

# Lug Style Butterfly Valve Type 578



## General

The Type 578 Lug Butterfly Valve has several beneficial design features unique to the Georg Fischer butterfly valve line. The double eccentric operating principle has an off-center disc and shaft that disengages the disk from the seal with only 3 degrees of rotation. This significantly reduces component wear and required operating torque, as the disk is not in contact with the seal when the valve is opening and closing. Conversely, a traditional boot-style valve has a centric design, significantly increasing the required operating torque because of the disk sealing principle associated with these valves. Boot-style valves often show a far more dramatic increase in required operating torque over time than a double eccentric valve. This can result in premature actuator failure and can even render the valve inoperable. Georg Fischer double eccentric butterfly valves require approximately 50% less operating torque than boot-style competitive valves.

The 578 valve also features a truly non-wetted shaft design. The bushing assembly has a double O-ring seal on both the disk and body sides, providing the highest level of protection and reliability.

## Features

- Size: 2"–12"
- Body: Glass filled PP with overmolded SS316 lugs, ANSI 150 bolt pattern
- Materials: PVC, CPVC, PP and PVDF
- Stem: 316 stainless steel
- Seal: EPDM or FPM; PTFE seals available upon request
- Operation: Bare shaft, lever, gear

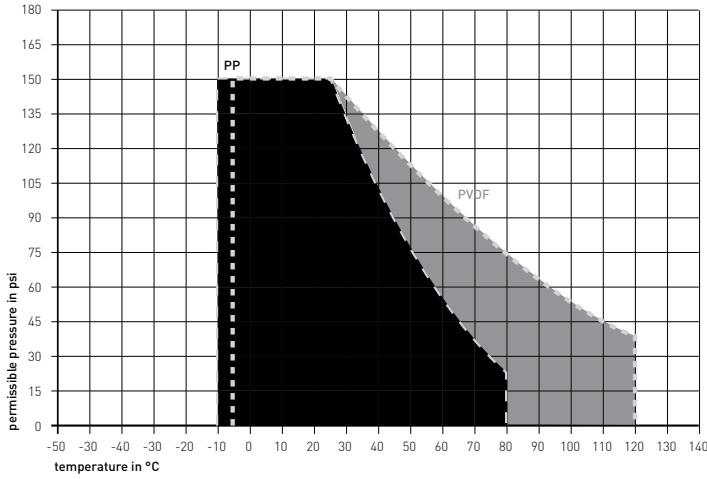
## Optional Features

- Actuation: Electric, pneumatic
- Accessories:
  - Integrated electrical feedback
  - Handle extension
  - Chain operator
  - Square operating nut
  - Fine adjustment lever (1 degree)

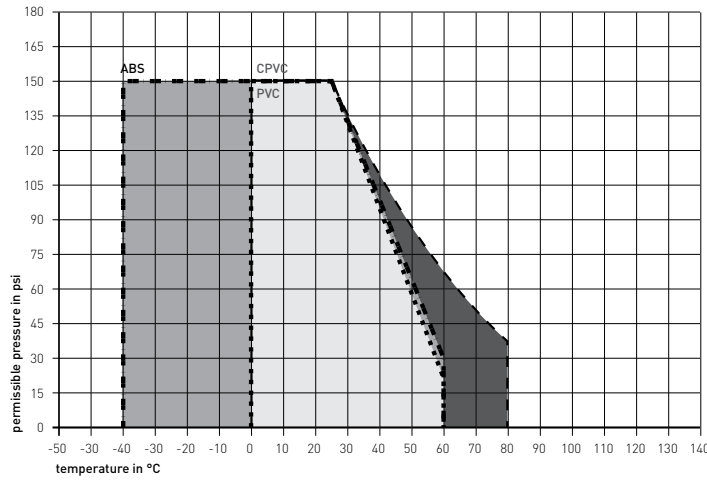
# Technical Data

## Pressure-temperature diagrams

PP, PVDF (useful life 25 years; medium water)



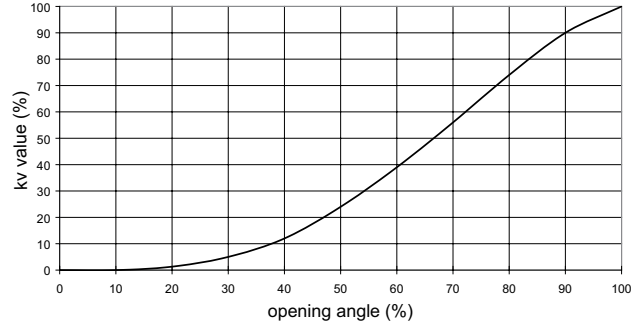
ABS, PVC, CPVC (useful life 25 years; medium water)



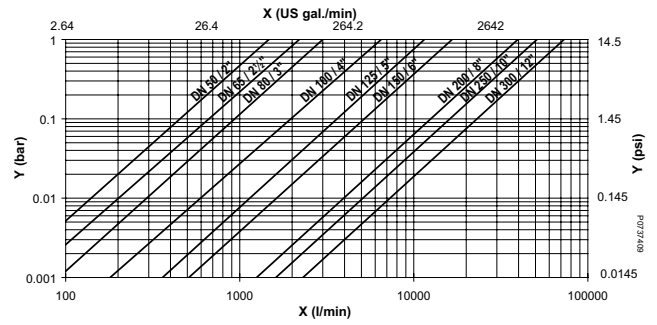
## Cv values

DN mm	Inch	d mm	Cv 100 gal/min ( $\Delta p = 1$ psi)
50	2	63	103
65	2½	75	154
80	3	90	210
100	4	110	455
125	5	140	805
150	6	160	1162
200	8	225	2772
250	10	280	3570
300	12	315	5110

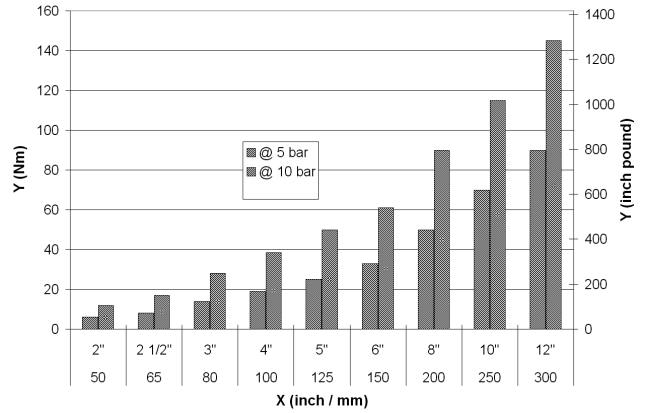
## Flow characteristics



## Pressure loss

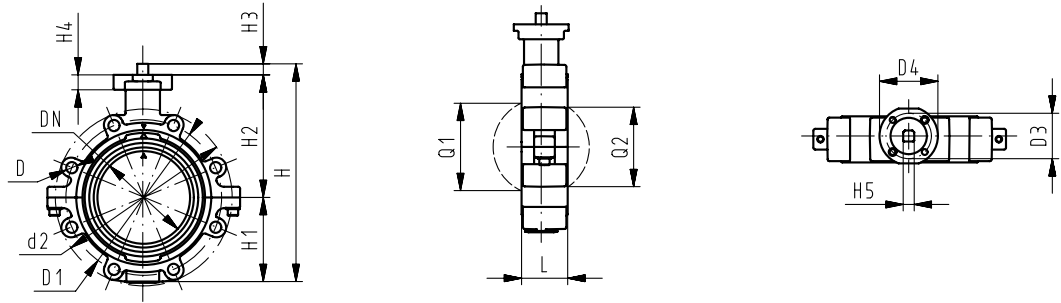


## Operating torque



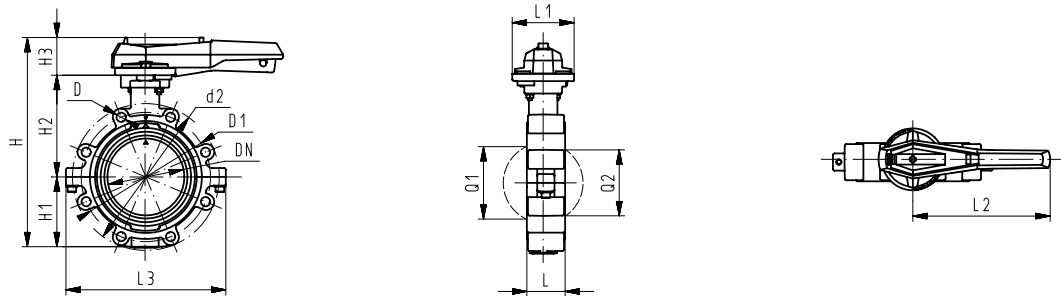
For non-GF actuators, breakaway torques 2.5 to 4 times the value of the moving torque must be taken into consideration, depending on the application conditions (e.g. control time, medium, temperature, etc.).

# Dimensions



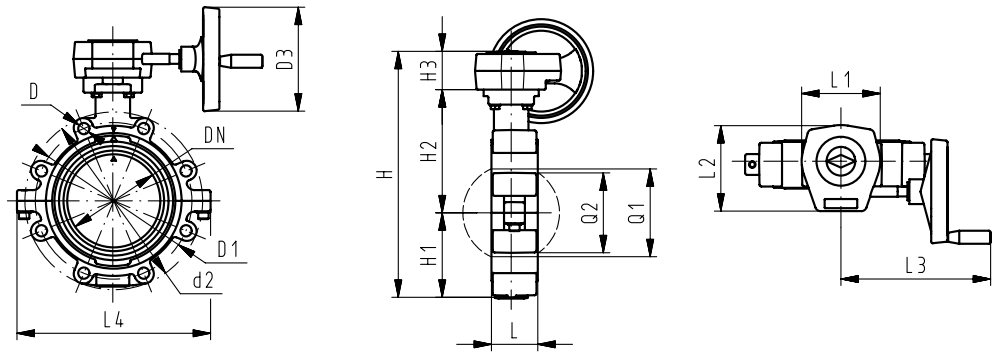
## Bare shaft

d mm	d inch	DN mm	d2 mm	D	D1 mm	D3 mm	D4 mm	H mm	H1 mm	H2 mm	H3 mm	H4 mm	L mm	Q1 mm	Q2 mm
63	2	50	160	UNC 5/8	120.6	70	90	238	77	134	27	23	45	40	-
75	2½	65	180	UNC 5/8	139.7	70	90	250	83	140	27	23	46	54	35
90	3	80	195	UNC 5/8	152.4	70	90	262	89	146	27	23	49	67	50
110	4	100	226	UNC 5/8	190.5	70	90	289	106	167	16	23	56	88	74
140	5	125	258	UNC 3/4	215.9	70	90	318	121	181	16	23	64	113	97
160	6	150	284	UNC 3/4	241.3	70	90	341	133	189	19	23	72	139	123
225	8	200	341	UNC 3/4	298.4	70	90	388	159	210	19	23	73	178	169
280	10	250	412	UNC 7/8	362.0	102	125	509	205	264	40	23	113	210	207
315	12	300	482	UNC 7/8	431.8	102	125	559	234	285	40	23	113	256	253



## Lever

d mm	d inch	DN mm	d2 mm	D	D1 mm	H mm	H1 mm	H2 mm	H3 mm	L mm	L1 mm	L2 mm	L3 mm	Q1 mm	Q2 mm
63	2	50	160	UNC 5/8	120.6	265	77	134	54	45	23	205	165	40	-
75	2½	65	180	UNC 5/8	139.7	277	83	140	54	46	23	205	182	54	35
90	3	80	195	UNC 5/8	152.4	289	89	146	54	49	23	205	210	67	50
110	4	100	226	UNC 5/8	190.5	328	106	167	55	56	23	255	240	88	74
140	5	125	258	UNC 3/4	215.9	357	121	181	55	64	23	255	272	113	97
160	6	150	284	UNC 3/4	241.3	377	133	189	55	72	23	255	300	139	123
225	8	200	341	UNC 3/4	298.4	436	159	210	67	73	23	408	360	178	169
280	10	250	412	UNC 7/8	362.0	536	205	264	67	113	23	408	440	210	207
315	12	300	482	UNC 7/8	431.8	586	234	285	67	113	23	408	510	256	253



### Gear

d mm	d inch	DN mm	d2 mm	D	D1 mm	D3	H mm	H1 mm	H2 mm	H3 mm	L mm	L1 mm	L2 mm	L3 mm	L4 mm	Q1 mm	Q2 mm
63	2	50	160	UNC 5/8	120.6	150	261	77	134	50	45	110	120	165	155	40	-
75	2 1/2	65	180	UNC 5/8	139.7	150	273	83	140	50	46	110	120	182	155	54	35
90	3	80	195	UNC 5/8	152.4	150	285	89	146	50	49	110	120	210	155	67	50
110	4	100	226	UNC 5/8	190.5	150	323	106	167	50	56	110	120	240	155	88	74
140	5	125	258	UNC 3/4	215.9	150	352	121	181	50	64	110	120	272	155	113	97
160	6	150	284	UNC 3/4	241.3	150	372	133	189	50	72	110	120	300	155	139	123
225	8	200	341	UNC 3/4	298.4	150	419	159	210	50	73	110	120	360	155	178	169
280	10	250	412	UNC 7/8	362.0	200	524	205	264	55	113	130	140	440	200	210	207
315	12	300	482	UNC 7/8	431.8	200	574	234	285	55	113	130	140	510	200	256	253

## **GF Piping Systems**

Tel. (714) 731-8800, Toll Free (800) 854-4090, Fax (714) 731-6201  
us.ps@georgfischer.com, www.gfpiping.com

