

# STAR

## HYDRAULICS

### SERVO TECHNOLOGY

British manufacturer of accurate and reliable  
Electro-Hydraulic Servo Valves



Incorporating Sapphire  
Technology for the 21st Century

# Company History

Founded in 1983 to provide a cost effective, fast turnaround Service/Repair of Electro-Hydraulic Servovalves.

- Introduced "Sapphire Technology" in 1988 to eliminate "ball glitch" and increase Servovalve life.
- Production of new Servovalves in 1990 with all the benefits of new materials and machining technology.
- 1992 Originally awarded BSI Quality Management System ISO 9001:2008.
- Appointment of first distributor - Hydraustar France in 1995.
- A further 19 world-wide distributors added in 15 years.
- In 2010 Star's quality and performance resulted in their valves being used on the SpaceX rocket travelling to the International Space Station.
- 2012 moved to new premises including "State of the Art" machining facilities, Clean Air Assembly and Test, Dedicated Development facilities.
- 2013 Development of 3 Stage Valves.
- 2015 Development of 850 Servovalve.
- 2017 Atex / IS approval.





## Servo valve - Service/Repair Upgrade

With over 30 years' experience Star has built an impressive reputation for a cost effective, fast turnaround service/repair of the following manufacturers servo valves:

- |                 |           |           |             |
|-----------------|-----------|-----------|-------------|
| ■ Abex          | ■ E.M.G.  | ■ M.T.S.  | ■ Schneider |
| ■ Atchley       | ■ Herion  | ■ Oilgear | ■ Sopenem   |
| ■ Bosch Rexroth | ■ Instron | ■ Parker  | ■ T.S.S.    |
| ■ Dowty         | ■ Matisa  | ■ Pegasus | ■ Ultra     |
| ■ Dynamic/Dyval | ■ Moog    | ■ Plasser | ■ Vickers   |

## Service - Repair Schedule

- Valve completely dismantled.
- Magnets fully demagnetised.
- Ultrasonically clean and microscopically inspect all components.
- Valve reassembled in clean air conditions.
- Valves tested in accordance with International Standard: ISO 10770-1:2009.
- Flow Plot and Technical data supplied with every valve.
- Full warranty on all repairs.

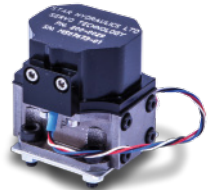
**For more information please contact –**  
Jason Nottingham +44 (0) 1684 296176  
sales@star-hydraulics.co.uk

# Products

## Benefits and Features

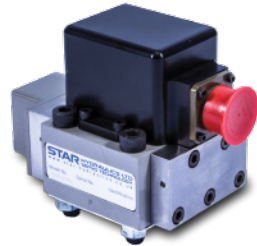
### “Sapphire Technology” ball in slot design

- Incorporated into Star designs since 1988
- Many millions of cycles per service life
- Increased spool life due to spool rotation
- Ultra low coefficient of friction sapphire to steel
- Feedback mechanism unhindered by spool rotation
- Extended warranties available



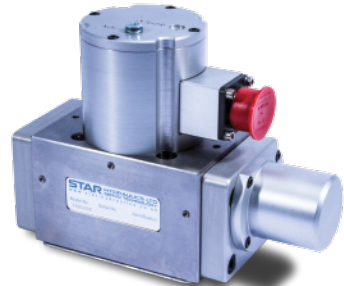
### Sapphire flow

- Ensuring first stage stability
- Precisely matched flow properties
- Long life in extreme environments



### Custom spool lap & bushing port geometries

- Zero overlap
- Overlap (closed centre)
- Underlap (open centre)
- Dual gain
- Asymmetric gain



### Special connectors

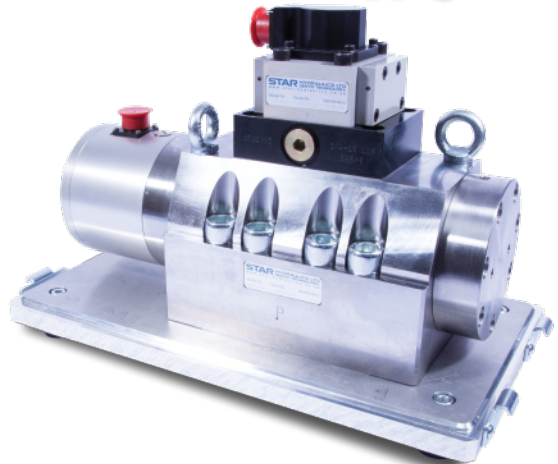
- MIL-C-5015
- MIL-DTL-38999
- Conduit style male/female
- Hermetic

### Safety

- Intrinsic safety
- Class, Div & Zone coverage
- Mechanical failsafe
- Double & triple coil redundancy

### Sealing materials

- Nitrile
- Fluorocarbon (Viton)
- Ethylene-Propylene
- Fluorosilicone





# Facilities

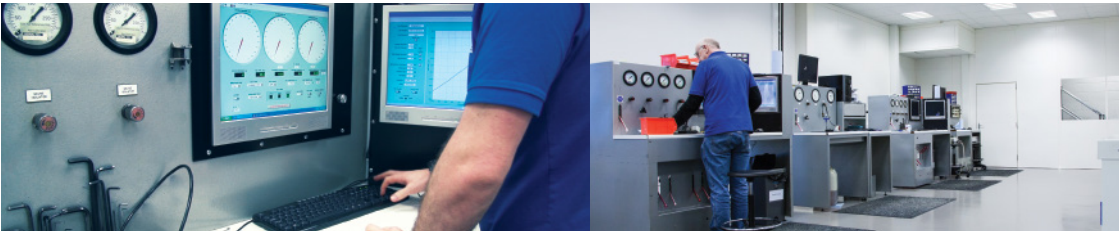
## Valve Assembly

This is a key function where very experienced staff assemble both new and repaired valves in a clean environment.



### Valve Testing Centre

Dedicated Test Room with Performance Qualification Test Rigs. Fluid cleanliness is better than ISO4406-1999 Code 12/10/8 – SAE AS4059 class 2



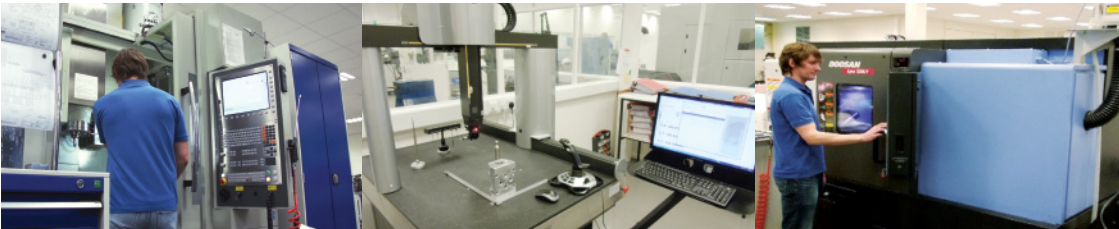
### Total Manufacturing Facility



Studer Grinding

Charmilles Technologies  
Roboform EDM

Sunnen Honing  
and Lapping



4 Axis Bridgeport CNC  
Machining Centre

CMM  
Machine

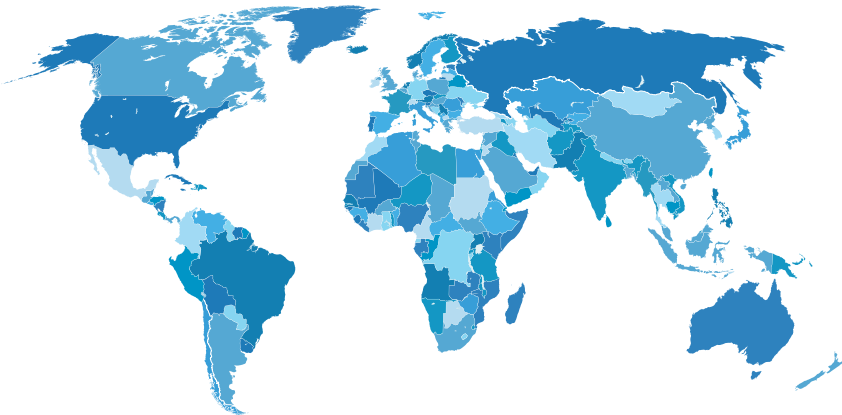
4 Axis Doosan  
CNC Lathe

With "State of the Art" Machining Facility Star Hydraulics are pleased to offer close tolerance machining services.

# International Distribution & Service Partner Network\*

Star Hydraulics Ltd have official distributors in the following countries; countries marked with an asterisk\* are Star Hydraulics approved service, repair and upgrade providers.

Australia *	India *	Serbia
Benelux	Israel	Russia
Brazil	Italy	South Africa
Canada	Japan *	South Korea *
China	Malaysia	Spain / Portugal
Denmark	Mexico	Sweden
Egypt	Norway	Switzerland
France *	Poland	Turkey
Germany *	Scandinavia	USA *



For the complete list of our global distributors and their contact details please visit [www.star-hydraulics.co.uk](http://www.star-hydraulics.co.uk)



# Industries

## ■ Aerospace Testing

Fatigue, Structure, Turbine Blade, Undercarriage, Propeller, Helicopter Body & Blade.

## ■ Automotive Testing

Fatigue, Springs, Steering components, Shock absorbers, Tow-bar, Tyres, Seats, Engine.

## ■ Flight Simulators

Civil, Military, Leisure.

## ■ Motorsport

F1, Fatigue testing, Engine Dynamometers, Carbon fibre testing.

## ■ Plastics

Injection moulding, Parison control in Blow Moulding, Tensile testing.

## ■ Power Generation

Fossil, Gas, Nuclear, Turbine speed control, Steam control valves.

## ■ Rail

Ballast Tamper, Stone Blowers.

## ■ Rolling Mills

Steel, Aluminium, Copper, Paper.

## ■ ROV's

(Remotely Operated Vehicles) Subsea Trenching, Submerged Mining and Marine Renewables.

## ■ Sawmills

Timber sizing, Production of Composite Timbers.

## ■ Seismic

Vibration control of Seismic Waves for Oil/Gas Exploration.



# Solutions for every sector...

Star Hydraulics have an excellent in house training facility and we welcome you and your colleagues to attend our free training seminars available on the following subjects:

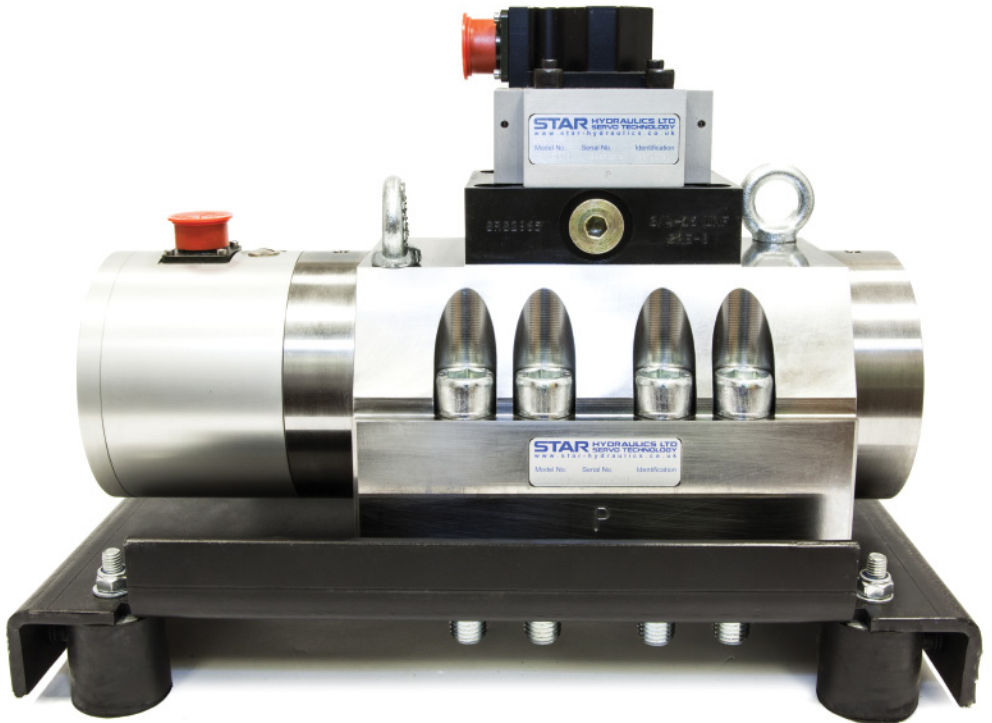
- Servo Valve Operation.
- Filtration – Cleanliness Codes.
- Flushing and Commissioning of Hydraulic Servo Systems.

Please contact us on 01684 296176 to arrange your free training seminar today.



ISO9001:2008

Manufactured in the UK  
and Quality Assured



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