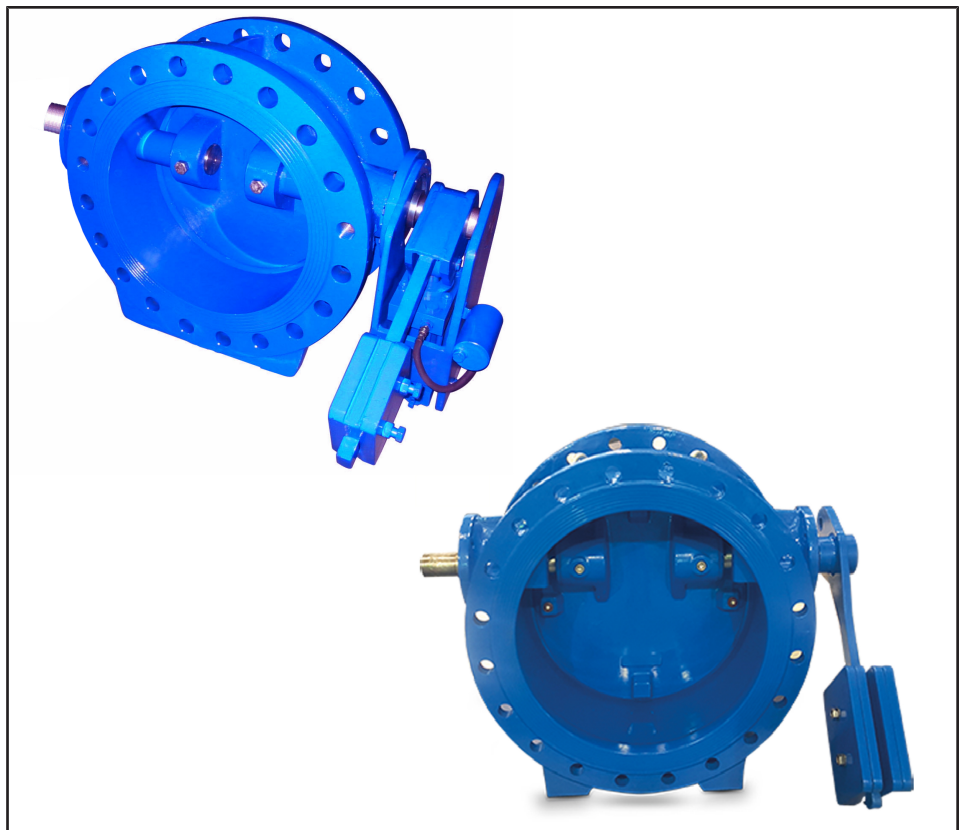


Tilting Disc Check Valve

COBRA-TDC01/03

Type Series Booklet



Legal information/Copyright

Type Series Booklet COBRA-TDC01/03

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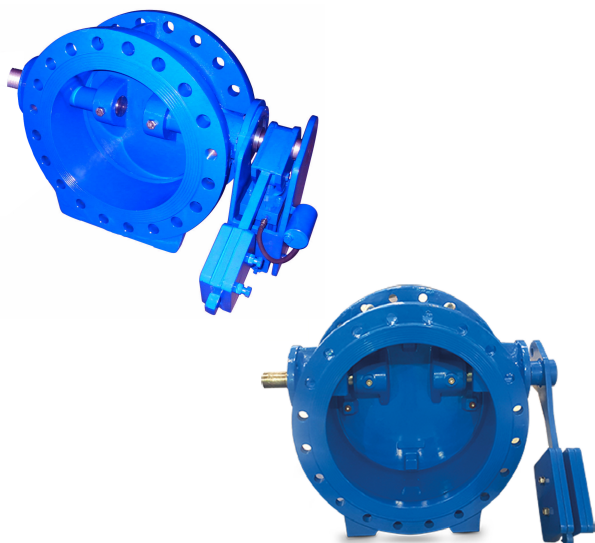
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Check Valves and Strainers

Tilting Disc Check Valves to DIN/EN

COBRA-TDC01/03



Main applications

- General irrigation systems
- Cooling circuits
- Water treatment
- Water supply systems

Fluids handled

- Service water
- River water, lake water and groundwater
- Cooling water

Operating data

Table 1: Operating properties

Characteristic	Value
Nominal pressure	PN 10/16/25/40
Nominal size	DN 150 - 1400
Max. permissible pressure [bar]	40
Min. permissible temperature [°C]	≥ -10
Max. permissible temperature [°C]	≤ +80

Selection as per pressure/temperature ratings (⇒ Page 5)

Body materials

Table 2: Overview of available materials

Material	Material number	Temperature limit
EN-GJS-400-15	5.3106	≤ 80 °C

Design details

Design

- Design in accordance with EN 16767
- Double-flanged body with short face-to-face length to EN 558/14
- Flanged ends to DIN EN 1092-2:
PN 10 ≤ DN 1400
PN 16 ≤ DN 1400
PN 25 ≤ DN 1000
PN 40 ≤ DN 1000
- Marked in accordance with DIN EN 19 (ISO 5209)
- Counterweight for horizontal installation
- With counterweight, or with counterweight with hydraulic damper
- Epoxy-coated body
- Valve certified for drinking water applications to WRAS (elastomer and coating)

Variants

- Smaller nominal sizes from DN 80 (only after technical evaluation)
- NBR gasket
- Counterweight for vertical installation

Product benefits

- Closing speed reduced by hydraulic damper

Product information

Product information as per Regulation No. 1907/2006 (REACH)

For information as per chemicals Regulation (EC) No. 1907/2006 (REACH), see <https://www.ksb.com/ksb-en/About-KSB/Corporate-responsibility/reach/>.

Related documents

Table 3: Information/documents

Document	Reference number
Operating manual	8194.8

Purchase order specifications

Please specify the following information in all enquiries or purchase orders:

1. Type
2. Nominal pressure
3. Nominal size
4. Operating pressure
5. Operating temperature
6. Materials
7. Fluid handled
8. Pipe connection
9. Variants
10. Number of type series booklet

Always indicate the original serial number and the year of construction when ordering spare parts.

Pressure/temperature ratings

Table 4: Permissible operating pressure [bar]

PN	Material	[°C]					
		-10 to 120	150	200	250	300	350
10	EN-GJS-400-15	10	9,7	9,2	8,7	8	7
16		16	15,5	14,7	13,9	12,8	11,2
25		25	24,3	23	21,8	20	17,5
40		40	38,8	36,8	34,8	32	28

Materials

Materials of COBRA-TDC01

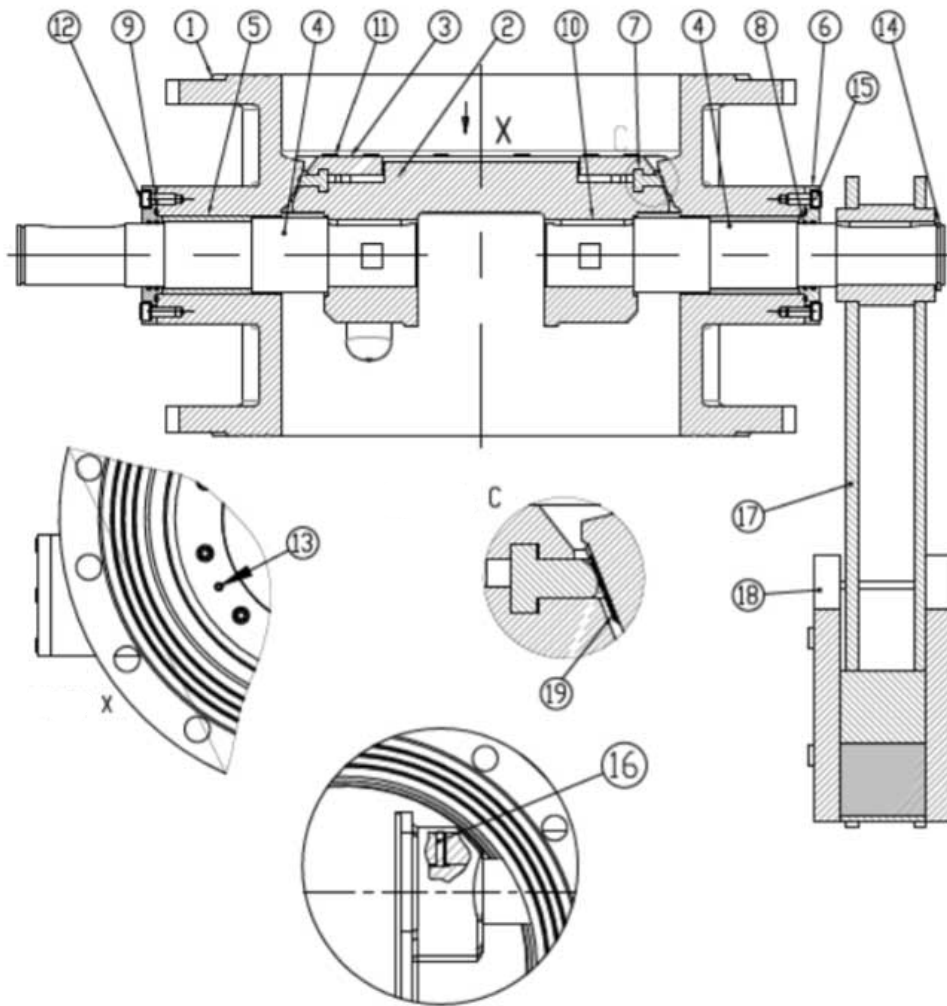


Fig. 1: COBRA-TDC01

Table 5: Parts list

Part No.	Description	Material	Note
1	Body	EN-GJS-400-15	Epoxy-coated
2	Valve disc	EN-GJS-400-15	Epoxy-coated
3	Retaining ring	AISI 304	-
4	Hinge pin	AISI 420	-
5	Hinge pin bearing	G-CuSn10	-
6	Front cover	St-37	Epoxy-coated
7	Joint ring	EPDM 65-70 Shore	-
8	O-ring	EPDM 65-70 Shore	-
9	Rear cover	St-37	Epoxy-coated

Part No.	Description	Material	Note
10	Key	Ck 45	-
11	Bolt/screw	A2	-
12	Bolt/screw	A2	-
13	Setting screw	A2	-
14	Circlip	Ck 60	-
15	Setting screw	A2	-
16	Setting screw	A2	-
17	Lever	-	-
18	Counterweight	-	-
19	Body seat	AISI 309L	-

Materials of COBRA-TDC03

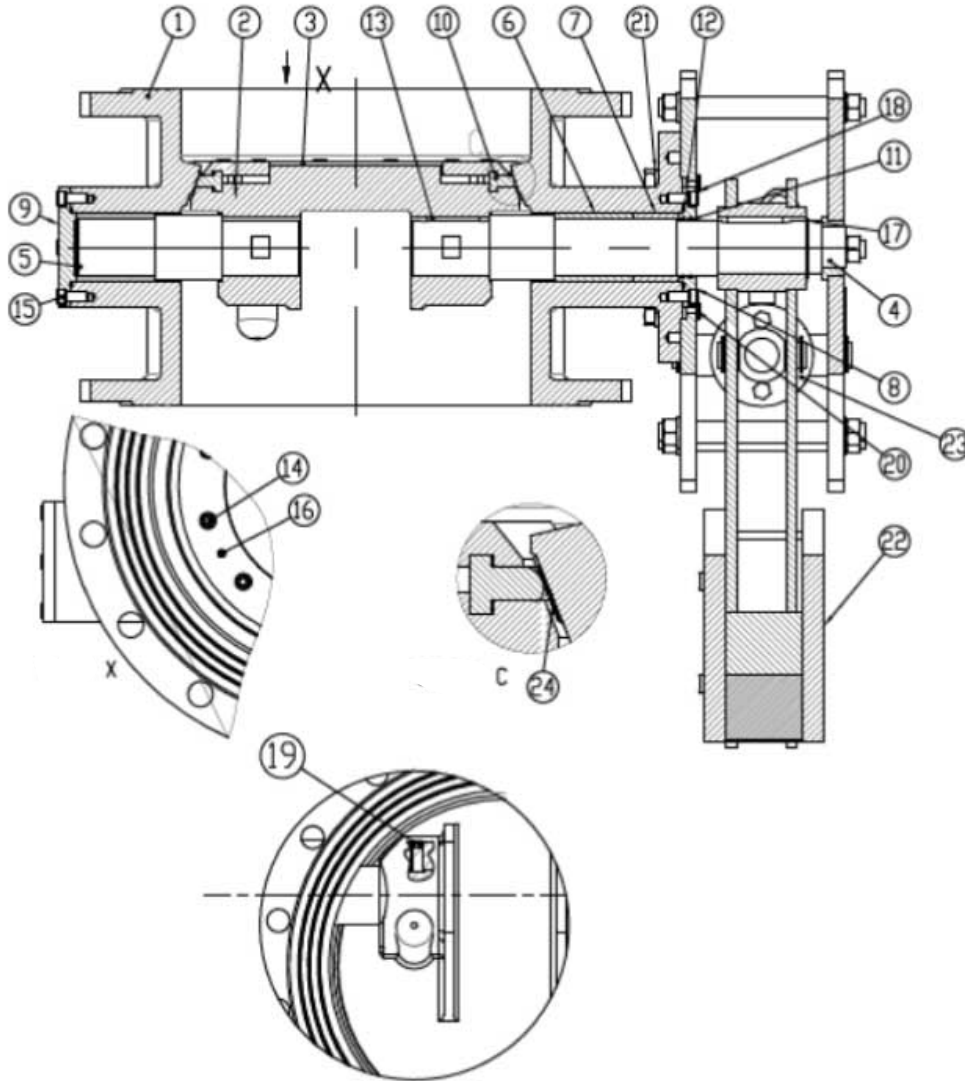


Fig. 2: COBRA-TDC03

Table 6: Parts list

Part No.	Description	Material	Note
1	Body	EN-GJS-400-15	Epoxy-coated
2	Disc	EN-GJS-400-15	Epoxy-coated
3	Retaining ring	AISI 304	-
4	Front hinge pin	AISI 420	-
5	Rear hinge pin	AISI 420	-
6	Hinge pin bearing	G-CuSn10	-
7	Spacer bush	Delrin	-
8	Front cover	St-37	Epoxy-coated
9	Rear cover	St-37	Epoxy-coated
10	Joint ring	EPDM 65-70 Shore	-
11	O-ring	EPDM 65-70 Shore	-
12	O-ring	EPDM 65-70 Shore	-
13	Key	Ck 45	-
14	Bolt/screw	A2	-
15	Bolt/screw	A2	-
16	Setting screw	A2	-
17	Circlip	Ck 60	-
18	Setting screw	A2	-
19	Setting screw	A2	-

Part No.	Description	Material	Note
20	Bolt/screw	A2	-
21	Washer	A2	-
22	Counterweight	-	-
23	Hydraulic damper	-	-
24	Body seat	AISI 309L	-

Dimensions and weights

Dimensions and weights of COBRA-TDC01

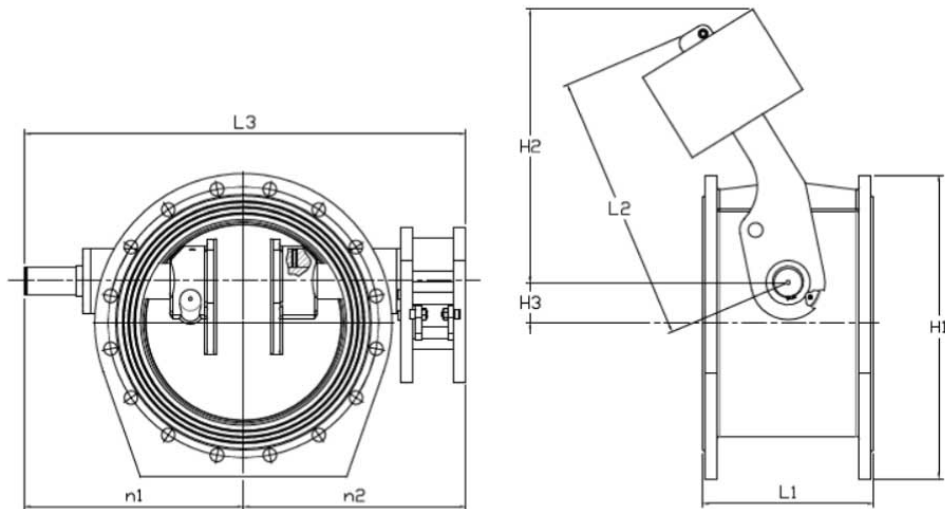


Fig. 3: Dimensions of COBRA-TDC01

Table 7: Dimensions and weights

PN	DN	L1	L2	L3	H1	H2	H3	n2	n1	kg
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
10	150	210	175	428	288	178	30	191,5	191,5	34
	200	230	350	602	243	339	40	325,5	276,5	48
	250	250	350	637	398	309	55	343	293,5	89
	300	270	450	743	455	468	60	377	365,5	98
	350	290	450	750	515	464	70	377,5	372	120
	400	310	450	824	577	464	80	415	409	165
	450	330	450	883	620	468	110	446	436,5	206
	500	350	450	911	673	468	100	460	450,5	257
	600	390	700	1089	795	699	125	550,5	538	370
	700	430	700	1272	950	698	140	678	491	475
	800	470	800	1494	1030	764	170	758	736	800
	900	510	800	1561	1130	785	140	790,5	770	960
	1000	550	1000	1726	1245	952	230	857,5	850	1150
	1100	590	1000	1870	1355	950	220	980	960	1480
1200	630	1000	2122	1465	991	240	1068	1068	1910	
1300	670	1000	2030	1580	989	260	1112	842	2380	
1400	710	1200	2450	1685	1160	280	1200	1180	2850	
16	150	210	175	428	288	178	30	191,5	191,5	34
	200	230	350	602	243	339	40	325,5	276,5	51
	250	250	350	637	408	309	55	343	293,5	91
	300	270	450	743	470	468	60	377	365,5	108
	350	290	450	750	530	464	70	377,5	372	134
	400	310	450	824	592	464	80	415	409	173
	450	330	450	883	645	468	110	446	436,5	230
	500	350	450	933	718	477	100	482	450,5	291
	600	390	700	1089	855	699	125	550,5	538	424
	700	430	700	1267	950	698	140	678	491	653
	800	470	800	1494	1040	764	170	758	736	935
	900	510	800	1561	1140	785	140	850,5	770	1000
	1000	550	1000	1709	1270	952	230	865,5	843	1300
	1100	590	1000	1870	1355	950	220	980	960	1520
1200	630	1200	2300	1480	991	240	1068	1068	1980	
1300	670	1200	2450	1600	989	260	1112	842	2540	

PN	DN	L1	L2	L3	H1	H2	H3	n2	n1	kg
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
16	1400	710	1200	2450	1695	1160	280	1200	1180	3100
25	150	210	175	428	303	178	30	236,5	191,5	36
	200	230	350	602	363	339	40	325,5	276,5	71
	250	250	450	637	428	451	55	347	336	111
	300	270	450	743	495	468	60	377	365,5	147
	350	290	450	843	565	475	70	426,5	416	164
	400	310	450	830	630	464	80	415	409	216
	450	330	700	975	675	699	110	494,5	480	280
	500	350	700	1051	733	704	100	547	504	386
	600	390	700	1129	860	690	125	590,5	538	454
	700	430	800	1450	1020	807	140	720	491	653
	800	470	800	1470	1060	807	170	882	800	1000
40	900	510	1000	1750	1350	950	140	870	820	1380
	1000	550	1200	1820	1335	1160	230	1000	980	1725
	150	210	175	428	303	178	30	236,5	191,5	38
	200	230	350	602	378	339	40	325,5	276,5	79
	250	250	450	683	453	451	55	347	336	140
	300	270	450	755	425	468	60	422	373	172
	350	290	450	883	590	465	70	466,5	416	270
	400	310	700	1000	700	699	80	415	409	336
	450	330	700	1000	700	700	110	494,5	480	318
	500	350	700	1086	758	725	100	567	518,5	436
	600	390	800	1424	905	805	140	749	675	608
700	430	1000	1650	1200	950	140	780	491	1013	
800	470	1200	1700	1300	1160	170	890	850	1250	
900	510	1200	1800	1350	1160	140	990	950	1530	
1000	550	1200	1950	1380	1160	230	1010	990	2185	

Mating dimensions as per standard

Face-to-face lengths: BS 5155, EN 558-1/14

Flanges: DIN EN 1092-2

Dimensions and weights of COBRA-TDC03

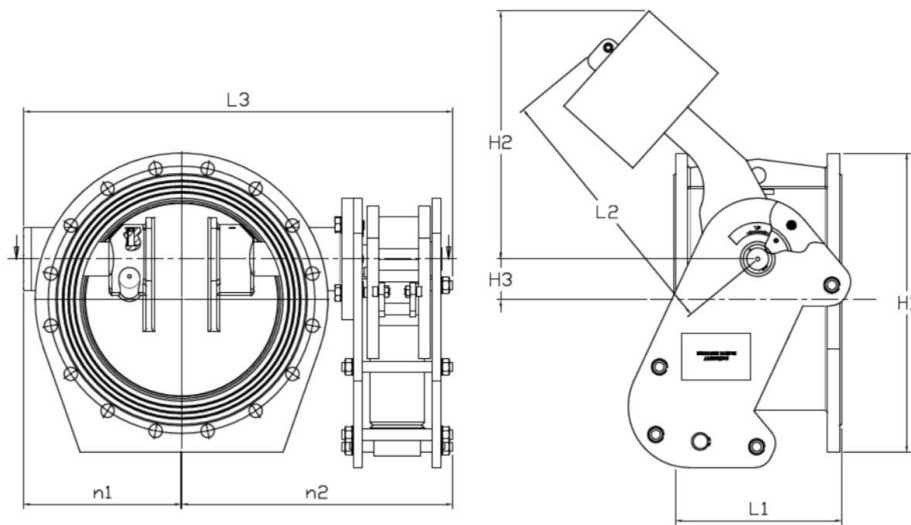


Fig. 4: Dimensions of COBRA-TDC03

Table 8: Dimensions and weights

PN	DN	L1	L2	L3	H1	H2	H3	n2	n1	kg
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
10	150	210	350	473	422	334	30	324	151	54
	200	230	350	546	440	340	40	351	195	68
	250	250	350	604	452	314	55	392	214	109
	300	270	450	670	521	467	60	430	242	132
	350	290	450	719	541	463	70	467	273	154
	400	310	450	810	577	463	80	505	305	199
	450	330	450	852	620	466	110	520	332	240
	500	350	450	891	673	466	100	546,5	345	291
	600	390	700	1065	795	698	125	665	400,5	440
	700	430	700	1192	905	696	140	701	491	545
	800	470	800	1309	1030	764	170	788	520,5	900
	900	510	800	1371	1130	785	140	823	573	1060
	1000	550	1000	1589	1245	953	230	974	617	1320
	1100	590	1000	1741	1355	960	220	1025	718	1650
1200	630	1000	1883	1465	990	240	1095	788	2080	
1300	670	1000	2050	1580	989	260	1155	842	2550	
1400	710	1200	2142	1685	1197	280	1250	892	3110	
16	150	210	350	473	422	334	30	324	151	54
	200	230	350	546	440	340	40	351	195	71
	250	250	350	604	457	314	55	392	214	111
	300	270	450	670	529	467	60	430	242	142
	350	290	450	739	549	463	70	467	273	168
	400	310	450	810	592	463	80	505	305	207
	450	330	450	852	645	466	110	520	332	264
	500	350	450	904	718	475	100	546,5	357,5	325
	600	390	700	1085	855	698	125	665	420	494
	700	430	700	1187	920	696	140	701	491	640
	800	470	800	1309	1040	764	170	788	520,5	1035
	900	510	800	1371	1140	785	140	850	573	1100
	1000	550	1000	1591	1270	951	230	974	627,5	1470
	1100	590	1000	1741	1355	960	220	1025	718	1690
1200	630	1000	2050	1480	1160	240	1140	788	2240	
1300	670	1000	2200	1600	1160	260	1200	842	2800	
1400	710	1200	2142	1695	1197	280	1250	892	3360	
25	150	210	350	473	430	334	30	324	151	56

PN	DN	L1	L2	L3	H1	H2	H3	n2	n1	kg
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
25	200	230	350	546	450	340	40	351	195	91
	250	250	450	627	516	453	55	415	214	145
	300	270	450	692	541	467	60	452	242,5	181
	350	290	450	822	566	468	70	517	306	198
	400	310	450	815	630	463	80	505	305	250
	450	330	700	950	675	700	110	553	360	350
	500	350	700	996	733	703	100	631	365,5	456
	600	390	700	1020	1060	690	125	665	420	524
	700	430	800	1350	1020	807	140	750	491	753
	800	470	800	1290	1060	810	170	865	570	1100
	900	510	1000	1560	1350	950	140	870	600	1550
1000	550	1200	1699	1335	1157	230	1039	660	1985	
40	150	210	350	473	430	334	30	324	151	58
	200	230	350	546	457	340	40	351	195	99
	250	250	450	640	529	453	55	415	225	174
	300	270	450	746	556	467	60	488,5	257,5	206
	350	290	450	825	590	456	70	519,5	306	304
	400	310	700	975	700	700	80	505	305	406
	450	330	700	975	700	700	110	553	360	388
	500	350	700	1017	758	723	100	631	385,5	506
	600	390	800	1025	1065	805	125	780	785	708
	700	430	1000	1550	1200	950	140	790	491	1183
	800	470	1200	1520	1300	1160	170	910	570	1510
900	510	1200	1610	1350	1160	140	990	650	1790	
1000	550	1200	1820	1380	1157	230	1050	700	2585	

Mating dimensions as per standard

Face-to-face lengths: BS 5155, EN 558-1/14

Flanges: DIN EN 1092-2



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