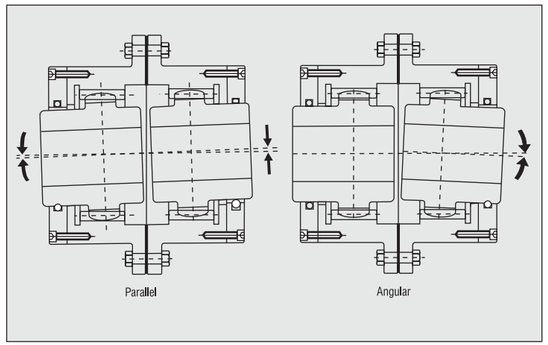
MISALIGNMENT :
The crowning of the teeth allows the coupling to withstand parallel misalignment upto a maximum of 10.25 mm and angular misalignment upto a maximum of 1.5 per gear mesh. The coupling can also absorb axial displacement of the shafts upto a maximum of 3 mm.

SELECTION OF THE COUPLINGS:
The following details are required for selection of the coupling :

1. Type of driven machine.
2. Power absorbed by the driven machine and Peak load.
3. Speed and Diameter of the connecting shafts and space available for accommodating the coupling.
4. Maximum misalignment to be compensated.
5. Surrounding temperature.
6. Any other special feature of the drive.

Example : Agear couplings is required to transmit 250KW from an Electric Motor running at 730 rev/min to a Pulper Machine. Considering the peak load as 180% of full load, the Motor shaft as 100 mm and the Pulper shaft as 110 mm, select a suitable gear coupling.

a) Service factor : 2 (for heavy duty application)
b) Peak load : 180% of full load.
c) Design power : 250 x 180/100 x 2 = 900KW
d) Power to be transmitted at 100 rev/min : 900 x 100 / 730 = 123.3KW
e) Coupling size : By referring to the Table, coupling size KFGC 5, has got a rating of 150 KWat 100 rev/min which exceeds the required power of 123.3KW. The bore range is 60mmto 110 mm. Hence, size KFGC 5 is selected for the application.



MISALIGNMENTS

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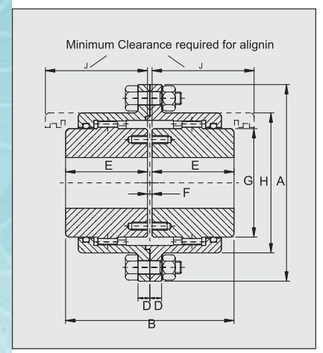
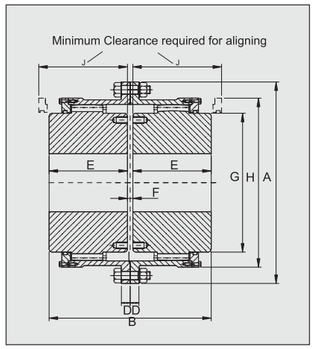
EMCO ENGINEERING

GEAR COUPLING

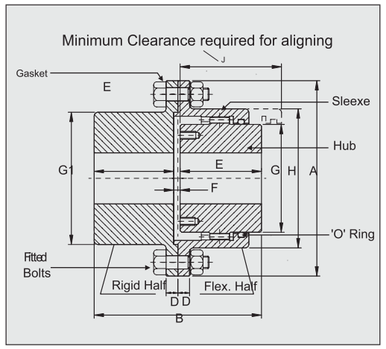
Standard Coupling | Spacer Type Coupling
Brake Drum Geared Coupling | Customised Coupling



FULL FLEXIBLE COUPLINGS SIZES
1 To 10 (KFGC)



FULL FLEXIBLE COUPLINGS SIZES
11 To 19 (KFGC)



HALF FLEXIBLE COUPLINGS (KHGC)

EMCO Curved Tooth Flexible Gear Couplings are the result of many years of experience in the field of Mechanical Power Transmission.

These Gear Couplings are distinguished by their mechanical flexibility and compensation of Angular, Parallel and Axial misalignments of the connected shafts. They are made for extensive use in Metal Rolling Mills, Paper Machinery, Cranes, Dredgers, Rubber and Plastic Industries, Cement Plants, Conveyors and Elevators, Compressors, Fans and Blowers, Screens and other general industries.

Flexible Gear Couplings basically consist of two hubs, with crowned external teeth and two outer sleeves with internal spur teeth.

Gear Hubs and the outer sleeves are manufactured from carbon steel and are hardened to the required degree. They are machined to fine tolerances for proper meshing of the gears as well as for inter-changeability.

HUBS : The teeth of Gear Hubs are crowned and are generated by involute system. The amount of crowning and backlash values are so chosen as to ensure the best results in torque transmission, greater flexibility and smooth operations.

SLEEVES : The internal teeth of the sleeves are generated to ensure correct profile. The coupling sleeves are joined together with high tensile steel bolts (class 8.8 IS:1367) fitted using a gasket in between them.

'O' RINGS : The setting of special 'O' Rings at the ends of coupling hubs prevents leakage of lubricants and entry of dust. The 'O' rings can also withstand high degree of temperature upto 120 C

SEAL CARRIERS : Seal carriers have been provided for sizes from KFGC 11 to KFGC 19 facilitate inspection and replacement of 'O' rings without disturbing the alignment.

POWERRATINGS : The normal power ratings are given in the Table. For selection of the correct size of couplings, proper service factor depending on the type of machines and the peak load should be considered.

SERVICEFACTOR : Generally, for medium duty use a service factor of 1.5. For heavy duty use a factor of 2 and for extra heavy duty a factor of 3 should be used. For special applications please contact Fenner with full details.

LUBRICATION : The coupling must be filled with grease or oil. It is recommended to use grease where the maximum temperature is within 80 C and for temperature above 80 C, oil should be used. When using grease it is suggested to fill the coupling completely with Lithium based grease with EP additives (NLGI-No.1 consistency). When the coupling is to be filled with oil, fill half the coupling with EPGear Oil.

RECOMMENDATION FOR GREASE & OIL:

Grease : Indian Oil - Servogem EP 1 or equivalent.

Oil : Indian Oil - Servomesh SP 680 or equivalant.

Coupling No / Size	Hub Bore (mm)			Dimensions (mm)									No. Of Bolts	Clamping Bolt Size	Approx. Weight in Kg.		Approx. Gd^2 Value in Kg M^2		Power at 100 rpm in Kw	Maximum Torque in Nm	Maximum Speed RPM	Amount of Grease / Oil		Max. Misalignment Capacity		
	Flex		Rigid																							
	Min.	Max	Max	A	B	D	E	F	G	G1	H	J			Full Flex	Half Flex	Full Flex	Half Flex				Kg.	Ltr.	Parallel (mm)	Axial Float (mm)	Angular per Gear Mesh
KFGC 1	14	55	60	170	115	17	55	5	78	90	110	65	6	M12 X 50	11	10.5	0.14	0.11	11.5	1100	6700	0.25	0.20	0.80		
KFGC 2	20	60	75	185	145	17	70	5	85	110	125	85	6	M12 X 50	16	15	0.21	0.18	28.5	2720	6100	0.50	0.40	0.95		
KFGC 3	30	75	90	220	175	20	85	5	107	130	150	105	6	M16 X 60	26	26	0.45	0.44	51.5	4920	5200	0.80	0.60	1.10	0.5	
KFGC 4	40	100	110	250	215	20	105	5	138	160	178	125	8	M16 X 60	41	42	0.98	0.88	96.5	9220	4500	1.00	0.80	1.30		
KFGC 5	46	120	130	290	240	25	115	10	166	185	204	140	8	M20 X 75	63	63	1.90	1.90	150	14320	3950	1.80	1.50	1.45		
KFGC 6	50	125	150	320	260	25	125	10	176	215	230	155	8	M20 X 75	86	87	3.05	3.06	230	21960	3500	2.40	2.00	1.55		
KFGC 7	60	145	170	350	290	25	140	10	208	240	260	175	10	M20 X 75	120	120	5.25	5.20	390	37250	3250	3.50	3.00	1.80		
KFGC 8	70	165	200	380	330	25	160	10	230	285	290	200	12	M20 X 75	165	170	8.52	8.63	515	49180	3000	4.00	4.00	1.90	1.0	
KFGC 9	80	200	220	430	340	25	165	10	270	315	332	210	10	M24 X 80	210	220	15.00	15.00	644	61500	2600	5.50	5.00	2.25		
KFGC 10	100	230	260	490	370	25	180	10	315	370	390	230	12	M24 X 80	310	320	28.67	29.00	930	88800	2300	8.50	8.00	2.60		
KFGC 11	110	260	280	545	410	30	200	10	350	380	445	270	12	M24 X 90	454	430	52.00	46.18	1265	120800	2100	12.50	12.00	3.30		1.5^0
KFGC 12	150	300	310	590	490	30	240	10	404	420	490	300	14	M24 X 90	630	590	88.60	76.57	1600	152800	1900	14.00	16.00	3.50	2.0	
KFGC 13	160	330	340	680	535	35	260	15	442	480	555	320	14	M30X110	887	850	155.00	140.00	2880	275000	1550	16.00	20.00	6.65		
KFGC 13A	200	340	370	730	575	35	275	25	470	520	595	350	16	M30X110	1050	1050	215.00	203.00	3980	380000	1400	18.00	24.00	7.35		
KFGC 14	200	370	370	730	575	35	280	15	500	520	610	340	16	M30X110	1097	1050	230.00	203.00	3980	380000	1400	18.00	24.00	7.35		
KFGC 14A	230	360	400	780	635	35	305	25	510	560	640	375	18	M30X110	1310	1350	300.00	305.00	4765	455000	1350	25.00	33.00	8.15		
KFGC 15	230	410	400	780	655	40	320	15	540	560	660	385	18	M30X110	1440	1350	352.00	305.00	4765	455000	1350	25.00	33.00	8.15		
KFGC 16	260	450	460	900	720	40	350	25	630	650	750	425	18	M36X120	2120	2000	670.00	611.20	6800	650000	1150	40.00	49.00	8.55		
KFGC 16A	300	490	530	1000	815	40	395	25	700	750	855	470	20	M36X120	3057	2900	1210.00	1132.00	8375	800000	1050	55.00	64.00	9.15	3.0	
KFGC 17	300	520	530	1000	820	40	400	20	720	750	855	490	20	M36X120	3100	2900	1275.00	1132.00	9000	850000	1050	55.00	64.00	9.15		
KFGC 17A	320	540	580	1100	920	40	440	40	750	820	955	525	20	M36X120	4196	4050	2030.00	1913.00	10730	1025000	950	60.00	72.00	9.65		
KFGC 18	320	620	580	1100	920	55	450	20	820	820	950	535	20	M36X150	4370	4050	2198.00	1913.00	11800	1120000	950	60.00	72.00	9.65		
KFGC 18A	400	600	700	1250	1000	55	475	50	840	920	1050	560	20	M48X160	5430	5200	3410.00	3179.00	12700	1200000	825	70.00	80.00	10.25		
KFGC 19	400	710	700	1250	1000	55	485	30	915	920	1050	560	20	M48X160	5590	5200	3588.00	3179.00	15500	1470000	825	70.00	80.00	10.25		