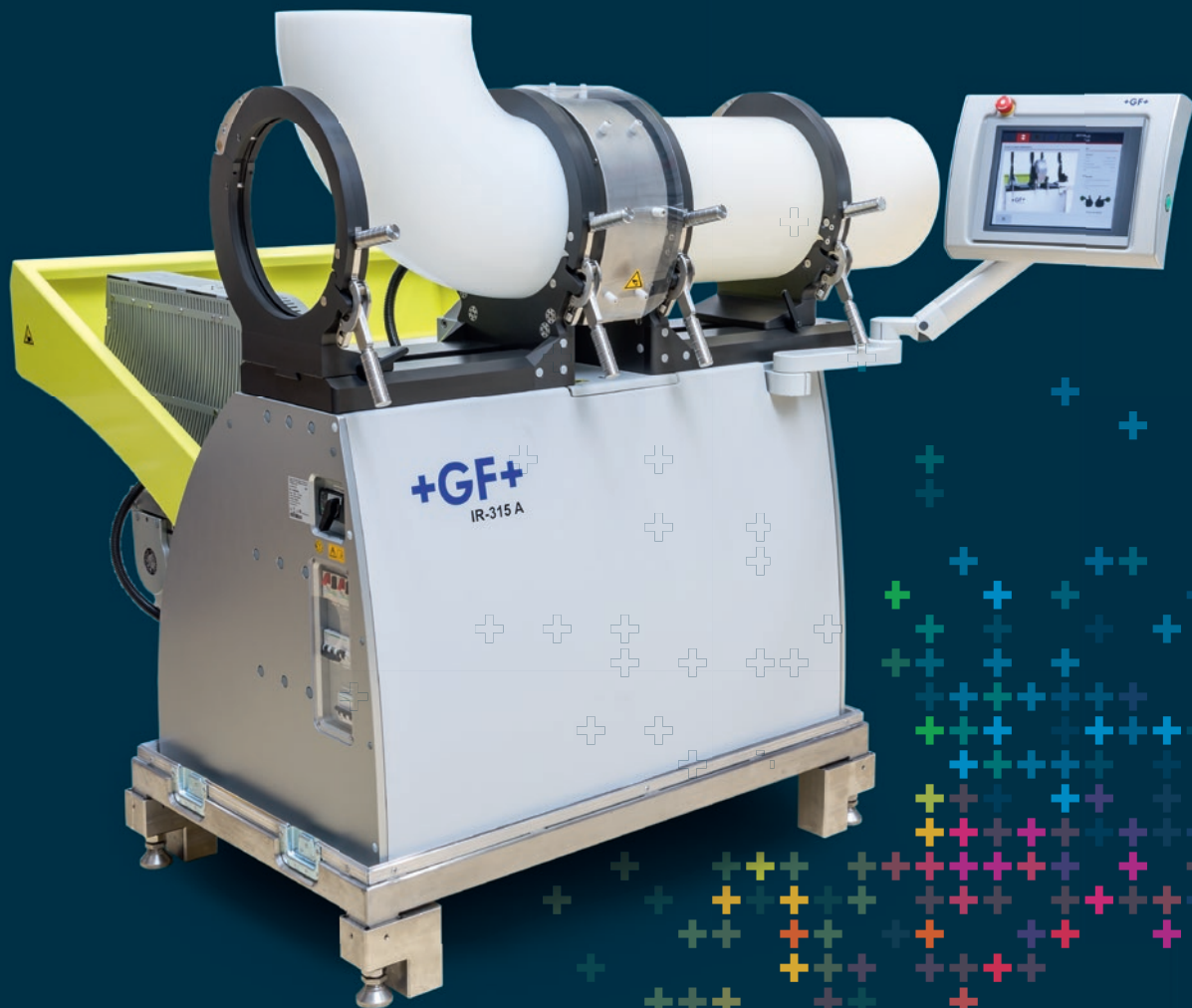


# Peace of mind with big dimensions

Automated infrared fusion machine  
IR-315 A



IR-315 A

# Peace of mind in quality of jointing

Pressure piping systems for industrial applications place high demands on mechanical stability, reproducibility and quality of fusion jointing. The new IR-315 A is part of the automated IR-A family made by GF. Automation, intuitive handling, system security and the revolutionary cooling system for big dimensions enable highest reproducibility, quality and efficiency for installers and operators.



## Easy and standardized transportation



Transport cases with integrated Euro-pallet

## Smart storage



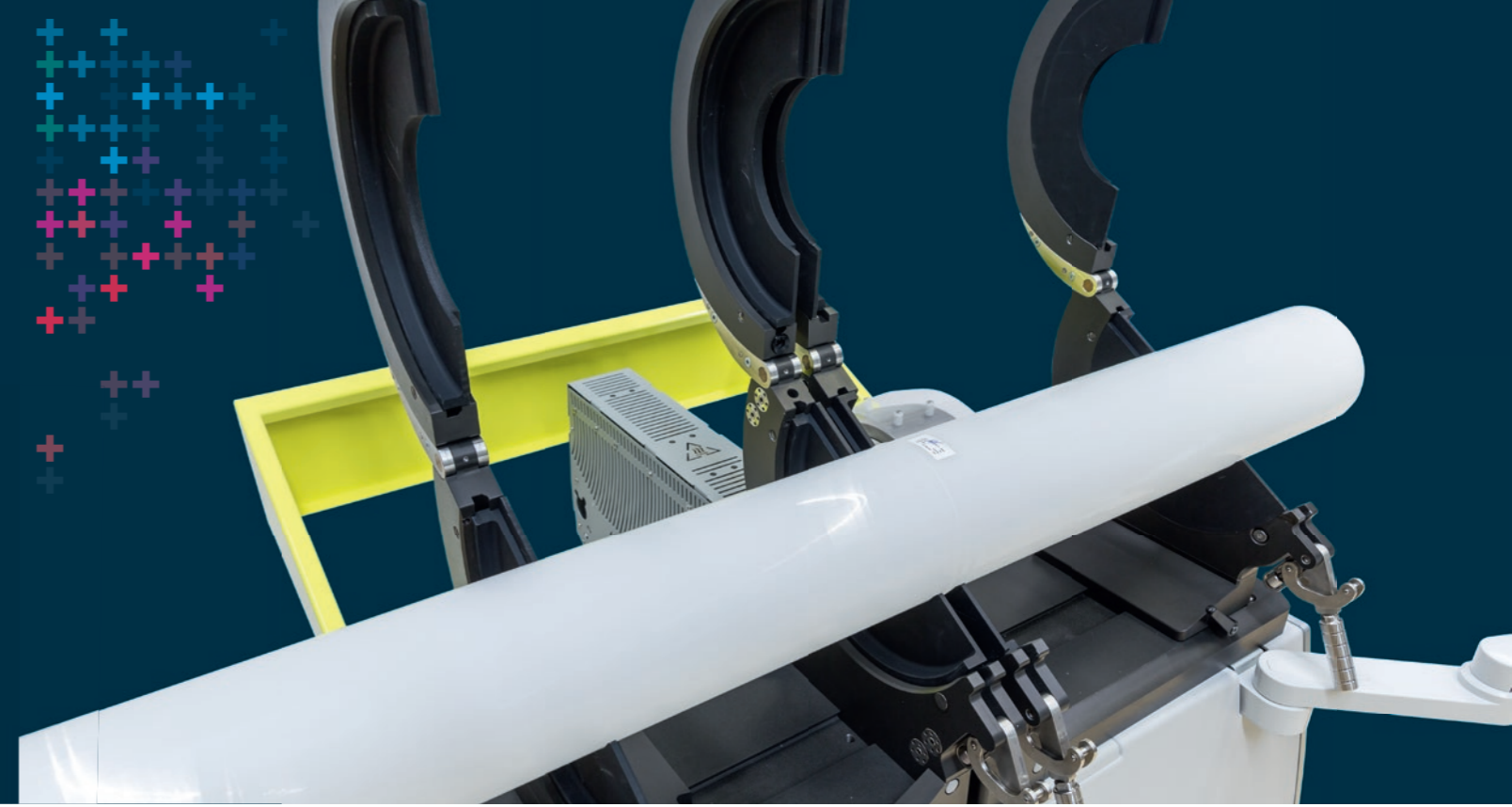
Working table for clean room conditions including all necessary accessories for example printer and clamping inserts

## Specifications IR-315 A

<b>Dimensions</b>	d110 – d315 mm (4" – 12")
<b>Materials</b>	PVDF SYGEF PP grey PROGEF PP-H PROGEF PE100 ecoFIT (≤ d225 mm)
<b>Languages</b>	English, German, Korean
<b>Power supply</b>	400 V 50/60 Hz, max. 5000W, integrated UPS (uninterruptible power supply)
<b>Machine control</b>	PLC (programmable logical controller)
<b>Working temperature range</b>	+5°C to +40°C
<b>Fusion factor <math>f_s</math></b>	≥ 0.80
<b>Weight machine/ incl. transport case</b>	665kg / 720kg
<b>Weight working table / incl. transport case</b>	300kg / 350kg
<b>Dimensions transport case machine L x W x H</b>	1.2 x 0.8 x 1.45 m
<b>Dimensions transport case working table L x W x H</b>	1.2 x 0.8 x 1.0 m
<b>Conformance/ standards</b>	DVS 2007-6, DVS 2203-1
<b>Compliance to</b>	2006/42/EC (MD) + 2004/108/EC (EMC)
<b>Applications</b>	Fusion machine and working table are designed for industrial applications and clean room conditions
<b>Purchase order number for fully equipped machine (with working table)</b>	790.165.001

## Features

# The user-friendly machine



### + Automated fusion process

Minimizes operator errors and immediately picks up any operational issues

- Facing is fully automated
- Heating is fully automated
- Joining process is automated



### + More free space

Ideal for complex installations

- Facer and heater do not interfere with the components
- Clamping slides designed for flange connections



### + Interactive handling

Easy to use

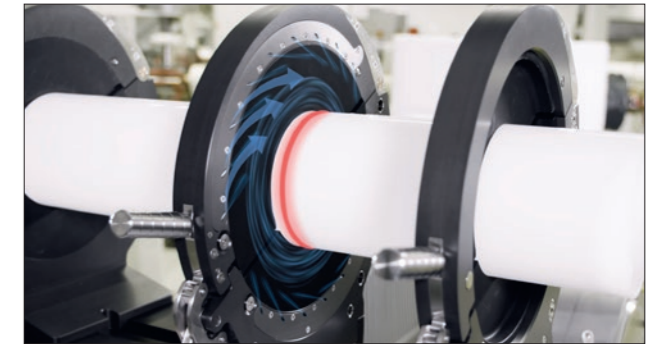
- Ergonomic adjustable touchscreen display
- Graphical user interface (GUI)
- Video guided process steps
- Multilingual instructions



### + Active cooling system

Reduces cooling time up to 30%

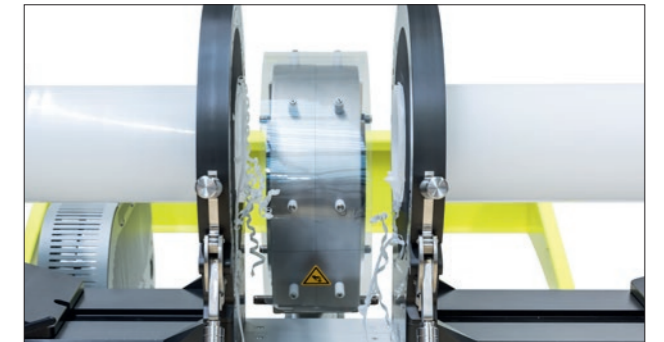
- Integrated in clamping device
- With filtered / cleaned air
- 360° air flow starts automatically after joining



### + Adjustable facing

Flexibility in design and installation

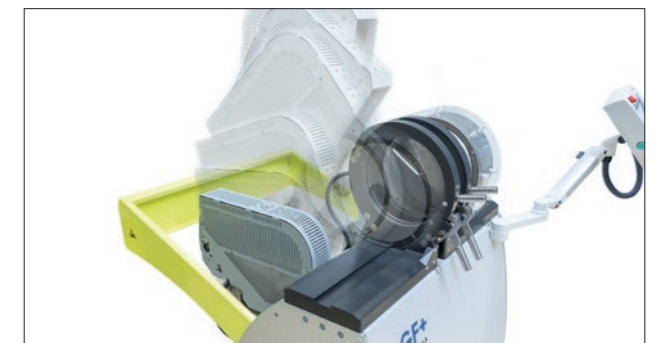
- Length options up to 5mm (default: 2mm)
- Individual facing values on both sides
- Refacing on one side possible
- Precise prefabrication possible
- Facing knife with four blades



### + Easy setup

Safe and easy machine preparation

- Heater, facer and clamping slide move automatically in work and transport position
- No assembling of heater and facer necessary
- Ready for welding within minutes



## Quality control

# No compromise in quality

The demand for quality control is constantly increasing. End user frequently require comprehensive documentation of the fusion process. Fusion joint documentation must be easy, safe and economical to obtain. The IR-315 A creates peace of mind.

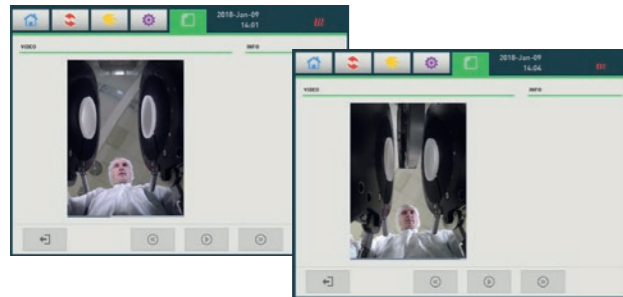
PROTOCOL		ADDITIONAL INFO	
<b>PIPE DATA</b>			
Material:	PVDF 90/8F	Ambient temperature:	23.8 °C
Diameter:	d 315 mm [12"]	Component temperature:	25.8 °C
Wall thickness:	9.7 mm [0.382"]	Number of refacings:	3
Nominal pressure (bar):	PN10	Sum facing left:	2 mm
SDR:	33	Sum facing right:	12 mm
<b>PROCESS DATA</b>			
Heater temperature:	Set value: 324.0 °C	Actual value:	309 °C
<b>GENERAL</b>			
Date:	31-Oct-2017	Time:	11:18
Worksite:	DF	<b>MACHINE</b>	
		Name:	IR-315 A
		Serial number:	145440403
		Software version:	1.11
		Service status:	OK



## + Measures all temperatures

### Increased efficiency and time saving

- Ambient temperature sensor
- Heater temperature is controlled
- Component temperature measured by IR sensor



## + Integrated video camera

### Enhanced quality control

- Records handling and preparation
- Enables traceability
- Exportable video files

## + Integrated process and quality control

### Permanent data alignment

- Jointing distance and jointing pressure are controlled and monitored by the machine
- Heating and cooling process are adjusted according to the ambient temperature

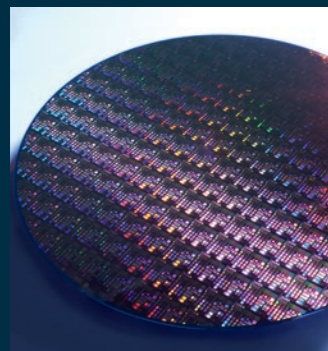


## + Data traceability

### Simplifies QA / QC

- Soft copies via USB connection
- No additional software needed
- Clear OK or NOK (Not OK) message
- Up to 5 printouts for protocol and label

## + Applications



Microelectronics



Clean water applications



Chemical process industry



Energy

## Technology

# The pioneer in IR fusion

GF Piping Systems has been the pioneer and leader for innovative infrared fusion technology since 1992. We have been working closely together with our customers focussing on their real-life needs. As a result we developed the automated IR-A family, which covers the dimension range from d20 up to d315 mm.

## + Advantages of IR fusion

- Short welding time
- Minimal defined bead
- High reproducibility
- High reliability
- Less thermo-stress
- Best for high purity applications

## + The optimized heating process

Non-contact heating (IR) shortens the heating time by more than 30% compared to conventional butt fusion. The entire equalization process is no longer necessary which solves the problem of varying bead formations". The tendency for melted material to stick to the heating element (especially PVDF) is eliminated.



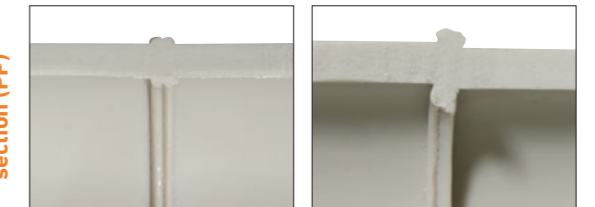
IR (infrared) fusion

Conventional butt fusion

Welding principle



Jointing cross-section (PP)



# The one-stop-shop solution

## Sales & rental pool

Sales companies worldwide, global and local rental pools

## Total plastic solution

Over 70'000 products

## Training

Trainings for welders, weld bead inspection and special maintenance

## Service & maintenance

Worldwide maintenance centers, engineering services, after sales support

# Worldwide at home

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

[www.gfps.com](http://www.gfps.com)

## Argentina / Southern South America

Georg Fischer Central Plastics Sudamérica S.R.L.  
Buenos Aires, Argentina  
Phone +54 11 4512 02 90  
[gfcentral.ps.ar@georgfischer.com](mailto:gfcentral.ps.ar@georgfischer.com)  
[www.gfps.com/ar](http://www.gfps.com/ar)

## Australia

Georg Fischer Pty Ltd  
Riverwood NSW 2210 Australia  
Phone +61 (0) 2 9502 8000  
[australia.ps@georgfischer.com](mailto:australia.ps@georgfischer.com)  
[www.gfps.com/au](http://www.gfps.com/au)

## Austria

Georg Fischer Rohrleitungssysteme GmbH  
3130 Herzogenburg  
Phone +43 (0) 2782 856 43-0  
[austria.ps@georgfischer.com](mailto:austria.ps@georgfischer.com)  
[www.gfps.com/at](http://www.gfps.com/at)

## Belgium / Luxembourg

Georg Fischer NV/SA  
1600 Sint-Pieters-Leeuw / Belgium  
Phone +32 (0) 2 556 40 20  
Fax +32 (0) 2 524 34 26  
[be.ps@georgfischer.com](mailto:be.ps@georgfischer.com)  
[www.gfps.com/be](http://www.gfps.com/be)

## Brazil

Georg Fischer Sist. de Tub. Ltda.  
04571-020 São Paulo/SP  
Phone +55 (0) 11 5525 1311  
[br.ps@georgfischer.com](mailto:br.ps@georgfischer.com)  
[www.gfps.com/br](http://www.gfps.com/br)

## Canada

Georg Fischer Piping Systems Ltd  
Mississauga, ON L5T 2B2  
Phone +1 (905) 670 8005  
Fax +1 (905) 670 8513  
[ca.ps@georgfischer.com](mailto:ca.ps@georgfischer.com)  
[www.gfps.com/ca](http://www.gfps.com/ca)

## China

Georg Fischer Piping Systems Ltd  
Shanghai 201319  
Phone +86 21 3899 3899  
[china.ps@georgfischer.com](mailto:china.ps@georgfischer.com)  
[www.gfps.com/cn](http://www.gfps.com/cn)

## Denmark / Iceland

Georg Fischer A/S  
2630 Taastrup  
Phone +45 (0) 70 22 19 75  
[info.dk.ps@georgfischer.com](mailto:info.dk.ps@georgfischer.com)  
[www.gfps.com/dk](http://www.gfps.com/dk)

## Finland

Georg Fischer AB  
01510 VANTAA  
Phone +358 (0) 9 586 58 25  
Fax +358 (0) 9 586 58 29  
[info.fi.ps@georgfischer.com](mailto:info.fi.ps@georgfischer.com)  
[www.gfps.com/fi](http://www.gfps.com/fi)

## France

Georg Fischer SAS  
95932 Roissy Charles de Gaulle Cedex  
Phone +33 (0) 1 41 84 68 84  
[fr.ps@georgfischer.com](mailto:fr.ps@georgfischer.com)  
[www.gfps.com/fr](http://www.gfps.com/fr)

## Germany

Georg Fischer GmbH  
73095 Albershausen  
Phone +49 (0) 7161 302 0  
[info.de.ps@georgfischer.com](mailto:info.de.ps@georgfischer.com)  
[www.gfps.com/de](http://www.gfps.com/de)

## India

Georg Fischer Piping Systems Pvt. Ltd  
400 083 Mumbai  
Phone +91 22 4007 2000  
Fax +91 22 4007 2020  
[branchoffice@georgfischer.com](mailto:branchoffice@georgfischer.com)  
[www.gfps.com/in](http://www.gfps.com/in)

## Indonesia

PT Georg Fischer Indonesia  
Karawang 41371, Jawa Barat  
Phone +62 267 432 044  
Fax +62 267 431 857  
[indonesia.ps@georgfischer.com](mailto:indonesia.ps@georgfischer.com)  
[www.gfps.com/id](http://www.gfps.com/id)

## Italy

Georg Fischer S.p.A.  
20063 Cernusco S/N (MI)  
Phone +39 02 921 861  
[it.ps@georgfischer.com](mailto:it.ps@georgfischer.com)  
[www.gfps.com/it](http://www.gfps.com/it)

## Japan

Georg Fischer Ltd  
530-0003 Osaka  
Phone +81 (0) 6 6341 2451  
[jp.ps@georgfischer.com](mailto:jp.ps@georgfischer.com)  
[www.gfps.com/jp](http://www.gfps.com/jp)

## Korea

Georg Fischer Korea Co. Ltd  
Unit 2501, U-Tower  
120 HeungdeokJungang-ro  
(Yeongdeok-dong)  
Giheung-gu, Yongin-si, Gyeonggi-do  
Phone +82 31 8017 1450  
Fax +82 31 217 1454  
[kor.ps@georgfischer.com](mailto:kor.ps@georgfischer.com)  
[www.gfps.com/kr](http://www.gfps.com/kr)

## Malaysia

Georg Fischer (M) Sdn. Bhd.  
40460 Shah Alam, Selangor Darul Ehsan  
Phone +60 (0) 3 5122 5585  
Fax +60 (0) 3 5122 5575  
[my.ps@georgfischer.com](mailto:my.ps@georgfischer.com)  
[www.gfps.com/my](http://www.gfps.com/my)

## Mexico / Northern Latin America

Georg Fischer S.A. de C.V.  
Apodaca, Nuevo Leon  
CP66636 Mexico  
Phone +52 (81) 1340 8586  
Fax +52 (81) 1522 8906  
[mx.ps@georgfischer.com](mailto:mx.ps@georgfischer.com)  
[www.gfps.com/mx](http://www.gfps.com/mx)

## Middle East

Georg Fischer Piping Systems (Switzerland) Ltd  
Dubai, United Arab Emirates  
Phone +971 4 289 49 60  
[gcc.ps@georgfischer.com](mailto:gcc.ps@georgfischer.com)  
[www.gfps.com/int](http://www.gfps.com/int)

## Netherlands

Georg Fischer N.V.  
8161 PA Epe  
Phone +31 (0) 578 678 222  
[nl.ps@georgfischer.com](mailto:nl.ps@georgfischer.com)  
[www.gfps.com/nt](http://www.gfps.com/nt)

## Norway

Georg Fischer AS  
1351 Rud  
Phone +47 67 18 29 00  
[no.ps@georgfischer.com](mailto:no.ps@georgfischer.com)  
[www.gfps.com/no](http://www.gfps.com/no)

## Philippines

Georg Fischer Pte Ltd  
Representative Office  
Phone +632 571 2365  
Fax +632 571 2368  
[sgp.ps@georgfischer.com](mailto:sgp.ps@georgfischer.com)  
[www.gfps.com/sg](http://www.gfps.com/sg)

## Poland

Georg Fischer Sp. z o.o.  
05-090 Sekocin Nowy  
Phone +48 (0) 22 31 31 0 50  
[poland.ps@georgfischer.com](mailto:poland.ps@georgfischer.com)  
[www.gfps.com/pl](http://www.gfps.com/pl)

## Romania

Georg Fischer Piping Systems (Switzerland) Ltd  
020257 Bucharest - Sector 2  
Phone +40 (0) 21 230 53 80  
[ro.ps@georgfischer.com](mailto:ro.ps@georgfischer.com)  
[www.gfps.com/int](http://www.gfps.com/int)

## Russia

Georg Fischer Piping Systems (Switzerland) Ltd  
Moscow 125040  
Phone +7 495 748 11 44  
[ru.ps@georgfischer.com](mailto:ru.ps@georgfischer.com)  
[www.gfps.com/ru](http://www.gfps.com/ru)

## Singapore

Georg Fischer Pte Ltd  
11 Tampines Street 92, #04-01/07  
528 872 Singapore  
Phone +65 6747 0611  
Fax +65 6747 0577  
[sgp.ps@georgfischer.com](mailto:sgp.ps@georgfischer.com)  
[www.gfps.com/sg](http://www.gfps.com/sg)

## Spain / Portugal

Georg Fischer S.A.  
28046 Madrid  
Phone +34 (0) 91 781 98 90  
[es.ps@georgfischer.com](mailto:es.ps@georgfischer.com)  
[www.gfps.com/es](http://www.gfps.com/es)

## Sweden

Georg Fischer AB  
117 43 Stockholm  
Phone +46 (0) 8 506 775 00  
[info.se.ps@georgfischer.com](mailto:info.se.ps@georgfischer.com)  
[www.gfps.com/se](http://www.gfps.com/se)

## Switzerland

Georg Fischer Rohrleitungssysteme (Schweiz) AG  
8201 Schaffhausen  
Phone +41 (0) 52 631 3026  
[ch.ps@georgfischer.com](mailto:ch.ps@georgfischer.com)  
[www.gfps.com/ch](http://www.gfps.com/ch)

## Taiwan

Georg Fischer Co. Ltd  
San Chung Dist., New Taipei City  
Phone +886 2 8512 2822  
Fax +886 2 8512 2823  
[www.gfps.com/tw](http://www.gfps.com/tw)

## United Kingdom / Ireland

Georg Fischer Sales Limited  
Coventry, CV2 2ST  
Phone +44 (0) 2476 535 535  
[uk.ps@georgfischer.com](mailto:uk.ps@georgfischer.com)  
[www.gfps.com/uk](http://www.gfps.com/uk)

## USA / Caribbean

Georg Fischer LLC  
9271 Jeronimo Road  
92618 Irvine, CA  
Phone +1 714 731 8800  
Fax +1 714 731 6201  
[us.ps@georgfischer.com](mailto:us.ps@georgfischer.com)  
[www.gfps.com/us](http://www.gfps.com/us)

## International

Georg Fischer Piping Systems (Switzerland) Ltd  
8201 Schaffhausen/Switzerland  
Phone +41 (0) 52 631 3003  
Fax +41 (0) 52 631 2893  
[info.export@georgfischer.com](mailto:info.export@georgfischer.com)  
[www.gfps.com/int](http://www.gfps.com/int)

„The information and technical data (altogether "Data") herein are not binding, unless explicitly confirmed in writing. The Data neither constitutes any expressed, implied or warranted characteristics, nor guaranteed properties or a guaranteed durability. All Data is subject to modification. The General Terms and Conditions of Sale of Georg Fischer Piping Systems apply.“