

**Solenoid Operated Poppet Type Two-Way Valves**

These valves are used for opening/closing oil path by having the poppet valve operated according to electric signal via solenoid. Because these are of poppet type, there is no hydraulic lock and the internal leakage can be greatly reduced.

**Specifications**

Model Numbers	Max. Flow L/min.	Max. Operating Kgf/cm <sup>2</sup>	Internal Leakage cm <sup>3</sup> /min	Max. changeover Frequency Cycles/min	Mass Kg
CDSG-03-C-※-21	50 *	140	Less than 0.25	AC : 300 DC : 240 R : 120	0.85

\* Maximum flow indicates a ceiling flow which does not affect the normal function (changeover) of the valve.

**Solenoid Ratings**

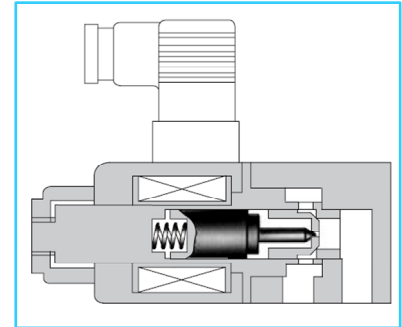
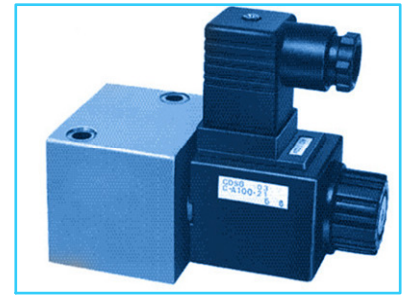
Electric Source	Coil Type	Frequency HZ	Voltage V		Current & Power at Rated Voltage		
			Source Rating	Serviceable Range	Inrush A	Holding A	Power W
AC	A100	50	100	80 – 100	1.3	0.52	--
			100	90 – 120	1.08	0.39	
			110		1.19	0.47	
	A120	60	120	96 – 132	1.08	0.45	
			108 – 144	0.98	0.33		
	A200	50	200	160 – 220	0.65	0.27	
			200	180 – 240	0.54	0.20	
			220		0.59	0.24	
	A240	50	240	192 – 264	0.55	0.23	
			216 – 288	0.45	0.17		
DC (K Series)	--	50/60	12	10.8 – 13.2	--	2.4	26
			24	21.6 – 26.6		1.2	
			48	43.2 – 52.8		0.55	
AC→DC Rectified	R100	50/60	100	90 – 110	--	0.32	26
			200	180 – 220		0.17	

- Because both AC and DC solenoids employ the plug-in type electrical wiring, the valve can be removed without removing the wiring.
- 50-60 Hz common service AC solenoids does not require rewiring when the applied frequency is changed.
- K-Series DC Solenoid which has a reputation for excellent DC Control is employed.

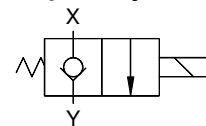
**Model Number Designation**

F-	CDS	G	-03	-C	-D12	21*1
Special Seals	Series Number	Type of Connection	Valve Size	Valve Type	Coil Type	Design Number
<b>F:</b> Special Seals for Phosphate Ester Type Fluids (Omit if not required)	<b>CDS:</b> Solenoid Operated Poppet Type Two-way valves	<b>G:</b> Sub-Plate Mounting	<b>03</b>	<b>C:</b> Normally Closed	AC <b>A100, A120 A200, A240</b>  DC <b>D12, D24 D48</b>  AC→DC Rectified <b>R100, R200</b>	<b>21</b>

\*1 Consult YUKEN for availability.



**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.
- **Mounting**  
There are no mounting restrictions for any models.
- **At the time of test run**  
At the time of test run, air exists within the valve which can keep the oil from flowing after the solenoid is energised. Perform several changeovers in the on-load status to discharge air completely.

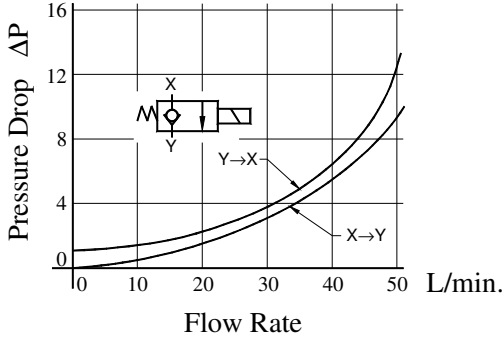
**Mounting Bolts**

Valve Model Numbers	Socket Head Cap Screws	Qty.	Mounting Bolt Ordering Code
CDSG-03	M6 x 60 Lg.	2	BKCD SG-03-21

**Pressure Drop**

**CDSG-03**

Kgf/cm<sup>2</sup>



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

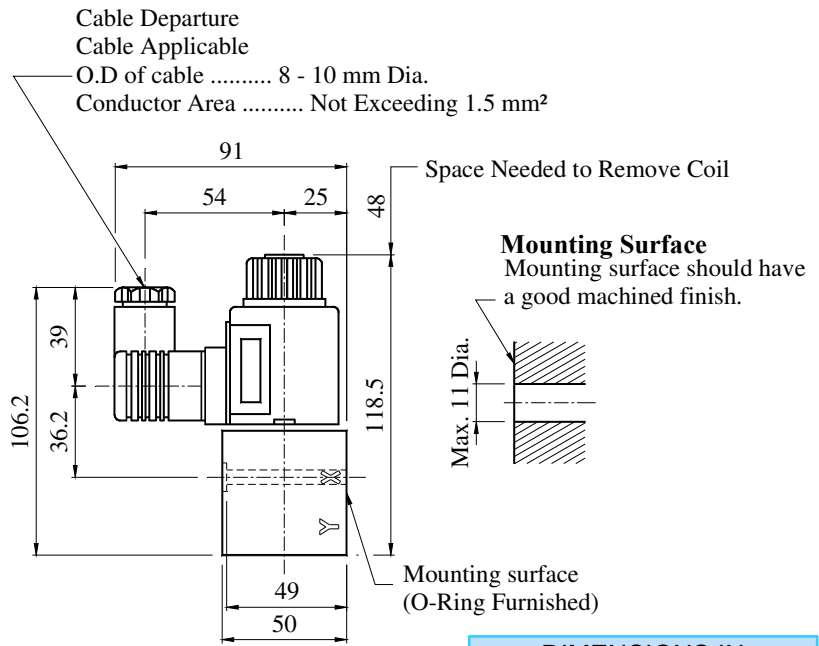
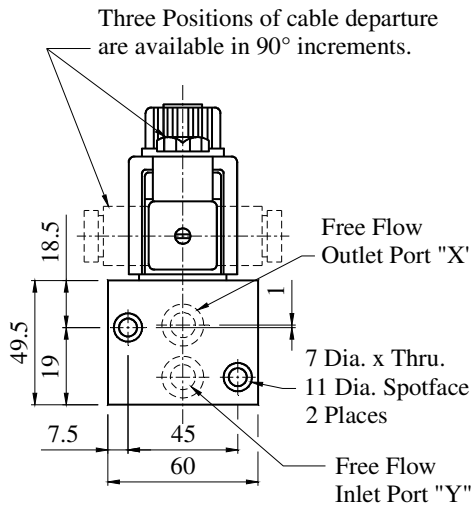
Viscosity	cSt	15	20	30	40	50	60	70	80	90	100
Factor		0.81	0.87	0.96	1.03	1.09	1.14	1.19	1.23	1.27	1.30

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

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

**CDSG-03-C-A-21**

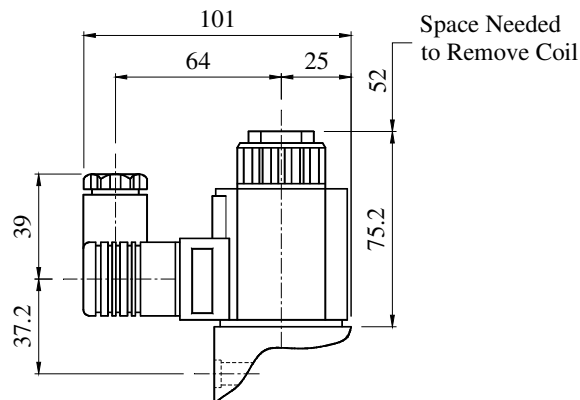
**Models with AC Solenoids**



**DIMENSIONS IN MILLIMETRES**

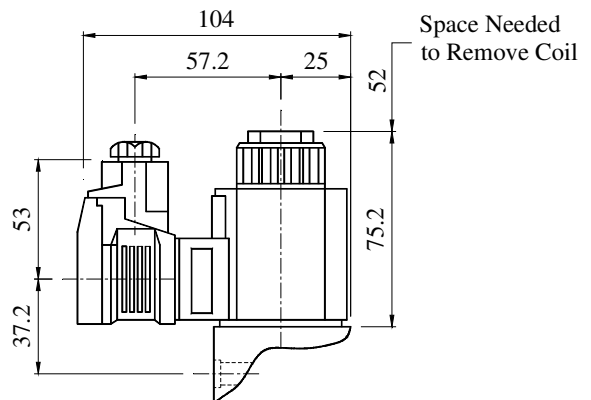
**CDSG-03-C-D-21**

**Models with DC Solenoids**



**CDSG-03-C-R-21**

**Models with R Type Solenoids**



For other dimensions refer to the "Models with AC Solenoid".

## ■ Spare Parts List

### ● List of Seals

Sl. No.	Name of Part	Part No.	Qty.
1	O-Ring	SO-NB-P12	1
2	O-Ring	SO-NB-P20	1
3	O-Ring	SO-NB-P26	1
4	O-Ring	AS568-A014	2

Note : When ordering the seals,  
please specify the seal kit number KS-CDSG-03-20.

## ■ Solenoid Assy., Coil, Connector Assy. Number

Valve Model Numbers	Solenoid Assy. Numbers	Coil Numbers	Connector Assy. Part Numbers
CDS※-03※-C-A100	CSA1-100-20	C-CSA1-100-20	GDM-211-B-11
CDS※-03※-C-A120	CSA1-100-20	C-CSA1-100-20	
CDS※-03※-C-A200	CSA1-100-20	C-CSA1-100-20	
CDS※-03※-C-A240	CSA1-100-20	C-CSA1-100-20	
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-SD1-100-50	GDME-211-R-B-11
CDS※-03※-C-R200	CSR1-200-20	C-SD1-200-50	