

Solenoid Operated Poppet Type Two-Way Valves

These valves are used for opening/closing the oil path by having the poppet valve operated with an electric signal via solenoid. Because these are of poppet type, the internal leakage is quite small and there is no worry about hydraulic lock.

Specifications

Model Numbers	Max. Flow L/min (U.S.GPM)	Max. Operating Pressure MPa (PSI)	Internal leakage cm ³ /min (cu.in./min)	Max. Changeover Frequency min ⁻¹ (Cycles/Min)	Approx. Mass kg(1bs.)
CDSC-01-C-D24-10*	15 (4.0)	21 (3050)*2	or less 0.25 (015)	240	0.35 (.8)
CDSC-03-C-*21*	50 (13.2)	14 (2030)	or less 0.25 (015)	AC: 300 DC: 240 R: 120	0.5 (1.1)
CDST-03W-03-C-*21*					0.85 (1.9)
CDSG-03-C-*21*					0.85 (1.9)

- ★ 1. The maximum flow means the limited flow without inducing any abnormality to the operation (changeover) of the valve.
- ★ 2. When the valve is operated at 18.5 Mpa (2680 PSI) or higher pressure, continuous energies time is restricted with Max. 30 min., and also the energies ratio less than 90 %.

Solenoid Ratings

Electric Source	Coil Type	Frequency (Hz)	Voltage (V)		Current & Power at Rated Voltage				
			Source Rating	Serviceable Range	Inrush (A)	Holding (A)	Power (W)		
AC	A100	50	100	80 - 100	1.12	0.55	—		
		60	100	90 - 120	0.95	0.40			
	A120	50	120	96 - 132	0.93	0.46			
		60		108 - 144	0.79	0.33			
	A200	50	200	160 - 220	0.56	0.28			
		60	200	180 - 240	0.48	0.20			
	A240	50	240		192 - 264	0.47		0.23	
		60		216 - 288	0.40	0.17			
	DC (K Series)	D12	—	12	10.8 - 13.2	—		2.20	26
		D24 ★	—	24	21.6 - 26.4	—		1.10	
D48		—	48	43.2 - 52.8	—	0.55			
AC→DC Rectified	R100	50/60	100	90 - 110	—	0.30	26		
	R200	50/60	200	180 - 220	—	0.15			

- ★ CDSC-01 is available with coil type "D24" only.
- Because both AC and DC solenoids employ the plug-in type electrical wiring, the valve can be removed without removing the wiring. (Coil type of CDSC-01 is flying lead wire only.)
- Being 50-60 Hz common service AC solenoids, do not require rewiring when the applied frequency is changed.
- K-Series DC Solenoid which has a reputation for excellent DC control is employed. (Coil type of CDSC-01 is with Surge Suppressor.)

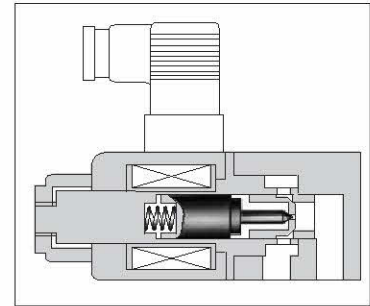
Model Number Designation

F-	CDS	T	-03	-C	-D12	-21	*
Special Seals	Series Number	Type of Connection	Valve Size	Valve Type	Coil Type	Design Number	Design Standard
F: Special seals for phosphate ester type fluids (Omit if not required)	CDS: Solenoid Operated Poppet Type Two-Way Valves	C: Cartridge Type	01	C: Normally Closed	DC D24	10	None: Japanese Std. "JIS" & European Design Std. 90: N. American Design Std.
		T: Threaded Connection	03			21	
			03W (Piping Size 1/4) 03 (Piping Size 3/8)			21	
G: Gasket Mounting	03	03	03	AC A100, A120 A200, A240	DC D12, D24, D100	21	None: Japanese Std. "JIS" 80: European Design Std. 90: N. American Design Std.

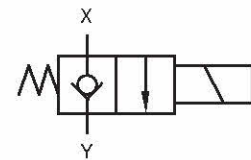
Mounting Bolts

Mounting bolt in the table below is attached only for Gasket mounting type valve (CDSG-03).

Valve Model Numbers	Socket Head Cap Screws (2pcs.)	
	Japanese Standard "JIS" European Design Standard	N. American Design Standard
CDSG-03	M6 × 60 Lg.	1/4-20 UNC × 2-1/4Lg.



Graphic Symbol



Instructions

Direction of flow when the solenoid is energised

These valves do not allow flow from Y to X when the solenoid is energised.

At the time of test run

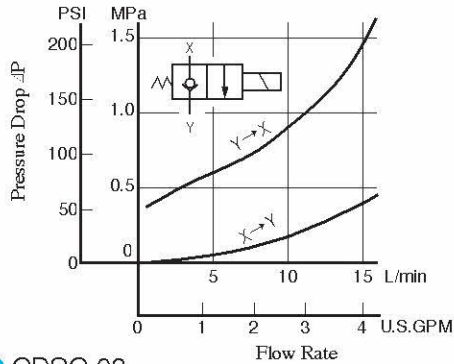
At the time of test run, there is a possibility that the oil may not flow even after the solenoid is energised because of the residual air in the valve.

Mounting

There are no mounting restrictions for any models.

Pressure Drop

- CDSC-01 Hydraulic Fluid: Viscosity 30 mm² (141 SSU), Specific Gravity 0.850



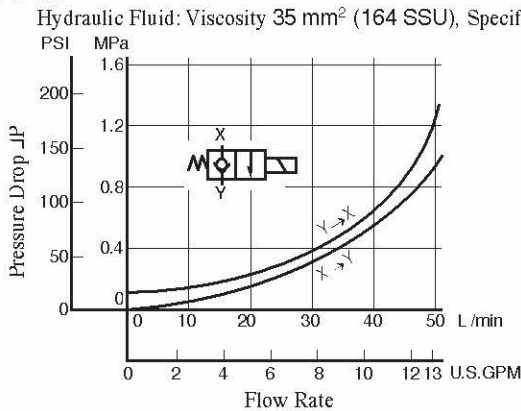
- For any other viscosity, multiply the factors in the table below.

Viscosity	mm ² /s	15	20	30	40	50	60	70	80	90	100
	SSU		77	98	141	186	232	278	324	371	417
Factor		0.84	0.91	1.00	1.07	1.14	1.19	1.24	1.28	1.32	1.35

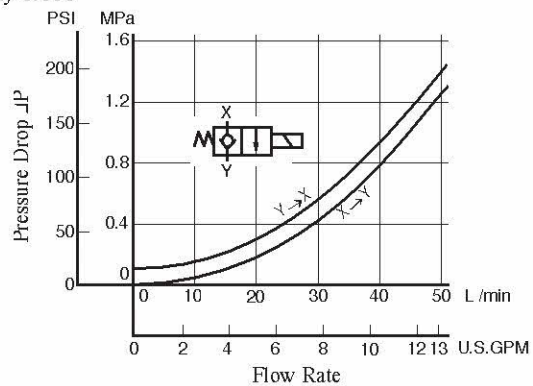
- For any other specific gravity (G'), the pressure drop (ΔP) may be obtained from the formula below.

$$\Delta P' = \Delta P (G'/0.850)$$

- CDSC-03
- CDST-03
- CDSG-03



- CDST-03W



Note: Measuring has been made for the CDSC-03 (Cartridge type) when it is equipped with the same body as the threaded connections and the gasket mounting type.

- For any other viscosity, multiply the factors in the table below.

Viscosity	mm ² /s	15	20	30	40	50	60	70	80	90	100
	SSU		77	98	141	186	232	278	324	371	417
Factor		0.81	0.87	0.96	1.03	1.09	1.14	1.19	1.23	1.27	1.30

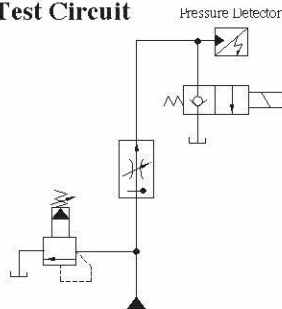
- For any other specific gravity (G'), the pressure drop (ΔP) may be obtained from the formula below.

$$\Delta P' = \Delta P (G'/0.850)$$

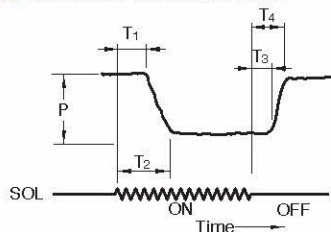
Changeover Time

Changeover time, T₂ and T₄, in particular, varies according to the hydraulic circuit and operating conditions. As an example, the following figures show how the measurement is made.

- Test Circuit

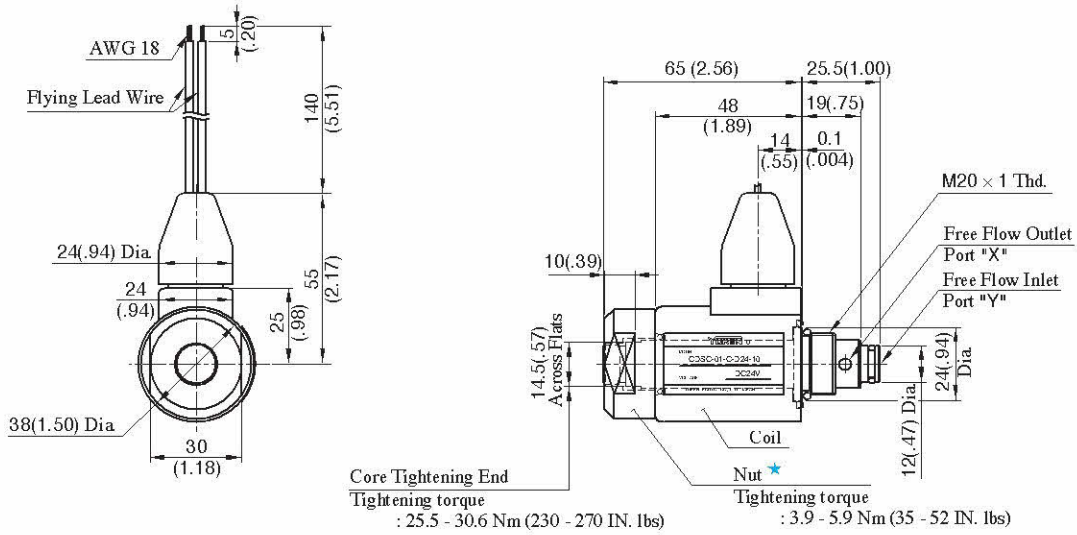


- Result of measurement



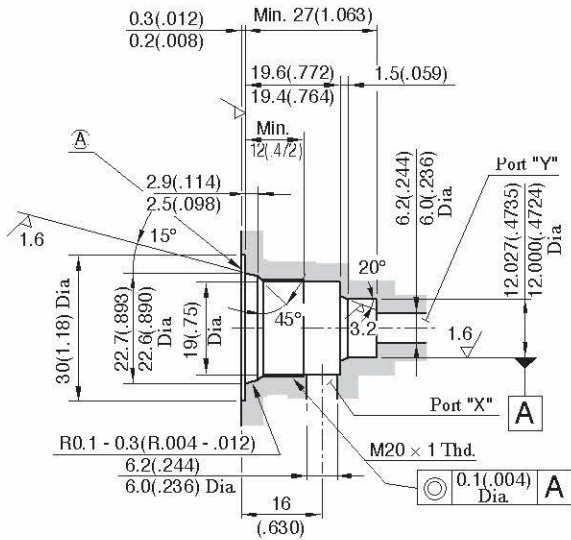
Model Number	Solenoid Types	Condition		Shifting time (ms)			
		Pressure "P" MPa (PSI)	Flow Rate L/min (U.S.GPM)	SOL "ON"(Open→Close)		SOL "OFF"(Open→Close)	
				T ₁	T ₂ (ex.)	T ₃	T ₄ (ex.)
CDSC-01	DC	10 (1450)	15 (4.0)	21.4	44.0	29.0	38.4
		21 (3050)	15 (4.0)	30.6	47.0	27.0	44.0
CDS*-03	AC	7 (1020)	50 (13.2)	10.0	86.0	20.0	44.0
		14 (2030)	50 (13.2)	11.0	43.0	12.0	54.0
	DC	7 (1020)	50 (13.2)	22.0	104.0	44.0	66.0
		14 (2030)	50 (13.2)	24.0	60.0	41.0	73.0
AC→DC Rectified	7 (1020)	50 (13.2)	27.0	100.0	114.0	146.0	
	14 (2030)	50 (13.2)	32.0	66.0	108.0	142.0	

CDSC-01-C-D24-10/1090



DIMENSIONS IN
MILLIMETRES (INCHES)

Details of Mounting Holes



Note: The fitting portion of o-rings should have a good machined finish.

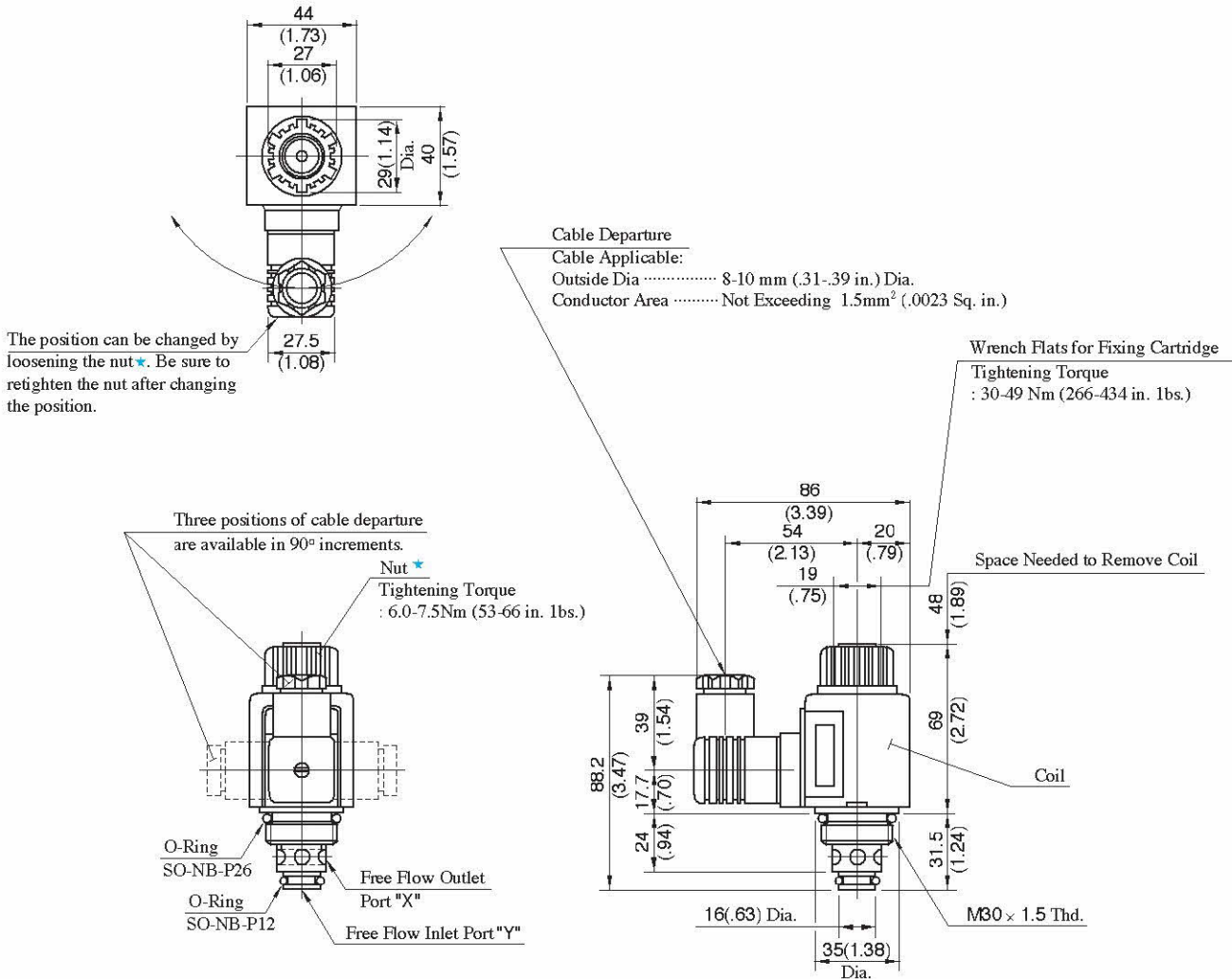
How to Mount

When mounting, the following steps must be followed:

1. Loosen the nut★, then remove the coil.
2. Thread the cartridge, making sure that the collar 24 (.94) Dia. of the cartridge is well fitted to the component surface (A surface in the left drawing).
3. Attach the coil and secure it with a nut.

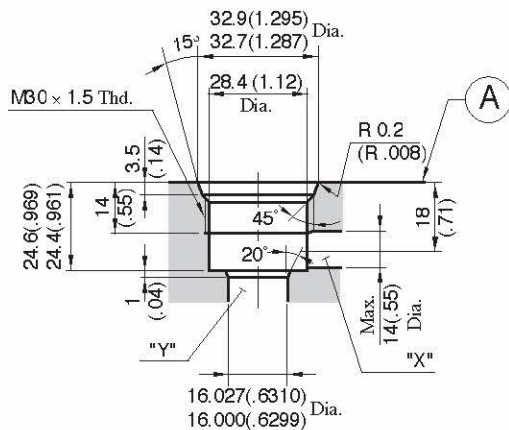
CDSC-03-C-A*-21/2190

Models with AC Solenoids



DIMENSIONS IN MILLIMETRES (INCHES)

Details of Mounting Holes



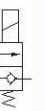
How to Mount

When mounting, the following steps must be followed:

1. Loosen the nut*, then remove the coil.
2. Thread the cartridge, making sure that the collar 35 (1.38) Dia. of the cartridge is well fitted to the component surface (A surface in the left drawing).
3. Attach the coil and secure it with a nut.

Note: The fitting portion of O-rings should have a good machined finish.

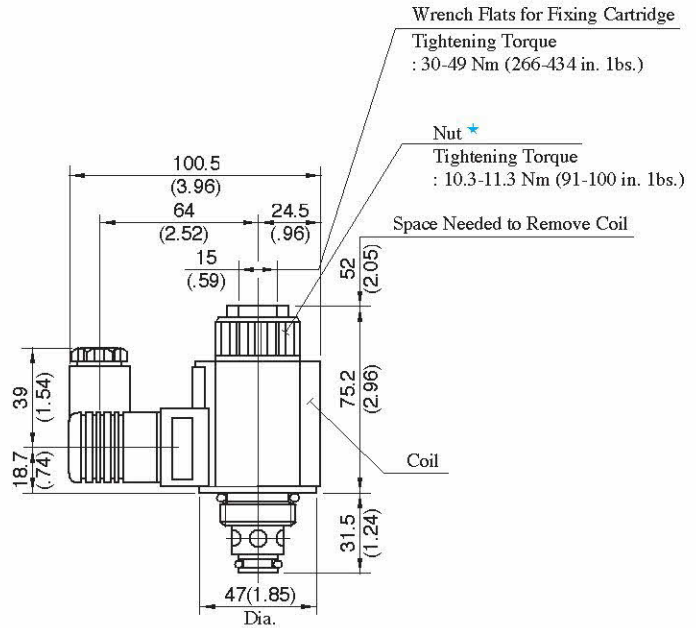
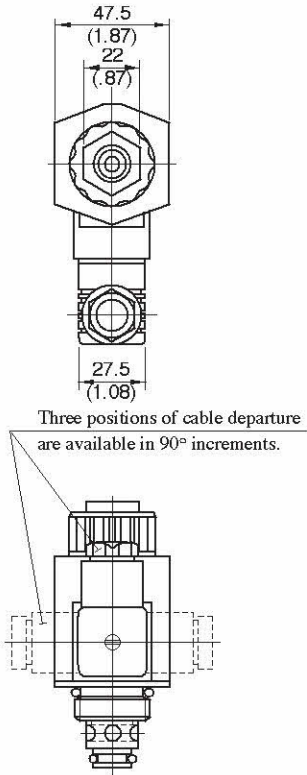
E



Solenoid Operated Poppet Type Two-Way Valves

CDSC-03-C-D*-21/2190

Models with DC Solenoids

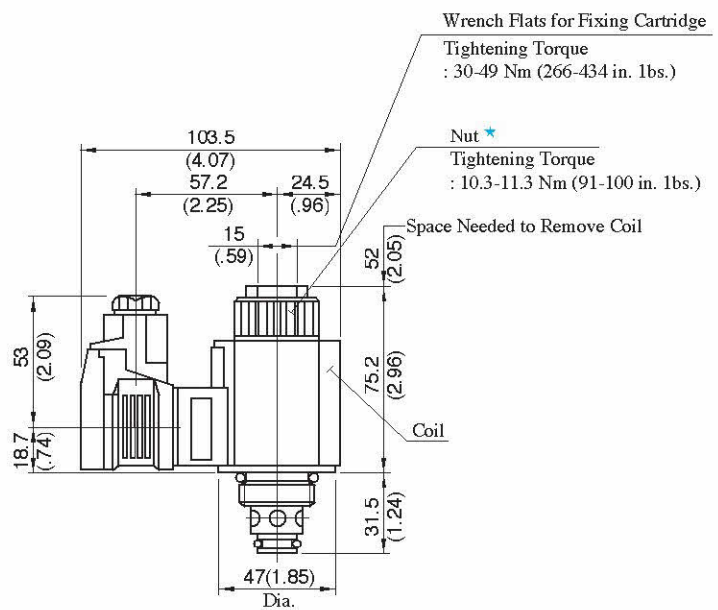
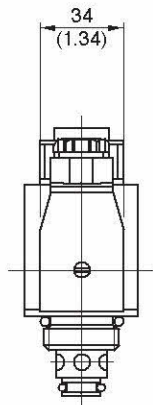


For other dimensions, refer to the "Models with AC Solenoids".

DIMENSIONS IN MILLIMETRES (INCHES)

CDSC-03-C-R*-21/2190

Models with R Type Solenoids

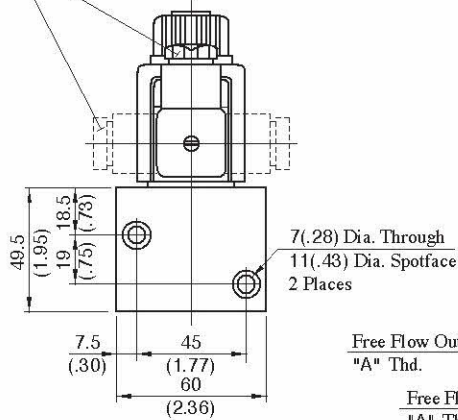


For other dimensions, refer to the "Models with AC Solenoids".

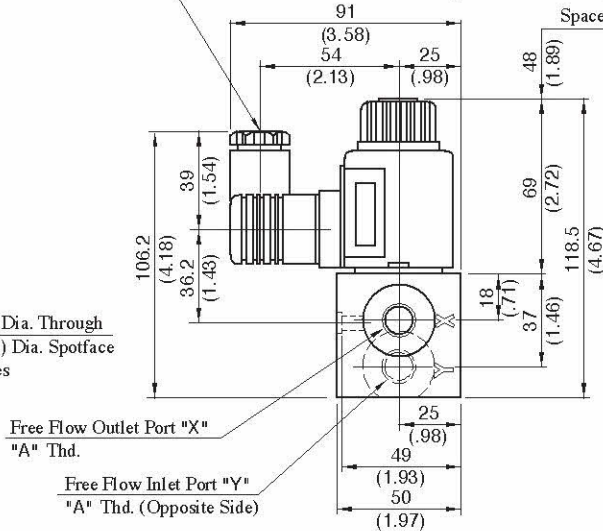
CDST-03, 03W-C-* -21/2180/2190

Models with AC Solenoids

Three positions of cable departure are available in 90° increments.



Cable Departure
Cable Applicable:
Outside Dia 8-10 mm (.31-.39 in.) Dia.
Conductor Area Not Exceeding 1.5mm² (.0023 Sq. in.)



Space Needed to Remove Coil

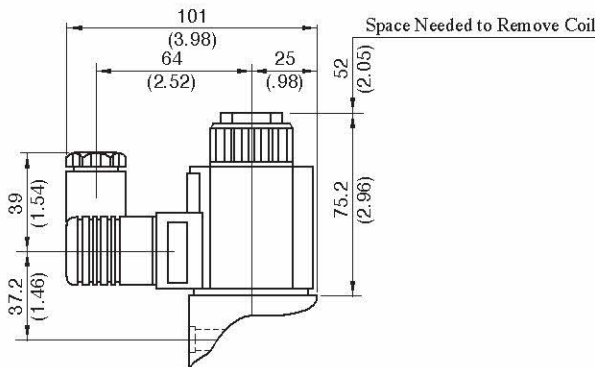
Model Numbers	"A" Thd.
CDST-03W-C-* -21	Re 1/4
CDST-03-C-* -21	Re 3/8
CDST-03W-C-* -2180	1/4 BSP.F
CDST-03-C-* -2180	3/8 BSP.F
CDST-03W-C-* -2190	1/4 NPT
CDST-03-C-* -2190	3/8 NPT

Note: The position of cable departure can be changed. For the detail, refer to CDSC-03 on the previous page.

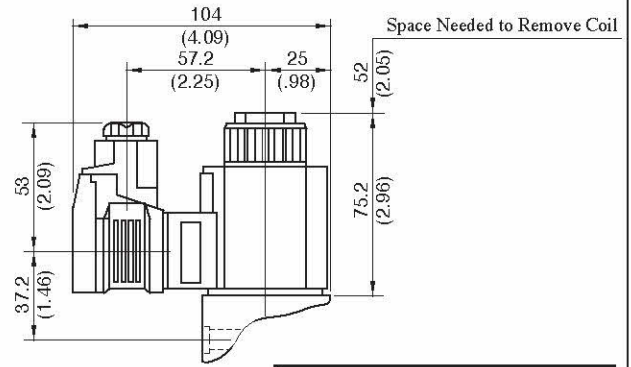
Free Flow Outlet Port "X"
"A" Thd.

Free Flow Inlet Port "Y"
"A" Thd. (Opposite Side)

Models with DC Solenoids



Models with R Type Solenoids



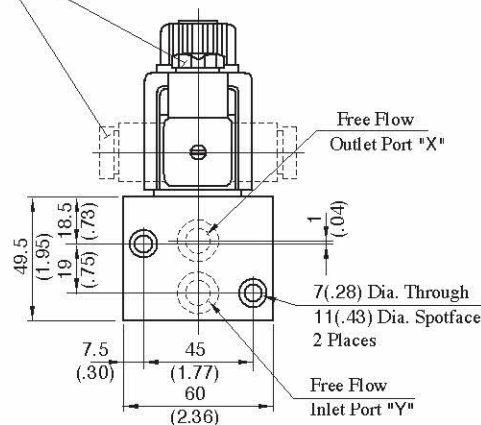
For other dimensions, refer to the "Models with AC Solenoids".

DIMENSIONS IN MILLIMETRES (INCHES)

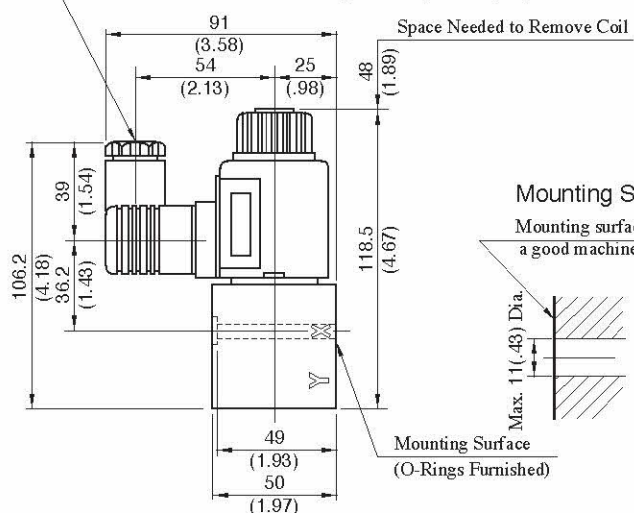
CDSG-03-C-* -21/2190

Models with AC Solenoids

Three positions of cable departure are available in 90° increments.



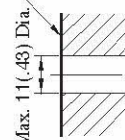
Cable Departure
Cable Applicable:
Outside Dia 8-10 mm (.31-.39 in.) Dia.
Conductor Area Not Exceeding 1.5mm² (.0023 Sq. in.)



Space Needed to Remove Coil

Mounting Surface

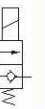
Mounting surface should have a good machined finish.



Mounting Surface
(O-Rings Furnished)

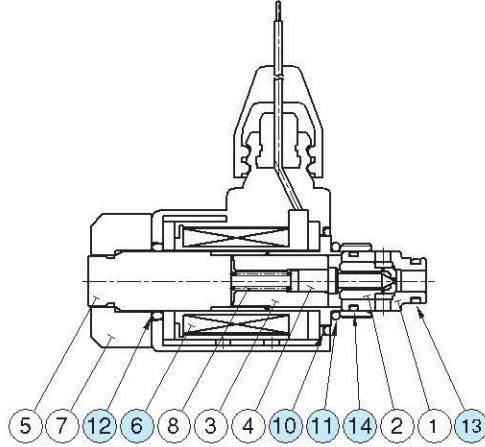
Note 1: For models with DC solenoids and models with R type solenoids, refer to CDST-03, 03W.

2: The position of cable departure can be changed. For the detail, refer to CDSC-03 on the previous page.



■ List of Seals and Coil Ass'y

CDSC-01-C-D24-10/1090

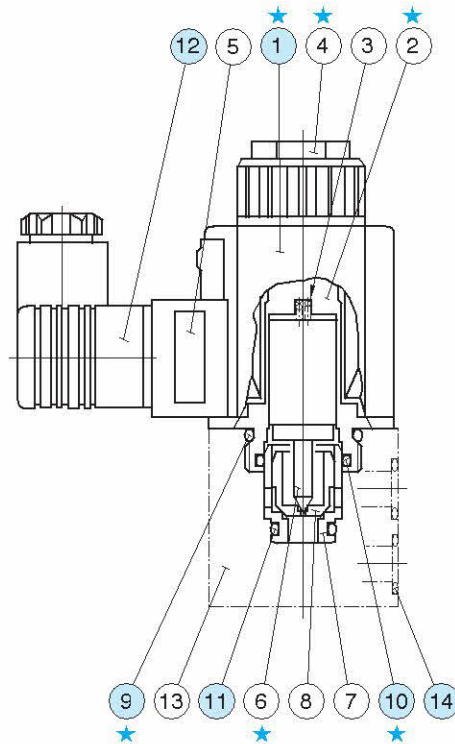


Item	Name of Parts	Part Numbers	Qty.	Seal Kit Numbers
6	Coil Ass'y	2697-VK317470-3	1	————
10	O-Ring	TK280163-7	1	KS-CDSC-01-10
11	O-Ring	SO-NB-P18	1	
12	O-Ring	SO-NB-P16	1	
13	O-Ring	SO-NB-P9	1	
14	O-Ring	SO-NB-A014	1	

Note: When ordering the seals, please specify the seal kit number.

List of Seals, Solenoid Ass'y, Coil Ass'y and Connector Ass'y

CDST-03*-C-*-21/2180/2190
 CDSC-03-C-*-21/2190
 CDSG-03-C-*-21/2190



Solenoid assembly is composed of the parts marked with ★.

List of Seals

Item	Name of Parts	Part Numbers	Qty.	Remarks
9	O-Ring	SO-NB-P26	1	_____
10	O-Ring	SO-NB-P20	1	_____
11	O-Ring	SO-NB-P12	1	_____
14	O-Ring	SO-NB-A014	2	only for CDSG

List of Seal Kits

Valve Model Numbers	Seal Kit Numbers
CDSC-03-C-*-21*	KS-CDSC-03-20
CDST-03*-C-*-21*	
CDSG-03-C-*-21*	KS-CDSG-03-20

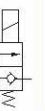
Note: When ordering the seals, please specify the seal kit number from the table right.

Solenoid Ass'y, Coil Ass'y and Connector Ass'y No.

Valve Model No.	Solenoid Ass'y No.	① Coil No.	⑫ Connector Ass'y No.
CDS*-03*-C-A100	CSA1-100-20	C-CSA1-100-20	GDM-211-B-11
CDS*-03*-C-A120	CSA1-120-20	C-CSA1-120-20	
CDS*-03*-C-A200	CSA1-200-20	C-CSA1-200-20	
CDS*-03*-C-A240	CSA1-240-20	C-CSA1-240-20	
CDS*-03*-C-D12	CSD1-12-20	C-SD1-12-50	GDM-211-B-11
CDS*-03*-C-D24	CSD1-24-20	C-SD1-24-50	
CDS*-03*-C-D48	CSD1-48-20	C-SD1-48-50	
CDS*-03*-C-R100	CSR1-100-20	C-SR1-100-50	GDME-211-R-B-10
CDS*-03*-C-R200	CSR1-200-20	C-SR1-200-50	

Change of supply voltage

The supply voltage can be changed by replacing the coil.



Interchangeability between Current and New Design

Because of solenoid assembly improvements, CDS*-03* has been model-changed (design 20 to design 21).

Specifications and Characteristics

There are no changes in the specifications and characteristics of the valves themselves.

Solenoid Ratings

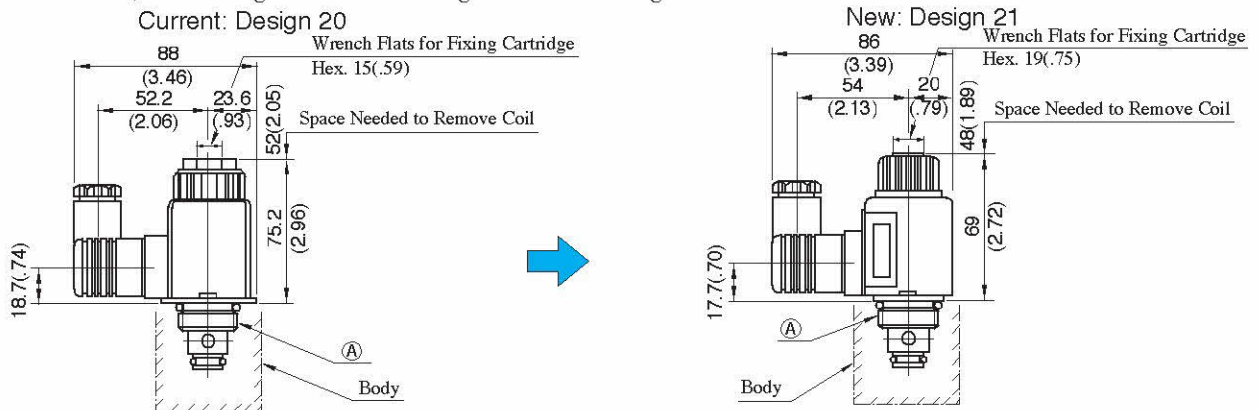
There are changes in the inrush current, holding current and power as shown below. No other changes.

Electric Source	Coil Type	Frequency (Hz)	Voltage (V)		Current & Power at Rated Voltage					
			Source Rating	Serviceable Range	Inrush (A)		Holding (A)		Power (W)	
					New	Current	New	Current	New	Current
AC	A100	50	100	80 - 110	1.12	1.30	0.55	0.52	—	—
		60	100	90 - 120	0.95	1.08	0.40	0.39		
			110		0.86	1.19	0.36	0.47		
	A120	50	120	96 - 132	0.93	1.08	0.46	0.45		
		60		108 - 144	0.79	0.98	0.33	0.33		
	A200	50	200	160 - 220	0.56	0.65	0.28	0.27		
			200	180 - 240	0.48	0.54	0.20	0.20		
		220	0.43		0.59	0.18	0.24			
A240	50	240	192 - 264	0.47	0.55	0.23	0.23			
	60		216 - 288	0.40	0.45	0.17	0.17			
DC (K Series)	D12	—	12	10.8 - 13.2	—	—	2.20	2.40	26	29
	D24		24	21.6 - 26.4			1.10	1.20		
	D48		48	43.2 - 52.8			0.55	0.60		
AC→DC Rectified	R100	50/60	100	90 - 110	—	—	0.30	0.32	26	29
	R200		200	180 - 220			0.15	0.17		

Interchangeability in Installation

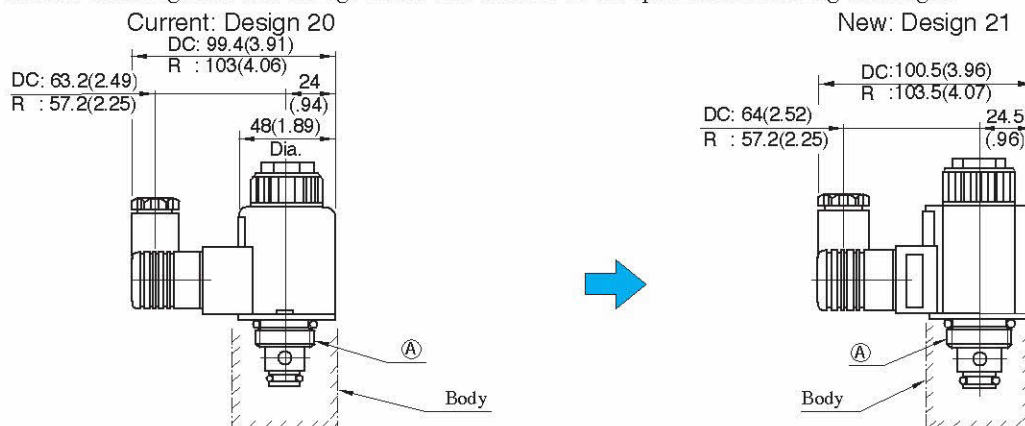
AC Solenoids

Most items of mounting are interchangeable except the dimensions as shown below. In addition, the size of the spanner (core end faces) for locking the CDSC cartridges has been changed to 15-19 mm across flats.



DC/R Type Solenoids

Most items of mounting are interchangeable except the dimensions as shown below. The solenoid shape changed from circular to hexagonal. No change in the size 15 mm of the spanner for locking cartridges.

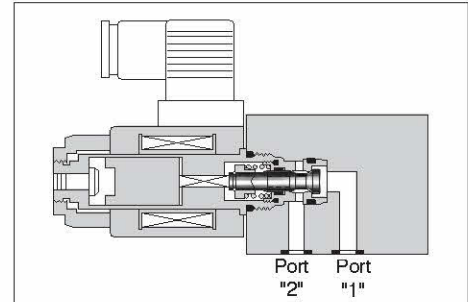


Note: The above drawings give illustrations for the cartridge type. The dimension (A) at the mounting section remains unchanged. In case of the Thread Connection Type and Gasket Mounting Type, a body is mounted to the hatched section. The dimensions of the body remain unchanged.

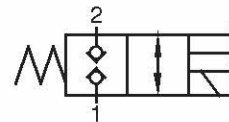
Shut-off Type Solenoid Operated Directional Valves

The shut-off type solenoid operated directional valves are poppet type solenoid operated two-way directional valves developed to meet the needs of this age such as energy and resources saving.

- High-response
High response is provided by the poppet design.
- Smallest internal leakage
Internal leakage are very small, less than 5 drips per min., which is achieved by the poppet design.
- Two mounting types: cartridge and sub-plate
Mounting dimensions for both types conform to ISO standard.
- Water-proof type (conforming to JIS D 0203 Water Spray Test 32) is also available.



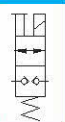
Graphic Symbol



Specifications

Model Numbers	Max. Flow ^{★1} L/min (U.S.GPM)	Max. Operating Pressure			Max. Changeover Frequency min ⁻¹ (Cycles/Min)	Internal leakage cm ³ /min (cu.in./min)	Approx. Mass kg(1bs.)	
		Port "1" ^{★2}		Port "2"			AC	DC
		"1" to "2" Flow	"2" to "1" Flow					
DSPC-01-C-* ^{★3} -20* ^{★4}	40 (10.6)	10 (1450)	16 (2320)	25 (3630)	300	or Less 0.25 (.015)	0.45 (1.0)	0.6 (1.3)
DSPG-01-C-* ^{★3} -20*							1.45 (3.2)	1.6 (3.5)
DSPC-03-C-* ^{★3} -10*	80 (21.1)	10 (1450)	16 (2320)	25 (3630)	240	or Less 0.25 (.015)	0.9 (2.0)	1.0 (2.2)
DSPG-03-C-* ^{★3} -10*							3.8 (8.4)	3.9 (8.6)

- ★1. Maximum flow rates depend on operating conditions. For details, see [page 491](#).
- ★2. Do not connect port "1" to a line subjected to surge pressures. In addition, if you use port "1" for tank line, be sure to keep the end of the line in the oil.
- ★3. Protections against dust and water conform to the international electric standard (IEC) PUBL 529 IP64.
- ★4. In the case of "DSPC-01-C-D*", use iron material for installation body (cavity).



Model Number Designation

F-	DSP	G	-01	-C	-D24	-20	*
Special Seals	Series Number	Type of Connection	Valve Size	Valve Type	Coil Type	Design Number	Design Standard
F: Special Seals for Phosphate Ester Type Fluids (Omit if not required)	DSP: Shut-Off Type Solenoid Operated Directional Valves	C: Cartridge Type G: Sub-plate Mounting	01	C: Normally Closed	AC A 100 A 200	20	None: Japanese Std. "JIS" & European Design Std. 90: N. American Design Std.
			03		DC D12 D24	10	

Solenoid Ratings

Electric Source	Coil Type	Frequency (Hz)	Voltage (V)		Current & Power at Rated Voltage					
			Source Rating	Serviceable Range	Inrush (A) ^{★1}		Holding (A)		Power (W)	
					01	03	01	03	01	03
AC	A100	50	100	80 - 110	2.42	5.37	0.51	0.90	—	—
			100	90 - 120	2.14	4.57	0.37	0.63		
		110	2.35		5.03	0.44	0.77			
	A200	50	200	160 - 220	1.21	2.69	0.25	0.45		
			200	180 - 240	1.07	2.29	0.19	0.31		
		220	1.18		2.52	0.22	0.38			
DC ^{★2} (K Series)	D12	—	12	10.8 - 13.2	—	—	2.45	3.16	29	38
	D24	—	24	21.6 - 26.4	—	—	1.23	1.57		

★1. Inrush current in the above table show rms values at maximum stroke.

★2. K-Series DC Solenoid which has a reputation for excellent DC control is employed.

Sub-plate

Model Numbers	Japanese Standard "JIS"		European Design Standard		N.American Design Standard		Approx. Mass kg (lbs.)
	Sub-plate Model Numbers	Thread Size	Sub-plate Model Numbers	Thread Size	Sub-plate Model Numbers	Thread Size	
DSPG-01	DSGM-01-31	Rc 1/8	DSGM-01-3180	1/8 BSP.F	DSGM-01-3190	1/8 NPT	0.8 (1.8)
	DSGM-01X-31	Rc 1/4	DSGM-01X-3180	1/4 BSP.F	DSGM-01X-3190	1/4 NPT	0.8 (1.8)
	DSGM-01Y-31	Rc 3/8	—	—	DSGM-01Y-3190	3/8 NPT	0.8 (1.8)
DSPG-03	DSGM-03-40	Rc 3/8	DSGM-03-2180	3/8 BSP.F	DSGM-03-2190	3/8 NPT	3.0 (6.6)
	DSGM-03X-40	Rc 1/2	DSGM-03X-2180	1/2 BSP.F	DSGM-03X-2190	1/2 NPT	3.0 (6.6)
	DSGM-03Y-40	Rc 3/4	DSGM-03Y-2180	3/4 BSP.F	DSGM-03Y-2190	3/4 NPT	4.7 (10.4)

● Sub-plates are available. Specify the sub-plate model number from the table above. When sub-plates are not used, the mounting surface should have a good machined finish.

Mounting Bolts

Four socket head cap screws in the table below are included.

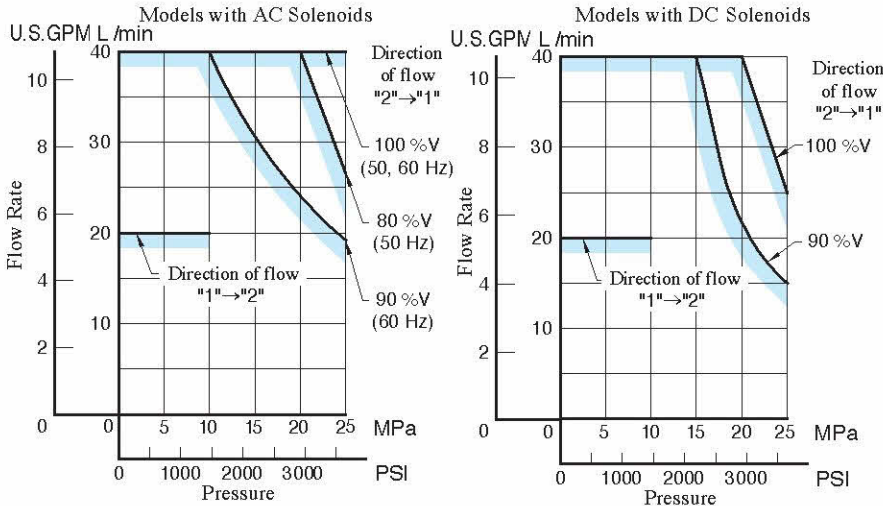
Valve Model Numbers	Descriptions	Soc. Hd. Cap Screw (4 pcs.)	Tightening Torque
DSPG-01	Japanese Standard "JIS" and European Design Standard	M5 × 50 Lg.	5-7 Nm (44 -62 in. lbs.)
	N. American Design Standard	No. 10-24 UNC × 2 Lg.	
DSPG-03	Japanese Standard "JIS" and European Design Standard	M6 × 80 Lg.	12-15 Nm (106 -133 in. lbs.)
	N. American Design Standard	1/4-20 UNC × 3-1/4 Lg.	

Typical Performance Characteristics at Viscosity 30 mm²/s (141 SSU) [ISO VG 46 oils, 50°C(122°F)]

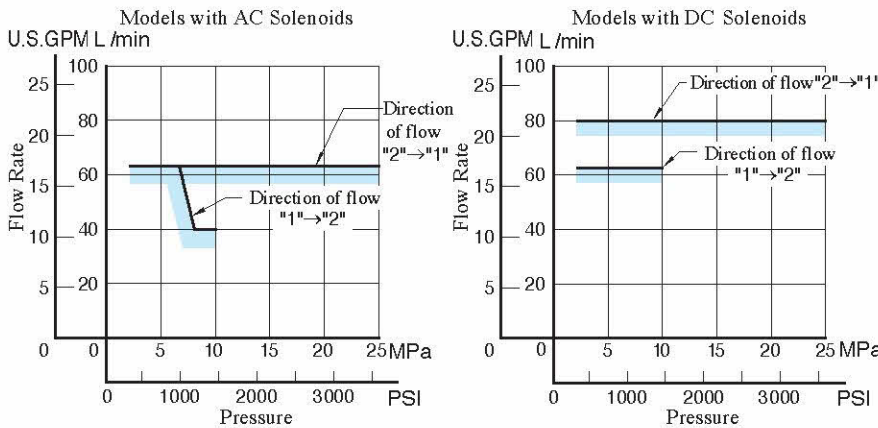
Maximum Flow Rate

The zone under each shaded line denotes the flow rate ranges being free of trouble in changeover.

DSPC/DSPG-01



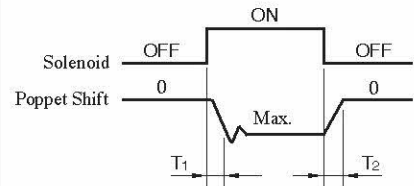
DSPC/DSPG-03



Typical Changeover Time

[Test Conditions]

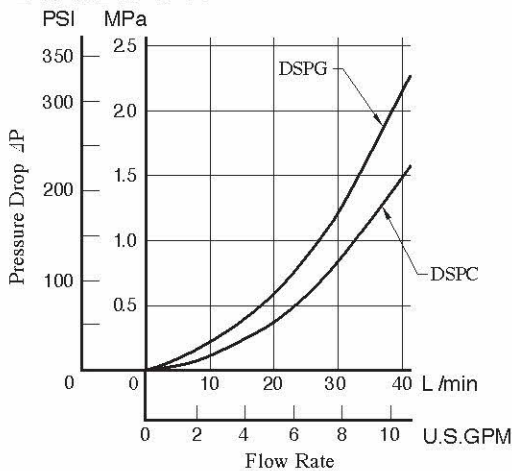
- Pressure: 15 MPa (2180 PSI)
- Flow Rate: (01) 30 L/min (7.9 U.S.GPM)
(03) 63 L/min (16.6 U.S.GPM)
- Viscosity: 30 mm²/s (141 SSU)
- Voltage: 100 % V
(After coil temperature rise and saturates)
- Direction of Flow: "2" → "1"



Model Numbers	Shifting Time (ms)	
	T ₁	T ₂
DSPC/DSPG-01-C-A*	22	30
DSPC/DSPG-01-C-D*	69	14
DSPC/DSPG-03-C-A*	22	20
DSPC/DSPG-03-C-D*	60	80

Pressure Drop

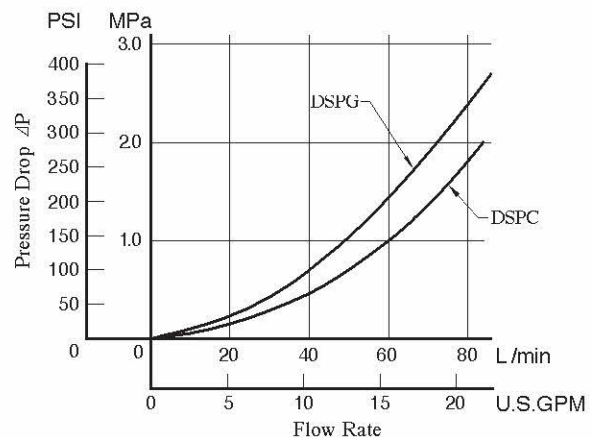
DSPC/DSPG-01



● For any other viscosity, multiply the factors in the table below.

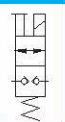
Viscosity	mm ² /s	15	20	30	40	50	60	70	80	90	100
	SSU		77	98	141	186	232	278	324	371	417
Factor		0.81	0.87	0.96	1.03	1.09	1.14	1.19	1.23	1.27	1.30

DSPC/DSPG-03



● For any other specific gravity (G'), the pressure drop (ΔP') may be obtained from the formula below.

$$\Delta P' = \Delta P(G'/0.850)$$

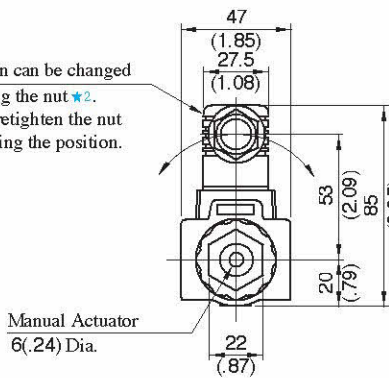


DSPC-01-C-*-20/2090

Mounting Surface: ISO 7789 20-01-0-93

● Models with AC Solenoids

The position can be changed by loosening the nut ★2. Be sure to retighten the nut after changing the position.

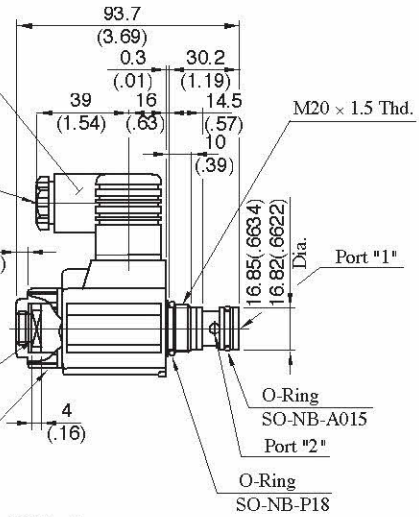


Three positions of cable departure are available in 90° increments.

Cable Departure
Cable Applicable:
Outside Dia.
.....8-10 mm (.31-.39 in.) Dia.
Conductor Area
.....Not Exceeding
1.5m² (.0023 Sq. in.)

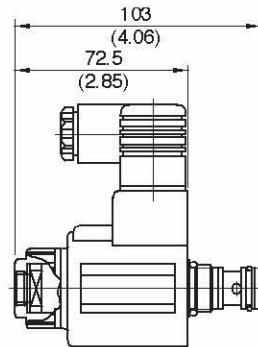
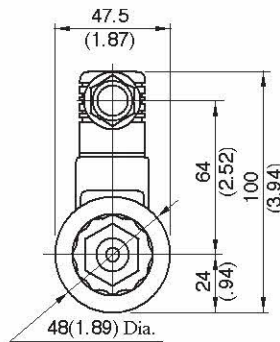
Core Tightening End
15(.59) Across Flats★1

Nut★2



- ★1. Tightening torque for iron core assembly: 30 - 50 Nm (266-443 IN. lbs.)
- ★2. Tightening torque for nuts: 10.3 - 11.3 Nm (91-100 IN. lbs.)

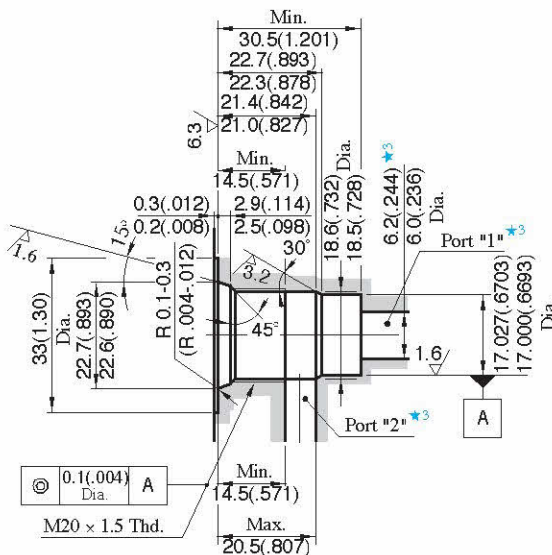
● Models with DC Solenoids



● For other dimensions, refer to the "Models with AC Solenoids".

■ Details of Mounting Holes

DIMENSIONS IN MILLIMETRES (INCHES)



How to Mount

When mounting, the following steps must be followed.

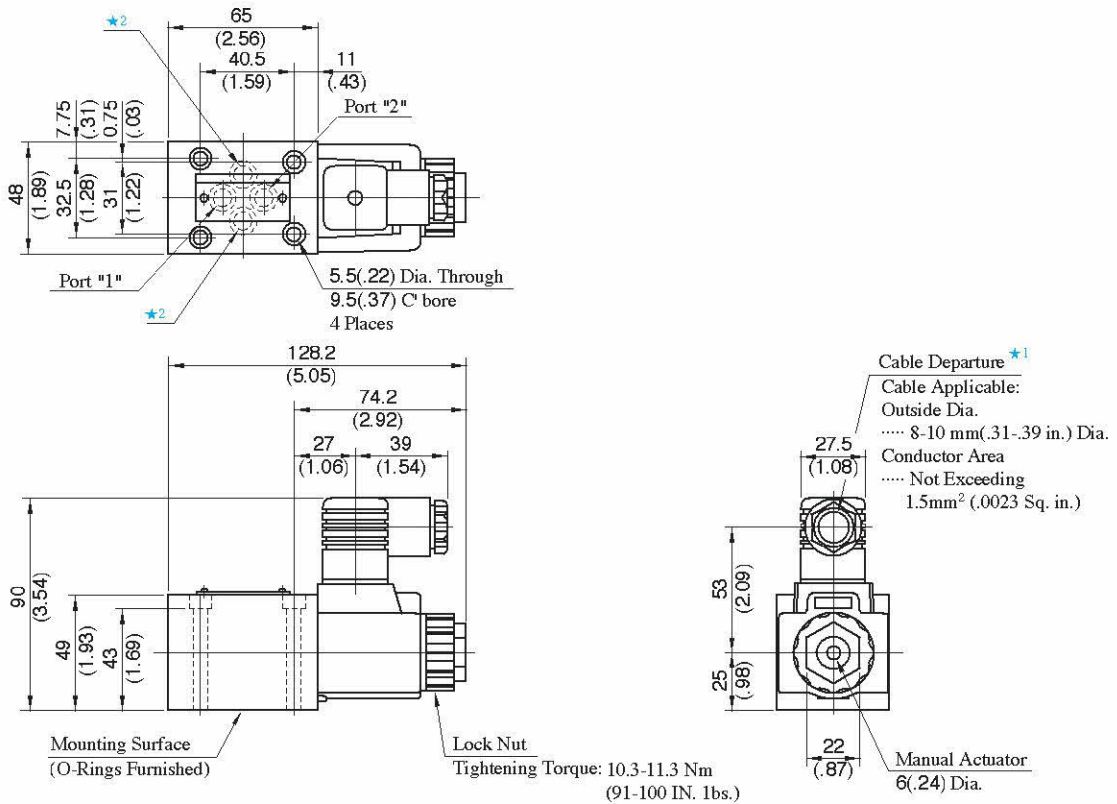
1. Loosen the coil fastening the nut and remove the coil.
2. Making use of the core tightening end, screw the cartridge in.
3. Attach the coil and fix it with the nut.

- ★3. Port diameter of 6.2 (.244) Dia. recommended.
- ★4. Use iron materials for the mounting section.

DSPG-01-C-* -20/2090

Mounting Surface: ISO 4401-AB-03-4-A

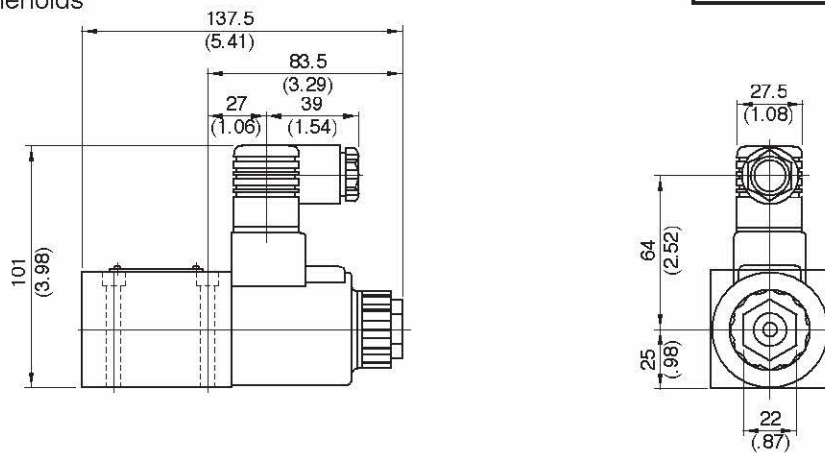
Models with AC Solenoids



- ★1. The location and the position of the cable departure can be changed. For details, see [the cartridge type](#).
- ★2. These ports (2) are not used. In addition, the body has the O-ring grooves and O-rings are included in the body.
- ★3. The mounting dimensions conform to ISO 4401-AB-03-4-A. Ports A and B are used as ports "2" and "1" respectively.
- ★4. O-rings for ports: SO-NB-P9

DIMENSIONS IN
MILLIMETRES (INCHES)

Models with DC Solenoids



● For other dimensions, refer to the "Models with AC Solenoids".

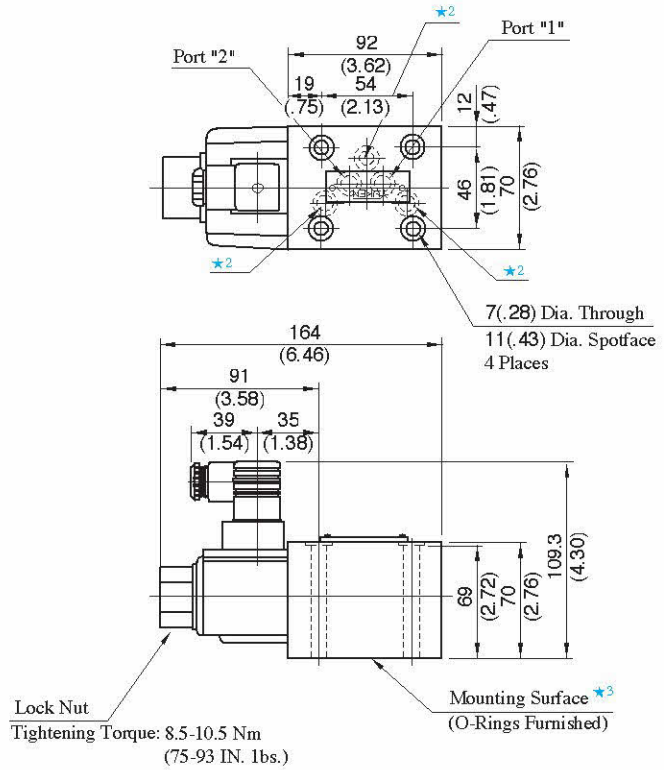
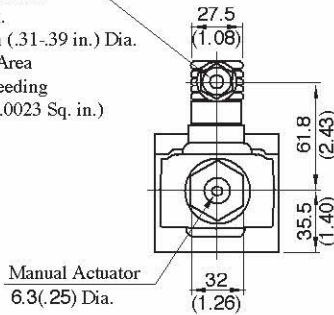
DSPG-03-C-*-10/1090

Models with AC Solenoids

Mounting Surface: ISO 4401-AC-05-4-A

Cable Departure ^{★1}

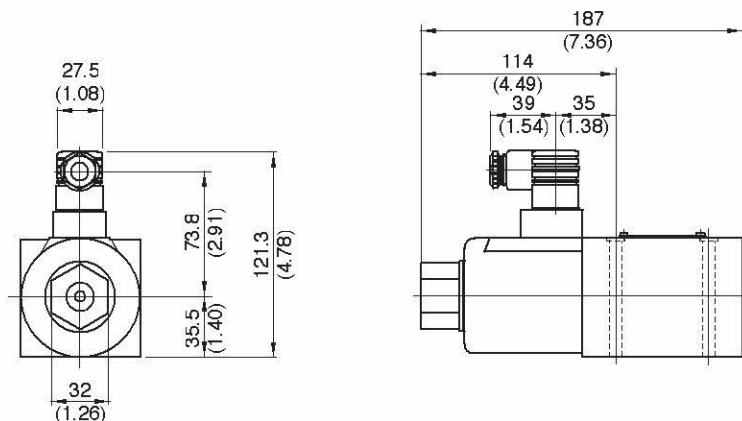
Cable Applicable:
Outside Dia.
.....8-10 mm (.31-.39 in.) Dia.
Conductor Area
.....Not Exceeding
1.5mm² (.0023 Sq. in.)



- ★1. The location and the position of the cable departure can be changed. For details, see the cartridge type.
- ★2. These ports (3) are not used. In addition, the body has the O-ring grooves and O-rings are included in the body.
- ★3. The dimensions of mounting surface conform to ISO 4401-AC-05-4-A. Ports A and B are used as port 2 and port 1 respectively.
- ★4. O-rings for each port: SO-NB-A014

DIMENSIONS IN MILLIMETRES (INCHES)

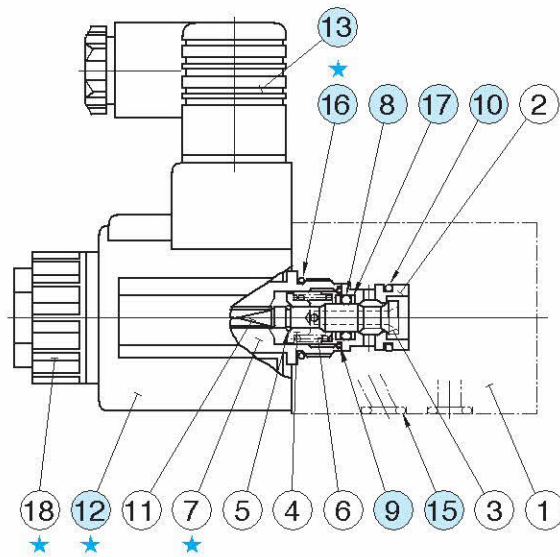
Models with DC Solenoids



● For other dimensions, refer to the "Models with AC Solenoids".

Shut-off Type Solenoid Operated Directional Valves

■ List of Seals, Solenoid Ass'y, Coil Ass'y and Connector Ass'y



Solenoid assembly is composed of the parts marked with ★.

● List of Seals

Item	Name of Parts	DSP*-01		DSP*-03		Remarks
		Part Numbers	Qty.	Part Numbers	Qty.	
8	O-Ring	SO-NA-P8	1	SO-NA-P12	1	————
9	O-Ring	SO-NB-A014	1	SO-NB-A017	1	————
10	O-Ring	SO-NB-A015	1	SO-NB-A018	1	————
15	O-Ring	SO-NB-P9	4	SO-NB-A014	5	————
16	O-Ring	SO-NB-P18	1	SO-NB-A119	1	only for "DSPG"
17	Back Up Ring	5701-VK413831-9	2	2691-VK418550-0	2	————

Note: When ordering the seals, specify the seal kit number from the table below.

● List of Seal Kits

Valve Model Numbers	Seal Kit Numbers
DSPC-01-C-*-20*	KS-DSPC-01-C-10
DSPC-03-C-*-10*	KS-DSPC-03-C-10
DSPG-01-C-*-20*	KS-DSPG-01-C-10
DSPG-03-C-*-10*	KS-DSPG-03-C-10

● Solenoid Ass'y, Coil Ass'y and Connector Ass'y No.

Valve Model No.	Solenoid Ass'y No.	⑫ Coil No.	⑬ Connector No.
DSPC/DSPG-01-C-A100-20/2090	SA1-100-N-6055	C-SA1-100-N-60	GDM-211-B-11
DSPC/DSPG-01-C-A200-20/2090	SA1-200-N-6055	C-SA1-200-N-60	
DSPC/DSPG-01-C-D12-20/2090	SD1-12-N-6055	C-SD1-12-N-60	
DSPC/DSPG-01-C-D24-20/2090	SD1-24-N-6055	C-SD1-24-N-60	
DSPC/DSPG-03-C-A100-10/1090	SA3-100-N-5130	C-SA3-100-N-50	
DSPC/DSPG-03-C-A200-10/1090	SA3-200-N-5130	C-SA3-200-N-50	
DSPC/DSPG-03-C-D12-10/1090	SD3-12-N-5130	C-SD3-12-N-50	
DSPC/DSPG-03-C-D24-10/1090	SD3-24-N-5130	C-SD3-24-N-50	