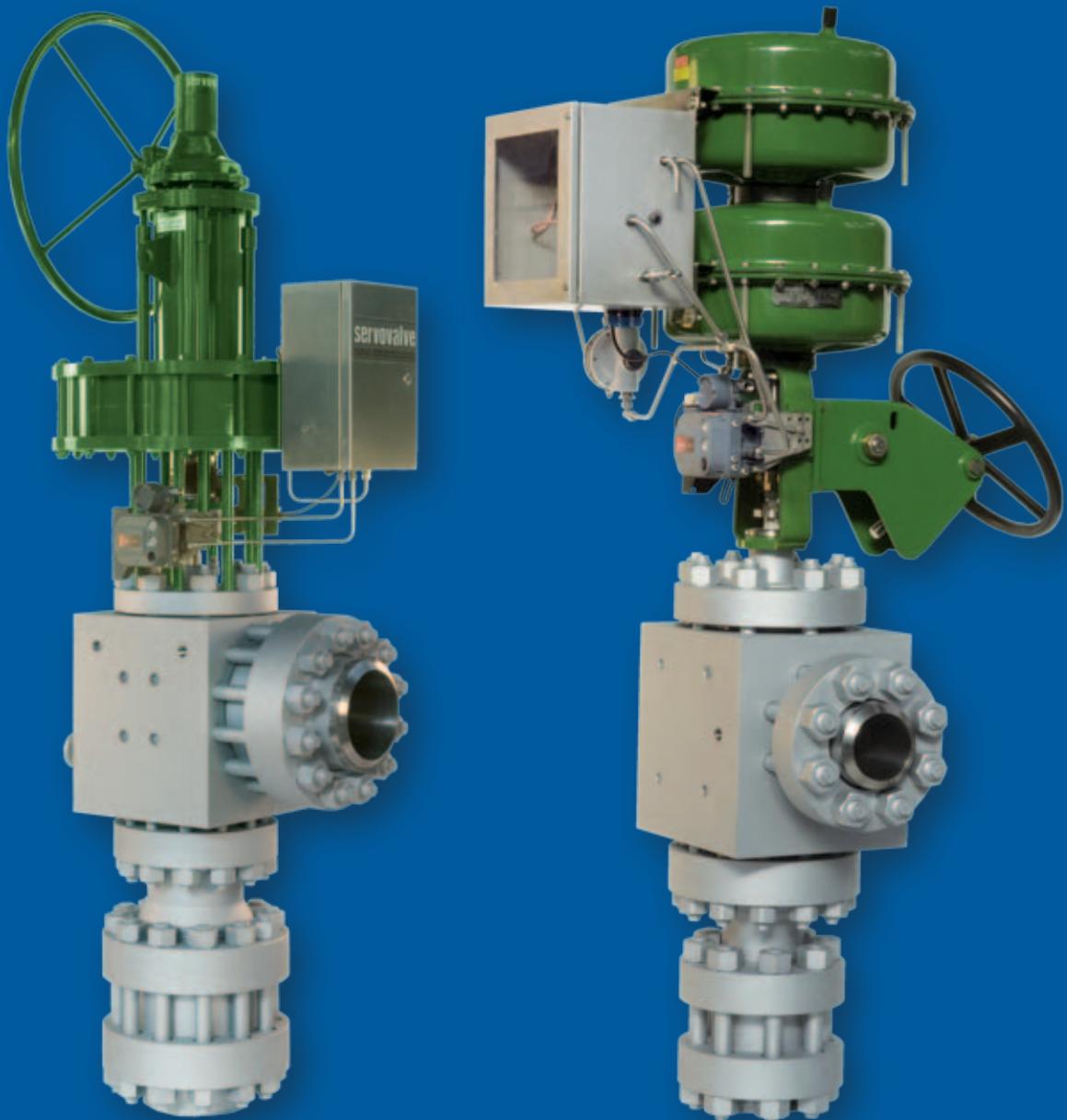




*Best High Pressure & Drilling Technology*

## **HIGH PRESSURE EQUIPMENT FOR FERTILIZER PLANTS**





BHDT Headquarters, Kapfenberg



BHDT Tube Works, Kapfenberg

BHDT Pump Production and Welding Center, Hoenigsberg



## BHDT - YOUR PARTNER FOR HIGHEST QUALITY AND RELIABILITY.

Decades of experience have made BHDT well known all over the world as a manufacturer of high pressure valves (angle, globe, check, safety, analyzer, sample and control valves), all kind of fittings (tees, elbows, reducers, nipples, threaded flanges, weld neck flanges, weldolets, etc.) and prefabricated HP isometrics (spools) especially for Urea and Ammonia plants.

Special know-how in the field of material science (Austenitic steel 316LUG and 25Cr-22Ni-2Mo, Duplex and Superduplex) for manufacturing of Fertilizer products in cooperation with all major licensors such as Stamicarbon, Toyo, Kellogg, Urea Casale and Saipem.

Valves and fittings are made exclusively of forged material. The exact knowledge of process technologies guarantees optimum function and long service life of our products.

All connections can be produced to conform to all international standards including ANSI B 16.5, 1500#-2500#, DIN, IG, as well as customer standards such as Saipem 5002, Urea Casale and KBR.

We also offer all kinds of actuators (gear, electric, hydraulic or pneumatic).

### PRODUCT RANGE:

- Angle and Globe Valves
- Safety Relief Valves
- Check Valves
- Control Valves
- Sample Valves
- Prefabricated Isometrics
- Carbamate Mixer
- Fittings (elbows, reducers, tees
- lens gaskets, weld neck flanges
- threaded flanges, weldolets, etc.)

## HIGH PRESSURE EQUIPMENT FOR FERTILIZER PLANTS: UREA, AMMONIA AND OTHER FLUIDS 20 MPa - 70 MPa

1.

**FITTINGS AND PIPE  
BENDS (UPTO NS 16")**



2.

**ANGLE, GLOBE AND CHECK  
VALVES (UPTO NS 10")**



3.

**CONTROL VALVES  
(UPTO NS 16")**



4.

**MATERIALS**

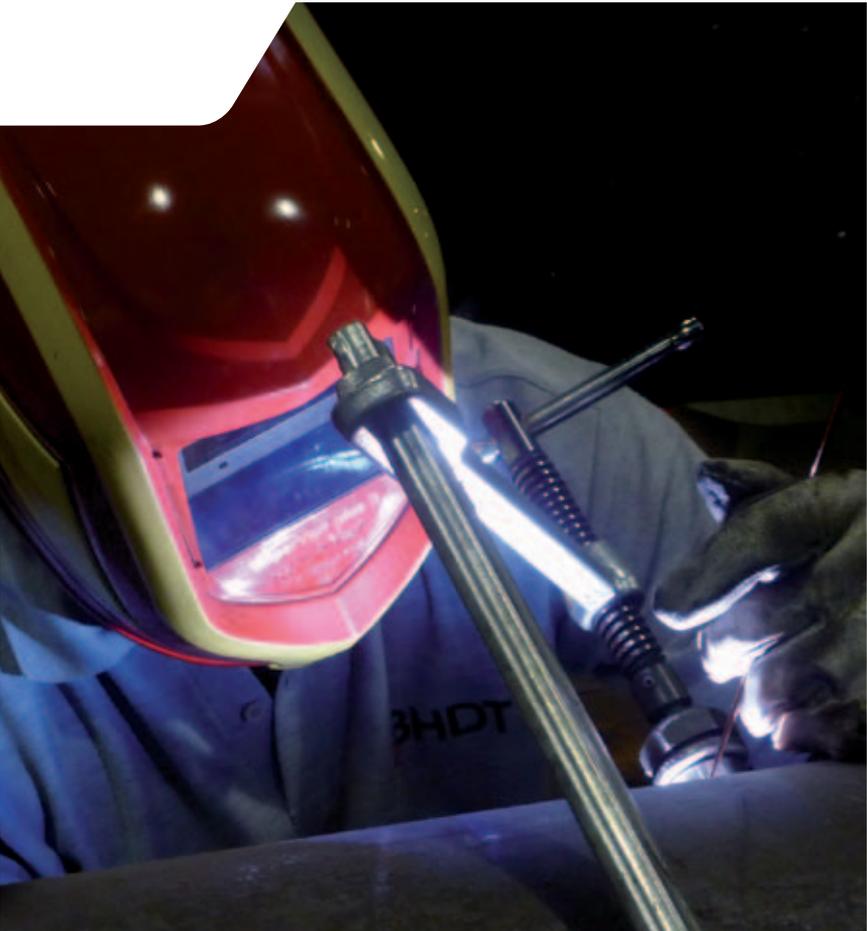


1.

# FITTINGS AND PIPE BENDS (UP TO NS 16")

## WELDING

of NS 14" Safurex pipe spool



## FLANGE RING ASSEMBLY

up to NS 16"  
Safurex/SA105



## WELDING NIPPLE

reducer up to NS 14"  
25Cr-22Ni-2Mo  
(Böhler A405)

## PIPE BENDS

up to NS 16"  
Safurex

## ELBOWS

NS 3"  
SA403 WP316LUG  
(Böhler A220)

## 2. ANGLE, GLOBE AND CHECK VALVES (UP TO NS 10")



**CHECK VALVE**  
with hollow cone, NS 6"  
PN 25 MPa  
25Cr-22Ni-2Mo  
(Böhler A405)



**ANGLE VALVE**  
gear operated, NS 6", weld  
neck flange, PN 2500 lbs  
SA182 F316LUG  
(Böhler A220)



**ANGLE VALVE**  
stub ends, steam jacket  
NS 5", PN 18.5 MPa  
SA182 F316LUG  
(Böhler A220)



**VALVE BODY FOR  
MONOBLOCK VALVE**  
NS 1", PN 25 MPa  
Safurex



**ANGLE VALVE**  
NS 2", PN 25 MPa  
2.4602  
(Böhler L328)



**ANGLE VALVES**  
PN 32,5 MPa  
SA182 F316LUG

3.

## CONTROL VALVES (UP TO NS 16")

### CONTROL VALVE: ANGLE, GLOBE, BUTTERFLY

- Characteristic: linear, equal %, on/off, modified
- Actuation: pneumatic: diaphragm, piston. Hydraulic and electric.
- Accessories: all types of positioner, position transmitter, solenoid valve, limit switch, air filter station, handwheel, booster, air lock relay, etc.
- Application: carbamate solution, urea let down, CO<sub>2</sub> vent, ammonia, etc.

### MATERIAL

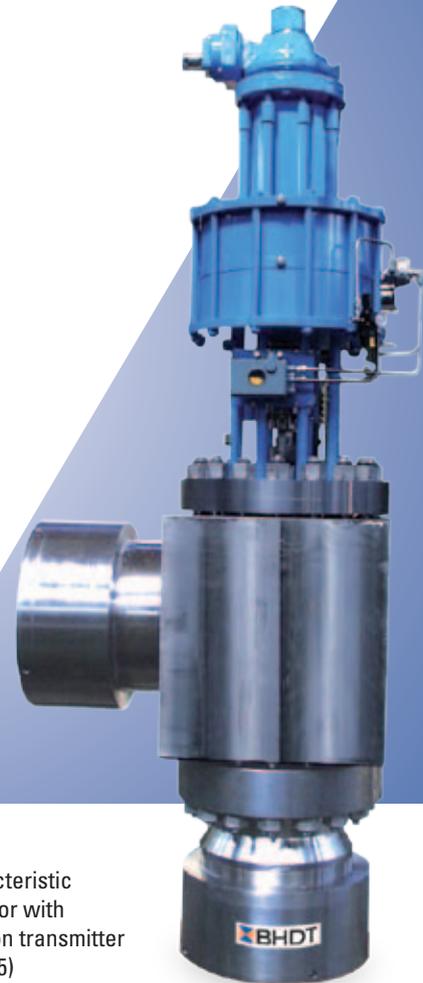
- Body: SA182 F316LUG (Böhler A220), 25Cr-22Ni-2Mo (Böhler A405) & LTCS A350 LF2 (Böhler V913), Titanium Gr. III & V & Safurex
- Trim: HVD1, Ferralium 255, Super duplex (Böhler grade A905, A926), Titanium, Zirconium, Safurex.

### ENDS

- Flanged (threaded, weld neck), DMF & as per customer specs.

### TESTS

- Hydrostatic test
- Leac test
- Functional test
- Performance test
- Check of Cv valve



### CONTROL VALVE

NS 14", PN 250 bar, Linear characteristic  
Cv value = 920, Pneumatic actuator with  
Intelligent positioner SRD, Position transmitter  
Mat. 25Cr-22Ni-2Mo (Böhler A405)



**CONTROL VALVE**  
up to NS 10", PN 32.5 MPa  
Safurex



**CONTROL VALVE**  
NS 16", PN 25 MPa  
SA182 F316LUG  
(Böhler A220)



**GLOBE  
CONTROL VALVE**  
NS 4", PN 25 MPa  
SA182 F316LUG  
(Böhler A220)

**VALVE TEST FACILITY:**

BHD T has its own control valve testing facility.

NP0.6 MPa to 250 MPa,  
NS up to 300 mm

- Flow coefficient KV (Cv), characteristics
- Media pressure drop factor FI
- Leak test Pressure upstream of the valve
- Pressure downstream of the valve
- Pressure drop
- Stroke position



**IMAGE OF TESTING HALL**  
for control valve

**FURTHER APPLICATIONS**  
LDPE PN500 EQUIPMENT

**CONTROL VALVES**

NS 4", PN 25 MPa  
SA182 F316LUG  
(Böhler A220)



## 4. MATERIALS

**BHD T STANDARD AUSTENITIC MATERIAL:**

1.4435 - SA182 F316LUG (Böhler A220)  
1.4466 - 25Cr-22Ni-2Mo - UNS S 31050 (Böhler A405)

**BHD T STANDARD AUSTENITIC-FERRITIC MATERIAL (DUPLEX):**

1.4467 - X2CrMnNiMoN26 5 4 (Böhler A905)  
1.4462 - SA182 F51 / UNS S 31803 (Böhler A903)

**BHD T STANDARD CARBON STEEL MATERIAL:**

1.1133 - SA350 LF2 (Böhler V913)

All other materials also available acc. to customer specifications like:  
Safurex, Titanium, Zirconium, HVD1, Ferralium Alloy 255, etc.


**STOCK AVAILABILITY**

Round bar material up to dia 530mm  
Square bar material up to 610mm

## ADDITIONAL PRODUCTS:



### HIGH PRESSURE SYSTEMS

- Tubular reactors, interstage cooler
- Angle valves
- Control valves
- Safety relief valves
- Check valves
- Vessels
- Fittings
- Injection pumps, pressure test stations
- Bolt tensioning devices
- Isometrics, distribution blocks
- High pressure tubes



### HIGH PRESSURE PUMPS

- Pumps for waterjet cutting applications
- Peroxide dosing pumps for LDPE plants
- Mobile and stationary pressure test pumps and valve test stations
- Ultra high pressure pumps and equipment for autofrettage



### OIL AND ENERGY

- Special Flanges
- Prefabricated piping isometrics
- Valves



### BHDt SERVICE

- Engineering Services
- Installation Services
- Corrosion Inspection Services
- Troubleshooting Services
- Emergency Repair Services
- Spare Parts Management
- Training Services

## CERTIFICATES



SZA  
Österreich

AD 2000-Merkblatt  
HP 0 / HP 100 R  
and EN ISO 3834-2

according to  
PED 97/23/EC



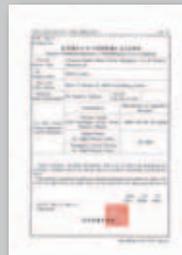
EN ISO  
9001:2008



PED 97/23/EC



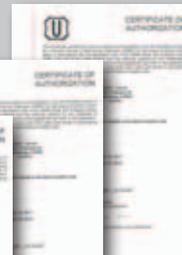
GOST TR  
for valves



Korea Gas  
Safety (KGS)



ASME-  
Stampholder



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