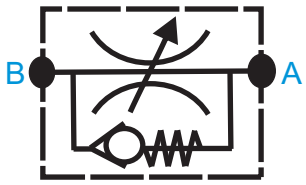
SPEED CONTROL VALVE (Panel Mounting)

(With Check Valve)

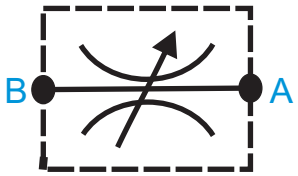


Type FDRV

Nominal Sizes 8 to 40
Maximum operating pressure 350 bar (5110 PSI)
Maximum flow 300 L/min

SPEED CONTROL VALVE (Panel Mounting)

(Without Check Valve)



Type FDV

Nominal Sizes 8 to 40
Maximum operating pressure 350 bar (5110 PSI)
Maximum flow 300 L/min

Speed Control Valve
(FDRV / FDV)

-: DESCRIPTION :-

Falcon high pressure Speed control Valve (FDV) & Speed Control Valve with check (FDRV) which are designed to control the flow in oil hydraulic system with adjustable construction of the cross-section. The flow rate is depend on pressure differential & viscosity. These valves are space saving inline mounting due to compact construction as well as mounting position is optional. A setting screw locks the flow setting.

-: FDV :-

Falcon high pressure Speed Control Valve (FDV) have a specially designed throttle mechanism to enable fine adjustment & shut off the flow.

Speed Control Valve consist essentially of a valve body, a special control spindle & control knob.

In starting position control spindle is fully closed when the flow is shut off, the flow rate increases according the number of the control knob is increased.

The control knob with it's coloured scale & scale rings in the top of the control knob permits an accurate repetition of the settings & visual indication of the flow area.

The coloured triangle on the rings indicates the size of the flow area. An increase in the size of the coloured triangle corresponds to an increase in flow area.

A set-screw locks the flow setting. The flow is controlled in both directions.

-: FDRV :-

Falcon high pressure Speed Control Valve with check (FDRV) allow the same fine flow adjustment. The flow control & shut off function, however, works in one direction only, Unrestricted flow in the reverse direction is via check valve.

Speed Control Valve with check valve consist essentially of a valve body with built-in valve seat, a hardened and polished poppet, a spring, the control spindle & control knob.

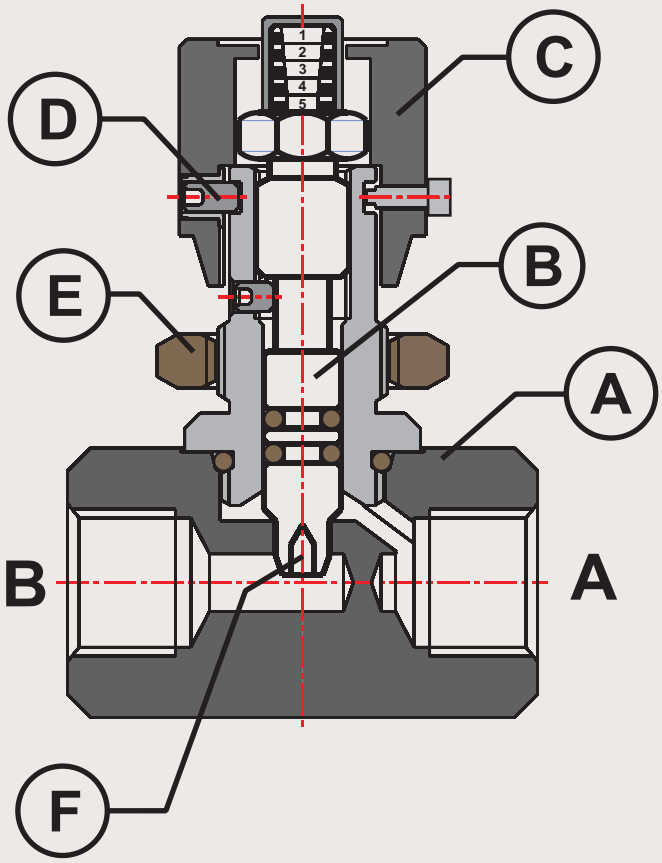
The poppet is pressed onto the valve seat by the spring, thereby shutting off port A from port B. In starting position the control spindle is fully closed when the flow is shut off, The flow rate in the flow direction A→B increases according to the turns of the control knob is increased.

The control knob with it's coloured scale & scale rings in the top of the control knob permits an accurate repetition of the settings & visual indication of the flow area.

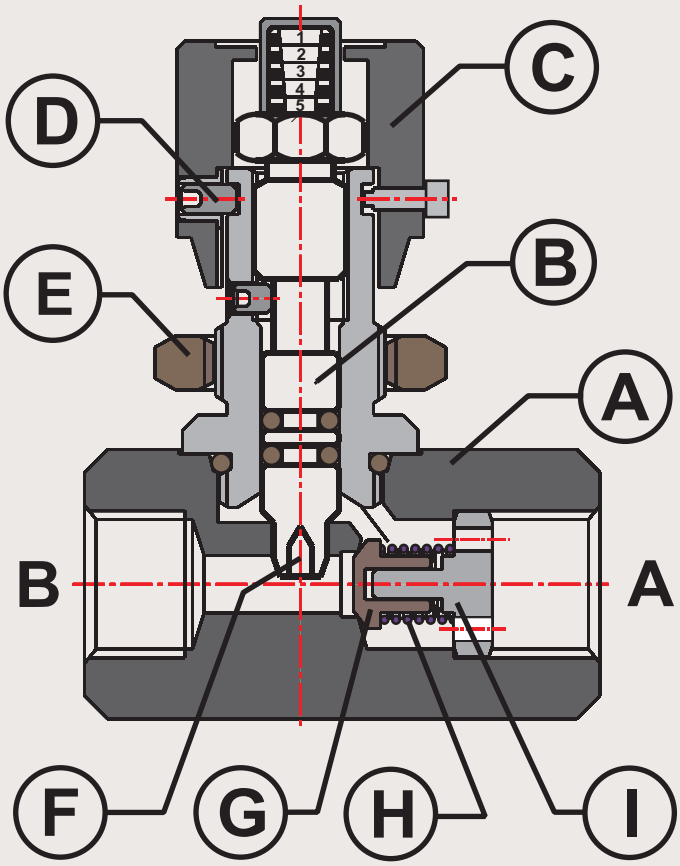
The coloured triangle on the rings indicates the size of the flow area. An increase in the size of the coloured triangle corresponds to an increase in flow area. A set-screw locks the flow setting.

The closing poppet opens when the pressure across port B is higher than the pressure across port A including the cracking pressure produced by the spring force.

FDV



FDRV



A) Valve Body,
B) Control Spindle,
C) Control Knob,
D) Setting Screw,
E) Hex Nut,
F) Throttle Opening,
G) Poppet,
H) Spring,
I) Strainer,

NOTE :- Thickness of Control Panel maximum 6mm.

-: TECHNICAL SPECIFICATION :-

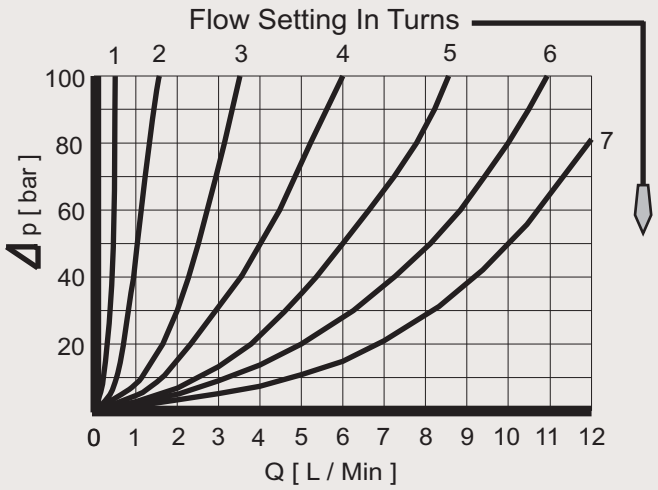
General

1) Type of construction	FDRV:- Slot type speed control valve with shut-off function & built-in check valve, FDV:- Slot type speed control valve with shut-off function,
2) Type of mounting	Inline mounting & optional,
3) Direction of flow	FDV :- optional, FDRV :- from A to B :- controlled flow, from B to A :- free flow via check valve,
4) Material	Valve body :- Mild steel with white zinc plated, Spool :- En-8, Control knob :- Polyamide, Spring :- Spring steel, O ring :- P.U,
5) Fluid temperature range	min : -20 °C / max : +80 °C,

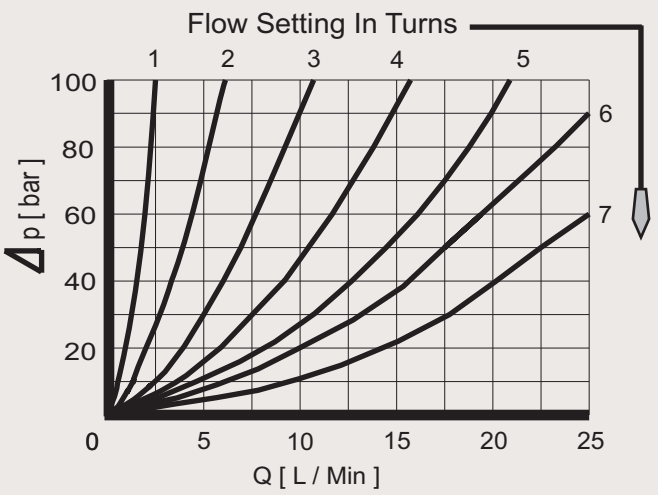
Hydraulic

6) Operating pressure	350 bar,
7) Operating fluid	Mineral oil,
8) Fluid temperature range	min : -20 °C / max : +80 °C,
9) Viscosity range	min : 2.8 mm^2/s max : 800 mm^2/s,
10) Flow rate	FDRV / FDV - 08 = 12 lpm, FDRV / FDV - 10 = 25 lpm, FDRV / FDV - 12 = 40 lpm FDRV / FDV - 16 = 75 lpm, FDRV / FDV - 20 = 120 lpm, FDRV / FDV - 25 = 150 lpm, FDRV / FDV - 30 = 200 lpm, FDRV / FDV - 40 = 300 lpm.

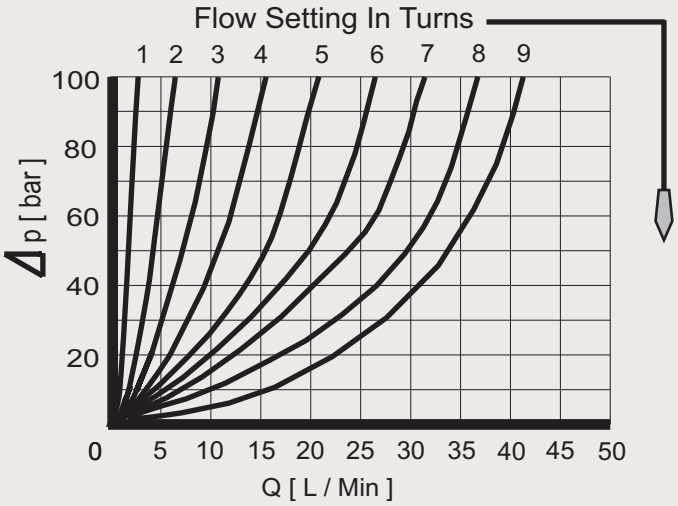
FDV / FDRV - 08



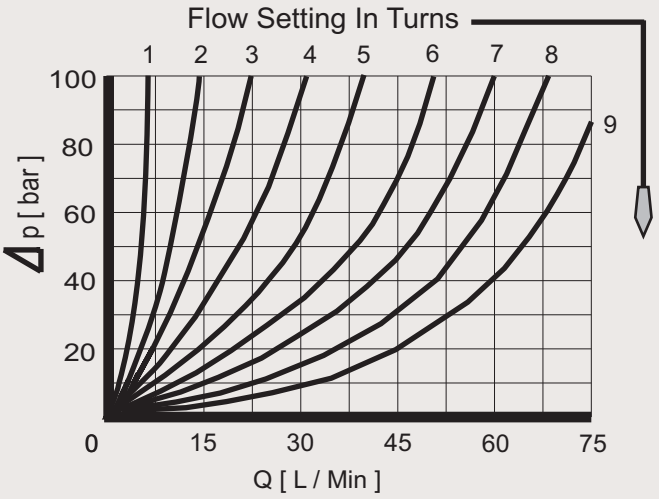
FDV / FDRV - 10



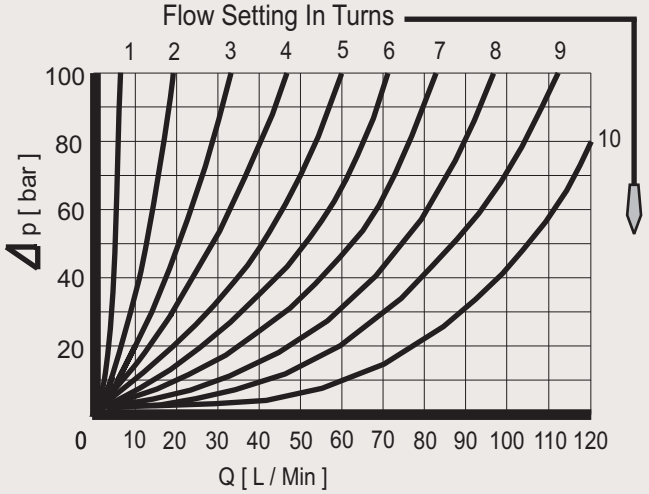
FDV / FDRV - 12



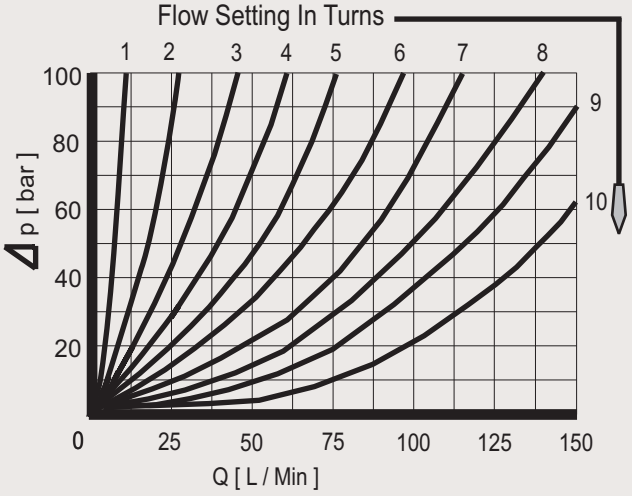
FDV / FDRV - 16



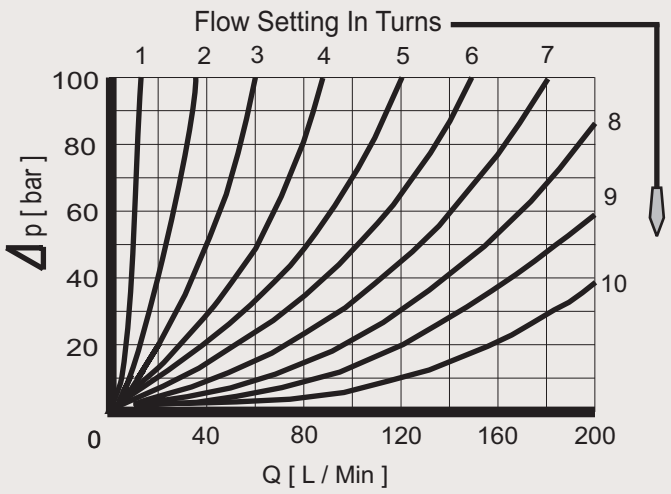
FDV / FDRV - 20



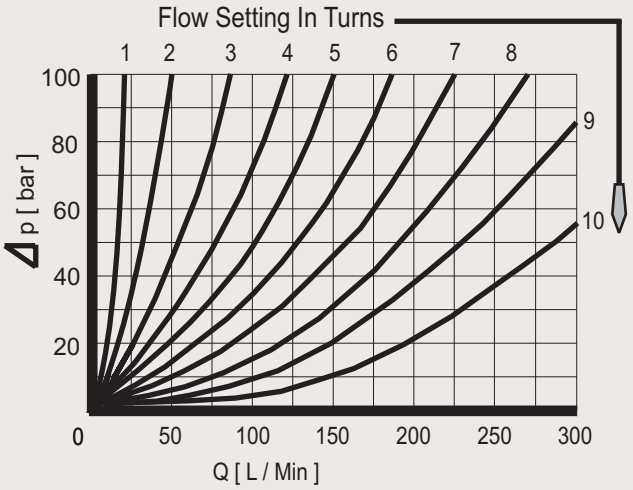
FDV / FDRV - 25



FDV / FDRV - 30



FDV / FDRV - 40



FDRV

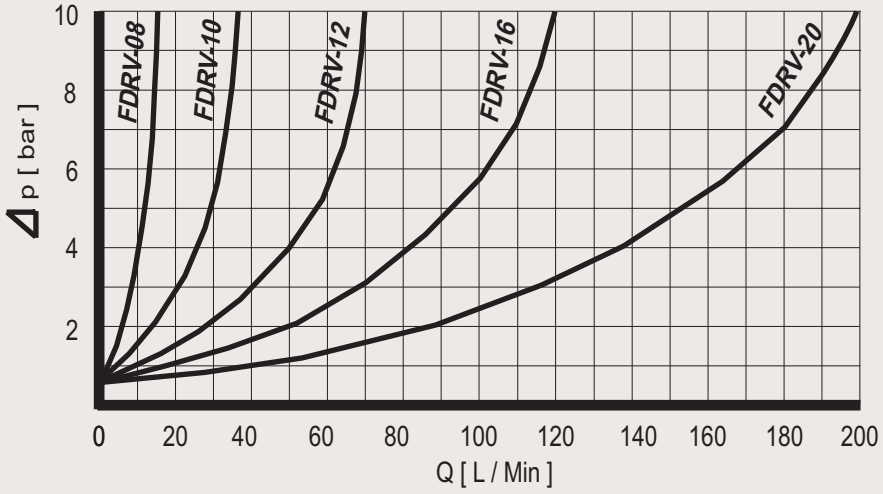
Flow Direction B to A

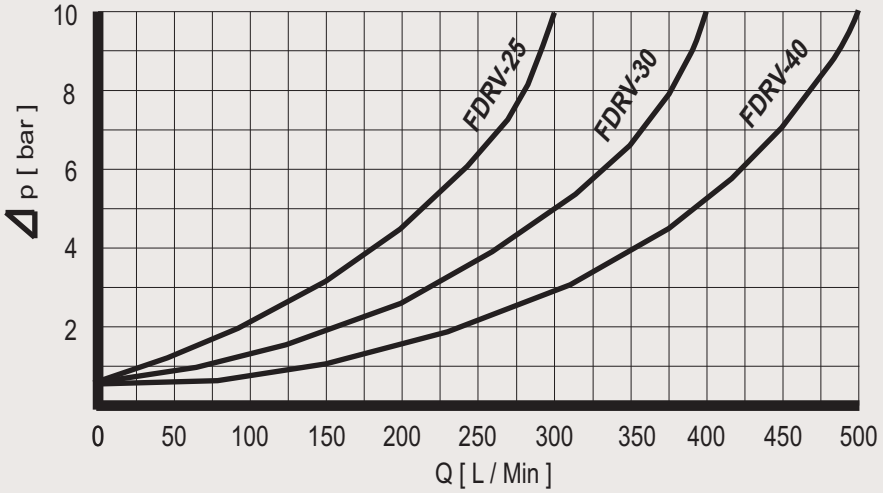
Pressure differential Δp depending on flow rate Q

Via opened check valve at

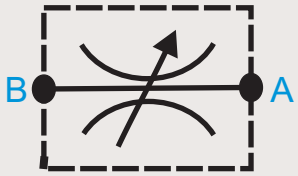
V = 72 mm² / s

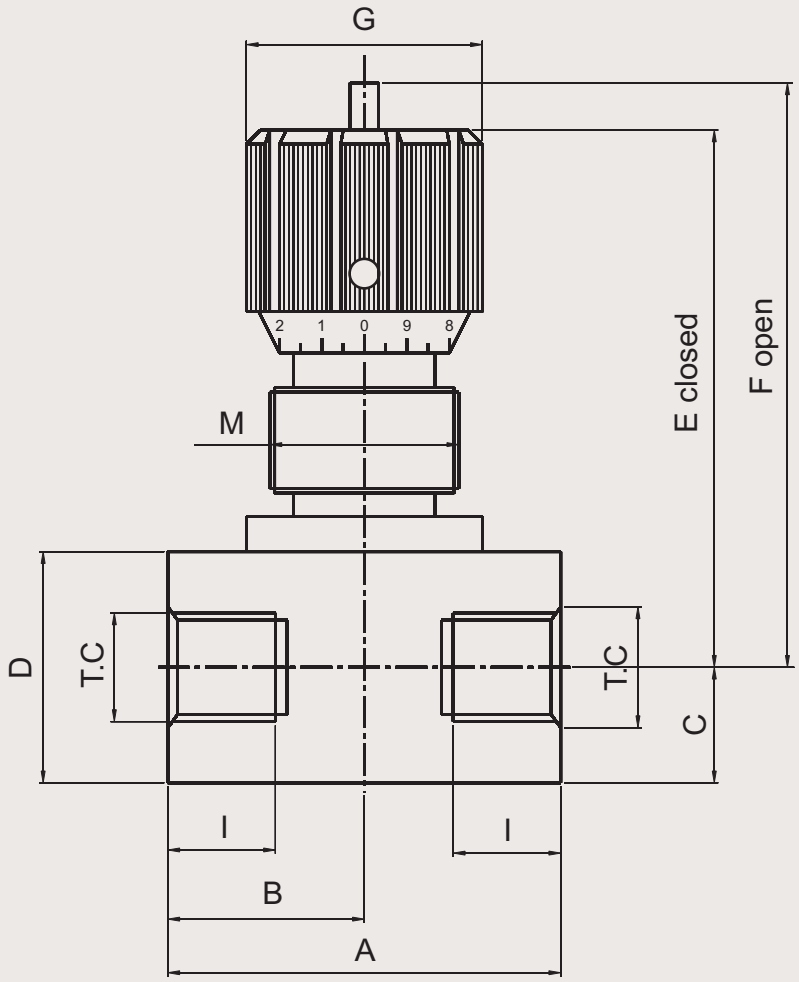
Oil temp = 30° C





FDV





SIZE	Threaded connection	A	B	C	D	E	F	I	M
08	1/4” BSP	55	27.5	15	30	68	75.5	14	M18x1.5
10	3/8” BSP	65	32.5	16	32	69	76.5	15	M18x1.5
12	1/2 “ BSP	68	34	19	38	82	92	18	M22x1.5
16	3/4 “ BSP	78	39	22.5	45	96	105	19	M22x1.5
20	1 “ BSP	108	54	25	50	128	145	24	M38x1.5
25	1 1/4 “ BSP	108	54	30	60	133	150	24	M38x1.5
30	1 1/2 “ BSP	108	54	35	70	138	150	24	M38x1.5
40	2 “ BSP	130	65	44	88	148	165	26	M38x1.5

Speed Control Valve
(FDRV / FDV)

Ref No:- FHT1001
Release : 06/2011
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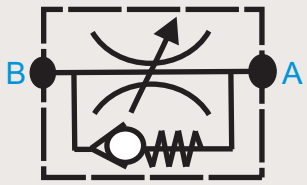
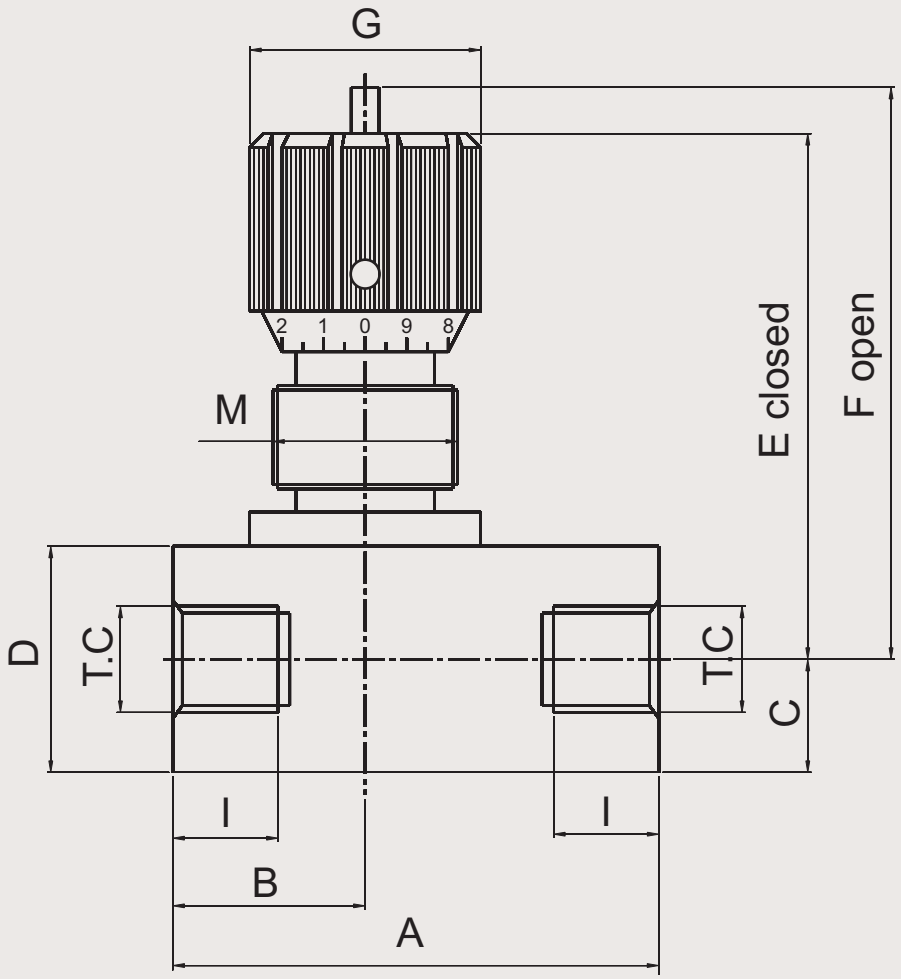
FDRV





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20	1 “ BSP	127	51	25	50	128	145	24	M38x1.5
25	1 1/4 “ BSP	143	55.5	30	60	133	150	24	M38x1.5
30	1 1/2 “ BSP	143	58	35	70	138	150	24	M38x1.5
40	2 “ BSP	165	65	44	88	148	165	26	M38x1.5