

Standard Metric Mitre Gears



Cross+Morse standard stock metric mitre gears complement the existing range of diametral pitch gears to provide the designer a wider range of selection. The mitre gear sets are available in 5 tooth sizes in 9 pitches from 1.0 Mod to 5.0 Mod, providing the correct solution for right angle drives in applications from light instrumentation and office equipment to heavy manufacturing machinery.

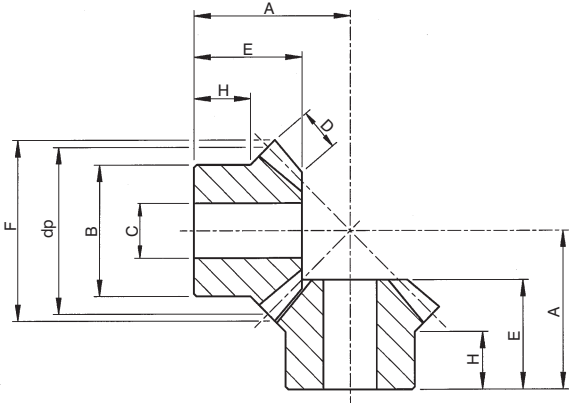
All gears are manufactured in medium carbon steels for high strength and durability, and can be optionally induction/flame hardened for more arduous applications. The gears are cut to the Gleason System with 20 degree pressure angle, and supplied only in pairs to ensure correct matching.

For long life and efficient operation it is essential that mitre 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 $+0.0/-0.05\text{mm}$



Cat. No.	Pitch Module	No. Teeth	dp	A	B	Bore C		D	E	F	H	Approx Weight per Gear Kg
						min	max					
M1016	1	16	16.0	16	13.3	4	7.5	4	11.2	17.4	6.5	.013
M1019		19	19.0	18	15.3	4	9	4	11.8	20.4	6.5	.015
M1022		22	22.0	20	16.3	5	10	4.7	12.8	23.4	6.5	.022
M1026		26	26.0	22	20.3	5	13	5.5	13.3	27.4	7	.033
M1030		30	30.0	26	20.3	5	13	6.4	16.0	31.4	8	.080
M1516	1.5	16	24.0	26	20.3	8	10	6	18.9	26.1	12	.028
M1519		19	28.5	30	20.3	8	12.5	6	21.3	30.6	12	.050
M1522		22	33.0	33	25.3	8	16	7.5	22.5	35.1	12	.081
M1526		26	39.0	36	28.3	8	19	8.5	23.2	41.1	12	.117
M1530		30	45.0	42	30.3	12	20	10	27.2	47.1	12	.167
M2016	2	16	32.0	33	25.3	8	14	8	23.5	34.8	14	.070
M2019		19	38.0	36	25.3	8	16	9	24.2	40.8	12	.105
M2022		22	44.0	42	30.3	12	20	10	27.9	46.8	14	.158
M2026		26	52.0	48	35.3	12	24	12	31.4	54.8	14	.261
M2030		30	60.0	54	40.3	14	27	13	34.1	62.8	17	.385
M2516	2.5	16	40.0	40	30.3	12	18	10	28.1	43.5	15	.150
M2519		19	47.5	42	35.3	12	23	11	27.1	51.0	13	.200
M2522		22	55.0	48	45.3	16	28	12	30.1	58.5	16	.328
M2526		26	65.0	54	45.3	16	30	15	33.2	68.5	16	.490
M2530		30	75.0	64	50.3	16	34	16	39.0	78.5	20	.700
M3016	3	16	48.0	45	40.3	12	21	12	31.7	52.5	18	.250
M3019		19	57.0	54	40.3	14	27	13	36.0	61.2	17	.370
M3022		22	66.0	58	50.3	16	34	15	36.9	70.2	17	.540
M3026		26	78.0	64	50.3	16	34	17	38.4	82.2	18	.750
M3030		30	90.0	74	60.3	20	40	19	43.8	94.2	22	.950
M3516	3.5	16	56.0	53	45.3	16	24	14	36.4	60.9	20	.450
M3519		19	66.5	58.8	50.3	18	34	15	37.8	71.5	19	.650
M3522		22	77.0	64	55.3	20	36	17	39.1	81.9	18	.720
M3526		26	91.0	73.05	62.3	20	41	20	43.35	96.0	20	1.290
M3530		30	105.0	82	70.3	20	46	23	47.1	110.0	22	1.900
M4016	4	16	64.0	64	50.3	16	31	15	44.3	69.7	25	0.680
M4019		19	76.0	68	55.3	20	36	18	44.4	81.7	22	0.900
M4022		22	88.0	74	60.3	20	40	20	45.9	93.7	22	1.050
M4026		26	104.0	82	70.3	20	46	25	48.0	109.7	22	2.000
M4030		30	120.0	94	80.3	20	54	26	54.2	125.7	25	2.450
M4516	4.5	16	72.0	68	55.3	20	34	17.5	46.3	78.4	25	0.750
M4519		19	85.5	75.57	62.3	20	41	20	49	91.8	25	1.290
M4522		22	99.0	82	70.3	20	46	22	50.1	105.3	25	1.550
M4526		26	117.0	93.3	75.3	20	50	25	54.7	123.0	26	2.790
M4530		30	135.0	105	80.3	20	54	29	60	141.4	28	3.100
M5016	5	16	80.0	74	60.3	20	40	18	48.9	87.1	25	0.920
M5019		19	95.0	82	60.3	20	40	22	52.2	102.1	25	1.500
M5022		22	110.0	94	80.3	20	54	24	58.2	117.1	30	2.390
M5026		26	130.0	105	80.3	20	54	29	62.7	137.1	30	3.140
M5030		30	150.0	119	80.3	20	54	32	68.9	157.1	35	4.200

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.

Tel +44 121 360 0155

Fax +44 121 325 1079

Email sales@crossmorse.com

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.

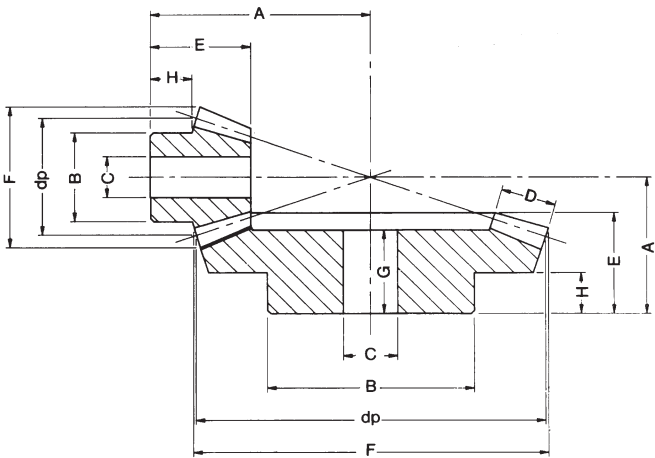
All gears are manufactured in medium carbon steels for high strength and durability, and can be optionally induction/flame hardened for more arduous applications. The gears are all gear cut to the Gleason System with 20 degree pressure angle, and supplied only in complete sets to ensure correct matching.

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

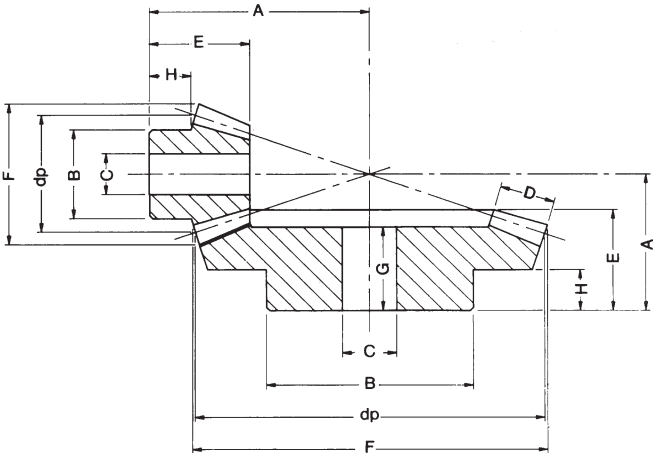
Catalogue No.	Pitch Module	No. Teeth	Pitch Dia. dp	A	B	Bore C		D	E	F	G	H	Approx Wt. kg
						min	max						
Bevel Gear Sets 1.5 : 1 Ratio													
M101624	1	16 24	16.0 24.0	20 20	13.3 20.3	4 5	8 12	4.3 4.3	12.0 14.8	18.1 24.8	12.0 13.3	7.0 9.3	.012 .035
M151624	1.5	16 24	24.0 36.0	31 32	20.3 28.3	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
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
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
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
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
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
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
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

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 45	15.0 45.0	32 22	13.3 25.3	4 8	8 16	7.1 7.1	16.6 17.1	17.7 45.3	16.6 15.2	9.2 10.0	.015 .10
M151545	1.5	15 45	22.5 67.5	46 37	19.3 45.3	8 14	10 30	10.5 10.5	22.6 29.6	26.5 68.1	22.6 34.6	11.7 20.0	.045 .41
M201545	2	15 45	30.0 90.0	60 42	25.3 45.3	8 16	15 30	14 14	28.9 32.1	35.4 90.8	28.9 28.4	14.2 20.0	.085 .61
M251545	2.5	15 45	37.5 112.5	73 52	32.3 60.3	12 20	18 40	18 18	34.6 39.7	44.2 113.4	34.6 35.3	15.9 25.0	.13 1.22
M301545	3	15 45	45.0 135.0	88 62	40.3 60.3	16 20	22 40	21 21	41.3 47.2	53.0 136.1	41.3 42.0	19.7 30.0	.34 1.85
M351545	3.5	15 45	52.5 157.5	105 72	45.3 80.3	20 20	28 54	23.5 23.5	49.6 54.4	61.9 158.8	49.6 48.6	25.0 35.0	.70 3.25
M401545	4	15 45	60.0 180.0	117 77	50.3 80.3	20 20	32 54	27.5 27.5	54.3 57.0	70.7 181.5	54.3 50.5	25.4 35.0	.75 3.95
M451545	4.5	15 45	67.5 202.5	128 87	55.3 90.3	20 20	36 60	28.5 28.5	55.2 63.9	79.5 204.2	55.2 57.0	24.8 40.0	.87 5.60
M501545	5	15 45	75.0 225.0	145 92	60.3 90.3	20 20	40 60	33 33	65.3 66.7	88.4 226.9	65.3 59.2	30.0 40.0	1.35 7.05
Bevel Gear Sets 4 : 1 Ratio													
M101560	1	15 60	15.0 60.0	38 22	13.3 30.3	4 8	8 20	9.3 9.3	17.2 17.1	17.80 60.30	17.2 15.2	7.7 10	.015 .24
M151560	1.5	15 60	22.5 90.0	57 42	20.3 50.3	8 16	11 34	11 11	23.0 34.0	26.70 90.40	23.0 31.2	11.7 25	.031 .78
M201560	2	15 60	30.0 120.0	75 48	25.3 60.3	8 16	14 40	16 16	31.0 37.6	35.60 120.60	31.0 34.2	14.4 25	.12 1.30
M251560	2.5	15 60	37.5 150.0	94 58	32.3 60.3	14 20	20 40	19 19	38.1 44.8	44.50 150.70	38.1 40.0	18.4 30	.21 1.95
M301560	3	15 60	45.0 180.0	115 69	40.3 80.3	16 20	24 54	23 23	48.1 53.2	53.30 180.80	48.1 48.2	24.5 35	.40 3.65
M351560	3.5	15 60	52.5 210.0	131 79	45.3 90.3	20 20	30 60	26 26	52.1 60.4	62.60 211.00	52.1 54.4	25.1 40	.56 5.40
M401560	4	15 60	60.0 240.0	145 82	50.3 90.3	20 20	34 60	30 30	55.1 60.8	71.10 241.10	55.1 53.0	23 40	.79 6.20
M451560	4.5	15 60	67.5 270.0	159.9 86.3	52.3 90.3	20 20	35 60	32 32	57.0 62.0	79.97 271.24	57.0 53.5	23 40	1.08 7.95
M501560	5	15 60	75.0 300.0	177.7 92	55.3 90.3	20 20	36 60	34 34	62.0 65.0	88.80 301.30	62.0 55.0	25 40	1.40 10.30

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.

Tel +44 121 360 0155

Fax +44 121 325 1079

Email sales@crossmorse.com