

Specifications	
Function (single acting)	<p>Flow direction overseat 1 → 2</p>
Maximum Viscosity	Max. 21cST (3 °E)
Body Material (Std)	Stainless Steel 1.4305 EN 10088 (AISI 303)
Orifice Material	Stainless Steel 1.4305 EN 10088 (AISI 303)
Armature Tube	Stainless Steel solenoid grade
Plunger and Top Stop	Stainless Steel solenoid grade
Seal Material (Std)	FKM
Connection Type (Std)	G parallel thread (ISO 228-1)
Coil Characteristics	
Standard Coil Voltage DC (=)	24 V
Standard Coil Voltage AC 50 Hz (-)	24 V, 110 V, 230 V
Standard Coil Voltage AC 60 Hz (-)	24 V, 120 V
Voltage Tolerance	+10% to -10% (AC/ DC)
Duty Cycle	100% ED
Protection Class	EEx m II 2GD T4 (IP65 - EN 60529)
Cable Type	H05V2V2-F 3G1
Coil Insulation	Class F to EN 60730

Features and Benefits

- Direct Acting
- Robust construction for industrial applications
- Fitted with explosion-proof operator and coil class EEx m II 2GD T4
- The valve are supplied with a 3 m power cable entry, wired on a non-removable plug
- Wide range of available orifices (max. Ø3 mm)



⚠ WARNING

The Ex approval is only valid for complete solenoid valves supplied ex factory (replacing the solenoid doesn't make a valve explosion-proof!).

Repairs may be performed by the manufacturer only, spare parts are not available (a valve is a closed system according to Directive 2014/34/UE).

Pipe Size	Cv (gpm)	Kv (m³/h)	OPD (bar)		Orifice (mm)	Seal Material	Valve Code
			AC Voltages	DC Voltages			
¼"	0,08	0,07	0 - 12	0 - 12	1,5	FKM	N299D\C
¼"	0,23	0,20	0 - 12	0 - 12	2,5	FKM	N299D\G
¼"	0,32	0,27	0-12	0 - 10	3,0	FKM	N299D\H

Options Available

Valve Options (see coding chart)
Body threaded connection G 1/8"
NPT threads (minimum batch may be required)

Solenoid Enclosure		
Coil	Voltage - Power	Fuse ²
N253	24 VDC - 10,1 W	800
N203 ¹	24 V / 50/60 Hz - AC 7,2 VA	800
N403 ¹	110 V / 50 Hz - AC 9,1 VA	200
NK03 ¹	120 V / 60 Hz - AC 8,6 VA	200
N703	230 V / 50 Hz - AC 8,5 VA	100

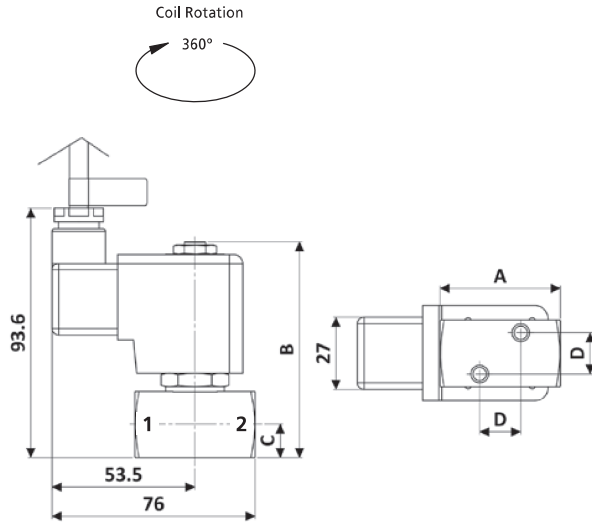
¹ MOQ required.

⚠ SAFETY WARNING

² A mains fuse or equivalent means of protection (breaking value shown on the table above for each coil type) must be installed on the mains supply line. Absence of mains protection is a non conformity to safety standards (EC Directives 2014/34/UE and 1999/92/EC) and could be a potential risk of explosion.

Seal Material ³ and Media Temperature Range	Media	Ambient Temperature Range	
		Min	Max
FKM (-20 °C to +80 °C)	Water, oil, air, aggressive fluids	-20 °C	+50 °C

³ See corrosion reference guide and sealing solutions for material compatibility.



Preferred Valve Mounting Options



Pipe Size	A	B	C	D	Weight (kg)
1/8" - 1/4"	45	81.2	12.5	15.4	-

Dimensions (mm)

Solenoid enclosures

N-- Type Coil - Insulation class F

- External material: thermoplastic
- Connection type: 3 m wired cable, with ferrules
- Enclosure classification: conforms to IP65 (according to EN 60529)
- Type examination certificates: PTB 03 ATEX 2086 X, IECEx PTB 05.0005X



Coding chart

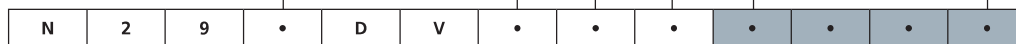
Main Valve Assembly

Pipe Size	
8	1/8"
9	1/4"

Orifice	
C	1.5
G	2.5
H	3.0

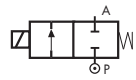
Option	
N	NPT
	w/o option

Voltage / Frequency - Class F	
N253	24 VDC
N203	24 V / 50/60 Hz
N403	110 V / 50 Hz
NK03	120 V / 60 Hz
N703	230 V / 50 Hz



Product coding example:

N298DVH N253
1/8" G, Ex m solenoid operator, stainless steel body, FKM seals, 3.0 mm orifice, 24 VDC.

Specifications	
Function (single acting)	 <p>Flow direction overseat 1 → 2</p>
Maximum Viscosity	Max. 21cST (3 °E)
Body Material (Std)	Brass CW617N (EN 12165)
Orifice Material	Stainless Steel 1.4305 EN 10088 (AISI 303)
Armature Tube	Stainless Steel solenoid grade
Plunger and Top Stop	Stainless Steel solenoid grade
Seal Material (Std)	FKM
Connection Type (Std)	G parallel thread (ISO 228-1)
Coil Characteristics	
Standard Coil Voltage DC (=)	24 V
Standard Coil Voltage AC 50 Hz (-)	24 V, 110 V, 230 V
Standard Coil Voltage AC 60 Hz (-)	24 V, 120 V
Voltage Tolerance	+10% to -10% (AC/ DC)
Duty Cycle	100% ED
Protection Class	EEx m II 2GD T4 (IP65 - EN 60529)
Cable type	H05V2V2-F 3G1
Coil Insulation	Class F to EN 60730

Features and Benefits

- Direct Acting
- Robust construction for industrial applications
- Fitted with explosion-proof operator and coil class EEx m II 2GD T4
- The valve are supplied with a 3 m power cable entry, wired on a non-removable plug
- Wide range of available orifices (max. Ø3 mm)



⚠ WARNING

The Ex approval is only valid for complete solenoid valves supplied ex factory (replacing the solenoid doesn't make a valve explosion-proof!).

Repairs may be performed by the manufacturer only, spare parts are not available (a valve is a closed system according to Directive 2014/34/UE).

Pipe Size	Cv (gpm)	Kv (m³/h)	OPD (bar)		Orifice (mm)	Seal Material	Valve Code
			AC Voltages	DC Voltages			
¼"	0.09	0.08	0 - 12	0 - 12	1.5	FKM	N263DVC
¼"	0.24	0.20	0 - 12	0 - 12	2.5	FKM	N263DVG
¼"	0.32	0.27	0-12	0-10	3.0	FKM	N263DVH

Options Available

Valve Options (see coding chart)
Body threaded connection G 1/8"
NPT threads (minimum batch may be required)

Solenoid Enclosure		
Coil	Voltage - Power	Fuse ²
N253	24 VDC - 10,1 W	800
N203 ¹	24 V / 50/60 Hz - AC 7,2 VA	800
N403 ¹	110 V / 50 Hz - AC 9,1 VA	200
NK03 ¹	120 V / 60 Hz - AC 8,6 VA	200
N703	230 V / 50 Hz - AC 8,5 VA	100

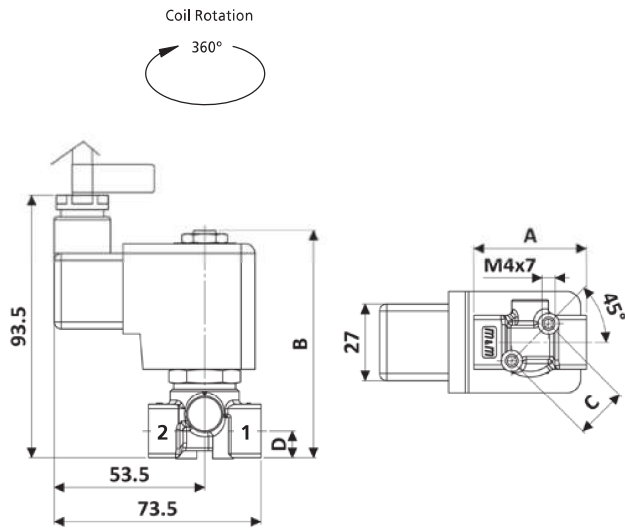
¹ MOQ required.

⚠ SAFETY WARNING

² A mains fuse or equivalent means of protection (breaking value shown on the table above for each coil type) must be installed on the mains supply line. Absence of mains protection is a non conformity to safety standards (EC Directives 2014/34/UE and 1999/92/EC) and could be a potential risk of explosion.

Seal Material ³ and Media Temperature Range	Media	Ambient Temperature Range	
		Min	Max
FKM (-20 °C to +80 °C)	Water, oil, air	-20 °C	+50 °C

³ See corrosion reference guide and sealing solutions for material compatibility.



Preferred Valve Mounting Options



Pipe Size	A	B	C	D	Weight (kg)
1/8" - 1/4"	40	81.1	18.5	9.5	-

Dimensions (mm)

Solenoid enclosures

N-- Type Coil - Insulation class F

- External material: thermoplastic
- Connection type: 3 m wired cable, with ferrules
- Enclosure classification: conforms to IP65 (according to EN 60529)
- Type examination certificates: PTB 03 ATEX 2086 X, IECEx PTB 05.0005X



Coding chart

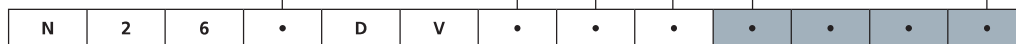
Main Valve Assembly

Pipe Size	
2	1/8"
3	1/4"

Orifice		Option	
C	1.5	N	NPT
G	2.5		w/o option
H	3.0		

Coil options

Voltage / Frequency - Class F	
N253	24 VDC
N203	24 V / 50/60 Hz
N403	110 V / 50 Hz
NK03	120 V / 60 Hz
N703	230 V / 50 Hz



Product coding example:

N262DVH N253
1/8" G, Ex m solenoid operator, brass body, FKM seals, 3.0 mm orifice, 24 VDC.

Specifications	
Function (single acting)	<p>Flow direction underseat 2 → 1</p>
Maximum Viscosity	Max. 21cST (3 °E)
Body Material (Std)	Stainless Steel 1.4305 EN 10088 (AISI 303)
Orifice Material	Stainless Steel 1.4305 EN 10088 (AISI 303)
Armature Tube	Stainless Steel solenoid grade
Plunger and Top Stop	Stainless Steel solenoid grade
Seal Material (Std)	FKM
Connection Type (Std)	G parallel thread (ISO 228-1)
Coil Characteristics	
Standard Coil Voltage DC (=)	24 V
Standard Coil Voltage AC 50 Hz (-)	24 V, 110 V, 230 V
Standard Coil Voltage AC 60 Hz (-)	24 V, 120 V
Voltage Tolerance	+10% to -10% (AC/ DC)
Duty Cycle	100% ED
Protection Class	EEx m II 2GD T4 (IP65 - EN 60529)
Cable Type	H05V2V2-F 3G1
Coil Insulation	Class F to EN 60730

Features and Benefits

- Direct Acting
- Robust construction for industrial applications
- Fitted with explosion-proof operator and coil class EEx m II 2GD T4
- The valve are supplied with a 3 m power cable entry, wired on a non-removable plug
- Wide range of available orifices (max. Ø3 mm)



⚠ WARNING

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Repairs may be performed by the manufacturer only, spare parts are not available (a valve is a closed system according to Directive 2014/34/UE).

Pipe Size	Cv (gpm)	Kv (m³/h)	OPD (bar)		Orifice (mm)	Seal Material	Valve Code
			AC Voltages	DC Voltages			
¼"	0.09	0.08	0 - 12	0 - 12	1.5	FKM	N399CVC
¼"	0.24	0.20	0 - 7	0 - 7	2.5	FKM	N399CVG
¼"	0.32	0.27	0-7	0 - 7	3.0	FKM	N399CVH

Options Available

Valve Options (see coding chart)
Body threaded connection G ½"
NPT threads (minimum batch may be required)

Solenoid Enclosure		
Coil	Voltage - Power	Fuse ²
N253	24 VDC - 10,1 W	800
N203 ¹	24 V / 50/60 Hz - AC 7,2 VA	800
N403 ¹	110 V / 50 Hz - AC 9,1 VA	200
NK03 ¹	120 V / 60 Hz - AC 8,6 VA	200
N703	230 V / 50 Hz - AC 8,5 VA	100

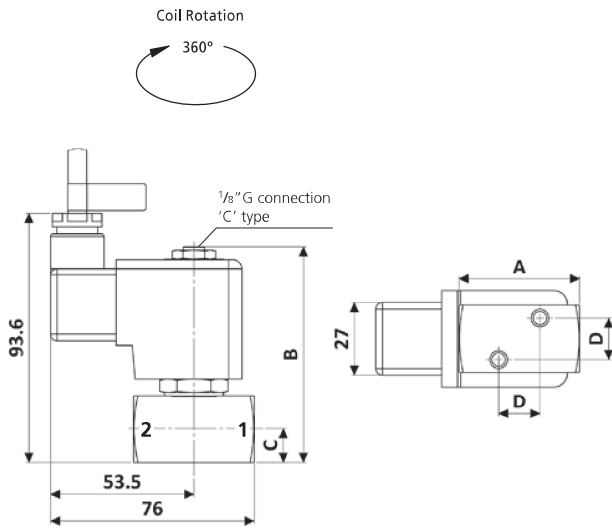
¹ MOQ required.

⚠ SAFETY WARNING

² A mains fuse or equivalent means of protection (breaking value shown on the table above for each coil type) must be installed on the mains supply line. Absence of mains protection is a non conformity to safety standards (EC Directives 2014/34/UE and 1999/92/EC) and could be a potential risk of explosion.

Seal Material ³ and Media Temperature Range	Media	Ambient Temperature Range	
		Min	Max
FKM (-20 °C to +80 °C)	Water, oil, air, aggressive fluids	-20 °C	+50 °C

³ See corrosion reference guide and sealing solutions for material compatibility.



Preferred Valve Mounting Options



Pipe Size	A	B	C	D	Weight (kg)
1/8" - 1/4"	45	80,6	12,5	15,4	

Dimensions (mm)

Solenoid enclosures

N-- Type Coil - Insulation class F

- External material: thermoplastic
- Connection type: 3 m wired cable, with ferrules
- Endosure classification: conforms to IP65 (according to EN 60529)
- Type examination certificates: PTB 03 ATEX 2086 X, IECEx PTB 05.0005X



Coding chart

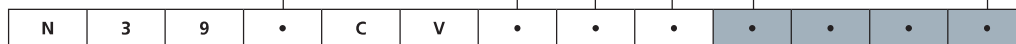
Main Valve Assembly

Pipe Size	
8	1/8"
9	1/4"

Orifice	
C	1.5
G	2.5
H	3.0

Option	
N	NPT
	w/o option

Voltage / Frequency - Class F	
N253	24 VDC
N203	24 V / 50/60 Hz
N403	110 V / 50 Hz
NK03	120 V / 60 Hz
N703	230 V / 50 Hz



Product coding example:

N398CVH N253
 1/8" G, Ex m solenoid operator, stainless steel body, FKM seals, 3.0 mm orifice, 24 VDC.

Specifications	
Function (single acting)	<p>Flow direction underseat 2 → 1</p>
Maximum Viscosity	Max. 21cST (3 °E)
Body Material (Std)	Brass CW617N (EN 12165)
Orifice Material	Stainless Steel 1.4305 EN 10088 (AISI 303)
Armature Tube	Stainless Steel solenoid grade
Plunger and Top Stop	Stainless Steel solenoid grade
Seal Material (Std)	FKM
Connection Type (Std)	G parallel thread (ISO 228-1)
Coil Characteristics	
Standard Coil Voltage DC (=)	24 V
Standard Coil Voltage AC 50 Hz (-)	24 V, 110 V, 230 V
Standard Coil Voltage AC 60 Hz (-)	24 V, 120 V
Voltage Tolerance	+10% to -10% (AC/DC)
Duty Cycle	100% ED
Protection Class	EEx m II 2GD T4 (IP65 - EN 60529)
Cable Type	H05V2V2-F 3G1
Coil Insulation	Class F to EN 60730

Features and Benefits

- Direct Acting
- Robust construction for industrial applications
- Fitted with explosion-proof operator and coil class EEx m II 2GD T4
- The valve are supplied with a 3 m power cable entry, wired on a non-removable plug
- Wide range of available orifices (max. Ø3 mm)



⚠ WARNING

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Repairs may be performed by the manufacturer only, spare parts are not available (a valve is a closed system according to Directive 2014/34/UE).

Pipe Size	Cv (gpm)	Kv (m³/h)	OPD (bar)		Orifice (mm)	Seal Material	Valve Code
			AC Voltages	DC Voltages			
¼"	0.09	0.08	0 - 12	0 - 12	1.5	FKM	N363CVC
¼"	0.15	0.13	0 - 10	0 - 10	2.0	FKM	N363CVE
¼"	0.24	0.20	0 - 7	0 - 7	2.5	FKM	N363CVG
¼"	0.32	0.27	0 - 5	0 - 5	3.0	FKM	N363CVH

Options Available

Valve Options (see coding chart)
Body threaded connection G 1/8"
NPT threads (minimum batch may be required)

Solenoid Enclosure		
Coil	Voltage - Power	Fuse ²
N253	24 VDC - 10,1 W	800
N203 ¹	24 V / 50/60 Hz - AC 7,2 VA	800
N403 ¹	110 V / 50 Hz - AC 9,1 VA	200
NK03 ¹	120 V / 60 Hz - AC 8,6 VA	200
N703	230 V / 50 Hz - AC 8,5 VA	100

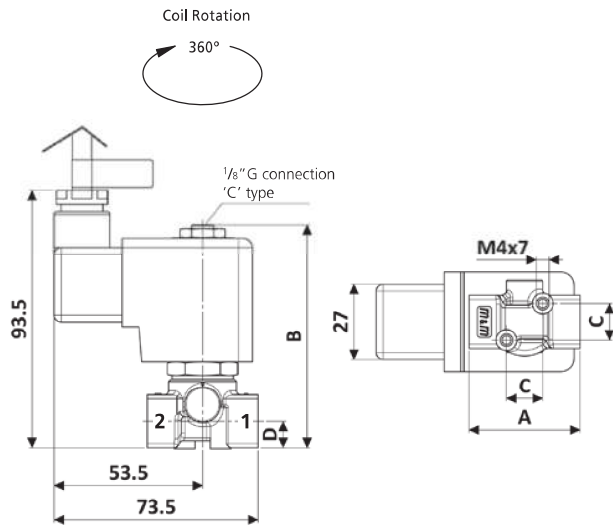
¹ MOQ required.

⚠ SAFETY WARNING

² A mains fuse or equivalent means of protection (breaking value shown on the table above for each coil type) must be installed on the mains supply line. Absence of mains protection is a non conformity to safety standards (EC Directives 2014/34/UE and 1999/92/EC) and could be a potential risk of explosion.

Seal Material ³ and Media Temperature Range	Media	Ambient Temperature Range	
		Min	Max
FKM (-20 °C to +80 °C)	Water, oil, air	-20 °C	+50 °C

³ See corrosion reference guide and sealing solutions for material compatibility.



Preferred Valve Mounting Options



Pipe Size	A	B	C	D	Weight (kg)
1/8" - 1/4"	40	80,5	13	9,5	-

Dimensions (mm)

Solenoid enclosures

N-- Type Coil - Insulation class F

- External material: thermoplastic
- Connection type: 3 m wired cable, with ferrules
- Enclosure classification: conforms to IP65 (according to EN 60529)
- Type examination certificates: PTB 03 ATEX 2086 X, IECEx PTB 05.0005X



Coding chart

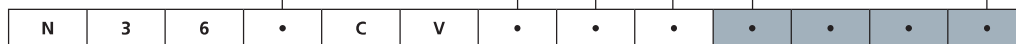
Main Valve Assembly

Pipe Size	
2	1/8"
3	1/4"

Orifice	
C	1.5
E	2.0
G	2.5
H	3.0

Option	
	w/o option

Voltage / Frequency - Class F	
N253	24 VDC
N203	24 V / 50/60 Hz
N403	110 V / 50 Hz
NK03	120 V / 60 Hz
N703	230 V / 50 Hz



Product coding example:

N363CVG N703
 1/4" G, Ex m solenoid operator, brass body, FKM seals, 2.5 mm orifice, 230 V / 50 Hz.

Specifications	
Function (single acting)	<p>Flow direction overseat 1 → 2</p>
Maximum Viscosity	Max. 21cST (3 °E)
Body Material (Std)	Brass CW617N (EN 12165)
Orifice Material	Stainless Steel 1.4305 EN 10088 (AISI 303)
Armature Tube	Stainless Steel solenoid grade
Plunger and Top Stop	Stainless Steel solenoid grade
Seal Material (Std)	FKM
Connection Type (Std)	G parallel thread (ISO 228-1)
Coil Characteristics	
Standard Coil Voltage DC (-)	24 V
Standard Coil Voltage AC 50 Hz (-)	24 V, 110 V, 230 V
Standard Coil Voltage AC 60 Hz (-)	24 V, 120 V
Voltage Tolerance	+10% to -10% (AC/ DC)
Duty Cycle	100% ED
Protection Class	EEx m II 2GD T4 (IP65 - EN 60529)
Cable Type	H05V2V2-F 3G1
Coil Insulation	Class F to EN 60730

Features and Benefits

- Pilot operated
- Robust construction for industrial applications
- Fitted with explosion-proof operator and coil class EEx m II 2GD T4
- The valve are supplied with a 3 m power cable entry, wired on a non-removable plug



⚠ WARNING

The Ex approval is only valid for complete solenoid valves supplied ex factory (replacing the solenoid doesn't make a valve explosion-proof!).

Repairs may be performed by the manufacturer only, spare parts are not available (a valve is a closed system according to Directive 2014/34/UE).

Pipe Size	Cv (gpm)	Kv (m³/h)	OPD (bar)		Orifice (mm)	Seal Material	Valve Code
			AC Voltages	DC Voltages			
3/8"	3.86	3.30	0.3 - 12	0.3 - 12	13	FKM	N204DYZ
1/2"	4.42	3.78			13	FKM	N205DYZ
3/4" compact	7.02	6.00			21	FKM	N206DYX
3/4"	9.83	8.40			25	FKM	N206DYZ
1"	11.23	9.60	0.5 - 12	0.5 - 12	25	FKM	N222DYZ
1 1/4"	25.97	22.20			40	FKM	N223DYK
1 1/2"	28.08	24.00			40	FKM	N224DYK
2"	37.91	32.40			50	FKM	N225DYJ

Options Available

Valve Options (see coding chart)
NPT threads (minimum batch may be required)

Solenoid Enclosure		
Coil	Voltage - Power	Fuse ²
N253	24 VDC - 10,1 W	800
N203 ¹	24 V / 50/60 Hz - AC 7,2 VA	800
N403 ¹	110 V / 50 Hz - AC 9,1 VA	200
NK03 ¹	120 V / 60 Hz - AC 8,6 VA	200
N703	230 V / 50 Hz - AC 8,5 VA	100

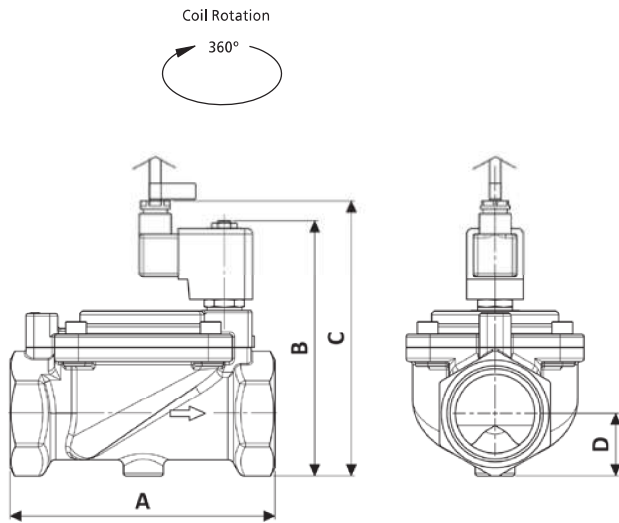
¹ MOQ required.

⚠ SAFETY WARNING

² A mains fuse or equivalent means of protection (breaking value shown on the table above for each coil type) must be installed on the mains supply line. Absence of mains protection is a non conformity to safety standards (EC Directives 2014/34/UE and 1999/92/EC) and could be a potential risk of explosion.

Seal Material ³ and Media Temperature Range	Media	Ambient Temperature Range	
		Min	Max
FKM (-20 °C to +80 °C)	Water, oil, air	-20 °C	+50 °C

³ See corrosion reference guide and sealing solutions for material compatibility.



Preferred Valve Mounting Options



Pipe Size	A	B	C	D	Weight (kg)
3/8" - 1/2"	67	103.3	115.7	15	-
3/4" compact	82	119	131.5	20.25	-
3/4" - 1"	96	125.5	137.9	23	-
1 1/4" - 1 1/2"	140	143.4	155.8	31.5	-
2"	167	160.4	172.8	39	-

Dimensions (mm)

Solenoid enclosures

N-- Type Coil - Insulation class F

- External material: thermoplastic
- Connection type: 3 m wired cable, with ferrules
- Enduse classification: conforms to IP65 (according to EN 60529)
- Type examination certificates: PTB 03 ATEX 2086 X, IECEx PTB 05.0005X



Coding chart

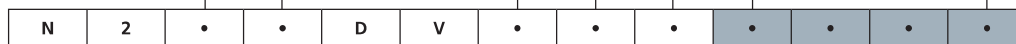
Main Valve Assembly

Pipe Size	
04	3/8"
05	1/2"
06	3/4"
(compact)	
06	3/4"
22	1"
23	1 3/4"
24	1 1/2"
25	2"

Orifice ¹	
Z	13
Y	21
Y	25
K	40
J	50

Option	
N	NPT
	w/o option

Voltage / Frequency - Class F	
N253	24 VDC
N203	24 V / 50/60 Hz
N403	110 V / 50 Hz
NK03	120 V / 60 Hz
N703	230 V / 50 Hz



¹ DN13 only for N204 and N205, DN21 only for N206 compact, DN25 only for N206 and N222, DN40 only for N223 and N224, DN50 only for N225.

Product coding example:

N205DVZ N253
1/2" G, Ex m solenoid operator, brass body, FKM seals, 13 mm orifice, 24 VDC.

Specifications	
Function (single acting)	<p>Flow direction overseat 1 → 2</p>
Maximum Viscosity	Max. 21cST (3 °E)
Body Material (Std)	Stainless steel AISI 316L (ASME SA351/351M GRADE CF3M)
Orifice Material	Stainless Steel 1.4305 EN 10088 (AISI 303)
Armature Tube	Stainless Steel solenoid grade
Plunger and Top Stop	Stainless Steel solenoid grade
Seal Material (Std)	FKM
Connection Type (Std)	G parallel thread (ISO 228-1)
Coil Characteristics	
Standard Coil Voltage DC (=)	24 V
Standard Coil Voltage AC 50 Hz (-)	24 V, 110 V, 230 V
Standard Coil Voltage AC 60 Hz (-)	24 V, 120 V
Voltage Tolerance	+10% to -10% (AC/ DC)
Duty Cycle	100% ED
Protection Class	EEx m II 2GD T4 (IP65 - EN 60529)
Cable Type	H05V2V2-F 3G1
Coil Insulation	Class F to EN 60730

Features and Benefits

- Pilot operated
- Robust construction for industrial applications
- Fitted with explosion-proof operator and coil class EEx m II 2GD T4
- The valve are supplied with a 3 m power cable entry, wired on a non-removable plug



⚠ WARNING

The Ex approval is only valid for complete solenoid valves supplied ex factory (replacing the solenoid doesn't make a valve explosion-proof!).

Repairs may be performed by the manufacturer only, spare parts are not available (a valve is a closed system according to Directive 2014/34/UE).

Pipe Size	Cv (gpm)	Kv (m³/h)	OPD (bar)		Orifice (mm)	Seal Material	Valve Code
			AC Voltages	DC Voltages			
3/8"	3.86	3.30	0,3 - 12	0,3 - 12	13	FKM	N204D <u>V</u> ZI
1/2"	4.42	3.78			13	FKM	N205D <u>V</u> ZI
3/4"	9.83	8.40			25	FKM	N206D <u>V</u> ZI
1"	11.23	9.60			25	FKM	N222D <u>V</u> ZI

Options Available

Valve Options (see coding chart)
NPT threads (minimum batch may be required)

Solenoid Enclosure		
Coil	Voltage - Power	Fuse ²
N253	24 VDC - 10,1 W	800
N203 ¹	24 V / 50/60 Hz - AC 7,2 VA	800
N403 ¹	110 V / 50 Hz - AC 9,1 VA	200
NK03 ¹	120 V / 60 Hz - AC 8,6 VA	200
N703	230 V / 50 Hz - AC 8,5 VA	100

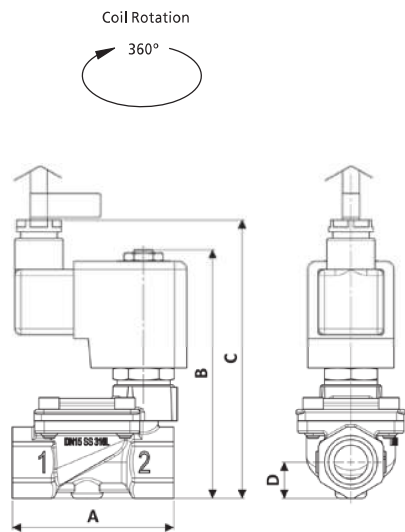
¹ MOQ required.

⚠ SAFETY WARNING

² A mains fuse or equivalent means of protection (breaking value shown on the table above for each coil type) must be installed on the mains supply line. Absence of mains protection is a non conformity to safety standards (EC Directives 2014/34/UE and 1999/92/EC) and could be a potential risk of explosion.

Seal Material ³ and Media Temperature Range	Media	Ambient Temperature Range	
		Min	Max
FKM (-20 °C to +80 °C)	Water, oil, air aggressive fluids	-20 °C	+50 °C

³ See corrosion reference guide and sealing solutions for material compatibility.



Preferred Valve Mounting Options



Pipe Size	A	B	C	D	Weight (kg)
3/8" - 1/2"	67	103.4	115.8	15	-
3/4" - 1"	96	125.6	138	23	-

Dimensions (mm)

Solenoid enclosures

N-- Type Coil - Insulation class F

- External material: thermoplastic
- Connection type: 3 m wired cable, with ferrules
- Enclosure classification: conforms to IP65 (according to EN 60529)
- Type examination certificates: PTB 03 ATEX 2086 X, IECEx PTB 05.0005X



Coding chart

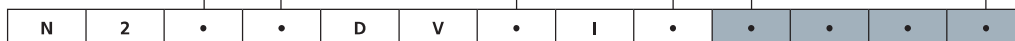
Main Valve Assembly

Pipe Size	
04	3/8"
05	1/2"
06	3/4"
22	1"

Orifice ¹	
Z	13
Y	25

Option	
N	NPT
	w/o option

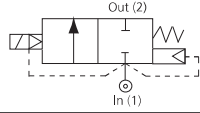
Voltage / Frequency - Class F	
N253	24 VDC
N203	24 V / 50/60 Hz
N403	110 V / 50 Hz
NK03	120 V / 60 Hz
N703	230 V / 50 Hz



¹ DN13 only for N204 and N205, DN25 only for N206 and N222.

Product coding example:

N205DVZI N253
 1/2" G, Ex m solenoid operator, stainless steel body, FKM seals, 13 mm orifice, 24 VDC.

Specifications	
Function	Normally Closed, energise to open 
Maximum Viscosity	115 SSU
3/8" - 1" Body Material (Std)	Brass CZ122
1 1/4" - 2" Body Material (Std)	Bronze DIN 1705
Flange Tube	Stainless Steel 303
Plunger and top stop	Stainless Steel 430FR
Springs	Stainless Steel 302
Seal Material (Std)	NBR
Connection Type (Std)	BS21
Shading Ring	Copper (std), Silver (stainless steel option)
Electrical Characteristics	
Coil Voltage DC (=)	24 V, 110 V
Coil Voltage AC 50 Hz (-)	110 V, 230 V
Voltage Tolerance	+10% or -10%
Duty Cycle	100% ED
Protection Class (Exd)	Exd IIC T6 (-50 °C to +40 °C) (IP67 BS EN 60529)
Protection Class (Exm)	Exm II 2 G T5 (-20 °C to +40 °C) (IP65 BS EN 60529)
Electrical Connection (Exd)	Via terminal block (max wire diameter 1.6 mm)
Electrical Connection (Exm)	2 metre lead 3 core
Coil Insulation	Class H (BS EN 60085) 180 °C (E5 type)
Power Rating	14.5 Watts, 19 VA

Features and Benefits

- Robust Valve Design
- Diaphragm Operation
- Fully Ported orifices for high Kv
- Choice of valve body material seals
- Response time up to 1" 15 - 60 ms
- Response time up to 2" 60 - 120 ms



Pipe Size	Cv (gpm)	Kv (m³/h)	OPD (Bar)		P. Max Bar	Orifice (mm)	Protection Class	Weight (kg) excluding Solenoid	
			AC Voltages	DC Voltages					
3/8"	3.5	3.0	0-14	0-10.3	50	16.00	Exd T6	0.9	
1/2"	4.9	4.2	0-14	0-10.3		16.00			
3/4"	5.4	4.7	0-14	0-10.3		16.00			
1"	8.2	7.0	0-14	0-10.3		20.00			
1 1/4"	26.7	23	0-4	-		40.00	3.0-3.2		
1 1/2"	26.7	23	0-4	-		40.00			
2"	30.2	26	0-4	-		40.00			
1 1/4"2	26.7	23	0.3-10	0.3-10		40.00			
1 1/2"2	26.7	23	0.3-10	0.3-10		40.00			
2"2	30.2	26	0.3-10	0.3-10		40.00			
3/8"	3.5	3.0	0-14	0-10.3		16.00		Exm T5	0.9
1/2"	4.9	4.2	0-14	0-10.3		16.00			
3/4"	5.4	4.7	0-14	0-10.3		16.00			
1"	8.2	7.0	0-14	0-10.3		20.00			
1 1/4"	26.7	23	0-4	-		40.00	3.0-3.2		
1 1/2"	26.7	23	0-4	-		40.00			
2"	30.2	26	0-4	-		40.00			
1 1/4"2	26.7	23	0.3-10	0.3-10		40.00			
1 1/2"2	26.7	23	0.3-10	0.3-10		40.00			
2"2	30.2	26	0.3-10	0.3-10		40.00			

Options Available

Solenoid Enclosure		
Protection Class	Electrical Entry	Enclosure Material
EExd T6 (IP67)	M20 x 1.5 Female (Std)	Aluminium (Std) Stainless Steel optional
EExd T4 (IP67)	(1/2" NPT conduit entry option)	
Exm T5 (IP65)	M16 x 1.5 male flying lead	Powder coated metal

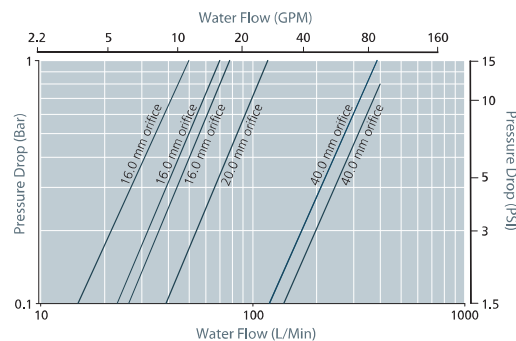
Main Valve Body Options	
Stainless Steel 316 (available up to and including 1")	
NPT threads	
Flanged Option (PN16 Std) for alternative options consult Rotork Midland	
Manual Override	

¹ See corrosion reference guide and sealing solutions for material compatibility.
² Pressure assisted to achieve a greater OPD, e.g. code :19G11ZSC3-6H299.

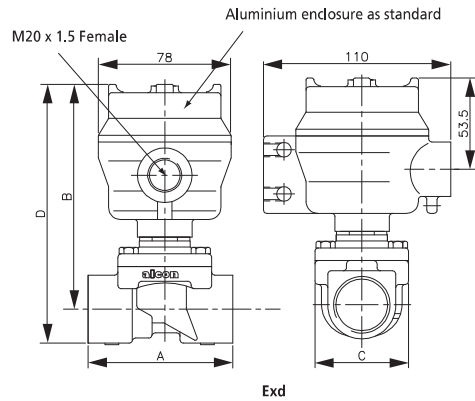
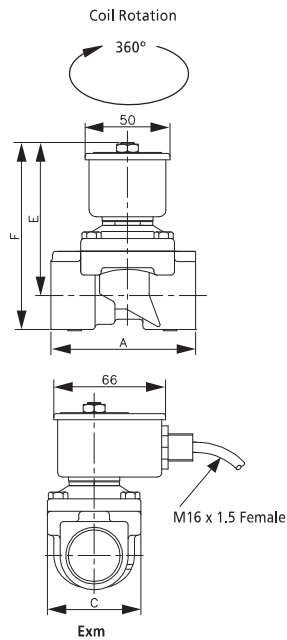
How to use the flow chart

1. Select the required flow.
2. Note the corresponding pressure drop.
3. Based on where the two points intersect select the most appropriate model.

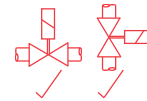
Seal Material ¹ and Media Temp. Range	EXD			EXM	
	Ambient Temperature Range °C			Ambient Temperature Range °C	
	Min	Max (T6)	Max (T4)	Min	Max (Exm)
NBR (-10 °C to +80 °C)	-10	40	70	-10	40
EPDM (-50 °C to +120 °C)	-50	40	70	-20	40
FKM (-20 °C to +150 °C)	-20	40	70	-20	40



ACD Series Exd & Exm – 2/2 Normally Closed



Preferred Valve Mounting Options



Dimensions

Pipe Size	A	B	C	D	E	F
3/8" - 3/4"	69.5	123	75	140	80	97
1"	69.5	123	75	140	80	97
1 1/4" - 2"	137	147	120	180	103	136

Dimensions given in mm

Solenoid enclosures

S4 Type enclosure

- Power consumption: Holding 19 VA, 12 V to 230 V 50 / 60 Hz. 14.5 W 12 V to 212 VDC
- External material: Powder coated aluminium or 316 st.st. enclosure with st.st. nameplate
- Electrical entry: M20 x 1.5 or 1/2" NPT conduit entry
- Protection Class: II 2 G Exd IIC T6 for ambient temp -50 °C to +40 °C
- Optional: II 2 G Exd IIC T4 for ambient temp -50 °C to +70 °C
- Additional Weight 0.8 kg - Aluminium or 1.5 kg - Stainless Steel



S4 Type enclosure

- Power consumption: Holding 16 VA, 12 V to 230 V 50 / 60 Hz. 10 W 12, 24 VDC
- External material: powder coated metal enclosure with st.st. nameplate
- Electrical entry: 2 metre length of approved 3 core cable with M16 conduit male winding insulation class
- Protection Class: II 2 G Exm II T5 for ambient temperatures -20 °C to +40 °C
- Additional weight: 0.5 kg



Coding chart

Main Valve Assembly

Model	Valve Body Conn. Size	Conn. Type	Operation	Body Material	Seals	Style
17	C 3/8"	1 BS21	1 AUTO	1 Brass (standard on valves up to and including 1")	A NBR	1 Standard (inc.Exm)
18	D 1/2"	2 BSP G (1 3/4" and above)	2 MANUAL OVERRIDE		B EPDM	3 Exd (S4)
19	F 1"	3 NPT		2 Bronze (standard on valves above 1")	C FKM	
	G 1 1/4"	4 FLANGED (PN16 STD)				
	H 1 1/2"			J 2"		

³ 10" pressure rated options are not available in DC voltage above 1".

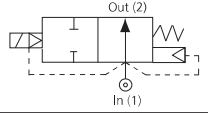
Product coding example:

17F31Z1C3-5H259 - ACD Series
1" NPT, auto operation, brass body, FKM seals, Exd T6 Aluminium Housing 110 V / 50 Hz M20 x 1.5.

Coil options

Endure	Voltage / Frequency	Electrical Connection	Approval
5	E2 230 V / 50 Hz	5 M20 x 1.5	9 Atex T6
6	H2 110 V / 50 Hz & 120 V / 60 Hz	9 1/2" NPT	949 Atex T4
	F1 24 VDC		

Endure	Voltage / Frequency	Electrical Connection
4	M1 230 V / 50 Hz	E 3 meter lead M16 Exm option only
	M2 110 V / 50 Hz	
	M4 24 VDC	

Specifications	
Function	Normally open, energise to close 
Maximum Viscosity	115 SSU
3/8" - 1" Body Material (Std)	Brass CZ122
1 1/4" - 2" Body Material (Std)	Bronze DIN 1705
Flange Tube	Stainless Steel 303
Plunger and top stop	Stainless Steel 430FR
Springs	Stainless Steel 302
Seal Material (Std)	NBR
Connection Type (Std)	BS21
Shading Ring	Copper (std), Silver (stainless steel option)
Electrical Characteristics	
Coil Voltage DC (=)	24 V, 110 V
Coil Voltage AC 50 Hz (~)	110 V, 230 V
Voltage Tolerance	+10% or -10%
Duty Cycle	100% ED
Protection Class (Exd)	Exd IIC T6 (-50 °C to +40 °C) (IP67 BS EN 60529)
Protection Class (Exm)	Exm II 2 G T5 (-20 °C to +40 °C) (IP65 BS EN 60529)
Electrical Connection (Exd)	Via terminal block (max wire diameter 1.6 mm)
Electrical Connection (Exm)	2 metre lead 3 core
Coil Insulation	Class H (BS EN 60085) 180 °C
Power Rating	14,5 Watts, 19 VA

Features and Benefits

- Robust Valve Design
- Diaphragm Operation
- Fully Ported orifices for high Kv
- Choice of valve body material seals
- Sizes 3/8" - 1" Advantica approved to BS EN 60730-2-8 for household use
- Response time up to 1" 15-60 ms
- Response time up to 2" 60-120 ms



Pipe Size	Cv (gpm)	Kv (m³/h)	OPD (Bar)		P. Max Bar	Orifice (mm)	Protection Class	Weight (kg) excluding Solenoid
			AC Voltages	DC Voltages				
3/8"	3.5	3.0	0-10	0-10	50	16.00	Exd T6	0.9
1/2"	4.9	4.2	0-10	0-10		16.00		
3/4"	5.4	4.7	0-10	0-10		16.00		
1"	8.2	7.0	0-10	0-10		20.00		
1 1/4"	26.7	23	0.3-10	0.3-10		40.00	3.0	
1 1/2"	26.7	23	0.3-10	0.3-10		40.00		
2"	30.2	26	0.3-10	0.3-10		40.00	Exm T5	0.9
3/8"	3.5	3.0	0-10	0-10		16.00		
1/2"	4.9	4.2	0-10	0-10		16.00		
3/4"	5.4	4.7	0-10	0-10		16.00		
1"	8.2	7.0	0-10	0-10	20.00			
1 1/4"	26.7	23	0.3-10	0.3-10	40.00	3.0		
1 1/2"	26.7	23	0.3-10	0.3-10	40.00			
2"	30.2	26	0.3-10	0.3-10	40.00			

Options Available

Solenoid Enclosure		
Protection Class	Electrical Entry	Enclosure Material
EExd T6 (IP67)	M20 x 1.5 Female (Std)	Aluminium (Std) Stainless Steel optional
EExd T4 (IP67)	(1/2" NPT conduit entry option)	
Exm T5 (IP65)	M16 x 1.5 male flying lead	Powder coated metal

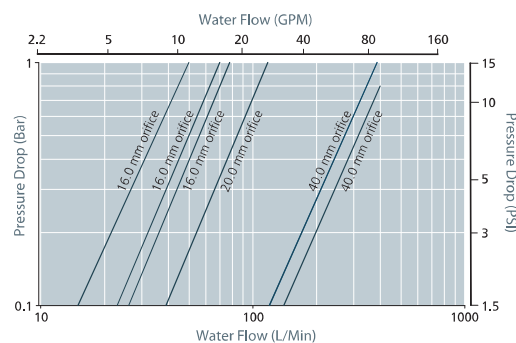
Main valve body options
Stainless Steel 316 (available up to and including 1")
NPT threads
Flanged Option (PN16 Std) for alternative options consult Rotork Midland

Seal Material ¹ and Media Temp. Range	EXD Ambient Temperature Range °C			EXM Ambient Temperature Range °C	
	Min	Max (T6)	Max (T4)	Min	Max (Exm)
NBR (-10 °C to +80 °C)	-10	40	70	-10	40
EPDM (-50 °C to +120 °C)	-50	40	70	-20	40
FKM (-20 °C to +150 °C)	-20	40	70	-20	40

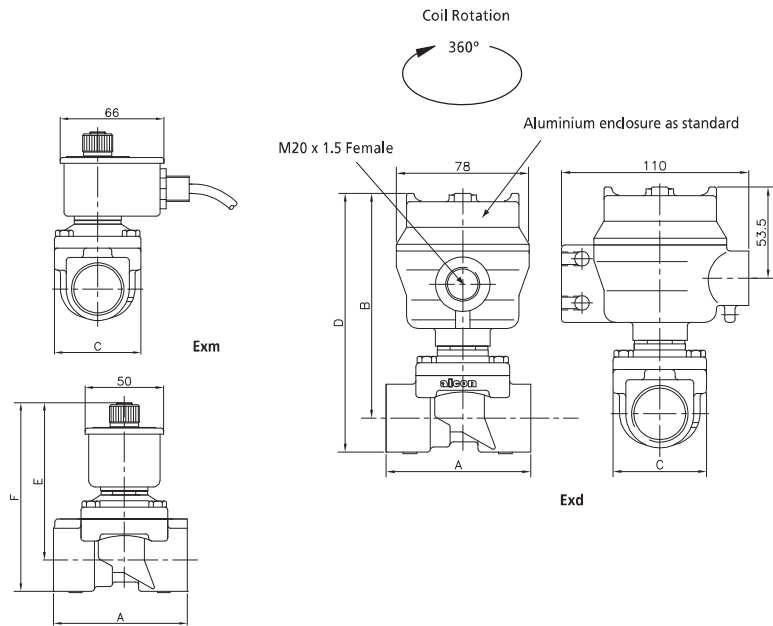
¹ See corrosion reference guide and sealing solutions for material compatibility.

How to use the flow chart

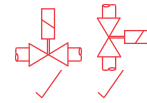
1. Select the required flow.
2. Note the corresponding pressure drop.
3. Based on where the two points intersect select the most appropriate model.



ACDN Series Exd & Exm – 2/2 Normally Open



Preferred Valve Mounting Options



Dimensions

Pipe Size	A	B	C	D	E	F
3/8" - 3/4"	69.5	123	75	140	88	105
1"	69.5	123	75	140	88	105
1 1/4" - 2"	137	103	120	180	127	143

Dimensions given in mm

Solenoid enclosures

S4 Type enclosure

Power consumption: Holding 19 VA, 12 V to 230 V, 50 / 60 Hz. 14.5 W, 12 V to 212 VDC

External material: Powder coated aluminium or 316 st.st. enclosure with st.st. nameplate

Electrical entry: M20 x 1.5 or 1/2" NPT conduit entry

Protection Class: II 2 G Exd IIC T6 for ambient temp -50 °C to +40 °C

Optional: II 2 G Exd IIC T4 for ambient temp -50 °C to +70 °C

Additional Weight 0.8 kg - Aluminium or 1.5 kg - Stainless Steel



S4 Type enclosure

Power consumption: Holding 16 VA, 12 V to 230 V, 50 / 60 Hz. 10 W 12, 24 VDC

External material: powder coated metal enclosure with st.st. nameplate

Electrical entry: 2 metre length of approved 3 core cable with M16 conduit male winding insulation class

Protection Class: II 2 G Exm II T5 for ambient temperatures -20 °C to +40 °C

Additional weight: 0.5 kg



Coding chart

Main Valve Assembly

Model	Valve Body Conn. Size	Connection Type	Operation	Body Material	Seals	Style
27 ACDN (1 1/4" and above)	C 3/8"	1 BS21	1 AUTO	1 Brass (standard on valves up to and including 1")	A NBR	1 Standard (inc. Exm)
56 ACDN (3/8"-1")	D 1/2"	2 BSP G (1 1/4" and above)			B EPDM	3 Exd (S4)
	E 3/4"				C FKM	
	F 1"	3 NPT		2 Bronze (standard on valves above 1")		
	G 1 1/4"	4 FLANGED (PN16 STD)		5 316 Stainless Steel (option available up to and inc 1")		
	H 1 1/2"					
	J 2"					

Coil options

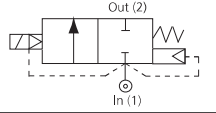
Enclosure	Voltage / Frequency	Electrical Connection	Approval
D N/O Exd Aluminium	E2 230 V / 50 Hz	5 M20 x 1.5	9 Atex T6
E N/O Exd Stainless Steel	H2 110 V / 50 Hz & 120 V / 60 Hz	9 1/2" NPT	949 Atex T4
	F1 24 VDC		

•	••	•	•
4	••	E	48

Enclosure	Voltage / Frequency	Electrical Connection	Solenoid Label
4 Exm	M1 230 V / 50 Hz	E 3 metre lead M16 EXM	48 N/O module
	M2 110 V / 50 Hz		
	M4 24 VDC		

Product coding example:

56E11Z1A3-DF159 - ACDN Series N/O 3/4" BS21, auto operation, bronze body, NBR seals, Exd T6 Aluminium 24 VDC M20 x 1.5.

Specifications	
Function	Normally closed, energise to open 
Maximum Viscosity	115 SSU
1/2" - 1" Body Material (Std)	Brass CZ122
1 1/4" - 2" Body Material (Std)	Bronze DIN 1705
Flange Tube	Stainless Steel 303
Plunger and top stop	Stainless Steel 430FR
Springs	Stainless Steel 302
Seal Material (Std)	NBR
Connection Type (Std)	BS21
Shading Ring	Copper (std), Silver (stainless steel option)
Electrical Characteristics	
Coil Voltage DC (=)	24 V, 110 V
Coil Voltage AC 50 Hz (~)	110 V, 230 V
Voltage Tolerance	+10% or -10%
Duty Cycle	100% ED
Protection Class (Exd)	Exd IIC T6 (-50 °C to +40 °C) (IP67 BS EN 60529)
Protection Class (Exm)	Exm II 2 G T5 (-20 °C to +40 °C) (IP65 BS EN 60529)
Electrical Connection (Exd)	Via terminal block (max wire diameter 1.6 mm)
Electrical Connection (Exm)	2 metre lead 3 core
Coil Insulation	Class H (BS EN 60085) 180 °C (E5 Type)
Power Rating	14,5 Watts, 19 VA

Features and Benefits

- Heavy duty valve design
- Piston Operation
- Wide temperature range capabilities
- Choice of valve body material seals
- ATEX approved
- Response time up to 1" 40-100 ms
- Response time up to 2" 60-1000 ms



Pipe Size	Cv (gpm)	Kv (m³/h)	OPD (Bar)	P. Max Bar	Orifice (mm)	Protection Class	Weight (kg) excluding Solenoid
1/2"	4.9	4.2	0.3-10.3	50	16.00	Exd T6	1.4
3/4"	6.3	5.4	0.3-10.3		16.00		2.3
1"	14.5	12.5	0.3-10.3		25.00		3.0
1 1/4"	20.9	18	0.3-10.3		30.00		5.2
1 1/2"	20.9	18	0.3-10.3		30.00		5.2
2"	24.4	21	0.3-10.3		32.00	Exm T5	1.4
1/2"	4.9	4.2	0.3-10.3		16.00		2.3
3/4"	6.3	5.4	0.3-10.3		16.00		3.0
1"	14.5	12.5	0.3-10.3		25.00		5.2
1 1/4"	20.9	18	0.3-10.3		30.00		5.2
1 1/2"	20.9	18	0.3-10.3	30.00	5.2		
2"	24.4	21	0.3-10.3	32.00	5.2		

Options Available

Solenoid Enclosure		
Protection Class	Electrical Entry	Enclosure Material
EExd T6 (IP67)	M20 x 1.5 Female (Std)	Aluminium (Std) Stainless Steel optional
EExd T4 (IP67)	(1/2" NPT conduit entry option)	
Exm T5 (IP65)	M16 x 1.5 male flying lead	Powder coated metal

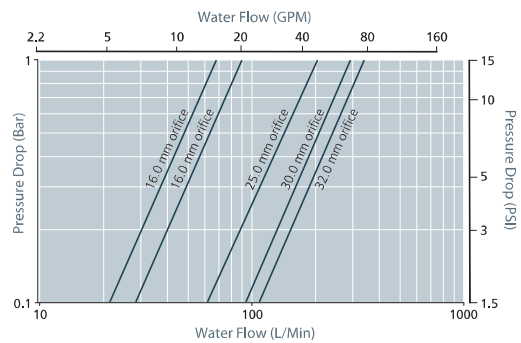
Main Valve Body Options
Stainless steel body 316 (available up to 1")
Oxygen Cleaning (Consult Rotork Midland for product code)
NPT Threads
Stainless steel tagging

¹ See corrosion reference guide and sealing solutions for material compatibility.

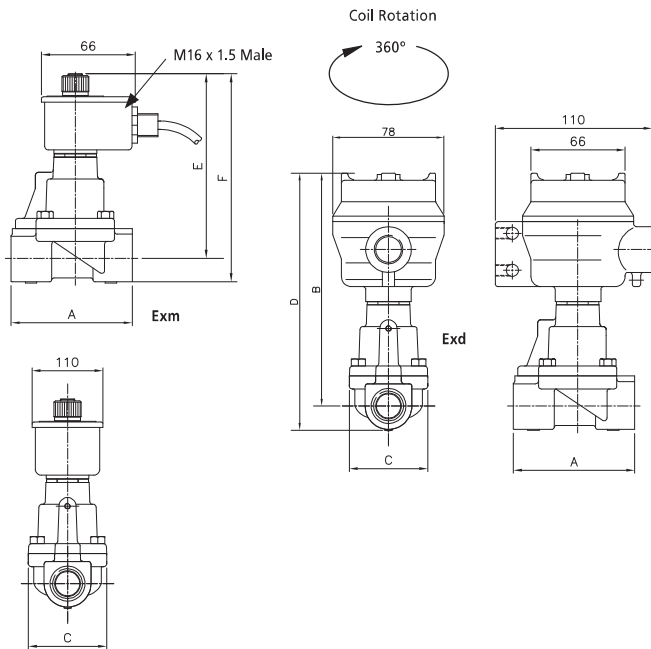
How to use the flow chart

1. Select the required flow.
2. Note the corresponding pressure drop.
3. Based on where the two points intersect select the most appropriate model.

Seal Material ¹ and Media Temp. Range	EXD			EXM	
	Ambient Temperature Range °C			Ambient Temperature Range °C	
	Min	Max (T6)	Max (T4)	Min	Max (Exm)
NBR (-10 °C to +80 °C)	-10	40	70	-10	40
EPDM (-50 °C to +120 °C)	-50	40	70	-20	40
FKM (-20 °C to +150 °C)	-20	40	70	-20	40



ACP Series Exd & Exm – 2/2 Normally Closed



Preferred Valve Mounting Options



Dimensions

Pipe Size	A	B	C	D	E	F
3/8" - 3/4"	85	149	75	165	105	122
1"	85	179	75	198	135	155
1 1/4" - 1 1/2"	117	177	83	252	133	209
2"	146	189	103	252	145	209

Dimensions given in mm

Solenoid enclosures

S4 Exd enclosure

Power consumption: Holding 19 VA, 12 V to 230 V, 50 / 60 Hz. 14.5 W, 12 V to 212 VDC
 External material: Powder coated aluminium or 316 st.st. enclosure with st.st. nameplate
 Electrical entry: M20 x 1.5 or 1/2" NPT conduit entry
 Protection Class: II 2 G Exd IIC T6 for ambient temp -50 °C to +40 °C
 Optional: II 2 G Exd IIC T4 for ambient temp -50 °C to +70 °C
 Additional Weight: 0.8 kg - Aluminium or 1.5 kg - Stainless Steel



S4 Exm enclosure

Power consumption: Holding 16 VA, 12 V to 230 V, 50 / 60 Hz. 10 W 12, 24 VDC
 External material: powder coated metal enclosure with st.st. nameplate
 Electrical entry: 2 metre length of approved 3 core cable with M16 conduit male winding insulation class
 Protection Class: II 2 G Exm II T5 for ambient temperatures -20 °C to +40 °C
 Additional weight: 0.5 kg



Coding chart

Main Valve Assembly

Model	Valve Body Conn. Size	Connection Type	Operation	Body Material	Seals	Style	
22 ACP Exd	D 1/2"	1 B521	1 AUTO	1 Brass (standard on valves up to and including 1")	A NBR	1 Standard (Inc Exm)	
	E 3/4"	2 BSP G	2 MANUAL OVERRIDE		B EPDM	3 Exd	
	F 1"	3 NPT		4 FLANGED (PN16 STD)	C FKM		
	G 1 1/4"				2 Bronze (standard on valves above 1")		
	H 1 1/2"				5 316 Stainless Steel (option available up to and inc 1")		
	J 2"						

Coil options

Enclosure	Voltage / Frequency	Electrical Connection	Approval
5 Exd Aluminium	E2 230 V / 50 Hz	5 M20 x 1.5	9 Atex T6
6 Exd Stainless Steel	H2 110 V / 50 Hz & 120 V / 60 Hz	9 1/2" NPT	949 Atex T4
	F1 24 VDC		
•	••	•	9
4	••	E	
Enclosure	Voltage / Frequency	Electrical Connection	
4 Exm	M1 230 V / 50 Hz	E 3 metre lead M16 EXM	
	M2 110 V / 50 Hz		
	M4 24 VDC		

Product coding example:

22H21Z2A3-5E259 - ACP Series
 1 1/2" BSPG, auto operation, bronze body, NBR seals, Exd Aluminium 230 V / 50 Hz M20 x 1.5.

Specifications	
Function	<p>3/2 or 5/2</p>
Media	Air
Maximum Viscosity	115 SSU
Body Material (Std)	Anodised Aluminium
Flange Tube	Brass
Plunger and Top Stop	Stainless Steel 430FR
Springs	Stainless Steel 302
Seal Material (Std)	NBR
Electrical Characteristics	
Coil Voltage DC (-)	12 V, 24 V, 110 V
Coil Voltage AC 50 Hz (-)	24 V, 110 V, 120 V, 230 V
Coil Voltage AC 60 Hz (-)	24 V, 110 V, 120 V, 220v
Voltage Tolerance	+10% or -10%
Duty Cycle	100% ED
Protection Class (Exd)	Exd IIC T6 (-50 °C to +40 °C) (IP67 BS EN 60529)
Protection Class (Exm)	Exm II 2 G T5 (-20 °C to +40 °C) (IP65 BS EN 60529)
Protection Class (Exia)	Exia IIC T6 (-40 °C to +50 °C)
Electrical Connection (Exd)	Via terminal block (max wire diameter 1.6 mm)
Electrical Connection (Exm)	2 metre lead 3 core
Electrical Connection (Exia)	PG9 via DIN plug connector DIN 43650-A
Coil Insulation (Exd & Exm)	Class H (BS EN 60085) 180 °C
Coil Insulation (Exia)	Class F (BS EN 60085) 155 °C
Power Rating	5 watts

Features and Benefits

- Ideal for in-line system service and repair
- Choice of valve body material seals
- Manual Override
- Low power LED Light
- Dual Coil option
- Exd, Exia and Exm compatible
- Max cycle frequency 5/sec



Pipe Size	Cv (gpm)	Kv (m ³ /h)	OPD (Bar)		P. Max Bar	Weight (kg) excluding Solenoid
			AC Voltages	DC Voltages		
¼"	1.4	1.2	2.5-10	2.5-10	10	0.5

Options Available

Solenoid Enclosure	
Protection Class	Electrical Entry
EExd T6 (IP67)	M20 x 1.5 Female (Std) (½" NPT conduit entry option)
EExd T4 (IP67)	
Exm	M16 x 1.5 Male flying lead
Exia	PG9 via Din Plug Connector Din 43650-A

Seal Material ¹ and Media Temp. Range	EXD			EXM	
	Ambient Temperature Range °C			Ambient Temperature Range °C	
	Min	Max (T6)	Max (T4)	Min	Max (Exm)
NBR (-10 °C to +80 °C)	-10	40	70	-10	40

¹ See corrosion reference guide and sealing solutions for material compatibility.

How to use the flow chart

1. Select the required flow.
2. Note the corresponding pressure drop.
3. Based on where the two points intersect select the most appropriate model.

