



## 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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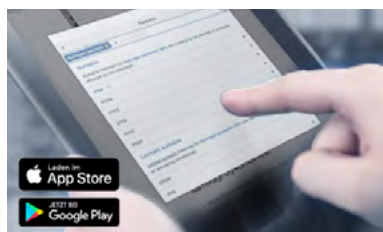
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## 1. General Technical Data

Product properties	
Dimensions	Detailed information can be found in chapter <a href="#">“3. Dimensions” on page 4.</a>
Material	
Body	GG25 Cast Iron, GGG50 Ductile Iron (other materials on request)
Disc	CF8M (other materials or coatings on request)
Seal	EPT, FKM, NBR, W-EPT (CSM, Silicone on request)
Body Design	Wafer, Lug
Nominal diameter/Orifice	DN 40...300
Media data	
Medium temperature	Detailed information can be found in chapter <a href="#">“4.1. Pressure temperature diagram” on page 6.</a>
Medium pressure	Detailed information can be found in chapter <a href="#">“4.1. Pressure temperature diagram” on page 6.</a>
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 <a href="#">“3. Dimensions” on page 4.</a> )
Approvals and certificates	
ISO top flange	EN ISO 5211
Considered standards	ISO 5208 ASME B16.34 API 609
Conformity (sealing material W-EPT)	FDA

## 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

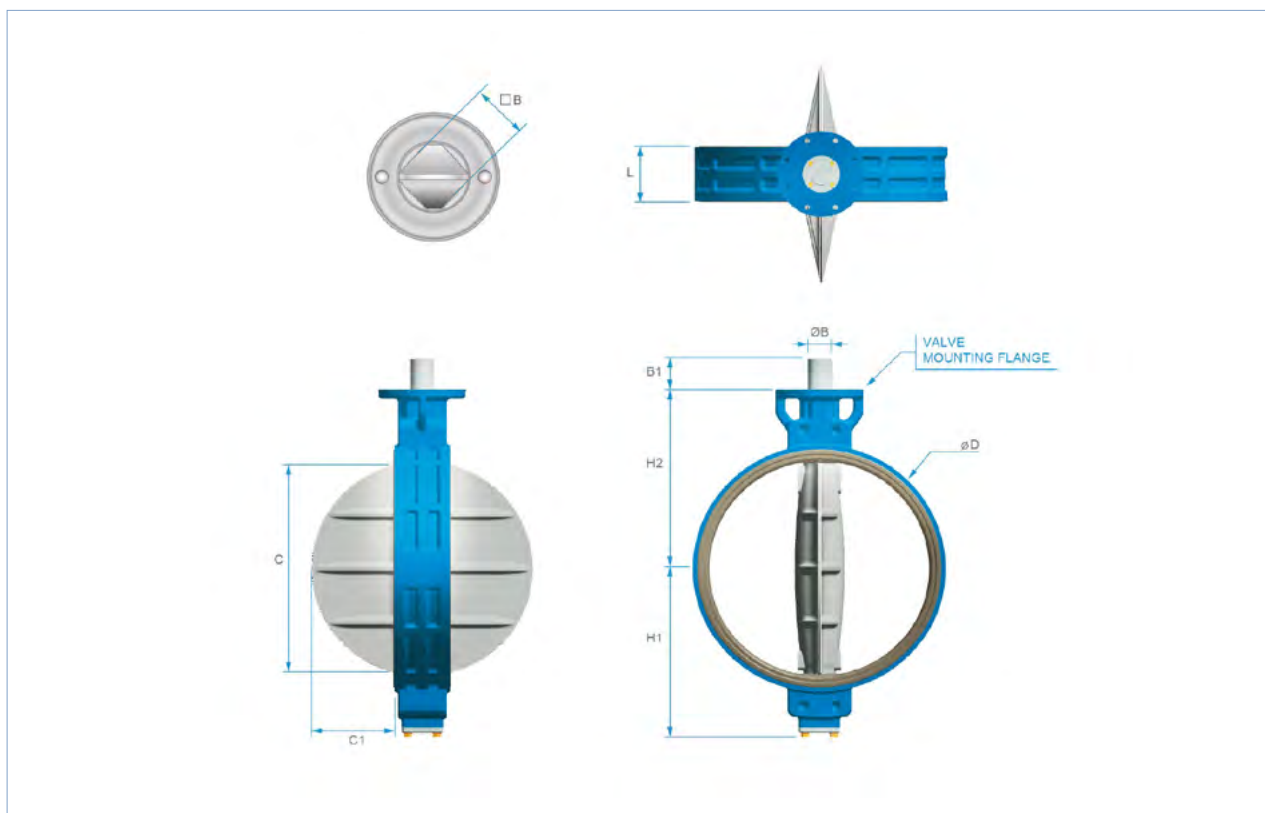
#### 3.1. Dimension for wafer type

**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

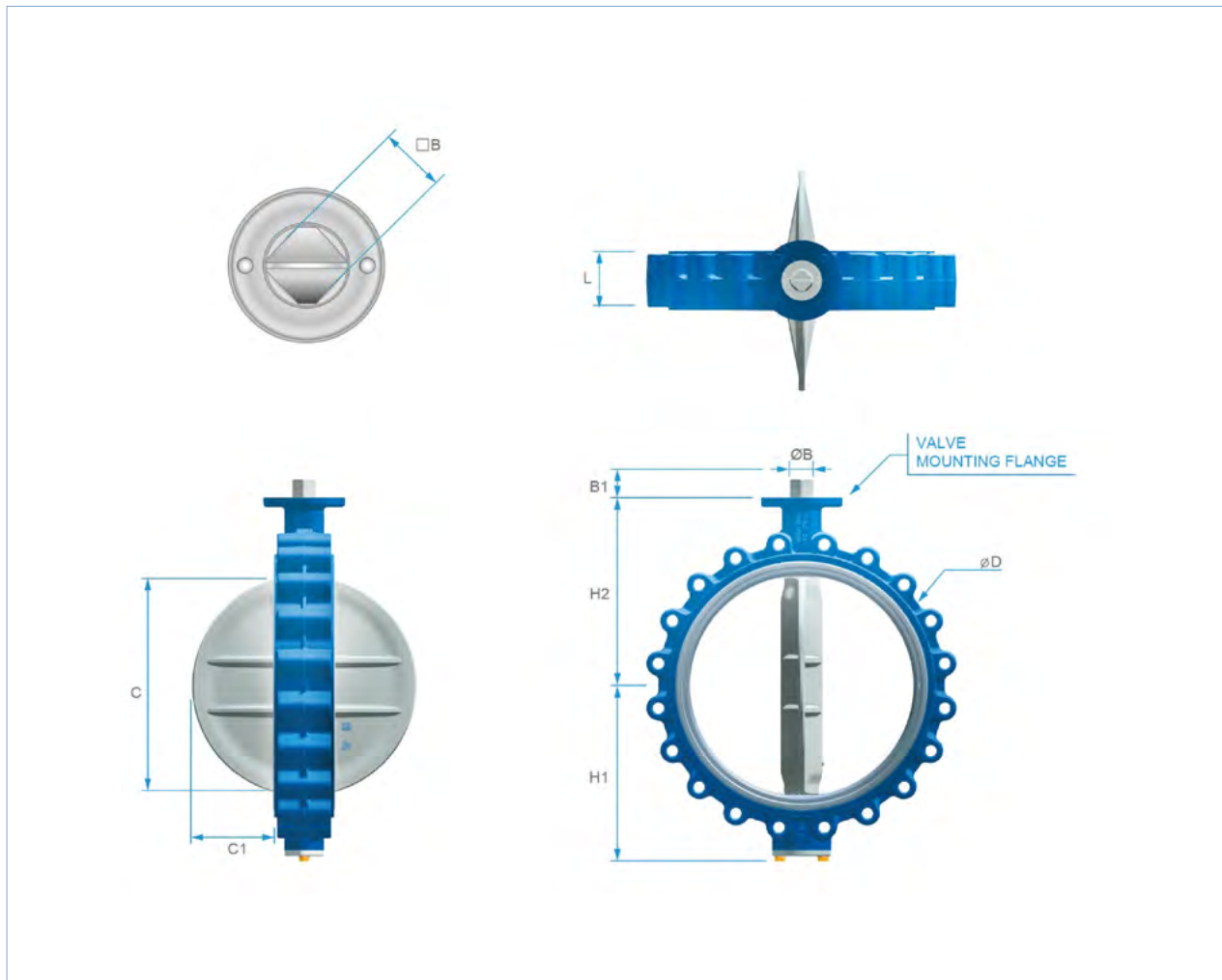
### 3.2. Dimension for lug type

**Note:**

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

**Flange Ratings:**

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

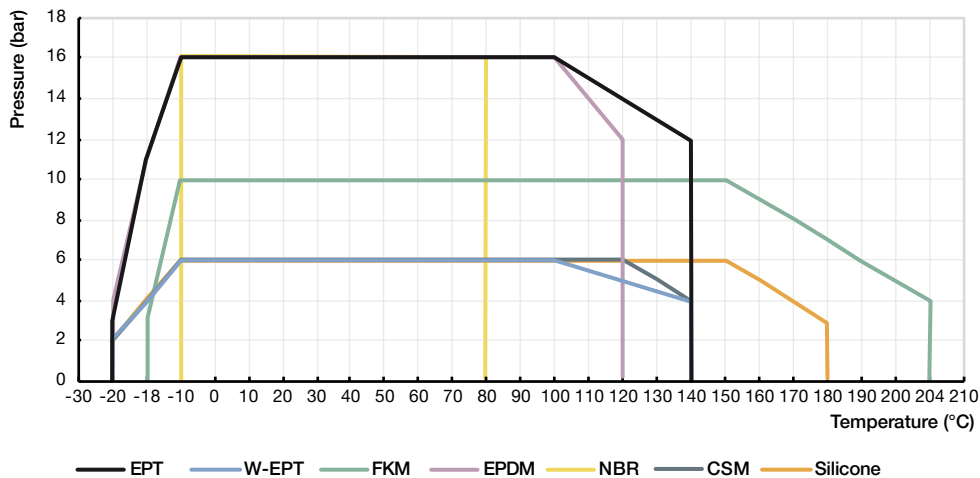


Size		Face to Face	Maße					Mounting flange (ISO5211)		Shaft end			Weight
mm	Inch	L	H1	H2	$\varnothing D$	C	C1	Type	PCD	$\varnothing B$	B1	$\square B$	kg
40	1.5	33	60	120	81	34	7	F05/07	50/70	14	19	11	2.2
50	2	43	65	143	96	39	8	F05/07	50/70	14	19	11	3.4
65	2.5	46	71	155	110	55	13	F05/07	50/70	14	19	11	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.

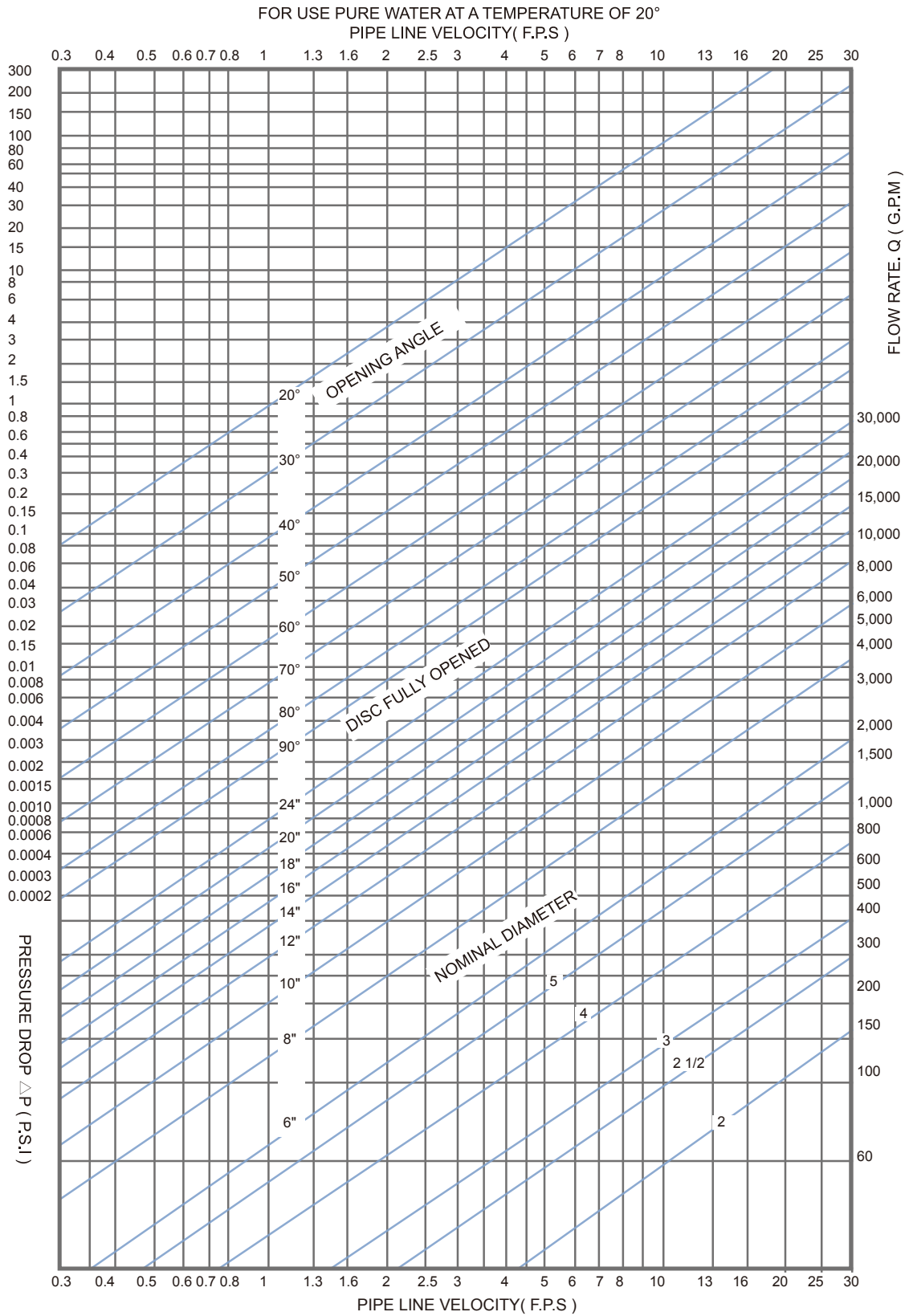
Size		Flow coefficient $C_v$ [US gpm] <sup>1.)</sup> Opening angle								
[mm]	[inch]	10°	20°	30°	40°	50°	60°	70°	80°	90°
40	1.5	0.8	2.8	8.1	16.6	25.7	42.1	69.0	94.8	132.2
50	2	1.3	4.4	11.9	25.7	44.5	70.2	117.0	154.4	225.8
65	2.5	2.3	8.8	21.3	41.0	71.4	111.2	218.8	280.8	368.6
80	3	2.9	11.5	30.4	56.2	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 WAFER - EPT

Orifice [mm]	Body material	Disc material [mm]	Liner	Max. pressure [bar]	Weight bare shaft [kg]	Weight with lever [kg]	Article no.	
							bare shaft	with lever
40	GGG50	CF8M	EPT	16	2	2.7	773687	773649
50	GG25	CF8M	EPT	16	3	3.7	773688	773650
65	GG25	CF8M	EPT	16	4	4.7	773669	773651
80	GG25	CF8M	EPT	16	4	4.7	773670	773652
100	GG25	CF8M	EPT	16	6	6.7	773671	773653
125	GG25	CF8M	EPT	16	8	9	309094	773654
150	GG25	CF8M	EPT	16	9	10	773673	773655
200	GGG50	CF8M	EPT	16	14	16	773674	773656
250	GGG50	CF8M	EPT	16	22	24	773675	773657
300	GGG50	CF8M	EPT	16	33	35	773676	773658

## 5.4. Ordering chart LUG - EPT

Orifice [mm]	Body material	Disc material [mm]	Liner	Max. pressure [bar]	Weight bare shaft [kg]	Weight with lever [kg]	Article no.	
							bare shaft	with lever
40	GGG50	CF8M	EPT	16	3	3.7	773689	773686
50	GGG50	CF8M	EPT	16	4	4.7	773677	773659
65	GGG50	CF8M	EPT	16	4	4.7	773678	773660
80	GGG50	CF8M	EPT	16	5	5.7	309102	773661
100	GGG50	CF8M	EPT	16	8	8.7	773680	773662
125	GGG50	CF8M	EPT	16	10	11	773681	773663
150	GGG50	CF8M	EPT	16	11	12	773682	773664
200	GGG50	CF8M	EPT	16	18	20	773683	773665
250	GGG50	CF8M	EPT	16	27	29	773684	773666
300	GGG50	CF8M	EPT	16	44	46	773685	773667

## 5.5. Ordering chart WAFER - FKM

Orifice [mm]	Body material	Disc material [mm]	Liner	Max. pressure [bar]	Weight bare shaft [kg]	Weight with lever [kg]	Article no.	
							bare shaft	with lever
40	GGG50	CF8M	FKM	10	2	2.7	20005725	20005728
50	GG25	CF8M	FKM	10	3	3.7	336020	20005729
65	GG25	CF8M	FKM	10	4	4.7	325576	20005730
80	GG25	CF8M	FKM	10	4	4.7	366487	20005731
100	GG25	CF8M	FKM	10	6	6.7	322900	382823
125	GG25	CF8M	FKM	10	8	9	356154	368992
150	GG25	CF8M	FKM	10	9	10	315045	20005732
200	GGG50	CF8M	FKM	10	14	16	315046	20005734
250	GGG50	CF8M	FKM	10	22	24	20005726	20005735
300	GGG50	CF8M	FKM	10	33	35	20005727	20005736

## 5.6. Ordering chart LUG - FKM

Orifice [mm]	Body material	Disc material [mm]	Liner	Max. pressure [bar]	Weight bare shaft [kg]	Weight with lever [kg]	Article no.	
							bare shaft	with lever
40	GGG50	CF8M	FKM	10	3	3.7	20005737	20005748
50	GGG50	CF8M	FKM	10	4	4.7	20005739	20005750
65	GGG50	CF8M	FKM	10	4	4.7	20005740	20005751
80	GGG50	CF8M	FKM	10	5	5.7	20005741	20005752
100	GGG50	CF8M	FKM	10	8	8.7	20005742	20005754
125	GGG50	CF8M	FKM	10	10	11	20005743	20005755
150	GGG50	CF8M	FKM	10	11	12	20005744	20005756
200	GGG50	CF8M	FKM	10	18	20	20005745	20005757
250	GGG50	CF8M	FKM	10	27	29	20005746	20005759
300	GGG50	CF8M	FKM	10	44	46	20005747	20005760

## 5.7. Ordering chart WAFER - NBR

Orifice [mm]	Body material	Disc material [mm]	Liner	Max. pressure [bar]	Weight bare shaft [kg]	Weight with lever [kg]	Article no.	
							bare shaft	with lever
40	GGG50	CF8M	NBR	16	2	2.7	20005761	20005771
50	GG25	CF8M	NBR	16	3	3.7	20005762	20005772
65	GG25	CF8M	NBR	16	4	4.7	20005763	20005773
80	GG25	CF8M	NBR	16	4	4.7	20005764	20005774
100	GG25	CF8M	NBR	16	6	6.7	20005766	20005775
125	GG25	CF8M	NBR	16	8	9	20005767	20005776
150	GG25	CF8M	NBR	16	9	10	367409	20005777
200	GGG50	CF8M	NBR	16	14	16	20005769	20005778
250	GGG50	CF8M	NBR	16	22	24	20005770	20005779
300	GGG50	CF8M	NBR	16	33	35	385537	20005780

## 5.8. Ordering chart LUG - NBR

Orifice [mm]	Body material	Disc material [mm]	Liner	Max. pressure [bar]	Weight bare shaft [kg]	Weight with lever [kg]	Article no.	
							bare shaft	with lever
40	GGG50	CF8M	NBR	16	3	3.7	20005781	20005795
50	GGG50	CF8M	NBR	16	4	4.7	20005782	20005796
65	GGG50	CF8M	NBR	16	4	4.7	20005783	20005798
80	GGG50	CF8M	NBR	16	5	5.7	20005784	20005799
100	GGG50	CF8M	NBR	16	8	8.7	20005786	20005800
125	GGG50	CF8M	NBR	16	10	11	20005787	20005802
150	GGG50	CF8M	NBR	16	11	12	20005790	20005803
200	GGG50	CF8M	NBR	16	18	20	20005791	20005806
250	GGG50	CF8M	NBR	16	27	29	20005793	20005811
300	GGG50	CF8M	NBR	16	44	46	20005794	20005814

## 5.9. Ordering chart WAFER - White EPT

Orifice [mm]	Body material	Disc material [mm]	Liner	Max. pressure [bar]	Weight bare shaft [kg]	Weight with lever [kg]	Article no.	
							bare shaft	with lever
40	GGG50	CF8M	W-EPT	6	2	2.7	20005815	20005827
50	GG25	CF8M	W-EPT	6	3	3.7	20005816	20005829
65	GG25	CF8M	W-EPT	6	4	4.7	20005818	20005830
80	GG25	CF8M	W-EPT	6	4	4.7	20005819	20001197
100	GG25	CF8M	W-EPT	6	6	6.7	347549	20005831
125	GG25	CF8M	W-EPT	6	8	9	20005820	20005832
150	GG25	CF8M	W-EPT	6	9	10	20005823	20005833
200	GGG50	CF8M	W-EPT	6	14	16	20005824	20005834
250	GGG50	CF8M	W-EPT	6	22	24	20005825	20005835
300	GGG50	CF8M	W-EPT	6	33	35	20005826	20005836

## 5.10. Ordering chart LUG - White EPT

Orifice [mm]	Body material	Disc material [mm]	Liner	Max. pressure [bar]	Weight bare shaft [kg]	Weight with lever [kg]	Article no.	
							bare shaft	with lever
40	GGG50	CF8M	W-EPT	6	3	3.7	20005837	20005849
50	GGG50	CF8M	W-EPT	6	4	4.7	20005838	20005850
65	GGG50	CF8M	W-EPT	6	4	4.7	20005839	20005852
80	GGG50	CF8M	W-EPT	6	5	5.7	20005840	20005853
100	GGG50	CF8M	W-EPT	6	8	8.7	20005841	20005854
125	GGG50	CF8M	W-EPT	6	10	11	20005842	20005855
150	GGG50	CF8M	W-EPT	6	11	12	20005844	20005856
200	GGG50	CF8M	W-EPT	6	18	20	20005845	20005858
250	GGG50	CF8M	W-EPT	6	27	29	20005847	20005860
300	GGG50	CF8M	W-EPT	6	44	46	20005848	20005861

## 5.11. Ordering chart for hand levers

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

## 5.12. Ordering chart replacement liners

Orifice [mm]	EPT	FKM	NBR	White EPT
	Article no.	Article no.	Article no.	Article no.
40	773949	775152	775162	775172
50	773950	775153	775163	775173
65	773951	775154	775164	775174
80	773952	775155	775165	775175
100	773953	775156	775166	775176
125	773954	775157	775167	775177
150	773955	775158	775168	775178
200	773956	775159	775169	775179
250	773957	775160	775170	775180
300	773958	775161	775171	775181

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