GF Piping Systems

ELGEF Plus

Branch saddle system Topload

The modular system for large dimensions of up to 2000 mm

Maximum flexibility thanks to modular systems solutions

The ELGEF Plus branch saddle system Topload convinces, based on the proven principle of the ELGEF Plus modular system, in the area of large PE installations for gas, water and industrial applications, which provides superior modularity and flexibility. The functional design and the interaction of the high-performance components, enables a simple, quick and safe assembly possible on-site.

System solutions

User-friendly and reliable installation

- Unique modularity thanks to optimally synchronized components
- Self-explanatory, secure and quick assembly
- Low weight and compact tools make an installation possible, even under difficult conditions and in cramped spaces
- The peeling tool that is integrated in the installation set ensures a reproducible, even chip thickness for an ideal welding preparation
- Branch saddles compliant to the pressure class and tools with a long service life ensure reliability and efficiency

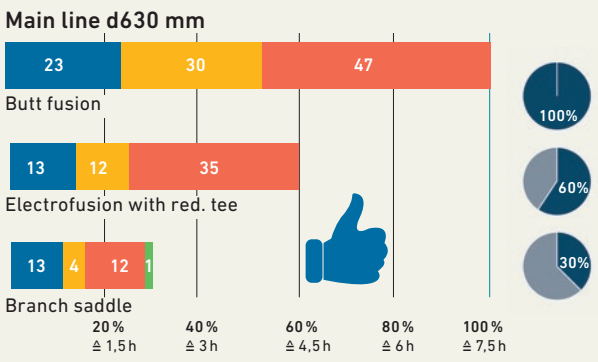
Flexible and individual application

- A free axial and radial positioning of the saddle ensures maximum flexibility during installation
- Flexible deployment during new installation works and subsequent integration of large volume main and drainage piping, under full operating pressure
- The branch socket is accessible / free of mechanical tension during the entire installation process

High cost efficiency compared to connecting tees

- Reduction of the required installation time by 70 %, in comparison with the installation of a reduced tee (d630 x 160 mm) with butt fusion
- Minimization of earthworks, thanks to the compact installation set and branch saddle
- Low weight and small packaging size simplify the installation and reduce the transport and storage costs

+ Overview of time savings



Trench work
Fusion & cooling process
Fusion preparations
Tapping

Branch saddle characteristics

Branch saddle system for ELGEF Plus in the dimensions d315-d2000 mm

The large pipe installation system consists of the tools the ELGEF Plus Topload branch saddles. The large dimensional ranges, and the correspondingly demanding application conditions, require a precise fit to the pipe, to ensure reliable connections, the highest rigidity and robustness of the system components and, with that, and absolute precision and manufacturing. Furthermore integrated mounting ribs for the clamping device enable to achieve a simple and secure installation of the branch saddles, due to an optimized pressure distribution. For a precisely fitting installation, without a pressure reduction factor, a precise alignment of the saddle is carried out before the welding process with axial and radial axis markings. The possible installation on pressureless and pressurized pipes, as well as the option between an electrofusion or butt fusion connection, is substantiation of the versatility that characterizes the saddles.

Branch saddle
with outlet d160-d225 mm

Branch saddle
with outlet d315-d500 mm

At a glance

Product range, in dependence on the main pipe and outlet diameters

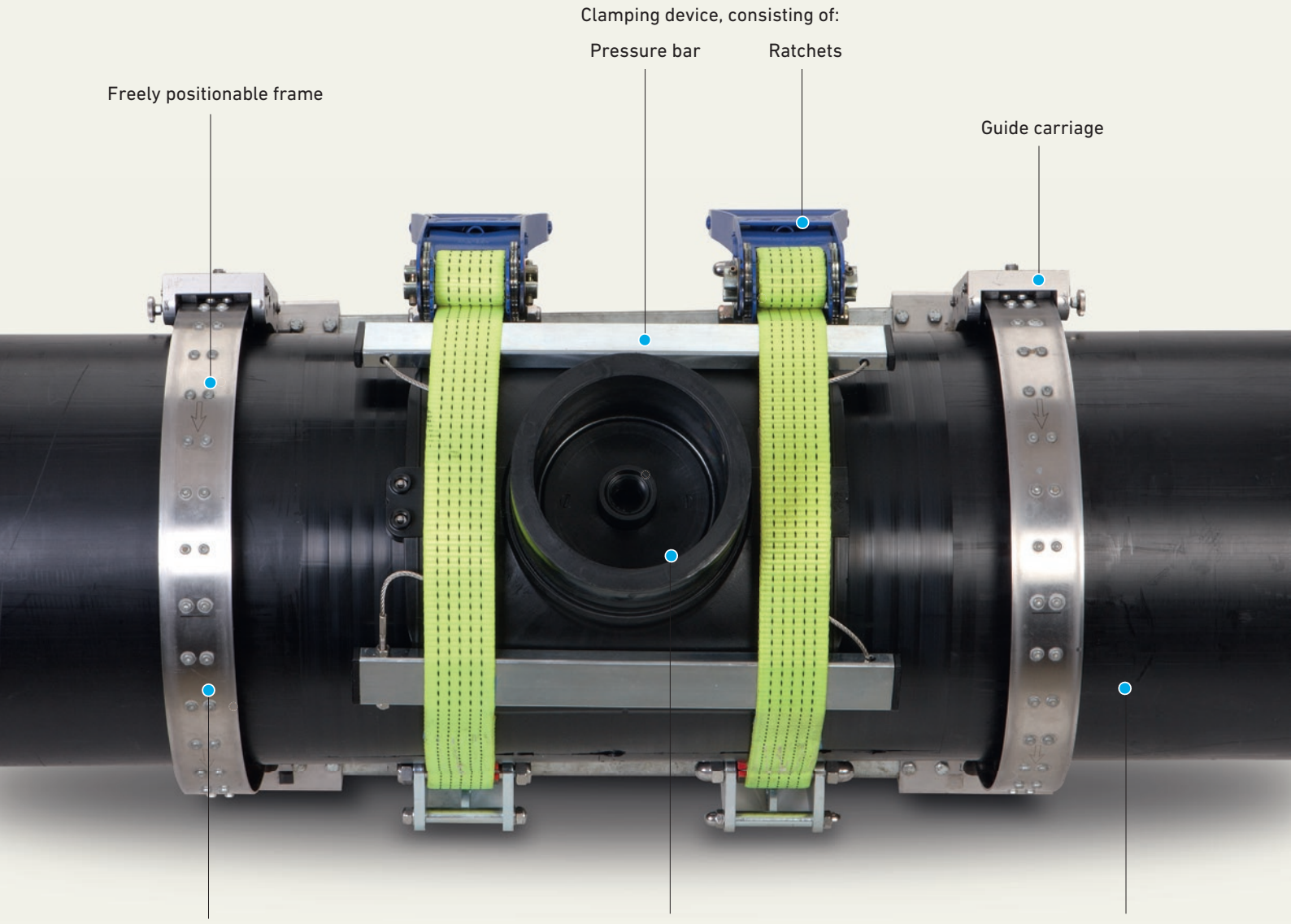
Outlet / Main pipe	d160 mm	d225 mm	d315 mm		d500 mm
	SDR 11	SDR 11	SDR 11	SDR 17	SDR 17
d315 mm	✓	✓			
d355 mm	✓	✓			
d400 mm	✓	✓			
d450 mm	✓	✓	✓		
d500 mm	✓	✓	✓		
d560 mm	✓	✓	✓		
d630 mm	✓	✓	✓		
d710 mm	✓	✓	✓	✓	
d800 mm	✓	✓	✓	✓	
d900 mm		✓	✓	✓	✓
d1000 mm		✓	✓	✓	✓
d1200 mm				✓	✓
d1400 mm				✓	✓
d1600 mm				✓	✓
d2000 mm				✓	✓
Clamping device	✓	✓	✓	✓	✓
Pressure testing plug	✓	✓	✓	✓	✓
Hole saw	✓	✓	✓	✓	✓

Performance and functionality due to high-quality component parts

A decisive added value is achieved through the sophisticated combination of the peeling tool and the clamping device. An additional plus is offered with the large outlet dimensions, in combination with a reliable tapping technology. This permits high flow rates and reduced pressure losses. Both during the connection of outlets to existing PE pipelines and also during a new installation the modular system offers the highest safety and reliability for the assembly of large dimensions.

Branch saddle

with outlet d160-d225 mm



Application

Safety and efficiency during application

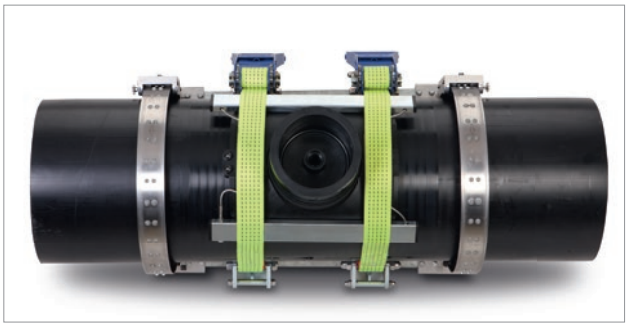
The accessories for the ELGEF Plus branch saddle system Topload are an important component of the entire modular system, and they show their full added value during use. The technical implementation and superior quality of the entire system, which consists of frame, peeling tool, clamping device and hole saw, is convincing. Use of the pressure testing plug makes it possible to quickly and simply carry out a pressure test. Combined with the material characteristics, such a low material weight, also the modularly designed and cross-dimensional installation system makes a decisive contribution for more safety, simplified handling and the highest efficiency in the application.

Modular installation set with cross-dimensional frame:

- High-quality, light and easily to position frame components, for a precise, safe and clean execution of the peeling process
- Quick installation due to a self-explanatory installation principle
- Simple installation without special tools

Easy to position clamping device:

- Mounting of the clamping device on the frame
- Simple positioning, also under difficult installation conditions, thanks to an advanced attachment of the clamping device on the fitting
- Tension indicators show the optimal clamping force
- Safe and quick assembly, due to robust closing hooks



Leakage test in advance of tapping:

- The installation is secured by means of a leakage test of the branch saddle, after welding and before initial tapping for the main pipe
- Simple and efficient, due to a threaded plug with a standardized testing connection

Branch saddle
for outlet d160-d225 mm

Branch saddle
for outlet d315-d500 mm

Tapping:

- Hardly any pressure losses, due to the fine-tuned geometry of the hole saw and the outlet plug
- Tapping, with a minimum of chips, due to a cutting geometry designed for plastic
- The pipe cutout remains safely in the hole saw and does not fall into the pipe
- Simple adaptation on the construction site, due to the use of commercially available, manually operated machines

Preparation and testing of the installation

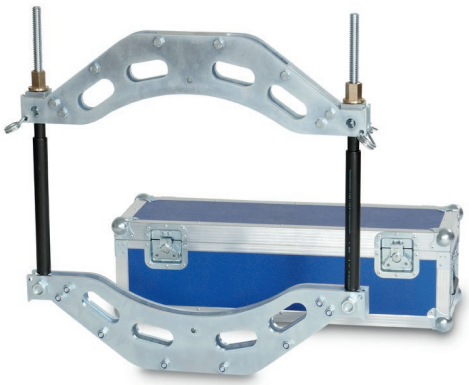
A proper preparation of the installation location on the main pipe, prevents costly corrections during the installation of the branch saddle.

Construction site appropriate testing of pipe quality

- Decisive for a safe and reliable installation is the quality of the main pipes, especially with regard to their roundness, possible flattening and damages, which occur with large-diameter pipes during their transport and storage
- Specially developed control gauges ensure a safe and quick check of the pipes possible

Preparation of pipes with rounding tools

- An impermissible pipe ovality can be corrected with the help of suitable rounding tools, which prevents a cost-intensive cutting out of the deformed pipe parts
- Simple operation, quick installation and the installation for transport
- The largest product range for mechanical rounding tools



Pressure testing plug

- Integrated pressure testing plug for outlet d160 – 225 mm
- Separate pressure testing plug for a larger outlet dimensions d315 – d500 mm
- Pressure testing possible up to 18 bar, a compliance to the DVS 2210-2 guideline
- Short assembly time
- No damage to outlet nozzle

Hole saw and tapping:

- Due to the construction length, a tapping of the pipe wall is possible up to thicknesses of 120 mm
- For the tapping of dimensions d315 and d500 mm, a drill stand is available as an option
- Safety is ensured by exact positioning, using an integrated drill and countersink combination

Example of use Coal Seam Gas in Australia

ELGEF Plus Branch Saddle System Prevails in Gas Project in Queensland

The Australian company is leading in extracting and producing coal seam gas. For decades already, the supplier has successfully converted coal seam gas into liquefied natural gas. With over 10,000 employees, the company supplies a significant percentage of Australia's gas, thus impacting the country's energy sector to a great extent.

Ultimate safety for demanding applications

Australia has large deposits of coal seam gas, which is extracted in extensive projects. For a project in the outback of Queensland, GF Piping Systems supplied the large-pipe systems for water supply on the site. Roughly 90 megaliters of water are created in coal gas extraction. The water is treated for use in households or in irrigation. A network of supply lines, connected to a 800 mm PE mains is used to distribute the water from the retention basin in the extraction zone to the treatment facilities. To connect these pipelines, the reliable ELGEF branch saddle system for large dimensions was selected. The reliability and safety offered by this establishedsystem convinced the customer, thanks to the fast and easy installation method in trenches as well as the efficiency achieved through this installation.

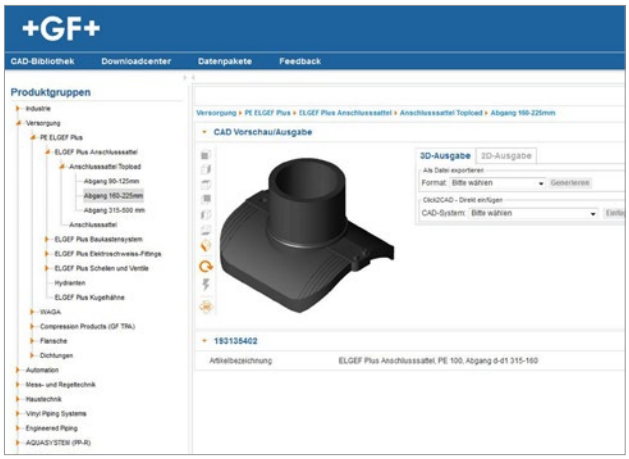
System solution makes a difference

The complete package of branch saddles (800x315 mm) including branch, pre-welded flange adapters, installation tools and accessories was pivotal in the cost and time savings for the installation. The decisive difference was the unique selling proposition of on-site training in all the installation steps and the comprehensive project support on site by local teams of experts.

From the planning phase all the way to implementation – our experts are on-site around the world

With the increasing deployment of plastic piping, the advantages of this material are becoming clear in comparison to standard metal systems: Non-corrosiveness, low weight, high resistance to chemicals, low overall costs and a long service life of the installations, are just a few of these.

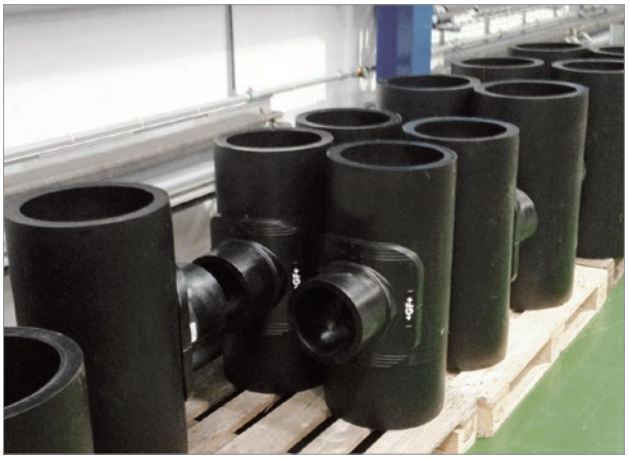
At GF, we dispose over 60 years of know-how. And we offer our customers comprehensive support during the planning phase, installation and commissioning of plastic piping systems. It is our task to create added value with our product solutions. In direct cooperation with our customers, we can master their challenges, and we develop new way for supplementing our product range. We offer services during all phases of a tendering process, including planning, execution and all the way to operation and maintenance.



Engineering / CAD

We support planning, installation and testing, as well as the selection of materials, testing of the construction, standardized execution, hydraulic modelling, dynamic tension analysis, a static load certification, FEA / FEM analysis with professional tools such as ROHR2.

The most frequently used planning tool, the GF Piping Systems CAD Library, with more than 25,000 entries for 3-D / 2-D drawings, presents the products in more than 30 different formats: cad.georgfischer.com



Customer-specific products:

In the area of customer-specific production, we focus on components that you require for completing your applications. Our global network is characterized by flexibly proactive sites, which offers you an ideal local partner. Our customers profit from an efficient and cost-effective solution that is tailored to their requirements, as well as an excellent service.

- Prefabricated reduced tees
- Procurement of saddle-specific installation sets omitted
- Integration in the piping system with butt fusion or electrofusion
- Appropriate for the required pressure class; no pressure reduction factor
- Ensured quality due to a 100 % pressure testing at the factory

Additional information is available on our website, or can be obtained directly by sending an e-mail to: services@georgfischer.com

The smart way to manage your assets

+ Comprehensive app & web platform

- The better way to manage your jobsite installations
- Use several entry points and upgrade options
- Preplan your work before its started

+ Enables more effective installation management

- Eliminate your paperwork and simplify planning
- Live monitoring of your installation progress
- Share views to enable smart decision making

+ Promotes quality installation

- Document your welding procedures, jobsite notes, photos
- Understand your fi eld asset behavior
- Track your asset data from your offi ce

+ Easy and reliable data management

- Record and archives your work- and welding-data
- Use geo positioning and online planning platform
- Monitor your asset and optimize future plans

1

- License
- Cloud storage
- Project management
- XL 100 users
- S 30 users

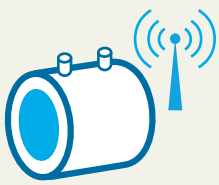
2

- QR code
- GF products
- Unitary QR code
- Full traceabilty
- Online live access

3

- QR scanner
- Synchronized to cloud
- Collection of all job data
- Photos / Notes

4



- MSA compatibility
- Welding certifi cates
- Geo position +/- 10cm
- Server synchronization

5

- Jobsite data synchronization
- Jobsite monitoring
- Secure platform
- Full access
- Geo mapping

6

- Document synchronization
- Quality assurance
- Example: GF NDT Certifi cate
- Cloud storage
- Peace of mind

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