+GF+

Built for the future

Butterfly Valve 565

Excellence in Flow+

Defying industry challenges

The importance of water for humanity cannot be understated. At first glance, it looks like an easy thing to handle. However, this vital media poses various challenges to industries requiring sophisticated and robust piping systems to ensure safe and reliable operation.

Water is life, and water is the most used substance on Earth. Consequently, treating it with utmost care and the highest quality systems is crucial for the environment, industries, and humans. Water challenges vary for industries such as water treatment, marine, and cooling applications. They all need reliable yet cost-effective solutions. Global megatrends such as climate change, urbanization, and digitalization are additional challenges industries must consider.

Historically, when it comes to butterfly valves, metal was the material of choice. The robustness and economic efficiency were convincing arguments for choosing metal valves. As durable as they are, there are some crucial drawbacks.

First, metal suffers from corrosion and abrasion. Depending on the environment, this shortens the lifetime of the valve significantly, resulting in additional costs due to interruptions of operation and replacements for the old valves. Second, there is weight. Metal butterfly valves are heavy, increasing stresses on piping systems and leading to required supporting structures. Additionally, the heavy valves are cumbersome to install and maintain.

Those drawbacks are the foundation for the biggest challenge – sustainability and the ecological footprint. Lightweight and long-living components are key for reaching both mandatory and self-proclaimed sustainability goals.

Building the future with lightweight durability

As thermoplastics provide strength, durability, and resistance to corrosion, they have overtaken metal as the primary choice for industrial applications. The benefits of the durable material in industrial applications cannot be denied.

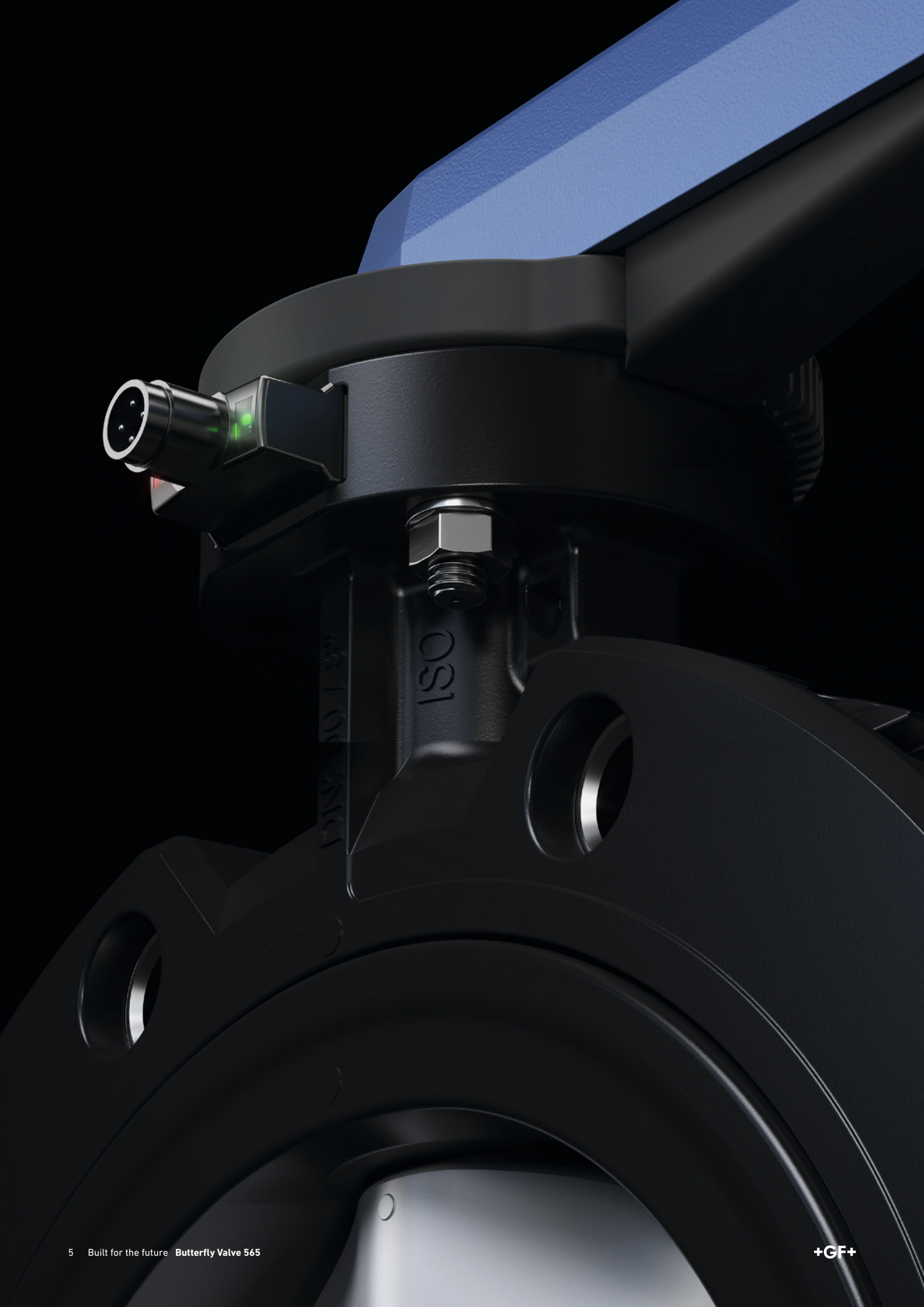
With the Butterfly Valve 565, GF offers high-quality thermoplastic butterfly valves for all water and water treatment applications. Launched in 2021, the 565's success began with the introduction of the Wafer-Style valve. In 2024, GF unveiled the 565 Lug-Style, expanding its versatility further. One year later, the 565 Big completes the portfolio by providing dimensions from DN350 to DN600*.

Unlike a Wafer-Style valve, the Lug-Style valve can function as an end valve, thanks to its body design and threaded inserts. Consequently, piping systems can be disassembled from one side, facilitating maintenance and operation of filters, tanks, and other installations.

*DN450 - DN600 available soon

The thermoplastic solution smoothens the path to a more sustainable future by being up to 60% lighter than metal competitors on average. Meanwhile, the expected service life is three times greater than that of metal valves. With the latest innovation, the Butterfly Valve 565, GF can provide a more sustainable, robust, and cost-effective solution for the reliable control of fluids.

Thanks to its standard interface, the Butterfly Valve 565 can easily accommodate various actuation options, including pneumatic, electric, and smart actuators, facilitating automated processes and ensuring future-proof operation.


ISO

Superior performance

Superior in every way, our high-performance thermoplastic butterfly valve enables the safe and sustainable control of fluids for all your water applications.

Direct replacement

The Butterfly Valve 565 comes in the same installation length as metal solutions. The exchange does not require any additional work on the pipes or new designs. This reduces the effort of both planning and installation, also thanks to a lighter weight.

Highly reliable

The Butterfly Valve 565 is built to last. High-performance thermoplastics protect it from abrasion and corrosion. This guarantees a longer system lifetime, even under harsh conditions such as water hammers. The results are a reduction of both maintenance costs and production stops.

Swiss quality

The Butterfly Valve 565 is produced by GF in Seewis (Grisons), Switzerland. High-quality valves have been produced here for over half a century. They combine technological innovation with the highest standards of material selection, manufacturing, and quality testing for safety, durability, and reliability.

60% lighter

Thanks to its low weight, a single person can lift and install the Butterfly Valve 565 in just a few minutes. This allows for easier installation, since the low weight significantly reduces the need for costly transportation and personnel.

Reduced costs

With the initial cost being comparable to metal solutions, the Butterfly Valve 565 outperforms its metal counterparts in the long run, reducing maintenance and replacement costs thanks to its superior materials and design.

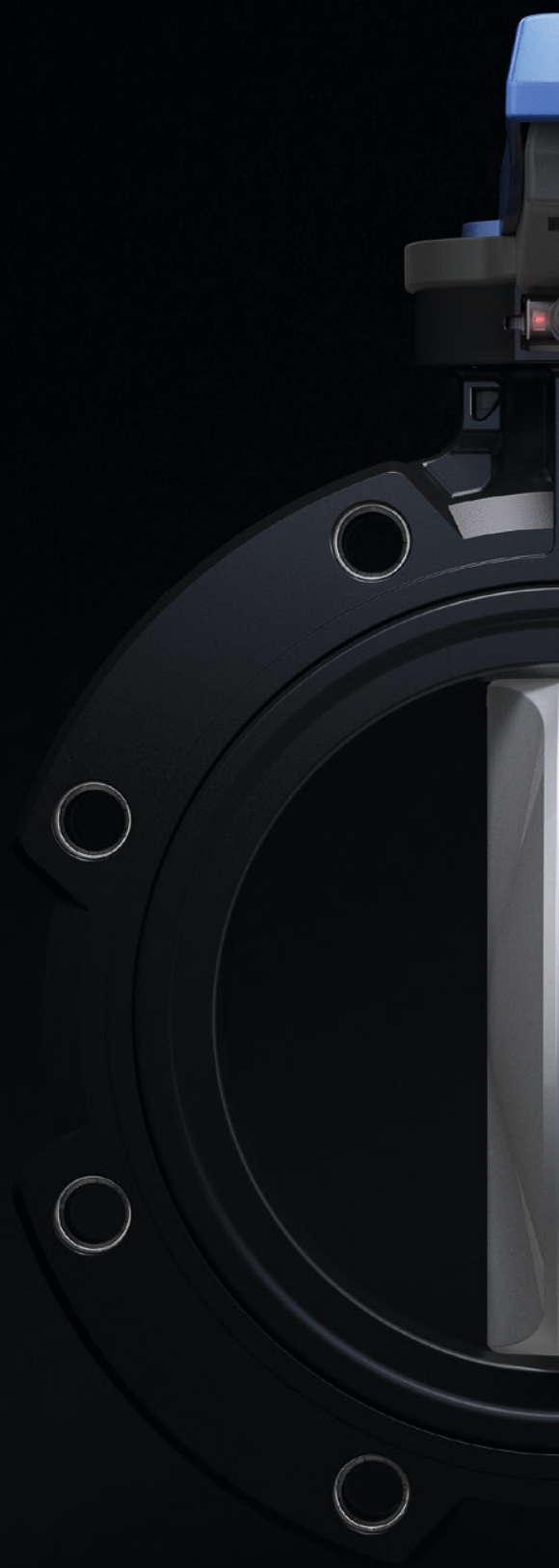
Ready for digitization

With its standard interface, the Butterfly Valve 565 can be upgraded with various modules, such as the smart actuator. This allows for automation and digitization of your systems, making them even more cost-effective and efficient.

Butterfly Valve 565 Lug-Style

Built for you

At GF, we understand that different challenges require adjustable solutions. This is why we revolutionized the well-proven design of lug-style butterfly valves. Adding plug-in lug inserts ensures the highest compatibility, flexibility, and increased sustainability.



Customizable and sustainable
The inserts are high-grade stainless steel as standard. Depending on individual requirements, the material can be changed to various materials on request. The removable inserts not only allow for the highest flexibility and customization but also for correctly sorted recycling at the end of service life, too.

Easier installation
Thermoplastic valves are on average 60% lighter than metal valves, making them easier to transport, handle, and install. Their lightweight design also reduces transportation and operation costs. The 565 comes in the same installation length (EN558 row 20, ISO 5752 row 20) as metal solutions facilitating the installation even more.

Inductive feedback sensor
The Butterfly Valve 565 is offered with inductive sensors that signal the CLOSED or OPEN position of the valve via an electric signal to a controller supplied by the customer. This feedback system can be added with the valve in-line and a new sensor swapped without removing the operator.

Unique and patented
The design of the valve housing is open at the side. The unique and patented design allows for easy access to the inserts. With this plug-in design of the inserts, less material is used than conventional solutions with over-molded inserts.

Better performance
Unlike metal valves, thermoplastic valves are immune to corrosion from rust and chemicals, which makes them ideal for use in harsh environments. They also have low thermal conductivity, which means they are better insulators than metal valves.

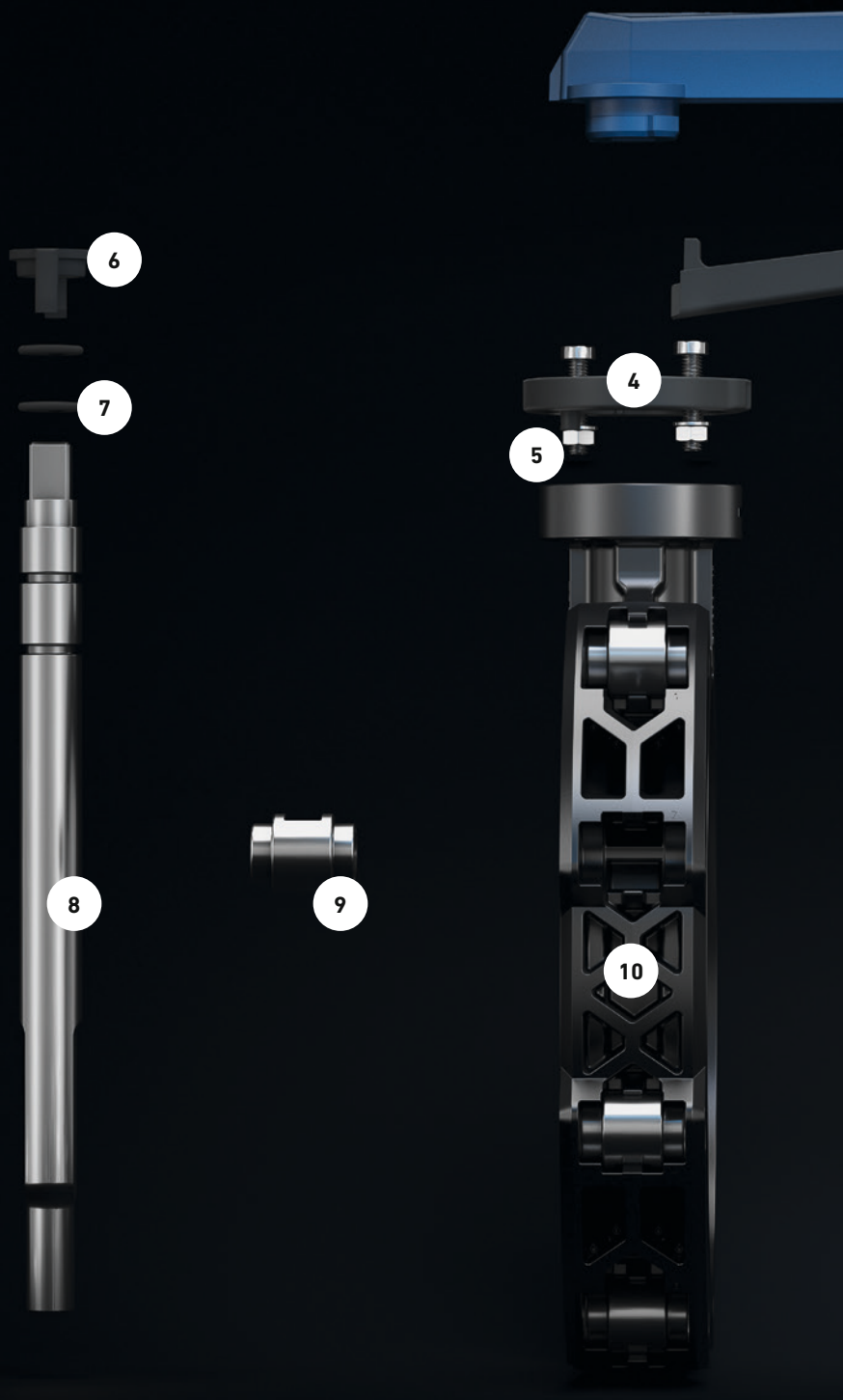
Full insight
The Data-Matrix-Code on the 565 simplifies the storage of all technical information for each valve, thus enabling individual traceability. The faultless identification of each valve facilitates easy installation, service, and repair.

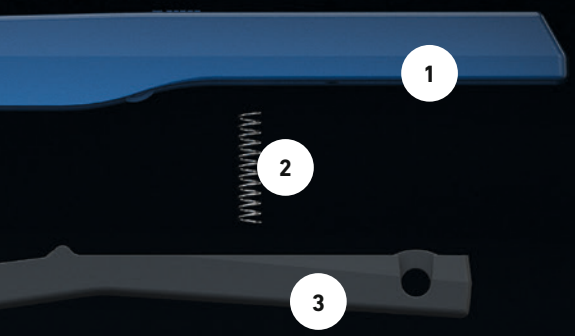
Reinforced disc
The Butterfly Valve 565 has a unique and patented disc design. The inner disc is made of fiber-reinforced polyamide and is encapsulated with PVDF. This design strengthens the durability and pressure/temperature performance of the valve.

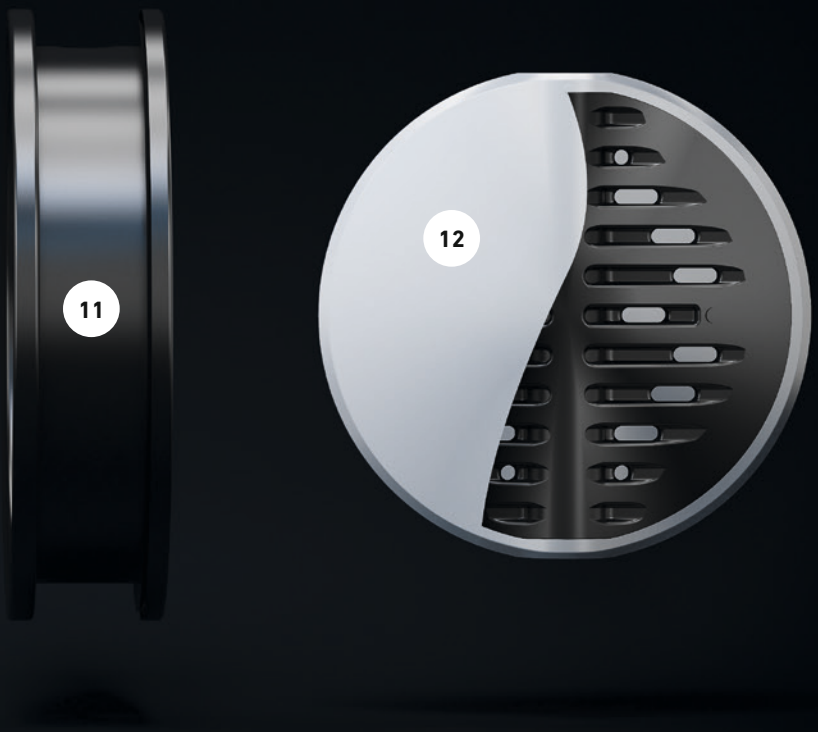
Engineered for the future

Superior longevity

Thermoplastic valves are highly durable and can last for many years without requiring replacement. They are also resistant to impact damage and can withstand extreme temperatures.







1. Lever
2. Spring
3. Grid lever
4. Index plate
5. Screw
6. Shaft lock
7. O-Ring
8. Shaft
9. Threaded inserts
10. Lug-style housing
11. Seat liner
12. Outer disc - PVDF
13. Inner disc - PA

Customizable modularity

Matching individual challenges

The Butterfly Valve 565 can be manually operated with a lockable lever or a hand wheel. Here, the effort required to fully open and close it can be reduced with the help of a gearbox. In addition, it can be operated with a pneumatic actuator that is ideal for plants with a high number of actuated valves, and an electric or smart actuator. But above all, the Butterfly Valve 565 features digital interfaces for state-of-the-art process automation.

Pneumatic Actuator

Pneumatic actuators are an economical solution for installations with many actuated valves. They are fast, adjustable, and have a fail-safe mode. The latest generation is entirely made from high-performance thermoplastics. Additionally, pneumatic actuators can be equipped with electro-pneumatic positioners, further increasing control and precision.

Electric Actuator

Electric actuators are highly reliable and easy to set up and operate. The latest generation introduces features such as Industrial Ethernet communication standards and an improved IP68 rating. The actuator can be installed on any standard valve with an ISO 5211 interface. Additional accessories allow the actuator to be used not only as an open/close actuator but also in continuously controlled operation.

Smart Actuator

Digitization is changing and improving many aspects of our lives. At GF, we are significantly shaping this progress by constantly developing our products. Our latest actuator is our first product that can be controlled fully by an app. Take the step with us into the future with our new digital actuator. One app, one actuator, many possibilities.

Customizable modularity

Accessories

Position Feedback Sensors

At GF, we offer multiple solutions to add reliable position monitoring to any valve assembly. The Click-In LED-Sensor (DCI) is mounted directly into the housing, providing visual feedback and an M12 connection. Alternatively, we can offer our Double Sensor Top Mount Cable Gland (DTM CG) and M12 (DTM M12) to be installed on top of our pneumatic actuators.

Valve Automation Center

At GF, we offer customized valve automation to meet individual requirements seamlessly. Our engineering experts design custom actuation solutions tailored to individual needs, while expert technicians assemble and rigorously test every valve assembly for flawless performance.

Spare parts

- O-ring
- Seat liner
- Disc
- Shaft
- Condensation block

Leveraging superior qualities

Over fifty years ago, GF transitioned from metal to thermoplastic, acknowledging that metal's drawbacks are actually thermoplastic's strengths. The Butterfly Valve 565 is our latest advancement, outperforming metal valves in many aspects.

The 565 offers several technical benefits. Its patented double-molded Polyamide disc, coated with high-performance PVDF, provides excellent strength, chemical resistance, and low friction, making it suitable for rigorous environments in various industries. Its compact design and reduced installation length compared to traditional metal valves make it perfect for tight spaces and retrofitting, complying with ISO 5752 to prevent expensive alterations to existing piping. Furthermore, the lightweight and durable materials negate the need for extra support, making it a cost-effective choice.

Additionally, this product line works with inductive double sensors and a switching ring for accurate feedback on the valve's position and performance, enabling remote monitoring and control for automation systems. The modular design and extra accessories allow for easy plug-and-play automation. The patented plug-in insert design streamlines maintenance and customization, reducing downtime, while the removable metal inserts can be taken apart for recycling, improving the sustainability of the Butterfly Valve 565.

Specifications

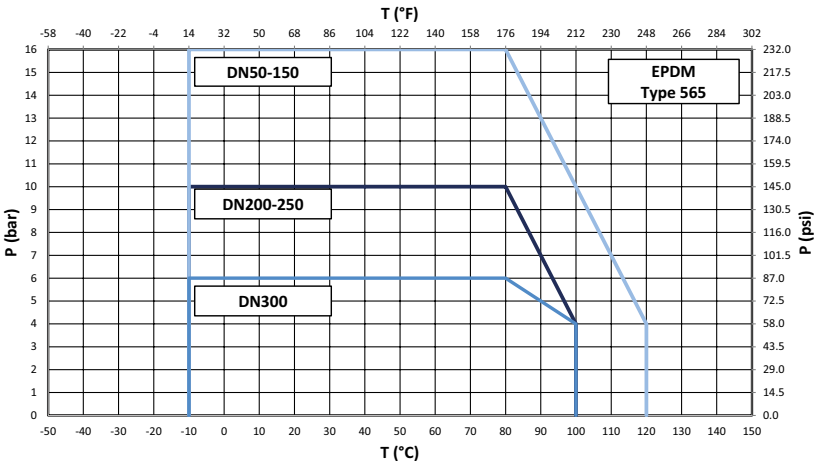
Body type	565W - Wafer-style housing					
	565L - Lug-style housing					
Dimensions	d63/DN50 – d315/DN300, 2" – 12" d355/DN350 – d630/DN600*, 14" – 24"					
Pressure ratings	**Manual actuated**		**Electric actuated**		**Pneumatic actuated**	
	DN50-150	PN16	DN50-200	PN10	DN50-250	PN10
	DN200-250	PN10	DN250	PN6	DN300	PN6
	DN300	PN6	DN300	PN4		
	DN350-600*	PN10				
Actuation variants	Manually operated: 565 W/L: lockable hand lever or manual reduction gear 565 Big: manual reduction gear					
	Pneumatic actuated: FC, FO, DA					
	Electric actuated: 565W/L: EA45-250 AC: 100 – 230 V, AC/DC: 24 V, Smart actuator dEA 565 Big: 100-230 V, 400V					
Actuator interface	EN ISO 5211					
Flange standards	ISO 7005 PN10/16, EN 1092 PN10/16, DIN 2501 PN10/16, ANSI/ASME B 16.5 Class 150, BS 1560: 1989 Class 125/150; BS 4504 PN10/16, 565 W/L: JIS B 2220 10K, JIS B 2239 10K					
Markings	CE, UKCA					
Product Standard	EN ISO 16136					
Test Standard	ISO 9393-2, EN 12266-1 (leackage rate A)					
Approvals	ACS, ABS, BV, DNV, EAC, EPD, FDA, KTW-BWGL, LR, NSF; PZH, RINA, WRAS, SIL					

*DN450 - DN600 available soon

Pressure-temperature diagrams**

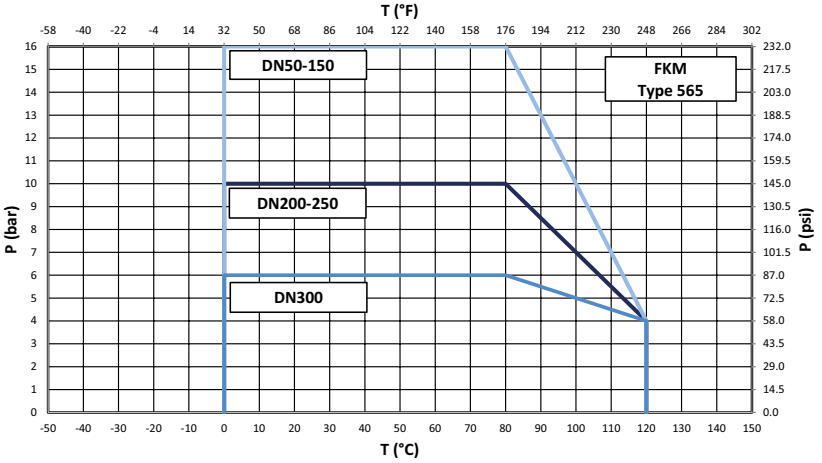
Butterfly Valve 565 Wafer/Lug-Style EPDM (DN50 – DN300)

T Temperature (°C, °F)
P Permissible pressure (bar, psi)



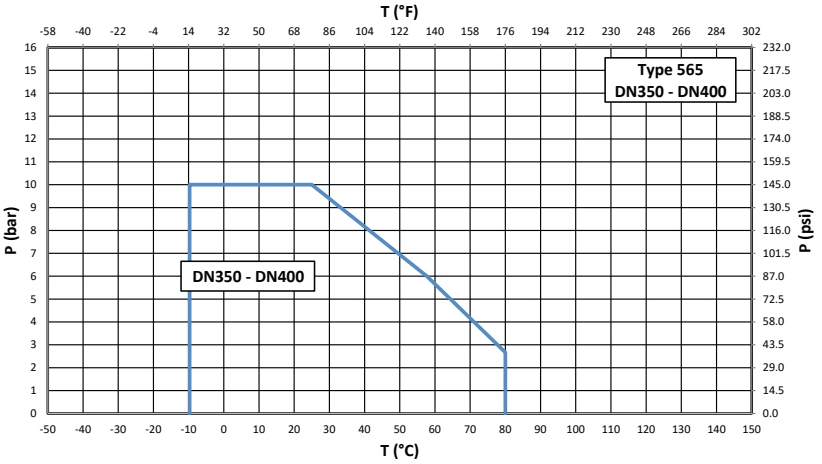
Butterfly Valve 565 Wafer/Lug-Style FKM (DN50 – DN300)

T Temperature (°C, °F)
P Permissible pressure (bar, psi)



Butterfly Valve 565 Big EPDM (DN350 – DN400*)

T Temperature (°C, °F)
P Permissible pressure (bar, psi)



* DN450 - DN600 available soon
**Based on a lifetime of 25 years and water or similar media.

Butterfly Valve 565 Wafer-Style

Beats metal in every round

Butterfly valves are ideal for controlling media flow in applications where compact design is crucial. Wafer-style butterfly valves can easily be mounted between two pipes using flange connections.

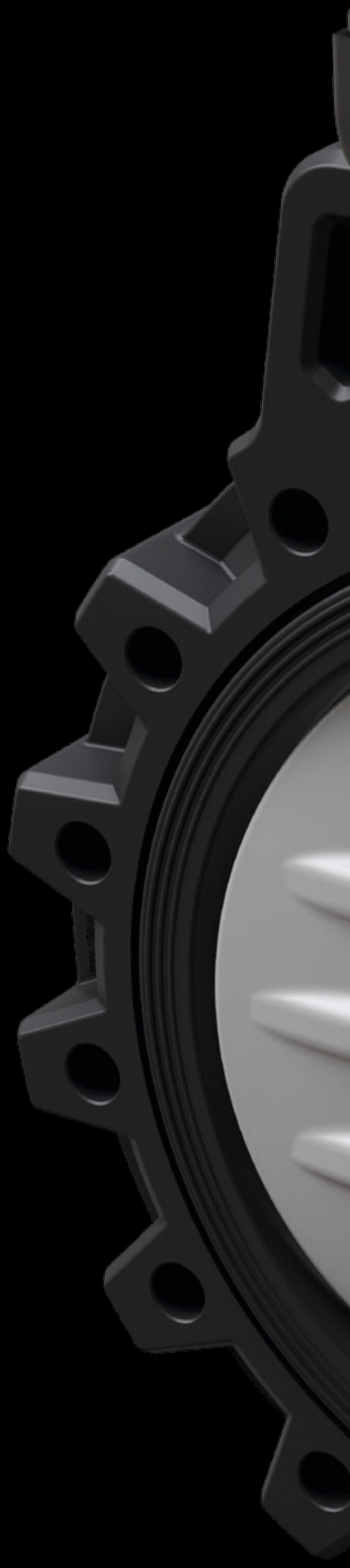
The Wafer-Style gives the full flexibility for the different installations types. The corrosion-resistant Butterfly Valve 565 comes in the same installation length as its metal counterparts (EN558/ISO5752 short). Therefore, the 565 is just as well suited for replacing old metal valves in existing piping systems as it is for new installations. The outstanding pressure and temperature performance allow the valve to be used in varied applications. Additionally, the superior characteristics of thermoplastic increase the possible installations even further and expand the lifetime compared to metal valves. Thus making the thermoplastic valve more cost-effective, too.

Introduced in 2021, the thermoplastic Butterfly Valve 565 has proven multiple times to be a reliable and durable solution for water and water treatment applications in the marine and water treatment industry, cooling applications and many more.

Butterfly Valve 565 Big

Built for the bigger picture

The lightweight and corrosion-resistant Butterfly Valve 565 Big is available in DN350 - DN600* (14-24 inch), offering the strongest solution for big challenges in water and water treatment applications while maintaining the same installation length as metal counterparts (EN558/ISO5752 Row 20).



Unmatched pressure-rating
With a PN10 pressure rating, the Butterfly Valve 565 Big is the strongest thermoplastic butterfly valve with a short installation length in the market - offering additional safety to your process.

Lightweight materials
Thanks to its 20% lower weight compared to metal valves, the 565 facilitates installation and maintenance, reduces the need for support structures, increases operational efficiency and sustainability, and supports reliable performance.

Retrofit upgrade
Replacing old metal butterfly valves with the 565 Big is effortless, thanks to its identical installation length (EN558 row 20, ISO 5752 row 20) — no additional work is required on the existing piping system. The 565 is available in both ANSI/ASTM and Metric standards.

Valve Automation
The modular design enables quick, easy, and flexible installation of add-ons like actuators or accessories such as actuators or accessories such as the position indicator built into the housing. The click-in design makes installation simple and compact, and position feedback is provided directly from the shaft.

*DN450 - DN600 available soon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Butterfly Valve 565 Portfolio

Built for the future

The Butterfly Valve 565's comprehensive portfolio offers an ideal solution to all your challenges and requirements for reliable water and water treatment applications. Different housing styles and standards and the vast amount of available dimensions enable flexible installation and effortless retrofit into existing piping systems.

Butterfly Valve 565 Wafer-Style

The Butterfly Valve 565 Wafer-Style is designed for installation between two pipes, providing an efficient solution for fluid control. The short installation length allows easy retrofit into existing piping systems while its compact, lightweight design ensures a secure fit across various applications.

Butterfly Valve 565 Lug-Style

The Butterfly Valve 565 Lug-Style offers greater flexibility as an end valve, allowing one-sided disassembly without disrupting the pipeline. Threaded bolt holes provide a stable installation, making it ideal for systems requiring periodic maintenance or modifications.

Butterfly Valve 565 Big

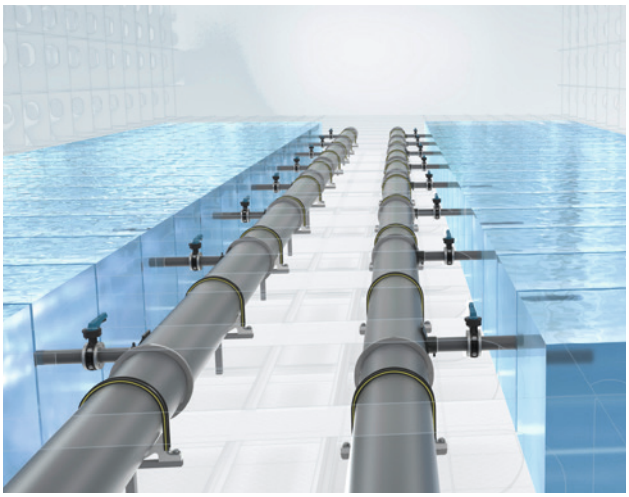
The Butterfly Valve 565 Big covers dimensions from DN350 to DN600* for larger installations. Withstanding pressures up to PN10, we can offer the strongest thermoplastic butterfly valve with a short installation length in large dimensions. The lightweight materials and housing with Lug features facilitate installation, operation, and maintenance.

*DN450 - DN600 available soon

Application examples

Reliable operation for demanding environments

The Butterfly Valve 565 is used in swimming pools, portable water treatment and production, hot and cold water plants, as well as refrigeration and HVAC installations. Furthermore, butterfly valves play a significant role in industries such as desalination and marine applications. Here, the lightweight and corrosion-resistant materials of the 565 demonstrate their full potential in enhancing longevity, efficiency, and sustainability.



Ballast water treatment

Ballast water systems ensure safe operating conditions during voyages, help ships reduce stresses on the vessel's hull, and provide transverse stability. GF maintenance-free solutions help to efficiently load, distribute, and unload ballast water from 0°C to 40°C, ensuring the ship can efficiently maneuver.

Aqua Parks & Swimming Pools

The superior materials of the Butterfly Valve 565 ensure high chemical and corrosion resistance, which leads to a long-lasting operation. Additionally, the lightweight and compact valve facilitates operation in confined spaces. Actuation possibilities such as pneumatic actuators and digital accessories ensure reliable and cost-effective operation.

Cooling

Corrosion and condensation-free materials are of utmost importance for reliable and efficient piping systems in cooling applications. Butterfly valves are used to control media flow within pipes. The simple design and short installation length make the Butterfly Valve 565 Lug-Style the ideal valve for cooling applications.

Media filtration

This technology is often used to harvest drinking and process water from surface and seawater. Due to the need for several flow processes, filters are made of numerous valves and bypass actuators. Decentralized membrane filtration systems can supply safe drinking water in low-income countries. GF offers maximum security and profitability for efficient processes, by eliminating maintenance costs caused by rust and deposits.

Learn more about our reference cases.

Sustainably future-proof

Ensuring the safe and reliable flow of fluids

What is more sustainable – thermoplastics or metal? GF set out to answer this question and commissioned a study of its Butterfly Valve 565 by an independent institute.

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The Swiss Climate AG analyzed the environmental impact as part of a Life Cycle Assessment (LCA) that served two main purposes:

The first purpose of the LCA was to achieve an EPD in accordance with EN 15804:2012+A2:2019. The Environmental Product Declaration (EPD) is a Type III environmental declaration that uses scientifically quantified data from the Life Cycle Assessment for the estimation of environmental impacts and comparisons between similar products. The Butterfly Valve 565 is the first industrial butterfly valve to obtain this certification and therefore enables customers to make an informed decision based on an analysis from a trusted and independent source.

The second purpose of the study was to conduct an analysis of the environmental impacts of the Butterfly Valve 565 and a metal alternative as part of a comparative LCA study in accordance with ISO 14040/44.

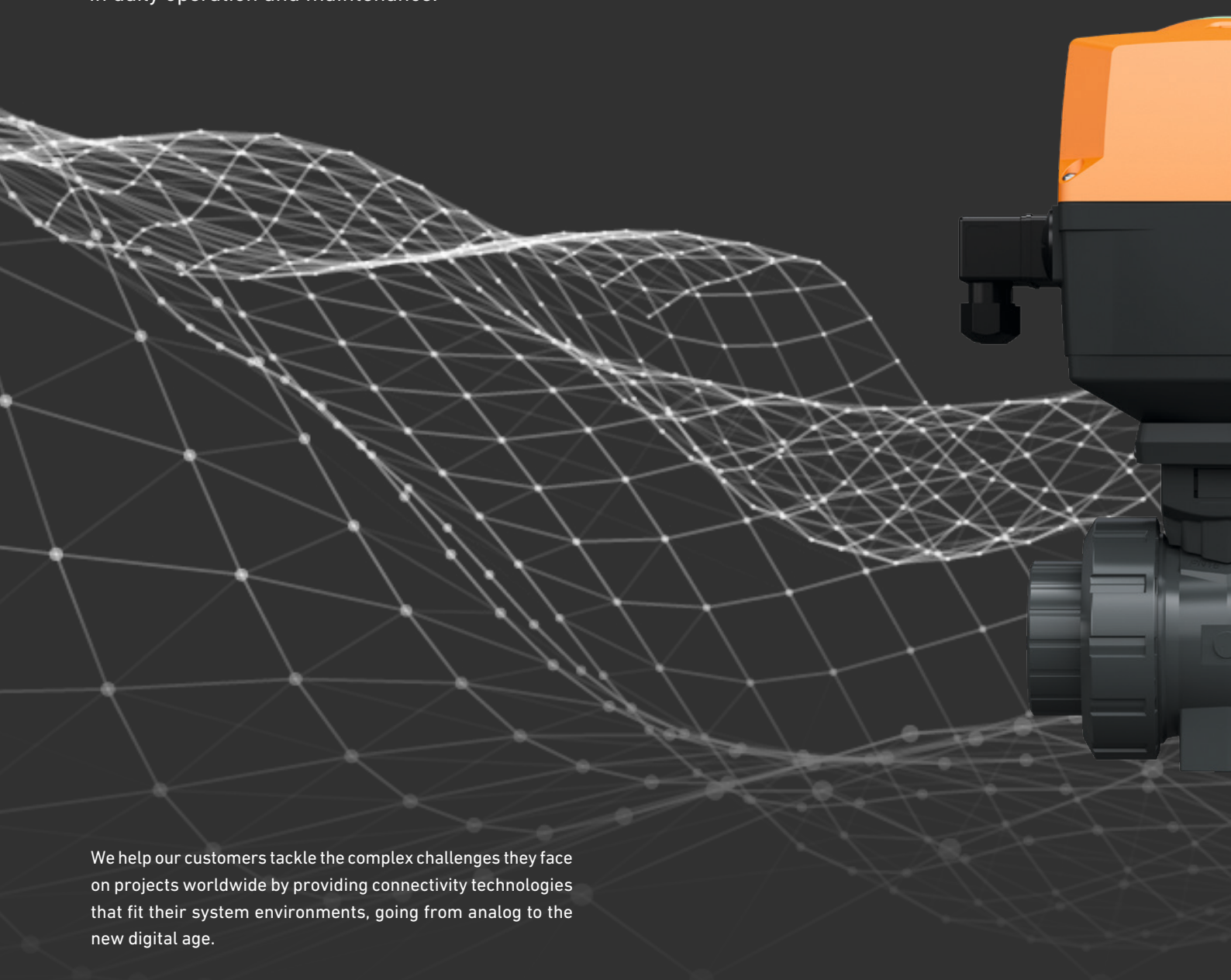
When comparing the valves' respective service lives, the Butterfly Valve 565 emits 26% less carbon emissions than the metal alternative.

Download the whitepaper to find all the results.

Process Automation

Seamless connectivity

Leading-edge field devices are intelligent and have a vast amount of relevant process and device data available. Connectivity technologies unlock this data, leading to increased efficiency in daily operation and maintenance.



We help our customers tackle the complex challenges they face on projects worldwide by providing connectivity technologies that fit their system environments, going from analog to the new digital age.

Our solutions allow for the automation of processes that provide remote access, high data transfer rates, and real-time diagnostic insights, giving users access to all relevant device parameters 24/7, 365.

Supporting future-proof Industrial Ethernet protocols

State-of-the-art network technology

- Seamless access to field device data without complex, expensive, and error-prone protocol conversions
- Flexible network topology concepts for any kind of plant environment

Up to 40% more efficient in commissioning and maintenance

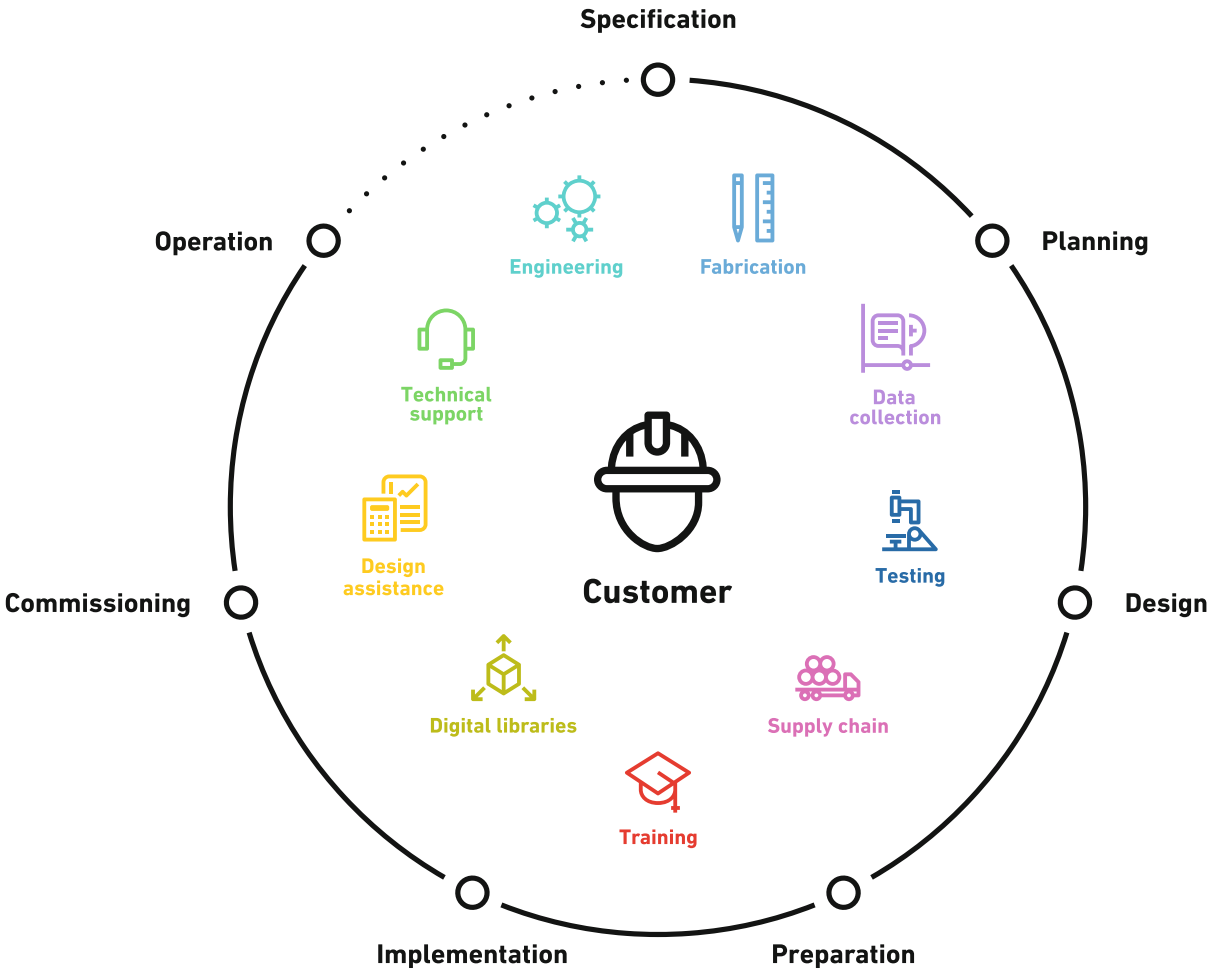
- Remote access to field devices for simple parameterization and commissioning
- Real-time insights into device health, preventive maintenance and diagnostics for troubleshooting
- Plug&Play device exchange with automatic re-configuration of a new device

Up to 30% increase in operational performance

- Digital data transfer leads to accurate process values
- Devices offer multiple process variables
- Trend monitoring of any process variable for continuous process optimization and preventive maintenance
- High availability of a plant by robust communication

One partner from planning to commissioning

With Specialized Solutions, the global leader GF provides project support every step of the way to achieve construction excellence. Allowing owners and planners to concentrate on their daily business without interruption.



Engineering

Increase the efficiency of your project with the tailor made analysis packages from GF and decide which offer is right for you according to your needs. You have the choice between Project Analysis and Advanced Engineering, thus always receiving the appropriate support in every phase of your project.

Digital libraries

GF is continuously developing digital libraries with all of our product design drawings. Our files are fully compatible with Autodesk Revit, AVEVA, Intergraph, Autodesk AutoCAD Plant 3D and Trimble SketchUp with 3Skeng to provide proper engineering design tools used by planners, architects, owners and operators for BIM and Plant Design.

Custom product design and prefabrication

Having your individual needs and application in focus, our customizing teams forge the solution that fits you best, developing custom-made parts to complete systems or special solutions produced in small series, individual consulting and off-site prefabrication. Through our global network of flexible locations, we offer a wide range of comprehensive solutions.

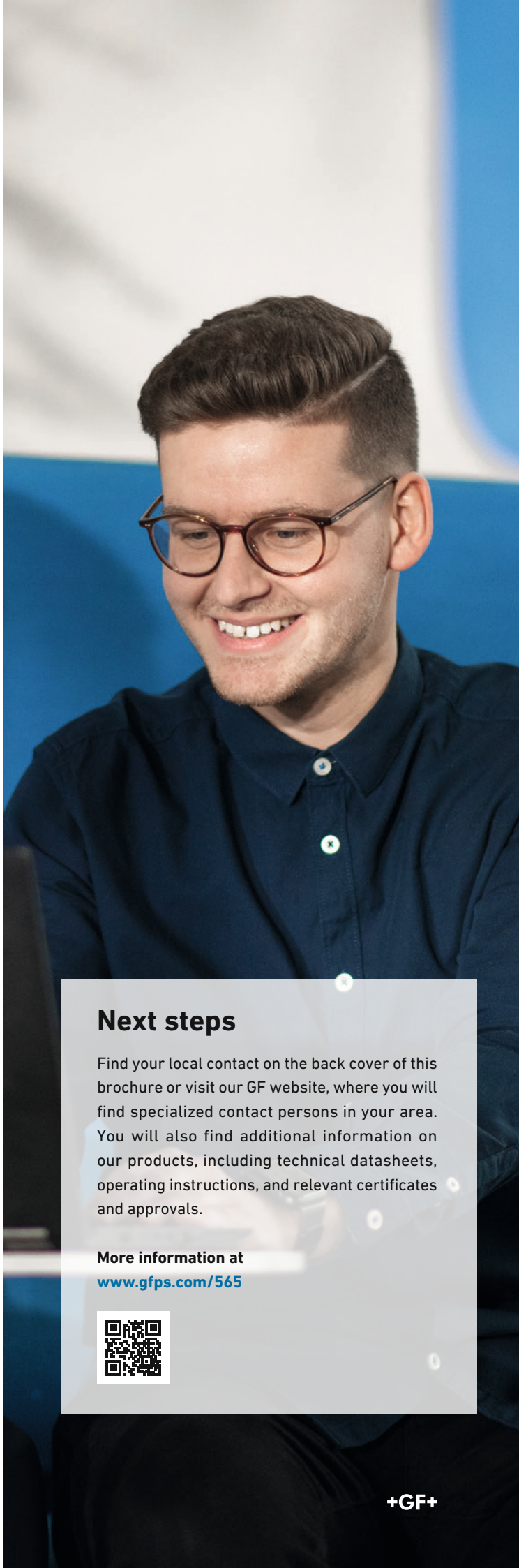
Training

GF instructional courses to help you teach your customers and their installers essential knowledge for the welding of pipes and piping components, as well as an in-depth understanding of butt and electrofusion connections. Trainings are available virtually, in-house or on site.Trusted training, empowering you.

Ultrasonic Non-Destructive Testing (NDT)

When installing a system, the most critical parts are going to be the weldings – often seen as the weakest point of a system and highly critical to a safe and reliable operation. With Ultrasonic NDT, you can proceed with assurance thanks to scientific proof that the welds are secure.

www.gfps.com/specialized-solutions



Next steps

Find your local contact on the back cover of this brochure or visit our GF website, where you will find specialized contact persons in your area. You will also find additional information on our products, including technical datasheets, operating instructions, and relevant certificates and approvals.

More information at
www.gfps.com/565

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Excellence in Flow

Visit our webpage to get in touch with your local specialist:
www.gfps.com/our-locations

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