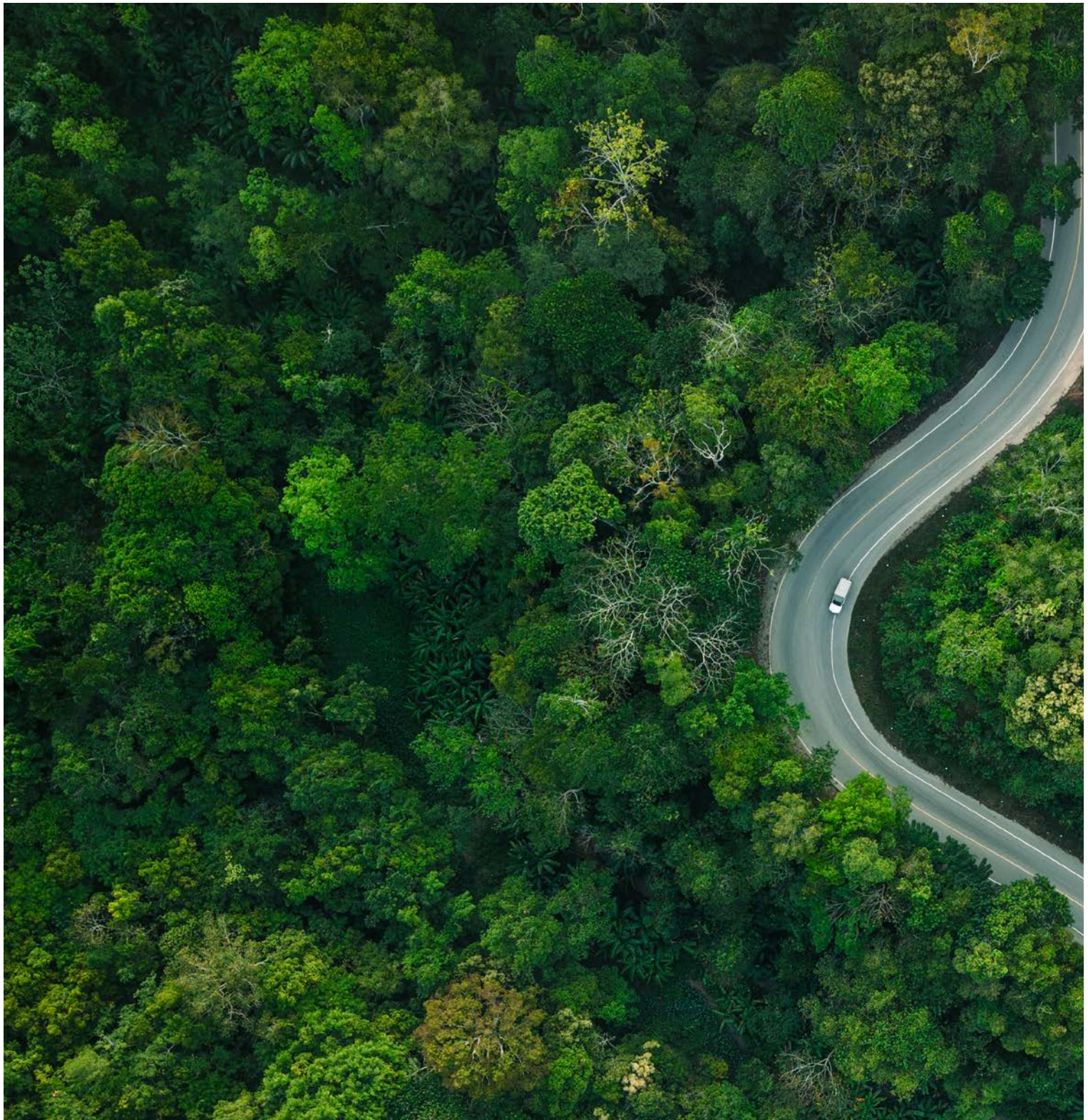


# Flow control solutions for pulp and paper

Smarter flow control for the modern pulp and paper mill











# Flow control for a new era of pulp & paper

The pulp and paper industry is evolving, driven by new demands in efficiency, sustainability, and operational resilience. As mills become larger and more optimized for stable, high-capacity production, flow control solutions must deliver more than just reliability. They must be the cornerstone of smarter maintenance, improved environmental performance, and continuous process development.

## A legacy of innovation you can trust

Our long experience provides the foundation for meeting changing industry requirements. Valmet pioneered valve technology, delivering our first Neles™ valves some seven decades ago. This history of durability and reliability is built upon trusted brands like Neles™ and Jamesbury™.

We have continuously shaped the industry through milestone innovations, such as the Neles™ PZ capping valve introduced in the 1960s for safe batch digester operations, and the highly precise NelesAce™ basis weight control valve. These field-proven products established our high-performance standards and form the strong foundation for our offering today.

## Engineered for today's demanding mills

Today's challenges are increasingly complex. Modern mills demand non-stop processing of fibrous media, tighter precision, predictive maintenance, and strict emission controls. Our solutions are explicitly engineered for these harsh conditions. After all, it's exactly these harsh pulp & paper conditions where the roots of business lie.

Proven technologies, including robust metal- and ceramic-seated designs, provide the durability to cut through fiber material and withstand severe applications like cooking and washing. Furthermore, advanced innovations like Neles™ Q-trim™ technology for cavitation and noise

reduction, the Neles™ M series pocket feeder valve, and intelligent digital valve controllers ensure your mill achieves the highest environmental and operational performance.

Sustainability and profitability are not competing priorities, but rather two sides of the same coin. The key to unlocking both is through enhanced process efficiency.



# The digital expansion: from reliable valves to intelligent flow control

In today's industry, achieving peak efficiency requires a holistic approach that goes beyond just robust mechanical hardware. It requires the power of digitalization. We are shifting from an analog past to a digital future, where flow control devices are no longer isolated components but part of an intelligent ecosystem that provides real-time data and actionable insights.

## Efficiency that bridges sustainability and profitability

An optimized process is an efficient one. It consumes less energy, water, and raw materials, directly translating to lower operational costs and a reduced environmental footprint. Smart devices, like the Neles™ NDX™, provide the real-time data and diagnostics for the predictive maintenance needed to optimize this process, ensuring you can move from a reactive to a proactive maintenance strategy and avoid unplanned downtime.

## A partnership to carry you into the future

At Valmet, we understand that you're not just buying valves; you're investing in the performance of your process. We work closely with our customers to understand their unique challenges, offering the industry's widest portfolio of flow control solutions, valve automation, and expert services from a single, reliable source. Whether you are building a new mill or optimizing an existing one, we have the expertise and technology to help you succeed.

As the shift towards increasingly data-driven operations continues, flow control devices are no longer isolated components, but part of a much greater intelligent ecosystem.





## Sustainability and profit go hand-in-hand

Paying attention to the details and making the right valve selections can make a profound difference in terms of both business and environmental performance. By prioritizing high flow capacity – or Cv-values – in your control valves, you unlock concrete benefits for both your bottom line and your sustainability targets.

Intelligent control valves help ensure accuracy and consistency throughout the modern mill. This optimized flow maximizes yield and end-product quality, which directly reduces the amount of process waste and obsolete production. These process attributes, achievable with our high-capacity valves, significantly improve material efficiency while simultaneously lowering your overall energy consumption.

Greater flow coefficients allow you to achieve the desired capacity with a smaller valve. Sizing down not only reduces the initial unit cost but also delivers continuous energy savings over the valve's entire lifespan. With smaller valves in place, process pumps require less energy to sustain an even flow, and smaller actuators reduce the demand for compressed air.

When you consider that an average pulp or paper process can utilize up to 3,000 individual valves, the compound effects of these improvements quickly add up. Making the smart choice in valve sizing translates into daily operational savings and a substantial reduction in energy wastage across your entire installed base. By optimizing flow capacity, you are taking a significant step toward better environmental performance without compromising profitability.

# Comprehensive offering

We offer our customers an industry-leading portfolio of valve products designed and proven to work in pulp, paper and bioproduct processes. Our dedicated expert services and digital tools are what make our offering truly unique and complete.

## Control valves

Proven designs for rotary and linear control service

- Improving uptime through reliability and serviceability
- Improving process accuracy (variability) and efficiency
- Ensuring a safe working environment
- Tested and certified assemblies through modularity

## On/off valves

High-performance designs for rotary and linear on/off service

- Improving process safety and reliability
- Enabling faster service and maintenance
- Preventing major damage and disruptions
- Tested and certified assemblies through modularity
- Performance verified with full valve assembly testing

## Modular smart devices

Intelligence for mill operation and maintenance

- Quick setup for easy start and maintenance
- Smart diagnostics for improved performance
- Proven open system interoperability
- Predictive functionalities for service planning and digital networking

## Expert services

Good practices and proven formulas for success born in pulp and paper

- Digitalization improves efficiency during engineering and erection stages
- Solutions for predictive maintenance to secure high operational process performance
- Solutions to secure spare parts availability and optimize capital tied in inventory

Automation and digitalization ensure accurate and efficient service across the solution lifecycle

### Industry-leading expertise and digital tools:

- Predictive maintenance
- Performance monitoring
- Installation and commissioning
- Valve selection and sizing
- Spare part inventory
- Planned shutdowns
- Valve replacement and recycling

### Application support covers:

- Certification: Documented according to global standards
- HSE features: According to industry requirements
- Interoperability: Work with all common protocols (e.g. HART, FDT, EDD or FDI)
- Engineering: Nelprof valve sizing and selection
- Service: On- and off-line tools, asset management solutions

Standards and certifications



# Flow control solutions for pulp, paper and bioproducts

## Ball valves

### Neles™ ball valves – Flanged ball valves optimized for demanding applications. Build to stand.

| Product                                                                                                       | Series                            | Design                                                                                                      | Specifications   |                                                   | Service                                                                                                   | Bulletin        |
|---------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------|------------------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------|
| <b>Neles ball valves</b><br> | M-series<br>Q-elements<br>(noise) | Pre-engineered valve types and materials according to industry standards for control, on/off and manual use | <b>Size:</b>     | DN25 – 600 (1" – 24")                             | High capacity design for harsh service in bioproducts manufacturing, including biochemicals and biodiesel | 1M120,<br>1M220 |
|                                                                                                               |                                   |                                                                                                             | <b>Pressure:</b> | EN PN10 – 40,<br>ASME 150 – 300,<br>JIS 10K – 20K |                                                                                                           |                 |
|                                                                                                               |                                   |                                                                                                             | <b>Seat:</b>     | Metal and soft seated                             |                                                                                                           |                 |
|                                                                                                               | E-series<br>ceramic               | Lime slurries, coaters                                                                                      | <b>Size:</b>     | DN25 – 200 (1" – 8")                              | Paper, board, pulp                                                                                        | 1E220           |
|                                                                                                               | PZ-series<br>Capping valve        | Chip feed                                                                                                   | <b>Size:</b>     | DN500 & 750 (20" & 30")                           | Batch digester for pulp                                                                                   | 8PZ20           |
|                                                                                                               | M1/M2-series<br>Pocket valve      | Sand, scrap catch                                                                                           | <b>Size:</b>     | DN150 & 200 (6" & 8")                             | Pulp mill, fibre line                                                                                     | 8PF20           |

### Jamesbury™ ball valves – Flanged ball valves for high flow capacity and reliability

| Product                                                                                                             | Series                       | Design                                                                                                      | Specifications        |                                                                                                | Service                                                                                                  | Bulletin |
|---------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------|
| <b>Jamesbury ball valves</b><br> | 7000-series<br>Standard port | Pre-engineered valve types and materials according to industry standards for control, on/off and manual use | <b>Size:</b>          | 1/2" – 20" (DN15 – 500)                                                                        | Applications up to 260 °C / 500 °F<br>High performance Xtreme™ seat materials<br>Low emission stem seals | B107-1   |
|                                                                                                                     |                              |                                                                                                             | <b>Pressure:</b>      | ASME 150 & 300                                                                                 |                                                                                                          |          |
|                                                                                                                     | 9000-series<br>Full port     |                                                                                                             | <b>Body:</b>          | Carbon Steel (WCB)<br>Carbon Steel (LCC)<br>Alloy 20 (CN7M)<br>Stainless Steel (CF8M)<br>Monel |                                                                                                          |          |
|                                                                                                                     |                              |                                                                                                             | <b>Size:</b>          | 1/2" – 24" (DN 15 – 600)                                                                       | High consistency pulp                                                                                    | B107-2   |
|                                                                                                                     |                              |                                                                                                             | <b>Pressure:</b>      | ASME 150 & 300                                                                                 |                                                                                                          |          |
|                                                                                                                     |                              |                                                                                                             | <b>Body:</b>          | Carbon Steel (WCB)<br>Carbon Steel (LCC)<br>Alloy 20 (CN7M)<br>Stainless Steel (CF8M)<br>Monel |                                                                                                          |          |
| <b>Jamesbury ball valves</b><br> | 4000-series                  |                                                                                                             | <b>Standard port:</b> | 1/2" – 2-1/2" (DN15 – 65)                                                                      | Bubble tight shut off                                                                                    | B105-1   |
|                                                                                                                     |                              |                                                                                                             | <b>Full port:</b>     | 1/2" – 2" (DN15 – 50)                                                                          |                                                                                                          |          |
|                                                                                                                     |                              |                                                                                                             | <b>Pressure:</b>      | ASME 400, ASME 800                                                                             |                                                                                                          |          |
|                                                                                                                     |                              |                                                                                                             | <b>Body:</b>          | Carbon steel,<br>316 stainless steel                                                           |                                                                                                          |          |
|                                                                                                                     |                              |                                                                                                             | <b>Ball:</b>          | 316 stainless steel,<br>Monel, Hastelloy C                                                     |                                                                                                          |          |
|                                                                                                                     |                              |                                                                                                             | <b>Stem:</b>          | 17-4PH                                                                                         |                                                                                                          |          |

### Neles Easyflow™ 3-piece floating ball valve

| Product                                                                                                                           | Series    | Design                                                     | Specifications   |                       | Service                                                                      | Bulletin |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------------------------------------|------------------|-----------------------|------------------------------------------------------------------------------|----------|
| <b>Neles Easyflow floating ball valves</b><br> | J4-series | Full and reduced bore, threaded, socket-weld, or butt-weld | <b>Size:</b>     | DN15 – 50 (1/2" – 2") | Bi-directional bubble-tight shut-off through pressure and temperature cycles | B137-1EN |
|                                                                                                                                   |           |                                                            | <b>Pressure:</b> | ASME 800              |                                                                              |          |

## Butterfly valves

### Neles butterfly valves – Triple eccentric disc valves for economical and high performance

| Product                                                                                                            | Series                         | Design                                                                                              | Specifications                                                                                                                                          | Service                                                                                                     | Bulletin                                          |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <b>Neles butterfly valves</b><br> | L-series<br>S-discs<br>(noise) | Economical performance for control and shut-off service in bioproduction lines: TM, PM, BM and pulp | <b>Size:</b> DN80 – 1400 (3" – 88")<br><b>Pressure:</b> ASME 150 – 600 / PN10 – 40 / ISO PN50<br><b>Temperature:</b> -200 to +600 °C / -328 to +1112 °F | Pre-engineered valve types and materials according to industry standards for control, on/off and manual use | 2LBF20, 2L121, 2L1220, 2LW22, 2LW23, 2L622, 2L623 |

### Jamesbury butterfly valves – High-performance valve in wafer or single-flanged lugged designs

| Product                                                                                                                | Series     | Design                                                                                                      | Specifications                                                                                                                                | Service                                                                                 | Bulletin |
|------------------------------------------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|----------|
| <b>Jamesbury butterfly valves</b><br> | 800-series | Pre-engineered valve types and materials according to industry standards for control, on/off and manual use | <b>Size:</b> 3"–12" (DN 80–300), not 5" (DN 125)<br><b>Pressure:</b> ASME 150 & 300 / PN 10 – 40<br><b>Seat:</b> Xtreme, Virgin Teflon (PTFE) | Economical performance for control and shut-off service in all soft seated applications | W160-1   |

### Neles Easyflow butterfly valves – Resilient seated butterfly valves

| Product                                                                                                                      | Series    | Design                                                                                                      | Specifications                                                                                                                                                                                                                          | Service                                                                                                                                                    | Bulletin |
|------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| <b>Neles Easyflow butterfly valves</b><br> | JA-series | Pre-engineered valve types and materials according to industry standards for control, on/off and manual use | <b>Size:</b> DN50 – 600 (2" – 24")<br><b>Pressure:</b> PN10, PN16, ASME 150<br><b>Body:</b> GGG40 ductile iron, GG25 cast iron, WCB carbon steel, CF8M stainless steel<br><b>Seal:</b> Ethylene-Propylene (EPDM), Nitrile (Buna-N, NBR) | Economical performance in all soft seated applications<br>Water and waste water<br>Sewage treatment<br>Other water and utility services in mill operations | W152-1   |

## Globe valves

### Neles globe valves – Superior accuracy

| Product                                                                                                          | Series                          | Design                                                                                                       | Specifications                                                                                                                  | Service                                                   | Bulletin                          |
|------------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------|
| <b>Neles globe valves</b><br> | G-series<br>T pattern globe     | Top-guided, cage-guided, anti-cavitation & noise abatement, Tendril™, Omega™ trims and flanged & welded ends | <b>Size:</b> ½" – 36" (DN 15 - 900)<br><b>Pressure:</b> ASME 150 – 2500<br><b>Temperature:</b> -196 to +593 °C, 320 to -1099 °F | Power and recovery boiler, chemical treatment application | 4GV20, 4GV21, 4GV24, 4GV25, 4GV23 |
|                                                                                                                  | A-series<br>Angle pattern globe |                                                                                                              |                                                                                                                                 |                                                           |                                   |
|                                                                                                                  | ZX-series<br>Rotary globe       | Very low capacity controls                                                                                   | <b>Size:</b> DN25 – 100 (1/2" – 4")<br><b>Pressure:</b> ASME 150 – 1500<br><b>Temperature:</b> -80 to +425 °C / -110 to -797 °F | Rotary trim, trim sets                                    | 1RG20                             |

## Segment valves

### Neles segment valves – High control performance and wide rangeability

| Product                                                                                                            | Series                                                                | Design                                                                               | Specifications                                                                                                                              | Service                                                                                                              | Bulletin   |
|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------|
| <b>Neles segment valves</b><br> | R-series<br>Cv-element<br>Q-elements (noise)<br>On-off segment valves | Pre-engineered valve types and materials according to industry standards for control | <b>Size:</b> DN25 – 800 (1" – 32")<br><b>Pressure:</b> ASME 150 – 600, PN10 – 100<br><b>Seat:</b> DIN, JIS-ratings<br>Metal and soft seated | Benchmark control performance for bio-processes<br>Constant gain over wide control range for industry specific needs | 3R21, 3R24 |
|                                                                                                                    | R2-series                                                             | MC-pumping control                                                                   | <b>Size:</b> 050/080 – 500/600 (02/03" – 20/24")<br><b>inlet/outlet</b>                                                                     | High consistency pulp                                                                                                | 3R22       |
|                                                                                                                    | NelesAce-series                                                       | Quick grade change                                                                   | <b>Size:</b> DN50 – 500 (1" – 20")                                                                                                          | Basis weight for paper                                                                                               | 8ACE21     |



## Pinch valves

| Flowrox™ pinch valves                                                                                            |                                      |                                                                                                                                                                                                                               |                                                                                                                              |                                                                                                                                                                                  |          |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Product                                                                                                          | Series                               | Design                                                                                                                                                                                                                        | Specifications                                                                                                               | Service                                                                                                                                                                          | Bulletin |
| <b>Flowrox pinch valves</b><br> | PVE-series<br>Enclosed body          | The enclosed body valve is the most common body type for Flowrox pinch valves. Its enclosed design prevents premature sleeve deterioration and protects the sleeve from the environment, making it extremely safe to operate. | <b>Size:</b> DN25 – 600<br><b>Pressure:</b> ASME 1" – 24"<br><b>Pressure range:</b> 0 – 100 bar<br>Bigger sizes upon request | Flowrox pinch valves for shut off and control applications involving abrasive or corrosive slurries, powders or granular substances. The rubber sleeve is the only wearing part. | 4PV20    |
| <b>Flowrox pinch valves</b><br> | PVE/S-series<br>Enclosed/sealed body | PVE/S includes extra stem and body seals to provide a secondary containment of the fluid in the valve and to prevent leakage to the outside environment from the valve body.                                                  |                                                                                                                              |                                                                                                                                                                                  | 4PV20    |

## Pumps

| Peristaltic pumps                                                                                                |              |                                                                                                                                         |                                                                                                                                                                                                                                                                                                                          |                              |          |
|------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------|
| Product                                                                                                          | Series       | Design                                                                                                                                  | Specifications                                                                                                                                                                                                                                                                                                           | Service                      | Bulletin |
| <b>Flowrox hose pumps</b><br> | LPP-D-series | Flowrox LPP pumps incorporate an advanced rolling design, which eliminates friction, maximizes hose life, and lowers energy consumption | <b>Size:</b> DN15, 20, 25; LPP-D 1/2", 3/4", 1"<br><b>Volume:</b> 0,1 – 2 m³/h / 0 – 7.9 gpm<br><b>Pressure:</b> 7,5 or 16 bar / 108 or 232 psi<br><b>Solids:</b> Up to 80%<br><b>Temperature:</b> Up to 95 °C / 203 °F<br><b>Particle size:</b> 25% from DN size<br><b>Suction lift:</b> 0 – 8 m / 0 – 26 ft capability | Chemical dosing applications | 4LPPD20  |

| Progressive cavity pumps                                                                                                        |                                                                                                                                                   |                                                                                                                        |                                                                                                                                                                                                                                             |                                                                |
|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Product                                                                                                                         | Series                                                                                                                                            | Design                                                                                                                 | Specifications                                                                                                                                                                                                                              | Service                                                        |
| <div>Flowrox progressive cavity pumps</div>  | <div>E-series</div> <div>Global:<br/>FPC-E35 / 10-80-2-0-0-0BN-NBR-GP-C /</div> <div>North America:<br/>FPC-E35 / 10-80-2-0-0-0BN-NBR-GP-C</div>  | Advanced spiral technology, 2/3 rotor geometry, combination of an elliptic rotor and a stator with even wall thickness | <div>Size:</div> 2/10, 4/10, 10/10, 20/10, 35/10, 70/10, 150/10, 250/10<br>0 – 228 m³/h / 0 – 1000 gpm<br><div>Volume:</div> Up to 10 bar / 150 psi<br><div>Pressure:</div> 0 – 1000 gpm<br>Up to 70 °C / 158 °F<br><div>Temperature:</div> | Flooded suction duties<br>e.g. paper coating and paste pumping |
| <div>Flowrox progressive cavity pumps</div>  | <div>EL-series</div> <div>Global:<br/>FPC-E35 / 10-80-2-0-0-0BN-NBR-GP-C /</div> <div>North America:<br/>FPC-E35 / 10-80-2-0-0-0BN-NBR-GP-C</div> | Advanced spiral technology and 2/3 elliptic rotor geometry                                                             | <div>Size:</div> 50/6, 100/6, 200/6, 330/6<br><div>Volume:</div> 0 – 188 m³/h / 0 – 830 gpm<br><div>Pressure:</div> Up to 6 bar / 87 psi<br><div>Temperature:</div> Up to 70 °C / 158 °F                                                    | Flooded suction duties<br>e.g. municipal waste pumping         |
| <div>Flowrox progressive cavity pumps</div>  | <div>D-series</div> <div>Global:<br/>FPC-E35 / 10-80-2-0-0-0BN-NBR-GP-C /</div> <div>North America:<br/>FPC-E35 / 10-80-2-0-0-0BN-NBR-GP-C</div>  | 1/2 rotor geometry and compact size                                                                                    | <div>Size:</div> 004/12, 010/12, 025/12, 075/12<br><div>Volume:</div> 0 – 0,75 m³/h / 0 – 6.6 gpm<br><div>Pressure:</div> Up to 12 bar / 175 psi<br><div>Temperature:</div> Up to 70 °C / 158 °F                                            | Flooded suction duties<br>e.g. flocculant and chemical dosing  |

## Knife gate valves

| Neles knife gate valves                                                                                                          |                                           |                                                                                                             |                                                                                                              |                                                                                                                                                                                                                   |          |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Product                                                                                                                          | Series                                    | Design                                                                                                      | Specifications                                                                                               | Service                                                                                                                                                                                                           | Bulletin |
| <b>Neles wafer-design knife gate valves</b><br> | KA-series<br>Uni-directional              | Pre-engineered valve types and materials according to industry standards for control, on/off and manual use | <b>Pressure:</b> DN50 – 700 / 2" – 28"<br><b>Size:</b> PN10, ASME 150<br><b>Body:</b> Stainless steel / CF8M | Knife gate valve with soft sealing is suitable for various process applications<br><br>Suitable for liquids that contain a maximum of 4% suspended solids<br><br>Pulp and paper<br><br>Sewage and water treatment | 4KA20    |
|                                                                                                                                  | KAB-series<br>Bi-directional              |                                                                                                             |                                                                                                              |                                                                                                                                                                                                                   | 4KAB20   |
|                                                                                                                                  | KL-series<br>Bi-directional through going |                                                                                                             |                                                                                                              |                                                                                                                                                                                                                   | 4KL20    |

## Actuators

| Modulating control and on-off service for double and single acting                                                           |                 |                                                                                       |                                                                                                                                                                                                                                                              |                                                                                                |                |
|------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|----------------|
| Product                                                                                                                      | Series          | Design                                                                                | Specifications                                                                                                                                                                                                                                               | Service                                                                                        | Bulletin       |
| <b>Neles actuators</b><br>                 | B1-series       | Pneumatic rotary piston type cylinder actuator, spring return and double acting model | <b>Torque output:</b> 40 – 100 000 Nm / 30 – 73 800 ft-lbs<br><b>Temperature:</b> -55 to +120 °C / -67 to +250 °F                                                                                                                                            | High performance on/off and modulating control actuator for ball, butterfly and segment valves | 6B20           |
| <b>Neles actuators</b><br>                 | N1-series       | Pneumatic rotary scotch yoke type actuator, spring return and double acting model     | <b>Torque output:</b> 25 – 218 765 Nm / 18 – 161 352 ft-lbs<br><b>Temperature:</b> -20 to +125 °C / -4 to +257 °F                                                                                                                                            | High performance on/off, ESD and modulating control actuator for ball and butterfly valves     | 6N120          |
| <b>Neles actuators</b><br>                 | VD-series       | Pneumatic linear spring diaphragm actuator, spring return model                       | <b>Thrust output:</b> 1890 – 22 800 N / 424 – 5125 lbf<br><b>Temperature:</b> -55 to +85 °C / -67 to +185 °F                                                                                                                                                 | High precision actuator for modulating control and on/off actuator for globe valves            | 6DA20          |
|                                                                                                                              | VB- & VC-series | Pneumatic linear spring piston type actuator, spring return and double acting model   | <b>Thrust output (VB):</b> 16 823 – 78 160 N / 3781 – 17571 lbf<br><b>Thrust output (VC):</b> 27 480 – 264 860 N / 6 177 – 59 542 lbf<br><b>Temperature (VB):</b> -55 to +120 °C / -67 to +250 °F<br><b>Temperature (VC):</b> -30 to +85 °C / -22 to +185 °F | High precision modulating control and on/off, ESD actuator for globe valves                    | 6VB20<br>6CA20 |
| Spring-diaphragm rotary actuator                                                                                             |                 |                                                                                       |                                                                                                                                                                                                                                                              |                                                                                                |                |
| Product                                                                                                                      | Series          | Design                                                                                | Specifications                                                                                                                                                                                                                                               | Service                                                                                        | Bulletin       |
| <b>Jamesbury Quadra-Powr™ actuator</b><br> | QPX-series      | Pneumatic rotary spring diaphragm actuator, spring return                             | <b>Torque output:</b> 15 – 796 Nm / 11 – 587 ft-lbs<br><b>Temperature:</b> -30 to +66 °C / -20 to +150 °F                                                                                                                                                    | High performance on/off and modulating control actuator for segment, ball and butterfly valves | A110-4         |



## Actuators

| Rack and pinion actuators – Compact pneumatic performance                                                                  |                                                 |                                                                                  |                                                                                                                   |                                                                                          |          |
|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------|
| Product                                                                                                                    | Series                                          | Design                                                                           | Specifications                                                                                                    | Service                                                                                  | Bulletin |
| <b>Neles Easyflow actuators</b><br>       | RNP-series                                      | Pneumatic rotary rack and pinion actuator, spring return and double acting model | <b>Torque output:</b> 4 – 5 005 Nm / 2.9 – 3 691 ft-lbs<br><b>Temperature:</b> -60 to +125 °C / -76 to +257 °F    | Economical on/off and modulating control actuator for segment, ball and butterfly valves | A112-1   |
| <b>Jamesbury Valv-Powr™ actuators</b><br> | VPVL-series<br>(Only for North-American market) | Pneumatic rotary rack and pinion actuator, spring return and double acting model | <b>Torque output:</b> 4.4 – 6 212 Nm / 3.25 – 4 582 ft-lbs<br><b>Temperature:</b> -51 to +150 °C / -60 to +302 °F | Economical on/off actuator for ball and butterfly valves                                 | A111-5   |

## Valve controllers, pneumatic positioners and limit switches

| Smart controls and monitoring for optimal valve performance                                                                           |                                                                    |                                                                                                                                           |                                                                                                                                                                                                                                                                               |                                                                                                                                                                                |                         |
|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Product                                                                                                                               | Series                                                             | Design                                                                                                                                    | Specifications                                                                                                                                                                                                                                                                | Service                                                                                                                                                                        | Bulletin                |
| <b>Neles valve controllers</b><br>                   | NDX™-series<br>ND9000™-series for control valves                   | Single and double action, linear and rotary operation for control valves, with open integration e.g. FDT, EDD or FDI                      | <b>Communication:</b> HART® 4 – 20 mA smart-functions, Profibus (ND9000)                                                                                                                                                                                                      | Leading control performance for bio-processes<br><br>Modular design with add on functionalities                                                                                | 7NDX22, 7NDX23, 7ND9021 |
| <b>Neles analog positioner</b><br>                 | NE700™-series for control valves                                   | Electropneumatic positioner for rotary or linear control valves                                                                           | <b>Input:</b> 4 – 20 mA, 0 – 20 mA<br><b>Split:</b> 4 – 12 mA, 12 – 20 mA<br><b>Temperature:</b> -25 to +120 °C / -15 to +248 °F<br><b>Vibration:</b> < 1%                                                                                                                    | Outstanding vibration resistance, field reversible and excellent repeatability and accuracy<br><br>Pneumatic output proportional to a standard milliampere DC input            | 7NENP20                 |
| <b>Stonel™ valve controller</b><br>                | Axiom™ AN/ANX-series for on/off valves                             | For 1/4-turn pneumatically actuated valves<br>Advanced explosionproof, nonincendive or intrinsically safe *                               | <b>Switch type:</b> Solid state sensors, NAMUR<br><b>Communication:</b> DeviceNet, AS-Interface, IO-Link<br><b>Temperature:</b> -40 to +80 °C / -40 to +176 °F                                                                                                                | Extremely durable and well suited for use in hazardous, corrosive, heavy washdown environments where internal/integrated solenoid is desired<br><br>Universal voltage solenoid | 7AN21, 7STWL70          |
| <b>Stonel limit switches for on/off valves</b><br> | Quartz™ QX/QN/QC/QG-series<br>Eclipse™ EC-series for on/off valves | For 1/4-turn pneumatically actuated or manually operated valves<br>Explosionproof, nonincendive, intrinsically safe or general purpose ** | <b>Switch type:</b> Solid state sensors, reed, NAMUR, mechanical<br><b>Communication:</b> DeviceNet (Quartz), AS-Interface (Quartz, Eclipse), IO-Link (Eclipse)<br><b>Temperature:</b> -40 to +80 °C / -40 to +176 °F (QX/QN/QG, and EC); -55 to +80 °C / -67 to +176 °F (QC) | Extremely durable and well suited for use in hazardous, corrosive, heavy washdown environments<br><br>Valve monitoring for on/off applications<br>3rd party solenoids          | 7QZ22, 7STWL70          |
| <b>Neles Easyflow limit switch</b><br>             | K-series for on/off valves                                         | For 1/4-turn pneumatically actuated or manually operated valves<br>Explosionproof or general purpose                                      | <b>Switch type:</b> NAMUR, mechanical contact, inductive proximity, reed, proximity<br><b>Temperature:</b> General: -20 to +80 °C / -4 to +176 °F<br>Cold: -40 to +80 °C / -40 to +176 °F<br>High: -20 to +100 °C / -4 to +212 °F                                             | Compact size, fast commissioning, secure wiring<br><br>Aluminum, stainless steel, or polycarbonate                                                                             | S100-1                  |

\*Wireless capabilities available as an option. \*\*Wireless capabilities (EC) available as an option.

Valmet is a global technology leader serving process industries. We work together with our customers throughout the entire lifecycle, delivering cutting-edge technologies and services as well as mission-critical automation and flow control solutions.



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