

Comprehensive offering to suit your every need

Valve controls and actuators for North American markets





Valve automation excellence

Valmet offers a unique and complete range of solutions for your valve automation needs. With our actuator and controller products you can fulfill end user requirements for control, emergency shutdown and on/off valve applications.

Our valve automation solutions will ensure the best possible valve performance and compliance to environmental regulations, regardless of valve make, model or manufacturer. Our offering ranges from limit switches to reliable actuators and intelligent valve controllers with third generation diagnostics.

Universal performance

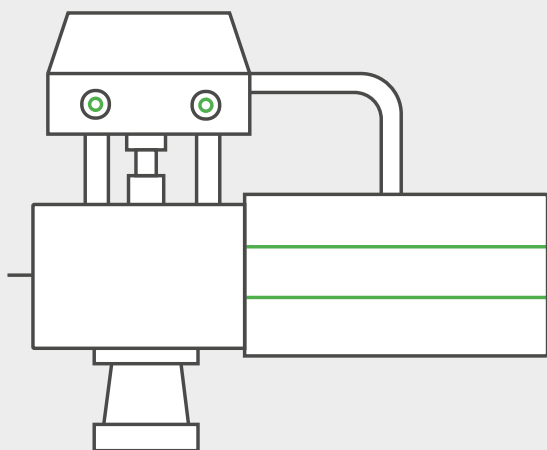
Whatever the valve in your process, our valve automation offering

brings a high level of reliability, ease of use and best in class operational performance to the entire valve assembly. Our valve automation products have been designed to work with all valves by major valve manufacturers, regardless of type or end use application. They are easy to incorporate into all valve assemblies and are based on proven technologies.

Over several decades we have perfected manufacturing quality

to the highest standard and developed features that deliver reliable performance in even the most challenging applications and operating environments. The added level of automation and intelligence delivers a new level of diagnostics capabilities for the planning and execution of effective predictive maintenance.

Valmet's valve automation offering



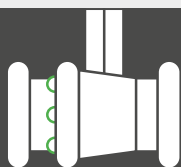
Valve controllers

- Neles™ and Stonel™ valve controllers (for control and on/off valves)
- Neles™ intelligent safety solenoids
- Stonel™ limit switches

Actuators

- Neles™ and Jamesbury™ pneumatic actuators (linear and rotary)
- Neles™ hydraulic actuators
- Valvcon™ electric actuators

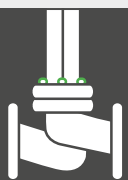
Valve automation



Ball valves



Butterfly valves



Linear valves

Your valve

- Any valve type
- Control or on/off
- Rotary or globe
- Pinch or knifegate
- Other applications

Valmet valve automation offering

Control, emergency shutdown and on/off valve applications for any valve

Valve controllers and limit switches



Control valve controllers



On/off valve controllers



Limit switches



Safety solenoids



Mounting parts



Actuators



Pneumatic cylinder actuators



Rack & Pinion actuators



Scotch yoke actuators



Linear actuators



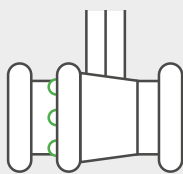
Electric actuators



Mounting parts



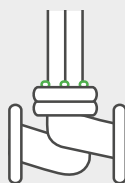
Your valve



Ball valves



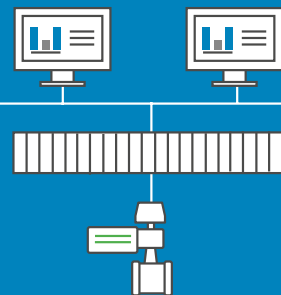
Butterfly valves



Linear valves

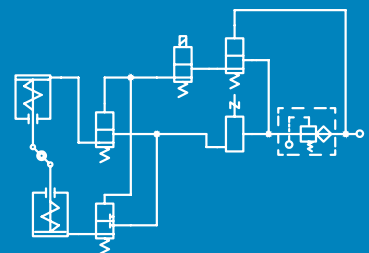
DCS integration

Interoperability tested with all major DCS vendors for ensured functionality



Instrumentation

- Predefined instrumentation drawings
- Needed pneumatic components available
- Instrumentation sizing support
- Actuator sizing



Global expert services

- ~40 Flow control service centers
- +300 Field service experts
- Local service support



Valve controllers product mapping

	For control valves					For on/off valves		For ESD valves
	NP700	NE700	ND7000	ND9000	NDX	AN/ANX	SG9000	VG9000
For more information see bulletins	7NENP20	7NENP20	7ND720	7ND9021	7NDX22 7NDX23	7AN21ST	7SG20	9VG921
Control signal / Communication								
Pneumatic	•							
4-20 mA		•						
4-20 mA/HART			•	•	•		•	•
0-24 VDC (with RCI)								•
AS-interface						Versions 3 & 5		
DeviceNet						•		
Foundation fieldbus				•	Standard			•
Profibus PA				•				
Partial stroke								•
Diagnostics								
Advanced			•	•	Compact	•	•	•
Premium					Standard			
DTM			•	•	•		•	•
EDDL			•	•	•		•	•
Wireless capabilities						•		
Enclosure ratings and certifications								
Non-Ex	•	•	•	•	•	•	•	•
Ex i			•	•	•	•	•	•
Ex d	•		•	•	•	ANX	•	•
SIL 2 certification			•	•	•			
SIL 3 certification								•
IP 54	•	•						
IP 66			•	•	•	•	•	•
IP 67						•		
IP 69K						•		
Enclosure								
Aluminum	•	•	•	•	•	•	•	•
Stainless steel				•		ANX	•	•
Conduit entry / Connector options								
NPT			•	•	•	•	•	•
M20			•	•	•	•	•	•
M25						•		
Mini-connectors				•		•		
Micro-connectors (M12)						•		
Temperature range								
-25 to +120 °C / -15 to +248 °F		•						
-40 to +90 °C / -40 to +194 °F	•							
-40 °C to +80 °C / -40 °F to +176 °F						•		
-40 to +85 °C / -40 to +185 °F			•	•	•		•	•
-53 to +85 °C / -63 to +185 °F				•				

Positioner/Valve controller solutions

High availability and easy interpretation are the key success factors in effective field device data analysis. Neles™ and Stonel™ intelligent valve controllers support standardized technologies and ensure the availability and usability of diagnostics information independent of your control, safety or asset management system.

Neles ND-series digital valve controllers for control valves



The **Neles™ NDX™, ND9000™ and ND7000™ -series** valve controllers are designed to operate universally on every control valve actuator and in all industry areas. They are smart, reliable and future-proof with superior design features

and unique diagnostics, that provide a solid foundation for performance optimization and proactive maintenance.

Neles NP/NE-series analog positioners for control valves



The **Neles™ NE700/NP700-series** positioners are designed to operate on every control valve actuator and in all industry areas. They offer rugged construction with few parts and resistance to vibration. NE700/NP700

positioners provide excellent repeatability and accuracy, with either rotary or linear control valves. Both devices are IP 54 enclosures.

Stonel Axiom AN/ANX-series for on/off valves



The **Stonel™ Axiom™** discrete valve controller can be ordered with multiple options to fulfill your requirements; standard solid state, network-enabled, and Stonel's Wireless Link

diagnostics and advanced capabilities. Each share most of the same components and functions. (AN/ANX series)

Neles SG-series for on/off valves



The **Neles™ SwitchGuard™ SG9000-series** is a top class intelligent on/off valve controller. Large pneumatics capacity and embedded diagnostic features help ensure availability

of switching and high cycling valves in demanding processes. The pneumatic capacity easily replaces any solenoid valve and other pneumatics accessories.

Neles VG-series for emergency shutdown valves



The **Neles™ ValvGuard™ VG9000-series** is an intelligent safety solenoid with partial stroke testing features for emergency shutdown and venting valves. Based on the automatic PST and other diagnostics data, plant safety targets

can be reached more economically. Large pneumatics capacity and embedded diagnostic support valve reliability.

Stonel™ product mapping

	1/4-turn			Linear	
	Axiom	Eclipse	Quartz	Prism	Hawkeye
For more information see brochure	CB086				
Non-contact solid state sensors with LEDs and 5 year warranty	•	•	•	•	HK
2-wire solid state sensors are both AC and DC compatible	•	•	•	•	•
PNP/NPN self calibration 3-wire unit, patented technology		•		•	
Universal voltage capability	•	•	•	•	•
Feedback “Input” options					
On/off (Discrete Input = DI)	•	•	•	•	•
4-20mA (Analog Input = AI)			•	•	
Optional communication technology					
AS-interface	versions 3 & 5	version 3	version 3	versions 3 & 5	Specialty application module
DeviceNet™	•	EN & EG	•	•	
IO-Link		•		•	
Diagnostics available as an option	•	•		•	
Red/green LEDs are coordinated with red/green mechanical visual indicator (Prism; green only)	•	•	•	•	
Push button calibration and wireless calibration option	•	•		•	
Integral solenoid	Standard			Optional	
Rebreather (prevents ingestion of contaminated air into actuator)	•				
Control “Output” options					
On/off (Discrete Output = DO)	•	•	•	Optional	
4-20mA (Analog Output = AO)			Optional	Optional	
General purpose and Division 2 (nonincendive) standard; Division 1 (I.S.) optional	•	•	•	•	•
Pin-connector options (not viable in CID1 XP applications)	AN only	•		•	
NPT conduit options	•	•	•	•	•
Screw on cover allows quicker access for maintenance needs; no special tools required	•	•	•	•	
Anodized aluminum with low copper content materials and stainless steel hardware	•		•		
Stainless steel enclosure and hardware	ANX only		•		HX
Polycarbonate materials with stainless steel hardware		•		•	HK
5 year bumper to bumper warranty (includes solenoid and mounting hardware)	•				

Stonel™ solutions

Our technology features user-friendly devices that allow automated valves to be connected easily and reliably into the control system. Minimize total life cycle cost when implementing our proven, field-based digital communication technologies.



Valve controller for rotary applications

The **Stonel™ Axiom™** discrete valve controller can be ordered with multiple options to fulfill your requirements; standard solid state, network-enabled, and Stonel's Wireless Link

diagnostics and advanced capabilities. Each share most of the same components and functions. (AN/ANX series)



Valve controller for linear applications

The **Stonel™ Prism™** intelligent valve controller integrates an advanced position sensing system and integral pneumatic control for sanitary diaphragms and other linear

applications. Its intuitive operation means set up is easy and can be completed in only seconds. (PI series)



Limit switches for rotary applications

The **Stonel™ Eclipse™** limit switch is compact and modular with solid state reliability. It delivers many of the same features and benefits as the Stonel Axiom, with some exceptions. Options in this series are the solution of choice in applications and processes that require the solenoid to be mounted externally. (EC series)

The **Stonel™ Quartz™** limit switch is durable, corrosion resistant, and versatile. Options include explosionproof, nonincendive, and general purpose. This product fits most applications and processes that require the solenoid to be mounted externally. (QX/QC/QN/QG series)



Limit switches for point sensing

The **Stonel™ Hawkeye™** proximity sensor is for linear valve position sensing. It can be ordered in options to fulfill requirements that are nonincendive, intrinsically and explosionproof.

Use in process environments for gate and globe valves. (HK/HX series)



Process networking components

The **Stonel™ FieldLink™** networking components enable taking advantage of field-based communication technologies to cut installation and maintenance costs and improve operating performance.

The enclosures, drop connectors, I/O modules, gateways and other devices support networking protocols including AS-Interface, DeviceNet, Modbus, Profibus, FOUNDATION Fieldbus and more. (JX/FN series and accessories)

Valvcon™ product mapping

	Rotary valve action		
	ADC-series	V-series	QB-series
For more information see bulletins	V201-1 V201-2	V200-1	V208-1
Torque output			
17-339 Nm (150-3000 lb-in)	•	•	
68-136 Nm (600-1200 lb-in)			•
Temperature range			
-40 to 130°F (-40 to 55°C)			•
-40 to 150°F (-40 to 66°C) Max. temp. 55°C/130°F with lead acid battery	•	•	
Available voltages			
	Universal power	AC (1PH)	Multi-voltage
115 VAC	•	•	•
230 VAC	•	•	•
24 VAC	•		
12 VDC	•		
24 VDC	•		•
Available rotation capabilities			
90-degree operation	•	•	•
180-degree operation	•	•	
270-degree operation	•	•	
Duty cycle			
Continuous/100% up to 40°C/104°F (75% at max temp)	•		
75% up to 40°C/104°F (varies w/ torque at max temp)		•	
Continuous/100% up to 55°C/130°F			•
Control type			
On/Off	•	•	•
Analog Control	•		•
Automatic cycling/Cycle rate regulation		•	
MODBUS (optional)	•		•
Housing construction			
A380 aluminum with baked-on powder coat	•	•	•
Certifications/Approval/Ratings			
cCSAus	•	•	•
ATEX: Ex db	•	•	
IECEX	•	•	
Ingress Protection IP66 (enclosure)	•	•	•
Visual position indication			
Yellow and black mechanical dial	•	•	•
Position feedback			
4-20 mA transmitter	•		•
SPDT end-of-travel indication switches	•	•	•
Calibration			
Manual via "set & go" user interface	•	•	•

Valvcon™ electric actuator solutions

Our electronically controlled electric actuators deliver compact, rugged, and reliable performance for precise valve and damper positioning across a wide range of industries, including aerospace, energy, water/wastewater, and more. Available configurations include on/off, positioning, automatic cycling, and battery back-up as well as mechanical spring back-up.

Quarter-turn valve and damper applications



Continuous duty, universal power, and universal control

The **Valvcon™ ADC-series** actuators with optional back-up power are field settable for “fail clockwise” or “fail counter clockwise”. It’s a continuous-duty, and extremely versatile brushless DC electric actuator for quarter-turn

valve and damper applications. It can be used for both on/off or PositionControl applications, especially when frequent cycling is required.



Demanding process applications

The **Valvcon V-series** with on/off control or automatic cycling applications means no maintenance required. These electric actuators are compact, rugged and reliable, making them especially suitable when space constraints

exist. They are well suited for a wide range of applications and come readily equipped with all available approvals as standard.



Continuous duty, integrated mechanical spring back-up power

The **Valvcon™ Quarterback™ QB-series** is a highly versatile, quarter-turn electric actuator featuring integrated mechanical spring back-up power for dependable, continuous duty performance. The compact and lightweight

unit is well-suited for use in on/off and Position Control applications, especially when space is limited and frequent cycling is required.

Pneumatic actuator product mapping

	Single- and double-acting			Single-acting
	Neles B1-series	Neles N1-series	Jamesbury VPVL-series	Jamesbury QPX-series
For more information see bulletins	6B20	6N120	A111-5	A110-4
Torque range				
3.2 to 7187 Nm			•	
15 to 796 Nm				•
700 to 15000 Nm	•	•		
15000 to 147000 Nm		•		
3500 to 5000 Nm	•	•		
5000 to 700000 Nm		•		
Style				
Pneumatic cylinder	•			
Spring diaphragm				•
Rack and pinion			•	
Skotch yoke		•		
Rotary applications				
On/Off	•	•	•	•
Modulating	•			•
Extra fine control				•
Fine control	•			
General control	•		•	
Emergency shut down (ESD) control	•	•	•	•
ISO5211 and VDI/VDE3845 connections	•	•	•	•
Fire protection	•	•		•
Travel adjustment: -5° to +5° and 85° to 95°	•	•	•	•
Travel range: Up to 100% adjust stop option	•	•	•	•
Type				
Fail safe	•		•	•
Fail in place	•		•	
Field reversible fail position		•	•	•
Temperature range				
Model specific, not continuous. See bulletins for exact range of Standard, Low, High, or Arctic versions				
-20 to +66 °C / -4 to 150 °F				•
-51 to +150 °C / -60 to 302 °F			•	
-55 to +120 °C / -67 to 248 °F	•			
-55 to +125 °C / -67 to 257 °F		•		
Pneumatics				
NPT threaded	•	•	•	•
Solenoid, NAMUR direct mount			•	
Solenoid, nipple bracket mount	•	•	•	•
Supply pressure range 1.4 - 7.0 barg (20 - 100 psi)				•
Supply pressure range 2.0 - 8.0 barg (30 - 116 psi)			•	
Supply pressure range 2.5 - 8.0 barg (36 - 116 psi)		•		
Supply pressure range 3.0 - 8.5 barg (43 - 120/145 psi)	•			
Pneumatics supply media				
Air	•	•	•	•
Water				•
Hydraulic fluid (mineral based)				•
Natural gas (sweet)	•	•		•
Nitrogen		•	•	•
Enclosure ratings and certifications				
IP 66	•		•	
IP 67		•	•	
IP 66M	Optional	•	•	
IP 67M	Optional	•	•	
Up to and including SIL 3	•	•	•	•
ATEX II 2 GD	•	•	•	•
PED		•		

Pneumatic actuator solutions

Valmet offers a wide range and various types of valve actuators for all industries and processes. Our high-performing pneumatic solutions support both rotary and linear valves and have a proven design to maximize cycle life and improve process efficiency while providing exceptionally smooth and reliable actuation for 90° rotary valves. Select from a comprehensive range of valve actuators to suit your every need regardless of valve type, size or even manufacturer.



Pneumatic cylinder – control and on/off service

The **Neles™ B1-series** is a rugged, heavy-duty actuator with a wide torque range. It offers an extremely long cycle life and a vast number of optional features. This proven, high-performance actuator range is well suited to operate almost any type of rotary valve and

provides reliable actuation for all industries and applications.



Scotch yoke – on/off service

The **Neles™ N1-series** actuators are designed for quarter-turn applications. The high performance, heavy-duty design offers extremely reliable valve execution with corrosion-resistance, wide torque range, and

versatile configurations. They are suitable for ESD applications on/off, HIPPS with options of pneumatic and hydraulic versions.



Rack and pinion – double acting and spring return

The **Jamesbury™ Valv-Powr™ VPVL-series** actuators are suitable for all process applications and are available with corrosion treatment options of electroless nickel, hard

anodized protection, and PTFE coating. The compact design makes this a favorite in the chemical industries.



Spring diaphragm – modulating control and on/off service

The **Jamesbury™ Quadra-Powr™ X, QPX series** spring-diaphragm actuators combine the low air pressure requirements of a diaphragm actuator with the high-pressure capacity of a piston actuator, resulting in a smoother, more accurate operation and longer cycle life. Options include mechanical

lock-out, 100% adjustable stop, tropicalization for wet and humid environments, fast operation and manual override. The efficient quarter-turn valve operation provides safe and reliable operation even when minimal supply pressure is available.

Linear actuator product mapping

	Neles		
	VD	VB	VC
For more information see bulletins	6DA20	6VB20	6CA20
Type/Style			
Diaphragm	•		
Cylinder		•	•
Piston-barrel		•	•
Single acting	•	•	
Double acting		•	•
Travel range			
0% to 100%	•	•	•
Stroke length			
Up to 80 mm	•		
Up to 280 mm		•	•
Thrust force			
1890 - 22800 N / 424 - 5125 ft-lb.	•		
13033 - 235406 N / 2930 - 52921 ft-lb.		•	•
27480 - 264860 N / 6177 - 59542 ft-lb.			•
Supply pressure range			
2.0 - 10 bar (29 - 145 psi)			•
2.8 - 10 bar (40 - 140 psi)		•	
3.2 - 4.2 bar (46 - 60 psi)	•		
Applications			
On/Off	•	•	•
Modulating	•		
Style			
Handwheel (optional)	•	•	•
Locking devices (optional)	•	•	•
Temperature range options			
-30 to +85 °C / -22 to 185 °F			•
-55 to +85 °C / -67 to 185 °F	•		
-55 to +120 °C / -67 to 248 °F		•	
Enclosure ratings and certifications			
Up to and including SIL 3	•	•	•
ATEX II 2 GD	•	•	•

Linear cylinder actuators

Valmet's pneumatic linear diaphragm actuators provide safe and reliable operation to suit on/off and modulating applications and offer extremely long cycle life. Available styles include diaphragm, cylinder, piston-barrel, single acting and double acting. They are designed for fast efficient operation of gate valve, globe valve, damper and other linear type valves. With options for handwheel and locking devices for versatility and the travel range up to 100%, these actuators have a proven, reliable design to meet the demands of modern automation.



Neles VD-series linear diaphragm actuators

The **Neles™ VD-series** linear actuators are a spring return diaphragm designed for use in both modulating control and on/off service. These actuators are well suited to operate linear valves with small to medium thrust requirements. The low friction diaphragm design provides precise control and reliable

operation, and the corrosion resistance coating protects against severe weather, chemical and petroleum environments. They are field reversible for spring to open or close.



Neles VB-series linear cylinder actuators

The **Neles™ VB-series** linear actuators are a piston type designed for use in both modulating control and on/off service. These actuators are well suited to operate linear valves with medium to high thrust requirements. A specifically designed

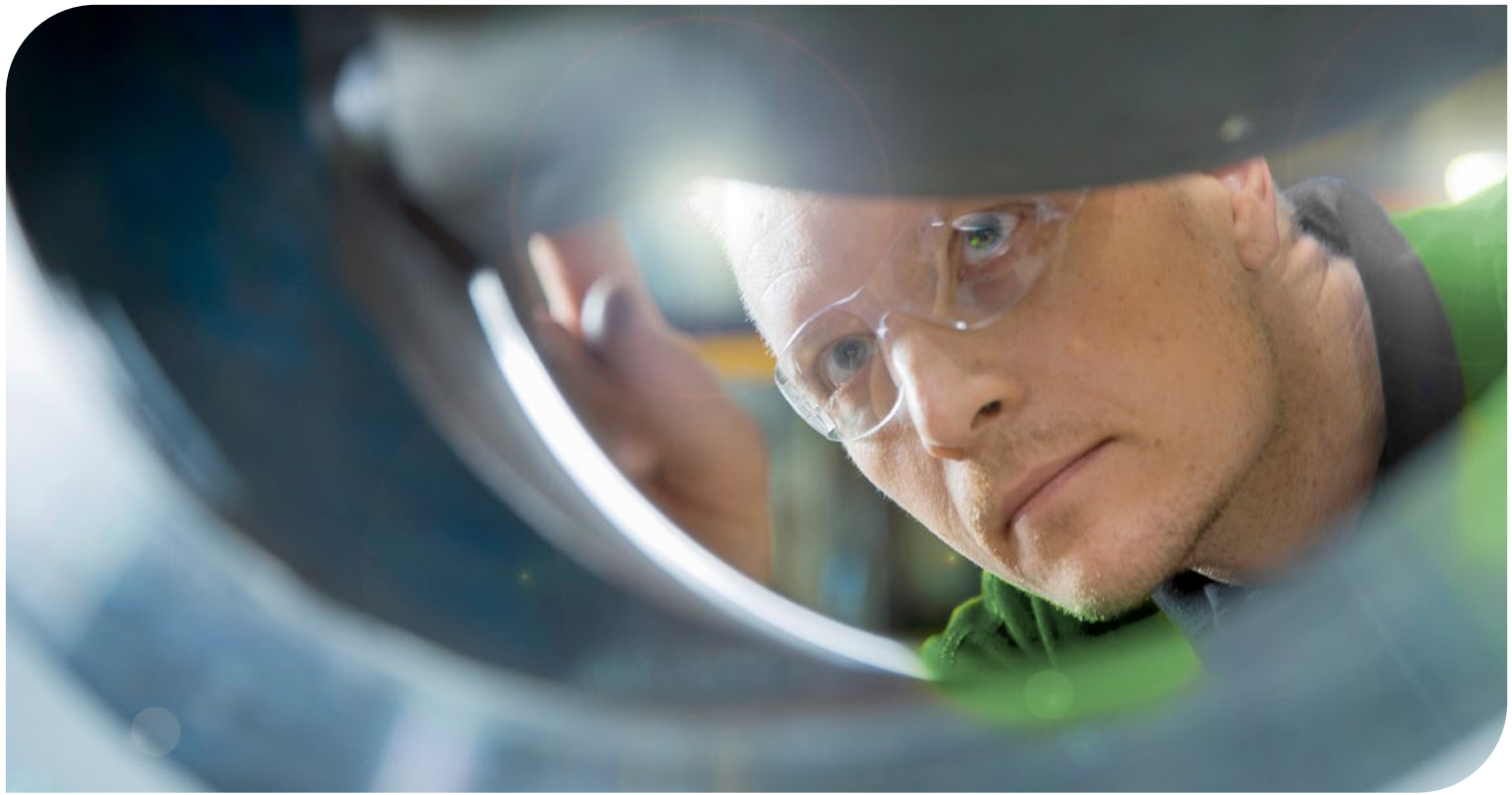
piston and cylinder in the main actuator ensures simple and accurate alignment when assembling the actuator or performing maintenance.



Neles VC-series linear cylinder actuators

The **Neles™ VC-series** are double acting, piston type linear actuators designed for use in both modulating control and on/off service for linear valves. These actuators are well suited to operate linear valves with medium to high thrust requirements. They deliver high control

performance and are low friction. The self lubricating piston seal in cylinder ensures efficient operation and improves the transfer of energy to the valve stem.



Extreme ruggedness for extreme conditions

Smooth-operating, automated process valves play an important role on offshore platforms. Process valves are often difficult to access and the on-site delivery of spare parts is more challenging than when operating onshore.

Traditionally, process valves on offshore platforms have been controlled by either solenoid valves or by positioners, depending on the application and on local decisions and procedures. The offshore environment also creates its own demands on the enclosures of these devices.

Nowadays, intelligent valve controllers are also available with stainless steel enclosures. Our stainless steel valve controller offering includes Neles ND9300 intelligent valve controllers for control valves, Neles SwitchGuard intelligent on/off valve controllers for demanding on/off applications, Stonel Axiom on/off valve controllers for standard on/off applications and Neles ValvGuard intelligent safety solenoids and partial stroke testing devices for safety valves.

This way the whole network of automated valves on platforms can be controlled by intelligent valve controllers, thereby creating many new opportunities – for example, in the field of condition monitoring and predictive diagnostics. By means of intelligent valve controllers and predictive diagnostics, condition monitoring and maintenance planning can also be performed remotely from an onshore location.

Offshore valve control offering

Control applications

- Neles™ ND9300 and ND9400

ESD applications

- Neles™ ValvGuard™ VG9300

On/off applications

- Stonel™ Axiom™
- Stonel™ Quartz™

Critical on/off applications

- Neles™ SwitchGuard™ SG9300

Configuration and diagnostics

- FDT and EDD capable for multi-vendor support of remote configuration and diagnostics access

Our offshore valve control offering

Neles™ ND9300 and ND9400



Neles ND9300 and ND9400, with its stainless steel construction for corrosive environments, are ideal solutions for when top class performance, comprehensive diagnostics and resistance to tough environmental conditions are required. ND9300 and ND9400 operate on every valve, on all field buses and integrates smoothly into all major control systems. It enables financial savings during all life cycle phases of the valve from engineering and commissioning to operations and maintenance.

Neles™ ValvGuard™ VG9300



Neles ValvGuard VG9300 is our stainless steel version of the new safety solenoids and partial stroke test device for emergency shutdown and venting valves, completing our successful range of valve controllers. VG9300 is available both for HART and FOUNDATION Fieldbus environments. It is simple to install and use, and is suitable for use with single- and double-acting actuators and rotary and linear valves. It offers extensive safety valve testing capabilities as well as optional internal limit switches.

Neles™ SwitchGuard™ SG9300



Neles SwitchGuard SG9300 is the stainless steel version of our innovative intelligent on/off valve controller. Its unique diagnostics features enable remote condition monitoring and predictive maintenance also with on/off valves. It too is simple to install and use and is suitable for use with single- and double-acting actuators and rotary and linear valves. Its highlights include exact valve opening and closing times and speed control with the possibility to set valve stroke profiles. The high pneumatics capacity eliminates the need for additional pneumatic accessories. The product is available with optional internal limit switches.

Stonel™ Axiom™



The stainless steel version of the explosion proof Axiom ANX is an optimum solution for standard on/off applications. It is a discrete on/off valve controller that combines a solenoid valve and proximity switches into one integrated package. The advanced position sensing system of Axiom offers reliable long-life performance with convenient push-button settings. The internal pneumatic valve has high tolerance to dirty air and it enables perfect operation in demanding offshore environment.



Superior offshore performance

Process upsets eliminated

- Detecting performance degrading with online diagnostics before it affects the process
- Enhanced field device availability due to predictive maintenance and reliable product design

Low life cycle costs

- Predictive tooling enables the shutdown work list to be planned in advance
- Unnecessary maintenance work is eliminated
- Longer maintenance cycle due to enhanced product reliability

Simple to install

- The same units can be used for all actuators – small and large, single- and double acting, and for both rotary and linear valves
- Mounting kit designs are available for all our actuators and over 800 3rd party actuators

Optimum process performance

- Automatic tuning of control performance with ND9300
- Advanced control algorithm of ND9300 maintains valve performance in changing conditions

Valmet's professionals around the world work close to our customers and are committed to moving our customers' performance forward – every day.



Valmet Flow Control Oy

flowcontrol@valmet.com

For more information, please visit
valmet.com/flowcontrol

To find the location nearest to you,
please scan here:

