

Presenting a new generation of valves:

+GF+ Type 546 Ball Valve



«Hello,
who are you?»

«Type 546
and you?»

Setting a new standard in piping systems.

GEORGE FISCHER +GF+
Piping Systems

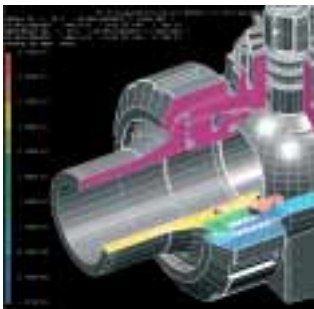
The new +GF+ Type 546 Ball Valve.

Innovation for your needs

Do ball valves play an important role in your work?

Do you judge the quality of a product on the functional reliability and operational safety of the entire system? The type 546 ball valve, successor to the proven type 346 ball valve, is an established product behind which stand George Fischer's 40 years of experience and know-how in plastic piping systems. The type 546 ball valve is the core of a modular system. From manual valve to actuated valve with numerous options – from electric feedback unit to lockable handle and pipe clamp, we have everything you require.

A ball valve, as part of a system, which meets your operational safety requirements just as easily as your ecological and economical needs. The George Fischer name stands for reliability and longevity; this also applies to the availability of spare parts and single components – now and in the future.



Designed for safety

Developed on state-of-the-art CAD systems and with FEM (Finite Element Method) calculations.



Tested through and through

Extensive prototype and pre-series testing in the EN ISO IEC 17025 accredited George Fischer test lab. 100% leakproof testing is integrated in the production process.

We promise

Highest quality

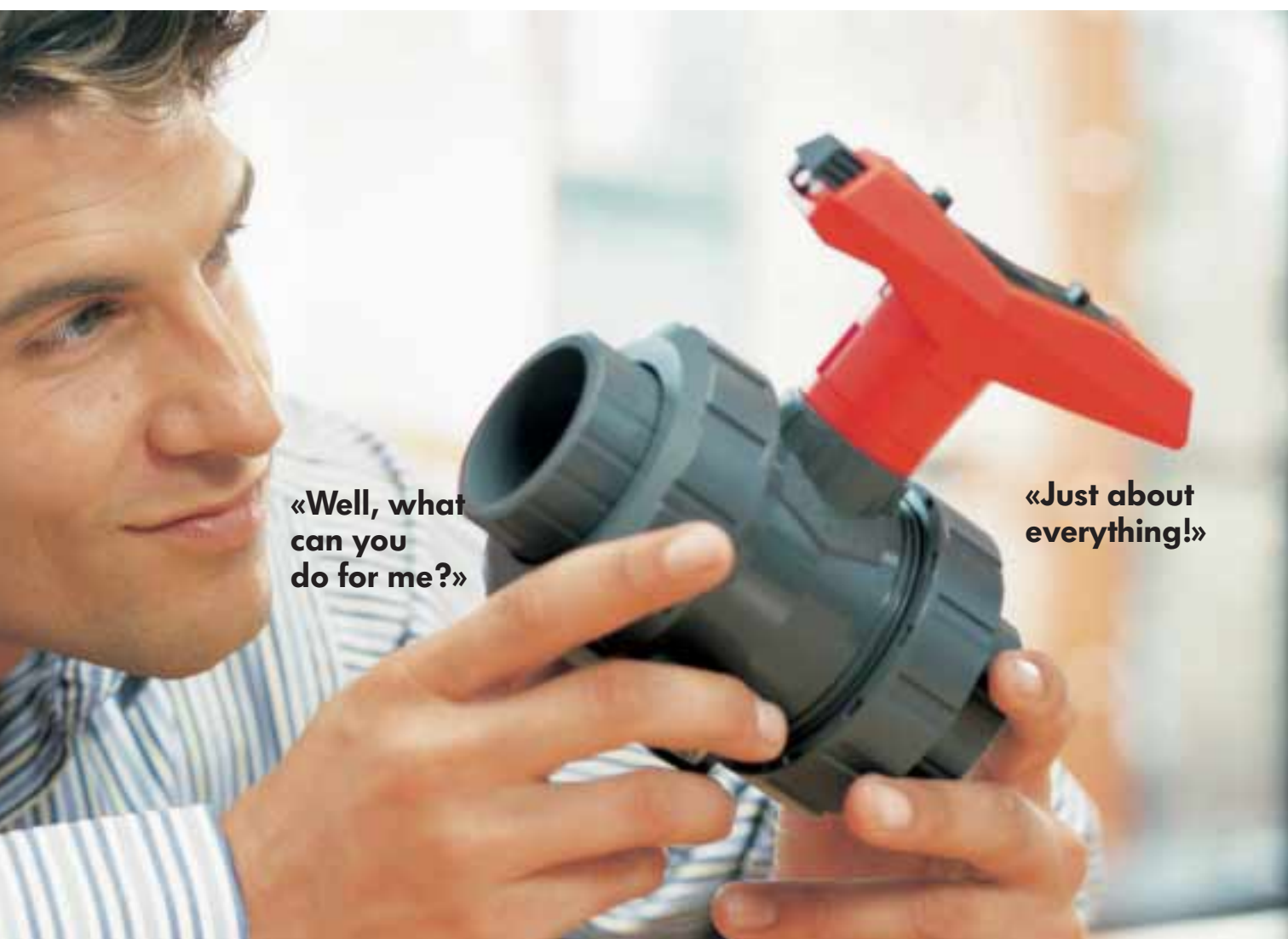
In the raw materials we use as well as in the entire production process. From incoming goods inspection all the way to delivery.

Safety in operation

Thanks to a safe connection with the buttress thread specially developed for plastics, new added features such as a handle that locks, and our worldwide customer support service.

Space saving design

Shorter installation length enabling more compact systems.



«Well, what
can you
do for me?»

«Just about
everything!»

Quicker mounting

Integrated fastening system for direct mounting or with a mounting plate for through wall installations, designed to fit with the +GF+ pipe clamps for complete piping systems.

More ergonomic

Latest valve design and an operator-friendly handle.

Tailoring to your particular application

Would you like to have a multi-functional valve that gives you position feedback even with a manual valve?
Would you like to use the ball valve as a transition valve?
Just configure it exactly as you wish!

Smart automation

Fast and easy to add pneumatic and electric actuators according to a modular principle.

The most comprehensive line of ball valves

The new generation of George Fischer ball valves will be available long-term in the materials: PVC-U, PVC-C, ABS, PP-H and PVDF in the dimensions DN 10–DN 100 as 2- and 3-way valve with the consistent compatibility of all connections, actuators and additional services.

+GF+ Type 546 Ball Valve.

Innovative down to the last detail.

Plastics-oriented design

The new type 546 industrial ball valve has a state-of-the-art design. The distinct design is internationally registered and protected. But the changes are not only cosmetic. It was our goal to develop a ball valve that combines the latest standards in technology, material, form and function. This is why we paid special attention to your needs. The new type 546 ball valve offers you added value with its multiple features and safety aspects down to the last detail.



Shorter length
For more compact systems



Safer locking
Multi-functional handle



Safer connection
New buttress thread developed specially for plastics



Built-in tool
For easy adjustment of ball torque



Choice of colors for short handle
Red or black



New stem for even more safety
Stronger seals



Integrated fastening system
Threaded inserts for fixed point direct mounting



Lockable handle
Protects against unauthorized operation



Redesigned central part
Flush-proof backing seals

**«So what's
different?»**

**«It's all
in the details!»**



+GF+ Type 546 Ball Valve. With multi-functional module.

The multi-functional module is the answer

What is the current status of the valves in the system? Which ones are open, which are closed?

To be able to answer these questions at all times means safety for you and your operators.

With this multi-functional module, we have a tested and proven unit for you which has not been available before.

The feedback concept includes a selection of 5 different limit switches, designed to fit your needs.

With AS-Interface on request.

The multi-functional module has more to offer

Thanks to its robust construction and the secure fastening on the ball valve (4 Torx screws), the multi-functional module can be used as a mounting bracket. Through-wall/panel mounting was never so easy.

Replace the lid and the module is equipped with a DIN EN ISO 5211 mounting interface. The new George Fischer actuators can be connected directly.



One module with many uses

The new multi-functional module significantly expands the number of uses for the type 546 ball valve:



Mechanical interface

The multi-functional module is fastened on the ball valve with 4 strong Torx screws and can be used for through-wall/panel mounting.



Connection for actuation

The new electric and pneumatic actuators are built onto the standardized mechanical interface of the multi-functional module.

«What's the
black box for?»

«Connections!»



Electric feedback unit

The multi-functional module is also an electric feedback unit with AS-Interface.



**Electric feedback unit and
position indicator**

Complete process monitoring and documentation, also for manual valves.



Many options

Multi-functional module as electric feedback unit for manual valves with many options:
Microswitch: Ag, Ni; Au
Inductive switch: NPN; PNP;
Namur

+GF+ Type 546 Ball Valve.

The new standard for automation.



The new pneumatic actuators PA 11 and PA 21

Two optimized sizes

- Adapted torques and very compact construction:

PA 11

from d 16/DN 10 to d 32/DN 25

PA 21

from d 40/DN 32 to d 63/DN 50

New attractive design

- All-plastic housing and with no metal parts on the outside
- Pre-loaded spring sets make maintenance safe and easy
- For long service life with guaranteed 250,000 cycles for the actuator

Comprehensive line of accessories

- Optional emergency manual override
- Multi-functional housing with integrated limit switches as accessory
- Stroke limiter as special version
- ISO-Namur interfaces for limit switch, pilot valve or valve mounting

Outstanding price-performance ratio for all versions

- FC fail safe to close function
- FO fail safe to open function
- DA double acting

Position feedback

- Multi-functional module with different limit switch versions (see pages 6/7)



Easy mounting
on the multi-functional module



Manual override
as an option, for limit switch
operation as well



Standard ISO-Namur connection
according to DIN ISO 5211

The new electric actuators EA 11 and EA 21

Two optimized sizes

EA 11

for standard applications

EA 21

for special requirements

Accessories for most functions

- Operation status monitoring
- Different input signals for set and actual values in control applications possible
- Expandable to PID controller
- Emergency manual override as a standard feature
- Communication interfaces
- ISO-Namur interfaces

Connection versatility

- Automatic adjustment of voltage and frequency
- Adjustment to supply voltage 100–230 V, 50–60 Hz
- 24 V AC/DC

Application versatility

- Implementable from simple applications up to process applications
- Modular design

All new, inside and outside

- New compact design
- Plastics-oriented construction
- Weight and space optimized
- Actuator designed for long service life with 250,000 cycles; this adds up to an optimal cost-benefit ratio

Certified worldwide

CE, UL, CSA



Integrated manual override
The handle is built into the housing.



Information and operation directly on location
Display for indication and configuration can be installed directly on the EA 21 actuator for control operations.

+GF+ Type 546 Ball Valve.

The system at a glance.

A complete model range with many combinations

From the manual valve to the electric actuated ball valve with LCD display. Modular design and expandable. From DN 10 to DN 50. Up to 16 bar pressure.

In cementable materials: PVC-U, ABS, PVC-C and in fusible materials: PP-H, PVDF

Connections in all the major standards:

- metric: DIN, EN, ISO
- inch: BS, ANSI
- JIS

This broad range of products enables you to find the right solution for your application.

The new +GF+ type 546 ball valve conforms to the following international standards

prEN ISO 16135 (pending)

Industrial valves – ball valves of thermoplastic materials (ISO/DIS 16135:2001)

ISO 9393

Thermoplastic valves – pressure test methods and requirements

EN 558

Flanged valve dimensions are in accordance with EN 558

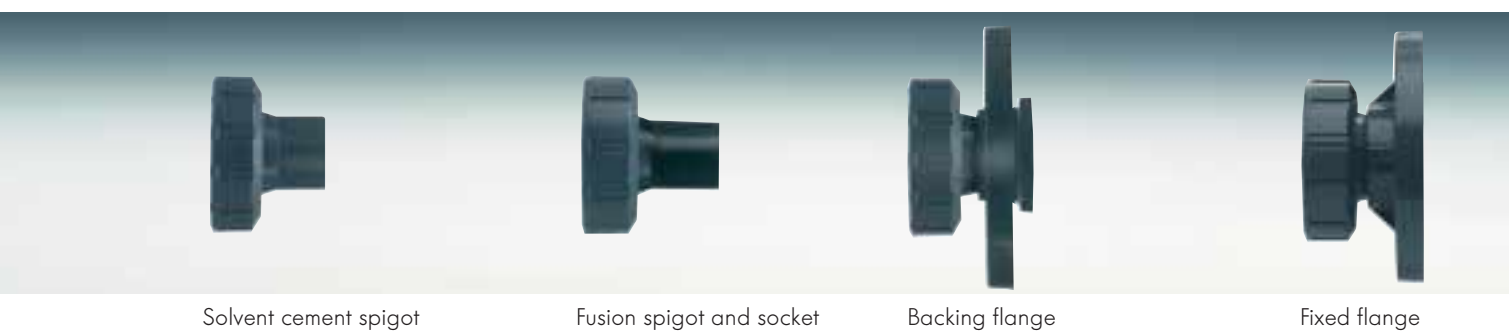
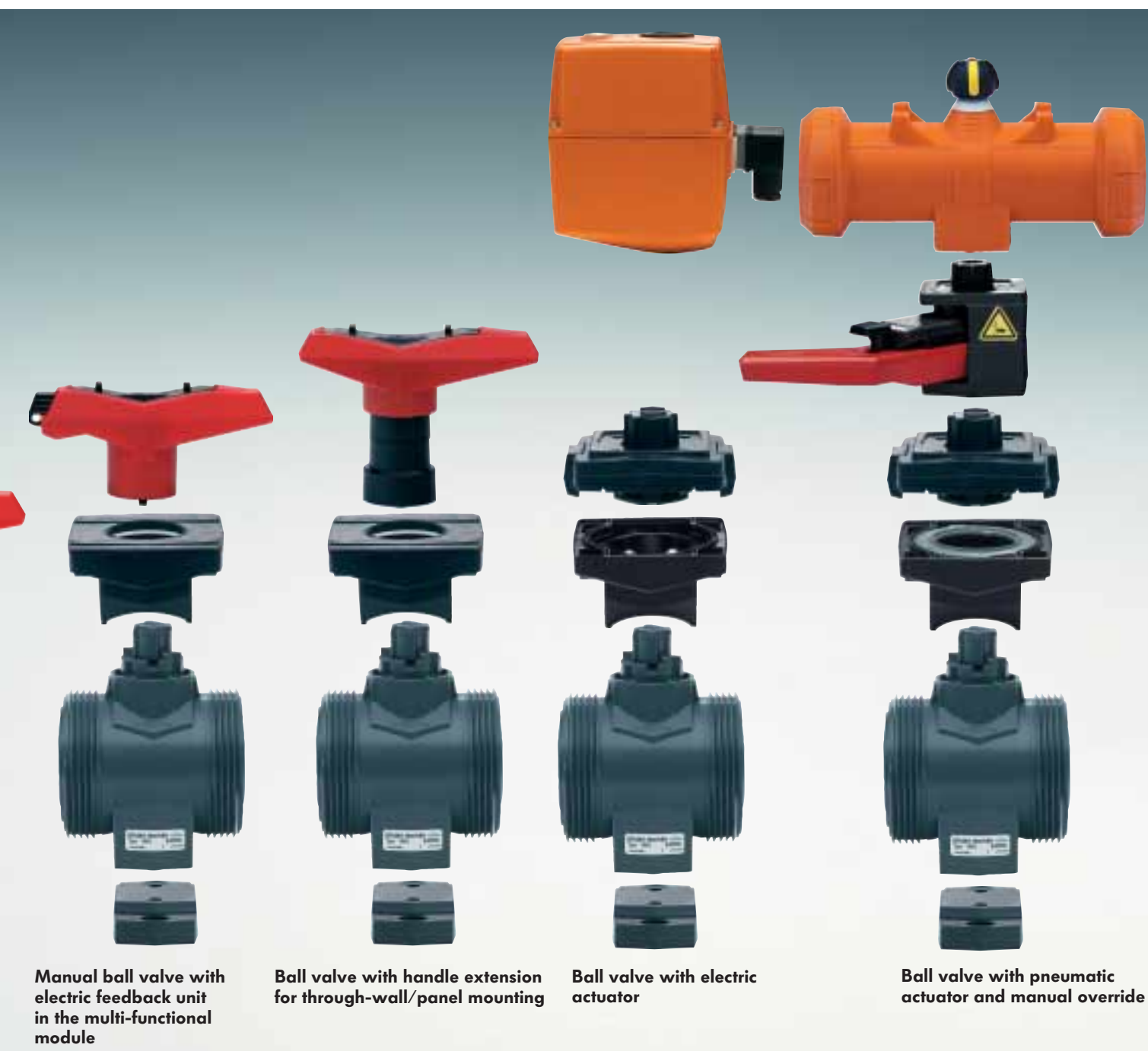
Approvals

DIBt approval pending



Solvent cement socket

Threaded socket



+GF+ Type 546 Ball Valve.

Always the right solution.

We already offer a wide range of products in our catalogues. And that is not going to change in the future. The new system components offer many new solutions. We have put together a selection menu to make it easier for you to order exactly the ball valve you need for your specific application. You choose. We deliver.

Material	Dimension	Version
PVC-U	DN 10 3/8"	Standard, PTFE ball seal
PVC-C	DN 15 1/2"	Oil-free, PTFE ball seal
ABS	DN 20 3/4"	Silicon-free, PTFE ball seal
PP-H	DN 25 1"	Silicon-free, PVDF ball seal
PVDF	DN 32 1 1/4"	
	DN 40 1 1/2"	
	DN 50 2"	



«Just what I need
for my application!»



Seal

EPDM seals
FPM seals

Threaded inserts

with threaded inserts
without threaded inserts

Connections (individually selectable)

Cement socket metric PVC-U
Cement socket JIS PVC-U
Cement socket inch ANSI PVC-U
Cement socket inch BS PVC-U
Cement spigot metric PVC-U
Threaded socket Rp PVC-U
Threaded socket Rp reinforced PVC-U
Threaded socket Rc PVC-U
Threaded socket NPT PVC-U
Cement socket metric PVC-C
Cement socket JIS PVC-C
Cement socket inch ANSI PVC-C
Cement spigot metric PVC-C
Threaded socket Rp PVC-C
Threaded socket Rp reinforced PVC-C
Threaded socket NPT PVC-C
Cement socket metric ABS
Cement socket inch BS ABS
Threaded socket Rp ABS
Threaded socket Rp reinforced ABS
Fusion socket metric PP-H
Socket fusion spigot metric PP-H

Threaded socket Rp reinforced PP-H
Threaded socket NPT reinforced PP-H
Butt fusion spigot SDR11 metric IR-PLUS PP-H
Butt fusion spigot SDR17.6 metric PP-H
Butt fusion spigot long SDR11 metric PP-H
Fusion socket metric PE-100
Butt fusion spigot SDR11 metric PE-100
Butt fusion spigot SDR17.6 metric PE-100
Butt fusion spigot long SDR11 metric PE-100
Fusion socket metric PVDF
Socket fusion spigot metric PVDF
Butt fusion spigot SDR21 metric IR-PLUS PVDF
Threaded socket NPT PVDF
Fixed flange serrated metric PVC-U
Fixed flange flat metric PVC-U
Fixed flange JIS PVC-U
Fixed flange serrated metric PP-H
Fixed flange inch BS PVDF
Backing flange PVC-U metric
Backing flange PVC-U inch ANSI
Backing flange PP-steel metric
Backing flange PP-steel inch ANSI

Multi-functional module

No multi-functional module

Empty module
Module with microswitches Ag, Ni
Module with microswitches Au
Module with inductive switches Namur
Module with inductive switches PNP
Module with inductive switches NPN

Pneumatic actuator

PA 11/21 fail safe to close
PA 11/21 fail safe to open
PA 11/21 double acting

Electric actuator

EA 11
EA 21

Accessories EA 11

No accessories
Standard limit switch
Heating element
Fail safe unit

Accessories EA 21

No accessories
Heating element
Cycle time module
Cycle time monitoring
Cycles monitoring
Motor current monitoring
2 limit switches Ag, Ni
2 limit switches Au
2 limit switches NPN
2 limit switches PNP
Positioner
Electric position indicator
Fieldbus module
Fail safe return unit

Manual handle

Standard handle red
Standard handle black
Multi-function handle red

Mounting plate

without mounting plate
with mounting plate

Manual override

without manual override
with manual override

Mounting plate

without mounting plate
with mounting plate



The new generation. A smart system.



Integrated threaded inserts
For direct mounting (optional).



Handle extension
With a standard metric pipe as an intermediate part, you can cater for even the thickest insulation.



Ball valve with mounting plate
Matching the height of the KLIP-IT spacer system. For the correct level of valve and pipeline.



Flange
The flange connection is designed for mounting with the KLIP-IT system.



The new fixed point installation
The ball valve unit easily becomes a fixed point. Direct mounting with the integrated threaded insert or the mounting plate. Designed to fit with the KLIP-IT system for pipe fastening. The planning, installation and maintenance of piping systems is now easier and faster.



The new integration in system and data technology

The type 546 manual ball valve with multi-functional module and feedback unit is also integrated in process monitoring.

Pneumatic and electric actuators offer fully automatic operation.

Take advantage of the synergies with George Fischer products. The most compact version is achieved in combination with our PRO-FIT product series.



The new CAD system planning

If you need the ball valve data for your 2-D or 3-D engineering – you are just a click away from downloading the new CAD product library for the type 546 from the Internet or ordering it on CD-ROM directly from us. The library is compatible with most CAD programmes.

www.piping.georgfischer.com

The technical data are not binding. They are not warranted characteristics and are subject to change. Please consult our General Conditions of Supply.

George Fischer Type 546 Ball Valve. One name. One system. Worldwide for you.



Quality and environmental management systems according to ISO 9001 and 14001 are the basis for the continuous improvement of our performance.

Excellent customer service is guaranteed by our global network of sales organisations in 25 countries and representatives in over 80 countries, with

the additional support of engineers and plant operators. These comprehensive George Fischer services mean more safety for you worldwide.



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