force per square metre (1 N/m²).

As Pa is such a small unit, the kPa (1 kilonewton/m²) or MPa (1 Meganewton/m²) tend to be more appropriate to fluid engineering.

However, the most popular metric unit used to measure the pressure in fluid engineering field is the bar, which is equal to 105 N/m², and approximates to 1 atmosphere. This unit is used throughout this publication.

Other units often used include lb/in² (PSI), kg/cm², atm in H₂O (atmosphere) and mm Hg. Conversion factors are readily available from many sources.

Absolute pressure (bar a)

This is the pressure measured from the datum of a perfect vacuum: i.e. a perfect vacuum has a pressure of 0 bar a.

Gauge pressure (bar g)

This is the pressure measured from the datum of the atmospheric pressure. Although in reality the atmospheric pressure will depend upon the climate and the height above sea level, a generally accepted value of 1.013 bar a (1 atm) is often used. This is the average pressure exerted by the air of the earth's atmosphere at sea level.

Gauge pressure = Absolute pressure - Atmospheric pressure

Pressure above atmospheric will always yield a positive gauge pressure. Conversely a vacuum or negative pressure is the pressure below that of the atmosphere. A pressure of -1 bar g corresponds closely to a perfect vacuum.

Differential pressure

This is simply the difference between two pressures. When specifying a differential pressure, it is not necessary to use the suffixes 'g' or 'a' to denote either gauge pressure or absolute pressure respectively, as the pressure datum point becomes irrelevant. Therefore the difference between two pressures will have the same value whether these pressures are measured in gauge pressure or absolute pressure, as long as the two pressures are measured from the same datum.

Flow

The flow is the quantity of fluid that passes through the valve's main orifice which has the nominal diameter (DN) shown in the tables.

The flow is given with a constant Kv value (according to VDI/VDE 2173) that shows how many cubic meters of water, at a temperature of 20 °C, flow through the valve in one hour with a pressure difference of one bar across the valve.

To determine the flow at higher pressures, multiply the Kv value by the square root of the differential pressure. Flow values shown in the selection tables are subject to a tolerance of $\pm 15\%$.

Viscosity

Viscosity of a fluid (liquid or gas) is its resistance to flow freely in a duct.

This phenomenon is also called internal friction and depends on existing cohesion forces among the fluid molecules. The viscosity of liquids decreases as the temperature rises; the viscosity of gases grows if the volume does not change.

According to the International System of Units (SI), the physical quantities are: force **F** $\Rightarrow$ in Newton **N**, distance **h** $\Rightarrow$ in meters **m**, area **A** $\Rightarrow$ in square meters **m²**, speed **u** $\Rightarrow$ in meters per second **m/s**, the unit of measurement of the **dynamic viscosity** is Pascal per second (Pa•s) or Newton multiplied by second per square meter (N•s/m²).

Dividing the dynamic viscosity of the liquid by its density, you can obtain the **kinematic viscosity**. Its unit of measurement is expressed in square meter per second (m²/s). Since the given numerical values are too small, the most common used unit is 10.000 times smaller: the stokes (stox) **St**,

$$1 \text{ St} = 1 \cdot 10^{-4} \text{ m}^2/\text{s} \text{ or } 10.000 \text{ St} = 1 \text{ m}^2/\text{s}$$

as well as the additional unit centistokes **cSt**

$$1 \text{ cSt} = 1 \cdot 10^{-2} \text{ St}$$

Technical information

General Information on frequently used seal materials

Consideration of the media should be made when selecting seal and body types.

NBR should be used for air, water, neutral gases, diesel and in general it is resistant to oils and grease from -10 to +90 °C.

EPDM for hot water and steam. It is resistant to bases and acids in weak concentrations from -40 to +140 °C. EPDM seals should not be used for media containing oil.

FKM combines most of the characteristics of NBR and EPDM and is particularly suitable for hot water and hydrocarbons from -10 to +140 °C (not for steam).

PTFE is practically resistant to all media. It is rigid and is used from -20 to +180 °C.

SIGODUR (filled PTFE) and **RUBY** are stiff materials particularly suitable for heavy duty applications.

Kalrez® Spectrum™ 6375 is a compound specifically designed for the chemical process industry. This compound has excellent broad chemical resistance, good mechanical properties, and outstanding hot-air aging properties. Kalrez® 6375 is well suited for use in mixed process streams because of its excellent resistance to acids, bases and amines. It is also recommended for use in hot water, steam pure ethylene oxide and propylene oxide.

Coil power supply

It is important that the exact voltage and frequency of the coil is used for the valve to operate correctly. Provided the coil is fitted correctly on the operator and that the armature is not obstructed, the valve can be operated for an indefinite time within the temperature limitations indicated. All solenoid valves have a copper shading ring to reduce vibrations caused by alternating currents. **Remark: The same valve fitted with coils of different power may have different pressure ratings than standard combinations indicated in each datasheet in this catalogue. (e.g. UL coils or high power coils).**

Media and ambient temperatures

Temperature limits for the media in the datasheets and should be used as a guide to valve selection. Normally the maximum ambient temperature can reach +50 °C for solenoid valves with coils in class "F", +70 °C for class "H". For applications outside these limits please contact our Technical Department.

General purpose solenoid valves

Solenoid valves shown in this catalogue, either normally open or normally closed, are intended to control the flow of fluids and cannot be used as safety valves.

Valve installation

To ensure proper valve function please observe following instructions:

Water hammer or fluid hammer

Water hammer (or, more generally, fluid hammer) is a pressure surge or wave resulting when a fluid (usually a liquid but sometimes also a gas) in motion is forced to stop or change direction suddenly (momentum change).

Water hammer commonly occurs when a valve is closed suddenly at an end of a pipeline system, and a pressure wave propagates in the pipe. It may also be known as hydraulic shock.

When using liquid fluids water-hammer can occur at pressure of 6 relative bar or higher.

This pressure wave can cause major problems, from noise and vibration to pipe collapse. It is possible to reduce the effects of the water hammer pulses with accumulators and other features.

Mitigating measures:

- **Air vessels** typically have an air cushion above the fluid level, which may be regulated or separated by a bladder. Sizes of air vessels may be up to hundreds of cubic meters on large pipelines. They come in many shapes, sizes and configurations. Such vessels often are called accumulators or expansion tanks.
- **Water Hammer Arrestors** are hydropneumatic devices similar to shock absorbers that can be installed between the water pipe and the machine to absorb the shock and stop the banging.

Safety

This product is not a safety device and must not be used as sole device to prevent the over-pressure of some parts of the plant or the containment of dangerous fluids.

Always connect the coil's earth terminal to ground to ensure the safety of the user and installation. The coil provides the basic insulation only. Install the product in a protected place to prevent electric shocks.

The coil should not be energized if it is not fitted onto a valve or without a plunger inside the valve, as it would overheat and get damaged. Do not touch the energized coil: risk of high temperature.

Do not use the tubes for conveying fluid to ground electrical devices.

Before disconnecting or disassembling the valve, make sure that there is no pressure inside the tubing or the valve itself. Accidental shocks due to fall or collision may damage the operator and/or the integrity of the coil encapsulation thus causing malfunctions such as loss of insulation, seizure of the moving parts and overheating.

Installation

Check for the operating conditions on product label and on the technical documents.

Check for compatibility between medium and valve materials. In case of doubt, please contact the manufacturer.

Keep the valve operator in a vertical position, facing upwards. This prevents limescale or dirt particles in the operator tube which could restrict the armature or create excessive noise whilst operating.

Whilst tightening or unscrewing the valve must be held or revolved only and exclusively by the hexagon or the frame set (in order to avoid damage to its components such as coil, armature tube, etc.).

The recommended **tightening torque of the coil nut is 0,5 Nm maximum**, a higher torque may cause damage to the valve armature tube.

The recommended **tightening torque of the connector screw is 0,5 Nm maximum**, a higher torque may cause an excessive yield stress with consequent damages to the coil rivet and/or plastic encapsulation.

Connections

To ensure that the solenoid valve works properly, do not connect to pipework with an internal diameter less than the nominal diameter (DN) of the valve. Clean all pipework before connection to the solenoid valve: care should be taken to prevent foreign bodies – dirt or material chips – from entering the valve during the assembly phase.

Use suitable seal material on the valve threads. Where liquid sealants are used, it is important to prevent them from entering the valve and block the movement.

Flow Direction

Respect the direction of flow across the valve, shown with an arrow or by numbers on the valve body, depending on the model type.

Filtration

If the fluid contains dirt particles it is necessary to install a filter upstream of the solenoid valve. Dirt is the most frequent cause of malfunction.

Environment

Coils fitted with suitable connectors have a protection class of IP65. However, it is advisable not to use the solenoid valve outside or in very damp conditions without adequate protection. Provide sufficient ventilation for the solenoid valve. **During continuous service the coil of the solenoid valve becomes hot and should not be touched.**

Quality standards

Rotork has a management system certified to ISO 9001, ISO 14001 & OHSAS 18001.

DNV is an independent classification society. Since 1998 it has certified the compliance of Rotork Italy's quality management system (formerly M&M International srl), and recently also the compliance to the ambient and safety standards, emphasizing the effort to implement continuous improvement processes aimed at developing the business in a logic of customer satisfaction, sustainability and safety for all its employees.

Certifications and approvals



The UL Listing mark on a product signifies that the product meets UL's Standards for Safety. The UL Listing mark appears on products and components suitable for factory and field installation.

All of the products carrying a UL Listing mark are covered by UL's Follow-up services program to verify that the products continue to be manufactured in compliance with UL's Safety Requirements.

Rotork manufactures and resells valve coils and timers complying with UL 429 and 746C under M&M International brand.

The cURus Listing mark on the products indicates that the compliance is accepted both in USA and Canada.

RoHS

The Restriction of Hazardous Substances Directive (RoHS) 2011/65/EU regards the restriction of the use of Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent chromium (Cr6+), Polybrominated biphenyls (PBB) and Polybrominated diphenyl ether (PBDE) in electrical and electronic equipment sold in the European Union.

RoHS is meant to prevent the release of these substances into the environment and protect the human, animal and environmental health, especially during the waste treatment.

The CE mark on a product guarantees the compliance with the RoHS Directive. Since 2006 the coils manufactured under M&M brand comply with the RoHS directive with the letter 'R' before the batch number.

Miscellaneous

Upon request (to be specified at the time of the Purchase Order) Rotork can provide the following inspection documents, which are also related to requirements of the PED Directive 2014/68/EC as additional evidence of the technical requirements of supplies:

For metal parts in stainless steel AISI 316L or 304L the inspection certificate 3.1 according to the standard EN 10204 (this certificate is mandatory only for products in categories above I, see PED 2014/68/EC ANNEX I, art. 4.3).

For all products the Test Report 2.2 according to the standard EN 10204, is relevant for products in category I or SEP.

CE marking



The CE marking was introduced in 1993 upon establishment of the European Economic Area. It regulates the entire life cycle of a product: design, manufacturing, placing on the market, disposal and enables its free movement within the European market (EEA).

CE marking signifies that the product conforms with the essential applicable EC requirements, such as safety, public health, consumer protection, and gives the product the presumption of conformity.

By affixing the CE mark on a product, manufacturers and importers are declaring, at their sole responsibility, conformity with all of the legal requirements of the Directive.

EC directives

EC directives for product safety were issued to unify regulations and working practices in force in the countries of the community prior to the constitution of the European Union. The following three directives concern electrical appliances and machines in general:

Machinery directive

EMC Directive

Low Voltage Directive (2006/95/EC)

The directive 97/23/EC concerns safety of pressure bearing equipment.

The directive 2011/65/EU (RoHS) limits the use of dangerous substances in electrical and electronic equipment.

Ask Rotork Sales Department for your Declaration of compliance to EC Regulation no. 1907/2006.

M&M branded products conforming to the EC directives

Products subject to the Low Voltage Directive are given a certification by the European Community.

Rotork issues declarations of conformity for M&M branded products.

We believe that our products are components and as such do not form a part of the range of products subject to the EMC directive. However, conformity of M&M branded products to the EMC directive could change depending on the function of the product's use, of the configuration (for example the use of connectors with passive electronic components, LED etc.), or the conditions of the electrical connection. For this reason it is recommended that you check the compliance of the final product with the EMC Directive.

Coding chart

Example code

_ - _ - B - 2 - 97 - D - V - E - K - 2700 - OB1

Electrical Supply

. = AC
C = DC

Function

. = Normally closed
D = Diverting
G = Universal
L = Latching
R = Normally open
S = 2nd service

Serial Letter

B = Armature ø10 mm
C = Armature ø10 mm low power
D = Armature ø14.5 mm
E = Armature ø14.5 mm low power

Ways / Type of Valve

2 = 2/2 ways
3 = 3/2 ways
6 = For steam
8 = Various
9 = Manifold

ID Code

Valve body identification

Fixed Core Type

A = 3/2 way 1/8" gas, spherical
C = 3/2 way 1/8" gas for bicone
D = 2/2 way 1/8" gas
E = 3/2 way gasket holder

Seal Material

B = NBR
E = EPDM
K = Kalrez®
L = Sigodur (fixed PTFE)
R = RUBY
S = Silicone
T = PTFE
V = FKM

ø Orifice (mm)

A = 1.0	O = 5.5
B = 1.2	P = 6.0
C = 1.4 - 1.5 - 1.6	T = 10.0
D = 1.7 - 1.8	U = 10.5 - 11.0
E = 2.0	V = 11.5
F = 2.2 - 2.3	Z = 13.0
G = 2.5	W = 14.5 - 15.0 - 15.5 - 16.5
H = 3.0 - 3.2	X = 18.0 - 20.0
L = 4.0	Y = 24.0 - 25.0
M = 4.5	K = 40.0
N = 5.0	J = 50.0

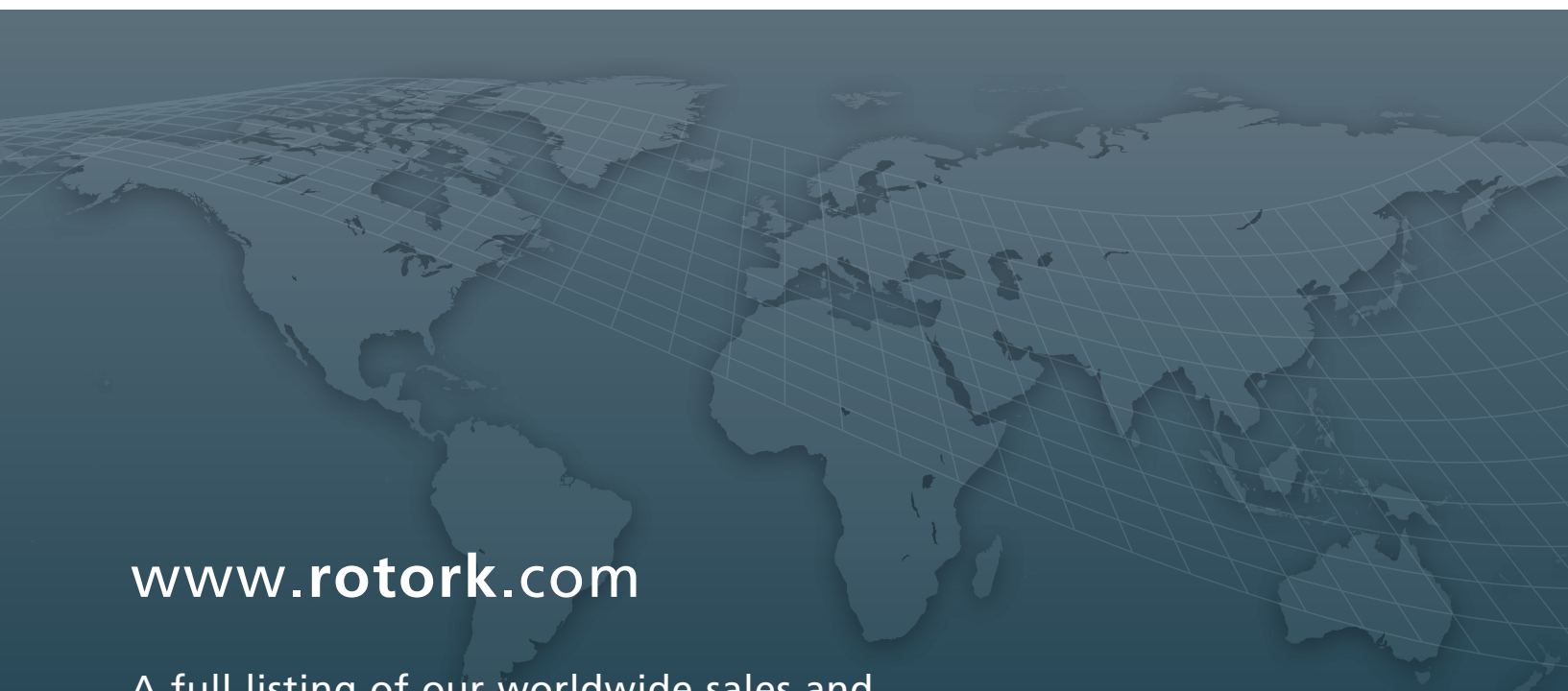
Special Executions

A = Silver shading ring
F = Protective treatment
K = Electroless nickel plating treatment
M = Manual override
N = NPT thread
V = Speed control screw

Coil Code

Type of Connector

0A1 = With connector 600 011 00 - Not assembled on the coil
0B1 = With connector 600 001 00 - Not assembled on the coil



www.rotork.com

A full listing of our worldwide sales and service network is available on our website.

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Rotork are corporate members of the Institute of Asset Management



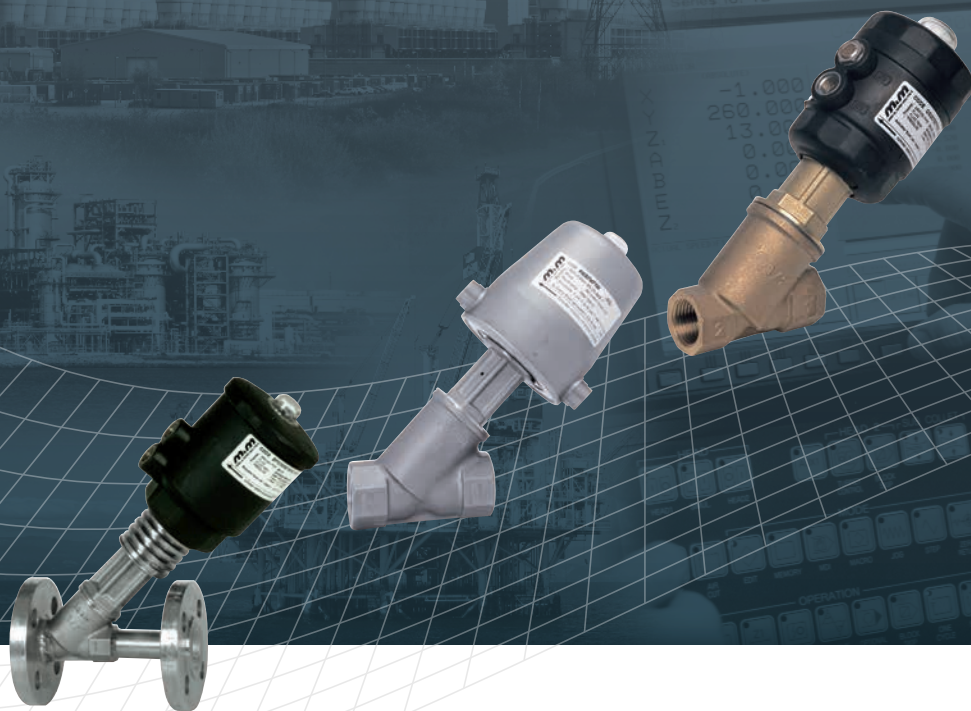
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As part of a process of on-going product development, Rotork reserves the right to amend and change specifications without prior notice. Published data may be subject to change. For the very latest version release, visit our website at www.rotork.com

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rotork®

Piston Actuated Valves Catalogue



m&m
international

A rotork® Brand

Keeping the World Flowing



Keeping the World Flowing

A circular graphic composed of eight segments. The top-left segment is red, the top-right is light grey, the middle-right is dark grey, the bottom-right is dark grey, the bottom-left is dark grey, the middle-left is light grey, the bottom-left is red, and the top-left is red. The text "RELIABILITY IN FLOW CONTROL" is in dark blue and "CRITICAL APPLICATIONS" is in red, both in a bold, sans-serif font.

**RELIABILITY
IN FLOW CONTROL
CRITICAL
APPLICATIONS**



› Reliable operation
when it matters

Assured reliability for critical applications and environments. Whether used 24/7 or infrequently, Rotork products will operate reliably and efficiently when called upon.

› Quality-driven
global manufacturing

Products designed with 60 years of industry and application knowledge.

Research and development across all our facilities ensures cutting edge products are available for every application.

› Customer-focused service
worldwide support

Solving customer challenges and developing new solutions. From initial enquiry through to product installation, long-term after-sales care and Client Support Programmes (CSP).

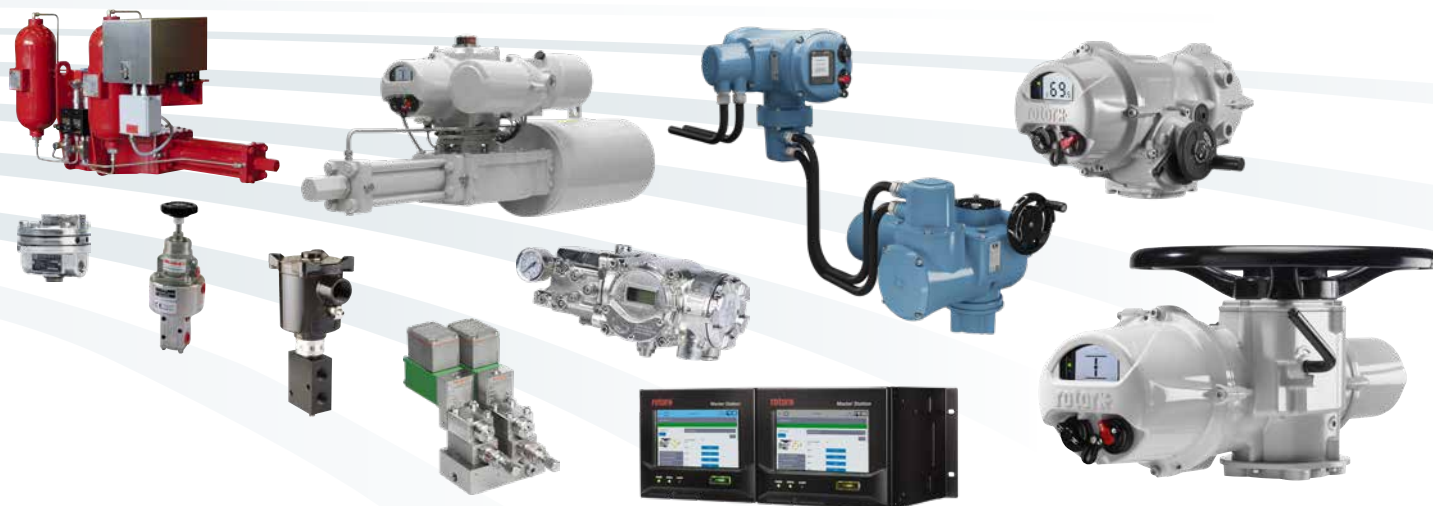
› Low cost
of ownership

Long-term reliability prolongs service life.

Rotork helps to reduce long term cost of ownership and provides greater efficiency to process and plant.

Piston Actuated Valves

Section	Page	Section	Page
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M&M Piston Valves – Features and Benefits	4	Comparative Charts	41
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Technical Information	7	Coding Chart	47
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Comprehensive product range serving multiple industries

Improved efficiency, assured safety and environmental protection.

Rotork products and services are used throughout industry inclusive of Power, Oil & Gas, Water & Wastewater, HVAC, Marine, Mining, Pulp & Paper, Food & Beverage, Pharmaceutical and Chemical industries around the world.

Global presence local service

Global company with local support.

Manufacturing sites, service centres, sales offices and *Centres of Excellence* throughout the world provide unrivalled customer services and fast delivery.

Market leader technical innovator

The recognised market leader for 60 years.

Our customers have relied upon Rotork for innovative solutions to safely manage the flow of liquids, gases and powders.

Corporate social responsibility

A responsible business leads to being the best business.

We are socially, ethically, environmentally responsible and committed to embedding CSR across all our processes and ways of working.

M&M Piston Valves – Features and Benefits

› **Standard versions with high performing components:**

Covering a wide range of industrial applications with reduced stock

› **Standard seal materials as FKM and PTFE:** Enhanced compatibility with fluids and resistance at high temperatures

› **Bi-Directional version:** Waterhammer-free installation for liquid fluids

› **Wide choice of connections:** Screw, weld, flange, clamp connections, spigots

› **Actuator housing rotation 360°:** Easy and quick installation

› **Self-registering gland and chevron packing:** Longer life

› **Valve body with angle seat design:**

High flow rate, low pressure drop

› **Stainless steel valves with universal design:** Suitable for vacuum applications

› **M&M pilot solenoid valves with banjo bolt:** User-friendly, quick

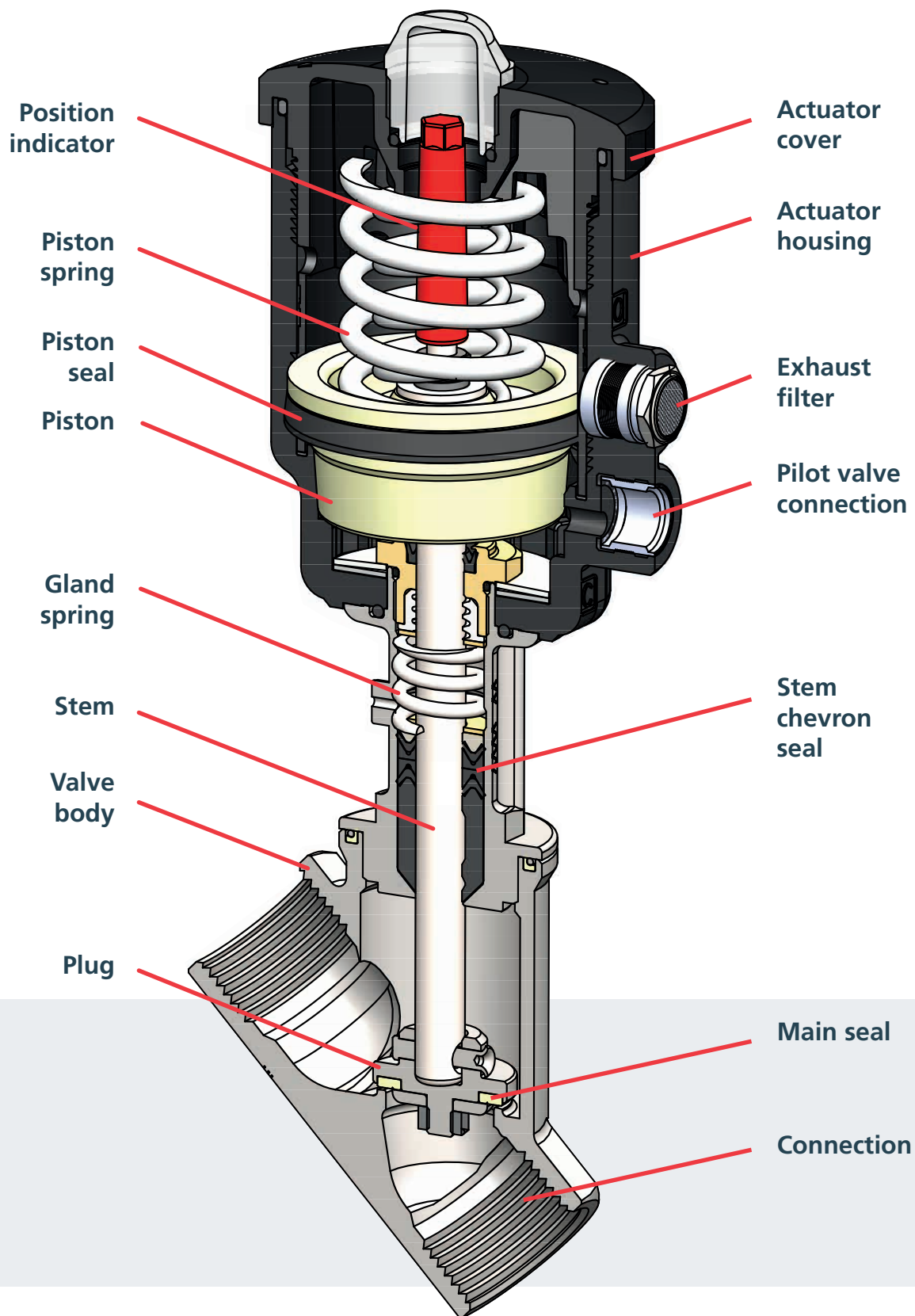
› **Actuator with built-in exhaust filter:**

Reduced noise, longer life

› **Position indicator:**

Instantly visible valve position

› **Backed by Rotork Global Support**



Valve Selection

Piston actuated valves use an external control medium to pilot the actuator, where a piston is directly connected to the main seal that closes onto the main orifice, thereby controlling the flow of liquids and gases.

They are highly recommended under the following conditions:

- Media containing dirt particles
- Highly viscous media (up to 600 cST (80°E) - 1 centistoke = 1 mm²/s)

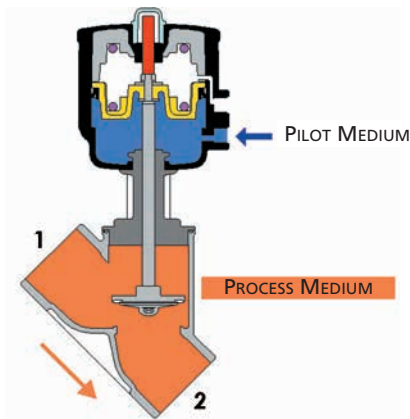
- High flow volumes
- High temperatures
- Damp environments or hazardous locations

Flow values shown in the selection tables are subject to a tolerance of $\pm 15\%$.

M&M International Piston Actuated Valve Versions

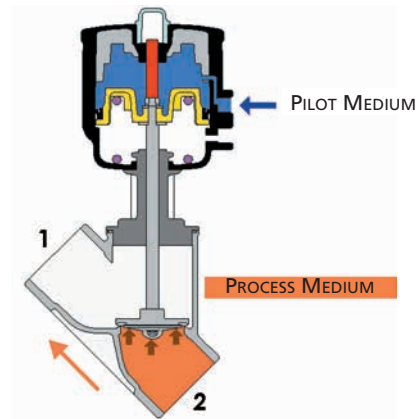
NC Valve – Flow over seat

The pressure of the pilot medium opens the valve, the spring closes it.



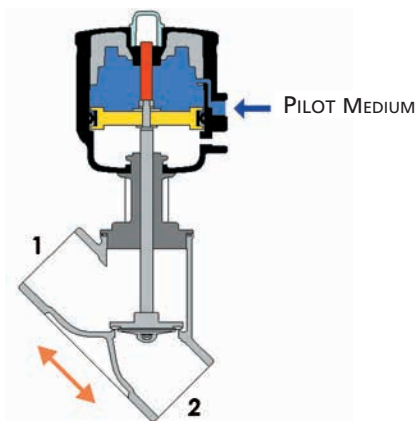
NO Valve – Flow under seat

The pressure of the pilot medium closes the valve, the spring force opens it.



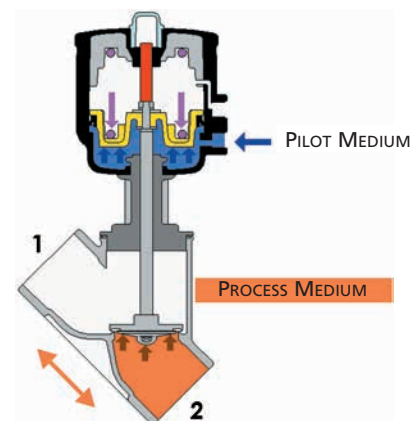
DOUBLE ACTING Valve – Flow over seat or under seat

The pilot medium opens and closes the valve. No springs. Two 3/2 pilot valves required.



BI-DIRECTIONAL NC Valve – Flow over seat or under seat

The pressure of the pilot medium opens the valve, the spring closes it. There are two springs and the valve can be used both over seat and under seat.



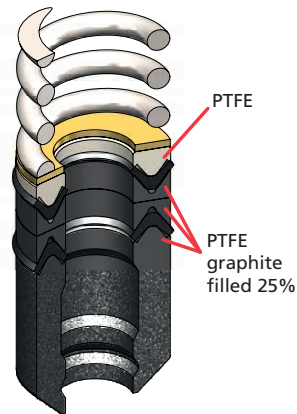
Technical Information

M&M piston actuated valves have been upgraded over the years both by design improvements as well as by using better performing materials. Below you will find some highlights about the outstanding features of M&M piston actuated valves.

Main seal material:

In 2004 standard PTFE was replaced by new modified PTFE and some design changes in the main seal were introduced. Modified PTFE has a better particle fusion, which gives the following improved features in comparison with PTFE:

- Lower porosity and permeability
- Fewer void spaces
- Higher elasticity
- Reduced deformation under load
- Better chemical resistance to controlled media
- Smoother surface and improved design flexibility



Bonnet chevron packing:

Standard bonnet seals consist of 2 'V'-shaped FKM gaskets and a package of 25% graphite-filled PTFE gaskets.

Stainless steel cast parts:

All our stainless steel series are fitted with bodies and bonnets cast specifically to Norm ASME SA351/351M GRADE CF3M, which is the Alloy Casting Institute designation for cast AISI 316L (normally used for wrought materials).

ACI designation is adopted by many standards issuing organizations, such as ASTM (for instance in ASME B 31.3 for stainless steel castings, appendix B and D, concerning recommended selection of materials for valves manufacturing). Our cast AISI 316L has a minimum content of 10% nickel, which gives improved ductility and strength.

This type of stainless steel can be compared to EN 1.4409 with a good approximation.

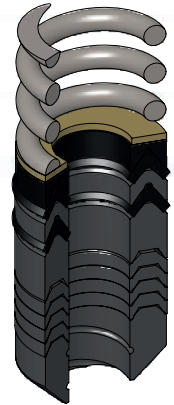
All our stainless steel cast parts bear a heat number identifying the basic material composition. Such details are stated in the casting certificate 3.1b, that can be ordered with the valves at an additional fee.

High temperature piston actuated valves:

M&M has developed a piston actuated valve version that can be used up to 200 °C, provided that the valve pressure limits are respected.

The main differences as regards materials and design are the following:

- Change of the actuator material: from standard PA6 to PA66 filled with 30% fibreglass
- All valves with DN > 25 with fixed plug design (to withstand turbulence caused by steam at high speed)
- Special design of bonnet chevrons, all are made of 25% graphite-filled PTFE



Body Pressure (PN) chart and PED classification:

M&M valve bodies bear a PN value which is to be intended as the body design pressure in bar. We use this value as a reference to perform burst tests on the bodies and bonnets upon quality control acceptance. This value is not related to the applicable medium pressure once the valve is in operation. The correct medium pressure is indicated on the valve label and is specific for each valve size and function.

Product Index

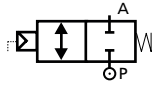
Valve	Code	Type of Connection	Actuator	Page
	BLG - (Bi-Directional)	ISO 228G / NPT	Ø 32	10
	CG - (Normally Closed) RCG - (Normally Open) BCG - (Bi-Directional) DCG - (Double Acting)	ISO 228G / NPT	Ø 45	11
	CG - (Normally Closed) RCG - (Normally Open) BCG - (Bi-Directional) DCG - (Double Acting)	ISO 228G / NPT	Ø 63 Ø 90	12 - 13
	Manual Operation CG -	ISO 228G / NPT	-	14
	Manual Operation PG -	ISO 228G / NPT	-	14
	PG - (Normally Closed) RPG - (Normally Open) BPG - (Bi-Directional) DPG - (Double Acting)	ISO 228G / NPT	Ø 45	15
	PG - (Normally Closed) RPG - (Normally Open) BPG - (Bi-Directional) DPG - (Double Acting)	ISO 228G / NPT	Ø 63 Ø 90	16 - 17
	PW / PB - (Normally Closed) RPW / RPB - (Normally Open) BPW / BPB - (Bi-Directional)	BUTT WELD: DIN 11850-2 pipe ISO 65/ANSI B.36.10 pipe	Ø 45 Ø 63 Ø 90	18 - 19
	PD / PA - (Normally Closed) RPD / RPA - (Normally Open) BPD / BPA - (Bi-Directional)	FLANGED: BS 4504 EN1092 shape B ANSI B16.5 class 150	Ø 63 Ø 90	20 - 21
	PC / PP - (Normally Closed) RPC / RPP - (Normally Open) BPC / BPP - (Bi-Directional)	CLAMP: ISO 2852 ASME BPE	Ø 45 Ø 63 Ø 90	22 - 23
	High Temperature Version PG - (Normally Closed) RPG - (Normally Open) BPG - (Bi-Directional)	ISO 228G / NPT / BUTT WELD FLANGED / CLAMP	Ø 63 Ø 90	24 - 25

Product Index

Valve	Code	Type of Connection	Actuator	Page
	PR- (Normally Closed) RPR- (Normally Open) BPR- (Bi-Directional)	THREADED SPIGOTS	Ø 45 Ø 63 Ø 90	26 - 27
	Atex Piston Actuated Valve PG- (Normally Closed) RPG- (Normally Open) BPG- (Bi-Directional)	ISO 228G / NPT	Ø 63 Ø 90	28 - 29
	Control Piston Actuated Valve ZPG- (flow always under seat)	ISO 228G / NPT	Ø 63 Ø 90	30 - 32

Options/Accessories	Code	Description	Page
	E.g. code PG205STWI0 (assembled ex-factory)	Travel Switch Option	33
	E.g. code PG205STWR0 (assembled ex-factory)	Stroke Regulator Option	33
	85703000-/85703100-/85704000- /85704100-	Position Module for Piston Actuated Valve	34
	85701800-	Travel Switch Conversion Kit for Piston Actuated Valve	35
	68000100- / 68000200-	Magnetic Switch For Conversion Kit	35
	B356CVCMK/B326CVCMK/ D326CVEMK	Pilot Solenoid Valves	36
-	Various Part Numbers	Seal Kits	37 - 40

2/2 Way Compact Piston Actuated Valve G 3/8" to 1/2" – Brass

Specifications	
Type: BLG NC Bi-directional flow over/under seat 1 → 2 / 2 → 1	
Media	Water, air, inert fluids, inert gases
Media Temperature	-10 to +90 °C
Ambient Temperature	-10 to +80 °C
Pilot Media	Filtered air
Actuator Body Material	Brass (CW617N EN12165)
Body Material	Brass (CW617N EN12165)
Piston Material	Aluminium
Stem Material	AISI 316l
Seal Material	NBR
Frequency	6 Cycles per minute

Piston valve with external pneumatic actuation, compact and solid construction.

Suitable for neutral media with particles in suspension, on applications where a standard pilot operated solenoid valve may become clogged.

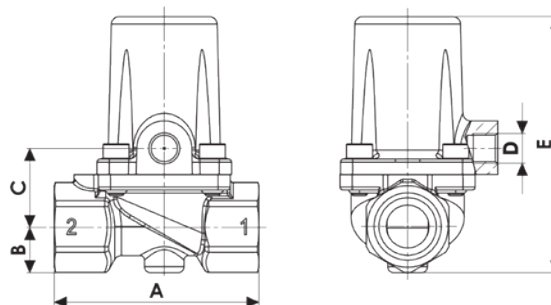


Features and Benefits

- Waterhammer-free design (with flow direction 2 → 1)
- Swift installation with banjo bolt pilot solenoid valve B356CVCMK (see page 36)
- Design suitable for vacuum applications up to 10⁻² mbar

Options Available	
NPT Connection, minimum batch may be required (e.g code BLN205DBW00)	
Electroless nickel plating treatment (e.g. code BLG205DBW0K)	

Dimensions & Weights		DN13.5	DN13.5
G connection	[ISO 228G]	3/8"	1/2"
A	[mm]	67	67
B	[mm]	15	15
C	[mm]	25.5	25.5
D	[mm]	1/8"	1/8"
E	[mm]	84	84
Weight	[kg]	0.55	0.52



Valve	Body Connection	DN	Flow Rate Kvs	Working Pressure Min.	Working Pressure Max.	Flow Direction	Pilot Pressure Min.	Pilot Pressure Max.	Actuator Ø	Function
Code	[ISO 228G]	[mm]	[l/min]	[barg]	[barg]	—	[barg]	[barg]	[mm]	—
BLG204DBW00 ¹	3/8"	13.5	56 / 45	0	10	1 → 2 / 2 → 1	4.5	10	32	NC bidirectional
BLG205DBW00	1/2"	13.5	70 / 55	0	10	1 → 2 / 2 → 1	4.5	10		

Note

1. Minimum batch may be required

2/2 Way Piston Actuated Valve G 1/2" to 1" to Compact Version – Bronze

Specifications	
Type: CG NC flow over seat 1 → 2	
Type: RCG NO flow under seat 2 → 1	
Type: BCG NC Bi-directional flow over/under seat 1 → 2 / 2 → 1	
Type: DCG DA flow over/under seat 1 ↔ 2	
Media	Water, oil, air, steam ¹
Media Temperature	-10 to +180 °C
Ambient Temperature	-10 to +60 °C
Pilot Media ²	Instrument air, inert gases
Actuator Body Material	Polyamide PA6 (reinforced fibreglass 30%)
Body Material	Bronze (CB491K EN1982)
Bonnet Material	Brass (CW617N EN12165)
Seal Material	PTFE
Position Indicator	As standard

Features and Benefits

- Waterhammer-free design for BCG - DCG (with flow direction 2 → 1)
- Actuator housing rotation 360°
- Design suitable for vacuum applications up to 10⁻² mbar



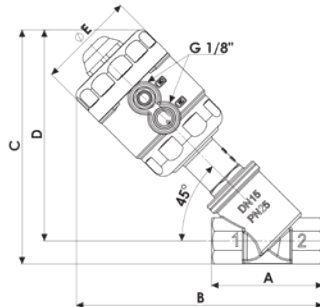
Options Available

NPT Connection (e.g code CN205CTW00)

Accessories

Position module, travel switch kit, pilot solenoid valves see pages 34/35/36

Dimensions & Weights		DN15	DN20	DN25
Actuator	[mm]	Ø 45		
A	[mm]	65	75	90
B	[mm]	144	149	168
C	[mm]	136	142	161
D	[mm]	123	126	141
E	[mm]	57	57	57
Weight	[kg]	0.8	0.9	1.1



The products listed below comply with the requirements of the European Pressure Equipment Directive 2014/68/UE and carry the CE mark when required. The products fall within the following Pressure Equipment Directive categories:

Bodies	Group 1 gases	Group 1 liquids and Group 2 other fluids
DN15 to DN25 (PN25)	art. 4.3	art. 4.3

⚠ WARNING!

According to the European Pressure Equipment Directive 2014/68/UE liquids whose saturated vapour pressure at the maximum allowable temperature is more than 0,5 barg shall be considered as gases.

Valve	Body Connection	DN	Flow Rate Kvs	Working Pressure ¹ Min.	Working Pressure ¹ Max.	Flow Direction	Pilot Pressure ³ Min.	Pilot Pressure ³ Max.	Actuator Ø	Function
Code	[ISO 228G]	[mm]	[l/min]	[barg]	[barg]	—	[barg]	[barg]	[mm]	—
CG205CTW00	1/2"	15	75	0	16	1 → 2	3.8	10	45	NC
CG206CTX00	3/4"	20	133	0	16	1 → 2	5.8	10		
CG207CTY00	1"	25	208	0	16	1 → 2	6.5	10		
RCG205CTW00	1/2"	15	75	0	16	2 → 1	4	10	45	NO
RCG206CTX00	3/4"	20	133	0	16	2 → 1	6.2	10		
RCG207CTY00	1"	25	208	0	16	2 → 1	8.8	10		
BCG205CTW00	1/2"	15	75	0	16 / 16	1 → 2 / 2 → 1	6.2 / 5	10	45	NC bidirectional
BCG206CTX00	3/4"	20	133	0	16 / 7	1 → 2 / 2 → 1	8.7 / 5	10		
BCG207CTY00	1"	25	208	0	16 / 5	1 → 2 / 2 → 1	9.5 / 5	10		
DCG205CTW00	1/2"	15	75	0	16 / 16	1 ↔ 2	3	10	45	DA
DCG206CTX00	3/4"	20	133	0	16 / 16	1 ↔ 2	5	10		
DCG207CTY00	1"	25	208	0	16 / 16	1 ↔ 2	8.5	10		

Notes

1. Steam max. working pressure 10 bar (9 barg)
2. Please contact M&M sales Department for other pilot media
3. Minimum pilot pressure at the max. working pressure: for lower working pressures please refer to the comparative charts

2/2 Way Piston Actuated Valve G 1/2" to 2", Regular Version – Bronze

Specifications	
Type: CG NC flow over seat 1 → 2	
Type: RCG NO Flow Under Seat 2 → 1	
Type: BCG NC Bi-Directional Flow Over/Under Seat 1 → 2 / 2 → 1	
Type: DCG DA Flow Over/Under Seat 1 ↔ 2	
Media	Water, oil, air, steam ¹
Media Temperature	-10 to +180 °C
Ambient Temperature	-10 to +60 °C
Pilot Media ²	Instrument air, inert gases
Actuator Body Material	Polyamide PA6 (reinforced fibreglass 30%)
Body Material	Bronze (CB491K EN1982)
Bonnet Material	Brass (CW617N EN12165)
Seal Material	PTFE
Position Indicator	As standard

Features and Benefits

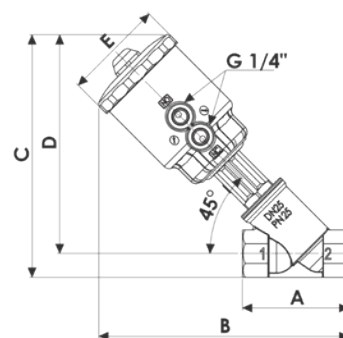
- Waterhammer-free design for BCG - DCG (with flow direction 2 → 1)
- Actuator housing rotation 360°



Options Available
Stroke regulator assembled ex-factory, see page 33 (e.g. code CG205STWR0)
Travel switch assembled ex-factory, see page 33 (e.g. code RCG209STKJ0)
NPT connection (e.g. code BCN207LTY00)
Design for vacuum applications up to 10 ⁻² mbar (e.g. code DCG210STJ0V)

Accessories
Position module, travel switch kit, pilot solenoid valves see pages 34/35/36

Dimensions & Weights		DN15	DN20	DN25	DN32	DN40	DN50	DN25	DN32	DN40	DN50
Actuator	[mm]	Ø 63						Ø 90			
A	[mm]	65	75	90	110	120	150	90	110	120	150
B	[mm]	192	198	212	225	230	248	223	234	239	257
C	[mm]	184	192	205	217	225	241	216	227	235	250
D	[mm]	171	176	185	193	198	207	196	202	207	216
E	[mm]	85	85	85	85	85	85	112	112	112	112
Weight	[kg]	1.2	1.3	1.5	1.9	2.1	2.9	2.0	2.4	2.6	3.3



The products listed below comply with the requirements of the European Pressure Equipment Directive 2014/68/UE and carry the CE mark when required. The products fall within the following Pressure Equipment Directive categories:

Valve Type	Bodies	Group 1 gases	Group 1 liquids and Group 2 other fluids
CG - RCG - BCG - DCG	DN15 to DN25 (PN25)	art. 4.3	art. 4.3
	DN32 to DN40 (PN25)	Not suitable	SEP
	DN50 (PN16)	Not suitable	SEP

⚠ WARNING!

According to the European Pressure Equipment Directive 2014/68/UE, liquids whose saturated vapour pressure at the maximum allowable temperature is more than 0,5 barg shall be considered as gases.

2/2 Way Piston Actuated Valve G 1/2" to 2", Regular Version – Bronze

Valve	Body Connection	DN	Flow Rate Kvs	Working Pressure ¹ Min. Max.		Flow Direction	Pilot Pressure ³ Min. Max.		Actuator Ø	Function	
Code	[ISO 228G]	[mm]	[l/min]	[barg]	[barg]	—	[barg]	[barg]	[mm]	—	
CG205STW00	1/2"	15	87	0	20	1 → 2	3.7	10	63	NC	
CG206STX00	3/4"	20	164	0	20	1 → 2	4.4	10			
CG207STY00	1"	25	260	0	20	1 → 2	5	10			
CG208STZ00	1 1/4"	32	410	0	16	1 → 2	5.9	10			
CG209STK00	1 1/2"	40	700	0	16	1 → 2	9	10			
CG210STJ00	2"	50	950	0	11	1 → 2	8	10			
CG207LTY00	1"	25	260	0	20	1 → 2	2	8	90		
CG208LTZ00	1 1/4"	32	410	0	16	1 → 2	3.5	8			
CG209LTK00	1 1/2"	40	700	0	16	1 → 2	4	8			
CG210LTJ00	2"	50	950	0	15	1 → 2	6.5	8			
RCG205STW00	1/2"	15	87	0	16	2 → 1	2.5	8	63	NO	
RCG206STX00	3/4"	20	164	0	16	2 → 1	4.3	8			
RCG207STY00	1"	25	260	0	16	2 → 1	5.5	8			
RCG208STZ00	1 1/4"	32	410	0	16	2 → 1	6.5	8			
RCG209STK00	1 1/2"	40	700	0	12	2 → 1	8	8			
RCG210STJ00	2"	50	950	0	8	2 → 1	8	8			
RCG207LTY00	1"	25	260	0	16	2 → 1	2	5	90		
RCG208LTZ00	1 1/4"	32	410	0	16	2 → 1	4	5			
RCG209LTK00	1 1/2"	40	700	0	16	2 → 1	5	5			
RCG210LTJ00	2"	50	950	0	10	2 → 1	5	5			
BCG205STW00	1/2"	15	87	0	16	1 → 2 / 2 → 1	5.5 / 3.8	10	63	NC bidirectional	
BCG206STX00	3/4"	20	164	0	16	1 → 2 / 2 → 1	6 / 3.8	10			
BCG207STY00	1"	25	260	0	16 / 11	1 → 2 / 2 → 1	6.5 / 3.8	10			
BCG208STZ00	1 1/4"	32	410	0	16 / 6	1 → 2 / 2 → 1	6.8 / 3.8	10			
BCG209STK00	1 1/2"	40	700	0	12 / 4	1 → 2 / 2 → 1	9 / 3.8	10			
BCG210STJ00	2"	50	950	0	8 / 2.5	1 → 2 / 2 → 1	9 / 3.8	10			
BCG207LTY00	1"	25	260	0	16 / 14	1 → 2 / 2 → 1	4 / 3.3	8	90		
BCG208LTZ00	1 1/4"	32	410	0	16 / 12	1 → 2 / 2 → 1	5 / 3.3	8			
BCG209LTK00	1 1/2"	40	700	0	16 / 8	1 → 2 / 2 → 1	6 / 3.3	8			
BCG210LTJ00	2"	50	950	0	14 / 6	1 → 2 / 2 → 1	8 / 3.3	8			
DCG205STW00	1/2"	15	87	0	16	1 ↔ 2	1.8	2	63	DA	
DCG206STX00	3/4"	20	164	0	16	1 ↔ 2	2	3.8			
DCG207STY00	1"	25	260	0	16	1 ↔ 2	3	5			
DCG208STZ00	1 1/4"	32	410	0	16	1 ↔ 2	4.5	6			
DCG209STK00	1 1/2"	40	700	0	16	1 ↔ 2	6.5	7			
DCG210STJ00	2"	50	950	0	10	1 ↔ 2	8	8			

Notes

1. Steam max. working pressure 10 bar (9 barg)
2. Please contact M&M sales Department for other pilot media
3. Minimum pilot pressure at the max. working pressure: for lower working pressures please refer to the comparative charts

Manual Angle Seat Valve G 1/2" to 2" – Bronze (CG) & Stainless Steel (PG)

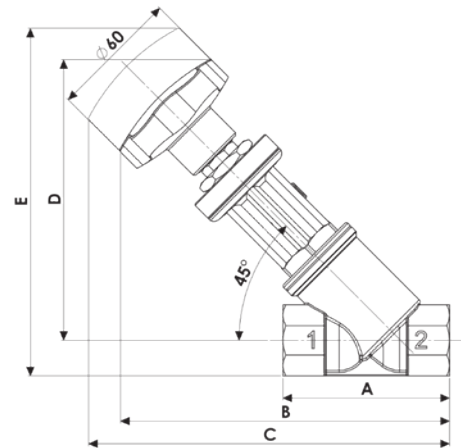
Specifications	
Function Flow over / under seat ¹	Type CG / PG
Media	Water, oil, air, aggressive media, steam ¹
Media Temperature	-10 to +180 °C
Ambient Temperature	-10 to +60 °C
Body Material (CG)	Bronze (CB491K EN1982)
Bonnet Material (CG)	Brass (CW617N EN12165)
Body Material (PG)	Cast AISI 316L (CF3M), see page 7
Bonnet Material (PG)	Cast AISI 316L (CF3M), see page 7
Seal Material	PTFE

¹ Not suitable for use with vacuum

Options Available
NPT connection (e.g. code PN2070TY00)



Dimensions & Weights		DN15	DN20	DN25	DN32	DN40	DN50
G connection	[ISO 228G]	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A	[mm]	65	75	90	110	120	150
B	[mm]	142	148	163	175	180	198
C	[mm]	150	155	172	188	193	212
D	[mm]	121	126	135	143	148	157
E	[mm]	141	150	165	181	189	205
Weight	[kg]	0.75	0.80	1.20	1.80	2.10	3.10



Valve	Body Connection	DN	Flow Rate Kvs	Working Pressure ¹		Flow Direction
Code	[ISO 228G]	[mm]	[l/min]	Min. [barg]	Max. [barg]	—
CG2050TW00	1/2"	15	87	0	25	1 ⇌ 2
CG2060TX00	3/4"	20	164	0	25	1 ⇌ 2
CG2070TY00	1"	25	260	0	25	1 ⇌ 2
CG2080TZ00	1 1/4"	32	410	0	25	1 ⇌ 2
CG2090TK00	1 1/2"	40	700	0	25	1 ⇌ 2
CG2100TJ00	2"	50	916	0	16	1 ⇌ 2
PG2050TW00	1/2"	15	87	0	40	1 ⇌ 2
PG2060TX00	3/4"	20	164	0	40	1 ⇌ 2
PG2070TY00	1"	25	260	0	40	1 ⇌ 2
PG2080TZ00	1 1/4"	32	410	0	25	1 ⇌ 2
PG2090TK00	1 1/2"	40	700	0	25	1 ⇌ 2
PG2100TJ00	2"	50	916	0	16	1 ⇌ 2

Note

1. Steam max. working pressure 10 bar (9 barg)

2/2 Way Piston Actuated Valve G 1/2" to 3/4", Compact Version – Stainless Steel

Specifications	
Type: PG NC flow over seat 1 → 2	
Type RPG: NO flow under seat 2 → 1	
Type: BPG NC bi-directional flow over/under seat 1 → 2 / 2 → 1	
Type: DPG DA flow over/under seat 1 ↔ 2	
Media	Water, oil, air, aggressive media, steam ¹
Media Temperature	-10 to +180 °C
Ambient Temperature	-10 to +60 °C
Pilot Media ²	Instrument air, inert gases
Body Material	Cast AISI 316L (CF3M), see page 7
Bonnet Material	Cast AISI 316L (CF3M), see page 7
Actuator Body Material	Polyamide PA6 (reinforced fibreglass 30%)
Seal Material	PTFE
Position Indicator	As standard

Features and Benefits

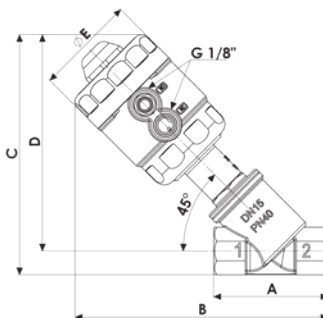
- Waterhammer-free design for BPG - DPG (with flow direction 2→1)
- Actuator housing rotation 360°
- Design suitable for vacuum applications up to 10⁻² mbar



Options Available
NPT connection (e.g. code PN205CTW00)

Accessories
Position module, travel switch kit, pilot solenoid valves see pages 34/35/36

Dimensions & Weights		DN15	DN20
Actuator	[mm]	Ø 45	
A	[mm]	65	75
B	[mm]	144	149
C	[mm]	136	142
D	[mm]	123	126
E	[mm]	57	57
Weight	[kg]	0.8	0.9



The products listed below comply with the requirements of the European Pressure Equipment Directive 2014/68/UE and carry the CE mark when required. The products fall within the following Pressure Equipment Directive categories:

Bodies	Group 1 gases	Group 1 liquids and Group 2 other fluids
DN15 to DN20 (PN40)	art. 4.3	art. 4.3

⚠ WARNING!

According to the European Pressure Equipment Directive 2014/68/UE, liquids whose saturated vapour pressure at the maximum allowable temperature is more than 0,5 barg shall be considered as gases.

Valve	Body Connection	DN	Flow Rate Kvs	Working Pressure ¹		Flow Direction	Pilot Pressure ³		Actuator Ø	Function
Code	[ISO 228G]	[mm]	[l/min]	[barg]	[barg]	—	[barg]	[barg]	[mm]	—
PG205CTW00	1/2"	15	75	0	16	1 → 2	3.8	10	45	NC
PG206CTX00	3/4"	20	133	0	16	1 → 2	5.8	10		
RPG205CTW00	1/2"	15	75	0	16	2 → 1	4	10	45	NO
RPG206CTX00	3/4"	20	133	0	16	2 → 1	6.2	10		
BPG205CTW00	1/2"	15	75	0	16 / 16	1 → 2 / 2 → 1	6.2 / 5	10	45	NC bidirectional
BPG206CTX00	3/4"	20	133	0	16 / 7	1 → 2 / 2 → 1	8.7 / 5	10		
DPG205CTW00	1/2"	15	75	0	16 / 16	1 ↔ 2	3	10	45	DA
DPG206CTX00	3/4"	20	133	0	16 / 16	1 ↔ 2	5	10		

Notes

1. Steam max. working pressure 10 bar (9 barg)
2. Please contact M&M sales Department for other pilot media
3. Minimum pilot pressure at the max. working pressure: for lower working pressures please refer to the comparative charts

2/2 Way Piston Actuated Valve G 1/2" to 2", Regular Version - Stainless Steel

Specifications	
Type: PG NC flow over seat 1 → 2	
Type: RPG NO flow under seat 2 → 1	
Type: BPG NC bi-directional flow over/under seat 1 → 2 / 2 → 1	
Type: DPG DA flow over/under seat 1 ↔ 2	
Media	Water, oil, air, aggressive media, steam ¹
Media Temperature	-10 to +180 °C
Ambient Temperature	-10 to +60 °C
Pilot Media ²	Instrument air, inert gases
Body Material	Cast AISI 316L (CF3M), see page 7
Bonnet Material	Cast AISI 316L (CF3M), see page 7
Actuator Body Material	Polyamide PA6 (reinforced fiberglass 30%)
Seal Material	PTFE
Position Indicator	As standard

Features and Benefits

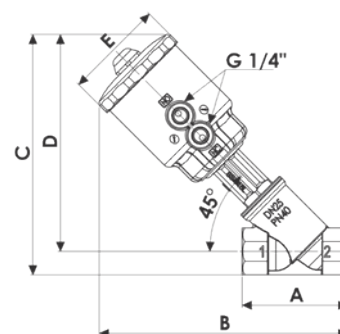
- Waterhammer-free design for BPG - DPG (with flow direction 2 → 1)
- Actuator housing rotation 360°
- Design suitable for vacuum applications up to 10⁻² mbar



Options Available
Stroke regulator assembled ex-factory, see page 33 (e.g. code RPG210STJ00)
Travel switch assembled ex-factory, see page 33 (e.g. code PG208STZ00)
NPT connection (e.g. code BPN207LTY00)
High temperature version, see pages 24/25 (e.g. code PG205STW0H)

Accessories
Position module, travel switch kit, pilot solenoid valves see pages 34/35/36

Dimensions & Weights		DN15	DN20	DN25	DN32	DN40	DN50	DN25	DN32	DN40	DN50
Actuator	[mm]	Ø 63						Ø 90			
A	[mm]	65	75	90	110	120	150	90	110	120	150
B	[mm]	192	198	212	225	230	248	223	234	239	257
C	[mm]	184	192	205	217	225	241	216	227	235	250
D	[mm]	171	176	185	193	198	207	196	202	207	216
E	[mm]	85	85	85	85	85	85	112	112	112	112
Weight	[kg]	1.2	1.3	1.5	1.9	2.1	2.9	2.0	2.4	2.6	3.3



The products listed below comply with the requirements of the European Pressure Equipment Directive 2014/68/UE and carry the CE mark when required. The products fall within the following Pressure Equipment Directive categories:

Valve Type	Bodies	Group 1 gases	Group 1 liquids and Group 2 other fluids
PG - RPG - BPG - DPG	DN15 to DN25 (PN40)	art. 4.3	art. 4.3
	DN32 to DN40 (PN25)	Category I	art. 4.3
	DN50 (PN16)	Category I	art. 4.3

⚠ WARNING!

According to the European Pressure Equipment Directive 2014/68/UE, liquids whose saturated vapour pressure at the maximum allowable temperature is more than 0,5 barg shall be considered as gases.

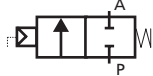
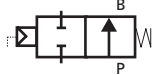
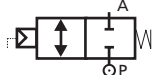
2/2 Way Piston Actuated Valve G 1/2" to 2", Regular Version – Stainless Steel

Valve	Body Connection	DN	Flow Rate Kvs	Working Pressure ¹		Flow Direction	Pilot Pressure ³		Actuator Ø	Function	
Code	[ISO 228G]	[mm]	[l/min]	[barg]	[barg]	—	[barg]	[barg]	[mm]	—	
PG205STW00	1/2 "	15	87	0	20	1 → 2	3.7	10	63	NC	
PG206STX00	3/4 "	20	164	0	20	1 → 2	4.4	10			
PG207STY00	1 "	25	260	0	20	1 → 2	5	10			
PG208STZ00	1 1/4 "	32	410	0	16	1 → 2	5.9	10			
PG209STK00	1 1/2 "	40	700	0	16	1 → 2	9	10			
PG210STJ00	2 "	50	950	0	11	1 → 2	8	10			
PG207LTY00	1 "	25	260	0	20	1 → 2	2	8	90		
PG208LTZ00	1 1/4 "	32	410	0	16	1 → 2	3.5	8			
PG209LTK00	1 1/2 "	40	700	0	16	1 → 2	4	8			
PG210LTJ00	2 "	50	950	0	15	1 → 2	6.5	8			
RPG205STW00	1/2 "	15	87	0	16	2 → 1	2.5	8	63	NO	
RPG206STX00	3/4 "	20	164	0	16	2 → 1	4.3	8			
RPG207STY00	1 "	25	260	0	16	2 → 1	5.5	8			
RPG208STZ00	1 1/4 "	32	410	0	16	2 → 1	6.5	8			
RPG209STK00	1 1/2 "	40	700	0	12	2 → 1	8	8			
RPG210STJ00	2 "	50	950	0	8	2 → 1	8	8			
RPG207LTY00	1 "	25	260	0	16	2 → 1	2	5	90		
RPG208LTZ00	1 1/4 "	32	410	0	16	2 → 1	4	5			
RPG209LTK00	1 1/2 "	40	700	0	16	2 → 1	5	5			
RPG210LTJ00	2 "	50	950	0	10	2 → 1	5	5			
BPG205STW00	1/2 "	15	87	0	16	1 → 2 / 2 → 1	5.5 / 3.8	10	63	NC bidirectional	
BPG206STX00	3/4 "	20	164	0	16	1 → 2 / 2 → 1	6 / 3.8	10			
BPG207STY00	1 "	25	260	0	16 / 11	1 → 2 / 2 → 1	6.5 / 3.8	10			
BPG208STZ00	1 1/4 "	32	410	0	16 / 6	1 → 2 / 2 → 1	6.8 / 3.8	10			
BPG209STK00	1 1/2 "	40	700	0	12 / 4	1 → 2 / 2 → 1	9 / 3.8	10			
BPG210STJ00	2 "	50	950	0	8 / 2.5	1 → 2 / 2 → 1	9 / 3.8	10			
BPG207LTY00	1 "	25	260	0	16 / 14	1 → 2 / 2 → 1	4 / 3.3	8	90		
BPG208LTZ00	1 1/4 "	32	410	0	16 / 12	1 → 2 / 2 → 1	5 / 3.3	8			
BPG209LTK00	1 1/2 "	40	700	0	16 / 8	1 → 2 / 2 → 1	6 / 3.3	8			
BPG210LTJ00	2 "	50	950	0	14 / 6	1 → 2 / 2 → 1	8 / 3.3	8			
DPG205STW00	1/2 "	15	87	0	16	1 ⇄ 2	1.8	2	63	DA	
DPG206STX00	3/4 "	20	164	0	16	1 ⇄ 2	2	3.8			
DPG207STY00	1 "	25	260	0	16	1 ⇄ 2	3	5			
DPG208STZ00	1 1/4 "	32	410	0	16	1 ⇄ 2	4.5	6			
DPG209STK00	1 1/2 "	40	700	0	16	1 ⇄ 2	6.5	7			
DPG210STJ00	2 "	50	950	0	10	1 ⇄ 2	8	8			

Notes

1. Steam max. working pressure 10 bar (9 barg)
2. Please contact M&M sales Department for other pilot media
3. Minimum pilot pressure at the max. working pressure: for lower working pressures please refer to the comparative charts

2/2 Way Piston Actuated Valve Butt Weld Connection – Stainless Steel

Specifications	
Type: PW/PB NC flow over seat 1 → 2	
Type: RPW/RPB NO flow under seat 2 → 1	
Type: BPW/BPB NC bi-directional flow over/under seat 1 → 2 / 2 → 1	
Media	Water, oil, air, aggressive media, steam ¹
Media Temperature	-10 to +180 °C
Ambient Temperature	-10 to +60 °C
Pilot Media ²	Instrument air, inert gases
Body Material	Cast AISI 316L (CF3M), see page 7
Bonnet Material	Cast AISI 316L (CF3M), see page 7
Butt Weld Connection	DIN 11850-2 pipe or ISO 65/ANSI B 36.10 pipe
Actuator Body Material	Polyamide PA6 (reinforced fiberglass 30%)
Seal Material	PTFE
Position Indicator	As standard

Features and Benefits

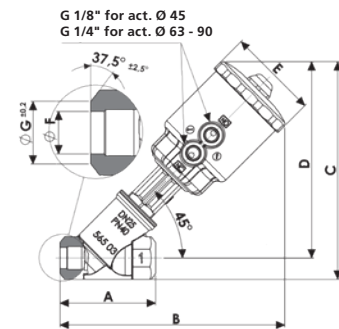
- Waterhammer-free design for BPW - BPB (with flow direction 2 → 1)
- Actuator housing rotation 360°
- Design suitable for vacuum applications up to 10⁻² mbar



Options Available
Stroke regulator assembled ex-factory, see page 33 (e.g. code RPW210STJ0)
Travel switch assembled ex-factory, see page 33 (e.g. code PB208STZ0)
High temperature version, see pages 24/25 (e.g. code BPW207LTY0H)

Accessories
Position module, travel switch kit, pilot solenoid valves see pages 34/35/36

Dimensions & Weights		DN15	DN20	DN15	DN20	DN25	DN32	DN40	DN50	DN25	DN32	DN40	DN50
Actuator	[mm]	Ø 45		Ø 63				Ø 90					
A	[mm]	65	75	65	75	90	110	120	150	90	110	120	150
B	[mm]	144	149	192	198	212	225	230	248	223	234	239	257
C	[mm]	136	142	184	192	205	217	225	241	216	227	235	250
D	[mm]	123	126	171	176	185	193	198	207	196	202	207	216
E	[mm]	57	57	85	85	85	85	85	85	112	112	112	112
F DIN 11850	[mm]	16	20	16	20	26	32	38	50	26	32	38	50
F ISO 65/ANSI B 36.10	[mm]	17.4	22.8	17.4	22.8	28.3	37.1	42.7	54.8	28.3	37.1	42.7	54.8
G DIN 11850	[mm]	19.2	23.2	19.2	23.2	29.2	36	42	54	29.2	36	42	54
G ISO 65/ANSI B 36.10	[mm]	20.6	26	20.6	26	31.5	41.1	46.7	58.8	31.5	41.1	46.7	58.8
Weight	[kg]	0.8	0.9	1.2	1.3	1.5	1.9	2.1	2.9	2.0	2.4	2.6	3.3



Welded ends complying with ISO 6761

The products listed below comply with the requirements of the European Pressure Equipment Directive 2014/68/UE and carry the CE mark when required. The products fall within the following Pressure Equipment Directive categories:

Valve Type	Bodies	Group 1 gases	Group 1 liquids and Group 2 other fluids
PW - RPW - BPW PB - RPB - BPB	DN15 to DN25 (PN40)	art. 4.3	art. 4.3
	DN32 to DN40 (PN25)	Category I	art. 4.3
	DN50 (PN16)	Category I	art. 4.3

⚠ WARNING!

According to the European Pressure Equipment Directive 2014/68/UE, liquids whose saturated vapour pressure at the maximum allowable temperature is more than 0,5 barg shall be considered as gases.

Notes

1. Steam max. working pressure 10 bar (9 barg)
2. Please contact M&M sales Department for other pilot media
3. Minimum pilot pressure at the max. working pressure: for lower working pressures please refer to the comparative charts (for different part numbers: e.g. PW205STW00 please refer to the equivalent part number PG205STW00 for threaded connection)

2/2 Way Piston Actuated Valve Butt Weld Connection – Stainless Steel

Valve	Body Connection	DN	Flow Rate Kvs	Working Pressure ¹		Flow Direction	Pilot Pressure ³		Actuator Ø	Function
Code	—	[mm]	[l/min]	[barg]	[barg]	—	[barg]	[barg]	[mm]	—
PW205CTW00	butt weld to DIN 11850-2 pipe	15	75	0	16	1 → 2	3.8	10	45	NC
PW206CTX00		20	133	0	16	1 → 2	5.8	10		
PW205STW00		15	87	0	20	1 → 2	3.7	10		
PW206STX00		20	164	0	20	1 → 2	4.4	10		
PW207STY00		25	260	0	20	1 → 2	5	10		
PW208STZ00		32	410	0	16	1 → 2	5.9	10		
PW209STK00		40	700	0	16	1 → 2	9	10		
PW210STJ00		50	950	0	11	1 → 2	8	10		
PW207LTY00		25	260	0	20	1 → 2	2	8		
PW208LTZ00		32	410	0	16	1 → 2	3.5	8		
PW209LTK00		40	700	0	16	1 → 2	4	8		
PW210LTJ00		50	950	0	15	1 → 2	6.5	8		
RPW205CTW00	butt weld to DIN 11850-2 pipe	15	75	0	16	2 → 1	4	8	45	NO
RPW206CTX00		20	133	0	16	2 → 1	6.2	8		
RPW205STW00		15	87	0	16	2 → 1	2.5	8		
RPW206STX00		20	164	0	16	2 → 1	4.3	8		
RPW207STY00		25	260	0	16	2 → 1	5.5	8		
RPW208STZ00		32	410	0	16	2 → 1	6.5	8		
RPW209STK00		40	700	0	12	2 → 1	8	8		
RPW210STJ00		50	950	0	8	2 → 1	8	8		
RPW207LTY00		25	260	0	16	2 → 1	2	5		
RPW208LTZ00		32	410	0	16	2 → 1	4	5		
RPW209LTK00		40	700	0	16	2 → 1	5	5		
RPW210LTJ00		50	950	0	10	2 → 1	5	5		
BPW205CTW00	butt weld to DIN 11850-2 pipe	15	75	0	16 / 16	1 → 2 / 2 → 1	6.2 / 5	10	45	NC bidirectional
BPW206CTX00		20	133	0	16 / 7	1 → 2 / 2 → 1	8.7 / 5	10		
BPW205STW00		15	87	0	16	1 → 2 / 2 → 1	5.5 / 3.8	10		
BPW206STX00		20	164	0	16	1 → 2 / 2 → 1	6 / 3.8	10		
BPW207STY00		25	260	0	16 / 11	1 → 2 / 2 → 1	6.5 / 3.8	10		
BPW208STZ00		32	410	0	16 / 6	1 → 2 / 2 → 1	6.8 / 3.8	10		
BPW209STK00		40	700	0	12 / 4	1 → 2 / 2 → 1	9 / 3.8	10		
BPW210STJ00		50	950	0	8 / 2.5	1 → 2 / 2 → 1	9 / 3.8	10		
BPW207LTY00		25	260	0	16 / 14	1 → 2 / 2 → 1	4 / 3.3	8		
BPW208LTZ00		32	410	0	16 / 12	1 → 2 / 2 → 1	5 / 3.3	8		
BPW209LTK00		40	700	0	16 / 8	1 → 2 / 2 → 1	6 / 3.3	8		
BPW210LTJ00		50	950	0	14 / 6	1 → 2 / 2 → 1	8 / 3.3	8		
PB205CTW00	butt weld to ISO 65/ ANSI B 36.10 pipe	15	75	0	16	1 → 2	3.8	10	45	NC
PB206CTX00		20	133	0	16	1 → 2	5.8	10		
PB205STW00		15	87	0	20	1 → 2	3.7	10		
PB206STX00		20	164	0	20	1 → 2	4.4	10		
PB207STY00		25	260	0	20	1 → 2	5	10		
PB208STZ00		32	410	0	16	1 → 2	5.9	10		
PB209STK00		40	700	0	16	1 → 2	9	10		
PB210STJ00		50	950	0	11	1 → 2	8	10		
PB207LTY00		25	260	0	20	1 → 2	2	8		
PB208LTZ00		32	410	0	16	1 → 2	3.5	8		
PB209LTK00		40	700	0	16	1 → 2	4	8		
PB210LTJ00		50	950	0	15	1 → 2	6.5	8		
RPB205CTW00	butt weld to ISO 65/ ANSI B 36.10 pipe	15	75	0	16	2 → 1	4	8	45	NO
RPB206CTX00		20	133	0	16	2 → 1	6.2	8		
RPB205STW00		15	87	0	16	2 → 1	2.5	8		
RPB206STX00		20	164	0	16	2 → 1	4.3	8		
RPB207STY00		25	260	0	16	2 → 1	5.5	8		
RPB208STZ00		32	410	0	16	2 → 1	6.5	8		
RPB209STK00		40	700	0	12	2 → 1	8	8		
RPB210STJ00		50	950	0	8	2 → 1	8	8		
RPB207LTY00		25	260	0	16	2 → 1	2	5		
RPB208LTZ00		32	410	0	16	2 → 1	4	5		
RPB209LTK00		40	700	0	16	2 → 1	5	5		
RPB210LTJ00		50	950	0	10	2 → 1	5	5		
BPB205CTW00	butt weld to ISO 65/ ANSI B 36.10 pipe	15	75	0	16 / 16	1 → 2 / 2 → 1	6.2 / 5	10	45	NC bidirectional
BPB206CTX00		20	133	0	16 / 7	1 → 2 / 2 → 1	8.7 / 5	10		
BPB205STW00		15	87	0	16	1 → 2 / 2 → 1	5.5 / 3.8	10		
BPB206STX00		20	164	0	16	1 → 2 / 2 → 1	6 / 3.8	10		
BPB207STY00		25	260	0	16 / 11	1 → 2 / 2 → 1	6.5 / 3.8	10		
BPB208STZ00		32	410	0	16 / 6	1 → 2 / 2 → 1	6.8 / 3.8	10		
BPB209STK00		40	700	0	12 / 4	1 → 2 / 2 → 1	9 / 3.8	10		
BPB210STJ00		50	950	0	8 / 2.5	1 → 2 / 2 → 1	9 / 3.8	10		
BPB207LTY00		25	260	0	16 / 14	1 → 2 / 2 → 1	4 / 3.3	8		
BPB208LTZ00		32	410	0	16 / 12	1 → 2 / 2 → 1	5 / 3.3	8		
BPB209LTK00		40	700	0	16 / 8	1 → 2 / 2 → 1	6 / 3.3	8		
BPB210LTJ00		50	950	0	14 / 6	1 → 2 / 2 → 1	8 / 3.3	8		

2/2 Way Piston Actuated Valve Flanged – Stainless Steel

Specifications	
Type: PD/PA NC flow over seat 1 → 2	
Type: RPD/RPA NO flow under seat 2 → 1	
Type: BPD/BPA NC bi-directional flow over/under seat 1 → 2 / 2 → 1	
Media	Water, oil, air, aggressive media, steam ¹
Media Temperature	-10 to +180 °C
Ambient Temperature	-10 to +60 °C
Pilot Media ²	Instrument air, inert gases
Body Material	Cast AISI 316L (CF3M), see page 7
Flange Material	cast AISI 316L
Connection	BS 4504 (EN1092, shape B) or ANSI B16.5 class 150
Bonnet Material	Cast AISI 316L (CF3M), see page 7
Actuator Body Material	Polyamide PA6 (reinforced fiberglass 30%)
Seal Material	PTFE
Position Indicator	As standard

Features and Benefits

- Waterhammer-free design for BPD - BPA (with flow direction 2 → 1)
- Actuator housing rotation 360°
- Design for vacuum applications up to 10⁻² mbar

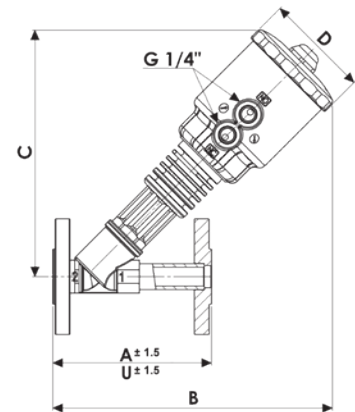


Options Available
Stroke regulator assembled ex-factory, see page 33 (e.g. code PD210STJG0)
Travel switch assembled ex-factory, see page 33 (e.g. code RPA208LTZ0)
High temperature version, see pages 24/25 (e.g. code PD205STW0H)

Accessories
Position module, travel switch kit, pilot solenoid valves see pages 34/35/36

Dimensions & Weights		DN15	DN20	DN25	DN32	DN40	DN50	DN25	DN32	DN40	DN50
Actuator	[mm]	Ø 63						Ø 90			
A (ANSI)	[mm]	139.7	152.4	165.1	184.2	203.2	228.6	165.1	184.2	203.2	228.6
U (BS/UNI/EN)	[mm]	130	150	160	180	200	230	160	180	200	230
B	[mm]	218	236	239	252	257	275	250	263	268	286
C	[mm]	194	210	208	216	220	230	219	227	232	240
D	[mm]	85	85	85	85	85	85	112	112	112	112
Weight	[kg]	2.6	3.0	3.8	5.6	6.5	8.7	4.4	6.0	6.9	9.1

A = face to face to ANSI B 16.10
U = face to face to EN 558-1



The products listed below comply with the requirements of the European Pressure Equipment Directive 2014/68/UE and carry the CE mark when required. The products fall within the following Pressure Equipment Directive categories:

Valve Type	Bodies	Group 1 gases	Group 1 liquids and Group 2 other fluids
PD - RPD - BPD PA - RPA - BPA	DN15 to DN25 (PN40)	art. 4.3	art. 4.3
	DN32 to DN40 (PN25)	Category I	art. 4.3
	DN50 (PN16)	Category I	art. 4.3

⚠ WARNING!

According to the European Pressure Equipment Directive 2014/68/UE, liquids whose saturated vapour pressure at the maximum allowable temperature is more than 0,5 barg shall be considered as gases.

Notes

1. Steam max. working pressure 10 bar (9 barg)
2. Please contact M&M sales Department for other pilot media
3. Minimum pilot pressure at the max. working pressure: for lower working pressures please refer to the comparative charts (for different part numbers: e.g. PD205STW00 please refer to the equivalent part number PG205STW00 for threaded connection)

2/2 Way Piston Actuated Valve Flanged – Stainless Steel

Valve	Body Connection	DN	Flow Rate Kvs	Working Pressure ¹		Flow Direction	Pilot Pressure ³		Actuator Ø	Function
Code	—	[mm]	[l/min]	[barg]	[barg]	—	[barg]	[barg]	[mm]	—
PD205STW00	flanges to BS 4504 EN1092 shape B	15	87	0	20	1 → 2	3.7	10	63	NC
PD206STX00		20	164	0	20	1 → 2	4.4	10		
PD207STY00		25	260	0	20	1 → 2	5	10		
PD208STZ00		32	410	0	16	1 → 2	5.9	10		
PD209STK00		40	700	0	16	1 → 2	9	10		
PD210STJ00		50	950	0	11	1 → 2	8	10		
PD207LTY00		25	260	0	20	1 → 2	2	8	90	
PD208LTZ00		32	410	0	16	1 → 2	3.5	8		
PD209LTK00		40	700	0	16	1 → 2	4	8		
PD210LTJ00		50	950	0	15	1 → 2	6.5	8		
RPD205STW00	flanges to BS 4504 EN1092 shape B	15	87	0	16	2 → 1	2.5	8	63	NO
RPD206STX00		20	164	0	16	2 → 1	4.3	8		
RPD207STY00		25	260	0	16	2 → 1	5.5	8		
RPD208STZ00		32	410	0	16	2 → 1	6.5	8		
RPD209STK00		40	700	0	12	2 → 1	8	8		
RPD210STJ00		50	950	0	8	2 → 1	8	8		
RPD207LTY00		25	260	0	16	2 → 1	2	5	90	
RPD208LTZ00		32	410	0	16	2 → 1	4	5		
RPD209LTK00		40	700	0	16	2 → 1	5	5		
RPD210LTJ00		50	950	0	10	2 → 1	5	5		
BPD205STW00	flanges to BS 4504 EN1092 shape B	15	87	0	16	1 → 2 / 2 → 1	5.5 / 3.8	10	63	NC bidirectional
BPD206STX00		20	164	0	16	1 → 2 / 2 → 1	6 / 3.8	10		
BPD207STY00		25	260	0	16 / 11	1 → 2 / 2 → 1	6.5 / 3.8	10		
BPD208STZ00		32	410	0	16 / 6	1 → 2 / 2 → 1	6.8 / 3.8	10		
BPD209STK00		40	700	0	12 / 4	1 → 2 / 2 → 1	9 / 3.8	10		
BPD210STJ00		50	950	0	8 / 2.5	1 → 2 / 2 → 1	9 / 3.8	10		
BPD207LTY00		25	260	0	16 / 14	1 → 2 / 2 → 1	4 / 3.3	8	90	
BPD208LTZ00		32	410	0	16 / 12	1 → 2 / 2 → 1	5 / 3.3	8		
BPD209LTK00		40	700	0	16 / 8	1 → 2 / 2 → 1	6 / 3.3	8		
BPD210LTJ00		50	950	0	14 / 6	1 → 2 / 2 → 1	8 / 3.3	8		
PA205STW00	flanges to ANSI B16.5 class 150	15	87	0	20	1 → 2	3.7	10	63	NC
PA206STX00		20	164	0	20	1 → 2	4.4	10		
PA207STY00		25	260	0	20	1 → 2	5	10		
PA208STZ00		32	410	0	16	1 → 2	5.9	10		
PA209STK00		40	700	0	16	1 → 2	9	10		
PA210STJ00		50	950	0	11	1 → 2	8	10		
PA207LTY00		25	260	0	20	1 → 2	2	8	90	
PA208LTZ00		32	410	0	16	1 → 2	3.5	8		
PA209LTK00		40	700	0	16	1 → 2	4	8		
PA210LTJ00		50	950	0	15	1 → 2	6.5	8		
RPA205STW00	flanges to ANSI B16.5 class 150	15	87	0	16	2 → 1	2.5	8	63	NO
RPA206STX00		20	164	0	16	2 → 1	4.3	8		
RPA207STY00		25	260	0	16	2 → 1	5.5	8		
RPA208STZ00		32	410	0	16	2 → 1	6.5	8		
RPA209STK00		40	700	0	12	2 → 1	8	8		
RPA210STJ00		50	950	0	8	2 → 1	8	8		
RPA207LTY00		25	260	0	16	2 → 1	2	5	90	
RPA208LTZ00		32	410	0	16	2 → 1	4	5		
RPA209LTK00		40	700	0	16	2 → 1	5	5		
RPA210LTJ00		50	950	0	10	2 → 1	5	5		
BPA205STW00	flanges to ANSI B16.5 class 150	15	87	0	16	1 → 2 / 2 → 1	5.5 / 3.8	10	63	NC bidirectional
BPA206STX00		20	164	0	16	1 → 2 / 2 → 1	6 / 3.8	10		
BPA207STY00		25	260	0	16 / 11	1 → 2 / 2 → 1	6.5 / 3.8	10		
BPA208STZ00		32	410	0	16 / 6	1 → 2 / 2 → 1	6.8 / 3.8	10		
BPA209STK00		40	700	0	12 / 4	1 → 2 / 2 → 1	9 / 3.8	10		
BPA210STJ00		50	950	0	8 / 2.5	1 → 2 / 2 → 1	9 / 3.8	10		
BPA207LTY00		25	260	0	16 / 14	1 → 2 / 2 → 1	4 / 3.3	8	90	
BPA208LTZ00		32	410	0	16 / 12	1 → 2 / 2 → 1	5 / 3.3	8		
BPA209LTK00		40	700	0	16 / 8	1 → 2 / 2 → 1	6 / 3.3	8		
BPA210LTJ00		50	950	0	14 / 6	1 → 2 / 2 → 1	8 / 3.3	8		

2/2 Way Piston Actuated Valve Clamp – Stainless Steel

Specifications	
Type: PC/PP NC flow over seat 1 → 2	
Type: RPC/RPP NO flow under seat 2 → 1	
Type: BPC/BPP NC bi-directional flow over/under seat 1 → 2 / 2 → 1	
Media	Water, oil, air, aggressive media, steam ¹
Media Temperature	-10 to +180 °C
Ambient Temperature	-10 to +60 °C
Pilot Media ²	Instrument air, inert gases
Body Material	Cast AISI 316L (CF3M), see page 7
Clamp End Material	AISI 316L
Clamp Connection	ISO 2852 or ASME BPE
Bonnet Material	Cast AISI 316L (CF3M), see page 7
Actuator Body Material	Polyamide PA6 (reinforced fiberglass 30%)
Seal Material	PTFE
Position Indicator	As standard
Gasket and Clamp	Not included

Features and Benefits

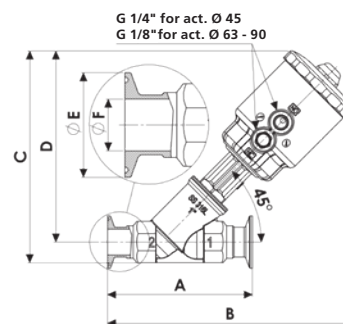
- Waterhammer-free design for BPC - BPP (with flow direction 2 → 1)
- Actuator housing rotation 360°
- Design suitable for vacuum applications up to 10⁻² mbar



Options Available
Stroke regulator assembled ex-factory, see page 33 (e.g. code PC210STJ00)
Travel switch assembled ex-factory, see page 33 (e.g. code RPC208LTZ00)

Accessories
Position module, travel switch kit, pilot solenoid valves see pages 34/35/36

Dimensions & Weights		DN15	DN20	DN15	DN20	DN25	DN32	DN40	DN50	DN25	DN32	DN40	DN50
Actuator	[mm]	Ø 45		Ø 63				Ø 90					
A - ISO	[mm]	102	114	102	114	140	159	159	190	140	159	159	190
A - ASME	[mm]	102	114	102	114	140	-	159	190	140	-	159	190
B - ISO	[mm]	162	167	210	217	231	240	249	267	243	251	260	279
B - ASME	[mm]	162	167	210	217	231	-	249	267	243	-	260	279
C - ISO	[mm]	140	142	187	193	211	218	229	240	222	230	241	251
C - ASME	[mm]	136	138	183	189	211	-	223	240	222	-	235	251
D	[mm]	123	125	170	176	185	192	197	206	196	204	209	217
E - ISO	[mm]	34	34	34	34	50.5	50.5	64	64	50.5	50.5	64	64
E - ASME	[mm]	25	25	25	25	50.5	-	50.5	64	50.5	-	50.5	64
F - ISO	[mm]	17.2	21.3	17.2	21.3	25	33.7	40	51	25	33.7	40	51
F - ASME	[mm]	9.4	15.75	9.4	15.75	22.1	-	34.8	47.5	22.1	-	34.8	47.5
Weight - ISO	[kg]	0.9	1.1	1.3	1.5	1.8	2.4	2.8	3.6	2.4	2.8	3.2	4.0
Weight - ASME	[kg]	0.9	1.1	1.3	1.5	1.8	-	2.8	3.6	2.4	-	3.2	4.0



The products listed below comply with the requirements of the European Pressure Equipment Directive 2014/68/UE and carry the CE mark when required. The products fall within the following Pressure Equipment Directive categories:

Valve Type	Bodies	Group 1 gases	Group 1 liquids and Group 2 other fluids
PC - RPC - BPC PP - RPP - BPP	DN15 to DN50 (PN10)	art. 4.3	art. 4.3

⚠ WARNING!

According to the European Pressure Equipment Directive 2014/68/UE, liquids whose saturated vapour pressure at the maximum allowable temperature is more than 0,5 barg shall be considered as gases.

Notes

1. Steam max. working pressure 10 bar (9 barg)
2. Please contact M&M sales Department for other pilot media
3. Minimum pilot pressure at the max. working pressure: for lower working pressures please refer to the comparative charts (for different part numbers: e.g. PP2055TW00 please refer to the equivalent part number PG2055TW00 for threaded connection)

2/2 Way Piston Actuated Valve Clamp – Stainless Steel

VALVE	Body Connection	DN	Flow Rate Kvs	Working Pressure ¹		Flow Direction	Pilot Pressure ³		Actuator Ø	Function
Code	—	[mm]	[l/min]	[barg]	[barg]	—	[barg]	[barg]	[mm]	—
PC205CTW00	clamp to ISO 2852	15	65	0	10	1 → 2	3.8	10	45	NC
PC206CTX00		20	120	0	10	1 → 2	5.8	10		
PC205STW00		15	85	0	10	1 → 2	3.7	10	63	
PC206STX00		20	160	0	10	1 → 2	4.4	10		
PC207STY00		25	260	0	10	1 → 2	5.9	10		
PC208STZ00		32	420	0	10	1 → 2	9	10		
PC209STK00		40	700	0	10	1 → 2	9	10		
PC210STJ00		50	810	0	10	1 → 2	8	10		
PC207LTY00		25	260	0	10	1 → 2	2	8	90	
PC208LTZ00		32	420	0	10	1 → 2	3.5	8		
PC209LTK00		40	700	0	10	1 → 2	4	8		
PC210LTJ00		50	810	0	10	1 → 2	6.5	8		
RPC205CTW00	clamp to ISO 2852	15	65	0	10	2 → 1	4	8	45	NO
RPC206CTX00		20	120	0	10	2 → 1	6.2	8		
RPC205STW00		15	85	0	10	2 → 1	2.5	8	63	
RPC206STX00		20	160	0	10	2 → 1	4.3	8		
RPC207STY00		25	260	0	10	2 → 1	5.5	8		
RPC208STZ00		32	420	0	10	2 → 1	6.5	8		
RPC209STK00		40	700	0	10	2 → 1	8	8		
RPC210STJ00		50	810	0	8	2 → 1	8	8		
RPC207LTY00		25	260	0	10	2 → 1	2	5	90	
RPC208LTZ00		32	420	0	10	2 → 1	4	5		
RPC209LTK00		40	700	0	10	2 → 1	5	5		
RPC210LTJ00		50	810	0	10	2 → 1	5	5		
BPC205CTW00	clamp to ISO 2852	15	65	0	10 / 10	1 → 2 / 2 → 1	6.2 / 5	10	45	NC bidirectional
BPC206CTX00		20	120	0	10 / 7	1 → 2 / 2 → 1	8.7 / 5	10		
BPC205STW00		15	85	0	10 / 10	1 → 2 / 2 → 1	5.5 / 3.8	10	63	
BPC206STX00		20	160	0	10 / 10	1 → 2 / 2 → 1	6 / 3.8	10		
BPC207STY00		25	260	0	10 / 10	1 → 2 / 2 → 1	6.5 / 3.8	10		
BPC208STZ00		32	420	0	10 / 6	1 → 2 / 2 → 1	6.8 / 3.8	10		
BPC209STK00		40	700	0	10 / 4	1 → 2 / 2 → 1	9 / 3.8	10		
BPC210STJ00		50	810	0	8 / 2.5	1 → 2 / 2 → 1	9 / 3.8	10		
BPC207LTY00		25	260	0	10 / 10	1 → 2 / 2 → 1	4 / 3.3	8	90	
BPC208LTZ00		32	420	0	10 / 10	1 → 2 / 2 → 1	5 / 3.3	8		
BPC209LTK00		40	700	0	10 / 8	1 → 2 / 2 → 1	6 / 3.3	8		
BPC210LTJ00		50	810	0	10 / 6	1 → 2 / 2 → 1	8 / 3.3	8		
PP205CTW00	clamp to ASME BPE	15	50	0	10	1 → 2	3.8	10	45	NC
PP206CTX00		20	120	0	10	1 → 2	5.8	10		
PP205STW00		15	50	0	10	1 → 2	3.7	10	63	
PP206STX00		20	135	0	10	1 → 2	4.4	10		
PP207STY00		25	250	0	10	1 → 2	5	10		
PP209STK00		40	640	0	10	1 → 2	9	10		
PP210STJ00		50	730	0	10	1 → 2	8	10	90	
PP207LTY00		25	250	0	10	1 → 2	2	8		
PP209LTK00		40	640	0	10	1 → 2	4	8		
PP210LTJ00		50	730	0	10	1 → 2	6.5	8		
RPP205CTW00	clamp to ASME BPE	15	50	0	10	2 → 1	4	8	45	NO
RPP206CTX00		20	120	0	10	2 → 1	6.2	8		
RPP205STW00		15	50	0	10	2 → 1	2.5	8	63	
RPP206STX00		20	135	0	10	2 → 1	4.3	8		
RPP207STY00		25	250	0	10	2 → 1	5.5	8		
RPP209STK00		40	640	0	10	2 → 1	8	8		
RPP210STJ00		50	730	0	8	2 → 1	8	8	90	
RPP207LTY00		25	250	0	10	2 → 1	2	5		
RPP209LTK00		40	640	0	10	2 → 1	5	5		
RPP210LTJ00		50	730	0	10	2 → 1	5	5		
BPP205CTW00	clamp to ASME BPE	15	50	0	10 / 10	1 → 2 / 2 → 1	6.2 / 5	10	45	NC bidirectional
BPP206CTX00		20	120	0	10 / 7	1 → 2 / 2 → 1	8.7 / 5	10		
BPP205STW00		15	50	0	10 / 10	1 → 2 / 2 → 1	5.5 / 3.8	10	63	
BPP206STX00		20	135	0	10 / 10	1 → 2 / 2 → 1	6 / 3.8	10		
BPP207STY00		25	250	0	10 / 10	1 → 2 / 2 → 1	6.5 / 3.8	10		
BPP209STK00		40	640	0	10 / 4	1 → 2 / 2 → 1	9 / 3.8	10		
BPP210STJ00		50	730	0	8 / 2.5	1 → 2 / 2 → 1	9 / 3.8	10	90	
BPP207LTY00		25	250	0	10 / 10	1 → 2 / 2 → 1	4 / 3.3	8		
BPP209LTK00		40	640	0	10 / 8	1 → 2 / 2 → 1	6 / 3.3	8		
BPP210LTJ00		50	730	0	10 / 6	1 → 2 / 2 → 1	8 / 3.3	8		

2/2 Way Piston Actuated Valve G 1/2" to 2", High Temperature Version – Stainless Steel

Specifications	
Type: PG NC flow over seat 1 → 2	
Type: RPG NO flow under seat 2 → 1	
Type: BPG NC bi-directional flow over/under seat 1 → 2 / 2 → 1	
Media	Water, oil, air, aggressive media, steam ¹
Media Temperature	-10 to +200 °C
Ambient Temperature	-10 to +60 °C
Pilot Media ²	Instrument air, inert gases
Body Material	Cast AISI 316L (CF3M), see page 7
Bonnet Material	Cast AISI 316L (CF3M), see page 7
Actuator Body Material	Polyamide PA6 (reinforced fiberglass 30%)
Seal Material	PTFE
Position Indicator	As standard

Features and Benefits

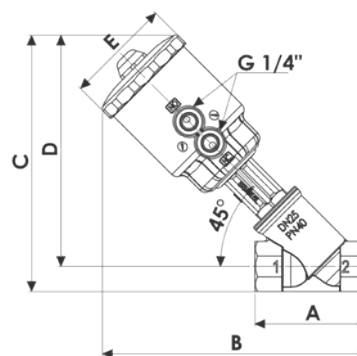
- Waterhammer-free design for BPG - DPG (with flow direction 2→1)
- Actuator housing rotation 360°



Options Available	
Stroke regulator assembled ex-factory, see page 33 (e.g. code RPG210STJRH)	
Travel switch assembled ex-factory, see page 33 (e.g. code PG208STZJH)	
NPT connection (e.g. code BPN207LTY0H)	
Butt weld connection (e.g. code BPW209LTK0H)	
Flanged connection (e.g. code PD205STW0H)	

Accessories
Position module, travel switch kit, pilot solenoid valves see pages 34/35/36

Dimensions & Weights		DN15	DN20	DN25	DN32	DN40	DN50
Actuator	[mm]	Ø 63			Ø 90		
A	[mm]	65	75	90	110	120	150
B	[mm]	192	198	212	234	239	257
C	[mm]	184	192	205	227	235	250
D	[mm]	171	176	185	202	207	216
E	[mm]	85	85	85	112	112	112
Weight	[kg]	1.2	1.3	1.5	2.4	2.6	3.3



The products listed below comply with the requirements of the European Pressure Equipment Directive 2014/68/UE and carry the CE mark when required. The products fall within the following Pressure Equipment Directive categories:

Valve Type	Bodies	Group 1 gases	Group 1 liquids and Group 2 other fluids
PG - RPG - BPG	DN15 to DN25 (PN40)	art. 4.3	art. 4.3
	DN32 to DN40 (PN25)	Category I	art. 4.3
	DN50 (PN16)	Category I	art. 4.3

⚠ WARNING!

According to the European Pressure Equipment Directive 2014/68/UE, liquids whose saturated vapour pressure at the maximum allowable temperature is more than 0,5 barg shall be considered as gases.

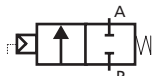
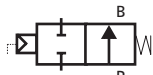
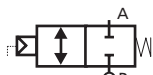
2/2 Way Piston Actuated Valve G 1/2" to 2", High Temperature Version – Stainless Steel

Valve	Body Connection	DN	Flow Rate Kvs	Working Pressure ¹ Min. Max.		Flow Direction	Pilot Pressure ³ Min. Max.		Actuator Ø	Function
Code	[ISO 228G]	[mm]	[l/min]	[barg]	[barg]	—	[barg]	[barg]	[mm]	—
PG205STW0H	1/2"	15	87	0	20	1 → 2	3.7	10	63	NC
PG206STX0H	3/4"	20	164	0	20	1 → 2	4.4	10		
PG207STY0H	1"	25	260	0	20	1 → 2	5	10		
PG208LTZ0H	1 1/4"	32	410	0	16	1 → 2	3.5	8	90	
PG209LTK0H	1 1/2"	40	700	0	16	1 → 2	4	8		
PG210LTJ0H	2"	50	950	0	15	1 → 2	6.5	8		
RPG205STW0H	1/2"	15	87	0	16	2 → 1	2.5	8	63	NO
RPG206STX0H	3/4"	20	164	0	16	2 → 1	4.3	8		
RPG207STY0H	1"	25	260	0	16	2 → 1	5.5	8		
RPG208LTZ0H	1 1/4"	32	410	0	16	2 → 1	4	5	90	
RPG209LTK0H	1 1/2"	40	700	0	16	2 → 1	5	5		
RPG210LTJ0H	2"	50	950	0	10	2 → 1	5	5		
BPG205STW0H	1/2"	15	87	0	16	1 → 2 / 2 → 1	5.5 / 3.8	10	63	NC bidirectional
BPG206STX0H	3/4"	20	164	0	16	1 → 2 / 2 → 1	6 / 3.8	10		
BPG207STY0H	1"	25	260	0	16 / 11	1 → 2 / 2 → 1	6.5 / 3.8	10		
BPG208LTZ0H	1 1/4"	32	410	0	16 / 12	1 → 2 / 2 → 1	5 / 3.3	8	90	
BPG209LTK0H	1 1/2"	40	700	0	16 / 8	1 → 2 / 2 → 1	6 / 3.3	8		
BPG210LTJ0H	2"	50	950	0	14 / 6	1 → 2 / 2 → 1	8 / 3.3	8		

Notes

1. Steam max. working pressure 14,5 barg
2. Please contact M&M sales Department for other pilot media
3. Minimum pilot pressure at the max. working pressure: for lower working pressures please refer to the comparative charts

2/2 Way Piston Actuated Valve G 3/4" to 2 3/8", Threaded Spigots – Stainless Steel

Specifications	
Type: PR NC flow over seat 1 → 2	
Type: RPR NO flow under seat 2 → 1	
Type: BPR NC bi-directional flow over/under seat 1 → 2 / 2 → 1	
Media	Water, oil, air, aggressive media, steam ¹
Media Temperature	-10 to +180 °C
Ambient Temperature	-10 to +60 °C
Pilot Media ²	Instrument air, inert gases
Body Material	Cast AISI 316L (CF3M), see page 7
Bonnet Material	Cast AISI 316L (CF3M), see page 7
Actuator Body Material	Polyamide PA6 (reinforced fiberglass 30%)
Seal Material	PTFE
Position Indicator	As standard

Features and Benefits

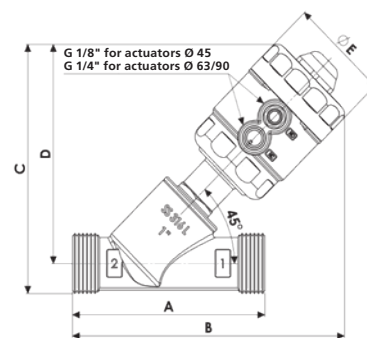
- Waterhammer-free design for BPR (with flow direction 2 → 1)
- Actuator housing rotation 360°
- Design suitable for vacuum applications up to 10⁻² mbar



Options Available
Stroke regulator assembled ex-factory, see page 33 (e.g. code BPR211STK[R0])
Travel switch assembled ex-factory, see page 33 (e.g. code BPR206STW[I0])
High temperature version, see pages 24/25 (e.g. code RPR208STY0[H])

Accessories
Position module, travel switch kit, pilot solenoid valves see pages 34/35/36

Dimensions & Weights		DN15	DN20	DN15	DN20	DN25	DN32	DN40	DN50	DN25	DN32	DN40	DN50
Actuator	[mm]	Ø 45		Ø 63				Ø 90					
A	[mm]	90	110	90	110	118	130	140	175	118	130	140	175
B	[mm]	148	156	196	206	217	226	224	246	228	237	235	257
C	[mm]	134	137	181	187	204	212	216	229	215	222	227	240
D	[mm]	121	121	168	171	183	188	189	196	194	199	200	207
E	[mm]	57	57	85	85	85	85	85	85	112	112	112	112
Weight	[kg]	0.9	1.0	1.3	1.4	1.65	2.0	2.2	3.1	2.15	2.5	2.7	3.5



The products listed below comply with the requirements of the European Pressure Equipment Directive 2014/68/UE and carry the CE mark when required. The products fall within the following Pressure Equipment Directive categories:

Valve Type	Bodies	Group 1 gases	Group 1 liquids and Group 2 other fluids
PR - RPR - BPR	DN15 to DN25 (PN40)	art. 4.3	art. 4.3
	DN32 to DN40 (PN25)	Category I	art. 4.3
	DN50 (PN16)	Category I	art. 4.3

⚠ WARNING!

According to the European Pressure Equipment Directive 2014/68/UE, liquids whose saturated vapour pressure at the maximum allowable temperature is more than 0,5 barg shall be considered as gases.

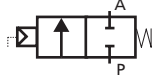
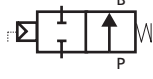
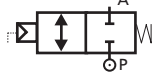
2/2 Way Piston Actuated Valve G 3/4" to 2 3/8", Threaded Spigots – Stainless Steel

Valve	Body Connection	DN	Flow Rate Kvs	Working Pressure ¹ Min. Max.		Flow Direction	Pilot Pressure ³ Min. Max.		Actuator Ø	Function
Code	[ISO 228G]	[mm]	[l/min]	[barg]	[barg]	—	[barg]	[barg]	[mm]	—
PR206CTW00	3/4"	15	75	0	16	1 → 2	3.8	10	45	NC
PR207CTX00	1"	20	133	0	16	1 → 2	5.8	10		
PR206STW00	3/4"	15	87	0	20	1 → 2	3.7	10	63	
PR207STX00	1"	20	164	0	20	1 → 2	4.4	10		
PR208STY00	1 1/4"	25	260	0	20	1 → 2	5	10		
PR209STZ00	1 1/2"	32	410	0	16	1 → 2	5.9	10		
PR211STK00	1 3/4"	40	700	0	16	1 → 2	9	10		
PR212STJ00	2 3/8" ⁴	50	950	0	11	1 → 2	8	10		
PR208LTY00	1 1/4"	25	260	0	20	1 → 2	2	8	90	
PR209LTZ00	1 1/2"	32	410	0	16	1 → 2	3.5	8		
PR211LTK00	1 3/4"	40	700	0	16	1 → 2	4	8		
PR212LTJ00	2 3/8" ⁴	50	950	0	15	1 → 2	6.5	8		
RPR206CTW00	3/4"	15	75	0	16	2 → 1	4	8	45	NO
RPR207CTX00	1"	20	133	0	16	2 → 1	6.2	8		
RPR206STW00	3/4"	15	87	0	16	2 → 1	2.5	8	63	
RPR207STX00	1"	20	164	0	16	2 → 1	4.3	8		
RPR208STY00	1 1/4"	25	260	0	16	2 → 1	5.5	8		
RPR209STZ00	1 1/2"	32	410	0	16	2 → 1	6.5	8		
RPR211STK00	1 3/4"	40	700	0	12	2 → 1	8	8		
RPR212STJ00	2 3/8" ⁴	50	950	0	8	2 → 1	8	8		
RPR208LTY00	1 1/4"	25	260	0	16	2 → 1	2	5	90	
RPR209LTZ00	1 1/2"	32	410	0	16	2 → 1	4	5		
RPR211LTK00	1 3/4"	40	700	0	16	2 → 1	5	5		
RPR212LTJ00	2 3/8" ⁴	50	950	0	10	2 → 1	5	5		
BPR206CTW00	3/4"	15	75	0	16 / 16	1 → 2 / 2 → 1	6.2 / 5	10	45	NC bidirectional
BPR207CTX00	1"	20	133	0	16 / 7	1 → 2 / 2 → 1	8.7 / 5	10		
BPR206STW00	3/4"	15	87	0	16	1 → 2 / 2 → 1	5.5 / 3.8	10	63	
BPR207STX00	1"	20	164	0	16	1 → 2 / 2 → 1	6 / 3.8	10		
BPR208STY00	1 1/4"	25	260	0	16 / 11	1 → 2 / 2 → 1	6.5 / 3.8	10		
BPR209STZ00	1 1/2"	32	410	0	16 / 6	1 → 2 / 2 → 1	6.8 / 3.8	10		
BPR211STK00	1 3/4"	40	700	0	12 / 4	1 → 2 / 2 → 1	9 / 3.8	10		
BPR212STJ00	2 3/8" ⁴	50	950	0	8 / 2.5	1 → 2 / 2 → 1	9 / 3.8	10		
BPR208LTY00	1 1/4"	25	260	0	16 / 14	1 → 2 / 2 → 1	4 / 3.3	8	90	
BPR209LTZ00	1 1/2"	32	410	0	16 / 12	1 → 2 / 2 → 1	5 / 3.3	8		
BPR211LTK00	1 3/4"	40	700	0	16 / 8	1 → 2 / 2 → 1	6 / 3.3	8		
BPR212LTJ00	2 3/8" ⁴	50	950	0	14 / 6	1 → 2 / 2 → 1	8 / 3.3	8		

Notes

1. Steam max. working pressure 10 bar (9 barg)
2. Please contact M&M sales Department for other pilot media
3. Minimum pilot pressure at the max. working pressure: for lower working pressures please refer to the comparative charts (for different part numbers: e.g. BPR207STX00 please refer to the equivalent part number BPG207STY00 for threaded connection)
4. According to ISO 338

Piston Actuated Valve Series M and G EXD II 2 GD c TX CLASS

Specifications	
Type: PG NC flow over seat 1 → 2	
Type: RPG NO flow under seat 2 → 1	
Type: BPG NC bi-directional flow over/under seat 1 → 2 / 2 → 1	
Protection Class	II 2 GD c TX
Media	Water, oil, air, aggressive media, steam ¹
Media Temperature	-10 to +200 °C
Ambient Temperature	-10 to +80 °C
Pilot Media ²	Instrument air, inert gases
Body Material	Cast AISI 316L (CF3M), see page 7
Bonnet Material	Cast AISI 316L (CF3M), see page 7
Actuator Body Material	ASTM A 351 CF8 (AISI 304)
Actuator Cover Material	ASTM A 351 CF8 (AISI 304)
Actuator Housing Material	ASTM A 351 CF8 (AISI 304)
Piston Material	Aluminium
Seal Material	PTFE
Position Indicator	As standard

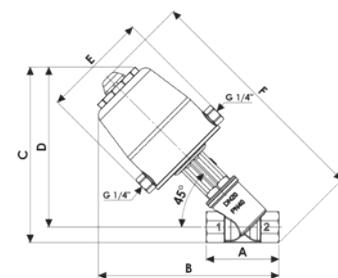
Features and Benefits

- Waterhammer-free design for BPG (with flow direction 2 → 1)
- Actuator housing rotation 360°
- High resistance to external agents, shocks



Options Available
Atex inductive switch assembled ex-factory (e.g. code PG207MTYX0), with ambient temperature -10 °C to +60 °C

Dimensions & Weights		DN15	DN20	DN25	DN32	DN40	DN50	DN25	DN32	DN40	DN50
Actuator	[mm]	Ø 63						Ø 90			
A	[mm]	65	75	90	110	120	150	90	110	120	150
B	[mm]	178	184	200	211	216	234	208	221	226	244
C	[mm]	171	178	200	204	212	227	201	213	221	236
D	[mm]	157	162	172	180	184	193	181	189	194	202
E	[mm]	108	108	108	108	108	108	135	135	135	135
F	[mm]	228	239	258	275	284	307	260	278	286	310
Weight	[kg]	2.3	2.4	2.6	3.1	3.4	4.1	3.6	4.1	4.3	5.1



The pilot solenoid valves ports have a G 1/4" thread and are marked with NO/NC (Normally Open/Normally Closed)

The products listed below comply with the requirements of the European Pressure Equipment Directive 2014/68/UE and carry the CE mark when required. The products fall within the following Pressure Equipment Directive categories:

Valve Type	Bodies	Group 1 gases	Group 1 liquids and Group 2 other fluids
PG - RPG - BPG	DN15 to DN25 (PN40)	art. 4.3	art. 4.3
	DN32 to DN40 (PN25)	Category I	art. 4.3
	DN50 (PN16)	Category I	art. 4.3

⚠ WARNING!

According to the European Pressure Equipment Directive 2014/68/UE, liquids whose saturated vapour pressure at the maximum allowable temperature is more than 0,5 barg shall be considered as gases.

Piston Actuated Valve Series M and G EXD II 2 GD c TX CLASS

Valve	Body Connection	DN	Flow Rate Kvs	Working Pressure ¹ Min. Max.		Flow Direction	Pilot Pressure ³ Min. Max.		Actuator Ø	Function	
Code	[ISO 228G]	[mm]	[l/min]	[barg]	[barg]	—	[barg]	[barg]	[mm]	—	
PG205MTW00	1/2"	15	87	0	20	1 → 2	3.7	10	63	NC	
PG206MTX00	3/4"	20	164	0	20	1 → 2	4.4	10			
PG207MTY00	1"	25	260	0	20	1 → 2	5	10			
PG208MTZ00	1 1/4"	32	410	0	16	1 → 2	5.9	10			
PG209MTK00	1 1/2"	40	700	0	16	1 → 2	9	10			
PG210MTJ00	2"	50	950	0	11	1 → 2	8	10			
PG207GTY00	1"	25	260	0	20	1 → 2	2	8	90		
PG208GTZ00	1 1/4"	32	410	0	16	1 → 2	3.5	8			
PG209GTK00	1 1/2"	40	700	0	16	1 → 2	4	8			
PG210GTJ00	2"	50	950	0	15	1 → 2	6.5	8			
RPG205MTW00	1/2"	15	87	0	16	2 → 1	2.5	10	63	NO	
RPG206MTX00	3/4"	20	164	0	16	2 → 1	4.3	10			
RPG207MTY00	1"	25	260	0	16	2 → 1	5.5	10			
RPG208MTZ00	1 1/4"	32	410	0	16	2 → 1	6.5	10			
RPG209MTK00	1 1/2"	40	700	0	16	2 → 1	9	10			
RPG210MTJ00	2"	50	950	0	12	2 → 1	9.4	10			
RPG207GTY00	1"	25	260	0	16	2 → 1	2	8	90		
RPG208GTZ00	1 1/4"	32	410	0	16	2 → 1	4	8			
RPG209GTK00	1 1/2"	40	700	0	16	2 → 1	5	8			
RPG210GTJ00	2"	50	950	0	16	2 → 1	7	8			
BPG205MTW00	1/2"	15	87	0	16	1 → 2 / 2 → 1	5.5 / 3.8	10	63	NC bidirectional	
BPG206MTX00	3/4"	20	164	0	16	1 → 2 / 2 → 1	6 / 3.8	10			
BPG207MTY00	1"	25	260	0	16 / 11	1 → 2 / 2 → 1	6.5 / 3.8	10			
BPG208MTZ00	1 1/4"	32	410	0	16 / 6	1 → 2 / 2 → 1	6.8 / 3.8	10			
BPG209MTK00	1 1/2"	40	700	0	12 / 4	1 → 2 / 2 → 1	9 / 3.8	10			
BPG210MTJ00	2"	50	950	0	8 / 2.5	1 → 2 / 2 → 1	9 / 3.8	10			
BPG207GTY00	1"	25	260	0	16 / 14	1 → 2 / 2 → 1	4 / 3.3	8	90		
BPG208GTZ00	1 1/4"	32	410	0	16 / 12	1 → 2 / 2 → 1	5 / 3.3	8			
BPG209GTK00	1 1/2"	40	700	0	16 / 8	1 → 2 / 2 → 1	6 / 3.3	8			
BPG210GTJ00	2"	50	950	0	14 / 6	1 → 2 / 2 → 1	8 / 3.3	8			

Notes

1. Steam max. working pressure 10 bar (9 barg)
2. Please contact M&M sales Department for other pilot media
3. Minimum pilot pressure at the max. working pressure: for lower working pressures please refer to the comparative charts

Specifications of Inductive Switch (must be ordered ex-factory, not available as retrofitting kit)

Type of sensor:	in accordance with Namur standards EN 60947-5-6
Switching distance (Sn):	4 mm
Continuous voltage (residual ripple ≤10%):	8,2V
Current absorption at 8,2V in presence of metal:	≤ 1mA
Current absorption at 8,2V in absence of metal:	≥ 3mA
Switching frequency:	2000 Hz
Repeatability (% of Sn):	≤ 3
Housing material:	brass with electroless nickel plating treatment
Cable:	PVC 2x0,25 mm ²
Cable length:	3 m
Safety rating:	UI=17V - Ii=17mA - Pi=73mW - Ci=0,25uF - Li=175uH



Control Piston Actuated Valve with Integrated Positioner

DN15 to DN50 – Stainless Steel

Valve Specifications	
Type: ZP flow always under seat 2 → 1	NC (Direct) / NO (Reverse)
Media	Water, oil, air, aggressive media, steam ¹
Media Temperature	-10 to +180 °C
Ambient Temperature	-10 to +60 °C
Pilot Media ²	Instrument air, inert gases (filtered with mesh 5 µ)
Body Material	Cast AISI 316L (CF3M), see Piston Actuated Valves Catalogue
Tube Material	AISI 316L (CF3M)
Process Connection	All connection types available for ON/OFF valve range in Stainless Steel
Bonnet Material	Cast AISI 316L (CF3M), see Piston Actuated Valves Catalogue
Actuator Body Material	Polyamide PA6 (reinforced fiberglass 30%)
Main Seal Material	PTFE
Flow Characteristic	Linear or equal-percentage
Positioner Specifications	
Power Supply	24 VDC ± 10%
Input Signal	4–20 mA, 0 to 5 / 10 V
Power Consumption	< 4W
Output	4–20 mA
Output Characteristics	Linear, EQ%, User Set (16 points)
Operating Temperature	-10 to 60 °C
Supply Pressure	Max 7 bar
Air Consumption	0 LPM
Filtering size	5 micron
Air Connection	G1/8" (Ø 6 mm tube)
Electrical Connection	Conduit M16 x 1.5 (with screw terminals)
Ingress Protection	IP67
Body Material	PPS
Cover Material	PC

Features and Benefits

Piston Actuated Valve

- Accuracy of control thanks to specifically trimmed plug profiles
- Universal design suitable for vacuum applications up to 10⁻² mbar
- Water-hammer free design
- Extended cycle life thanks to self-registering gland and chevron packing
- Optimized control characteristic with high flow rate and low pressure drop

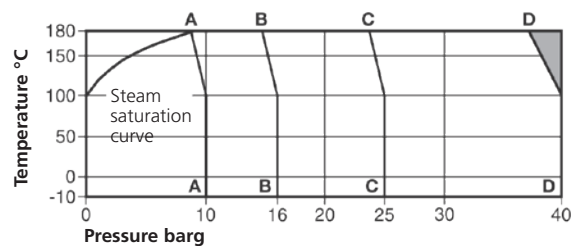
Smart Positioner Design Features (solenoid technology)

- Fail Freeze and Fail Safe function
- LCD display
- Feedback signal. 4-20 mA output option
- Auto calibration
- Low air consumption level
- Front panel pushbuttons for configuration



Valve Options	Code Examples
Main Seal material in Peek ¹	ZP*205SPWEEK
Body and Shaped plug with hardening treatment ¹	ZP*205SPWEEK
Positioner Options	
Fail Option: Safe (S) or Freeze (F)	SNG10S or SNG10F
Feedback output option: 4-20 mA (1)	SNG11S or SNG11F

¹ Seal in peek and hardened nickel plated body usually match together to improve valve life in severe applications



A – A PN10
B – B PN16 - ANSI 150
C – C PN25
D – D PN40

The product must not be used in this region or beyond the body design conditions (PN) quoted in the selection chart as damage to the internals will occur!

DN	Flow Rate ⁴ Equl% 1:25	Flow Rate ⁴ linear 1:25	Working Pressure ¹ Max.	Flow Direction	Pilot Pressure Min.	Pilot Pressure Max.	Actuator Ø	PN ³	Valve Code (* is the connection ref. to be selected in the coding table)		Positioner Code
[mm]	Kvs [m3/h]	Kvs [m3/h]	[barg]	[2 → 1]	[barg]	[barg]	[mm]	—	EQ%	Linear	Fail Safe, no feedback
15	4.5	4.9	16	Only under seat	4.5	7	63	40	ZP*205STWEO	ZP*205STWLO	SNG10S
20	8.7	8.7	16					40	ZP*206STXEO	ZP*206STXLO	
25	12.7	14.4	14					40	ZP*207LTYEO	ZP*207LTYLO	
32	20.4	22.8	12					25	ZP*208LTYEO	ZP*208LTYLO	
40	29.7	34.2	8	Only under seat	4.5	7	90	25	ZP*209LTKEO	ZP*209LTKLO	
50	36.3	39	6					16	ZP*210LTYEO	ZP*210LTYLO	

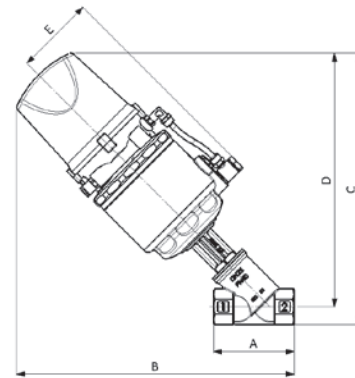
Notes:

1. Steam max. working pressure 10 bar (9 barg)
2. Please contact M&M sales department for other pilot media
3. PN 10 for all sizes with Clamp connection
4. Flow values shown in the selection table are subject to a tolerance of ±15%

Control Piston Actuated Valve with Integrated Positioner

DN15 to DN50 – Stainless Steel

GAS - NPT - WELDED ENDS	Dimensions & Weights		DN15	DN20	DN25	DN32	DN40	DN50
	Actuator	[mm]	Ø 63		Ø 90			
	A	[mm]	64	75	90	110	120	150
	B	[mm]	287	293	309	322	327	345
	C	[mm]	280	287	302	315	323	338
	D	[mm]	266	271	282	290	295	304
	Weight	[kg]	1.9	2	2.8	3.2	3.4	4.1



FLANGED EN1092-1	Dimensions & Weights		DN15	DN20	DN25	DN32	DN40	DN50
	Actuator	[mm]	Ø 63		Ø 90			
	A	[mm]	130	150	160	180	200	230
	B	[mm]	325	332	345	360	365	386
	C	[mm]	347	356	368	392	403	418
	D	[mm]	299	303	315	322	327	335
	Weight	[kg]	3.3	3.7	5.2	6.8	7.7	9.9

FLANGED ANSI B16.5	Dimensions & Weights		DN15	DN20	DN25	DN32	DN40	DN50
	Actuator	[mm]	Ø 63		Ø 90			
	A	[mm]	139.7	152.4	165.1	184.2	203.2	228.6
	B	[mm]	323	328	346	358	365	386
	C	[mm]	344	352	369	381	391	411
	D	[mm]	299	303	315	322	327	335
	Weight	[kg]	3.3	3.7	5.2	6.8	7.7	9.9

CLAMP ISO 2852	Dimensions & Weights		DN15	DN20	DN25	DN32	DN40	DN50
	Actuator	[mm]	Ø 63		Ø 90			
	A	[mm]	102	114	140	159	159	190
	B	[mm]	306	313	334	347	347	365
	C	[mm]	283	288	307	315	327	338
	D	[mm]	266	271	282	290	295	304
	Weight	[kg]	2	2.2	3.2	3.6	4	4.8

CLAMP ASME BPE	Dimensions & Weights		DN15	DN20	DN25	DN32	DN40	DN50
	Actuator	[mm]	Ø 63		Ø 90			
	A	[mm]	102	114	140	/	159	190
	B	[mm]	306	313	334	/	347	385.3
	C	[mm]	280	287	307	/	323	331.5
	D	[mm]	266	271	282	/	295	304
	Weight	[kg]	2	2.2	3.2	/	4	4.8

Regulatory

The products listed below comply with the requirements of the European Pressure Equipment Directive 2014/68/EU and carry the CE mark when required. The products fall within the following Pressure Equipment Directive categories:

Valve Type	Bodies	Group 1 gases	Group 1 liquids and Group 2 other fluids
ZPG - ZPR - ZPN - ZPC - ZPP - ZPA - ZPD -	DN15 to DN25 (PN40)	SEP (art. 4.3)	SEP (art. 4.3)
	DN32 to DN40 (PN25)	Category I	SEP (art. 4.3)
	DN50 (PN16)	Category I	SEP (art. 4.3)

⚠ WARNING!

According to the European Pressure Equipment Directive 2014/68/UE, liquids whose saturated vapour pressure at the maximum allowable temperature is more than 0,5 barg shall be considered as gases.

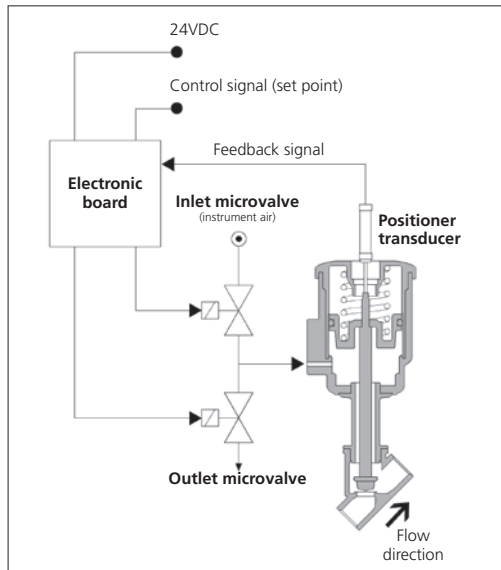
Control Piston Actuated Valve With Integrated Positioner

DN15 to DN50 – Stainless Steel

Operating Principles and Description

M&M control piston actuated valves are operated by a compact pneumatic integrated positioner working in a closed loop. Picture A shows the operating layout: the set-point signal (coming from the control panel of the plant) is compared with the internal signal (feed-back) of the position sensor. When the two values don't match, the electronic system inside the valve operates two microvalves (which open or close the pilot air feeding) to change the stroke until both signals match.

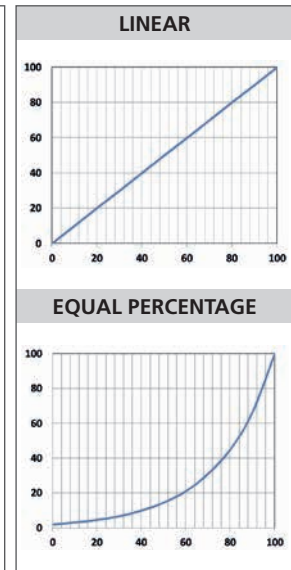
The proportionality between the stroke of the valve and the instantaneous flow is guaranteed by the special plug design: linear plug and equal percentage plug (Picture C) the graphs show an ideal curve, which cannot be reproduced exactly but varies according to the DN of the valve and the specific installation parameters. When fully closed the valve is leakage tight thanks to the soft seal, as in M&M standard on/off piston actuated valves (see Picture B).



Picture A



Picture B



Picture C

Coding chart

Valve type / function	Process connection*	Valve head (to match DN)	Main seal material	DN (mm)	Plug options	Special Features	Positioner
ZP	A C D G N P R W	205S For DN15 206S For DN20 207L For DN25 208L For DN32 209L For DN40 210L For DN50	T PTFE P PEEK	W DN15 X DN20 Y DN25 Z DN32 K DN40 J DN50	E Equal % L Linear	O None K Nickel plating hardening treatment	SNG10S No feedback, Fail Safe SNG10F No feedback, Fail Freeze SNG11S Feedback 4-20mA, Fail Safe SNG11F Feedback 4-20mA, Fail Freeze
ZP	•	••••	•	•	•	•	•••••

Product coding example: ZPN205STWEK-SNG10S Control valve with NPT threaded connection, DN15, main seal in PTFE, equal% plug, fitted with smart linear positioner in fail safe configuration.

Travel Switch

Technical Specifications

The travel switch detects the open position of the valve relaying back an electrical signal. The signal is provided by a magnetic sensor with a non contact switch (free NC, NO switch)

Specifications	
Max. Switching Voltage	500 V
Max. Switching Current	0,5 A
Max. Switching Power	30 W/VA
Max. Switching Frequency	150 Hz
Contact Actuation Time	4,5 ms
Repeatability	± 0,3 mm
Temperature Limits	-25 to +100 °C
Protection Class	IP67
Housing Material	Brass with electroless nickel plating treatment
Plug For Cable	3x0,5 mm ² ; Ø 4-6 mm (DIN EN 60947/5/2)



Notes

The option must be expressly requested upon order
It is available for actuators sizes Ø63 & Ø90 only (e.g. code RPG205TWI0)
It is available only assembled ex-factory

Stroke Regulator

Features and Benefits

With the stroke regulator the flow be can manually adjusted from 0% to 100% integrated position indicator. In normally open valves it can also be used as manual override.

Notes

This option must be expressly requested upon order
It is available for actuators sizes Ø63 & Ø90 only (e.g. code CG2055TWR0)
It is available only assembled ex-factory



Position Module for Piston Actuated Valve

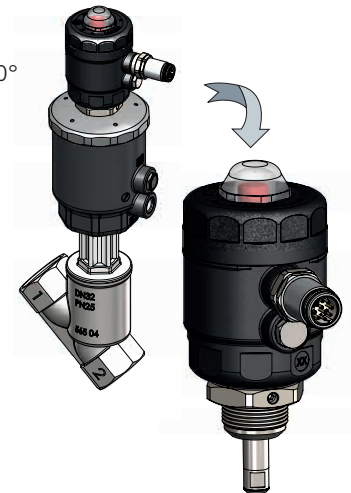
Specifications	
Electrical Position Feedback	Mechanical limit switches or inductive limit switches
Body/Cover Material	Polyamide PA6 (reinforced fiberglass 30%)
Connector Material	Copper-zinc alloy / aluminium alloy / cast zinc – nickel plating treatment
Electrical Connection	Connector M16 – 10 poles / wire Ø 5 - 9 mm
Ambient Temperature	-10 to +60 °C
Protection Class	IP65
Specifications: Mechanical Switches	
Number of Switches	2
Type of Switch	Change over contacts (NC and / or NO)
Contacts Material	Silver
Maximum Tension	Connector 230 VAC with dirt level 2 / 160 VAC with dirt level 3
Maximum Current	6 A with resistive load - 2 A with inductive load
Specifications: Inductive Switches	
Number of Switches	2
Output Version	Normally open contact (PNP)
Power Supply	12 to 24 VDC
Maximum Load Current	50 mA per output
Power Consumption	13 mA max. at 24 VDC without load

M&M position modules offer an electrical position feedback for reading the valve position of piston actuated valves open or closed.

The position detection is carried out through a mechanical or inductive switch that can be fitted to all M&M standard Piston Valves.

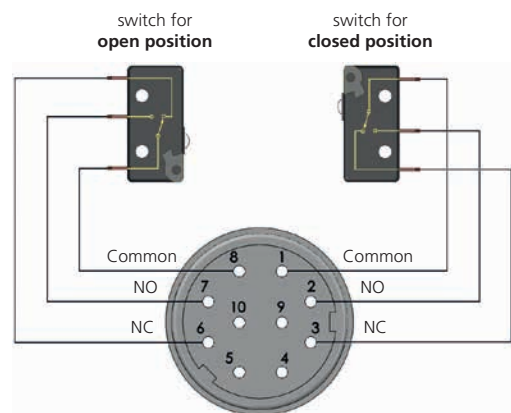
Features and Benefits

- Actuator housing rotation 360°



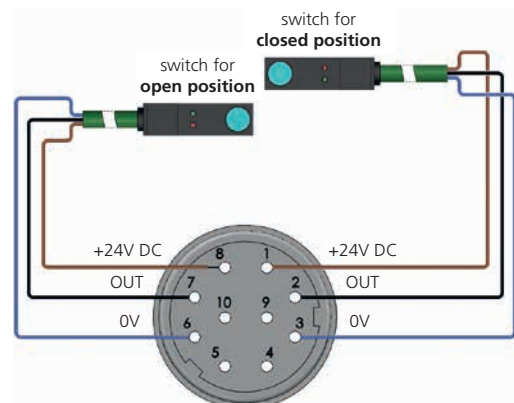
ELECTRICAL CONNECTION SCHEME FOR MECHANICAL SWITCHES

Connector frontal view:

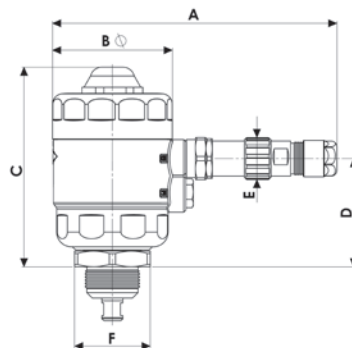


ELECTRICAL CONNECTION SCHEME FOR INDUCTIVE SWITCHES

Connector frontal view:



Dimensions & Weights		Position Module
Actuator	[mm]	45/63/90
A	[mm]	134
B	[mm]	57
C	[mm]	95
D	[mm]	51.5
E	[mm]	20
F	[mm]	Hex 36
Weight	[kg]	0.43



Position Module	Actuator Ø	Electrical Position Feedback
Code	[mm]	—
857 030-	63/90	Mechanical
857 040-	45	
857 031-	63/90	Inductive
857 041-	45	

Travel Switch Conversion Kit for Piston Actuated Valve

Features and Benefits

Kit suitable for all M&M International pneumatic valves.

It allows the installation of a position sensor on top of the actuator. The sensor can be magnetic or inductive and provides an electrical signal indicating the open position of the valve (this is a function different from the position module, which detects the actual valve position: open or closed).

The sensor is not included.

The kit is recommendable for magnetic or inductive sensors with threaded body having an external diameter size up to 12mm max.

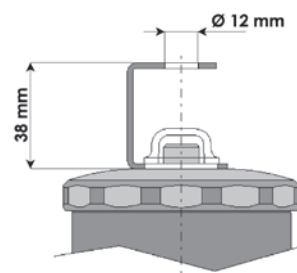
You can install a sensor having a larger diameter (up to 18 mm max.) in this case you shall re-drill the upper hole on the sensor support bracket.

The valve position is visible through the transparent sight dome.

- Simple to retrofit
- Suitable for magnetic or inductive commercial switches with M12 or M8 thread

Code **857 018 00-** includes: support bracket, transparent dome, red position indicator with built-in magnet (switch and plug not included, see below).

CONVERSION KIT code 857 018 00-:



Magnetic Switch for Conversion Kit

M&M offers 2 types (type **A** or type **B** see below) of standard magnetic switches to be purchased in addition to the conversion kit. Other types of switches can be outsourced directly by the customer, provided that they comply with M&M kit mounting specifications.

Notes: 2 conversion kits complete with sensors are available:

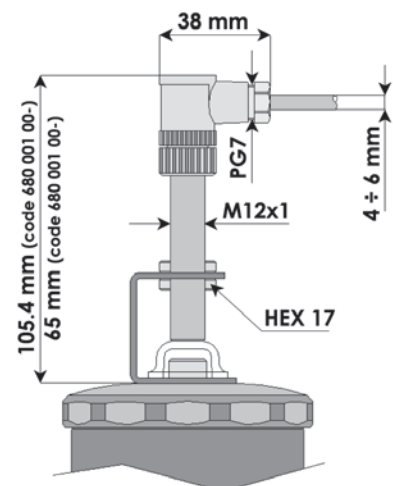
Code **857 019 00-** includes: support bracket, transparent dome, red position indicator, magnet, connector code 600 012 00- and sensor code 680 001 00-.

Code **857 020 00-** includes: support bracket, transparent dome, red position indicator, magnet, sensor with cable code 680 002 00-.

Technical Specifications		
Magnetic Switches	• Type A code 680 001 00-	• Type B code 680 002 00- ¹
Contact	Free NC, NO switch	Free NC, NO switch
Repeatability	± 0,3 mm	± 0,3 mm
Temperature Limits	- 25 to + 100 °C	- 25 to + 100 °C
Protection Class	IP 67 ²	IP 67
Max. Switching Voltage	500 V	150 V
Max. Switching Current	0,5 A	1 A
Max. Switching Power	30 WVA	20 WVA
Contact Actuation Time	4,5 ms	2 ms
Connection	Plug to screw clamp connection DIN IEC 60947/5/2	With moulded cable (5 m)
Cable	3 x 0,25 mm ²	3 x 0,25 mm ²

1. Minimum batch may be required

2. If matched with a connector rated IP67 or higher



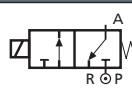
• **Type A**
CONNECTOR code 600 012 00-
+ **SWITCH** code 680 001 00-



• **Type B**
SWITCH AND CABLE (5m)
code 680 002 00-¹



3/2 Way Direct Acting Pilot Solenoid Valve with Manual Override

Specifications	
Type: B356/B326/D326 Normally Closed	
Media	Water, inert gases, air
Media Temperature	-10 to +60 °C
Ambient Temperature	-10 to +60 °C
Body Material	Brass (CW617N EN 12165) with electroless nickel plating treatment
Operator Material	Stainless steel
Seal Material	Foodgrade FKM
Protection Class	IP65 (with connector and gasket)

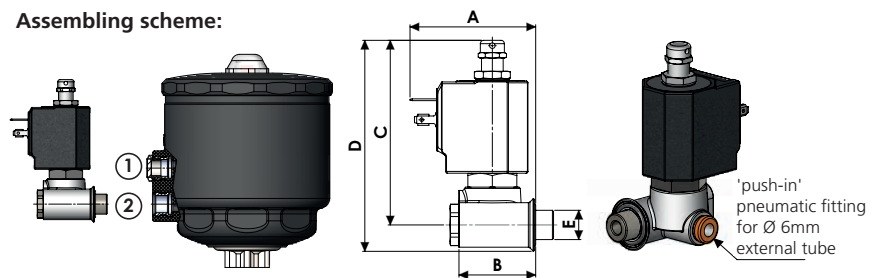
Features and Benefits

- Expressly designed to pilot M&M Piston Actuated Valves
- Valve rotation 360° around port



Dimensions & Weights		B356	B326	D326
Connection	'Push-in'			
A	[mm]	48	51	56.5
B	[mm]	31	34	34
C	[mm]	67	67	83
D	[mm]	77	79	95
E	[mm]	1/8" G	1/4" G	1/4" G
Weight	[kg]	0.25	0.25	0.30

Assembling scheme:



Screw the pilot valve bolt into the inlet port of the piston valve actuator using a maximum torque level of 5 Nm:

- into hole ① for **NORMALLY OPEN VALVES** (RPG/RCG)
- into hole ② for **NORMALLY CLOSED VALVES** (PG-BPG/CG-BCG)

Valve	DN	Flow rate Kvs	OPD		
			min.	max. AC	max. DC
Code	[mm]	[l/min]	[barg]	[barg]	[barg]
B356CVCMK	1.5	0.7	0	10	10

Coils	
Code	[Volts/Hz]
2250	24 VDC
2200	24 V 50/60 Hz
2400	110 V 50 Hz - 120 V 60 Hz
2600	200 V 50 Hz - 220 V 60 Hz
2700	230 V 50 Hz - 240 V 60 Hz

B356 - FKM seal, for actuator size Ø 45

Connection: to DIN 46244
Coil power: AC 10va (holding)
AC 16va (inrush)
DC 7w

OPTIONS

UL approved coils (e.g. code 225R)

DIN connector code 600 001 00-

Valve	DN	Flow rate Kvs	OPD		
			min.	max. AC	max. DC
Code	[mm]	[l/min]	[barg]	[barg]	[barg]
B326CVCMK	1.5	0.7	0	10	10

Coils	
Code	[Volts/Hz]
2250	24 VDC
2200	24 V 50/60 Hz
2400	110 V 50 Hz - 120 V 60 Hz
2600	200 V 50 Hz - 220 V 60 Hz
2700	230 V 50 Hz - 240 V 60 Hz

B326 - FKM seal, for actuator size Ø 63

Connection: to DIN 46244
Coil power: AC 10va (holding)
AC 16va (inrush)
DC 7w

OPTIONS

UL approved coils (e.g. code 240R)

DIN connector code 600 001 00-

Valve	DN	Flow rate Kvs	OPD		
			min.	max. AC	max. DC
Code	[mm]	[l/min]	[barg]	[barg]	[barg]
D326CVMK	2.0	1.3	0	10	10

Coils	
Code	[Volts/Hz]
7250	24 VDC
7200	24 V 50/60 Hz
7400	110 V 50 Hz - 120 V 60 Hz
7600	200 V 50 Hz - 220 V 60 Hz
7700	230 V 50 Hz - 240 V 60 Hz

D326 - FKM seal, for actuator size Ø 90

Connection: to DIN EN 175301-803 form A
(ex din 43650-a)
Coil power: AC 18va (holding)
AC 36va (inrush)
DC 14w

OPTIONS

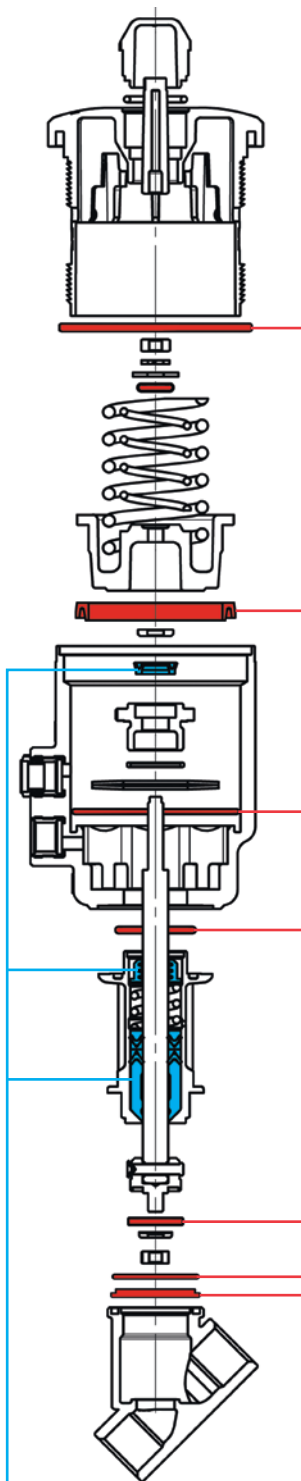
UL approved coils (e.g. code 725R)

DIN connector code 600 011 00-

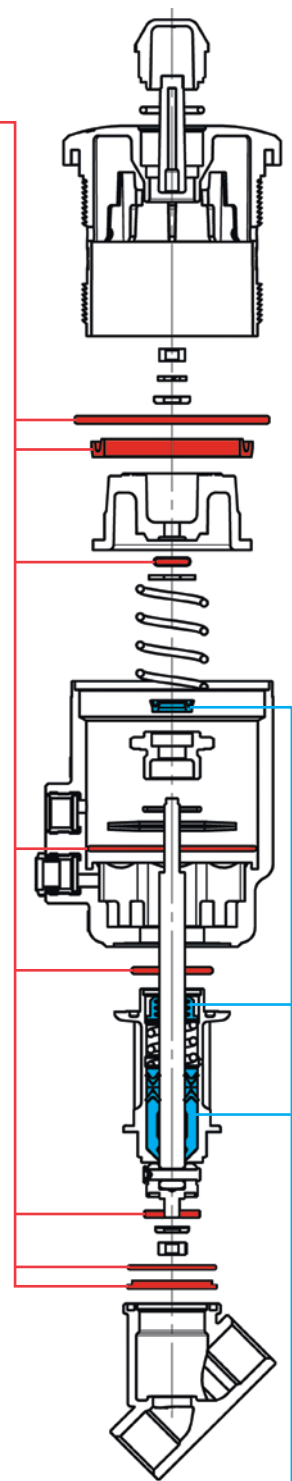
Seal Kit for Stainless Steel Valves Actuator Ø 63/90

Maintenance operations must be carried out by qualified personnel according to manufacturer's instructions. To replace seals, please refer to the instruction manual provided with the valve.

Normally Closed



Normally Open



SPARE PARTS KIT:
Lip seal, o-rings, main seal, body seal

Kit code	DN	Valve Type ¹	Actuator
856 111 00-	15	PG/RPG/BPG- PN/RPN/BPN- PW/RPW/BPW- PB/RPB/BPB- PD/RPD/BPD- PA/BPA/RPA- PC/RPC/BPC- PP/RPP/BPP- PR/RPR/BPR- High Temperature Version	Ø 63
856 122 00-	20		
856 133 00-	25		
856 144 00-	32		
856 155 00-	40		
856 166 00-	50		
856 611 00-	15	DPG/DPN-	Ø 63
856 622 00-	20		
856 633 00-	25		
856 644 00-	32		
856 655 00-	40		
856 666 00-	50		
856 313 00-	25	PG/RPG/BPG- PN/RPN/BPN- PW/RPW/BPW- PB/RPB/BPB- PD/RPD/BPD- PA/BPA/RPA- PC/RPC/BPC- PP/RPP/BPP- High Temperature Version	Ø 90
856 314 00-	32		
856 315 00-	40		
856 316 00-	50		

STEM SEALS KIT

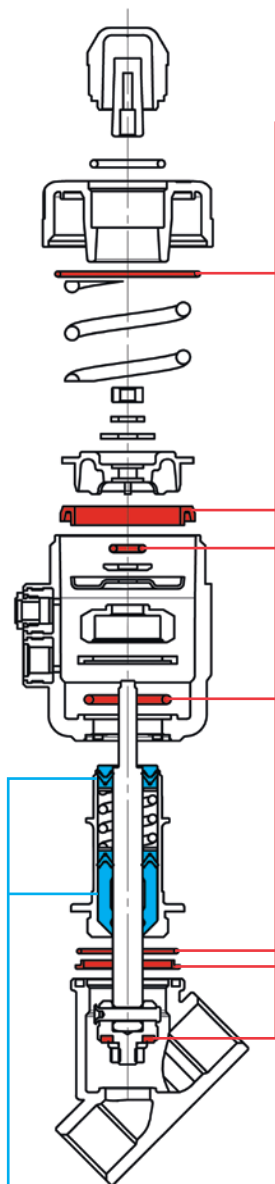
Kit Code	DN	Valve Type ¹	Actuator
856 802 00-	all	PG/RPG/BPG/DPG- PN/RPN/BPN/DPN- PW/RPW/BPW- PB/RPB/BPB- PD/RPD/BPD- PA/BPA/RPA- PC/RPC/BPC- PP/RPP/BPP- PR/RPR/BPR-	Ø 63/90
856 900 00-	15	High Temperature Version	Ø 63
856 901 00-	20		
856 902 00-	25		
856 903 00-	32	High Temperature Version	Ø 90
856 904 00-	40		
856 905 00-	50		

1. Included versions with optional: stroke regulator (e.g. code PW208STZR0) and travel switch version (e.g. code BPG209LTKI0)

Seal Kit For Stainless Steel Valves Actuator Ø 45

Maintenance operations must be carried out by qualified personnel according to manufacturer's instructions.
To replace seals, please refer to the instruction manual provided with the valve.

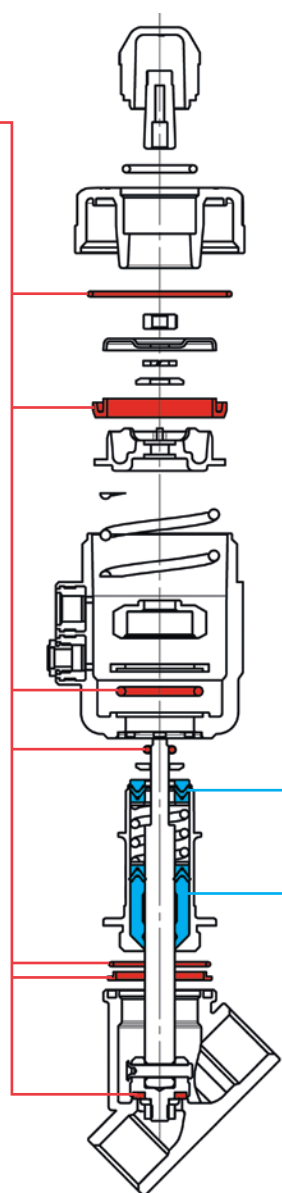
Normally Closed



SPARE PARTS KIT: Lip seal, o-rings, main seal, body seal			
Kit Code	DN	Valve Type	Actuator
856 011 00-	15	PG/RPG/BPG- PN/RPN/BN- PW/RPW/BPW- PB/RPB/BPB- PC/RPC/BPC- PP/RPP/BPP- PR/RPR/BPR	Ø 45
856 012 00-	20		
856 013 00-	15	DPG/DPN-	
856 014 00-	20		

STEM SEALS KIT			
Kit code	DN	Valve Type	Actuator
856 801 00-	all	all	Ø 45

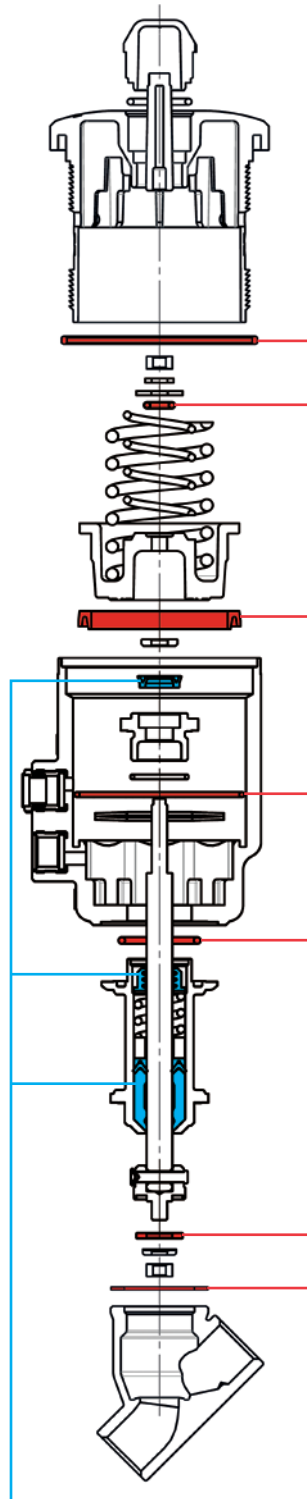
Normally Open



Seal Kit For Bronze Valves Actuator Ø 63/90

Maintenance operations must be carried out by qualified personnel according to manufacturer's instructions.
To replace seals, please refer to the instruction manual provided with the valve.

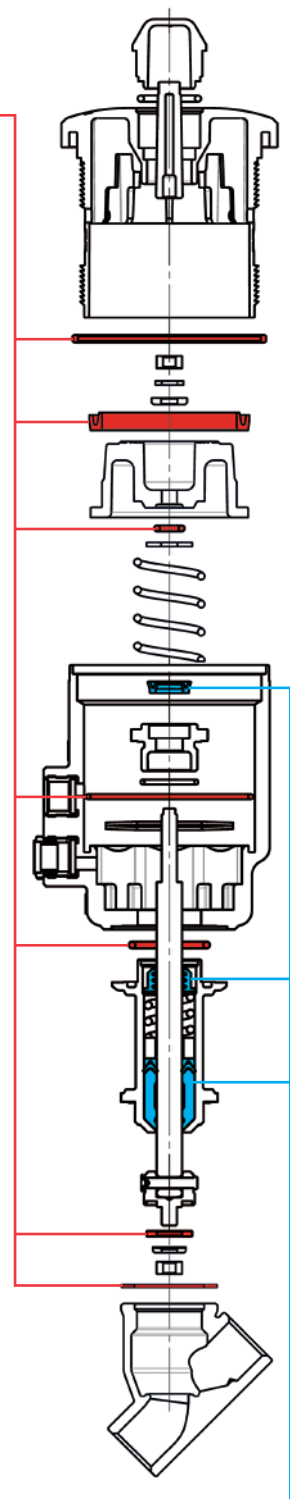
Normally Closed



SPARE PARTS KIT: Lip seal, o-rings, main seal, flat seal			
Kit Code	DN	Valve Type ¹	Actuator
856 112 00-	15	CG/RCG/BCG- CN/RCN/BCN-	Ø 63
856 123 00-	20		
856 134 00-	25		
856 145 00-	32		
856 156 00-	40		
856 167 00-	50		
856 612 00-	15	DCG/DCN-	
856 623 00-	20		
856 634 00-	25		
856 645 00-	32		
856 656 00-	40		
856 667 00-	50		
856 317 00-	25	CG/RCG/BCG- CN/RCN/BCN-	Ø 90
856 318 00-	32		
856 319 00-	40		
856 320 00-	50		

STEM SEALS KIT			
Kit Code	DN	Valve Type ¹	Actuator
856 802 00-	all	CG/RCG/BCG-/DCG- CN/RCN/BCN/DCN-	Ø 63/90

Normally Open

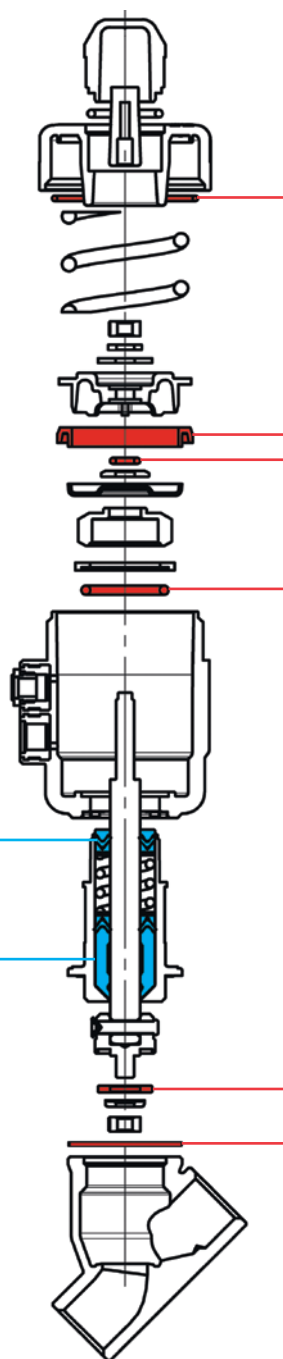


1. Included versions with optional: stroke regulator (e.g. code CG206STXR0) and travel switch version (e.g. code BCG210LTJJ0)

Seal Kit For Bronze Valves Actuator Ø 45

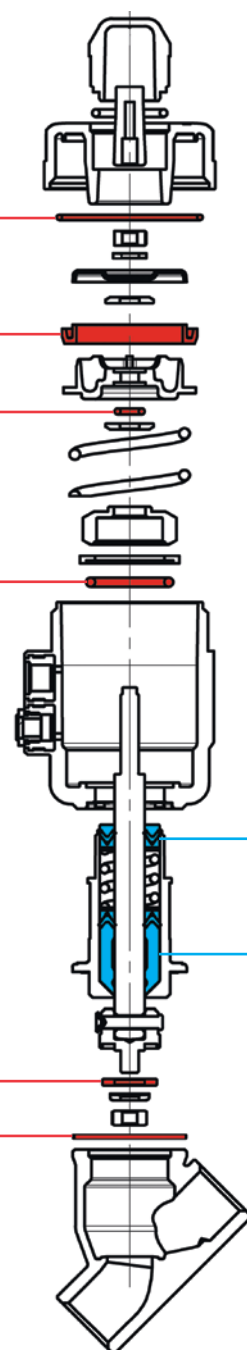
Maintenance operations must be carried out by qualified personnel according to manufacturer's instructions.
To replace seals, please refer to the instruction manual provided with the valve.

Normally Closed



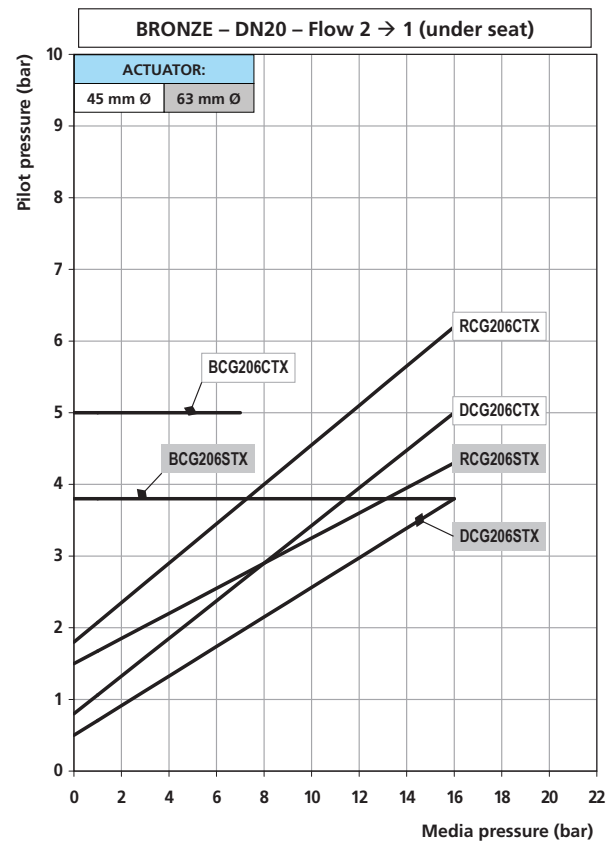
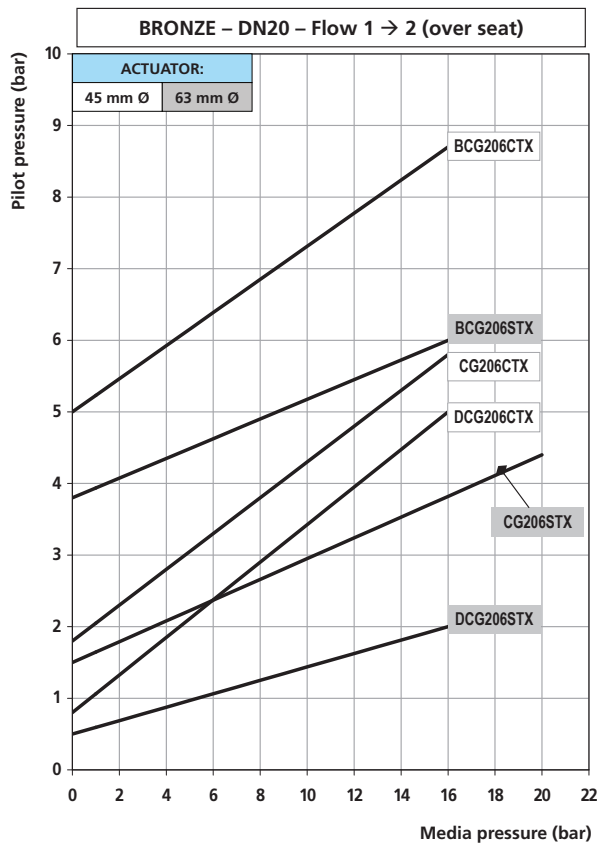
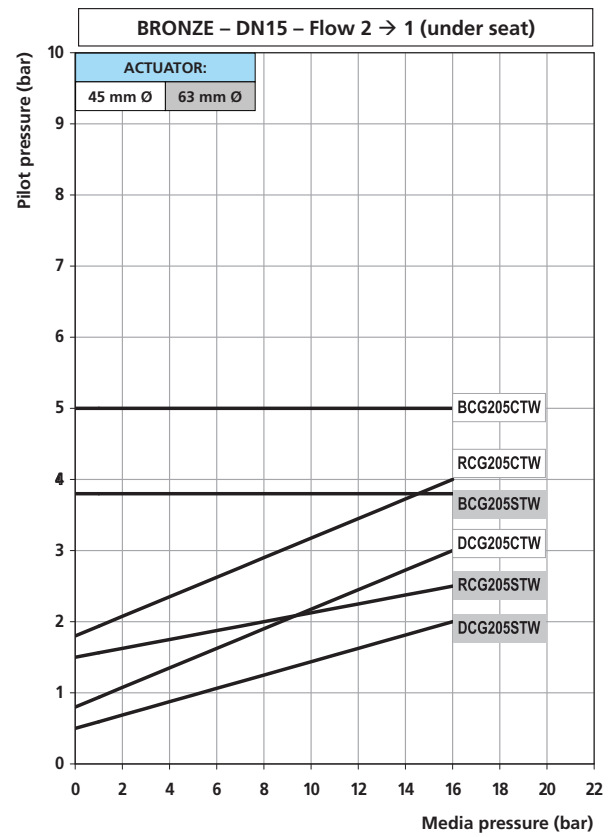
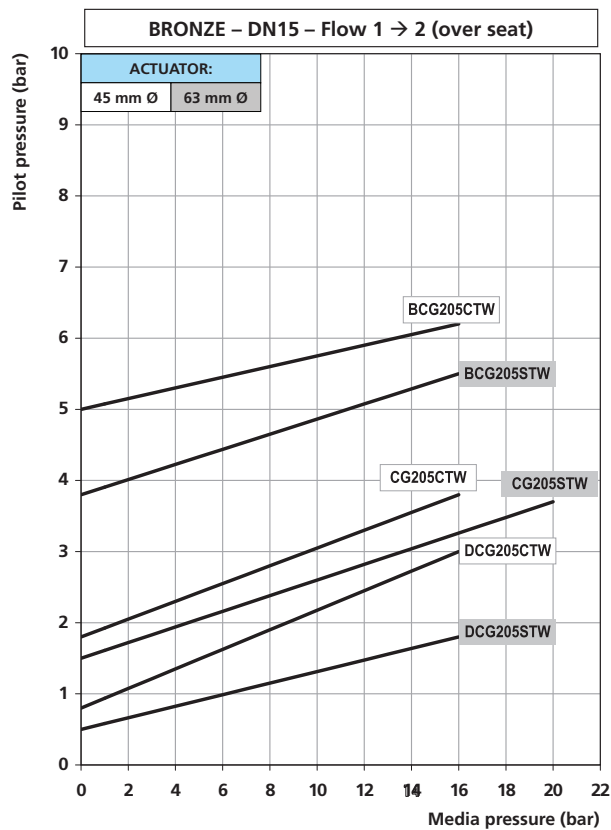
SPARE PARTS KIT: Lip seal, o-rings, main seal, flat seal			
Kit Code	DN	Valve Type	Actuator
856 015 00-	15	CG/RCG/BCG- CN/RCN/BCN-	Ø 45
856 016 00-	20		
856 017 00-	25		
856 018 00-	15	DCG/DCN-	
856 019 00-	20		
856 020 00-	25		

Normally Open



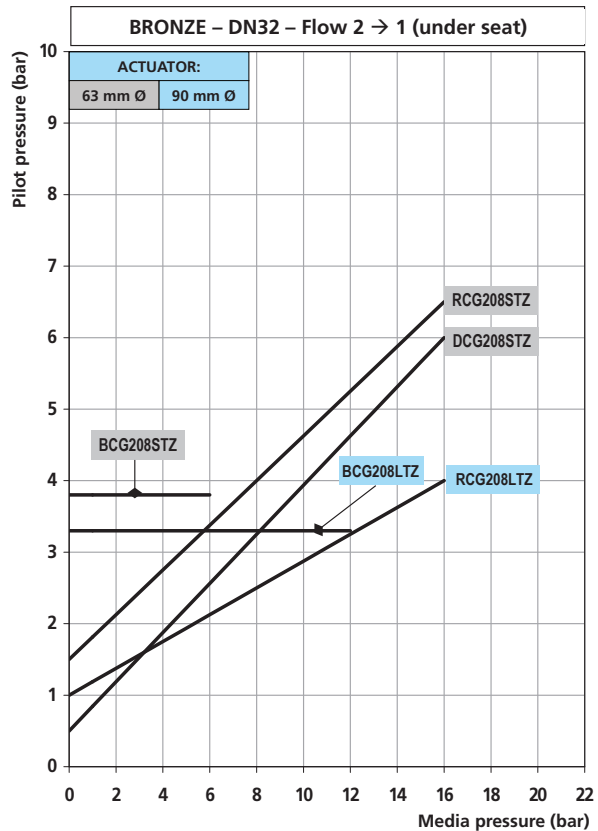
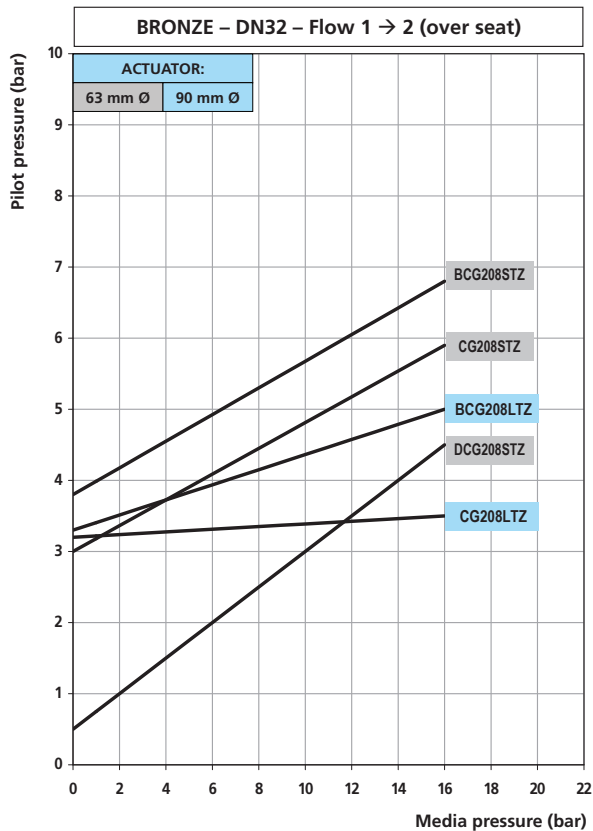
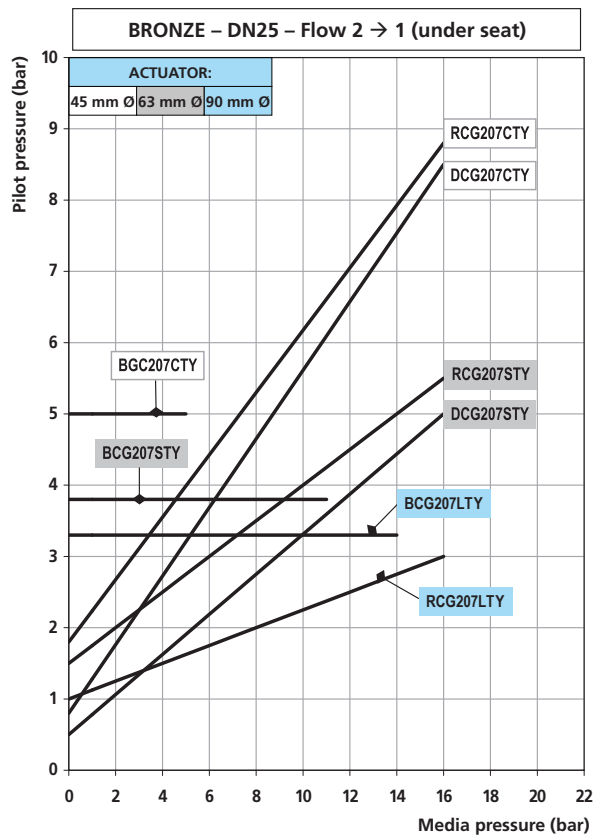
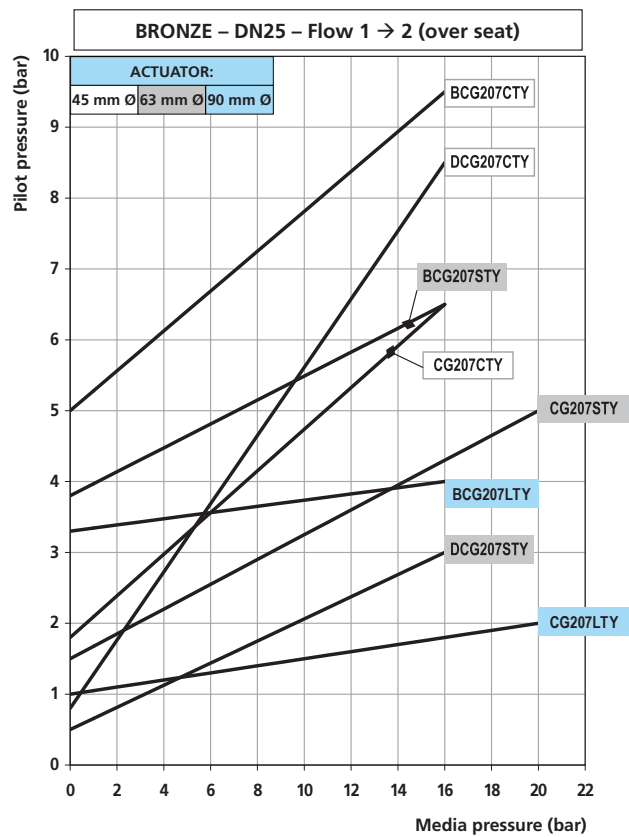
STEM SEALS KIT			
Kit Code	DN	Valve Type	Actuator
856 801 00-	all	all	Ø 45

Bronze Valves Comparative Charts DN15 to DN20



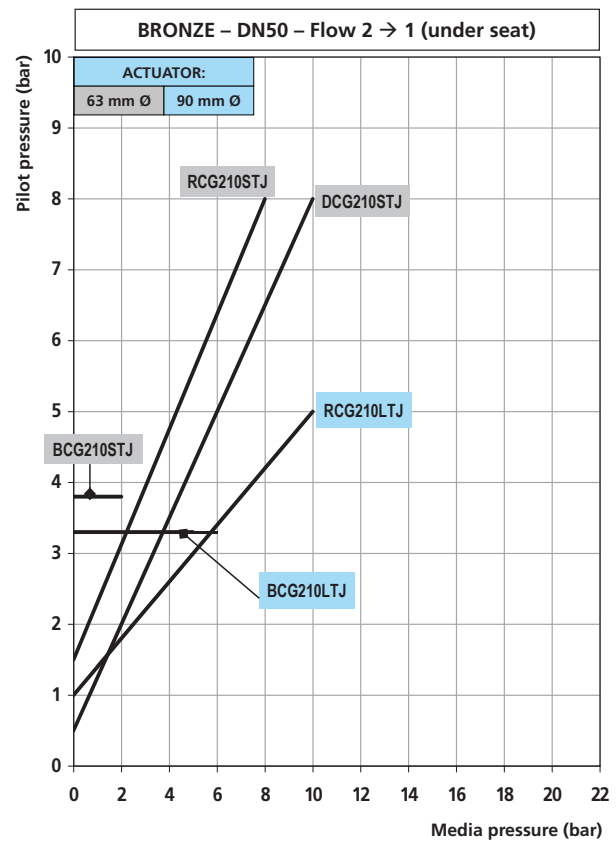
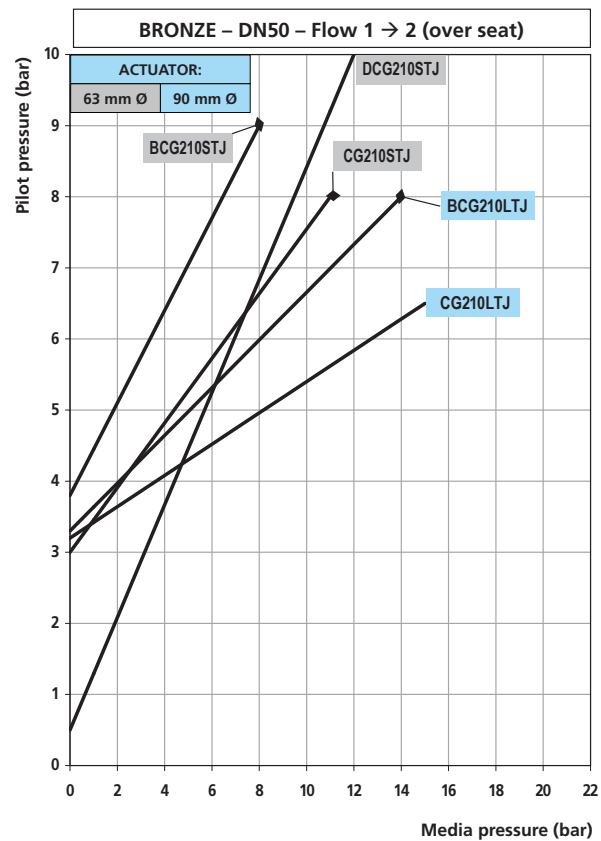
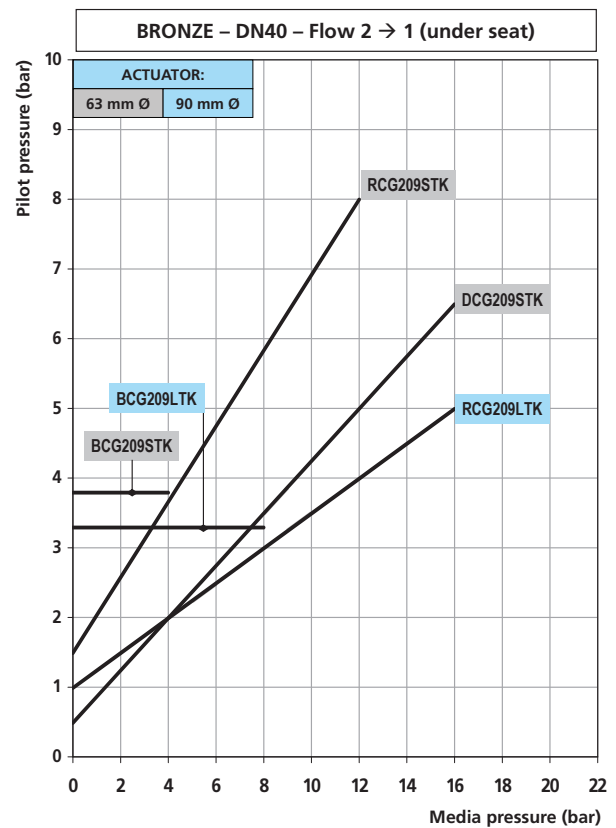
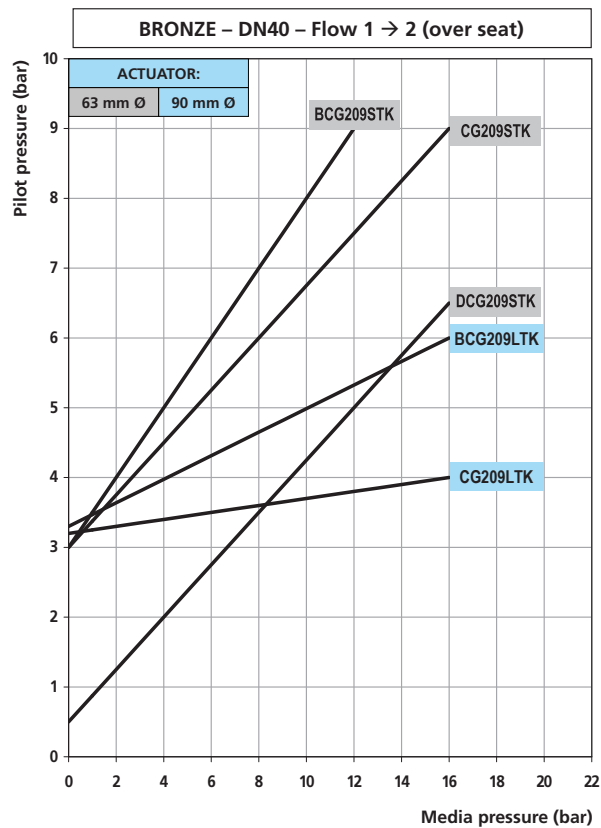
Version: CG = Normally Closed, BCG = Normally Closed (anti-waterhammer), RCG = Normally Open, DCG = Double Acting

Bronze Valves Comparative Charts DN25 to DN32



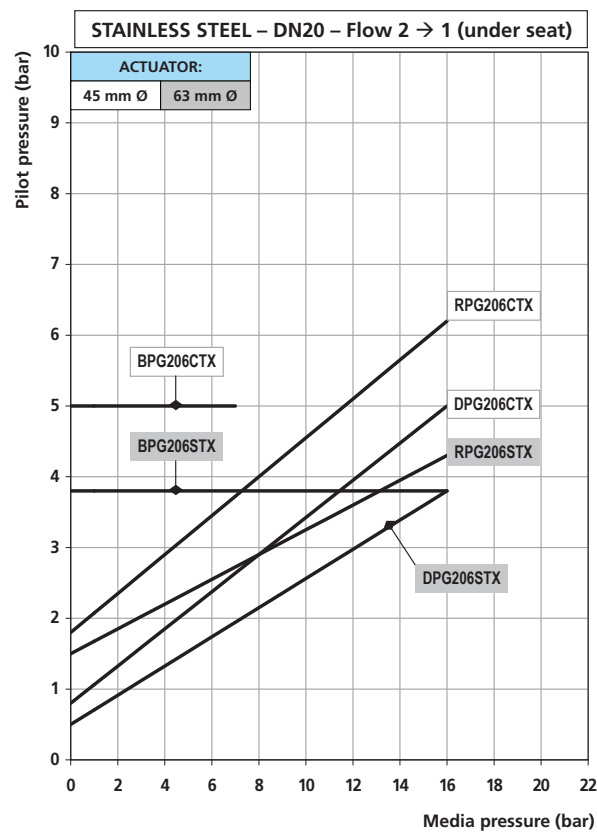
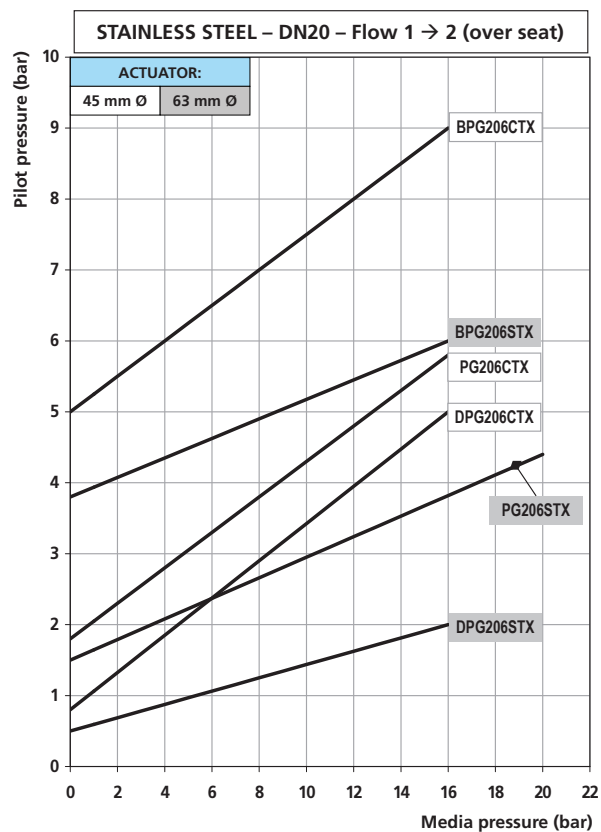
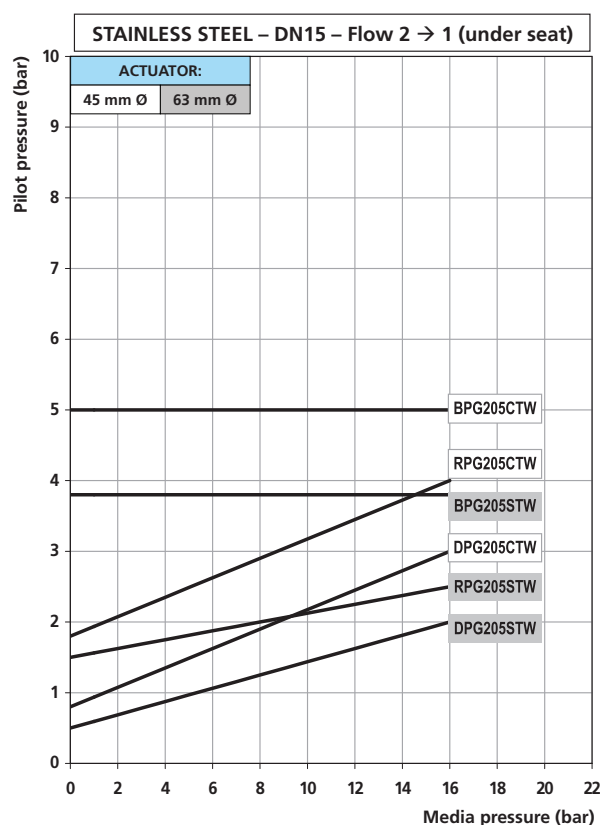
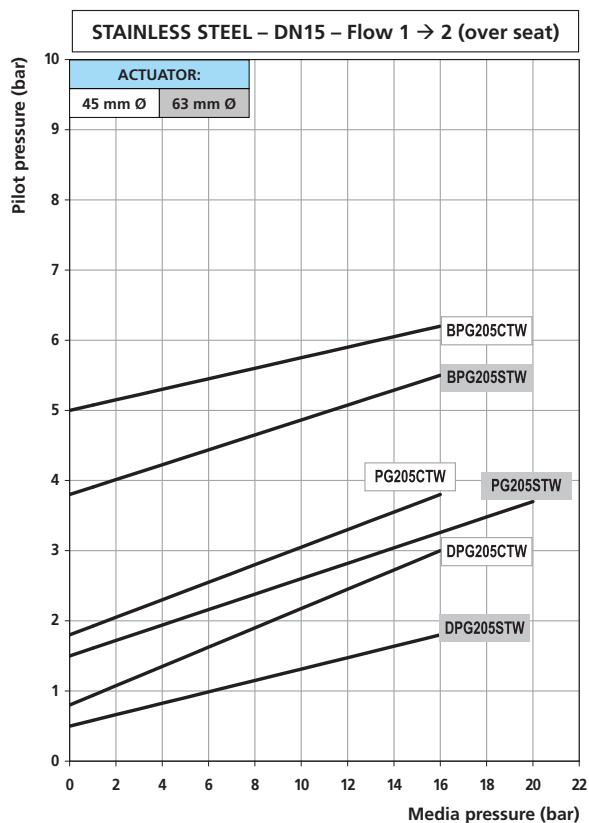
Version: CG = Normally Closed, BCG = Normally Closed (anti-waterhammer), RCG = Normally Open, DCG = Double Acting

Bronze Valves Comparative Charts DN40 to DN50



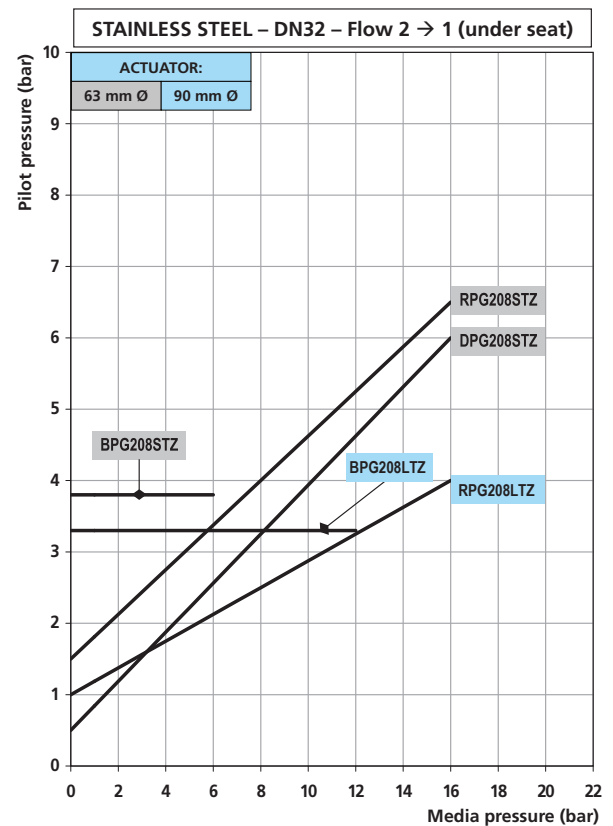
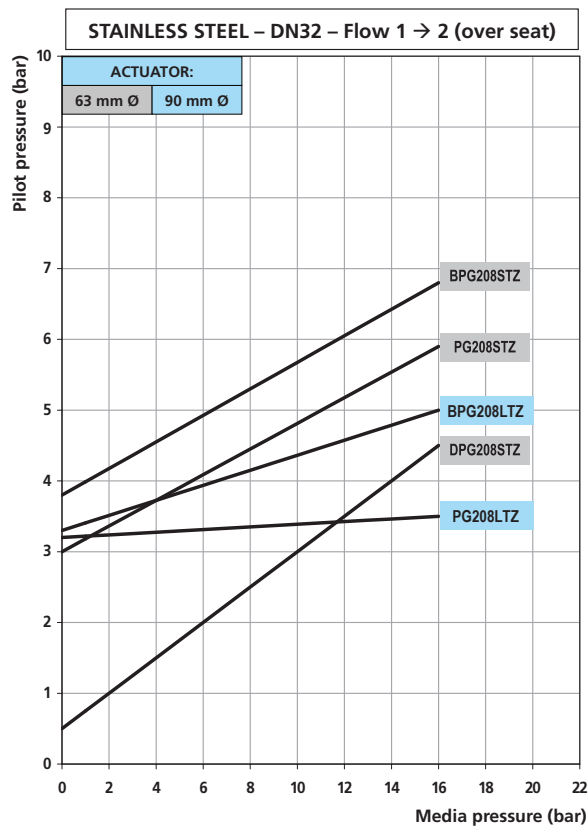
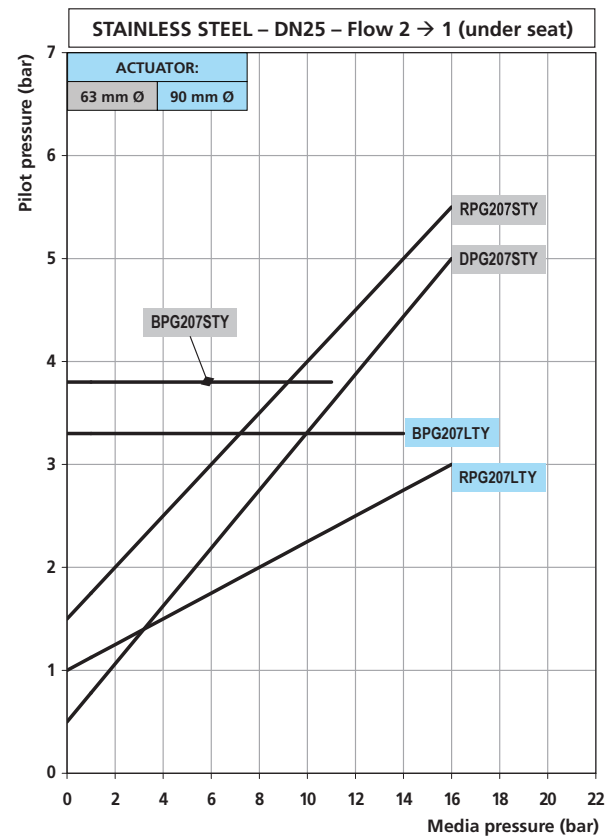
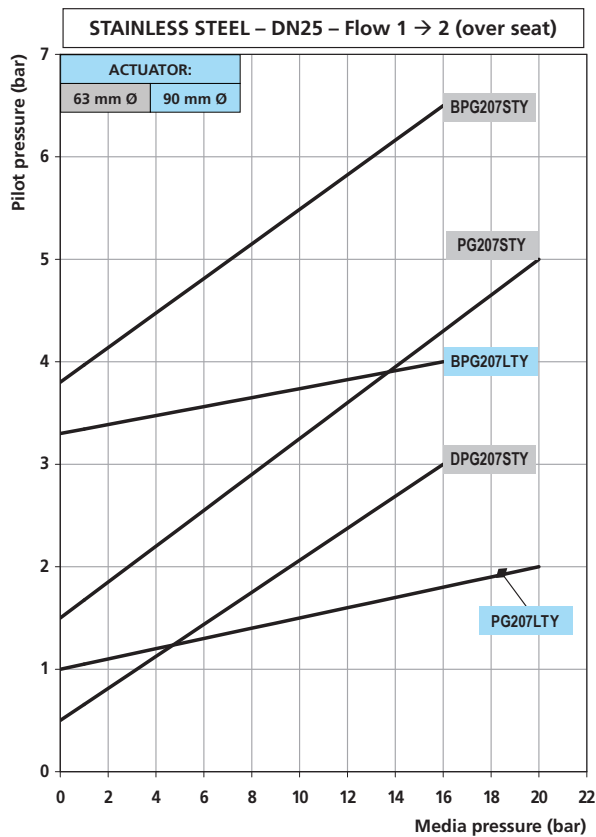
Version: CG = Normally Closed, BCG = Normally Closed (anti-waterhammer), RCG = Normally Open, DCG = Double Acting

Stainless Steel Valves Comparative Charts DN15 to DN20



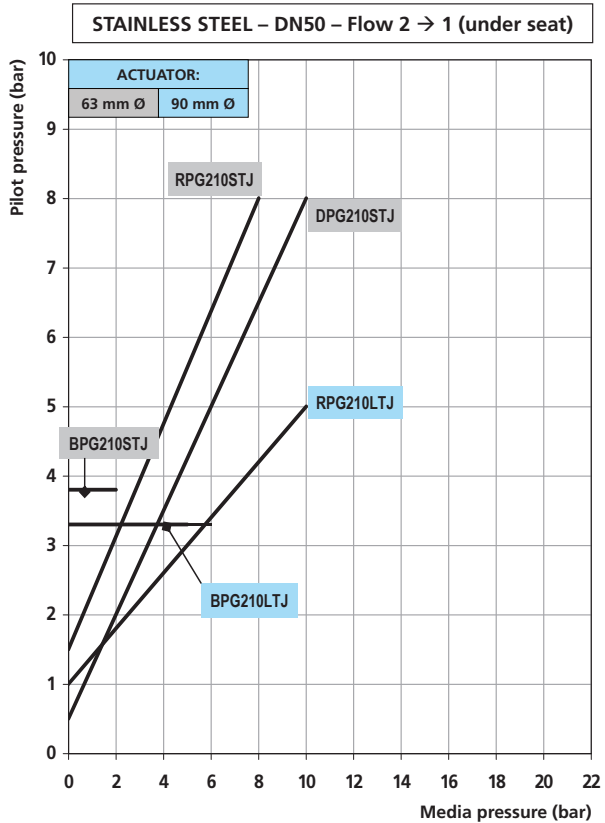
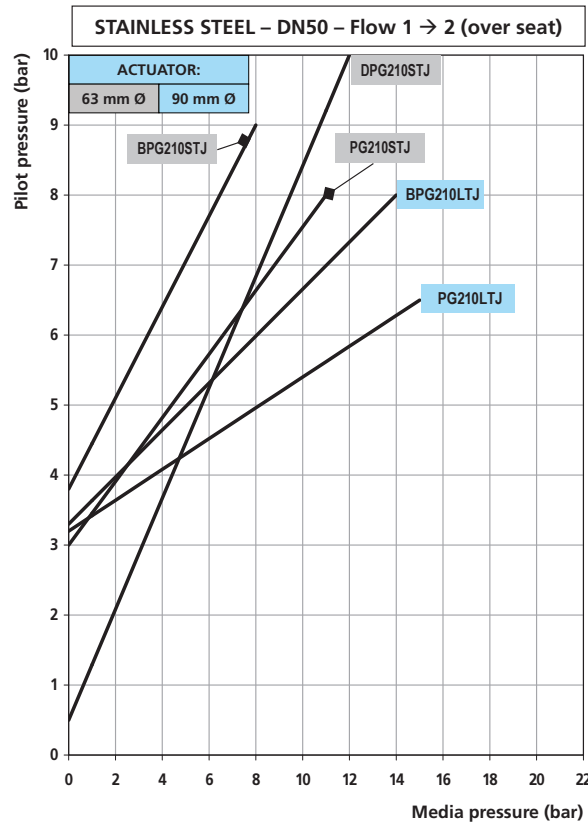
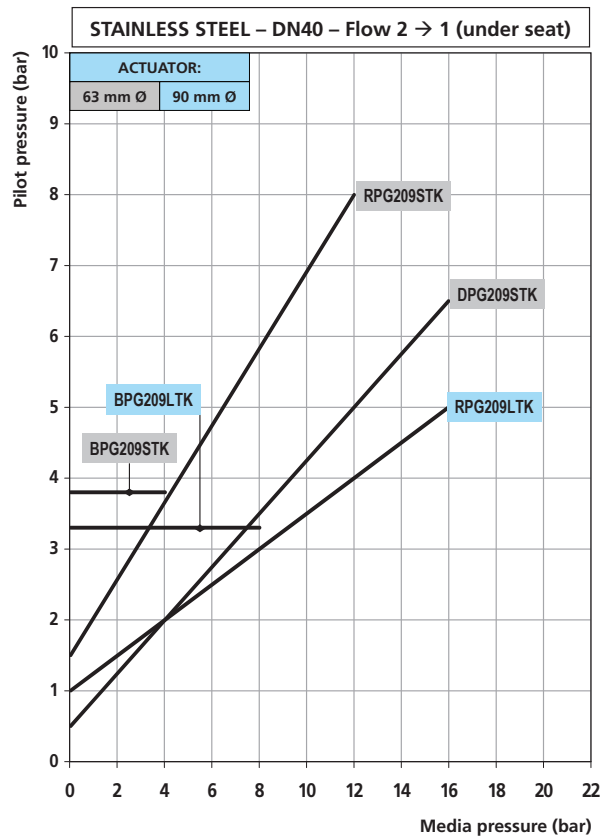
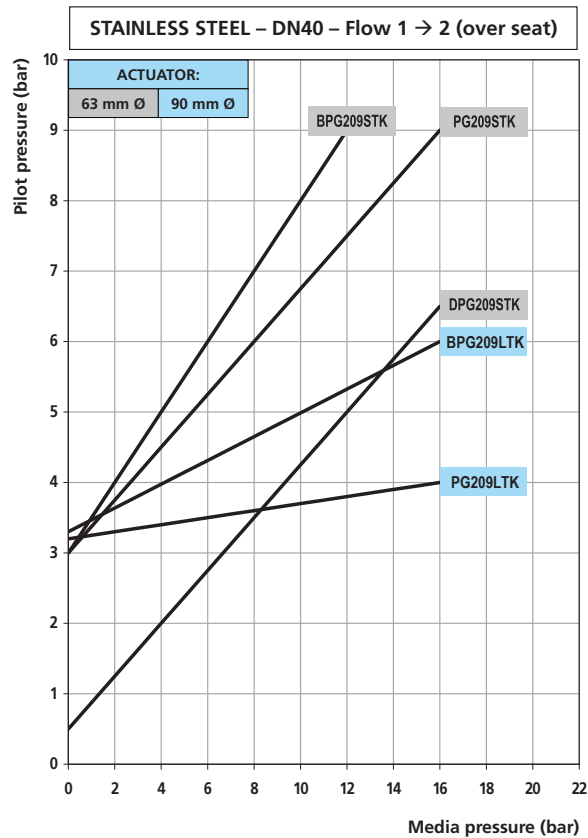
Version: PG = Normally Closed, BPG = Normally Closed (anti-waterhammer), RPG = Normally Open, DPG = Double Acting

Stainless Steel Valves Comparative Charts DN25 to DN32



Version: PG = Normally Closed, BPG = Normally Closed (anti-waterhammer), RPG = Normally Open, DPG = Double Acting

Stainless Steel Valves Comparative Charts DN40 to DN50



Version: PG = Normally Closed, BPG = Normally Closed (anti-waterhammer), RPG = Normally Open, DPG = Double Acting

Piston Valves Opening/Closing Time (sec)

Actuator Volume

NC Version – Flow Direction 1 → 2

DN [mm]	Actuator Ø 45 1,5 mm pilot orifice B356-		Actuator Ø 63 1,5 mm pilot orifice B326-		Actuator Ø 90 2,0 mm pilot orifice D326-	
	NC		NC		NC	
	o	c	o	c	o	c
15	0,09	0,22	0,14	0,3	-	-
20	0,09	0,22	0,2	0,3	-	-
25	-	-	0,32	0,34	0,32	0,34
32	-	-	0,34	0,38	0,36	0,4
40	-	-	0,34	0,38	0,4	0,46
50	-	-	0,36	0,38	0,4	0,46

Actuator	Air Volume
[mm]	[dm³]
Ø 45 mm	0,036
Ø 63 mm	0,099
Ø 90 mm	0,212

Notes:

Pilot pressure: 6 bar

Pilot media: AIR

Pressure in body: 0 bar

For Normally Open valves (NO) invert columns o and c

Coding Chart

PISTON ACTUATED VALVE CODING

CODE

1

2

3

4

5

6

7

8

9

10

11

-

13-16

17

18

Function

- = NC Normally closed

B = NC Bidirectional

R = NO Normally open

D = DA Double acting

Z = Control / Modulating

Serial Letter

P = Stainless steel type

C = Bronze / Brass type

L = Compact brass type

Connection Type

O = Operator (w/o body)

A = Flange (ANSI B16.10 Class 150)

B = Butt weld (ISO 65 - ANSI B 36.10)

C = Clamp (ISO 2852)

D = Flange (EN 1092 shape B)

G = GAS (ISO 228G)

N = NPT

P = Clamp connection (ASME BPE)

R = Threaded spigots

W = Butt weld (DIN 11850)

Valve Body ID. Code

04 = 3/8" (only for BLG)

05 = 1/2"

06 = 3/4"

07 = 1"

08 = 1 - 1/4"

09 = 1 - 1/2"

10 = 2"

11 = 1 3/4" (spigots only)

12 = 2 3/8" (spigots only)

Ways

2

Orifice [Ø mm]

W = 15

X = 20

Y = 25

Z = 32

K = 40

J = 50

Seal Material

B = NBR (only for BLG)

P = PEEK

T = PTFE

Actuator Type

O = Manual angle seat valve

D = Ø 32 only for BLG

C = Ø 45 Polyamide

S = Ø 63 Polyamide

L = Ø 90 Polyamide

M = Ø 63 AISI (for ATEX PAV)

G = Ø 90 AISI (for ATEX PAV)

SNG1 smart positioner

0 no feedback

1 feedback 4-20 mA

S Fail safe

F Fail freeze

Special Execution

O = Standard

H = High temperature (SS)

K = Nickel plated + hardening treatment

V = Vacuum seal (bronze)

Optional Features

O = NO optional features

A = Mechanical position module

B = Inductive position module

E = Equi% Plug (only control PAV)

L = Linear Plug (only control PAV)

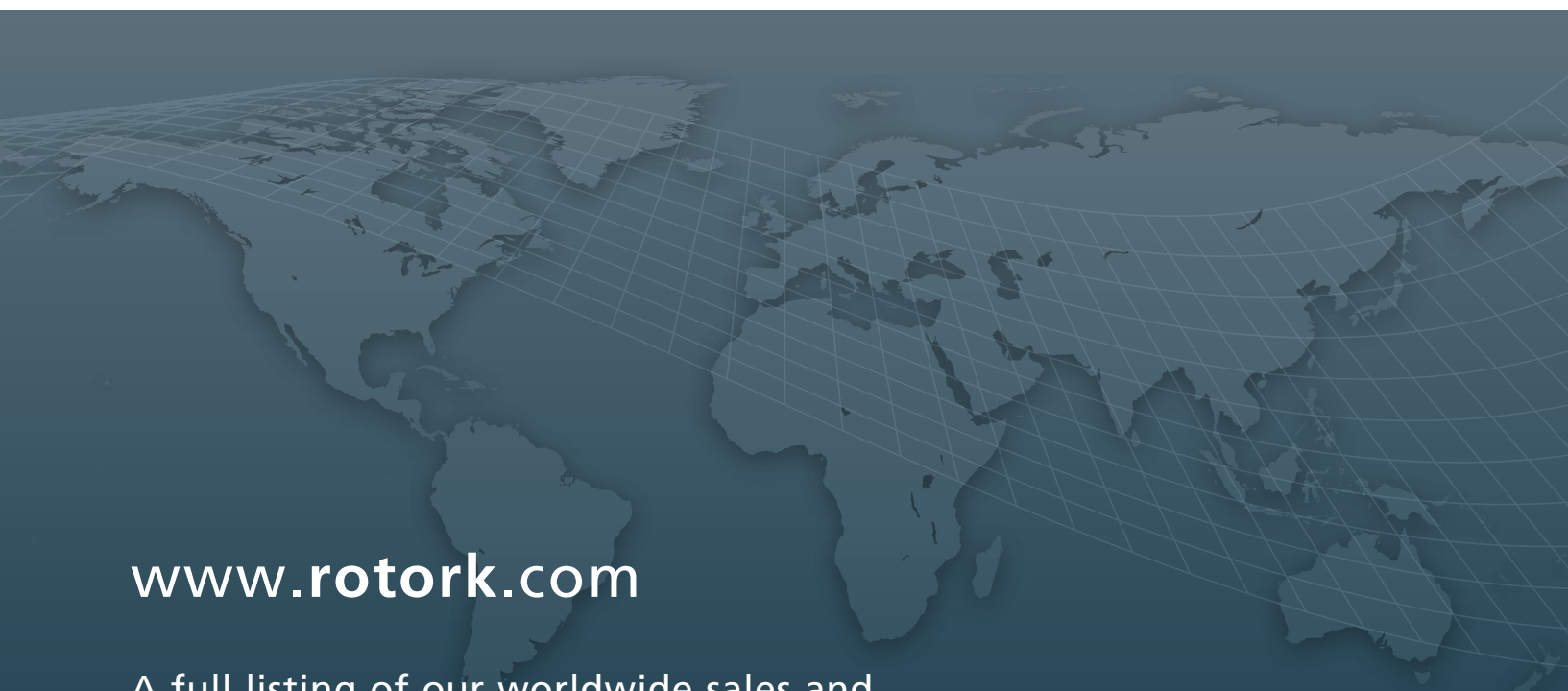
I = Travel switch

R = Stroke regulator

X = Atex inductive switch (only for ATEX PAV)



Keeping the World Flowing



www.rotork.com

A full listing of our worldwide sales and service network is available on our website.

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