

# "Smart's Art of Control Valves"



# **Products Overview**

All kind of Control Valves

**Self-Actuating Pressure Regulators** 

**Pneumatic Actuators, Desuperheaters** 

Dear Reader, Dear Customer,



**Overseas Engineering AM Sàrl** is a dynamic and well known company active in the field of advanced technology for control valves, having clients located worldwide.

Overseas provides the best in class of Quality Control Valves available currently in the market 100% European made and built in few decades of experience in the field of chemical, petrochemical, oil & gas, power and all other major industries requesting solid, strong and reliable control valves.

Our company offers a great wide range of products from automatic control engineering and heat engineering sectors, to central lubrication and laboratory equipment. Taking in account our solid experience in this field and our close collaboration with international key players, we specialize in designing and manufacturing of control valves, steam desuperheaters, needle valves, regulators, central lubrication equipment, distillers and re-distillers.

Our clients appreciate that most of our valves are custom-made, fully designed and manufactured according to their specific needs.

To have better idea about our control valves line, please have a look to our general catalogue.

Overseas is proud to be your reliable business partner in the « Art of Control Valves Technology »

"Please kindly be informed that, as of 21st of June 2018, we have a new Corporate Name, as **Overseas Engineering AM Sàrl."** 

### Visit us at the Valve World Magazine

(Annual Procurement Report 2018)

# Overseas Consulting & International Coordinator A.M. Sarl (Smart Valves)

Overseas Consulting & International Coordinator A.M. Sàrl (Smart Valves) is a dynamic and well known company active in the field of advanced technology for Control Valves, under the brand of "Smart Valves", with a strong worldwide base portfolio of clients.

Smart Valves provides the best in class of Quality Control Valves available currently in the market 100% European made, building on decades of experience in the field of chemical, petrochemical, oil & gas, power and all other major industries requesting solid, strong and reliable Control Valves.

Smart Control Valves are produced in various types:

- Standard single ported globe Control Valve (S)
- Heavy duty single ported globe Control Valve with anti-cavitation and antiflashing trim and also low noise design (S1A and S1B)
- Double ported globe Control Valve for higher capacity and minimum required actuating force (\$10)
- Rotary plug Control Valve for abrasive media with high rangeability (\$33)
- Three way Control Valve for mixing and diverting of process fluids (S<sub>3</sub>)





- Angle globe Control Valve for choked service condition (\$1A-C1)
- Minimum flow Control Valve (S1B-M)
- Self actuating pressure reducing regulators (SNR1,3,5)
- Linear multi-spring diaphragm actuator (P/R, P1/R1, P1B/R1B) and rotary spring diaphragm actuator (P99/R99 and PN99/ RN99)
- Steam desuperheater: Ring type (SP-1),
   Lance and Piston type (ST-1)
- And also other special valves according to client requirements

In a wide range of technical specification as follows:

- Nominal sizes from 1/2 to 16 inch (DN15 to DN400)
- Pressure ratings from CL150 to CL2500 (PN10 to PN420)
- Control characteristics as linear, equal percentage, quick-opening, modified
- Body materails of cast iron, spheroidal iron, carbon steel, alloy steel, stainless steel and special alloy.
- Leakage classes II, IV, V and VI as PN-EN 60534-4 and ANSI/FCI 70-2
- Bonnet types of standard, extended and bellow seal
- Special designs for oxygen, hydrogen, gas fuels, low temperature fluids (liquid oxygen, liquid nitrogen), acid gases containing H2S (as per ANSI/NACE MRo1-75/ISO15156); with heat jacket; for potentially explosive atmospheres (as per ATEX Directive 94/9/EC).

- Valves are executed with following types of connections: Flanged, Flangeless, Welding (BW, SW) and Threaded.
- The Smart Control Valves comply with the requirements of the European Pressure Equipment Directive 2014/68/EU.

Their design, manufacture, testing, and selection of materials are all carried out according to API, ANSI, ASME, ASTM, EN, FCI, IEC, ISA, NACE and other international standards.

Our clients appreciate that most of our valves are custom-made, fully designed and manufactured according to their specific needs.



C	υ	П	11	μa	Ш	у

Name: Overseas Consulting & International Coordinator A.M. Sàrl (Smart Valves)

Address: Avenue Mon-Repos 32

CH - 1005 Lausanne Switzerland

Phone: +41 21 311 24 35

Fax: +41 21 311 24 36

**Email:** overseaseng@bluewin.ch

Website: www.overseaseng.com





# **Smart's Art of Control Valves**



# "Smart Valves" Product Portfolio



# **Smart Valves' Manufacturing Range Summary**

ITEM	SERIES	ТҮРЕ	SIZE	PORT TYPE	PN RATING	BODY MATERIAL	DESCRIPTION
1	S	GLOBE	1/2"10"	1 PORT 2 WAY	PN1040/ CL150 & 300	GREY CAST IRON (EN-GJS 250)  DUCTILE (Spheroidal) IRON (EN-GJS 400-18LT)  CARBON STEEL (ASTM A216 WCB)  CARBON STEEL (ASTM A352 LCB)  STAINLESS STEEL (ASTM A351 CF8M)	Standard version of control valve
2	S1A & S1B	GLOBE	1/2"16"	1 PORT 2 WAY	PN10630/ CL1502500	CARBON STEEL (ASTM A216 WCB) ALLOY STEEL (ASTM A216 WC9) CARBON STEEL (ASTM A352 LCB) STAINLESS STEEL (ASTM A351 CF8M)	Heavy duty Control Valve with anti-cavitation and anti-flashing trim and also low noise design
3	<b>S3</b>	GLOBE	1/2"10"	1 PORT 3 WAY	PN10420/ CL1502500	GREY CAST IRON (EN-GJS 250) DUCTILE (Spheroidal) IRON (EN-GJS 400-18LT) CARBON STEEL (ASTM A216 WCB) CARBON STEEL (ASTM A352 LCB) STAINLESS STEEL (ASTM A351 CF8M)	for mixing and diverting of process fluids
4	S33	ROTARY PLUG	1"12"	1 PORT 2 WAY	PN1040/ CL150 & 300	CARBON STEEL (ASTM A216 WCB) CARBON STEEL (ASTM A352 LCB) STAINLESS STEEL (ASTM A351 CF8M)	for abrasive media with high rangeability
5	S10	GLOBE	1"12"	2 PORT 2 WAY	PN16160/ CL150900	CARBON STEEL (ASTM A216 WCB) CARBON STEEL (ASTM A352 LCB) STAINLESS STEEL (ASTM A351 CF8M)	for higher capacity and minimum required actuating force
6	S1B-M	MULTI PATH GLOBE	2"8"	1 PORT 2 WAY	PN10400/ CL1502500	CARBON STEEL ALLOY STEEL	Minimum flow & Multi path application
7	S1A-C1	ANGLE GLOBE (CHOKE)	1"4"	1 PORT 2 WAY	PN10630/ CL1504500	CARBON STEEL STAINLESS STEEL	for choked service condition
8	S1A-C3	STRAIGHT GLOBE (CHOKE)	1"4"	1 PORT 2 WAY	PN10630/ CL1504500	CARBON STEEL STAINLESS STEEL	
9	SA	NEEDLE VALVE	1/4"1/2"	2 PORT 2 WAY	40 Mpa (400 BAR)	CARBON STEEL STAINLESS STEEL	For pressure gauges, fittings, flow converters
10	SH	GLOBE	1/2"4"	1 PORT 2 WAY	PN1040/ CL150 & 300	GREY CAST IRON (EN-GJS 250) DUCTILE (Spheroidal) IRON (EN-GJS 400-18LT) CARBON STEEL (ASTM A216 WCB) STAINLESS STEEL (ASTM A351 CF8M)	2-DIRECTIONAL FLOWS
11	SNR (1,2,3,4 ,5,6,7,8)	Self actuating PRV	1"4"	1 PORT 2 WAY	PN1040/ CL150 & 300	GREY CAST IRON DUCTILE IRON CARBON STEEL STAINLESS STEEL	For pressure reducing, differential and flow control and regulation
12	Piston (Atomising)	DESUPERHEATE R	6"	-	-	CARBON STEEL ALLOY STEEL	-
13	Lance (ST-1)	DESUPERHEATE R	4"	-	-	CARBON STEEL ALLOY STEEL	-
14	Ring (SP-1)	DESUPERHEATE R	6"	-		CARBON STEEL ALLOY STEEL	- 4
		P					

# **Single-ported Globe Control Valves Type S**



Single-Ported Globe Control Valves Type S are used in automatic and remote control systems to control flow of gases and liquids. Wide range of material and design versions make the valves widely sought-after in Oil, Gas and Chemical industry, heat and power generation industry, paper industry, food industry, metallurgy and coal mining.

Technical Table		
Nominal sizes	DN15; 20; 25; 32; 40; 50; 65; 80; 100; 125; 150; 200; 250 (NPS 1/2" up to 10")	
Nominal pressure	PN10; 16; 25; 40 ; As per EN1092-1 & EN1092-2 CL150; CL300 ; As per ANSI/ASME B16.5, B16.34 & MSS-SP44	
Flow ratio	0,01 800 m³/h	
Control characteristics	Linear, equal percentage, quick-opening, modified	
Rangeability	50:1, non-catalogue - 100:1	
Leakage class	IV class EN 60534-4 ; VI class EN 60534-4 Class from B to G EN 12266-1	
Media temperature	- 196 + 450°C	
Body Materials & Bonnet	Cast iron EN-GJL 250; Spheroidal iron EN-GJS 400-18LT Carbon steel GP 240 GH (1.0619), ASTM A216 Gr.WCB Carbon steel for low temp. G20Mn5 (1.6220), ASTM A352 Gr.LCB Stainless steel GX5CrNiMo 19-11-2 (1.4408), ASTM A351 Gr.CF8M	

# Single ported Globe Control Valves Type S1A and S1B



Single-Ported Globe Control Valves Type S1A, S1B are used in automatic and remote control installations as flow control elements to adjust flow of liquids, steam and gases. Wide range of material and design versions makes the valves applicable in most demanding working conditions in power generation, petroleum chemistery, heating,

Technical Table		
Nominal sizes	DN15; 20; 25; 40; 50; 80; 100; 150; 200; 250; 300; 400 (NPS 1/2" up to 16")	
Nominal Pressure	PN10; 16; 25; 40; 63; 100; 160; 250; 320; 400; possible up to: PN630 As per EN1092-1 & EN1092-2 CL150; CL300; CL600; CL900; CL1500; CL2500; As per ANSI/ASME B16.5, B16.34 & MSS-SP44	
Flow ratio	0,1 960 m³/h; 10 800 m³/h	
Control characteristics	Linear, Equal percentage, Quick-opening, Modified	
Rangeability	50:1, 100:1	
Leakage class	IV class EN 60534-4 V class EN 60534-4 VI class EN 60534-4 Class from B to G EN 12266-1	
Media temperature	- 196 + 650°C	
Body materials & Bonnet	Carbon steel GP 240 GH (1.0619) , ASTM A216 Gr.WCB Alloy steel G17CrMo9-10 (1.7379) , ASTM A216 Gr.WC9 Carbon steel for low temp. G20Mn5 (1.6220), ASTM A352 Gr.LCB Stainless steel GX5CrNiMo 19-11-2 (1.4408) , ASTM A351 Gr.CF8M	

### **Three-way Control Valves Type S3**



Three-Way Control Valves Type S3 are used in automatic systems and remote control systems as flow control elements to adjust flow of liquids and gases. Type S3M is designed to mix two streams of medium, where as type S3R is designed to split one stream into two. Recommended for application in city-heating and HVAC systems and many branches of industry. They can be delivered with P/R and PN/RN actuators (basic option) or with P1/R1; P1B/R1B actuators (upon request) electric actuators (E), handwheels type 20 or with no drives.

Technical Table		
Nominal sizes	DN15; 20; 25; 32; 40; 50; 65; 80; 100; 150; 200; 250 (NPS 1/2" up to 10")	
Nominal pressure	PN10; 16; 25; 40 ; As per EN1092-1 & EN1092-2 CL150; CL300 ; As per ANSI/ASME B16.5, B16.34 & MSS-SP44	
Flow ratio	0,63 320 m³/h	
Control characteristics	linear	
Rangeability	50:1	
Leakage class	IV class EN 60534-4 VI class EN 60534-4 class from B to G EN 12266-1	
Media temperature	- 196 + 450°C	
Body Materials & Bonnet	Cast iron EN-GJL 250 Spheroidal iron EN-GJS 400-18LT Carbon steel GP 240 GH (1.0619) , ASTM A216 Gr.WCB carbon steel for low temp. G20Mn5 (1.6220), ASTM A352 Gr.LCB Stainless steel GX5CrNiMo 19-11-2 (1.4408) , ASTM A351 Gr.CF8M	

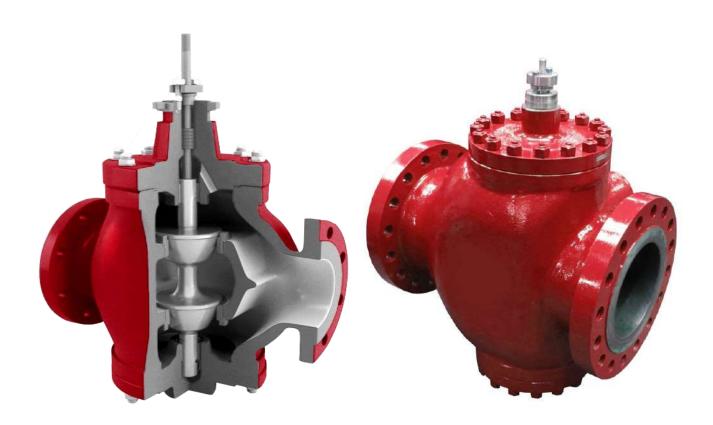
### **Rotary Plug Control Valves Type S33**



Rotary Plug Control Valves S33 represent the design of valves, where change in flow ratio is achieved through eccentrically set rotary plug. Such structures are particularly useful for control of flow under heavy-duty conditions, with high probability of cavitation and erosion. High rangeability (50:1) and wide range of material and design variants make them ideal for application in many branches of industry, such as power generation, metallurgy, chemical and petroleum industry, food industry, paper industry, etc.

Technical Table		
Nominal sizes	DN25; 40; 50; 80; 100; 150; 200; 250; 300 (NPS 1" up to 12")	
Nominal pressure	PN 10, 16, 25, 40, 63 ; As per EN1092-1 & EN1092-2 CL150; CL300 ; As per ANSI/ASME B16.5, B16.34 & MSS-SP44	
Flow ratio	3 2160 m³/h	
Control characteristics	linear, equal percentage	
Rangeability	50:1	
Leakage class	IV class EN 60534-4; VI class EN 60534-4 class from B to G EN 12266-1	
Media temperature	- 40 + 450°C	
Body Materials & Bonnet	carbon steel GP 240 GH (1.0619), ASTM A216 Gr.WCB carbon steel for low temp. G20Mn5 (1.6220), ASTM A352 Gr.LCB stainless steel GX5CrNiMo 19-11-2 (1.4408), ASTM A351 Gr.CF8M	

# **Double-Ported Control Globe Valves Type S10**



The Valves Type S10 with pressure balanced plug are used as final flow control valves (units) for automatic and remote control systems. They can be applied to adjust flow of fluids in various industries, such as chemical plants, steelworks, shipyards, etc.

Technical Table		
Nominal sizes	DN20; 25;32; 40; 50; 65; 80; 100; 150; 200; 250; 300 (NPS 3/4" up to 12")	
Nominal pressure	PN 16; 25; 40; 63;100; 160; As per EN1092-1 & EN1092-2 CL150; CL300; CL600 ; As per ANSI/ASME B16.5, B16.34 & MSS-SP44	
Flow ratio	41930 m³/h	
Control characteristics	Linear, Equal percentage, Quick opening	
Rangeability	50:1	
Leakage class	II class EN 60534-4 VI class EN 60534-4 class from B to G EN 12266-1	
Media temperature	-180+650 °C	
Body materials	Carbon steel GP 240 GH (1.0619), ASTM A216 Gr.WCB carbon steel for low temp. G20Mn5 (1.6220), ASTM A352 Gr.LCB Stainless steel GX5CrNiMo 19-11-2 (1.4408), ASTM A351 Gr.CF8M	

# Mini Flow Control Valves type S1B-M



#### **Technical Table**

Nominal size DN 50...200 / NPS 2" ...8"

Nominal pressure PN 10...400 ; As per EN1092-1 & EN1092-2

CL150...2500; As per ANSI/ASME B16.5, B16.34 & MSS-SP44

Leakage class V as per EN 60534-4

Materials Carbon steel and alloy steel

# Single-ported choke valves (Angle Valve) type S1A-C1



#### **Technical Table**

Nominal size DN 25...100 / NPS 1" ...4"

PN 10...630 ; As per EN1092-1 & EN1092-2

Nominal pressure CL150...CL4500 ; As per ANSI/ASME B16.5, B16.34 & MSS-SP44

Leakage class IV, V & VI as per EN 60534-4

Materials Carbon steel and stainless steel

# Single-ported choke valves type S1A-C3



#### **Technical Table**

Nominal size DN 25...100 / NPS 1" ...4"

Nominal PN 10...630 ; As per EN1092-1 & EN1092-2

CL150...CL4500; As per ANSI/ASME B16.5,

B16.34 & MSS-SP44

**Leakage class** IV, V & VI as per EN 60534-4

Materials Carbon steel and stainless steel

### **Needle Valves SA**

Pressure

These Needle Valves are designed for installation, startup and maintenance of pressure / flow converters, pressure gauges and other fittings and supplementary equipment in industrial automatic systems.



#### **Technical Table**

**Materials** 

Body: carbon steel; stainless steel

Gland: stainless steel; PTFE

Maximum working pressure

40 MPa

Maximum working temperature

EPDM (up to 150°C) ; PTFE; VITON (up to 200°C) ;

with regard to the type of sealing

Graphite (up to 500°C)

Pipe sizes

NPT 1/4"; 3/8"; 1/2" ; G 1/2"

M20x1.5

# **Single-Ported Globe Control Valves Type SH**



These valves are used as flow control valves for automatic and remote control systems, for stepless, infinite or ON/OFF flow control in water or steam heating systems as well as for ventilation and air conditioning circuits (HVAC).

Technical Table		
Nominal sizes	DN15; 20; 25; 32; 40; 50; 65; 80; 100 (NPS 1/2" up to 4")	
Nominal pressure	PN10; 16; 25; 40 ; As per EN1092-1 & EN1092-2 CL150; CL300 ; As per ANSI/ASME B16.5, B16.34 & MSS-SP44	
Flow ratio	0,010 160 m³/h	
Control characteristics	linear, equal percentage, quick-opening	
Rangeability	50:1	
Leakage class	IV class acc EN 60534-4 VI class acc EN 60534-4	
Media temperature	- 40 + 260°C	
Body materials & Bonnet	Cast iron EN-GJL 250 Spheroidal iron EN-GJS 400-18LT Carbon steel GP 240 GH (1.0619); ASTM A216 Gr.WCB Stainless steel GX5CrNiMo 19-11-2 (1.4408), ASTM A351 Gr.CF8M	

# **Self-Actuating Pressure Reducing Regulators**





SNR 2

Regulators are applied in heating systems, in industrial processes with cold and hot water, steam, air and non- flammable gases. Using with other media subject to consulting with manufacturer.

	Technical Table
SNR1	Used to control preset pressure in process installations connected to valve outlet.
SNR2	For regulation of pressure after the valve with an intensifier.
SNR3	Used to control preset pressure in process installations connected to valve inlet.
SNR5	For control of pressure differences on the installation connected with the regulator in series.
SNR6	For control of pressure differences with flow limitation on the installation connected with the regulator in series (installation on the return).
SNR7	For control of pressure differences on the installation connected with the regulation parallel.
SNR8	For flow regulation.

### **Reduction and Cooling Station**

The reduction and cooling stations are applied in the commercial power industry for maintaining the pressure and temperature of steam within the limits determined by the technological process by injecting the cooling liquid.

The main elements of the reduction and cooling stations are:

- Steam Reduction Valves
- Desuperheaters (injectors of cooling water)



### **Desuperheaters**

The purpose of the desuperheaters is to transport the cooling water to the cooling chamber in the maximum atomization condition in the whole range of working pressures and flow. Desuperheaters can be categorized in three types:

- Piston Desuperheaters
- Ring Desuperheaters

### **Piston Desuperheaters Type ST-1**



It is applied in the system of regulating the steam temperature in the industry and energy sectors. The task of the desuperheater is to provide the injection of water with perfect atomization to the pipeline of superheated steam for the purpose of cooling it to the set parameters.

They consist of the valve part with a one- or two-stage valve head, and the head with injection nozzles. They provide a wide range of control (about 40:1), do not require an injection valve and may be equipped with a pneumatic or electric drive. They are applied in the DN150 pipelines.

Technical Table		
Nominal diameter - water	DN 25 DN 50 (NPS 1" up to 2")	
Nominal pressure - water	PN 40; 63; 100	
Nominal diameter - steam	DN 80 DN 150 (NPS 3" up to 6")	
Nominal pressure - steam	PN 25; 40; 63; 100	
Nozzles	with full and empty atomization cone; spraying angle 6090°	
Material	body (bar stock execution), bonnet: 10CrMo 4-5; (1.7335) head, internal elements: X17CrNi 16-2; (1.4057) nozzles: X6CrNiMoTi 17-12-2; (1.4571)	
Flow coefficient	Kvs 0,1510	
Leakage class	V class EN-IEC 60534-4	
Rangeability	40:1	

### **ST-1 Type Lance Steam Desuperheater**

For smaller diameters of the pipeline and lower requirements in terms of control (about 3:1), it is recommended to use the lance desuperheaters. The lance desuperheaters are most frequently equipped with one injection nozzle and are recommended for the pipelines up to DN100.

Technical Table			
D. Gatawia I.	Body: S355J2G3 ; (1.0570); 13CrMo 4-5 ; (1.7335)		
Materials	Nozzles: X6CrNiMoTi 17-12-2 ; (1.4571)		
Flow coefficient Kv	max 2.0		
Rangeability	3:1		



### **SP-1 Type Ring Steam Desuperheater**

The ring desuperheaters are used for the diameters of steam pipelines up to DN150. these desuperheaters are fixed between the pipeline flanges. They contain 1..3 injection nozzles. The control of ring desuperheaters may be increased (up to about 15:1) by using multi-outlet

Technical Table			
	Body: S355J2G3 ; (1.0570); 13CrMo 4-5 ; (1.7335)		
Materials	Nozzles: X6CrNiMoTi 17-12-2 ; (1.4571) (with empty or full spray cone, degree 6090°)		
Flow coefficient Kv	max 1.0		
Rangeability	3·1		



# **Steam-Atomizing Desuperheater**



Feeding with auxiliary steam is necessary. Regulatability 1:15. Range of pipeline diameters: over DN150.

### **Passage Flanged Valve For 2-Directional Flows**



#### **Technical Table**

Nominal sizes DN300 (12")

Nominal pressure PN100, CL600

Flow ratio 1350 m3/m

Rangeability 100:1

Body & bonnet material carbon steel for low temperatures

G20Mn5 (1.6220)

### **Our group of Valves with Pneumatic Actuators and Accessories**

We supply valves with pneumatic actuators fitted with accessories according to customer requirements.



### **Valves with Manual Drives**

Our product portfolio includes manual drivers used directly on control valves.



### **Our group of Valves with Electric Actuators**



We use electric actuators of leading manufactures depending on installation requirements or customer suggestions. We could provide your specialized valves with electric actuators from various manufacturers such as:

- · AUMA
- · SIPOS
- · REGADA
- · DREHMO
- · ROTORK



# **Multi-Spring Pneumatic Diaphragm Actuators Type P/R**



Diaphragm Actuators designed by SMART VALVES are known for their durability, performance and, most importantly, their widely adaptable features to fully suit the customers' needs. The multi-spring pneumatic diaphragm (membrane) actuators of P/R column style are applied for control operation of control valves and other positioning elements in industrial automatic systems.

Technical Table				
Active area of the membrane	160, 250, 400, 630, 2x630, 1000, 1500, 2x1500 cm <sup>2</sup>			
Stroke	20, 38, 50, 63, 80, 100 mm			
Spring range	20100 kPa up to 180 380 kPa			
Maximum supply pressure	600 kPa (for 160, 250, 400 and 630 cm²)			
	500 kPa (for 2x630, 1000, 1500 and 2x1500 cm²)			
Working temperature	- 40 + 80°C			
Handwheel	top mount			

# **Multi-Spring Pneumatic Diaphragm (Membrane)**



The Multi-Spring Pneumatic Diaphragm (membrane) Actuators of P1/R1 Yoke Style are applied for control operation of control valves and other positioning elements in industrial automatic systems.

Technical Table					
Active area of the membrane	400, 630, 1000, 1500, 1500T cm <sup>2</sup>				
Stroke	20, 38, 50, 63, 80, 100 mm				
Spring range	20100 kPa up to 180 380 kPa				
Navissus susakusus	450 kPa (for 400 cm²)				
Maximum supply pressure	400 kPa (for 630, 1000, 1500 and 1500T cm²)				
Working temperature	- 40 + 80°C				
Handwheel	side mount				

# **Special Design Control Valves**



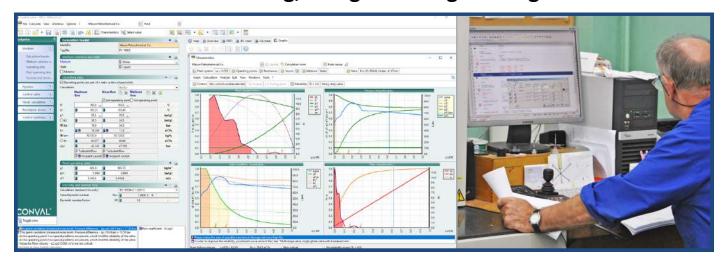




# Smart Control Valves' Manufacturing Process



# Scheduling, Design and Engineering



**Casting** Forging







# Machining







# Welding







**Dimension Inspection** 















# **Pressure Testing**



**Painting** 



### **Control Valve Standards**

### Numerous standards are applicable to Smart's Control Valves.









**API 598** API RP550 Sec. 6 **IPS-G-IN-160 IPS-C-IN-160** IPS-E-IN-100

NACE MR 01 75/ ISO 15156 **NACE MR 01 03** 

MSS SP-6 MSS SP-25

MSS SP-44







ANSI/ ISA S5.1 **ANSI/ ISA S75.01 ANSI/ ISA S75.02 ANSI/ ISA S75.03 ANSI/ ISA S75.05 ANSI/ ISA S75.11 ANSI/ ISA S75.12 ANSI/ ISA S75.12 ANSI/ ISA S75.13 ANSI/ ISA S75.15 ANSI/ ISA S75.16 ANSI/ ISA S75.17 ANSI/ ISA S75.19** 

**ASTM A216 ASTM A217 ASTM A351 ASTM A193 ASTM A194** 



**ANSI/ASME B16.1 ANSI/ASME B16.4 ANSI/ASME B16.5** ANSI/ASME B16.10 **ANSI/ASME B16.25 ANSI/ASME B16.34**  EN19, Marking EN12982 EN558-1 EN12266-1 EN558-2 EN12516-1 EN736-1 EN12516-2 EN736-2 EN12516-3 EN736-3 EN12627 EN1349 EN12760 EN1092-1 EN1092-2

EN1759-1

PN-EN 10213-1,2,3 &4

**PN-EN 10025** 

**PN-EN 10028** 

**PN-EN 10088** 



**ANSI/ ISA S75.22** 



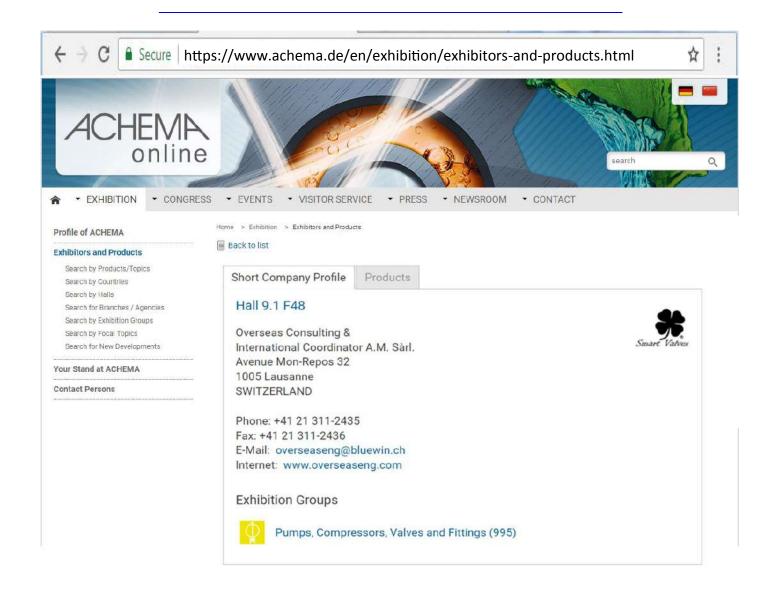


**IEC 60534** FCI 70-2-1991

EN 50014

#### Visit us at the ACHEMA 2018 website

(www.achema.de)



#### **Product Information**

For several years "Smart Valves" has been developing the design of valves specifically for severe service applications; Smart Control Valves with multi-hole elements (plugs, cages, plates) and with multi-stage units aimed at restrictingand eliminating the problems of noise, cavitation, flashing and choked flow. Our design is proven to be effective and has thus achieved recognition. Installing Smart Control Valves, with a choice between passage and angle valves, plays an important role together with the calculation of the correct flow direction for a given application. Selection of design materials and improving the valve component quality are of great importance for product durability and reliability.

#### **Our Smart Control Valves feature:**

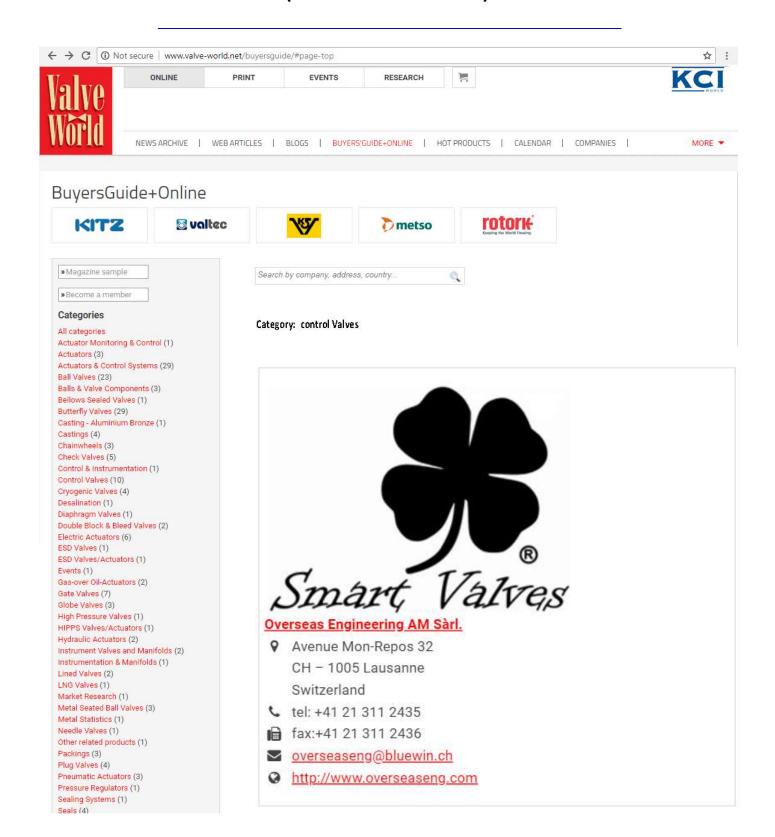
Quenching and tempering within a hardness range of 35 - 55 HRC, depending on the the component and its and function; Stelliting (stellite No. 6) of profiles or seat surfaces, plugs, guiding sleeves and stems, hardness 40 HRC; components made of full stellite (plugs, seats) or titanium (stems); ceramic components undergo Nitriding (CrN) - gas nitriding or bath nitriding, hardness 900 HV; thickness of hardened layer 0.1mm; coatings to internal valve body surfaces of BELZONA 1590 paste.





#### Visit us at the VALVE WORLD 2018 website

(www.valve-world.net)





Overseas Engineering AM Sàrl. is a dynamic and well known company active in the field of advanced technology for Control Valves, under the brand of "Smart Valves", with a strong worldwide base portfolio of customers.

Smart Valves provides the best in class of Quality Control Valves available currently in the market 100% European made, building on decades of experience in the field of chemical, petrochemical, oil & gas, power and all other major industries requesting solid, strong and reliable Control Valves.

#### Smart Control Valves are produced in various types:

- Standard single ported globe Control Valve (S)
- Heavy duty single ported globe Control Valve with anti-cavitation and anti-flashing trim and also low noise design

(S1A and S1B)

- Double ported globe Control Valve for higher capacity and minimum required actuating force (S10)
- Rotary plug Control Valve for abrasive media with high rangeability (S33)
- Three way Control Valve for mixing and diverting of process fluids (S3)
- Angle globe Control Valve for choked service condition (S1A-C1)
- Minimum flow Control Valve (S1B-M)
- Self actuating pressure reducing regulators (SNR1,3,5)
- Linear multi-spring diaphragm actuator (P/R, P1/R1, P1B/R1B) and rotary spring diaphragm actuator (P99/R99 and

PN99/RN99)

- Steam desuperheater: Ring type (SP-1), Lance and Piston type (ST-1)
- And also other special valves according to client requirements.

#### In a wide range of technical specification as follows:

- Nominal sizes from 1/2 to 16 inch (DN15 to DN400)
- Pressure ratings from CL150 to CL2500 (PN10 to PN420)
- Control characteristics as linear, equal percentage, quick-opening, modified
- Body materials of cast iron, spheroidal iron, carbon steel, alloy steel, stainless steel and special alloy.
- Leakage classes II, IV, V and VI as PN-EN 60534-4 and ANSI/FCI 70-2
- Bonnet types of standard, extended and bellow seal
- Special designs for oxygen, hydrogen, gas fuels, low temperature fluids (liquid oxygen, liquid nitrgen),

containing H2S (as per ANSI/NACE MR-01-75/ISO15156); with heat jacket; for potentially explosive atmospheres (as

per ATEX Directive 94/9/EC).

- Valves are executed with following types of connections: Flanged, Flangeless, Welding (BW, SW) and Threaded.
- The Smart Control Valves comply with the requirements of the European Pressure Equipment Directive 2014/68/EU

and API, ANSI, ASME, ASTM, EN, FCI, IEC, ISA, NACE and other international standards.

i Information

#### **Contact details:**

Overseas Engineering AM Sàrl. Avenue Mon-Repos 32 CH - 1005 Lausanne Switzerland tel: +41 21 311 2435

fax:+41 21 311 2436 overseaseng@bluewin.ch http://www.overseaseng.com

#### Categories:

**Control Valves** 



MORE -

Type S1A-C1



Single Ported Globe



Single Ported Globe Control

40
32
Smart Valves

# "Smart Control Valves" Technical Data Table

Please fill in the table below and send it to us in order to get the best fitting offer

Smar	t Valves	rieuse jiii iii the tubie beid	ow and send it t	to us in oraci i	o get the best	jitting ojjei
1	ai	Company Name				
2	Det	Address				
3	any	Contact Person				
4	Company Detail	Telephone/Fax				
5	ပိ	E-Mail				
6		Location				
7	z	Service				
8	0	Haz, area class	IP Code		SIL	
9	SELECTION	Ambient temp.	min.		max.	
10	Щ	Allowable sound pressure level				dB(A)
11	Ä	Upstream pipe NPS	Sch.		t(mm)	
12	10 at	Downstream pipe NPS	Sch.		t(mm)	
13	<b>X</b>	Pipe class	Material			
14	AL AL	Pipe insulation	☐ thermal		acoustic	
15	>	Design Pressure		Bar	Design Temp.	°C
16	7	Pipe connection upstream				
17	ř	Process Fluid				
18	A RELEVANT FOR CONTROL VALVE	Upstream cond.	Liquid [	Steam	☐ Gas ☐ Tv	o Phases
19	ပ္ပ	Special fluid properties:				
20	ਲ	Claurete	Min.	Norm.	Max.	Unit
21	P.	Flow rate				
22	5	Inlet press. P1				
23	A	Outlet press. P2				
24	E	Temperature T1				111
25	급	Inlet density p1 or M			-1	
26	2	Vapour pressure Pv				
27		Critical pressure Pc				
28	Α	Viscosity			-1	
29	S	Specific heat ratio (k=Cp/Cv)			we-s	
30	S	Compressibility factor Z1				A-
31	2	Gas/vapour mass fract.				%
32	PROCESS DAT	Shut off pressure	P <sub>1</sub>	P <sub>2</sub>	Unit	
33		Air supply Min.	Max.		Unit	
34		Power/Signal fail position	□Open □	Close	Remain	
Remark	s:		and the second s		5022014F881V-0.04704F1	
			_			
						a a
Rev.	Date	Description	Prepared By	Checked by	Approved by	Remarks









ISO 9001 OHSAS 18001 ISO 14001

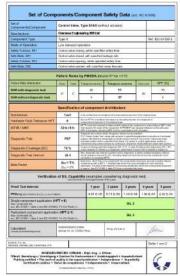
#### All our valves are certified by ATEX, Fire Safe & SIL















# **Overseas Engineering Sàrl**



Avenue Mon-Repos 32, CH 1005 Lausanne, Switzerland

Phone: +41 21 311 24 34-35

Fax: +41 21 311 24 36

E-mail: overseaseng@bluewin.ch

overseasinfo@bluewin.ch

Web: www.overseaseng.com

