

Take the best

■ **plastic valves**



## Table of contents

Diaphragm valves .....	2	Flow meter systems .....	11
Butterfly valves .....	3	Pressure regulating valves / special valves .....	12
Ball valves .....	4	Leakage warning systems .....	15
Globe control valves .....	6	Strainer .....	16
Milk of lime globe control valves .....	7	Accessories for manual and automatic valves ..	17
Swing check valves .....	8	Dymatrix valves .....	19
Gate valves .....	10	Special designs .....	20



Pipeline systems are required to do more than just facilitate the passage of fluid and gaseous media. They must also provide the means by which the respective medium is distributed precisely, to control pressure and flow, and to monitor operating conditions. Thermoplastic materials have, due to their excellent resistance and low weight, also proven successful in valves and in control and measuring instruments. Highly durable and resistant to aggressive wear from the inside and outside, plastic valves and fittings are at the fore when it comes to demanding applications. It is in particular their excellent corrosion resistance that makes them ideal for applications in the chemical, process and heavy industries.

In the areas of water treatment and chemical supply, PP and PVC are frequently used as casing materials. With higher operating temperatures or heavily oxidising media, as well as in response to meeting high purity requirements, PVDF is the material of choice. With a multitude of available working principles and construction materials, a comprehensive selection of plastic valves to satisfy every conceivable requirement.

Our fittings, valves, and control and measurement equipment constitute interfaces between the user, system controls technology and pipeline system. The most common types are diaphragm, ball, butterfly and check valves. Standardised interfaces even allow for the later automation of manually operated valves. Furthermore, our Exner globe control valves serve to implement demanding control tasks in the chemical and process industries.

## Diaphragm valve types 14 / 15 / 72



### Features

- Simple operation
- Optical position indication
- Very suitable for throttling
- Only diaphragm and body wetted by process media
- Resistant to abrasive process media
- Excellent corrosion resistance
- Installation independent of flow direction
- Adjustable travel stop to prevent over-tightening strain on diaphragm
- Also suitable for end-of-line installation
- Types 14 / 15: optimized body and diaphragm design higher pressure / temperature resistance and improved flow characteristic
- Type 72: valve body reinforced with stainless steel elements for improved pressure resistance

### Typical application areas

- Chemical industry
- Pickling plants
- Flue gas cleaning systems
- Water conditioning
- Pure and ultra-pure media conduits

### Special notes

- Optional, retrofittable cushion cover made of PVDF for aggressive, highly diffusing media
- Relatively high pressure losses / comparatively low  $c_v$ -values

Actuator type	Limit switch	Options		
		Chain wheel	Positioner	Solenoid valve
Hand wheel	+	+	-	-
Pneumatic actuator	+	-	+	+
Electric actuator *)	+	-	+	-

\*) Explosion protection possible

### Technical data

#### ■ Nominal diameter:

##### Type 14

Flange: DN 15 – DN 100

True union type with socket, threaded or spigot ends: DN 15 – DN 50

##### Type 15

Flange: DN 125, 150

##### Type 72

Flange: DN 200, 250

#### ■ Operating temperature:

- 40°C up to 120°C

(depending on material and process media)

#### ■ Working pressure:

DN 15 – DN 100: PN 10,  
scaled down for larger diameters

#### ■ Vacuum tightness:

DN 15 – DN 50: 100 %,  
scaled down for larger diameters

#### ■ Length:

DIN EN 558 - 1 series FTF 1 (DIN 3202 – series F 1)

#### ■ Body material:

PVC-U, PVC-C, PP, PVDF  
Bonnet: PVC-U, PP, PP-G, PVDF

#### ■ Diaphragm material:

EPDM, CSM, PTFE with EPDM backing,  
Cushion cover made of PVDF

## Butterfly valve types 56 / 57 / 75



### Features

- **Type 57:** DN 40 - 350
- **Type 56:** DN 400
- **Type 75:** DN 450 - 600
- Integrated top flange according to DIN EN ISO for easy automatization subsequently from manual to automatic operation
- Short length – compact dimensions
- Robust design
- Massive seat with profiled flange gasket
- Only disc and seat in contact with process media
- High sealing performance with small stem torques
- Corrosion resistant
- Installation irrespective of flow direction

### Typical application areas

- Chemical industry
- Pickling plants
- Flue gas cleaning systems
- Landfill leachates

### Special notes

- For process media containing solid parts in horizontal pipelines: installation with a horizontal disc rotation axis, disc opening in flow direction at bottom of pipe
- For installation in plastic pipelines: observe the disc outlet dimensions [depending on pipe dimensions and wall thickness, chamfered stub flanges must be installed (see catalogue page T2 – 11)]

**New!**

**Also as Lug Type available !**

- **Type 57 L:**  
DN 80 - DN 200: lever type  
DN 80 - DN 250: gear type  
(with electric or pneumatic actuator on request)

### Technical data

- **Nominal diameter:**  
DN 40 – DN 1500 (DN 700 – DN 1500 in PDCPD)
- **Connection:**  
Wafer-type valve for flange connection according to DIN 2501 – PN 10
- **Operating temperature:**  
– 20°C up to 120°C  
(depending on material and process media)
- **Working pressure:**  
DN 40 – DN 250: PN 10,  
scaled down for larger diameters
- **Vacuum tightness:**  
DN 40 – DN 125: 100 %,  
scaled down for larger diameters
- **Length:**  
Company standard
- **Body material:**  
PVC-U, PP, PVDF, PDCPD (type 57 L)
- **Sealing material:**  
EPDM, NBR, CSM, FKM, FKM-F

Actuator type	Limit switch	Chain wheel	Options Stem extension	Positioner	Solenoid valve	Explosion protection
Handle DN 40 – DN 200 (13 lock positions)	+	–	+	–	–	–
Gear with hand wheel	+	+	+	–	–	–
Pneumatic actuator	+	–	+	+	+	+
Electric actuator	+	–	+	+	–	+

## Ball valve type 21



### Features

- Radially expandable (true union) and "safe-bloc"
- Preferably to be used for simple OPEN / CLOSE operations (even with high operating frequency)
- Integrated top flange according to DIN EN ISO
- Integrated ball valve holder
- Double O-ring sealing of the shaft for additional safety (absolute seal to the environment even in case of shaft overload)
- Low weight, high tightness
- Full bore -> low pressure loss, piggable
- Installation independent of flow direction

### Typical application areas

- Chemical industry
- Tank farms
- Water conditioning
- Swimming pools
- Landfill gas

### Special notes

- Only partially suitable for encrusting process media or media containing solid parts
- Manual valve with ATEX approval:  
 or

Actuator type	Limit switch	Options		
		Stem extension	Positioner	Solenoid valve
Handle	+	+	-	-
Gear with hand wheel	+	+	-	-
Pneumatic actuator *)	+	+	+	+
Electric actuator *)	+	+	+	-

\*) Explosion protection possible

### Technical data

- **Nominal diameter:**  
DN 10 – DN 100
- **Connection:**  
Flange connection according to DIN 2501 – PN 10;  
True union type with socket, threaded or spigot ends
- **Operating temperature:**  
– 20 °C up to 100 °C  
(depending on material and process media)
- **Working pressure:**  
DN 10 – DN 80: PN 16 / PN 10 (material dependent)  
DN 100: PN 10
- **Vacuum tightness:**  
100 %
- **Length:**  
DIN EN 558 - 1 series FTF 1 (DIN 3202 – series F 1)
- **Body material:**  
PVC-U, PVC-C, PP, PVDF
- **Sealing material:**  
EPDM, FKM, FKM-F

## 3/2-way ball valve type 23



### Features

- Radially expandable (true union) and "safe-bloc"
- Preferably for alternate filling or draining of two pipelines
- Integrated top flange according to DIN EN ISO
- Low weight, high tightness
- Vertical L-port (Double L-Port or Cross Port Ball as an option)
- Installation independent of flow direction

### Typical application areas

- Chemical industry
- Water conditioning
- Tank farms
- Swimming pools

### Special notes

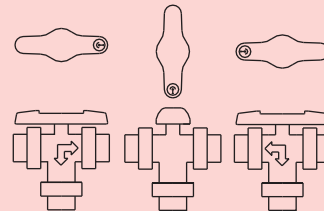
- Only partially suitable for encrusting process media or media containing solid parts
- Manual valve with ATEX approval:  
 or

Actuator type	Limit switch	Options		
		Stem extension	Positioner	Solenoid valve
Handle	+	+	-	-
Gear with hand wheel	+	-	-	-
Pneumatic actuator	+	-	+	+
Electric actuator *)	+	-	+	-

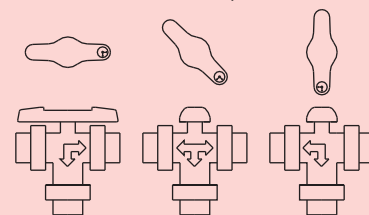
\*) Explosion protection possible

### Operation methods

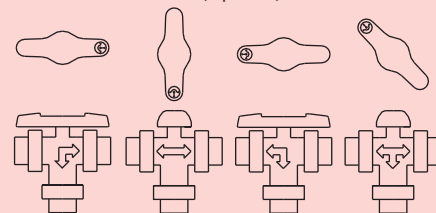
- With L-Port Ball (standard):



- With Double L-Port Ball (option):



- With Cross Port Ball (option)<sup>1)</sup>:



<sup>1)</sup> Only DN 15 up to DN 50

### Technical data

- **Nominal diameter:**  
DN 15 – DN 100
- **Connection:**  
Flange connection according to DIN 2501 – PN 10;  
True union type with socket, threaded or spigot ends
- **Operating temperature:**  
– 20 °C up to 100 °C  
(depending on material and process media)
- **Working pressure:**  
PN 10
- **Vacuum tightness:**  
100 %
- **Length:**  
DIN EN 558 - 1 series FTF 1 (DIN 3202 – series F 1)
- **Body material:**  
PVC-U, PVC-C, PP, PVDF
- **Sealing material:**  
EPDM, FKM, FKM-F

## Globe control valve types 640 / 650



### Features

- Changeable trim set
- Low weight
- Corrosion resistant
- Selectable  $c_v$ -values
- Selectable plug form for linear or equal-percentage characteristic
- Optical position indication
- Pneumatic actuators air to „CLOSE“ or „OPEN“, GRP housing (glass reinforced plastics)
- Electric actuators 24 V, 115 V or 230 V / 50 Hz with feedback signal for open/close or 0/4-20 mA
- Horizontal and vertical installation possible

### Typical application areas

- Chemical industry, chlorine chemistry
- Power plants
- Waste water treatment
- Water conditioning
- Pickling and waste incineration plants
- Biotechnology and food industry
- Electroplating

### Technical data

- **Nominal diameter:**  
DN 15 – DN 100
- **Connection:**  
Flange connection according to DIN 2501 – PN 10 or ANSI
- **Operating temperature:**  
– 40 °C up to 140 °C  
(depending on material and process media)
- **Working pressure:**  
PN 6, 10 (material dependent)
- **Vacuum tightness:**  
100%
- **Length:**  
PVC, PP: Company standard  
PVDF, PTFE: DIN EN 558 - 1 series FTF 1
- **Body material:**  
Type 640: PVC-U, PP<sup>1)</sup>  
Type 650: PVDF, PTFE<sup>1)</sup>
- **Sealing material:**  
EPDM, FKM, FEP-FKM, PTFE bellows
- **Assembly parts:**  
Stainless steel 1.4571, Hastelloy or Titanium

Actuator type	Options		
	Limitswitch	Positioner	Explosion protection
Pneumatic actuator	+	+	+ <sup>*)</sup>
Electric actuator	+	–	–

<sup>\*)</sup> ATEX-accreditation submitted (Ex II 2G EEx ia T4)

<sup>1)</sup> Housing of PVC-C, PVDF-el or PTFE 1600 TFM on request

## Milk of lime globe control valve type 680



### Features

- Changeable trim set
- Selectable  $c_v$ -values
- Selectable plug form for linear or equal-percentage characteristic
- Optical position indication
- Pneumatic actuators air to „CLOSE“ or „OPEN“, GRP housing (glass reinforced plastics)
- Electric actuators 24 V, 115 V or 230 V / 50 Hz with feedback signal for open/close or 0/4-20 mA
- Horizontal and vertical installation possible
- Flow direction indicated on the housing by an arrow
- Wear-proofed CrN-covered plug and seat
- Angle valve for inevitably draining in vertical position

### Typical application areas

- Power plants
- Paper industry
- Waste incineration plants
- Water conditioning
- Waste water treatment

### Special notes

- For horizontal installation as far as possible wash-up has to be planned. Inevitable draining only in case of vertical incoming flow!

Actuator type	Options	
	Limitswitch	Positioner
Pneumatic actuator	+	+
Electric actuator	+	-

### Technical data

- **Nominal diameter:**  
DN 25 – DN 80
- **Connection:**  
Flange connection according to DIN 2501 – PN 10 or ANSI
- **Operating temperature:**  
–20 °C up to 130 °C
- **Working pressure:**  
PN 10
- **Length:**  
Company standard
- **Body material:**  
1.4571
- **Material seat + plug:**  
1.4571 CrN-covered
- **Sealing material:**  
EPDM, FKM, PTFE stuffing
- **Assembly parts:**  
Stainless steel 1.4571, Hastelloy or Titanium

## Ball check valve types 31 / 32, Ball foot valve type 30



### Features

- Low weight
- Corrosion resistant
- Long service life with maintenance-free operation
- Flow direction indicated on the housing by an arrow
- Preferably vertical installation (minimum opening and closing pressures to be observed)
- Type 31: radially expandable thanks to union nut on both sides

### Typical application areas

- Water conditioning
- Chemical industry

### Technical data

- **Nominal diameter:**  
DN 15 – DN 100 (type 31: DN 15 – DN 50)
- **Connection:**  
Type 32: socket, flange according to DIN 2501 – PN 10  
Type 31: true union type with socket, threaded, spigot or flanged ends  
Type 30: socket, flange according to DIN 2501 – PN 10
- **Operating temperature:**  
– 20 °C up to 100 °C  
(depending on material and process media)
- **Working pressure:**  
DN 15 – DN 50: PN 10, scaled down for larger diameters
- **Vacuum tightness:**  
100%
- **Length:**  
Company standard
- **Body material:**  
PVC-U, PVC-C, PP, PVDF
- **Sealing material:**  
EPDM, FKM, FKM-F

## Swing check valve type 33



### Features

- Straight clearance without cross sectional reduction
- Low pressure loss
- Corrosion resistant, long service
- Maintenance opening → wearing parts can be replaced without removal from the pipe
- If PVC is required: housing made of super high impact HI - PVC
- Horizontal and vertical installation possible (minimum opening and closing pressures to be observed)

### Typical application areas

- Chemical industry
- Waste incineration plants
- Pickling plants, waterworks

### Special notes

- Adjustable-weight version on request

### Technical data

- **Nominal diameter:**  
DN 20 – DN 200
- **Connection:**  
Flange connection according to DIN 2501 – PN 10
- **Operating temperature:**  
– 20 °C up to 100 °C (material dependent)
- **Working pressure:**  
Max. PN 10 (depending on materials and nominal diameter)
- **Vacuum tightness:**  
100%
- **Length:**  
DIN EN 558 - 1 series FTF 48 (DIN 3202 – series F 6)
- **Body material:**  
HI-PVC, PP, PVDF
- **Sealing material:**  
EPDM, CSM, NBR, PTFE

## Wafer check valve type 34



### Features

- Short length, low weight
- Relatively high pressure loss due to large cross-sectional reduction
- Corrosion resistant
- Horizontal and vertical installation possible (minimum opening and closing pressures to be observed)

### Typical application areas

- Water conditioning, swimming pools
- Ventilation, irrigation and dewatering

### Special notes

- With pulsating media or in case of installation in horizontal pipelines: return spring required
- For installation in plastic pipelines, spacer rings must be installed on the outlet side corresponding to the nominal diameter and the internal pipe diameter to ease discharge (see catalogue page L5 - 16)

### Technical data

- **Nominal diameter:**  
DN 32 - DN 500
- **Connection:**  
Wafer-type valve for flange connections according to DIN 2501 - PN 10
- **Operating temperature:**  
- 20 °C up to 100 °C  
(depending on material and process media)
- **Working pressure:**  
DN 32 - DN 150: PN 10, scaled down for larger diameters
- **Length:**  
Company standard
- **Body material:**  
PVC-U, PP, PVDF
- **Sealing material:**  
EPDM, FKM, PTFE

## Y-check valve type 35



### Features

- Low weight
- Relatively low pressure loss
- Corrosion resistant, maintenance friendly
- Horizontal and vertical installation possible (minimum opening and closing pressures to be observed)

### Typical application areas

- Water conditioning
- Swimming pools

### Special notes

- PP, PVDF: with return spring  
PVC-U: available with return spring on request

### Technical data

- **Nominal diameter:**  
DN 15 - DN 50
- **Connection:**  
PVC-U ->  
spigot ends, union with socket or flanged end with fitting dimensions according to DIN 2501 - PN 10  
PP, PVDF ->  
threaded spigot, union with socket, spigot, threaded or flanged ends with fitting dimensions according to DIN 2501 - PN 10
- **Operating temperature:**  
- 20 °C up to 120 °C (material dependent)
- **Working pressure:**  
PN 10 (PVDF: PN 16)
- **Length:**  
DIN EN 558 - 1 series FTF 1 (DIN 3202 - series F 1)
- **Body material:**  
PVC-U, PP, PVDF
- **Sealing material:**  
EPDM, FKM

## Gate valve type C popular and type C soft seal



### Features

- Preferably for simple OPEN / CLOSE operations without control function
- Straight flow without cross-sectional reduction, piggable
- Extremely low pressure loss
- Corrosion resistant
- Housing made of super high impact PVC (HI-PVC)
- Installation independent of flow direction
- Suitable for end-of-line installation gate
- Type C popular: Clean out (drain) plug in bottom area of valve body
- Type C soft seal: Elastomer-coated shut-off element (gate) -> smooth clearance, self cleaning

### Typical application areas

#### Type C popular

- Waterworks
- Fresh water pipelines

#### Type C soft seal

- Waterworks
- Landfill leachates
- Wastewater (pressure and low-pressure range)

### Special notes

- In horizontal pipelines type C gate valves should be generally installed in vertical position with an inclination of < 30°
- Type C popular: Not suitable for encrusting process media or media containing solid parts

### Technical data

- **Nominal diameter:**  
DN 40 – DN 350 (soft sealing DN 40 – DN 200)
- **Connection:**  
Flange connection according to DIN 2501 – PN 10 or ANSI
- **Operating temperature:**  
0 °C up to 50 °C (process media)
- **Working pressure:**  
DN 40 – DN 200: PN 10, scaled down for larger diameters
- **Vacuum tightness:**  
100 %
- **Length:**  
Company standard
- **Body material:**  
HI-PVC
- **Sealing material:**  
EPDM (soft sealing: SBR-coated gate)

Actuator type	Limit switch	Chain wheel	Options Stem extension	Positioner	Solenoid valve	Explosion protection
Hand wheel	+	+	+	-	-	-
Electric rotary drive	+	-	+	+	-	+

## Float type flowmeter



### Features

- Transparent / translucent metering tube, float in process media
- Measuring range 15 l/h up to 60.000 l/h
- For liquid and gaseous media in closed pipeline systems
- Vertical installation, upward flow

### Typical application areas / operating limits

- Water conditioning
- Dosing systems
- Limit switch and measuring probes for nonferromagnetic media

### Special notes

- Inlet- and outlet length: min. 5 x DN to be provided

### Technical data

- **Nominal diameter:**  
M 335/M 350 → DN 25 - DN 65  
M 123 → DN 10 / 15 / 25  
M 10 - 13 → R 1/4", R 5/8"
- **Connection:**  
Unions with socket, threaded, spigot or flanged (M 10 - 13: threaded)
- **Operating temperature:**  
- 20 °C up to 100 °C  
(depending on material and process media)
- **Working pressure:**  
PN 10
- **Body material:**  
PA, PSU, PVDF, PP-n, PVC-transparent  
M 10 - M 13: PMMA
- **Sealing material:**  
EPDM, FKM
- **Optional output signal:**  
Limit switch, Transmitter 4 - 20 mA

## Paddle wheel sensor



### Features

- 5-blade paddle wheel in the process media
- Large nominal diameter range / flow range
- For liquid media (0,5 - 20 cSt) in closed pipeline systems
- Vertical or horizontal installation
- Flow velocity: 0,1 - 10 m/s

### Typical application areas / operating limits

- Swimming pools
- Water conditioning, chemical pipeline systems
- Not suitable for highly polluted media/media containing solid parts

### Special notes

- Inlet length: min. 15 x DN to be provided
- Outlet length: min. 5 x DN to be provided

### Technical data

- **Nominal diameter:**  
d 20 - d 315, for miniature sensor DF 110: d 4 - d 20
- **Connection:**  
Installation fitting with unions d 4 - d 63  
Connection clamp for pipes d 50 - d 315
- **Operating temperature:**  
- 20 °C up to 100 °C  
(depending on material and process media)
- **Working pressure:**  
PN 10 (other pressures on request)
- **Body material:**  
PVC, PP, PVDF (miniature valve body also of PFA)
- **Sealing material:**  
EPDM, FKM, Parofluor / Kalrez
- **Optional display:**  
Actual flow, cumulated flow
- **Optional output signal:**  
0 - 5 V, 4 - 20 mA

## Pressure reducing valve types V 82 / V 182 and type V 782



### Features

- To reduce the system pressure downstream of the valve
- Proven mechanical working principle
- Types V 82 / V 182: with pressure gauge protected by a diaphragm for secondary pressure
- Type V 782: with optimized control characteristic (lower hysteresis and pressure drop)
- Any mounting position possible

### Typical application areas

- Water conditioning, chemical tank farms
- Semiconductor industry, solar technology

### Special notes

- V 82 / V 182: ensure complete filling of the measuring chamber with buffer solution after unmounting the pressure gauge

### Technical data

- **Nominal diameter:**  
DN 10 – DN 100 (type 782: DN 10 – DN 40)
- **Connection:**  
Spigot ends or flanges, unions with socket, threaded or spigot ends
- **Operating temperature:**  
– 20 °C up to 120 °C  
(depending on material and process media)
- **Working pressure:**  
DN 10 – DN 50: PN 10,  
scaled down for larger diameters
- **Length:**  
Company standard
- **Body material:**  
PVC-U, PP, PVDF
- **Sealing material / diaphragm material:**  
EPDM, PTFE

## Pressure relief valve types V 85 / V 185



### Features

- Dissipates pressure peaks in plants / pipeline systems (overpressure protection)
- Excess flow drained into bypass / recirculation
- Negligible pressure loss in main pipeline
- Proven mechanical working principle
- DN 10 – DN 50 minimal dead space, only valve bottom and diaphragm wetted by process media
- Any mounting position possible

### Typical application areas

- Water conditioning
- Chemical tank farms

### Special notes

- DN 10 – DN 50 with integrated holder (holes for threaded inserts)

### Technical data

- **Nominal diameter:**  
DN 10 – DN 100
- **Connection:**  
Spigot ends or flanges, unions with socket, threaded or spigot ends
- **Operating temperature:**  
– 20 °C up to 120 °C  
(depending on material and process media)
- **Working pressure:**  
DN 10 – DN 50: PN 10,  
scaled down for larger diameters
- **Length:**  
Company standard
- **Body material:**  
PVC-U, PP, PVDF
- **Sealing material / diaphragm material:**  
EPDM, PTFE

## Pressure retaining valve types V 86 / V 186 and type V 786



### Features

- Generates system-dependent working pressure upstream of the valve
- Alternative to dissipating pressure peaks in case of installation in a bypass
- Proven mechanical working principle
- Type V 186: minimal dead space, only valve body and diaphragm wetted by process media
- Type V 786: with optimized regulating characteristic
- Any mounting position possible

### Typical application areas

- Water conditioning, chemical tank farms
- Semiconductor industry, solar technology

### Special notes

- V 186: with integrated holder (holes for threaded inserts)

### Technical data

- **Nominal diameter:**  
DN 10 – DN 100 (type 786: DN 10 – DN 40)
- **Connection:**  
Spigot ends or flanges, unions with socket, threaded or spigot ends
- **Operating temperature:**  
– 20 °C up to 120 °C  
(depending on material and process media)
- **Working pressure:**  
DN 10 – DN 50: PN 10  
(Type V 786: DN 32 – DN 40: PN 6)  
DN 65 – DN 80: PN 6; DN 100: PN 4
- **Length:**  
Company standard
- **Body material:**  
PVC-U, PP, PVDF
- **Sealing material / diaphragm material:**  
EPDM, PTFE (type V 186: only PTFE)

## Throttle valve type V 251



### Features

- For fine flow control (throttling)
- For liquid and gaseous media
- Flow rate adjustable with a screwdriver
- Any mounting position and flow direction possible

### Typical application areas

- Water conditioning
- Chemical tank farms
- Dosing stations

### Special notes

- Max. flow speed of 20 m/s to be observed during dimensioning (noise)

### Technical data

- **Nominal diameter:**  
DN 10 – DN 80
- **Connection:**  
Socket end, spigot end (IR fusion)
- **Operating temperature:**  
– 20 °C up to 120 °C  
(depending on material and process media)
- **Working pressure:**  
PN 10
- **Length:**  
Company standard
- **Body material:**  
PVC-U, PP, PVDF
- **Sealing material:**  
EPDM, FKM

## Gauge guard type Z 700 and type Z 701    Level switch NIVEX type 600



### Features

- For pressure measurement of neutral or aggressive media
- Pressure gauge hermetically protected from the media by a PTFE-coated diaphragm
- Suitable for installation in standard pressure gauges or pressure switches with R 1/4" or R 1/2"
- Available as type Z 701 without pressure gauge and buffer solution

### Features

- Corrosion resistant level switch for control of levels in pressure less tanks / vessels
- With 1-5 probe pipes
- Probe pipe length: 500 - 5000 mm
- Available with liquid receiver

### Typical application areas

- All industrial areas

### Special notes

- Only suitable for overpressure
- If an internal thread is to be used for the pipe coupling use, only cylindrical threads without PTFE tape or any other thread filling sealants

### Technical data

- **Nominal diameter:**  
DN 20 – DN 25
- **Connection:**  
Threaded, socket end, spigot for IR fusion  
R 1/4" – R 1/2"
- **Available pressure gauges - Display range:**  
0 – 0,6 / 1 / 1,6 / 2,5 / 4 / 6 / 10 bar
- **Operating temperature:**  
– 40 °C up to 120 °C  
(depending on material and process media)
- **Working pressure:**  
PN 10
- **Body material:**  
PVC-U, PP, PVDF
- **Diaphragm material:**  
PTFE

### Typical application areas

- Protects pumps against running dry

### Special notes

- Only for pressure less vessels and tanks
- Liquid receiver: protects diaphragm of the pressure switch

### Technical data

- **Nominal size:**  
DN 25 / 65 / 80
- **Operating temperature:**  
5 °C up to 100 °C  
(depending on material and process media)
- **Probe pipe material:**  
PVC-U, PP, PVDF, 1.4571
- **Diaphragm switch material:**  
NBR, FKM
- **Protection class:**  
IP 54 / IP 65
- **Supply voltage:**  
up to max. 230 V / 50 Hz
- **Switching accuracy:**  
Round about ± 5mm water column round the switching point

## Water jet vacuum pump type P 20



### Features

- For delivery and mixing of chemical media
- For aspiration / addition of liquid and gaseous media (e.g. acids or alkaline solutions)
- Any mounting position possible, flow direction indicated on the housing
- Suction performance mainly influenced by: nozzle orifice diameter, propulsion water pressure and volume as well as back pressure

### Typical application areas

- Water conditioning, dosing stations
- Chemical tank farms

### Special notes

- Upstream and downstream pipe lengths (min. 5 x DN) to be ensured
- For exact dosing of propulsion and suction flows, suitable throttle elements (e.g. throttle sleeves or diaphragm valves) can be installed
- Malfunctions are possible in case of fluctuating water pressure, insufficient water pressure, excessively high back pressure or dirty nozzle

### Technical data

- **Nominal diameter:**  
DN 10 – DN 50: unions with socket, spigot, treaded ends  
DN 65 – DN 80: coupling (IR neck)
- **Operating temperature:**  
– 20 °C up to 120 °C  
(depending on material and process media)
- **Working pressure:**  
PN 10
- **Body material:**  
PVC-U, PP, PVDF
- **Sealing material:**  
EPDM, FKM

## Leakage warning system



### Features

- Intelligent leakage warning system with point sensors for double-containment systems
- Precise leak detection of electrically conducting liquids at a maximum of 99 measuring points
- Sensors for above- or below-ground installation available
- Permanent leakage, cable break and short-circuit monitoring

### Typical application areas / operating limits

- Double containment pipes and double containment tanks
- Not to be used with oils

### Special notes

- Operation of the leakage warning system in close vicinity to strong electric fields is to be avoided
- Only use system-inherent cables (especially low impedance) for wiring

### Technical data

- **Supply voltage:**  
230 V / 50 Hz
- **Max. power consumption:**  
115 mA
- **Alarm indication:**  
LED (red), LCD display
- **Alarm relay:**  
Potential-free change-over contact
- **Protection class:**  
Sensors / display units → IP 65 / IP 54
- **Material:**  
Sensor head / electrodes → PP / Hastelloy C-276  
O-ring → EPDM, FKM, NBR

## Y-strainer type 51



### Features

- Transparent housing
- Radially expandable
- Comparatively large free filter surface
- Mesh 0,25 / 0,5 / 0,7 mm
- Installation with maintenance opening directed downwards

### Typical application areas

- Swimming pools
- Water conditioning
- Chemical plant engineering

### Special notes

- Sieve cleaning maintenance intervals to be observed
- Flow direction to be observed (arrow on the housing)

### Technical data

- **Nominal diameter:**  
DN 15 – DN 100
- **Connection:**  
Socket, spigot, threaded or flanged ends
- **Operating temperature:**  
0 °C up to 50 °C
- **Working pressure:**  
PN 10
- **Length:**  
Company standard
- **Body material:**  
PVC-U
- **Sieve material:**  
PVC-U
- **Sealing material:**  
EPDM, FKM

## Y-strainer type 36



### Features

- Radially expandable
- Mesh 0,5 / 1,0 / 1,5 / 2,0 mm
- Simple, maintenance-friendly design
- Installation with maintenance opening directed downwards

### Typical application areas

- Swimming pools
- Water conditioning
- Chemical plant engineering

### Special notes

- Sieve cleaning maintenance intervals to be observed
- Flow direction to be observed (arrow on the housing)

### Technical data

- **Nominal diameter:**  
DN 15 – DN 50 (DN 65 – DN 400: type 37 on request)
- **Connection:**  
PVC-U → spigot ends,  
union with socket or flanged  
PP, PVDF → threaded spigot, union with socket,  
spigot, threaded or flanged ends
- **Operating temperature:**  
– 20 °C up to 120 °C  
(depending on material and process media)
- **Working pressure:**  
PN 10 (PVDF: PN 16)
- **Length:**  
Flange → DIN EN 558 - 1 series FTF 1
- **Body material:**  
PVC-U, PP, PVDF
- **Sieve material:**  
FEP
- **Sealing material:**  
EPDM, FKM

## Fullface gasket type 52



### Features

- Exact seal centering thanks to screw holes on both sides
- Material identification label
- Dual O-ring profile gives high surface pressure for improved sealing
- 400 – 500 µm PTFE or PVDF coating of the parts wetted by the process media → very good chemical and thermal resistance together with good sealing behaviour due to EPDM carrier

### Typical application areas

- Industrial piping
- Pickling plants
- Chemical industry
- Water supply

### Special notes

- Optimal sealing performance with smooth flange faces

### Technical data

- **Nominal diameter:**  
DN 15 – DN 400
- **Material:**  
EPDM, CSM, NBR, PTFE, PVDF
- **Operating temperature:**  
– 70 °C up to 120 °C  
(depending on material and process media)
- **Pressure class:**  
PN 10
- **Dimensions:**  
According to DIN 2501 – PN 10,  
ANSI / ASME B 16.5 Class 150

## Electro-pneumatic positioner



### Features

- For control of pneumatic actuators
- Converts an electric input signal into a linear or swivel movement of the actuator
- Simple adjustment of actuating time and actuating force
- Control pressure: 4 – 6 bar

### Available versions

- For fitting to turn or stroke actuators
- Single or double acting
- Also according to ATEX

### Possible additional options

- Limit switch
- Position transmitter
- Power amplifier
- Terminal strips
- Manometer blocks
- Alarm modules
- HART module
- Profibus DP

## Solenoid valves / NAMUR mounting



### Features

- For electromagnetic control of pneumatic actuators
- For filtered, oil-free and dry compressed air and other neutral, dry fluids
- Crossover-free switching, switchover function guaranteed even with small cross-section air supply
- Return spring provides safety position in the event of power failure (monostable function)
- Manual override
- Reversible seal allows for 3/2- or 5/2-way function

### Special notes

- **Exhaust air recirculation:**  
actuating time can be adjusted in both actuator directions

### Technical data

- **Operating pressure:**  
Control pressure 2 up to 10 bar
- **Solenoid:**  
DC, AC or intrinsically safe circuits
- **Switching time:**  
ON -35 ms; OFF -250 ms
- **Material:**  
Aluminium / NBR
- **Operating temperature:**  
-10 °C up to 50 °C

## Limit switch boxes



### Features

- For limit switch signalling on pneumatic swivel actuators
- Cable entry protected against shock and being stepped on
- Excellent accessibility of the terminal block
- Fine-toothed cam arrester for simple vibration-free adjustment
- NAMUR interface for mounting on pneumatic swivel actuators

### Special notes

- Installation space for up to
  - 4 microswitches or
  - 4 slot initiators or
  - 2 proximity switches or
  - 1 double initiator

### Technical data

- **Housing protection class:**  
IP 65
- **Material:**  
Housing: black Vestamid  
Cover material: transparent Makrolon
- **Connection:**  
PG 13,5 or ASI compression coupling
- **Versions:**  
e.g. microswitches, 2- and 3-wire proximity switches, NAMUR proximity switches or slot initiators, double initiators, also as ATEX version

## Dymatrix valves



### Features

- For flushing, sampling, branching and pressure regulating of pure chemicals, DI water und Slurry
- Corrosion resistant
- Long life cycle
- Minimized dead space
- Completely flushable
- Various combinations
- Very compact modular design

*New!* **Dymatrix™**

### Typical application areas

- Semiconductor industry
- Solar technology

### Typical applications

- Etching
- Cleaning
- Plating
- CMP
- Photo resist

Valve	Actuator type		
	Manual	Pneumatic	Electric
Pinch valve	+	+	+
2-way valve	-	+	-
Multi port valve	+	+	-
Needle valve	+	+	-
High purity regulator	-	+	-
Constant flow valve	-	+	-

### Technical data

- **Connection tubing size:**  
 3 x 2 mm / 1/8"  
 6 x 4 mm / 1/4"  
 10 x 8 mm / 3/8"  
 12 x 10 mm / 1/2"  
 19 x 16 mm / 3/4"  
 25 x 22 mm / 1"
- **Overview connections:**  
 Flare type  
 Flowell 20  
 Flowell 60  
 Super type pillar  
 Super 300 type pillar  
 Rc  
 FNPT
- **Wetted parts:**  
 PTFE, PFA, PVDF<sup>\*)</sup>
- **Secondary sealings:**  
 FKM, FKM-F, EPDM

<sup>\*)</sup> for some types elastomere sealings

## Special designs

### Throttle valve type LDK



- Especially for ventilation applications
- DN 100 – DN 3000
- PN 0,1 or PN 0,05
- Smallest leak rates possible
- Body material: PE 100, PP, PP-s-el, PE-el; partially FRP-reinforced
- Actuator: self-inhibiting drive with hand wheel / electric or pneumatic actuator

### Double containment ball valve type DR 21

- d 32/90 – d 63/125
- Media pipe / protection pipe: PE 100 / PE 100, PVDF / PE 100, PVDF / PP, PP / PP, PP / PE 100
- Simple subsequent automation
- Extremely easy to assemble and maintenance-friendly

### Flow control valve type 87

- Constant flow adjustable - even with fluctuating pressure
- DN 15 – DN 80
- PN 10
- For differential pressure from 0,2 – 2,0 bar
- Housing / sealing: PVC / EPDM

### Float valve type V 140

- Optimal level control without auxiliary energy
- DN 10 – DN 80
- Body material: PVC-U, PP
- Robust, low-maintenance design
- Operational safety thanks to integrated seat seal

### Strainer type 37



- DN 65 – DN 200 (up to DN 400 on request)
- Housing / sealing: PP, PVDF, PVC-U / EPDM, FPM
- Mesh width: 0,5 / 1,0 / 1,8 / 2,0
- PN 6
- Fixed flange acc. to DIN 2501 - PN 10
- Filter screen insert: FEP, V4A

### Multi-port valve

- With rising or non-rising stem
- DN 100 – DN 1000
- Housing / sealing: PE 100, PP, PVDF / EPDM, FKM
- Subsequent automation possible

### Flow analysis valve in ECTFE

- Flange connection: DN 25
- Material: ECTFE (Halar)
- Dairy union acc. to DIN 405 for analysis sensor element
- For highly aggressive chemicals at high temperature and pressure resistance

### Dymatrix™-valves

#### Quick drain valve type QDV



- DN 40 – DN 100
- Housing / sealing: PVC-U, PP / FKM, FKM-F, EPDM
- Solar technology and semiconductor industrie
- For quick drain liquids from tanks and vessels
- Easy to maintain
- Overview connections: Flange, IR-spigot ends, socket ends, threaded ends

### Vortex-flow meter systems

- No media contacting moving parts
- No wetted rubber sealing
- Excellent accuracy and repeatability
- Nominal diameter: 1/4" – 8"
- Material: PP, PVDF, PFA