



200 Series Electro-Hydraulic Servovalves

Sapphire Technology

The Sapphire Technology logo, which consists of a stylized, multi-faceted geometric shape resembling a sapphire crystal, positioned above the word "Technology".

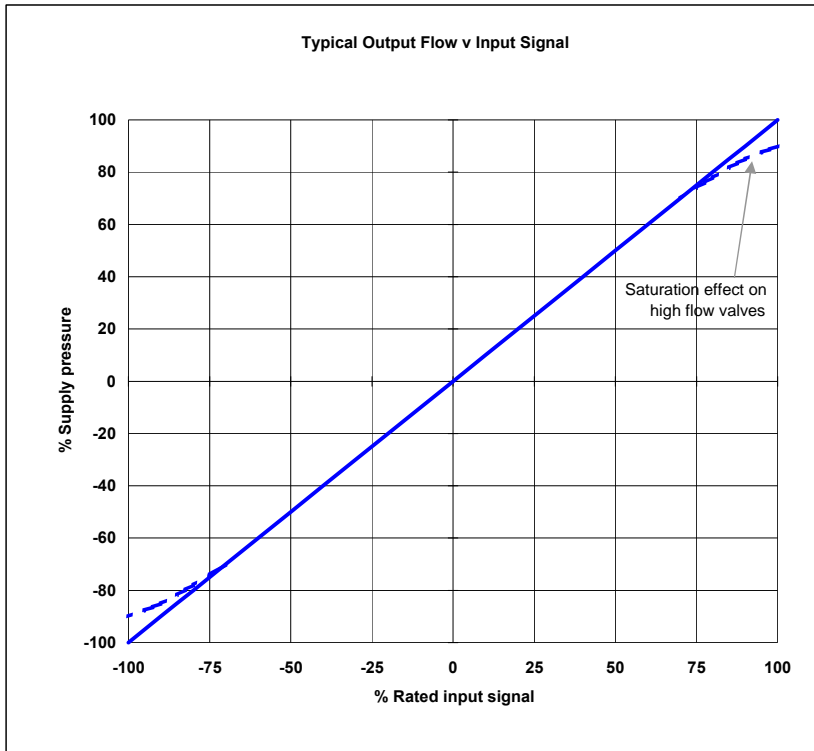
**2-stage mechanical feedback (miniature)
Low mass, high band-width torque motor
High spool drive forces
Long life "Sapphire Technology" design
High resolution, low hysteresis
Rated flows 2 to 7 l/min at 70 bar
High Response
Internal pilot supply (4 port)**

Star Hydraulics Limited
8 Beta Close
Tewkesbury Business Centre
Tewkesbury
Gloucestershire
GL20 8SR
England (UK)

Technical Data

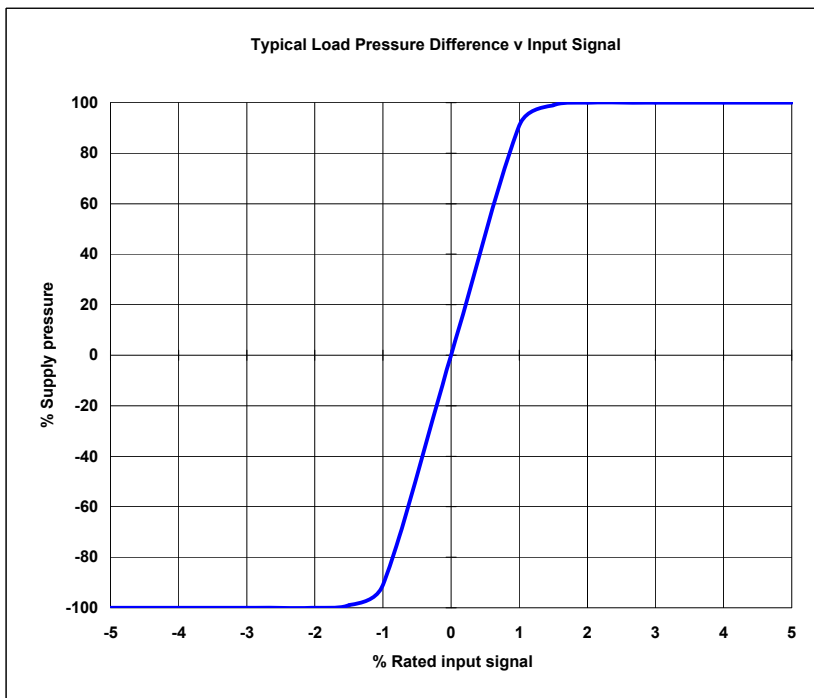
Nominal flow ratings at 70 bar Dp	2, 4 & 7 l/min For other flow ratings consult factory
Hysteresis	< 3.0% without dither
Threshold	< 0.5% without dither
Null shift	
with 40 °C temp change	< 2%
with 70 bar supply pressure change	< 2%
with return pressure 0 to 35 bar	< 2%
Load pressure difference at 1% input	> 60% of supply pressure
Seal material options	FPM, NBR, EPDM
Temperature range (ambient)	-29 to 135 °C (subject to seal material)
Proof pressure	
at pressure port	150% operating pressure
at return port	100% operating pressure
Burst pressure	250% max supply pressure
External leakage	zero
Degree of protection EN 50529P	IP 65
Weight	230 g
Vibration	30 g, 3 axes
Mounting position	Any, fixed or movable
Supply filtration	
non by-pass	Beta 10 = 200 (10 µm abs)
cleanliness control filter	Beta 3 = 200 (3 µm abs)
Fluid cleanliness level per ISO 4406: 1999	
minimum	16/ 14/ 12
recommended	14/ 12/ 10
Operating pressure (max)	
EPDM	210 bar
FPM, NBR	315 bar
Supply pressure	Constant
Fluid viscosity	10 to 100 cSt
Fluid type	Petroleum based mineral oil For operation with other media consult factory

Technical Data

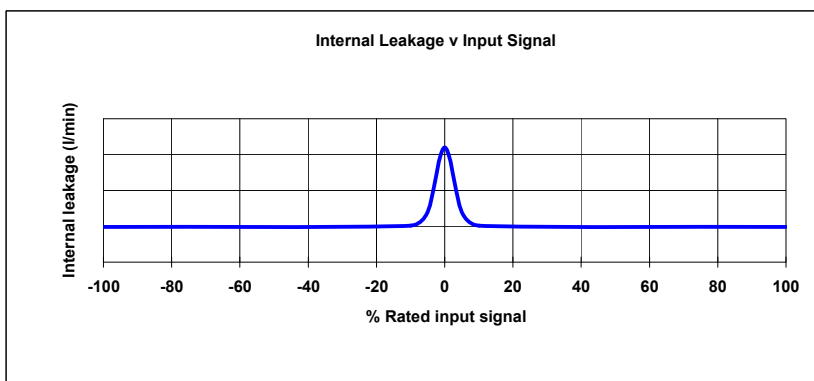


The flow tolerance for standard servovalves is $\pm 10\%$ of the rated flow at 100% rated input signal.

The rated flow is quoted at 70 bar Δp , 100% rated input signal.



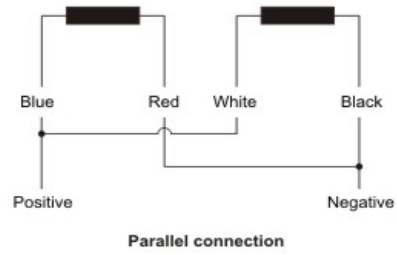
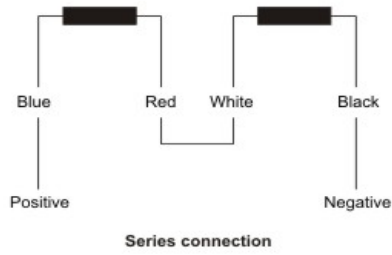
Pressure gain characteristic will vary with positive and negative lap conditions.



This comprises of both 1st stage flow (tare leakage) and the second stage null leakage.

Figures vary in accordance with rated flow, spool lap and performance characteristics.

Electrical Details



Output flow polarity

Flow in the direction of P » C2, C1 » R when coils connected as shown

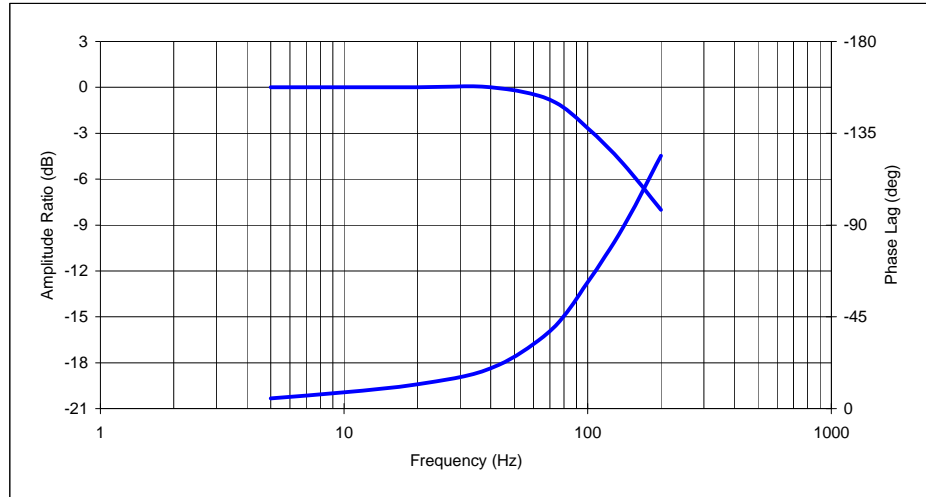
Coil options

Rated current mA	Resistance / coil Ω	Series connection		Parallel connection	
		Input current mA	Effective resistance Ω	Input current mA	Effective resistance Ω
10	1000	5	2000	10	500

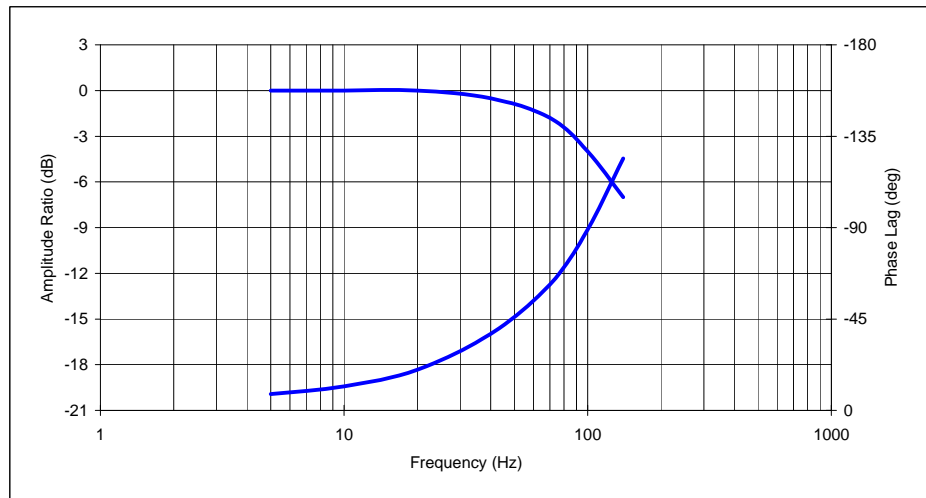
Please contact factory for more options

Frequency Response

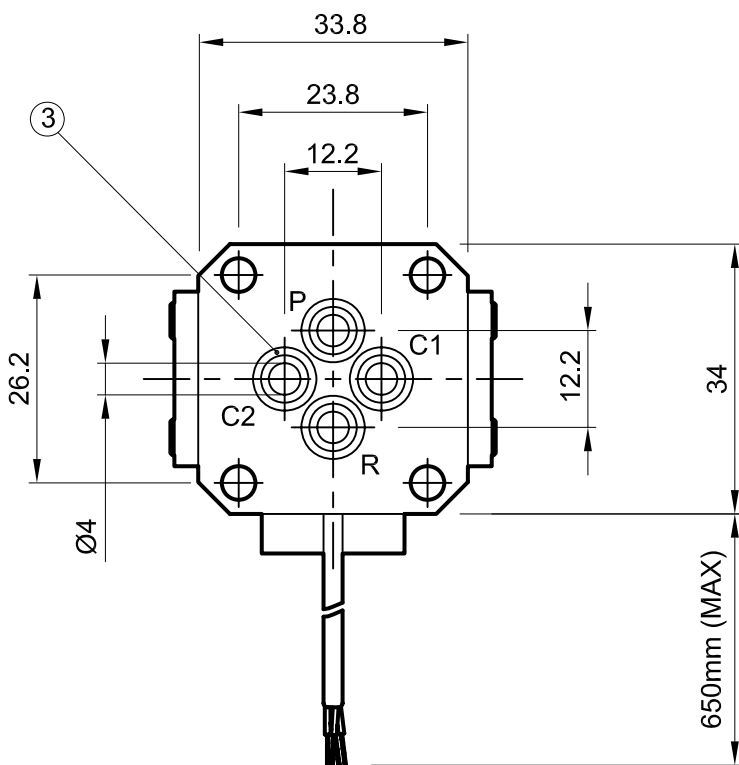
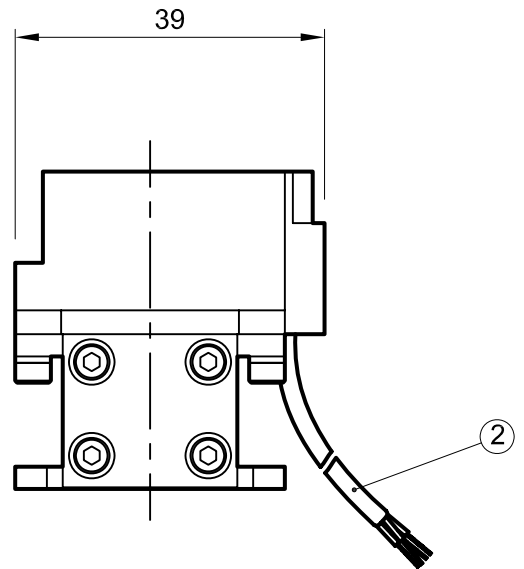
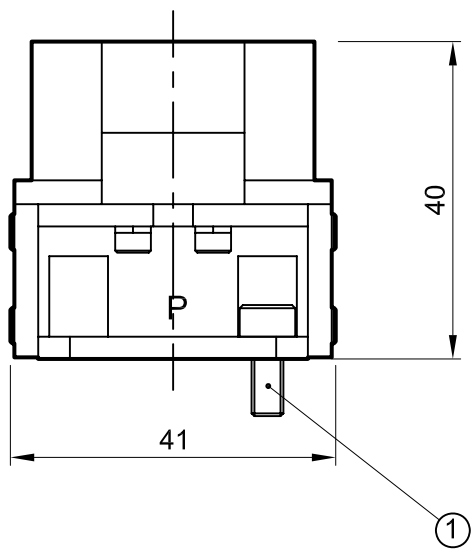
Rated Input ... 25%
Rated Flow (l/m) ... 2 ~ 7
Ps (bar) ... 210
Viscosity (cSt)... 32
Temp (°C) ... 40



Rated Input ... 100%
Rated Flow (l/m) ... 2 ~ 7
Ps (bar) ... 210
Viscosity (cSt)... 32
Temp (°C) ... 40



Typical performance curves optimised per 210 bar supply pressure, fluid viscosity 32 cSt at 40 °C

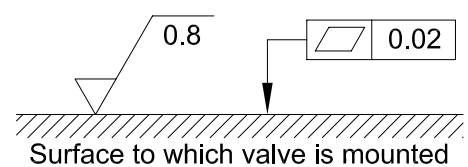


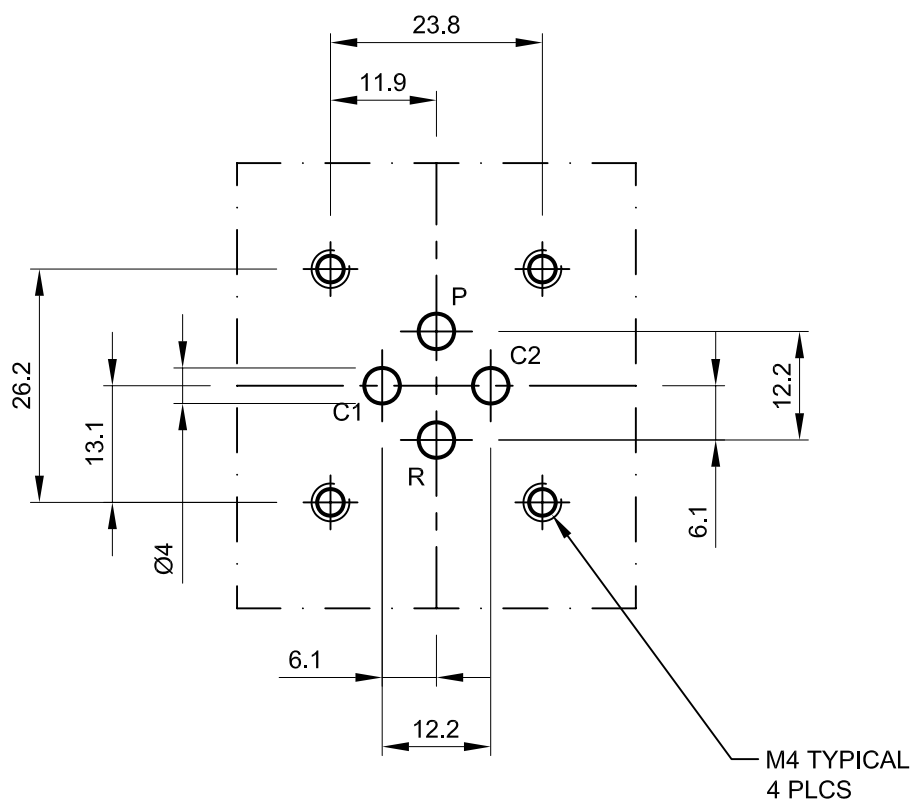
1. Suggested mounting bolts M4 x 10 long high tensile steel socket head cap screws.
2. Colour coded flying lead available at 180° to position shown (advise desired position at time of order).
3. Base O-Rings: 6 I/D x 1 section (4 pcs).

Installation Details Model 200

Dimensions in millimeters
3rd angle projection

ID200-2Q09-En





Manifold Dimensions Model 200

Dimensions in millimeters
3rd angle projection

Filename

