



MRC® Gear Couplings

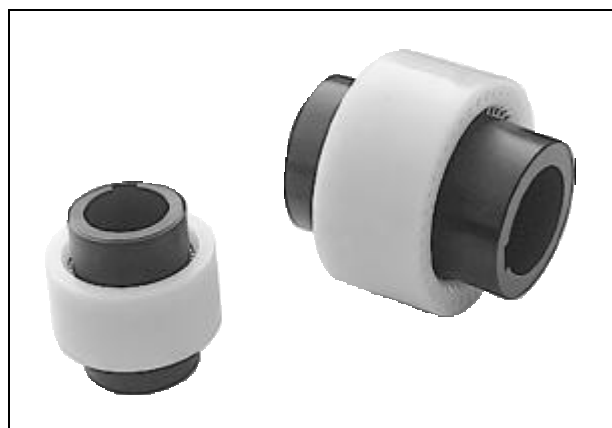
“MRC®” Gear Coupling

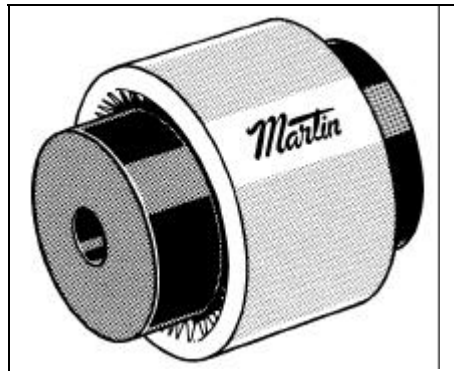
Martin's Gear Couplings provide a low cost alternative in applications where low power requirements are used. They provide an excellent way to compensate for axial, radial and angular misalignment of connecting shafts.

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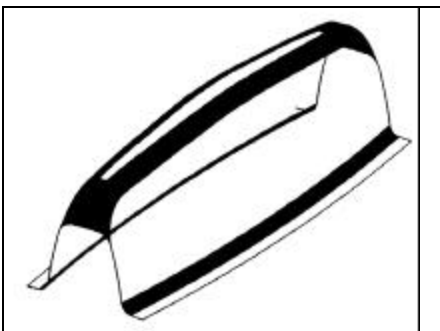
Pilot Bore and Finished Bore





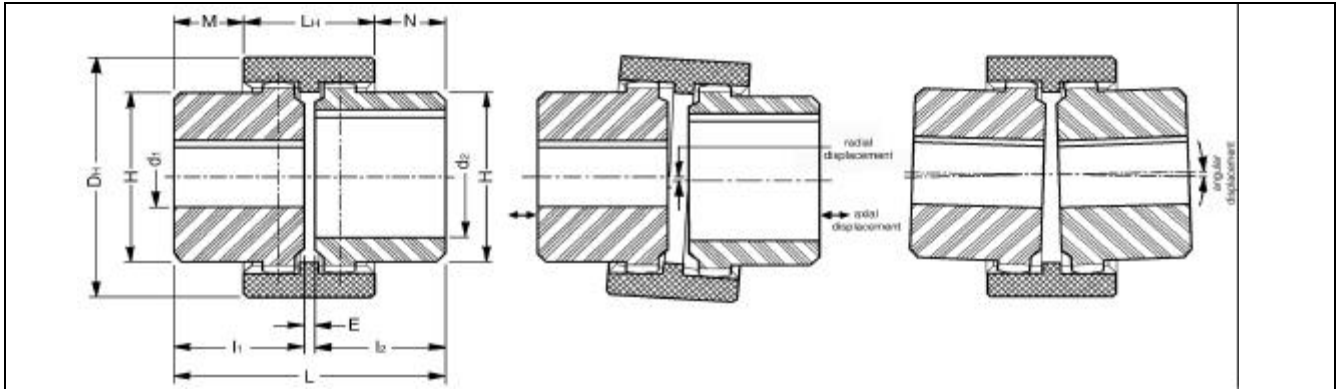
- Compact and lightweight design
- High Torque
- Power Ratings from, 37kW — 450kW
- 82°C Continuous ambient operating temperature
- Split fit and Blind assembly
- Minimum shaft gap
- No metal to metal contact — electrically isolated
- No seals or retainers to maintain
- No lubrication
- Resists most contaminating elements
- Stocked in a wide range of bore sizes

Double cardinal curved tooth with unique, smooth rounded profile



Gear Coupling

- Double cardanic curved tooth
 - *residual force due to axial-radial and angular misalignment is minimized;
- Full machined tooth
 - *symmetrical and even tooth form maximize performance of double cardan action between coupling components,
- Unique and smooth rounded tip relief profile,
 - *higher torque transmission under misalignment conditions,
 - *prevent stress raising on the plastic component to ensure smooth, low friction rotation;
- Low weight and minimum dimensions
 - *easy assembling in limited space;
- Available from stock with H7 fit, standard keyway finish-bores.



Gear Couplings — Dimensions

Coupling Size	Assembled Length (L)	Bore		(L ₁ & L ₂)	H	Length of Hub (mm)	Gap E	M & N	LH	Sleeve Dia. D _H	Approx. Weight (Kg)
		Stock	Max.								
14	50	4	14	23	25	Up to 40	4	6,5	37	40	,19
19	54	10	19	25	32	Up to 40	4	8,5	37	48	,23
24	56	10	24	26	36	Up to 50	4	7,5	41	52	,32
28	84	10	28	40	44	Up to 55	4	19	46	66	,73
32	84	12	32	40	50	Up to 55	4	18	48	76	,96
38	84	12	38	40	58	Up to 60	4	18	48	83	1,23
42	88	15	42	42	65	Up to 60	4	19	50	92	1,50
48	104	15	48	50	68	Up to 60	4	27	50	100	1,82
55	124	15	55	60	82	Up to 70	4	29,5	65	120	4,20
65	144	15	65	70	96	Up to 70	4	36	72	140	5,20

*Note: See finished bore chart for additional stock sizes.

Gear Couplings — Available in the following Finished Bore.

Coupling Size	Finish bores (mm) H7, keyway to DIN 6885 sh.1 (JS9) and setscrew																															
	8	9	10	11	12	13	14	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55	60	65	70	75	
MRC14																																
MRC19																																
MRC24																																
MRC28																																
MRC32																																
MRC38																																
MRC42																																
MRC48																																
MRC55																																
MRC65																																

Standard Length.

Gear Couplings



Gear Couplings — Dimensions

Coupling Size	Bore		Nominal Torque		Max. Torque		Alignment Tolerances			Max. Speed RPM
	Stock	Max.	Nm	In. Lbs.	Nm	In. Lbs.	Max. Axial	Parallel	Angular	
14	4	14	10	86	20	173	±1	±0,3	±1	14000
19	10	19	16	138	32	277				11800
24	10	24	20	173	40	347				10600
28	10	28	45	390	90	781				8500
32	12	32	60	520	120	1041				7500
38	12	38	80	694	160	1388				6700
42	15	42	100	868	200	1736				6000
48	15	48	140	1215	280	2430				5600
55	15	55	270	2344	540	4686				4800
65	15	65	380	3298	760	6596				4000

*Nominal Torque ratings will allow for 82°C (180°F) ambient, full misalignment and/or maximum RPM.

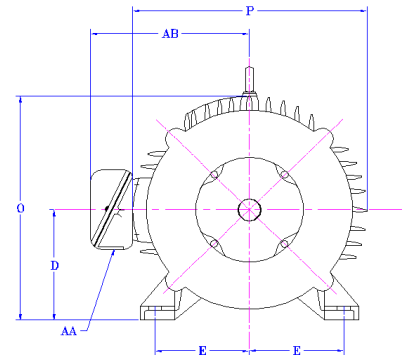
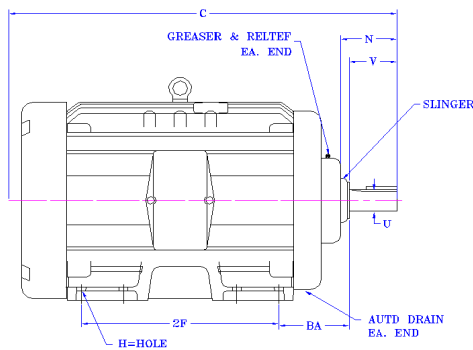
*Transient, intermittent peak loads should not exceed 3 times nominal torque.

+Starting torque and breaking loads should not exceed listed maximum torque.

+Applications with properly aligned shafts, low speeds and uniform loading will permit operation at maximum torque levels.

ASSEMBLY

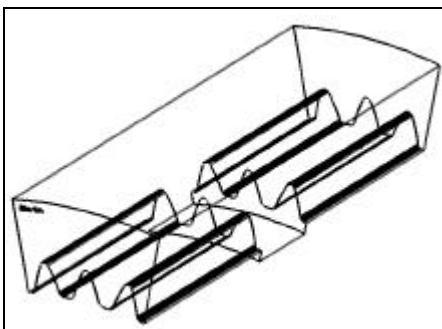
1. When possible, hubs should be mounted flush with the end of the shaft.
2. Maintain recommended shaft gap whenever possible.
3. After assembly, check coupling length.
4. After final assembly, check to make sure the sleeve moves freely in an axial direction.



Gear Couplings for Standard IEC-Motors

A.C. Motor Size	Motor Output at 50Hz n= 3000 (1/min)		Gear Coupling	Motor Output at 50Hz n= 1500 (1/min)		Gear Coupling	Motor Output at 50Hz n= 1000 (1/min)		Gear Coupling	Motor Output at 50Hz n= 750 (1/min)		Gear Coupling	Shaft End dx1 (mm) 3000<=1500
	Power kW	T (Nm)		Power kW	T (Nm)		Power kW	T (Nm)		Power kW	T (Nm)		
56	0.09	0.32		0.06	0.43		0.037	0.43					9x20
	0.12	0.41		0.09	0.64		0.045	0.52					
63	0.18	0.62	14	0.12	0.88	14	0.06	0.72	14			14	11x23
	0.25	0.86		0.18	1.3		0.09	1.1					
71	0.37	1.3		0.25	1.8		0.18	2		0.09	1.4		14x30
	0.55	1.9		0.37	2.5		0.25	2.7		0.12	1.8		
80	0.75	2.5	19	0.55	3.7	19	0.37	3.9	19	0.18	2.5	19	19x40
	1.1	3.7		0.75	5.1		0.55	5.8		0.25	3.5		
90S	1.5	5	24	1.1	7.5	24	0.75	8	24	0.37	5.3	24	24x50
90L	2.2	7.4		1.5	10		1.1	12		0.55	7.9		
100L	3	9.8		2.2	15		1.5	15		0.75	11		
			28	3	20	28			28	1.1	16	28	28x60
112M	4	13		4	27		2.2	22		1.5	21		
132S	5.5	18		5.5	36		3	30		2.2	30		
	7.5	25	38			38			38			38	38x80
132M				7.5	49		4	40		3	40		
							5.5	55					
160M	11	36		11	72		7.5	75		4	54		
	15	49	42			42			42	5.5	74	42	42x110
160L	18.5	60		15	98		11	108		7.5	100		
180M	22	71	48	18.5	121	48			48			48	48x110
180L				22	144		15	148		11	145		
200L	30	97		30	196		18.5	181		15	198		55x110
	37	120					22	215					
225S				37	240	65			65	18.5	244	65	55x110
225M	45	145		45	292		30	293		22	290		60x140
250M	55	177	65	55	356		37	361		30	392		60x140
280S	75	241											65x140
280M	90	289											75x140
315S	110	353											80x170

Polyamide resin transmission ring with low friction glossy surface



Gear Coupling

- Outer polyamide resin sleeve is manufactured from semi-crystalline engineering polymer with high molecular weight by injection moulding;
- Mould with high polishing allow low friction rotation;
- Smooth rounded tooth bottom minimize notching stresses;
- Tip relief on tooth allow smooth gearing;
- Small size, weight and low inertia;
- Silent operation and elastic absorption of shocks and vibration;
- Resistance to most common chemical agents and also to moderate heat;
- Maintenance-free due to self-lubrication of plastic material;
- Axial plug-in for easy assembling;
- Operating range -25°C to + 100°C