



# Domin Valves

Performance and Efficiency,  
Perfected.





# Pioneering the World's Greatest Hydraulic Valves

Domin Valves achieve the highest levels of both efficiency and performance, without compromise.

Traditionally, engineers have faced a trade-off between two-stage valves, which provided high speed and precision but were notoriously inefficient, and direct drive valves, which prioritised energy efficiency and robustness but often sacrificed speed and size. Recognising this challenge, Domin set out to develop a groundbreaking solution that delivers the highest levels of both efficiency and performance, without compromise.

Through innovative architectural design and a fusion of cutting-edge tools - including additive manufacturing, modern onboard electronics, position sensing, and advanced motor and drive systems - we've engineered a range of hydraulic products that defy convention. Our valves deliver unmatched quality and performance without compromising on cost, efficiency, or reliability.



## S4 Pro

S01

0.5 - 18 l/min  
(0.2 - 5 gpm)



## S6 Pro

NG06

10 - 63 l/min  
(2.6 - 16.6 gpm)



## S10 Pro

S04

50 - 250 l/min  
(13.2 - 66 gpm)



## S12 Pro

NG10

250-660 l/min  
(66 - 174 gpm)

Achieve more without  
compromise to cost, efficiency  
and performance.



The Domin S6 Pro is a high-performance valve that competes very well in terms of motion control performance, particularly with position and force control. 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.

Motion Product Development Manager, Delta Motion





# Discover the Benefits Domin Valves



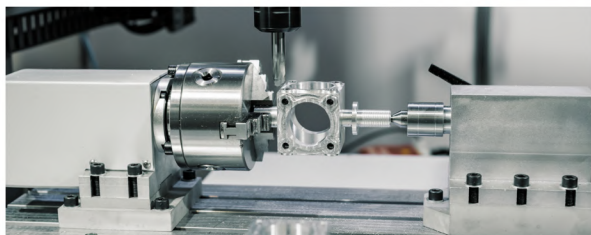
## Less Down Time

Domin Valves are designed to amplify torque from the motor to the spool, resulting in exceptional resistance to particulates and contamination. This innovative feature ensures our valves maintain optimal performance even in challenging environments.



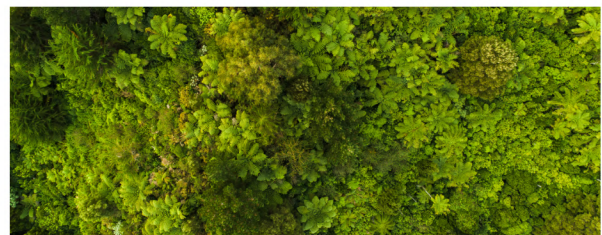
## Lower Servicing Costs

Unlike many two-stage valves prone to leaks and downtime due to degrading high pressure seals, Domin's valve design eliminates these issues, giving lower maintenance costs and increased uptime.



## Precision and Repeatability

Advanced algorithms in Domin's high-performance servo valves offer responsive control over hydraulic systems. Close-loop spool position control significantly enhances flow control accuracy and repeatability.



## Energy Savings

For a typical NG06 valve, replacing a two-stage valve with a direct drive valve can lead to an annual reduction of approximately 1 tonne of CO2 emissions, equating to around \$400 in energy savings per valve per year.



# A Detailed Look



## Pioneering Additive Manufacturing

This patented process for servo valve manufacture allows for ultra-compact design and unprecedented capabilities.



## Dominating Miniaturisation

Our slim on-board electronics enable valuable weight and space savings. Proprietary control algorithms optimise performance by minimising overshoot and maximising responsiveness.



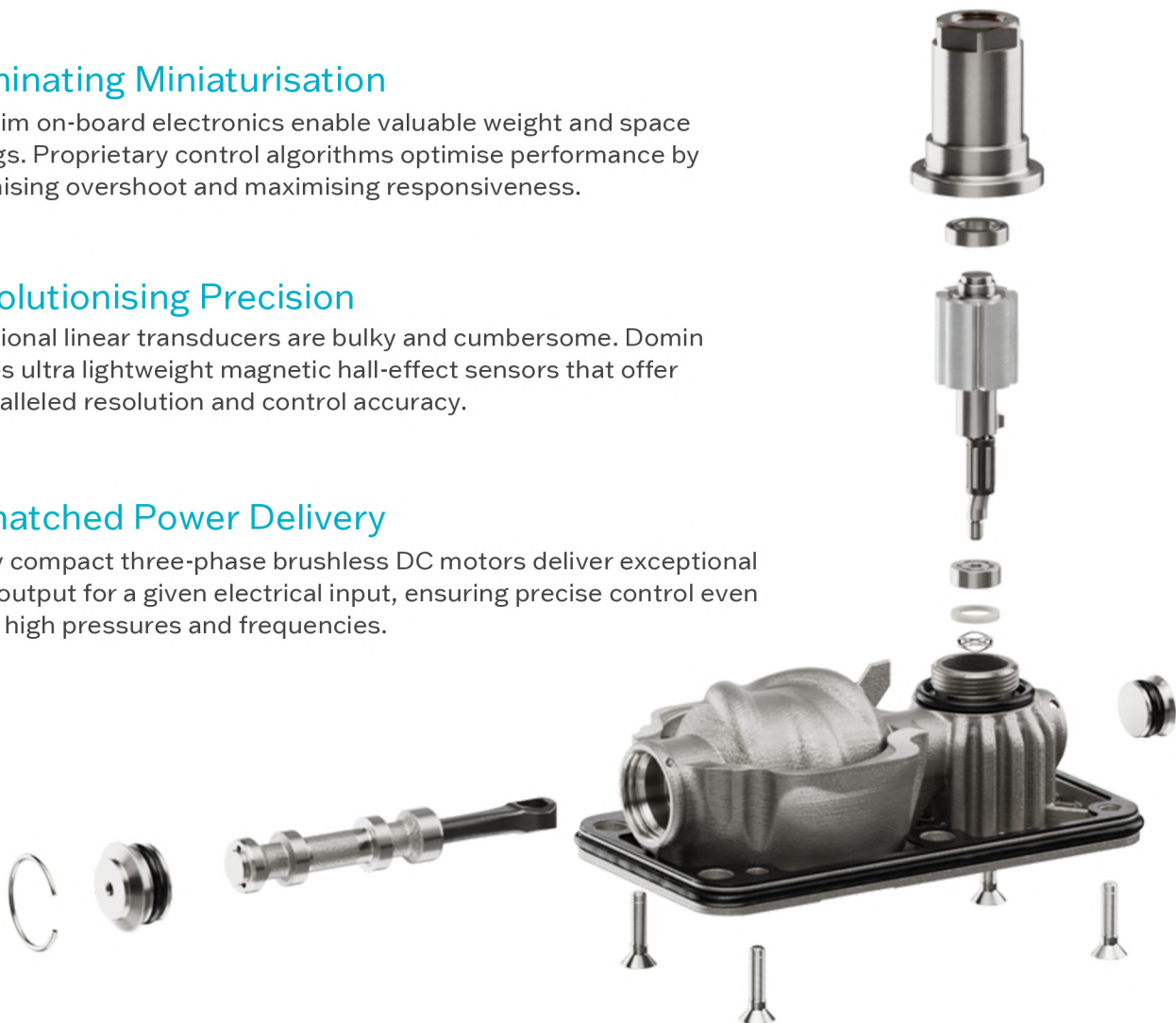
## Revolutionising Precision

Traditional linear transducers are bulky and cumbersome. Domin utilises ultra lightweight magnetic hall-effect sensors that offer unparalleled resolution and control accuracy.



## Unmatched Power Delivery

Highly compact three-phase brushless DC motors deliver exceptional force output for a given electrical input, ensuring precise control even under high pressures and frequencies.







# S4 Pro

S01



## “Smallest Direct Drive Valve in the World”

As the smallest direct drive valve in the world, the S4 Pro is a true game-changer. With its miniature port circle of 12.2 mm and weight of less than 300g, it's perfectly suited for applications where space is limited but performance is paramount. From demanding industrial settings to cutting-edge robotics and motorsport applications, the S4 Pro excels. Delivering superior performance, dynamics, and reliability in an ultra-compact package, it introduces a new era of control and productivity with the Domin S4 Pro series.

### Performance

Hysteresis	Leakage	Mass	Frequency Response	Rated Flow	Response Time
<1%	<0.45 l/min (<0.12 gpm)	290g (0.64 lbs)	>200 Hz	0.5-18 l/min (0.2-5 gpm)	<3 ms



Domin is an outstanding organization to work with and the advancements they're making with once “traditional” hydraulic servo products is a game-changer for the industry. The Domin valves are highly responsive, true to spec, easily tuned, repeatable, reliable and extremely robust.

Technical Specialist, Motion Industries

### Common Applications



Aerospace



Automotive /  
Motorsports



Animatronics



Simulation



Robotics



Marine



# S6 Pro

NG06 / S04

“Discover Ultimate Power Density”



Experience optimal performance without compromise. Whether in test simulation or industrial manufacturing, the S6 Pro ensures seamless operations and maximum productivity, thanks to its superior design and exceptional power density. With the Domin S6 Pro, you get the best of both worlds: the size, mass, dynamic capabilities, and industry-leading power density of the most advanced two-stage valves, paired with low quiescent leakage and unwavering reliability. Experience effortless efficiency, precision and power with the Domin S6 Pro series.

## Performance

Hysteresis	Leakage	Mass	Frequency Response	Rated Flow	Response Time
<0.2%	<1.1 l/min (<0.3 gpm)	550g (1.21 lbs)	>220 Hz	10-63 l/min (2.6-16.6 gpm)	<3.5 ms



We have now fully transitioned from the Woodward HRT (57 l/min) servo valve to the Domin S6 Pro servo valve. The Domin valves have proven to be very rugged and reliable with outstanding performance.

President, Visi-Trak Worldwide LLC

## Common Applications



Die Casting



Blow / Injection Moulding



Wood / Timber Machines



Vibration Equipment



Metal Processing



Simulation



# S10 Pro

NG10

“Unrivalled Performance  
and Efficiency for High  
Flow Applications”



Unlock massive energy savings with the Domin S10 Pro, the most efficient direct drive valve for flows ranging from 100 to 250 lpm. Designed to sustain high bandwidth operation at exceptional flows without compromising on operating pressures or duty cycles, the S10 Pro is the pinnacle of reliability and versatility. Where other servo proportional valves struggle with packaging size and weight, the S10 Pro rises above, offering a lighter and more compact alternative to traditional electrohydraulic servo valves. Experience the difference with the Domin S10 Pro.

## Performance

Hysteresis	Leakage	Shock Resistance	Frequency Response	Rated Flow	Response Time
<0.2%	<3 l/min (<0.8 gpm)	50g	>150 Hz	50-250 l/min (13.2-66 gpm)	<7 ms



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.

Sales Manager, Peerless Engineering

## Common Applications



Blow / Injection  
Moulding



Wood / Timber  
Machines



Railroads



Gas, Steam &  
Hydro Turbines



Hydraulic  
Presses



Vibration  
Equipment

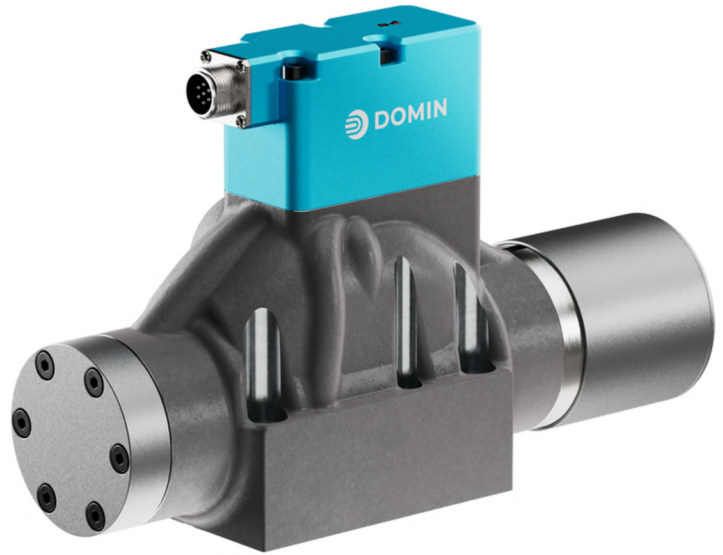




# S12 Pro

NG16

“Compact Power,  
Proven Reliability”



Introducing the Domin S12 Pro - the next evolution in high-performance, high-flow hydraulic valves. Engineered for superior reliability, responsiveness, and compact design. With dimensions of 337 mm in length and 177 mm in height, the S12 Pro is thoughtfully designed with all components fully enclosed, eliminating exposed wires or sensors. This user-focused design ensures not only a clean, sleek appearance but also easier handling and installation. This combination of performance and compact design makes the S12 Pro Ideal for applications in industrial manufacturing, test simulation, and the energy sector.

## Performance

Frequency  
Response

**>100** Hz

Rated Flow

**250-660** l/min  
(66-174 gpm)

Response  
Time

**<9** ms

Building on the proven reliability of the S6 Pro, which is now used as the first stage for the most advanced two-stage valve in the world, the Domin S12 Pro delivers unmatched performance with the same trusted dependability. Combining high flow, excellent dynamics, proven reliability, and low power consumption, the S12 Pro sets a new benchmark in demanding applications.

## Common Applications



Blow / Injection  
Moulding



Wood / Timber  
Machines



Simulation



Gas, Steam &  
Hydro Turbines



Hydraulic  
Presses



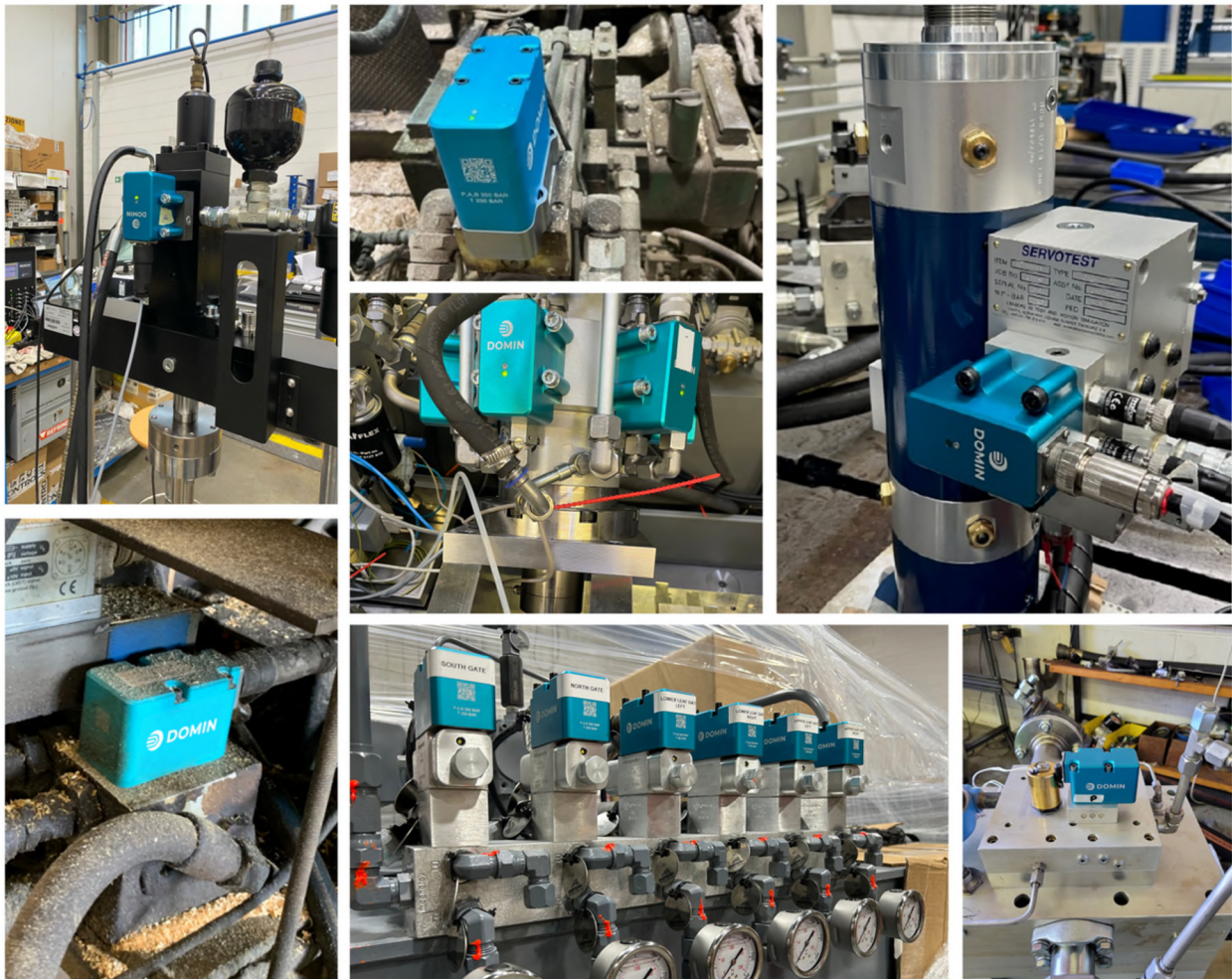
Vibration  
Equipment



# “Out with the old, in with the **Blue.**”

Domin offers hassle-free upgrades for customers using Parker, Bosch, Moog, Atos, and Woodward Servo and Proportional Valves. Our range of drop-in replacements guarantees a smooth transition to Domin Valves, delivering enhanced performance and reliability for your systems. Whether you're initiating a new project or upgrading your current setup, contact us today to explore our variety of plug-and-play solutions tailored to your specific needs.

Our commitment goes beyond the replacement of valves; we thrive on co-creating solutions with our clients, solving real-world problems, and ushering in an era of unparalleled efficiency and innovation.





# Quality at Scale

At Domin, we are committed to delivering excellent customer service by ensuring quality is upheld in every step of every process, every day, by everyone. Quality isn't just a goal; it is our culture.

Exceptional quality is a priority, even for high-volume production. We achieve this through:

**Rigorous in-process controls:** Stringent checks throughout every stage of manufacturing ensure consistent quality in every valve.

**Strong Partnerships:** Our collaboration with great minds across the industry ensures we stay at the forefront of innovation. For example, our partnership with Renishaw, a world leader in additive manufacturing technologies, provides us with access to cutting-edge equipment and expertise, further solidifying our commitment to quality.

**Process Capability:** We prioritise capable and repeatable manufacturing processes. This minimises variability and guarantees consistent performance across every valve we produce, regardless of production volume.





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## Contact Us



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