



## Butterfly valve

- Manually operated / Automatable
- High flow values
- Shaft and body are non-wetted parts
- Low torques
- Zero leakage

Product variants described in the data sheet may differ from the product presentation and description.

### Can be combined with

	<b>Type 2052</b> Pneumatic rotary actuator	▶
	<b>Type 2051</b> Pneumatic rotary actuator	▶
	<b>Type 3003</b> Electrical Rotary Actuator - On/Off and control	▶
	<b>Type 3004</b> Explosion Proof Rotary Actuator - On/Off and control	▶
	<b>Type 3005</b> Electric Rotary Actuator - On/Off and Control	▶
	<b>Type 1061</b> Accessory for pneumatic rotary actuators	▶
	<b>Type 8792</b> Digital electropneumatic Positioner SideControl	▶

### Type description

2/2 way butterfly valve in metal for shutting off and controlling media flows. Based on the fact that the butterfly valve is available in various designs (intermediate flange, end flange) and in different materials, it meets the requirements of various applications and processes. Preferential areas of application for butterfly valves are, for example, the metal industry, power plant technology, paper industry as well as mining, shipbuilding and mechanical engineering.

Further characteristics and advantages are:

- Through shaft for self-centering disc --> even wear and low torque
- PFA-coated shaft in the sealed area
- Blow-out proof shaft seal
- Spherically shaped disc
- Notched handle in ductile iron: lockable in 10 adjustable positions

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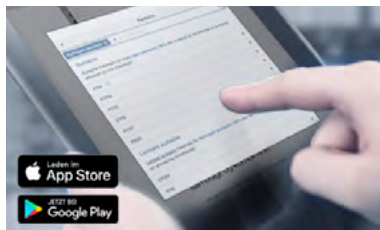
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## 1. General Technical Data

Product properties	
Dimensions	Detailed information can be found in chapter <b>"3. Dimensions"</b> on page 4.
Material	
Body	GG25 Cast Iron, GGG50 Ductile Iron (other materials on request)
Disc	CF8M (other materials or coatings on request)
Seal	EPT (W-EPT, FKM, EPDM, NBR, CSM, Silicone on request)
Body Design	Wafer, Lug
Nominal diameter/Orifice	DN 40...300
Media data	
Medium temperature	-20 °C...140 °C (Detailed information about EPT can be found in chapter <b>"4.1. Pressure temperature diagram"</b> on page 6.) Absperrklappen mit anderen max. Druckstufen sind auf Anfrage erhältlich.
Medium pressure	Max. 16 bar für schmierende Medien und 10 bar für nicht-schmierende Medien (Detailed information can be found in chapter <b>"4.1. Pressure temperature diagram"</b> on page 6.)
Process/Port connection & communication	
Port connection	EN1092-1 & EN1092-2 ASME/ANSI B16.1 Class 125 ASME/ANSI B16.5 Class 150 (Detailed information can be found in chapter <b>"3. Dimensions"</b> on page 4.)
Approvals and certificates	
ISO top flange	EN ISO 5211
Considered standards	ISO 5208 ASME B16.34 API 609

## 2. Materials

### 2.1. Chemical Resistance Chart – Bürkert resistApp



#### Bürkert resistApp – Chemical Resistance Chart

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

[Start Chemical Resistance Check](#)

### 3. Dimensions

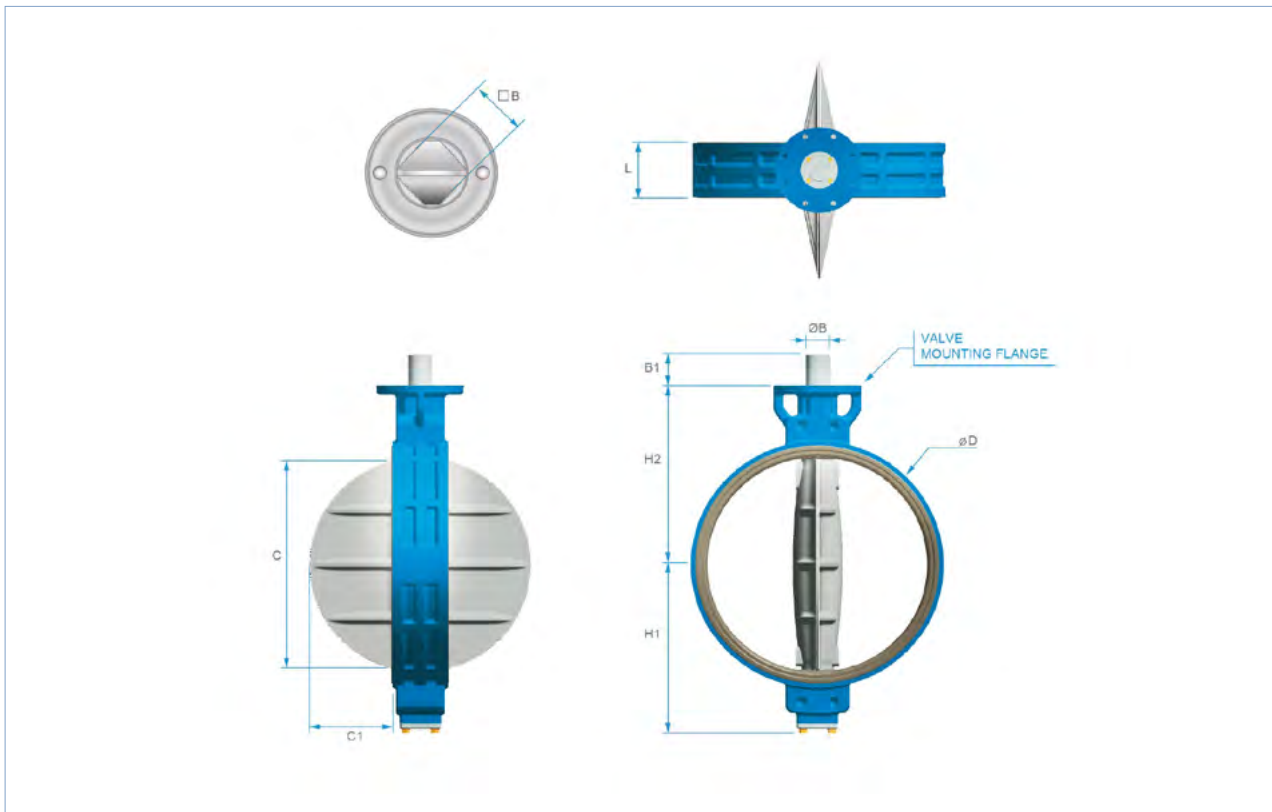
#### 3.1. Dimension for wafer type

**Note:**

- Dimensions in mm
- Pipe limit size > C

**Flange Ratings:**

- PN 10, 16 acc. to EN1092-1 & EN1092-2
- ASME / ANSI B16.1 Class 125 & Class 150
- AS Table E
- JIS 10K



Size		Face to Face	Maße					Mounting flange (ISO5211)		Shaft end			Weight
mm	Inch	L	H1	H2	ØD	C	C1	Type	PCD	ØB	B1	□B	kg
40	1.5	33	60	120	81	34	7	F05/07	50/70	14	19	11	2.00
50	2	43	65	143	96	39	8	F05/07	50/70	14	19	11	3.00
65	2.5	46	71	155	110	55	13	F05/07	50/70	14	19	11	3.80
80	3	46	77	162	124	69	19	F05/07	50/70	14	19	11	4.00
100	4	52	107	181	148	91	27	F05/07	50/70	14	19	11	5.30
125	5	56	122	197	180	115	36	F05/07	50/70	18	19	14	7.30
150	6	56	150	210	206	140	47	F05/07	50/70	18	19	14	8.20
200	8	60	165	240	259	186	68	F10 <sup>1</sup> /F12	102/125	22	24	17	13.50
250	10	68	201	286	320	239	90	F10 <sup>1</sup> /F12	102/125	25	24	19	21.20
300	12	78	234	309	370	289	111	F10 <sup>1</sup> /F12	102/125	28	24	22	32.50

1.) Other dimensions on request

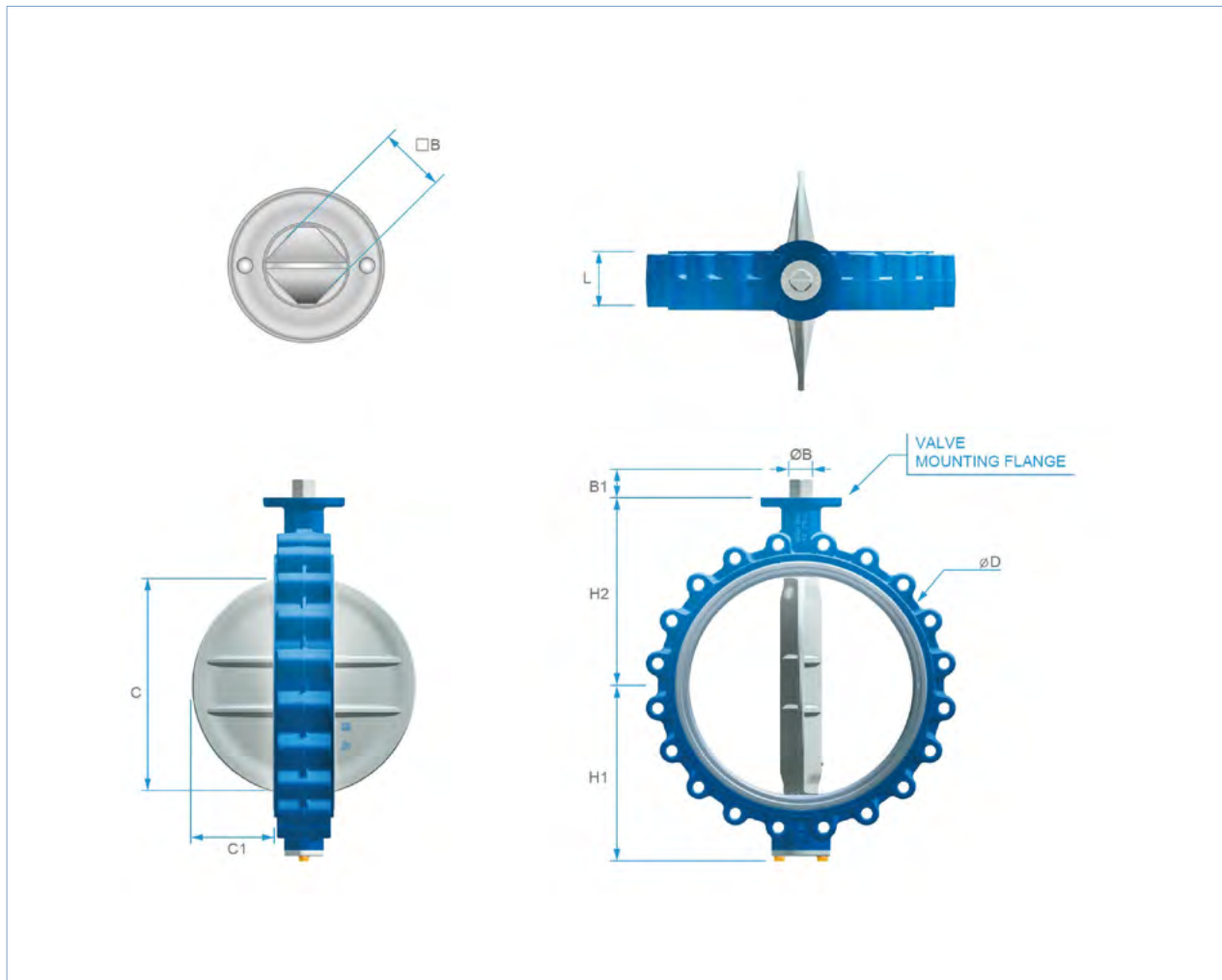
### 3.2. Dimension for lug type

**Note:**

- Dimensions in mm
- Pipe limit size > C
- Further flange ratings on request

**Flange Ratings:**

- PN 16 gem. EN1092-1 & EN1092-2

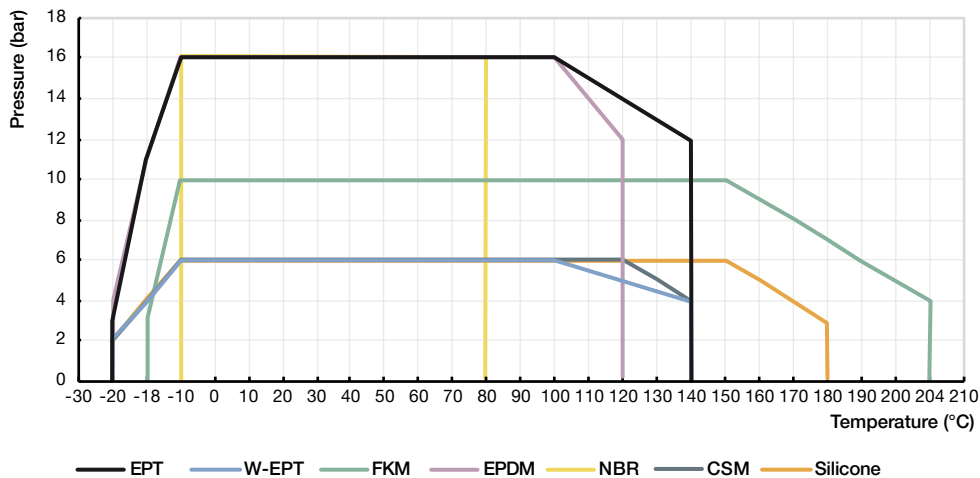


Size		Face to Face	Maße					Mounting flange (ISO5211)		Shaft end			Weight
mm	Inch	L	H1	H2	$\varnothing D$	C	C1	Type	PCD	$\varnothing B$	B1	$\square B$	kg
40	1.5	33	60	120	81	34	7	F05/07	50/70	14	19	11	2.2
50	2	43	65	143	96	39	8	F05/07	50/70	14	19	11	3.4
65	2.5	46	71	155	110	55	13	F05/07	50/70	14	19	11	4
80	3	46	77	162	124	69	19	F05/07	50/70	14	19	11	4.5
100	4	52	89	181	148	91	27	F05/07	50/70	14	19	11	7.6
125	5	56	112	197	180	115	36	F05/07	50/70	18	19	14	9.5
150	6	56	123	210	206	140	47	F05/07	50/70	18	19	14	10.4
200	8	60	150	240	259	186	68	F10 <sup>1</sup> /F12	102/125	22	24	17	17.5
250	10	68	179	286	320	239	90	F10 <sup>1</sup> /F12	102/125	25	24	19	26.5
300	12	78	216	309	370	289	111	F10 <sup>1</sup> /F12	102/125	28	24	22	43.5

1.) Other dimensions on request

## 4. Performance specifications

### 4.1. Pressure temperature diagram



### 4.2. Torque

**Note:**

- Seating / unseating torque values above included friction bearing torque for stated  $\Delta p$ .
- For actuator dimensioning we recommend considering a safety factor of minimum 30 %.
- Test medium: Water at room temperature

Size		Differential pressure <sup>1.)</sup>		
		6 kg/cm <sup>2</sup>	10 kg/cm <sup>2</sup>	16 kg/cm <sup>2</sup>
[mm]	[inch]	[Nm]	[Nm]	[Nm]
40	1.5	4.5	4.5	4.5
50	2	10	10	11.5
65	2.5	13	13.5	15
80	3	19.6	19.6	19.6
100	4	29.4	29.4	34.3
125	5	44.1	44.1	54
150	6	58	72	80
200	8	120	125	130
250	10	170	185	200
300	12	352	357	450

1.) Lubricating (non corrosive)

### 4.3. Flow characteristic

**Note:**

- Butterfly valves can be used as a control valve at an opening angle between 30° and 90°. A regulation to an opening angle below 30° is not recommended due to high flow rates and cavitation, which results in early damage of the valve.
- The max. flow rate of the medium through the butterfly valve must not be exceeded.
- 3 m/s for liquid media. The use between 3 and 5 m/s is possible. However, this increases the risk of cavitation, noise, vibrations and pressure surges.
- 20 m/s for gas. The use between 20 and 25 m/s is possible. However, this increases the risk of cavitation, noise, vibrations and pressure surges.

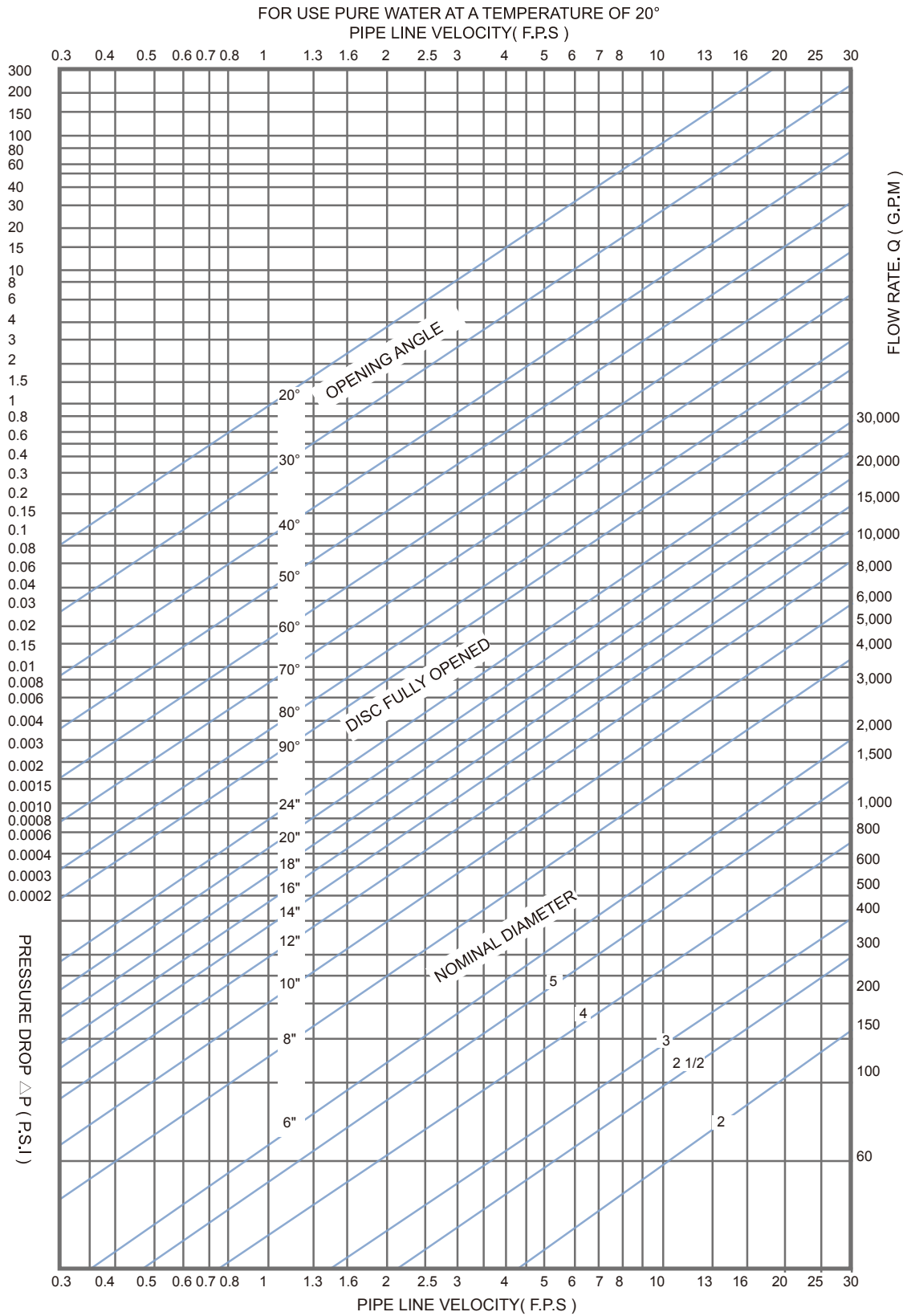
Size		Flow coefficient $C_v$ [US gpm] <sup>1.)</sup> Opening angle								
[mm]	[inch]	10°	20°	30°	40°	50°	60°	70°	80°	90°
40	1.5	0.8	2.8	8.1	16.6	25.7	42.1	69.0	94.8	132.2
50	2	1.3	4.4	11.9	25.7	44.5	70.2	117.0	154.4	225.8
65	2.5	2.3	8.8	21.3	41.0	71.4	111.2	218.8	280.8	368.6
80	3	2.9	11.5	30.4	56.2	97.1	147.4	250.4	395.5	497.3
100	4	4.4	17.1	45.6	84.2	139.2	258.6	422.4	709.0	845.9
125	5	7.6	28.1	72.5	138.1	253.9	461.0	700.8	1214.5	1454.3
150	6	11.7	48.0	111.2	204.8	381.4	634.1	1021.4	1474.2	2175.0
200	8	22.2	74.9	193.1	358.0	670.4	1164.2	1833.4	2702.7	3655.1
250	10	32.8	118.2	286.7	527.7	978.1	1710.5	2636.0	3809.5	5565.7
300	12	39.8	150.9	365.0	719.6	1330.3	2486.3	3800.2	5839.5	8257.9

1.)  $C_v = 1.17K_v$

### 4.4. Pressure Loss Diagram

**Note:**

Pressure drop diagram for water at 20 °C



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## 5. Ordering information

### 5.1. Bürkert eShop – Easy ordering and quick delivery

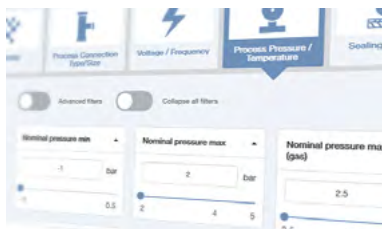


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### 5.2. Bürkert product filter























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### 5.3. Ordering chart for wafer version

Orifice [mm]	Body material	Disc material [mm]	Liner	Max. pressure [bar]	C <sub>v</sub> [m <sup>3</sup> /h]	Weight bare shaft [kg]	Article no.	
							bare shaft	with hand lever
40	GGG50	CF8M	EPT	16	132.2	2	773687 	773649 
50	GG25	CF8M	EPT	16	225.8	3	773688 	773650 
65	GG25	CF8M	EPT	16	368.6	4	773669 	773651 
80	GG25	CF8M	EPT	16	497.3	4	773670 	773652 
100	GG25	CF8M	EPT	16	845.9	6	773671 	773653 
125	GG25	CF8M	EPT	16	1454.3	8	309094 	773654 
150	GG25	CF8M	EPT	16	2175.0	9	773673 	773655 
200	GGG50	CF8M	EPT	16	3655.1	14	773674 	773656 
250	GGG50	CF8M	EPT	16	5565.7	22	773675 	773657 
300	GGG50	CF8M	EPT	16	8257.9	33	773676 	773658 

## 5.4. Ordering chart for lug version

Orifice [mm]	Body material	Disc material [mm]	Liner	Max. pressure [bar]	C <sub>v</sub> [m <sup>3</sup> /h]	Weight bare shaft [kg]	Article no.	
							bare shaft	with hand lever
40	GGG50	CF8M	EPT	16	132.2	3	773689	773686
50	GGG50	CF8M	EPT	16	225.8	4	773677	773659
65	GGG50	CF8M	EPT	16	368.6	4	773678	773660
80	GGG50	CF8M	EPT	16	497.3	5	309102	773661
100	GGG50	CF8M	EPT	16	845.9	8	773680	773662
125	GGG50	CF8M	EPT	16	1454.3	10	773681	773663
150	GGG50	CF8M	EPT	16	2175.0	11	773682	773664
200	GGG50	CF8M	EPT	16	3655.1	18	773683	773665
250	GGG50	CF8M	EPT	16	5565.7	27	773684	773666
300	GGG50	CF8M	EPT	16	8257.9	44	773685	773667

## 5.5. Ordering chart for hand levers

Orifice [mm]	Article no.
40...100	774667
125...150	774668
200...300	774669

## 5.6. Ordering chart EPT replacement liners

Orifice [mm]	Article no.
40	773949
50	773950
65	773951
80	773952
100	773953
125	773954
150	773955
200	773956
250	773957
300	773958

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