

# Transition Fittings



# QUALITY IS CENTRAL.

Quality at Georg Fischer Central Plastics is backed by the most extensive research and development, quality assurance and in-house testing programs in the industry.

## LEADERS IN TRANSITION FITTINGS

Georg Fischer Central Plastics is known as North America's leader in designing and manufacturing HDPE piping systems. We specialize in HDPE fittings and pipe, but also work in metals. Our time-tested products ensure very durable piping systems from end to end.

We've been in the piping connection business for nearly 60 years, developing high quality and innovative products to meet the ever-changing needs of the piping industry. Along the way, we have developed new products, many becoming industry standards. For example, almost 50 years ago, we were the first to develop and introduce an HDPE to steel transition fitting - one that remains the fitting of choice for many piping systems around the world.

Gas | Water & Waste Water |  
Energy | Industrial

## TAKING PRODUCTION SERIOUSLY

At Georg Fischer Central Plastics, we are dedicated to excellence and innovation. We continually invest in new technologies to ensure our production capabilities are second to none. Our head office in Shawnee, Oklahoma spans seven acres and includes a manufacturing facility operating under strict ISO standards.

In 2012, we also acquired Independent Pipe Products, Inc. With facilities in Dallas, Texas and Abbeville County, South Carolina, this makes Georg Fischer Central Plastics a provider of Design-Flow® HDPE Pipe in sizes as large as 65" in diameter.

Hands down, we have more HDPE piping systems products than anyone in the business. And if we don't have it, we can custom build it.

We work closely with our customers to custom design product for specific application. With advanced, in-house engineering and testing facilities, we continue to develop innovative products and solutions to meet the demands of today's piping infrastructure.

- ISO 9001 quality system
- ISO 14001 and ISO 18001 certified
- High volume capabilities
- Robotic welding
- Fully automated injection molding
- Tool & die facility
- Advanced powder coating system

Our transition fittings undergo an extensive testing program to ensure consistent, high performance in the field.

### CATEGORY 1

CARBON STEEL TO PE  
STAINLESS STEEL TO PE  
BRASS TO PE

#### GEOTHERMAL TRANSITIONS

- Socket fusion couplings

#### ID CONTROLLED TRANSITIONS

- Smooth piggable transitions for any pipeline application

#### SOCKET WELD TRANSITIONS

- The easiest weld to perform in the field for any application

#### SPECIALTY TRANSITION FITTINGS

- Custom designed in-house and produced in a leading ISO 9001 manufacturing facility

### CATEGORY 3

A lower cost alternative for many municipal and industrial applications.

# Specialty Transition Fittings.

Custom engineered  
in-house to exact  
specifications.  
Every time.

Call us for availability of  
other sizes and dimensions.  
Visit [gfc.com](http://gfc.com) to view  
product details in  
our catalog.



## **WELD-END TRANSITION FITTINGS**

PE2406/PE2708 Gas Pipe  
PE3408 Gas Pipe  
PE3408/PE4710 Oil Field Pipe  
Steel weld end epoxy coated  
(1/2"–24")



## **THREADED EXTERNAL COATED TRANSITIONS**

PE3408/PE4710 Pipe  
PE2406/PE2708 Gas Pipe  
Steel thread end epoxy coated  
(1/2"–8")

## **CATEGORY 1: TRANSITION FITTINGS**

As with all of our Transition Fittings, our polyethylene-to-steel joints are actually many times stronger than the PE pipes they attach to. Our time-tested design eliminates human error in the plastic-to-steel connection by providing a tamper-proof, gas tight, ASTM D2513 Category 1 mechanical joint.

Our Category 1 Fittings exceed the hydrostatic burst pressure and tensile strength of the polyethylene pipe and are designed to exceed ASTM F1973 specifications.



### **THREADED INTERNAL COATED TRANSITIONS**

PE3408 Oil Field Pipe  
Steel threaded internal coated (1/2"–8")



### **FLANGE TRANSITION FITTINGS**

PE2406/PE2708 Pipe  
Steel flange end epoxy coated (2"–24")



### **VICTAULIC TRANSITION FITTINGS**

PE3408 Pipe  
Steel victaulic end epoxy coated (2"–24")

## **CARBON STEEL TO PE FEATURES AND BENEFITS**

- All products are protected with an electrostatically-applied, fusion-bonded epoxy powder coating specifically designed for the exterior of gas or petroleum pipelines
- One-piece design eliminates loose parts
- PE-to-steel transition joints are stronger than the PE pipe itself
- Transition joint designed to effectively resist pullout
- The transition design utilizes a double O-ring design for added protection
- All gas carrying welds on steel transitions are 100% air tested

## **TECHNICAL SPECIFICATIONS**

- Steel Gas Carrier — API 5L — ASTM A53
- Pipe Threads — ANSI B1.20.1
- PE Pipe per ASTM D2513
- Protective Coating Specs
- All parts are protected with an electrostatically applied, fusion-bonded epoxy powder coating specifically designed for the exterior of gas petroleum pipelines
- 8 mils minimum thickness
- AGA 49 grey
- Cathodic disbondment testing per ASTM G8
- Salt spray testing per ASTM B117
- Impact resistance testing per ASTM G14

## **OPTIONS**

- Tracer wire connector
- Special designs and custom specifications available
- Protective sleeves available
- Available in Schedule 40 and Schedule 80

Our Brass and Stainless Transitions meet the demands of municipal and industrial application.

Call us for availability of other sizes and dimensions. Visit [gfcpc.com](http://gfcpc.com) to view product details in our catalog.

## BRASS AND STAINLESS FITTINGS

Brass and Stainless Fittings meet all requirements for a true Category 1 mechanical joint. The PE to brass or stainless joint is many times stronger than the PE pipe.

## TRANSITION FEATURES

- Compression design effectively resists pullout
- No-weld design on brass and stainless transitions
- Minimum shear points

## TESTING AND COMPLIANCE

All GF Central Plastics transition fittings meet or exceed the following applicable standards:

- Sustained Pressure Test per ASTM D1598
- ASTM D2513 Category I
- Leak Test per ASTM E515
- Tensile Pull Test per ASTM D638
- Constant Tensile Load Test per ASTM F1588



### THREADED BRASS

Sizes: (3/4"-2")

### TECHNICAL STANDARDS AND SPECIFICATIONS

- Tested to AWWA C906 requirements
- Meets or exceeds the following applicable standards:
  - DOT Code of Federal Regulations
  - Title 49 Part 192
  - ASTM D2513 CAT. 1 (where applicable)
  - ASTM D638
- Threads per ANSI B1.20.1
- Brass Adapter Insert – Brass 360 Alloy
- Compression Ring – Stainless 304 standard, Stainless 316 available

### STAINLESS STEEL

Sizes: (3/4"-3")

### TECHNICAL STANDARDS AND SPECIFICATIONS

- Meets or exceeds the following applicable standards:
  - DOT Code of Federal Regulations
  - Title 49 Part 192
  - ASTM D2513 CAT. 1 (where applicable)
  - ASTM D638
  - Threads per ANSI B1.20.1
- Stainless Steel Adapter Insert – Stainless 304 standard, Stainless 316 available
- Compression Ring – Stainless 304 standard, Stainless 316 available
- NSF Approved

## ID CONTROLLED TRANSITION FITTING

Our ID Controlled Transition Fitting ensures a smooth piggable leak-free transition between polyethylene pipe and steel pipe. Designed with a smooth bore inner diameter, the ID Controlled Transition Fitting eliminates the internal retainers found in most transition fittings. The ID Controlled Transition Fitting is the ideal solution for pipelines that demand an unimpeded pathway.

## SPECIFICATIONS

- Available in 2" to 24" IPS
- Available in Threaded, Welded, Victaulic, and Flanged Ends

## MATERIALS AVAILABLE

- PE Pipe: PE3408/PE4710
- Carbon Steel per A53/API-5L
- Stainless Steel per A312 Type 304 Welded
- Red Brass per B43 Type 23000 Seamless
- Electrostatically applied Fusion-Bonded
- Epoxy Coating (carbon steel only)
- Qualified to ASTM D2513 Category 1 standards
- Meets ASTM D2513 Category 1 requirements for natural gas applications

## APPLICATIONS

- Water & Waste Water
- Gas Distribution
- Energy



Simplify your transitions with the easiest weld to perform in the field.

## SOCKET WELD TRANSITIONS

Simple and effective, the Category 1, Socket Weld Transition Fitting allows for a precise connection while eliminating several steps during installation.

The fitting's socket easily slips over the pipe, requiring only one weld.

The Socket Weld Transition Fitting also eliminates the need for a root pass grind of the cap. This one-step transition fitting improves precision and saves precious time in the field.

Georg Fischer Central Plastics Socket Weld Transition Fittings meet ASTM D2513 specifications.

## SIZES

- PE sizes from 1/2" CTS through 24" IPS
- Steel sizes from 1/2" IPS through 24" IPS

## SPECIFICATIONS

### POLYETHYLENE PIPE

- PE2406/PE80, PE3408/PE3608, PE4710/PE100 shall according to market requirements in which the Transition Fitting is installed.
- PE2406 IAPMO & CSA Listed where applicable.

### STEEL PIPE/NIPPLE

- Per ASTM A53 Type E Grade A or API 5L Grade B.
- Schedule 40, (Standard) & Schedule 80. (Optional)  
Other wall thicknesses available by request.

### RETAINER RING

- Steel Tubing C1020 / C1035 per ASTM A513 or equivalent.

### O RINGS

- Buna-N (Nitrile) per ASTM D2000.



Call us for availability of other sizes and dimensions. Visit [gfcpc.com](http://gfcpc.com) to view product details in our catalog.



## SPECIALTY TRANSITION FITTINGS

We are specialists in custom design and production of specialty fittings for the most rigorous applications. With advanced in-house engineering capabilities and testing facilities, we can help you design and build one-of-a-kind transition fittings. We work closely with our customers to custom design and manufacture. Bring us an idea and we will work with you to create fittings for your specific needs.

## CAPABILITIES INCLUDE

- Custom engineering on 3D software
- Certified welding to ASME Boiler Code and API 1104
- Fusion bonded epoxy and polyester coatings
- Proprietary epoxy/polyester Dual Coat System
- Full traceability of all components sold
- Sizes up to 24"



12" TRANSITION



12" x 8" TRANSITION



PULLING HEAD



16" TRANSITION



HAMMER



FEMALE TRANSITION

## GEOHERMAL TRANSITIONS SOCKET FUSION COUPLINGS



### SOCKET PE3408/PE4710

#### MALE THREAD

3/4" NPT x 1" IPS – 2" NPT x 2" IPS

#### FEMALE THREAD

1/2" FPT x 3/4" IPS – 1 1/2" FPT x 1 1/2" IPS

#### MALE THREAD 90° ELBOW

1" NPT x 1" IPS and 1 1/4" NPT x 1 1/4"

Category 3 transitions are a lower-cost alternative for many municipal and industrial applications.

Call us for availability of other sizes and dimensions. Visit [gfc.com](http://gfc.com) to view product details in our catalog.

## **CATEGORY 3: TRANSITION FITTINGS**

The design of our Category 3 Transition Fittings is simple and reliable. PE pipe is inserted through the entire fitting, making the Category 3 transition perfect for applications involving the transport of abrasive or corrosive materials, such as slurry applications.

Category 3 transitions are available in epoxy-coated carbon steel, stainless steel, and red brass; all with PE3408/4710 pipe. Category 3 transitions are designed to provide a full pressure seal, plus a pipe restraint rating equivalent to the anticipated thermal stresses occurring in a pipeline.

### **FEATURES AND BENEFITS**

- Qualified to ASTM D2513 Category 3 standards
- ID fully lined with HDPE for total corrosion protection
- Available in stainless steel, bronze and epoxy-coated steel
- Threaded and victaulic connections  
weld flanged
- Protective sleeves available upon request

### **APPLICATIONS**

- Water and Waste Water
- Oilfield
- Industrial
  - Dredging
  - Landfill
  - Irrigation
  - Mining
  - Process lines
  - Salt water disposal
- Geothermal
- NOT suitable for gas distribution

## TECHNICAL SPECIFICATIONS

- Size Range: 3/4" IPS – 24" IPS
- Materials Available:
  - PE Pipe: PE3408/PE4710
  - Carbon Steel per A53/API-5L
  - Stainless Steel per A312
  - Type 304 Welded
  - Red Brass per B43
  - Type C23000 Seamless
- Electrostatically applied Fusion-Bonded Epoxy Coating (carbon steel only)

All transition fittings have been tested to meet or exceed the following requirements:

- ASTM D1598
- ASTM 1500
- ASTM D1638
- ASTM E515
- CSA Z245.20



**Threaded, Victaulic,  
Weld and Flanged  
Ends available**

**Epoxy-coated  
Carbon Steel,  
Stainless Steel,  
or Red Brass**

**Polyethylene  
pipe inserted  
through the  
entire fitting**





**GEORG FISCHER**  
PIPING SYSTEMS

## **GEORG FISCHER CENTRAL PLASTICS**

Georg Fischer Central Plastics builds quality piping systems that are efficient, reliable and safe - supplying products and solutions with unparalleled integrity.

**PIPING SYSTEMS, PRODUCTS & SOLUTIONS WITH INTEGRITY**

**Oklahoma - Head Office**

39605 Independence  
Shawnee, OK 74804

**Texas**

4949 Joseph Hardin Drive  
Dallas, TX 75236

**1.800.654.3872**

[gfcpc.com](http://gfcpc.com)

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