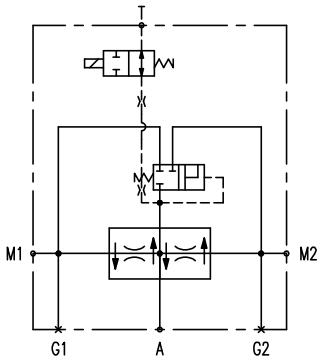
ENGINEERING
TOMORROW

Traction Control HIC Technical Information
X05-FD10 Traction Manifold

OPERATION

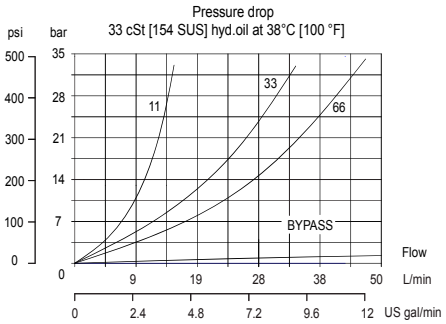
This valve provides electrically actuated traction control for hydrostatic systems with one pump and two motors in parallel. In normal operation, fluid passes freely through the valve. When the solenoid is energized, fluid is forced through the flow divider/combiner, preventing wheel spin or motor over speed.

Schematic



PERFORMANCE

Performance curve

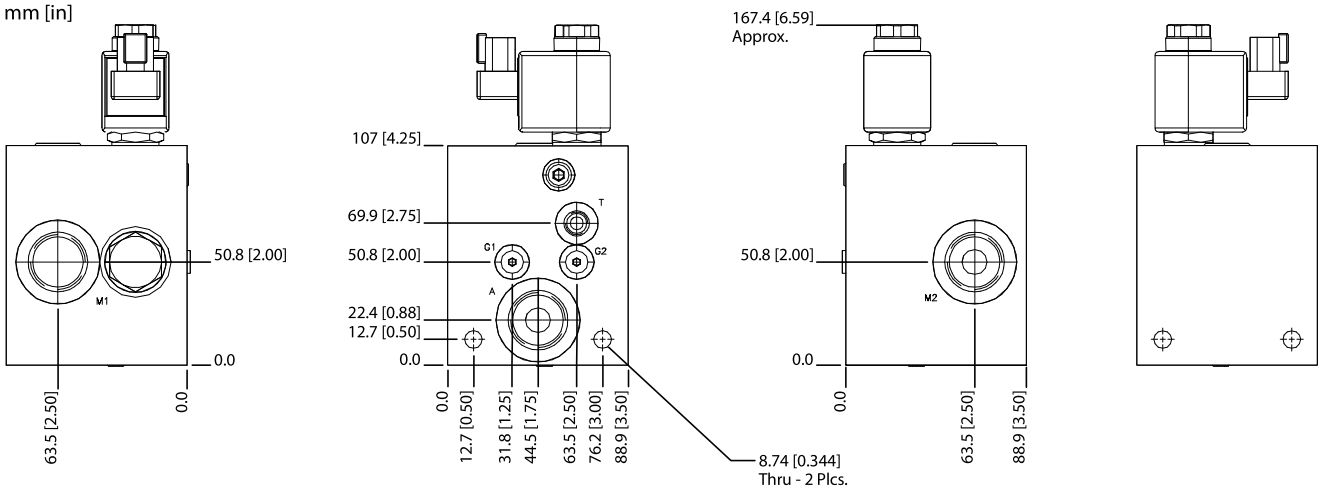


Specifications

Rated pressure	207 bar [3000 psi]
Rated flow at 7 bar [100 psi]	45 l/min [12 US gal/min]
Weight	2.79 kg [6.15 lb]
Bypass Cracking Pressure	3.1 bar [45 psi]

DIMENSIONS

mm [in]



ORDERING INFORMATION

X05–FD10–12S–66–12–DE–B

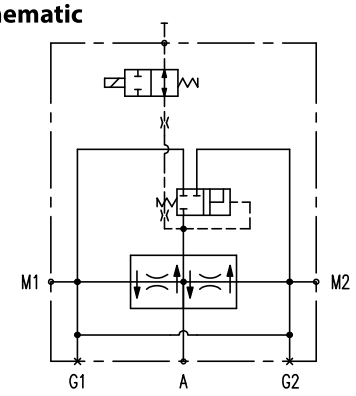
- PORT SIZES & MATERIAL
  6061 T6 ALUMINUM
  - 8S = M1, M2 & A – #8 SAE; G1 & G2 – #2 SAE; T – #4 SAE
  - 12S = M1, M2 & A – #12 SAE; G1 & G2 – #2 SAE; T – #4 SAE
  - 4B = M1, M2 & A – 1/2 BSP; G1 & G2 – 1/8 BSP; T – 1/4 BSP
  - 6B = M1, M2 & A – 3/4 BSP; G1 & G2 – 1/8 BSP; T – 1/4 BSP
- FLOW DIVISION — SEE CATALOG FOR CP340–1
- VOLTAGE — SEE CATALOG FOR SV08–22–01
- TERMINATION
- SEALS: B = BUNA–N; V = VITON

Traction Control HIC Technical Information
X05-FD16 Traction Manifold

OPERATION

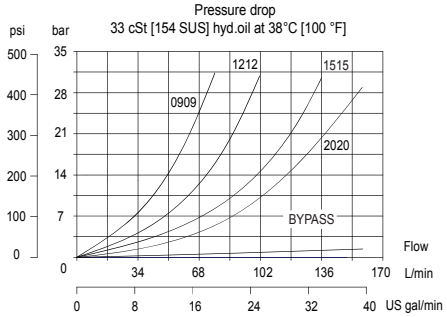
This valve provides electrically actuated traction control for hydrostatic systems with one pump and two motors in parallel. In normal operation, fluid passes freely through the valve. When the solenoid is energized, fluid is forced through the flow divider/combiner, preventing wheel spin or motor over speed.

Schematic



PERFORMANCE

Performance curve

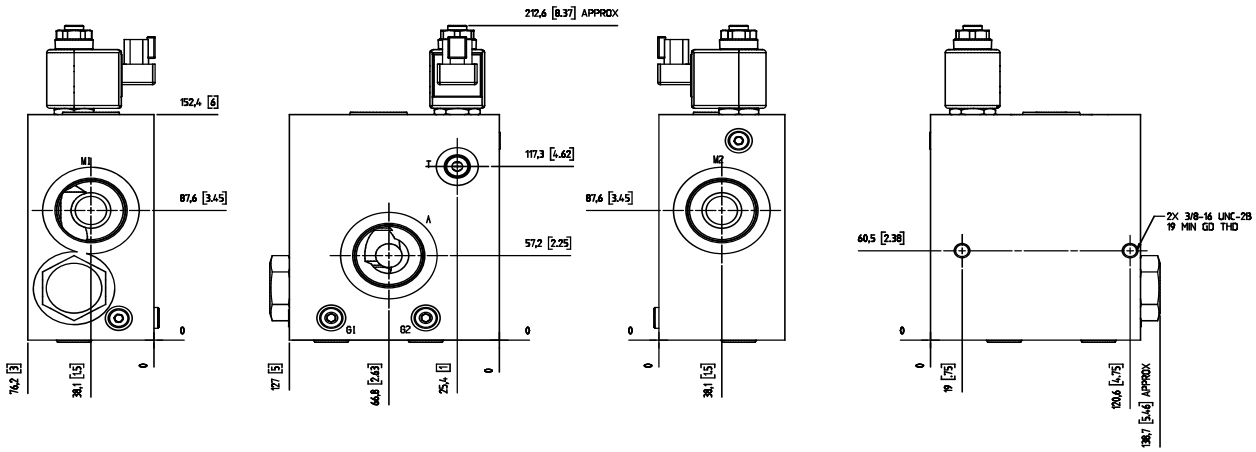


Specifications

Rated pressure	350 bar [5075 psi]
Rated flow at 7 bar [100 psi]	150 l/min [40 US gal/min]
Weight	4.48 kg [9.88 lb]
Bypass cracking pressure	3.8 bar [55 psi]

DIMENSIONS

mm [in]



ORDERING INFORMATION

X05–FD16–F04–1515–00–12–DE–B

PORT SIZES & MATERIAL
6061 T6 ALUMINUM, DUCTILE
16S, S16S = M1, M2 & A – #16 SAE
G1 & G2 – #2 SAE
T – #6 SAE
20S, S20S = M1, M2 & A – #20 SAE
G1 & G2 – #2 SAE
T – #6 SAE
F04, SF04 = M1, M2 & A – 1" CODE 61
G1 & G2 – #2 SAE
T – #6 SAE
8B, S8B = M1, M2 & A – 1 BSP
G1 & G2 – 1/8 BSP
T – 3/8 BSP
10B, S10B = M1, M2 & A – 1-1/4 BSP
G1 & G2 – 1/8 BSP
T – 3/8 BSP

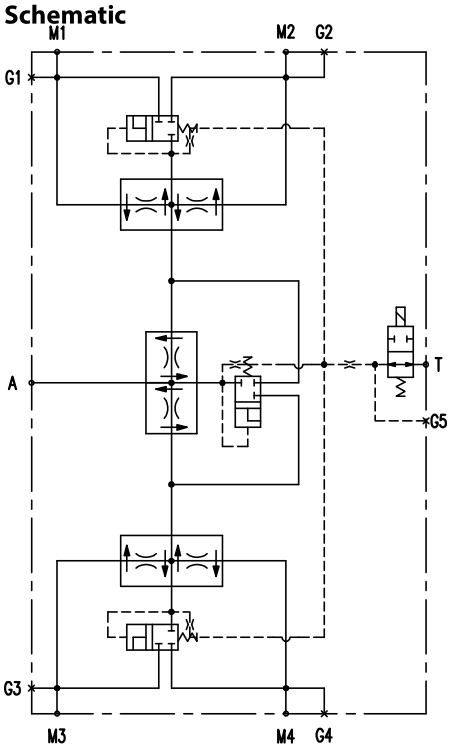
SEALS
B = BUNA–N
V = VITON
TERMINATION
VOLTAGE
SEE CATALOG FOR SV08–22–01
ORIFICE 'E'
00 – PLUG
59 – .059ø
79 – .079ø
FLOW DIVISION
SEE CATALOG FOR CP342–3–U–0–XXXX
PORT 'M2'
PORT 'M1'

Traction Control HIC Technical Information
X05-FD104 Traction Manifold

OPERATION

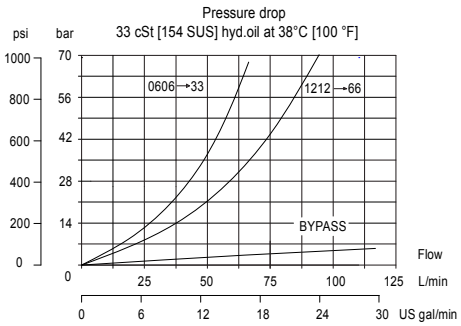
This valve provides electrically actuated traction control for hydrostatic systems with one pump and four motors in parallel. In normal operation, fluid passes freely through the valve. When the solenoid is energized, fluid is forced through the flow divider/combiners. The result is equal flow to all four motors, preventing wheel spin or motor over speed.

Schematic



PERFORMANCE

Performance curve



Specifications

Rated pressure	207 bar [3000 psi]
Rated flow at 7 bar [100 psi]	45 l/min [12 US gal/min]
Weight	8.74 kg [19.74 lb]
Bypass cracking pressure	3.1 bar [45 psi]

ORDERING INFORMATION

X05 - FD104 - 8S - 0303 - 11 - 12 - DE - B

- SEALS: B = BUNA-N, V = VITON
- TERMINATION
- VOLTAGE
- SEE CATALOG FOR SV08-22-01
- FLOW DIVISION
- SEE CATALOG FOR CP340-1
- FLOW DIVISION
- SEE CATALOG FOR CP342-1
- PORT SIZES & MATERIAL

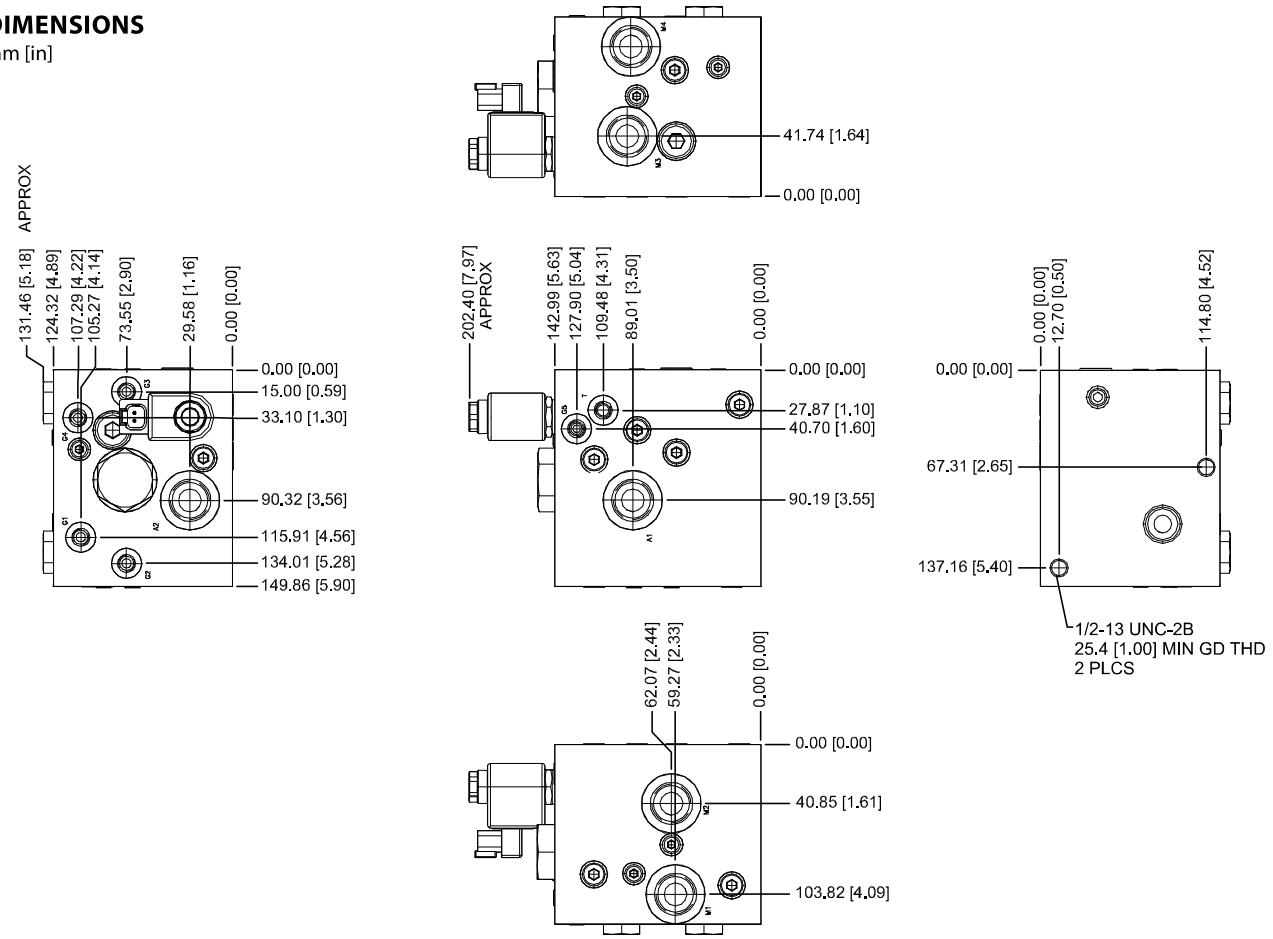
6061 T6 ALUMINUM
8S = M PORTS - #8 SAE
A1 & A2 - #10 SAE
T & G - #4 SAE
10S = M PORTS - #10 SAE
A1 & A2 - #12 SAE
T & G - #4 SAE

DIMENSIONS

See next page.

DIMENSIONS

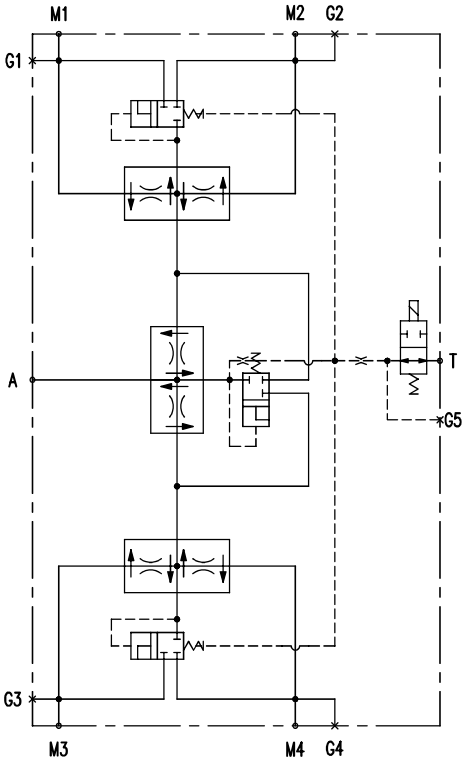
mm [in]



OPERATION

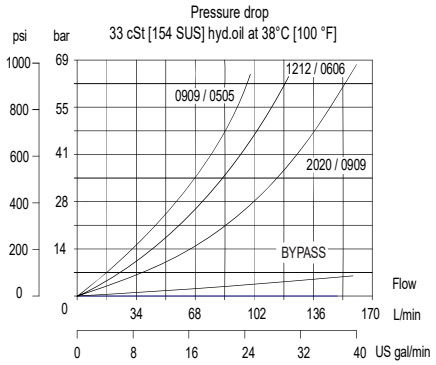
This valve provides electrically actuated traction control for hydrostatic systems with one pump and four motors in parallel. In normal operation, fluid passes freely through the valve. When the solenoid is energized, fluid is forced through the flow divider/combiners. The result is equal flow to all four motors, preventing wheel spin or motor over speed.

Schematic



PERFORMANCE

Performance curve



Specifications

Rated pressure	350 bar [5075 psi]
Rated flow at 7 bar [100 psi]	150 l/min [40 US gal/min]
Weight	14.57 kg [32.12 lb]
Bypass cracking pressure	4 bar [55 psi]

ORDERING INFORMATION

X05 - FD164 - S12S - 0909 - 2020 - H12D - DE - B

CODE	M1 - M4	A1	G1 - G5 & T	MATERIAL	FINISH
S10S	#10 SAE	#12 SAE	#4 SAE	DUCTILE	CLEAR ZINC
S12S	#12 SAE	#16 SAE	#4 SAE	DUCTILE	CLEAR ZINC

CODE	MATERIAL
B	BUNA-N
V	VITON

Motor Flow Division
CP342-3-U-0-XXXX

Port A Flow Division
CP342-3-U-0-XXXX

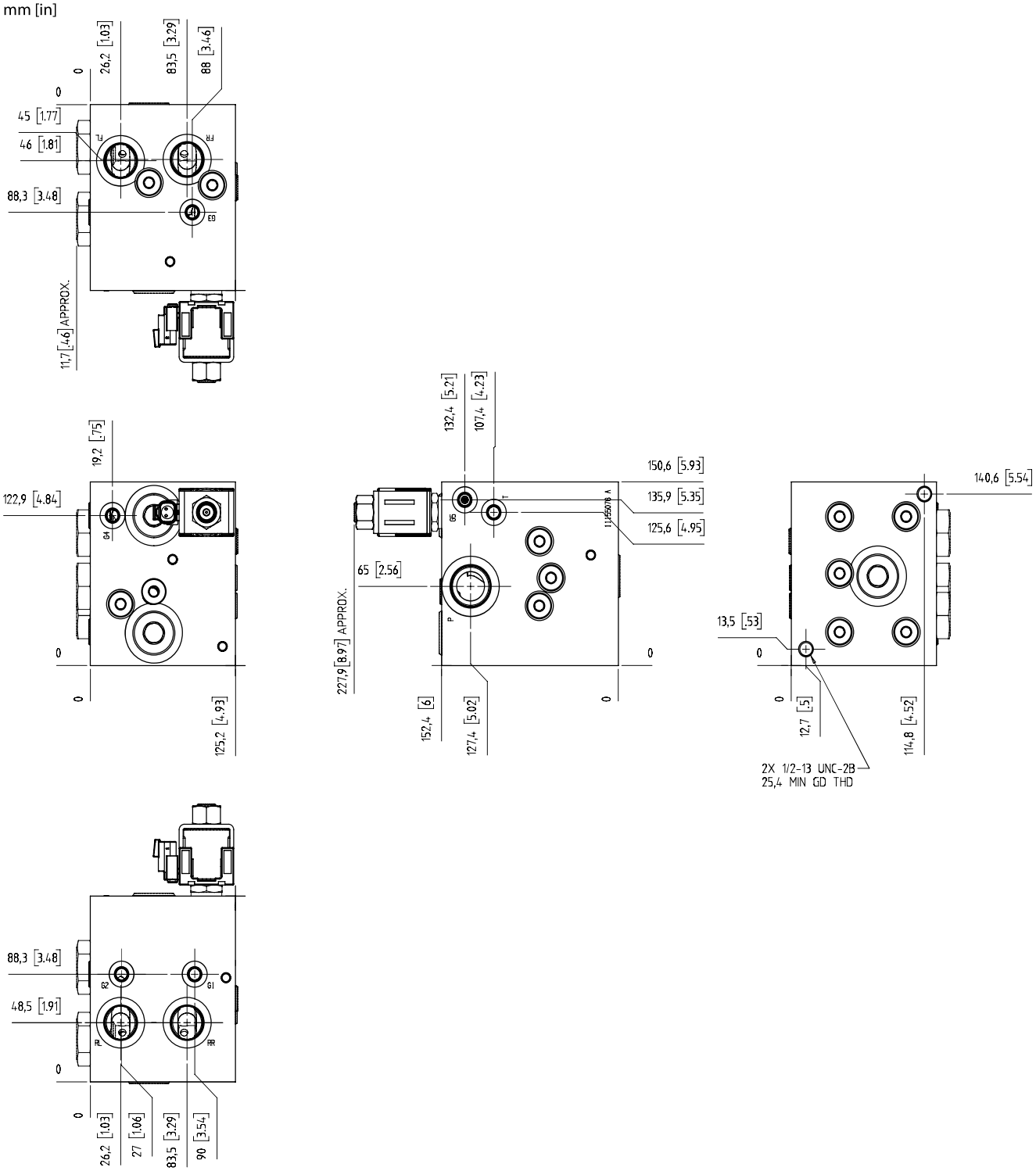
Traction Control Solenoid
HSV10-22-01-XX-XX-X-00

DIMENSIONS

See next page.

DIMENSIONS

mm [in]



OPERATION & APPLICATION

The Loop Flushing Block allows oil to drain from the power transmission loop to other oil treatment components. The low pressure side of the circuit is directed to the relief valve, which is then drained out of the transmission loop.

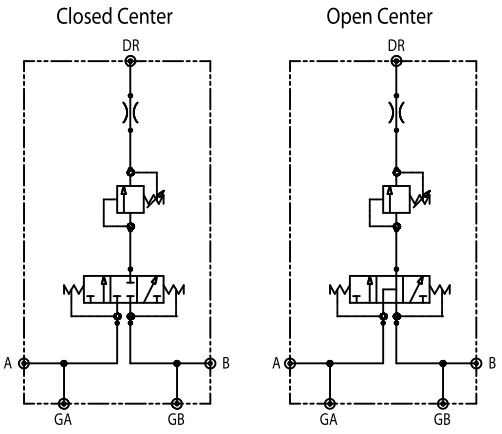
This HIC is typically used in closed loop circuits to assist in the process of removing contamination and cooling oil. Hydrostatic systems with sustained operation and continuous pressure will benefit from a loop flushing circuit.

To configure the LFB12, determine the charge pump pressure and desired flushing flow. Working up from the desired flow, select the orifice size with a pressure rise that, when added to one of the available relief settings (in the ordering information section), meets the charge pump pressure.

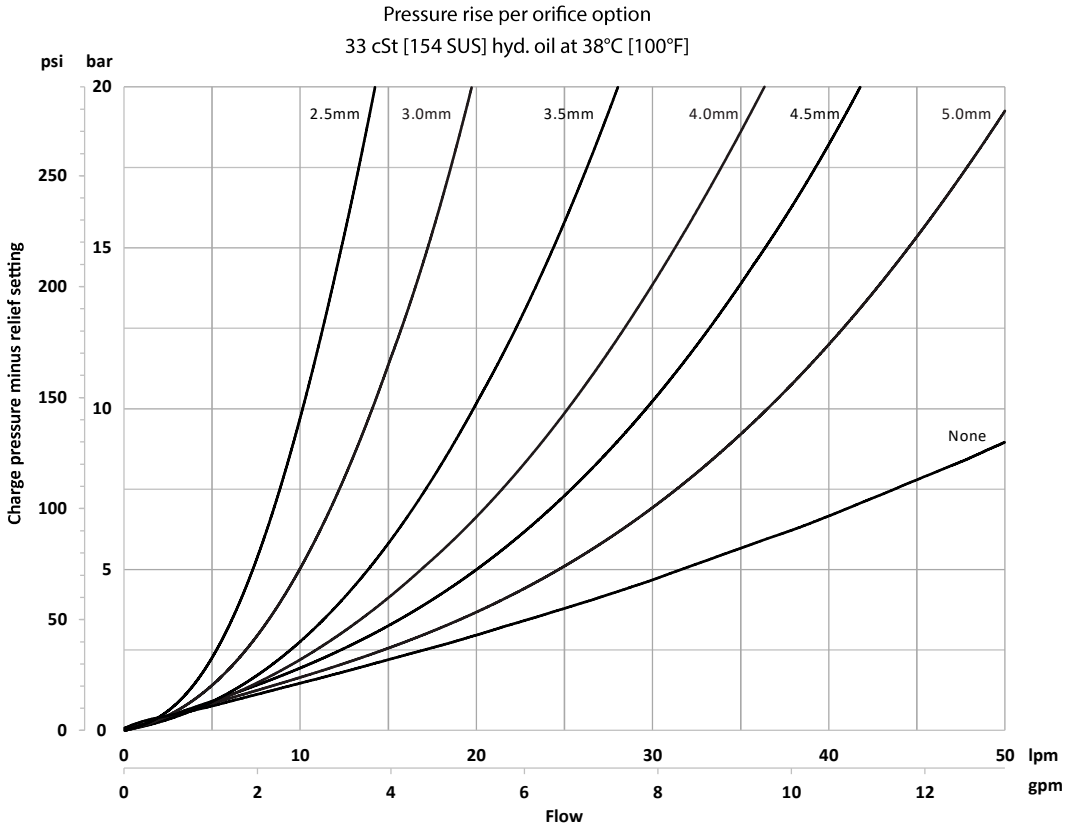
Specifications

Rated pressure	350 bar [5075 psi]
Rated flow	See performance chart
Weight	3.4 kg [7.5 lb]
Valves	CP721-3 [Shuttle] CP210-1 [Relief] M12 orifice plug
Material	Ductile Iron

Schematic

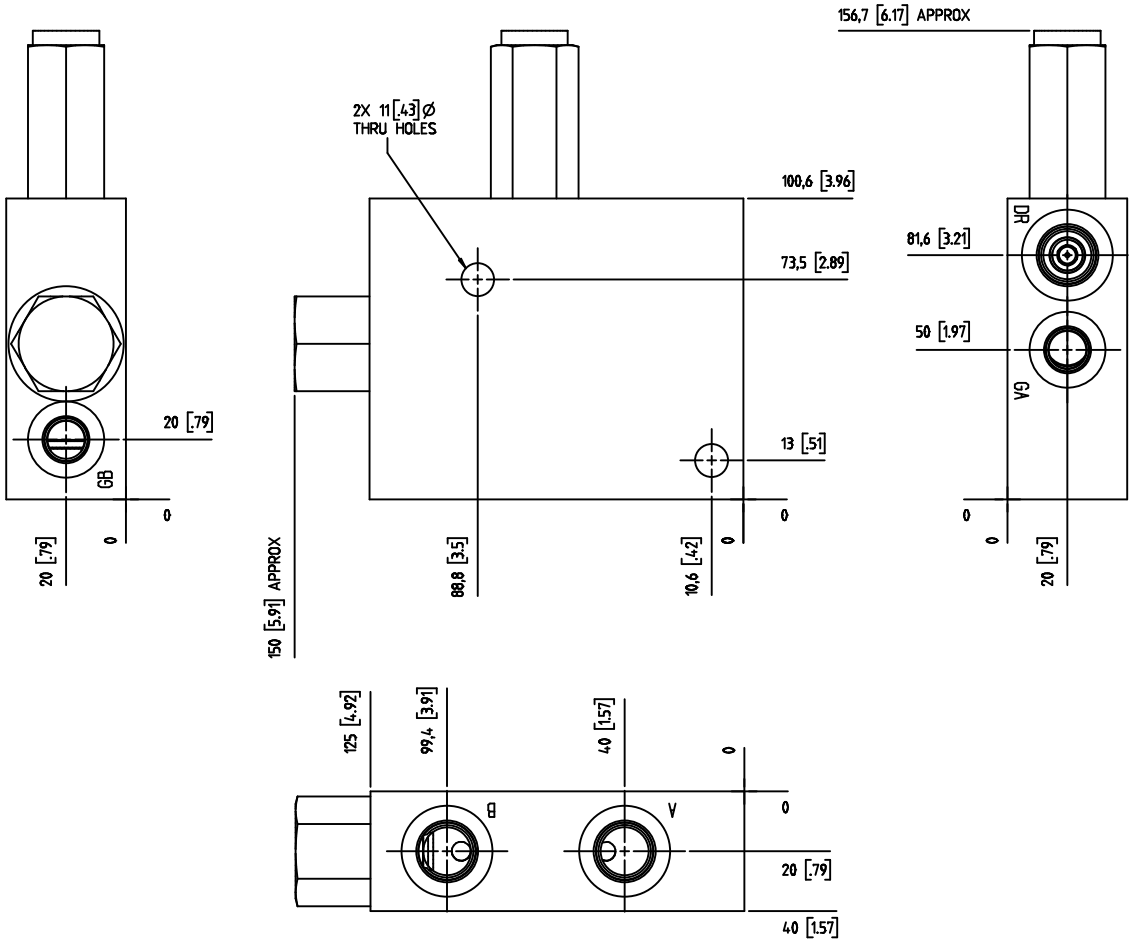


PERFORMANCE CHART



DIMENSIONS

mm [in]



ORDERING INFORMATION

LFB12 - C - 17 - 3.0 - B - S8S

Spool Center
C = Closed
O = Open

Relief Setting
7 = 7 bar [100 psi]
10 = 10 bar [150 psi]
14 = 14 bar [200 psi]
17 = 17 bar [250 psi]
21 = 21 bar [300 psi]
24 = 24 bar [350 psi]
28 = 28 bar [400 psi]

Orifice Option
00 = None
2.5 = ø2.5mm
3.0 = ø3.0mm
3.5 = ø3.5mm
4.0 = ø4.0mm
4.5 = ø4.5mm
5.0 = ø5.0mm

Seal Material
B = Buna
V = Viton

Port Sizes
S8S = 8S SAE [A, B, & DR]
6S SAE [GA & GB]
S4B = ½ BSP [A, B, & DR]
¼ BSP [GA & GB]