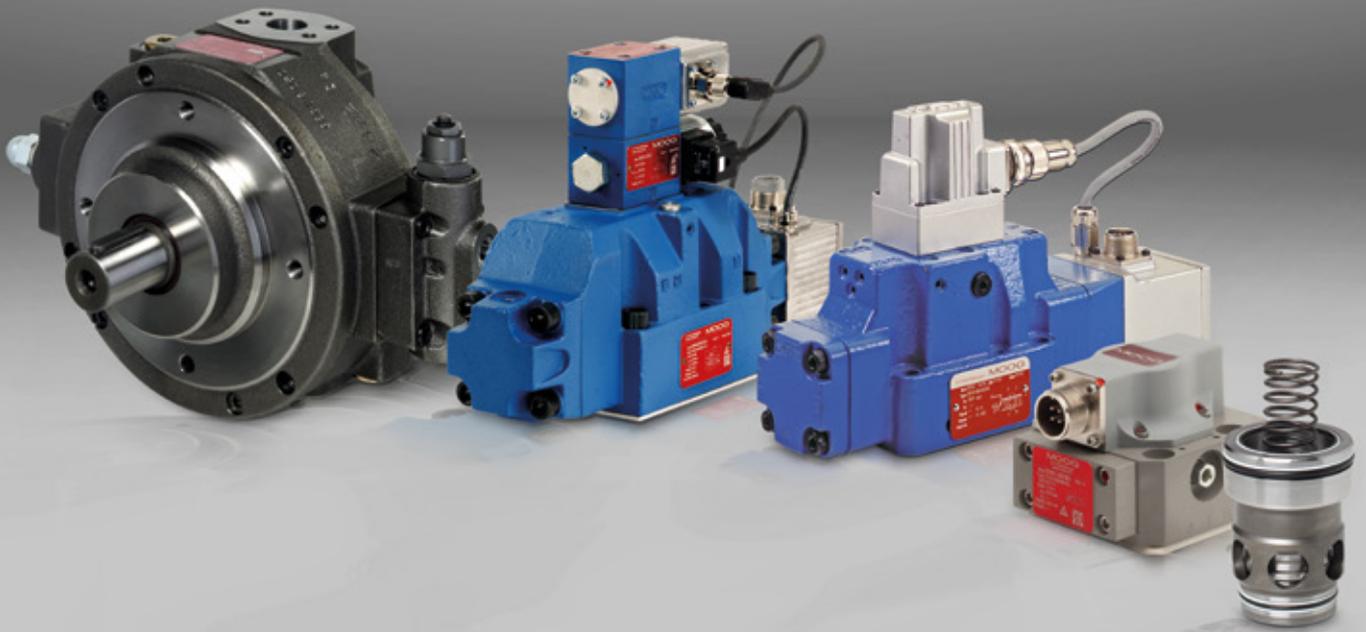


ELECTRO-HYDRAULIC PRODUCTS



Rev. B, October 2016

WORLD CLASS PRODUCTS FOR THE
HIGHEST MACHINE PRODUCTIVITY

WHAT MOVES YOUR WORLD

MOOG

MOOG WORLD CLASS ELECTRO-HYDRAULIC PRODUCTS

Whenever the highest levels of motion control performance and design flexibility are required, you'll find Moog expertise at work. We can help you overcome your toughest engineering obstacles and enhance your products performance through collaboration, technological expertise and our products.

Moog electro-hydraulic products such as Servo and Proportional Valves, Industrial Cartridge Valves, Radial Piston Pumps or Motion and Machine Controllers, provide precise control of position, velocity and force - so important to the proper operation of a wide variety of industrial machinery.

Your benefits at a glance:

- Long lasting performance and reliability that increase your machine lifetime and your return on investment
- Easier installation, creating less downtime so you are operating sooner
- Higher efficiency helping you lower your energy consumption and reduce your maintenance efforts

SERVO VALVES

Moog offers an extensive product range of Servo Valves specifically designed for precise control of position, velocity and force.

				Advantages
SERIES	30, 771 to 773, 631, 760, 761, 72, 78, 79-100, 79-200	D633, D634, D636, D637, D638, D639	D765, D661, D671, D672, D791, D792	<ul style="list-style-type: none"> ● High wear-resistance and durability ● Robust and proven track record in broad range of industries ● Convenient selection and configuration of valves to suit the application ● Easy integration into the hydraulic system using standard interfaces ● High accuracy and repeatability for demanding applications ● Fail-safe and Explosion proof versions available
Rated Flow @ Δp 70 bar (1,000 psi)	From 0.95 to 757 l/min	From 5 to 100 l/min	From 4 to 1,000 l/min	
Maximum operating pressure (bar)	From 210 to 350	350	From 315 to 350	
100% Step Response @ 210 bar (3,000 psi)	From 3 to 40 ms	From 8 to 20 ms	From 3 to 19 ms	
Moog Servo Valves at a glance	<ul style="list-style-type: none"> ● Pilot operated with low friction double nozzle pilot stage with high resolution and low hysteresis ● Mechanical position feedback without onboard electronics 	<ul style="list-style-type: none"> ● Direct Drive Valves with Linear Force Motor ● Analog or digital onboard electronics ● Optional fieldbus interface, pressure or axis control functionality 	<ul style="list-style-type: none"> ● 2- and 3-stage pilot operated valves with ServoJet or nozzle flapper pilot ● Analog or digital onboard electronics ● Optional fieldbus interface, pressure or axis control functionality 	

PROPORTIONAL VALVES

Moog offers an extensive product range of Proportional Valves specifically designed for precise control of position, velocity and force.

				Advantages
SERIES	D634, D637, D639	D661 to D665, D681 to D685	D671 to D675, D941 to D945	<ul style="list-style-type: none"> ● Numerous models with a range of sizes, performance characteristics and mounting options available ● Flow-optimized design for high rated flows ● Fast commissioning of digital products using Moog Valve and Pump Configuration Software (MoVaPuCo) ● Fail-safe and Explosion proof versions available
Rated Flow @ Δp 10 bar (145 psi)	From 24 to 60 l/min	From 30 to 1,500 l/min	From 30 to 1,500 l/min	
Maximum operating pressure (bar)	350	350	350	
100% Step Response @ 210 bar (3,000 psi)	From 20 to 25 ms	From 9 to 48 ms	From 10 to 44 ms	
Moog Proportional Valves at a glance	<ul style="list-style-type: none"> ● Direct Drive Valves with Linear Force Motor ● Analog or digital onboard electronics ● Optional fieldbus interface, pressure or axis control functionality 	<ul style="list-style-type: none"> ● 2- and 3-stage pilot operated valves with ServoJet or Direct Drive Valve pilot ● Analog onboard electronics 	<ul style="list-style-type: none"> ● 2- and 3-stage pilot operated valves with ServoJet or Direct Drive Valve pilot ● Digital onboard electronics ● Optional fieldbus interface, pressure or axis control functionality 	

INDUSTRIAL CARTRIDGE VALVES

Moog offers a broad product range of cartridges and cartridge valves for directional, pressure, check and throttle functions.

SERIES	 DIRECTIONAL, PRESSURE AND CHECK CARTRIDGES INCLUDING COVERS AND PILOT VALVES	 ACTIVE CARTRIDGE VALVES	 SERVO AND PROPORTIONAL CARTRIDGE VALVES	Advantages <ul style="list-style-type: none"> • Compact manifold design for high flows by using cartridges • High robustness and reliability • High flexibility through modular design
Rated Flow @ Δp 5 bar (75 psi)	From 130 to 10,500 l/min	From 100 to 12,000 l/min	From 33 to 20,550 l/min	
Maximum operating pressure (bar)	From 350 to 420	350	From 210 to 420	
Moog Cartridge Valves at a glance	<ul style="list-style-type: none"> • Modular set of building blocks to cover a wide variety of functions and applications 	<ul style="list-style-type: none"> • Actively operated for fast and accurate switching • Optional position monitoring for safety applications 	<ul style="list-style-type: none"> • 2- and 3-way throttle control • Different performance and fail-safe options available 	

RADIAL PISTON PUMPS

Moog Radial Piston Pump (RKP) is a variable displacement piston pump, available in various sizes (from 19 to 250 cm³ per revolution) and offers a highly dynamic control of pressure, flow and horse power in industrial applications.

SERIES	 RKP	 RKP-D	Advantages <ul style="list-style-type: none"> • Flexible configuration according to application demands • Reduced effort for noise damping measures • Improved control in hydraulic cycle • Less installed power, less effort to cool fluid • Increased machine productivity, process stability and repeatability and condition monitoring capability • Well suited for a broad variety of special fluids and for use in potentially explosive environments (ATEX Certification)
Size in cm ³ per revolution	From 19 to 250	From 19 to 250	
Flow l/min @ 1.500 rpm l/min @ 1.800 rpm	Up to 375 Up to 450	Up to 375 Up to 450	
Pressure (bar)	From 34 to 450	From 34 to 450	
Moog Radial Piston Pump at a glance	<ul style="list-style-type: none"> • Robust and compact design • Low noise emission • Broad range of compensator types and various control options available • Low pressure pulsation with less resonances • High efficiency 	<ul style="list-style-type: none"> • Improved dynamics • Parameters online switchable • Improved diagnostics • Factory-set leakage compensation • Less wiring (no external card required) • Easy to use Windows based configuration tool (Moog Valve and Pump Configuration Software) 	

MOTION AND MACHINE CONTROLLERS

Moog offers a wide range of Machine and Motion Controllers and Software to meet your specific needs.

SERIES	 MSC-R	 MSC II	 MC 600	Advantages <ul style="list-style-type: none"> • Modular design enables the solution to be scaled to the needs of the machine • Industry standard fieldbus enable convenient integration with other machine elements (sensors, drives, etc.) • Designed to perform in harsh environments • Resistant against various aggressive fluids
Moog Motion and Machine Controllers at a glance	<ul style="list-style-type: none"> • Motion Controllers and Software for electric and hydraulic servo actuation applications that offer rapid set-up • Motion Controllers with high vibration resistance and extended resistance against fluid contamination and corrosion for use in harsh environments • Machine Controllers available in modular design for high flexibility and effortless implementation into new systems 			

MORE PRODUCTS. MORE SUPPORT.

Moog designs a range of motion control products to complement those featured in this document. Moog also provides service and support for all of our products. For more information, contact the Moog facility closest to you.

Australia
+61 3 9561 6044
Service + 61 3 8545 2140
info.australia@moog.com
service.australia@moog.com

India
+91 80 4057 6666
Service +91 80 4057 6604
info.india@moog.com
service.india@moog.com

Russia
+7 8 31 713 1811
Service +7 8 31 764 5540
info.russia@moog.com
service.russia@moog.com

Brazil
+55 11 3572 0400
info.brazil@moog.com
service.brazil@moog.com

Ireland
+353 21 451 9000
info.ireland@moog.com

Singapore
+65 677 36238
Service +65 651 37889
info.singapore@moog.com
service.singapore@moog.com

Canada
+1 716 652 2000
info.canada@moog.com

Italy
+39 0332 421 111
Service 800 815 692
info.italy@moog.com
service.italy@moog.com

South Africa
+27 12 653 6768
info.southafrica@moog.com

China
+86 21 2893 1600
Service +86 21 2893 1626
info.china@moog.com
service.china@moog.com

Japan
+81 46 355 3767
info.japan@moog.com
service.japan@moog.com

Spain
+34 902 133 240
info.spain@moog.com

France
+33 1 4560 7000
Service +33 1 4560 7015
info.france@moog.com
service.france@moog.com

Korea
+82 31 764 6711
info.korea@moog.com
service.korea@moog.com

Sweden
+46 31 680 060
info.sweden@moog.com

Germany
+49 7031 622 0
Service +49 7031 622 197
info.germany@moog.com
service.germany@moog.com

Luxembourg
+352 40 46 401
info.luxembourg@moog.com

Turkey
+90 216 663 6020
info.turkey@moog.com

Hong Kong
+852 2 635 3200
info.hongkong@moog.com

The Netherlands
+31 252 462 000
info.thenetherlands@moog.com
service.netherlands@moog.com

United Kingdom
+44 (0) 1684 858000
Service +44 (0) 1684 278369
info.uk@moog.com
service.uk@moog.com

USA
+1 716 652 2000
info.usa@moog.com
service.usa@moog.com

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