

Product Range Malaysia

# Utility PE Systems



## General Information

### Measures, units and short cuts

D, d, d2	Diameter
DN	Nominal diameter
di	Inside diameter
L, L1, L2	length
H, H1 H2	height
e, e1, e2	wall thickness
kg	weight
SDR	Standard Dimension Ratio

### Specification

The pressure rating of GF PE Pipes refers to the calculated values of MS1058, EN12201 and ISO 4427 standards, and PE-fittings refers to the calculated values of MS1058, EN12201, and ISO4427 standards considering the total security value.

### Terms and conditions of supply

Please find the terms and conditions of supply on the last page.

### Quality management systems

Quality management systems are well established at GF and is continuously improved to satisfy our customers. GF Piping Systems are certified according to ISO 9001 as well as ISO 14001 (Environmental management).

### Technical documentation

For further technical information we offer you the GF "Technical handbook distribution" and the detailed assembly instructions.

### Service, training and consultation

Our comprehensive training program offers you the possibility for extensive advice and consultation and training. Please reserve one of our training program for piping systems.

### Your Partner

Georg Fischer (GF) is a world-wide corporation. Please find the address of your local GF Piping Systems partner on the back cover.

### Works certificates

Works certificate corresponding MS1058 and ISO 4427 for the supply of Water will be delivered on request.

## General Information

# GF Malaysia



## + Business Activity

Starting as a representative office in 1996, the company grew until 2004 when George Fischer (M) Sdn. Bhd. was established as a Malaysian sales and production company. Since 2004, we have continued to support the SEA market demands and customer needs.

Being a major player in the market, GFPS offers an extensive product range which covers a diverse range of applications and specialized markets ranging from pipes, fittings, valves, measurement instruments to respective jointing technologies. Besides tailor-made piping solutions for applications in Industrial Systems (IS), Building Technology (BT), Water and Gas Utilities (UT), George Fischer (M) Sdn. Bhd. provides technical service and training directly to its customers in Malaysia and through our regional service and training centers throughout other ASEAN countries.

George Fischer (M) Sdn. Bhd. has established a new production facility in Klang in 2017. We can now offer customized solutions as part of our commitment to serve our local and ASEAN customers.

George Fischer (M) Sdn. Bhd. is located in Klang, strategically located close to the two major ports of Malaysia, West Port and North Port. Our production, sales, service and training centre are all located on site for efficient operation. Currently, George Fischer (M) Sdn. Bhd. has 50 employees.

A handwritten signature in black ink, appearing to read 'Thian Aun Goh', written over a horizontal line.

Thian Aun Goh  
Managing Director  
George Fischer (M) Sdn. Bhd.

# Overview PE

GF Polyethylene Pipes & Fittings is a high strength PE100 Polyethylene piping system and can be used for conveying all types of liquids, slurries and gases. Some of the common applications include mineral slurry pipelines, sewer rising mains, reuse water, effluent transportation, submarine pipelines, irrigation and mine water supply. Polyethylene is the preferred material for use in trenchless pipelines which are installed by directional drilling, slip lining and pipe bursting methods. PE100 preferred jointing method is heat fusion, therefore Butt Fusion and Electrofusion equipment is required. Polyethylene cannot be joined with adhesives or solvents.

## Advantage of GF PE Systems

PE has many advantages over alternatives such as metal and rigid pipe materials, the more obvious ones being:

### Long life

PE pipes are inert and hence, non-aging when operated within their design criteria. PE pipes have been installed for many years and have minimum life expectancy of 50 years when used in accordance with the relevant standards.

### UV and Weather resistance

Because of the black pigments used, black polyethylene is very weather-resistant. Even longer exposure to direct sunlight, wind and rain hardly causes any damage to the material.

### Abrasion resistance

PE offers good resistance to abrasion and erosion from aggressive slurries which can rapidly damage steel or other traditional pipe materials.

### Chemical resistance

PE is unaffected by both internal and external chemical attacks by a wide range of acids, alkalis, ground water salts and other environmental factors.

Polyethylene shows a good resistance against a broad range of media. Studies by independent institutes have shown that the expected lifetime of PE pipes, even under extreme conditions, exceeds the lifetime required by standards. For detailed information, observe the list of chemicals from GF Piping Systems or contact the responsible GF Piping Systems representative.

## SDR/PN Conversions for PE80 and PE100

SDR	41	33	26	21	17	13.6	11	9	7.4
PN for PE80	3.2 Bar	4 Bar	-	6.3 Bar	8 Bar	10 Bar	12.5 Bar	16 Bar	20 Bar
PN for PE100	4 Bar	-	6.3 Bar	8 Bar	10 Bar	12.5 Bar	16 Bar	20 Bar	25 Bar

### Environmentally compatible

PE is an environmentally compatible hydrocarbon.

### Impact strength

PE has excellent impact resistance which unlike many other polymers is retained at sub-zero temperatures.

### Exceptionally smooth bore

PE does not suffer from increased surfaces roughness or internal corrosion and provides a smooth bore for the life of the piping system. Internal corrosion also causes a reduced life of steel systems which further inhibit flow. The smooth bore also inhibits the formation of scale.

### Flexibility

In contrast to traditional piping materials, PE pipes are relatively flexible. This inherent flexibility can be used to time and labour saving advantage in handling and installation, particularly in designing underground piping layouts. Importantly also, PE pipes are not susceptible to shear breaks that can occur in rigid conduits such as cast iron and uPVC.

### Long pipe lengths

Depending on the size of the pipe diameter, PE pipes can be supplied in long coil lengths, this means fewer pipe joints.

# Packaging, handling and storage

Polyethylene (PE) pipe is tough and resilient. However its relative lightness can be deceptive when considering the safety aspects of moving and handling. It can also be damaged by excessive scuffing or gouging of ends, external and internal surfaces during loading, unloading and transfer operations.

## Transport

PE pipes should be transported on a flat-bed, container or curtain-side type vehicle, free from sharp objects and any projections. Care should be taken to ensure the size, shape, weight and centre of gravity are such that the stability and security of the load is not compromised throughout the transport journey. Furthermore, nothing should be placed on top of PE pipes during transport which could cause the pipe to deform.

## Loading and Unloading

Wide slings should be used to lift pipe bundles by crane. Chains, hooks or wire rope slings should not be used since they can slip and gouge or abrade the pipe surface. Strapping or banding straps used to retain packs and bundles must not be used for lifting or handling. Allowance should be made for deflection or bending of pipes during all loading and unloading operations. Depending on the terrain, standard forklifts can generally be used for lengths up to 6m. If a forklift is used, contact points must be protected from damage and forklift tines must not be inserted between the windings of the coils. Longer lengths should be lifted and moved by equipment fitted with loadspreading beams or attachments. Cranes or Hiabs can be efficient and safe provided precautions are made for correct slinging of the load and operation of the equipment.

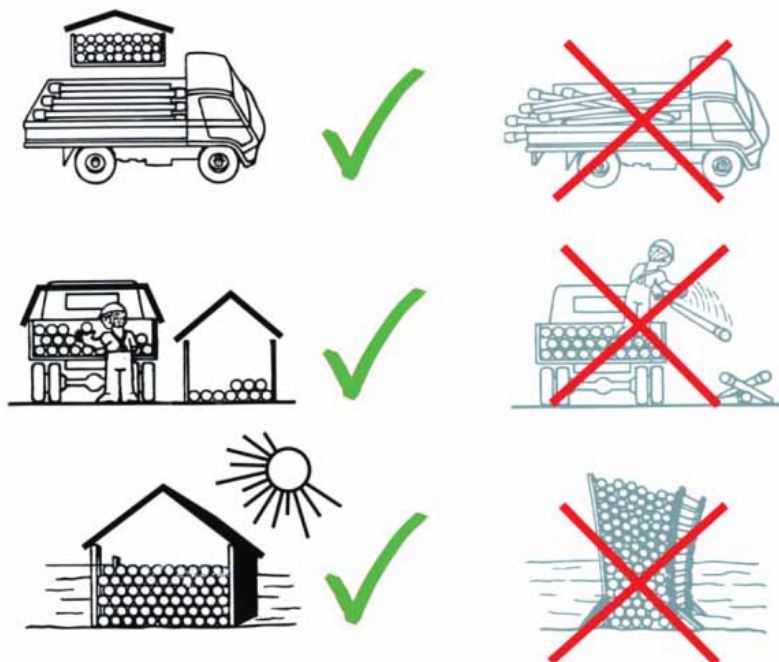
Pipes which have been held or restrained in bundles or singly by strapping, banding or similar, during storage, handling and transportation will hold considerable amounts of stored energy. Thermal expansion and contraction contributes to the amount and the direction of the stored energy. This stored energy can be hazardous if released incorrectly.

## Storage

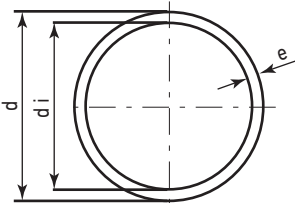
Pipe should not be stored in direct contact with the ground. Timber battens or other suitable means should be placed under the pipe in uniform spacing. Stack height should be limited to prevent pipe from losing shape due to imposed loads. Nothing should be placed on top of PE pipes during storage which could cause pipe to deform. Pipe stacks should be pegged, chocked or otherwise secured to prevent pipes rolling or falling.

Bundled packs should be stacked so that their packaging battens are in line with each other. This will facilitate easy access by the forklift truck or side loader. Where battens are not aligned additional rigid dunnage should be placed between bundles. Coils can be stored flat on a solid flat surface or in near vertical position to prevent distortion.

Impact, abrasion and contact with hot surfaces such as vehicle exhausts can damage pipes and pipe ends. Covered storage should be considered if prolonged exposure to direct sunlight is envisaged as well as storage away from sources of direct heat or fire. Pipe should not be stored where there is a possibility of contact with chemicals (e.g. lubricating/hydraulics oils, solvents, conditioning fluids etc). Pipe which has been heavily contaminated with such substances should be scrapped.



# PE100 Pipes



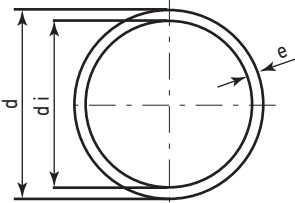
## Pipe PE100

**SDR17 PN10**  
**SDR13.6 PN12.5**  
**SDR11 PN16**

- Material : PE100
- Dimension : MS1058 and ISO4427
- Application : For Water Only
- Colour : Black ( Blue striped )
- Length : 5.8m

d (mm)	PN (inch)	Code	Weight (kg)	e (mm)	L (m)
110	10	300 202 491	2.18	6.6	5.8
125	10	300 202 497	2.78	7.4	5.8
160	10	300 202 450	4.56	9.5	5.8
180	10	300 202 451	5.77	10.7	5.8
200	10	300 202 452	7.12	11.9	5.8
225	10	300 202 453	9.03	13.4	5.8
250	10	300 202 454	10.54	14.8	5.8
25	12.5	300 202 434	0.15	2.0	5.8
32	12.5	300 202 435	0.23	2.4	5.8
40	12.5	300 202 436	0.36	3.0	5.8
50	12.5	300 202 437	0.55	3.7	5.8
63	12.5	300 202 438	0.88	4.7	5.8
75	12.5	300 202 439	1.24	5.6	5.8
90	12.5	300 202 440	1.78	6.7	5.8
110	12.5	300 202 492	2.64	8.1	5.8
125	12.5	300 202 498	3.40	9.2	5.8
160	12.5	300 202 455	5.56	11.8	5.8
180	12.5	300 202 456	7.06	13.5	5.8
200	12.5	300 202 457	8.66	14.8	5.8
225	12.5	300 202 458	10.99	16.6	5.8
250	12.5	300 202 459	13.54	19.0	5.8
20	16	300 202 426	0.12	2.0	5.8
25	16	300 202 427	0.17	2.3	5.8
32	16	300 202 428	0.28	3.0	5.8
40	16	300 202 429	0.43	3.7	5.8
50	16	300 202 430	0.67	4.6	5.8
63	16	300 202 431	1.06	5.8	5.8
75	16	300 202 432	1.48	6.8	5.8
90	16	300 202 433	2.14	8.2	5.8
110	16	300 202 493	3.18	10.0	5.8
125	16	300 202 499	4.12	11.4	5.8
160	16	300 202 460	6.74	14.0	5.8
180	16	300 202 461	8.52	16.4	5.8
200	16	300 202 462	10.51	18.0	5.8
225	16	300 202 463	13.30	20.5	5.8
250	16	300 202 464	16.36	22.7	5.8

# PE100 Pipes



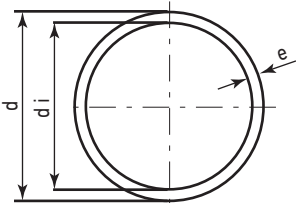
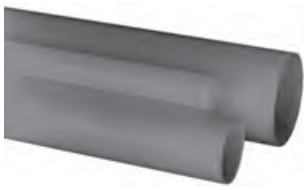
## Pipe PE100

**SDR17 PN10**  
**SDR13.6 PN12.5**  
**SDR11 PN16**

- Material : PE100
- Dimension : MS1058 and ISO4427
- Application : For Water Only
- Colour : Black ( Blue striped )
- Length : 6m

d (mm)	PN (inch)	Code	Weight (kg)	e (mm)	L (m)
110	10	<b>300 202 091</b>	2.18	6.6	6
125	10	<b>300 202 097</b>	2.78	7.4	6
160	10	<b>300 202 050</b>	4.56	9.5	6
180	10	<b>300 202 051</b>	5.77	10.7	6
200	10	<b>300 202 052</b>	7.12	11.9	6
225	10	<b>300 202 053</b>	9.03	13.4	6
250	10	<b>300 202 054</b>	10.54	14.8	6
25	12.5	<b>300 202 100</b>	0.15	2.0	6
32	12.5	<b>300 202 101</b>	0.23	2.4	6
40	12.5	<b>300 202 102</b>	0.36	3.0	6
50	12.5	<b>300 202 103</b>	0.55	3.7	6
63	12.5	<b>300 202 104</b>	0.88	4.7	6
75	12.5	<b>300 202 105</b>	1.24	5.6	6
90	12.5	<b>300 202 106</b>	1.78	6.7	6
110	12.5	<b>300 202 107</b>	2.64	8.1	6
125	12.5	<b>300 202 108</b>	3.40	9.2	6
160	12.5	<b>300 202 055</b>	5.56	11.8	6
180	12.5	<b>300 202 056</b>	7.06	13.5	6
200	12.5	<b>300 202 057</b>	8.66	14.8	6
225	12.5	<b>300 202 058</b>	10.99	16.6	6
250	12.5	<b>300 202 059</b>	13.54	19.0	6
20	16	<b>300 202 115</b>	0.12	2.0	6
25	16	<b>300 202 116</b>	0.17	2.3	6
32	16	<b>300 202 117</b>	0.28	3.0	6
40	16	<b>300 202 118</b>	0.43	3.7	6
50	16	<b>300 202 119</b>	0.67	4.6	6
63	16	<b>300 202 120</b>	1.06	5.8	6
75	16	<b>300 202 121</b>	1.48	6.8	6
90	16	<b>300 202 122</b>	2.14	8.2	6
110	16	<b>300 202 123</b>	3.18	10.0	6
125	16	<b>300 202 124</b>	4.12	11.4	6
160	16	<b>300 202 060</b>	6.74	14.0	6
180	16	<b>300 202 061</b>	8.52	16.4	6
200	16	<b>300 202 062</b>	10.51	18.0	6
225	16	<b>300 202 063</b>	13.30	20.5	6
250	16	<b>300 202 064</b>	16.36	22.7	6

# PE100 Pipes



## Pipe PE100

**SDR17 PN10**  
**SDR13.6 PN12.5**  
**SDR11 PN16**

- Material : PE100
- Dimension : MS1058 and ISO4427
- Application : For Water Only
- Colour : Black ( Blue striped )
- Length : 11.6m, 12m

d (mm)	PN (inch)	Code	Weight (kg)	e (mm)	L (m)
110	10	<b>300 202 488</b>	2.18	6.6	11.6
125	10	<b>300 202 494</b>	2.78	7.4	11.6
160	10	<b>300 202 411</b>	4.56	9.5	11.6
180	10	<b>300 202 412</b>	5.77	10.7	11.6
200	10	<b>300 202 413</b>	7.12	11.9	11.6
225	10	<b>300 202 414</b>	9.03	13.4	11.6
250	10	<b>300 202 415</b>	10.54	14.8	11.6
110	12.5	<b>300 202 489</b>	2.64	8.1	11.6
125	12.5	<b>300 202 495</b>	3.40	9.2	11.6
160	12.5	<b>300 202 416</b>	5.56	11.8	11.6
180	12.5	<b>300 202 417</b>	7.06	13.5	11.6
200	12.5	<b>300 202 418</b>	8.66	14.8	11.6
225	12.5	<b>300 202 419</b>	10.99	16.6	11.6
250	12.5	<b>300 202 420</b>	13.54	19.0	11.6
110	16	<b>300 202 490</b>	3.18	10.0	11.6
125	16	<b>300 202 496</b>	4.12	11.4	11.6
160	16	<b>300 202 421</b>	6.74	14.0	11.6
180	16	<b>300 202 422</b>	8.52	16.4	11.6
200	16	<b>300 202 423</b>	10.51	18.0	11.6
225	16	<b>300 202 424</b>	13.30	20.5	11.6
250	16	<b>300 202 425</b>	16.36	22.7	11.6
110	10	<b>300 202 088</b>	2.18	6.6	12
125	10	<b>300 202 094</b>	2.78	7.4	12
160	10	<b>300 202 011</b>	4.56	9.5	12
180	10	<b>300 202 012</b>	5.77	10.7	12
200	10	<b>300 202 013</b>	7.12	11.9	12
225	10	<b>300 202 014</b>	9.03	13.4	12
250	10	<b>300 202 015</b>	10.54	14.8	12
110	12.5	<b>300 202 089</b>	2.64	8.1	12
125	12.5	<b>300 202 095</b>	3.40	9.2	12
160	12.5	<b>300 202 016</b>	5.56	11.8	12
180	12.5	<b>300 202 017</b>	7.06	13.5	12
200	12.5	<b>300 202 018</b>	8.66	14.8	12
225	12.5	<b>300 202 019</b>	10.99	16.6	12
250	12.5	<b>300 202 020</b>	13.54	19.0	12
110	16	<b>300 202 090</b>	3.18	10.0	12
125	16	<b>300 202 096</b>	4.12	11.4	12
160	16	<b>300 202 021</b>	6.74	14.6	12
180	16	<b>300 202 022</b>	8.52	16.4	12
200	16	<b>300 202 023</b>	10.51	18.2	12
225	16	<b>300 202 024</b>	13.30	20.5	12
250	16	<b>300 202 025</b>	16.36	22.7	12

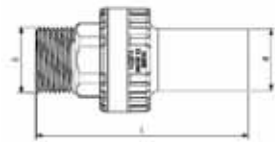


# PE-Brass Transition Fitting

## Transition Fittings PE/Brass Male Thread



- Material : PE100 SDR11 /Brass ( ISO S5)
- Dimension : MS1058, ISO4427, EN12201
- Application : 16 bar Water

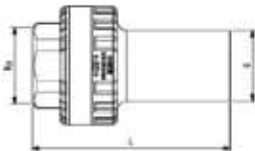


d (mm)	R (inch)	Code	SP	kg	L (m)
25	¾	<b>300 200 003</b>	25	0.14	85
32	1	<b>300 200 005</b>	25	0.19	94
63	1½	<b>300 200 008</b>	5	0.80	135
63	2	<b>300 200 009</b>	5	0.81	138

## Transition Fittings PE/Brass Female Thread



- Material : PE100 SDR11 /Brass ( ISO S5)
- Dimension : MS1058, ISO4427, EN12201
- Application : 16 bar Water



d (mm)	R (inch)	Code	SP	kg	L (m)
25	¾	<b>300 200 013</b>	25	0.19	71
32	1	<b>300 200 015</b>	25	0.12	74
63	1½	<b>300 200 008</b>	5	0.50	107
63	2	<b>300 200 019</b>	5	0.56	111

# General Condition of Supply of George Fischer (M) Sdn. Bhd.

## 1 General

- 1.1 These General Conditions shall apply to all Products supplied by Georg Fischer Piping Systems Limited («Georg Fischer») to the Purchaser. They shall also apply to all future business even when no express reference is made to them.
- 1.2 Any deviating or supplementary conditions especially Purchaser's general conditions of purchase and verbal agreements shall only be applicable if accepted in writing by Georg Fischer.
- 1.3 The written form shall be deemed to be fulfilled by all forms of transmission, evidenced in the form of text, such as telefax, e-mail, etc.

## 2 Tenders

- Tenders shall only be binding if they contain a specifically stated period for acceptance.

## 3 Scope of Delivery

- 3.1 Georg Fischer's product range is subject to change.
- 3.2 The confirmation of order shall govern the scope and execution of the contract.

## 4 Data and Documents

- 4.1 Technical documents such as drawings, descriptions, illustrations and data on dimensions, performance and weight as well as the reference to standards are for information purposes only. They are not warranted characteristics and are subject to change.
- 4.2 All technical documents shall remain the exclusive property of Georg Fischer and may only be used for the agreed purposes or as Georg Fischer may consent.

## 5 Confidentiality, Protection of Personal Data

- 5.1 Each party shall keep in strict confidence all commercial or technical information relating to the business of the other party, of which it has gained knowledge in the course of its dealing 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.
- 5.2 In the context of the contractual relation with the Purchaser personal data may be processed. The Purchaser agrees to the disclosure of said data to third parties such as foreign subcontractors and suppliers etc.

## 6 Local Laws and Regulations, Export Controls

- 6.1 The Purchaser shall bring to the attention of Georg Fischer all local laws and regulations at the place of destination which bear connection with the execution of the contract and the adherence to relevant safety regulations and approval procedures.
- 6.2 In case of re-exports, Purchaser shall be responsible for compliance with pertinent export control regulations.

## 7 Price

- 7.1 Unless agreed otherwise, the prices shall be deemed quoted net ex works (according to Incoterms 2010 of the ICC, or latest version) including standard packing. All supplementary costs such as the cost of carriage, insurance, export-, transit- and import- licences etc. shall be borne by the Purchaser. The Purchaser shall also bear the costs of all taxes, fees, duties etc. connected with the contract.
- 7.2 If the costs of packing, carriage, insurance, fees and other supplementary costs are included in the tender price or contract price or are referred to specifically in the tender or confirmation of order, Georg Fischer reserve the right to revise their prices accordingly should any change occur in the relevant tariffs.

## 8 Terms of Payment

- 8.1 The Purchaser shall make payment in the manner agreed by the parties without any deductions such as discounts, costs, taxes or dues.
- 8.2 The Purchaser may only withhold or off-set payments due against counter claims which are either expressly acknowledged by Georg Fischer or finally awarded to the Purchaser. In particular, payment shall still be made when unessential items are still outstanding provided that the Products already delivered are not rendered unusable as a result.

## 9 Retention of Title

- 9.1 The Products shall remain the property of Georg Fischer until the Purchaser shall have settled all claims, present and future, which Georg Fischer may have against him.
- 9.2 Should the Purchaser resell Products to which title is reserved, in the ordinary course of business, he shall hereby be deemed to have tacitly assigned to Georg Fischer the proceeds deriving from their sale together with all collateral rights, securities and reservations of title until all claims held by Georg Fischer shall have been settled. Until revoked by Georg Fischer, this assignment shall not preclude Purchaser's right to collect the assigned receivables.
- 9.3 To the extent the value of the Products to which title is reserved together with collateral securities exceeds Georg Fischer's claims against the Purchaser by more than 20%, Georg Fischer shall re-assign the above proceeds to Purchaser at his request.

## 10 Delivery

- 10.1 The term of delivery shall commence as soon as the contract has been entered into, all official formalities such as import and payment permits have been obtained and all essential technical issues have been settled. The term of delivery shall be deemed duly observed when, upon its expiry, the Products are ready for despatch.
- 10.2 Delivery is subject to the following conditions, i.e. the term of delivery shall be reasonably extended:
  - a) if Georg Fischer are not supplied in time with the information necessary for the execution of the contract or if subsequent changes causing delays are made by the Purchaser.
  - b) if Georg Fischer are prevented from performing the contract by force majeure. Force majeure shall equally be deemed to be any unforeseeable event beyond Georg Fischer's control which renders Georg Fischer's performance commercially impractical or impossible, such as delayed or defective supplies from sub contractors labour disputes, governmental orders or regulations, shortages in materials or energy, serious disturbances in Georg Fischer's works, such as the total or partial destruction of plant and equipment or the breakdown of essential facilities, serious disruptions in transport facilities, e.g. impassable roads. Should the effect of force majeure exceed a period of six (6) months, either party may cancel the contract forthwith. Georg Fischer shall not be liable for any damage or loss of any kind whatsoever resulting the reform, any suspension or cancellation being without prejudice to Georg Fischer's right to recover all sums due in respect of consignments delivered and costs incurred to date.
  - c) if the Purchaser is in delay with the fulfilment of his obligations under the contract, in particular, if he does not adhere to the agreed conditions of payment or if he has failed to timely provide the agreed securities.
- 10.3 If for reasons attributable to Georg Fischer the agreed term of delivery or a reasonable extension thereof is exceeded, Georg Fischer shall not be deemed in default until the Purchaser has granted to Georg Fischer in writing a reasonable extension thereof of not less than one (1) month which equally is not met. The Purchaser shall then be entitled to the remedies provided at law, it being however understood that, subject to limitations of Art. 16, damage claims shall be limited to max. 10% of the price of the delayed delivery.
- 10.4 Part shipments shall be allowed and Georg Fischer shall be entitled to invoice for such partial deliveries.
- 10.5 If the Purchaser fails to take delivery within a reasonable time of Products notified as ready for despatch, Georg Fischer shall be entitled to store the Products at the Purchaser's expense and risk and to invoice them as delivered. If Purchaser fails to effect payment, Georg Fischer shall be entitled to dispose of the Products.
- 10.6 Should Purchaser cancel an order without justification and should Georg Fischer not insist on the performance of the contract, Georg Fischer shall be entitled to a penalty amounting to 10% of the contract price, Georg Fischer's right to prove and claim higher damages remaining reserved.

Purchaser shall be entitled to prove, that Georg Fischer has suffered no or a considerably lower damage than the penalty forfeited.

## 11 Packing

- If the Products are provided with additional packing over and above the standard packing, such packing shall be charged additionally.

## 12 Passing of Risk

- 12.1 The risk in the Products shall pass to the Purchaser as soon as they have left Georg Fischer's works (EX WORKS, Incoterms 2010 ICC, or latest version), even if delivery is made carriage-paid, under similar clauses or including installation or when carriage is organized and managed by Georg Fischer.
- 12.2 If delivery is delayed for reasons beyond Georg Fischer's control, the risk shall pass to the Purchaser when he is notified that the Products are ready for despatch.

## 13 Carriage and Insurance

- 13.1 Unless agreed otherwise, the Purchaser shall bear the cost of carriage.
- 13.2 The Purchaser shall be responsible for transport insurance against damage of whatever kind. Even when such insurance is arranged by Georg Fischer it shall be deemed taken out by the order of and for the account of the Purchaser and at his risk.
- 13.3 Special requests regarding carriage and insurance shall be communicated to Georg Fischer in due time. Otherwise carriage shall be arranged by Georg Fischer at their discretion, but without responsibility, by the quickest and cheapest method possible. In case of carriage-paid delivery transport arrangements shall be made by Georg Fischer. If the Purchaser specifies particular requirements, any extra costs involved shall be borne by him.
- 13.4 In the event of damage or loss of the Products during carriage the Purchaser shall mark the delivery documents accordingly and immediately have the damage ascertained by the carrier. Not readily ascertainable damages sustained during carriage shall be notified to the carrier within six (6) days after receipt of the Products.

## 14 Inspection, Notification of Defects and Damages

- 14.1 The Products will be subject to normal inspection by Georg Fischer during manufacture. Additional tests required by the Purchaser shall be agreed upon in writing and shall be charged to the Purchaser.
- 14.2 It shall be a condition of Georg Fischer's obligation under the warranties stated hereinafter that Georg Fischer be notified in writing by the Purchaser of any purported defect immediately upon discovery. Notice concerning weight, numbers or apparent defects is to be given latest within 30 days from receipt of the Products, notice of other defects immediately latest within seven (7) working days after discovery, in any event within the agreed warranty period.
- 14.3 Purchaser shall not dispose of allegedly defective Products until all warranty and/or damage claims are finally settled. At its request, defective Products are to be placed at Georg Fischer's disposal.
- 14.4 At its request, Georg Fischer shall be given the opportunity to inspect the defect and/or damage, prior to commencement of remedial work, either itself or by third party experts.

## 15 Warranty

- 15.1 At the written request of the Purchaser, Georg Fischer undertakes to repair or replace at its discretion, as quickly as possible and free of charge, all Products supplied which demonstrably suffer from faulty design, materials or workmanship, from faulty operating or installation instructions or which become defective or unusable due to faulty advice. 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 Disclosure Form. The form may be obtained from Georg Fischer's local sales company or via [www.piping.georgfischer.com](http://www.piping.georgfischer.com). Replaced parts shall become property of Georg Fischer, unless Georg Fischer waives such claim.
- 15.2 For Products which are manufactured to specifications, drawings or patterns supplied by the Purchaser, Georg Fischer's warranty shall be restricted to proper materials and workmanship.
- 15.3 The Purchaser shall be entitled to rescind the contract or to demand a reduction of the contract price if
  - the repair or replacement of the defective Product is impossible
  - the defective Product is not repaired or replaced within a reasonable period
  - Georg Fischer refuses the repair or replacement or if for reasons attributable to Georg Fischer the repair or replacement is delayed.
- 15.4 For Products or essential components manufactured by a third party and supplied by Georg Fischer under this contract, Georg Fischer's warranty is limited to the warranty provided by said third party.
- 15.5 This warranty shall not apply to damage resulting from normal wear and tear, improper storage and maintenance, failure to observe the operating instructions, overstressing or overloading, unsuitable operating media, unsuitable construction work or unsuitable building ground, improper repairs or alterations by the Purchaser or third parties, the use of other than original spare parts and other reasons beyond Georg Fischer's control.
- 15.6 No action or claim may be brought by the Purchaser on account of any alleged breach of warranty or any other obligation of Georg Fischer after the expiration of twelve (12) months from receipt of the Products by the end user or at the latest within eighteen (18) months of the Products being despatched by Georg Fischer.
- 15.7 In case of Products for use in domestic installations or in utilities
  - Georg Fischer will assume the costs of dismantling the defective Product and restoring the damaged object up to CHF 1'000'000 per occurrence.
  - warranty or damage claims - contrary to Section 15.6 - are time-barred five (5) years from the date of installation or seven (7) years from the production date, whichever is earlier.

## 16 Limitation of Liability

The rights and remedies of the customer shall be exclusively governed by these General Conditions of Supply and shall be in lieu of any remedies at law. All further claims for damages, reduction of the purchase price, termination of or rescission of the contract are excluded. In no case whatsoever shall the customer be entitled to claim damages other than compensation for costs of remedying defects in the supplies. This in particular refers, but shall not be limited, to loss of production, loss of use, loss of orders, loss of profit, third party recovery claims and other direct or indirect or consequential damages. This limitation of liability equally applies to the extent Georg Fischer is liable for acts or omissions of its employees or third parties engaged for the performance of its obligations. It does not apply in case unlawful intent or gross negligence on the part of Georg Fischer's management and in case of Georg Fischer's statutory liability, in particular under applicable product liability laws.

## 17 Severability

Should any term or clause of these General Conditions in whole or in part be found to be unenforceable or void, all other provisions shall remain in full force and effect and the unenforceable or void provision shall be replaced by a valid provision, which comes closest to the original intention of the unenforceable or invalid provision.

## 18 Place of Performance and Jurisdiction

- 18.1 Place of performance for the Products shall be the Georg Fischer works from which the Products are despatched.
- 18.2 The contract shall be governed by Swiss law without regard to conflict of law provisions that would require the application of another law.
- 18.3 Any civil action based upon any alleged breach of this contract shall be filed and prosecuted exclusively in the courts of Schaffhausen, Switzerland. Georg Fischer however reserves the right to file actions in any court having jurisdiction over controversies arising out of or in connection with the present contract.



No Lesen : PC003808  
Licence No :

### LESEN PENSIJILAN BARANGAN Product Certification Licence



SIRIM QAS International Sdn. Bhd. dengan ini menganugerahkan kepada  
SIRIM QAS International Sdn. Bhd. hereby grants to

GEORGE FISCHER (M) SDN. BHD.  
NO 2, 4 & 6 JALAN PERMATA 3/KS 09  
TAMAN PERINDUSTRIAN AIR HITAM  
41300 KLANG  
SELANGOR, MALAYSIA



Lesen untuk menggunakan Tanda Pensijilan di atas barangan  
a licence to use the Certification Mark on  
POLYETHYLENE (PE) PIPES FOR WATER SUPPLY

Please refer to detail in the SCHEDULE

sebagai mematuhi keperluan  
as complying with  
MS 1058 : PART 2 : 2005

  
Mohd Azamuddin bin Salleh  
Pegawai Urusan  
Managing Director  
SIRIM QAS International Sdn. Bhd.



SIRIM QAS International Sdn. Bhd. No. 2, 4 & 6 Jalan Permata 3/KS 09 Taman Perindustrian Air Hitam 41300 KLANG Selangor Darul Ehsan MYSIA	Tarikh Mula Pensijilan : 12 October 2016 Certified Since Sari Selangor : 12 October 2016 MSR Code : " "	Tarikh Disahkannya : 27 March 2019 Issue Date No Siri : 04311 Serial No
--	--	--

Lesen ini dianugerahkan berkuatkuasanya kepada pemohon Pensijilan Barangan SIRIM QAS International Sdn. Bhd.  
This licence is granted subject to the conditions of the Product Certification Agreement of SIRIM QAS International Sdn. Bhd.



No Lesen : PG023001  
Licence No :

### LESEN PENSIJILAN BARANGAN Product Certification Licence



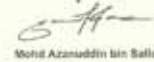
SIRIM QAS International Sdn. Bhd. dengan ini menganugerahkan kepada  
SIRIM QAS International Sdn. Bhd. hereby grants to

GEORGE FISCHER (M) SDN. BHD.  
NO. 14, JALAN ANGGERIK MOKARA 31/50  
SECTION 31, KOTA KEMUNING  
40450 SHAH ALAM  
SELANGOR, MALAYSIA

Lesen untuk menggunakan Tanda Pensijilan di atas barangan  
a licence to use the Certification Mark on  
POLYETHYLENE (PE) FITTINGS FOR WATER SUPPLY AND FOR  
DRAINAGE AND SEWERAGE UNDER PRESSURE

Please refer to detail in the SCHEDULE

sebagai mematuhi keperluan  
as complying with  
BS EN 12201-3 : 2011 + A1 : 2012

  
Mohd Azamuddin bin Salleh  
Pegawai Urusan  
Managing Director  
SIRIM QAS International Sdn. Bhd.



SIRIM QAS International Sdn. Bhd. No. 2, 4 & 6 Jalan Permata 3/KS 09 Taman Perindustrian Air Hitam 41300 KLANG Selangor Darul Ehsan MYSIA	Tarikh Mula Pensijilan : 09 October 2016 Certified Since Sari Selangor : 09 October 2016 MSR Code : " "	Tarikh Disahkannya : 10 September 2019 Issue Date No Siri : 04100 Serial No
--	--	--

Lesen ini dianugerahkan berkuatkuasanya kepada pemohon Pensijilan Barangan SIRIM QAS International Sdn. Bhd.  
This licence is granted subject to the conditions of the Product Certification Agreement of SIRIM QAS International Sdn. Bhd.

# Worldwide at home

Our sales companies and representatives ensure local customer support in over 100 countries.

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

## Malaysia

George Fischer (M) Sdn. Bhd.  
No. 2, 4 & 6, Jalan Permata 3/KS 09,  
Taman Perindustrian Air Hitam,  
41200 Klang, Selangor Darul Ehsan,  
Malaysia  
Phone : +603 3122 5585  
Fax : +603 3122 5575  
[www.gfps.com/my](http://www.gfps.com/my)

Malaysia Northern Region Sales & Service Centre  
No. 80-G & 80-1, Lintang Sungai Pinang, Skyline City,  
10150 Georgetown, Penang.  
Malaysia  
Phone : +604 283 5575 / 6575  
Fax : +604 283 2575

Malaysia Southern Region Sales & Service Centre  
No. 6, Jalan Ekoperniagaan 1/15,  
Taman Ekoperniagaan,  
81100 Johor Bahru, Johor DT,  
Malaysia  
Phone : +607 522 4222  
Fax : +607 522 4333

## Singapore \*

George Fischer Pte. Ltd.  
11 Tampines Street 92, #04-01/07  
528872 Singapore  
Phone : +65 6747 0611  
Fax : +65 6747 0577  
[www.gfps.com/sg](http://www.gfps.com/sg)

\* Thailand, Cambodia, Myanmar, Laos,  
Brunei and East Timor / Timor-Leste

## Indonesia

PT Georg Fischer Indonesia  
Karawang - Factory  
Jl. Desa Anggadita Klari,  
Karawang Timur,  
41371 Jawa Barat,  
Indonesia  
Phone : +62 267 432 044  
Fax : +62 267 431 857  
[www.gfps.com/id](http://www.gfps.com/id)

PT Georg Fischer Trading Indonesia  
Sales & Marketing Office  
Wisma 77 Tower 2,  
5th Floor Zone 2,  
Jl. S. Parman Kav.77  
Jakarta, Indonesia  
Phone : +62 212 967 6066  
Fax : +62 212 967 6066

## Philippines

George Fischer Pte. Ltd.  
Philippines Representative Office  
#3 E, Rodriguez Jr. Avenue,  
Bagong Ilog (C5) Pasig City,  
1604 Philippines  
Phone : +632 571 2365 to 67  
Fax : +632 571 2368  
[www.gfps.com/ph](http://www.gfps.com/ph)

## Vietnam

George Fischer Pte. Ltd.  
Vietnam Representative Office  
Centre Point Building, Room 601,  
Floor 6, 106 Nguyen Van Troi Street,  
Ward 8, Phu Nhuan District,  
Ho Chi Minh City,  
Vietnam  
Phone : +84 28 3948 4000  
Fax : +84 28 3948 4010  
[www.gfps.com/vn](http://www.gfps.com/vn)