# PAPER, PULPS SAVIULS

Servo Valve Maintenance, Repair and Upgrades for Total Productivity

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HELPING MAINTENANCE PROFESSIONALS
ENSURE MAXIMUM MACHINE PRODUCTIVITY
ACROSS KEY PRODUCTION PLANT ENVIRONMENTS

Pulp Mills | Paper Mills | Saw Mills | Corrugated Plants
Paper and Corrugated Board Converting Plants | Packaging Plants





# KEEP YOUR MACHINES AT PEAK PRODUCTIVITY WITH MOTION CONTROL SERVICE AND SUPPORT

Every day, maintenance professionals like you are faced with ensuring maximum machine productivity and maintaining the highest quality output at faster cycle times and larger sizes. Motion control is critical to your machine's performance. That's why Moog Global Support offers the technical expertise and full breadth of services to keep you productive.

As the global OEM supplier of Servo and Servo Proportional Valves to the leading machine builders in the paper, pulp and saw mill industries, Moog offers a range of services to help mill operators and maintenance professionals reduce downtime and ensure maximum perhour output.

### SUPPORTING KEY NEEDS FOR PAPER. PULP AND SAW MILL PROFESSIONALS

Moog has extensive experience providing motion control solutions in paper and wood processing environments. Count on our service team to keep your Moog Servo Valves and Radial Piston Pumps up and running for:

- Reduced downtime that ensures maximum machine productivity
- Fast cycle times through dynamic motion control performance
- Safe and reliable performance even in challenging operating conditions

### APPLICATIONS SUPPORTED

### PULP AND PAPER MILLS

- Calendar Roll
- Core Cutter
- Head Box
- Reels
- Rewinders
- Slitters
- Cutters
- Tension Control

### **SAW MILLS**

- Optimisers
- Band Saws
- Veneer Lathes
- Veneer Lathe Chargers
- Saw Sets
- Curve Saws
- Chippers
- Chipping Heads
- Steppers
- Canters
- Edgers
- Slashers
- Planers









# INCREASE PRODUCTIVITY WITH A MOOG UPGRADE

As machines have become faster and the requirements more stringent for higher productivity, reliability and safety, Moog provides a full spectrum of upgrade solutions. Many customers in the paper, pulp and saw mill industries have aseen benefits from replacing analogue electronics (electrical feedback valves) and no integrated electronics (mechanical feedback valves) with highly reliable microprocessor-based digital electronics. The result is multiple competitive advantages in control accuracy and ease of maintenance.

### **SOLUTIONS**

- Moog 1:1 concept: full hydraulic compatibility from analogue to digital electronics valve technology
- Moog design of control electronics: same controller dynamics
- Commissioning/start up support
- Audit and assessment of installed Moog technologies
- Installation of low-noise, highly volumetric efficient, longlife RKP Radial Piston Pumps
- Training to maximise long service life and keep your technology operating for years to come

### **UPGRADE POSSIBILITIES**

Moog D941 and D639 Series replace D651, D656 and D691, and D631/G631 (MFB) Valves

Moog D638 Series replaces D635

Moog D633/D636 and D634/D637 Series replace Series 62, 76 and 760 Servo Valves

Upgrade Analog Servo Valve and Proportional Valve with the latest versions of the D633/D634 Direct Drive Valves, D660 ServoJet Valves and D680 Valves

Upgrade your pump to the latest RKP Radial Piston Pump models

Replace Bosch and Atchley valves with Moog digital MFB, EFB or Direct Drive Valve upgrades

### ADVANTAGES OF A DIGITAL UPGRADE

- Better static and dynamic performance via higher resolution and advanced control electronics
- Same electrical command signals, fewer changes in automation system
- Higher reliability and uptime, better machine safety
- Lower maintenance costs and cost of ownership
- Latest paper machinery technology for older machines
- Digital electronics enable superior pressure control
- With bus communication or PC via local CAN-Bus, you can take advantage of the diagnostic functions and internal valve error handling integrated in the digital valve

### ADVANTAGES OF AN ANALOGUE UPGRADE

To meet the need for higher dynamics, fast step response and reliable long-life performance, Moog has developed models of our proven Proportional Valves with extreme, vibration resistant internal electrical connectors and localised potting of critical components.

### **Direct Drive Valves**

- Models with extreme vibration resistant internal electrical connectors available
- D634Z395C and D634Z549A also have additional potting on critical electrical components

### D660 ServoJet Valves and D680 Mini DDV Pilot Valves

 Models with a vibration isolation pad between the main stage valve body and the electrical housing available





## RESPONSIVE MOOG SERVICE IS NEARBY



### **REPAIR**

Deliver less unplanned downtime and ensure "like-new" performance without the need for unnecessary tuning with factory repair services



### **OEM PARTS**

Ensure industry-leading machine performance with the only provider of OEM parts



### TRAINING

Get hands-on training from expert Moog trainers using Moog equipment in our facilities or on-site at yours



### **RETROFITS/UPGRADES**

Access exact replacements for motion control products to improve the quality of underperforming machines



### FIELD SERVICE

Supplement your staff with professionals who know your applications and can reduce your risk of downtime



### FLEXIBLE SERVICE AGREEMENTS

Shift from unplanned "break and fix" approach to planned maintenance that minimises risk of failure

### OIL AND CONTAMINATION ANALYSIS

As an additional service, Moog can help you assess your critical fluids for peak machine performance.

To improve the performance of your facility contact Chris Goff: email: cgoff@moog.com, tel +44 7920 50 11 24

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