



**NSF  
APPROVED**

**POLY16  
PLUS**

***Compression  
fittings***

*for PE pressure  
piping applications  
according*

*ASTM D3035-95 IPS  
ASTM D2447-95*

***Clamp  
saddles***



**+GF+ ALPRENE** 

*Catalogue February 2004*

# Technical Information

## Compression fittings

- Materials** **Body, Nut, Thrust ring:**  
Virgin Polypropylene in Master Batch  
UV stabilized (Grade 8, ASTM D2565, 1-8)  
**Clamp ring:**  
Acetalic resin (POM)  
**Gaskets:**  
Food safe rubber (NBR)  
Shore: 1/2" - 2": 70, 3": 60  
**Reinforcement rings:**  
Stainless Steel AISI 430
- Colours** Body: dark grey  
Nut: light grey
- Standards** **For PE Pipe:**  
ASTM D2447 (IPS) for use on SDR 7 thru SDR 17  
ASTM D3035  
**Threads: NPT**  
Male Thread (pressure tight)  
Female Thread (pressure tight)  
ANSI/ASME B1 . 201  
**Test Standards:**  
ISO 3458-59/3501-3503-9561  
DIN 8076 / UNI 403 / ISO/DIS 14236.2
- Working Pressure (psi)** 1/2" - 2" : 232 psi @ 68° F  
3" : 150 psi @ 68° F
- Certificates** U.S.A. NSF - pw  
Conforms to AWWA C906-91  
Italy (IIP N° 254)  
Germany (DVGW N° DW-8616AT-2451/2452)  
Switzerland (SVGW / SSIGE N° K 161)  
Holland (KIWA N° K5144/01)  
Great Britain (WBS N° 9810038)  
Australia (QAS AS 4129, N° 1157)  
South Africa (JASWIC, N° 594)  
Norway (Byggforsk 0089)  
Sweden (SITAC T000422)  
Finland (STF, N° 58/6221/2000)  
Slovakia (Vusapl, N° P/00782/110/1/98)  
Hungary (Orszagos tisztiorvos N° 2929-2-/96)  
Poland (TIN 72 AT/W-1517/370/98)

## Clamp saddles

- Body:**  
Virgin Polypropylene in Master Batch UV  
stabilized (Grade 8, ASTM D2565, 1-8)  
**Gaskets:**  
Food safe rubber (NBR)  
Shore: 1/2" - 4": 70  
**Reinforcement rings:**  
Stainless Steel AISI 430  
**Bolts and Nuts:**  
galvanized or stainless steel

**Body:** black

- For PE Pipe:**  
ASTM D2447 - 95 D3035 - 95  
**For PVC C PVC Pipe:**  
ASTM D1785 F441  
For PP acid waste ASTM F - 1412  
**Threads:**  
Female Thread (pressure tight)  
ANSI/ASME B1 - 201  
**Test Standards:**  
ISO/FDIS 13460

ODxNpt	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	3"	4"
3/4"	150							
1"	150	150						
1 1/4"	150	150	150					
1 1/2"	150	150	150					
2"	150	150	150	150				
2 1/2"	150	150	150	150	150	150		
3"	150	150	150	150	150	150		
4"	150	150	150	150	150	150		
5"			90	90	90	90		
6"			90	90	90	90	90	90
8"					75	75	75	75
10"						150		75
12"						150		75

## List of abbreviations

- |            |  |           |  |
|------------|--|-----------|--|
| <b>BS</b>  | British Standard                           | <b>DN</b> | Nominal Bore                           |
| <b>DIN</b> | Deutsche Industrie-Norm                    | <b>PN</b> | Nominal Pressure                       |
| <b>ISO</b> | International Standardization Organisation | <b>SP</b> | Standard Pack (bag)                    |
| <b>PP</b>  | Polypropylene                              | <b>GP</b> | Gross Pack (box): Inches 23.2x9.8x16.1 |
| <b>PE</b>  | Polyethylene                               | <b>MT</b> | Male Thread NPT                        |
| <b>NBR</b> | Nitrile Rubber                             | <b>FT</b> | Female Thread NPT                      |
| <b>OD</b>  | Pipe Outside Diameter                      | <b>CC</b> | Compression coupling                   |

# Specification

## Compression Fittings POLY16 Plus for PE pressure piping systems manufactured according: ASTM D 2447-95 (IPS size) ASTM D 3035-95

### Tender Specification

All compression fittings included in this specification shall be designed and be suitable for use with potable water distribution systems and be supplied from manufacturer complying with the requirements of ISO 9002. Fittings bodies may be of various configurations and include male adaptors, female adaptors, couplings, reduced couplings, elbows 90°, Tee 90°, Tee 90° reduced / increased, Tee 90° with female off-take end caps. The main size range is from 1/2" up to 3". The fittings up to 2" must be able to operate at a constant working pressure of 232 psi (fittings 3", at 150 psi) at an ambient temperature of 68 degree Fahrenheit.

#### 1. Compression fitting bodies up to 2"

- 1.1 All bodies shall be injection moulded from recognised top quality polypropylene (PP)
- 1.2 All bodies shall be dark grey
- 1.3 All bodies must have moulded-in manufacturer identification, material and series information and show the dimensions of the pipe thread
- 1.4 All male and female threads of the bodies shall be injection moulded according to the ANSI/ASME B1.201 standard (NPT threads)

#### 2. Compression fitting nuts up to 2"

- 2.1 All nuts shall be injection moulded from recognised top quality polypropylene (PP)
- 2.2 All nuts shall be coloured light grey
- 2.3 All nuts must have an UV resistance of grade 8 according to ASTM D2565
- 2.4 All nuts shall have moulded-in manufacturer identification and show the dimensions of the pipe for ASTM and JIS standards
- 2.5 The outer circumference must be provided with ribs to enhance hand grip or the tightening of the nut with adequate tools

#### 3. Clamp rings

- 3.1 All clamp ring shall be injection moulded from recognised top quality Polyacetal (POM)
- 3.2 All clamp rings shall be coloured grey
- 3.3 Clamp rings shall not be connected to the thrust rings but be able to move freely on them
- 3.4 Thrust rings and clamp rings must be two (2) different components

#### 4. Thrust rings

- 4.1 All thrust rings shall be injection moulded from recognised top quality polypropylene (PP)
- 4.2 All thrust rings shall be coloured blue
- 4.3 All thrust rings up to 1 1/2" shall be secured in the body so that they can not fall if the fittings is disassembled
- 4.4 All thrust rings must not be connected to the clamp rings.
- 4.5 All thrust rings must apply pressure on the gaskets if the nut is tighten
- 4.6 Thrust rings and clamp rings must be two (2) different components

#### 5. Gaskets

- 5.1 All gaskets shall be made of recognised top quality Nitrile Rubber (NBR) and not contain a plasticiser that when in direct contact, has a harmful effect either to plastic pipes and fittings
- 5.2 Each gasket must have a smooth finish and be free from moulding flashes or similar
- 5.3 The gaskets up to 2" must have an average Shore hardness of 70 +/-5 degrees
- 5.4 The gaskets for 3" must have an average Shore hardness of 60 +/-5 degrees
- 5.5 All gaskets shall be coloured blue
- 5.6 All gaskets must have a conical shape on the inside of the gasket for an easy insertion of the pipe without disassembling of the fitting. All gaskets are to have a wide flat sealing contact function with the pipe in question
- 5.7 All gaskets must have a cylindrical shape on the outside of the gasket
- 5.8 All gaskets must have two (2) lips on the bottom of the gaskets to guarantee a good sealing in cases of suction and vacuum.
- 5.9 The use of O-rings as a pipe to fitting seal is not permitted

#### 6. Testing

- 6.1 The compression fittings must conform with the relevant internationally recognised

#### PERFORMANCE REQUIREMENTS:

Type test	Standard
Dimension of the threads	ANSI/ASME B1.201
Tightness of the joints	ISO 3458
Tightness of the joints when subjected to bending	ISO 3503
Resistance to pull-out	ISO 3501
Internal under-pressure test	ISO 3459
Long term pressure test	ISO/DIN 14236

#### 7. Packaging

- 7.1 All compression fittings up to 1" must be packed in transparent protective bags
- 7.2 All compression fittings must be packed in carton boxes
- 7.3 If only one type of product is packed all carton boxes shall have a label showing the manufacturer identification, the description of the product, the drawing of the product, the relevant size and the quantity.

#### 8. Product training and technical information

- 8.1 The manufacturer or the material supplier shall provide a specialised theoretical and active practical product training given by qualified instructors to enable installers of the above-mentioned products to be able to understand and use the products correctly and efficiently under site conditions.
- 8.2 The courses are to be held on the purchaser's own premises upon demand
- 8.3 The manufacturer is to provide accurate and easy-to-understand assembly instructions in at least one internationally recognised language, which can be used at any subsequent time for reference purposes.

## Clamp saddles for piping systems manufactured according:

- ASTM D 2447-95 (IPS size)
- ASTM D 3035-95
- ASTM D-1785
- ASTM F-441
- ASTM F-1412

### Tender Specification

All clamp saddles included in this specification shall be designed and be suitable for use with potable water distribution systems and be supplied from manufacturer complying with the requirements of ISO 9001. The main size range is from 3/4" up to 12" with outlets from 1/2" up to 4". The clamp saddles up to 2" must be able to operate at a constant working pressure of 150 psi (saddles > 5", minimum 75 psi) at an ambient temperature of 68 degree Fahrenheit.

#### 1. Upper and lower parts of the saddles

- 1.1 All bodies shall be injection moulded from recognised top quality polypropylene (PP)
- 1.2 All bodies shall be black
- 1.3 All bodies must have moulded-in manufacturer identification, material and series information and show the dimensions of the pipe and of the pipe thread
- 1.4 All female threads of the bodies shall be injection moulded according to the ANSI/ASME B1.201 standard (NPT threads)
- 1.5 If applicable the reinforcement ring shall be manufactured of stainless steel (AISI 430)

#### 2. Bolts and nuts

- 2.1 All bolt and nuts must be galvanized

#### 3. Gaskets

- 3.1 All gaskets shall be made of recognised top quality Nitrile Rubber (NBR) and not contain a plasticiser that when in direct contact, has a harmful effect either to plastic pipes and fittings
- 3.2 Each gasket must have a smooth finish and be free from moulding flashes or similar
- 3.3 The gaskets must have an average Shore hardness of 70 +/-5 degrees
- 3.4 All gaskets must have an O-ring combined with a flat gasket (one piece).
- 3.5 The use of O-rings is only permitted for irrigation applications

#### 4. Testing

- 4.1 The clamp saddles must conform with the relevant internationally recognised performance requirements:

Type test	Standard
Dimension of the threads	ANSI/ASME B1.201
Tightness	ISO/DIS 13460
Internal under-pressure test	ISO/DIS 13460
Long term pressure test	ISO/DIS 13460

#### 5. Packaging

- 5.1 All clamp saddles up to 4" must be packed individually in transparent protective bags
- 5.2 All clamp saddles must be packed in carton boxes
- 5.3 If only one type of product is packed all carton boxes shall have a label showing the manufacturer identification, the description of the product, the drawing of the product, the relevant size and the quantity.

#### 6. Product training and technical information

- 6.1 The manufacturer or the material supplier shall provide a specialised theoretical and active practical product training given by qualified instructors to enable installers of the above-mentioned products to be able to understand and use the products correctly and efficiently under site conditions.
- 6.2 The courses are to be held on the purchaser's own premises upon demand
- 6.3 The manufacturer is to provide accurate and easy-to-understand assembly instructions in at least one internationally recognised language, which can be used at any subsequent time for reference purposes.

# General Conditions of Supply

## 1. General

- 1.1 These general conditions shall apply to all goods supplied by GEORG FISCHER ALPRENE srl 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 ALPRENE srl.

## 2. Tenders

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

## 3. Scope of Delivery

- 3.1 GEORG FISCHER ALPRENE srl'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 ALPRENE srl and may only be used for the agreed purposes or as GEORG FISCHER ALPRENE srl may consent.
- 4.3 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.

## 5. Local Laws and Regulations

The Purchaser shall bring to the attention of GEORG FISCHER ALPRENE srl 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. Prices

- 6.1 Unless agreed otherwise, the prices shall be deemed quoted net, ex works, including standard packing. All supplementary costs, such as the cost of carriage, insurance, export 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.
- 6.2 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 ALPRENE srl reserve the right to revise their prices accordingly should any change occur in the relevant tariffs.

## 7. Payment

- 7.1 The Purchaser shall make payment in the manner agreed by the parties to the GEORG FISCHER works conducting the account without any deductions such as discounts, costs, taxes or dues.
- 7.2 The Purchaser may only withhold or off-set payments due against counterclaims which are either expressly acknowledged by GEORG FISCHER ALPRENE srl or finally awarded to the Purchaser. In particular, payment shall still be made when unessential items are still outstanding provided, however, that the goods already delivered are not rendered unusable as a result.

## 8. Retention of Title

- 8.1 The goods shall remain the property of GEORG FISCHER ALPRENE srl until the Purchaser shall have settled all claims, present and future, which GEORG FISCHER ALPRENE srl may have against him.
- 8.2 Should the Purchaser sell goods to which title is reserved he shall then be deemed to have tacitly assigned to GEORG FISCHER ALPRENE srl the proceeds deriving from their sale together with all collateral rights, securities and reservations of title until all claims held by GEORG FISCHER ALPRENE srl shall have been settled.
- 8.3 To the extent the value of the goods to which title is reserved together with collateral securities should exceed GEORG FISCHER ALPRENE srl's claims against the Purchaser by more than 20%, ALPRENE srl shall re-assign the above proceeds to Purchaser at his request.
- 8.4 In case of default on the part of the Purchaser, in particular in case of arrears, GEORG FISCHER shall be entitled to repossession of the goods after having given notice to this effect, and the Purchaser shall be obligated to surrender the goods.

## 9. Delivery

- 9.1 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 points have been settled. The term of delivery shall be deemed duly observed when, upon its expiry, the goods are ready for despatch.
- 9.2 Delivery is subject to the following conditions, i. e. the term of delivery shall be reasonably extended:
  - a) if GEORG FISCHER ALPRENE srl 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 ALPRENE srl are prevented from performing the contract by force majeure. Force majeure shall equally be deemed to be any unforeseeable event beyond GEORG FISCHER ALPRENE srl's control which renders GEORG FISCHER ALPRENE srl's performance commercially unpracticable or impossible, such as delayed or defective supplies from subcontractors, labour disputes, governmental orders or regulations, shortages in materials or energy, serious disturbances in GEORG FISCHER ALPRENE srl'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 months, either party may cancel the contract forthwith. GEORG FISCHER ALPRENE srl shall not be liable for any damage or loss of any kind whatsoever resulting therefrom, any suspension or cancellation being without prejudice to GEORG FISCHER ALPRENE srl's right to recover all sums due in respect of consignments delivered and costs incurred to date.
  - c) if the Purchaser fails to fulfill or delays in fulfilling his obligations under the contract, in particular if he does not adhere to the agreed conditions of payment.
- 9.3 If for reasons attributable to GEORG FISCHER ALPRENE srl a reasonable term of delivery is exceeded, GEORG FISCHER ALPRENE srl shall not be deemed in default until the Purchaser has granted to GEORG FISCHER ALPRENE srl in writing a reasonable extension thereof of not less than one month which equally is not met. The Purchaser shall then be entitled to cancel the contract.

- 9.4 If the Purchaser fails to take delivery within a reasonable time of goods notified as ready for despatch, GEORG FISCHER ALPRENE srl shall be entitled to store the goods at the Purchaser's expense and risk and to invoice them as delivered.
- 9.5 Partial shipments shall be allowed and GEORG FISCHER ALPRENE srl shall be entitled to invoice for such deliveries.
- 9.6 If GEORG FISCHER ALPRENE srl do not insist on the performance of a contract cancelled by the Purchaser, a penalty of 10% of the contract price shall become due unless GEORG FISCHER ALPRENE srl can prove greater damages.

## 10. Packing

If the goods are provided with additional packing over and above the standard packing, such packing shall be invoiced separately and be non-returnable.

## 11. Passing of Risk

- 11.1 The risk in the goods shall pass to the Purchaser as soon as they have left GEORG FISCHER ALPRENE srl's works, even if delivery is made carriage-paid, under similar clauses or in cluding installation or when carriage is organized and managed by GEORG FISCHER ALPRENE srl.
- 11.2 If delivery is delayed for reasons beyond GEORG FISCHER ALPRENE srl's control, the risk shall pass to the Purchaser when he is notified that the goods are ready for despatch.

## 12. Carriage and Insurance

- 12.1 Unless agreed otherwise, the Purchaser shall bear the cost of carriage.
- 12.2 The Purchaser shall be responsible for insurance against damage of whatever kind. Even when such insurance is arranged by GEORG FISCHER ALPRENE srl it shall be deemed taken out by the order of and for the account of the Purchaser and at his risk.
- 12.3 Special requests regarding carriage and insurance shall be communicated to GEORG FISCHER ALPRENE srl in due time. Otherwise carriage shall be arranged by GEORG FISCHER ALPRENE srl 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.
- 12.4 In the event of damage or loss of the goods 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 days after receipt of the goods.

## 13. Inspection and Acceptance

- 13.1 The goods will be subject to normal inspection by GEORG FISCHER ALPRENE srl during manufacture. Additional tests required by the Purchaser shall be agreed upon in writing and shall be charged to the Purchaser.
- 13.2 It shall be a condition of GEORG FISCHER ALPRENE srl's obligation under the warranties stated hereinafter that GEORG FISCHER ALPRENE srl 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 goods, notice of other defects latest within the agreed warranty period.

## 14. Warranty

- 14.1 At the written request of the Purchaser, GEORG FISCHER ALPRENE srl undertake to repair or replace, at their discretion, as quickly as possible and free of charge all goods supplied which demonstrably suffer from faulty design, materials or workmanship or from faulty operation or installation instructions. Replaced parts shall become property of GEORG FISCHER ALPRENE srl.
- 14.2 The Purchaser shall be entitled to cancel the contract or to demand a reduction in the contract price if:
  - repair or replacement is impossible, or
  - GEORG FISCHER ALPRENE srl are unable or refuse to remedy the defect or replace the defective goods within a reasonable period of time or are unduly delaying such remedy or replacement.
- 14.3 For goods which are manufactured to specifications, drawings or patterns supplied by the Purchaser, GEORG FISCHER ALPRENE srl's warranty shall be restricted to proper materials and workmanship.
- 14.4 This warranty shall not apply to damage resulting from normal wear, improper storage and maintenance, failure to observe the operating instructions, overstraining or overloading, unsuitable operating media, improper repairs or alterations by the Purchaser or third parties, the use of non-genuine parts and other reasons beyond GEORG FISCHER ALPRENE srl's control.
- 14.5 For goods or essential components manufactured by a third party and supplied by ALPRENE srl under this contract, GEORG FISCHER ALPRENE srl's warranty is limited to the warranty provided by said third party.
- 14.6 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 ALPRENE srl after the expiration of twelve (12) months from receipt of the goods by the end user or at the latest within eighteen (18) months of the goods being despatched by GEORG FISCHER ALPRENE srl.

## 15. Limitation of Liability

The warranties set forth above are expressly in lieu of any express warranty of any kind and in lieu of any implied warranty, including any warranty of merchantability or fitness for a particular purpose. GEORG FISCHER ALPRENE srl shall not be liable for any incidental special or consequential damages, such as loss of profits, loss of production, loss of use or loss of contract, arising for any reason, including damages resulting from delayed delivery, defective design, materials or workmanship or from faulty instructions and whether such damages are claimed to arise from breach of contract, in tort, the theory of product liability or otherwise; reservation is solely being made for ALPRENE srl's statutory liability due to material breach of an essential contractual obligation, express representations, wrongful intent, gross negligence or product liability acts.

## 16. Place of Performance and Jurisdiction

- 16.1 Place of performance for the goods shall be the GEORG FISCHER ALPRENE srl works from which the goods are despatched.
- 16.2 Any civil action based upon any alleged breach of this contract shall be filed and prosecuted exclusively in the courts having jurisdiction over the GEORG FISCHER ALPRENE srl works invoicing the goods. GEORG FISCHER ALPRENE srl however reserves the right to file actions in any court having jurisdiction over controversies arising out of or in connection with the present contract.
- 16.3 The contract shall be governed by the law applicable at the place of business of the GEORG FISCHER ALPRENE srl works invoicing the goods in question.



The connection since 1955®

Central Plastics Company

Alprene Master Distributor for the U.S.A

39605 Independence, Shawnee, Okla. 74801

PH: 800.654.3877 or 405.273.6302 FX: 800.733.5993 or 405.273.5993



*loosen nut push in pipe tighten nut job done*

Applications



Reclaimed Water



Irrigation



Industrial - Mining



Water Distribution



Telecommunications

**+GF+ ALPRENE** 

HEAD QUARTER  
GEORG FISCHER ALPRENE S.r.l.  
Via Bonazzi, 32  
40013 Castel Maggiore (Bo) Italy  
Tel. +39 051 6324211  
Fax +39 051 6324213  
info@alprene.it  
www.alprene.com

USA CONTACT  
Cell. 1 713 962 4661  
Fax 1 832 736 9414  
e-mail: alpreneusa@aol.com