

# Automation made easy for you

Accurate measurement  
Precise control  
Reliable actuation



# The best choice

## Corrosion and chemical resistant system solutions

### + Georg Fischer

Georg Fischer focuses on three core businesses: GF Piping Systems, GF Automotive and GF Machining Solutions. The industrial corporation, founded in 1802, headquarters in Switzerland and operates approximately 120 companies with more than 14'800 employees in 33 countries. GF Piping Systems is a leading supplier of plastic and metal piping systems with global market presence. We offer pipes, fittings, valves, automation products, jointing technology and corresponding services for the treatment of water and chemicals, as well as for the safe distribution of liquids and gases.

### + Our market segments

Being a strong implementation partner, GF Piping Systems supports its customers in every phase of the project. No matter which processes and applications are planned in the following market segments:

- Automation
- Building Technology
- Chemical Process Industry
- Energy
- Food & Beverage / Cooling
- Microelectronics
- Marine
- Water & Gas Utilities
- Water Treatment

### + Global presence

Our global presence ensures customer proximity worldwide. Sales companies in 26 countries and representatives in another 80 countries provide customer service around the clock. With 32 production sites in Europe, Asia and the USA we are close to our customers and comply with local standards. A modern logistics concept with local distribution centers ensures highest product availability and short delivery times. GF Piping Systems' specialists are always close by.

### + Complete solutions provider

Our extensive product range represents a unique form of product and competence bundling. With over 70 000 products, allied with a broad range of services, we offer individual and comprehensive system solutions for a variety of industrial applications. Having the profitability of the projects of our customers in focus, we optimize processes and applications that are integrated into the whole system. Continually setting standards in the market, we directly provide our customers with technological advantages. Due to our worldwide network customers benefit directly from our 50 years+ experience in plastics.

From start to finish, we support our customers as a competent, reliable and experienced partner.

## Automation

# Automation made easy

Measurement, control and actuation. Measurement encompasses a wide range of measurement technologies and parameters. Most of these products are available in plastic and are offered with dedicated fittings, which integrate our sensors perfectly into your piping system. Control comprises various control functionalities (from simple relays to PID controllers) and all major communication technologies. Actuation includes pneumatic, electric and magnetic actuators, which can be seamlessly combined with all kinds of valves and accessories.

### The all-in-one solution for your automation needs

**Easy to combine**  
Flexible combination and upgrade

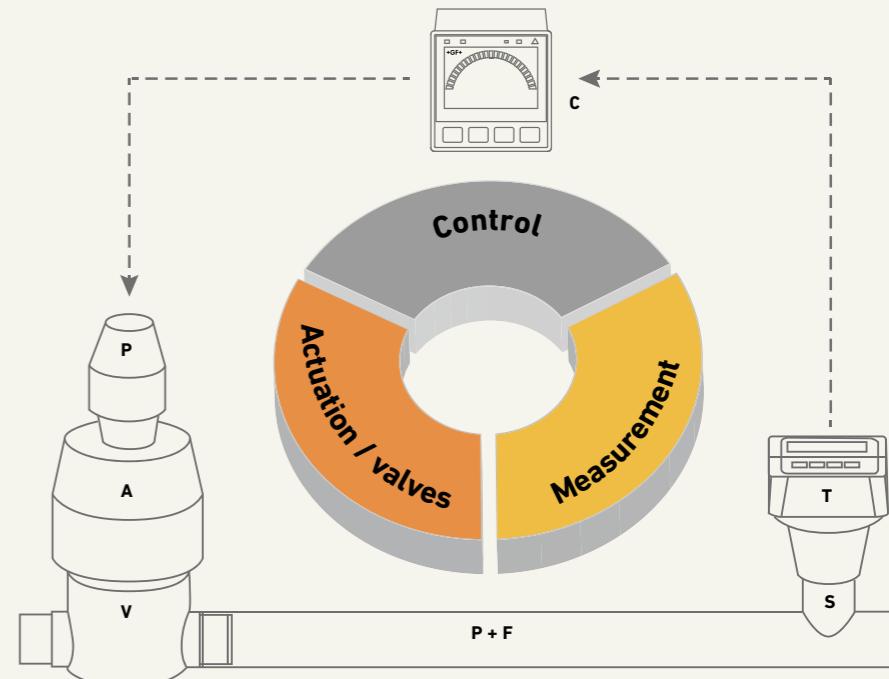
**Easy to install**  
Seamless integration

**Easy to connect**  
State-of-the-art communication technology

**Easy to set-up**  
Plug-and-play design

**Easy to operate**  
Intuitive menu structure

**Easy to maintain**  
Wide range of accessories



S: Sensor  
T: Transmitter  
C: Controller

P: Positioner  
A: Actuator

V: Valve  
P+F: Pipe & fittings

**Measurement**  
Accurate measurement



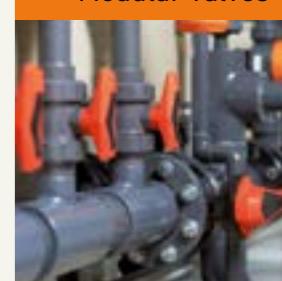
**Control**  
Precise control



**Actuation**  
Reliable actuation

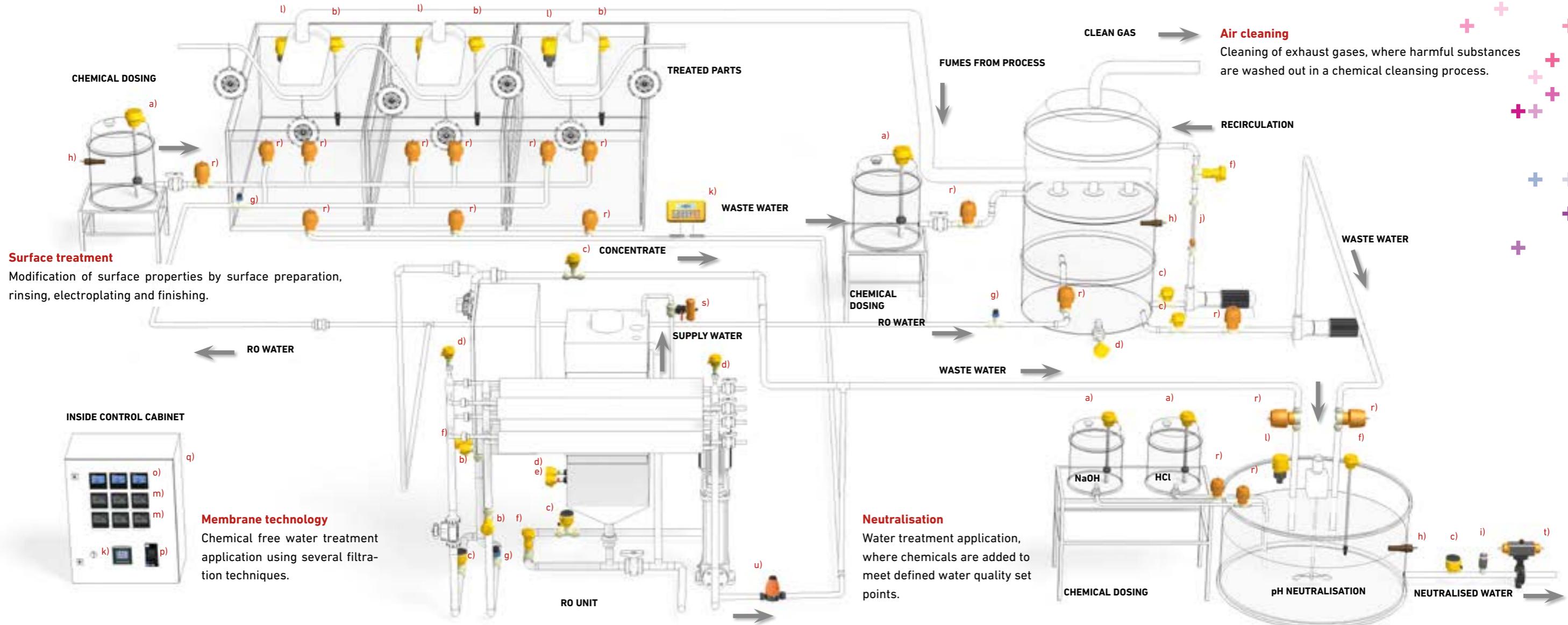


**Valves**  
Modular valves



# Industrial automation made easy

We have a comprehensive automation offering for your industrial applications.



## Measurement

- a) Level sensor type 2250
- b) Conductivity sensor using 2850 sensor electronics
- c) Electromagnetic flow sensor type 2551
- d) Pressure sensor type 2450
- e) Temperature sensor type 2350
- f) pH-sensor type 2724
- g) Paddlewheel flow sensor type 2536
- h) Limit switch
- i) pH / ORP Wet-tap unit type 3719
- j) Variable area flow meter type 335
- k) Portaflow ultrasonic flowmeter type 330/220
- l) Ultrasonic level sensor type 2270

## Control

- m) Multi-parameter transmitter type 9900
- n) Customer PLC
- o) Dual channel transmitter type 9950
- p) PID controller
- q) Profibus concentrator

## Actuation / Valves

- r) Diaphragm valve, pneumatic, type DIASTAR Ten
- s) Pneumatic ball valve type 230
- t) Pneumatic butterfly valve type 240
- u) Pressure retaining valve type 586

The rendering above shows an exemplary selection of industrial applications, where our automation offering can be used.

# Measurement

Accurate measurement is the basis for reliable process control

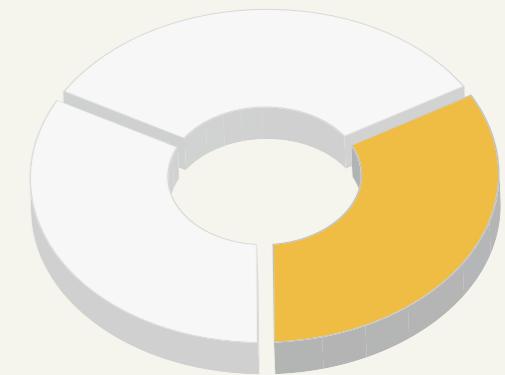


Our measurement offering will cover your needs: flow, pH, conductivity, level, temperature and various water quality parameters. Corresponding to our piping systems, most sensors are available in plastic and are therefore highly resistant to chemicals. Our plug-and-play measurement products are self-explanatory, easy to maintain and offered with suitable installation fittings.

## Measurement

# Measurement products

An overview of the key products



## Paddlewheel flow sensor



Rotor-X paddlewheel flow sensor type 515

- Non-powered
- 0.3-6 m/s (1 to 20 ft/s)
- DN15-DN900 (½ to 36 in.)
- PP 12.5 bar @ 20 °C (180 psi @ 68 °F)
- PVDF 14 bar @ 20 °C (203 psi @ 68 °F)
- 19.7 Hz per m/s nominal (6 Hz per ft/s nominal)
- Wet tap sensors available



Rotor-X paddlewheel flow type 2536

- 0.1-6 m/S (0.3 to 20 ft/S)
- DN15-DN900 (½ to 36 in.)
- DN15-DN100 (½ to 4 in.) for PVC
- PP 12.5 bar @ 20 °C (180 psi @ 38 °F)
- PVDF 14 bar @ 20 °C (203 psi @ 68 °F)
- PVC 14 bar @ 20 °C (203 psi @ 68 °F)
- 49 Hz per m/S nominal (15 Hz per ft/S nominal)



Paddlewheel flow sensor type 2537

- 0.1-6 m/s (0.3 to 20 ft/s)
- DN15-DN200 (½ to 8 in.)
- PP 12.5 bar @ 20 °C (181 psi @ 68 °F)
- PVDF 14 bar @ 20 °C (203 psi @ 68 °F)
- 4-20 mA, digital (S<sup>3</sup>L), flow switch or pulse outputs (based on part number)



Stainless steel paddlewheel flow sensor - type 2540

- 0.1-6 m/s (0.3 to 20 ft/s)
- DN40-DN900 (1½ to 36 in.)
- 316 stainless steel
- 17 bar @ 100 °C (250 psi @ 212 °F)
- 49 Hz per m/s nominal (15 Hz per ft/s nominal)
- Open collector output



Metalex paddlewheel flow sensor type 525

- 0.5-6 m/s (1.6-20 ft/s)
- DN15-DN300 (½-12 in.)
- 316 stainless steel
- 103 bar (1500 psi @ safety factor 1.5) @149 °C (300 °F)
- 39 Hz per m/s nominal (12 Hz per ft/s nominal)

## Magmeter



Magmeter (blind or display) type 2551

- 0.05-10 m/s (0.15 to 33 ft/s)
- DN15-DN900 (½ to 36 in.)
- 10.3 bar @ 25 °C (150 psi @ 77 °F)
- 4-20 mA, or frequency/digital (S<sup>3</sup>L) outputs
- Optional relay outputs



Metal magmeter type 2552

- 0.05-10 m/s (0.15 to 33 ft/s)
- DN50-DN2550 (2 to 102 in.)
- 316 stainless steel & PVDF
- 20.7 bar @ 25 °C (300 psi @ 77 °F)
- 4-20 mA, frequency/digital (S<sup>3</sup>L)
- Hot-tap using ball or gate valves

# When the level matters

## Inline flow sensors



- Turbine flow sensor type 2100**
- 0.38 to 38 lpm (0.10 to 10 gpm)
  - DN15 (½ in.)
  - PVDF
  - 16 bar @ 20 °C (232 psi @ 68 °F)
  - Open collector output
  - Use with end fitting: 3-2100-31 to 3-2100-38



- Micro-flow rotor sensor type 2000**
- 0.11 - 12.11 lpm (0.03 - 3.2 gpm)
  - ¼ in. NPT or ISO 7/1-R1/4 threads
  - Polyphenylene sulphide and PEEK
  - 5.5 bar @ 0 ° to 80 °C (80 psi @ 32 °F to 176 °F)
  - Open collector output
  - Standard cable 7.6 m (25 ft)



- Mini-flow rotor sensor type 2507**
- 400 - 12 000 mL/m (0.1 to 3.2 U.S. gpm)
  - G ¼ in. ports, ¼ in. NPT pipe adapters
  - PVDF
  - 5.5 bar @ 24 °C (80 psi @ 75 °F)
  - Open Collector output
  - Standard cable 7.6 m (25 ft)

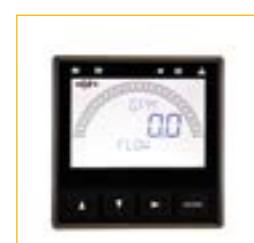
## Displays / transmitters



- SmartPro transmitter type 9950**
- One instrument for multiple sensor types
  - Two different sensor types can be combined in one instrument
  - Configurable display
  - Derived measurements
  - Advanced boolean logic
  - Optional modules can be added for additional capabilities
  - USB Port for field upgrades using standard USB flash drive



- Flow integral mount type 9900**
- Local display for sensor mounted instruments
  - Provides 4 - 20 mA output
  - "At a glance" visibility
  - "Dial-type" digital bar graph
  - NEMA 4X/IP65



- SmartPro transmitter type 9900**
- Multi-parameter input selection
  - Large auto-sensing backlit display
  - "Dial-type" digital bar graph
  - Optional field upgradable relays
  - Selectable error mode for current outputs, 3.6 mA or 22 mA
  - Optional relay, direct conductivity / resistivity, 4 to 20 mA output, and HART modules are available



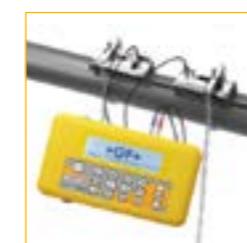
- Battery powered flow totaliser type 8150**
- Displays GPS, GPM, GPH, GPD, LPS, LPM, LPH, LPD
  - Battery powered
  - Single input
  - Panel or field mount
  - 3 totalisers, auto calibration
  - Use with 515 or 525 flow sensors

## Variable area flow meters



- Variable area flow meters type 335 / 350, SK50-73**
- Taper tubes in PVC transparent, PA, PSU, PVDF
  - Union connection with PVC (std)
  - DN10-DN65 (½" - 3 ½")
  - PN10
  - Optional switch feedback
  - Special scales on request

## Ultrasonic flow meters



- Portaflow portable ultrasonic flow meter - type 330 / 220**
- 0.1 m/s - 20 m/s
  - d13 - d2000
  - Battery powered, AC 110 - 240 V
  - Output: 0/4 to 20 mA, RS 232, USB, pulse
  - Data logger (type 330)
  - Transit time measurement



- Ultraflow wall mount ultrasonic flow meter - type 3000 / 4000**
- 0.1 m/s - 20 m/s
  - d13 - d2000
  - DC 24 V or AC 86 - 240 V
  - Output 0/4 to 20 mA, RS 232, USB, pulse
  - Data logger (type 4000)
  - Transit time measurement



- Ultrasonic flow meter type U1000**
- 0.1 m/s - 10 m/s
  - d25 - d115
  - DC 12 - 24 V
  - Output: 4 - 20 mA, pulse or frequency
  - Transit time measurement

# Easy to install

## pH/ORP sensors and instruments



- SmartPro transmitter type 9950**
- One instrument for multiple sensor types
  - Two different sensor types can be combined in one instrument
  - Configurable display
  - Derived measurements
  - Advanced boolean logic
  - Optional modules can be added for additional capabilities
  - USB Port for field upgrades using standard USB flash drive



- SmartPro transmitter type 9900**
- Multi-Parameter input selection
  - Large auto-sensing backlit display
  - "Dial-type" digital bar graph
  - Optional field upgradable relays
  - Selectable error mode for current outputs, 3.6 mA or 22 mA
  - Optional relay, direct conductivity/resistivity, 4 to 20 mA output, and HART modules are available



- Threaded dryLoc pH/ORP electrode - type 2774-2777**
- 0-14 pH, ± 2,000 mV ORP
  - Ryton body, PTFE junction
  - Use sensor ¾" threads for mounting
  - DryLoc preamplifier connection with gold plated pins
  - Suitable for submersible applications
  - For use with 2750/2760 preamplifiers



- DryLoc pH/ORP electrodes type 2724-2726**
- 0-14 pH, ± 2,000 mV ORP
  - Ryton body, PE junction
  - Use fittings for in-line applications or ¾" NPT or ISO
  - Suitable for submersible applications
  - DryLoc preamplifier connection with gold plated pins



- Differential dryLoc pH/ORP electrodes type 2764-2767**
- 0-14 pH, ± 2,000 mV ORP
  - Ryton body, PTFE junction
  - Use sensor 1 inch threads for mounting
  - DryLoc preamplifier connection with gold plated pins
  - For use with 2750/2760 preamplifiers



- pH/ORP wet-tap assembly - type 3719/2756, wet-tap electrodes type 2757**
- Use a wet-tap style sensor for 0-14 pH, ± 2,000 mV ORP
  - CPVC, PVC
  - 1½ or larger
  - 1½ or 2 NPT, ISO 7/1-R1.5 or R2
  - Electrode removal without process shutdown



- DryLoc pH/ORP electrodes for harsh applications - type 2734-2736**
- Enhanced reference and bridge gels to resist chemical poisoning
  - Ryton (PPS) body and PTFE junction for broad range of chemical compatibility
  - PTFE reference junction resists fouling and chemical attack
  - Mounts in Signet standard fittings from DN15 to DN100 (½ to 4 in.)



- DryLoc pH/ORP sensor electronics type 2750**
- 0-14 pH, ± 2,000 mV ORP
  - PBT, CPVC (PVC-C)
  - DryLoc connection with gold plated pins
  - 4-20 mA or digital (S<sup>3</sup>L)
  - Use with 8900, 9900 or PLC
  - In-line and submersible versions available

## Conductivity/resistivity sensors and instruments



- SmartPro transmitter type 9950**
- One instrument for multiple sensor types
  - Two different sensor types can be combined in one instrument
  - Configurable display
  - Derived measurements
  - Advanced boolean logic
  - Optional modules can be added for additional capabilities
  - USB Port for field upgrades using standard USB flash drive



- SmartPro transmitter type 9900**
- Multi-parameter input selection
  - Large auto-sensing backlit display
  - "Dial-type" digital bar graph
  - Optional field upgradable relays
  - Selectable error mode for current outputs, 3.6 mA or 22 mA
  - Optional relay, direct conductivity/resistivity, 4 to 20 mA output, and HART modules are available



- Dual-channel conductivity controller - type 8860**
- Displays µS, mS, KΩ, MΩ, PPM
  - AC or DC supply
  - Up to 2 sensor inputs
  - Up to 2 Open collector outputs and 4 relay outputs
  - Up to 3 active current outputs
  - % reject, % recovery and ratio functions



- Conductivity sensor electronics with PVDF type 2850**
- 0.055-400 000 µS (0.02-200 000 ppm) (18.2 MΩ - 1 KΩ)
  - PBT (integral mount) /PBT/CPVC (universal J-box)
  - Integral systems connect to the 2839 series electrodes or 2819 series electrode via 3-286X universal j-box assembly
  - 4-20 mA or digital (S<sup>3</sup>L)
  - Factory NIST certified



- Conductivity integral system with 9900 transmitter**
- Local display for sensor mounted instruments
  - Provides 4-20 mA output
  - "At a glance" visibility
  - "Dial-type" digital bar graph
  - NEMA 4X/IP65



- Conductivity/resistivity electrodes type 2818-2823**
- 0.055-400 000 µS (0.02-200 000 ppm) (18.2 MΩ - 1 KΩ)
  - 316 SS or titanium (hastelloy-C also available upon request)
  - Reversible threads or sanitary flange connections
  - Connect to 2850 sensor electronics

Dual-Channel ProcessPro's -3 are still available

## Temperature and pressure sensors and instruments



- SmartPro transmitter type 9950**
- One instrument for multiple sensor types
  - Two different sensor types can be combined in one instrument
  - Configurable display
  - Derived measurements
  - Advanced boolean logic
  - Optional modules can be added for additional capabilities
  - USB port for field upgrades using standard USB flash drive



- SmartPro transmitter type 9900**
- Multi-parameter input selection
  - Large auto-sensing backlit display
  - "Dial-type" digital bar graph
  - Optional field upgradable relays
  - Selectable error mode for current outputs, 3.6 mA or 22 mA
  - Optional relay, direct conductivity/resistivity, 4 to 20 mA output, and HART modules are available



- Temperature integral system with 9900 transmitter**
- Local display for sensor mounted instruments
  - Provides 4 - 20 mA output
  - "At a glance" visibility
  - "Dial-type" digital bar graph
  - NEMA 4X/IP65



- Temperature sensor type 2350**
- In-line mounting: 10 °C to 100 °C (14 °-212 °F)
  - Submersible mounting: 10 °C to 85 °C (14 °-185 °F)
  - PVDF
  - ¾ inch dual threaded for in-line or submersible installation
  - 4-20 mA or digital (S<sup>3</sup>L)



- Pressure integral system with 9900 transmitter**
- Utilizes the 2450 sensor for pressure or hydrostatic level measurement
  - Local display for sensor mounted instruments
  - Provides 4 - 20 mA output
  - "At a glance" visibility
  - "Dial-type" digital bar graph
  - NEMA 4X/IP65



- Pressure sensor type 2450**
- 0 - 0.7 bar (0 - 10 psig)-U
  - 0 - 3.4 bar (0 - 50 psig)-L
  - 0 - 17 bar (0 - 250 psig)-H
  - Vacuum range available
  - Wetted material: PVDF, ceramic and FKM
  - ½" union, dual threaded
  - 4 - 20 mA or digital (S<sup>3</sup>L)

## Point level switches



- Vibration forks type 2280**
- For safe operation in critical applications
  - Cable, DIN connector and connection terminals
  - Easy wiring in various applications
  - No moving parts
  - No maintenance costs



- Ultrasonic gap switch type 2284**
- PPS Full-plastic body
  - Reliable point level detection even in very corrosive or viscous liquids
  - Optimized chemical compatibility
  - Compact size
  - Easy installation in pipes and small systems
  - Robust ultrasonic principle even in highly viscous liquid



- Conductive multipoint switch type 2281**
- Individual cutting of electrodes
  - Most economic solution to indicate multiple point levels
  - Easy adaptation of switching points on site
  - Up to 4 switching points in one sensor
  - 4 times faster installation
  - Cost effective solution



- Guided float switch type 2282**
- PP or PVDF full-plastic body
  - Compact and cost attractive solution for small vessels
  - Optimized chemical compatibility
  - Ultra compact housing
  - Easy installation in compact systems



- Float switch type 2285**
- Double chambered enclosure
  - Easiest way to monitor point levels in open tanks and basins
  - High operational safety
  - Mercury free switching contact
  - Safe use in drinking- and waste water applications

## Level sensors and transmitters



- Non-contacting radar level transmitter type 2290**
- Non-contacting
  - Robust against most interfering factors such as fumes, light foaming or fluctuations of pressure or temperature
  - Display and comprehensive configuration menu
  - PP, PTFE or steel antenna enclosures



- Guided radar level transmitter type 2291**
- Reliable guidance of measuring signal along probe
  - Advanced resilience in case of extreme fumes, thick foam layers or agitation
  - Great performance also on media of low dielectric constants
  - Special coatings for probes available: PP, PFA and FEP



- Ultrasonic integral level transmitter type 2260**
- Non-contact principle
  - Narrow 5 and 6° beam
  - Range: 4, 6, 15 meters (13, 20, 50 ft)
  - 4 - 20 mA, HART, relay output
  - PP and PVDF bodies
  - ATEX versions
  - Quick-set and advanced menu
  - Large multi-parameter display
  - Allows for open channel measurement



- Ultrasonic level sensor type 2270**
- Non-contact principle
  - Narrow 5 and 6° beam
  - Range: 4, 6, meters (13, 20 ft)
  - 4 - 20 mA, HART
  - PP and PVDF bodies
  - Easy to use EView programming software
  - Allows for open channel measurement



- Hydrostatic level sensor type 2250**
- 0 - 10 psi = 0 - 7.03 m = 0 - 23.06 ft
  - 0 - 50 psi = 0 - 35.15 m = 0 - 115.32 ft
  - Wetted material: PVDF, PVC, ceramic and FKM
  - Submersible sensor
  - 4 - 20 mA or digital (S<sup>3</sup>L)
  - Uses hydrostatic pressure for level and depth control

## Water analysis



- Chlorine analyzer system type 4630**
- Continuous free chlorine measurement without chemical reagents
  - Optional pH sensor for increased accuracy
  - Pre-wired panel for easy installation
  - Built in pressure regulator and variable area flow meter



- Turbidimeter type 4150**
- Complies with U.S. EPA 180.1 or ISO7027
  - Two adjustable alarm relays
  - Built-in pressure regulator
  - Easy access for wiring and maintenance
  - Optional auto cleaning for reduced maintenance



- Process optical dissolved oxygen sensor type 2610**
- Optical DO measurement with no flow requirements
  - No membranes or filling solutions
  - Flexible communications, 4 to 20 mA or modbus 3-2610-41
  - Measurement range: 0 - 20 mg/L, 0 - 200 % saturation



- Chlorine dioxide system type 4632**
- Complete turnkey system – no additional parts required to install
  - Now available with a flow switch interrupt (chlorine and chlorine dioxide)
  - Complies with EPA standard 334.0
  - Chemical free measuring system – 0 - 2 ppm
  - Optional pH measurement

Easy to monitor

# Easy to operate

## Accessories



- Switching power supplies  
type 7310**
- Universal AC input/full range
  - Protections: short circuit/overload/over-voltage
  - Cooling by free air convection
  - Install on DIN rail TS-35/7.5 or 15
  - Built in DC OK active signal
  - LED indicator for power on



- i-GO signal converter  
type 8058**
- Connects third party 4 - 20 mA signals to the 8900 and 9900
  - Available for single or dual 4 - 20 mA sensor inputs
  - Compatible with 8900, 9900



- Buffer solutions  
type pH/ORP**
- NIST Traceable
  - Easily identifiable colour coded buffer solutions
  - Liquid or powder versions
  - Temperature compensated values
  - Kits for easy use



- Wall mount  
accessory kit**
- Compact enclosure that works with 9900 transmitter and other 1/4 DIN size instruments
  - Equipped with a 1/4 DIN cutout and two 1/2" holes at the base
  - Mounting hardware and liquid tight connectors are included



- 8059 external relay  
module**
- AC and DC powered versions
  - External relays controlled by host instrument
  - Digital pass-through (DC versions) to simplify wiring
  - Relay can be tested locally, and also via the host instrument
  - Only compatible with 8900



- HART –  
USB modem**
- HART to USB converter
  - Portable or DIN rail version
  - ATEX



- Calibration kits for turbidimeter  
type 4150**
- Stable pre-mixed standards that are certified accurate
  - Sealed calibration cuvettes
  - Shelf-life 12 months
  - Easy to follow instructions
  - Kits for easy use



- Limit contacts GK 10/GK11 for  
type 335/350 and short version**
- Reed contact
  - IP65
  - 230 V



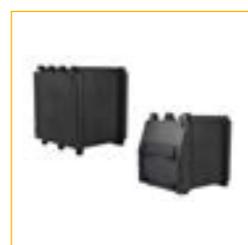
- pH/ORP system tester  
type 2759**
- Battery powered
  - Simulates pH and ORP
  - Compatible with 2750 and 2760 preamp
  - Connects to any pH/ORP instrument



- Configuration tool type 0252**
- Back up and restore SmartPro transmitters and blind sensors
  - Configurations to a computer file
  - User-friendly interface
  - Configure settings such as instrument type, units, scale 4 to 20 current loops and modify labels from the computer
  - Use a single file to clone multiple SmartPro transmitters and blind sensors



- 4 - 20 mA sensor GK 15 for VAFM  
type 335/350**
- 12 - 24 V DC
  - IP 65
  - 4 - 20 mA (3 wire)



- Rear enclosure kits for 9900**
- Compatible with all existing 9900-1P transmitters
  - NEMA TYPE 4X/IP66 rated for indoor or outdoor installations
  - Spacious for any 9900 transmitter accessory module
  - Hinged cover design for easy to access wiring
  - Hinged cover suitable for wall mount or pipe mount installations



- Conductivity/resistivity tools  
type 2850 - 101 - X**
- Available in 5 different values
  - Verifies electronic independent of electrode
  - Compatible with all conductivity and resistivity instruments
  - Temperature compensated to 25 °C



- Formazin stock kit for turbidimeter  
type 4150**
- Turbidity standard for most any value
  - Three different graduated pipettes included
  - Four glass cuvettes with light shield caps
  - Easy to follow instructions



- Flow wet-tap valve  
type 3519**
- DN15-DN900 (1/2 to 36 in.)
  - PVC
  - 7 bar @ 20 °C (100 psi max @ 68 °F)
  - Use with wet-tap paddlewheel flow sensors type 515 and 2536

# Easy to connect

## Installation fitting tees



- Plastic - metric tees**
- ABS\* DN20-DN50
  - PVC DN15-DN50
  - PP DN15-DN50
  - PVDF DN15-DN50
  - PE DN15-DN50



- Plastic - fiberglass tees**
- Fiberglass 1.5-2.0"/SCH 80
  - Special order 1/2 saddles available up to 12 inch/DN 300



- Plastic - PVC tees**
- PVC 0.50-2.0" / SCH 80
  - PVC-C 0.50-2.0" / SCH 80
  - PVC BSP\* 0.50-2.0"
  - Fiberglass 1.50-2.0" / SCH 80



- Metal - tees**
- Carbon steel NPT 0.50-2.0" / SCH 40
  - Copper sweat-on 0.50-2.0" / SCH K
  - Galvanized iron NPT 1.00-2.0" / SCH 40



- Metal - tees**
- 316 SS NPT 0.50-2.00"/SCH 40
  - Brass NPT 1.00-2.00"/SCH 40

\* BSP and ABS fittings are available through your local Georg Fischer sales company.

## Weldolets / brazelets



- Weldolet**
- PVC-U DN65-DN600
  - PP DN65-DN600
  - PE DN65-DN600
  - PVDF DN65-DN600
  - SS DN50-DN630



- Weldolets / brazelets**
- Carbon steel 2.5-12.0"/SCH 40
  - Brass 2.5-12.0"/SCH 40
  - 316 SS 2.5-12.0"/SCH 40

## Wafer fittings



### Wafer

- PP DN65-DN300 (2.5-4.0")
- PVDF DN65-DN200 (3.0")

## Saddles



### Electrofusion transition

- PE 2.0-12.0"



### Electrofusion

- PE DN65-DN400



### Clamp-on

- PVC 2.0-8.0"/SCH 80
- PVC-U metric DN65-DN200
- BSP 3"-6"



### PVC-U Glue-on

- PVC 10"-12"/SCH 80
- Special order up to 20 inch

## Metalex



- Metalex**
- SS socket 0.50-1.00"
  - SS weld-on 1.25-12"



- Metalex weld-on mini-tap**
- 1.25-12"

# Control

Precise control throughout your automation loop

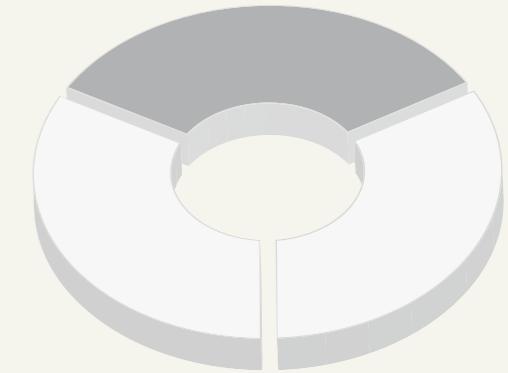
Clever design makes life easy. All our measurement parameters can be connected with one and the same transmitter, a true multi-parameter controller. Additional functionalities like batch control or communication technologies can be added anytime because of the modular design. Our control products are simple to operate, have intuitive menu structures and can be upgraded modularly.



## Control

# Control products

An overview of the key products



## Multi-parameter instruments



- SmartPro transmitter type 9900**
- Multi-parameter input selection
  - Large auto-sensing backlit display
  - „Dial-type“ digital bar graph
  - Optional field upgradable relays
  - Selectable error mode for current outputs, 3.6 mA or 22 mA
  - Optional relay, direct conductivity/resistivity, 4 to 20 mA output, and HART modules are available



- Multi-parameter/multi-channel controller type 8900**
- AC or DC power option
  - Up to 6 sensor inputs (2 frequency inputs max)
  - Up to 4-20mA outputs
  - Up to 8 relays
  - Use with all digital (S<sup>3</sup>L) sensors



- Dual channel transmitter type 9950**
- Independent dual channel multi-parameter, flow, pH, ORP, conductivity, resistivity, pressure, temperature, level, volume, salinity, dissolved oxygen, other (4 to 20 mA)
  - 2 Passive 4 to 20 mA loop outputs standard
  - Options for up to 4 relays – dry contact or solid state
  - Derived functions: ratio, difference, sum, % rejection, % recovery

## Modules



- Modules type 9900**
- 2 mechanical relays module
  - Direct conductivity module
  - HART communication module
  - Batch module
  - Additional 4 to 20 mA output module



- Modules type 9950**
- 4 mechanical relays module
  - 2 mechanical relays and 2 solid state relays module
  - 2 mechanical relays with 4 binary input modules

## Accessories



- i-GO signal converter type 8058**
- Connects third party 4-20 mA signals to the 8900 and 9900
  - Available for single or dual 4-20 mA sensor inputs
  - Compatible with 8900, 9900
  - Requires programming at the factory with the 8350, 8450



- PID controller type 3216**
- Easy set-up
  - Auto-tune
  - 24 V or 100-230 V
  - External set-point
  - Manual override via push button
  - Compact design

# Actuation

Reliable actuation with configuration flexibility

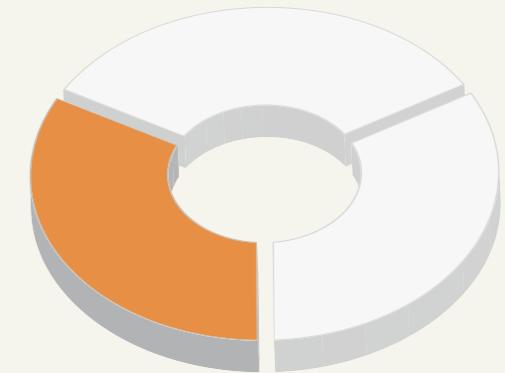


With our modular set-up, valves and actuators can be combined flexibly and additional functionalities, like positioners or monitoring devices, can be added optionally. Naturally, we offer the whole range in all-plastic designs, which are capable of withstanding harsh environments. A wide range of pressure regulating valves and accessories complete our actuation portfolio.

## Actuation

# Actuation products

An overview of the key products

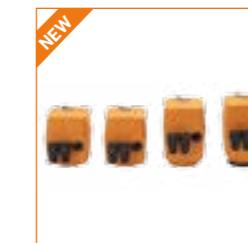


## Actuators electric and pneumatic



Electric actuators  
type EA15

- Replaces type E11
- 100–230 V AC, 24 V AC/DC
- Torques from 20 Nm
- LED enforced position feedback
- Standard: position feedback, heater
- Optional: fail-safe return unit integrated



Electric actuators  
type EA25, EA45, EA120, EA250

- Replaces type EA21 - 42
- 100–230 V AC, 24 V AC/DC
- Torques from 25 Nm – 250 Nm
- LED enforced position feedback
- Standard: position feedback, heater
- Optional: fail-safe return unit integrated, positioner, monitoring, profibus DP VO



Pneumatic actuator  
type PA11/PA21

- FC, FO, DA
- Rack and pinion principle
- Accessory interface acc. ISO5211
- Visual position indication
- Full plastic solution
- PA11: 10 Nm/PA21: 20 Nm



Pneumatic actuator  
type PA30 - PA90

- FC, FO, DA
- Scotch Yoke principle
- Accessory interface acc. ISO5211
- Visual position indication
- Adjustable end stops
- Various coatings on request

## Actuated butterfly valves



Butterfly valve electric  
type 145/146/147\*

- Electric actuated butterfly valve
- Actuator type: EA45/120/250 (24 V, 110–230 V)
- Plastic butterfly valve wafer/lugstyle
- Butterfly valve type 567/578
- PVC-U, PVC-C, ABS, PP-H, PVDF
- 567: DN50–DN600; 578: DN50–DN300



Butterfly valve electric  
type 038-E/039-E

- Electric actuated butterfly valve
- Actuator type: EA45/120/250 (24 V, 110–230 V)
- Metal butterfly valve wafer/lugstyle
- Butterfly valve type 038/039
- 038/039: Ductile iron with powder/epoxy/rilsan coating
- 038: DN50–DN600, 039: DN50–DN1200

\* Predecessor type 140/143/144 with electric actuators type EA31/42

# Easy to modify

## Actuated butterfly valves



- Butterfly valve pneumatic type 240/243/244**
- Pneumatic actuated butterfly valve
  - Actuator type: PA30-PA90
  - Plastic butterfly valve wafer/lugstyle
  - Butterfly valve type 567/578
  - PVC-U, PVC-C, ABS, PP-H, PVDF
  - 567: DN50 - DN600; 578: DN50 - DN300



- Butterfly valve pneumatic type 038-P/039-P**
- Pneumatic actuated butterfly valve
  - Actuator type: PA30 - PA70
  - Metal butterfly valve wafer/lugstyle
  - Butterfly valve type 038/039
  - 038/039: ductile iron with powder/epoxy coating/rilsan coating
  - 038: DN50 - DN600; 039: DN50 - DN1200

## Actuated ball valves



- Pneumatic ball valve type 230-235**
- Pneumatic actuated 2-way ball valve
  - Actuator type: PA11/PA21 (<DN65)
  - Actuator type: PA30-PA90 (>DN50)
  - Ball valve 546
  - ABS, PVC-C, PVC-U, PP-H, PVDF
  - DN10-DN100



- Pneumatic ball valve type 285-288**
- Pneumatic actuated 3-way ball valve
  - Actuator type: PA11/PA21
  - Actuating angle 90°
  - Ball valve 543
  - ABS, PVC-C, PVC-U, PP, PVDF
  - DN10-DN50



- Electric ball valve type 179 - 184\***
- Electric actuated 2-way ball valve
  - Actuator type: EA25/45/120 (24 V, 110-230 V)
  - Actuating angle 90°
  - Ball valve 546
  - ABS, PVC-C, PVC-U, PP-H, PVDF
  - EA25 DN10-DN50; EA45/120 DN65-DN100



- Electric ball valve type 167-170\*\***
- Electric actuated 3-way ball valve
  - Actuator type: EA25 (24 V, 110-230 V)
  - Actuating angle 90°; max. 180°
  - Ball valve 543
  - ABS, PVC-C, PVC-U, PP, PVDF
  - DN10-DN50



- Electric ball valve type 127**
- Electric actuated 2-way ball valve
  - Actuator type: EA15 (24 V, 110-230 V)
  - Actuating angle 90°
  - Ball valve 546
  - ABS, PVC-C, PVC-U, PP-H, PVDF
  - DN10-DN50



- Electric ball valve type 104**
- Electric actuated 2-way ball valve
  - Actuator type: EA04 (24V, 85-230V)
  - Actuating angle 0 - 90°
  - Ball valve 546
  - PVC-C, PVC-U, PP-H
  - DN10 - DN50 3/8 - 2"
  - Limited accessory range
  - Low cycle applications

\* Predecessor type 130-135 with electric actuators type EA21 / 31

\*\* Predecessor type 185-188 with electric actuator type EA21

## Actuation

### Actuated diaphragm valves



- Diaphragm valve type 604/605**
- PVC-U, PVC-C, PP-H, PVDF
  - EPDM, FKM, PTFE / EPDM, PTFE / FKM
  - DN15
  - PN6
  - pneumatic actuated FC, FO, DA



- Diaphragm valve DIASTAR TenPLUS**
- ABS, PVC-U, PVC-C, PP-H, PVDF, PVDF-HP
  - EPDM, FKM, PTFE/EPDM, PTFE/FKM
  - DN15-DN50
  - PN10 (both sides)
  - pneumatic actuated FC, FO, DA
  - Accessories available



- Diaphragm valve DIASTAR Six**
- ABS, PVC-U, PVC-C, PP-H
  - EPDM, FKM
  - DN15-DN50
  - PN6
  - pneumatic actuated FC



- Diaphragm valve DIASTAR Sixteen**
- PVDF, PVDF-HP
  - EPDM, FKM, PTFE/EPDM, PTFE/FKM
  - DN15-DN50
  - PN16
  - pneumatic actuated FC, FO, DA
  - Accessories available



- Diaphragm valve DIASTAR Ten**
- ABS, PVC-U, PVC-C, PP-H, PP-N, PVDF, PVDF-HP
  - EPDM, FKM, PTFE/EPDM, PTFE/FKM
  - DN15-DN50
  - PN10
  - pneumatic actuated FC, FO, DA
  - Accessories available



- Diaphragm valve DIASTAR 025**
- ABS, PVC-U, PVC-C, PP-H, PVDF, PVDF-HP
  - EPDM, FKM, PTFE/EPDM, PTFE/FKM
  - DN65-DN150
  - up to PN10
  - pneumatic actuated FC, FO, DA
  - Accessories available

### Actuated process control valves



- Solenoid valve type 157**
- direct acting pivoted armature valve
  - 2/2-Ways
  - PVC-U
  - EPDM, FKM
  - 230 V AC, 24 V AC, 24 V DC
  - DN4-DN8
  - 0 - 4 bar depending on dimension



- Solenoid valve type 160/161**
- direct acting pivoted armature valve
  - 2/2- or 3/2-ways
  - PVC-U
  - EPDM, FKM
  - 230 V AC, 24 V AC, 24 V DC
  - DN10-DN20
  - 0 - 3 bar depending on dimension



- Solenoid valve type 165**
- pilot assisted solenoid valve
  - 2/2-Ways
  - PVC-U, PVDF
  - EPDM, FKM
  - 230 V AC, 110 V AC, 24 V AC, 24 V DC
  - DN15-DN50
  - 0.5 - 6 bar



- Solenoid valve type 166**
- direct acting pivoted armature valve
  - 2/2- or 3/2-Ways
  - PVC-U, PVDF
  - EPDM, FKM
  - 230 V AC, 110 V AC, 24 V AC, 24 V DC
  - DN3-DN5
  - 0 - 10 bar depending on dimension



# Easy to regulate

## Pressure regulating valves



- Pressure reducing valve type 582**
- PVC-U, CPVC, PP-H, PVDF
  - Spigot or union connection
  - O-ring Material: EPDM, FKM
  - DN10-DN50
  - 0.5 - 9 bar or 0.3 - 3 bar
  - Manometer with or without gauge guard optional



- Pressure retaining valve type 586**
- PVC-U, CPVC, PP-H, PVDF
  - Spigot or union connection
  - O-ring Material: EPDM, FKM
  - DN10-DN50
  - 0.5 - 9 bar or 0.3 - 3 bar
  - Manometer with or without gauge guard optional



- Pressure reducing valve type V82**
- PVC-U, PP, PVDF
  - EPDM, EPDM-PTFE-coated
  - V82 DN65-80: 0.5-6 bar
  - DN100 0.5-4 bar

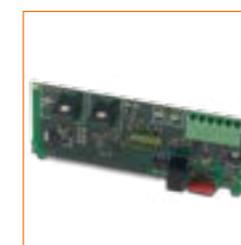


- Pressure retaining valve type V86**
- PVC-U, PP, PVDF
  - EPDM, EPDM-PTFE-coated
  - V86 DN65-80: 1-6 bar
  - DN100: 1-4 bar

## Electric accessories



- Monitoring board (EA25-250)**
- Easy monitoring for on/off actuation
  - "Plug & Play" installation
  - Cycle time extension
  - Cycle time monitoring
  - Cycle counter
  - Motor current monitoring



- Positioner (EA25-250)**
- Input 4 - 20mA or 0 - 10V (can be inverted)
  - Output/Feedback 4.20mA (can be inverted)
  - Motor current monitoring on board
  - "Plug & Play" installation



- Fail-safe return unit (E15-250)**
- Integrated battery including charging management
  - Error messages for low battery
  - Optional fail safe open/fail safe close
  - Optional without battery for external 24V DC source



- Profibus (EA25-250)**
- Version DP V0
  - M12 connectors for daisy chain
  - Integrated in actuator housing (no external box)
  - Can be used in combination with fail-safe return unit
  - Monitoring or positioner can be activated via software

## Pneumatic accessories



- Solenoid pilot valve 3/2-ways type PV94**
- 230 V, 50 - 60 Hz
  - 115 V, 50 - 60 Hz
  - 24 V, 50 - 60 Hz
  - 24 V DC
  - G $\frac{1}{8}$ , G $\frac{1}{4}$ , G $\frac{3}{8}$ mm
  - DN1.2



- Solenoid pilot valve 3/2-ways type PV95**
- 230 V, 50 - 60 Hz
  - 115 V, 50 - 60 Hz
  - 24 V, 50 - 60 Hz
  - 24 V DC
  - G $\frac{1}{8}$ , G $\frac{1}{4}$
  - DN1.5-DN2



- Solenoid Pilot valve type 2000**
- Modular version for 3/2-way and 5/2-way valves
  - 24 V DC
  - Connection module AS-Interface
  - Connection module profibus interface



- Solenoid pilot valve type MNL 532**
- Version for 3/2-way and 5/2-way
  - Namur connection
  - Material of body: Aluminium
  - 24 V AC, 24 V DC, 48 V AC, 110 V AC, 230 V AC



- Electric position feedback type ER 52-1/ER53-1**
- For pneumatic stroke actuators
  - For DIASTAR Ten, TenPLUS, Sixteen, 025
  - Mechanical switches (AgNi or Au)
  - NPN/PNP, Namur connection
  - With visual position indication



- Electric position feedback limit switch box**
- For pneumatic rotary actuators
  - For PA11 - 90:
  - Mechanical switches (AgNi or Au)
  - NPN/PNP, Namur connection
  - With visual position indication



- Stroke limiter/ manual override**
- For DIASTAR all type Ten, TenPLUS, Sixteen, 025

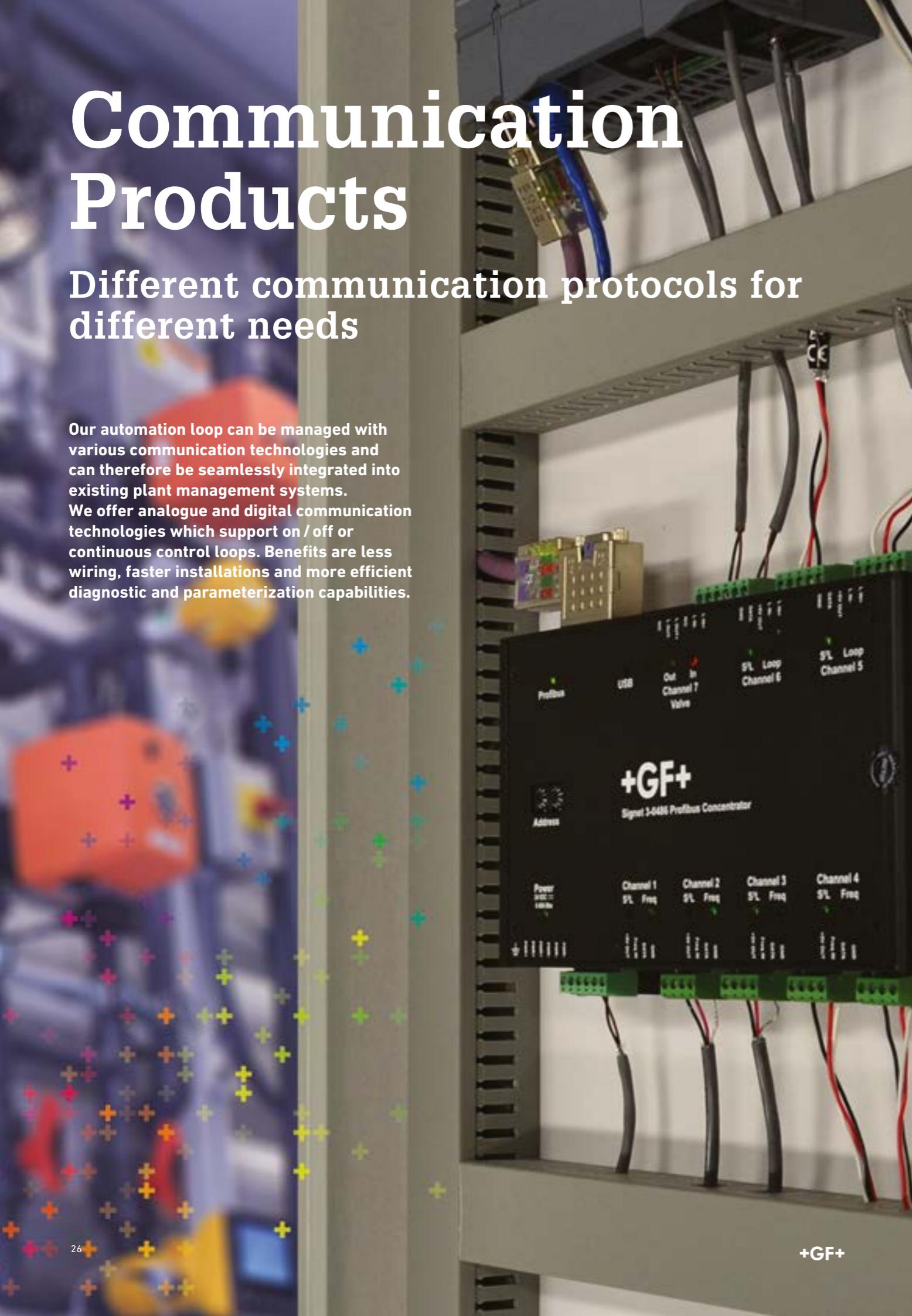


- Digital electro-pneumatic positioner type DSR 500**
- Mounted on pneumatic control valves
  - Linear and rotary actuators
  - Nominal stroke 3 - 28 mm
  - Self-learning
  - Control signal 4 - 20 mA
  - 24 V DC

# Communication Products

## Different communication protocols for different needs

Our automation loop can be managed with various communication technologies and can therefore be seamlessly integrated into existing plant management systems. We offer analogue and digital communication technologies which support on / off or continuous control loops. Benefits are less wiring, faster installations and more efficient diagnostic and parameterization capabilities.

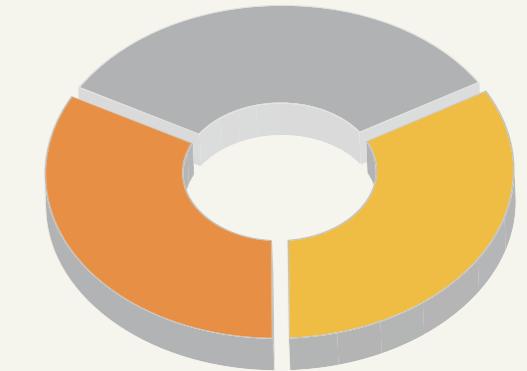


## Communication

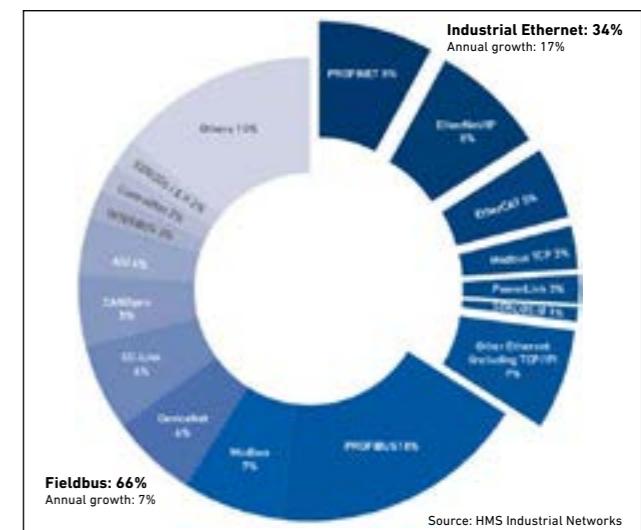
# Communication products

## Communication in industry

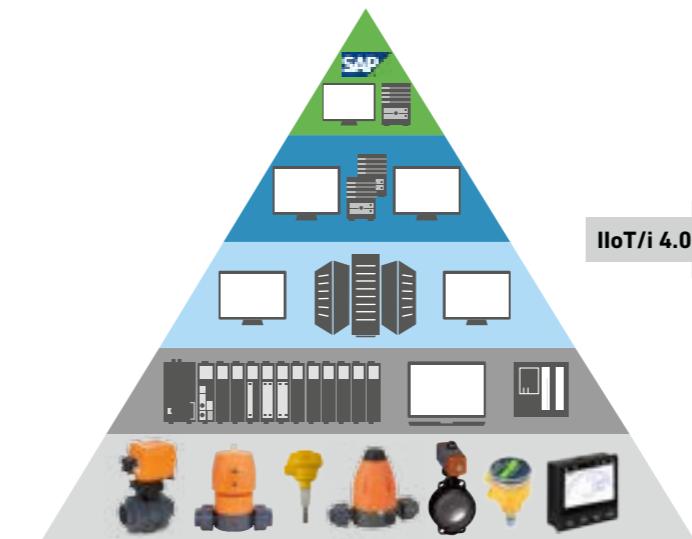
Digital communications with instruments, sensors, and valves is a growing necessity in many applications. The ability to digitally control and gather information from remote devices offers increased flexibility. Internet of Things (IoT), Industrial Internet of Things (IIoT), and Industry 4.0 (i 4.0) are movements in technology that connect individual sensors and actuators to information networks allowing automation and enterprise systems unparalleled access to real time data and information. Already today digital communication is used via different field bus protocols. GF is providing options for Profibus, HART and AS-interface. Converters can be used to transition from one protocol to the other. For the bus communication split please refer to the chart. Very often also standard analogue or digital signals are connected to PLCs to make them accessible for programming. In the future the different layers of system automation will disappear and merge into each other. GF is getting ready to support you in the best way today and in the future.



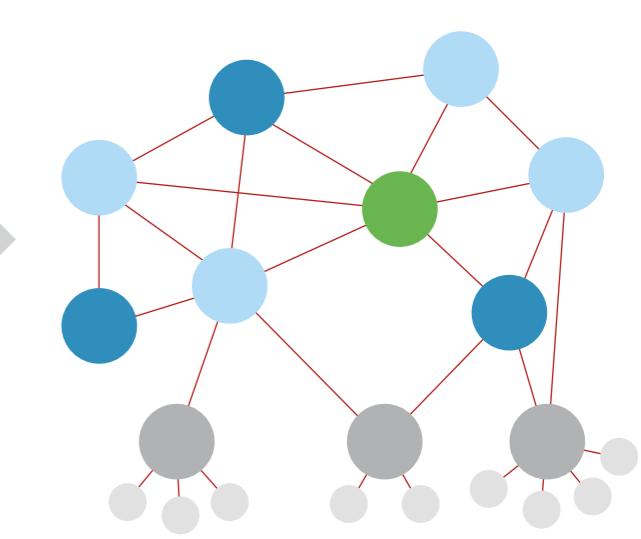
## Fieldbus vs. industrial ethernet



## Today (Automation pyramid/hierarchic)



## Future (Cyber-Physical-Systems)





## Communication



### Profibus concentrator type 3 - 0486

- Connect GF actuated valves and sensors to profibus automation networks
- Supports six S<sup>3</sup>L sensors or relay modules plus a proportional controlled actuated valve
- Four of the (S<sup>3</sup>L) inputs support flow frequency devices for cost effective flow monitoring
- Two of the (S<sup>3</sup>L) inputs support 4 to 20 mA current loop inputs for connections to third party sensors



### Profibus for valve cluster

- Modular version for 3/2-way and 5/2-way valves
- Connection module profibus interface
- 24 V DC
- Optional available module AS-Interface



### Profibus (EA25-250)

- Connectable to Profibus DPV0 networks
- Using all the advantages of the standard full plastic GF electric actuator



### Transmitter type 9900

- Optional modul available



### Non-contacting radar level transmitter type 2290

- Non-contacting
- Robust against most interfering factors such as fumes, light foaming or fluctuations of pressure or temperature
- Display and comprehensive configuration menu
- PP, PTFE or steel antenna enclosures



### Ultrasonic level sensor type 2260/ultrasonic level transmitter type 2270

- Non-contacting
- Robust against most interfering factors such as fumes, light foaming or fluctuations of pressure or temperature
- Display and comprehensive configuration menu
- PP, PTFE or steel antenna enclosures



### AS-interface for pneumatic rotary actuators

- Pilot valve 5/2-ways
- Electric feedback integrated
- Full plastic housing
- Optical status indicator
- AS interface version 3.0



### AS-interface for electric actuators

- Integrated control an electric
- Feedback
- For 24 V DC actuators
- For EA11-EA42
- Manual override standard



### AS-interface for manual valves with feedback

- With integrated feedback
- Ideal for ball valves
- Ideal for butterfly valves
- Ideal for diaphragm valves



### AS-interface for pneumatic stroke actuators

- Pilot valve 3/2-Ways
- Compact design
- Full plastic housing
- Optical status indicator
- AS Interface Version 3.0



### AS-interface for sensor with switch output

- With switching output
- For level switch
- For flow switch
- For pressure switch
- For temperature switch

# Valves

The right valve  
for your application

We offer one of the most comprehensive valve product ranges, which enables you to find the right match for your application. Our valves are available in a wide selection of dimensions, materials, chemical resistances, standards, actuation, operation principles and pipe connections and are designed for long service life. The combination of the right valve selection and our high product quality leads to a favorable total cost of ownership.

+GF+

## Valves

### Manual ball valves



Ball valve  
type 546

- ABS, PVC-C, PVC-U, PP-H, PVDF
- EPDM, FKM, ball seat: PTFE, PVDF
- DN10 - DN100
- Up to PN16 = PVC-U, PVC-C, PVDF; up to PN10 = PP-H, ABS
- Lockable lever, multifunctional module
- Linear version



Linear ball valve  
type 546

- PVC-U, PVC-C, ABS, PP-H, PVDF
- DN15 - DN50
- Lockable lever
- Multifunctional module



3-Way ball valve  
type 543

- ABS, PVC-C, PVC-U, PP-H, PVDF
- EPDM, FKM, ball seat: PTFE, PVDF
- DN10 - DN50
- Up to PN10
- Lockable Lever, multifunctional module



Ball valve  
type 375

- PVC-U, PVC-C
- EPDM, FKM, ball seat: PTFE
- DN10-DN100
- PN16
- Not actuated



Metering ball valve  
type 523

- PVC-U, PP-H, PVDF
- EPDM, FKM, Ball Seat: PTFE
- DN10-DN15
- Up to PN16

### Manual Diaphragm valves



Diaphragm Valve  
type 514

- PVC-U, PVC-C, ABS, PP-H, PVDF, PVDF-HP
- EPDM, PTFE/EPDM, FKM, PTFE/FKM
- DN15 - DN50
- Up to PN16
- Lockable handwheel
- Electrical feedback module



Diaphragm valve  
type 515

- PVC-U, PVC-C, ABS, PP-H, PP-N, PVDF, PVDF-HP
- EPDM, PTFE/EPDM, FKM, PTFE/FKM
- DN15 - DN50
- Up to PN16
- Lockable handwheel
- Electrical feedback module



Diaphragm valve  
type 517 (317)

- PVC-U, PVC-C, PP-H, PVDF, PVDF-HP
- EPDM, PTFE/EPDM, FKM, PTFE/FKM
- DN15 - DN50 (type 317: DN65-DN150)
- Up to PN16
- Lockable handwheel
- Electrical feedback module



Diaphragm valve  
type 519

- PP-H, PP-N, PVDF-HP
- EPDM, PTFE/EPDM, PTFE/FKM
- DN20 - DN20 : d110 - d63
- Up to PN16
- Lockable handwheel
- Electrical feedback module

## Valves

### Manual butterfly valves



**Butterfly valve manual  
type 567**

- ABS, PVC-C, PVC-U, PP-H, PVDF
- Sealings: EPDM, FKM, PTFE/FKM
- DN50 - DN600
- PN10
- Lever, Gear, 230 V o. 24 V, FC /FO/DA
- Optional: Integrated position indicator in valve body



**Metal butterfly valve  
type 038/039**

- 038: GGG, LUG; 039: GGG Wafer
- Sealings: EPDM, FKM
- 038: DN50 - DN300;
- 039: DN50 - DN1200
- PN10/PN16
- Lever, gear, 230 V o. 24 V, FC/F0/DA



**Butterfly valve manual  
type 578**

- ABS, PVC-C, PVC-U, PP-H, PVDF
- Sealings: EPDM, FKM, PTFE/FKM
- DN50 - DN300
- PN10
- Lever, gear, 230 V o. 24 V, FC/F0/DA
- Optional: Integrated position indicator in valve body



### Accessories



**Multifunctional  
modules**

- Multi functional module
- Accessory for ball valves 546/543
- Limit switch AgNi, Au, Namur, NPN, PNP
- Interface for electric pneumatic actuators



**Electrical feedback  
module**

- Electrical feedback module
- Accessory for (manual) diaphragm valves 514-519
- Limit switch AgNi or Au
- Self adjusting mechanism



**Integrated position  
indicator**

- Integrated position indicator
- Accessory for butterfly valves 567/578
- Limit switch AgNi, AU, Namur, NPN, PNP



**Labelling ball valve**

- Labelling system for ball valve 546/543/523

### Process control valves



**Angle seat check valve  
type 303/304**

- PVC-U, ABS)
- EPDM, FKM
- DN10 - DN80
- PN10



**Wafer check valve  
type 369**

- PVC-U, PP-H, PVDF
- EPDM, FKM
- DN32 - DN300, 1½ - 12"
- PN10



**Line strainer  
type 305/306**

- PVC-U, PVC-C, ABS, PP-H, PVC-U transparent
- EPDM, FKM
- DN15 - DN50, PVC-U up to DN80
- PN10
- Screen: stainless-steel and PVC-U



**Throttle valve  
type V251**

- PVC-U, PP-H, PVDF
- EPDM, FKM
- DN10 - DN50
- PN10



**Water jet suction pump (eductor)  
type P20**

- PVC-U, PP-H, PVDF
- EPDM, FKM
- DN10 - DN80
- PN10



**Float valve  
type V140**

- PVC, PP
- EPDM, FKM
- DN10 - DN80
- PN6
- Vertical mounting position

### Process control valves



**Check valve  
type 561/562**

- ABS, PVC-C, PVC-U, PP-H, PVDF
- EPDM, FKM
- DN10 - DN100
- Up to PN16
- Type 562 with spring



**Ventilating valve/  
Ventilating and bleed valve  
type 591/595**

- ABS, PVC-C, PVC-U, PP-H, PVDF
- EPDM, FKM
- DN10 - DN100
- Up to PN16
- Type 595 with spring
- Float PP-H / PVDF



**Gauge guard  
type Z500/501**

- True plastic design (no metal screws!)
- PVC-U, PP-H, PVDF
- EPDM, EPDM-PTFE-coated
- DN20 or DN 25
- PN10
- With or without pressure gauge

# Services & solutions in all project phases

When moving from metal to plastic and increasing the use of those materials, their benefits are clear: low material weight, corrosion and chemical resistance, low total cost of installation and long life expectancy are just a few.

At GF, we have over 60 years of plastics know-how, and can offer you full support to meet your needs in designing, installing and commissioning plastic systems.



# Centers of excellence

## Competent support for you

Competent support offered by all GF sales companies and our Centers of Excellence (CoE)



Technical support

Chemical resistance

Training courses

On-site training

CAD library

Online and mobile calculation tools

Technical manual

Customising



### + Easy access support

Quick, reliable and competent service is as important as a comprehensive product offering

We ensure that our staff in all countries has state-of-the-art knowledge of products, applications and technology. As a result, our local GF automation specialists can support you professionally in choosing the right products and defining a system which truly satisfies your needs, in addition to commissioning and after-sales service. Furthermore, GF is setting up a global network of centers of excellence (CoE) for automation where dedicated teams for sales, service and automation training are available to you.

### + Value Added Services

From planning support to implementation – our specialists are always close by

As a leading provider of piping systems in plastic and metal, we offer our customers not only reliable products, but also a large package of services. Our support ranges from a comprehensive technical manual or the extensive CAD library to an international team of experts, who work closely together with local sales companies. And when it comes to implementing a project, our customers additionally benefit from a wide range of training courses, either on site or in our modern training centers worldwide.

For more information on our automation system please contact our local sales companies and our sales representatives.  
[www.gfps.com](http://www.gfps.com)

# Worldwide at home

Our sales companies and representatives ensure local customer support in over 100 countries

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