



# High-Performance Servo Proportional Valves





# We are changing the **status-quo**

Current hydraulic systems rely on 20th century designs that are only 20% efficient. At Domin, we have developed state-of-the-art technology, which increases the efficiency of all systems fourfold.

## We are increasing efficiencies

We are disrupting the hydraulics industry for the better, making companies and products more efficient, and together saving 855bn kilowatt-hours every year by 2030, which is one gigatonne of CO2.

## We are driving innovation

Our valves utilise the most advanced design, analysis, test, and manufacturing technologies. This enables an innovative step-change in the performance of servo proportional technology.

We set new standards in power density, dynamic performance and reliability compared to existing alternatives already on the market.

Based in the UK, we design, manufacture and supply high-performance hydraulic servo proportional valves globally.



In the testing we performed, we were not able to get the valve to misbehave or go unstable, which means the valve can handle very difficult control situations.

[Industry Segment Manager, Delta Motion](#)





## S4 Pro

S01  
0.7 - 18 l/min



## S6 Pro

NG06  
6 - 60 l/min



## S6 Pro X

S04  
6 - 63 l/min



## S10 Pro

NG10  
50 - 250 l/min



We've been waiting a long time for an extremely rugged servo valve that holds up in the forest industry. We didn't expect this valve to be so cost-effective and handle extreme vibration at high cycle rates. With a very small footprint and as a drop-in replacement for Bosch, Moog, Parker, and Woodward. We now stock several valves for a wide range of applications. Saving money with better performance."

Peerless Engineering

Achieve more without  
compromise to cost,  
efficiency and performance.



The valves performance, configurability & durability is simply unmatched. We've been able to replace several OEMs valves with a single Domin valve.

Vice President, The Servo Group

## Improved Reliability



### Less Down Time

All small, blockage-prone features are removed from Domin valves. Testing shows 100% more in-service life in harsh environments such as sawmills with no problems.



### Lower Servicing Costs

No high-pressure seals or filters ensures lower servicing needs for Domin valves. Fewer components also results in a simpler assembly. Environmental sealing protects the product and ensures long-lasting life.

## Improved Performance



### Precision & Repeatability

High positional accuracy & low hysteresis of our valves ensure high precision of movement in both directions. This leads to an improved product quality and reduced scrap rates.



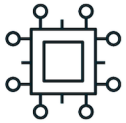
### Power Density

Our valves deliver vastly improved weight & space savings whilst ensuring the highest possible performance on the market.





# Advanced Engineering Improving Your Profitability



## Advanced Electronics

Our onboard electronics closes the loop on spool position, enabling a step change in flow control accuracy & repeatability compared to our competitors.



## Reduce Energy Costs

By replacing a two-stage valve with a Domin valve, customers have seen a reduction in CO2 consumption by 1 ton annually per valve. This translates to a savings of 2500 kWh of energy per tonne of CO2, equivalent to \$500 in savings, per valve, per year.



## Lead Times

Domin can offer improved lead times compared to our competitors,

Starting at just 8 weeks.





# S4 Pro



## Overview

The Domin S4 Pro series of servo proportional valves are lightweight, high-performance directional flow control valves that cover a range of rated flows from 0.7 l/min to 18 l/min up to a maximum pressure of 350 bar per spool land.

Based on a miniature port circle of 12.2 mm and with a weight of less than 300g, the S4 Pro is suited to applications requiring superior performance, dynamics and reliability expected of a proportional valve in an ultra-compact package.

Hysteresis

<1%

Leakage

<0.45 l/min

Mass

290g

Frequency Response

>200 Hz

Rated Flow

0.7-18 l/min

Response Time

<3 ms

## S4 Pro Common Applications



Aerospace



Automotive / Motorsports



Animatronics



Simulation



Robotics



Marine

## S4 Pro Upgrade Examples

Star 300

60%

Lower Leakage

Moog G771

25%

Faster Step Response

Woodward 27A

30%

Lighter



# S6 Pro



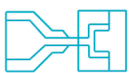
## Overview

The Domin S6 Pro servo proportional valve has been designed to achieve the best characteristics from two competing valve technologies: fluid amplified electrohydraulic valves and proportional valves.

The S6 Pro has the size, mass, and dynamic capabilities of the most compact electrohydraulic valves, and the low quiescent leakage and reliability of the best proportional valves.

Hysteresis	Leakage	Mass	Frequency Response	Rated Flow	Response Time
<0.2%	<1.1 l/min	550g	>190 Hz	6-60 l/min	<3.5 ms

## S6 Pro Applications



Die Casting



Blow / Injection Moulding



Wood / Timber Machines



Vibration Equipment



Steel & Aluminium Processing



Simulation

## S6 Pro Upgrade Examples

Atos DLHZO

65%

Faster Step Response

Bosch Rexroth 4WRPEH 6

50%

Higher Flow

Moog D633

78%

Lighter



# S6 Pro X



## Overview

The Domin S6 Pro X servo proportional valve builds upon the benefits of the S6 Pro.

Notably, the S6 Pro X is available in two versions: voltage-controlled and current-controlled, providing greater flexibility in its application.

Based on the S04 port pattern and weighing less than 800 g, the valve has a rated flow of 63 litres per minute. It offers unparalleled performance for a variety of demanding applications.

Hysteresis

<0.2%

Leakage

<1.1 l/min

Mass

750g

Frequency Response

>250 Hz

Rated Flow

6-63 l/min

Response Time

<3.5 ms

## S6 Pro X Common Applications



Aerospace



Vibration Equipment



Animatronics



Simulation



Fatigue & Material Testing



Steel & Aluminium Processing

## S6 Pro X Upgrade Examples

Woodward 27 E

57%

Smaller

Star 550

30%

Lower Leakage

Moog G761

78%

Faster Step Response





# S10 Pro



## Overview

The Domin S10 Pro is a single-stage servo proportional valve which combines high flow, excellent dynamics, strong chip shear, and low power consumption.

The S10 Pro has been designed to sustain high bandwidth operation at exceptional flows without significant limitation of operating pressures or duty cycles.

Where servo proportional valves have been employed to control high flows there is a clear trade with packaging size and weight.

The S10 Pro valve is packaged to be lower weight and more compact than the best of electrohydraulic servo valves.

Hysteresis	Leakage	Shock Resistance	Frequency Response	Rated Flow	Response Time
<0.2%	<3 l/min	50g	>150 Hz	50-250 l/min	<7ms

## S10 Pro Common Applications



Blow / Injection Moulding



Wood / Timber Machines



Railroads



Gas, Steam & Hydro Turbines



Hydraulic Presses



Vibration Equipment

## S10 Pro Upgrade Examples

Moog D634

# 65%

Faster Step Response

Bosch 4WRPEH 10

# 42%

Smaller

Woodward 27G

# 43%

Higher Bandwidth



# Expert Design, Technology, and Manufacturing

By working closely with our clients, we can turn around designs, proposals, products for testing, and deliver orders efficiently with short lead times.

All of our design, manufacturing and development takes place within the UK at one of our state-of-the-art facilities.

Our Domin Technology Centre is capable of quickly turning around highly demanding components & systems, aided by in-house tool and gauge manufacturing.

If you would like a valve with performance outside of the suggested parameters, then we can also help with this.

We continue to expand the range of valves we supply as demand increases for our products. We can design, refine, and custom-build the perfect solution for you.



# Customer Promise

We pride ourselves on providing exceptional customer service, ensuring that every customer feels heard and valued.

Our average daytime response time is 10 minutes, so customers can expect quick and efficient service.

With an average worldwide order to delivery time of just 8 weeks, we ensure that customers receive their products in time to fulfil their business objectives.

Our customer promise is centred around providing personalized service, quick response times, and efficient delivery, which we service to our customers across the globe.



Visi-Trak is excited to have Domin as our supplier for our high-performance valve platform. We are looking forward to a long-term partnership that will allow us to provide our customers with the highest performance control system for die casting on the market."

Tom Vann, President, Visi-Trak





"The valve is well made, solid, looks great and has a nice finish. It has great hysteresis and good repeatability. We tested it thoroughly and were unable to find any faults."

Technical Manager, Magneto Hydraulique and Pneumatique Inc

## Contact Us



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