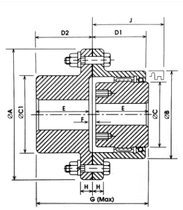
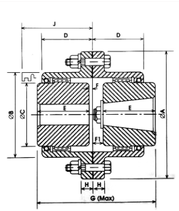
TABLE 3. HALF RIGID GEAR COUPLING

Coupling Size	Power at 100 R.P.M.		Bore (Rigid Hub)		Bore (Gear Hub)		DIMENSIONS									
	K.W.	H.P.	Stock (Pilot)	Max. (Dia)	Stock (Pilot)	Max. (Dia)	A	B	C	C1	D1	D2	E	F	G	H	J
HG 00	6	8	10	42	10	35	120	75	50	60	39.5	46.5	45	3	93	15	54
HG 01	11	15	15	60	15	50	170	110	68	84	49	57.5	55	5	115	17	65
HG 02	26	35	25	75	25	60	185	125	85	105	62	72.5	70	5	145	17	80
HG 03	46	621	35	90	35	75	220	150	105	126	78	87.5	85	5	175	20	100
HG 04	88	181	40	110	40	90	250	175	126	155	96	107.5	105	5	215	20	125
HG 05	140	882	45	125	45	110	290	200	155	175	106	120	115	10	240	25	135
HG 06	210	824	60	140	60	125	320	230	175	196	117	130	125	10	260	25	145
HG 07	360	826	75	160	75	140	350	260	205	225	134	145	140	10	290	25	165
HG 08	470	297	90	180	90	160	380	290	230	252	147	165	160	10	330	25	190
HG 09	585	841	100	220	100	180	430	330	255	310	156	170	165	10	340	25	195
HG 10	860	1152	115	260	115	220	490	390	310	365	170	185	180	10	370	25	210



HALF RIGID TYPE



MILL MOTOR TYPE

TABLE 4. MIL MOTOR TYPE GEAR COUPLING

Coupling Size	Power at 100 R.P.M.		Bore (Rigid Hub)		DIMENSIONS									
	K.W.	H.P.	Stock (Pilot)	Max. (Dia)	A	B	C	D	E	F	F1 Max.	G Max	H	J
MG 00	6	8	10	35	120	75	50	39.5	45	1.5	8.5	100	15	54
MG 01	11	15	15	50	170	110	68	49	55	2.5	14.5	127	17	65
MG 02	26	35	25	60	185	125	85	62	70	2.5	24.5	167	17	80
MG 03	46	62	35	75	220	150	105	78	85	2.5	34.5	207	20	100
MG 04	88	118	40	90	250	175	130	96	105	2.5	44.5	257	20	125
MG 05	140	188	45	110	290	200	155	106	115	5	55	290	25	135
MG 06	210	282	60	125	320	230	175	117	125	5	60	315	25	145
MG 07	360	482	75	140	350	260	205	134	140	5	70	355	25	165
MG 08	470	629	90	160	380	290	230	147	160	5	80	405	25	190
MG 09	585	784	100	180	430	330	255	156	165	5	85	420	25	195
MG 10	860	1152	115	220	490	390	310	170	180	5	95	460	25	210

For Torque, Max speed, Misalignment, Weight, Gd2 value etc., please see equivalent size of Coupling from Table 1.

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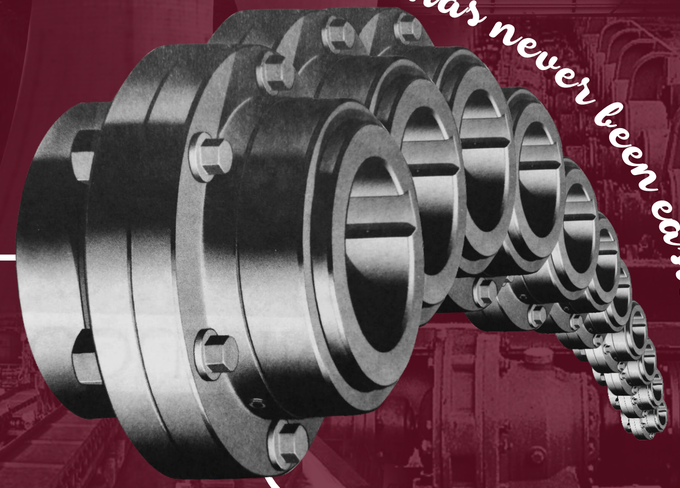
TECHSTAR FLEXIBLE GEAR COUPLING

Alignment has never been easier



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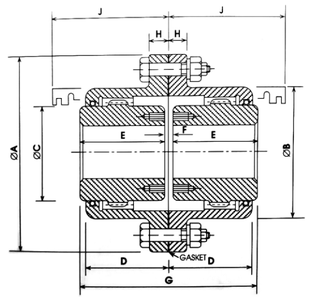
ABOUT TECHSTAR

TECHSTAR Gear Coupling are mechanically flexible and are designed to compensate angular, axial and parallel misalignment automatically. Gear teeth are generated by involute system. Adequate care is taken to maintain the uniformity of teeth profile & pitch. Normally teeth are crowned. If required barreling can also be done. Upto Size FG-03 both Hubs and Castings of couplings are made of Steel conforming to 45C8 of IS : 1570. From Size FG-04 castings are made of Cast Steel, conforming to grade -1 of IS : 2707 – (1996). Teeth are heat treated to a hardness of 240 – 280 BHN as per IS : 12405 – (1988).

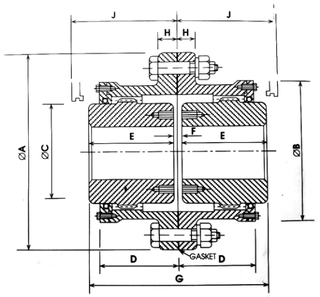
Bolt are made of Steel conforming to 45C8 of IS : 1570 and are suitable hardened. Nuts conform to property class 4 of IS : 1367 (Part 6) (1980). Sealing arrangement of the coupling are integral with the castings. Upto size FG-10 good quality wear resistant 'O' Rings are provide at both ends of couplings, to prevent leakage of lubricant and entry of dust. The 'O' Rings can withstand a high degree of temperature upto 120° C. As the couplings are machined all over, no balancing is necessary as per IS : 12405 – (1988).

However, for specific applications, balancing of couplings can also be done as per client's requirement.

FULL GEAR COUPLING



SIZE - FG 00 TO FG 10



SIZE - FG 11 TO FG 19

TABLE 1.

EXPORTING AS PER AGMA / DIN STD.

Coupling Size	Power at 100 R.P.M.		Torque in NM	Hub Bore diameter		Max. Speed R.P.M.	Misalignment (Max.)			Gd² in Kg M² (Appx.)	Weight in kg. (Appx.)	Amount of Lubricant		DIMENSIONS							
	K.W.	H.P.		Stock (Pilot)	Max		Parallel	Axial	Angular Per Mesh			Grease (kg)	Oil (litre)	A	B	C	D	E	F	G	H	J
FG 00	6	8	573	10	35	8000	0.6			0.04	3.9	0.15	0.08	120	75	50	39.5	45	3	93	15	54
FG 00S	9	12	900	15	40	7000	0.7			0.07	7	0.15	0.08	150	95	56	41	45	3	93	15	54
FG 01	11	15	1051	15	50	6300	0.8			0.11	9	0.26	0.15	170	110	68	49	55	5	115	17	65
FG 02	26	35	2483	25	60	5000	1.0	±0.5		0.19	15	0.60	0.35	185	125	85	62	70	5	145	17	80
FG 03	46	62	4393	35	75	4000	1.1			0.45	25	0.90	0.55	220	150	105	78	85	5	175	20	100
FG 04	88	118	8404	40	90	3350	1.3			1.00	40	1.30	0.80	250	175	130	96	105	5	215	20	125
FG 05	140	188	13370	45	110	2800	1.45			2.00	60	2.50	1.50	290	200	155	106	115	10	240	25	135
FG 06	210	282	20055	60	125	2500	1.55			3.20	82	3.00	1.80	320	230	175	117	125	10	260	25	145
FG 07	360	482	34380	75	140	2120	1.8			5.12	110	3.50	2.00	350	260	205	134	140	10	290	25	165
FG 08	470	629	44885	90	160	1900	1.9	±1.0		8.50	170	4.50	2.70	380	290	230	147	160	10	330	25	190
FG 09	585	784	55868	100	180	1700	2.25		±1.5°	13.95	200	5.70	3.40	430	330	255	156	165	10	340	25	195
FG 10	860	1152	82130	115	220	1400	2.6			30.40	280	8.25	5.00	490	390	310	170	180	10	370	25	210
FG 11	1150	1541	109825	125	250	1250	3.3	±2.0		53.50	500	10.00	6.00	545	445	350	195	200	10	410	30	235
FG 12	1550	2077	148025	135	285	1120	3.5			88.30	680	10.75	6.50	590	490	400	225	240	10	490	30	275
FG 13	2100	2814	200550	170	315	1000	6.65			165.70	925	10.85	6.80	680	555	445	240	260	15	535	35	300
FG 14	3000	4020	286500	205	355	900	7.4			288.00	1205	12.95	7.80	730	610	500	260	280	15	575	35	325
FG 15	3625	4857	346188	225	385	800	8.2			330.45	1610	15.75	9.60	780	660	540	300	320	15	655	35	365
FG 16	6250	8375	596875	255	450	710	8.6	±3.0		725.20	2255	22.80	13.90	900	755	630	330	350	20	720	45	410
FG 17	8690	11645	829895	295	500	630	9.2			1310.5	3400	31.90	19.30	1000	855	720	382	400	20	820	45	470
FG 18	10800	14472	1031400	315	560	560	9.7			2195.6	4450	55.00	30.00	1100	950	815	425	450	20	920	55	530
FG 19	12800	17152	1222400	395	630	500	10.3			3598.8	6200	58.00	32.50	1250	1050	915	445	485	30	1000	55	575

All linear dimensions are in mm.
Lubricant - Where ambient temperature is within 80°C, a Calcium base Ep type grease is recommended and where temperature is above 80°C, EP gear oil should be used.

COMBINED SERVICE FACTOR TABLE

TABLE 2. DRIVEN UNITS	Electric Motor Steam Turbine	Water Turbine Steam Engine	I.C Engine 4 or More Cyls.	I.C Engine Upto 3 Cyls.
Agitator Blower-Centifugal, Bottling Machinery, Compressors-Centrifugal, Conveyors-Belt, Chain; Dynamometer, Exciter, Fan (upto 7.5 K.W.)-Centrifugal; Food Industry-Cereal Cooker; Generator-Even Load, Line Shaft, Machine Tools-General Machine; Paper Mills-Agitator, Bleacher; Pumps-Centrifugal; Screen-Air Washing; Sewage Disposal Equipment, Stocker, Textile Mills-Batcher, Dyeing Machinery.	1.0	1.5	2.0	2.5
Blowers-Vane & Lobe; Compressors-Reciprocating; Conveyors-Screw, Fans-Heavy (Above 7.5 KW), Propeller (Indoor), Food Industry-Beat slicer, dought mixer, meet grinder. Generator hoist or Railway Service, Elevators-Centrifugal or Gravity Discharge, Excalators, Machine Tools-Punch Press Mills (Rotary Type). Dryer Cooler; Tumbling Barrel, Mixer-Concrete, Paper Mills-Beater, Pulper, Winder Printing Press; Propeller (Marine, Hammer Mill (Light Duly), Roller, Pumps-Rotary (Other Than Gear); Screen-Coal & Sand (Rotary), Shredder, Textile Mills-Dry Can, Loom, Spining & Tentering Frame, Timber Industry-Brand Resaw, Circular Resaw, Planer, Rolls (Non-Receiving), Slab Conveyor, Shorting Table, Windlass, Wind Mill, Rubber Industry-Extruder.	1.5	2.0	2.5	3.0
Compressors-4 or more cyls, Crusher-Cane, Elevator-Bucket, Freight, Fan -Cooling Tower, Generator-Welder load, Metal Forming Machines, Paper Mill-Calender, Press, Pulp Grinder, Rubber Warming Mill, Shovel, Winches -Haulage.	2.0	2.5	3.0	3.5
Compressors-Reciprocating-1 to 3 Cyls; Conveyor-reciprocating, Crusher-Gyratory, Mills (Rotary Type)-Ball, Pebble, Rod & Tube, Pumps-1 & 2 Cyl, Rubber Industry-Banbury Mixer, Winches-Mine Haulage.	2.5	3.0	3.5	4.0

SELECTION OF COUPLING

Informations required for selection -

- Details of Driving & driven Machines.
- Power to be transmitted (if not available, power of prime mover).
- Diameter & extension of shafts (to be connected).
- Speed (R.P.M.) of machines.
- Starting/Peak load (if available).
- Gap between shafts (if existing).
- Direction of coupling is reversing or non-reversing.
- For reversing movement - reversing number per hour.

SIZE SELECTION

Select adequate service factor (S.F.) from Table No.-2. Convert your power into K.W./100 r.p.m. thus-

$$\text{K.W./100 r.p.m.} = \frac{\text{K.W. (actual) X SF X 100}}{\text{R.P.M. of Prime Mover}}$$

From Table no.1, select a coupling having the power rating (k.w. at 100 r.p.m.) equal to or greater then the converted value calculated above.

Having selected the coupling power wise, check from table-1, that selected coupling can accommodate both driving and driven shafts. If not, go up to next suitable larger size of coupling.

For drives having heavy inertia/peak load, reversing of moment, space restriction etc. Refer to TECHSTAR for selection.