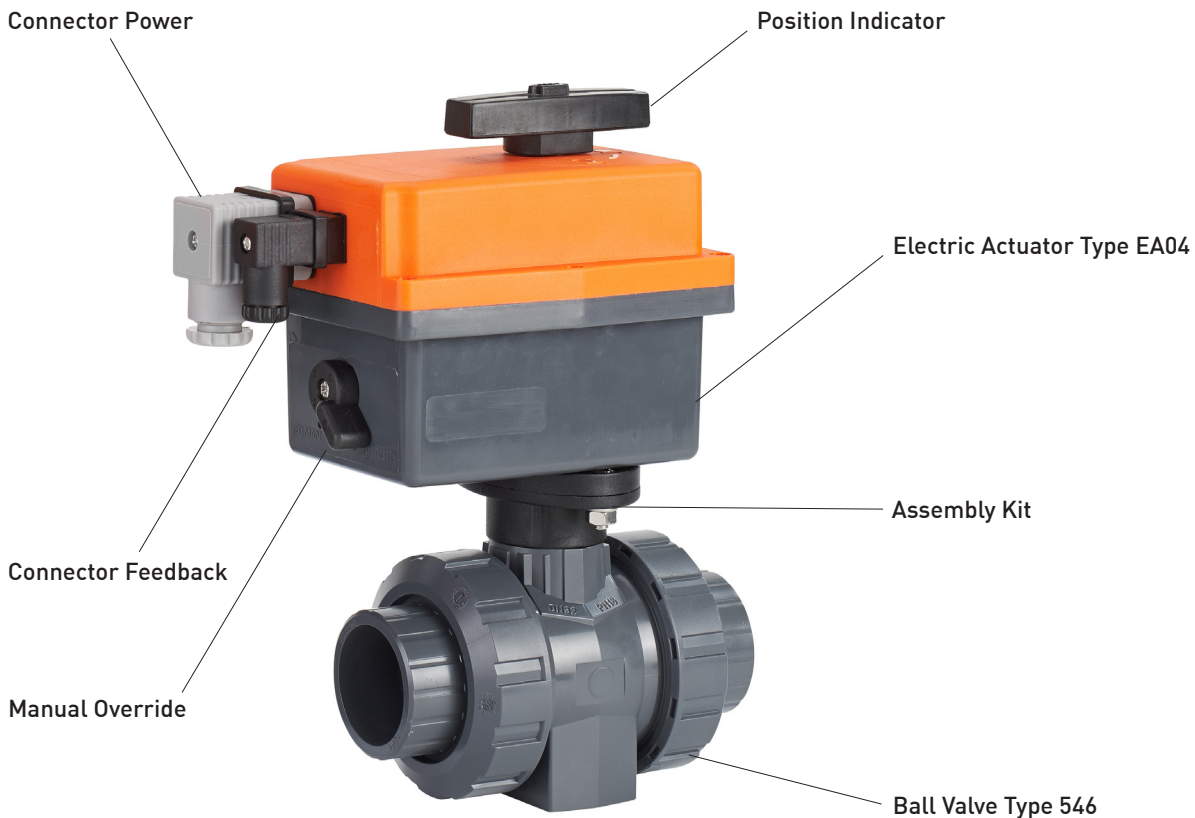




[Datasheet](#)

Type 104 Electrically Actuated Ball Valve

Standard Features



- **Size**
3/8" – 2" / DN 10-50
- **Voltage**
110 / 85 – 240 V AC/DC or 24 V AC/DC
- **Manual Override**
- **Material**
PVC-U, CPVC, PP-H
- **Connection Ends**
Socket, Spigots, Threaded NPT
- **Standards**
ISO, JIS, BS, ASTM
- **Seat**
PTFE
- **Seals**
EPDM or FPM
- **Mounting**
Stainless steel threaded inserts for easy and secure mounting
- **Duty Cycle**
75 %
- **Limit Switches**
Two SPDT

General

Available in PVC-U, CPVC and PP-H, the type 104 ball valve from Georg Fischer offers an economic solution for less demanding applications. The valve operates on 110-240 respectively 85-240 or 24 volts auto-sensing either AC or DC. The type 104 is based on the same industrial ball valve Georg Fischer uses in other applications. This means the valve is true union and can be repaired if need be. With a 75 % duty cycle, the valve is suitable for mid to light cycle conditions.

Technical Specifications Electric Actuator EA04



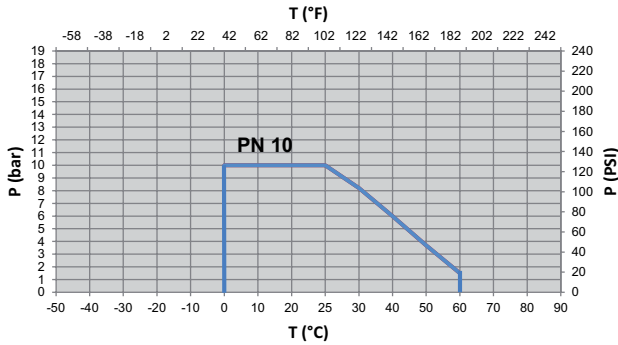
Nominal torque Mdn	10 Nm	20 Nm
Control time ± 10%	17-20 seconds	11-12 seconds
L/W/H (actuator only)	169/104/123 mm 6.7/4.1/4.8 inch	177/110/149 mm 7/4.3/5.9 inch
Weight	0.9 kg / 2.0 lbs	1.5 kg / 3.3 lbs
Housing material	Polyamide (PA6)	Polyamide (PA6)
Rated voltage - 0 % / + 5 %, Nominal current	110 – 240 V AC/DC, 50/60 Hz, max. 0.27 A or 24 V AC/DC, 50/60 Hz, max. 0.39 A	85 – 240 V AC/DC, 50/60 Hz, max. 0.17 A or 12-24 V AC/DC, 50/60 Hz, max. 2.13 A
Duty cycle ED	75 %	
Actuating angle ± 1°	90°	
Position indicator	optical, integrated	
Emergency manual override	integrated, standard	
Protection class	IP 65	
Electrical connections	Power- Connector plug 3 P+E per DIN 43650 ISO 440 & C192	
Limit switches	Two SPDT micro switches (Motor stop + 2 extra limit switches)	
Operating temperature	-20 to +70° C / -4 to +158 ° F	

Technical Data

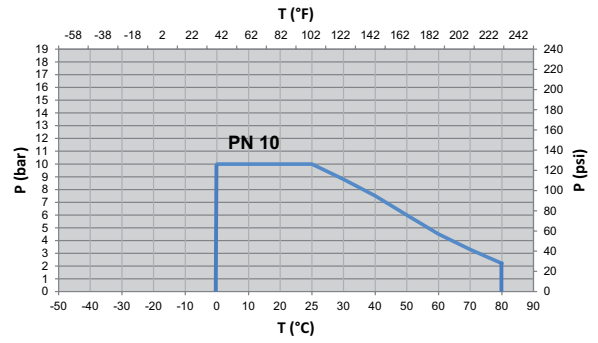
Pressure- Temperature Diagrams For Type 104 Ball Valves DN 10 – DN 50 | 3/8” – 2”

The following pressure temperature diagrams are based on a lifetime of 25 years and the medium water or similar media.

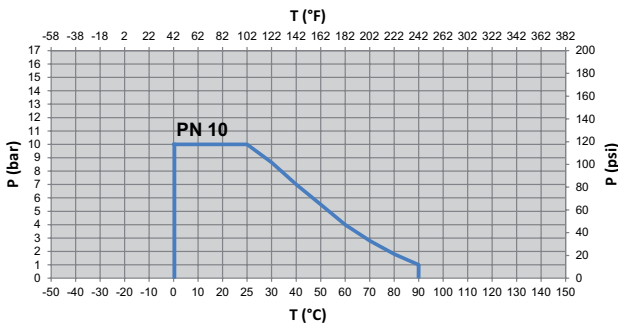
PVC-U



CPVC

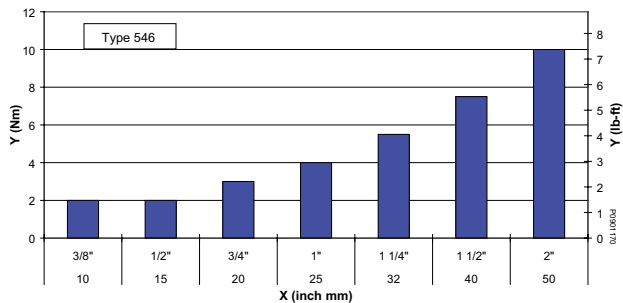


PP-H



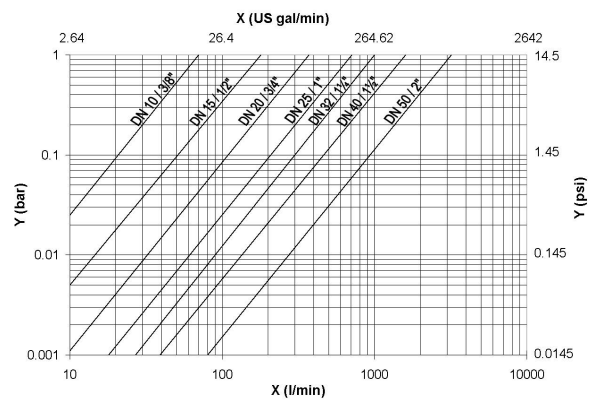
Operating Torque

Average values at nominal pressure



X Size (mm, inch) Y Torque [Nm, inch pound]

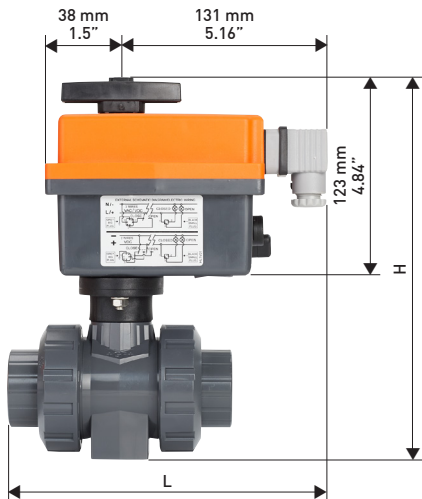
Pressure loss DN10-50



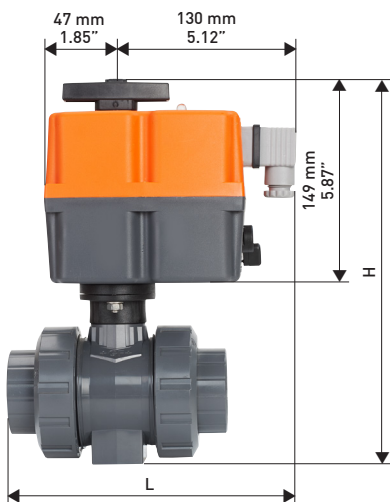
Medium: water, 20°C

X Flow rate (l/min / U.S. gal/min) Y Pressure loss Δp (bar / psi)

Dimensions Ball Valve Type 104



inch	d	DN	Height [mm/inch]	Length [mm/inch]			Width [mm/inch]
				PVC, CPVC	PP-H Socket	PP-H Spigot	
3/8	16	10	194 / 7.64	178.5 / 7.03	178.5 / 7.03		50 / 1.97
1/2	20	15	194 / 7.64	178.5 / 7.03	178.5 / 7.03	196 / 7.72	50 / 1.97
3/4	25	20	207 / 8.15	186 / 7.32	185.5 / 7.30	202.5 / 7.97	58 / 2.28
1	32	25	217 / 8.54	192.5 / 7.58	190.5 / 7.50	206 / 8.11	68 / 2.68
1 1/4	40	32	236 / 9.29	204.5 / 8.05	198.5 / 7.81	216.5 / 8.52	84 / 3.31



inch	d	DN	Height [mm/inch]	Length [mm/inch]			Width [mm/inch]
				PVC, CPVC	PP-H Socket	PP-H Spigot	
1 1/2	50	40	275 / 10.83	208.5 / 8.21	203.5 / 8.01	225.5 / 8.88	97 / 3.82
2	63	50	307 / 12.09	221.5 / 8.72	214 / 8.43	240 / 9.45	124 / 4.88

Type 104 Electrically Actuated Ball Valve - PVC-U

Cement Socket Metric

Actuator Type	DN	ID Inch	110 - 240 V AC / DC		24 V AC / DC	
			EPDM	FPM	EPDM	FPM
10 Nm	10	3/8	199104002	199104012	199104042	199104052
	15	1/2	199104003	199104013	199104043	199104053
	20	3/4	199104004	199104014	199104044	199104054
	25	1	199104005	199104015	199104045	199104055
	32	1 1/4	199104006	199104016	199104046	199104056
20 Nm	40	1 1/2	199104007	199104017	199104047	199104057
	50	2	199104008	199104018	199104048	199104058

Cement Socket ASTM+Threaded NPT

Actuator Type	DN	ID Inch	110 - 240 V AC / DC		24 V AC / DC	
			EPDM	FPM	EPDM	FPM
10 Nm	10	3/8	199104222	199104232	199104242	199104252
	15	1/2	199104223	199104233	199104243	199104253
	20	3/4	199104224	199104234	199104244	199104254
	25	1	199104225	199104235	199104245	199104255
	32	1 1/4	199104226	199104236	199104246	199104256
20 Nm	40	1 1/2	199104227	199104237	199104247	199104257
	50	2	199104228	199104238	199104248	199104258

Cement Socket BS

Actuator Type	DN	ID Inch	110 - 240 V AC / DC		24 V AC / DC	
			EPDM	FPM	EPDM	FPM
10 Nm	10	3/8	199104402	199104412	199104442	199104452
	15	1/2	199104403	199104413	199104443	199104453
	20	3/4	199104404	199104414	199104444	199104454
	25	1	199104405	199104415	199104445	199104455
	32	1 1/4	199104406	199104416	199104446	199104456
20 Nm	40	1 1/2	199104407	199104417	199104447	199104457
	50	2	199104408	199104418	199104448	199104458

Cement Socket JIS

Actuator Type	DN	ID Inch	110 - 240 V AC / DC		24 V AC / DC	
			EPDM	FPM	EPDM	FPM
10 Nm	10	3/8	199104483	199104493	199104863	199104867
	15	1/2	199104484	199104494	199104864	199104868
	20	3/4	199104485	199104495	199104865	199104867
	25	1	199104486	199104496	199104866	199104868
	32	1 1/4	199104487	199104497	199104867	199104877
20 Nm	40	1 1/2	199104488	199104498	199104868	199104878
	50	2				

Type 104 Electrically Actuated Ball Valve - CPVC

Cement Socket metric

Actuator Type	DN	ID Inch	110 - 240 V AC / DC		24 V AC / DC	
			EPDM	FPM	EPDM	FPM
10 Nm	10	3/8	199104102	199104112	199104142	199104152
	15	1/2	199104103	199104113	199104143	199104153
	20	3/4	199104104	199104114	199104144	199104154
	25	1	199104105	199104115	199104145	199104155
	32	1 1/4	199104106	199104116	199104146	199104156
20 Nm	40	1 1/2	199104107	199104117	199104147	199104157
	50	2	199104108	199104118	199104148	199104158

Cement Socket ASTM+Threaded NPT

Actuator Type	DN	ID Inch	110 - 240 V AC / DC		24 V AC / DC	
			EPDM	FPM	EPDM	FPM
10 Nm	10	3/8	199104322	199104332	199104342	199104352
	15	1/2	199104323	199104333	199104343	199104353
	20	3/4	199104324	199104334	199104344	199104354
	25	1	199104325	199104335	199104345	199104355
	32	1 1/4	199104326	199104336	199104346	199104356
20 Nm	40	1 1/2	199104327	199104337	199104347	199104357
	50	2	199104328	199104338	199104348	199104358

Type 104 Electrically Actuated Ball Valve - PP-H

Socket Metric

Actuator Type	DN	ID Inch	110 - 240 V AC / DC		24 V AC / DC	
			EPDM	FPM	EPDM	FPM
10 Nm	10	3/8	199104502	199104512	199104542	199104552
	15	1/2	199104503	199104513	199104543	199104553
	20	3/4	199104504	199104514	199104544	199104554
	25	1	199104505	199104515	199104545	199104555
	32	1 1/4	199104506	199104516	199104546	199104556
20 Nm	40	1 1/2	199104507	199104517	199104547	199104557
	50	2	199104508	199104518	199104548	199104558

Spigot Metric

Actuator Type	DN	ID Inch	110 - 240 V AC / DC		24 V AC / DC	
			EPDM	FPM	EPDM	FPM
10 Nm	10	3/8	199104563	199104573	199104583	199104593
	15	1/2	199104564	199104574	199104584	199104594
	20	3/4	199104565	199104575	199104585	199104595
	25	1	199104566	199104576	199104586	199104596
	32	1 1/4	199104567	199104577	199104587	199104597
20 Nm	40	1 1/2	199104568	199104578	199104588	199104598
	50	2	199104569	199104579	199104589	199104599

GF Piping Systems – worldwide at home

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

www.gfps.com



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

Adding Quality to People's Lives

Argentina/Southern South America

Georg Fischer Central Plastics
Sudamérica S.R.L.
Buenos Aires, Argentina
Phone +5411 4512 02 90
gfcntal.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

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

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

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
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
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.georgfischer.com

Netherlands

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

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

Georg 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
Tustin, CA 92780-7258
Phone +1(714) 731 88 00
Toll Free 800 854 40 90
us.ps@georgfischer.com
www.gfiping.com

Vietnam

Georg 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

GFDO_6334_4 (07.10)

© Georg Fischer Piping Systems Ltd
CH-8201 Schaffhausen/Switzerland, 2010
Printed in Switzerland



+GF+

GEORG FISCHER PIPING SYSTEMS