



## **892E Series Electro-Hydraulic Servovalves**

Sapphire  echnology



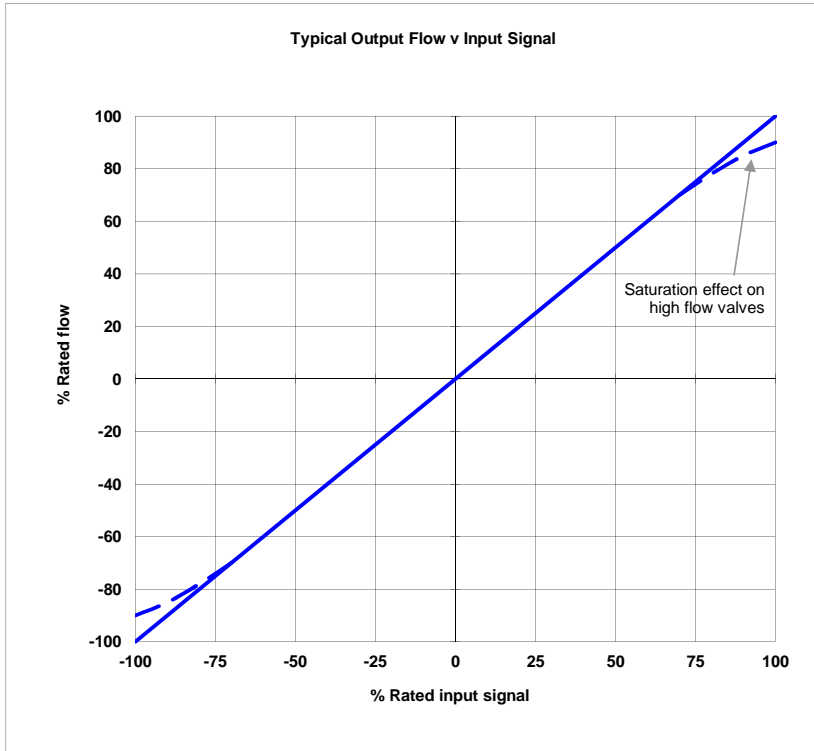
**2-stage electric feedback, on board electronics**  
**Low mass, high band-width torque motor**  
**High spool drive forces**  
**Long life "Sapphire Technology" design**  
**Higher resolution, lower hysteresis**  
**Rated flows 95 to 230 l/min at 70 bar**  
**Higher frequency & step response**  
**External pilot supply (5 port)**  
**ISO 10372 size 6**

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

## Technical Data

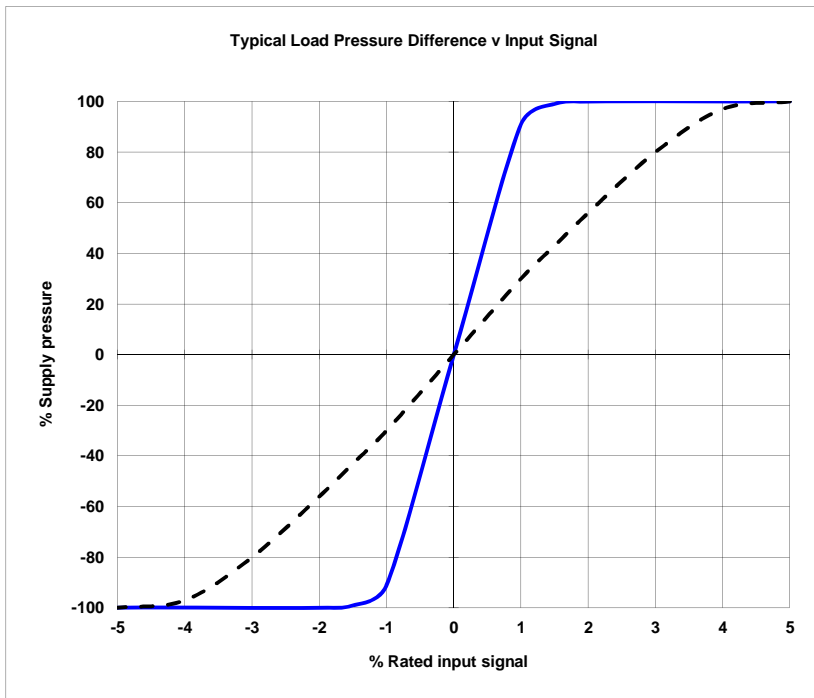
Nominal flow ratings at 70 bar Dp	95, 150 & 230 l/min For other flow ratings consult factory
Hysteresis	< 0.5%
Threshold	< 0.1%
Null shift	
with 40 °C temp change	< 2%
with 70 bar supply pressure change	< 2%
with return pressure 0 to 35 bar	< 2%
Load pressure difference at 1% input	≥ 30% of supply pressure can be as high as 100%
Seal material options	FPM, NBR, EPDM
Temperature range (ambient)	-15 to 80 °C
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	3.8 kg (w/ field filter 5.0 kg)
Vibration	30 g, 3 axes
Mounting position	Any, fixed or movable (consult factory for critical startup applications)
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	300 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**

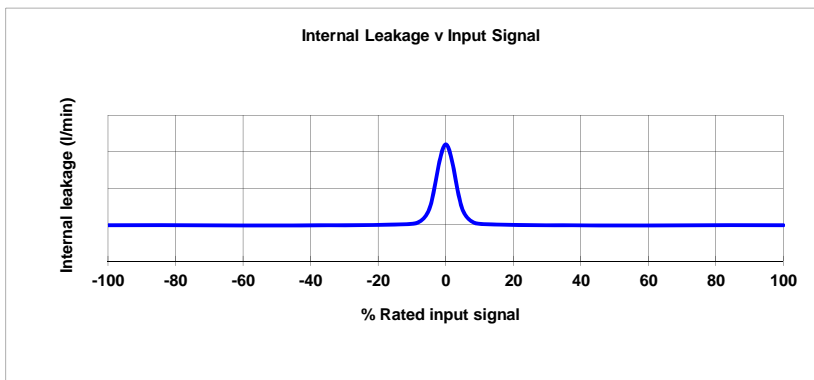


The flow tolerance for standard servovalves is  $\pm 10\%$  of the rated flow at 100% rated input signal.

The rated flow is quoted at 70 bar  $\Delta p$ , 100% rated input signal.



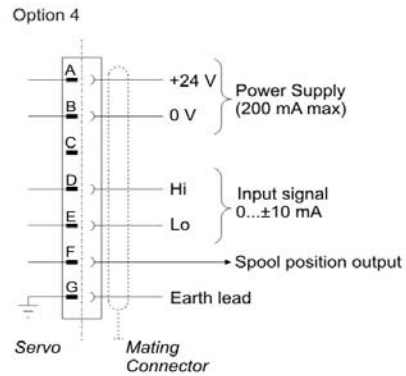
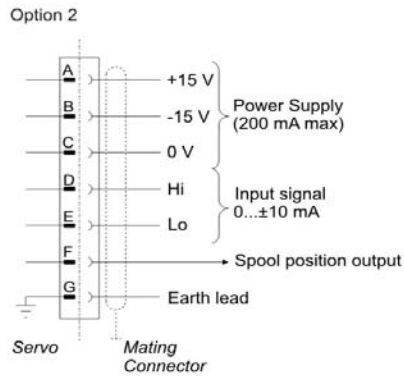
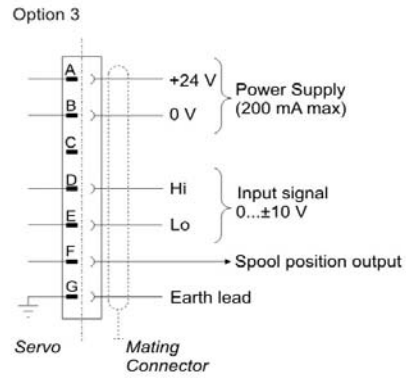
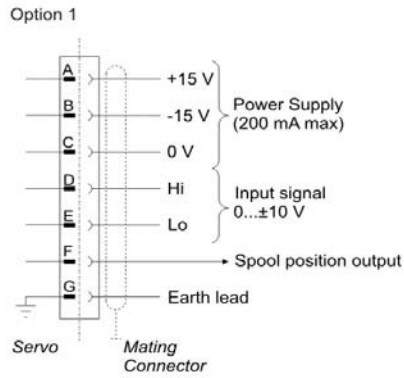
Pressure gain characteristic will vary with positive and negative lap conditions.



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



### Notes

Above options are factory set

Power supply voltage  $\pm 3\%$  of rated figure, ripple  $< 50$  mV p-p

Connection cable to be DEF STAN 61-12, part 4 screened, 7-2-C type, 8 core (7/0.2 mm)

+ve input to pin D causes flow in the direction of P » C2, C1 » R

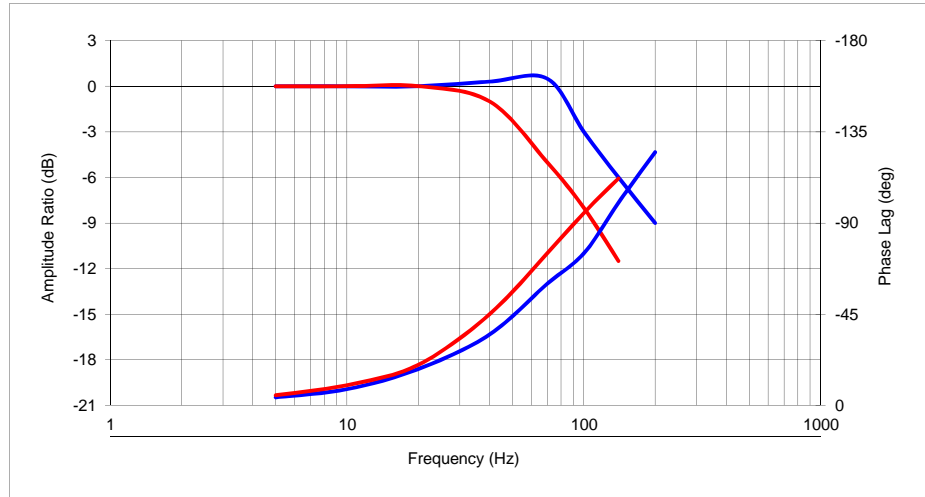
Pin F must be referenced to 0 V



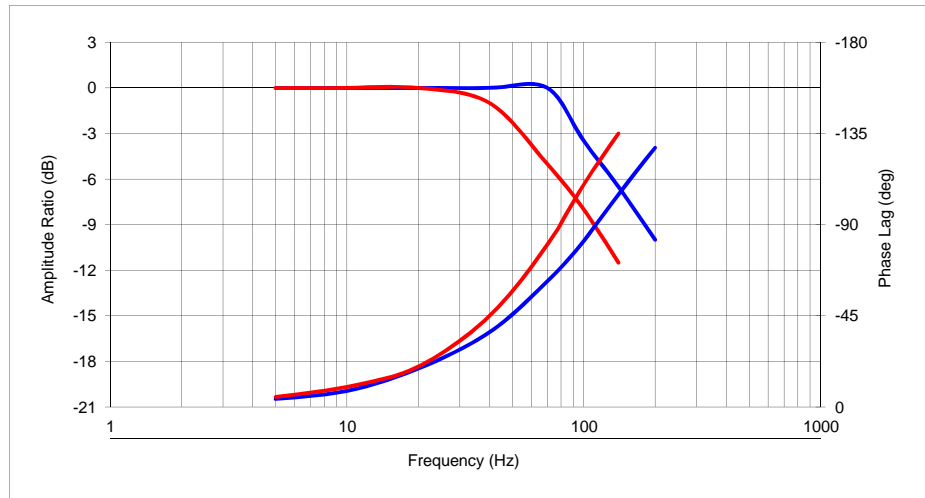
# Frequency Response

25% In — 100% In —

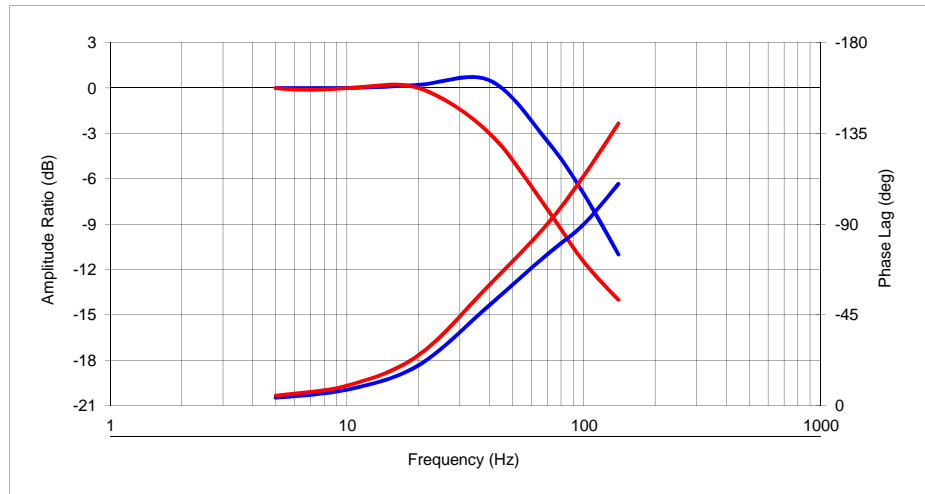
Rated Flow (l/m) ... 95



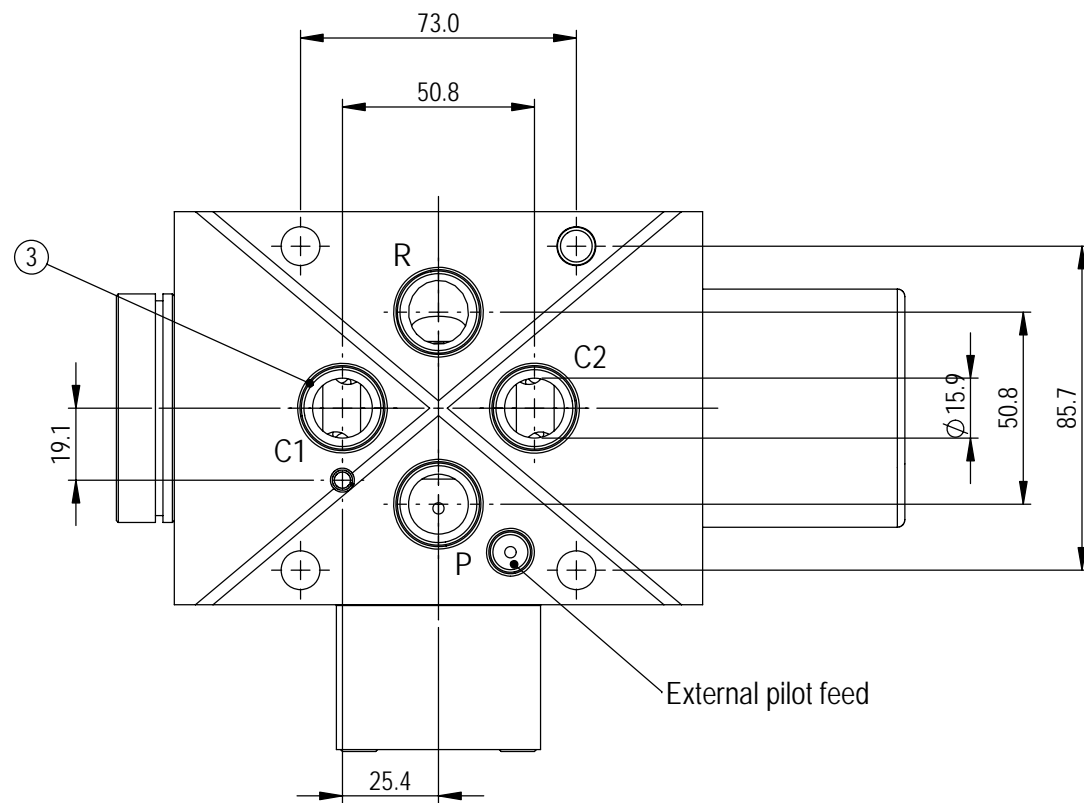
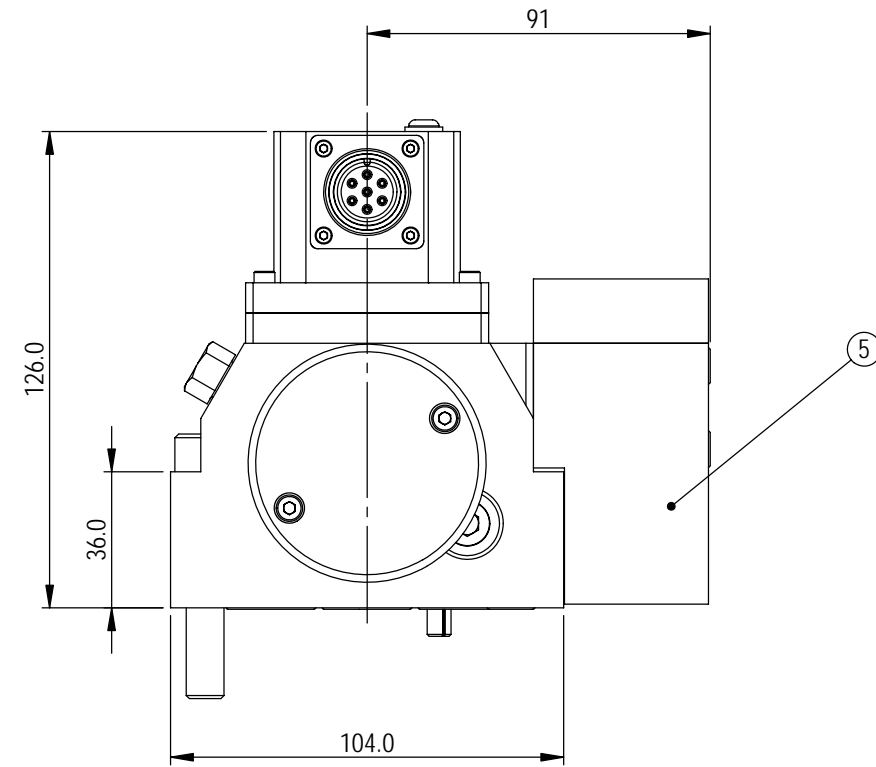
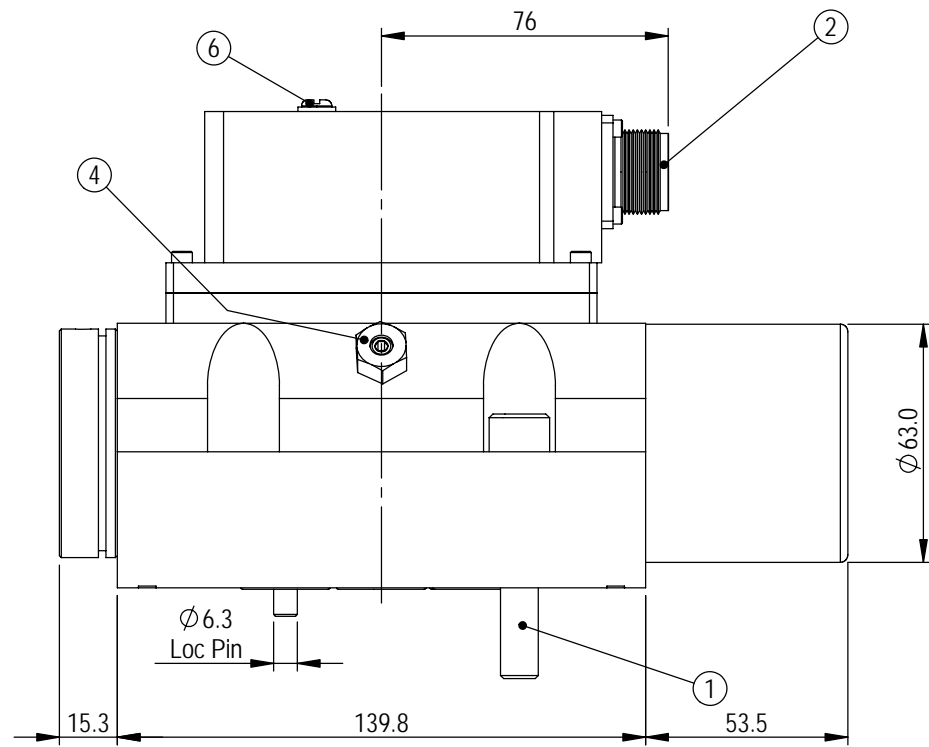
Rated Flow (l/m) ... 150



Rated Flow (l/m) ... 230



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



1. Suggested mounting bolts M10 x 60 long high tensile steel socket head cap screws.

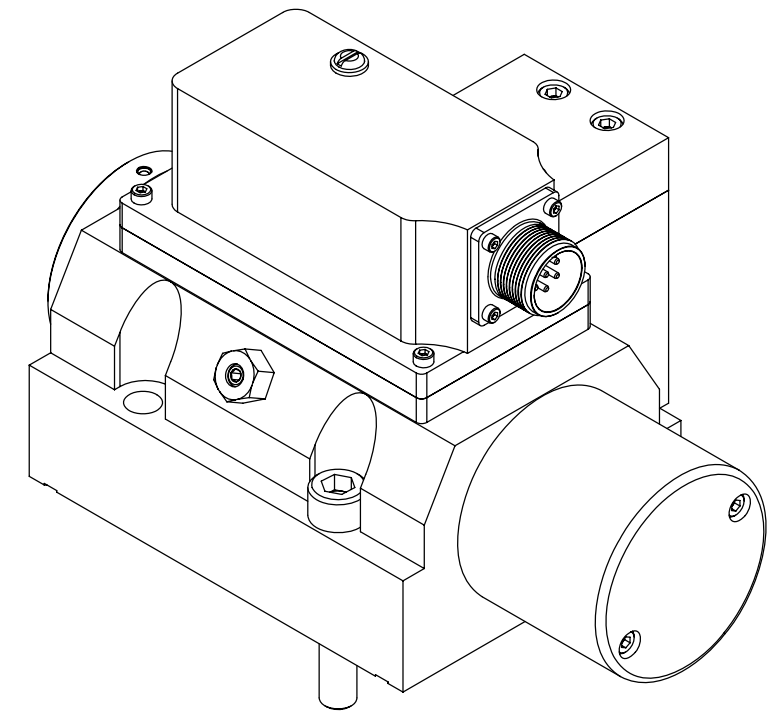
2. 7-way electrical connector mates with MS3106E-14S-A7SN or equivalent.

3. Base O-Rings: 20.3 I/D x 1.78 section (4 pcs). 9.25 I/D x 1.78 section (1 pc). 6.07 I/D x 1.78 section (1 pc).

4. Can be supplied with facility for mechanical null offset - consult factory.

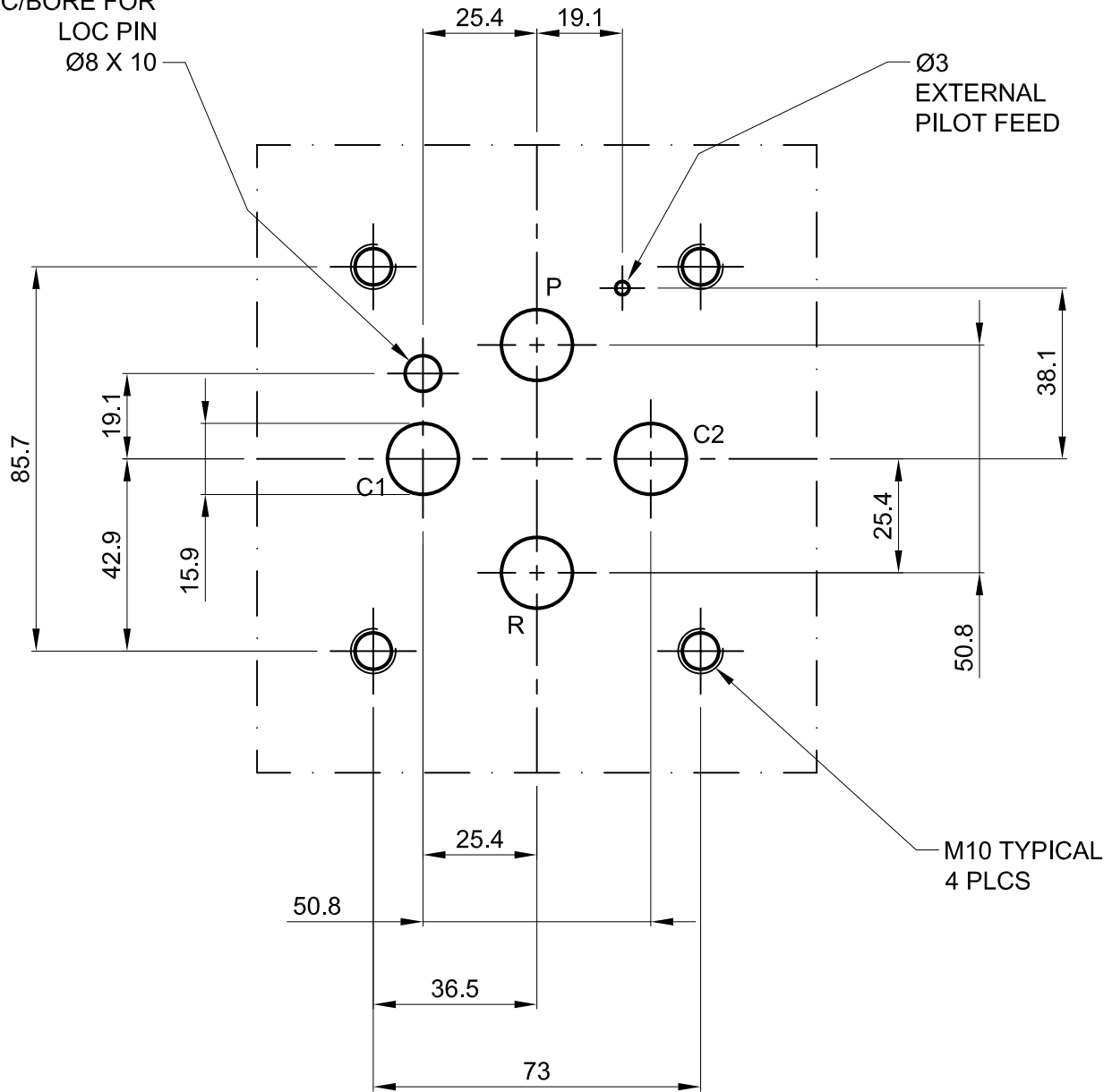
5. Optional field replaceable filter - additional charge applies - consult factory.

6. Blanking screw, remove to access multi-turn potentiometer for electrical null adjustment.



C/BORE FOR  
LOC PIN  
Ø8 X 10

Ø3  
EXTERNAL  
PILOT FEED



## Manifold Dimensions Model 892

Dimensions in millimeters  
3rd angle projection

Filename

