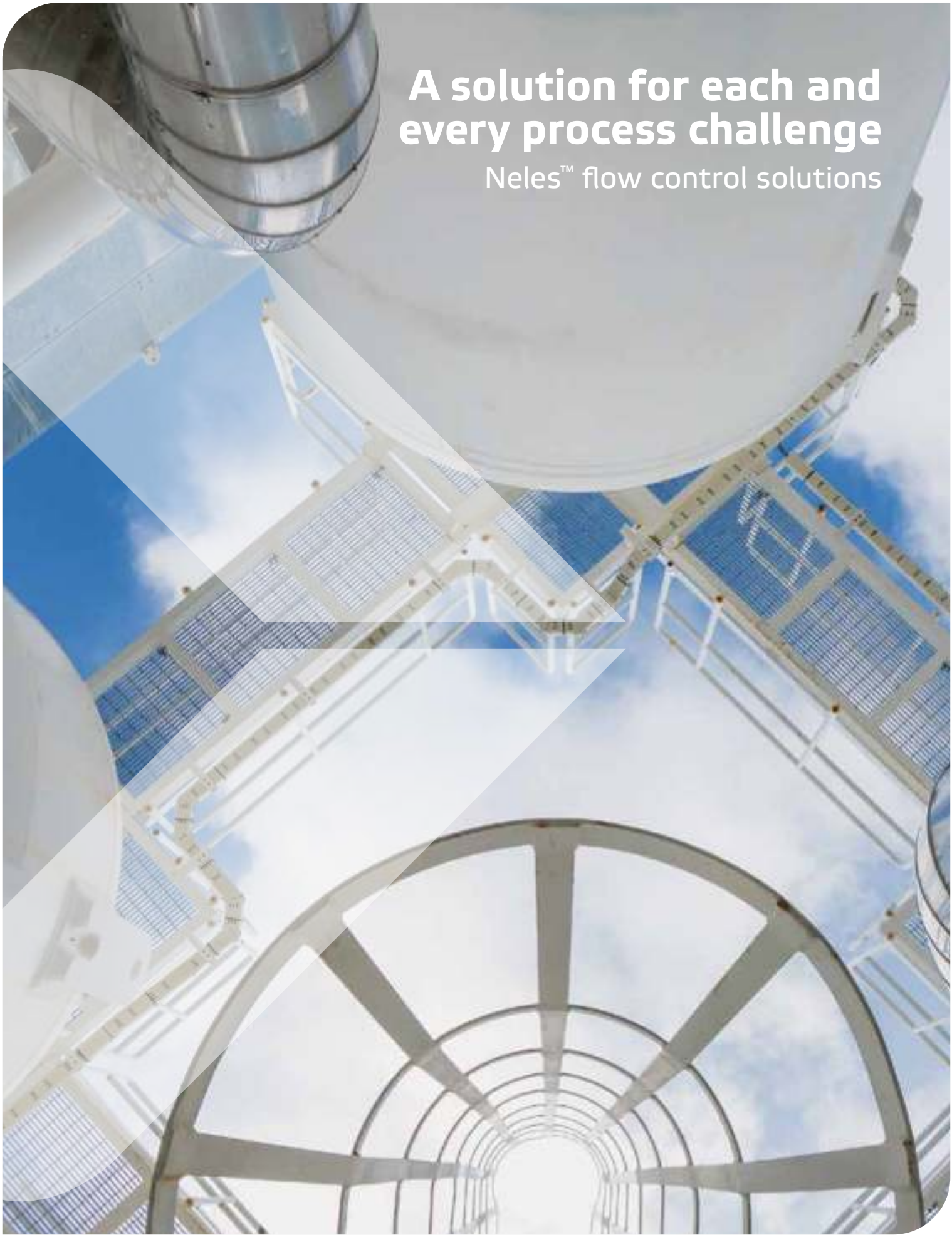
Valmet
FORWARD



A solution for each and every process challenge

Neles™ flow control solutions

Designed to perform

To help you optimize your process performance and reliability, Valmet approaches each process and application as a specific challenge. Our control, on-off and ESD valves, accessories, intelligent devices and software products are engineered to meet these challenges.

The selection of the right valves and accessories in demanding and often critical applications in oil and gas, pulp and paper or energy industry applications is often a matter of both business performance and the efficiency, safety and reliability of process itself.

Our valves and all related products and services are always created with the customer's process and business in mind. We design and deliver solutions that enhance performance and ensure process safety and reliability. They provide innovative, fundamentally simple construction, operation and maintenance features to optimize process performance atthe lowest cost.

Each Valmet device and solution is based on our extensive industry experience and knowhow. Our dedicated people, from sales to services, are committed to delivering the results our customers expect from us, and more.

Nelprof™

Valve sizing and selection software

- Digital tool for control, on/off and safety valve sizing and selection
- Allows you to select the right valve and valve actuator for your application
- With inbuilt expert system that guides you through the selection process with notes and warnings
- Enables analysis and comparison of control valve performance before installation
- Helps to choose the right valve size and type with optimal actuator to reduce process variability and ensure the best process performance
- On/off module that enables the selection of all intelligent metal and soft-seated on/off and emergency valve assemblies
- The SIL module is the first safety integrity level tool on the market, enabling safety integrity level evaluation for the whole valve assembly, including valve, actuator, positioner and pneumatic components when needed

Ensuring reliable performance

Reliable performance requires more than just high-quality valves.
All valve solutions delivered by Valmet are thoroughly tested and supported by dedicated services designed to ensure optimal life cycle performance.

Testing capabilities

We have an extensive quality assurance program covering all manufacturing activities. All components or valve units are tested before delivery. For modulating control valves the testing includes control performance for the verification of every delivered valve unit.

Basic testing includes hydrostatic, seat leakage and functional testing. Advanced computer – based test rigs have been provided for these valve testing activities. A special feature in our test facilities is high-pressure gas test and top-of-range industrial cryogenic laboratory.

Ensuring process safety and reliability

In addition to our robust and reliable valves, we offer a range of products and services designed to ensure the desired performance of critical valves across their entire life cycle. For instance, the Neles™ ValvGuard™ intelligent safety solenoid and PST system helps monitor and ensure the full functionality of critical, yet often idle, emergency shutdown (ESD) and venting valves.

Simplifying service solutions

We are committed to helping energy and hydrocarbon, and pulp and paper customers improve process performance and reduce operating costs. Our leading edge technological solutions and skilled customer support personnel get the job done with a goal of making your work life easier.

Our services encompass the entire product life cycle, from the time of installation all the way through to planned replacement. At every step, our goal is to reduce your cost of doing business and enhancing your overall profitability.

We apply a vast amount of industry, process, application and product knowledge into every customer relationship. Our technicians work in partnership with you to develop programs and provide services that meet your specific requirements.

Valve controls

We offer a unique range of reliable and easy-to-use solutions to control your valves.

With the help of our products you can fulfill end user requirements for control, emergency shutdown and on/off valve applications. Our products will ensure the best possible valve performance and compliance with environmental regulations.

Our offering ranges from limit switches to high performance intelligent valve controllers such as the Neles™ NDX™ and Neles™ ND9000™, with third generation diagnostics. Our competitive valve control solutions allow you to get the best possible performance from your valves.

Control valves

Control valves					
Product	**Series**	**Design**	**Specifications**	**Service**	**Bulletin**
Neles V-port segment valves 	RA, RE -series	Wafer, flanged **Options:** Reduced Cv trims, Q-Trims	**Size:** DN 25 – 800 / 1" – 32" **Pressure:** ASME 150 – 600, PN10 – 100 **Temperature:** -52 to + 425 ºC / -60 to +797 ºF **Body:** CF8M, WCB, CG8M Titanium, Hastelloy C, SMO **Tightness:** Class IV ~ VI 10xISO Rate D, Rate D	General, Demanding/ Erosive, Severe, Fire safe, Low emission	3R21, 3R24
Neles™ Finetrol™ eccentric plug valves 	FC, FG & FL -series	Flanged, eccentric rotary plug valve **Options:** Reduced Cv trims, Q-Trims, cryogenic	**Size:** DN 25 – 300 / 1" – 12"" **Pressure:** PN 10 – 100 / ASME 150 – 600 **Temperature:** -200 to +450 ºC / -320 to +842 ºF **Body:** CF8M, WCC **Tightness:** Class IV ~ VI	General, Severe, SIL, Fire safe, Low emission	5FT20, 5FT22
Neles high performance triple eccentric disc valves 	L12, L6, LW & LG, L1 & L2 -series	Wafer, lugged, double flanged **Options:** Heat traced, flow balancing trim, cryogenic, high flow capacity, great controllability range	**Size:** DN80 – 2200 (3" – 88") **Pressure:** ASME 150 – 600 / PN10 – 100 **Temperature:** -200 to +650 ºC / -320 to +1200 ºF **Body:** CF8M, WCB, LCC, 5A, Monel See other body materials from bulletin **Tightness:** Up to ISO Rate A, API 598 & Class VI	General, Moderate SIL, Fire safe, Low emission	2L121, 2L1220, 2LW22, 2LW23, 2L622, 2L623, 2LBF20
Neles™ RotaryGlobe™ 	ZX -series	Flanged, rotary globe control valve **Options:** Balanced anti-cavitation and low noise, different CV and LIN/EQ% trims	**Size:** ½" – 4" / DN 15" – 100" **Pressure:** ASME 150 – 1500 / PN 10 – 100 **Temperature:** -80 to +425 ºC / -110 to +797 ºF **Body:** CF8M, WCC **Tightness:** Class III ~ IV	General, severe, Fire safe, Low emission	1RG20
Neles top entry rotary valves 	T5 -series	Reduced port, flanged, weldends **Options:** Q-Trim, Q2-Trim, different Cv-trims, cryogenic	**Size:** DN 25 – 800 / 1" – 32" **Pressure:** PN 10 – 100 / ASME 150 – 600 **Temperature:** -200 to +600 ºC / -320 to +1110 ºF **Body:** CF8M, WCB **Tightness:** Class V ~ VI	Heavy duty	1T520
Neles E-series ceramic valves 	E2 & E6 -series	Reduced port, wafer, lugged **Options:** Different Cv-trims	**Size:** DN 25 – 200 / 1" – 8" **Pressure:** PN 10 – 40 / ASME 150 – 300 **Temperature:** -40 to +425 ºC / -40 to +800 ºF **Body:** Stainless steel / Magnesia, partially stabilized Zirconia (Mg – PS2) Metal Matrix Composite (MMC) **Tightness:** ISO rate D, Class V	Erosive applications	1E220

Globe control valves

Globe control valves				
Product	**Series**	**Design**	**Specifications**	**Bulletin**
Neles GU-series globe control valves 	GU-series	Globe unbalanced, top guided type Single seated, flanged, butt & socket weld	**Size:** DN15 – 150 (½" – 6") **Pressure:** ASME 150 – 2500 / PN10 – 320 / JIS 10K – 20K **Temperature:** -200 to +593 ºC / -320 to +1053 ºF **Body:** WCB, CF8M **Tightness:** ANSI Class IV ~ VI **Trim:** SS410, SS420, SS316, SS316 + Alloy 6, etc.	4GV21
Neles GB-series globe control valves 	GB-series	Globe balanced, single seated, cage-guided High capaity and heavy duty balanced, flanged, butt & socket weld	**Size:** DN50 – 600 (2" – 24") **Pressure:** ASME 150 – 2500 / PN10 – 320 / JIS 10K – 20K **Temperature:** -200 to +593 ºC / -320 to +1053 ºF **Body:** WCB, CF8M **Tightness:** ANSI Class IV ~ V **Trim:** SS410, SS420, SS316, SS316 + Alloy 6, etc.	4GV25
Neles GM-series globe control valves 	GM-series	Globe Omega trim, multi-stage type Flanged, butt & socket weld	**Size:** DN50 – 600 (2" – 24") **Pressure:** ASME 150 – 2500 /PN10 – 320 / JIS 10K – 20K **Temperature:** -200 to +593 ºC / -320 to +1053 ºF **Body:** WCB, CF8M **Tightness:** ANSI Class IV ~ VI **Trim:** SS420, SS316 + Alloy 6, etc.	4GV20
Neles A-series globe control valves 	AU, AB, AM -series	Angle pattern valves Angle, top-guided, cage-guided, Tendril™, Omega™ trim, flanged, butt & socket weld	**Size:** DN15 – 1200 (½" – 48") **Pressure:** ASME 150 – 2500 / PN10 – 320 **Temperature:** -200 to +593 ºC / -320 to +1053 ºF **Body:** WCB, CF8M **Tightness:** ANSI Class IV ~ VI **Trim:** SS410, SS420, SS316, SS316 + Alloy 6, etc.	4GV23
Neles GW-series globe control valves 	GW-series	Globe 3-Way, diverting/ mixing type Flanged, butt & socket weld	**Size:** DN25 – 250 (1" – 10") **Pressure:** ASME 150 – 600 / PN10 – 100 **Temperature:** -29 to +425 ºC / -20 to +797 ºF **Body:** WCB, CF8M **Tightness:** ANSI Class II ~ IV **Trim:** SS410, SS316, SS316 + Alloy 6, etc.	4GV24

On-off valves

On-off valves					
Product	**Series**	**Design**	**Specifications**	**Service**	**Bulletin**
Neles X-series ball valves 	XA, XB, XC, XU, XT -series Seat supported XG, XM, XH -series Trunnion mounted	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 **Pressure:** ASME 150 – 900 / PN 10 – 160 **Temperature:** -200 to +600 ºC / -320 to +1110 ºF **Body:** CF8M, WCB See other body materials from bulletin **Tightness:** ANSI Class IV ~ VI	General	1X22, 1X23, 1X26, 1X27, 1XH20, 1XH21
Neles M-series ball valves 	M1, M2 -series Seat supported and trunnion mounted	Full bore, Metal and soft seats **Options:** Black and green liqour applications	**Size:** DN 25 – 600 1" – 24" **Pressure:** PN 10 – 40 / ASME 150 – 300 **Temperature:** -50 to +250 ºC / -60 to + 480 ºF **Body:** CF8M, CG8M **Tightness:** ISO rate D metal seats, Bubble tight with soft seats	General in P&P industry	1M120, 1M220
Neles D-series ball valve 	D2C, D2D, D1F -series	Full or reduced port, Stemball construction **Options:** Steam jacket, Cryogenic and high temperature, Catalyst handling, Q-Trim, Q2-Trim	**Size:** D1F:DN50 – 6002" – 28" D2: DN700 – 900 (28" – 36") **Pressure:** PN 10 – 100 / ASME 150 – 600 **Temperature:** -200 to +600 ºC / -320 to +1110 ºF **Body:** CF8M, WCB See other body materials from bulletin **Tightness:** Class V ~ VI	Demanding application	1D21
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:** DN80 – 2200 (3" – 88")" **Pressure:** ASME 150 – 600 / PN10 – 100 **Temperature:** -200 to +650 ºC / -320 to +1200 ºF **Body:** CF8M, WCB, LCC, 5A, Monel See other body materials from bulletin **Tightness:** Up to ISO Rate A, API 598 & Class VI	General, Moderate SIL, Fire safe, Low emission	2L121, 2L1220, 2LW22, 2LW23, 2L622, 2L623, 2LBF20
V-port segmented ball valves 	RE-series	Flanged	**Size:** DN 300 - 800 / 12" - 32" **Pressure:** DN 10 - 40 / ASME 150 - 300 **Temperature:** -52…+315 ºC / -60…+599 ºF **Body:** CF8M, WCB, CG8M, Titanium, Hastelloy C, SMO **Tightness:** ISO 5208 Rate D with metal seat. Rate C with soft seat.	General	3R27

ESD valves

ESD valves					
Product	**Series**	**Design**	**Specifications**	**Service**	**Bulletin**
Neles X-series ball valves 	XA, XB, XC, XU, XT -series Seat supported, XG, XM, XH -series Trunnion mounted	Full or reduced bore, Metal seats **Options:** Cryogenic, high temp.	**Size:** DN25 – 600 (1" – 24") For larger sizes, see bulletin **Pressure:** PN10 – 160 /ASME150 – 900 **Temperature:** -200 to +600 ºC / -330 to +1110 ºF **Body:** CF8M, WCB See other body materials from bulletin **Tightness:** Class IV ~ VI	High MTBF, SIL 3 certified	1X22, 1X23, 1X26, 1X27, 1XH20, 1XH21, 9VG921, CB058
Neles D-series ball valves 	D2C, D2D, D1F -series	Full or reduced port, Stemball construction **Options:** Cryogenic, high temp.	**Size:** D1F: DN50 – 700 /2" – 28" D2: DN700 – 900 (28" – 36") **Pressure:** PN 10 – 100 / ASME 150 – 600 **Temperature:** -200 to +600 ºC / -330 to +1110 ºF **Body:** CF8M, WCB, LCC **Tightness:** Class V ~ VI	High MTBF, SIL 3 certified	1D21, 9VG921, CB058
Neles top entry rotary valves 	T5-series	Reduced or full port, flanged, weldends **Options:** Cryogenic, high temp.	**Size:** DN 25 – 400 / 1" – 16") **Pressure:** PN 10 – 40 / ASME 150 – 600 **Temperature:** -200 to +600 ºC / -320 to +1110 ºF **Body:** CF8M, WCB See other body materials from bulletin **Tightness:** Class IV ~ VI	High MTBF, SIL 3 certified	1T520, 9VG921, CB058
Neles high performance triple eccentric disc valves 	L6, LW & LG, L1 & L2 -series	Wafer, lugged, double flanged **Options:** High tightness, cryogenic, high temp.	**Size:** DN80 – 2200 (3" – 88") **Pressure:** ASME 150 – 2500, PN 10 – 400 **Temperature:** -200 to +650 ºC / -320 to +1200 ºF **Body:** CF8M, WCB, LCC, 5A, Monel See other body materials from bulletin **Tightness:** Up to ISO Rate A, API 598 & Class VI	High MTBF SIL 3 certified	CB058, 2L121, 2L1220, 2LW22, 2LW23, 2L622, 2L623, 2LBF20

Engineered valve solutions

Engineered valve solutions				
Product	**Series**	**Specifications**	**Service**	**Bulletin**
Neles lever valves 	BH-series	**Pressure:** NPS 8 – NPS 64 / ASME 150 – 300 / (PN10 – 40) **Body:** Carbon steel **Temperature:** -29 to +280 °C / -20 to +536 °F	Valve opens at precise pressure differential without use of separate monitoring. Air separation, chemical plants, cement and steel, industry, safety valve	2BH20
Neles cryogenic butterfly valves 	BWX -series	**Pressure:** NPS 4 – NPS 24 / DN 100 – DN 600 / ASME 600 / PN63 **Body:** Stainless steel special material **Temperature:** -200 to +470 °C / -320 to +880 °F	Cryogenic and high temperature LNG applications, air separation, nitrogen, helium and hydrogen	2BWX20

Valve controllers

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 **Pressure:** 1.4 – 8.0 bar / 20 – 115 psi **Temperature:** -40 to +85 °C / -40 to +185 °F **Communication:** HART	7NDX22, 7NDX23, CB058
	NDX1511/ NDX2511 -series	Standard		
	NDX1512/ NDX2512 -series	Explosion proof		
Neles ND9000 Intelligent valve controllers 	ND9100 -series	Standard	**Power:** Taken from the 4 to 20 mA, control signal or fieldbus powered **Pressure:** 1.4 – 8 bar / 20 – 115 psi **Temperature:** -53 to + 85 °C / -63 to +185 °F **Communication:** HART, Profibus PA, Foundation Fieldbus	7ND9021, CB058
	ND9200 -series	Explosion proof		
	ND9300 -series	Stainless steel enclosure intrinsically safe and explosion proof		
	ND9400 -series	Stainless steel intrinsically safe		

Valve controllers

Valve controllers					
Product	**Series**	**Design**	**Specifications**		**Bulletin**
Neles ValvGuard VG9000 intelligent safety solenoids 	VG9200 -series	Standard epoxy coated anodised aluminium alloy enclosure, intrinsically safe and explosion proof	**Input:** **Pressure:** **Temperature:** **Communication:** **Safety:**	Foundation Fieldbus + 0/24 VDC, 4/20 mA, 0/24 VDC with RCI9H2 3.0 – 7.5 bar / 44 – 109 psi -40 to +85 ºC /-40 to +185 ºF Foundation Fieldbus, HART TÜV SIL 3 approved partial stroke testing system for emergency shutdown valves	9VG921, CB058
	VG9300 -series	Full 316 stainless steel enclosure, intrinsically safe and explosion proof			
Neles ValvGuard VG9PST partial stroke testing device used with external solenoid valve 	VG9200 -series	Standard epoxy coated anodised aluminium alloy enclosure, intrinsically safe and explosion proof	**Input:** **Pressure:** **Temperature:** **Communication:**	8-20 mA 3.0 – 7.5 bar / 44 – 109 psi -40 to +85 ºC / -40 to +185 ºF HART	9VG921, CB058
	VG9300 -series	Full 316 stainless steel enclosure, intrinsically safe and explosion proof			
Neles™ SwitchGuard™ intelligent on/off valve controller 	SG9200 -series	Standard anodised aluminium alloy enclosure, intrinsically safe and explosion proof	**Input:** **Pressure:** **Temperature:** **Communication:**	0/24 VDC with converter or 4 – 20 mA 3.0 – 8.0 bar / 44 – 115 psi -40 to +85 ºC / -40 to +185 ºF HART	7SG20, CB058
	SG9300 -series	Stainless steel enclosure, intrinsically safe and explosion proof			

Pneumatic actuators

Pneumatic actuators				
Product	**Series**	**Design**	**Specifications**	**Bulletin**
Neles B1-series 	B1C & B1J -series	Pneumatic rotary cylinder actuator **Options:** Manual and hydraulic overdrives, lockout devices, high-cycle, fire protection	**Pressure input:** 2.8 – 10 bar / 40 – 140 psi **Pressure output:** Torque: 28 – 100000 Nm / 21 – 73800 ft-lb **Temperature:** -55 to 120 ºC / -67 to +250 ºF **Action:** B1C-double acting, B1J-spring return	6B20, CB058
Neles N1-series scotch yoke actuators 	N1-series	Pneumatic or hydraulic rotary cylinder actuator, scotch yoke type **Options:** Manual and hydraulic overdrives, fire protection	**Torque output range:** **Spring return model:** **Spring torque:** 25 Nm - 147425 Nm, 18 lb ft - 108735 lb ft Air torque @ 4.0 barg / 58 psi: 26 Nm - 218765 Nm, 19 lb ft - 161353 lb ft **Double acting model:** Air torque @ 4.0 barg / 58 psi: 71 Nm – 311333 Nm, 52 lb ft - 229627 lb ft **Temperature:** Normal -20º...+80 ºC, High -20º...+125 ºC	6N120, CB058
Neles VD-series linear diaphragm actuators 	VD-series	Pneumatic diaphragm actuator for linear valves **Options:** Handwheel for manual operation, volume tank	**Pressure input:** 3.0 – 4.2 bar /44 – 60 psi **Pressure output:** Thrust: 1890 – 22800 N / 424 – 5125 ft-lb **Temperature:** -55 to +85 ºC /-67 to +185 ºF **Action:** Spring return	6VD20, CB058
Neles VB-series linear cylinder actuators 	VBC & VBD/R -series	Pneumatic cylinder actuator for linear valves **Options:** Handwheel for manual operation, Volume tank or buil-in volume chamber	**Pressure input:** 2.8 – 10 bar / 40 – 140 psi **Pressure output:** Thrust: 16823 – 78160 N / 3781 – 17571 ft-lb **Temperature:** -55 to +120 ºC /-67 to +250 ºF **Action:** VBC-double acting, VBD/R-spring return	6VB20, CB058
Neles VC-series linear cylinder actuators 	VC-series	Pneumatic cylinder actuator for linear valves **Options:** Handwheel for manual operation, volume tank or built-in volume chamber	**Pressure input:** 2.0 – 10 bar / 29- 145 psi **Pressure output:** Thrust: 27480 – 264860 N / 6177 – 59542 ft-lb **Temperature:** -30 to +85 ºC /-22 to +185 ºF **Action:** Double acting	6CA20, CB058

Analog positioners

Analog positioners				
Product	**Series**	**Design**	**Specifications**	**Bulletin**
Neles pneumatic positioner 	NP700 -series	Pneumatic positioner	**Input:** 0.2 – 1 bar, 20 – 200 kPa, 3 – 15 psi 3.0 – 7.5 bar / 44 – 109 psi **Split:** 0.2 – 0.6 bar, 0.6 bar – 1 bar, 3 – 9 psig, 9 – 15 psig **Temperature:** -40 to +90 ºC / -40 to +200 ºF **Vibration:** < 1%	7NENP20, CB058
Neles electro-pneumatic positioner 	NE700 -series	Electropneumatic positioner	**Input:** 4 – 20 mA, 0 – 20 mA **Split:** 4 – 12 mA, 12 – 20 mA **Temperature:** -25 to +120 ºC / -15 to +248 ºF **Vibration:** < 1%	7NENP20, CB058

Application specific products

Application specific products					
Product	**Series**	**Design**	**Specifications**	**Service**	**Bulletin**
Neles capping valves 	PZ-series	Capping valve **Options:** Pressure switches for safety interlocks, water flushing for ball surface	**Size:** DN 500 – 750 / 20” – 30” **Pressure:** PN 16 & ASME 150 **Temperature:** Max. +200 ºC / +390 ºF **Body:** CF8M	For digester chip fill	8PZ20
NelesACE™ basis weight control valves 	NelesACE	V-port segment valve together with high resolution stepping motor	**Size:** DN 50 – 500 / 2” – 20” **Pressure:** PN 25 - 40, ASME 150 - 300 **Temperature:** -40 to +250 ºC / -40 to +480 ºF **Body:** CF8M	Basis weight control unit	8ACE21
Neles M-series pocket feeder 	M1, M2 -series	Pocket feeder construction	**Size:** DN 150 – 200 /6” – 8” **Pressure:** PN 10 – 40, ASME 150 - 300 **Temperature:** -50 to +250 ºC / -60 to +480 ºF **Body:** CF8M	For separator service	8PF20

Valve options

Valve options			
Product	**Design**	**Specifications**	**Bulletin**
Q-Ball™ 	Low noise and anti-cavitation trim for ball, segment and eccentric plug valves **Options:** Q2 trim for extended aerodynamic noise attenuation for gas service diffuser	**Size:** DN 50 to 900 / 2" to 36" **Pressure:** ASME 150 – 1500, PN 10 – 100 **Body:** CF8M, WCB	8Q20, 8Q220
S-Disc™ 	Flow balancing trim for triple eccentric disc valves	**Size:** DN 80 to 1500 / 3" to 60" **Pressure:** ASME 150 – 600, PN10 – 100 **Cv-range:** 150 – 43800 **Materials:** CF8M, WCB, CG8M,LCC, 254SMO, 5A	2SL120
A-plate 	Noise attenuator plate for noise reduction. **Option 1:** threaded directly into a Finetrol™ or T5 valve body. **Option 2:** wafer style. Can be mounted between flanges.	**Size:** DN 25 – 1000 / 1" – 40" **Pressure:** ASME 150, 300, 600, PN 10 to 100 **Cv-range:** 7 – 4480 **Materials:** CF8M, WCB	8ATT20
Q2-plate 	2 stage noise attenuation plate for gas applications **Options:** Wafer style. Mounted between flanges.	**Size:** DN 50 – 6002" – 24" **Pressure:** ASME 150, 300, 600, PN 10 to 100 **Cv-range:** 22 – 13108 **Materials:** Stainless steel	8Q220

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

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