

# GF Piping Systems → worldwide at home

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

[www.piping.georgfischer.com](http://www.piping.georgfischer.com)



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.

#### Australia

George Fischer Pty Ltd  
Kingsgrove NSW 2008  
Phone +61(0)2/95 54 39 77  
[australia.ps@georgfischer.com](mailto:australia.ps@georgfischer.com)  
[www.georgfischer.com.au](http://www.georgfischer.com.au)

#### Austria

George Fischer  
Rohrleitungssysteme GmbH  
3130 Herzogenburg  
Phone +43(0)2782/856 43-0  
[austria.ps@georgfischer.com](mailto:austria.ps@georgfischer.com)  
[www.georgfischer.at](http://www.georgfischer.at)

#### Belgium/Luxembourg

George Fischer NV/SA  
1070 Bruxelles/Brüssel  
Phone +32(0)2/556 40 20  
[be.ps@georgfischer.com](mailto:be.ps@georgfischer.com)  
[www.georgfischer.be](http://www.georgfischer.be)

#### Brazil

George Fischer Ltda  
04795-100 São Paulo  
Phone +55(0)11/5687 1311  
[br.ps@georgfischer.com](mailto:br.ps@georgfischer.com)

#### China

George Fischer  
Piping Systems Ltd Shanghai  
Pudong, Shanghai 201319  
Phone +86(0)21/58 13 33 33  
[china.ps@georgfischer.com](mailto:china.ps@georgfischer.com)  
[www.cn.piping.georgfischer.com](http://www.cn.piping.georgfischer.com)

#### Denmark/Iceland

Georg Fischer A/S  
2630 Taastrup  
Phone +45 (0)70 22 19 75  
[info.dk.ps@georgfischer.com](mailto:info.dk.ps@georgfischer.com)  
[www.georgfischer.dk](http://www.georgfischer.dk)

#### France

Georg Fischer S.A.S.  
93208 Saint-Denis Cedex 1  
Phone +33(0)1/492 21 34 1  
[fr.ps@georgfischer.com](mailto:fr.ps@georgfischer.com)  
[www.georgfischer.fr](http://www.georgfischer.fr)

#### Germany

Georg Fischer GmbH  
73095 Albershausen  
Phone +49(0)7161/302-0  
[info.de.ps@georgfischer.com](mailto:info.de.ps@georgfischer.com)  
[www.vgd.georgfischer.de](http://www.vgd.georgfischer.de)

Georg Fischer DEKA GmbH  
35232 Dautphetal-Mornshausen  
Phone +49(0)6468/915-0  
[deka.ps@georgfischer.com](mailto:deka.ps@georgfischer.com)  
[www.dekapipe.de](http://www.dekapipe.de)

#### India

George Fischer Piping Systems Ltd  
400 093 Mumbai  
Phone +91(0)22/2820 2362  
[in.ps@georgfischer.com](mailto:in.ps@georgfischer.com)

#### Italy

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

#### Japan

Georg Fischer Ltd  
556-0011 Osaka,  
Phone +81(0)6/6635 2691  
[jp.ps@georgfischer.com](mailto:jp.ps@georgfischer.com)  
[www.georgfischer.jp](http://www.georgfischer.jp)

#### Malaysia

Georg Fischer (M) Sdn. Bhd.  
47500 Subang Jaya  
Phone +60 (0)3-8024 7879  
[conne.kong@georgfischer.com.my](mailto:conne.kong@georgfischer.com.my)

#### Middle East

George Fischer Piping Systems  
Dubai, United Arab Emirates  
Phone +971 4 289 41 20  
[gdubai@emirates.net.ae](mailto:gdubai@emirates.net.ae)  
[www.piping.georgfischer.com](http://www.piping.georgfischer.com)

#### Netherlands

Georg Fischer N.V.  
8161 PA Epe  
Phone +31(0)578/678 222  
[nl.ps@georgfischer.com](mailto:nl.ps@georgfischer.com)  
[www.georgfischer.nl](http://www.georgfischer.nl)

#### Norway

Georg Fischer AS  
1351 Rud  
Phone +47(0)67 18 29 00  
[no.ps@georgfischer.com](mailto:no.ps@georgfischer.com)  
[www.georgfischer.no](http://www.georgfischer.no)

#### Poland

Georg Fischer Sp. z o.o.  
02-226 Warszawa  
Phone +48(0)22/313 10 50  
[poland.ps@georgfischer.com](mailto:poland.ps@georgfischer.com)  
[www.georgfischer.pl](http://www.georgfischer.pl)

#### Romania

Georg Fischer  
Rohrleitungssysteme AG  
70000 Bucharest - Sector 1  
Phone +40(0)1/222 91 36  
[ro.ps@georgfischer.com](mailto:ro.ps@georgfischer.com)

#### Singapore

George Fischer Pte Ltd  
528 872 Singapore  
Phone +65(0)67 47 06 11  
[sgp.ps@georgfischer.com](mailto:sgp.ps@georgfischer.com)  
[www.georgfischer.com.sg](http://www.georgfischer.com.sg)

#### Spain/Portugal

Georg Fischer S.A.  
28046 Madrid  
Phone +34(0)91/781 98 90  
[es.ps@georgfischer.com](mailto:es.ps@georgfischer.com)  
[www.georgfischer.es](http://www.georgfischer.es)

#### Sweden/Finland

Georg Fischer AB  
12523 Älvsjö-Stockholm  
Phone +46(0)8/506 775 00  
[info.se.ps@georgfischer.com](mailto:info.se.ps@georgfischer.com)  
[www.georgfischer.se](http://www.georgfischer.se)

#### Switzerland

Georg Fischer  
Rohrleitungssysteme [Schweiz] AG  
8201 Schaffhausen  
Phone +41(0)52 631 30 26  
[ch.ps@georgfischer.com](mailto:ch.ps@georgfischer.com)  
[www.piping.georgfischer.ch](http://www.piping.georgfischer.ch)

#### Taiwan

Georg Fischer Ltd.  
2F, No. 88, Hsing Te Road  
San Chung City  
Taipei Hsien, Taiwan (R.O.C.)  
Phone +886 2 8512 2822  
Fax +886 2 8512 2823

#### United Kingdom/Ireland

George Fischer Sales Limited  
Coventry, CV2 2ST  
Phone +44(0)2476 535 535  
[uk.ps@georgfischer.com](mailto:uk.ps@georgfischer.com)  
[www.georgfischer.co.uk](http://www.georgfischer.co.uk)

#### USA/Canada/Latin America/Caribbean

George Fischer Inc.  
Tustin, CA 92780-7258  
Phone +1(714) 731 88 00  
Toll Free 800/854 40 90  
[us.ps@georgfischer.com](mailto:us.ps@georgfischer.com)  
[www.us.piping.georgfischer.com](http://www.us.piping.georgfischer.com)

#### Export

Georg Fischer  
Rohrleitungssysteme [Schweiz] AG  
8201 Schaffhausen  
Phone +41(0)52 631 30 26  
[export.ps@georgfischer.com](mailto:export.ps@georgfischer.com)  
[www.piping.georgfischer.com](http://www.piping.georgfischer.com)

GMST 5917/4 (2.06)

© Georg Fischer Piping Systems Ltd  
CH-8201 Schaffhausen/Switzerland, 2006  
Printed in Germany

**+GF+**

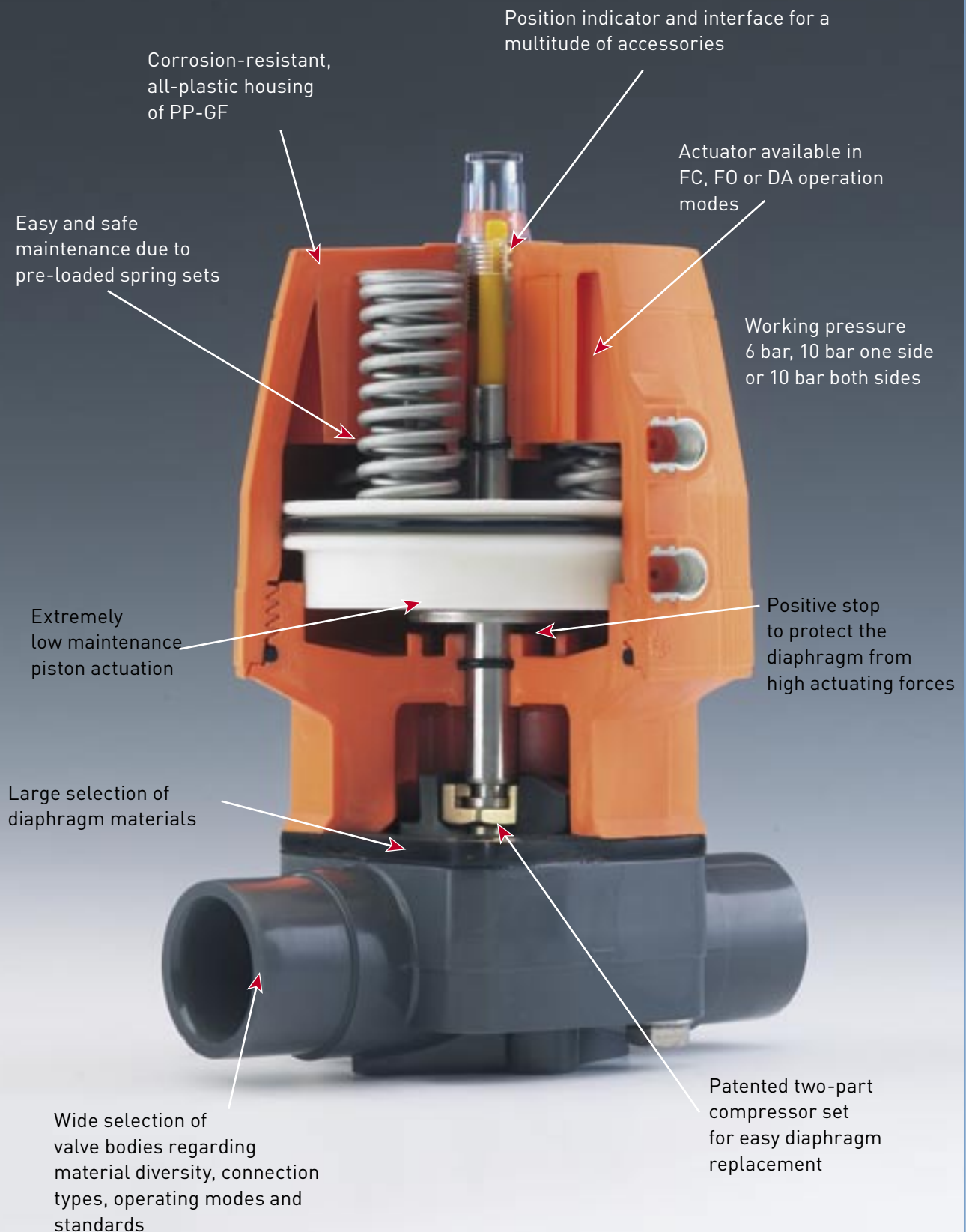
**GEORG FISCHER**  
PIPING SYSTEMS

Product  
Information

## DIASTAR Pneumatic Diaphragm Valves



# ➤ The star in every application



# The system at a glance

The DIASTAR product series from GF Piping Systems presents a complete family of pneumatically actuated diaphragm valves – providing you with an optimal solution for controlling aggressive media.

Valve bodies are available with threaded connections, spigots, sockets, flanges and branches, depending on the installation. International standards, e.g. ISO, BS, ASTM, ANSI and JIS, have also been taken into consideration.

## DIASTAR Eco

This actuator has been optimized especially for elastomer diaphragms and 6 bar working pressure. The perfect solution if you are looking for an economical valve with extremely compact dimensions and a long service life.

## DIASTAR 028 FC

The DIASTAR 028 FC is ideal for all standard applications up to 10 bar that require integrating accessories. This version has an accessory interface that allows you to link the actuator effortlessly to your system control. It features an outstanding price-performance ratio and a compact design.

## DIASTAR 025

Our strongest one. This type series has the highest closing forces and is implemented wherever high line pressure, up to 10 bar on both sides, needs to be controlled. The DIASTAR 025 is also your valve of choice if you place a great deal of importance on reliability and easy system integration, which is provided for with the integrated accessory interface. It is available in the FC, FO and DA modes of operation.



# The highlights

The new DIASTAR from GF Piping Systems is available in three type series. All three models feature a compact design and are adapted to the respective line pressure. So your requirements are covered, whether in applications with high working pressures and closing forces or compact installations in the low pressure range. State-of-the-art materials technology combined with innovative manufacturing methods are the platform on which all three DIASTAR type series are based. Our long-term expertise in developing diaphragm valves ensures best performance adapted precisely to the application, top quality and a long life cycle.

## Wide selection of materials

A comprehensive selection of valve bodies means there are no limits as far as applications are concerned. You are free to select PVC-U, PVC-C, ABS, PP-H, PP-n or PVDF. Together with the diverse diaphragm materials available, such as EPDM, PTFE, CSM, FPM and NBR, our valves can be used with almost any chemical.

## Broad range of application

For cooling applications, GF Piping Systems recommends ABS valve bodies. If your focus is on conveying pure and ultrapure media, then you are surely interested in our PP-n or PVDF-HP materials.

Of course, we also have the right diaphragm material for your particular application.

Does your application require a more precise adjustment of the actuator to the respective line pressure? No problem with GF Piping Systems. The actuation force of all three DIASTAR type series can be adjusted even more accurate - by simply adapting the number of spring sets.

## High corrosion resistance

Its resistance to harmful environmental impact and aggressive environments is one of the most important features of the actuator, especially in the chemical industry and electroplating.

Our housing material made of fiberglass-reinforced propylene guarantees that your actuator is not exposed to harmful substances from outside. The extensive use of plastics or stainless steel also protects its inner workings.

## Maximum safety

A long diaphragm life is in general mutually exclusive with high closing forces and low control pressures – it is, however, nonetheless essential for the safety of your system.

GF Piping Systems has solved this problem with the new DIASTAR design:

- very low control pressure due to the optimal piston surface for the respective working pressure
- high closing force due to the use of 3, 4 or 6 strong spring sets





Whether for use in cooling applications, for pure and ultrapure media, for the chemical industry or electroplating - our stars fulfil your every wish in terms of applications thanks to the wide range of materials and accessories on offer.



- integrated positive stop in the actuator, which ensures that the piston moves full force to the defined position without needlessly stressing the diaphragm
- 3 times longer life compared to single-layer clad PTFE diaphragms by using PTFE diaphragms with an additional elastomer backing diaphragm

#### Safe maintenance and minimal downtime

GF Piping Systems is the only supplier to have pneumatic diaphragm valves with pre-loaded spring sets. This allows opening the actuator without danger. An on-site revision can thus be carried out quickly and without special tools. The number of cycles is specified for the DIASTAR at min. 250,000. Only then an inspection of the seals is necessary. The long service intervals and the easy maintenance mean you benefit from lower total cost of ownership – an advantage not offered by competitors.

#### Less inventory and faster retrofitting

Particularly in plant construction where chemical dosing and distribution is involved, diverse diaphragms need to be used - depending on the medium. For diaphragm valves, this means stockings of at least two actuator types (for elastomer and PTFE diaphragms) is required.

But not if you choose GF Piping Systems. Our patented, two-part compressor set allows you to implement one and the same actuator for both elastomer and PTFE diaphragms. It's easy to retrofit by simply changing the diaphragm holder. Your benefit: more flexibility and more cost savings.

#### Easy integration of many interesting accessories

Both the DIASTAR 028 FC and the DIASTAR 025 have a mechanical interface to which our accessory can be easily connected. An absolute must nowadays - because actuation technology is an integral part of the entire plant control. Our range of accessory offers you a multitude of interesting and useful options:

- self-adjusting limit switch
- positioner
- solenoid pilot valve
- valve clusters with bus communication
- AS-i controller

# Technical data

## Application limit values

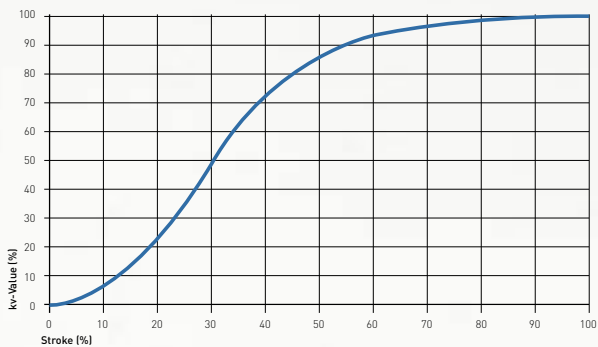
Features		Diastar Eco	DIASTAR 028	DIASTAR 025
Mode of operation	FC	✓	✓	✓
	FO			✓
	DA			✓
Dimension		d20DN15...d63DN50	d20DN15...d63DN50	d20DN15...d160DN150
Valve body materials	PVC-U	✓	✓	✓
	PVC-C	✓	✓	✓
	ABS	✓	✓	✓
	PP-H	✓	✓	✓
	PROGEF Natural		✓	✓
	SYGEF Standard		✓	✓
	SYGEF Plus		✓	✓
Diaphragm materials	EPDM	✓	✓	✓
	FPM	on request	✓	✓
	CSM	on request	✓	✓
	NBR	on request	✓	✓
	PTFE		✓	✓
Valve type	Straight-through valve	✓	✓	✓
	Zero static valve		✓	✓
Connection types	Threaded	✓	✓	✓
	Socket	✓	✓	✓
	Spigot	✓	✓	✓
	Flange		✓	✓
	IR spigot	✓	✓	✓
	BCF spigot		✓	✓
Accessory	Limit switch		✓	✓
	Emergency manual override		✓	✓
	Stroke limiter		✓	✓
	Positioner		✓	✓
	Bus communication	✓*	✓	✓
Typical applications		On/Off	Chemical dosing	Chemical dosing
		Where space is critical	Water treatment	Water treatment
		Working pressure to 6 bar	Working pressure to 10 bar one side	Working pressure to 10 bar both sides
		Water treatment	Integration in process automation	Control applications
				Control of pure and ultrapure media
				FO / DA functions
				Applications with higher viscosity and solids content

\* with the respective pilot valve or valve cluster

<b>Materials</b>	<b>Housing</b>	PP-GF30 Orange [Polypropylene, 30% fiberglass-reinforced]
	<b>Pistons</b>	PP-GF30 White [Polypropylene, 30% fiberglass-reinforced]
	<b>Valve body</b>	PVC-U, PVC-C, ABS, PP-H, PP-n, PVDF, PVDF-HP
	<b>Diaphragms</b>	EPDM, FPM, CSM, NBR, PTFE
	<b>Position indicator</b>	PP
	<b>Indicator cap</b>	SAN
	<b>Spindle</b>	Stainless steel 1.4104
	<b>Metal inserts</b>	Stainless steel 1.4305
	<b>Seals</b>	NBR
	<b>Springs</b>	Galvanized steel
<b>Mode of operation</b>	<b>DIASTAR Eco</b>	FC
	<b>DIASTAR 028</b>	FC
	<b>DIASTAR 025</b>	FC, F0, DA
<b>Dimension</b>	<b>DIASTAR Eco</b>	d20DN15...d63DN50
	<b>DIASTAR 028</b>	d20DN15...d63DN50
	<b>DIASTAR 025</b>	d20DN15...d160DN150
<b>Pressure rating</b>	<b>DIASTAR Eco</b>	EPDM 6 bar one side
	<b>DIASTAR 028</b>	EPDM 10 bar one side / PTFE 6 bar one side
	<b>DIASTAR 025</b>	EPDM 10 bar both sides / PTFE 10 bar both sides
<b>Medium temperature</b>	up to 120°C *	
<b>Allowable control pressure</b>	Max 6 bar for function FC	
	Max 5 bar for function F0 and DA	
<b>Control medium</b>	Compressed air (oil-free) / Inert, non-aggressive gases, max 40°C	
<b>Ambient temperature</b>	-10°C to 50°C	

\* depending on the material of the valve body - see the pressure-temperature diagram in our planing fundamentals

Flow characteristics



Pressure loss (Media water, 20°C)

