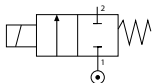




2/2 NC



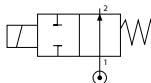
□ 25 x 25 mm

Page 3.2





2/2 NO



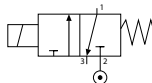
□ 25 x 25 mm

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3/2 NC



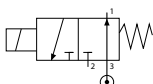
□ 25 x 25 mm

Page 3.6





3/2 NO



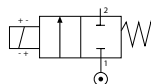
□ 25 x 25 mm

Page 3.8





2/2 LATCHING



□ 25 x 25 mm

Page 3.10





22 mm

Series A

Page 17.2





30 mm

Series B

Page 17.3





Connectors

Page 17.8 - 17.10



**DIRECT ACTING SOLENOID VALVES WITH FLANGE
FIXING AND BRASS CW510L BODY - PB ≤ 0.1%**

CW510L / Pb ≤ 0.1%

Ex
II 2 G/D Ex h

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



Series F1F

F1F

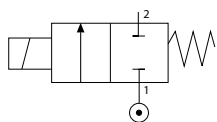
Series F1F

DIRECT ACTING SOLENOID VALVES WITH FLANGE FIXING AND BRASS CW510L BODY

2/2 NC

25 x 25 mm

CW510L
Pb ≤ 0.1%



Component Parts and Materials

- 1 Body: Brass CW510L - Pb ≤ 0.1%
- 2 Seals: NBR - EPDM - FKM - CR
- 3 Armature tube: Stainless steel
- 4 Fixed and mobile core: Stainless steel AISI 430FR
- 5 Springs: Stainless steel



General features - F1F

- 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

- Food industry
- Coffee & vending
- Compressors
- Water and Neutral liquids
- Air and Inert gases
- Oils, Steam, Vacuum



Ordering codes

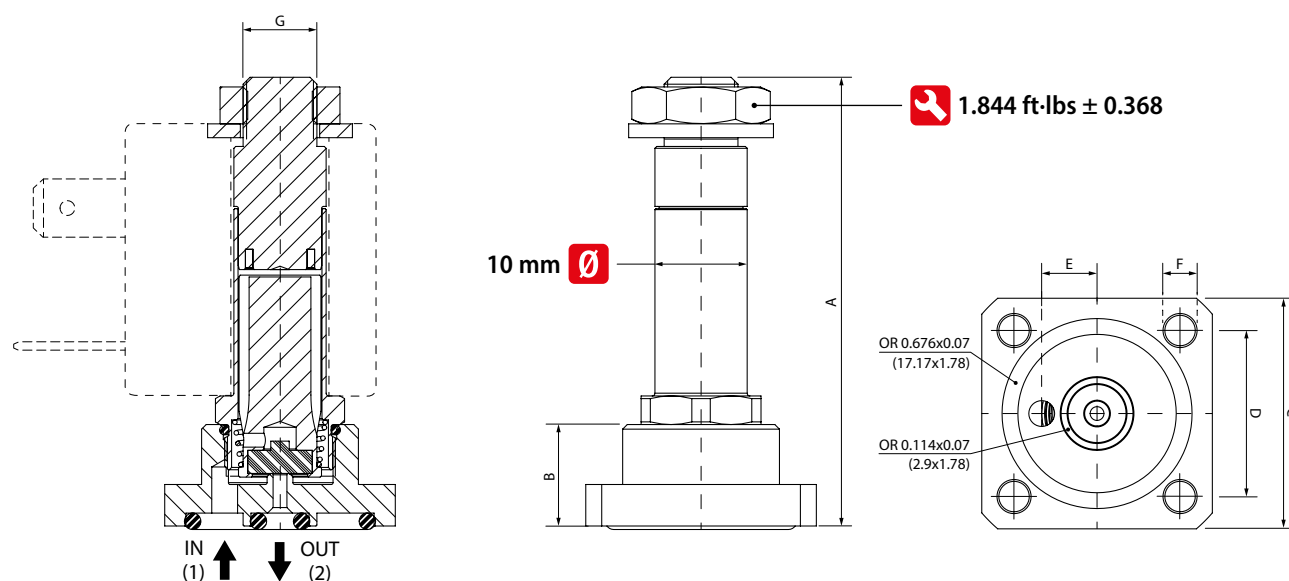
Series	Port size	Functions	Orifice inch (mm)	Sealing materials	Version	Suitable coils	
F 1 F	J 4	1	1 5	N	0	A	A
	J4 = □25x25 mm	1 = 2/2 NC	15 = 1/16 (1.5) 02 = 5/64 (2) 25 = 3/32 (2.5)	N = NBR E = EPDM V = FKM C = CR	0 = Standard	A = A series - SOL10 B = B series - SOL11	A = 12V DC B = 24V DC 1 = 24V 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	
						psi (bar)			DC W	AC VA	Size mm	Series A - Page 17.2 B - Page 17.3
						Min	Max DC	Max AC				
F1F J4 1 15 _ 0	N = NBR +14°F +194°F (-10°C +90°C)	25x25 mm	1/16 (1.5)	25	0.07 (0.06)	0	232 (16)	435 (30)	6.5	7.5	22	A - SOL10
F1F J4 1 02 _ 0	V = FKM +14°F +284°F (-10°C +140°C)		5/64 (2)	37	0.10 (0.09)	0	580 (40)	580 (40)	8	11	30	B - SOL11
F1F J4 1 25 _ 0	E = EPDM +14°F +284°F (-10°C +140°C)						174 (12)	363 (25)	6.5	7.5	22	A - SOL10
	C = CR -31°F +212°F (-35°C +100°C)		3/32 (2.5)	53	0.17 (0.15)	0	435 (30)	580 (40)	8	11	30	B - SOL11
							65 (4.5)	261 (18)	6.5	7.5	22	A - SOL10
							189 (13)	435 (30)	8	11	30	B - SOL11

① Select seal material

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

Coil not included



Size	A inch (mm)	B inch (mm)	C inch (mm)	D inch (mm)	E inch (mm)	F inch (mm)	G
25x25 mm	1.915 (48.65)	0.433 (11)	0.984 (25)	0.708 (18)	0.236 (6)	0.129 (3.3)	M8 x 0.75

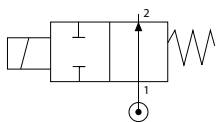
Series F1F

DIRECT ACTING SOLENOID VALVES WITH FLANGE FIXING AND BRASS CW510L BODY

2/2 NO

25 x 25 mm

CW510L
Pb ≤ 0.1%



Component Parts and Materials

- 1 Body: Brass CW510L - Pb ≤ 0.1%
- 2 Seals: NBR - EPDM - FKM - CR
- 3 Armature tube: Brass
- 4 Fixed and mobile core: Stainless steel AISI 430FR
- 5 Springs: Stainless steel



General features - F1F

- 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

- Food industry
- Coffee & vending
- Compressors
- Water and Neutral liquids
- Air and Inert gases
- Oils, Steam, Vacuum



Stainless Steel armature tube on request



Ordering codes

Series	Port size	Functions	Orifice inch (mm)	Sealing materials	Version	Suitable coils	
F 1 F	J 4 J4 = □25x25 mm	2 2 = 2/2 NO	1 5 15 = 1/16 (1.5) 02 = 5/64 (2) 25 = 3/32 (2.5)	N N = NBR E = EPDM V = FKM C = CR	0 0 = Standard	A A = A series - SOL10 B = B series - SOL11	A A = 12V DC B = 24V DC 1 = 24V AC 2 = 110V AC 3 = 220V AC

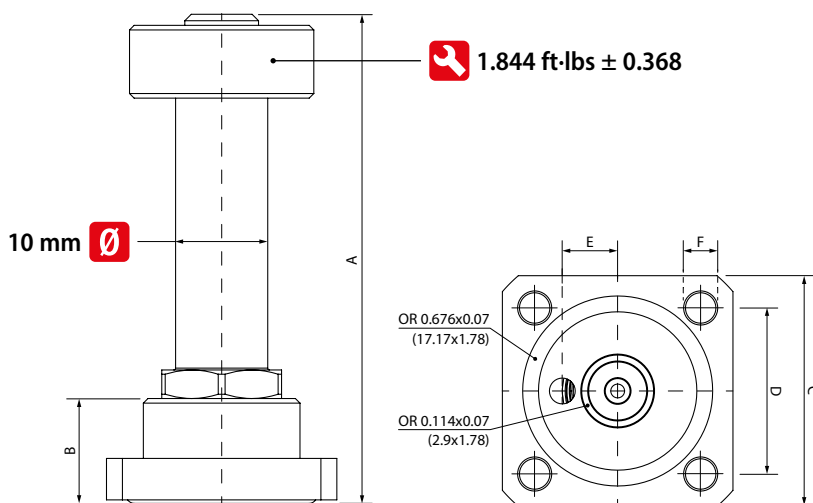
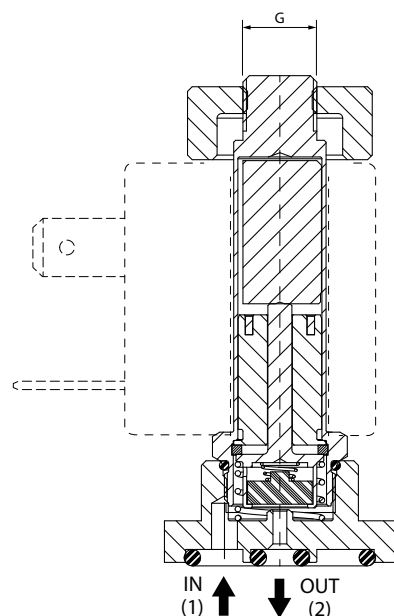
Valves and coils are supplied separately.
Upon commercial agreements can be supplied assembled.

Code	Sealing materials	Port size	Ø Orifice	Viscosity	Cv (Kv)	Differential pressure (OPD)			Power		Coils		
						psi (bar)			DC W	AC VA	Size mm	Series	
						Min	Max DC	Max AC					
F1F J4 2 15 _ 0	N = NBR +14°F +194°F (-10°C +90°C)	25x25 mm	1/16 (1.5)	25	0.07 (0.06)	0	-	261 (18)	-	7.5	22	A - SOL10	B - SOL11
F1F J4 2 02 _ 0	V = FKM +14°F +284°F (-10°C +140°C)		5/64 (2)	37	0.10 (0.09)	0	261 (18)	261 (18)	8	11	30	A - SOL10	
F1F J4 2 25 _ 0	E = EPDM +14°F +284°F (-10°C +140°C)						145 (10)	145 (10)	8	11	30	A - SOL10	B - SOL11
	C = CR -31°F +212°F (-35°C +100°C)		3/32 (2.5)	53	0.17 (0.15)	0	-	94 (6.5)	-	7.5	22	A - SOL10	B - SOL11
							94 (6.5)	94 (6.5)	8	11	30	A - SOL10	

① Select seal material

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

Coil not included



Size	A inch (mm)	B inch (mm)	C inch (mm)	D inch (mm)	E inch (mm)	F inch (mm)	G
25x25 mm	2.271 (57.7)	0.433 (11)	0.984 (25)	0.708 (18)	0.236 (6)	0.129 (3.3)	M8 x 1

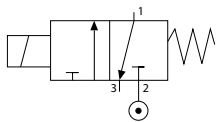
Series F1F

DIRECT ACTING SOLENOID VALVES WITH FLANGE FIXING AND BRASS CW510L BODY

3/2 NC

25 x 25 mm

CW510L
Pb ≤ 0.1%



Component Parts and Materials

- 1 Body: Brass CW510L - Pb ≤ 0.1%
- 2 Seals: NBR - EPDM - FKM
- 3 Armature tube: Stainless steel
- 4 Fixed and mobile core: Stainless steel AISI 430FR
- 5 Springs: Stainless steel



General features - F1F

- 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

- Food industry
- Coffee & vending
- Compressors
- Water and Neutral liquids
- Air and Inert gases
- Oils, Steam, Vacuum



Ordering codes

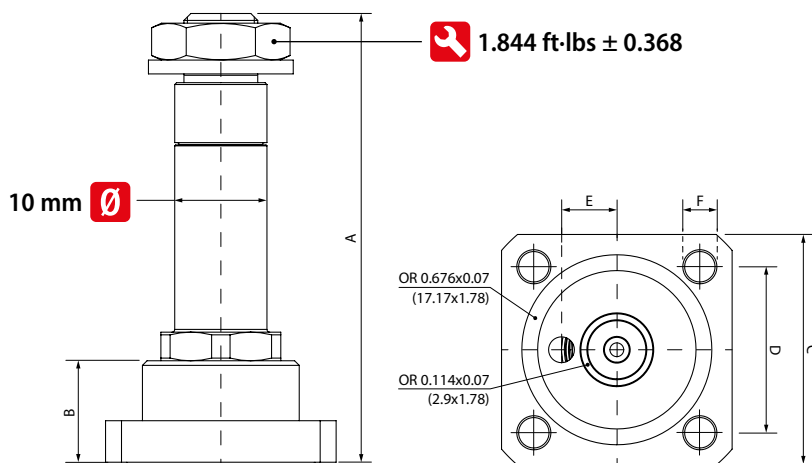
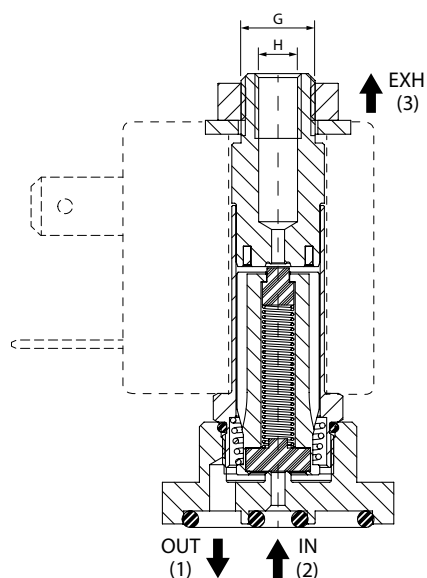
Series	Port size	Functions	Orifice inch (mm)	Sealing materials	Version	Suitable coils	
F 1 F	J 4	3	1 5	N	0	A	A
	J4 = □25x25 mm	3 = 3/2 NC	15 = 1/16 (1.5) 02 = 5/64 (2) 25 = 3/32 (2.5)	N = NBR E = EPDM V = FKM	0 = Standard	A = A series - SOL10 B = B series - SOL11	A = 12V DC B = 24V DC 1 = 24V AC 2 = 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		
①	①		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 17.2 B - Page 17.3	
F1F J4 3 15 _ 0	N = NBR +14°F +194°F (-10°C +90°C)	□ 25x25 mm	1/16 (1.5)	1/16 (1.4)	25	0.07 (0.06)	0.06 (0.05)	0	196 (13.5)	196 (13.5)	6.5	7.5	22	A - SOL10	
										196 (13.5)	196 (13.5)	8	11	30	B - SOL11
F1F J4 3 02 _ 0	V = FKM +14°F +284°F (-10°C +140°C)		5/64 (2)	1/16 (1.4)	25	0.10 (0.09)	0.06 (0.05)	0	116 (8)	116 (8)	6.5	7.5	22	A - SOL10	
										116 (8)	116 (8)	8	11	30	B - SOL11
F1F J4 3 25 _ 0	E = EPDM +14°F +284°F (-10°C +140°C)		3/32 (2.5)	1/16 (1.4)	25	0.17 (0.15)	0.06 (0.05)	0	73 (5)	73 (5)	6.5	7.5	22	A - SOL10	
										73 (5)	73 (5)	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	H	G
	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)		
25x25 mm	1.915 (48.65)	0.433 (11)	0.984 (25)	0.708 (18)	0.236 (6)	0.129 (3.3)	M5	M8 x 0.75

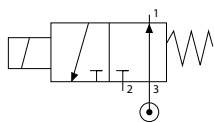
Series F1F

DIRECT ACTING SOLENOID VALVES WITH FLANGE FIXING AND BRASS CW510L BODY

3/2 NO

25 x 25 mm

CW510L
Pb ≤ 0.1%



Component Parts and Materials

- 1 Body: Brass CW510L - Pb ≤ 0.1%
- 2 Seals: NBR - EPDM - FKM
- 3 Armature tube: Stainless steel
- 4 Fixed and mobile core: Stainless steel AISI 430FR
- 5 Springs: Stainless steel



General features - F1F

- 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

- Food industry
- Coffee & vending
- Compressors
- Water and Neutral liquids
- Air and Inert gases
- Oils, Steam, Vacuum



Ordering codes

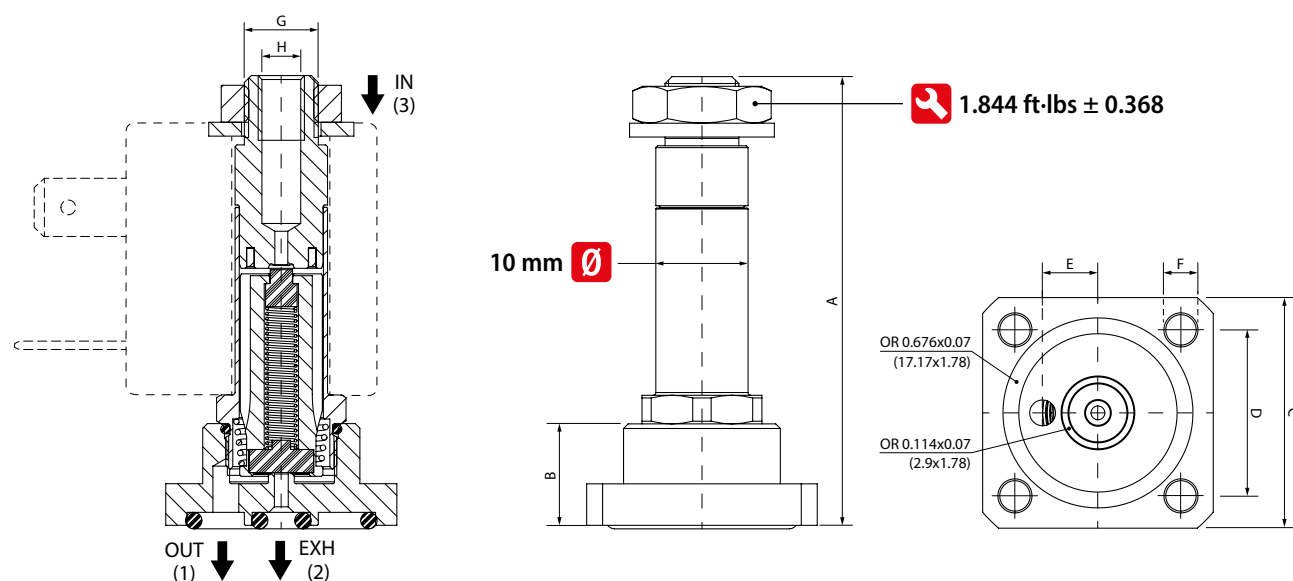
Series	Port size	Functions	Orifice inch (mm)	Sealing materials	Version	Suitable coils	
F 1 F	J 4	4	1 5	N	0	A	A
	J4 = □25x25 mm	4 = 3/2 NO	15 = 1/16 (1.5) 02 = 5/64 (2) 25 = 3/32 (2.5)	N = NBR E = EPDM V = FKM	0 = Standard	A = A series - SOL10 B = B series - SOL11	A = 12V DC B = 24V DC 1 = 24V AC 2 = 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	
①	①		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 17.2 B - Page 17.3
F1F J4 4 15 _ 0	N = NBR +14°F +194°F (-10°C +90°C)	□ 25x25 mm	1/16 (1.4)	1/16 (1.5)	25	0.06 (0.05)	0.07 (0.06)	0	145 (10)	145 (10)	6.5	7.5	22	A - SOL10
F1F J4 4 02 _ 0	V = FKM +14°F +284°F (-10°C +140°C)		1/16 (1.4)	5/64 (2)	25	0.06 (0.05)	0.10 (0.09)	0	145 (10)	145 (10)	8	11	30	B - SOL11
									145 (10)	145 (10)	6.5	7.5	22	A - SOL10
F1F J4 4 25 _ 0	E = EPDM +14°F +284°F (-10°C +140°C)		1/16 (1.4)	3/32 (2.5)	25	0.06 (0.05)	0.17 (0.15)	0	145 (10)	145 (10)	8	11	30	B - SOL11
									58 (4)	145 (10)	6.5	7.5	22	A - SOL10
										145 (10)	145 (10)	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	H	G
	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)		
25x25 mm	1.915 (48.65)	0.433 (11)	0.984 (25)	0.708 (18)	0.236 (6)	0.129 (3.3)	M5	M8 x 0.75

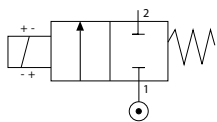
Series F1F

DIRECT ACTING SOLENOID VALVES WITH FLANGE FIXING AND BRASS CW510L BODY

2/2 LATCHING

25 x 25 mm

CW510L
Pb ≤ 0.1%



Pulse switching ≥20 ms, polarity reversed



Component Parts and Materials

- 1 Body: Brass CW510L - Pb ≤ 0.1%
- 2 Seals: NBR - EPDM - FKM - CR
- 3 Armature tube: Stainless steel
- 4 Fixed and mobile core: Stainless steel AISI 430FR
- 5 Springs: Stainless steel



General features - F1F

- 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

- Food industry
- Coffee & vending
- Compressors
- Water and Neutral liquids
- Air and Inert gases
- Oils, Steam, Vacuum



Ordering codes

Series	Port size	Functions	Orifice inch (mm)	Sealing materials	Version	Suitable coils	
F 1 F	J 4	B	1 5	N	0	A	A
	J4 = □25x25 mm	B = 2/2 Latching	15 = 1/16 (1.5) 02 = 5/64 (2) 25 = 3/32 (2.5)	N = NBR E = EPDM V = FKM C = CR	0 = Standard	A = A series - SOL10 B = B series - SOL11	A = 12V DC B = 24V DC F = 3V DC H = 9V DC

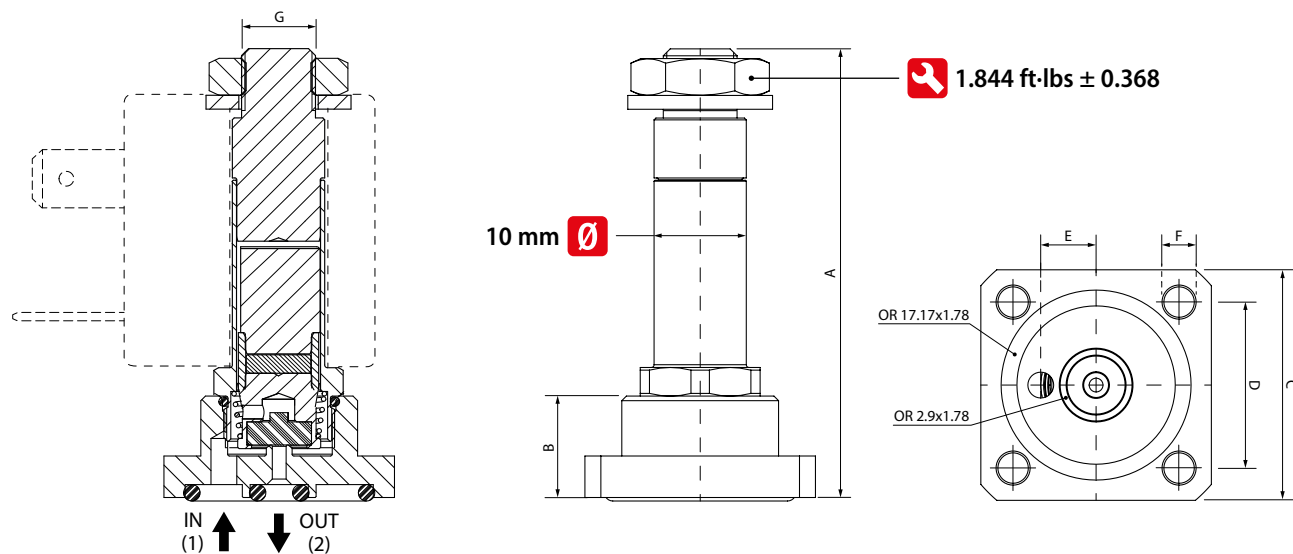
Valves and coils are supplied separately.
Upon commercial agreements can be supplied assembled.

Code	Sealing materials	Port size	Ø Orifice	Viscosity	Cv (Kv)	Differential pressure (OPD)		Power	Coils	
①	①		inch (mm)	cSt	gpm (m³/h)	psi (bar)		DC	Size	Series
						Min	Max DC	W	mm	A - Page 17.2 B - Page 17.3
F1F J4 B 15 _ 0	N = NBR +14°F +194°F (-10°C +90°C)	25x25 mm	1/16 (1.5)	25	0.07 (0.06)	0	145 (10)	2	22	A - SOL10
							290 (20)	3	22	A - SOL10
							507 (35)	4	30	B - SOL11
F1F J4 B 02 _ 0	V = FKM +14°F +284°F (-10°C +140°C) E = EPDM +14°F +284°F (-10°C +140°C)	25x25 mm	5/64 (2)	25	0.10 (0.09)	0	94 (6.5)	2	22	A - SOL10
							188 (13)	3	22	A - SOL10
							333 (23)	4	30	B - SOL11
F1F J4 B 25 _ 0	C = CR -31°F +212°F (-35°C +100°C)	25x25 mm	3/32 (2.5)	25	0.17 (0.15)	0	36 (2.5)	2	22	A - SOL10
							72 (5)	3	22	A - SOL10
							145 (10)	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)	
25x25 mm	1.915 (48.65)	0.433 (11)	0.984 (25)	0.708 (18)	0.236 (6)	0.129 (3.3)	M8 x 0.75