

Standard Metric Series Bevel Gears

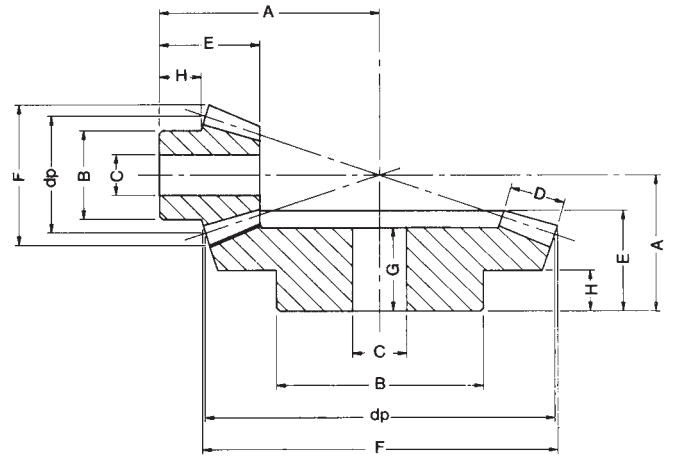
Cross+Morse standard stock bevel gears complement the existing range of diametral pitch gears to provide the designer a wider range of selection. Available in 4 standard ratios with 9 different pitches ranging from 1.0 Mod to 5.0 Mod, these bevels provide the ideal solution for many right angle drive applications from light instrumentation to rugged manufacturing plant and agricultural equipment. All gears are manufactured in medium carbon steels for high strength and durability, and can be optionally induction/flame hardened for more arduous applications. The gears are all gear cut to the Gleason System with 20 degree pressure angle, and supplied only in complete sets to ensure correct matching.

For long life and efficient operation it is essential that bevel gears are correctly mounted on rigidly supported shafts with bearings able to support the axial and radial loads imposed. The shafts should be at a true right angle within the following tolerances:-

Shaft Axis to intersect within $\pm 0.025\text{mm}$

Shafts to be at right angles within $\pm 5'$ angle

The mounting distance (Dimension 'A') to be true within $+0.0/-0.05\text{mm}$



Metric Series Bevel Gears 1.0 Mod to 5.0 Mod

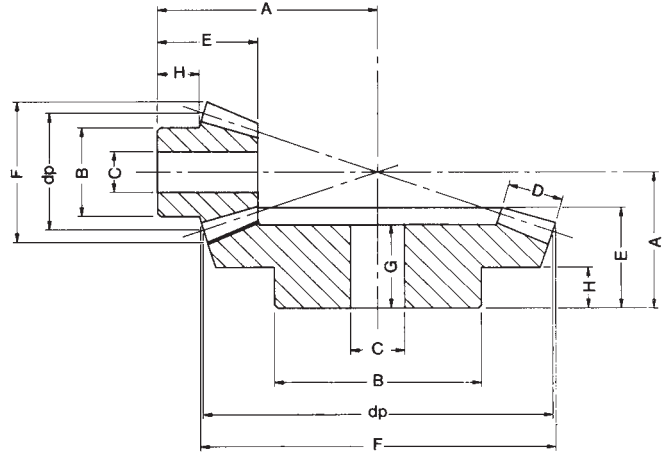
Catalogue No.	Pitch Module	No. Teeth	Pitch Dia. dp	A	B	Bore C		D	E	F	G	H	Approx Wt. kg
						min	max						
Bevel Gear Sets 1.5 : 1 Ratio													
M101624	1	16 24	16.0 24.0	20 20	13.3 20.3	4 5	8 12	4.3 4.3	12.0 14.8	18.1 24.8	12.0 13.3	7.0 9.3	.012 .035
M151624	1.5	16 24	24.0 36.0	31 32	20.3 28.3	8 8	10 13	8 8	20.3 24.9	27.1 37.2	20.3 22.7	11.8 16.0	.040 .115
M201624	2	16 24	32.0 48.0	40 37	25.3 32.3	8 8	15 21	10 10	25.2 27.2	36.2 49.7	25.2 24.7	13.8 16.0	.080 .255
M251624	2.5	16 24	40.0 60.0	49 46	32.3 45.3	12 16	18 29	13 13	30.8 34.0	45.2 62.1	30.8 30.8	16.4 20.0	.17 .40
M301624	3	16 24	48.0 72.0	55 51	40.3 55.3	12 16	23 36	14.5 14.5	32.4 36.2	54.3 74.5	32.4 32.0	16.4 20.0	.30 .65
M351624	3.5	16 24	56.0 84.0	66 61	45.3 55.3	16 20	26 36	18 18	40.4 44.2	63.3 86.9	40.4 40.0	20.4 25.0	.57 .90
M401624	4	16 24	64.0 96.0	78 66	50.3 60.3	16 20	32 40	18 18	46.8 45.5	72.4 99.3	46.8 40.0	25.4 25.0	.68 1.20
M451624	4.5	16 24	72.0 108.0	83 81	60.3 80.3	20 20	38 54	20 20	47.6 57.8	81.4 111.7	47.6 51.3	25.1 35.0	.93 2.20
M501624	5	16 24	80.0 120.0	92 86	60.3 80.3	20 20	40 54	24 24	54.1 61.1	90.5 124.1	54.1 54.5	25.4 35.0	1.06 2.40
Bevel Gear Sets 2.0 : 1 Ratio													
M101530	1	15 30	15.0 30.0	22 20	13.3 20.3	4 5	8 13	5 5	11.9 15.1	17.4 30.6	11.9 13.7	6.5 9.0	.010 .040
M151530	1.5	15 30	22.5 45.0	35 32	19.3 32.3	8 8	10 21	9 9	21.1 25.2	26.1 45.9	21.1 23.0	11.9 16.0	.040 .170
M151632	1.5	16 32	24.0 48.0	35.83 27.45	21.0 32.0	10 12	11 21	8 8	19.5 20.0	26.7 49.3	18.0 17.0	11.3 10.0	.04 .12
M201530	2	15 30	30.0 60.0	45 39	25.3 40.3	8 14	13 27	11.5 11.5	26.0 29.8	34.8 61.2	26.0 26.8	14.1 18.0	.090 .320
M201632	2	16 32	32.0 64.0	45.41 35.21	26.0 40.0	10 12	15 27	10 10	23 25.0	35.6 65.8	21.0 21.0	11.9 10.0	.08 .26
M251530	2.5	15 30	37.5 75.0	55 45	32.3 45.3	12 16	17 30	15 15	31.8 33.7	43.5 76.5	31.8 30.0	16.2 20.0	.170 .500
M251632	2.5	16 30	40.0 75.0	55.88 45	34.0 40.3	12 14	18 27	12 11.5	27.5 29.8	44.5 61.2	25.0 26.8	14.4 18.0	.170 .320
M301530	3	15 30	45.0 90.0	66 56	40.3 55.3	12 16	22 36	17 17	37.3 42.1	52.2 91.8	37.3 38.0	19.9 25.0	.315 .960
M301632	3	16 32	48.0 96.0	61.64 45.31	40.0 60.0	15 15	24 40	15 15	28.0 30.0	53.4 98.7	25.0 24.0	11.6 10.0	.23 .72
M351530	3.5	15 30	52.5 105.0	79 61	45.3 60.3	16 20	25 40	20.5 20.5	46.1 45.0	60.9 107.1	46.1 40.0	24.7 25.0	.49 1.35
M351632	3.5	15 30	52.5 105.0	79 61	45.3 60.3	16 20	25 40	20.5 20.5	46.1 45.0	60.9 107.1	46.1 40.0	24.7 25.0	.49 1.35
M401530	4	15 30	60.0 120.0	87 76	50.3 80.3	20 20	30 54	22.5 22.5	48.6 57.3	69.6 122.3	48.6 51.9	24.6 35.0	.63 2.45
M401632	4	16 32	64.0 128.0	80.81 52.42	50.0 80.0	15 20	32 54	20 20	36.0 32.0	71.2 131.6	32.0 24.0	13.4 10.0	.52 1.32
M451530	4.5	15 30	67.5 135.0	94 81	60.3 80.3	20 20	34 54	26 26	51.4 60.3	78.3 137.6	51.4 54.3	24.7 35.0	1.20 3.18
M451632	4.5	16 32	72.0 144.0	90.5 59.21	60.0 90.0	20 20	36 60	22 22	39.5 36.0	80.1 148.0	35.0 27.0	15.4 10.0	.76 1.94
M501530	5	15 30	75.0 150.0	104 85	60.3 80.3	20 20	37 54	30 30	57.6 62.5	87.0 152.9	57.6 56.0	25.3 35.0	1.38 3.87
M501632	5	16 32	80.0 160.0	106.06 63.52	60.0 100.0	20 20	40 65	25 25	50.0 38.0	88.9 164.5	45.0 28.0	21.1 10.0	1.04 2.53

All dimensions in mm.

All gears stocked with standard plain bore. Rebore, keyway, setscrew and induction hardening services available.

Bevel and mitre gears with other D.P. and module can be supplied to order up to 375mm diameter.

Standard Metric Bevel Gears



Metric Series Bevel Gears 1.0 Mod to 5.0 Mod

Catalogue No.	Pitch Module	No. Teeth	Pitch Dia. dp	A	B	Bore C		D	E	F	G	H	Approx Wt. kg
						min	max						
Bevel Gear Sets 3 : 1 Ratio													
M101545	1	15	15.0	32.00	13.3	4	8	7.1	16.6	17.7	16.6	9.2	0.02
		45	45.0	22.00	25.3	8	16	7.1	17.1	45.3	15.2	10.0	0.09
M151545	1.5	15	22.5	46.00	19.3	8	10	10.5	22.6	26.5	22.6	11.7	0.05
		45	67.5	37.00	45.3	14	30	10.5	29.6	68.1	27.2	20.0	0.41
M151648	1.5	16	24.0	46.44	20.0	10	11	12.0	24.0	26.8	23.0	11.7	0.05
		48	72.0	27.27	50.0	12	33	12.0	20.0	73.0	17.0	10.0	0.33
M201545	2	15	30.0	60.00	25.3	8	15	14.0	28.9	35.4	28.9	14.2	0.09
		45	90.0	42.00	45.3	16	30	14.0	32.1	90.8	28.4	20.0	0.61
M201648	2	16	32.0	61.76	26.0	12	16	15.0	28.5	35.8	27.0	12.4	0.10
		48	96.0	32.90	60.0	15	40	15.0	23.0	97.3	19.0	10.0	0.65
M251545	2.5	15	37.5	73.00	32.3	12	18	18.0	34.6	44.2	34.6	15.9	0.13
		45	112.5	52.00	60.3	20	40	18.0	39.7	113.4	35.3	25.0	1.22
M251648	2.5	16	40.0	74.41	32.0	12	18	18.0	32.0	44.7	30.0	13.0	0.18
		48	120.0	38.60	70.0	20	48	18.0	26.0	121.6	21.0	10.0	1.13
M301545	3	15	45.0	88.00	40.3	16	22	21.0	41.3	53.0	41.3	19.7	0.34
		45	135.0	62.00	60.3	20	40	21.0	47.2	136.1	42.0	30.0	1.85
M301648	3	16	48.0	86.25	40.0	15	22	18.0	32.0	53.7	30.0	12.1	0.28
		48	144.0	45.20	80.0	20	54	18.0	29.0	145.9	23.0	10.0	1.85
M351545	3.5	15	52.5	105.00	45.3	20	28	23.5	49.6	61.9	49.6	25.0	0.60
		45	157.5	72.00	80.3	20	54	23.5	54.4	158.8	48.6	35.0	3.25
M351648	3.5	16	56.0	100.29	48.0	15	30	22.0	38.0	62.6	35.5	15.0	0.50
		48	168.0	49.48	90.0	20	60	22.0	31.0	170.2	24.0	10.0	2.69
M401545	4	15	60.0	117.00	50.3	20	32	27.5	54.3	70.7	54.3	25.4	0.75
		45	180.0	77.00	80.3	20	54	27.5	57.0	181.5	50.5	35.0	3.95
M401648	4	16	64.0	112.73	55.0	20	35	25.0	41.5	71.6	38.5	15.2	0.68
		48	192.0	54.20	100.0	20	66	25.0	33.0	194.5	25.0	10.0	3.74
M451545	4.5	15	67.5	128.00	55.3	20	36	28.5	55.2	79.5	55.2	24.8	0.87
		45	202.5	87.00	90.3	20	60	28.5	63.9	204.2	57.0	40.0	5.60
M451648	4.5	16	72.0	133.27	60.0	20	40	28.0	53.0	80.5	50.0	23.4	1.08
		48	216.0	72.93	100.0	20	66	28.0	49.0	218.8	40.0	18.0	6.70
M501545	5	15	75.0	145.00	60.3	20	40	33.0	65.3	88.4	65.3	30.0	1.35
		45	225.0	92.00	90.3	20	60	33.0	66.7	226.9	59.2	40.0	7.05
M501648	5	16	80.0	145.61	60.0	20	40	35.0	60.0	89.5	57.0	22.5	1.34
		48	240.0	75.45	150.0	20	100	35.0	50.0	243.2	40.0	20.0	9.00
Bevel Gear Sets 4 : 1 Ratio													
M101560	1	15	15.0	38.00	13.3	4	8	9.3	17.2	17.8	17.2	7.7	0.02
		60	60.0	22.00	30.3	8	20	9.3	17.1	60.3	15.2	10.0	0.24
M151560	1.5	15	22.5	57.00	20.3	8	11	11.0	23.0	26.7	23.0	11.7	0.04
		60	90.0	42.00	50.3	16	34	11.0	34.0	90.4	31.2	25.0	0.78
M151664	1.5	16	24.0	61.02	18.0	10	12	12.0	25.0	26.9	24.0	12.2	0.05
		64	96.0	30.53	70.0	15	48	12.0	22.0	96.7	19.0	10.0	0.71
M201560	2	15	30.0	75.00	25.3	8	14	16.0	31.0	35.6	31.0	14.4	0.12
		60	120.0	48.00	60.3	16	40	16.0	37.6	120.6	34.2	25.0	1.30
M201664	2	16	32.0	73.07	25.0	12	15	15.0	24.0	35.9	23.0	8.2	0.09
		64	128.0	35.79	80.0	20	54	15.0	24.0	129.0	20.0	10.0	1.23
M251560	2.5	15	37.5	94.00	32.3	14	20	19.0	38.1	44.5	38.1	18.4	0.21
		60	150.0	58.00	60.3	20	40	19.0	44.8	150.7	40.0	30.0	1.95
M251664	2.5	16	40.0	92.49	30.0	12	20	18.0	30.5	44.9	29.0	11.7	0.18
		64	160.0	42.77	90.0	20	60	18.0	29.0	161.2	24.0	10.0	2.38
M301560	3	15	45.0	115.00	40.3	16	24	23.0	48.1	53.3	48.1	24.5	0.40
		60	180.0	69.00	80.3	20	54	23.0	53.2	180.8	48.2	35.0	3.65
M301664	3	16	48.0	108.05	40.0	15	25	22.0	34.0	53.8	32.0	11.0	0.32
		64	192.0	46.41	100.0	20	66	22.0	30.0	193.5	24.0	10.0	3.43
M351560	3.5	15	52.5	131.00	45.3	20	30	26.0	52.1	62.6	52.1	25.1	0.56
		60	210.0	79.00	90.3	20	60	26.0	60.4	211	54.4	40.0	5.40
M351664	3.5	16	56.0	132.13	48.0	15	32	25.0	45.0	62.8	43.0	19.1	0.60
		64	224.0	69.32	100.0	20	66	25.0	50.0	225.7	43.0	22.0	7.00
M401560	4	15	60.0	145.00	50.3	20	34	30.0	55.1	71.1	55.1	23.0	0.79
		60	240.0	82.00	90.3	20	60	30.0	60.8	241.1	53.0	40.0	6.20
M401664	4	16	64.0	148.21	50.0	20	34	30.0	50.0	71.8	48.0	18.5	0.79
		64	256.0	71.72	120.0	20	80	30.0	50.0	257.9	42.0	20.0	9.60
M451560	4.5	15	67.5	159.90	52.3	20	35	32.0	57.0	79.97	57.0	23.0	1.08
		60	270.0	86.30	90.3	20	60	32.0	62.0	271.2	53.5	40.0	7.95
M451664	4.5	16	72.0	165.08	55.0	20	38	32.0	53.0	80.7	50.5	19.0	1.07
		64	288.0	77.83	130.0	20	84	32.0	53.0	290.2	44.0	23.0	12.00
M501560	5	15	75.0	177.70	55.3	20	36	34.0	62.0	88.8	62.0	25.0	1.40
		60	300.0	92.00	90.3	20	60	34.0	65.0	301.3	55.0	40.0	10.30
M501664	5	16	80.0	183.06	60.0	20	40	35.0	58.0	89.7	55.5	20.6	1.46
		64	320.0	85.65	150.0	20	100	35.0	58.0	322.4	48.0	25.0	16.50

All dimensions in mm.

All gears stocked with standard plain bore. Rebore, keyway, setscrew and induction hardening services available.

Bevel and mitre gears with other D.P. and module can be supplied to order up to 375mm diameter.