## Contents 2020
**Edition February 2020**

### Product group

<table>
<thead>
<tr>
<th>Product Group</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richter Pumps</td>
<td>PFA/PTFE lined pumps</td>
<td>3</td>
</tr>
<tr>
<td>Goulds Pumps</td>
<td>Metallic chemical-standard pumps</td>
<td>7</td>
</tr>
<tr>
<td>Witte Pumps</td>
<td>Gear pumps</td>
<td>9</td>
</tr>
<tr>
<td>Accessories</td>
<td>Pump accessories</td>
<td>11</td>
</tr>
<tr>
<td>Richter Valves</td>
<td>PFA/PTFE lined valves</td>
<td>12</td>
</tr>
<tr>
<td>Düker</td>
<td>Enamelled valves and fittings</td>
<td>21</td>
</tr>
<tr>
<td>VH Armaturen</td>
<td>TOPI Chemical and pharmaceutical ball valves</td>
<td>23</td>
</tr>
<tr>
<td>Habonim</td>
<td>Sanitary and process ball valves</td>
<td>26</td>
</tr>
<tr>
<td>Automation</td>
<td>Actuators for valves</td>
<td>30</td>
</tr>
<tr>
<td>API Schmidt-Bretten</td>
<td>Plate heat exchangers</td>
<td>32</td>
</tr>
<tr>
<td>GAB Neumann</td>
<td>Graphite and Silicon carbide heat exchangers</td>
<td>34</td>
</tr>
<tr>
<td>Striko</td>
<td>Rupture disks and burst sensors</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Static mixers and heat exchangers</td>
<td>39</td>
</tr>
<tr>
<td>CT Glass</td>
<td>Borosilicate glass and sight glasses</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Flow sight glasses, strainers</td>
<td>41</td>
</tr>
<tr>
<td>CT Aseptic</td>
<td>Sanitary valves</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>Valves for bulk technology</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>PTFE hoses</td>
<td>48</td>
</tr>
<tr>
<td>CT Industry</td>
<td>Process and industrial valves</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Expansion joints</td>
<td>54</td>
</tr>
<tr>
<td>CT Trading</td>
<td>ANSI and energy valves</td>
<td>55</td>
</tr>
</tbody>
</table>
Richter Sealless Chemical Pump Type MNK
with magnetic coupling
PFA/PTFE-Lined Chemical Magnetic Drive Standard Pumps
generally for aggressive-corrosive applications

**MNK**
**Magnetic Drive Pump**
ISO ISO Standard Chemical
sealless
PFA/PTFE – liner
0.1 to 600 m³/h

**MNK-B**
**Magnetic Drive Pump**
ISO Standard Chemical Pump
sealless
close-coupled design
PFA/PTFE – liner
0.1 to 90 m³/h

**EMI and RMI-B Magnetic Pumps**
ISO Standard Chemical Pump
in chassis and block construction
sealless
PFA/PTFE – liner
0.1 bis 95 m³/h
Richter Chemical Pump Type SCK
with mechanical seal
PFA/PTFE-Lined Process- and Chemical-Pumps
for abrasive-corrosive applications

SCK  ISO Standard Chemical Pump
SDK-B  Close-Coupled Pump
PFA/PTFE-liner
with single or double acting mechanical seals
0.1 to 300 m³/h

MNK-X, MNK-XB, SCK-X
Vortex - Pumps
PFA/PTFE-liner
magnetic drive
mechanical seal
0.1 to 250 m³/h

MNK-S, SDK-S
Self-Priming Process Pumps
PFA/PTFE and PE-liner
magnetic drive
mechanical seal
0.1 to 40 m³/h
VOGEL® ISO Standard Pump Serie IC
with CYCLON - sealing
ICM  ISO-Chemical Pumps
ICMB  Close-coupled Pumps
sealless with magnetic drive
Stainless Steel, Hastelloy, Titan etc.
0.1 to 450 m³/h

IC  ISO-Chemical Pumps
ICB  Close-coupled Pumps
with single or double acting mechanical seals
Stainless Steel, Hastelloy, Titan etc.
0.1 to 450 m³/h

ICP high pressure / temperature
Chemical Process Pumps
with double mechanical seal
Pressure up to 25 bar
Temperature -40 to +280 °C
Steel, stainless steel, spec. material
0.1 to 450 m³/h
Witte Gear Pumps
Chemical pump with magnetic coupling
Gear Pumps
for the chemical, pharmaceutical, food and plastics industries

**CHEM Chemical Pumps**
- with mechanical seals
- with magnetic coupling
for low to medium viscosities
Stainless steel and special materials
20 + 100'000 l/h, pressure up to 120 bar

**PURO food pump**
Dosing and feed pump for
food and pharmaceutical application
for low to medium viscosities
Stainless steel and special materials
2.78 + 3'200 cm³/rev, pressure up to 120 bar

**EXTRU and POLY high pressure pumps**
Dosing, discharge, pressure ingrease and
feed pumps for the plastics industry.
for medium to high viscosities
Heat-resistant steels also with lining
2.78 + 12'000 cm³/rev, pressure up to 250 bar
SAFERUN®
Pump Accessories

Richter SAFERUN®
Pump Condition Monitoring
expandable for pumps type
MNK starting from year of
construction 2009

Variable Pump Performance
continuous speed controlling
device by frequency changers

Buffer Fluid Systems
closed circuit for single or
tandem mechanical seals
- thermosyphon system
- quench system
Richter Ball Valve Type KN
with ENVIPAK stem sealing acc. to TA-Lufts VDI 2440

Ball versions

1-piece PFA ball (standard)
ALO ceramics ball with square stem (optional)
Cavity-free TF ball for optimum
PTFE ball, high-quality flow
control, play-free (optional)

Pressure/temperature range
Operating pressures up to 26 bar on request

Body EN-1092-1/05/01/02:
-40°C (-40°F) to 200°C (400°F);
max. 10 bar (150 psig) acc. to AD 2000
Body ASTM F456/PPFA:
-20°C (-4°F) to 200°C (400°F);
max. 17,3 bar (250 psig) acc. to ASME B.16.11

For applications at low temperatures, please observe the local regulations!
Operating temperatures below -10°C (-14°F) special material for ball stem case.
PFA/PTFE-Lined Chemical Ball Valves
for abrasive-corrosive Applications

**KN Ball Valve**
ENVIPACK stem sealing
one-piece PFA ball stem
- floating ball
- TF-ball, clearance volume-free
- ball from oxyde ceramic
- HD-Liner 5 mm thikness
- execution S for clean-rooms
DN 15 to 200, PN 16

**BV Ball Valve**
PTFE stuffing box
one-piece ball stem
reduced bore
DN 15 to 150, PN 16

**KK Compact Ball Valve**
assembly between two flanges
particularly for glass plant
special designs
DN 15 to 150, PN 16
Richter Chemical Control Valve RSS
with detail V-cone
PFA / PFA-Lined Chemical Control Valves
for abrasive-corrosive applications

**RSS Control Valve**
HD bellows sealed by DN 25-100
with safety stuffing box
V-plug for small volume
rangeability 1:100
$K_v 100$ 0.01 to 155 m$^3$/h
DN 15 to 100, PN 16

**KNR Control Ball Valve**
ENVIPAK steam sealing
one-piece PFA ball stem
rangeability 1:25
$K_v 100$ 0.8 to 800 m$^3$/h
DN 15 to 150, PN 16

**GU Overflow Valve**
**KSE Safety Relief Valve**
bellow sealed
one-piece valve body
hermetic tight
TUeV-construction unit-examined
DN 50 to 100, PN 16
Richter sampling valve PA
bellow-sealed and with exhaust port
PFA/PTFE-Lined Sampling Valve
PFA/PTFE-Lined Tank Bottom Valves

PA Sampling Valves
- top-entry design
- different bottle-adapters
- optionally bellow-sealed
  - body from stainless steel with flanges or welding ends
  - pneumatic or electric Actuators
- DN 25 and 50, PN 16

BAV Tank Bottom Valve
- mounted plug
- bellows seated
- hand operated available
- bottom-flange ISO 7005-2 Typ B
- DN 80/50 to 150/100, PN 16

KA-N Tank Bottom Ball Valve
- ENVI PACK stem sealing
- one-piece PFA ball stem
- or ceramic
- pneumatic or electric actuators
- bottom-flange ISO 7005-2 Typ B
- DN 50/25 to 150/100, PN 16
PFA/PTFE-Lined Shut-Off Valves

**NK Butterfly Valve**
Lug, Wafer u. double flange design
one piece disc/ stem unit PFA-lined or stainless steel 1.4408
optional safety stuffing box

DN 50 to 600 , PN 10/16

**MV Diaphragm Shut-Off and Control Valve**
clearance volume-free
stroke indicator
pneumatic or electric actuators

DN 15 to 200 , PN 16

**HV Bellow Sealed Valve**
manual operated
safety stuffing box
available as control valve
control characteristic equal percentage and linear

DN 15 to 100 , PN 16
PFA/PTFE-Lined Valves

CV Ball Check Valve
GR Check Valve
for horizontal, inclination and vertical flow
also with integrated sight glasses
DN 15 to 150, PN 10 and 16

PSG Sight Glasses
2 and 3-way design
doubled sight glasses disks
Borosilicate glasses DIN 7080

SGS Tube Sight Glass
clearance volume-free optional
DN 15 to 200 (300), PN 6 to 16

GSO Pipeline Strainer
optional body from stainless steel
filter insert made of ETFE
mesh width 85 to 2000 µm
DN 15 to 100, PN 16
PFA/PTFE-Lined Valves
with body made of stainless steel 1.4408

**KN-S Ball Valve**
ENVIPACK stem sealing
one-piece PFA ball stem, reduced dead space or floating ball,
- ball from oxyd ceramic
- design for Pharma

DN 25, 40, 50, 80 , PN 16

**MV-S Diaphragm Shutt-Off and Control Valve**
clearance volume-free
stroke indicator
pneumatic or electric actuators

DN 25, 40, 50, 80 , PN 16

**PSG-S Sigth Glasses**
2-way design
doubled sight glasses disks
Borosilicate glasses DIN 7080

DN 25, 40, 50, 80 , PN 6 to16
Düker TE – Technical Enamel
email250light. email350. email80. email850P
Enamelled Valves and Fittings
for the chemical, pharmaceutical and food industries

**Tank Bottom Valves**
Compliant to TA-Luft, FDA und GMP
- low dead volume
- manually operated or automated
- body available in stainless steel or Hastelloy

**Valves**
- Diaphragm valves
- Oblique-seat valves
- Tubular sight glass free of cavities
- Sight glasses
- Phase separating valves

**Pipe shaped pieces**
- Elbows and Tees
- Customised collectors
- according to DIN, ANSI or factory standard
TOPI Flange Ball Valves
according to factory standards of the pharmaceutical and chemical industry
TOPI Flange Chemical Ball Valves

two-piece ball valve with top flange  ISO 5211

TOPI 210 VFD VA

body S/S 1.4408 / 1.4404
maintenance-free stem packing
Anti-Static, Fire-Safe, Anti-Blow-Out
FDA CFR 21, TA-Luft VDI 2440, SIL 2
reinforced stem from 1.4462
floating ball; full bore
seat rings TFM pure

DN 15 to 200, PN 10/40

TOPI 210 VFD GS

body carbon steel GP 240 GH+N
maintenance-free stem packing
Anti-Static, Fire-Safe, Anti-Blow-Out
TA-Luft VDI 2440, SIL 2
reinforced stem from 1.4462
floating ball; full bore
seat rings PTFE with 25% Carbon

DN 15 to 200, PN 10/40

TOPI 211

metallic sealing
stainless steel, carbon steel, specials
Anti-Static, Fire-Safe, TA-Luft, SIL 2
reinforced stem, maintenance-free
full bore floating ball and spring loaded
seat rings, hard metal coated

DN 80 to 200, PN 10/40
Ball Valves Model Series TOPI
with top flange  ISO 5211

**TOPI 220**
- soft sealing with guided ball
- Stainless steel, cast steel, special mat.
- Anti-Static, Fire-Safe, TA-Luft, SIL 2
- reinforced stem, maintenance-free
- Spring-loaded seat rings TFM, PTFE/VA
- DN 80 to 200, PN 10/40

**TOPI 215**
- one-sided spring loaded seat ring
- Stainless steel, cast steel, special mat
- Anti-Static, Fire-Safe, TA-Luft, SIL 2
- reinforced stem, maintenance-free
- floating ball, full bore
- seat rings TFM pur
- DN 15 to 150, PN 10/40

**TOPI 310**
- multi-path ball valve made of S/S
- Anti-Static, TA-Luft, SIL 2
- reinforced stem, maintenance-free
- floating ball, full bore
- seat rings on all passages
- DN 15 to 50, PN 10/40
TuBore™ Sanitary Ball Valve Series 48
with clamps or welding ends according to ISO, DIN and ASME

True Bore Vs. Regular/Full Bore

In a standard Ball valve the Ball Inside Diameter (ID) is generally not the same as the Pipe ID.

The Ball ID of Habonim Tubore series is the exact ID of the Tube.
3-Piece Sanitary Ball Valves Series 48
with Clamp or welding ends acc. to ISO, DIN and ASME BPE

48G TuBore™ Ball Valve
Externally and internally polished valves
HERMETIX™ shaft seal
Graphite-free Fire-Safe design
ISO 15848-1 and FDA certification
Fire-Safe acc. to API 607 und ISO 10497
316L (1.4404), 1.4435, Hastelloy C22
DN 10 to 100 (150), PN 10 (16)

48TuBore™ Ball Valve
Standard shaft seal

48X TuBore™ Ball valve
HERMETIX™ shaft seal
ISO 15848-1 and FDA certification
Fire-Safe acc. to API 607 and ISO 10497
316L (1.4404), Hastelloy C276
DN 10 to 100 (150), PN 10 (16)

R48 TuBore™
Bottom outlet ball valve
in series R48 und R48X TuBore™ and
as standard valve R47X , R47P
and with special balls available
DN 15 to 100
Process ball valves for higher requirements
for the bio, chemical, process, gas/oil and energy technology

3-Piece Standard Ball Valves
HERMETIX™ shift shaft seal
- Fire-Safe, TA-Luft VDI 2440
- Steel, stainless steel, Hastelloy, Monel
- Threaded sleeve, welding ends, flanged
DN 1/4 "(8) to 6" (150), PN 63 (25)

Metallic Sealing Ball Valves
Temperature ranges up to +650 °C
- 3-part body with welding ends
- 2-part body with flanges
- Fire-Safe acc. to API 607 u. ISO 10497
- Steel, stainless steel, heat resistant steels, special materials.
DN 8 to 200, PN 40 to 160

Cryogenic Ball Valves
Temperature range to -269 to +200 °C
- 1, 2 and 3-part body design
- Multi-path batt valve
- Thread, welding ends, flange or or bottom flange connection
- Stainless steel, gunmetal and special materials
DN 8 to 200, PN 16 and 400
Process ball valves for higher requirements
for the bio, chemical, process, gas/oil and energy technology

Control Ball Valves
- 3-part body
- 1-piece body with flanges
- Characteristic linear u. equal percentage
- Anti cavitation insert
- PED, Fire-Safe, TA-Luft, ATEX
- Steel, stainless steel, special materials
DN 15 to 200, PN 16 to 40

Special Ball Valves (extract)
- High pressure ball valves
- Diverter ball valves
- Dual Safe ball valves
  - double valve with intermediate drainage
- Tank bottom ball valve
- Special balls for
  - CIP/SIP, "C"-ball, pressure relief

COMPACT Actuators
4-Piston 90° Rotary Actuators
- ISO 5211 / DIN 3337 design
- Namur connections
- Simple and double acting
- body cast steel and stainless steel
4 to 2500/4700 Nm at 8 bar
CT Automation
with own engineering
Automation
actuators and remote effect technology for valves

Rotary Actuators
- pneumatic
- double pistons actuators
- 4-pistons compact actuators
- hygienic actuators
- hydraulic
- electric

Linear Actuators
- open/close actuators
- regulating actuators
- pneumatic
- electric
- hygienic actuators

Remote Effect Systems
- optical position indicators
- limit switch box
- electropneumatic positioner
- BUS-systems
Plate Heat Exchangers
sealed or fully welded
Plate Heat Exchanger
food, pharmaceutical, process and energy applications

**Sigma**
Sealed plate heat exchanger
- SIGMAFIX gasket system
- different plate coinages
- SIGMATWIN double-walled plates
special materials

**Sigmawig**
**Sigmawig Titan**
WIG welded plate heat exchanger
- without welding-rod materials
- different plate coinages
special materials

**Sigmashell**
Laser welded plate heat exchanger
- round compact design
- full-welded
- bolted body
- counter, direct or cross flow
- vacuum to 150 bar
Graphite heat exchangers
Silicone carbide heat exchangers
Graphite and silicon carbide heat exchangers
for highly corrosive and oxidative media

Annular groove graphite heat exchangers
- Heat exchangers
- Heavy-duty condensers
- Partial condensers
- Block heat exchangers
- Evaporators
Impegrated graphite GAB , GPX
0.3 to 163 m², to 16 bar, to +230 °C

Silicon carbide heat exchangers
CORROSIC®
- Plate heat exchangers
- Block heat exchangers
- Shell and tube heat exchangers
to 42 m², -1 to +16 bar, -60 to +230 °C

Graphite mass transfers equipment
- Absorbers
- Quenches
- Steam jet vacuum pumps
- Reactors
- Columns and inner parts
0.3 to 163 m², to 16 bar, to +230 °C
Reverse Acting Rupture Disk with V-Strut
in holder SU-Pro with leakage monitoring
Graphite Rupture Disks
Rupture Disk Monitoring

Graphite Rupture Disk
- Flat Graphite Rupture Disk
- Monobloc Graphite Rupture Disk
- special equipment
DN 25 to 600, 0.07 to 83 bar

Rupture Disk Holders
for graphite rupture disks
- special materials
- PTFE-lined
- vacuum support

Rupture Disk Monitoring
- burst sensor
- full metal burst sensor
- leak sensor
DN 8 to 600
Metal Rupture Disks
Rupture Disk Holder

**Metal Rupture Disk**
- Flat Rupture Disk
- Forward Acting Disk
- Reverse Acting Disk
- V-Strud Rupture Disk
- Sanitary Rupture Disk

DN 4 to 800, 0.02 to 1200 bar

**Standard Disk Holder**
not pre-mounted metallic seal
- special materials
- PTFE-lined
- leak monitoring

DN 20 to 250

**Pro Disk Holder**
pre-mounted metallic seal
- control and cleaning without solve the metallic seals

DN 20 to 150
Static Mixers
- mix
- disperse
- emulsify
- reactors
DN 1.6 to 2000

Mixing Elements
food, pharmaceutic, chemistry, petrochemistry, laboratory
- liquids
- gas
- pastes

Heat Exchangers
- Tube Bundle Heat Exchanger
- Double Jacket Heat Exchanger
integrated mixing elements for highly viscose rayon media
viscosity up to 50'000 mPas
capacity up to 2500 kW
Technical glasses
Sight glasses

Round sight glasses
Long sight glasses
Reflex sight glasses
- MAXOS® glasses
- Borosilicatglass DIN 7080

Apparatus sight glasses
- round and long sight glasses
- sanitary sight glasses
- with screen wiper
- with light
- manholes

Tube – Sight Glasses
- flange design
- welding ends
- sanitary design
- with splinter protection
- PTFE lined

Bahnhofstrasse 48
Tel. 061 467 90 30
CT Chemie-Technik AG
e-Mail: info@chemie-technik.ch
CH-4132 Muttenz
Fax 061 467 90 40
Sight Glasses

Flow Sight Glass
- Borosilicatglass DIN 7080
- FDA compliant seals
- with visual indicator
- Flange or welding ends
- S/S, Carbon steel, Special mat.
DN 15 to 250 , PN 10 to 40 (160)

Flow Sight Glasses without residual fluid
by horizontal mounting
- Borosilicatglass DIN 7080
- FDA compliant seals
- Flange or welding ends
- S/S, Carbon steel, Special mat.
DN 15 to 80 , PN 16

3 and 4-Way Sight Glasses
Angle design Sight Glasses
- Borosilicatglass DIN 7080
- Flange connection
- Stainless or Carbon Steel
DN 15 to 100 ; PN 10 to 40
Strainers

Y-Strainers DIN 3237
- Insert with standard or fine mesh
- with drain plug
- Stainless steel or other materials
- Flange or welding ends

Basket screen strainers
Pot strainers
- stainless steel screen
- additional equipment
- Stainless steel or other materials

Hat sieves
Flat sieves
- wafer design
- stainless steel
- for use as a starter screen
Sanitary Valves and Components
for the biotechnology, pharmaceutical and food industries
Sanitary Valves
3A certified, EHEDG compliant
- single seat valve
- bottom drain valve
- double seat valve
- double seat with steam barrier
- double seat with washing circuit
DN 10 to 150, PN 10

Sanitary Pressure Regulators
Sanitary Safety Relief Valves
- diaphragm-controlled pressure regulators for pure gases and liquids
- connections for orbit welding ends, tri-clamp, sterile unions
DN15 to 40, 0 to 20 bar

Sanitary Rupture Discs
- fragment-free opening
- vacuum resistant design
- clamp support
- sanitary union connections
- optional with burst indicator
DN 25 to 100, 0.3 to 20 bar
Sanitary Shut-Off Valves
acc. to 3A standard for biotechnology, pharmaceutical, food

Sanitary Butterfly Valves
- various connection standards
- various sealing materials
- PTFE seat rings
- various manual operations
- stainless steel automatic actuators
DN 20 to 250, PN 7 (PTFE PN 2)

Sanitary Diaphragm Valves
- EPDM and PTFE diaphragm
- free of dead space, self-emptying
- maintenance-friendly valve cover
- stainless steel automatic actuators
DN 15 to 50, PN 7

Sanitary Ball Valves
Various types 2 and 3 way
- CIP capable, well sterilizable
- minimized dead space, pigable
- cleanable dead space
- stainless steel automatic actuators
DN 25 to 100, PN 10
Valve for Granulate and Bulk Material
for food, pharmaceutical and hazardous goods

**Butterfly Valves**
- centric and double eccentric
- metallic sealing
- soft sealing, FDA compliant
- static and active sealing elements.
  stainless steel and special materials
DN 50 to 700, PN 2.5 to 16

**Segment Ball Valve**
- FDA and EHEDG compliant
- static or active sealing elements.
- flange and CLAMP connection
- customized finishes
Stainless steel or special materials
DN 25 to 600, PN 10 to 16

**Flat Slide Gate Valve**
for shut-off and dosing
- single gate and double gate
- soft-sealing, low dead space
- static and active inlet cassette
- optional locking air
stainless steel or coated aluminum
DN 150 to 500, PN 10
CIP Cleaning Heads
- Static Spray Heads
- Rotating Spray Heads
- Jet Cleaners
- different spray pattern

TANKO Jet - Cleaning System
- medium-driven
- external drive
- magnetic coupled
- different numbers of nozzles

CIP – Cleaning Units
- trolley or stationary
- CIP-Monitoring
Stainless Steel Ball Valves for Pure Media
for clean rooms, pharmaceuticals, food and beverages

**Wafer Ball Valves**
full port, machined
body and ball AISI 316
seal elements PTFE
centering ring PA
DN 15 to 100, PN 16

![Wafer Ball Valve Image](image)

**Hygienic Ball Valves**
full port inside Ra <0.8 µm
with CLAMP connection
with orbit welding ends
TA-Luft acc. to VDI 2440
sealing elements PTFE, TFM 1600
reduced dead space
DN 15 to 100, PN 63/40

![Hygienic Ball Valve Image](image)

**Bar Stock Ball Valves**
Body machined on all sides
shaft seal maintenance-free
Anti-static, Fire-Safe acc. API-607
TA-Luft accVDI 2440
Stainless steel and special materials
DN 15 to 200, PN 16 to 63

![Bar Stock Ball Valve Image](image)
BIOFLEX ULTRA
smooth bore

Bioflex Ultra PTFE liner tube:
- Externalli convoluted
- Smooth bore, with slight ripples
- Mirror smooth internal surface finish generated by hot polish during manufacture

PTFE liner tube extended through the end fitting, hot formed on the sealing face
PTFE Hoses acc. to FDA
chemistry, pharmaceutical, food

Bioflex
PTFE-smooth hose
- self-cleaning
- full bore
- highly flexible
- break and vacuum resistant
- Pressure / temperature resistant
- Anti-static design optional
DN 15 to 80

Pharmaline
PTFE-smooth hose
- RE-LINK-AF end fittings
- self assembly, highly flexible
- break and vacuum resistant
- Pressure / temperature resistant
- Anti-static design optional
DN 6 to 80

Corroflon
PTFE low convoluted hose
- self-cleaning
- highly flexible
- full bore
- break and vacuum resistant
- Anti-static design optional
DN 15 to 150
Process and Industrial Valves
Process and Energy Ball Valves
2 and 3-Piece Body with Top Flange ISO 5211

3-Piece Ball Valves
with threaded ends
with welding ends
anti-static, anti-blow-out
TA-Luft acc. to VDI 2440
seats and seals PTFE, PTFE-R
DN 1/4 to 4", PN 100/63/40

Compact Ball Valves
Wafer Type Ball Valve
top flange acc. to ISO 5211
anti-static, anti-blow-out
TA-Luft acc. to VDI 2440
seats and seals PTFE, PTFE-R
DN 15 to 150, PN 10 to 160

High Pressure Ball Valve
3-Piece High-Pressure Ball Valve
top flange acc. to ISO 5211
both sides spring loaded seat rings
metal seated
trunnion mounted ball
DN 15 to 250, PN 63 to PN 325
Butterfly Valves and Check Valves
for process and energy engineering

Elastomer Butterfly Valves
- centric valve disk
- wafer design
- lug design
- replaceable sealing collar
- Stainless Steel body
- ISO 5211 top flange
DN 40 to 600, PN 10 to 16

High Performance Butterfly Valves
- double and triple eccentric valve disk
- wafer and flange design
- soft and metal seated
- special materials
DN 50 to 1600, PN 10 to 160

Check Valves
- standard and double eccentric
- flange design
- wafer design
- with counterbalance
- with hydraulic damping
DN 100 to 1600, PN 10 to 40
Flexible piping connections
Expansion joints and vibration absorbers

Steel Bellow Expansion Joints
- Axial Expansion Joints
- Lateral Expansion Joints
- Angular Expansion Joints
- Vibration Absorbers
- Metal Hoses
DN 15 to 3400, PN 1 to 40

Rubber Expansion Joints
- Universal Expansion Joints
- Lateral Expansion Joints
- Angular Expansion Joints
Elastomers:
EPDM, Butyl, Perbunan, Neoprene
DN 20 to 3600, PN 0.7 to 25

PTFE Expansion Joints
Bellow with 2, 3 and 5 convolutions
with and without expansion limiter
- PTFE pure
- PTFE antistatic
DN 25 to 600, PN 2.5 to 10
CT Commercial Products
for chemicals, pharmaceuticals, industry, energy
Safety Valves and Pressure Regulators
food, pharmaceutical, process and energy applications

Safety Valves
Relief Valves
- Normal and full stroke valves
- Flange and threaded connection
- Clamp and sterile connections
- Special designs
ductile iron, steel, stainless steel
DN 8 to 150, 0.05 to 500 bar

Pressure Reducer
Pressure Regulator
completely made of stainless steel
- operated by piston
- operated by diaphragm
- flange and screwed ends
- clamp and sterile connections
DN 6 to 100, 0.01 to 600 bar

Pressure Relief Valves
Vacuum Relief Valves
completely made of stainless steel
- Single and double acting
- spring loaded
- soft sealing
- Thread and flange connection
DN 15 to 50, -0.95 to 4 bar
Industrial Valves
DIN and ANSI with flanges or welding ends

Globe Valves
- Stuffing box and bellows seals
- Angle seat and angle valves
- Piston valves
DN 15 to 600, PN 16 to 100

Gate Valves
- oval and round valve body
- with extended cryogenic bonnet
- with bellows seal
DN 50 to 1400, PN 16 to 100 (160)

Check Valves
- Disc Check Valves
- Piston Check Valves
- Swing Check Valves
DN 15 to 600, PN 16 to 100 (160)

High-Pressure Valves
- HP Globe Valves
- HP Gate Valve
- HD Check Valves
DN 50 to 600, PN 100 to 420
# ANSI Small Valves

acc. to ASEM and API standard

## PRODUCT RANGE

<table>
<thead>
<tr>
<th>TYPE</th>
<th>GATE - GLOBE - BALL, PISTON, SWING CHECK VALVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZES</td>
<td>FROM 1/4&quot; TO 4&quot;</td>
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<tr>
<td>CLASSES</td>
<td>150 - 300 - 600 - 800 - 1500 - 2500 - 4500 LBS</td>
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<tr>
<td>ENDS</td>
<td>SOCKET WELDING AS PER ANSI B16.11</td>
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<tr>
<td></td>
<td>N.P.T. AS PER ANSI B1.20.1</td>
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<tr>
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<td>BUTT WELDING AS PER ANSI B16.6</td>
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<tr>
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<td>INTEGRALLY FLANGED AS PER ANSI B16.10</td>
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<tr>
<td></td>
<td>&amp; ANSI B16.5 SPECIAL CLAMP</td>
</tr>
<tr>
<td>EXECUTIONS</td>
<td>BOLTED &amp; WELDED BONNET - PRESSURE SEAL - REDUCE &amp; FULL PORT - BELLOWS SEAL - CRYOGENIC TYPE - EXTENDED BODY - &quot;Y&quot; PATTERN - INSIDE SCREW STEM</td>
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## MATERIALS

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<thead>
<tr>
<th></th>
<th>ASTM A105</th>
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<tbody>
<tr>
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<td>ASTM A350 GR. LF2</td>
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<tr>
<td>MATERIALS</td>
<td>ASTM A182 F5, F11, F22, F9</td>
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<td>ASTM A182 F318, F316L, F304, F304L, F321, F347</td>
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<td>ASTM A182 F51, F53, F55</td>
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<td>ASTM F44</td>
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<td>MONEL, INCONEL, INCOLOY, HASTELLOY, TITANIUM</td>
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</tbody>
</table>
Process equipment from a single source

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