BORSIG offers comprehensive products and service solutions for power generation, the oil and gas industries as well as the chemical and petrochemical industries.

Our VALVE PROGRAM „MADE in GERMANY“ is focussing on high pressure control and shut-off valves for extreme operating conditions.
All our valve solutions are tailor-made to the respective applications and manufactured by the application of Duplex, Super Duplex and other special materials for extreme operating conditions.

The company looks back on more than 60 years of valve experience and has manufactured over 50,000 control and shut-off valves. Our locations are in Gladbeck and Leegebruch.

TRUE METAL SEATED CONTROL AND SHUT-DOWN VALVES

We design and manufacture high quality trunnion mounted ball valves tailored to your specific control processes. Based on the application of customized control discs our control valve product line is engineered to suit very high differential pressure applications giving you an exceptionally high rangeability for your plant operation.

Sizes: NPS 2” - 36”
DN 25 - 600
Classes: ANSI 600 - 2500
PN 100 - 420
CONTROL BALL VALVE - CBV
Massflow Control / Pressure Reduction / Pre-Filling

SHORT DESCRIPTION
- Control function
- Multistage pressure reduction
- Different control disc designs for individual control characteristics
- Extreme durability and robust design ideal for severe service applications
- Metal to metal seated
- Full shut-off and ESD function against full ∆p

TYPES AND VARIATIONS
- Split body / top entry / fully welded
- Forged steel
- Ceramic inserts for slurries
- Uni- or bidirectional
- Welded ends, flanges

TECHNICAL CHARACTERISTICS
Nominal sizes: 2”-36” / DN 50-900
Temperature: - 60°C ... +400°C
Rating: ANSI Class 600 - 2500 / PN100 - 420
Pressure reduction: 0,1% - 85% ∆p
Control range: 1:50
Control characteristic: Linear, equal percentage
Leakage rate: A acc. ISO 5208 or EN 12266-1 / Vl acc. EN 1349

MEDIA
- Natural gas / sour gas / crude oil
- Process water / salt water / brine
- Slurries
- Petrochemicals (petroleum distillates)
- Steam
- Nitrogen

MATERIALS

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TOP ENTRY BALL VALVE - TEV
Control Ball Valves and Shut-Off Ball Valves

SHORT DESCRIPTION
- Control and shut-off function possible
- Erosion and corrosion resistance
- Extreme durability and robust design ideal for severe service applications
- Quick maintenance is possible because the housing remains in the pipeline during maintenance
- Metal to metal seated
- Full shut-off and ESD function against full Δp

TYPES AND VARIATIONS
- Forged and casted steel
- Uni- or bidirectional
- Welded ends, flanges

MEDIA
- Natural gas / sour gas / crude oil
- Process water / salt water / brine
- Slurries
- Petrochemicals (petroleum distillates)
- Steam
- Nitrogen

TECHNICAL CHARACTERISTICS
Nominal sizes: 2”-36” / DN 50-900
Temperature: -60°C … +400°C
Rating: ANSI Class 600 - 2500 / PN100 - 420
Leakage rate: A acc. ISO 5208 or EN 12266-1 / VI acc. EN 1349

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SHUT-OFF BALL VALVE - SOBV

Bubble Tight Isolation & Emergency Shut-Off Ball Valves

SHORT DESCRIPTION
- Piggable full bore or reduced bore
- Erosion and corrosion resistance
- Extreme durability and robust design ideal for severe service applications
- Metal to metal seated
- Full shut-off and ESD function against full Δp

TYPES AND VARIATIONS
- Split body / top entry / fully welded
- TWIN ball (DBB Ball)
- Emergency shut down function
- Forged steel
- Ceramic inserts for slurries
- Uni- or bidirectional
- Welded ends, flanges

TECHNICAL CHARACTERISTICS
Nominal sizes: 2”-36” / DN 50-900
Temperature: - 60°C ... +400°C
Rating: ANSI Class 600 - 2500 / PN100-420
Leakage rate: A acc. ISO 5208 or EN 12266-1 / VI acc. EN 1349

MEDIA
- Natural gas / sour gas/ crude oil
- Process water / salt water / brine
- Slurries
- Petrochemicals (petroleum distillates)
- Steam
- Nitrogen

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BYPASS - ACCESSORIES FOR SHUT-OFF BALL VALVES

SHORT DESCRIPTION

- Pressure compensation between valve inlet and downstream piping
- Filling by vent connection and bleeding by drain connection
- For smooth opening (resulting in wear reduction)
- Modular designed - fully serviceable

DESIGN AND IMPLEMENTATION

- Pipes between valve in- and outlet
- Additional isolation valves for easy bypass operation

TYPES AND VARIATIONS

- Different bypass design available
- Threaded connections at ball valve flange and cavity
- Welded connections at bypass-piping

MEDIA

- Natural gas / sour gas / crude oil
- Petrochemicals (petroleum distillates)
- Steam
- Nitrogen

TECHNICAL CHARACTERISTICS

Nominal sizes: 2” - 36” / DN 50 - 900
Temperature: - 60°C ... +400°C
Rating: ANSI Class 600 - 2500 / PN 100 - 420

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BALL VALVE WITH STEM EXTENSION
Control Ball Valves and Shut-Off Ball Valves

SHORT DESCRIPTION
- Ball valve for over- and underground use
- Extreme erosion and corrosion resistance
- Extreme durability and robust design ideal for severe service applications
- **Metal to metal seated**
- **Full shut-off and ESD function against full Δp**

TYPES AND VARIATIONS
- Forged steel
- Uni- or bidirectional
- Welded ends, flanges

MEDIA
- Natural gas / sour gas / crude oil
- Process water / salt water / brine
- Slurries
- Petroleum distillates
- Steam
- Nitrogen

TECHNICAL CHARACTERISTICS
- Nominal sizes: 2”-36” / DN 50-900
- Temperature: -60°C ... +400°C
- Rating: ANSI Class 600 - 2500 / PN100-420
- Leakage rate: A acc. ISO 5208 or EN 12266-1 / VI acc. EN 1349
- Extension length: Acc. to client specification

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FULLY WELDED BALL VALVE
Control Ball Valves and Shut-Off Ball Valves

SHORT DESCRIPTION
- Ball valve for over- and underfloor use
- Erosion and corrosion resistance
- Extreme durability and robust design ideal for severe service applications
- Fully serviceable
- Metal to Metal seated
- Full shut-off and ESD function against full Δp

TYPES AND VARIATIONS
- Forged steel
- Uni- or bidirectional
- Welded ends, flanges

MEDIA
- Natural gas / sour gas / crude oil
- Process water / salt water / brine
- Slurries
- Petrochemicals (petroleum distillates)
- Steam
- Nitrogen

TECHNICAL CHARACTERISTICS
Nominal sizes: 2”–36” / DN 50–900
Temperature: -60°C ... +400°C
Rating: ANSI Class 600 - 2500 / PN 100 - 420
Leakage rate: A acc. ISO 5208 or EN 12266-1 / VI acc. EN 1349

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DESUPERHEATER-DSH
Temperature Control of Superheated Steam

SHORT DESCRIPTION
- Integrated shut-off and control function
- Integrated metal seated ball valve
- Multi stage pressure reduction
- Individual nozzles
- 90° rotary movement (minimizes wear of packings)
- No additional control and shut-off valve for supply of injection water necessary
- Easy exchange of the nozzles

TYPES AND VARIATIONS
- Forged steel
- Welded ends, flanges

MEDIA
- Steam
- Feed water

TECHNICAL CHARACTERISTICS
- Probe sizes: 71 – 91 mm
- Pressure reduction stages: 1 – 3
- Number of nozzles: 6 – 27
- Steam temperature: Up to 650°C
- Min. steam velocity: 5 m/s
- Control range: 1:50
- Control characteristic: Linear, equal percentage

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MOTIVE STEAM NOZZLE - MSN
Temperature Control of Superheated Steam

SHORT DESCRIPTION
- Ideal for low Δp and very short mixing sections
- Combined injection of spray water and motive steam
- External control and shut-off valve for control and isolation of media
- No movable parts

TYPES AND VARIATIONS
- Forged steel
- Welded ends, flanges

MEDIA
- Steam
- Feed water

TECHNICAL CHARACTERISTICS
Sizes: Steam pipe 6” / DN150
other sizes on request
Pressure rating: Up to ANSI Class 2500 / PN 400
Steam temperature: Up to 650 °C

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RIGID SPRAYING NOZZLE - RSN

Cooling of Superheated Steam

SHORT DESCRIPTION
- Ideal for low ∆p and low mass flow
- Exchangeable, fixed are nozzles
- External control and shut-off valve for control and isolation of injection water

TYPES AND VARIATIONS
- Forged steel
- Welded ends, flanges

MEDIA
- Steam
- Feed water

TECHNICAL CHARACTERISTICS
- Connection to steam pipe: Probe type, flanged
- Pressure reduction stages: 1
- Number of nozzles: 1 - 6
- Min. steam velocity: 5 m/s
- Temperature: Up to 650°C
- Mass flow: Max. 2.8 t/h
- Sizes: From DN 80 / 3” [steam]
  from DN 20 / 1” [water]

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STEAM CONDITIONING STATION - SCS
Multistage Pressure Reduction and Additional Temperature Control

SHORT DESCRIPTION
- Ideal for steam conditioning in power plants
- Multistage pressure reduction
- Integrated motive steam nozzle for steam atomized spray water
- Downstream injection

TYPES AND VARIATIONS
- Angle form, z-type
- Forged steel, casted steel

MEDIA
- Steam
- Feed Water

TECHNICAL CHARACTERISTICS
Sizes: Inlet 2 - 20” / DN25 – 500
outlet 2 - 80” / DN50 – 2000
other sizes on request

Pressure rating: ANSI Class 600 – 2500 / PN100 – 420
Pressure reduction stages: 3 - 10
Pressure reduction: 70 – 98% of initial steam pressure
Steam temperature: Up to 570°C
Control range: 1:25 – 1:50
Control characteristic: Linear, equal percentage

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REFERENCES

- Fully welded ball valve at Thyssengas gas compressor station
- Split body control ball valve at VNG underground gas storage site
Top entry ball valve installed at Uniper gas storage site