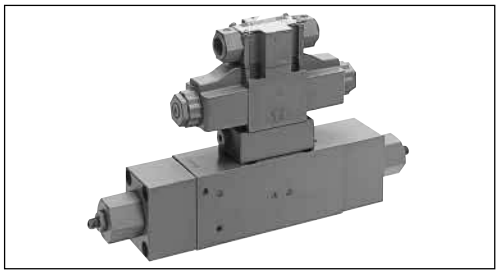
Solenoid controlled pilot operated directional control valve



Features

- The combined application with pressure compensation valve (MUV, MDM) makes it possible to gain the flow characteristics with pressure compensation corresponding to the regulating amount of the flow adjusting screw.
- This valve by itself has a shock-less effect as a solenoid pilot switching valve. If 02 size stack valve (throttle valve, reducing valve) is used for a pilot system, more efficient shock-less effect can be expected.
- Possible to stack in multiple linking to a solenoid proportional switching valve and multiple types.

Nomenclature

*	-	MEP	**	*	*	*	*	*	*	-	60	-	*	*
1		2	3	4	5	6	7	8	9		10		11	12

(1) Nomenclature of applied fluid
No mark : Working oil with petroleum contents
H : Working oil with water/glycol contents
F : Working oil with phosphoric acid ester

(2) Model No.
MEP : Solenoid controlled pilot operated directional control valve

(3) Nominal diameter
12 : 1/2
16 : 3/4
20 : 1
25 : $1^1/_4$
32 : $1^1/_2$

(4) Spool symbol (refer to model list)

(5) Flow type (refer to the specifications)
1 : Q1 flow
2 : Q2 flow
3 : QMAX flow

(6) Spool operating systems
C : Spring center type
B : Spring off-set type (with SOLb)
N : No spring type (without detente)

(7) Voltage mark (refer to solenoid specifications table)

(8) Pilot · Drain mark
X : Internal pilot, internal drain type
Y : External pilot, internal drain type
Z : External pilot, internal drain type
N : Internal pilot, external drain type
*The combination of a pilot and drain cannot be changed.

(9) Pilot stack valve mark
O : Without stack valve
W : with MT-02W-55
P : with MG-02P-1-55
G : with MT-02W-55, MG-02P-1-55

(10) Design number (design number is subject to change)

(11) Spool differential pressure mark
No mark : Differential pressure 0.6MPa {6kgf/cm²}
3 : Differential pressure 0.3MPa {3kgf/cm²}

(12) Option mark of pilot solenoid operated valve ★1
No mark : Terminal box type
D : No spring type (with detente)
Regarding options except above options, refer to KSO-G02 (page 29) option mark table.

Specifications

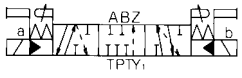
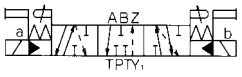
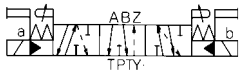
Model No.	Nom. Dia.	Connections	Max. operating pressure★1 MPa {kgf/cm²}	Max. flow rate L/min			Pilot pressure★1 MPa {kgf/cm₂}	Permissible back pressure MPa {kgf/cm²}	Exhausting oil volume at spool switching cm³
				Q1	Q2	QMAX			
MEP12	12	1/2	21 {210}	25	50	75	8~14 {80~140}	10 {100}	1.4
MEP16	16	3/4		50	100	130			3.1
MEP20	20	1		80	160	200			5.9
MEP25	25	$1^1/_4$		125	250	300			9.9
MEP32	32	$1^1/_2$		200	400	500			15.4

Note) ★1 When the max. operating pressure exceeds 14MPa {140kgf/cm²}, choose an external pilot type with pilot pressure in 14Mpa {140kgf/cm²} or less. In case that the pressure in an internal pilot exceeds 14MPa {140kgf/cm²}, choose an option with MG-02P-1-55 (Option mark: P).

★2 The max. flow rate Q1 and Q2 show the case with inlet valve block having a spring for a differential pressure 0.6MPa {6kgf/cm²} or 0.3MPa {3kgf/cm²}, and QMAX. means the case with a inlet valve block having a spring for a differential pressure MPa {6kgf/cm²}. When applying multiple linkage with a pressure compensation valve, there will be a case that the flow rate will not reach the maximum flow rate in the second link or later. Have a guideline in the 3rd link with 80% of the max. flow rate.

Refer to KSO-G02 (page 29) for the solenoid operated valve's specifications.

(4) : Spool type table

Spool method meter in spool ★3	JIS hydraulic symbols	Spool type meter out spool ★4	JIS hydraulic symbols
A		P	
B		Q	
C		R	
D		S	
F			

Note) ★3 Although the max. open levels from P to A, from P to B depend on Q1, Q2, or QMAX, the open levels from A to T, from B to T is only influenced by QMAX.

★4 Although the max. open level from A to T and from B to T differ depending on Q1, Q2 and QMAX, the open level of either from P to A, and from P to B corresponds to three times of QMAX only.

○ Spool corresponds to a solenoid proportional switching valve (MEV).

(7) : Voltage mark table

Voltage mark	Supply voltage	Voltage mark	Supply voltage
A	AC100V (50/60Hz), AC110V (60Hz)	N	DC12V
B	AC200V (50/60Hz), AC220V (60Hz)	P	DC24V
C	AC110V (50Hz)	Q	DC48V
D	AC220V (50Hz)	R	DC100V
J	AC240V (50/60Hz)	S	DC110V
K	AC120V (50/60Hz)	T	DC200V
L	AC115V (50/60Hz)	U	DC220V
M	AC230V (50/60Hz)	E	AC100V (50/60Hz) with rectifier
		F	AC110V (50/60Hz) with rectifier
		G	AC200V (50/60Hz) with rectifier
		H	AC220V (50/60Hz) with rectifier

Refer to KSO-G02(page 29) solenoid specifications for the solenoid specs.

Weight (kg)

Model No.	①	②	③	④
MEP12	6.5	7.9	7.8	9.2
MEP16	9	10.4	10.3	11.7
MEP20	14.4	15.8	15.7	17.1
MEP25	19.1	20.5	20.4	21.8
MEP32	27.9	29.3	29.2	30.6

Note) Weight

①Pilot stack valve mark: O (without stack valve)

②Pilot stack valve mark: W (with MT-02W-55)

③Pilot stack valve mark: P (with MG-02P-1-55)

④Pilot stack valve mark: G (with MT-02W-55, MG-02P-1-55)

Pilot solenoid operated valve model No.

Model code	Adopted solenoid valve model code (*: voltage mark)
MEP****C***-60-**	KSO-G02-4C*-30
MEP****B***-60-**	KSO-G02-8B*-30-4T
MEP****N***-60-**	KSO-G02-2N*-30
MEP****N***-60-*D	KSO-G02-2D*-30