

Critical control performance

Control valve solutions
for oil & gas





The right control valve makes all the difference

Control valves are critical to the overall performance of many oil and gas processes. Ensuring stability and long-lasting process uptime make for safe, reliable and profitable operations.

Control valves are the most important part of any process control loop. They are central to the overall performance of your process – especially when reliability and productivity are your primary goals.

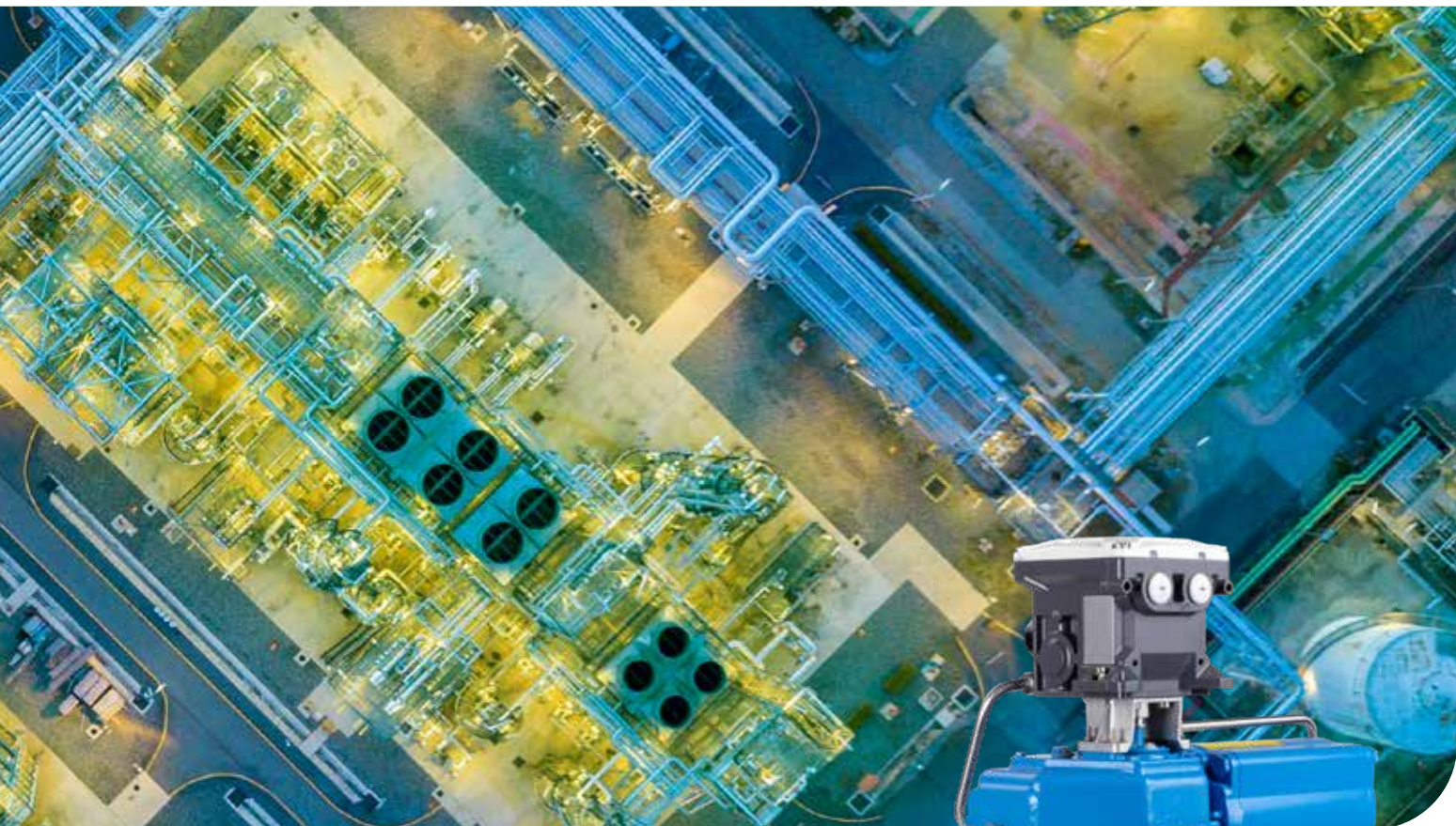
Finding the best control valve solution for your process is not always easy. Some of the key factors to consider include process and fluid dynamics, metallurgy, sealing technology, noise and emissions control and diagnostics. Also, compliance with relevant regulations, standards and certifications.

Ultimately, the right control valve for you is engineered,



manufactured, tested and optimized for your specific application. We offer a full range of

control valve solutions and services that ensure trouble-free operations and peace of mind.



The reliable control valve partner

To complement our high-quality Neles™ and Jamesbury™ valve products, we offer our support and services across all the phases of the product life cycle.

Responsible supplier

As a responsible supplier, we are committed to delivering on our promises and ensuring the best possible performance of our products as a part of your process.

Proven performance

We pride ourselves as being your reliable partner with proven technologies and services based on industry understanding and experience.

We want to see your process improve continuously, ensuring quality, driving down costs and gaining the best possible return on your investment in Valmet valve solutions.

Our comprehensive approach helps ensure your success:

1. We understand your unique application requirements

- Specifications
- Timing and delivery
- Cost parameters

2. We help specify the best solution for your application

- Product sizing and selection tools
- Field-proven products and accessories
- Proactive service programs

3. We implement to the highest standards

- Sophisticated manufacturing and quality control
- Testing
- Installation and start-up
- Warranty

4. We support your maintenance strategy

- Local repair services and technical assistance
- Diagnostics and predictive maintenance



Expert services and support

We offer flow control expert service to our customers around the world through our network of more than 40 service centers and 400 field service experts.

Proactive approach

Our highly skilled technicians are there to ensure you get the support you need, when you need it. Each year we service more than 20,000 valves and conduct in excess of 3,000 site visits to ensure smooth processes and maximized uptime for our customers.

The right tools

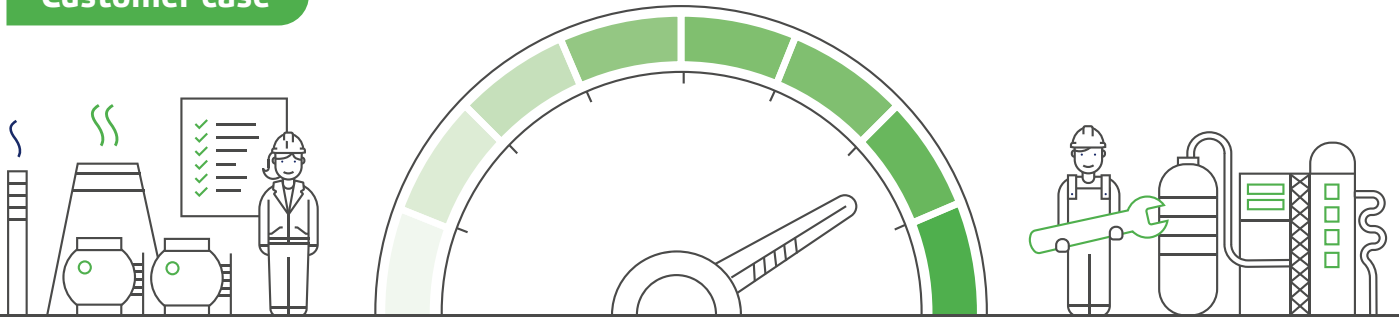
Our service commitment reaches well beyond valve installation. We take a proactive approach to service, continuously supporting your business and process performance. Our comprehensive service offering combined with the latest in digital tools and advanced automation forms a solid platform for continuous process optimisation and predictive maintenance.



Predictive maintenance pays for itself many times over

Planning and executing predictive maintenance based on accurate installed base data helps dial up the cost-efficiency of service operations in many ways.

Customer case



Monitoring of control loops and field devices delivers substantial savings for a European refinery

Year one: Installation and actionable findings

Commissioning and startup

We sent an expert on site to install the servers and software that collect control loop and field device data. The expert and the customer also jointly reviewed the criticality of each device with regards to process, safety and environment and agreed on standard operating procedures to inform of poorly behaving and underperforming loops or devices then optimally act on findings. Finally, we trained key users to ensure smooth implementation and mutual commitment to the long-term success of the project.

Savings and KPIs

We delivered substantial savings early on by addressing underperforming processes and devices predictively. Results, financial benefits and opportunities for improvements were carefully tracked and reviewed in follow-up meetings.

Year two: Targeted maintenance and measurable results

Predictive maintenance

In a year's time the operative model was well understood by both teams and had become an integral part of operation and maintenance. This transformative approach to condition and performance monitoring allowed the customer to fully implement a predictive maintenance strategy for valves and other critical equipment.

More savings


Continuous finetuning of the model and targeted improvements further contributed to us exceeding KPIs and delivering demonstratable savings year after year.

Valmet control valves offering for oil & gas


Globe control valves

Neles globe control valves					
Product	Series	Design	Specifications	Service	Bulletin
Neles top-guided globe valves 	GU-series	Globe unbalanced, single seated, top-guided, flanged, butt & socket welded Options: Low noise and anti-cavitation Tendril™ trim	Size: DN15 – 150 (½" – 6") Pressure: ASME 150 – 2500 / PN10 – 320 / JIS 10K – 20K Temperature: -200 to +593 °C / -320 to +1053 °F Body: WCB, CF8M Tightness: ANSI Class IV ~ VI	General, severe, high pressure, cryogenic and high temperature, low emissions, fire safe, SIL	4GV21
Neles cage-guided globe valves 	GB-series	Globe balanced, single seated, cage-guided, flanged, butt & socket welded Options: Low noise and anti-cavitation Tendril™ trims	Size: DN 50 – 900 (2" – 36") Pressure: ASME 150 – 2500 / PN10 – 320 / JIS 10K – 20K Temperature: -200 to +593 °C / -320 to +1053 °F Body: WCB, CF8M Tightness: ANSI Class IV ~ V	General, severe, high pressure, cryogenic and high temperature, low emissions, fire safe, SIL	4GV23
Neles™ Omega™ globe valves 	GM-series	Globe Omega, multi-stage, single seated, top- & cage-guided, flanged, butt & socket welded	Size: DN 50 – 900 (2" – 36") Pressure: ASME 150 – 2500 / PN10 – 320 / JIS 10K – 20K Temperature: -200 to +593 °C / -320 to +1053 °F Body: WCB, CF8M Tightness: ANSI Class IV ~ VI	Severe, high pressure and high temperature, low emissions, fire safe, SIL	4GV20
Neles angle pattern valves 	AU, AB & AM-series	Angle body, single seated, top- & cage-guided, flanged, butt & socket welded Options: Low noise and anti-cavitation trim Tendril™ trim Omega™ trim	Size: DN15 – 1200 (½" – 48") Pressure: ASME 150 – 2500 / PN10 – 320 Temperature: -200 to +593 °C / -320 to +1053 °F Body: WCB, CF8M Tightness: ANSI Class IV ~ VI	General, severe, erosive, high pressure, cryogenic and high temperature, low emissions, fire safe, SIL	4GV23
Neles 3-way globe valves 	GW-series	Globe 3-way, diverting / mixing double seated, flanged, butt & socket welded	Size: DN25 – 250 (1" – 10") Pressure: ASME 150 – 600 / PN10 – 100 Temperature: -29 to +425 °C / -20 to +797 °F Body: WCB, CF8M Tightness: ANSI Class II ~ IV	Diverting, mixing	4GV24


RotaryGlobe valves

Neles™ RotaryGlobe™						
Product	Series	Design	Specifications		Service	Bulletin
Neles RotaryGlobe 	ZX-series	Flanged, rotary globe control valve Options: Balanced anti-cavitation and low noise, different Cv and LIN /EQ% trims	Size: Pressure: Temperature: Body: Tightness:	DN15 – 100 (½" – 4") ASME 150 – 1500 / PN10 – 100 -80 to +425 °C / -110 to +797 °F CF8M, WCC Class III ~ IV	General, severe, fire safe, low emission	1RG20

Segment valves

Neles segment valves						
Product	Series	Design	Specifications		Service	Bulletin
Neles V-port segment valves 	RA & RE-series	Wafer, flanged Options: Reduced Cv trim, low noise and anti-cavitation Q-Trim™	Size: Pressure: Temperature: Body: Tightness:	DN25 – 800 (1" – 32") ASME 150 – 600 / PN10 – 100 -52 to +425 °C / -60 to +797 °F CF8M, WCB, CG8M, Titanium, Hastelloy C, SMO Class IV ~ VI 10xISO Rate D, Rate D	General, demanding, erosive, severe, fire safe, low emission	3R21 3R24




Plug valves

Neles plug valves						
Product	Series	Design	Specifications		Service	Bulletin
Neles™ Finetrol™ eccentric plug valves 	FC, FG & FL-series	Flanged, eccentric rotary plug valve Options: Reduced Cv trim, low noise and anti-cavitation Q-Trim, cryogenic, globe valve face-to-face	Size: Pressure: Temperature: Body: Tightness:	DN25 – 300 (1" – 12") ASME 150 – 600 / PN10 – 100 -200 to +450 °C / -320 to +842 °F CF8M, WCC Class IV ~ VI	General, severe, SIL, fire safe, low emission	5FT20 5FT22

Ball valves

Neles ball valves						
Product	Series	Design	Specifications		Service	Bulletin
Neles X-series modular ball valves 	XA, XB, XC, XU & XT -series Seat supported	Full or reduced port, metal and soft seats Options: Steam jacket, cryogenic and high temperature, catalyst handling, coal gasification, polymer service, oxygen service, Q-Trim, Q2-Trim™	Size:	DN25 - 600 (1" – 24") For larger sizes, see bulletin	General, demanding, SIL, fire safe, low emission	1X22 1X23 1X26 1X27 1XH20
	XG, XM & XH -series Trunnion mounted		Pressure:	ASME 150 – 900 / PN 10 -160 Temperature:		
Neles top entry rotary valves 	T5-series	Reduced or full port, flanged, weld-ends Options: Cryogenic, high temperature	Size:	DN25 – 400 (1" – 16") Pressure: ASME 150 – 600 / PN10 – 40 Temperature: -200 to +600 °C / -320 to +1110 °F Body: CF8M, WCB For other body materials, see bulletin Tightness: Class IV ~ VI	High MTBF, SIL 3 certified	1T520
Neles D-series ball valves 	D2C, D2D & D1F -series	Full or reduced port, stemball construction Options: Cryogenic, high temperature	Size:	D1F: DN50 – 700 (2" – 28") D2: DN700 – 900 (28" – 36") Pressure: ASME 150 – 600 / PN10 – 100 Temperature: -200 to +600 °C / -320 to +1110 °F Body: CF8M, WCB For other body materials, see bulletin Tightness: Class V ~ VI	High MTBF, SIL 3 certified	1D21
Neles E-series ceramic valves 	E2 & E6 -series	Reduced port, wafer, lugged Options: Different Cv-trims	Size:	DN25 – 200 (1" – 8") Pressure: ASME 150 – 300 / PN10 – 40 Temperature: -40 to +425 °C / -40 to +800 °F Body: Stainless steel / Magnesia, partially stabilized Zirconia (Mg-PS2) Metal Matrix Composite (MMC) Tightness: ISO rate D, Class V	Erosive applications	1E220

Ball valves

Jamesbury ball valves						
Product	Series	Design	Specifications		Service	Bulletin
Jamesbury standard port flanged ball valves 	7000-series	Pre-engineered valve types and materials according to industry standards for control, on/off and manual use	Size: DN15 – 500 (½" – 20") Pressure: ASME 150 & 300 Temperature: Up to +260 °C / +500 °F Materials: Carbon steel, 316SS, Alloy 20, Monel, Hastelloy C		Applications up to 260 °C / 500 °F, high performance Xtreme™ seat materials, low emission stem seals	B107-1 B107-3
Jamesbury full port flanged ball valves 	9000-series	Pre-engineered valve types and materials according to industry standards for control, on/off and manual use	Size: DN15 – 600 (½" – 24") Pressure: ASME 150 & 300 Temperature: Up to +260 °C / +500 °F Materials: Carbon steel, 316SS, Alloy 20, Monel, Hastelloy C		Applications up to 260 °C / 500 °F, high performance Xtreme seat materials, low emission stem seals	B107-1 B107-3
Jamesbury safety shut-off valves 	4000-series	Pre-engineered valve types and materials according to industry standards for control, on/off and manual use	Size: Standard port: DN15 – 65 (½" – 2½") Full port: DN15 – 50 (½" – 2") Pressure: ASME 600 or CWP to 2500 psi (172 bar) Temperature: Up to +260 °C / +500 °F Body: Carbon steel, 316SS Ball/stem: Carbon steel, 316SS, Monel, Hastelloy C		Applications up to 260 °C / 500 °F, high performance, Xtreme seat materials, low emission stem seals	B105-1

Butterfly valves

Neles butterfly valves						
Product	Series	Design	Specifications		Service	Bulletin
Neles high performance triple eccentric disc valves 	L12, L6, LW & LG, L1 & L2-series	Wafer, lugged, double flanged Options: High tightness, erosion resistant version, cryogenic and high temperature, high cycling	Size: Pressure: Temperature: Body: Tightness:	DN80 – 2200 (3" – 88") ASME 150 – 600 / PN10 – 100 -200 to +650 °C / -320 to +1200 °F CF8M, WCB, CG8M, LCC, 5A Up to ISO Rate A, API 598 & Class VI	General, Moderate SIL, fire safe, low emission	2L121 2L1220 2LW20 2L621
Neles™ butterfly valves 	BWX-series	Wafer, lugged, double flanged	Size: Pressure: Temperature: Body:	NPS 4 – 24 / DN100 – 600 ASME 600 / PN63 -29 to +470 °C / -20 to +880 °F Stainless steel, special material	Cryogenic LNG applications, high temperature, nitrogen, helium and hydrogen	2BW20
Jamesbury butterfly valves						
Product	Series	Design	Specifications		Service	Bulletin
Jamesbury high performance butterfly valve 	800-series	Pre-engineered valve types and materials according to industry standards for control, on/off and manual use	Size: Pressure: Temperature: Body/trim: Seat:	Wafer: DN65 – 750 (2½" – 30") Lugged: DN65 – 1500 (2½" – 60") ASME 150 & 300 Up to +260 °C / +500 °F Carbon steel, 316SS, Alloy 20, 254SMO®, Monel, Hastelloy C Teflon®, Xtreme, UHMV, 316SS/PTFE, 316SS/XT	Economical performance for control and shut-off service in all soft seated applications	W101-6 W104-1 W105-1 W130-1

Valve controls

Intelligent valve controllers					
Product	Series	Design	Specifications		Bulletin
Neles™ NDX™ intelligent valve controllers 	NDX1510 -series	Compact	Power:	Taken from the 4 to 20 mA, control signal	7NDX22 7NDX23 CB058
	NDX1511 / NDX2511 -series	Standard	Pressure:	1.4 – 8.0 bar / 20 – 115 psi	
	NDX1512 / NDX2512 -series	Explosion proof	Temperature:	-40 to +85 °C / -40 to +185 °F	
			Communications:	HART	
Neles™ ND9000™ intelligent valve controllers 	ND9100 -series	Standard	Power:	Taken from the 4 to 20 mA, control signal or fieldbus powered	7ND9021 CB058
	ND9200 -series	Explosion proof	Pressure:	1.4 – 8 bar / 20 – 115 psi	
	ND9300 -series	Stainless steel enclosure intrinsically safe and explosion proof	Temperature:	-53 to +85 °C / -63 to +185 °F	
	ND9400 -series	Stainless steel intrinsically safe	Communications:	HART, Profibus PA, Foundation Fieldbus	
Analog positioners					
Product	Series	Design	Specifications		Bulletin
Neles pneumatic positioners 	NP700 -series	Pneumatic positioner	Input:	0.2 – 1 bar, 20 – 200 kPa, 3 – 15 psi	7NENP20
			Split:	0.2 – 0.6 bar, 0.6 – 1 bar, 3 – 9 psig, 9 – 15 psig	
			Temperature:	-40 to +120 °C / -40 to +250 °F	
Neles electro- pneumatic positioners 	NE700 -series	Electropneumatic positioner	Input:	4 – 20 mA, 0 – 20 mA	7NENP20
			Split:	4 – 12 mA, 12 – 20 mA	
			Temperature:	-25 to +120 °C / -15 to +248 °F	



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

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