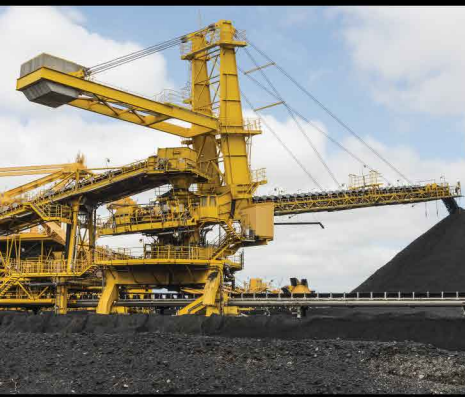


Gear Couplings





KATEEL GEAR COUPLINGS

The fundamental characteristic of KATEEL Gear Couplings is their high torque to size ratio, which offers a compact assembly capable of both high loads and high speeds. The design of these couplings is such that it accommodates angular misalignment, offset missalignment or combined angular-offset misalignment within allowable ratings and permits axial float or thermal expansion of connected shafts.

CONSTRUCTION:

Full Gear type (KFG) : Kateel Full Gear Coupling consists of two identical toothed hubs, two identical flanged sleeves with internal teeth, a flange gasket, a set of flange bolts nuts & lock washers, four lube plugs with Aluminium gaskets and two oil/grease retaining Nitrile 'O' rings over the hubs.

The couplings' flanged sleeves are made from closed die forgings and the hubs are made from EN8/EN9 forged steel.

The flanged sleeves are identical and interchangeable and are connected with each other by means of tight fitting close tolerance bolts in jig drilled and jig reamed flange bolt holes.

The use of 'O' rings for sealing of oil/grease eliminates the necessity of dismantling the hubs from shafts for changing



APPLICATION:

Kateel Gear Couplings can be used effectively and economically for transmission of mechanical power in Agitators, Blowers, Cranes, Conveyors, Crushers, Elevators, Escalators, Generators, Hammer Mills, Lineshafts, Machinetools, Metal-forming Machines, Mixers, Pulverisers, Pumps, Winches etc.

In Industries like:

Cement, Brewing & Distilling, Food, Lumber Rolling Mills, Oil & Petroleum, Chemical & Fertilizers, Papermills, Rubber Industries, Sewage Disposal, Sugar, Textile Industry, Thermal Power Houses Etc.

TYPES OF COUPLINGS:

HALF GEAR HALF RIGID COUPLING

This coupling is primarily used in tandem pairs connected by floating shaft; or as individual unit in conjunction with driver shaft or driven shaft having a self-aligning support bearing. It is extensively used for cross travel and long travel line shaft drives of EOT cranes. When used individually, it accommodates angular misalignment only.

FLOATING SHAFT TYPE GEAR COUPLING

This coupling consists of two HALF GEAR HALF RIGID couplings connected by a solid shaft. These couplings are used when power is to be transmitted between two widely separated machines. This assembly can accommodate excessive offset misalignment, angular misalignment and combined angular-offset misalignment.

STANDARD FULL GEAR COUPLING

This coupling again accommodates offset misalignment, angular misalignment and combined offset-angular misalignment. It is universally used for direct connecting driving shaft and driven shaft in most industrial applications. The hubs can be easily reversed for more than normal shaft separation.

KATEEL GEAR COUPLING FEATURES

- Gears are Crowned Type
- Gear's hardness 26-28 HRC
- Hub And Flange Concentricity within 20 Micron's
- Forged and Normalised
- High Tensile Bolts with Lock Washer

The specification sheets provided in the following pages give the maximum Torque, Bore and RPM capacities of individual couplings. To arrive at the final size, please adopt the following procedure.

1. Calculate the Effective Torque to be transmitted from following formula.

$$\text{Effective Torque} = 716.2 \times H.P. \times SF \text{ Kg.M RPM}$$

Where SF is service factor to be selected from adjacent table.

2. Select the coupling size approximately on the basis of bore considering the maximum diameter of the driven shaft and driving shaft. In case the rated torque capacity of coupling thus selected is equal or more to the effective torque calculated above, confirm the coupling size. In case the rated torque, is less than the effective torque, increase the coupling size to the size with rated torque equal or more than the effective torque.

3. Check that RPM of coupling is within limits of

maximum RPM specified for the size of coupling selected. In case of higher RPMs, please consult with us for special High Speed couplings which are dynamically balanced.

RECOMMENDED SERVICE FACTOR (S.F)

In order to provide for the dynamic torque that must be transmitted, it may be necessary to increase the horsepower to be transmitted by a factor which will allow for momentary increase in torque due to the characteristics of the equipment. The service factors shown in the table below provides a basis for estimating this allowance for specific combinations of connected equipment.

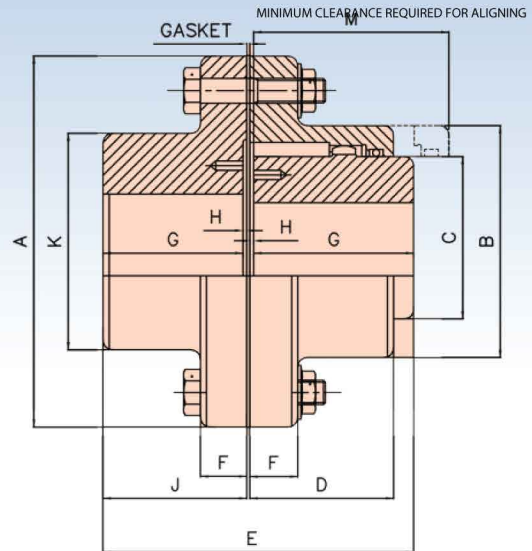
These factors are derived from experience with average applications and they can be considered as a general guide. For conditions not covered by the table, the service factor may be selected by referring to an application in the table that is closest to the type of application being considered. In case of doubt, request you to kindly consult with us.

SERVICE FACTORS

LOAD	DRIVEN EQUIPMENT	TYPES OF DRIVE	
		Motor or Turbine	Reciprocating Engine
UNIFORM	Centrifugal Pumps Conveyors – Even Loaded exciters Fans and Blowers- Light duty Generators – Even loaded, Mixers – Liquid	1.0	1.50
LIGHT SHOCK	Centrifugal Pumps Generators – Pulsating load Grinders, Hydraulic Pumps Kilns. Line shafting, Machine Tools Oscillating Pumps, Textile Machinery Wood working Machinery	1.5	2.0
MEDIUM SHOCK	Air Compressors Multi-Cylinder, Ball and Rod Mills Cranes Elevators, Hoists Punch Presses, Reciprocating Pumps Shears, Ship Drives, Welding Generators	2.0	2.5
HEAVY SHOCK	Air Compressors, Single Cylinder, Dredges. Drilling rings Mine Machinery, Rolling Mill Drives Rubber Mixers	2.5	3.0
EXTREME SHOCK	Ore Crushers Bar stock Shears Vibrating Conveyors	3.0	3.5

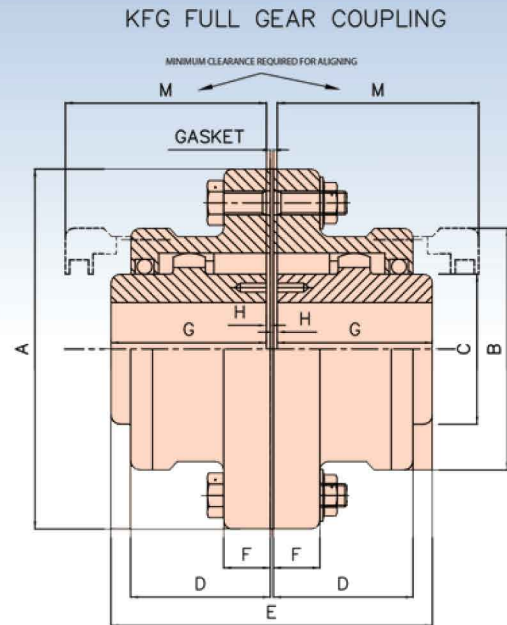


KHG HALF GEAR COUPLING



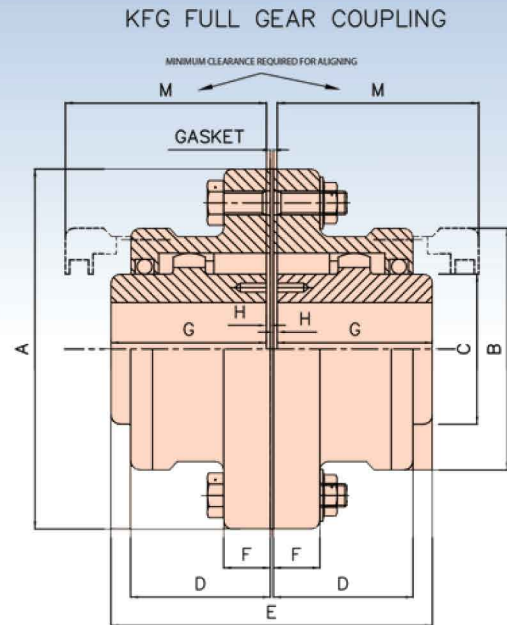
SIZE KHG	MAX BORE		PILOT BORE MM.	LOAD CAPACITY		MAX RPM	Wt. with SOLID HUBS KG.	GD ² KG. M	DIMENSIONS IN MM.										
	GEAR	RIGID		Torque Kg.M	H.P/100 RPM				A	B	C	D	E	F	G	H	J	K	M
100	35	50	10	50	7	8000	4.2	0.03	120	75	50	39.5	93	15	45	1.5	46.5	70	55
101	50	60	20	100	14	6300	10	0.14	170	110	65	49	115	17	55	2.5	57.5	85	65
102	60	75	30	250	35	5000	15	0.2	185	125	85	62	145	17	70	2.5	72.5	110	80
103	75	90	40	450	63	4000	26	0.48	220	150	105	78	175	20	85	2.5	87.5	130	105
104	90	110	50	850	119	3350	40	0.95	250	175	130	96	215	20	105	2.5	107.5	160	125
105	110	130	60	1300	182	2800	62	1.9	290	200	155	106	230	25	110	5.0	115	185	140
106	125	150	75	2000	280	2500	85	3.0	320	230	175	117	260	25	125	5.0	130	215	155
107	140	170	90	3500	490	2100	120	5.25	350	260	205	136	290	25	140	5.0	145	240	175
108	160	200	105	4500	630	1900	180	8.5	380	290	230	147	320	25	155	5.0	160	285	190
109	180	220	125	5600	784	1700	210	15.0	430	330	250	156	340	25	165	5.0	170	315	205
110	220	260	140	8200	1148	1400	290	30.5	490	390	310	171	370	25	180	5.0	185	370	220

Note: Dimensional details are susceptible to changes without prior notice for continuous improvement.



SIZE KFG	BORE		LOAD CAPACITY		MAX RPM	Wt. with SOLID HUBS KG.	GD ² KG. M	DIMENSIONS IN MM.								
	MAX	PILOT	Torque Kg.M	H.P/100 RPM				A	B	C	D	E	F	G	H	M
100	35	10	50	7	8000	4.2	0.03	120	75	50	39.5	93	15	45	1.5	45
101	50	20	100	14	6300	10	0.14	170	110	65	49	115	17	55	2.5	65
102	60	30	250	35	5000	15	0.20	185	125	85	62	145	17	70	2.5	80
103	75	40	450	63	4000	26	0.48	220	150	105	78	175	20	85	2.5	105
104	90	50	850	119	3350	40	0.95	250	175	130	96	215	20	105	2.5	125
105	110	60	1300	182	2800	62	1.90	290	200	155	106	230	25	110	5.0	140
106	125	75	2000	280	2500	85	3.00	320	230	175	117	260	25	125	5.0	155
107	140	90	3500	490	2100	120	5.25	350	260	205	134	290	25	140	5.0	175
108	160	105	4500	630	1900	180	8.50	380	290	230	147	320	25	155	5.0	190
109	180	125	5600	784	1700	210	15.0	430	330	250	156	340	25	165	5.0	205
110	220	140	8200	1148	1400	290	30.5	490	390	310	171	370	25	180	5.0	220

Note: Dimensional details are susceptible to changes without prior notice for continuous improvement.



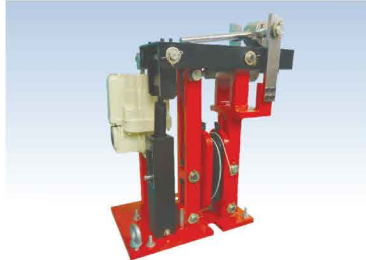
SIZE KFG	BORE		LOAD CAPACITY		MAX RPM	Wt. with SOLID HUBS KG.	GD ² KG. M	DIMENSIONS IN MM.								
	MAX	PILOT	Torque Kg.M	H.P/100 RPM				A	B	C	D	E	F	G	H	M
111	260	160	11000	1536	1250	550	58	545	445	350	192	410	30	200	5	240
112	300	180	14700	2053	1120	710	88	590	490	400	231	490	30	240	5	280
113	330	200	20000	2793	1000	980	138	680	555	440	242	535	35	260	7.5	310
114	370	220	28600	3994	900	1320	291	730	610	500	266	575	35	280	7.5	330
115	410	250	34750	4852	800	1700	353	780	660	540	305	655	35	320	7.5	370
116	455	300	60000	8378	710	2550	680	900	755	625	335	720	45	350	10	425
117	520	375	85350	11917	630	3620	1235	1000	855	720	386	820	45	400	10	460
118	610	450	113000	15778	560	4860	1965	1100	950	810	430	920	55	450	10	510
119	710	520	149000	20805	500	6380	3012	1250	1050	910	446	1000	55	485	15	560

Note: Dimensional details are susceptible to changes without prior notice for continuous improvement.

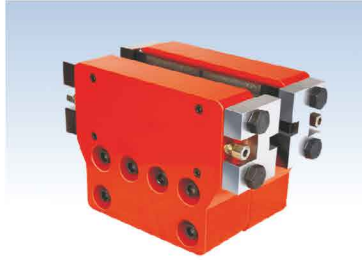
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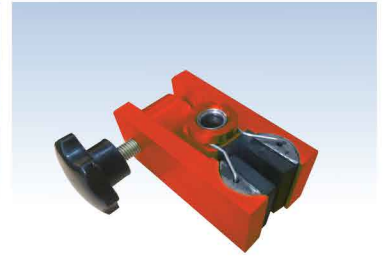
Hydraulic Rail Clamp



Electro-hydraulic Rail Clamp



Thruster



Manual Brake



Clutch Buttons & Brake Pads



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