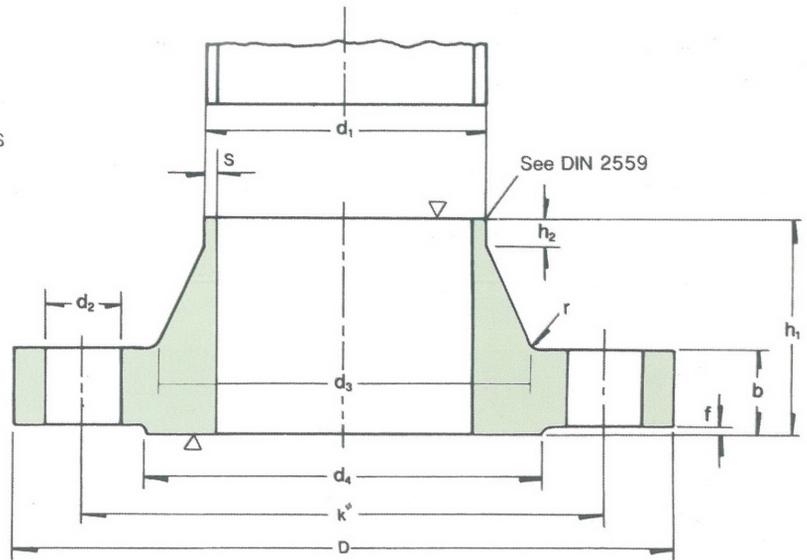


## WELDING NECK FLANGE I-I).Nominal Pressure 6

The flanges with the dimensions of this standard and made of St 37-2 material can be used at maximum 120°C temperature with up to 6 kg/cm<sup>2</sup> of working pressure.

At higher temperature of 120°C to 300°C, it should be taken into consideration that the material yield point becomes low.



DIMENSIONS IN MM

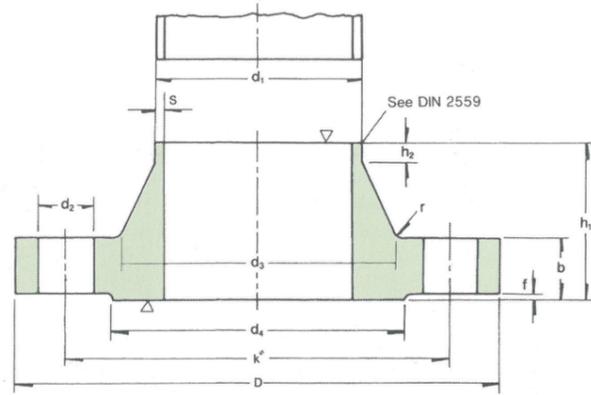
NOMINAL PRESSURE 6																
PIPE		FLANGE				NECK				RAISED FACE		DRILLING			APPROX. WEIGHT (7.85 kg/dm <sup>3</sup> ) kg ≈	
NOMINAL SIZE	d <sub>1</sub>	D	b	k	h <sub>1</sub>	d <sub>3</sub>	s	r	h <sub>2</sub>	d <sub>4</sub>	f	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>		
10	14 17.2*)	75	12	50	28	22 26	1.8	4	6	35	2	4	M10	-	11.5	0.335
15	20 21.3*)	80	12	55	30	28 30	2	4	6	40	2	4	M10	-	11.5	0.392
20	25 26.9*)	90	14	65	32	35 38	2.3	4	6	50	2	4	M10	-	11.5	0.592
25	30 33.7*)	100	14	75	35	40 42	2.6	4	6	60	2	4	M10	-	11.5	0.747
32	38 42.4*)	120	14	90	35	50 55	2.6	6	6	70	2	4	M12	(1/2")	14	1.05
40	44.5 48.3*)	130	14	100	38	58 62	2.6	6	7	80	3	4	M12	(1/2")	14	1.18
50	57 60.3*)	140	14	110	38	70 74	2.9	6	8	90	3	4	M12	(1/2")	14	1.34
65	76.1*)	160	14	130	38	88	2.9	6	9	110	3	4	M12	(1/2")	14	1.67
80	88.9*)	190	16	150	42	102	3.2	8	10	128	3	4	M16	(5/8")	18	2.71
100	108 114.3*)	210	16	170	45	122 130	3.6	8	10	148	3	4	M16	(5/8")	18	3.24
125	133 139.7*)	240	18	200	48	148 155	4	8	10	178	3	8	M16	(5/8")	18	4.49
150	159 168.3*)	265	18	225	48	172 184	4.5	10	12	202	3	8	M16	(5/8")	18	5.15
200	216 219.1*)	320	20	280	55	230 236	5.9	10	15	258	3	8	M16	(5/8")	18	7.78
250	267 273*)	375	22	335	60	282 290	6.3	12	15	312	3	12	M16	(5/8")	18	10.8
300	318 323.9*)	440	22	395	62	335 342	7.1	12	15	365	4	12	M20	(3/4")	23	14.0
350	268 355.6*)	490	22	445	62	385	7.1	12	15	415	4	12	M20	(3/4")	23	16.1

\*)Outer diameter of pipe corresponds to ISO recommendation R64.  
Material (to be specified by orderer):  
St.37-2 by DIN 17100 for temperature ≤ 300°C.

Weldable heat-treated steel for temperature 300°C.  
Process: Machining the outside diameter, bore, gasket surface, bevel end for welding, and bolt holes.

WELDING NECK FLANGE

I-2).Nominal Pressure 6(Continue)



DIMENSIONS IN MM

NOMINAL PRESSURE 6(CONTINUE)																
NOMINAL SIZE	PIPE		FLANGE			NECK				RAISED FACE		DRILLING			APPROX. WEIGHT (7.85 kg/dm <sup>3</sup> ) kg ≈	
	d <sub>1</sub>	D	b	k	h <sub>1</sub>	d <sub>3</sub>	s	r	h <sub>2</sub>	d <sub>4</sub>	f	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>		
400	419 406.4*	540	22	495	65	438	7.1	12	15	465	4	16	M20 (3/4")	23	18.3	
500	521 508*	645	24	600	68	538	7.1	12	15	570	4	20	M20 (3/4")	23	24.6	
600	622 609.6*	755	24	705	70	640	7.1	12	16	670	5	20	M24 (7/8")	27	31.5	
700	720 711.2*	860	24	810	70	740	7.1	12	16	775	5	24	M24 (7/8")	27	37.4	
800	820 812.8*	975	24	920	70	842	7.1	12	16	880	5	24	M27 (1")	30	46.1	
900	920 914.4*	1075	26	1020	70	942	7.1	12	16	980	5	24	M27 (1")	30	55.6	
1000	1020 1016*	1175	26	1120	70	1045	7.1	16	16	1080	5	28	M27 (1")	30	61.9	
1200	1220	1405	28	1340	90	1248	8	16	20	1295	5	32	M30 (1 1/8")	33	100	
1400	1420	1630	32	1560	90	1452	8	16	20	1510	5	36	M33 (1 1/4")	36	149	
1600	1620	1830	34	1760	90	1655	9	16	20	1710	5	40	M33 (1 1/4")	36	180	
1800	1820	2045	36	1970	100	1855	10	16	20	1920	5	44	M36 (1 3/8")	39	225	
2000	2020	2265	38	2180	110	2058	11	16	25	2125	5	48	M39 (1 1/2")	42	295	
2200	2220	2475	42	2390	115	2260	12	18	25	2335	6	52	M39 (1 1/2")	42	361	
2400	2420	2685	44	2600	125	2462	13	18	25	2545	6	56	M39 (1 1/2")	42	415	
2600	2620	2905	46	2810	130	2665	14	18	25	2750	6	60	M45 (1 3/4")	48	530	
2800	2820	3115	48	3020	135	2865	15	18	30	2960	6	64	M45 (1 3/4")	48	643	
3000	3020	3315	50	3220	140	3068	16	18	30	3160	6	68	M45 (1 3/4")	48	777	
3200	3220	3525	54	3430	150	3272	16	20	30	3370	6	72	M45 (1 3/4")	48	851	
3400	3420	3735	56	3640	160	3475	18	20	35	3580	6	76	M45 (1 3/4")	48	993	
3600	3620	3970	60	3860	165	3678	18	20	35	3790	6	80	M52 (2")	56	1001	

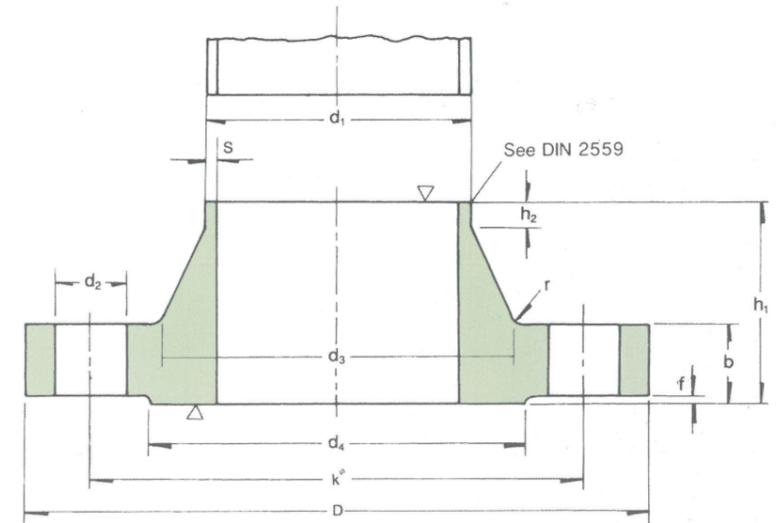
\*)Outer diameter of pipe corresponds to ISO recommendation R64.  
Material (to be specified by orderer):  
St.37-2 by DIN 17100 for temperature ≤300 °C.

Weldable heat-treated steel for temperature 300°C.  
Process: Machining the outside diameter, bore, gasket surface, bevel end for welding, and bolt holes.

WELDING NECK FLANGE

2-1).Nominal Pressure 10

The flanges with the dimensions of this standard and made of St 37-2 material can be used at maximum 120°C temperature with up to 6 kg/cm<sup>2</sup> of working pressure.  
At higher temperature of 120°C to 300°C, it should be taken into consideration that the material yield point becomes low.



DIMENSIONS IN MM

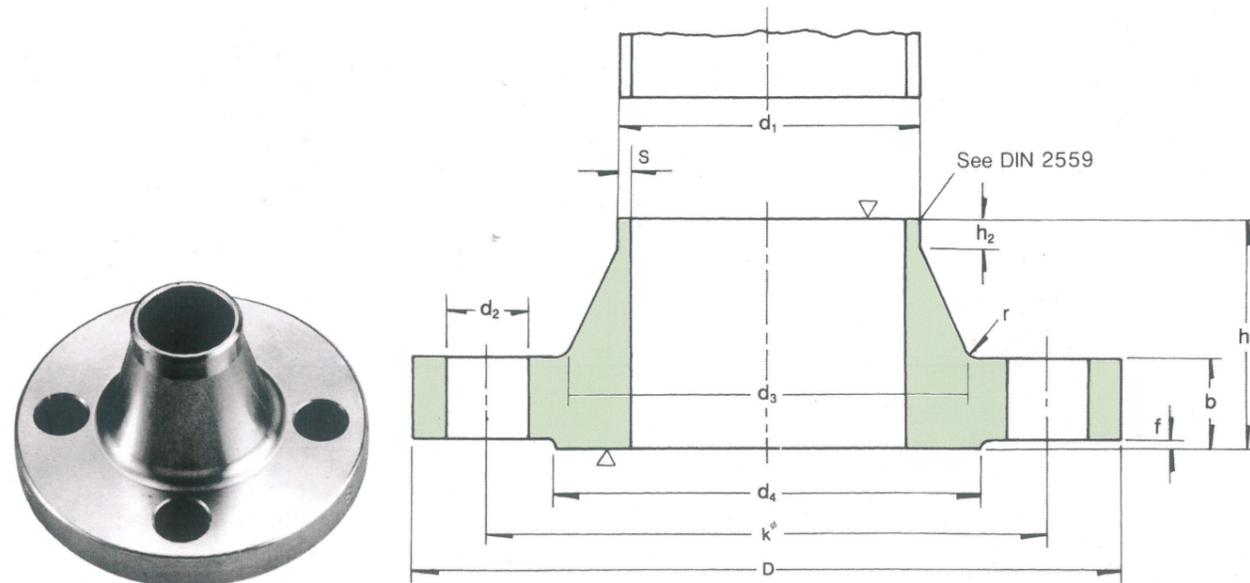
NOMINAL PRESSURE 10																
NOMINAL SIZE	PIPE		FLANGE			NECK				RAISED FACE		DRILLING			APPROX. WEIGHT (7.85 kg/dm <sup>3</sup> ) kg ≈	
	d <sub>1</sub>	D	b	k	h <sub>1</sub>	d <sub>3</sub>	s	r	h <sub>2</sub>	d <sub>4</sub>	f	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>		
200	216 219.1*	340	24	295	62	232 235	5.9	10	16	268	3	8	M20 (3/4")	23	11.3	
250	267 273*	395	26	350	68	285 292	6.3	12	16	320	3	12	M20 (3/4")	23	14.7	
300	318 323.9*	445	26	400	68	335 344	7.1	12	16	370	4	12	M20 (3/4")	23	17.6	
350	368 355.6*	505	26	460	68	385	7.1	12	16	430	4	16	M20 (3/4")	23	21.4	
400	419 406.4*	565	26	515	72	440	7.1	12	16	482	4	16	M24 (7/8")	27	26.1	
500	521 508*	670	28	620	75	542	7.1	12	16	585	4	20	M24 (7/8")	27	34.7	
600	622 609.6*	780	28	725	80	642	7.1	12	18	685	5	20	M27 (1")	30	42.2	
700	720 711.2*	895	30	840	80	745	8	12	18	800	5	24	M27 (1")	30	58.7	
800	820 812.8*	1015	32	950	90	850	8	12	18	905	5	24	M30 (1 1/8")	33	80.0	
900	920 914.4*	1115	34	1050	95	950	10	12	20	1005	5	28	M30 (1 1/8")	33	95.6	

\*)Outer diameter of pipe corresponds to ISO recommendation R64.  
Material (to be specified by orderer):  
St.37-2 by DIN 17100 for temperature ≤300 °C.

Weldable heat-treated steel for temperature > 300°C.  
Process: Machining the outside diameter, bore, gasket surface, bevel end for welding, and bolt holes.

WELDING NECK FLANGE

2-2).Nominal Pressure 10(Continue)



DIMENSIONS IN MM

NOMINAL PRESSURE 10(CONTINUE)															
PIPE		FLANGE				NECK				RAISED FACE		DRILLING			APPROX. WEIGHT (7.85 kg/dm <sup>3</sup> ) kg
NOMINAL SIZE	d <sub>1</sub>	D	b	k	h <sub>1</sub>	d <sub>3</sub>	s	r	h <sub>2</sub>	d <sub>4</sub>	f	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>	
1000	1020 1016*)	1230	34	1160	95	1052	10	16	20	1110	5	28	M33 (11/4")	36	114
1200	1220	1455	38	1380	115	1255	11	16	25	1330	5	32	M36 (13/8")	39	182
1400	1420	1675	42	1590	120	1460	12	16	25	1535	5	36	M39 (11/2")	42	248
1600	1620	1915	46	1820	130	1665	14	16	25	1760	5	40	M45 (13/4")	48	347
1800	1820	2115	50	2020	140	1868	15	16	30	1960	5	44	M45 (13/4")	48	430
2000	2020	2325	54	2230	150	2072	16	16	30	2170	5	48	M45 (13/4")	48	539
2200	2220	2550	58	2440	160	2275	18	18	35	2370	6	52	M52 (2")	56	658
2400	2420	2760	62	2650	170	2478	20	18	35	2570	6	56	M52 (2")	56	825
2600	2620	2960	66	2850	180	2680	22	18	40	2780	6	60	M52 (2")	56	979
2800	2820	3180	70	3070	190	2882	22	18	40	3000	6	64	M52 (2")	56	1156
3000	3020	3405	74	3290	200	3085	24	18	45	3210	6	68	M56 (21/4")	62	1402

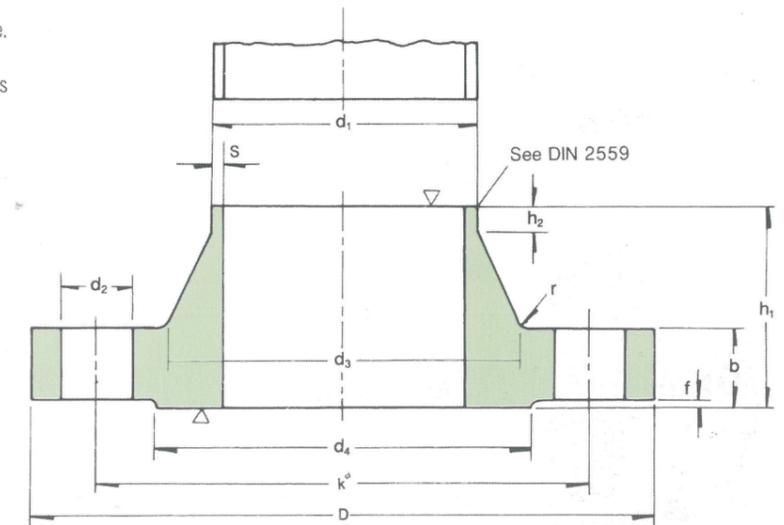
\*)Outer diameter of pipe corresponds to ISO recommendation R64.  
Material (to be specified by orderer):  
St.37-2 by DIN 17100 for temperature ≤ 300°C.

Weldable heat-treated steel for temperature > 300°C.  
Process: Machining the outside diameter, bore, gasket surface, bevel end for welding, and bolt holes.

WELDING NECK FLANGE

3-1).Nominal Pressure 16

The flanges with the dimensions of this standard and made of St 37-2 material can be used at maximum 120°C temperature with up to 16 kg/cm<sup>2</sup> of working pressure.  
At higher temperature of 120°C to 300°C, it should be taken into consideration that the material yield point becomes low.



DIMENSIONS IN MM

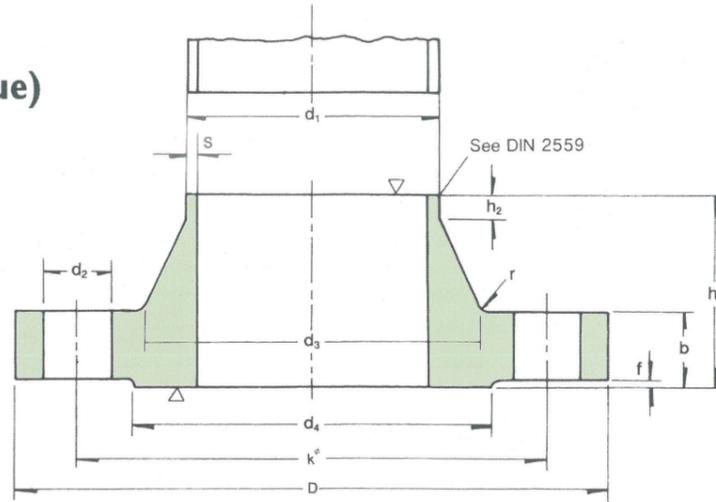
NOMINAL PRESSURE 16																
PIPE		FLANGE				NECK				RAISED FACE		DRILLING			APPROX. WEIGHT (7.85 kg/dm <sup>3</sup> ) kg	
NOMINAL SIZE	d <sub>1</sub>	D	b	k	h <sub>1</sub>	d <sub>3</sub>	s	r	h <sub>2</sub>	d <sub>4</sub>	f	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>		
10	14 17.2*)	90	14	60	35	25 28	1.8	4	6	40	2	4	M12 (1/2")	14	0.580	
15	20 21.3*)	95	14	65	35	30 32	2	4	6	45	2	4	M12 (1/2")	14	0.648	
20	25 26.9*)	105	16	75	38	38 40	2.3	4	6	58	2	4	M12 (1/2")	14	0.952	
25	30 33.7*)	115	16	85	38	42 45	2.6	4	6	68	2	4	M12 (1/2")	14	1.14	
32	38 42.4*)	140	16	100	40	52 56	2.6	6	6	78	2	4	M16 (5/8")	18	1.69	
40	44.5 48.3*)	150	16	110	42	60 64	2.6	6	7	88	3	4	M16 (5/8")	18	1.86	
50	57 60.3*)	165	18	125	45	72 75	2.9	6	8	102	3	4	M16 (5/8")	18	2.53	
65	76.1*)	185	18	145	45	90	2.9	6	10	122	3	4	M16 (5/8")	18	3.06	
80	88.9*)	200	20	160	50	105	3.2	8	10	138	3	4/8 <sup>1)</sup>	M16 (5/8")	18	3.70	
100	108 114.3*)	220	20	180	52	125 131	3.6	8	12	158	3	8	M16 (5/8")	18	4.62	
125	133 139.7*)	250	22	210	55	150 156	4	8	12	188	3	8	M16 (5/8")	18	6.30	
150	159 168.3*)	285	22	240	55	175 184	4.5	10	12	212	3	8	M20 (3/4")	23	7.75	

\*)Outer diameter of pipe corresponds to ISO recommendation R64.  
Material (to be specified by orderer):  
St.37-2 by DIN 17100 for temperature ≤ 300°C.

Weldable heat-treated steel for temperature 300°C.  
Process: Machining the outside diameter, bore, gasket surface, bevel end for welding, and bolt holes.

WELDING NECK FLANGE

3-2).Nominal Pressure 16(Continue)



DIMENSIONS IN MM

NOMINAL PRESSURE 16(CONTINUE)																
NOMINAL SIZE	PIPE		FLANGE			NECK				RAISED FACE		DRILLING			APPROX. WEIGHT (7.85 kg/dm <sup>3</sup> ) kg	
	d <sub>1</sub>	D	b	k	h <sub>1</sub>	d <sub>3</sub>	s	r	h <sub>2</sub>	d <sub>4</sub>	f	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>		
(175)	191 193.7*)	315	24	270	60	208 210	5.4	10	12	242	3	8	M20	(3/4")	23	10.0
200	216 219.1*)	340	24	295	62	232 235	5.9	10	16	268	3	12	M20	(3/4")	23	11.0
250	267 273*)	405	26	355	70	285 292	6.3	12	16	320	3	12	M24	(7/8")	27	15.6
300	318 323.9*)	460	28	410	78	338 344	7.1	12	16	378	4	12	M24	(7/8")	27	22.0
350	355.6*) 368	520	30	470	82	390	8	12	16	438	4	16	M24	(7/8")	27	28.7
400	406.4*) 419	580	32	525	85	445	8	12	16	490	4	16	M27	(1")	30	36.3
500	508*) 521	715	34	650	90	548	8	12	16	610	4	20	M30	(1 1/8")	33	59.3
600	609.6*) 622	840	36	770	95	652	8.8	12	18	725	5	20	M33	(1 1/4")	36	73.4
700	711.2*) 720	910	36	840	100	755	8.8	12	18	795	5	24	M33	(1 1/4")	36	75.0
800	812.8*) 820	1025	38	950	105	855	10	12	20	900	5	24	M36	(1 3/8")	39	99.0
900	914.4*) 920	1125	40	1050	110	955	10	12	20	1000	5	28	M36	(1 3/8")	39	119
1000	1016*) 1020	1255	42	1170	120	1058	10	16	22	1115	5	28	M39	(1 1/2")	42	159
1200	1220	1485	48	1390	130	1262	12.5	16	30	1330	5	32	M45	(1 3/4")	48	243
1400	1420	1685	52	1590	145	1465	14.2	16	30	1530	5	36	M45	(1 3/4")	48	323
1600	1620	1930	58	1820	160	1668	16	16	35	1750	5	40	M52	(2")	56	479
1800	1820	2130	62	2020	170	1870	17.5	16	35	1950	5	44	M52	(2")	56	599
2000	2020	2345	66	2230	180	2072	20	16	40	2150	5	48	M56	(2 1/4")	62	719

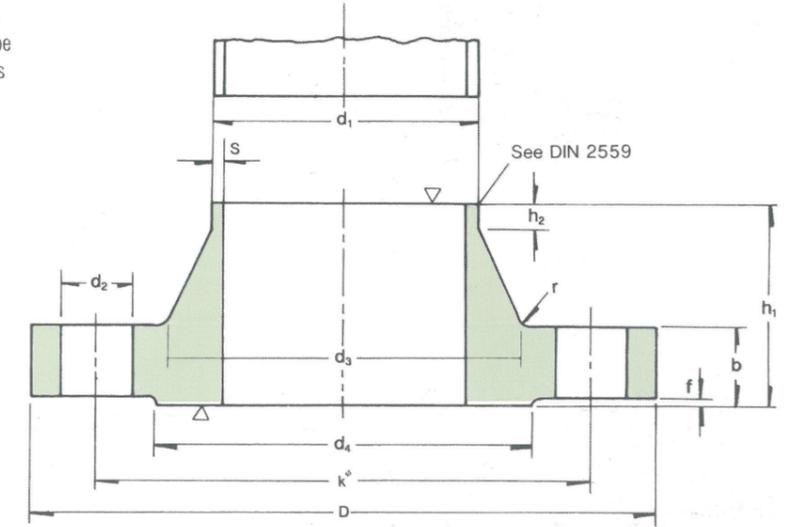
\*)Outer diameter of pipe corresponds to ISO recommendation R64.  
Material (to be specified by orderer):  
St.37-2 by DIN 17100 for temperature ≤ 300° C.

Weldable heat-treated steel for temperature >300° C.  
Process: Machining the outside diameter, bore, gasket surface, bevel end for welding, and bolt holes.

WELDING NECK FLANGE

4).Nominal Pressure 25

The flanges with the dimensions of this standard and made of St 37-2 material can be used at maximum 120°C temperature with up to 25 kg/cm<sup>2</sup> of working pressure.  
At higher temperature from 120°C to 300°C, it should be taken into consideration that the material yield point becomes low.



DIMENSIONS IN MM

NOMINAL PRESSURE 25																
NOMINAL SIZE	PIPE		FLANGE			NECK				RAISED FACE		DRILLING			APPROX. WEIGHT (7.85 kg/dm <sup>3</sup> ) kg	
	d <sub>1</sub>	D	b	k	h <sub>1</sub>	d <sub>3</sub>	s	r	h <sub>2</sub>	d <sub>4</sub>	f	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>		
(175)	191 193.7*)	330	28	280	75	215 218	5.6	10	15	248	3	12	M24	(7/8")	27	13.4
200	216 219.1*)	360	30	310	80	240 244	6.3	10	16	278	3	12	M24	(7/8")	27	17.0
250	267 273*)	425	32	370	88	292 298	7.1	12	18	335	3	12	M27	(1")	30	24.4
300	318 323.9*)	485	34	430	92	345 352	8	12	18	395	4	16	M27	(1")	30	31.2
350	368 355.6*)	555	38	490	100	398	8	12	20	450	4	16	M30	(1 1/8")	33	45.0
400	419 406.4*)	620	40	550	110	452	8.8	12	20	505	4	16	M33	(1 1/4")	36	58.7
500	521 508*)	730	44	660	125	558	10	12	20	615	4	20	M33	(1 1/4")	36	86.1
600	622 609.6*)	845	46	770	125	660	11	12	20	720	5	20	M36	(1 3/8")	39	101
700	720 711.2*)	960	46	875	125	760	12.5	12	20	820	5	24	M39	(1 1/2")	42	134
800	820 812.8*)	1085	50	990	135	865	14.2	12	22	930	5	24	M45	(1 3/4")	48	183
900	920 914.4*)	1185	54	1090	145	968	16	12	24	1030	5	28	M45	(1 3/4")	48	232
1000	1020 1016*)	1320	58	1210	155	1070	17.5	16	24	1140	5	28	M52	(2")	56	302

Refer to DIN 2635 for nominal size 10-150  
Size in parentheses should preferably be avoided.  
\*)Outer diameter of pipe corresponds to ISO recommendation R64.  
Material (to be specified by orderer):

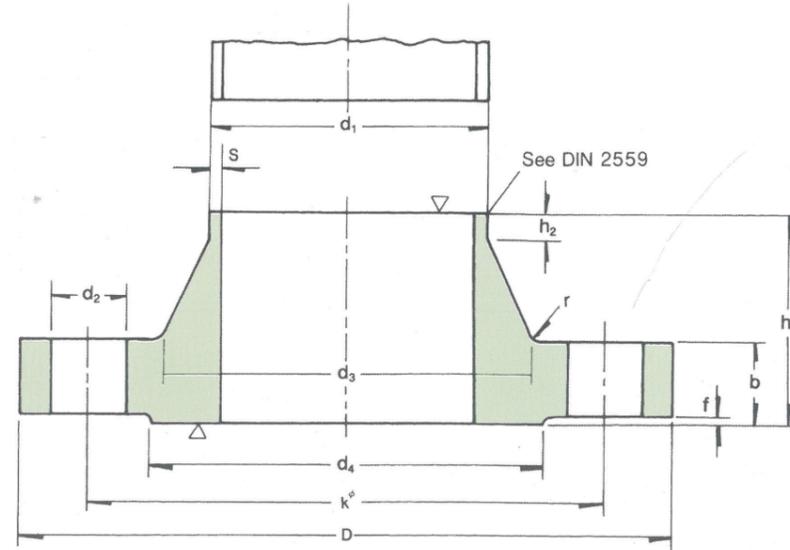
St.37-2 by DIN 17100 for temperature ≤ 300° C.  
Weldable heat-treated steel for temperature >300° C.  
Process: Machining the outside diameter, bore, gasket surface, bevel end for welding, and bolt holes.

WELDING NECK FLANGE

5-1).Nominal Pressure 40

The flanges with the dimensions of this standard and made of St 37-2 can be used at maximum 120°C temperature with 10 kg/cm<sup>2</sup> of working pressure.

At higher temperature of 120°C to 300°C, it should be taken into consideration that the material yield point becomes low.



DIMENSIONS IN MM

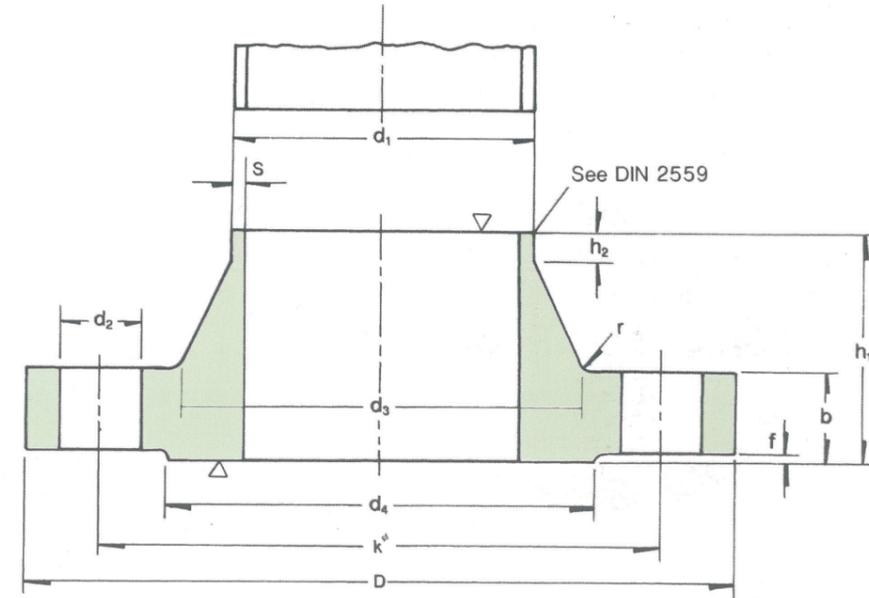
NOMINAL PRESSURE 40																		
NOMINAL SIZE	PIPE					FLANGE				NECK			RAISED FACE		DRILLING			APPROX. WEIGHT (7.85 kg/dm <sup>3</sup> )
	d <sub>1</sub>	D	b	k	h <sub>1</sub>	d <sub>3</sub>	s	r	h <sub>2</sub>	d <sub>4</sub>	f	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>				
10	14 (17.2*)	90	16	60	35	25 28	1.8	4	6	40	2	4	M12 (1/2")	14	0.661			
15	20 (21.3*)	95	16	65	38	30 32	2	4	6	45	2	4	M12 (1/2")	14	0.746			
20	25 (26.9*)	105	18	75	40	38 40	2.3	4	6	58	2	4	M12 (1/2")	14	1.06			
25	30 (33.7*)	115	18	85	40	42 46	2.6	4	6	68	2	4	M12 (1/2")	14	1.29			
32	38 (42.4*)	140	18	100	42	52 56	2.6	6	6	78	2	4	M16 (5/8")	18	1.88			
40	44.5 (48.3*)	150	18	110	45	60 64	2.6	6	7	88	3	4	M16 (5/8")	18	2.33			
50	57 (60.3*)	165	20	125	48	72 75	2.9	6	8	102	3	4	M16 (5/8")	18	2.82			
65	76.1*)	185	22	145	52	90	2.9	6	10	122	3	8	M16 (5/8")	18	3.74			
80	88.9*)	200	24	160	58	105	3.2	8	12	138	3	8	M16 (5/8")	18	4.75			
100	108 (114.3*)	235	24	190	65	125 134	3.6	8	12	162	3	8	M20 (3/4")	23	6.52			

Size in parentheses should preferably be avoided.  
 \*)Outer diameter of pipe corresponds to ISO recommendation R64.  
 Material (to be specified by orderer):

St.37-2 by DIN 17100 for temperature ≤300°C.  
 Weldable heat-treated steel for temperature > 300°C.  
 Process: Machining the outside diameter, bore, gasket surface, bevel end for welding, and bolt holes.

WELDING NECK FLANGE

5-2).Nominal Pressure 40(Continue)



DIMENSIONS IN MM

NOMINAL PRESSURE 40(CONTINUE)																		
NOMINAL SIZE	PIPE					FLANGE				NECK			RAISED FACE		DRILLING			APPROX. WEIGHT (7.85 kg/dm <sup>3</sup> )
	d <sub>1</sub>	D	b	k	h <sub>1</sub>	d <sub>3</sub>	s	r	h <sub>2</sub>	d <sub>4</sub>	f	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>				
125	133 (139.7*)	270	26	220	68	155 162	4	8	12	188	3	8	M24 (7/8")	27	9.07			
150	159 (168.3*)	300	28	250	75	182 192	4.5	10	12	218	3	8	M24 (7/8")	27	11.8			
(175)	191 (193.7*)	350	32	295	82	215 218	5.6	10	15	260	3	12	M27 (1")	30	18.2			
200	216 (219.1*)	375	34	320	88	240 244	6.3	10	16	285	3	12	M27 (1")	30	21.5			
250	267 (273*)	450	38	385	105	298 306	7.1	12	18	345	3	12	M30 (11/8")	33	34.9			
300	318 (323.9*)	515	42	450	115	352 362	8	12	18	410	4	16	M30 (11/8")	33	49.7			
350	368 (355.6*)	580	46	510	125	408	8.8	12	20	460	4	16	M33 (11/4")	36	68.1			
400	419 (406.4*)	660	50	585	135	462	11	12	20	535	4	16	M36 (13/8")	39	96.5			
500	521 (508*)	755	52	670	140	562	14.2	12	20	615	4	20	M39 (11/2")	42	117			

Size in parentheses should preferably be avoided  
 \*)Outer diameter of pipe corresponds to ISO recommendation R64.  
 Material (to be specified by orderer):

St.37-2 by DIN 17100 for temperature ≤300°C.  
 Weldable heat-treated steel for temperature >300°C.  
 Process: Machining the outside diameter, bore, gasket surface, bevel end for welding, and bolt holes.

WELDING NECK FLANGE

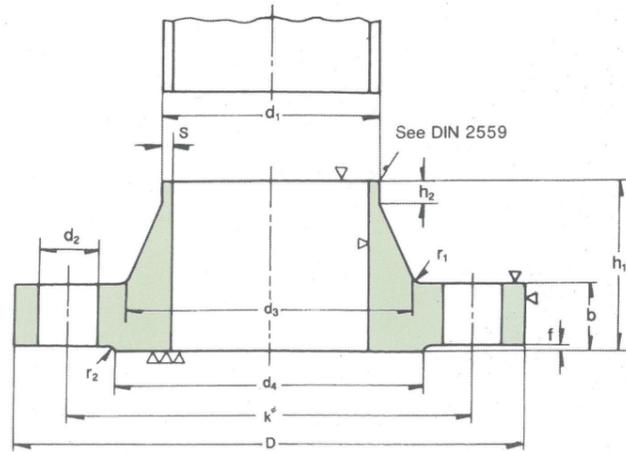
6).Nominal Pressure 64

The flanges with the dimensions of this standard and made of RSt. 42-2 can be used at maximum 120°C temperature with up to 64 kg/cm<sup>2</sup> of working pressure.

At higher temperature of 120°C to 300°C, it should be taken into consideration that the material yield point becomes low.

GASKET SURFACE, DIN 2526 :

- Raised face.....(Form E)
- Groove & tongue type, DIN 2512 (Form N and Form F)
- Male & female type, DIN 2513 (Form V13 and Form R13)
- Male & female type, DIN 2514 (Form V14 and Form R14)
- Male & female type, DIN 2517 (Form V17 and Form R17)
- Gasket surface of lens-form, sealing, DIN 2696....(Form L)



DIMENSIONS IN MM

NOMINAL PRESSURE 64

NOMINAL SIZE	PIPE					FLANGE					NECK				RAISED FACE			DRILLING			APPROX. WEIGHT (7.85 kg/dm <sup>3</sup> ) kg ≈
	d <sub>1</sub>	D	b	k	h <sub>1</sub>	d <sub>2</sub>	D	b	k	h <sub>1</sub>	d <sub>3</sub>	s	r <sub>1</sub>	h <sub>2</sub>	d <sub>4</sub>	f	r <sub>2</sub>	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>	
50	57 60.3*	180	26	135	62	78 82	2.9	6	10	95	3	1.5	4	M20 (3/4")	23	4.55					
65	76.1*	205	26	160	68	98	3.2	6	12	120	3	1.5	8	M20 (3/4")	23	5.73					
80	88.9*	215	28	170	72	112	3.6	8	12	130	3	1.5	8	M20 (3/4")	23	6.69					
100	108 114.3*	250	30	200	78	132 138	4	8	12	160	3	1.5	8	M24 (7/8")	27	9.66					
125	133 139.7*	295	34	240	88	162 168	4.5	8	12	185	3	1.5	8	M27 (1")	30	15.1					
150	159 168.3*	345	36	280	95	192 202	5.6	10	12	215	3	1.5	8	M30 (1 1/8")	33	21.9					
(175)	191 193.7*	375	40	310	105	225 228	6.3	10	16	245	3	1.5	12	M30 (1 1/8")	33	23.7					
200	216 219.1*	415	42	340	110	252 256	7.1	10	16	270	3	1.5	12	M33 (1 1/4")	36	34.9					
250	267 273*	470	46	400	125	310 316	8.8	12	18	325	3	1.5	12	M33 (1 1/4")	36	49.6					
300	318 323.9*	530	52	460	140	365 372	11	12	18	375	4	2	16	M33 (1 1/4")	36	68.7					
350	368 355.6*	600	56	525	150	420	12.5	12	20	435	4	2	16	M36 (1 3/8")	39	94.6					
400	419 406.4*	670	60	585	160	475	14.2	12	20	485	4	2	16	M39 (1 1/2")	42	124					

\*)Outer diameter of pipe corresponds to ISO recommendation R64.  
Material (to be specified by orderer):  
RSt.42-2 by DIN 17100 for temperature ≤ 300°C.  
Weldable heat-treated steel for temperature > 300°C.

Process: Machining the outside diameter, bore, gasket surface, bevelend for welding, and bolt holes. at the outside diameter. company mark, nominal size, nominal pressure, and material.

WELDING NECK FLANGE

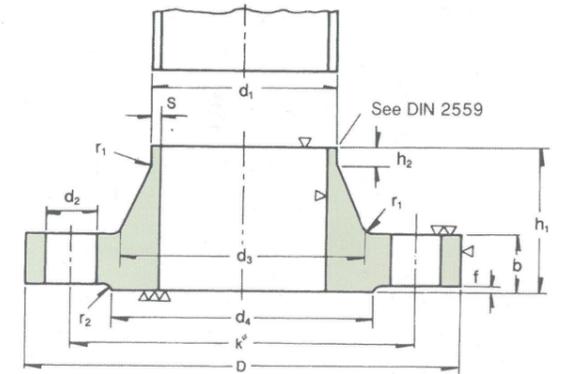
7).Nominal Pressure 100

The flanges with the dimensions of this standard and made of RSt 42-2 can be used at maximum 120°C temperature with up to 100 kg/cm<sup>2</sup> of working pressure.

At higher temperature of 120°C to 300°C, it should be taken into consideration that the material yield point becomes low.

GASKET SURFACE, DIM 2526 :

- Raised face(Form E)
- Groove & tongue type, DIN 2512(Form N and Form F)
- Male & female type, DIN 2513(Form V13 and Form R13)
- Male & female type, DIN 2514(Form V14 and Form R14)
- Male & female type, DIN 2517(Form V17 and Form R17)
- Gasket surface with tapered collar for special welding. DIN 2695(Form M)
- Gasket surface of lens-form,sealing, DIN 2696(Form L)



DIMENSIONS IN MM

NOMINAL PRESSURE 100

NOMINAL SIZE	PIPE					FLANGE					NECK				RAISED FACE			DRILLING			APPROX. WEIGHT (7.85 kg/dm <sup>3</sup> ) kg ≈
	d <sub>1</sub>	D	b	k	h <sub>1</sub>	d <sub>2</sub>	D	b	k	h <sub>1</sub>	d <sub>3</sub>	s	r <sub>1</sub>	h <sub>2</sub>	d <sub>4</sub>	f	r <sub>2</sub>	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>	
10	14 17.2*	100	20	70	45	28 32	1.8	4	6	40	2	1	4	M12 (1/2")	14	1.09					
15	20 21.3*	105	20	75	45	32 34	2	4	6	45	2	1	4	M12 (1/2")	14	1.19					
25	30 33.7*	140	24	100	58	48 52	2.6	4	8	65	2	1	4	M16 (5/8")	18	2.66					
32	38 42.4*	155	24	110	60	58 62	2.6	6	8	75	2	1	4	M20 (3/4")	23	3.20					
40	44.5 48.3*	170	26	125	62	65 70	2.9	6	10	85	3	1.5	4	M20 (3/4")	23	4.09					
50	57 60.3*	195	28	145	68	86 90	3.2	6	10	95	3	1.5	4	M24 (7/8")	27	5.98					
65	76.1*	220	30	170	76	108	3.6	6	12	120	3	1.5	8	M24 (7/8")	27	7.91					
80	88.9*	230	32	180	78	120	4	8	12	130	3	1.5	8	M24 (7/8")	27	8.95					
100	108 114.3*	265	36	210	90	145 150	5	8	12	160	3	1.5	8	M27 (1")	30	13.7					
125	133 139.7*	315	40	250	105	180	6.3	8	12	185	3	1.5	8	M30 (1 1/8")	33	22.7					
150	159 168.3*	355	44	290	115	210	7.1	10	12	215	3	1.5	12	M30 (1 1/8")	33	30.2					
(175)	191 193.7*	385	48	320	127	245	8.8	10	16	245	3	1.5	12	M30 (1 1/8")	33	38.9					
200	216 219.1*	430	52	360	130	278	10	10	16	270	3	1.5	12	M33 (1 1/4")	36	52.8					
250	267 273*	505	60	430	157	340	12.5	12	18	325	3	1.5	12	M36 (1 3/8")	39	81.4					
300	318 323.9*	585	68	500	170	400	14.2	12	18	375	4	2	16	M39 (1 1/2")	42	122					
350	368 355.6*	655	74	560	189	460	16	12	20	435	4	2	16	M45 (1 3/4")	48	165					

Size in parentheses should preferably be avoided  
\*)Outer diameter of pipe corresponds to ISO recommendation R64.  
Material (to be specified by orderer):  
RSt.42-2 by DIN 17100 for temperature ≤ 300°C.  
Weldable heat-treated steel for temperature > 300°C.

Process: Machining the outside diameter, bore, gasket surface, bevel end for welding, spot face for not, and bolt holes.  
Marking: Every flange should be marked with the following at the outside diameter:  
Company mark, nominal size, nominal pressure, and material.

WELDING NECK FLANGE

8).Nominal Pressure 160

The flanges with the dimensions of this standard and made of RSt. 42-2 can be used at maximum 120°C temperature with up to 160 kg/cm<sup>2</sup> of working pressure.

At higher temperature of 120°C to 300°C, it should be taken into consideration that the material yield point becomes low.

GASKET SURFACE, DIN 2526 :

Raised face(Form E)

Groove & tongue type, DIN 2512(Form N and Form F)

Male & female type, DIN 2513(Form V13 and Form R13)

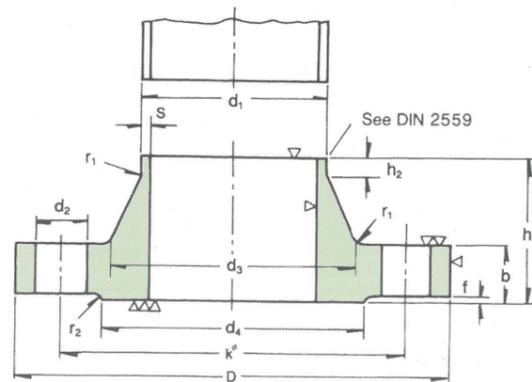
Male & female type, DIN 2514(Form V14 and Form R14)

Male & female type, DIN 2517(Form V17 and Form R17)

Gasket surface with tapered collar for special welding.

DIN 2695(Form M)

Gasket surface of lens-form,sealing, DIN 2696(Form L)



DIMENSIONS IN MM

NOMINAL PRESSURE 160

PIPE NOMINAL SIZE	FLANGE					NECK				RAISED FACE				DRILLING			APPROX. WEIGHT (7.85 kg/dm <sup>3</sup> ) kg
	d <sub>1</sub>	D	b	k	h <sub>1</sub>	d <sub>3</sub>	s	r <sub>1</sub>	h <sub>2</sub>	d <sub>4</sub>	f	r <sub>2</sub>	d <sub>5</sub> <sup>1)</sup>	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>	
10	14 17.2*)	100	20	70	45	28 32	2	4	6	40	2	1	18	4	M12 (1/2")	14	1.09
15	20 21.3*)	105	20	75	45	32 34	2	4	6	45	2	1	24	4	M12 (1/2")	14	1.19
25	30 33.7*)	140	24	100	58	48 52	2.9	4	8	65	2	1	35	4	M16 (5/8")	18	2.66
40	44.5 48.3*)	170	28	125	64	65 70	3.6	6	10	85	3	1.5	52	4	M20 (3/4")	23	4.30
50	57 60.3*)	195	30	145	75	86 90	4	6	10	95	3	1.5	63	4	M24 (7/8")	27	6.25
65	76.1*)	220	34	170	82	108	5	6	12	105	3	1.5	85	8	M24 (7/8")	27	8.35
80	88.9*)	230	36	180	86	120	6.3	8	12	125	3	1.5	97	8	M24 (7/8")	27	9.75
100	108 114.3*)	265	40	210	100	145 150	8	8	12	145	3	1.5	124	8	M27 (1")	30	14.8
125	(146) 139.7*)	315	44	250	115	180	10	8	14	185	3	1.5	153	8	M30 (1 1/8")	33	23.0
150	(171) 168.3*)	355	50	290	128	210	12.5	10	14	215	3	1.5	181	12	M30 (1 1/8")	33	32.5
(175)	(191) 193.7*)	390	54	320	138	245	14.2	10	16	235	3	1.5	218	12	M33 (1 1/4")	36	43.5
200	216 219.1*)	430	60	360	140	278	16	10	16	260	3	1.5	243	12	M33 (1 1/4")	36	59.4
250	267 273*)	515	68	430	155	340	20	12	18	325	3	1.5	298	12	M39 (1 1/2")	42	94.5
300	318 323.9*)	585	78	500	175	400	22.2	12	18	375	4	2	345	16	M39 (1 1/2")	42	136

1)Diameter for lens sealing by DIN 2696

\*)Outer diameter of pipe corresponds to ISO recommendation R64.

Material (to be specified by orderer):

RSt.42-2 by DIN 17100 for temperature ≤ 300°C.

Weldable heat-treated steel for temperature > 300°C.

Process: Machining the outside diameter, bore, gasket surface, bevel end for welding, spot face for nut, and bolt holes.

Marking: Every flange should be marked with the following at the outside diameter:

Company mark, nominal size, nominal pressure, and material.

WELDING NECK FLANGE

9).Nominal Pressure 250

The flanges with the dimensions of this standard and made of RSt. 42-2 can be used at maximum 120°C temperature with up to 250 kg/cm<sup>2</sup> of working pressure.

At higher temperature of 120°C to 300°C, it should be taken into consideration that the material yield point becomes low.

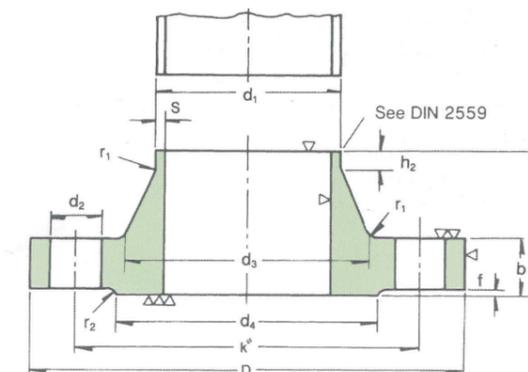
GASKET SURFACE, DIM 2526 :

※ Raised face(Form E)

※ Gasket surface with tapered collar for special welding.

DIN 2695(Form M)

※ Gasket surface of lens-form,sealing, DIN 2696(Form L)



DIMENSIONS IN MM

NOMINAL PRESSURE 250

PIPE NOMINAL SIZE	FLANGE					NECK				RAISED FACE				DRILLING			APPROX. WEIGHT (7.85 kg/dm <sup>3</sup> ) kg
	d <sub>1</sub>	D	b	k	h <sub>1</sub>	d <sub>3</sub>	s	r <sub>1</sub>	h <sub>2</sub>	d <sub>4</sub>	f	r <sub>2</sub>	d <sub>5</sub> <sup>1)</sup>	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>	
15	20 21.3*)	130	26	90	60	48	2.6	4	6	45	2	1	24	4	M16 (5/8")	18	2.47
25	30 33.7*)	150	28	105	65	60	3.6	4	8	65	2	1	35	4	M20 (3/4")	23	3.51
40	44.5 48.3*)	185	34	135	80	84	5	6	10	85	3	1.5	52	4	M24 (7/8")	27	6.45
50	57 60.3*)	200	38	150	85	95	6.3	6	10	95	3	1.5	63	8	M24 (7/8")	27	7.85
65	76.1*)	230	42	180	95	124	8	6	12	105	3	1.5	85	8	M24 (7/8")	27	12.2
80	95 101.6*)	255	46	200	102	136	11	8	12	130	3	1.5	97	8	M27 (1")	30	16.0
100	121 127*)	300	54	235	120	164	14.2	8	14	160	3	1.5	124	8	M30 (1 1/8")	33	26.3
125	(146) 152.4*)	340	60	275	140	200	16	8	16	185	3	1.5	153	12	M30 (1 1/8")	33	37.8
150	(171) 177.8*)	390	68	320	160	240	17.5	10	18	215	3	1.5	181	12	M33 (1 1/4")	36	58.0
(175)	216 219.1*)	430	74	355	170	270	22.2	10	22	270	3	1.5	218	12	M36 (1 3/8")	39	73.6
200	(241) 244.5*)	485	82	400	190	305	25	10	25	300	3	1.5	243	12	M39 (1 1/2")	42	105
250	(292) 298.5*)	585	100	490	215	385	32	12	30	350	3	1.5	298	16	M45 (1 3/4")	48	182

Size in parentheses should preferably be avoided

\*)Outer diameter of pipe corresponds to ISO recommendation R64.

1)Diameter for the lens sealing by DIN 2696. Refer to DIN 2629 for nominal size 10.

Material (to be specified by orderer):

RSt.42-2 by DIN 17100 for temperature ≤ 300°C.

Weldable heat-treated steel for temperature > 300°C.

Process: Machining the outside diameter, bore, gasket surface, bevel end for welding, spot face for nut, and bolt holes.

Marking: Every flange should be marked with the following data at the outside diameter:

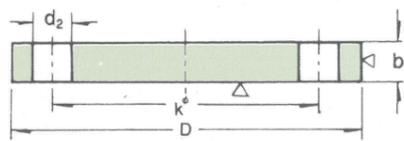
Company mark, nominal size, nominal pressure, and material.

# DIN FLANGE DIN 2527

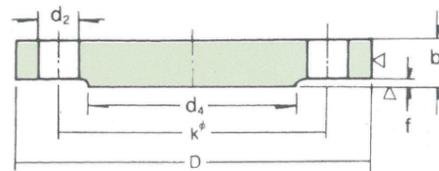
## BLIND FLANGE Nominal Pressure 6 to 40 Scope of Application

The blind flange having the dimensions of this standard and made of St.37 can be used at maximum 120°C temperature and with working pressure stated in the table for the nominal temperature. For use at a temperature higher than 120 °C, it should be taken into consideration that the material yield point becomes low.

Form B



Form C



Drawing of a blind flange with its face raised (Form C) for the nominal size 250 and nominal pressure 6, made of St 37.

DIMENSIONS IN MM

NOMINAL PRESSURE 6											
SIZE	FLANGE			RAISED FACE		DRILLING			APPROX. WEIGHT (7.85 kg/dm <sup>3</sup> ) FOR		
	D	b	k	d <sub>4</sub>	f	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>	FORM B KG ≈	FORM C KG ≈	
10	75	12	50	35	2	4	M10	-	11.5	0.38	0.33
15	80	12	55	40	2	4	M10	-	11.5	0.44	0.38
20	90	14	65	50	2	4	M10	-	11.5	0.65	0.59
25	100	14	75	60	2	4	M10	-	11.5	0.82	0.74
32	120	14	90	70	2	4	M12	(1/2")	14	1.17	1.07
40	130	14	100	80	3	4	M12	(1/2")	14	1.39	1.21
50	140	14	110	90	3	4	M12	(1/2")	14	1.62	1.43
65	160	14	130	110	3	4	M12	(1/2")	14	2.44	2.21
80	190	16	150	128	3	4	M16	(5/8")	16	3.43	3.09
100	210	16	170	148	3	4	M16	(5/8")	18	4.76	4.37
125	240	18	200	178	3	8	M16	(5/8")	18	6.11	5.68
150	265	18	225	202	3	8	M16	(5/8")	18	7.51	7.02
(175)	295	20	255	232	3	8	M16	(5/8")	18	10.4	9.85
200	320	20	280	258	3	8	M16	(5/8")	18	12.3	11.7
250	375	22	330	312	3	12	M16	(5/8")	18	18.3	17.6
300	440	22	395	365	4	12	M20	(3/4")	23	25.3	24.0
350	490	22	445	415	4	12	M20	(3/4")	23	31.6	30.1
400	540	22	495	465	4	16	M20	(3/4")	23	38.4	36.4
500	645	24	600	570	4	20	M20	(3/4")	23	60.4	58.1
NOMINAL PRESSURE 10											
200	340	24	295	268	3	8	M20	(3/4")	23	16.5	15.6
250	395	26	350	320	3	12	M20	(3/4")	23	24.0	23.1
300	445	26	400	370	4	12	M20	(3/4")	23	30.9	29.4
350	505	26	460	430	4	16	M20	(3/4")	23	40.6	38.0
400	565	26	515	482	4	16	M24	(7/8")	27	49.4	47.5
500	670	28	620	585	4	20	M24	(7/8")	27	75.0	72.7

# DIN FLANGE DIN 2527



DIMENSIONS IN MM

## NOMINAL PRESSURE 16 \*) 4 bolts for nominal pressure 10, DIN 2527

SIZE	FLANGE			RAISED FACE		DRILLING			APPROX. WEIGHT (7.85 kg/dm <sup>3</sup> ) FOR		
	D	b	K	d <sub>4</sub>	f	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>	FORM B KG ≈	FORM C KG ≈	
10	90	14	60	40	2	4	M12	(1/2")	14	0.63	0.56
15	95	14	65	45	2	4	M12	(1/2")	14	0.72	0.64
20	105	16	75	58	2	4	M12	(1/2")	14	1.01	0.93
25	115	16	85	68	2	4	M12	(1/2")	14	1.23	1.13
32	140	16	100	78	2	4	M16	(5/8")	18	1.80	1.66
40	150	16	110	88	3	4	M16	(5/8")	18	2.09	1.85
50	165	18	125	102	3	4	M16	(5/8")	18	2.88	2.59
65	185	18	145	122	3	4	M16	(5/8")	18	3.66	3.33
80	200	20	160	138	3	4*/8	M16	(5/8")	18	4.77	4.34
100	220	20	180	158	3	8	M16	(5/8")	18	5.65	5.26
125	250	22	210	188	3	8	M16	(5/8")	18	8.42	7.67
150	285	22	240	212	3	8	M20	(3/4")	23	10.4	9.85
(175)	315	24	270	242	3	8	M20	(3/4")	23	14.0	13.5
200	340	24	295	268	3	12	M20	(3/4")	23	16.1	15.6
250	405	26	355	320	3	12	M24	(7/8")	27	24.9	23.9
300	460	28	410	378	4	12	M24	(7/8")	27	35.1	33.6
350	520	30	470	438	4	16	M24	(7/8")	27	47.8	46.2
400	580	32	525	490	4	16	M27	(1")	30	63.5	61.5
500	715	34	650	610	4	20	M30	(1 1/8")	33	102	99.5

## NOMINAL PRESSURE 25 For nominal size 10-150, refer to nominal pressure 40.

(175)	330	28	280	248	3	12	M24	(7/8")	27	17.3	16.5
200	360	30	310	278	3	12	M24	(7/8")	27	22.3	21.5
250	425	32	370	335	3	12	M27	(1")	30	33.5	32.5
300	485	34	430	395	4	16	M27	(1")	30	46.3	44.7
350	555	38	490	450	4	16	M30	(1 1/8")	33	68.0	65.9
400	620	40	550	505	4	16	M33	(1 1/4")	36	89.7	87.0
500	730	44	660	615	4	20	M33	(1 1/4")	36	138	134

## NOMINAL PRESSURE 40

10	90	16	60	40	2	4	M12	(1/2")	14	0.72	0.62
15	95	16	65	45	2	4	M12	(1/2")	14	0.81	0.74
20	105	18	75	58	2	4	M12	(1/2")	14	1.24	1.05
25	115	18	85	68	2	4	M12	(1/2")	14	1.38	1.31
32	140	18	100	78	2	4	M16	(5/8")	18	2.03	1.82
40	150	18	110	88	3	4	M16	(5/8")	18	2.35	2.11
50	165	20	125	102	3	4	M16	(5/8")	18	3.20	2.91
65	185	22	145	122	3	8	M16	(5/8")	18	4.29	4.13
80	200	24	160	138	3	8	M16	(5/8")	18	5.88	5.21
100	235	24	190	162	3	8	M20	(3/4")	23	7.54	7.08
125	270	26	220	188	3	8	M24	(7/8")	27	10.8	10.4
150	300	28	250	218	3	8	M24	(7/8")	27	14.5	13.9
(175)	350	32	295	260	3	12	M27	(1")	30	22.1	21.3
200	375	34	320	285	3	12	M27	(1")	30	27.2	26.2
250	450	38	385	345	3	12	M30	(1 1/8")	33	43.8	43.1
300	515	42	450	410	4	16	M30	(1 1/8")	33	63.3	62.2
350	580	46	510	465	4	16	M33	(1 1/4")	36	89.5	87.2
400	660	50	585	535	4	16	M36	(1 3/8")	39	127	124
500	755	52	670	615	4	20	M39	(1 1/2")	42	172	168

Nominal size in parentheses should preferably be avoided. Screw thread size in parentheses shall not be used for new construction.

Material: St 37 of DIN 17100 (For other material, please specify in the order sheet).

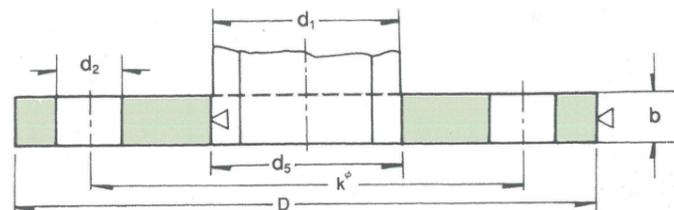
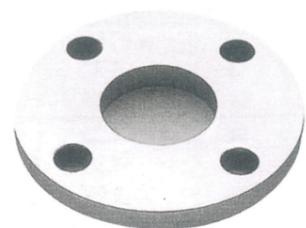
St 37-2 for 12 °C to 300°C temperature; Heat-treated steel for temperature over 300 °C, e.g., C22N or alloyed steel as mentioned for pipes of DIN 17175.

# DIN FLANGE DIN 2573

## PLATE FLANGE

### 1). Nominal Pressure 6

Form A : Gasket Surface Unfinished  
Form B : Gasket Surface Finished



DIMENSIONS IN MM

PIPE		FLANGE				DRILLING			APROX. WEIGHT (7.85 kn/dm <sup>3</sup> ) kg	
NOMINAL SIZE	d <sub>1</sub>	d <sub>5</sub>	D	b <sup>1)</sup>	k	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>		
10	14 17.2*)	14.5 17.7	75	12	50	4	M10	-	11.5	0.363
15	20 21.3*)	20.5 21.8	80	12	55	4	M10	-	11.5	0.41
20	25 26.9*)	25.5 27.4	90	14	65	4	M10	-	11.5	0.60
25	30 33.7*)	30.5 34.2	100	14	75	4	M10	-	11.5	0.74
32	38 42.4*)	38.5 42.9	120	16	90	4	M12	(1/2")	14	1.19
40	44.5 48.3*)	45 48.8	130	16	100	4	M12	(1/2")	14	1.39
50	57 60.3*)	57.5 60.8	140	16	110	4	M12	(1/2")	14	1.53
65	76.1*)	76.6	160	16	130	4	M12	(1/2")	14	1.89
80	88.9*)	89.4	190	18	150	4	M16	(5/8")	18	2.98
100	108 114.3*)	108.5 114.8	210	18	170	4	M16	(5/8")	18	3.46
125	133 139.7*)	133.5 140.2	240	20	200	8	M16	(5/8")	18	4.60
150	159 168.3*)	159.5 168.8	265	20	225	8	M16	(5/8")	18	5.22
200	216 219.1*)	217 220.1	320	22	280	8	M16	(5/8")	18	7.15
250	267 273*)	268 274	375	24	335	12	M16	(5/8")	18	9.61
300	318 323.9*)	319 324.9	440	24	395	12	M20	(3/4")	23	12.6
350	355.6*) 368	356.6 369	490	26	445	12	M20	(3/4")	23	15.6
400	406.4*) 419	407.4 420	540	28	495	16	M20	(3/4")	23	18.4
500	508*) 521	509 522	645	30	600	20	M20	(3/4")	23	24.6

\*) Outside diameter of pipe corresponds to ISO recommendation R64.  
1) By finishing the face, plate thickness "b" will be reduced by 1-1.5mm.

Material: St.37-2, DIN 17100  
A: Face unfinished  
B: Face finished

EXAMPLE OF FIXING METHOD

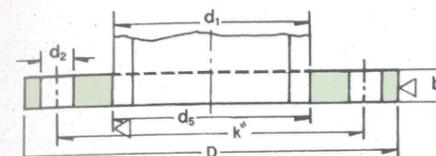


# DIN FLANGE DIN 2576

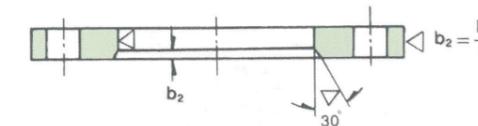
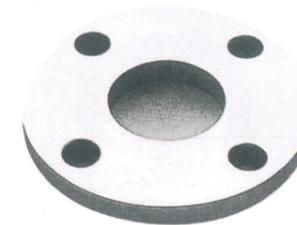
## PLATE FLANGE

### 2). Nominal Pressure 10

The flanges with the dimensions of this standard and made of St. 37-2 can be used with up to 10 kg/cm<sup>2</sup> of working pressure at temperature below 120°C. At the temperature over 120°C, it should be taken into consideration that the material yield point lowers.



Form A : Gasket surface unfinished ~  
Form B : Gasket surface finished ▽



[For Shipbuilders]  
Form A : Gasket surface unfinished ~  
Form B : Gasket surface finished ▽

DIMENSIONS IN MM

PIPE		FLANGE				DRILLING			APROX. WEIGHT (7.85 kn/dm <sup>3</sup> ) kg	
NOMINAL SIZE	d <sub>1</sub>	d <sub>5</sub>	D	b <sub>1</sub> <sup>1)</sup>	k	NUMBER OF HOLES	BOLT DIAMETER	d <sub>2</sub>		
10	14 17.2*)	14.5 17.7	90	14	60	4	M12	(1/2")	14	0.613 1.605
15	20 21.3*)	20.5 21.8	95	14	65	4	M12	(1/2")	14	0.675 0.669
20	25 26.9*)	25.5 27.4	105	16	75	4	M12	(1/2")	14	0.947 0.936
25	30 33.7*)	30.5 34.2	115	16	85	4	M12	(1/2")	14	1.14 1.11
32	38 42.4*)	38.5 42.9	140	16	100	4	M16	(5/8")	18	1.66 1.62
40	44.5 48.3*)	45 48.8	150	16	110	4	M16	(5/8")	18	1.89 1.86
50	57 60.3*)	57.5 60.8	165	18	125	4	M16	(5/8")	18	2.51 2.47
65	76.1*)	76.6	185	18	145	4	M16	(5/8")	18	3.00
80	88.9*)	89.4	200	20	160	4	M16	(5/8")	18	3.79
100	108 114.3*)	108.5 114.8	220	20	180	8	M16	(5/8")	18	4.20 4.03
125	133 139.7*)	133.5 140.2	250	22	210	8	M16	(5/8")	18	5.71 5.46
150	159 168.3*)	159.5 168.8	285	22	240	8	M20	(3/4")	23	6.72 6.57
(175)	191 193.7*)	192 194.7	315	24	270	8	M20	(3/4")	23	8.60 8.45
200	216 219.1*)	217 220.1	340	24	295	8	M20	(3/4")	23	9.50 9.31
250	267 273*)	268 274	395	26	350	12	M20	(3/4")	23	12.5 11.9
300	318 323.9*)	319 324.9	445	26	400	12	M20	(3/4")	23	14.4 13.8
350	355.6*) 368	356.6 369	505	28	460	16	M20	(3/4")	23	20.6 19.0
400	406.4*) 419	407.4 420	565	32	515	16	M24	(7/8")	27	27.9 25.9
500	508*) 521	509 522	670	38	620	20	M24	(7/8")	27	41.1 37.9

\*) Outside diameter of pipe corresponds to ISO recommendation R64.  
Nominal size in parentheses should preferably be avoided.

1) By finishing the face, plate thickness b<sub>1</sub> is reduced by 1-1.5mm.  
Material: St.37-2, DIN 17100  
Process: Machining the outside diameter, bore, and bolt holes.  
A: Gasket surface unfinished

B: Gasket surface finished  
[ For shipbuilders ]  
Machining the outside diameter, bore; and bolt holes; and chamfering the bore edge.  
AS: Gasket surface unfinished  
BS: Gasket surface finished