

## Discovering Termovent SC



Company Profile & Production Range

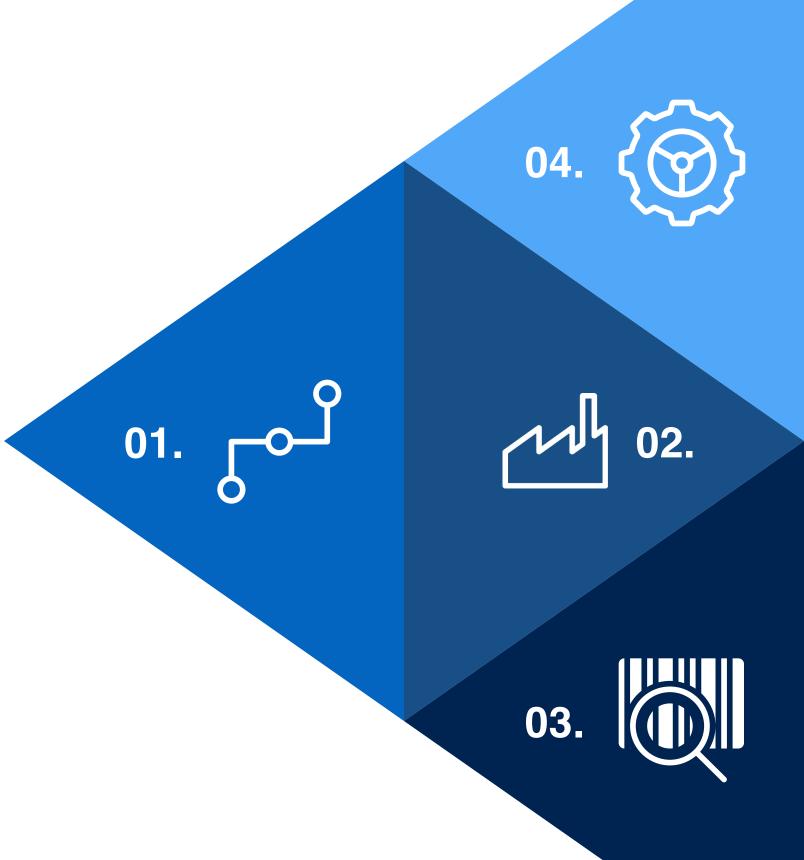
### Let Us Introduce Termovent SC

01. Our Story

02. Production

03. Quality System

04. Production Range





## Our Story

We are TERMOVENT SC Company, a regional leader in production of industrial valves for process industry and thermo energetics.

We remained until today a company in private ownership and management structure, as for the past 50 years of presence.



## Timeline



The company was founded by Mr. Slobodan Crnogorac

First certification of Quality

Management System

Start of production at the newly built factory in Temerin, Serbia

## Next generation Mr. Aleksandar Crnogorac becomes the new CEO of Termovent SC



2002



2003



2004

Certified according to European

Directive 97/23 EC, since

Termovent SC products carry CE-0035

Steel Foundry in 2003 has become a member of Termovent SC

The first investment in Steel Foundry - Induction Furnaces



## Next important investment in the Foundry - Alfaset process moulding technology



2010



2013

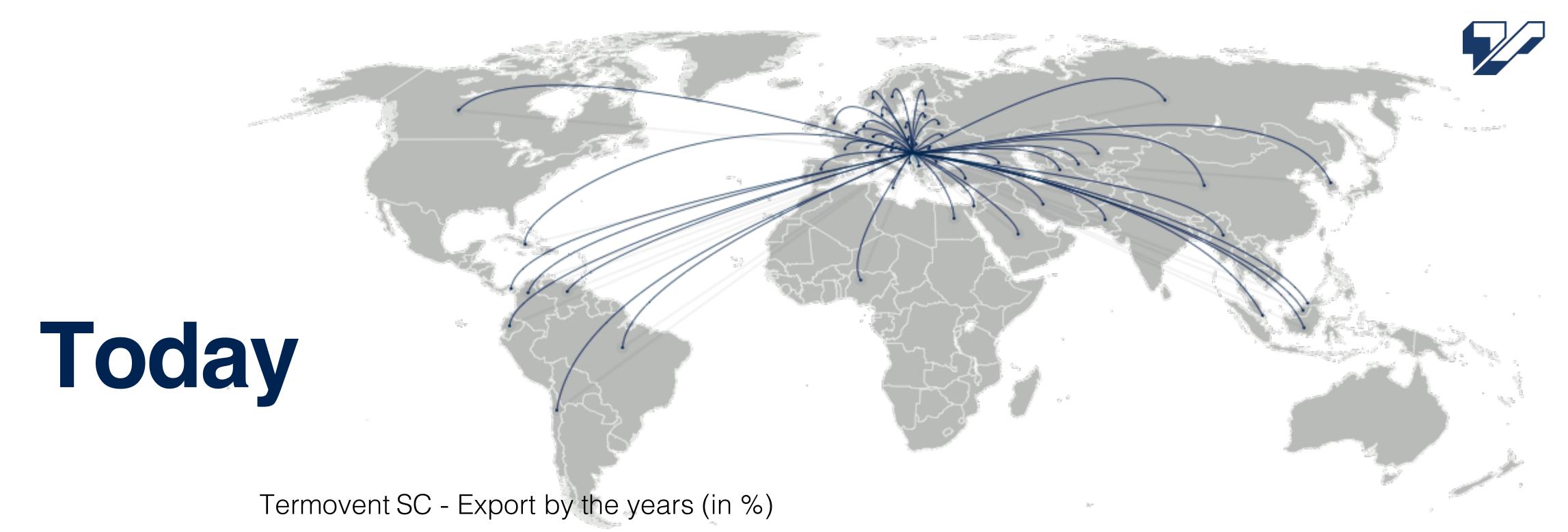


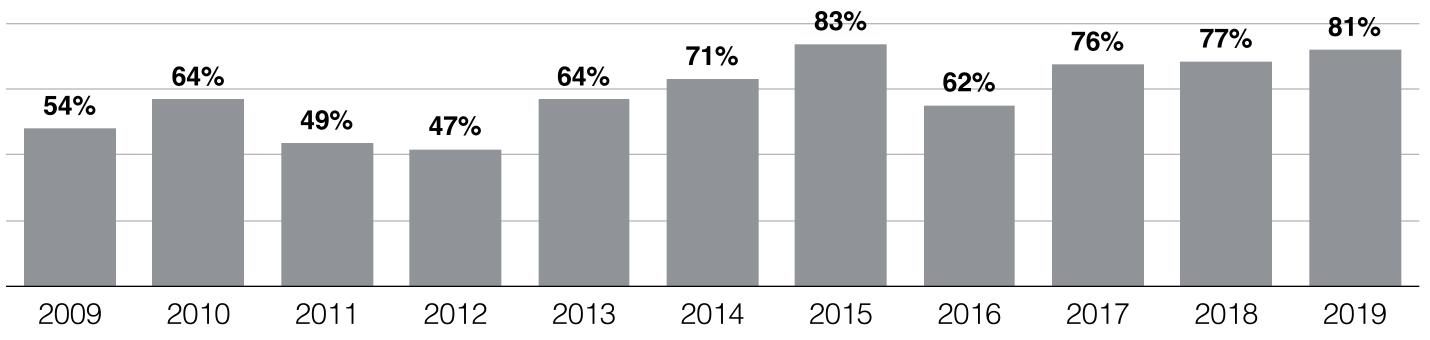
2016

The American Petroleum Institute certifies Termovent SC and awarded
The API Monograms

50 Years Anniversary

New investments in Termovnet SC 5-axis CNC Machining Center GT Travisan DS 600



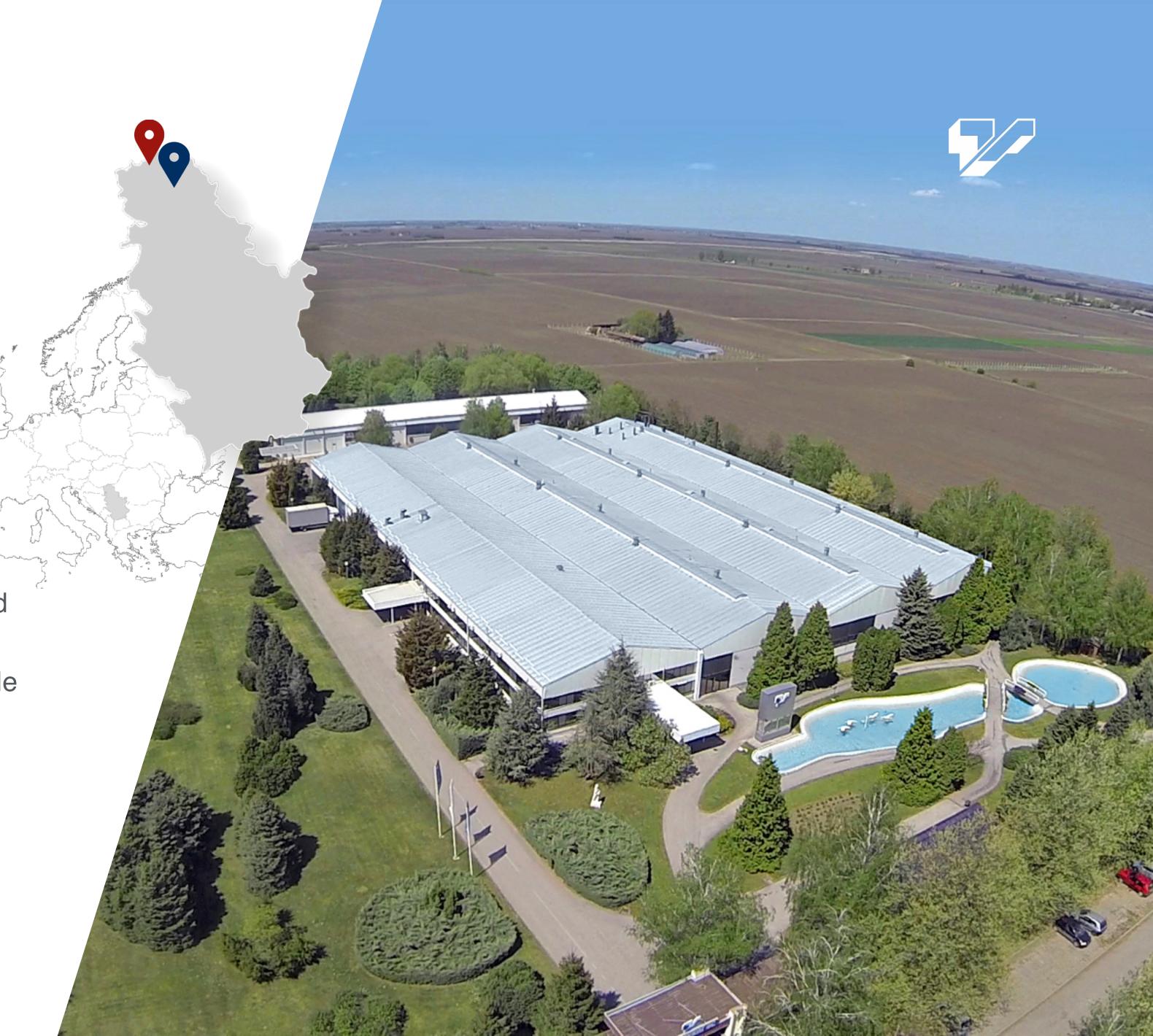


Today, we are present with our products on almost all continents. TERMOVENT SC products are installed and functioning in many plants in more than 60 countries worldwide.

## All in One Place

All of the product components are manufactured in Temerin Serbia, at our own manufacturing plant. The casting product components are made in our own TERMOVENT SC Steel Foundry in Backa Topola, Serbia.

Thus we can guarantee high quality of TERMOVENT SC valves.



### Valve Plant





TERMOVENT SC Temerin, production site with a comprehensive infrastructure, all necessary equipment for long-range future activities and with modern work environment, in which the production started in 1996. Production of Industrial valves for power plants, pipelines, refineries and industrial plants of any kind.





**Production of INDUSTRIAL VALVES** 

## Steel Foundry





All casting product components are made in our own TERMOVENT SC Steel Foundry in Backa Topola, Serbia. Our long-standing supplier of castings Steel Foundry has become a member of our company since 2003.



**Production of STEEL CASTINGS** 

## Production Capacities

TERMOVENT SC's ongoing investments into the latest machines and process technology is the key factor for continuously increasing productivity ensuring accurate, efficient and high quality production of valve components.













5-axis CNC Machining Center // 2 pcs.

CNC - Lathes // 8 pcs.

CNC Horizontal Machining Centers // 2 pcs.

CNC Metal Saw // 3 pcs.

**Automatic Welding Machines // 4 pcs.** 

**Vertical Lathes (Carousel) // 2 pcs.** 

Universal Lathes // 24 pcs.

Drilling Machines // 9 pcs.

Milling Machines // 7 pcs.

Horizontal Boring / Milling / Turning Machine (Borwerk) // 4 pcs.

Grinding Machines // 3 pcs.

Lapping Machines // 3 pcs.

**Automatic Painting Lines / 2 pcs.** 

**Thread Rolling Machine** 

## Machinery

We feature highly developed production capacities.

TERMOVENT SC is continuously investing in latest machines and process technologies, every year. This way we can increase our productivity and achieve a successful and good quality production.



Design, process planning, casting, machining, assembly, testing, surface treatment, logistic and quality management integrated in our own plants is crucial for ensuring the constant high quality of TERMOVENT SC products.



### 100% Testing

In keeping with the pertinent standard, every single product is tested. A unique identification number on each product allows a full traceability of all activities and material consumption.

















Test bench up to 1600 bar (up to 6 bar with air)

Test bench up to 650 bar (up to 6 bar with air)

Test bench up to 500 bar (up to 6 bar with air)

Test bench for hydraulic testing up to 1000 bar

**Spectrometers for chemical analysis of materials (PMI)** 

**Equipment for ultrasonic examination** 

**Equipment for magnetic particle examination** 

**Equipment for wall thickness measuring** 

**Hardness testing equipment** 

**Equipment for coating thickness measuring** 

**Equipment for liquid penetrant examination** 

# Mesuring & Control Equipment

Reliable Quality Maintenance and on-going improvement of products quality are a commitment and responsibility of all company employees. A reliable and quality product is our priority, and a satisfied customer - our objective in continuity.



## Quality System

We pay special attention to the application of current international rules and standards in quality system development. We keep improving and maintaining a high level of the quality system through active education.

We have the following valid certificates:



TP TC 032/2013 TP TC 010/2011 TP TC 012/2011



TÜV InterCert ISO 9001-2015 ISO 14001:2004 OHSAS 18001:2007

**EN ISO 3834** 

AD-2000 Merkblatt HP 0 Merkblatt W 0

PED 2014/68/EU – Module H1



**API Certificates** 

API 6A - 1129 API 6D - 1049 API 600 - 0096 API 602 - 0019



## Fields of Application

Valves

### **Energetics**

- Thermal Power Plants
- Hydroelectric Power Plants
- Heating Stations
- Boilers Production

### Oil & Gas

- Oil & Gas Exploitation
- Oil & Gas Pipelines
- Oil RefineriesAnd Oil Processing
- Pumping Stations & Tanks

### **Process Industry**

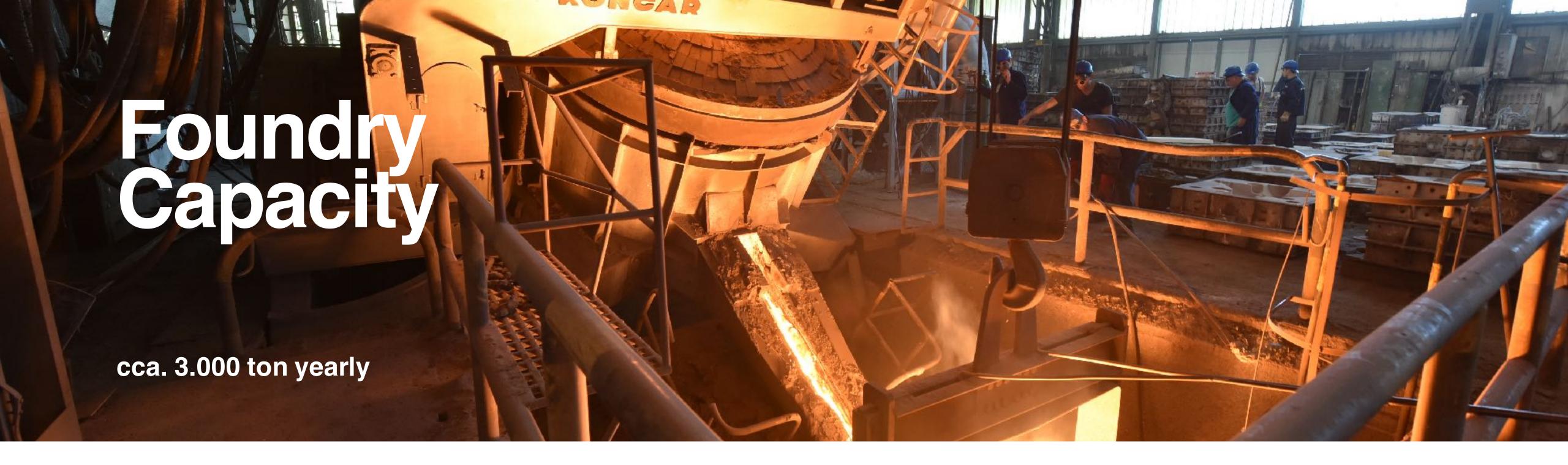
- Ironworks
- Smeltery
- Cement Industry
- Paper Industry
- Heating and Cooling Systems
- Production of Agricultural Fertilizers
- Sugar Refineries
- Chemical Plants
- Petrochemical Plants

## Fields of Application

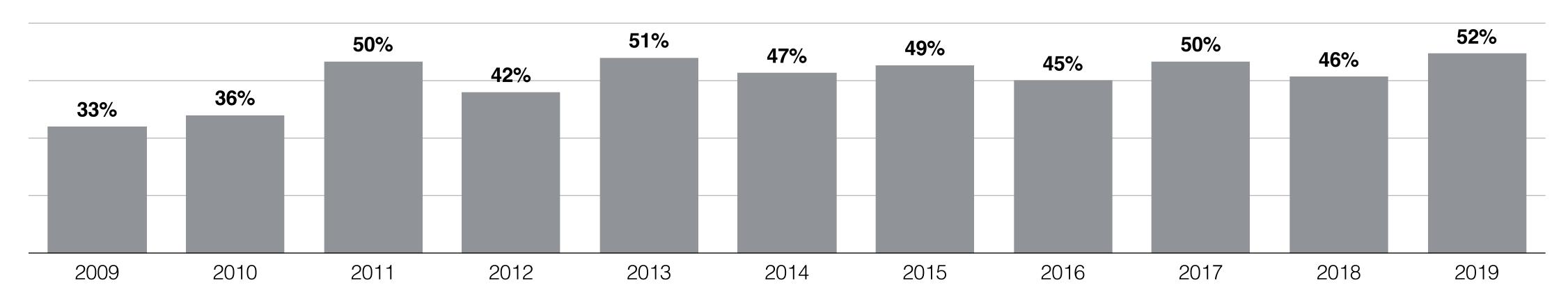
### Castings

- Thermal Power Plants
- Production of Machines and Tools
- Cement Industry
- Mines and Ironworks
- Construction (Building) Industry
- Railways
- Automotive Industry
- Agricultural Mechanization
- Shipbuilding
- Valves Industry





Termovent SC Steel Foundry - Export by the years (in %)



## Steel Foundry Materials



### **Carbon Steels**

**GE300** 

GP240GH

**WCB** 

LCB

20L

### **Heat Resistant Steels**

GX40CrNiSi27-4

GX40CrNiSi 25-20

GX130CrSi29

### **Stainless Steels**

GX5CrNi19-10

GX5CrNiMo19-11-2

GX5CrNiMoNb19-11-2

GX5CrNiNb19 11

GX12Cr12

CF8

CF8M

CF8C

12X18H9T

12X18H12M3T

### Wear Resistant Steel

G20Mn5

GX120Mn13

GX120Mn18-2

### Abrasive Resistant Steels

GX300CrMo153

GX300CrMo27 1

### **Alloy Steels**

G20Mo5

G17CrMo5-5

G17CrMo9-10

G24CrMo4

4A

4C

WC1

WC6

WC9

C5

C12A

**CA15** 

G35CrNiMo6-6

G32NiCrMo8-5-4

Other materials acc. to EN or ASTM Standards



## Production Range

**Globe Valves** 

**Gate Valves** 

**Check Valves** 

Oil & Gas Exploitation Products

**Other Types of Products** 

## Globe Valves

### **High Pressure Globe Valve**

Туре	VHP
DN (NPS)	10 (3/8") ÷ 200 (8")
Rating	PN 250 ÷ 500
	Cl 1500 ÷ 2500

#### **Standard Materials**

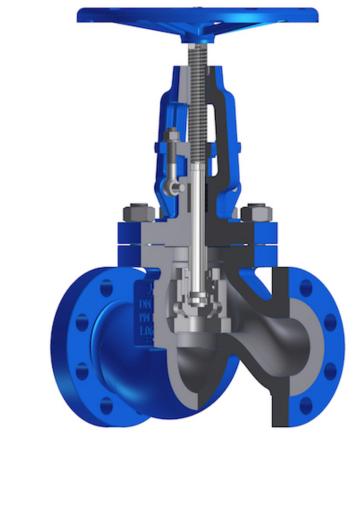
1.0460, 1.5415, 1.7335, 1.7383, 1.4903, 1.4301, 1.4541, 1.4404	A105, F1, F12 Cl.2, F22 Cl.3, F91, F304, F321, F316
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### **Globe Valve EN 13709**

Туре	VENS	
DN	15 ÷ 350	
Rating	PN 16 ÷ 160	

### **Standard Materials**

1.0460, 1.0565,	1.0619, 1.6220,
1.5415, 1.7335,	1.5419, 1.7357,
1.4301, 1.4541,	1.4308, 1.4408
1 1101	





### **Globe Valve BS 1873**

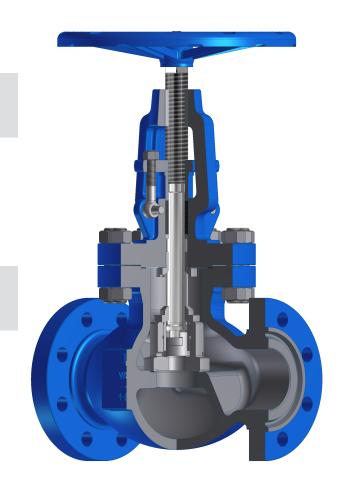
Type VBS

DN (NPS)  $50 (2'') \div 250 (10'')$ 

Rating CI 150 ÷ 900

**Standard Materials** 

WCB, LCB, LCC, LC1, WC6, CF8, CF8M



### Globe Valve Y type BS 1873

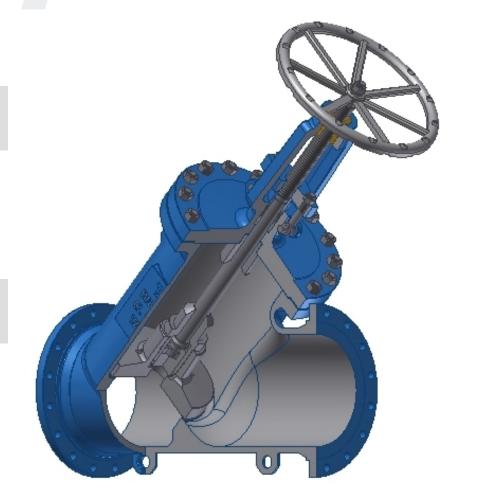
Type VBSY

DN (NPS)  $15 (\frac{1}{2}'') \div 500 (20'')$ 

Rating CI 150 ÷ 300

#### **Standard Materials**

WCB, LCB, LCC, LC1, WC6, CF8, CF8M



### **Globe Valve API 602**

Type VAP

DN (NPS)  $8 (\frac{1}{4}'') \div 50 (2'')$ 

Rating Cl 150 ÷ 1500

#### **Standard Materials**

A105, LF2, F12 Cl.2, F22 Cl.3, F5, F91, F304, F321, F347, F316







## Control Valves

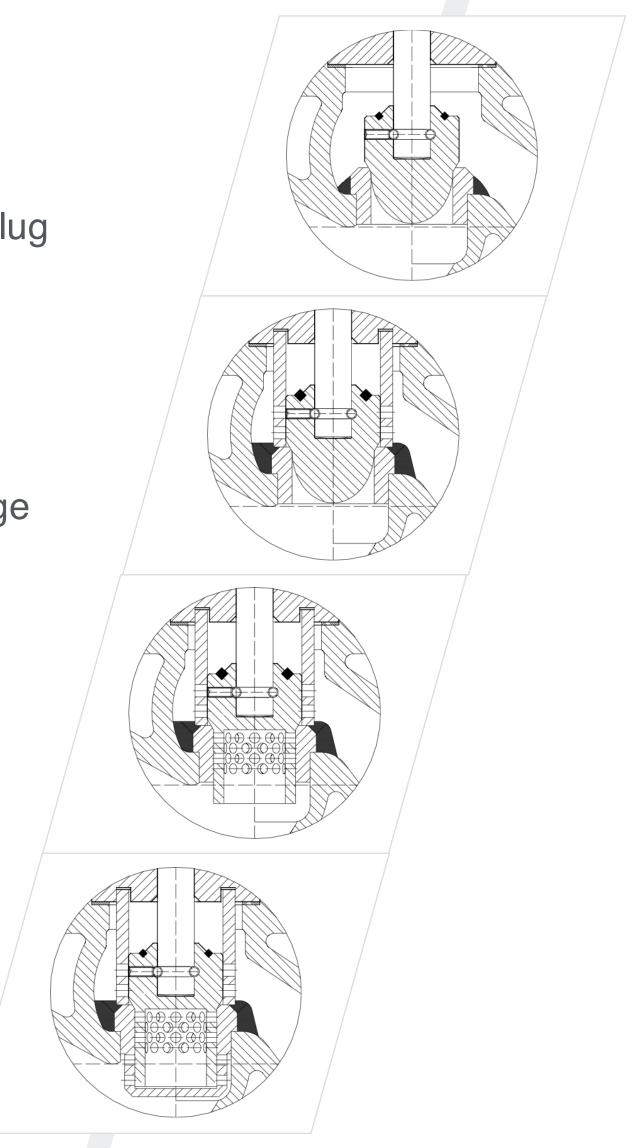
With equal percentage or linear flow characteristic

1 Stage designwith Parabolic Plug

2 Stage designwith Parabolic Plugand Anti-Cavitation Cage

2 Stage design
with Perforated Plug
and Silencer

3 Stage design
with Perforated Plug, Seat
and Anti-Cavitation Cage



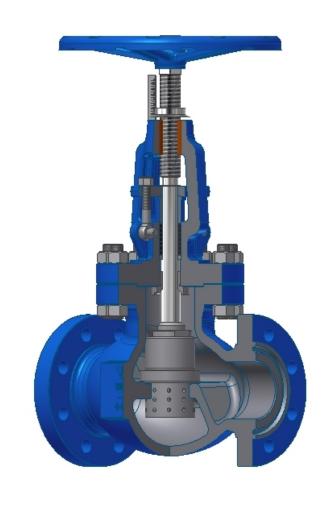
### **Control Valve EN 1349**

Туре		VENR	
DN		15 ÷ 350	
Rating		PN 16 ÷ 160	

#### **Standard Materials**

1.0460, 1.0565, 1.5415, 1.7335, 1.4301, 1.4541, 1.4404

1.0619, 1.6220, 1.5419, 1.7357, 1.4308, 1.4408



### **Control Valve BS Std.**

Туре	VBR	
DN (NPS)	50 (2") ÷ 250 (10")	
Rating	Cl 150 ÷ 900	
Standard Materials		

WCB, LCB, LCC, LC1, WC6, CF8, CF8M

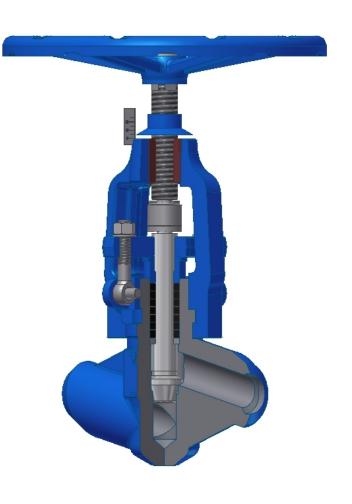


### **High Pressure Control Valve**

Type	VHPR	
DN (NPS)	10 (3/8") ÷ 200 (8")	
Rating	PN 250 ÷ 500 Cl 1500 ÷ 2500	
Otomodował Motowiala		

#### Standard Materials

1.0460, 1.5415, 1.7335, 1.7383, 1.4903, 1.4301,	A105, F1, F12 Cl.2, F22 Cl.3, F91,
1.4541. 1.4404	F304, F321, F316
1.4041.1.4404	



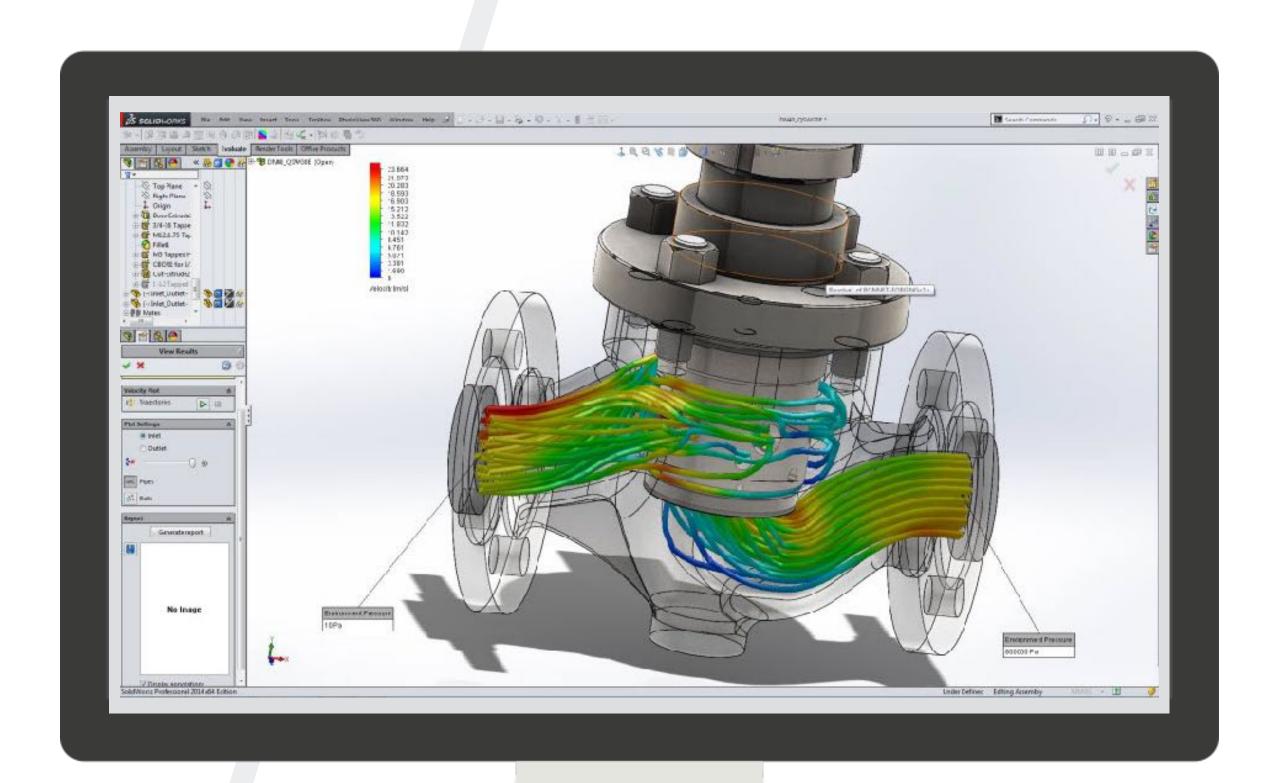
Other materials acc. to EN or ASTM Standards

### SolidWorks® Flow Simulation

The SolidWorks® Flow Simulation provides the advanced capabilities we need to get to market faster—designers can catch mistakes sooner, change course quickly, and create better-performing products at a lower cost.

Engaging SolidWorks® Flow Simulation intuitive
Computational Fluid Dynamics (CFD) in production
process, enables TERMOVENT SC designers to
simulate liquid and gas flow in real -world conditions, run
"what if" scenarios, and effciently analyze the effects
of liquid flow, heat transfer, and related forces on
immersed or surrounding components.

Early in the design process, our designers can easily simulate liquid flow, heat transfer, and liquid forces that are critical to the success of the product design.





## Gate Valves

### **Gate Valve EN 1984**

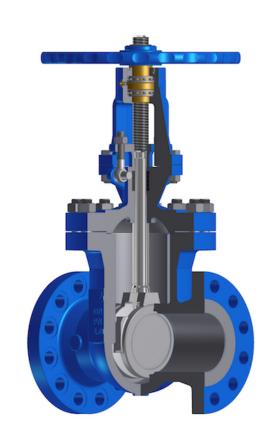
Type GEN

DN  $50 \div 600$ 

Rating PN 16 ÷ 160

#### **Standard Materials**

1.0619, 1.6220, 1.5419, 1.7357, 1.4308, 1.4408



### **High Pressure Gate Valve**

Type GHP

DN (NPS)  $10 (\%'') \div 300 (12'')$ 

PN 250 ÷ 400 CI 900 ÷ 2500

#### **Standard Materials**

1.0460, 1.5415, 1.7335, A105, F1, F12 Cl.2, F22 1.7383, 1.4903, 1.4301, Cl.3, F91, F304, F321, 1.4541, 1.4404, F316,

1.0619, 1.6220, 1.7357, WCB, WC1, WC6, 1.7379, C12A, 1.4308, WC9, C12A, CF8, CF8C, CF8M



### **Gate Valve API 600**

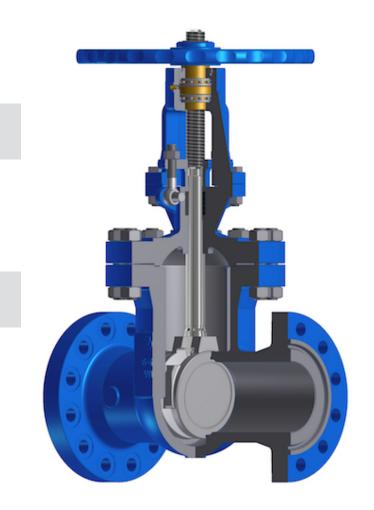
Type GAC

DN (NPS)  $50 (2'') \div 650 (26'')$ 

Rating CI 150 ÷ 1500

**Standard Materials** 

WCB, LCB, LCC, LC1, WC6, CF8, CF8C, CF8M



### **Gate Valve API 602**

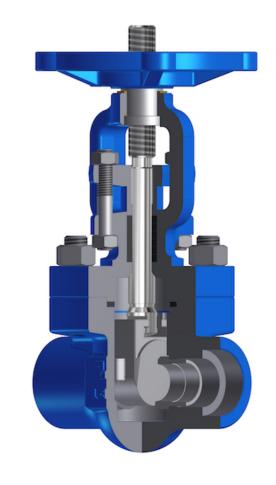
Type GAF

DN (NPS)  $8 (\frac{1}{4}'') \div 50 (2'')$ 

Rating CI 150 ÷ 1500

**Standard Materials** 

A105, LF2, F12 Cl.2, F22 Cl.3, F5, F91, F304, F321, F347, F316





## Check Valves

### **High Pressure Swing Check Valve**

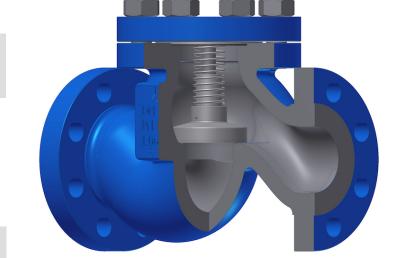
Туре	CHPS
DN (NPS)	10 (3/8") ÷ 200 (8")
Rating	PN 250
	CI 1500

#### **Standard Materials**

1.0619, 1.6220, 1.7357, 1.7379, C12A, 1.4308, 1.4408	WCB, WC1, WC6 WC9, C12A, CF8 CF8C, CF8M
1.0460, 1.5415, 1.7335, 1.7383,	A105, F1, F12 Cl.2, F22 Cl.3,
1.4903, 1.4301, 1.4541, 1.4404,	F91, F304, F321, F316,

### **Lift Check Valve EN 14341**

Туре	CLEN
DN	15 ÷ 350
Rating	PN 16 ÷ 160



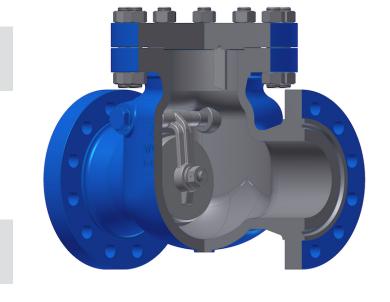
### **Standard Materials**

1.0460, 1.0565,	1 0610 1 6000
1.5415, 1.7335,	1.0619, 1.6220,
1.4301, 1.4541,	1.5419, 1.7357, 1.4308, 1.4408
1.4404	1.4300, 1.4400

### **Swing Check Valve BS 1868**

<b>3</b>	
Туре	CSBS
DN (NPS)	15 (½") ÷ 600 (24")
Rating	Cl 150 ÷ 900
	Standard Materials

WCB, LCB, LCC, LC1, WC6, CF8, CF8M



Other materials acc. to EN or ASTM Standards

### Oil & Gas Exploitation Products

### **Xmass Tree Gate Valve API 6A**

Type GXT

DN (NPS) 50 (2 1/16") ÷ 100 (4 1/16")

Rating 2000 ÷ 5000 psi

Standard Materials

4A, CA15



### Pig Valve API 6D

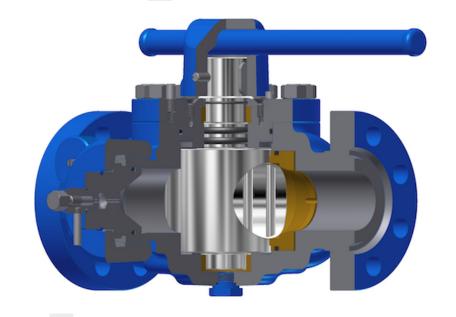
Type CPVP

DN 50 (2") ÷ 150 (6")

Rating CI 600 ÷ 1500

**Standard Materials** 

WCB, LCB, LC1, LC2, CA15, CF8, CF8M



### Adjustable Choke API 6A

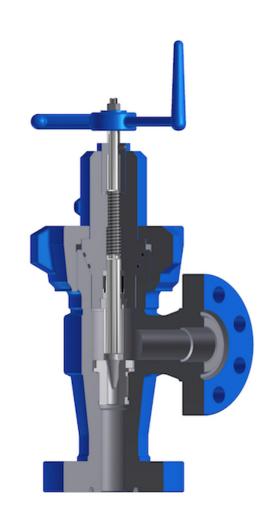
Type VAC

DN (NPS) 50 (2 1/16")

Rating 2000 ÷ 5000 psi

**Standard Materials** 

4A, CA15



### **Positive Choke API 6A**

Type VPC

DN (NPS) 50 (2 1/16")

Rating 2000 ÷ 5000 psi

**Standard Materials** 

4A, CA15



### **Change Over Valve**

Type COV

DN (NPS)  $50 (2'') \div 200 (8'')$ 

Rating CI 150 ÷ 900

**Standard Materials** 

WCB, LCB, LCC, CF8, CF8M



Other materials acc. to EN or ASTM Standards



## Other Types of Products

### **Needle Valve**

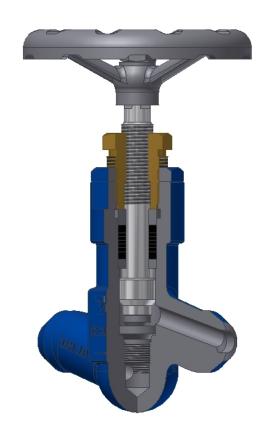
Type VNS

DN 6 ÷ 15

Rating PN 16 ÷ 630

**Standard Materials** 

1.0460, 1.0565, 1.5415, 1.7335, 1.7383,1.4903,1.4301, 1.4541, 1.4404



### **Strainer Y type**

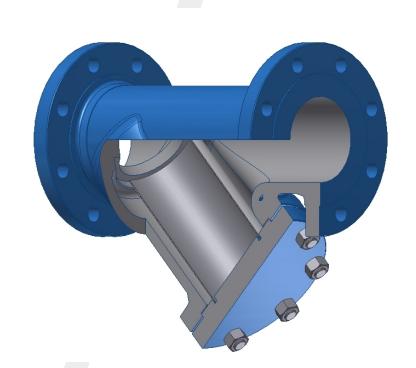
Type SBSY

DN (NPS)  $15 (\frac{1}{2}'') \div 500 (20'')$ 

Rating CI 150 ÷ 300

**Standard Materials** 

WCB,LCB,WC1,WC6,WC9, C12A,CF8,CF8C



### **Cock for Pressure Gauge**

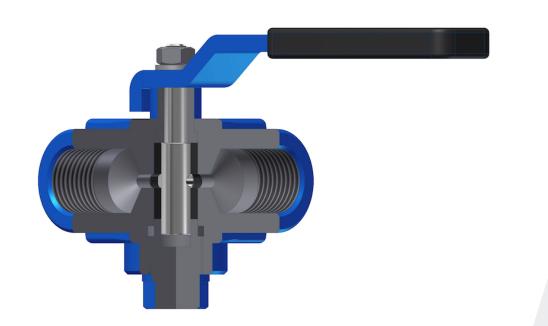
Type CPG

DN 15 ÷ 20

Rating PN 16 ÷ 160

**Standard Materials** 

1.0460, 1.4301, 1.4404



### **Plug Valve**

Type CPV

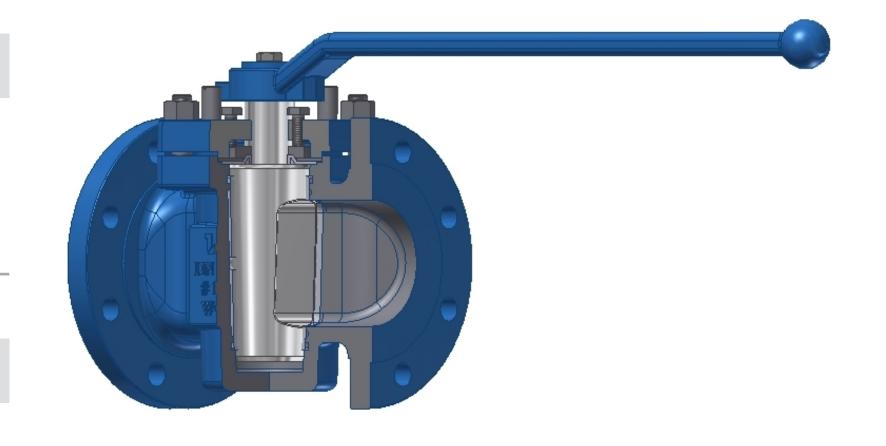
DN (NPS)  $15 (\frac{1}{2}'') \div 300 (12'')$ 

Rating PN16 ÷ 100Cl 150 ÷ 600

DN (NPS) 15 (1/2") ÷ 50 (2") Rating Cl 600

**Standard Materials** 

A105, LF2, 304, F321, F316, HASTELLOY B2 WCB, LCB, CF8, CF8C, CF8M

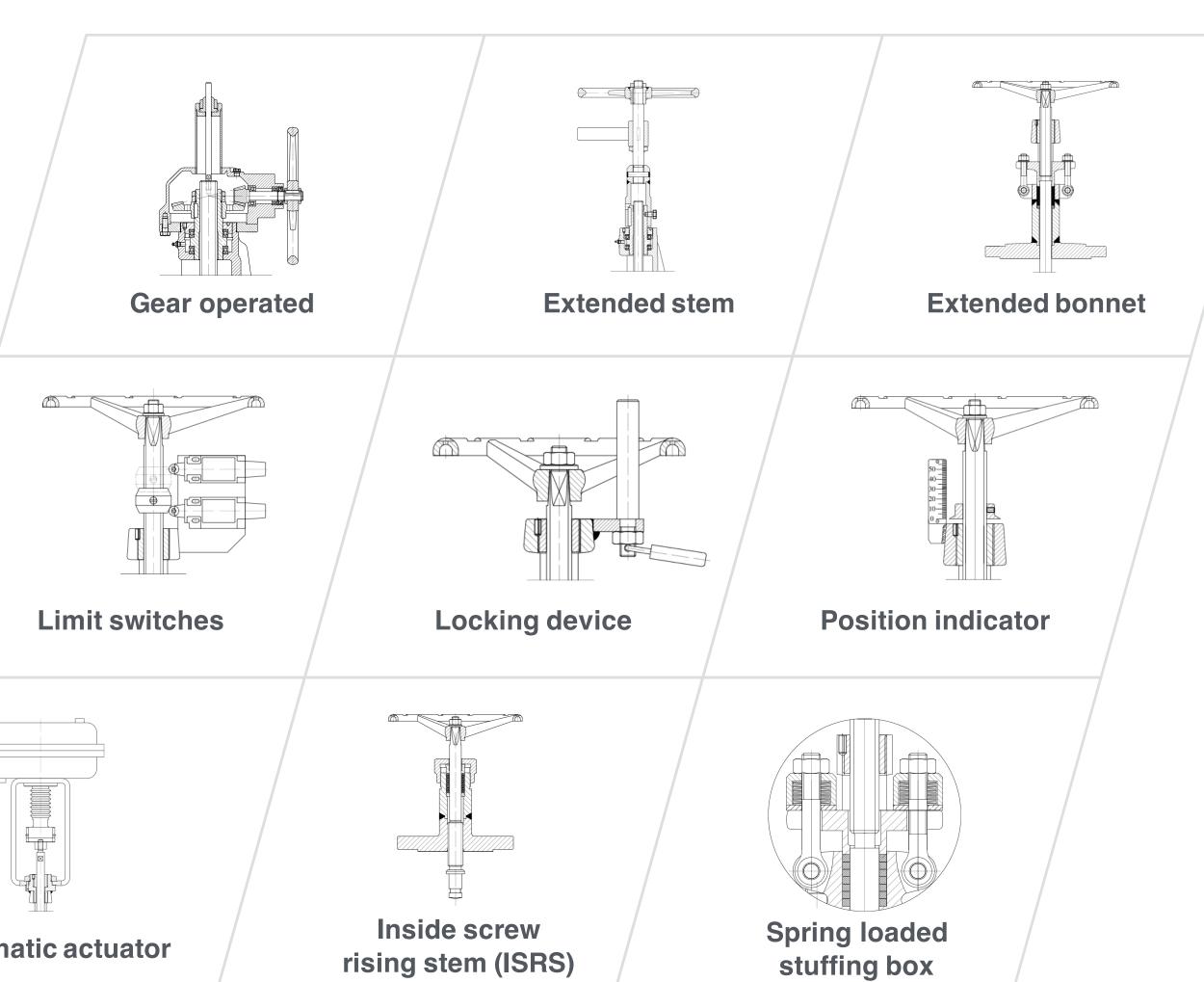


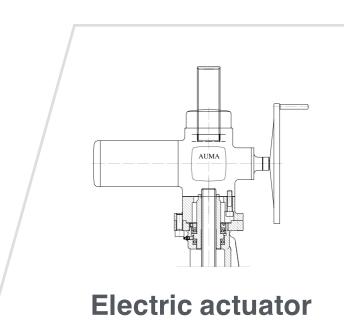


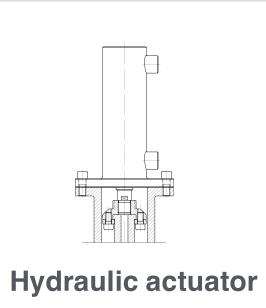


## Optional Execution

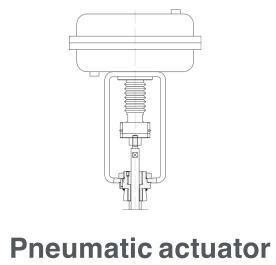
Globe Valves (+)

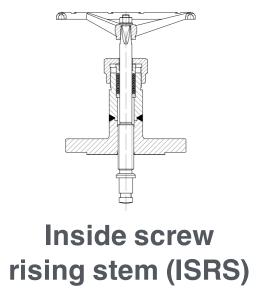






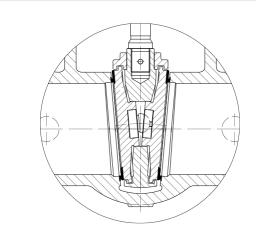
**Chain operated** 



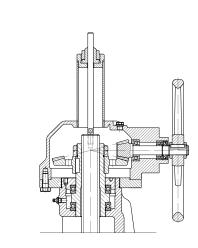


### Optional Execution

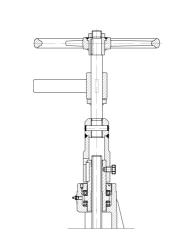
**Gate Valves** 



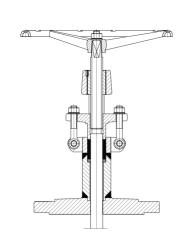




Gear operated



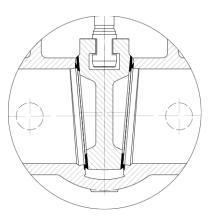
**Extended stem** 



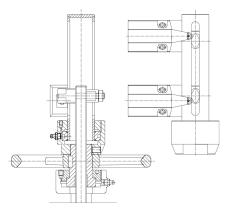
**Extended bonnet** 



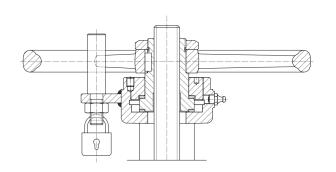
**Chain operated** 



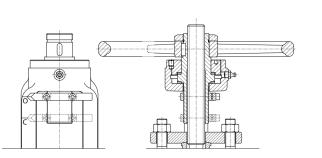
Solid wedge



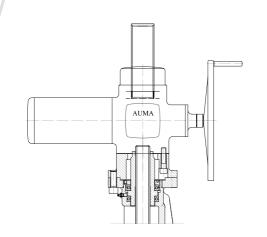
**Limit switches** 



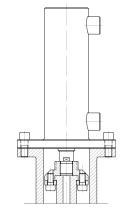
Locking device



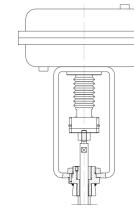
**Position indicator** 



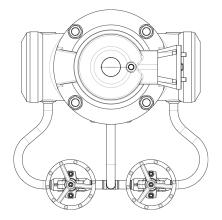
**Electric actuator** 



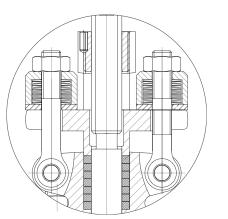
Hydraulic actuator



**Pneumatic actuator** 



Overpressure safety device



Spring loaded stuffing box



Perfect for the pressure.

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