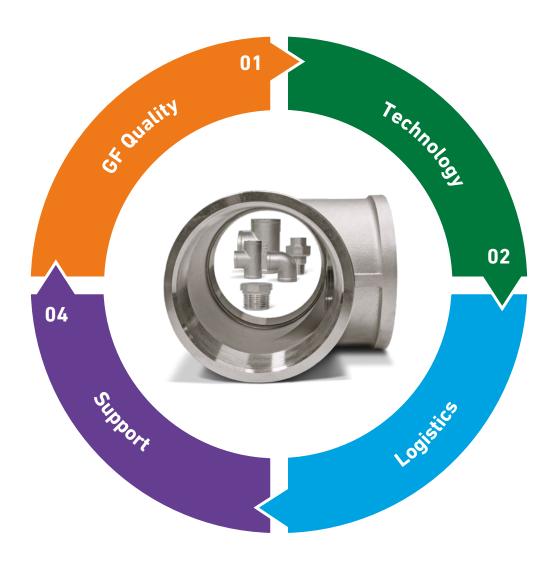


Technical Catalogue

Stainless steel fittings, threaded



A 360° perspective for our customers



GF Quality

- Design and development by GF
- Special alloy suitable for drinking water (fulfils national and international standards)
- · Products conforming to ISO 4144

Cogistics

- Excellent availability (items stocked at European Central Stock in Austria/Traisen)
- Efficient delivery (together with malleable cast iron fittings)
- · Full assortment (nascent)

Technology

- Consistent laying lengths (z-measure) according to EN 10242 (Malleable cast iron fittings)
- Well-known high GF quality of threads: accuracy of fit and angularity
- Universal female threads (Rp/G) ISO 7-1 / ISO 228-1 up to including 2"
- · Female threads with sealing face

Support

- · Professional technical service
- · CAD-Library (from 2018)

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The technical data given in this publication are for general information purposes only. They imply no warranty of whatever kind. Please consult our General Terms and Conditions of Supply.

General Information

Product Characteristics. Standards

GF offers threaded stainless steel fittings in accordance with ISO 4144 ("Pipework - Stainless steel fittings, threaded in accordance with ISO 7-1"). There is currently no European EN standard or harmonised European standard published for these products.

The design of the GF threaded stainless steel fittings is based on the EN 10242 malleable cast iron fittings standard, to allow for uniform installation dimensions (z-dimension).

The jointing threads Rp and R comply with the ISO 7 and EN 10226 standards.

The fastening threads G comply with the EN ISO 228 standard.

Our range of threaded stainless steel fittings can be divided into two differing manufacturing processes or materials:

- Casted fittings in material 1.4408 according to EN 10283 or CF8M / 316 according to ASTM A351/A351M
- Fittings from pipes in material TP316L / 316L according to ASTM A312

Other materials or stainless steel grades are available upon request.

The material designation is part of the product labeling on the fitting, as well as the GF logo, fitting size and batch code.

Application limits

GF threaded stainless steel fittings are used for conveying liquids and gases up to the following pressure and temperature limits:

Maximum permissible working pressure bar **)
25
interpolated values
20

^{*)} The values are fluid temperatures under continuous operation conditions. Applications with specific environment temperatures require further technical assessment.

Elements of the GF designation

GF has introduced a product designation for inquiries and orders. It consists of:

Designation	Explanation
Type of fitting	Catalogue number (see product range part)
Fitting size(s)	given in inch (see column "Dim." in the product range part)
Material	316 / 316L

To simplify the order specification, the 9-character GF item code given in the chapter product range, can also be used.

For example, the GF designation for an elbow with 2 internal threads in dimension $\frac{1}{2}$, material 316 is:

90 - 1/2 316 or 773 090 104

The following rules apply for the sequence of connection

- for equal fittings giving the individual connection size once is sufficient.
- for reducing fittings with 2 connections of different sizes the connection size of the larger is given first, then the one of the smaller connection.
- for fittings with 3 connections (fig. 1) in case of equal connections on the run, it is sufficient to give the size of the run first, followed by the size of the branch.

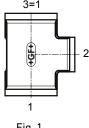


Fig. 1

For example, the designation for a Tee (figure no. 130) with internal threads in dimension 114 on the run and 34 at the branch in 316 material is as follows:

130 - 114 x 34 316 or 773 130 151

^{**) 1} bar = 10⁵ N/m² = 100 kPa

Corporate policy

The success of our corporation is secured only if we fulfil the requirements of our customers regarding product performance, quantities, on time delivery, price and service and all needs of our company environment are respected. Our aim is to improve customers satisfaction, delivery service as well as environmental and health and safety performance by continuous enhancement of product and process quality. We base this process on our Integrated Management System, which we improve continuously and rely on our competent employees, which we lead with targets and support in their personal development. We consequently aim to implement and "live" the GF Values.

Our Integrated Management System is certified in according to EN ISO 9001, EN ISO 14001 and BS OHSAS 18001.

Actual certificate can be ordered at

www.fittings.at/contactform



Manufacturing and manufacturing processes

Casted items are manufactured by using the so-called "lost wax casting" technique (also known as "precision casting"). This process uses a wax corpus (fitting positive) as a lost casting model. The casted item is produced by pouring into precise ceramic shells. This process ensures a top-quality surface in particular, as well as low manufacturing tolerances on the casting products.

GF produces threaded stainless steel fittings with selected quality-controlled partners. Appropriate quality assurance measures are implemented and monitored across the entire value-added and delivery chains. Product engineering, as well as design specification and quality criteria are developed by GF and are in line with the GF quality philosophy.

GF threaded stainless steel fittings are individually tested within the framework of the existing standard.

The pressure test for the union fittings has been carried out on each individual item.

Measurements

The measurements given in this catalogue represent the status at the time of printing - mistakes and printing errors excluded. Please contact our technical support to ensure the correct GF measurement order code according to your application.

Product presentation at chapter "Product Range"

This technical catalogue documents all threaded stainless steel fittings of Georg Fischer Fittings GmbH. **Products** without position or code number are shown for information purposes only and are not part of the delivery program and will be added to our assortment at a later stage (delivery information for this product available upon request).

The individual fitting types are displayed in the catalogue by using **symbol images** and **sketches**, along with the related key dimensions.

Code ... GF order numbers and product range will be updated continuously; articles without order code are not available for delivery at the time of the printing of this catalogue (delivery information available upon request).

Dim. ... refers to the thread/fitting size(s).

374 G ... refers to the thread size G according to EN ISO 228 of the 374 union nut.

 width across flat. The given measurement states the size of the screw-wrench that is to be used.

SP ... minimum order quantity, quantity per order standard pack

GP ... quantity per carton

Weight ... weight per item in kg

Assortment overview -Stainless steel fittings, threaded

The product range is divided into three main groups:

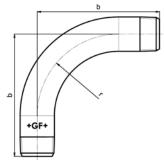
- Casted fittings in material 316
- Casted unions in material 316
- Fittings from pipes in material 316L



Abbreviattions: F = Female (internal) thread, M = Male (external) thread, BW = Butt Weld end

Product range



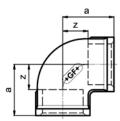


4 Pipe bend 90°

* Articles without order code are not yet available at the time of printing this catalog.

Dim.	Code	b	r
(inch)		(mm)	(mm)
1/4	*	60	40
3/8	*	70	45
1/2	*	80	55
3/4	*	100	70
1	*	120	80
1 1/4	*	140	105
1 1/2	*	160	115
2	*	190	125
2 1/2	*	240	170
3	*	290	200



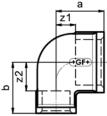


90 Elbow 90°, equal

Dim.	Code	SP	GP	Weight	а	Z
(inch)				(kg)	(mm)	(mm)
1/4	773 090 102	10	40	0.033	21	11
3/8	773 090 103	10	60	0.047	25	15
1/2	773 090 104	10	40	0.077	28	15
3/4	773 090 105	10	30	0.114	33	18
1	773 090 106	5	30	0.184	38	21
1 1/4	773 090 107	5	20	0.305	45	26
1 1/2	773 090 108	0	15	0.397	50	31
2	773 090 109	0	10	0.633	58	34
2 1/2	773 090 110	0	4	1.105	69	42
3	773 090 111	0	2	1.506	78	48

#**GF**+

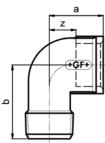




90 Elbow 90°, reducing

Dim. (1-2)	Code	SP	GP	Weight	а	b	z1	z2
(inch)				(kg)	(mm)	(mm)	(mm)	(mm)
3/8 - 1/4	773 090 116	10	40	0.038	23	23	13	13
1/2 - 1/4	773 090 117	10	40	0.051	24	24	11	14
1/2 - 3/8	773 090 118	10	20	0.058	26	26	13	16
3/4 - 3/8	773 090 119	10	40	0.077	28	28	13	18
3/4 - 1/2	773 090 120	10	30	0.095	30	31	15	18
1 - ³ / ₈	773 090 145	10	30	0.115	32	34	15	24
1 - 1/2	773 090 121	5	20	0.129	32	34	15	21
1 - 3/4	773 090 122	5	20	0.151	35	36	18	21
1 1/4 - 1/2	773 090 132	5	40	0.173	35	38	16	25
1 1/4 - 3/4	773 090 123	5	30	0.194	36	41	17	26
1 1/4 - 1	773 090 124	5	10	0.241	40	42	21	25
1 1/2 - 3/4	773 090 125	5	25	0.233	38	44	19	29
1 ½ - 1	773 090 126	5	20	0.283	42	46	23	29
1 ½ - 1 ¼	773 090 127	0	10	0.345	46	48	27	29
2 - 1	773 090 128	0	15	0.376	44	52	20	35
2 - 1 1/4	773 090 129	0	15	0.445	48	54	24	35
2 - 1 ½	773 090 130	0	10	0.517	52	55	28	36
2 ½ - 2	773 090 131	0	6	0.841	61	66	34	42

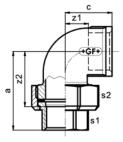




92 Elbow 90°

Dim.	Code	SP	GP	Weight	а	b	z
(inch)				(kg)	(mm)	(mm)	(mm)
1/4	773 092 102	10	50	0.029	21	28	11
3/8	773 092 103	10	40	0.043	25	32	15
1/2	773 092 104	10	40	0.070	28	37	15
3/4	773 092 105	10	30	0.109	33	43	18
1	773 092 106	5	40	0.179	38	52	21
1 1/4	773 092 107	5	20	0.293	45	60	26
1 1/2	773 092 108	0	15	0.404	50	65	31
2	773 092 109	0	10	0.618	58	74	34
2 ½	773 092 110	0	4	1.062	69	88	42
3	773 092 111	0	3	1.506	78	98	48





95 Union elbow, flat seat

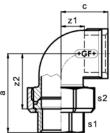
Supplied with PTFE sealing gasket; a and z2 include the seal thickness (size $\frac{1}{2}$ - $\frac{1}{2}$ = 2mm; size 2 = 3mm).

* Articles without order code are not yet available at the time of printing this catalog.

Inside hexagon

Dim.	374 G	Code	SP	GP	Weight	а	C	z1	z2	s1	s2
(inch)	(inch)				(kg)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
1/4	5/8	*				42.0	21	11	32.0	#10	28
3/8	3/4	*				46.0	25	15	36.0	#12	32
1/2	1	773 095 104	0	10	0.167	50.5	28	15	37.5	25	39
3/4	1 1/4	*				57.0	33	18	42.0	32	48
1	1 1/2	*				64.0	38	21	47.0	38	55
1 1/4	2	773 095 107	0	5	0.672	72.0	45	26	53.0	49	68
1 1/2	2 1/4	773 095 108	0	5	0.868	80.5	50	31	61.5	54	75
2	2 3/4	773 095 109	0	5	1.344	94.0	58	34	70.0	66	92



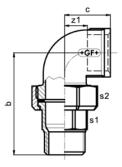


Union elbow, spherical/taper seat

* Articles without order code are not yet available at the time of printing this catalog. # Inside hexagon

Dim.	374 G	Code	SP	GP	Weight	а	C	z1	z2	s1	s2
(inch)	(inch)				(kg)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
1/4	5/8	*				42.0	21	11	32.0	#10	28
3/8	3/4	*				46.0	25	15	36.0	#12	32
1/2	1	773 096 104	0	10	0.169	50.5	28	15	37.5	25	39
3/4	1 1/4	*				57.0	33	18	42.0	32	48
1	1 ½	*				64.0	38	21	47.0	38	55
1 1/4	2	773 096 107	0	5	0.679	72.0	45	26	53.0	49	68
1 1/2	2 1/4	773 096 108	0	8	0.879	80.5	50	31	61.5	54	75
2	2 3/4	773 096 109	0	5	1.356	94.0	58	34	70.0	66	92





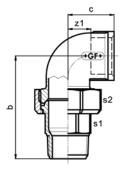
97 Union elbow, flat seat

Supplied with PTFE sealing gasket; b includes the seal thickness (size $\frac{1}{2}$ - $\frac{1}{2}$ = 2mm; size 2 = 3mm).

* Articles without order code are not yet available at the time of printing this catalog.

Dim.	374 G	Code	SP	GP	Weight	b	С	z1	s1	s2
(inch)	(inch)				(kg)	(mm)	(mm)	(mm)	(mm)	(mm)
1/4	5/8	*				53.5	21	11	16	28
3/8	3/4	*				57.5	25	15	19	32
1/2	1	773 097 104	0	10	0.182	67.5	28	15	25	39
3/4	1 1/4	*				75.5	33	18	32	48
1	1 1/2	*				85.0	38	21	38	55
1 1/4	2	773 097 107	0	5	0.726	95.5	45	26	49	68
1 1/2	2 1/4	773 097 108	0	8	0.966	104.0	50	31	54	75
2	2 3/4	773 097 109	0	5	1.479	122.0	58	34	66	92



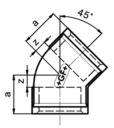


98 Union elbow, spherical/taper seat

* Articles without order code are not yet available at the time of printing this catalog.

Dim.	374 G	Code	SP	GP	Weight	b	C	z1	s1	s2
(inch)	(inch)				(kg)	(mm)	(mm)	(mm)	(mm)	(mm)
1/4	5/8	*				53.5	21	11	16	28
3/8	3/4	*				57.5	25	15	19	32
1/2	1	773 098 104	0	10	0.184	67.5	28	15	25	39
3/4	1 1/4	*				75.5	33	18	32	48
1	1 ½	*				85.0	38	21	38	55
1 1/4	2	773 098 107	0	5	0.736	95.5	45	26	49	68
1 ½	2 1/4	773 098 108	0	8	0.977	104.0	50	31	54	75
2	2 3/4	773 098 109	0	5	1.482	122.0	58	34	66	92

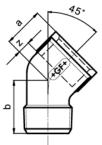




120 Elbow 45°

Dim.	Code	SP	GP	Weight	а	Z
(inch)				(kg)	(mm)	(mm)
1/4	773 120 102	10	40	0.029	17	7
3/8	773 120 103	10	30	0.042	20	10
1/2	773 120 104	5	20	0.066	22	9
3/4	773 120 105	5	20	0.096	25	10
1	773 120 106	5	30	0.154	28	11
1 1/4	773 120 107	5	20	0.252	33	14
1 1/2	773 120 108	5	20	0.321	36	17
2	773 120 109	0	5	0.519	43	19
2 1/2	773 120 110	0	5	0.830	48	21
3	773 120 111	0	3	1.189	54	24

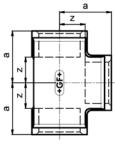




121 Elbow 45°

Dim.	Code	SP	GP	Weight	а	b	Z
(inch)				(kg)	(mm)	(mm)	(mm)
1/4	773 121 102	10	60	0.025	17	22	7
3/8	773 121 103	10	40	0.037	20	25	10
1/2	773 121 104	10	20	0.060	22	28	9
3/4	773 121 105	5	30	0.089	25	32	10
1	773 121 106	5	20	0.148	28	37	11
1 1/4	773 121 107	5	20	0.238	33	43	14
1 ½	773 121 108	0	20	0.312	36	46	17
2	773 121 109	0	5	0.498	43	55	19
2 ½	773 121 110	0	5	0.832	50	62	23
3	773 121 111	0	4	1.196	55	70	25

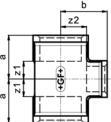




130 Tee, equal

Dim.	Code	SP	GP	Weight	а	z
(inch)				(kg)	(mm)	(mm)
1/4	773 130 102	10	30	0.046	21	11
3/8	773 130 103	10	40	0.066	25	15
1/2	773 130 104	10	30	0.104	28	15
3/4	773 130 105	5	20	0.155	33	18
1	773 130 106	5	20	0.237	38	21
1 1/4	773 130 107	5	15	0.394	45	26
1 1/2	773 130 108	0	10	0.519	50	31
2	773 130 109	0	5	0.815	58	34
2 1/2	773 130 110	0	2	1.358	69	42
3	773 130 111	0	2	2.060	78	48





130 Tee, reducing

Dim. (1-2)	Code	SP	GP	Weight	а	b	z1	z2
(inch)				(kg)	(mm)	(mm)	(mm)	(mm)
3/8 - 1/4	773 130 115	10	20	0.058	23	23	13	13
1/2 - 1/4	773 130 117	10	40	0.078	24	24	11	14
1/2 - 3/8	773 130 119	10	40	0.086	26	26	13	16
3/4 - 3/8	773 130 124	10	60	0.111	28	28	13	18
3/4 - 1/2	773 130 127	5	20	0.138	30	31	15	18
1 - 1/2	773 130 137	5	10	0.192	32	34	15	21
1 - 3/4	773 130 140	5	10	0.214	35	36	18	21
1 1/4 - 1/2	773 130 148	5	20	0.280	34	38	15	25
1 1/4 - 3/4	773 130 151	5	10	0.304	36	41	17	26
1 1/4 - 1	773 130 155	5	15	0.336	40	42	21	25
1 ½ - ½	773 130 164	0	15	0.345	36	42	17	29
1 1/2 - 3/4	773 130 166	5	15	0.352	38	44	19	29
1 ½ - 1	773 130 169	0	10	0.415	42	46	23	29
1 ½ - 1 ¼	773 130 172	0	10	0.475	46	48	27	29
2 - 1/2	773 130 181	0	10	0.500	38	48	14	35
2 - 3/4	773 130 183	0	12	0.514	40	50	16	35
2 - 1	773 130 185	0	5	0.579	44	52	20	35
2 - 1 1/4	773 130 188	0	10	0.633	48	54	24	35
2 - 1 ½	773 130 191	0	5	0.703	52	55	28	36





180 Cross

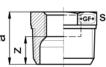
Dim.	Code	SP	GP	Weight	а	Z
(inch)				(kg)	(mm)	(mm)
1/4	773 180 102	10	30	0.053	21	11
3/8	773 180 103	10	40	0.079	25	15
1/2	773 180 104	5	20	0.129	28	15
3/4	773 180 105	5	20	0.188	33	18
1	773 180 106	5	20	0.302	38	21
1 1/4	773 180 107	0	10	0.486	45	26
1 ½	773 180 108	0	5	0.625	50	31
2	773 180 109	0	5	0.952	58	34
2 1/2	773 180 110	0	3	1.574	69	42
3	773 180 111	0	2	2.181	78	48



240 Socket, reducing

Dim. (1-2)	Code	SP	GP	Weight (kg)	a (mm)	z2 (mm)
3/8 - 1/4	773 240 117	10	40	0.031	30	10
1/2 - 1/4	773 240 117	10	20	0.046	36	13
1/2 - 3/8	773 240 118	10	20	0.040	36	13
3/4 - 3/8	773 240 121	10	20	0.064	39	14
3/4 - 1/2	773 240 122	10	20	0.069	39	11
1 - 1/2	773 240 124	5	20	0.106	45	15
1 - 3/4	773 240 125	5	20	0.115	45	13
1 1/4 - 3/4	773 240 128	5	30	0.161	50	16
1 1/4 - 1	773 240 129	5	10	0.184	50	14
1 ½ - 1	773 240 132	0	10	0.243	55	19
1 ½ - 1 ¼	773 240 133	0	10	0.249	55	17
2 - 1	773 240 136	0	20	0.323	65	24
2 - 1 1/4	773 240 137	0	15	0.352	65	22
2 - 1 ½	773 240 138	0	8	0.378	65	22
2 ½ - 2	773 240 142	0	6	0.603	74	23
3 - 2 ½	773 240 145	0	3	0.856	80	23





241 Reducing bush

Dim. (1-2)	Code	SP	GP	Weight	а	z	s
(inch)				(kg)	(mm)	(mm)	(mm)
3/8 - 1/4	773 241 117	10	60	0.016	18.5	8.5	19
1/2 - 1/4	773 241 119	10	60	0.034	23.0	13.0	23
1/2 - 3/8	773 241 120	10	60	0.028	23.0	13.0	23
3/4 - 1/4	773 241 121	10	40	0.064	25.0	15.0	30
3/4 - 3/8	773 241 122	10	40	0.057	25.0	15.0	30
3/4 - 1/2	773 241 123	10	30	0.048	25.0	12.0	30
1 - 1/4	773 241 124	10	60	0.107	28.0	18.0	36
1 - ³ / ₈	773 241 125	10	40	0.101	28.0	18.0	36
1 - 1/2	773 241 126	10	40	0.097	28.0	15.0	36
1 - 3/4	773 241 127	5	20	0.075	28.0	13.0	36
1 1/4 - 1/2	773 241 129	10	30	0.182	30.5	17.5	46
1 1/4 - 3/4	773 241 130	10	30	0.162	30.5	15.5	46
1 1/4 - 1	773 241 131	5	30	0.128	30.5	13.5	46
1 ½ - ½	773 241 133	0	20	0.233	30.5	17.5	50
1 1/2 - 3/4	773 241 134	0	20	0.218	30.5	15.5	50
1 ½ - 1	773 241 135	0	20	0.189	30.5	13.5	50
1 ½ - 1 ¼	773 241 136	0	20	0.113	30.5	11.5	50
2 - 1/2	773 241 137	0	20	0.427	36.0	23.0	65
2 - 3/4	773 241 138	0	30	0.420	36.0	21.0	65
2 - 1	773 241 139	0	15	0.408	36.0	19.0	65
2 - 1 1/4	773 241 140	0	20	0.344	36.0	17.0	65
2 - 1 ½	773 241 141	0	10	0.277	36.0	17.0	65
2 ½ - 2	773 241 145	0	24	0.482	41.5	17.5	80
3 - 1 ½	773 241 148	0	12	1.012	45.5	26.5	95
3 - 2	773 241 149	0	12	0.913	45.5	21.5	95
3 - 2 ½	773 241 150	0	16	0.598	45.5	18.5	95



245 Hexagon nipple, reducing

Dim. (1-2)	Code	SP	GP	Weight	а	S
(inch)				(kg)	(mm)	(mm)
3/8 - 1/4	773 245 117	10	80	0.026	31.5	19
1/2 - 1/4	773 245 118	10	60	0.045	40.0	23
1/2 - 3/8	773 245 119	10	60	0.047	40.0	23
³ / ₄ - ³ / ₈	773 245 121	10	30	0.069	43.5	30
3/4 - 1/2	773 245 122	10	20	0.074	43.5	30
1 - 1/2	773 245 123	5	20	0.110	49.0	36
1 - 3/4	773 245 124	5	30	0.112	49.0	36
1 1/4 - 1/2	773 245 125	5	20	0.161	49.0	36
1 1/4 - 3/4	773 245 126	10	20	0.170	54.0	46
1 1/4 - 1	773 245 127	5	20	0.178	54.0	46
1 ½ - ½	773 245 175	5	20	0.186	47.5	50
1 1/2 - 3/4	773 245 128	5	20	0.190	49.0	50
1 ½ - 1	773 245 129	0	30	0.207	54.0	50
1 ½ - 1 ¼	773 245 130	0	10	0.207	54.0	50
2 - 1/2	773 245 181	0	30	0.328	53.0	65
2 - 3/4	773 245 182	0	30	0.329	54.5	65
2 - 1	773 245 131	0	20	0.368	64.0	65
2 - 1 1/4	773 245 132	0	20	0.362	64.0	65
2 - 1 ½	773 245 133	0	10	0.365	64.0	65
2 ½ - 2	773 245 135	0	12	0.562	74.0	80
3 - 2 ½	773 245 137	0	8	0.833	81.0	95

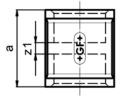


a z

246 Socket, reducing

Dim. (1-2) (inch)	Code	SP	GP	Weight (kg)	a (mm)	(mm)
3/8 - 1/4	773 246 116	10	40	0.030	35	25
1/2 - 3/8	773 246 118	10	40	0.053	43	30
3/4 - 1/2	773 246 120	10	20	0.079	48	33
1 - 3/4	773 246 122	5	20	0.128	55	38
1 1/4 - 1	773 246 125	5	15	0.200	60	41
1 ½ - 1 ¼	773 246 128	0	10	0.263	63	44
2 - 1 ½	773 246 131	0	8	0.400	70	46

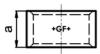




270 Socket

Dim.	Code	SP	GP	Weight	а	z1
(inch)				(kg)	(mm)	(mm)
1/4	773 270 102	10	50	0.023	27	7
3/8	773 270 103	10	50	0.033	30	10
1/2	773 270 104	10	60	0.055	36	10
3/4	773 270 105	10	40	0.079	39	9
1	773 270 106	5	40	0.135	45	11
1 1/4	773 270 107	5	30	0.202	50	12
1 ½	773 270 108	0	20	0.273	55	17
2	773 270 109	0	14	0.432	65	17
2 1/2	773 270 110	0	10	0.712	74	20
3	773 270 111	0	6	0.945	80	20

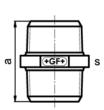




274 Half pipe socket

Dim.	Code	SP	GP	Weight (kg)	(mm)
1/4	773 274 102	10	80	0.008	11.0
3/8	773 274 103	10	80	0.010	11.5
1/2	773 274 104	10	30	0.018	15.0
3/4	773 274 105	10	40	0.026	16.5
1	773 274 106	5	25	0.044	19.5
1 1/4	773 274 107	10	40	0.066	21.5
1 1/2	773 274 108	0	5	0.083	21.5
2	773 274 109	0	5	0.146	26.0
2 ½	773 274 110	0	12	0.241	30.5
3	773 274 111	0	20	0.337	33.5





280 Hexagon nipple

Dim.	Code	SP	GP	Weight	а	S
(inch)				(kg)	(mm)	(mm)
1/4	773 280 102	10	80	0.023	30.0	19
3/8	773 280 103	10	60	0.032	31.5	22
1/2	773 280 104	10	30	0.060	40.0	28
3/4	773 280 105	10	40	0.083	43.5	33
1	773 280 106	5	30	0.140	49.0	42
1 1/4	773 280 107	5	30	0.200	54.0	50
1 ½	773 280 108	0	10	0.239	54.0	55
2	773 280 109	0	20	0.402	64.0	70
2 1/2	773 280 110	0	10	0.623	74.0	85
3	773 280 111	0	6	0.890	81.0	100

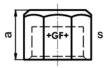




290 Plug, beaded

Dim.	Code	SP	GP	Weight	C	S
(inch)				(kg)	(mm)	(mm)
1/4	773 290 102	10	80	0.015	17.5	17
3/8	773 290 103	10	60	0.020	18.5	19
1/2	773 290 104	10	50	0.035	23.0	23
3/4	773 290 105	10	30	0.054	25.0	30
1	773 290 106	5	40	0.086	28.0	36
1 1/4	773 290 107	5	30	0.139	30.5	46
1 1/2	773 290 108	0	30	0.165	30.5	50
2	773 290 109	0	20	0.296	36.0	65
2 1/2	773 290 110	0	15	0.482	41.5	80
3	773 290 111	0	12	0.713	45.5	95

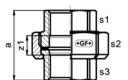




300 Cap

Dim.	Code	SP	GP	Weight	а	S
(inch)				(kg)	(mm)	(mm)
1/4	773 300 102	10	40	0.026	17	19
3/8	773 300 103	10	40	0.028	18	22
1/2	773 300 104	10	40	0.057	24	27
3/4	773 300 105	5	20	0.079	26	33
1	773 300 106	5	30	0.119	29	40
1 1/4	773 300 107	5	20	0.190	34	49
1 ½	773 300 108	5	30	0.246	34	56
2	773 300 109	0	30	0.384	39	68
2 ½	773 300 110	0	4	0.610	44	85
3	773 300 111	0	3	0.869	50	98





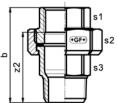
330 Union flat seat

Supplied with PTFE sealing gasket; a and z1 include the seal thickness (size $\frac{1}{2}$ - $\frac{1}{2}$ = 2mm; size 2 - 3 = 3mm).

 * Articles without order code are not yet available at the time of printing this catalog. # Inside hexagon

Dim.	374 G	Code	SP	GP	Weight	а	z1	s1	s2	s3
(inch)	(inch)				(kg)	(mm)	(mm)	(mm)	(mm)	(mm)
1/4	5/8	*				37.5	17.5	17	28	#10
3/8	3/4	*				38.5	18.5	21	32	#12
1/2	1	773 330 104	0	10	0.133	41.0	15.0	25	39	25
3/4	1 1/4	773 330 105	0	10	0.233	48.0	18.0	32	48	32
1	1 ½	773 330 106	0	10	0.319	53.0	19.0	38	55	38
1 1/4	2	773 330 107	0	5	0.562	61.5	23.5	49	68	49
1 ½	2 1/4	773 330 108	0	5	0.693	64.5	26.5	54	75	54
2	2 3/4	773 330 109	0	10	1.053	74.5	26.5	66	92	66
2 1/2	3 ½	*				84.5	30.5	85	113	85
3	4	*				91.5	31.5	96	126	96





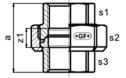
331 Union flat seat

Supplied with PTFE sealing gasket; b and z2 include the seal thickness (size $\frac{1}{4}$ - $\frac{1}{2}$ = 2mm; size 2 - 3 = 3mm).

* Articles without order code are not yet available at the time of printing this catalog.

Dim.	374 G	Code	SP	GP	Weight	b	z2	s1	s2	s3
(inch)	(inch)				(kg)	(mm)	(mm)	(mm)	(mm)	(mm)
1/4	5∕8	*				49.0	39.0	17	28	16
3/8	3/4	*				50.5	40.5	21	32	19
1/2	1	773 331 104	0	10	0.148	58.0	45.0	25	39	25
3/4	1 1/4	773 331 105	0	10	0.246	66.5	51.5	32	48	32
1	1 ½	773 331 106	0	10	0.369	74.0	57.0	38	55	38
1 1/4	2	773 331 107	0	5	0.623	85.0	66.0	49	68	49
1 1/2	2 1/4	773 331 108	0	5	0.792	88.0	69.0	54	75	54
2	2 3/4	773 331 109	0	5	1.175	102.5	78.5	66	92	66
2 1/2	3 ½	*				117.0	90.0	85	113	85
3	4	*				127.0	97.0	96	126	96



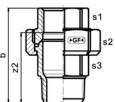


340 Union spherical/taper seat

* Articles without order code are not yet available at the time of printing this catalog. # Inside hexagon

Dim.	374 G	Code	SP	GP	Weight	а	z1	s1	s2	s3
(inch)	(inch)				(kg)	(mm)	(mm)	(mm)	(mm)	(mm)
1/4	5/8	*				37.5	17.5	17	28	#10
3/8	3/4	*				38.5	18.5	21	32	#12
1/2	1	773 340 104	0	10	0.135	41.0	15.0	25	39	25
3/4	1 1/4	773 340 105	0	10	0.235	48.0	18.0	32	48	32
1	1 ½	773 340 106	0	10	0.323	53.0	19.0	38	55	38
1 1/4	2	773 340 107	0	5	0.577	61.5	23.5	49	68	49
1 1/2	2 1/4	773 340 108	0	5	0.704	64.5	26.5	54	75	54
2	2 3/4	773 340 109	0	10	1.066	74.5	26.5	66	92	66
2 1/2	3 ½	*				84.5	30.5	85	113	85
3	4	*				91.5	31.5	96	126	96



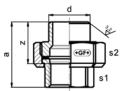


341 Union spherical/taper seat

* Articles without order code are not yet available at the time of printing this catalog.

Dim.	374 G	Code	SP	GP	Weight	b	z2	s1	s2	s3
(inch)	(inch)				(kg)	(mm)	(mm)	(mm)	(mm)	(mm)
1/4	5/8	*				49.0	39.0	17	28	16
3/8	3/4	*				50.5	40.5	21	32	19
1/2	1	773 341 104	0	10	0.151	58.0	45.0	25	39	25
3/4	1 1/4	773 341 105	0	10	0.256	66.5	51.5	32	48	32
1	1 ½	773 341 106	0	10	0.374	74.0	57.0	38	55	38
1 1/4	2	773 341 107	0	5	0.630	85.0	66.0	49	68	49
1 ½	2 1/4	773 341 108	0	5	0.803	88.0	69.0	54	75	54
2	2 3/4	773 341 109	0	5	1.200	102.5	78.5	66	92	66
2 1/2	3 ½	*				117.0	90.0	85	113	85
3	4	*				127.0	97.0	96	126	96





Union flat seat, with internal thread and butt weld end

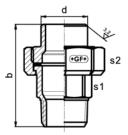
Supplied with PTFE sealing gasket; a and z include the seal thickness (size $\frac{3}{8}$ - $\frac{1}{2}$ = 2mm; size 2 = 3mm).

* Articles without order code are not yet available at the time of printing this catalog.

Inside hexagon

Dim.	374 G	Code	SP	GP	Weight	а	Z	d	s1	s2
(inch)	(inch)				(kg)	(mm)	(mm)	(mm)	(mm)	(mm)
3/8	3/4	*				38.5	28.5	17.2	#12	32
1/2	1	773 360 104	0	40	0.131	41.0	28.0	21.3	25	39
3/4	1 1/4	773 360 105	0	20	0.227	48.0	33.0	26.9	32	48
1	1 1/2	773 360 106	0	10	0.318	53.0	36.0	33.7	38	55
1 1/4	2	773 360 107	0	25	0.524	61.5	42.5	42.4	49	68
1 ½	2 1/4	773 360 108	0	20	0.654	64.5	45.5	48.3	54	75
2	2 3/4	773 360 109	0	10	1.015	74.5	50.5	60.3	66	92





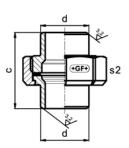
361 Union flat seat, with external thread and butt weld end

Supplied with PTFE sealing gasket; b includes the seal thickness (size $\frac{3}{6}$ - $\frac{1}{2}$ = 2mm; size 2 = 3mm).

* Articles without order code are not yet available at the time of printing this catalog.

Dim. (inch)	374 G (inch)	Code	SP	GP	Weight (kg)	b (mm)	d (mm)	s1 (mm)	s2 (mm)
3/8	3/4	*				50.5	17.2	19	32
1/2	1	773 361 104	0	20	0.144	58.0	21.3	25	39
3/4	1 1/4	773 361 105	0	20	0.247	66.5	26.9	32	48
1	1 1/2	773 361 106	0	20	0.369	74.0	33.7	38	55
1 1/4	2	773 361 107	0	8	0.580	85.0	42.4	49	68
1 ½	2 1/4	773 361 108	0	6	0.754	88.0	48.3	54	75
2	2 3/4	773 361 109	0	6	1.126	102.5	60.3	66	92





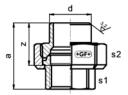
362 Union flat seat, with butt weld ends

Supplied with PTFE sealing gasket; c includes the seal thickness (size $\frac{3}{6}$ - $1\frac{1}{2}$ = 2mm; size 2 = 3mm).

* Articles without order code are not yet available at the time of printing this catalog.

Dim.	374 G	Code	SP	GP	Weight	C	d	s2
(inch)	(inch)				(kg)	(mm)	(mm)	(mm)
3/8	3/4	*				38.5	17.2	32
1/2	1	773 362 104	0	20	0.130	41.0	21.3	39
3/4	1 1/4	773 362 105	0	20	0.216	48.0	26.9	48
1	1 1/2	773 362 106	0	20	0.319	53.0	33.7	55
1 1/4	2	773 362 107	0	20	0.495	61.5	42.4	68
1 1/2	2 1/4	773 362 108	0	20	0.570	64.5	48.3	75
2	2 3/4	773 362 109	0	10	0.990	74.5	60.3	92



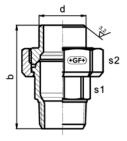


365 Union spherical/taper seat, with internal thread and butt weld end

* Articles without order code are not yet available at the time of printing this catalog.

Dim.	374 G	Code	SP	GP	Weight	а	Z	d	s1	s2
(inch)	(inch)				(kg)	(mm)	(mm)	(mm)	(mm)	(mm)
3/8	3/4	*				38.5	28.5	17.2	19	32
1/2	1	773 365 104	0	40	0.133	41.0	28.0	21.3	25	39
3/4	1 1/4	773 365 105	0	20	0.229	48.0	33.0	26.9	32	48
1	1 1/2	773 365 106	0	15	0.324	53.0	36.0	33.7	38	55
1 1/4	2	773 365 107	0	20	0.531	61.5	42.5	42.4	49	68
1 1/2	2 1/4	773 365 108	0	15	0.668	64.5	45.5	48.3	54	75
2	2 3/4	773 365 109	0	10	1.031	74.5	50.5	60.3	66	92



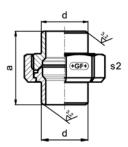


366 Union spherical/taper seat, with external thread and butt weld end

* Articles without order code are not yet available at the time of printing this catalog.

Dim.	374 G	Code	SP	GP	Weight	b	d	s1	s2
(inch)	(inch)				(kg)	(mm)	(mm)	(mm)	(mm)
3/8	3/4	*				50.5	17.2	19	32
1/2	1	773 366 104	5	30	0.147	58.0	21.3	25	39
3/4	1 1/4	773 366 105	0	20	0.249	66.5	26.9	32	48
1	1 1/2	773 366 106	0	20	0.373	74.0	33.7	38	55
1 1/4	2	773 366 107	0	20	0.590	85.0	42.4	49	68
1 1/2	2 1/4	773 366 108	0	14	0.688	88.0	48.3	54	75
2	2 3/4	773 366 109	0	10	1.150	102.5	60.3	66	92





367 Union spherical/taper seat, with butt weld ends

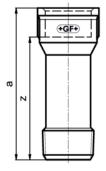
* Articles without order code are not yet available at the time of printing this catalog.

Dim.	374 G	Code	SP	GP	Weight	а	d	s2
(inch)	(inch)				(kg)	(mm)	(mm)	(mm)
3/8	3/4	*				38.5	17.2	32
1/2	1	773 367 104	0	40	0.118	41.0	21.3	39
3/4	1 1/4	773 367 105	0	15	0.220	48.0	26.9	48
1	1 1/2	773 367 106	0	8	0.321	53.0	33.7	55
1 1/4	2	773 367 107	0	25	0.450	61.5	42.4	68
1 ½	2 1/4	773 367 108	0	20	0.631	64.5	48.3	75
2	2 3/4	773 367 109	0	10	1.000	74.5	60.3	92

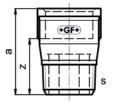


526 Extension tube

Dim.	Length	Code	SP	GP	Weight	а	z
(inch)	(mm)				(kg)	(mm)	(mm)
3/8	100	773 526 119	10	40	0.063	100	90
1/2	100	773 526 125	10	30	0.095	100	87
3/4	100	773 526 132	5	20	0.129	100	85
1	100	773 526 135	5	30	0.187	100	83





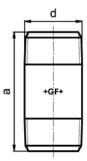


529a Socket, internal and external thread

Inside hexagon

Dim.	Code	SP	GP	Weight	а	z	S
(inch)				(kg)	(mm)	(mm)	(mm)
1/4	773 529 102	10	70	0.023	28	18	#6
3/8	773 529 103	10	50	0.038	35	25	#8
1/2	773 529 104	10	40	0.064	43	20	#12
3/4	773 529 105	10	40	0.093	48	23	#17
1	773 529 106	5	40	0.163	55	38	#22
1 1/4	773 529 107	5	30	0.224	60	41	
1 1/2	773 529 108	0	20	0.281	63	44	
2	773 529 109	0	10	0.422	70	46	





530 Pipe nipple

Dim.	Code	SP	GP	Weight	а	d
(inch)				(kg)	(mm)	(mm)
1/4	773 530 102	10	60	0.019	40	13.5
3/8	773 350 103	10	60	0.026	40	17.2
1/2	773 530 104	10	40	0.057	60	21.3
3/4	773 530 105	5	20	0.078	60	26.9
1	773 530 106	10	40	0.112	60	33.7
1 1/4	773 530 107	5	20	0.180	80	42.4
1 1/2	773 530 108	5	20	0.193	80	48.3
2	773 530 109	0	15	0.409	100	60.3
2 1/2	773 530 110	0	10	0.681	100	76.1
3	773 530 111	0	4	1.091	120	88.9

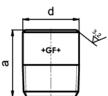




531 Nipple

GB	Code	SP	GP	Weight	а
(inch)				(kg)	(mm)
1/4	773 531 102	10	60	0.010	18
3/8	773 531 103	10	60	0.016	22
1/2	773 531 104	5	20	0.028	25
3/4	773 531 105	5	20	0.045	30
1	773 531 106	5	20	0.074	35
1 1/4	773 531 107	5	20	0.113	38
1 ½	773 531 108	0	20	0.138	38
2	773 531 109	0	20	0.226	45
2 1/2	773 531 110	0	6	0.402	55
3	773 531 111	0	4	0.544	60

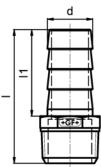




533 Welding nipple

Dim.	Code	SP	GP	Weight	а	d
(inch)				(kg)	(mm)	(mm)
1/4	773 533 102	10	60	0.016	30	13.5
3/8	773 533 103	10	60	0.020	30	17.2
1/2	773 533 104	10	30	0.033	35	21.3
3/4	773 533 105	10	40	0.056	40	26.9
1	773 533 106	5	20	0.039	40	33.7
1 1/4	773 533 107	5	20	0.141	50	42.4
1 1/2	773 533 108	5	20	0.147	50	48.3
2	773 533 109	5	20	0.202	50	60.3
2 1/2	773 533 110	0	18	0.410	60	76.1
3	773 533 111	0	8	0.644	70	88.9





540 Hose nipple

Dim.	Code	SP	GP	Weight	ι	l1	d
(inch)				(kg)	(mm)	(mm)	(mm)
1/4	773 540 102	10	50	0.026	52.0	34.5	9.2
3/8	773 540 103	10	50	0.035	55.0	36.5	11.2
1/2	773 540 104	5	20	0.058	64.0	41.0	13.7
3/4	773 540 105	5	30	0.098	72.5	47.5	20.0
1	773 540 106	5	30	0.153	79.5	51.5	26.4
1 1/4	773 540 107	5	20	0.237	85.0	54.5	32.6
1 1/2	773 540 108	0	20	0.332	98.0	67.5	39.0
2	773 540 109	0	10	0.559	108.5	72.5	51.5
2 ½	773 540 110	0	10	0.891	119.0	77.5	65.5
3	773 540 111	0	5	1.318	130.0	84.5	76.0

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General terms and conditions of Georg Fischer Fittings GmbH, Traisen

- These general conditions of sale apply to all deliveries of Georg Fischer Fittings-GmbH, A-3160 Traisen ("Georg Fischer") to the Buyer.

 They shall also apply to all future transactions even if reference is not made explicitly to these general conditions of sale.

 Provisions which deviate from or supplement these conditions of sale, in particular the Buyer's general conditions of purchase or verbal agreements, are not accepted by Georg Fischer, unless this has been confirmed in writing by Georg Fischer. These general conditions of sale even apply if Georg Fischer unconditionally makes the delivery in knowledge of Buyer's conflicting terms and conditions.
- All forms of dispatch which enable proof of transmission in the form of a text, such as e.g. telefax, e-mail, etc. shall be deemed to be on a par with communi-cations in written form.

2

Georg Fischer's offers are not binding, unless agreed otherwise in writing. An order shall only be deemed accepted by Georg Fischer if confirmed in writing and if the order confirmation was received by Buyer.

- Georg Fischer reserves the right to introduce modifications to its range of products. The order confirmation shall govern the scope and execution of the contract. If the column .5P' of the current addition of the Sales Catalogue "Program and Index values" shows a specific quantity, such quantity reflects the minimum order quantity.

Data and Documentation

- Data and Documentation
 Technical documentation such as drawings, descriptions, illustrations, any indications of measurements, properties or weight and reference to norms shall serve the purpose of providing information only and do not contain any guarantees with respect to properties if and when it appears timely in view of technical progress Georg Fischer reserves the right to make appropriate modifications.
 All technical documentation remains the intellectual property of Georg Fischer and may only be used for the purposes agreed upon or for the purposes indicated by Georg Fischer.

Confidentiality, Data Protection

- Each party shall treat as confidential all non-public commercial or technical information pertaining to the other party of which it gains knowledge in the course of its business relationship with the other party. Such information shall neither be disclosed to third parties nor used for other purposes than those for which the information has been supplied. Within the context of the contractual relationship with the Buyer the processing of personal data may be required. The Buyer hereby grants his approval in this respect and accepts that Georg Fischer may also disclose such data to third parties (e.g. sub-contractors) in Austria and abroad for the purpose of handling and maintaining business relations.

Regulations at the Place of Destination, Export Controls

- The Buyer must draw the attention of Georg Fischer to local provisions of law or other regulations which refer to the execution of delivery and compliance with safety regulations and approval
- In case of re-exports, the Buyer shall be responsible for compliance with pertinent export control regulations.

- Unless agreed otherwise, the prices shall be deemed quoted ex works according to Incoterms 2010 of the ICC(or latest edition), incl. standard packaging. All additional charges such as costs for freight, insurance, export, transit, import or other permits as well as legalisations ("Ancillary Costs") shall be borne by the Buyer. Likewise the Buyer shall bear the costs of all taxes, levies, charges and customs duties.

 Upon request Buyer shall be provided with the Ancillary Costs accruing for the respective products, with the order confirmation at the latest. 7.1

Terms of Payment

- Payments are to be made by the Buyer at the place in which the Georg Fischer company that
 - issues the invoice is located without any deductions such as cash discount, expenses, taxes and fees, in accordance with terms of payment agreed upon. Invoices are payable within 14 days net, unless
- otherwise agreed.

 The Buyer shall only have a right of set-off and a right of retention with respect to claims which are either undisputed or have been established as being binding in law. In particular payments are also to be made if unessential parts of the delivery are still outstanding, provided that the use of the delivery is not rendered impossible as a result.

Reservation of Title

- Reservation of Title

 The delivered products shall remain the property of Georg Fischer until the Buyer has settled all claims which accrue to Georg Fischer against the Buyer at the time of the delivery. Should the Buyer in the ordinary course of business resell any products to which title is reserved, the Buyer hereby internally assigns to Georg Fischer those rights which accrue to the Buyer against his customers arising out of the sale of products including all collateral rights, securities and reservations of title until Buyer has paid all of Georg Fischer is receivables, irrespective of whether the products were resold without or after processing. If the Buyer is in default with his payment obligations, he has to inform Georg Fischer about the assignment of claims and the applicable debtors, to provide all information necessary to collect the debt, hand over the relevant documentation and notify the debtors of the assignment. Until revoked by Georg Fischer, this assignment shall not preclude the Buyer's right to collect the assigned receivables. If the value of the goods subject to the afore-mentioned retention of title together with collateral securities provided to Georg Fischer seceeds Georg Fischer's claims against the Buyer by more than 20%, Georg Fischer shall re-assign the rights mentioned under Section 9.2 to the Buyer at his request.
- than Zuw, deury insured share stages and the stages are the products with other goods Georg Fischer With the processing, combination and mixing of the products with other goods Georg Fischer acquires the co-ownership in the new good in proportion of the value of the Georg Fischer products in which title is reserved (final invoice amount incl. VAT) to the other processed,
- products in which there is reserved, with an involved amount mich. Yai, to the other processed, combined or mixed goods.

 Should Buyer be in breach of contract, in particular payment default, Georg Fischer shall be entitled to take back the goods in which title is reserved after having issued a reminder and the Buyer is obliged to surrender such products. 9.5

- Delivery dates indicated by Georg Fischer are not binding, unless explicitly stated otherwise in the
- Delivery dates indicated by Georg Fischer are not binding, unless explicitly stated otherwise in the order confirmation explicitly. Any binding term of delivery begins as soon as the contract has been entered into, all official formalities such as permits for import and payment have been obtained and all essential technical issues have been settled. It shall be considered as met when the delivery is ready for dispatch.

 The obligation to deliver is subject to the following conditions, i.e. the term of delivery will be extended or the delivery date will be postponed by a reasonable period of time:

 a) if Georg Fischer does not receive in time the information necessary for the execution of the order or if subsequent changes causing delays are made by the Buyer;

 b) if Georg Fischer is one to be held responsible which make it unreasonably difficult or impossible for Georg Fischer to make the delivery, such as delays in deliveries or defective deliveries from the designated suppliers, industrial action, official measures, a shortage of raw materials or energy, significant disruptions of operations, for example by destruction of the plant as a whole or of important departments or as a result of the breakdown of essential facilities, serious transport hold-ups, e.g. as a result of road blockades. If these circumstances prevail for over six (6) months, both parties shall have the right to withdraw from the contract. The Buyer shall not be entitled to claim compensation for damages;

 c) if the Buyer is in default in performance of its contractual obligations, in particular if it does not comply with the terms of payment or does not pro-vide the securities agreed upon in a timely manner.
- comply with the terms or payment or ooes not pro-vide the securities agreed upon in a timely manner.

 10.3 If Georg Fischer is to be held responsible for exceeding the agreed term of delivery (including reasonable extension thereof), Georg Fischer shall not be deemed in default until the Buyer has granted to Georg Fischer in writing a reasonable extension thereof of not less than one (1) month which equally is not met. Thereafter the Buyer shall be entitled to the remedies provided by law. Subject to limitations of Section 16, any claim the Buyer may have to compensation for damages for delay shall, however, be limited to a maximum of 10% of the price of the delayed delivery.

 10.4 Partial deliveries shall be allowed. Georg Fischer may issue partial invoices for partial deliveries.

 10.5 If the Buyer does not take in time delivery of goods which have been notified as been ready for dispatch, Georg Fischer shall be entitled to store the goods at the expense and at the risk of the Buyer and to invoice the goods as having been delivered. If the Buyer fails to effect payment, Georg Fischer shall in particular be entitled to dispose otherwise of the goods.

10.6 In the event that the Buyer cancels an order and Georg Fischer does not insist on performance of the contract, Georg Fischer shall be entitled to a penalty amounting to 10% of the contract price (forfeited penalty), as well as to damages in excess of this amount for which proof is submitted. The Buyer shall be entitled to provide evidence that Georg Fischer actualty has suffered no damage or that its damage is considerably lower than the penalty forfeited.

If the products are packaged in a way which is above and beyond the standard packaging, the extra packaging in question will be charged additionally.

Passing of Risk

- The risk passes to the Buyer as soon as they have left Georg Fischer's works (EX WORKS, Incoterms 2010 ICC, or latest version), even if delivery is at Georg Fischer's the expense, under similar clauses or including installation or when carriage is organised and managed by Georg Fischer.

 If delivery is delayed for reasons for which Georg Fischer is not to be held responsible, the risk shall pass to the Buyer upon notification that the goods are ready for dispatch.

13 Shipment and Insurance

- Unless agreed otherwise, the Buyer shall bear the cost of carriage
- Insurance against damages of any kind whatsoever shall be the Buyer's responsibility. Even when insurance is arranged by Georg Fischer, it shall be deemed to have been taken out by order and for the account of the Buyer.
- Any special requests regarding carriage and insurance shall be communicated to Georg Fischer in due time. Otherwise carriage shall be arranged by Georg Fischer at Georg Fischer's discretion without, however, assuming responsibility by the fastest and most cost-efficient method possible
- If it is individually agreed, that Georg Fischer bears the shipping costs, transport arrangements shall be made by Georg Fischer. If the Buyer issues special instructions in this connection, any additional costs will be charged to the Buyer.

 13.4 In the event of damage to or loss of products during carriage, the Buyer shall mark the delivery
- documents accordingly and immediately have the damage ascertained by the carrier.

 Not readily ascertainable damages incurred during carriage shall be notified to the carrier within six (6) workdays after receipt of the products.

Inspection and Acceptance of Delivery

- The products are tested by Georg Fischer during manufacture to the usual extent. If the Buyer wishes more extensive testing, such tests must be agreed upon in writing and are to be paid by the Buyer.

 The Buyer undertakes to comply with its statutory obligations of inspection and notice obligation before its prespect of weight, number of items or the external appearance and workmanship of products must be reported by the latest five (5) workdays after receipt thereof. The Buyer must
- give written notice of other defects immediately after discovery, in any case, however, within the agreed period of warranty. Notice of defects must be made in writing.

 14.3 Defective parts must in any case be kept until claims under warranty or claims to compensation for damage have been finally clarified and must be made available to Georg Fischer upon request.

 14.4 If so requested, Georg Fischer is to be given the opportunity to appraise the defect and/or the damage either by itself or by third party experts prior to commencement of repair work.

15 Liability for Defects

15.1 Upon receipt of a written request of the Buyer, Georg Fischer undertakes (at its own choice) to repair or replace as soon as possible and free of charge all products which it can be proven have become defective or unusable due to poor materials, faulty design, faulty workmanship, faulty

become defective or unusable due to poor materials, faulty design, faulty workmanship, faulty operating or installation instructions.

In order to protect employees from toxic or radioactive substances which may have been transported through defective parts returned to Georg Fischer's sales organisation, said parts must be accompanied by a Material Safety Dis-closure Form. The form may be obtained from Georg Fischer's local sales company or via www.piping.georgfischer.com.

Parts which are replaced become the property of Georg Fischer, unless Georg Fischer waives uch claim.

- 15.2 For products which are manufactured according to the Buyer's specifications, drawings or
- 13.2. For products withcrafe infinitactured according to the payer's specifications, or awings of models, Georg Fischer's warranty is limited to proper materials and workmanship.
 15.3. The Buyer is entitled to require rescission of the contract or a reduction of the contract price, if

 it is impossible to carry out a repair or make a subsequent delivery;
 Georg Fischer does not succeed in carrying out the repair or making a subsequent delivery within a reasonable period of time or

 - Georg Fischer refuses to carry out the repair or make a subsequent delivery or is negligent in causing a delay in this respect.
- Georg Fischer refuses to carry out the repair or make a subsequent delivery or is negligent in causing a delay in this respect.
 15.4 For products or essential components manufactured by third party, Georg Fischer's warranty is limited to the warranty provided by said third party.
 15.5 The warranty shall not apply to defects and damage in cases of insignificant deviations from the agreed quality or resulting from natural wear and tear, inadequate storage or maintenance, non-compliance with operating and assembly instructions, overloading, unsuitable operational supplements, defective construction work, unsuitable building ground, inappropriate repairs or atterations by the Buyer or third parties, use of non-original spare parts and other reasons for which Georg Fischer is not to be held responsible.
 15.6 Claims based on warranty or liability shall become time-barred twelve (12) months after receipt of the delivery by Georg Fischer.
 15.7 For Products that are customarily used for a building and caused such building's defectiveness or for products, which find application in underground pipeline construction.
 a) Georg Fischer assumes in connection with the subsequent performance the proportionate dismantling and assembly costs for the restoration of the original state of the affected object as well as in cases of negligence all other direct damages (personal injury and property damage). Section 16, however, applies accordingly, and
 b) in deviation of Section 15.6 warranty and liability claims, expire (5) years after installation, but not later than seven (7) years after the manufacturing date.
 Thereby, Georg Fischer assumes the costs of dismantling and assembly costs for the restoration of the original state of the affected object up to a maximum of € 730.000 per occurrence; this liability shall, moreover, be limited to an overall maximum of € 2.000.000 in the case of serial tosses. This limitation shall not

Only in instances of intent and blatant gross negligence shall Georg Fischer (including his officers, his employees and other vicarious agents) be liable for breach of contractual and extra-contractual obligations, in particular due to frustration, delay, demonstrable false advice, pre-contractual liability. This disclaimer applies in particular to the liability of indirect and consequential damages, such as loss of production, loss of orders, claims for compensation by third parties and loss of profits.

Insofar Georg Fischer's liability thereby exists it is limited to foreseeable, typically occurring

damage. If one Party claims a breach of contract by the other party, it must take all necessary measures to mitigate the damage caused thereby, provided that this can be done with economically reasonable means. If the party concerned does not comply with its duty to mitigate damages, the other party may demand adequate reduction of its obligation to pay damages. This limitation of liability does not apply to any culpable infringement of essential contractual obligations, the lack of assured properties as well as in cases of compulsory liability according to the product liability law applicable to the respective product delivered.

Should certain provisions in these general conditions of sale in whole or in part be or become invalid or null and void, the contracting parties undertake to replace the invalid or null and void provision with a valid provision which comes as close as possible to fulfilling the meaning and purpose of the invalid or null and void provision.

Place of Performance and Place of Jurisdiction

- 18.1 Place of performance for the products shall be the Georg Fischer works from which the products are despatched.
- are despatched.

 12. If any disputes arise out of the contractual relationship, the lawsuit is to be filed exclusively with the competent court in St. Põiten, Austria. Georg Fischer is, however, also entitled to bring an action before any other competent court.

 18.3 The contractual relationship is subject to Austrian law (excluding the choice of law principles thereof and the United Nations Convention on Contracts for the International Sale of Goods) in accordance with the Austrian Code of Civil Law (ABGB) and the Austrian Code of nmercial Law (HGB).

GF Piping Systems

We support you

Our sales companies and representatives ensure local customer support in the following countries.

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The technical data are not binding and not expressly warranted characteristics of the goods. They are subject to change. Our General Conditions of Sale apply.

