

# **Engineered Simplicity**

# **Double-See**® Vinyl Double Containment Piping System



## Double-See® Vinyl Double Containment Piping System

## Easy to Install, Innovative-Design Pressure Piping System

### **Overview**

Protect people and the environment in your facility with the Double-See double contained vinyl piping system. Double-See is fast and easy to install, and is available with a complete selection of pipe, fittings, leak detection and access tees, closure couplings, and termination fittings. All fittings are factory assembled.

Double-See is available in PVC and CPVC; either material may be primary or secondary with Clear PVC always being an option for the containment pipe. All CPVC pipe, fittings and valves are ChlorFIT® Schedule 80 CORZAN® CPVC high performance resin. System size options range from ½"×2" to 6"×10", meeting virtually any application requirement.

Installation versatility allows simultaneous joining throughout a system or in combination with patented closure couplings, which enable practical compliance with ASME B31.3

The primary piping is fully pressure rated according to the size and schedule. The containment piping is hydrostatic pressure rated for 50psi with simultaneous joined connections, and 5psi with closure couplings.



#### **Double-See™ Benefits**

- Enhance safety by protecting people and the environment from potential leaks
- Eliminate potential downtime at production facilities
- Installation is fast and easy due to unique design features and preassembled components
- Flexible choice of PVC, CPVC, and Clear PVC
- Designed for maximum reliability and service life
- Easy to install leak detection cable due to centralizer design
- Allows true, practical compliance with ASME B31.3 during installation
- GF quality materials and service support



## High Performance Design

Double-See pipe centralizers securely snap over the carrier pipe and allow it to freely "float" inside the containment pipe. This is important, as the carrier and containment piping is often at different temperatures, and will expand and contract at different rates. If the carrier piping is restricted from moving, it will experience additional stress.

GF's fitting centralizers have a patented design that accommodates movement in 3 dimensions. This feature can eliminate or reduce the need for some expansion loops; please see our technical manual for detailed information.

The Double-See Valve-in-Valve is a unique solution that gives the containment piping full pressure rating with an easily accessible, high quality ball valve. The design uses a Type 546 valve inside the housing of a larger Type 546 valve, with the carrier valve's stem connected to the containment valve handle. In any case, GF can offer a double containment box of any size or shape to fit any valve, union, or object in the system, ensuring complete containment.

## **Easy to Install**

Double-See is fast and easy to install. All fittings feature flush carrier and containment, and fittings have the socket depth pre-marked on the outside. When pipe is cut in the field, the inner and outer are cut to the same length. These features make planning, measuring and installing Double-See easy. In addition, all Double-See fittings are factory pre-assembled. Some other double contained piping systems on the market require the installer to solvent cement additional joints between the carrier fitting and couplings, which require more time on site and increase the risk of leaks.

The system can be installed by simultaneously joining (solvent cementing) the carrier and containment, or by using GF's closure couplings. For projects that require ASME B31.3 compliance, the primary line must be visible during the pressure test to allow inspection for leaks. The GF closure coupling allows practical compliance to this standard and is easy to install.

GF pipe centralizers are easy install in cases where the installer needs to reposition or otherwise put them on the pipe. No tape or adhesive is required.



Closure coupling installation





## Applications

Double containment ensures that, should there be a leak in the carrier piping, the chemicals or water will not come in contact with people, production processes or the environment. Double-See is an ideal containment system for drinking water and wastewater treatment, chemical processing, delivery and dosing, microelectronics, metal plating and surface finishing, life sciences applications, and data centers.

#### **Drinking and Waste Water Treatment**

Water treatment often requires dosing water with concentrated chemicals such as sodium hypochlorite (a component of bleach), sulfuric acid, sodium hydroxide, and ferric chloride. Double-See is perfectly suited for these applications, whereas other thermoplastics such as HDPE are not recommended.

#### **Chemical Production Facilities**

Chemical plants produce a wide range of products. For many, PVC or CPVC is the best choice for piping material as it will not corrode like metals. Protecting employees and equipment from these chemicals is the highest priority; Double-See provides reliable protection.

#### Data Centers

The increase usage of digital data is generating continued, worldwide growth of facilities housing computer servers. Eliminating unplanned downtime is the main concern for planners and managers of these mission critical facilities. Double-See is the solution of choice for the pressurized piping lines, located over critical spaces. (For glycol systems, see COOL-FIT® Plus pre-insulated piping system).

#### **Product Range**

Size range	<ul> <li>½"-6" primary pipe</li> <li>2"-10" containment pipe</li> </ul>	
Material	<ul> <li>Polyvinyl Chloride (PVC) Grey</li> <li>Chlorinated Polyvinyl Chloride (CPVC)</li> <li>Clear Polyvinyl Chloride (Clear PVC)</li> </ul>	
Pressure rating	<ul> <li>Varies by size (primary)</li> <li>Schedule 80 and 40 pipe</li> <li>Up to 5 psi (secondary with closure coupling)</li> <li>Up to 50 psi (secondary with simultaneous joining)</li> </ul>	
Operating	PVC: 32°F–140°F (0°C–60°C)	
temperature	CPVC: 32°F–200°F (0°C–93°C)	
Joining technology	Solvent (Cement) Weld	
Standards	ASTM D1784 ASTM D2467 ASTM F439 NSF 61	ASTM D1785 ASTM F441 NSF 14 ASME B31.3 compliant

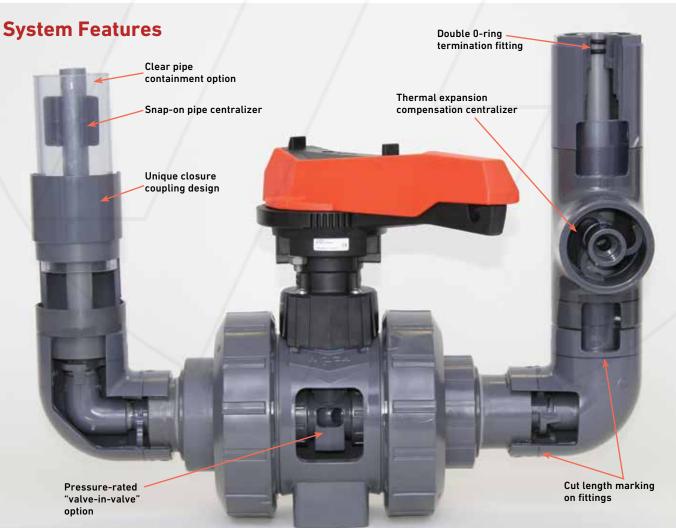
## **Complete System Includes Leak Detection and Custom Products**

The Double-See offering includes a complete range of pipe, fittings—including 45 wyes and terminations—and leak detection low points, plus leak detection alarm panels and sensors. GF's Signet float switches, ultrasonic switches, and more can be used in low points, tied back to alarm panels that alert facilities personnel locally, or communicate with building automation systems. Continuous-type leak detection systems are also available through GF.

Double-See containment boxes can be fabricated to contain any valve or instrument, in any shape or size. Custom fittings and spools can also be designed and fabricated by our expert US engineering and production teams to meet any need.

Valve containment box

CORZAN® is a registered trademark of The Lubrizol Corp.



Tel: 01626 201092

#### **GF Piping Systems**

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

Argentina / Southern South America Georg Fischer Central Plastics Sudamérica S.R.L. Buenos Aires, Argentina Phone +5411 4512 02 90 gfcentral.ps.ar@georgfischer.com

Australia George Fischer Pty Ltd Riverwood NSW 2210 Australia Phone +61(0)2 9502 8000 australia.ps@georgfischer.com www.georgfischer.com.au

Austria Georg Fischer Rohrleitungssysteme GmbH 3130 Herzogenburg Phone +43(0)2782 856 43-0

austria.ps@georgfischer.com www.georgfischer.at **Belgium / Luxembourg** Georg Fischer NV/SA 1070 Bruxelles/Brüssel Phone +32(0)2 556 40 20 be.ps@georgfischer.com www.georgfischer.be

Brazil Georg Fischer Sist. de Tub. Ltda. 04795-100 São Paulo Phone +55(0)11 5525 1311 br.ps@georgfischer.com www.georgfischer.com.br

Canada Georg Fischer Piping Systems Ltd Mississauga, ON L5T 2B2 Phone +1(905)670 8005 Fax +1(905)670 8513 ca.ps@georgfischer.com www.georgfischer.ca

China Georg Fischer Piping Systems Ltd Shanghai 201319 Phone +86(0)21 3899 3899 china.ps@georgfischer.com www.georgfischer.cn

Denmark / Iceland Georg Fischer A/S 2630 Taastrup Phone +45 (0)70 22 19 75 info.dk.ps@georgfischer.com www.georgfischer.dk

Finland Fintano Georg Fischer AB 01510 VANTAA Phone +358 (0)9 586 58 25 Fax +358 (0)9 586 58 29 info.fi.ps@georgfischer.com www.georgfischer.fi

France Georg Fischer SAS 95932 Roissy Charles de Gaulle Cedex Phone +33(0)1 41 84 68 84 fr.ps@georgfischer.com www.georgfischer.fr

Germany Geora Fischer GmbH 73095 Albershausen Phone +49(0)7161 302-0 info.de.ps@georgfischer.com www.aeorafischer.de

India

Georg Fischer Piping Systems Ltd 400 076 Mumbai Phone +91 224007 2001 in.ps@georgfischer.com www.georgfischer.in

Italy Georg Fischer S.p.A. 20063 Cernusco S/N (MI) Phone +3902 921 861 it.ps@georgfischer.com www.georgfischer.it

**Japan** Georg Fischer Ltd 556-0011 Osaka, Phone +81(0)6 6635 2691 jp.ps@georgfischer.com www.georgfischer.jp

Korea Korea Georg Fischer Piping Systems 271-3 Seohyeon-dong Bundang-gu Seongnam-si, Gyeonggi-do Seoul 463-824 Phone +82 31 8017 1450 Fax +82 31 8017 1454 Kora pr@ mosenfischer.com kor.ps@georgfischer.com www.georgfischer.kr

**Malaysia** George Fischer (M) Sdn. Bhd. 40460 Shah Alam, Selangor Darul Ehsan Phone +60 (0)3 5122 5585 my.ps@georgfischer.com www.georgfischer.my Mexico / Northern Latin America

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

Middle East Georg Fischer Piping Systems (Switzerland) Ltd. Dubai, United Arab Emirates Phone +971 4 289 49 60 gcc.ps@georgfischer.com www.export.georafischer.com

Netherlands Georg Fischer N.V. 8161 PA Epe Phone +31(0)578 678 222 nl.ps@aeorafischer.com www.georgfischer.nl

New Zealand Georg Fischer Ltd 13 Jupiter Grove, Upper Hutt 5018 PO Box 40399, Upper Hutt 5140 Phone +64(0)4 527 9813 nz.ps@georgfischer.com www.gfps.com/nz

Norway Georg Fischer AS 1351 Rud Phone +47(0)67 18 29 00 no.ps@georgfischer.com www.georgfischer.no

**Poland** Georg Fischer Sp. z o.o. 05-090 Sekocin Nowy Phone +48(0)22 31 31 0 50 poland.ps@georgfischer.com www.georgfischer.pl

Romania Georg Fischer Piping Systems (Switzerland) Ltd. 020257 Bucharest - Sector 2 Phone +40(0)21 230 53 80 ro.ps@georgfischer.com www.export.georgfischer.com

**Russia** Georg Fischer Piping Systems (Switzerland) Ltd. Moscow 125047 Tel. +7 495 258 60 80 ru.ps@georgfischer.com www.georgfischer.ru

Singapore George Fischer Pte Ltd 11 Tampines Street 92, #04-01/07 528 872 Singapore Phone +65 6747 0611 sgp.ps@georgfischer.com www.sg.piping.georgfischer.com

**Spain / Portugal** Georg Fischer S.A. 28046 Madrid Phone +34(0)91 781 98 90 es.ps@georgfischer.com www.georgfischer.es

Sweden Georg Fischer AB 117 43 Stockholm Phone +46(0)8 506 775 00 info.se.ps@georgfischer.com www.georgfischer.se

Switzerland Georg Fischer Rohrleitungssysteme (Schweiz) AG 8201 Schaffhausen Phone +41(0)52 631 30 26 ch.ps@georgfischer.com www.piping.georgfischer.ch

Taiwan Georg Fischer Co., Ltd. San Chung Dist., New Taipei City Phone +886 2 8512 2822 Fax +886 2 8512 2823 www.georgfischer.tw

United Kingdom / Ireland George Fischer Sales Limited Coventry, CV2 2ST Phone +44(0)2476 535 535 uk.ps@georgfischer.com www.georgfischer.co.uk

USA / Caribbean Georg Fischer LLC Irvine, CA 92618 Phone +1(714) 731 88 00 Toll Free 800 854 40 90 us.ps@georgfischer.com www.gfpiping.com

Vietnam George Fischer Pte Ltd 136E Tran Vu, Ba Dinh District, Hanoi Phone +84 4 3715 3290 Fax +84 4 3715 3285

International Georg Fischer Piping Systems (Switzerland) Ltd. 8201 Schaffhausen/Switzerland Phone +41(0)52 631 30 03 Fax +41(0)52 631 28 93 info.export@georgfischer.com www.export.georgfischer.com

www.gfps.com

The technical data is not binding. They neither constitute expressly warranted characteristics our guaranteed properties nor a guaranteed durability. They are subject to modification. Our General Terms of Sale apply.

**GF Piping Systems** 

Tel. (714) 731-8800, Toll Free (800) 854-4090, Fax (800) 426-7188 us.ps@georgfischer.com, www.gfpiping.com



Item #1307 (12/18) © Georg Fischer LLC 2018 Printed in USA