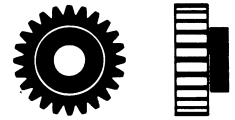
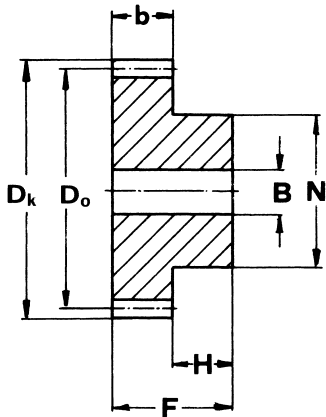
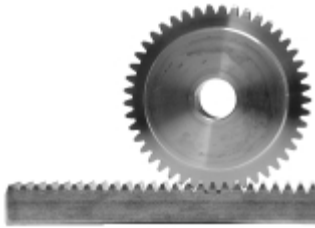


# Metric Spur Gears



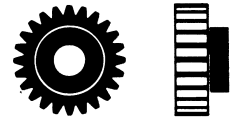
**Module 1** Pressure Angle 20° Material: Steel ETG100 <  $\varnothing$  63mm  
 CK45 - AS1443-1994 1045 >  $\varnothing$  63mm



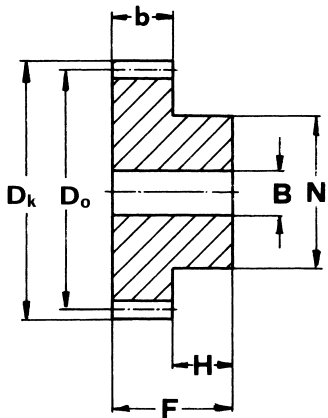
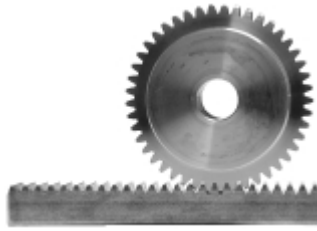
No. of Teeth	Dimensions in mm							Torque Md (Nm)	Part No.
	Predrilled Hole $B_{h7}$	Hub Diam. N	Outside Diam. $D_k$	Pitch Diam. $D_o$	Length Overall F	H	Face Width b		
12	5	9	14	12	25	10	15	0.2	SNB1012
13	5	10	15	13	25	10	15	0.3	SNB1013
14	5	10	16	14	25	10	15	0.3	SNB1014
15	6	12	17	15	25	10	15	0.4	SNB1015
16	6	13	18	16	25	10	15	0.5	SNB1016
17	6	14	19	17	25	10	15	0.6	SNB1017
18	8	15	20	18	25	10	15	0.7	SNB1018
19	8	16	21	19	25	10	15	0.8	SNB1019
20	8	17	22	20	25	10	15	0.9	SNB1020
21	8	18	23	21	25	10	15	1.0	SNB1021
22	8	19	24	22	25	10	15	1.1	SNB1022
23	8	20	25	23	25	10	15	1.2	SNB1023
24	8	20	26	24	25	10	15	1.3	SNB1024
25	8	22	27	25	25	10	15	1.4	SNB1025
26	8	22	28	26	25	10	15	1.5	SNB1026
27	8	23	29	27	25	10	15	1.6	SNB1027
28	8	25	30	28	25	10	15	1.7	SNB1028
29	8	25	31	29	25	10	15	1.8	SNB1029
30	8	25	32	30	25	10	15	1.9	SNB1030
31	10	25	33	31	25	10	15	2.0	SNB1031
32	10	25	34	32	25	10	15	2.1	SNB1032
33	10	25	35	33	25	10	15	2.3	SNB1033
34	10	28	36	34	25	10	15	2.4	SNB1034
35	10	28	37	35	25	10	15	2.6	SNB1035
36	10	28	38	36	25	10	15	2.7	SNB1036
37	10	28	39	37	25	10	15	2.8	SNB1037
38	10	28	40	38	25	10	15	3.0	SNB1038
39	10	28	41	39	25	10	15	3.1	SNB1039
40	10	30	42	40	25	10	15	3.3	SNB1040
41	10	30	43	41	25	10	15	3.4	SNB1041
42	10	30	44	42	25	10	15	3.6	SNB1042
43	10	30	45	43	25	10	15	3.8	SNB1043
44	10	30	46	44	25	10	15	3.9	SNB1044
45	10	30	47	45	25	10	15	4.1	SNB1045
46	10	30	48	46	25	10	15	4.3	SNB1046
47	10	35	49	47	25	10	15	4.5	SNB1047
48	10	35	50	48	25	10	15	4.6	SNB1048
49	10	35	51	49	25	10	15	4.8	SNB1049
50	10	35	52	50	25	10	15	5.0	SNB1050
51	10	35	53	51	25	10	15	5.1	SNB1051
52	10	40	54	52	25	10	15	5.2	SNB1052
53	10	40	55	53	25	10	15	5.4	SNB1053
54	10	40	56	54	25	10	15	5.6	SNB1054
55	10	40	57	55	25	10	15	5.8	SNB1055
56	10	40	58	56	25	10	15	6.0	SNB1056
57	10	40	59	57	25	10	15	6.1	SNB1057
58	10	45	60	58	25	10	15	6.3	SNB1058
59	10	45	61	59	25	10	15	6.5	SNB1059
60	10	50	62	60	25	10	15	6.7	SNB1060
64	10	50	66	64	25	10	15	7.6	SNB1064
72	10	50	74	72	25	10	15	9.7	SNB1072
80	10	50	82	80	25	10	15	11.9	SNB1080

**Notes:** ETG100 is a high strength special steel that does not require heat treating.  
 Use nitriding or tenifer treatment for anti-rust.  
 CK45 is heat treatable for higher performance - nitriding (factor 1.5) or to harden (factor 2.5) the teeth.  
 The listed torques: Md (Nm) are based on a rotation speed of 200rpm.  
 SF = 1.4 (safety factor for tooth root stress).  
 SH = 1.0 (safety factor for Hertzian stress) for continuous operation.  
 All dimensions are subject to change without notice.

# Metric Spur Gears



**Module 1.5** Pressure Angle 20° Material: Steel ETG100 <  $\varnothing$  63mm  
CK45 - AS1443-1994 1045 >  $\varnothing$  63mm



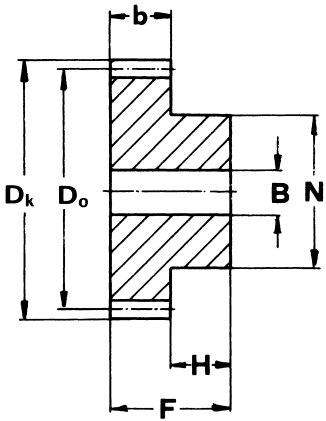
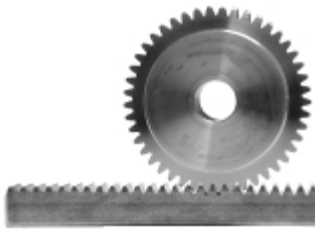
No. of Teeth	Dimensions in mm							Torque Md (Nm)	Part No.
	Predrilled Hole $B_{H7}$	Hub Diam. N	Outside Diam. $D_k$	Pitch Diam. $D_o$	Length Overall F	H	Face Width b		
12	6	13	21.0	18	30	13	17	0.8	SNB1512
13	6	15	22.5	19.5	30	13	17	0.9	SNB1513
14	6	16	24.0	21	30	13	17	1.1	SNB1514
15	8	18	25.5	22.5	30	13	17	1.2	SNB1515
16	8	19	27.0	24	30	13	17	1.4	SNB1516
17	8	20	28.5	25.5	30	13	17	1.7	SNB1517
18	8	22	30.0	27	30	13	17	1.9	SNB1518
19	8	22	31.5	28.5	30	13	17	2.1	SNB1519
20	8	25	33.0	30	30	13	17	2.3	SNB1520
21	8	25	34.5	31.5	30	13	17	2.5	SNB1521
22	8	28	36.0	33	30	13	17	2.8	SNB1522
23	8	28	37.5	34.5	30	13	17	3.0	SNB1523
24	8	30	39.0	36	30	13	17	3.4	SNB1524
25	10	30	40.5	37.5	30	13	17	3.6	SNB1525
26	10	30	42.0	39	30	13	17	3.9	SNB1526
27	10	35	43.5	40.5	30	13	17	4.1	SNB1527
28	10	35	45.0	42	30	13	17	4.4	SNB1528
29	10	35	46.5	43.5	30	13	17	4.8	SNB1529
30	10	35	48.0	45	30	13	17	5.0	SNB1530
31	10	43	49.5	46.5	30	13	17	5.4	SNB1531
32	10	40	51.0	48	30	13	17	5.7	SNB1532
33	10	40	52.5	49.5	30	13	17	6.0	SNB1533
34	10	40	54.0	51	30	13	17	6.2	SNB1534
35	10	40	55.5	52.5	30	13	17	6.6	SNB1535
36	12	45	57.0	54	30	13	17	6.9	SNB1536
37	12	45	58.5	55.5	30	13	17	7.3	SNB1537
38	12	45	60.0	57	30	13	17	7.6	SNB1538
39	12	45	61.5	58.5	30	13	17	8.0	SNB1539
40	12	45	63.0	60	30	13	17	8.4	SNB1540
41	12	50	64.5	61.5	30	13	17	8.8	SNB1541
42	12	50	66.0	63	30	13	17	9.2	SNB1542
43	12	50	67.5	64.5	30	13	17	9.6	SNB1543
44	12	50	69.0	66	30	13	17	10.0	SNB1544
45	12	50	70.5	67.5	30	13	17	10.5	SNB1545
46	12	55	72.0	69	30	13	17	10.9	SNB1546
47	12	55	73.5	70.5	30	13	17	11.4	SNB1547
48	12	55	75.0	72	30	13	17	11.8	SNB1548
49	12	55	76.5	73.5	30	13	17	12.3	SNB1549
50	12	55	78.0	75	30	13	17	12.8	SNB1550
54	12	60	84.0	81.0	30	13	17	14.8	SNB1554
56	12	60	87.0	84	30	13	17	15.8	SNB1556
57	12	60	88.5	85.5	30	13	17	16.4	SNB1557
60	15	60	93.0	90	30	13	17	18.0	SNB1560
64	15	70	99.0	96.0	30	13	17	20.3	SNB1564
72	15	70	111.0	108	30	13	17	24.1	SNB1572
80	15	80	123.0	120	30	13	17	31.1	SNB1580

**Notes:** ETG100 is a high strength special steel that does not require heat treating.  
Use nitriding or tenifer treatment for anti-rust.  
CK45 is heat treatable for higher performance - nitriding (factor 1.5) or to harden (factor 2.5) the teeth.  
The listed torques: Md (Nm) are based on a rotation speed of 200rpm.  
SF = 1.4 (safety factor for tooth root stress).  
SH = 1.0 (safety factor for Hertzian stress) for continuous operation.  
All dimensions are subject to change without notice.

# Metric Spur Gears



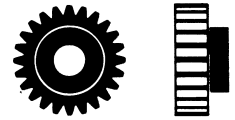
**Module 2 Pressure Angle 20° Material: Steel** ETG100 <  $\varnothing$  63mm  
 CK45 - AS1443-1994 1045 >  $\varnothing$  63mm



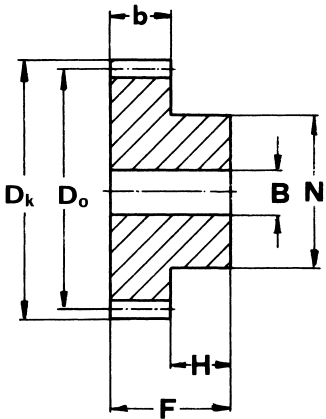
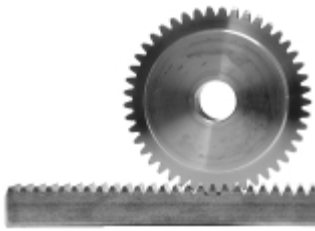
No. of Teeth	Dimensions in mm							Torque Md (Nm)	Part No.
	Predrilled Hole $B_{h7}$	Hub Diam. N	Outside Diam. $D_k$	Pitch Diam. $D_o$	Length Overall F	H	Face Width b		
12	10	18	28	24	35	15	20	1.7	SNB2012
13	10	19	30	26	35	15	20	1.9	SNB2013
14	12	20	32	28	35	15	20	2.2	SNB2014
15	12	24	34	30	35	15	20	2.6	SNB2015
16	12	25	36	32	35	15	20	3.0	SNB2016
17	12	25	38	34	35	15	20	3.5	SNB2017
18	12	30	40	36	35	15	20	4.0	SNB2018
19	12	32	42	38	35	15	20	4.4	SNB2019
20	15	33	44	40	35	15	20	4.9	SNB2020
21	15	34	46	42	35	15	20	5.5	SNB2021
22	15	35	48	44	35	15	20	6.0	SNB2022
23	15	35	50	46	35	15	20	6.6	SNB2023
24	15	40	52	48	35	15	20	7.2	SNB2024
25	15	43	54	50	35	15	20	7.8	SNB2025
26	15	45	56	52	35	15	20	8.1	SNB2026
27	15	45	58	54	35	15	20	8.7	SNB2027
28	15	45	60	56	35	15	20	9.3	SNB2028
29	15	50	62	58	35	15	20	10.0	SNB2029
30	15	50	64	60	35	15	20	10.6	SNB2030
31	20	50	66	62	35	15	20	11.3	SNB2031
32	20	50	68	64	35	15	20	12.0	SNB2032
33	20	50	70	66	35	15	20	12.7	SNB2033
34	20	50	72	68	35	15	20	13.4	SNB2034
35	20	50	74	70	35	15	20	14.1	SNB2035
36	20	50	76	72	30	15	20	14.9	SNB2036
37	20	55	78	74	35	15	20	15.6	SNB2037
38	20	55	80	76	35	15	20	16.5	SNB2038
39	20	60	82	78	35	15	20	17.3	SNB2039
40	20	60	84	80	35	15	20	18.1	SNB2040
41	20	65	86	82	35	15	20	19.0	SNB2041
42	20	65	88	84	35	15	20	19.8	SNB2042
43	20	70	90	86	35	15	20	20.7	SNB2043
44	20	70	92	88	35	15	20	21.6	SNB2044
45	20	70	94	90	35	15	20	22.6	SNB2045
46	20	70	96	92	35	15	20	23.5	SNB2046
47	20	70	98	94	35	15	20	24.5	SNB2047
48	20	70	100	96	35	15	20	25.5	SNB2048
49	20	80	102	98	35	15	20	26.6	SNB2049
50	20	80	104	100	35	15	20	27.6	SNB2050
54	20	80	112	108	35	15	20	31.9	SNB2054
56	25	90	116	112	35	15	20	34.2	SNB2056
57	25	90	118	114	35	15	20	35.4	SNB2057
60	25	90	124	120	35	15	20	39.0	SNB2060
64	25	90	132	128	35	15	20	43.1	SNB2064
72	25	100	148	144	35	15	20	53.8	SNB2072
80	30	100	164	160	35	15	20	66.0	SNB2080

**Notes:** ETG100 is a high strength special steel that does not require heat treating.  
 Use nitriding or tenifer treatment for anti-rust.  
 CK45 is heat treatable for higher performance - nitriding (factor 1.5) or to harden (factor 2.5) the teeth.  
 The listed torques: Md (Nm) are based on a rotation speed of 200rpm.  
 SF = 1.4 (safety factor for tooth root stress).  
 SH = 1.0 (safety factor for Hertzian stress) for continuous operation.  
 All dimensions are subject to change without notice.

# Metric Spur Gears



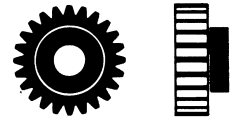
**Module 2.5** Pressure Angle 20° Material: Steel ETG100 < Ø 63mm  
 CK45 - AS1443-1994 1045 > Ø 63mm



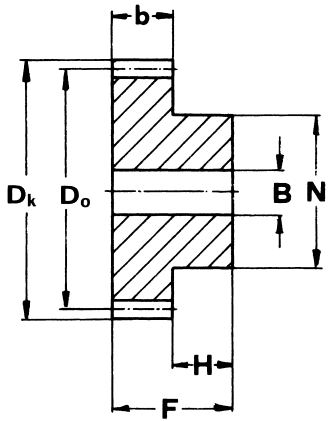
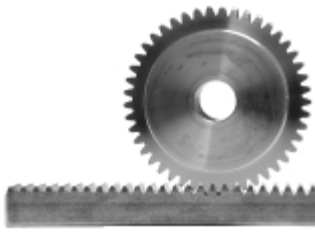
No. of Teeth	Dimensions in mm							Torque Md (Nm)	Part No.
	Predrilled Hole B <sub>h7</sub>	Hub Diam. N	Outside Diam. D <sub>k</sub>	Pitch Diam. D <sub>o</sub>	Length Overall F	H	Face Width b		
12	10	23	35	30	40	15	25	2.4	SNB2512
13	10	24	37.5	32.5	40	15	25	3.4	SNB2513
14	15	28	40	35	40	15	25	4.2	SNB2514
15	15	30	42.5	37.5	40	15	25	5.0	SNB2515
16	15	30	45	40	40	15	25	5.8	SNB2516
17	15	30	47.5	42.5	40	15	25	6.7	SNB2517
18	15	35	50	45	40	15	25	7.7	SNB2518
19	15	35	52.5	47.5	40	15	25	8.6	SNB2519
20	15	40	55	50	40	15	25	9.5	SNB2520
21	15	45	57.5	52.5	40	15	25	10.4	SNB2521
22	15	45	60	55	40	15	25	11.4	SNB2522
23	15	45	62.5	57.5	40	15	25	12.4	SNB2523
24	15	50	65	60	40	15	25	13.5	SNB2524
25	15	55	67.5	62.5	40	15	25	14.6	SNB2525
26	15	55	70	65	40	15	25	15.8	SNB2526
27	15	60	72.5	67.5	40	15	25	17.0	SNB2527
28	15	60	75	70	40	15	25	18.1	SNB2528
29	15	60	77.5	72.5	40	15	25	19.4	SNB2529
30	15	65	80	75	40	15	25	20.7	SNB2530
31	20	65	82.5	77.5	40	15	25	22.0	SNB2531
32	20	70	85	80	40	15	25	23.4	SNB2532
33	20	70	87.5	82.5	40	15	25	24.8	SNB2533
34	20	70	90	85	40	15	25	26.3	SNB2534
35	20	70	92.5	87.5	40	15	25	27.8	SNB2535
36	20	70	95	90	40	15	25	29.3	SNB2536
37	20	75	97.5	92.5	40	15	25	31.0	SNB2537
38	20	75	100	95	40	15	25	32.5	SNB2538
39	20	80	102.5	97.5	40	15	25	34.1	SNB2539
40	20	80	105	100	40	15	25	35.9	SNB2540
42	20	80	110	105	40	15	25	39.4	SNB2542
45	20	90	117.5	112.5	40	15	25	45.0	SNB2545
48	20	90	125	120	40	15	25	50.8	SNB2548
50	20	100	130	125	40	15	25	55.0	SNB2550
54	25	100	140	135	40	15	25	63.5	SNB2554
56	25	100	145	140	40	15	25	68.0	SNB2556
60	25	100	155	150	40	15	25	77.0	SNB2560
72	25	100	185	180	40	15	25	110.2	SNB2572

**Notes:** ETG100 is a high strength special steel that does not require heat treating.  
 Use nitriding or tenifer treatment for anti-rust.  
 CK45 is heat treatable for higher performance - nitriding (factor 1.5) or to harden (factor 2.5) the teeth.  
 The listed torques: Md (Nm) are based on a rotation speed of 200rpm.  
 SF = 1.4 (safety factor for tooth root stress).  
 SH = 1.0 (safety factor for Hertzian stress) for continuous operation.  
 All dimensions are subject to change without notice.

# Metric Spur Gears



## Module 3 Pressure Angle 20° Material: Steel CK45 AS1443-1994 1045



No. of Teeth	Dimensions in mm							Torque Md (Nm)	Part No.
	Predrilled Hole B <sub>h7</sub>	Hub Diam. N	Outside Diam. D <sub>k</sub>	Pitch Diam. D <sub>o</sub>	Length Overall F	H	Face Width b		
12	15	25	42	36	50	20	30	5.4	SNB3012
13	15	30	45	39	50	20	30	6.3	SNB3013
14	15	30	48	42	50	20	30	7.6	SNB3014
15	15	35	51	45	50	20	30	9.1	SNB3015
16	15	35	54	48	50	20	30	10.6	SNB3016
17	15	40	57	51	50	20	30	12.3	SNB3017
18	15	45	60	54	50	20	30	13.9	SNB3018
19	15	45	63	57	50	20	30	15.0	SNB3019
20	15	45	66	60	50	20	30	16.5	SNB3020
21	15	50	69	63	50	20	30	18.2	SNB3021
22	15	50	72	66	50	20	30	20.0	SNB3022
23	15	55	75	69	50	20	30	21.7	SNB3023
24	15	55	78	72	50	20	30	23.6	SNB3024
25	15	60	81	75	50	20	30	25.5	SNB3025
26	15	65	84	78	50	20	30	28.5	SNB3026
27	15	65	87	81	50	20	30	30.7	SNB3027
28	15	70	90	84	50	20	30	33.0	SNB3028
29	15	70	93	87	50	20	30	35.3	SNB3029
30	20	75	96	90	50	20	30	37.6	SNB3030
31	20	80	99	93	50	20	30	40.1	SNB3031
32	20	80	102	96	50	20	30	42.6	SNB3032
33	20	80	105	99	50	20	30	45.2	SNB3033
34	20	85	108	102	50	20	30	47.8	SNB3034
35	20	85	111	105	50	20	30	50.6	SNB3035
36	20	90	114	108	50	20	30	53.4	SNB3036
37	20	90	117	111	50	20	30	56.3	SNB3037
38	20	95	120	114	50	20	30	59.3	SNB3038
39	20	100	123	117	50	20	30	62.3	SNB3039
40	20	100	126	120	50	20	30	65.4	SNB3040
42	20	100	132	126	50	20	30	71.7	SNB3042
45	20	100	141	135	50	20	30	81.9	SNB3045
48	20	100	150	144	50	20	30	93.0	SNB3048
50	25	110	156	150	50	20	30	100.4	SNB3050
54	25	110	168	162	50	20	30	116.5	SNB3054
56	25	120	174	168	50	20	30	125.0	SNB3056
60	25	120	186	180	50	20	30	143.0	SNB3060
72	25	120	222	216	50	20	30	203.8	SNB3072
80	25	120	246	240	50	20	30	250.4	SNB3080

**Notes:** CK45 is heat treatable for higher performance - nitriding (factor 1.5) or to harden (factor 2.5) the teeth.

The listed torques: Md (Nm) are based on a rotation speed of 200rpm.

SF = 1.4 (safety factor for tooth root stress).

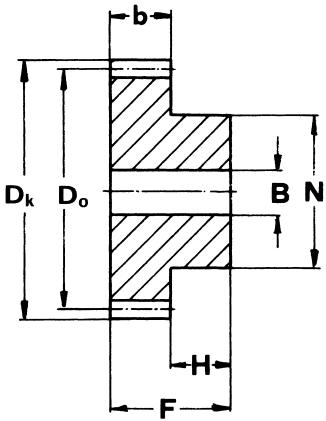
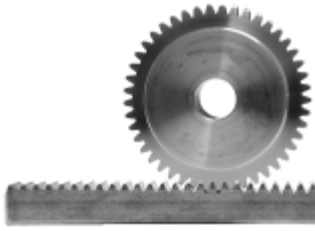
SH = 1.0 (safety factor for Hertzian stress) for continuous operation.

All dimensions are subject to change without notice.

# Metric Spur Gears



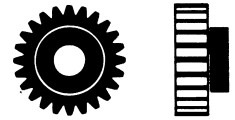
## Module 4 Pressure Angle 20° Material: Steel CK45 AS1443-1994 1045



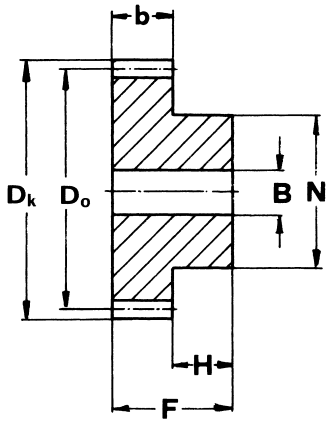
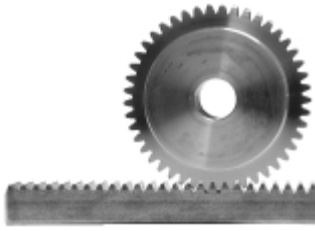
No. of Teeth	Dimensions in mm							Torque Md (Nm)	Part No.
	Predrilled Hole B <sub>h7</sub>	Hub Diam. N	Outside Diam. D <sub>k</sub>	Pitch Diam. D <sub>o</sub>	Length Overall F	H	Face Width b		
12	20	35	56	48	60	20	40	12.3	SNB4012
13	20	35	60	52	60	20	40	15.2	SNB4013
14	20	45	64	56	60	20	40	18.2	SNB4014
15	20	45	68	60	60	20	40	21.2	SNB4015
16	20	50	72	64	60	20	40	24.2	SNB4016
17	20	50	76	68	60	20	40	27.4	SNB4017
18	20	55	80	72	60	20	40	30.7	SNB4018
19	20	60	84	76	60	20	40	34.2	SNB4019
20	20	65	88	80	60	20	40	37.8	SNB4020
21	20	70	92	84	60	20	40	41.6	SNB4021
22	20	70	96	88	60	20	40	45.5	SNB4022
23	20	75	100	92	60	20	40	49.5	SNB4023
24	20	75	104	96	60	20	40	53.7	SNB4024
25	20	75	108	100	60	20	40	58.1	SNB4025
26	20	80	112	104	60	20	40	62.5	SNB4026
27	20	80	116	108	60	20	40	67.3	SNB4027
28	20	80	120	112	60	20	40	72.1	SNB4028
29	20	80	124	116	60	20	40	77.0	SNB4029
30	20	80	128	120	60	20	40	82.1	SNB4030
32	20	90	136	128	60	20	40	93.1	SNB4032
35	30	90	148	140	60	20	40	111.7	SNB4035
36	30	90	152	144	60	20	40	118.2	SNB4036
40	30	100	168	160	60	20	40	146.2	SNB4040
42	30	100	176	168	60	20	40	161.2	SNB4042
45	30	110	188	180	60	20	40	185.2	SNB4045
48	30	110	200	192	60	20	40	210.7	SNB4048
50	30	120	208	200	60	20	40	228.8	SNB4050
54	30	120	224	216	60	20	40	264.8	SNB4054
56	30	130	232	224	60	20	40	287.2	SNB4056
60	30	140	248	240	60	20	40	327.2	SNB4060
64	40	140	264	256	60	20	40	369.5	SNB4064
72	40	140	296	288	60	20	40	463.8	SNB4072
80	40	140	328	320	60	20	40	570.5	SNB4080

**Notes:** CK45 is heat treatable for higher performance - nitriding (factor 1.5) or to harden (factor 2.5) the teeth.  
 The listed torques: Md (Nm) are based on a rotation speed of 200rpm.  
 SF = 1.4 (safety factor for tooth root stress).  
 SH = 1.0 (safety factor for Hertzian stress) for continuous operation.  
 All dimensions are subject to change without notice.

# Metric Spur Gears



**Module 5 Pressure Angle 20° Material: Steel CK45 AS1443-1994 1045**



No. of Teeth	Dimensions in mm							Torque Md (Nm)	Part No.
	Predrilled Hole B <sub>h7</sub>	Hub Diam. N	Outside Diam. D <sub>k</sub>	Pitch Diam. D <sub>o</sub>	Length Overall F	H	Face Width b		
12	20	45	70	60	70	20	50	24.3	SNB5012
13	20	45	75	65	70	20	50	30.7	SNB5013
14	20	55	80	70	70	20	50	36.7	SNB5014
15	20	60	85	75	70	20	50	42.4	SNB5015
16	20	65	90	80	70	20	50	48.4	SNB5016
17	20	70	95	85	70	20	50	53.1	SNB5017
18	20	70	100	90	70	20	50	61.8	SNB5018
19	20	70	105	95	70	20	50	68.7	SNB5019
20	25	75	110	100	70	20	50	75.8	SNB5020
21	25	75	115	105	70	20	50	83.2	SNB5021
22	25	80	120	110	70	20	50	90.9	SNB5022
23	25	80	125	115	70	20	50	98.8	SNB5023
24	25	80	130	120	70	20	50	107.0	SNB5024
25	25	80	135	125	70	20	50	115.6	SNB5025
26	25	90	140	130	70	20	50	124.2	SNB5026
27	25	90	145	135	70	20	50	133.2	SNB5027
28	25	90	150	140	70	20	50	142.5	SNB5028
29	25	90	155	145	70	20	50	152.1	SNB5029
30	25	90	160	150	70	20	50	162.0	SNB5030
32	30	100	170	160	70	20	50	186.6	SNB5032
35	30	100	185	175	70	20	50	222.4	SNB5035
36	30	105	190	180	70	20	50	235.0	SNB5036
38	30	105	200	190	70	20	50	260.9	SNB5038
40	30	110	210	200	70	20	50	300.2	SNB5040
45	30	110	235	225	70	20	50	381.0	SNB5045
48	30	120	250	240	70	20	50	434.0	SNB5048
50	30	120	260	250	70	20	50	456.8	SNB5050
54	30	130	280	270	70	20	50	551.6	SNB5054
60	30	140	310	300	70	20	50	678.4	SNB5060

**Notes:** CK45 is heat treatable for higher performance - nitriding (factor 1.5) or to harden (factor 2.5) the teeth.  
 The listed torques: Md (Nm) are based on a rotation speed of 200rpm.  
 SF = 1.4 (safety factor for tooth root stress).  
 SH = 1.0 (safety factor for Hertzian stress) for continuous operation.  
 All dimensions are subject to change without notice.

# Metric Racks

## Actual Tooth Sizes Pictured



Module 0.5  
Pitch 1.57



Module 1.0  
Pitch 3.1416



Module 1.5  
Pitch 4.7124



Module 2.0  
Pitch 6.2832



Module 2.5  
Pitch 7.8540



Module 3.0  
Pitch 9.4248



Module 4.0  
Pitch 12.5664



Module 5.0  
Pitch 15.7080



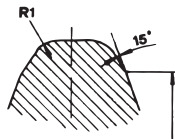
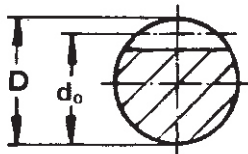
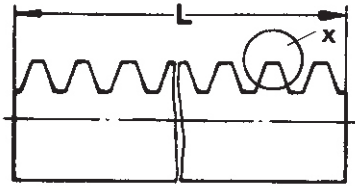
Module 6.0  
Pitch 18.8496



# Metric Racks - Round Profile



## Modules 1-6 Pressure Angle 20° Material: Steel C40h7 AS1443-1040



Detail X

Module	Dimensions in mm			Approx. Weight per mtr. kg (lbs).	Part No.
	D <sub>h7</sub>	d <sub>o</sub>	Length L (mm) <sup>+10%</sup>		
1	10	9	500	0.55 (1.21)	RZ 10/500
	10	9	1000		RZ 10/1000
	10	9	2000		RZ 10/2000
1.5	15	13.5	500	1.33 (2.94)	RZ 15/500
	15	13.5	1000		RZ 15/1000
	15	13.5	2000		RZ 15/2000
2	20	18	500	2.3 (5.07)	RZ 20/500
	20	18	1000		RZ 20/1000
	20	18	2000		RZ 20/2000
2.5	25	22.5	500	3.38 (7.46)	RZ 25/500
	25	22.5	1000		RZ 25/1000
	25	22.5	2000		RZ 25/2000
3	30	27	500	5.12 (11.29)	RZ 30/500
	30	27	1000		RZ 30/1000
	30	27	2000		RZ 30/2000
4	40	36	500	9.09 (20.04)	RZ 40/500
	40	36	1000		RZ 40/1000
	40	36	2000		RZ 40/2000
5	50	45	500	13.54 (29.85)	RZ 50/500
	50	45	1000		RZ 50/1000
	50	45	2000		RZ 50/2000
6	50	44	1000	RZ 60/1000	
	50	44	2000	RZ 60/2000	

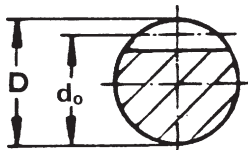
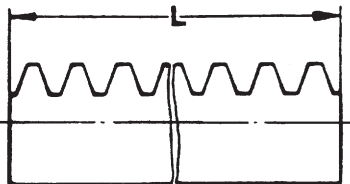
Pitch error ≤ ± 0.005mm.

Added up errors ≤ ± 0.1mm on 1000mm.

Round rack is also available in 3 mtr lengths on request.

All dimensions are subject to change without notice.

## Modules 1-3 Pressure Angle 20° Material: Stainless Steel AS2837-1986-303-4305 AISI 303



Module	Dimensions in mm			Part No.
	D <sub>h6</sub>	d <sub>o</sub>	Length L (mm)	
1	10	9	1000	RZE 10/1000
1.5	15	13.5	1000	RZE 15/1000
2	20	18	1000	RZE 20/1000
2.5	25	22.5	1000	RZE 25/1000
3	30	27	1000	RZE 30/1000

All dimensions are subject to change without notice.

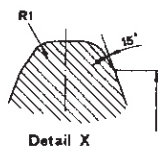
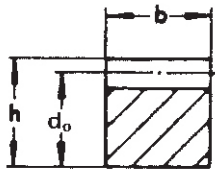
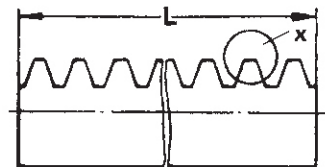
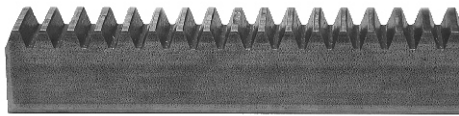
Also available up to 2 mtr lengths.

Also available in Module 4 & 5.

# METRIC RACKS Pitch and Diagrams of actual size see page 14



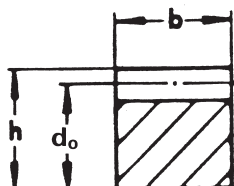
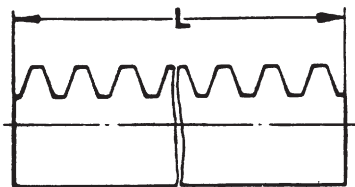
## Modules 1-8 Pressure Angle 20° Material: Steel CK45 - AS1443-1994-1045 C40 - AS1443-AISI1040



Module	Dimensions in mm				Approx. Weight per mtr. kg(lbs)	Part No.
	Face Width $b_{h_{11}}$	Height		Length $L$ (mm) <sup>+10</sup> <sub>0</sub>		
		$h_{h_{11}}$	$d_o$ (tolerance)			
1	15	15	14 (0-0.2)	500	1.7 (6.7)	BZ 10/500
	15	15	14	1000		BZ 10/1000
	15	15	14	2000		BZ 10/2000
1.5	17	17	15.5(0-0.25)	500	2.1 (8.4)	BZ 15/500
	17	17	15.5	1000		BZ 15/1000
	17	17	15.5	2000		BZ 15/2000
2	20	20	18 (0-0.25)	500	2.9 (11.3)	BZ 20/500
	20	20	18	1000		BZ 20/1000
	20	20	18	2000		BZ 20/2000
2.5	25	25	22.5	500	4.0 (16.2)	BZ 25/500
	25	25	22.5	1000		BZ 25/1000
	25	25	22.5	2000		BZ 25/2000
3	30	30	27 (0-0.3)	500	6.2 (25.3)	BZ 30/500
	30	30	27	1000		BZ 30/1000
	30	30	27	2000		BZ 30/2000
4	40	40	36 (0-0.3)	500	11.0 (44.9)	BZ 40/500
	40	40	36	1000		BZ 40/1000
	40	40	36	2000		BZ 40/2000
5	50	50	45 (0-0.35)	500	15.9 (64.8)	BZ 50/500
	50	50	45	1000		BZ 50/1000
	50	50	45	2000		BZ 50/2000
6	60	60	46.5 (0-0.4)	1000	24.3 (110.7)	BZ 60/1000
	60	60	46.5	2000		BZ 60/2000
8	80	80	62 (0-0.5)	1000	42.7 (188.3)	BZ 80/1000
	80	80	62	2000		BZ 80/2000

**Notes:**  
 3 mtr. lengths available on request.  
 Machined ends for continuous mounting available.  
 Pitch error  $\pm 0.1$  mm/mtr  
 All dimensions are subject to change without notice.

## Modules 1-3 Pressure Angle 20° Material: Stainless Steel AS2837-1986-303 AISI 303



Module	Dimensions in mm				Part No.
	Face Width $b_{h_{11}}$	Height		Length $L$ (mm)	
		$h_{h_{11}}$	$d_o$		
1	8	8	7	1000	ZE 10/1000
1.5	12	12	10.5	1000	ZE 15/1000
2	16	16	14	1000	ZE 20/1000
2.5	20	20	17.5	1000	ZE 25/1000
3	24	24	21	1000	ZE 30/1000

**Notes:**  
 Dimensions the same as above Steel Rack available on request.  
 Longer lengths available on request.  
 All dimensions are subject to change without notice.



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