

ENGIC

DIN EN 1092-1 FLANGES



Flange Facing Dimensions

Type A flat face				Type B raised face				Type C tongue face				Type D groove face			
Type E spigot				Type F recess				Type G O ring recess				Type H O ring groove			

Flange facing types according to DIN EN 1092-1

Type A: Flat Face	Type D: Groove face	Type G: O Ring Recess
Type B: Raised Face	Type E: Spigot	Type H: O Ring Groove
Type C: Tongue Face	Type F: Recess	

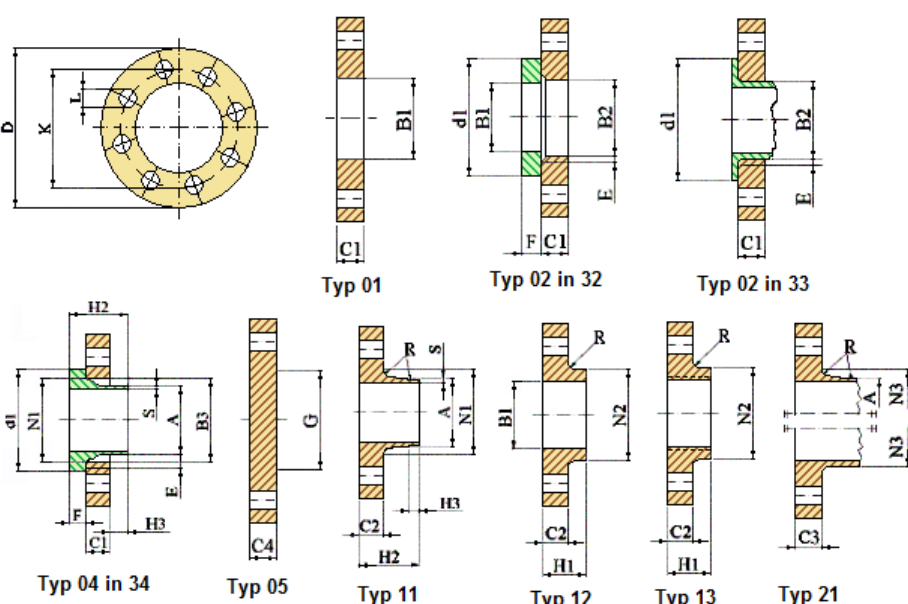
Units [mm]

DN	PN												f1	f2	f3	f4	w	x	y	z	α	R		
	2.5	6	10	16	25	40	63	100	160	250	320	400												
	d1																							
10	35	35	40	40	40	40	40	40	40	40	40	40	2	4.5	4	2	24	34	35	23	-	2.5		
15	40	40	45	45	45	45	45	45	45	45	45	45					29	39	40	28	-			
20	50	50	58	58	58	58	58	58	58	58	58	58					36	50	51	35	41°			
25	60	60	68	68	68	68	68	68	68	68	68	68					43	57	58	42				
32	70	70	78	78	78	78	78	78	78	78	78	78					51	65	66	50				
40	80	80	88	88	88	88	88	88	88	88	88	88					61	75	76	60				
50	90	90	102	102	102	102	102	102	102	102	102	102					73	87	88	72				
65	110	110	122	122	122	122	122	122	122	122	122	122					95	109	110	94				
80	128	128	138	138	138	138	138	138	138	138	138	138					106	120	121	105				
100	148	148	158	158	162	162	162	162	162	162	162	162	3	5	4.5	2.5	129	149	150	128	32°	3		
125	178	178	188	188	188	188	188	188	188	188	188	188					155	175	176	154				
150	202	202	212	212	218	218	218	218	218	218	218	218					183	203	204	182				
200	258	258	268	268	278	285	285	285	285	285	285	285					239	259	260	238				
250	312	312	320	320	335	345	345	345	345	345	345	-					292	312	313	291				
300	365	365	370	378	395	410	410	410	410	-	-	-					343	363	364	342				
350	415	415	430	438	450	465	465	465	-	-	-	-					395	421	422	394			27°	3.5
400	465	465	482	490	505	535	535	535	-	-	-	-					447	473	474	446				
450	520	520	532	550	555	560	560	560	-	-	-	-					497	523	524	496				
500	570	570	585	610	615	615	615	615	-	-	-	-	349	375	376	548								
600	670	670	685	725	720	735	735	-	-	-	-	-	649	675	676	648								
700	775	775	800	795	820	840	840	-	-	-	-	-	751	777	778	750								
800	880	880	905	900	930	960	960	-	-	-	-	-	856	882	883	855								
900	980	980	1005	1000	1030	1070	1070	-	-	-	-	-	961	987	988	960								
1000	1080	1080	1110	115	1140	1180	1180	-	-	-	-	-	5	6.5	6	4	1062	1092	1094	1060	28°	4		
1200	1280	1295	1330	1330	1350	1380	1380	-	-	-	-	-					1262	1292	1294	1260				
1400	1480	1510	1535	1530	1560	1600	-	-	-	-	-	-					1462	1492	1494	1460				
1600	1690	1710	1760	1750	1780	1815	-	-	-	-	-	-					1662	1692	1694	1660				
1800	1890	1920	1960	1950	1985	-	-	-	-	-	-	-					1862	1892	1894	1860				
2000	2090	2125	2170	2150	-	-	-	-	-	-	-	-					2062	2092	2094	2060				
2200	2295	2335	2370	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-		
2400	2495	2545	2570	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-		
2600	2695	2750	2780	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-		
2800	2910	2960	2000	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-		
3000	3110	3160	3210	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-		
3200	3310	3370	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-		
3400	3510	3580	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-		
3600	3720	3790	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-		
3800	3920	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-		
4000	4120	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-		

* Flange facing types C, D, E, F, G and H are not used for PN 2.5 and PN 6.

* Flange facing types G and H are only used for PN 10 and PN 40.

DIN EN 1092-1 PN-2.5 Flange

			Types of flanges (typ) up to DIN EN 1092-1		
Typ 01: Plate (slip-on) flanges for welding			Typ 13: Hubbed threaded flanges		
Typ 02: Loose plate flanges with weld-on plate collar			Typ 21: Integral flanges		
Typ 04: Loose plate flanges with weld-neck collar			Typ 32: Weld-on plate collars		
Typ 05: Blank (blind) flanges			Typ 33: Lapped pipe ends		
Typ 11: Weld-neck flanges			Typ 34: Weld-neck collars		
Typ 12: Hubbed slip-on flanges for welding					
Table References:					
D: Outside Diameter		A: Outside Diameter of Neck		G Max Diameter of Shoulders	
K: Diameter of Bolt Circle		E: Chamfer		R: Corner Radius	
L: Diameter of Bolt Hole		F: Collar Thickness		N: Neck Diameter	
S: Neck Thickness (Preferred Value)					

DN	Mating dimensions					A	Bore Diameter		Flange thickness			F					G max		Length																	
	D	K	L	Bolting			B1	B2	C1*	C2 C3	C4						H2	H3	H4	H5																
				No	Size																															
				Flange type																																
				01, 02, 05, 11, 21																	11, 21 35-37	01 32	02	01 02	11 21	05	32	35	36	37	05	11	11	35	36	37
10	75	50	11	4	M10	17.2	18	21	12	12	12	10	5	2	2.5	-	28	6	28	35	7															
15	80	55	11	4	M10	21.3	22	25	12	12	12	10	5	2	2.5	-	30	6	30	38	7															
20	90	65	11	4	M10	26.9	27.5	31	14	14	14	10	6	2.5	3	-	32	6	32	40	8															
25	100	75	11	4	M10	33.7	34.5	38	14	14	14	10	7	2.5	3	-	35	6	35	40	10															
32	120	90	14	4	M12	42.4	43.5	46	16	14	14	10	8	3	3	-	35	6	35	42	12															
40	130	100	14	4	M12	48.3	49.5	53	16	14	14	10	8	3	3	-	38	7	38	45	15															
50	140	110	14	4	M12	60.3	61.5	65	16	14	14	12	8	3	3	-	38	8	38	45	20															
65	160	130	14	4	M12	76.1	77.5	81	16	14	14	12	8	3	3	55	38	9	38	45	20															
80	190	150	18	4	M16	88.9	90.5	94	18	16	16	12	10	3	4	70	42	10	42	50	25															
100	210	170	18	4	M16	114.3	116	120	18	16	16	14	10	4	4	90	45	10	45	52	25															
125	240	200	18	8	M16	139.7	141.5	145	20	18	18	14	10	4	4	115	48	10	48	55	25															
150	265	225	18	8	M16	168.3	170.5	174	20	18	18	14	10	5	4	140	48	12	48	55	25															
200	320	280	18	8	M16	219.1	221.5	226	22	20	20	16	11	5	5	190	55	15	55	62	30															
250	375	335	18	12	M16	273	276.5	281	24	22	22	18	12	8	-	235	60	15	60	68	-															
300	440	395	22	12	M20	323.9	327.5	333	24	22	22	18	12	8	-	285	62	15	62	68	-															
350	490	445	22	12	M20	355.6	359.5	365	26	22	22	18	13	8	-	330	62	15	62	68	-															
400	540	495	22	16	M20	406.4	411	416	28	22	22	20	14	8	-	380	65	15	65	72	-															
450	595	550	22	16	M20	457	462	467	30	22	24	20	15	8	-	425	65	15	65	72	-															
500	645	600	22	20	M20	508	513.5	519	30	24	24	22	16	8	-	475	68	15	68	75	-															
600	755	705	26	20	M24	610	616.5	622	32	30	30	22	16	-	-	575	70	16	70	-	-															
700	860	810	26	24	M24	711	-	721	40	30	40	-	16	-	-	670	76	16	70	-	-															
800	975	920	30	24	M27	813	-	824	44	30	44	-	16	-	-	770	76	16	70	-	-															
900	1075	1020	30	24	M27	914	-	926	48	30	48	-	16	-	-	860	74	16	70	-	-															
1000	1175	1120	30	28	M27	1016	-	1028	52	30	52	-	18	-	-	960	74	16	70	-	-															
1200	1375	1320	30	32	M27	1219	-	1234	60	32	50	-	20	-	-	1160	94	20	90	-	-															
1400	1575	1520	30	36	M27	1422	-	-	-	38	-	-	-	-	-	1346	96	20	-	-	-															
1600	1790	1730	30	40	M27	1626	-	-	-	46	-	-	-	-	-	1546	102	20	-	-	-															
1800	1990	1930	30	44	M27	1829	-	-	-	46	-	-	-	-	-	1746	110	20	-	-	-															
2000	2190	2130	30	48	M27	2032	-	-	-	50	-	-	-	-	-	1950	122	22	-	-	-															
2200	2405	2340	33	52	M27	2035	-	-	-	56	-	-	-	-	-	-	129	25	-	-	-															
2400	2605	2540	33	56	M30	2438	-	-	-	62	-	-	-	-	-	-	143	25	-	-	-															
2600	2805	2740	33	60	M30	2620	-	-	-	64	-	-	-	-	-	-	148	25	-	-	-															
2800	3030	2960	36	64	M30	2820	-	-	-	74	-	-	-	-	-	-	161	25	-	-	-															
3000	3230	3160	36	68	M33	3020	-	-	-	80	-	-	-	-	-	-	170	25	-	-	-															
3200	3430	3360	36	72	M33	3220	-	-	-	84	-	-	-	-	-	-	180	25	-	-	-															
3400	3630	3560	36	76	M33	3420	-	-	-	90	-	-	-	-	-	-	194	28	-	-	-															
3600	3840	3770	36	80	M33	3620	-	-	-	96	-	-	-	-	-	-	201	28	-	-	-															
3800	4045	3970	39	80	M36	3820	-	-	-	102	-	-	-	-	-	-	212	28	-	-	-															
4000	4245	4170	39	84	M36	4020	-	-	-	106	-	-	-	-	-	-	226	28	-	-	-															

DIN EN 1092-1 PN-6 Flange

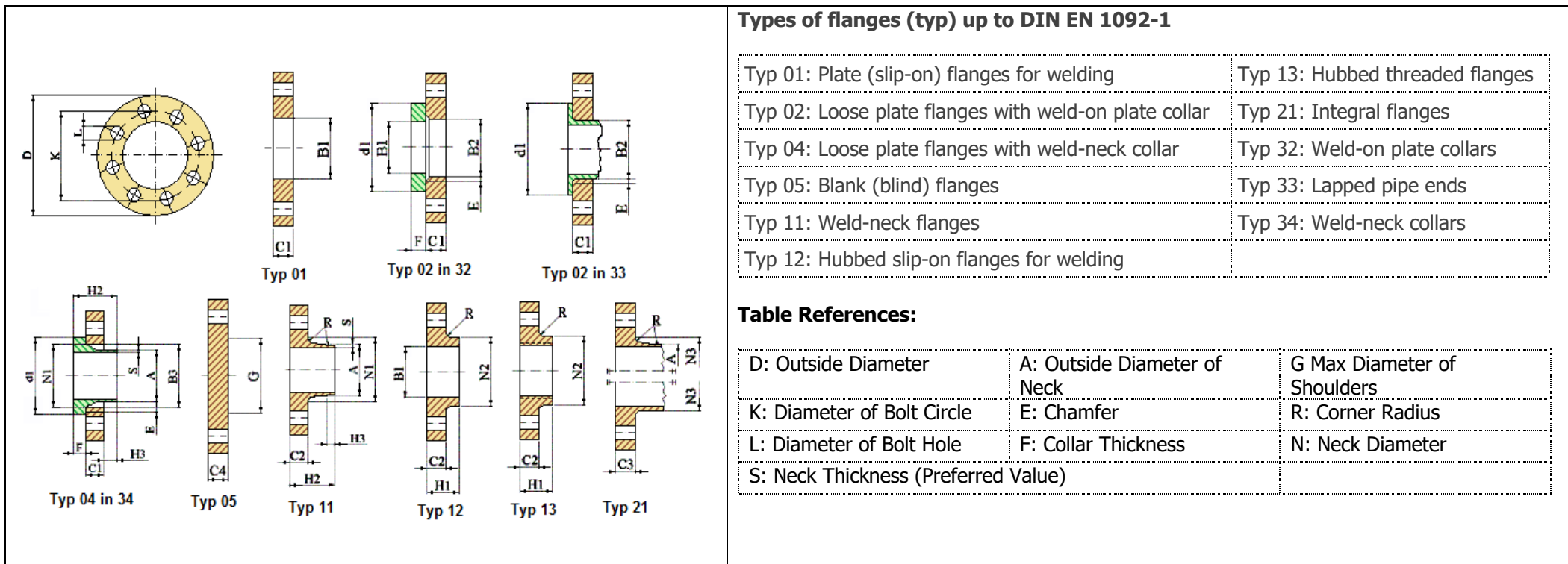
						Types of flanges (typ) up to DIN EN 1092-1																																		
Typ 01						Typ 02 in 32					Typ 02 in 33					Typ 01: Plate (slip-on) flanges for welding					Typ 13: Hubbed threaded flanges																			
Typ 04 in 34						Typ 05					Typ 11					Typ 12					Typ 21					Typ 02: Loose plate flanges with weld-on plate collar					Typ 21: Integral flanges									
																										Typ 04: Loose plate flanges with weld-neck collar					Typ 32: Weld-on plate collars									
																															Typ 05: Blank (blind) flanges					Typ 33: Lapped pipe ends				
																															Typ 11: Weld-neck flanges					Typ 34: Weld-neck collars				
																															Typ 12: Hubbed slip-on flanges for welding									
						Table References:																																		
						D: Outside Diameter					A: Outside Diameter of Neck					G Max Diameter of Shoulders																								
						K: Diameter of Bolt Circle					E: Chamfer					R: Corner Radius																								
						L: Diameter of Bolt Hole					F: Collar Thickness					N: Neck Diameter																								
						S: Neck Thickness (Preferred Value)																																		

DN	Mating dimensions					A	Bore Diameter		Flange thickness			E	F	G max	Length			Neck diameters			R	S			
	D	K	L	Bolting			B1	B2	C1*	C2 C3	C4				H1	H2	H3	N1	N2	N3					
				No	Size																				
	Flange type																								
	01, 02, 05, 11, 12, 13, 21						11 21**	01 12 32	02	01 02 04	11 12 13 21				05	02 04	32 34	05	12	11 34	11 34	11 34	12	21	11 12 13 21
10	75	50	11	4	M10	17.2	18	21	12	12	12	3	10	-	20	28	6	26	25	20	4	1.8			
15	80	55	11	4	M10	21.3	22	25	12	12	12	3	10	-	20	30	6	30	30	26	4	2			
20	90	65	11	4	M10	26.9	27.5	31	14	14	14	4	10	-	24	32	6	38	40	34	4	2.3			
25	100	75	11	4	M10	33.7	34.5	38	14	14	14	4	10	-	24	35	6	42	50	44	4	2.6			
32	120	90	14	4	M12	42.4	43.5	46	16	14	14	5	10	-	26	35	6	55	60	54	6	2.6			
40	130	100	14	4	M12	48.3	49.5	53	16	14	14	5	10	-	26	38	7	62	70	64	6	2.6			
50	140	110	14	4	M12	60.3	61.5	65	16	14	14	5	12	-	28	38	8	74	80	74	6	2.9			
65	160	130	14	4	M12	76.1	77.5	81	16	14	14	6	12	55	32	38	9	88	100	94	6	2.9			
80	190	150	18	4	M16	88.9	90.5	94	18	16	16	6	12	70	34	42	10	102	110	110	8	3.2			
100	210	170	18	4	M16	114.3	116	120	18	16	16	6	14	90	40	45	10	130	130	130	8	3.6			
125	240	200	18	8	M16	139.7	141.5	145	20	18	18	6	14	115	44	48	10	155	160	160	8	4			
150	265	225	18	8	M16	168.3	170.5	174	20	18	18	6	14	140	44	48	12	184	185	182	10	4.5			
200	320	280	18	8	M16	219.1	221.5	226	22	20	20	6	16	190	44	55	15	236	240	238	10	5.9			
250	375	335	18	12	M16	273	276.5	281	24	22	22	8	18	235	44	60	15	290	295	284	12	6.3			
300	440	395	22	12	M20	323.9	327.5	333	24	22	22	8	18	285	44	62	15	342	355	342	12	7.1			
350	490	445	22	12	M20	355.6	359.5	365	26	22	22	8	18	330	-	62	15	385	-	392	12	7.1			
400	540	495	22	16	M20	406.4	411	416	28	22	22	8	20	380	-	65	15	438	-	442	12	7.1			
450	595	550	22	16	M20	457	462	467	30	22	24	8	20	425	-	65	15	492	-	494	12	7.1			
500	645	600	22	20	M20	508	513.5	519	30	24	24	8	22	475	-	68	15	538	-	544	12	7.1			
600	755	705	26	20	M24	610	616.5	622	32	30	30	8	22	575	-	70	16	640	-	642	12	7.1			
700	860	810	26	24	M24	711	-	-	-	24	40	-	-	670	-	70	16	740	-	746	12	7.1			
800	975	920	30	24	M27	813	-	-	-	24	44	-	-	770	-	70	16	842	-	850	12	7.1			
900	1075	1020	30	24	M27	914	-	-	-	26	48	-	-	860	-	70	16	942	-	950	12	7.1			
1000	1175	1120	30	28	M27	1016	-	-	-	26	52	-	-	960	-	70	16	1045	-	1050	16	7.1			
1200	1405	1340	33	32	M30	1219	-	-	-	28	60	-	-	1160	-	90	20	1248	-	1264	16	8			
1400	1630	1560	36	36	M33	1422	-	-	-	32	68	-	-	1346	-	90	20	1452	-	1480	16	8			
1600	1830	1760	36	40	M33	1626	-	-	-	34	76	-	-	1546	-	90	20	1655	-	1680	16	9			
1800	2045	1970	39	44	M36	1829	-	-	-	36	84	-	-	1746	-	100	20	1855	-	1878	16	10			
2000	2265	2180	42	48	M39	2032	-	-	-	38	92	-	-	1950	-	110	25	2058	-	2082	16	11			
2200	2475	2390	42	52	M39	2035	-	-	-	42	-	-	-	-	-	115	25	2260	-	-	18	12			
2400	2685	2600	42	56	M39	2438	-	-	-	44	-	-	-	-	-	125	25	2462	-	-	18	13			
2600	2905	2710	48	60	M45	2620	-	-	-	46	-	-	-	-	-	130	25	2665	-	-	18	14			
2800	3115	3020	48	64	M45	2820	-	-	-	48	-	-	-	-	-	135	30	2865	-	-	18	15			
3000	3315	3220	48	68	M45	3020	-	-	-	50	-	-	-	-	-	140	30	3068	-	-	18	16			
3200	3525	3430	48	72	M45	3220	-	-	-	54	-	-	-	-	-	150	30	3272	-	-	20	18			
3400	3735	3640	48	76	M45	3420	-	-	-	56	-	-	-	-	-	160	35	3475	-	-	20	18			
3600	3970	3860	56	80	M52	3620	-	-	-	60	-	-	-	-	-	165	35	3678	-	-	20	18			

* Above DN 600-dimension C1 is to be specified by the purchaser.

** For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

DIN EN 1092-1 PN-10 Flange



DN	Mating dimensions					A	Bore Diameter			Flange Thickness				E	F	G max	Length				Neck Diameters			R	S
	D	K	L	Bolting			B1	B2	B3	C1	C2	C3	C4				Length		Neck Diameters						
				No	Size												H1	H2	H3	N1	N2	N3			
	Flange type																								
	01, 02, 05, 11, 12, 13, 21					11 21* 34	01 12 32	02	04	01 02 04	11 12 13	21	05	02 04	32 34	05	12	11 34	11 34	11 34	12	21	11 12 21	11 34	
10																									
15																									
20																									
25	Use dimensions PN 40																								
32																									
40																									
50																									
65																									
80																									
100	Use dimensions PN 16																								
125																									
150																									
200	340	295	22	8	M20	219.1	221.5	226	240	24	24	24	24	6	20	190	44	62	16	234	246	246	10	5.9	
250	395	350	22	12	M20	273	276.5	218	294	26	26	26	26	8	22	235	46	68	16	292	298	298	12	6.3	
300	445	400	22	12	M20	323.9	327.5	333	348	26	26	26	26	8	22	285	46	68	16	342	350	348	12	7.1	
350	505	460	22	16	M20	335.6	359.5	365	400	28	26	26	26	8	22	330	53	68	16	385	400	408	12	7.1	
400	565	515	26	16	M24	406.4	411	416	450	32	26	26	26	8	24	380	57	72	16	440	456	456	12	7.1	
450	615	565	26	20	M24	457	462	467	498	36	28	28	28	8	24	425	63	72	16	488	502	502	12	7.1	
500	670	620	26	20	M24	508	513.5	519	550	38	28	28	28	8	26	475	67	75	16	542	559	559	12	7.1	
600	780	725	30	20	M27	610	616.5	622	650	42	34	34	34	8	26	575	75	80	18	642	658	658	12	7.1	
700	895	840	30	24	M27	711.1	-	-	-	-	30	34	38	-	-	670	-	80	18	746	-	772	12	8	
800	1015	950	33	24	M30	813	-	-	-	-	32	36	42	-	-	770	-	90	18	850	-	876	12	8	
900	1115	1050	33	28	M30	914	-	-	-	-	34	38	46	-	-	860	-	95	20	950	-	976	12	10	
1000	1230	1160	36	28	M33	1016	-	-	-	-	34	38	52	-	-	960	-	95	20	1052	-	1080	16	10	
1200	1455	1380	39	32	M36	1219	-	-	-	-	38	44	60	-	-	1160	-	115	25	1256	-	1292	16	11	
1400	1675	1590	42	36	M39	1422	-	-	-	-	42	48	-	-	-	1346	-	120	25	1460	-	1496	16	12	
1600	1915	1820	48	40	M45	1626	-	-	-	-	46	52	-	-	-	1546	-	130	25	4666	-	1712	16	14	
1800	2115	2020	48	44	M45	1829	-	-	-	-	50	56	-	-	-	1746	-	140	30	4868	-	1910	16	15	
2000	2325	2230	48	48	M45	2032	-	-	-	-	54	60	-	-	-	1950	-	150	30	2072	-	2120	16	16	
2200	2550	2440	56	52	M52	2235	-	-	-	-	58	-	-	-	-	-	-	160	35	2275	-	-	18	18	
2400	2760	2650	56	56	M52	2438	-	-	-	-	62	-	-	-	-	-	-	170	35	2478	-	-	18	20	
2600	2960	2850	56	60	M52	2620	-	-	-	-	66	-	-	-	-	-	-	180	40	2680	-	-	18	20	
2800	3180	3070	56	64	M52	2820	-	-	-	-	70	-	-	-	-	-	-	190	40	2882	-	-	18	22	
3000	3405	3290	62	68	M56	3020	-	-	-	-	75	-	-	-	-	-	-	200	45	3085	-	-	18	24	

* For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

Note: The p/t rating from EN 1092-1 apply only for flange type 05, 11, 12, 13 and 21 having nominal sizes up to and including DN 600. The p/t rating of all other flanges shall be agreed between the manufacturer and the purchaser.

DIN EN 1092-1 PN-16 Flange

Typ 01 Typ 02 in 32 Typ 02 in 33 Typ 04 in 34 Typ 05 Typ 11 Typ 12 Typ 13 Typ 21										Types of flanges (typ) up to DIN EN 1092-1									
Typ 01: Plate (slip-on) flanges for welding					Typ 13: Hubbed threaded flanges														
Typ 02: Loose plate flanges with weld-on plate collar					Typ 21: Integral flanges														
Typ 04: Loose plate flanges with weld-neck collar					Typ 32: Weld-on plate collars														
Typ 05: Blank (blind) flanges					Typ 33: Lapped pipe ends														
Typ 11: Weld-neck flanges					Typ 34: Weld-neck collars														
Typ 12: Hubbed slip-on flanges for welding																			

Table References:									
D: Outside Diameter			A: Outside Diameter of Neck			G Max Diameter of Shoulders			
K: Diameter of Bolt Circle			E: Chamfer			R: Corner Radius			
L: Diameter of Bolt Hole			F: Collar Thickness			N: Neck Diameter			
S: Neck Thickness (Preferred Value)									

DN	Mating dimensions					A	Bore Diameter			Flange Thickness				E	F	G max	Length			Neck Diameters			R	S
	D	K	L	Bolting			B1	B2	B3	C1	C2	C3	C4				H1	H2	H3	N1	N2	N3		
				No	Size																			
	Flange type																							
	01, 02, 05, 11, 12, 21						11 21* 34	01 12 32	02	04	01 02 04	11 12 13	21	05	02 04	32 34	05	12 13	11 34	11 34	11 34	12 13	21	11 12 13 21
10																								
15																								
20																								
25	Use dimensions PN 40																							
32																								
40																								
50	165	125	18	4	M16	60.3	61.5	65	77	19	18	18	18	5	16	-	28	45	8	74	84	84	5	2.9
65	185	145	18	**	M16	76.1	77.5	81	96	20	18	18	18	6	16	55	32	45	10	92	104	104	6	2.9
80	200	160	18	8	M16	88.9	90.5	94	108	20	20	20	20	6	16	70	34	50	10	105	118	120	6	3.2
100	220	180	18	8	M16	114.3	116	120	134	22	20	20	20	6	18	90	40	52	12	131	140	140	8	3.6
125	250	210	18	8	M16	139.7	141.5	145	162	22	22	22	22	6	18	115	44	55	12	156	168	170	8	4
150	285	240	18	8	M20	168.3	170.5	174	188	24	22	22	22	6	20	140	44	55	12	184	195	190	10	4.5
200	340	295	22	12	M20	219.1	221.5	226	240	26	24	24	24	6	20	190	44	62	16	235	246	246	10	5.9
250	405	355	26	12	M24	273	276.5	281	294	29	26	26	26	8	22	235	46	70	16	292	298	296	12	6.3
300	460	410	26	12	M24	323.9	327.5	333	348	32	28	28	28	8	24	285	46	78	16	344	350	350	12	7.1
350	520	470	26	16	M24	355.6	359.5	365	400	35	30	30	30	8	26	330	57	82	16	390	400	410	12	8
400	580	525	30	16	M27	406.4	411	416	454	38	32	32	32	8	28	380	63	85	16	445	456	458	12	8
450	640	585	30	20	M27	457	462	467	500	42	40	40	40	8	30	425	68	87	16	490	502	516	12	8
500	715	650	33	20	M30	508	513.5	519	556	46	44	44	44	8	32	475	73	90	16	548	559	576	12	8
600	840	770	36	20	M33	610	616.5	622	660	52	54	54	54	8	32	575	83	95	18	652	658	690	12	8.8
700	910	840	36	24	M33	711.1	-	-	-	-	36	42	48	-	-	670	83	100	18	755	760	760	12	8.8
800	1025	950	39	24	M36	813	-	-	-	-	38	42	52	-	-	770	90	105	20	855	864	862	12	10
900	1125	1050	39	28	M36	914	-	-	-	-	40	44	58	-	-	860	94	110	20	955	968	962	12	10
1000	1255	1170	42	28	M39	1016	-	-	-	-	42	46	64	-	-	960	100	120	22	1058	1072	1076	16	10
1200	1485	1390	48	32	M45	1219	-	-	-	-	48	52	76	-	-	1160	-	130	30	1262	-	1282	16	12.5
1400	1685	1590	48	36	M45	1422	-	-	-	-	52	58	-	-	-	1346	-	145	30	1465	-	1482	16	14.2
1600	1930	1820	56	40	M52	1626	-	-	-	-	58	64	-	-	-	1546	-	160	35	1668	-	1696	16	16
1800	2130	2020	56	44	M52	1829	-	-	-	-	62	68	-	-	-	1746	-	170	35	1870	-	1896	16	17.5
2000	2345	2230	62	48	M56	2032	-	-	-	-	66	70	-	-	-	1950	-	180	40	2072	-	2100	16	20

* For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

Note: The p/t rating from EN 1092-1 apply only for flange type 05, 11, 12, 13 and 21 having nominal sizes up to and including DN 600. The p/t rating of all other flanges shall be agreed between the manufacturer and the purchaser.

DIN EN 1092-1 PN-25 Flange

 Typ 01		 Typ 02 in 32	 Typ 02 in 33		
 Typ 04 in 34	 Typ 05	 Typ 11	 Typ 12	 Typ 13	 Typ 21

Types of flanges (typ) up to DIN EN 1092-1		
Typ 01: Plate (slip-on) flanges for welding	Typ 13: Hubbed threaded flanges	
Typ 02: Loose plate flanges with weld-on plate collar	Typ 21: Integral flanges	
Typ 04: Loose plate flanges with weld-neck collar	Typ 32: Weld-on plate collars	
Typ 05: Blank (blind) flanges	Typ 33: Lapped pipe ends	
Typ 11: Weld-neck flanges	Typ 34: Weld-neck collars	
Typ 12: Hubbed slip-on flanges for welding		

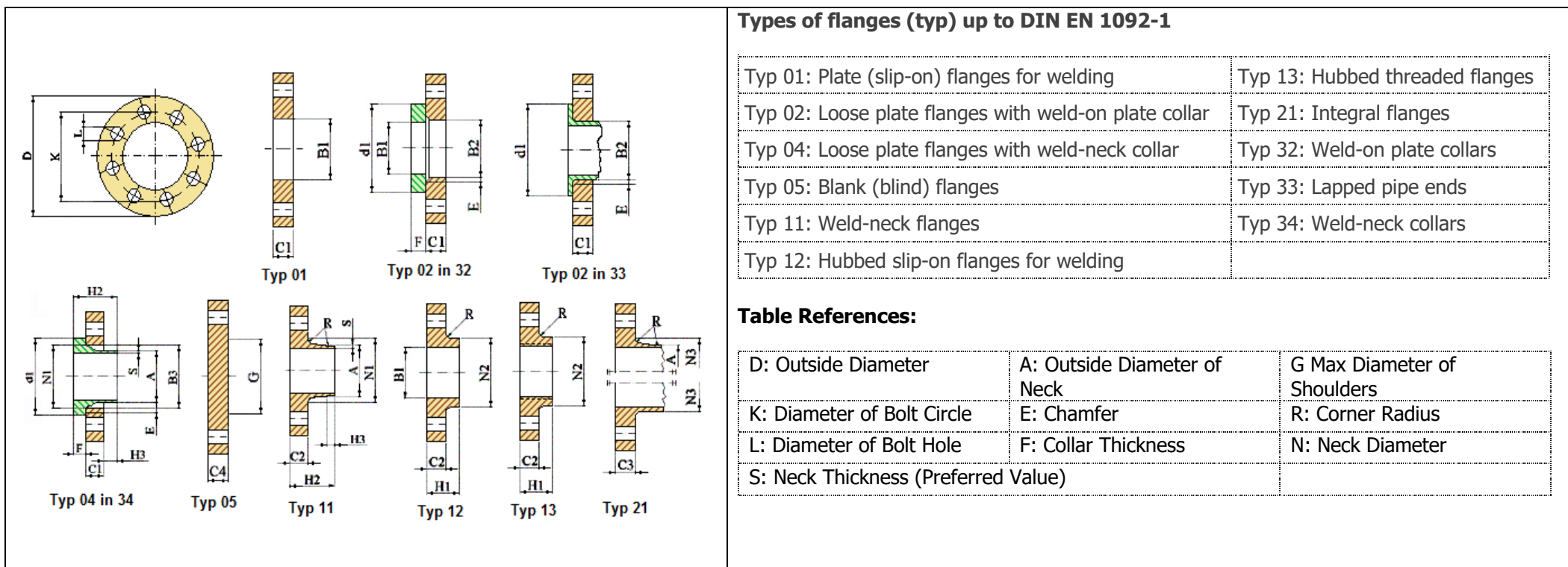
Table References:		
D: Outside Diameter	A: Outside Diameter of Neck	G Max Diameter of Shoulders
K: Diameter of Bolt Circle	E: Chamfer	R: Corner Radius
L: Diameter of Bolt Hole	F: Collar Thickness	N: Neck Diameter
S: Neck Thickness (Preferred Value)		

DN	Mating dimensions					A	Bore Diameter			Flange Thickness				E	F	G max	Length			Neck Diameters			R	S
	D	K	L	Bolting			B1	B2	B3	C1	C2	C3	C4				H1	H2	H3	N1	N2	N3		
				No	Size																			
	Flange type																							
	01, 02, 05, 11, 12, 21						11 21* 34	01 12 32	02	04	01 02 04	11 12 13	21	05	02 04	32 34	05	12 13	11 34	11 34	11 34	12 13	21	11 12 13 21
10																								
15																								
20																								
25																								
32																								
40																								
50	Use dimensions PN 40																							
65																								
80																								
100																								
125																								
150																								
200	360	310	26	12	M24	219.1	221.5	226	250	32	30	30	30	6	26	190	52	80	16	244	256	252	10	6.3
250	425	370	30	12	M27	273.5	276.5	281	302	35	32	32	32	8	26	235	60	88	18	298	310	304	12	7.1
300	485	430	30	16	M27	323.9	327.5	333	356	38	34	34	34	8	28	285	67	92	18	352	364	364	12	8
350	555	490	33	16	M30	355.6	359.5	365	408	42	38	38	38	8	32	332	72	100	20	398	418	418	12	8
400	620	550	36	16	M33	406.4	411	416	462	46	40	40	40	8	34	380	78	110	20	452	472	472	12	8.8
450	670	600	36	20	M33	457	462	467	510	50	46	46	46	8	36	425	84	110	20	500	520	520	12	8.8
500	730	660	36	20	M33	508	513.5	519	568	56	48	48	48	8	38	475	90	125	20	558	580	580	12	10
600	845	770	39	20	M36	610	616.5	622	670	68	58	58	58	8	40	575	100	125	20	660	684	684	12	11
700	960	875	42	24	M39	711	-	-	-	-	46	50	-	-	-	-	-	125	20	760	-	780	12	12.5
800	1085	990	48	24	M45	813	-	-	-	-	50	54	-	-	-	-	-	135	22	864	-	882	12	14.2
900	1158	1090	48	28	M45	914	-	-	-	-	54	58	-	-	-	-	-	145	24	968	-	982	12	16
1000	1320	1210	56	28	M52	1016	-	-	-	-	58	62	-	-	-	-	-	155	24	1070	-	1086	16	17.5
1200	1530	1420	56	32	M52	1219	-	-	-	-	-	70	-	-	-	-	-	-	-	-	-	1296	18	-
1400	1755	1640	62	36	M56	1422	-	-	-	-	-	76	-	-	-	-	-	-	-	-	-	1508	18	-
1600	1975	1860	62	40	M56	1626	-	-	-	-	-	84	-	-	-	-	-	-	-	-	-	1726	20	-
1800	2195	2070	70	44	M64	1829	-	-	-	-	-	90	-	-	-	-	-	-	-	-	-	1920	20	-
2000	2425	2300	70	48	M64	2032	-	-	-	-	-	96	-	-	-	-	-	-	-	-	-	2150	20	-

* For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

Note: The p/t rating from EN 1092-1 apply only for flange type 05, 11, 12, 13 and 21 having nominal sizes up to and including DN 600. The p/t rating of all other flanges shall be agreed between the manufacturer and the purchaser.

DIN EN 1092-1 PN-40 Flange

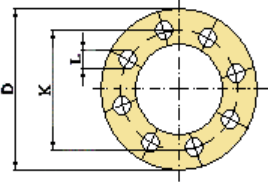
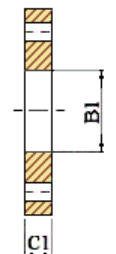
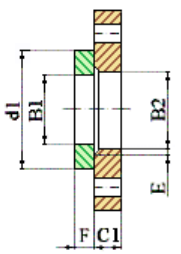
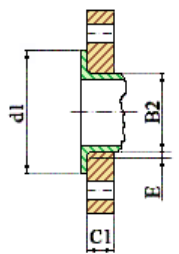
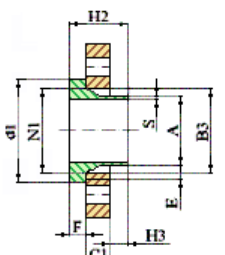
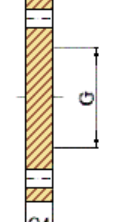
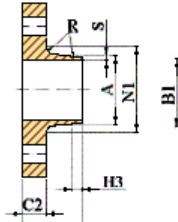
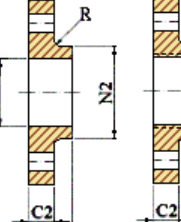


DN	Mating dimensions					A	Bore Diameter			Flange Thickness				E	F	G max	Length			Neck Diameters			R	S
	D	K	L	Bolting			B1	B2	B3	C1	C2	C3	C4				H1	H2	H3	N1	N2	N3		
				No	Size																			
	Flange type																							
	01, 02, 05, 11, 12, 21						11 21* 34	01 12 32	02	04	01 02 04	11 12 13	21	05	02 04	32 34	05	12 13	11 34	11 34	11 34	12 13	21	11 12 13 21
10	90	60	14	4	M12	17.2	18	21	31	14	16		16	3	12	-	22	35	6	28	30	28	4	1.8
15	95	65	14	4	M12	21.3	22	25	35	14	16		16	3	12	-	22	38	6	32	35	32	4	2
20	105	75	14	4	M12	26.9	27.5	31	42	16	18		18	4	14	-	26	40	6	40	45	40	4	2.3
25	115	85	14	4	M12	33.7	34.5	38	49	16	18		18	4	14	-	28	40	6	46	52	52	4	2.6
32	140	100	18	4	M16	42.4	43.5	47	59	18	18		18	5	14	-	30	42	6	56	60	60	6	2.6
40	150	110	18	4	M16	48.3	49.5	53	67	18	18		18	5	14	-	32	45	7	64	70	70	6	2.6
50	165	125	18	4	M16	60.3	61.5	65	77	20	20		20	5	16	-	34	48	8	75	84	84	6	2.9
65	185	145	18	8	M16	76.1	77.5	81	96	22	22		22	6	16	55	38	52	10	90	104	104	6	2.9
80	200	160	18	8	M16	88.9	90.5	94	114	24	24		24	6	18	70	40	58	12	105	118	120	8	3.2
100	235	190	22	8	M20	114.3	116	120	138	26	24		24	6	20	90	44	65	12	134	145	142	8	3.6
125	270	220	26	8	M24	139.7	141.5	145	166	28	26		26	6	22	115	48	68	12	162	170	162	8	4
150	300	250	26	8	M24	168.3	170.5	174	194	30	28		28	6	24	140	52	75	12	192	200	192	10	4.5
200	375	320	30	12	M27	219.1	221.5	226	250	36	34		36	6	28	190	52	88	16	244	260	254	10	6.3
250	450	385	33	12	M30	273	276.5	281	312	42	38		38	8	30	235	60	105	18	306	312	312	12	7.1
300	515	450	33	16	M30	323.9	327.5	333	368	48	42		42	8	34	285	67	115	18	362	380	378	12	8
350	580	510	36	16	M33	355.6	359.5	365	418	54	46		46	8	36	330	72	125	20	408	424	432	12	8.8
400	660	585	39	16	M36	406.4	411	416	472	60	50		50	8	42	380	78	135	20	462	478	498	12	11
450	685	610	39	20	M36	457	462	467	510	66	57		57	8	46	425	84	135	20	500	522	522	12	12.5
500	755	670	42	20	M39	508	513.5	519	572	72	57		57	8	50	475	90	140	20	562	576	576	12	14.2
600	890	795	48	20	M45	610	616.5	622	676	84	72		72	8	54	575	100	150	20	666	686	686	12	16

* For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

Note: The p/t rating from EN 1092-1 apply only for flange type 05, 11, 12, 13 and 21 having nominal sizes up to and including DN 600. The p/t rating of all other flanges shall be agreed between the manufacturer and the purchaser.

DIN EN 1092-1 PN-63 Flange

											
Typ 01			Typ 02 in 32			Typ 02 in 33					
											
Typ 04 in 34			Typ 05			Typ 11			Typ 12		

DIN EN 1092-1 PN-100 Flange

Types of flanges (typ) up to DIN EN 1092-1		
Typ 01: Plate (slip-on) flanges for welding	Typ 13: Hubbed threaded flanges	
Typ 02: Loose plate flanges with weld-on plate collar	Typ 21: Integral flanges	
Typ 04: Loose plate flanges with weld-neck collar	Typ 32: Weld-on plate collars	
Typ 05: Blank (blind) flanges	Typ 33: Lapped pipe ends	
Typ 11: Weld-neck flanges	Typ 34: Weld-neck collars	
Typ 12: Hubbed slip-on flanges for welding		

Table References:		
D: Outside Diameter	A: Outside Diameter of Neck	G Max Diameter of Shoulders
K: Diameter of Bolt Circle	E: Chamfer	R: Corner Radius
L: Diameter of Bolt Hole	F: Collar Thickness	N: Neck Diameter
S: Neck Thickness (Preferred Value)		

DIN EN 1092-1 PN-160 Flange

 Typ 01 Typ 02 in 32 Typ 02 in 33 Typ 04 in 34 Typ 05 Typ 11 Typ 12 Typ 13 Typ 21		Types of flanges (typ) up to DIN EN 1092-1	
Typ 01: Plate (slip-on) flanges for welding		Typ 13: Hubbed threaded flanges	
Typ 02: Loose plate flanges with weld-on plate collar		Typ 21: Integral flanges	
Typ 04: Loose plate flanges with weld-neck collar		Typ 32: Weld-on plate collars	
Typ 05: Blank (blind) flanges		Typ 33: Lapped pipe ends	
Typ 11: Weld-neck flanges		Typ 34: Weld-neck collars	
Typ 12: Hubbed slip-on flanges for welding			
Table References:			
D: Outside Diameter		A: Outside Diameter of Neck	
K: Diameter of Bolt Circle		E: Chamfer	
L: Diameter of Bolt Hole		F: Collar Thickness	
S: Neck Thickness (Preferred Value)		G Max Diameter of Shoulders	
		R: Corner Radius	
		N: Neck Diameter	

DN	Mating dimensions					A	Flange Thickness		Length		Neck Diameters		R1		S
	D	K	L	Bolting			C2	C3	H2	H3	N1	N3			
				No	Size										
	Flange type														
	11, 21						11 21*	11	21	11	11	11	21	11	21
10	100	70	14	4	M12	17.2	20	20	45	6	32	40	4	4	2.0
15	105	75	14	4	M12	21.3	20	20	45	6	34	45	4	4	2.0
25	140	100	18	4	M16	33.7	24	24	58	8	52	61	4	4	2.9
40	170	125	22	4	M20	48.3	28	28	64	10	70	82	6	4	3.6
50	195	145	26	4	M24	60.3	30	30	75	10	90	96	6	4	4.0
65	220	170	26	8	M24	76.1	34	34	82	12	108	118	6	5	5.0
80	230	180	26	8	M24	88.9	36	36	86	12	120	128	8	5	6.3
100	265	210	30	8	M27	114.3	40	40	100	12	150	150	8	5	8.0
125	315	250	33	8	M30	139.7	44	44	115	14	180	184	8	6	10.0
150	355	290	33	12	M30	168.3	50	50	128	14	210	224	10	6	12.5
200	430	360	36	12	M33	219.1	60	60	140	16	278	288	10	8	16.0
250	515	430	42	12	M39	273.0	68	68	155	18	340	346	12	8	20.0
300	585	500	42	16	M39	323.9	78	78	175	18	400	414	12	10	22.2

* For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

DIN EN 1092-1 PN-250 Flange

Typ 01	Typ 02 in 32	Typ 02 in 33
Typ 04 in 34	Typ 05	Typ 11
Typ 12	Typ 13	Typ 21

Types of flanges (typ) up to DIN EN 1092-1		
Typ 01: Plate (slip-on) flanges for welding	Typ 13: Hubbed threaded flanges	
Typ 02: Loose plate flanges with weld-on plate collar	Typ 21: Integral flanges	
Typ 04: Loose plate flanges with weld-neck collar	Typ 32: Weld-on plate collars	
Typ 05: Blank (blind) flanges	Typ 33: Lapped pipe ends	
Typ 11: Weld-neck flanges	Typ 34: Weld-neck collars	
Typ 12: Hubbed slip-on flanges for welding		

Table References:		
D: Outside Diameter	A: Outside Diameter of Neck	G Max Diameter of Shoulders
K: Diameter of Bolt Circle	E: Chamfer	R: Corner Radius
L: Diameter of Bolt Hole	F: Collar Thickness	N: Neck Diameter
S: Neck Thickness (Preferred Value)		

DN	Mating dimensions					A	Flange Thickness		Length		Neck Diameters		R1	S	
	D	K	L	Bolting			C2	C3	H2	H3	N1	N3			
				No	Size										
	Flange type														
	11, 21						11 21*	11	21	11	11	11	21	11	21
10	125	85	18	4	M16	-	-	24	-	-	-	46	-	4	-
15	130	90	18	4	M16	21.3	26	26	60	6	48	52	4	4	2.6
25	150	105	22	4	M20	33.7	28	28	65	8	60	63	4	4	3.6
40	185	135	26	4	M24	48.3	34	34	80	10	80	90	6	4	5.0
50	200	150	26	4	M24	60.3	38	38	85	10	84	102	6	5	6.3
65	230	180	26	8	M24	76.1	42	42	95	12	95	125	6	5	8.0
80	255	200	30	8	M27	101.6	46	46	102	12	136	142	8	5	11.0
100	300	235	33	8	M30	127.0	54	54	120	14	164	168	8	6	14.2
125	340	275	33	8	M30	152.4	60	60	140	16	200	207	8	6	16.0
150	390	320	36	12	M33	177.8	68	68	160	18	240	246	10	8	17.5
200	485	400	42	12	M39	244.5	82	82	1900	25	305	314	10	8	25.0
250	585	490	48	16	M45	298.5	100	100	215	30	385	394	12	10	32.0
300	690	590	52	16	M48	-	-	120	-	-	-	480	-	10	-

* For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

* For flanges type 21

* For flanges type 11 use flanges PN 320

DIN EN 1092-1 PN-320 Flange

Typ 01 Typ 02 in 32 Typ 02 in 33

Typ 04 in 34 Typ 05 Typ 11 Typ 12 Typ 13 Typ 21

Types of flanges (typ) up to DIN EN 1092-1

Typ 01: Plate (slip-on) flanges for welding	Typ 13: Hubbed threaded flanges
Typ 02: Loose plate flanges with weld-on plate collar	Typ 21: Integral flanges
Typ 04: Loose plate flanges with weld-neck collar	Typ 32: Weld-on plate collars
Typ 05: Blank (blind) flanges	Typ 33: Lapped pipe ends
Typ 11: Weld-neck flanges	Typ 34: Weld-neck collars
Typ 12: Hubbed slip-on flanges for welding	

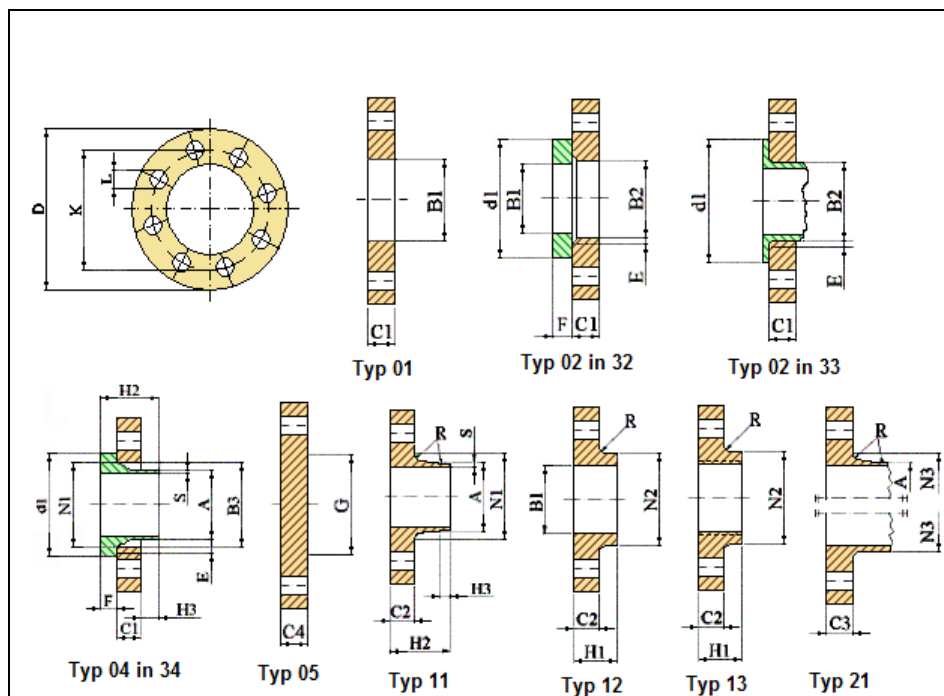
Table References:

D: Outside Diameter	A: Outside Diameter of Neck	G Max Diameter of Shoulders
K: Diameter of Bolt Circle	E: Chamfer	R: Corner Radius
L: Diameter of Bolt Hole	F: Collar Thickness	N: Neck Diameter
S: Neck Thickness (Preferred Value)		

DN	Mating dimensions					A	Flange Thickness		Length		Neck Diameters		R1	S	
	D	K	L	Bolting			C2	C3	H2	H3	N1	N3			
				No	Size										
	Flange type														
	11, 21						11 21*	11	21	11	11	11	21	11	21
10	125	85	18	4	M16	17.2	24	24	58	-	44	46	4	4	2.6
15	130	90	18	4	M16	21.3	26	26	60	6	48	52	4	4	3.2
25	160	115	22	4	M20	33.7	34	34	78	8	68	72	4	5	5.0
40	195	145	26	4	M24	48.3	38	38	88	10	92	96	6	5	6.3
50	210	160	26	8	M24	63.5	42	42	100	10	106	110	6	6	8.0
65	255	200	30	8	M24	88.9	51	51	120	12	138	137	6	6	11.0
80	275	220	30	8	M27	101.6	55	55	130	14	156	160	8	5	12.5
100	335	265	36	8	M33	133.0	65	65	145	16	186	190	8	8	16.0
125	380	310	36	12	M33	168.3	75	75	175	20	230	235	8	8	20.0
150	425	350	39	12	M36	193.7	84	84	195	25	265	266	10	10	25.0
200	525	440	42	16	M39	244.5	103	103	235	30	345	350	10	10	30.0
250	640	540	52	16	M48	323.9	125	125	300	40	428	432	12	10	40.0

* For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

DIN EN 1092-1 PN-400 Flange



Types of flanges (typ) up to DIN EN 1092-1

Typ 01: Plate (slip-on) flanges for welding	Typ 13: Hubbed threaded flanges
Typ 02: Loose plate flanges with weld-on plate collar	Typ 21: Integral flanges
Typ 04: Loose plate flanges with weld-neck collar	Typ 32: Weld-on plate collars
Typ 05: Blank (blind) flanges	Typ 33: Lapped pipe ends
Typ 11: Weld-neck flanges	Typ 34: Weld-neck collars
Typ 12: Hubbed slip-on flanges for welding	

Table References:

D: Outside Diameter	A: Outside Diameter of Neck	G Max Diameter of Shoulders
K: Diameter of Bolt Circle	E: Chamfer	R: Corner Radius
L: Diameter of Bolt Hole	F: Collar Thickness	N: Neck Diameter
S: Neck Thickness (Preferred Value)		

DN	Mating dimensions					A	Flange Thickness		Length		Neck Diameters		R1		S
	D	K	L	Bolting			C2	C3	H2	H3	N1	N3			
				No	Size										
	Flange type														
	11, 21					11 21*	11	21	11	11	11	21	11	21	11
10	125	85	18	4	M16	17.2	28	28	65	8	48	48	4	4	3.6
15	145	100	22	4	M20	26.9	30	30	68	8	56	57	4	4	5.0
25	180	130	26	4	M24	42.4	38	38	90	10	82	81	4	5	7.1
40	220	165	30	4	M27	60.3	48	48	110	12	106	105	6	5	10.0
50	235	180	30	8	M27	76.1	52	52	120	15	120	120	6	6	12.5
65	290	225	33	8	M30	101.6	64	64	135	18	158	158	6	6	16.0
80	305	240	33	8	M30	114.3	68	68	150	20	174	174	8	8	17.5
100	370	295	39	8	M36	139.7	80	80	175	25	216	216	8	8	22.2
125	415	340	39	12	M36	193.7	92	92	200	30	258	259	8	10	30.0
150	475	390	42	12	M39	219.1	105	105	225	35	302	302	10	10	35.0
200	585	490	48	16	M45	273.0	130	130	280	40	388	388	10	10	40.0

* For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

This image shows a full page of blank handwriting practice paper. It features numerous horizontal blue lines spaced evenly across the entire page, providing a guide for letter height and placement. There are no margins, text, or other markings present.