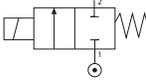


2/2 NC

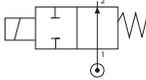



1/8" - 1/4"

Page 2.3



2/2 NO

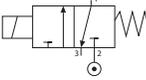



1/8" - 1/4"

Page 2.5



3/2 NC

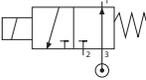



1/8" - 1/4"

Page 2.7



3/2 NO

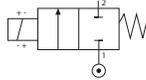



1/8" - 1/4"

Page 2.9



2/2 LATCHING

1/8" - 1/4"

Page 2.11



22 mm



Series A

Page 15.2



30 mm



Series B

Page 15.3




Connectors

Page 15.8 - 15.10



DIRECT ACTING SOLENOID VALVES IN STAINLESS STEEL 316L

Ex
II 2 G/D Ex h

C **UL** **US**
CSA C22.2

AISI 316L



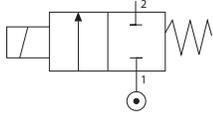
Series X1F

Series X1F

DIRECT ACTING SOLENOID VALVES WITH BODY IN STAINLESS STEEL AISI 316L

2/2 NC

1/8" - 1/4"



Component Parts and Materials

- 1 Body: Stainless steel AISI 316L
- 2 Seals: NBR - EPDM - FKM - CR - NBR ❄️
- 3 Armature tube: Stainless steel
- 4 Fixed and mobile core: Stainless steel AISI 430FR
- 5 Springs: Stainless steel
- 6 Shading ring: Copper



General features - X1F

- Universal mounting position
- Operator kit Ø 10 mm
- ATEX II 2G/D Ex h certification
- Coils: Class H - - CSA C22.2



Maximum allowable pressure

580 psi (40 bar)



Compatibility and materials table

Page 0.13 - 0.14



Room temperature with coil class H

+14°F +176°F
-10°C +80°C



Applications

- Water, Oils, Corrosive liquids
- Air, Inert and aggressive gases, Vacuum
- Food industry
- Laser cutting, Welding, Metallurgy
- Oxygen, Steam, Medical
- Chemical and Petrochemical Industry



Silver-plated shading ring on request



Ordering codes

Series	Port size	Functions	Orifice inch (mm)	Sealing materials	Version	Thread	Suitable coils
X 1 F	0 2	1	1 5	N	0	N	A A
	02 = 1/8" 03 = 1/4"	1 = 2/2 NC	15 = 1/16 (1.5) 02 = 5/64 (2) 25 = 3/32 (2.5) 03 = 1/8 (3) 04 = 5/32 (4)	N = NBR E = EPDM V = FKM C = CR F = NBR ❄️	0 = Standard	N = NPTF	A = A series - SOL10 A = 12V DC B = B series - SOL11 B = 24V DC 1 = 24V AC 2 = 110V AC 3 = 220V AC

Valves and coils are supplied separately. Upon commercial agreements can be supplied assembled.

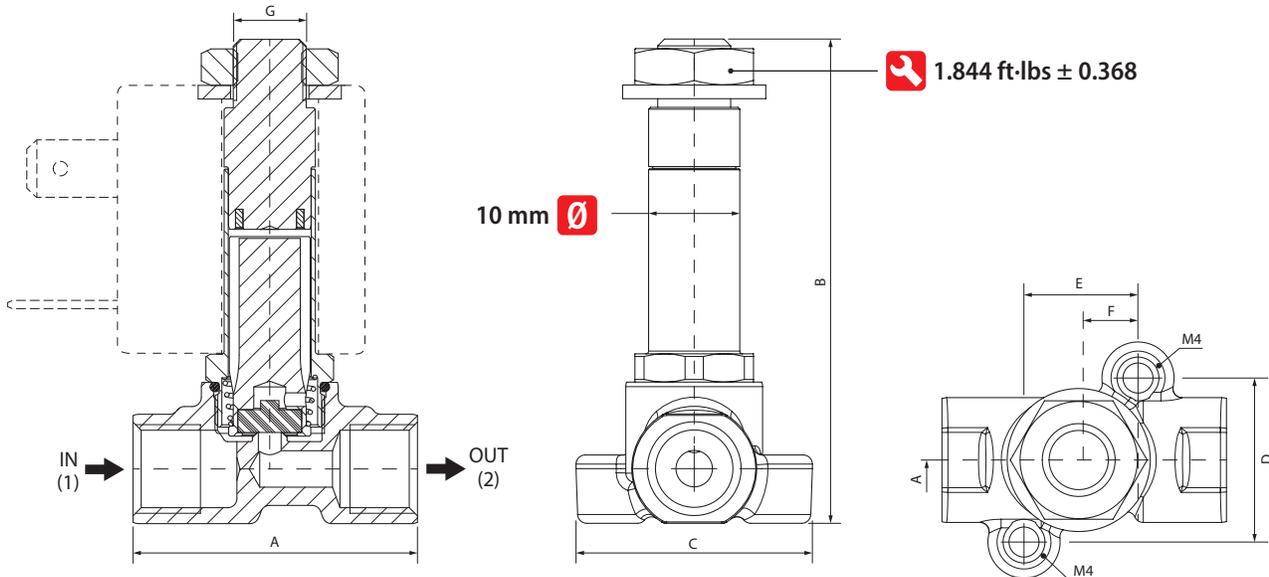
Code	Sealing materials	Port size	Ø Orifice	Viscosity	Cv (Kv)	Differential pressure (OPD)					
						inch (mm)	cSt	gpm (m³/h)	psi (bar)		
									Min	Max DC	Max AC
X1F 02 1 15_0 N	N = NBR +14°F +194°F (-10°C +90°C) V = FKM +14°F +284°F (-10°C +140°C) E = EPDM +14°F +284°F (-10°C +140°C)	1/8"	1/16 (1.5)	25	0.07 (0.06)	0	232 (16)	435 (30)			
X1F 02 1 02_0 N			5/64 (2)	37	0.10 (0.09)	0	174 (12)	363 (25)			
X1F 02 1 25_0 N			3/32 (2.5)	53	0.17 (0.15)	0	65 (4.5)	261 (18)			
X1F 02 1 03_0 N			1/8 (3)	53	0.23 (0.20)	0	44 (3)	145 (10)			
X1F 02 1 04_0 N			5/32 (4)	53	0.35 (0.30)	0	15 (1)	58 (4)			
X1F 03 1 15_0 N	C = CR -31°F +212°F (-35°C +100°C) F = NBR ❄️ -40°F +194°F (-40°C +90°C)	1/4"	1/16 (1.5)	25	0.07 (0.06)	0	232 (16)	435 (30)			
X1F 03 1 02_0 N			5/64 (2)	37	0.10 (0.09)	0	174 (12)	363 (25)			
X1F 03 1 25_0 N			3/32 (2.5)	53	0.17 (0.15)	0	65 (4.5)	261 (18)			
X1F 03 1 03_0 N			1/8 (3)	53	0.23 (0.20)	0	44 (3)	145 (10)			
X1F 03 1 04_0 N			5/32 (4)	53	0.35 (0.30)	0	15 (1)	58 (4)			

Power		Coils	
DC	AC	Size	Series
W	VA	mm	A - Page 15.2 B - Page 15.3
6.5	7.5	22	A - SOL10
8	11	30	B - SOL11
6.5	7.5	22	A - SOL10
8	11	30	B - SOL11
6.5	7.5	22	A - SOL10
8	11	30	B - SOL11
6.5	7.5	22	A - SOL10
8	11	30	B - SOL11
6.5	7.5	22	A - SOL10
8	11	30	B - SOL11
6.5	7.5	22	A - SOL10
8	11	30	B - SOL11

① Select seal material

With steam: EPDM - P max = 36 psi (2.5 bar)

Coil not included



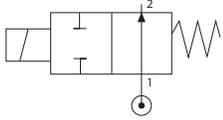
Size	A	B	C	D	E	F	G
	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	
1/8"	1.228 (31.2)	2.090 (53.1)	1.019 (25.9)	0.708 (18)	0.492 (12.5)	0.255 (6.5)	M8 x 0.75
1/4"	1.456 (37)	2.208 (56.1)	1.141 (29)	0.826 (21)	0.472 (12)	0.236 (6)	M8 x 0.75

Series X1F

DIRECT ACTING SOLENOID VALVES WITH BODY IN STAINLESS STEEL AISI 316L

2/2 NO

1/8" - 1/4"



Component Parts and Materials

- 1 Body: Stainless steel AISI 316L
- 2 Seals: NBR - EPDM - FKM - CR
- 3 Armature tube: Stainless steel
- 4 Fixed and mobile core: Stainless steel AISI 430FR
- 5 Springs: Stainless steel
- 6 Shading ring: Copper



General features - X1F

- Universal mounting position
- Operator kit Ø 10 mm
- ATEX II 2G/D Ex h certification
- Coils: Class H - - CSA C22.2



Maximum allowable pressure

580 psi (40 bar)



Compatibility and materials table

Page 0.13 - 0.14



Room temperature with coil class H

+14°F +176°F
-10°C +80°C



Applications

- Water, Oils, Corrosive liquids
- Air, Inert and aggressive gases, Vacuum
- Food industry
- Laser cutting, Welding, Metallurgy
- Oxygen, Steam, Medical
- Chemical and Petrochemical Industry



Silver-plated shading ring on request



Ordering codes

Series	Port size	Functions	Orifice inch (mm)	Sealing materials	Version	Thread	Suitable coils
X 1 F	0 2	2	1 5	N	0	N	A A
	02 = 1/8" 03 = 1/4"	2 = 2/2 NO	15 = 1/16 (1.5) 02 = 5/64 (2) 25 = 3/32 (2.5) 03 = 1/8 (3)	N = NBR E = EPDM V = FKM C = CR	0 = Standard	N = NPTF	A = A series - SOL10 A = 12V DC B = B series - SOL11 B = 24V DC 1 = 24V AC 2 = 110V AC 3 = 220V AC

Valves and coils are supplied separately. Upon commercial agreements can be supplied assembled.

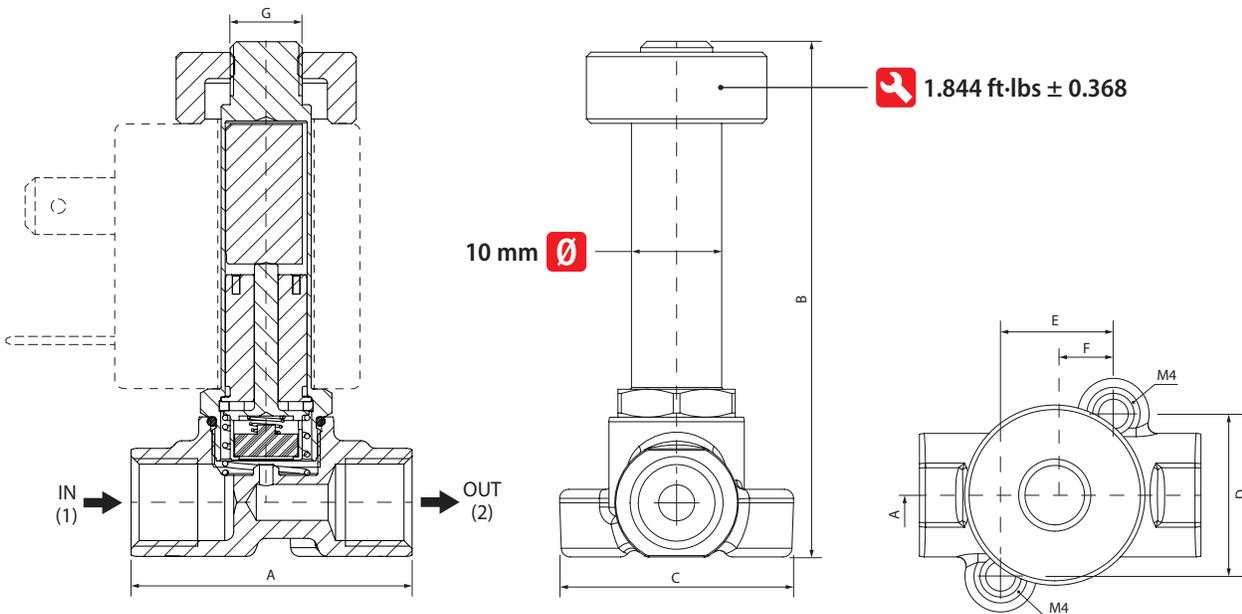
Code	Sealing materials	Port size	Ø Orifice	Viscosity	Cv (Kv)	Differential pressure (OPD)		
						inch (mm)	psi (bar)	
							Min	Max DC
①	①	NPTF		cSt	gpm (m³/h)			
X1F 02 2 15 _0 N	N = NBR +14°F +194°F (-10°C +90°C) V = FKM +14°F +284°F (-10°C +140°C)	1/8"	1/16 (1.5)	25	0.07 (0.06)	0	-	261 (18)
X1F 02 2 02 _0 N			5/64 (2)	37	0.10 (0.09)	0	-	145 (10)
X1F 02 2 25 _0 N			3/32 (2.5)	53	0.17 (0.15)	0	-	94 (6.5)
X1F 02 2 03 _0 N			1/8 (3)	53	0.23 (0.20)	0	-	61 (4.2)
X1F 03 2 15 _0 N	E = EPDM +14°F +284°F (-10°C +140°C) C = CR -31°F +212°F (-35°C +100°C)	1/4"	1/16 (1.5)	25	0.07 (0.06)	0	-	261 (18)
X1F 03 2 02 _0 N			5/64 (2)	37	0.10 (0.09)	0	-	145 (10)
X1F 03 2 25 _0 N			3/32 (2.5)	53	0.17 (0.15)	0	-	94 (6.5)
X1F 03 2 03 _0 N			1/8 (3)	53	0.23 (0.20)	0	-	61 (4.2)

Power		Coils	
DC	AC	Size	Series
W	VA	mm	A - Page 15.2 B - Page 15.3
-	7.5	22	A - SOL10
8	11	30	B - SOL11
-	7.5	22	A - SOL10
8	11	30	B - SOL11
-	7.5	22	A - SOL10
8	11	30	B - SOL11
-	7.5	22	A - SOL10
8	11	30	B - SOL11
-	7.5	22	A - SOL10
8	11	30	B - SOL11
-	7.5	22	A - SOL10
8	11	30	B - SOL11

① Select seal material

With steam: EPDM - P max = 36 psi (2.5 bar)

Coil not included



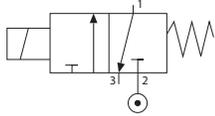
Size	A	B	C	D	E	F	G
	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	
1/8"	1.228 (31.2)	2.251 (57.2)	1.019 (25.9)	0.708 (18)	0.492 (12.5)	0.255 (6.5)	M8 x 1
1/4"	1.456 (37)	2.370 (60.2)	1.141 (29)	0.826 (21)	0.472 (12)	0.236 (6)	M8 x 1

Series X1F

DIRECT ACTING SOLENOID VALVES WITH BODY IN STAINLESS STEEL AISI 316L

3/2 NC

1/8" - 1/4"



Component Parts and Materials

- 1 Body: Stainless steel AISI 316L
- 2 Seals: NBR - EPDM - FKM
- 3 Armature tube: Stainless steel
- 4 Fixed and mobile core: Stainless steel AISI 430FR
- 5 Springs: Stainless steel
- 6 Shading ring: Copper



General features - X1F

- Universal mounting position
- Operator kit Ø 10 mm
- ATEX II 2G/D Ex h certification
- Coils: Class H - - CSA C22.2



Maximum allowable pressure

580 psi (40 bar)



Compatibility and materials table

Page 0.13 - 0.14



Room temperature with coil class H

+14°F +176°F
-10°C +80°C



Applications

- Water, Oils, Corrosive liquids
- Air, Inert and aggressive gases, Vacuum
- Food industry
- Laser cutting, Welding, Metallurgy
- Oxygen, Steam, Medical
- Chemical and Petrochemical Industry



Silver-plated shading ring on request



Ordering codes

Series	Port size	Functions	Orifice inch (mm)	Sealing materials	Version	Thread	Suitable coils
X 1 F	0 2	3	1 5	N	0	N	A A
	02 = 1/8" 03 = 1/4"	3 = 3/2 NC	15 = 1/16 (1.5) 02 = 5/64 (2) 25 = 3/32 (2.5) 03 = 1/8 (3) 04 = 5/32 (4)	N = NBR E = EPDM V = FKM	0 = Standard	N = NPTF	A = A series - SOL10 A = 12V DC B = B series - SOL11 B = 24V DC 1 = 24V AC 2 = 110V AC 3 = 220V AC

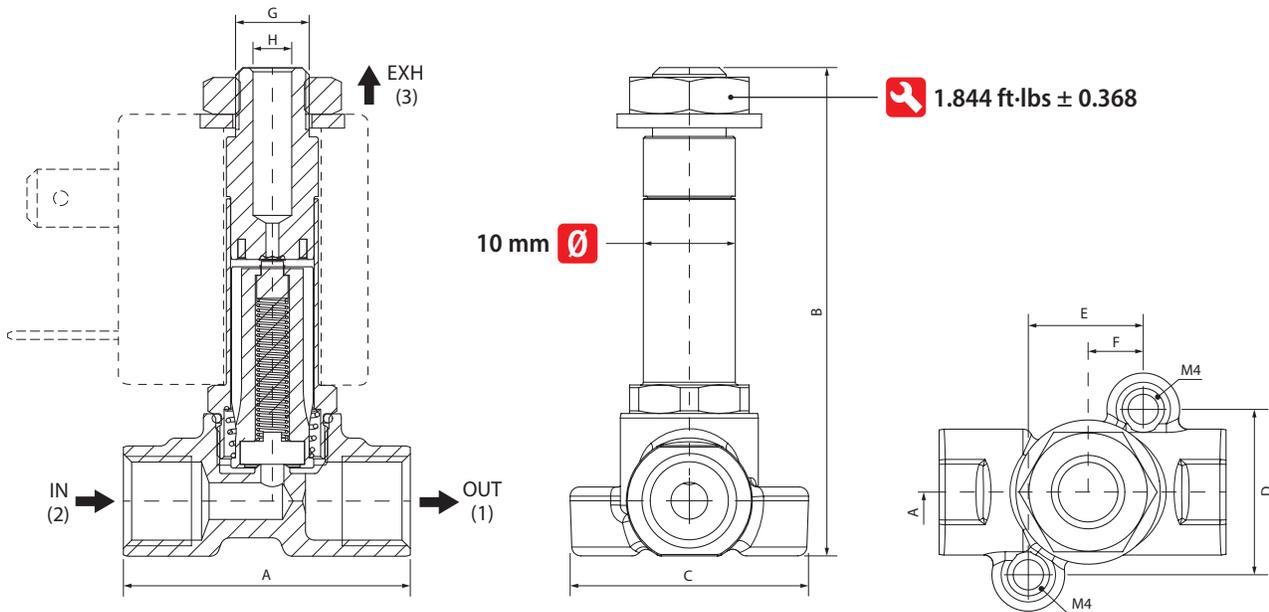
Valves and coils are supplied separately. Upon commercial agreements can be supplied assembled.

Code	Sealing materials	Port size	Ø Orifice		Viscosity	Cv (Kv)		Differential pressure (OPD)			Power		Coils		
			inch (mm)			cSt	gpm (m³/h)		psi (bar)			DC	AC	Size	Series
			IN	EXH			IN	EXH	Min	Max DC	Max AC	W	VA	mm	A - Page 15.2 B - Page 15.3
X1F 02 3 15 _0 N	N = NBR +14°F +194°F (-10°C +90°C) V = FKM +14°F +284°F (-10°C +140°C) E = EPDM +14°F +284°F (-10°C +140°C)	1/8"	1/16	1/16	25	0.07	0.06	0	145 (10)	145 (10)	6.5	7.5	22	A - SOL10	
X1F 02 3 02 _0 N			5/64	1/16		25	0.10		0.06	0	87 (6)	87 (6)	8	11	30
X1F 02 3 25 _0 N			3/32	1/16	25	0.17	0.06	0	58 (4)	58 (4)	6.5	7.5	22	A - SOL10	
X1F 02 3 03 _0 N			1/8	1/16		25	0.23		0.06	0	-	44 (3)	8	11	30
X1F 02 3 04 _0 N			5/32	1/16	25	0.35	0.06	0	-	15 (1)	-	7.5	22	A - SOL10	
X1F 03 3 15 _0 N			1/16	1/16		25	0.07		0.06	0	145 (10)	145 (10)	8	11	30
X1F 03 3 02 _0 N		1/4"	5/64	1/16	25	0.10	0.06	0	87 (6)	87 (6)	6.5	7.5	22	A - SOL10	
X1F 03 3 25 _0 N			3/32	1/16		25	0.17		0.06	0	58 (4)	58 (4)	8	11	30
X1F 03 3 03 _0 N			1/8	1/16	25	0.23	0.06	0	-	44 (3)	-	7.5	22	A - SOL10	
X1F 03 3 04 _0 N			5/32	1/16		25	0.35		0.06	0	-	15 (1)	8	11	30

① Select seal material

With steam: EPDM - P max = 36 psi (2.5 bar)

Coil not included



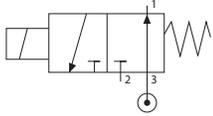
Size	A	B	C	D	E	F	G	H
	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)		
1/8"	1.228 (31.2)	2.090 (53.1)	1.019 (25.9)	0.708 (18)	0.492 (12.5)	0.236 (6)	M8 x 0.75	M5
1/4"	1.456 (37)	2.208 (56.1)	1.141 (29)	0.826 (21)	0.472 (12)	0.236 (6)	M8 x 0.75	M5

Series X1F

DIRECT ACTING SOLENOID VALVES WITH BODY IN STAINLESS STEEL AISI 316L

3/2 NO

1/8" - 1/4"



Component Parts and Materials

- 1 Body: Stainless steel AISI 316L
- 2 Seals: NBR - EPDM - FKM
- 3 Armature tube: Stainless steel
- 4 Fixed and mobile core: Stainless steel AISI 430FR
- 5 Springs: Stainless steel
- 6 Shading ring: Copper



General features - X1F

- Universal mounting position
- Operator kit Ø 10 mm
- ATEX II 2G/D Ex h certification
- Coils: Class H - - CSA C22.2



Maximum allowable pressure

580 psi (40 bar)



Compatibility and materials table

Page 0.13 - 0.14



Room temperature with coil class H

+14°F +176°F
 -10°C +80°C



Applications

- Water, Oils, Corrosive liquids
- Air, Inert and aggressive gases, Vacuum
- Food industry
- Laser cutting, Welding, Metallurgy
- Oxygen, Steam, Medical
- Chemical and Petrochemical Industry



Silver-plated shading ring on request



Ordering codes

Series	Port size	Functions	Orifice inch (mm)	Sealing materials	Version	Thread	Suitable coils
X 1 F	0 2	4	1 5	N	0	N	A A
	02 = 1/8" 03 = 1/4"	4 = 3/2 NO	15 = 1/16 (1.5) 02 = 5/64 (2) 25 = 3/32 (2.5)	N = NBR E = EPDM V = FKM	0 = Standard	N = NPTF	A = A series - SOL10 A = 12V DC B = B series - SOL11 B = 24V DC 1 = 24V AC 2 = 110V AC 3 = 220V AC

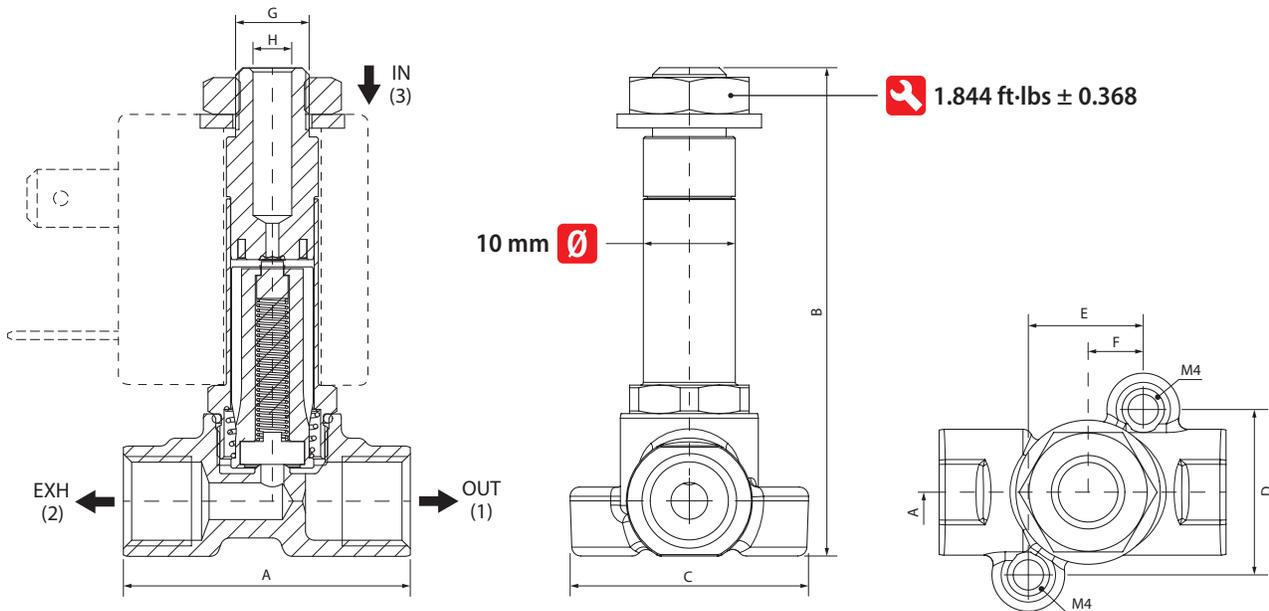
Valves and coils are supplied separately. Upon commercial agreements can be supplied assembled.

Code	Sealing materials	Port size	Ø Orifice		Viscosity	Cv (Kv)		Differential pressure (OPD)			Power		Coils					
			inch (mm)			cSt	gpm (m³/h)		psi (bar)			DC	AC	Size	Series			
			IN	EXH			IN	EXH	Min	Max DC	Max AC	W	VA	mm	A - Page 15.2 B - Page 15.3			
X1F 02 4 15 _0 N	N = NBR +14°F +194°F (-10°C +90°C)	1/8"	1/16	1/16	25	0.06	0.07	0	145 (10)	145 (10)	6.5	7.5	22	A - SOL10				
X1F 02 4 02 _0 N			1/16	5/64		0.06	0.10		145 (10)	145 (10)					8	11	30	B - SOL11
X1F 02 4 25 _0 N			1/16	3/32		0.06	0.17		58 (4)	145 (10)								
X1F 03 4 15 _0 N	V = FKM +14°F +284°F (-10°C +140°C)	1/4"	1/16	1/16	25	0.06	0.07	0	145 (10)	145 (10)	6.5	7.5	22	A - SOL10				
X1F 03 4 02 _0 N			1/16	5/64		0.06	0.10		145 (10)	145 (10)					8	11	30	B - SOL11
X1F 03 4 25 _0 N			1/16	3/32		0.06	0.17		58 (4)	145 (10)								
	E = EPDM +14°F +284°F (-10°C +140°C)	1/4"	1/16	1/16	25	0.06	0.07	0	145 (10)	145 (10)	6.5	7.5	22	A - SOL10				
			1/16	5/64		0.06	0.10		145 (10)	145 (10)					8	11	30	B - SOL11
			1/16	3/32		0.06	0.17		58 (4)	145 (10)								

① Select seal material

With steam: EPDM - P max = 36 psi (2.5 bar)

Coil not included



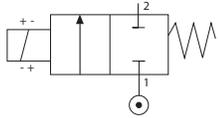
Size	A	B	C	D	E	F	G	H
	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)		
1/8"	1.228 (31.2)	2.090 (53.1)	1.019 (25.9)	0.708 (18)	0.492 (12.5)	0.236 (6)	M8 x 0.75	M5
1/4"	1.456 (37)	2.208 (56.1)	1.141 (29)	0.826 (21)	0.472 (12)	0.236 (6)	M8 x 0.75	M5

Series X1F

DIRECT ACTING SOLENOID VALVES WITH BODY IN STAINLESS STEEL AISI 316L

2/2 LATCHING

1/8" - 1/4"



Pulse switching ≥ 20 ms, polarity reversed



Ordering codes

Series	Port size	Functions	Orifice inch (mm)	Sealing materials	Version	Thread	Suitable coils
X 1 F	0 2	1	1 5	N	0	N	A A
	02 = 1/8" 03 = 1/4"	B = 2/2 Latching	15 = 1/16 (1.5) 02 = 5/64 (2) 25 = 3/32 (2.5) 03 = 1/8 (3) 04 = 5/32 (4)	N = NBR E = EPDM V = FKM C = CR	0 = Standard	N = NPTF	A = A series - SOL10 A = 12V DC B = B series - SOL11 B = 24V DC F = 3V DC H = 9V DC

Valves and coils are supplied separately. Upon commercial agreements can be supplied assembled.



Component Parts and Materials

- 1 Body: Stainless steel AISI 316L
- 2 Seals: NBR - EPDM - FKM - CR
- 3 Armature tube: Stainless steel
- 4 Fixed and mobile core: Stainless steel AISI 430FR
- 5 Springs: Stainless steel
- 6 Shading ring: Copper



General features - X1F

- Universal mounting position
- Operator kit \varnothing 10 mm
- ATEX II 2G/D Ex h certification
- Coils: Class H - - CSA C22.2



Maximum allowable pressure

580 psi (40 bar)



Compatibility and materials table

Page 0.13 - 0.14



Room temperature with coil class H

+14°F +176°F
-10°C +80°C



Applications

- Water, Oils, Corrosive liquids
- Air, Inert and aggressive gases, Vacuum
- Food industry
- Laser cutting, Welding, Metallurgy
- Oxygen, Steam, Medical
- Chemical and Petrochemical Industry

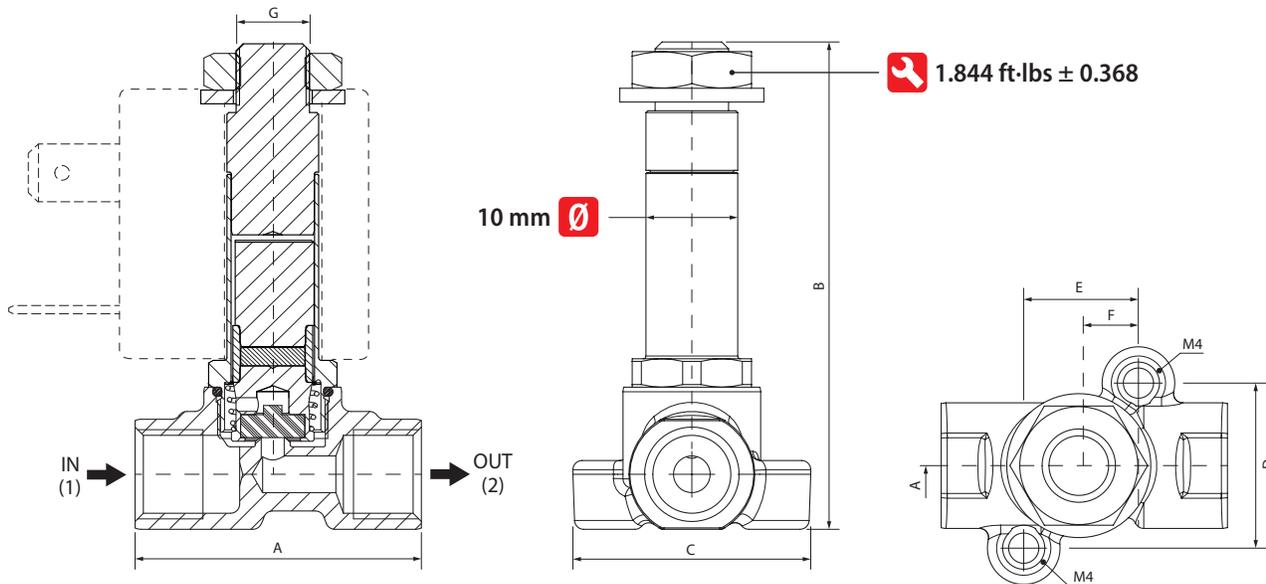
Code	Sealing materials	Port size	Ø Orifice	Viscosity	Cv (Kv)	Differential pressure (OPD)		
						gpm (m³/h)	psi (bar)	
							Min	Max DC
X1F 02 B 15_0 N	N = NBR +14°F +194°F (-10°C +90°C) V = FKM +14°F +284°F (-10°C +140°C)	1/8"	1/16 (1.5)	25	0.07 (0.06)	0	145 (10) 290 (20) 507 (35)	
X1F 02 B 02_0 N			5/64 (2)	37	0.10 (0.09)	0	94 (6.5) 188 (13) 333 (23)	
X1F 02 B 25_0 N			3/32 (2.5)	53	0.17 (0.15)	0	36 (2.5) 72 (5) 145 (10)	
X1F 02 B 03_0 N			1/8 (3)	53	0.23 (0.20)	0	43 (3) 797 (5.5)	
X1F 03 B 15_0 N	E = EPDM +14°F +284°F (-10°C +140°C) C = CR -31°F +212°F (-35°C +100°C)	1/4"	1/16 (1.5)	25	0.07 (0.06)	0	145 (10) 290 (20) 507 (35)	
X1F 03 B 02_0 N			5/64 (2)	37	0.10 (0.09)	0	94 (6.5) 188 (13) 333 (23)	
X1F 03 B 25_0 N			3/32 (2.5)	53	0.17 (0.15)	0	36 (2.5) 72 (5) 145 (10)	
X1F 03 B 03_0 N			1/8 (3)	53	0.23 (0.20)	0	43 (3) 797 (5.5)	

DC	Coils	
	Size	Series
W	mm	A - Page 15.2 B - Page 15.3
2	22	A - SOL10
3	22	A - SOL10
4	30	B - SOL11
2	22	A - SOL10
3	22	A - SOL10
4	30	B - SOL11
2	22	A - SOL10
3	22	A - SOL10
4	30	B - SOL11
2	22	A - SOL10
3	22	A - SOL10
4	30	B - SOL11
2	22	A - SOL10
3	22	A - SOL10
4	30	B - SOL11

① Select seal material

With steam: **EPDM - P max = 36 psi (2.5 bar)**

Coil not included



Size	A	B	C	D	E	F	G
	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	
1/8"	1.228 (31.2)	2.090 (53.1)	1.019 (25.9)	0.708 (18)	0.492 (12.5)	0.255 (6.5)	M8 x 0.75
1/4"	1.456 (37)	2.208 (56.1)	1.141 (29)	0.826 (21)	0.472 (12)	0.236 (6)	M8 x 0.75