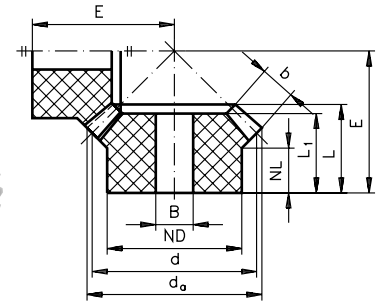
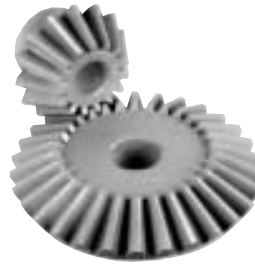


BEVEL GEARS - ACETAL

- Pressure Angle 20°
- Machined bores from Module 1.5
- Select matched pairs for the stated transmission ratios



Material: Acetal, Module : 0.5

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	b	B	E	Torque (Ncm)	Weight (g)
102 355 207	1 : 1	16	8.7	8	7	6	8	8	2	3	10.5	2.0	0.3

Material: Acetal, Module : 1.0

102 355 507	1 : 1	16	17.6	16	12	8	13.6	13.6	4.7	5	18.4	19.5	1.9
102 355 520	1 : 1	30	31.4	30	15	7.4	12.9	15.3	7.4	6	24.8	75.7	5.9
102 355 556	2 : 1	15	16.8	15	12.2	10.6	17	17	6.6	5	26.4	24.1	2.4
102 355 557		30	31.1	30	18	9.1	14.8	16.2	6.6	8	20.9	24.1	6.3
102 355 576	3 : 1	15	16.6	15	12.3	11	20.4	20.4	9.2	5	36.3	34.4	2.7
102 355 577		45	46.1	45	23.4	9.6	16.5	18.2	9.2	10	22.7	34.4	16.0
102 355 588	4 : 1	10	12	10	7.8	9.3	17.7	17.7	8.2	4	30.1	10.7	0.9
102 355 589		40	40.8	40	23.4	10.8	15.7	17	8.2	10	20.1	10.7	12.6
102 355 598	5 : 1	12	13.7	12	9.5	10	20.3	9.5	4	40.5	15	2	2.0
102 355 599		60	60.4	60	20.5	11	15.5	17.4	9.5	10	21	15	17.0

Material: Acetal, Module : 1.5

102 355 707	1 : 1	16	26.4	24	18.5	10	16.2	18.4	7	8	25.8	65.5	5.9
102 355 756	2 : 1	15	25.4	22.5	17	11.5	22.8	22.8	10.5	8	35.8	86.4	7.5
102 355 757		30	46.4	45	23.4	9.6	17.5	19.5	10.5	10	26.2	86.4	17.0
102 355 776	3 : 1	15	25.1	22.5	17.2	12.5	26.8	26.8	14	8	47.9	110	8.5
102 355 777		45	68.8	67.5	30.4	11.5	21.5	23	14	12	29.4	110	49.0
102 355 788	4 : 1	10	18	15	11.3	10.9	23.5	23.5	12.3	5	41.7	36.4	3.0
102 355 789		40	61.2	60	30.4	12.8	20	21.7	12.3	12	26.2	36.4	32.0

Material: Acetal, Module : 2.0

102 356 007	1 : 1	16	34.9	32	21.9	9.6	18.3	21.2	10	10	30.4	160	10.4
102 356 056	2 : 1	15	33.6	30	22.5	11.8	26	27	14.6	10	44.2	210	13.3
102 356 057		30	62.2	60	30.2	11.8	22.6	24.2	14.6	12	32.6	210	41.0
102 356 074	3 : 1	10	24	20	16.6	12	25	25	12.5	6	43.7	65.8	6.1
102 356 075		30	61.7	60	30.3	11.5	20.2	22	12.5	12	28	65.8	38.0
102 356 088	4 : 1	10	23.8	20	14.3	12.8	28.9	28.9	16.3	6	54	85.8	6.4
102 356 089		40	81.5	80	36	16.6	24.7	27	16.3	18	32.5	85.8	65.0

Material: Acetal, Module : 2.5

102 356 107	1 : 1	16	43.5	40	25.2	11.5	22.9	26.3	12.3	12	37	310	20.0
102 356 156	2 : 1	15	42	37.5	26.5	13	29.6	31.2	17.3	12	53.3	390	23.6
102 356 157		30	77.3	75	36.1	15	27.5	29.5	17.3	16	40.5	390	69.0
102 356 174	3 : 1	10	29.7	25	18.8	13	28.8	28.8	15.7	8	52.4	120	10.2
102 356 175		30	77.2	75	36.1	15.5	25.2	29	15.7	18	35.7	120	68.0

Material: Acetal, Module : 3.0

102 356 407	1 : 1	16	52.3	48	28.8	13.2	25.8	29.2	13.8	14	43	510	32
102 356 456	2 : 1	15	50.3	45	31.2	14.8	35	36.3	20.5	14	63.3	670	38.0
102 356 457		30	93	90	45	19	34.2	37	20.5	18	49.5	670	129.0

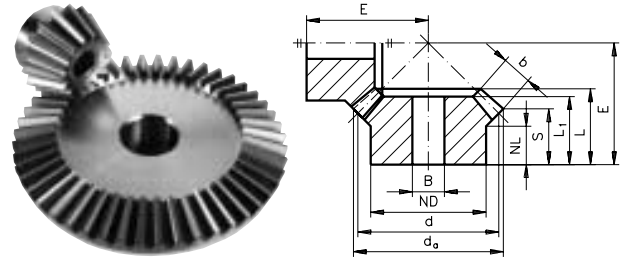
Material: Acetal, Module : 3.5

102 356 507	1 : 1	16	61.4	56	33.3	14.4	28.1	33.1	15.8	18	49.5	800.0	50.0
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11

BEVEL GEARS - BRASS

- Angle between axes 90°
- Straight milled teeth
- Select matched pairs for the stated transmission ratios



Material: Brass MS 58, Module : 0.5

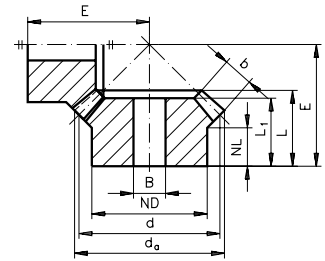
Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Ncm)	Weight (g)
102 350 211	1 : 1	20	10.7	10	8	4	-	7	5	3	4	9.7	3.8	1
102 350 215	1 : 1	24	12.7	12	8	4	6.4	7	5	3	4	10.7	5.6	3
102 350 220	1 : 1	30	15.7	15	10	4	7.5	8.5	6.6	3	4	13.7	8.8	4
102 350 223	1 : 1	36	18.7	18	12	5	9	10.1	8	3	4	16.7	11.7	10
102 350 226	1 : 1	40	20.7	20	12	5	8.5	9.5	7.5	3	4	17.1	13.1	10
102 350 232	1 : 1	50	25.7	25	14	5	8.5	9.5	7.5	3	4	19.6	16.7	16
102 350 252	1.5 : 1	20	11.0	10	8	3.5	6.5	7.1	4.7	3	4	11.9	3.8	2
102 350 253		30	15.4	15	10	4	6	7	5.4	3	4	10.1	3.8	4
102 350 260	2 : 1	20	11.2	10	8	4	7	7.5	5	3	4	14.65	3.8	2
102 350 261		40	20.3	20	12	5	7.5	8.4	7.1	3	4	11.83	3.8	8
102 350 272	2.5 : 1	20	11.3	10	8	4	7	7.6	4.9	3	4	11.7	3.8	3
102 350 273		50	25.2	25	14	5	7	7.8	6.8	3	4	11.5	3.8	12
102 350 276	3 : 1	15	8.8	7.5	6	3.7	6.5	7	4.3	3	3	15.3	2.1	1
102 350 277		45	22.7	22.5	12	5	7.5	8.4	7.5	3	4	11	2.1	11

Material: Brass MS 58, Module : 1.0

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Ncm)	Weight (g)
102 350 503	1 : 1	12	13.0	12	8	5	8.5	9.6	7.7	3	5	13.2	5.2	3
102 350 507	1 : 1	16	17.4	16	12	5	9	10.3	7.8	3	5	15.1	12.7	9
102 350 511	1 : 1	20	21.4	20	15	5	9	10.4	7.8	4	5	17.1	20.7	15
102 350 516	1 : 1	25	26.4	25	16	7	11.5	13	9.7	5	5	21.5	40.5	26
102 350 520	1 : 1	30	31.4	30	16	7	11.5	13.1	9.7	5	5	24	59.8	33
102 350 523	1 : 1	36	37.4	36	16	7	11.5	13	9.6	5	5	26.9	79.6	43
102 350 526	1 : 1	40	41.4	40	16	8	12.5	14	10.6	5	5	29.9	88.7	53
102 350 532	1 : 1	50	51.4	50	16	8	12.5	14	10.6	5	6	34.9	110	76
102 350 535	1 : 1	60	61.4	60	16	8	12.5	14.1	10.6	5	6	39.9	130	110
102 350 552	1.5 : 1	20	22.1	20	15	5	10	11.1	7.2	5	5	21.5	25.9	16
102 350 553		30	30.8	30	16	5	9	10.9	8.3	6	6	17.7	25.9	28
102 350 556	2 : 1	15	17.4	15	12.5	4.5	9	10.1	5.8	5	5	20.2	14.2	9
102 350 557		30	30.6	30	16	5	9	10.8	8.8	5	5	15.7	14.2	27
102 350 560	2 : 1	20	22.4	20	15	5	10	11.1	6.8	5	5	26.2	25.69	17
102 350 561		40	40.6	40	16	8	12	13.8	11.7	5	6	21.1	25.69	50
102 350 576	3 : 1	15	17.7	15	13	5	10	11.1	6.5	5	5	28.5	14.4	10
102 350 577		45	45.4	45	16	8	12.5	14.7	13.2	5	6	20.2	14.4	68
102 350 592	4 : 1	15	17.8	15	13	5.5	10	11	6.3	5	5	35	14.4	10
102 350 593		60	60.3	60	16	8	12.5	14.6	13.6	5	6	20.5	14.4	110

BEVEL GEARS - DIECAST ZINC

- Angle between axes 90°
- Machined bores
- Material : Diecast Zinc Zn Al 4 Cn



Order Code	Module	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	b	B-H7	E	Torque (Ncm)	Weight (g)
102 358 507	1.0	1 : 1	16	17.3	16	12	7.5	13.1	13.1	4.5	6	17.7	9	8
102 358 707	1.5	1 : 1	16	26	24	19	10.8	17	18.6	6.7	8	25.7	30	27

Order Code	Module	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	b	B-H7	E	Torque (Ncm)	Weight (g)
102 359 007	2.0	1 : 1	16	34.6	32	23	10	19.2	21.3	9.6	10	30	78	51
102 359 107	2.5	1 : 1	16	43.3	40	26	12	22.9	22.5	12.3	12	36	143	87
102 359 407	3.0	1 : 1	16	52.3	48	30	13	26	29.3	14	14	42.5	242	145
102 359 507	3.5	1 : 1	16	61.5	56	34	14	29.1	33.2	15.5	16	49.4	374	227

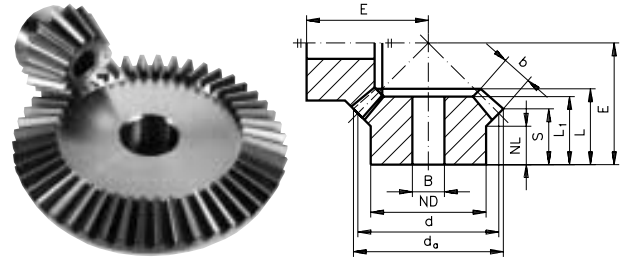
Tensile Strength Data

Die-Cast Zinc	270 N / mm ²
Grey Cast Iron	260 N / mm ²
Plastic	80 N / mm ²
Steel	500 N / mm ²

BEVEL GEARS - STEEL

- Straight crown-milled teeth
- Angle between axes 90°
- Select matched pairs for the stated transmission ratios

For geometrical data, see 'Technical Information' page 211.



Material: Steel 9SMn 28K, Module : 0.5

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Ncm)	Weight (g)
102 360 211	1 : 1	20	10.7	10	8	4	-	7	5	3	4	9.7	3.9	1
102 360 215	1 : 1	24	12.7	12	8	4	6.4	7	5	3	4	10.7	5.7	3
102 360 220	1 : 1	30	15.7	15	10	4	7.5	8.5	6.6	3	4	13.7	9.1	4
102 360 223	1 : 1	36	18.7	18	12	5	9	10.1	8	3	4	16.7	13.3	10
102 360 226	1 : 1	40	20.7	20	12	5	8.5	9.5	7.5	3	4	17.1	16.7	10
102 360 232	1 : 1	50	25.7	25	14	5	8.5	9.5	7.5	3	4	19.6	25.2	16
102 360 252	1.5 : 1	20	11.0	10	8	3.5	6.5	7.1	4.7	3	4	11.9	3.9	2
102 360 253		30	15.4	15	10	4	6	7	5.4	3	4	1.1	3.9	4
102 360 260	2 : 1	20	11.2	10	8	4	7	7.5	5	3	4	14.65	3.9	2
102 360 261		40	20.3	20	12	5	7.5	8.4	7.1	3	4	11.83	3.9	8
102 360 272	2.5 : 1	20	11.3	10	8	4	7	7.6	4.9	3	4	17.1	3.9	3
102 360 273		50	25.2	25	14	5	7	7.8	6.8	3	4	11.5	3.9	10
102 360 276	3 : 1	15	8.8	7.5	6	3.7	6.5	7	4.3	3	3	15.3	2.2	1
102 360 277		45	22.7	22.5	12	5	7.5	8.4	7.5	3	4	11	2.2	10

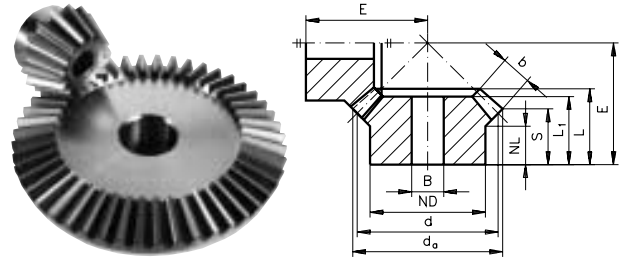
Material: Steel 9SMn 28K, Module : 1.0

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Ncm)	Weight (g)
102 360 507	1 : 1	16	17.4	16	14	7.0	10	11.2	8.7	4	5	16	13.0	9
102 360 510	1 : 1	19	20.4	19	15	6.5	10	11.8	9.2	4	5	18	17.9	14
102 360 513	1 : 1	22	23.4	22	18	7.0	11	12.8	9.7	4.7	5	20	30.9	22
102 360 518	1 : 1	26	27.4	26	22	7.0	12	13.4	9.7	5.5	5	22	49.9	35
102 360 520	1 : 1	30	31.4	30	22	7.0	14	16.0	11.7	6.4	5	26	78.4	50
102 360 526	1 : 1	40	41.4	40	30	10.0	18	19.8	15.7	6	8	35	130.0	111
102 360 548	1.5 : 1	16	18.1	16	13	6.9	11	12.0	8.7	4.3	5	20	14.0	10
102 360 549		24	24.8	24	20	8.8	13	14.8	12.6	4.3	5	20	14.0	32
102 360 556	2 : 1	15	17.4	15	13	6.5	11	11.9	7.6	5	5	22	14.3	10
102 360 557		30	30.6	30	20	9.0	13	15.1	13.1	5	5	20	14.3	40
102 360 564	2.5 : 1	16	18.6	16	13	7.4	13	14.4	8.5	6.5	5	28	21.6	13
102 360 565		40	40.5	40	25	9.0	13	14.8	12.6	6.5	8	20	21.6	65
102 360 576	3 : 1	15	17.7	15	13	9.2	16	16.5	10.0	7.1	5	32	20.7	14
102 360 577		45	45.4	45	25	10.0	15	17.0	15.1	7.1	8	22	20.7	92
102 360 584	3.5 : 1	16	18.7	16	13	7.6	16	16.6	8.4	8.7	5	36	29.6	16
102 360 585		56	56.3	56	30	10.0	14	16.7	14.6	8.7	8	22	29.6	130
102 360 592	4 : 1	15	17.8	15	13	7.7	16	17.3	8.4	9.3	5	38	27.8	15
102 360 593		6	60.3	60	30	10.0	15	17.1	15.1	9.3	8	22	27.8	160

BEVEL GEARS - STEEL

- Straight crown-milled teeth
- Angle between axes 90°
- Select matched pairs for the stated transmission ratios

For geometrical data, see 'Technical Information' page 211.



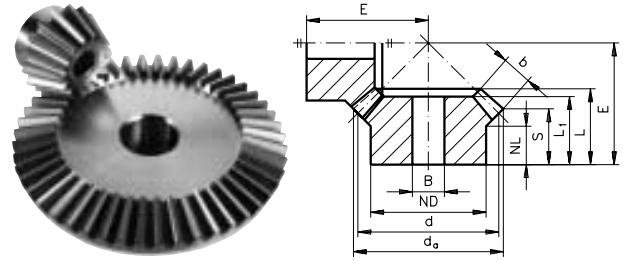
Material: Steel 9SMn 28K, Module : 1.5

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight (g)
102 360 707	1 : 1	16	26.1	24	20	11	15	17.3	14.1	5.1	8	25	0.37	32
102 360 711	1 : 1	20	32.1	30	22	9	15	17.2	13.1	6.4	8	27	0.75	47
102 360 713	1 : 1	22	35.1	33	20	8	15	17.1	12.6	7	8	28	1.0	50
102 360 716	1 : 1	25	39.6	37.5	25	8	15	17.6	12.3	7.95	10	30	1.4	70
102 360 720	1 : 1	30	47.1	45	30	12	20	21.9	15.6	9.6	10	37	2.6	135
102 360 726	1 : 1	40	62.1	60	40	12	25	27.7	19.1	12.7	15	48	6.3	310
102 360 748	1.5 : 1	16	27.1	24	20	7.5	14	16.1	11	6.5	8	28	0.48	34
102 360 749		24	37.2	36	20	12	17	20.2	16.9	6.5	10	28	0.48	55
102 360 752	1.5 : 1	20	33.1	30	20	9	17	18.9	12.5	8.1	8	34	0.97	52
102 360 753		30	46.2	45	30	12	20	22.1	17.9	8.1	10	32	0.97	133
102 360 756	2 : 1	15	26.1	22.5	18	6.5	13	14.8	8.4	7.6	8	30	0.49	26
102 360 757		30	45.9	45	30	12	18	20.7	17.6	7.6	1	28	0.49	124
102 360 760	2 : 1	20	33.6	30	20	9.5	19	21.6	12.9	10.1	8	42	1.2	59
102 360 761		40	60.9	60	40	12	19	22	17.9	10.1	15	32	1.2	234
102 360 764	2.5 : 1	16	27.9	24	18	8.8	18	19.5	10.8	9.7	8	40	0.73	36
102 360 765		40	60.7	60	40	10	17	20.1	16.9	9.7	15	28	0.73	220
102 360 768	2.5 : 1	18	30.9	27	20	10.8	21	22.9	13	10.9	8	46	1.0	54
102 360 769		45	68.2	67.5	50	12	20	24.1	20.4	10.9	15	33	1.0	370
102 360 780	3 : 1	16	28	24	18	11	21	23.2	12.7	11.4	8	48	0.85	42
102 360 781		48	72.6	72	50	12	20	24.1	20.8	11.4	15	32	0.85	405
102 360 784	3.5 : 1	16	28.1	24	18	12.2	24	26.0	13.6	13.1	8	55	0.98	48
102 360 785		56	84.5	84	50	12	24	27.1	23.8	13.1	15	35	0.98	634
102 360 792	4 : 1	15	26.7	22.5	18	14.4	27	28.9	15.5	13.9	8	60	0.94	42
102 360 793		60	90.4	90	50	12	25	27.6	24.6	13.9	15	35	0.94	745

BEVEL GEARS - STEEL

- Straight crown-milled teeth
- Angle between axes 90°
- Select matched pairs for the stated transmission ratios

For geometrical data, see 'Technical Information' page 211.



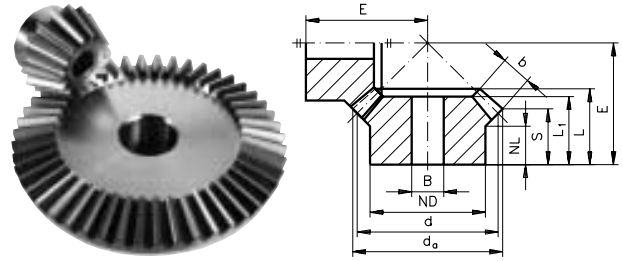
Material: Up to 80Ø Steel 9SMn 28K; Over 80Ø C45, Module : 2.0

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight (g)
102 361 007	1 : 1	16	34.8	32	25	11.5	18	20.7	16.4	6.8	10	31	0.89	66
102 361 011	1 : 1	20	42.8	40	30	10	17	19.9	14.4	8.5	10	33	1.7	104
102 361 013	1 : 1	22	46.8	44	30	10	19	21	15.4	9.3	10	36	2.3	130
102 361 016	1 : 1	25	52.8	50	35	8	19	21.4	14.4	10.6	10	38	3.5	182
102 361 020	1 : 1	30	62.8	60	40	12	25	26.9	18.4	12.7	15	47	6.2	306
102 361 026	1 : 1	40	82.8	80	50	15	31	33.7	23.4	15.2	20	62	13.5	660
102 361 048	1.5 : 1	16	35.5	32	20	8	21	22.6	13.1	12	10	36	1.5	60
102 361 049		24	50.3	48	30	8	18	21.5	15.7	12	10	30	1.5	151
102 361 052	1.5 : 1	20	43.5	40	30	7.5	20	22.3	11.2	14	10	40	2.9	119
102 361 053		30	62.3	60	40	15	25	28.7	21.7	14	15	40	2.9	301
102 361 056	2 : 1	15	33.7	30	20	7.5	22	23	10.9	14	10	40	1.6	58
102 361 057		30	61.8	60	40	12	24	27.2	21.9	14	15	35	1.6	312
102 361 060	2 : 1	20	43.7	40	30	7.5	22	24	10.9	15	10	50	3.1	132
102 361 061		40	81.8	80	50	18	29	32.8	26.9	15	20	45	3.1	593
102 361 064	2.5 : 1	16	35.8	32	20	9	25	26.4	12.7	15	10	52	4.2	76
102 361 065		4	81.5	80	50	15	29	32.7	27.9	15	20	42	4.2	650
102 361 068	2.5 : 1	18	39.8	36	30	11.8	26	27.4	13.8	15	10	58	2.5	133
102 361 069		45	91.5	90	60	18	30	33.8	28.9	15	25	45	2.5	830
102 361 080	3 : 1	16	35.9	32	20	10	25	26.6	12.6	15	10	60	1.9	80
102 361 081		48	97.3	96	60	18	30	35	31	15	25	45	1.9	950
102 361 084	3.5 : 1	16	35.9	32	20	10	25	26.8	12.5	15	10	68	1.9	82
102 361 085		56	113.1	112	60	18	31	35.5	31.9	15	25	46	1.9	1200
102 361 092	4 : 1	15	34	30	20	13.5	29	29.9	15.5	15	10	75	1.7	80
102 361 093		60	120.9	120	60	20	35	40.1	37	15	25	50	1.7	1600

BEVEL GEARS - STEEL

- Straight crown-milled teeth
- Angle between axes 90°
- Select matched pairs for the stated transmission ratios

For geometrical data, see 'Technical Information' page 211.



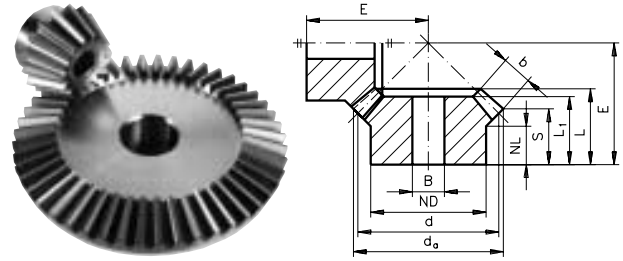
Material: Up to 80Ø Steel 9SMn 28K; Over 80Ø C45, Module : 2.5

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight (kg)
102 361 107	1 : 1	16	43.7	40	30	10	21	23.8	16.8	11	10	35	4.7	0.12
102 361 109	1 : 1	18	48.7	45	30	10	22	25	17.4	12	10	38	6.7	0.15
102 361 111	1 : 1	20	53.7	50	35	10	22	25.9	16.9	14	10	40	9.7	0.21
102 361 113	1 : 1	22	58.7	55	30	10	24	27.1	17.3	15	10	43	12.8	0.24
102 361 116	1 : 1	25	66.2	62.5	45	10	25	28.8	17.6	17	15	47	18.8	0.37
102 361 120	1 : 1	30	78.7	75	50	12	29	32.7	19.3	20	15	55	32.6	0.56
102 361 126	1 : 1	40	103.6	100	60	14	31	35.4	21.8	20	25	70	48.4	1.10
102 361 148	1.5 : 1	16	44.3	40	30	11.6	26	28.2	16.4	14	10	45	6.0	0.15
102 361 149		24	62.9	60	30	12	26	29.4	22.1	14	10	40	6.0	0.30
102 361 152	1.5 : 1	20	54.3	50	30	10	27	30.2	16	18	10	52	12.7	0.23
102 361 153		30	77.9	75	50	14	27	31.1	22.2	18	15	45	12.7	0.55
102 361 156	2 : 1	15	42.2	37.5	30	15.4	31	33.3	18.6	17	10	55	6.4	0.16
102 361 157		30	77.3	75	50	10	24	28.1	21.6	47	15	38	6.4	0.53
102 361 160	2 : 1	20	54.6	50	30	14	34	36.6	19.2	20	10	68	14.1	0.28
102 361 161		40	102.3	100	60	15	29	33.3	25.3	20	25	48	14.1	0.97
102 361 164	2.5 : 1	16	44.8	40	30	13	32	34.1	15.9	20	10	65	8.8	0.18
102 361 165		40	101.9	100	60	15	29	33.8	27.4	20	25	45	8.8	1.00
102 361 168	2.5 : 1	18	49.8	45	30	15.6	36	37.9	19.7	20	10	75	11.2	0.24
102 361 169		45	114.4	112.5	70	15	28	33.4	26.9	20	25	47	11.2	1.20
102 361 180	3 : 1	16	44.9	40	30	15	34	36.5	17.8	20	10	77	8.8	0.20
102 361 181		48	121.6	120	80	15	29	33.9	28.5	20	25	46	8.8	1.60
102 361 184	3.5 : 1	16	44.9	40	30	16.5	36	37.7	18.7	20	10	88	8.8	0.22
102 361 185		56	141.4	140	80	18	32	37.2	32.4	20	25	50	8.8	2.30
102 361 192	4 : 1	15	42.5	37.5	30	16	35	36.8	17.6	20	10	92	7.9	0.19
102 361 193		60	151.2	150	80	18	33	37.8	33.8	20	25	50	7.9	2.60

BEVEL GEARS - STEEL

- Straight crown-milled teeth
- Angle between axes 90°
- Select matched pairs for the stated transmission ratios

For geometrical data, see 'Technical Information' page 211.



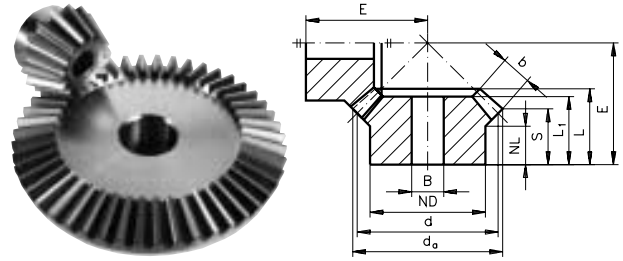
Material: Steel C45, Module : 3.0

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight (kg)
102 361 407	1 : 1	16	52.4	48	40	12	24	27.7	18.2	15	10	40	9.3	0.24
102 361 409	1 : 1	18	58.4	54	40	10	25	28.1	17.2	17	10	42	13.7	0.28
102 361 411	1 : 1	20	64.4	60	40	10	26	29.5	17.2	19	15	45	18.9	0.32
102 361 413	1 : 1	22	70.4	66	40	8	27	30.2	17.2	20	15	48	24.6	0.41
102 361 416	1 : 1	25	79.4	75	50	10	28	31.9	16.7	23	15	52	36.6	0.49
102 361 420	1 : 1	30	94.4	90	50	12	35	38.8	22.2	25	20	65	58.7	0.95
102 361 426	1 : 1	40	124.4	120	60	15	35	39.1	22.2	25	25	80	87.1	1.60
102 361 444	1.25 : 1	16	52.9	48	40	11.7	27	29.2	16.9	17	15	45	10.6	0.22
102 361 445		20	63.9	60	40	10	25	27.8	18.4	17	15	40	10.6	0.30
102 361 448	1.5 : 1	16	53.2	48	40	13.2	30	32.7	17.7	19	15	52	11.8	0.25
102 361 449		24	75.5	72	50	8	24	27.8	18.6	19	15	40	11.8	0.49
102 361 452	1.5 : 1	20	65.2	60	40	10	33	35.8	16.8	24	15	60	24.4	0.39
102 361 453		30	93.5	90	50	15	33	37.6	25.7	24	20	53	24.4	0.86
102 361 456	2 : 1	15	50.6	45	30	11.5	33	35.4	16.4	22	10	60	12.0	0.27
102 361 457		30	92.8	90	50	10	26	30.7	22.3	22	20	42	12.0	0.75
102 361 460	2 : 1	20	65.6	60	40	10	33	36.1	14.4	25	15	73	25.5	0.45
102 361 461		40	122.8	120	60	18	34	38.7	28.8	24	25	56	25.5	1.40
102 361 464	2.5 : 1	16	53.8	48	40	13.6	37	38.8	16.1	25	15	75	15.9	0.31
102 361 465		40	122.3	120	60	16	32	36.8	28.9	25	25	50	15.9	1.40
102 361 468	2.5 : 1	18	59.8	54	40	11.7	36	38.4	15.7	25	15	82	20.2	0.38
102 361 469		45	137.3	135	70	18	34	39	30.9	25	30	55	20.2	1.90
102 361 476	3 : 1	15	50.7	45	38	17	37.2	39	19.4	21	18	86	13.1	0.26
102 361 477		45	136.9	135	60	30	40.7	45.1	39.3	21	28	59	13.1	1.56
102 361 480	3 : 1	16	53.9	48	40	12.5	36	38.3	15	25	15	86	15.9	0.31
102 361 481		48	145.9	144	70	18	34	38.7	32	25	30	53	15.9	2.30
102 361 484	3.5 : 1	16	53.9	48	40	15	39	40.6	16.8	25	15	100	15.9	0.34
102 361 485		56	169.7	168	80	18	33	39.8	34	25	30	55	15.9	3.10
102 361 492	4 : 1	15	51	45	30	13	38	39.7	15.7	25	10	105	14.3	0.27
102 361 493		60	181.5	180	80	18	35	40.6	35.5	25	30	55	14.3	3.80

BEVEL GEARS - STEEL

- Straight crown-milled teeth
- Angle between axes 90°
- Select matched pairs for the stated transmission ratios

For geometrical data, see 'Technical Information' page 211.



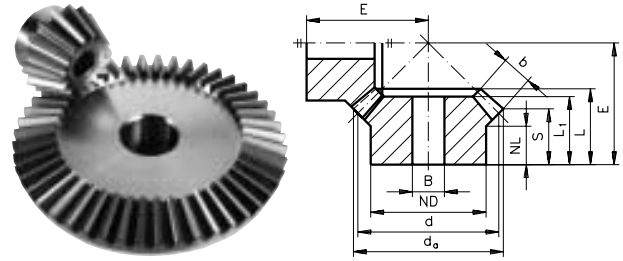
Material: Steel C45, Module : 4.0

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight (kg)
102 361 807	1 : 1	16	70	64	50	11	29	32.9	21	19	20	50	21.0	0.42
102 361 809	1 : 1	18	78	72	50	16	36	41	27	22	20	60	31.6	0.64
102 361 811	1 : 1	20	85.9	80	50	16	39	43.5	28	24	20	65	42.5	0.81
102 361 813	1 : 1	22	93.9	88	50	12	37	40.9	24	26	20	65	57.0	0.94
102 361 816	1 : 1	25	105.9	100	60	12	38	42.7	23	30	20	70	85.0	1.40
102 361 820	1 : 1	30	125.9	120	60	18	42	47.9	27.9	30	25	85	125.3	2.00
102 361 826	1 : 1	40	165.8	160	80	20	48	53.2	32.9	30	30	110	185.9	4.20
102 361 844	1.25 : 1	16	70.6	64	50	12.5	32	36.5	20.6	22	20	58	24.4	0.47
102 361 845		20	85.2	80	50	15	33	38.4	26.3	22	20	55	24.4	0.70
102 361 848	1.5 : 1	16	71	64	50	12.5	36	38.9	19.3	25	20	65	28.3	0.50
102 361 849		24	100.7	96	60	12	31	35.6	23.5	25	20	52	28.3	1.01
102 361 852	1.5 : 1	20	87	80	50	18	48	51.1	27.3	30	20	85	54.4	0.95
102 361 853		30	124.6	120	60	18	40	46.4	31.5	30	25	68	54.4	1.90
102 361 856	2 : 1	15	67.5	60	40	10	38	41	16.9	28	20	75	27.3	0.41
102 361 857		30	123.8	120	60	15	33	39.4	28.8	28	25	55	27.3	1.60
102 361 860	2 : 1	20	87.4	80	50	13	45	48	21.9	30	20	100	54.4	0.97
102 361 861		40	163.7	160	80	20	40	45.7	33.7	30	30	70	54.4	3.30
102 361 864	2.5 : 1	16	71.8	64	50	12	41	43.8	16.5	30	20	95	34.0	0.60
102 361 865		40	163.1	160	80	20	40	46.4	36.9	30	30	65	34.0	3.40
102 361 868	2.5 : 1	18	79.7	72	50	13.8	44	46.8	19.5	30	20	108	42.1	0.80
102 361 869		45	183	180	90	20	43	49.6	39.9	30	30	72	42.1	4.90
102 361 880	3 : 1	16	71.8	64	50	17	46	48.3	20.3	30	20	115	34.0	0.68
102 361 881		48	194.6	192	90	20	43	50	41.9	30	30	70	34.0	5.70
102 361 884	3.5 : 1	16	71.9	64	50	13	42	44.6	16.1	30	20	127	34.8	0.66
102 361 885		56	226.3	224	90	20	40	49	42	30	30	70	34.8	6.90
102 361 892	4 : 1	15	68	60	40	12.5	43	44.8	16	30	20	135	30.6	0.52
102 361 893		60	242	240	90	20	41	50.1	44	30	30	70	30.6	8.30

BEVEL GEARS - STEEL

- Straight crown-milled teeth
- Angle between axes 90°
- Select matched pairs for the stated transmission ratios

For geometrical data, see 'Technical Information' page 211.



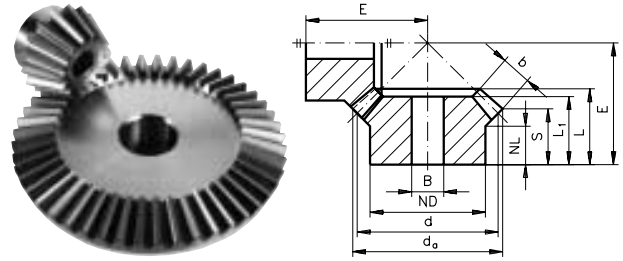
Material: Steel C45, Module : 5.0

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight (kg)
102 362 107	1 : 1	16	87.4	80	60	12	36	41.5	25.7	25	20	62	43.3	0.86
102 362 109	1 : 1	18	97.4	90	60	12	37	42.2	23.7	29	20	65	65.1	1.05
102 362 111	1 : 1	20	107.4	100	60	12	39	44.4	23.7	32	25	70	88.6	1.30
102 362 113	1 : 1	22	117.5	110	70	12	43	48.5	25.7	35	25	77	120.0	1.84
102 362 116	1 : 1	25	132.4	120	70	12	42	47.5	21.2	40	30	80	177.1	2.14
102 362 120	1 : 1	30	157.4	150	70	12	44	51.3	24.7	40	30	96	261.0	3.52
102 362 126	1 : 1	40	207.27	200	90	20	52	60	32.9	40	35	128.1	387.3	7.06
102 362 144	1.25 : 1	16	88.2	80	60	12	40	44.2	23.3	29	20	70	50.3	0.91
102 362 145		20	106.6	100	60	15	39	45	29.1	29	25	65	50.3	1.30
102 362 152	1.5 : 1	20	108.7	100	60	12	50	54.7	22.9	40	25	95	113.4	1.63
102 362 153		30	155.8	150	70	12	40	46.3	26.4	40	30	72	113.4	3.07
102 362 156	2 : 1	15	84.4	75	60	15	50	54.1	21.4	38	20	94	57.9	0.98
102 362 157		30	154.7	150	70	15	40	46.7	32.2	38	30	65	57.9	3.03
102 362 160	2 : 1	20	109.3	100	60	18	58	62.1	27.3	40	25	125	113.4	1.89
102 362 161		40	204.7	200	90	20	48	55.6	39.7	40	35	85	113.4	6.48
102 362 168	2.5 : 1	18	99.6	90	60	16.5	57	60.8	24.4	40	25	135	89.8	1.56
102 362 169		45	228.8	225	100	20	50	57.8	44.8	40	40	85	89.8	9.08
102 362 176	3 : 1	15	84.9	75	60	15	53	56.4	19.1	40	20	130	62.3	1.11
102 362 177		45	228.3	225	100	20	45	53.1	42.4	40	40	75	62.3	7.92
102 362 180	3 : 1	16	89.8	80	60	16.5	55	59	21.6	40	20	140	70.9	1.31
102 362 181		48	243.2	240	100	20	47	55.7	44.9	40	40	80	70.9	9.64

BEVEL GEARS - STEEL

- Straight crown-milled teeth
- Angle between axes 90°
- Select matched pairs for the stated transmission ratios

For geometrical data, see 'Technical Information' page 211.

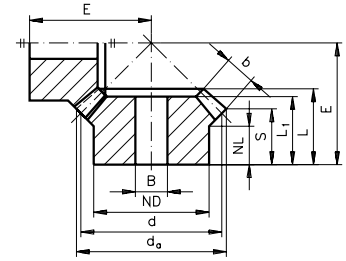


Material: Steel C45, Module : 6.0

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight (kg)
102 367 309	1 : 1	18	116.5	108	60	15	44	54	31.3	35	25	81	113.1	1.77
102 367 311	1 : 1	20	128.5	120	70	15	44	54	27.8	40	30	83.4	159.6	2.19
102 367 316	1 : 1	25	158.5	150	75	15	51	60	26.7	50	30	97.3	318.9	3.79
102 367 320	1 : 1	30	188.5	180	90	15	51	60	26.4	50	35	112.1	469.8	5.81
102 367 326	1 : 1	40	248.5	240	100	20	58	67	32.9	50	40	148.6	697.1	11.6
102 367 352	1.5 : 1	20	130	120	70	15	58	67	27	50	30	113.6	204.1	2.80
102 367 353		30	186.7	180	90	15	50	59	33.6	50	35	88.5	204.1	5.71
102 367 360	2 : 1	20	130.7	120	70	15	58	67	23.6	50	30	139.9	204.1	2.96
102 367 361		40	245.3	240	100	20	50	58	37.7	50	40	92.3	204.1	9.61
102 367 368	2.5 : 1	18	119.2	108	70	15	61	70	24.4	50	30	157	161.6	2.63
102 367 369		45	274.4	270	100	25	60	69	52.3	50	45	100.7	161.6	14.59
102 367 376	3 : 1	15	101.4	90	70	20	67	73	26.2	50	30	159.2	112.2	1.88
102 367 377		45	273.8	270	100	30	60	69	55	50	45	94.3	112.2	13.17

BEVEL GEARS - STAINLESS STEEL

- Angle between axes 90°
- Select matched pairs for stated transmission ratios
- Manufactured to DIN 3967 Quality grade 8



Material: Stainless Steel 1.4305, Module : 1.0

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight (g)
102 360 991	1 : 1	16	17.4	16	14	7.0	10	11.2	8.7	4	5	16	0.13	9
102 360 992	2 : 1	15	17.4	15	13	6.5	11	11.9	7.6	5	5	22	0.14	10
102 360 993		30	30.6	30	20	9.0	13	15.1	13.1	5	5	20		

Material: Stainless Steel 1.4305, Module : 1.5

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight (g)
102 360 994	1 : 1	16	26.1	24	20	11	15	17.3	14.1	5.1	8	25	0.37	32
102 360 995	2 : 1	15	26.1	22.5	18	6.5	13	14.8	8.4	7.6	8	30	0.49	26
102 360 996		30	45.9	45	30	12	18	20.7	17.6	7.6	10	28		

Material: Stainless Steel 1.4305, Module : 2.0

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight (g)
102 361 991	1 : 1	16	34.8	32	25	11.5	18	20.7	16.4	6.8	10	31	0.89	66
102 361 992	2 : 1	15	33.7	30	20	7.5	22	23	10.9	14	10	40	1.6	58
102 361 993		30	61.8	60	40	12	24	27.2	21.9	14	15	35		

Material: Stainless Steel 1.4305, Module : 2.5

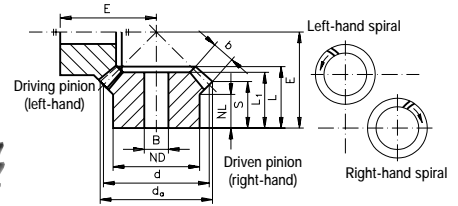
Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight (g)
102 361 994	1 : 1	16	43.7	40	30	10	21	23.8	16.8	11	10	35	4.7	120
102 361 995	2 : 1	15	42.2	37.5	30	15.4	31	33.3	18.6	17	10	55	6.4	160
102 361 996		30	77.3	75	50	10	24	28.1	21.6	17	15	38		

Material: Stainless Steel 1.4305, Module : 3.0

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight (g)
102 361 997	1 : 1	16	52.4	48	40	12	24	27.7	18.2	15	10	40	9.3	240
102 361 998	2 : 1	15	50.6	45	30	11.5	33	35.4	16.4	22	10	60	12.0	270
102 361 999		30	92.8	90	50	10	26	30.7	22.3	22	20	42		

SPIRAL BEVEL GEARS - STEEL

- Cyclo-palloid toothing
- Angle between axes 90°
- Induction hardened with ground hubs & bores



Material : Steel 42 Cr Mo 4, Module : 0.6

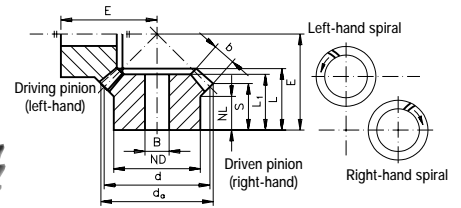
Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight/Pair (g)
102 385 316	1 : 1	25	23.3	22.5	19	7.2	12	13.4	9.2	6	6	20	2.5	50
102 385 320	1 : 1	30	27.8	27	22	7	13	14.9	9.9	7	8	23	3.5	75
102 385 322	1 : 1	35	32.3	31.5	25	7.2	15	16.3	10.6	8	8	26	4.6	116
102 385 354	1.5 : 1	22	20.8	19.8	17	7	13	14.3	8.5	7	6	23	2.6	116
		33	30.3	29.7	20	8	14	15.5	11.6	7	8	21	2.6	116
102 385 362	2 : 1	22	20.8	19.8	16	7.4	15	15.6	8.5	8	6	28	2.9	103
		44	40.1	39.6	25	8	15	17.2	13.6	8	10	23	2.9	103
102 385 374	2.5 : 1	22	20.9	19.8	16	6.8	16	16.7	7.5	10	6	32	3.5	172
		55	49.9	49.5	30	8	16	19.3	15.6	10	10	25	3.5	172
102 385 378	3 : 1	20	19.1	18	15	7.5	17	17	8.2	10	6	35	3.3	175
		60	54.3	54	45	8	16	19.7	16.6	10	10	25	3.3	175

Material : Steel 42 Cr Mo 4, Module : 1.0

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight/Pair (g)
102 385 511	1 : 1	20	31.4	30	25	8.4	15	17.3	11.7	8	8	26	7.5	112
102 385 516	1 : 1	25	38.9	37.5	25	8	16	19	11.9	10	10	30	11.8	155
102 385 520	1 : 1	30	46.4	45	30	8	19	21.7	13.2	12	10	35	17.0	278
102 385 552	1.5 : 1	20	31.6	30	25	8	17	18.3	10	10	8	32	9.4	188
		30	46.3	45	30	8	17	19.5	14	10	10	28	9.4	188
102 385 550	1.615 : 1	13	20.27	18.57	16	8.2	12	13.78	9.53	5	8	24	2.6	45
		21	31.06	30	20	6	10.5	12.2	9.57	5	10	18	2.6	45
102 385 560	2 : 1	20	31.8	30	25	8	19	20.2	9.4	12	8	39	10.8	323
		40	60.9	60	40	8	18	21.2	15.9	12	12	30	10.8	323
102 385 556	2.066 : 1	15	23.57	21.77	19	6	13.24	13.24	6.94	7	8	29	4.4	112
		31	45.88	45	24	8	14.06	16.56	13.51	7	10	23.5	4.4	112
102 385 572	2.5 : 1	20	31.8	30	25	8.4	21	22.8	9.8	14	8	47	7.8	355
		50	75.7	75	50	8	18	21.1	15.9	14	12	30	7.8	355
102 385 580	2.882 : 1	17	27.55	25.67	22	7	16.83	16.83	8.33	9	10	45	6.4	380
		49	74.66	74	50	10	16	21.05	18.1	9	20	30	6.4	380
102 385 584	3 : 1	16	26.1	24	20	8.3	22	22.6	9.3	14	8	45	6.1	380
		48	72.5	72	50	8	18	21.3	16.8	14	12	28	6.1	380
102 385 594	4 : 1	16	25.9	24	20	7.3	21	21.8	8.2	14	8	56	9.8	842
		64	96.5	96	7	8	19	22.4	19	14	20	30	9.8	842

SPIRAL BEVEL GEARS - STEEL

- Cyclo-palloid toothing
- Angle between axes 90°
- Induction hardened with ground hubs & bores



Material : Steel 42 Cr Mo 4, Module : 1.3

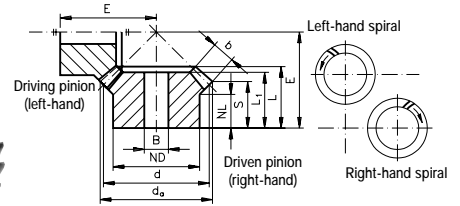
Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight/Pair (g)
102 385 611	1 : 1	20	41.8	40	30	7.3	19	20.7	12.9	11	10	32	17.3	222
102 385 616	1 : 1	25	51.8	50	30	8	19	21.8	11.9	14	10	36	27.5	326
102 385 620	1 : 1	30	61.8	60	35	8	21	24.2	12.9	16	12	42	37.1	530
102 385 648	1.5 : 1	16	34.3	32	25	8	18	19.9	10.7	11	8	34	13.6	220
		24	49.4	48	30	8	18	21.1	15	11	10	30	13.6	220
102 385 658	2 : 1	16	34.4	32	25	7	20	22.1	9.6	14	8	41	17.2	397
		32	65.1	64	40	8	20	23.3	17.1	14	12	32	17.2	397
102 385 666	2.5 : 1	14	30.5	28	22	8.7	20	21.6	10.5	12	8	45	12.6	420
		35	70.9	70	45	8	18	21.6	17.1	12	12	30	12.6	420
102 385 678	3 : 1	11	25.1	22	19	6	17	17.9	7.5	11	8	40	8.4	320
		33	66.6	60	40	8	17	20.4	16.9	11	12	27	8.4	320

Material : Steel 42 Cr Mo 4, Module : 1.5

Order Code	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight/Pair (g)
102 385 709	1 : 1	18	41.7	39.6	30	8	17	20.3	13.2	10	10	32	18.6	209
102 385 715	1 : 1	24	54.9	52.8	35	8	20	22.6	12.7	14	10	38	35.5	408
102 385 719	1 : 1	28	63.7	61.6	40	8	20	23.2	13.3	14	12	43	41.5	576
102 385 740	1.214 : 1	14	41.02	38.71	22	11	21.14	24.24	15.36	11.5	12	38	17.3	236
		17	48.91	47	30	11	20.91	23.91	16.6	11.5	15	34.8	17.3	236
102 385 744	1.385 : 1	13	36.72	33.94	22	11	21.59	23.99	15.88	10	12	38.5	13.1	216
		18	48.51	47	30	11	20.9	24.9	19.05	10	15	34.8	13.1	216
102 385 748	1.5 : 1	16	37.8	35.8	30	8	17	18.8	10.5	10	10	36	15.7	273
		24	54.4	52.8	35	8	17	21.1	15.6	10	10	32	15.7	273
102 385 756	2 : 1	16	38	35.2	30	8.4	19	21.2	10.5	12	10	45	19.1	435
		32	71.7	70.4	45	8	17	21	15.7	12	12	32	19.1	435
102 385 764	2.5 : 1	16	38	35.2	30	7.5	20	21.6	9.6	13	10	53	20.0	624
		40	89.1	88	60	8	16	20.6	15.8	13	15	32	20.0	624
102 385 774	3 : 1	10	26.0	22	17	8	19	20.1	9.6	11	8	42	10.2	380
		30	66.6	66	40	8	17	21.3	17.8	11	12	28	10.2	380
102 385 784	4 : 1	11	27.8	24.2	20	8	19	20.7	9	12	8	57	11.8	775
		44	97.3	96.8	70	8	17	21.9	19	12	20	30	11.8	775

SPIRAL BEVEL GEARS - STEEL

- Cyclo-palloid toothing
- Angle between axes 90°
- Teeth hardened and lapped (where indicated)



Material : Steel 16 Mn Cr 5, Module : 2.0

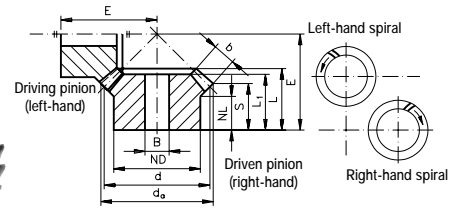
Order Code	Hardened	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight/Pair (g)
102 386 011	Yes	1 : 1	20	72.82	70	45	15	28	32.73	21.42	16	16	55	63.0	973
102 386 016	Yes	1 : 1	25	80.33	78	45	15	29	32.31	22.41	14	16	60	64.8	1200
102 381 018	No	1 : 1	26	82.80	80	55	20	35	37.70	26.40	16	16	65	73.5	1581
102 386 048	Yes	1.5 : 1	16	53.33	50	35	6	19	22.06	13.61	12	10	48.45	33.7	561
			24	77.20	75	39	15	24	28.30	21.68	12	16	45	33.7	561
102 381 054	No	2 : 1	12	45.10	41.5	30	12	27.8	27.80	14.40	15	12	55	32.1	846
			24	84.50	83	50	15	29	32.60	26.00	15	16	45	32.1	846
102 386 054	Yes	2 : 1	13	48.59	45	30	15	30	33.01	20.88	15	10	63.65	34.9	818
			26	91.75	90	40	22	30	35.88	29.31	15	16	50	34.9	818
102 386 074	Yes	3 : 1	10	36.47	32	22	11	24	25.64	17.69	13	8	60.52	20.8	638
			30	96.97	96	48	19	25	29.39	25.59	13	20	40	20.8	638

Material : Steel 16 Mn Cr 5, Module : 2.5

Order Code	Hardened	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight/Pair (g)
102 386 111	Yes	1 : 1	20	91.54	88	56	18	34	36.91	22.77	20	20	65	119.5	1700
102 386 116	Yes	1 : 1	25	99.53	96	54	16	32	37.21	23.78	19	20	70	137.9	2000
102 381 119	No	1 : 1	28	109.9	106.4	70	25	44	47.7	33.6	20	20	85	157.6	3400
102 386 148	Yes	1.5 : 1	16	68.17	64	40	14	25	31.73	18.39	16	16	65	69.7	1300
			24	98.76	96	54	14	23	28.92	20.09	16	20	50	69.7	1300
102 381 154	No	2 : 1	11	57.2	52.5	40	15	36.6	36.6	18.7	20	16	70	68.0	2000
			22	107.1	105	70	20	39	44.6	35.9	20	20	60	68.0	2000
102 386 154	Yes	2 : 1	13	60.49	56	39	15	34	38.21	20.11	20	16	75.13	72.4	1400
			26	114.19	112	54	21	30	38.02	29.26	20	25	55	72.4	1400
102 386 162	Yes	2.5 : 1	10	45.41	40	33	11	24.5	27.38	16.05	15	12	62.33	39.6	1200
			25	101.5	100	54	22	30	37.34	31.97	15	25	50	39.6	1200
102 386 174	Yes	3 : 1	10	43.09	37.5	27	12	26.5	28.79	19.61	15	12	69.84	37.4	1100
			30	113.71	112.5	54	24	32	37.62	33.24	15	25	50	37.4	1100

SPIRAL BEVEL GEARS - STEEL

- Cyclo-palloid toothing
- Angle between axes 90°
- Teeth hardened and lapped (where indicated)



Material : Steel 16 Mn Cr 5, Module : 3.0

Order Code	Hardened	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight/Pair (g)
102 386 411	Yes	1 : 1	20	104.24	100	68	17	36	43.39	27.13	23	25	75	198.2	2600
102 386 416	Yes	1 : 1	25	116.24	112	64	18	34	41.68	26.13	22	25	80	232.7	2800
102 386 448	Yes	1.5 : 1	16	81.0	76	50	15	28	35.50	19.66	19	20	75	117.9	1682
			24	117.31	114	64	18	28	34.99	24.51	19	25	60	117.9	1682
102 386 454	Yes	2 : 1	13	69.39	64	45	16	37	41.71	22.32	22	20	84.62	108.7	2000
			26	130.63	128	54	20	32	40.34	30.70	22	25	60	108.7	2000
102 381 456	No	2 : 1	15	77.9	72.5	55	25	51.3	51.3	28.8	25	20	100	152.4	4800
			30	147.6	145	90	25	50	57.4	46.5	25	30	80	152.4	4800
102 386 462	Yes	2.5 : 1	10	54.49	48	39	11	28	30.77	16.26	18	16	72.71	65.0	1700
			25	121.8	120	64	28	38	44.81	38.36	18	25	60	65.0	1700

Material : Steel 16 Mn Cr 5, Module : 3.5

Order Code	Hardened	Ratio	N (teeth)	Overall Dia d_a	Pitch Dia d	Hub Dia ND	Hub Length NL	L_1	L	S	b	B-H7	E	Torque (Nm)	Weight/Pair (g)
102 386 516	Yes	1 : 1	25	132.94	128	72	20	38	46.16	28.49	25	30	90	352.6	4200
102 381 518	No	1 : 1	26	144.9	140	85	30	57	62.3	42.5	28	30	110	408.4	7300
102 386 554	Yes	2 : 1	13	78.29	72	54	12	34	39.49	19.54	24	20	88.38	167.6	2800
			26	147.06	144	64	25	38	47.67	37.15	24	30	70	167.6	2800
102 386 562	Yes	2.5 : 1	10	63.58	56	40	14	34	38.12	21.46	21	16	87.06	103.5	2400
			25	142.1	140	70	35	45	52.27	44.75	21	30	70	103.5	2400
102 386 574	Yes	3 : 1	10	60.33	52.5	40	12	33	36.13	22.46	22	16	92.64	109.7	2700
			30	159.2	157.5	70	29	40	47.96	41.53	22	30	65	109.7	2700

LASTING
PERFORMANCE...

...NO PROBLEM