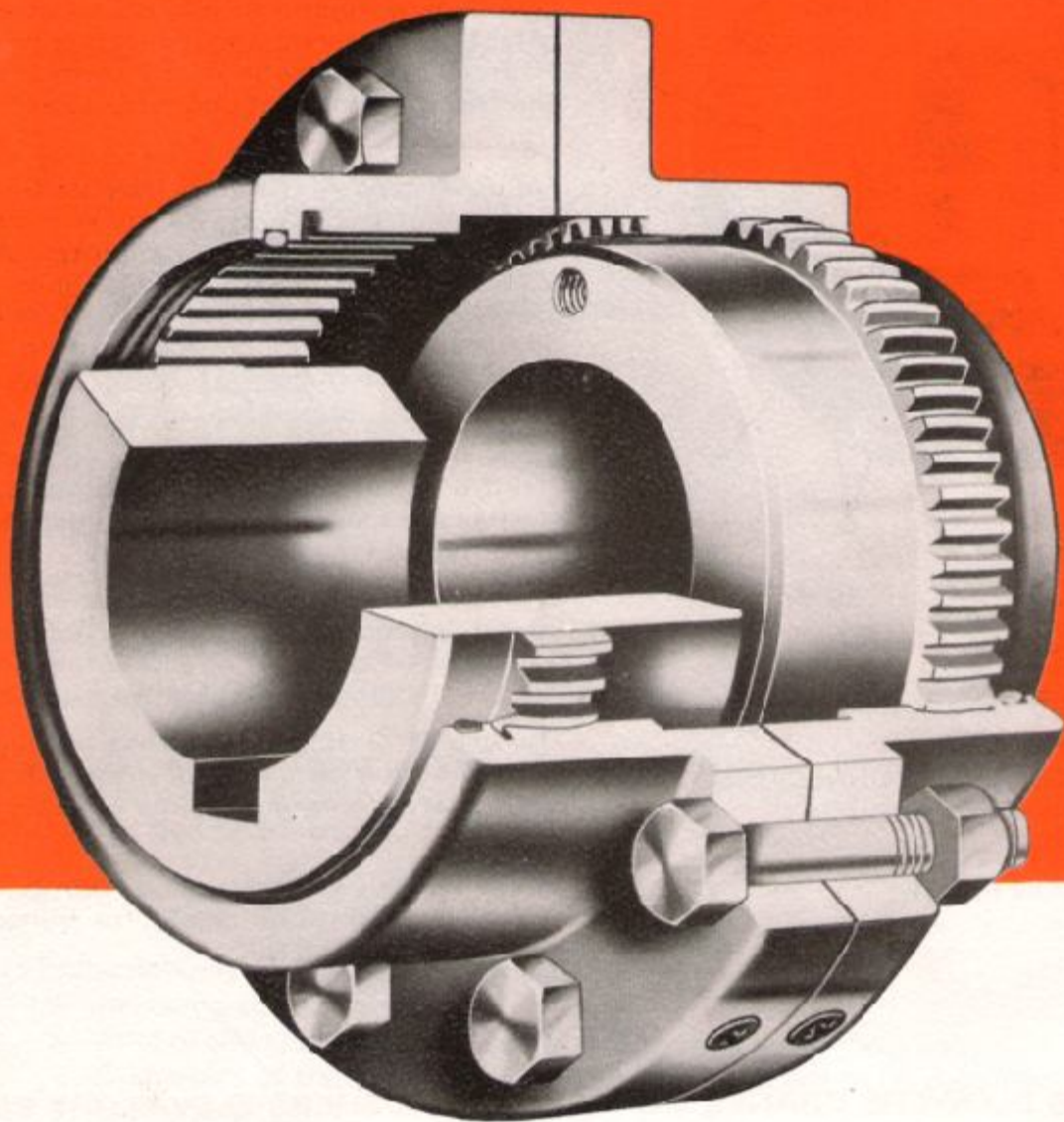


ALLFLEX

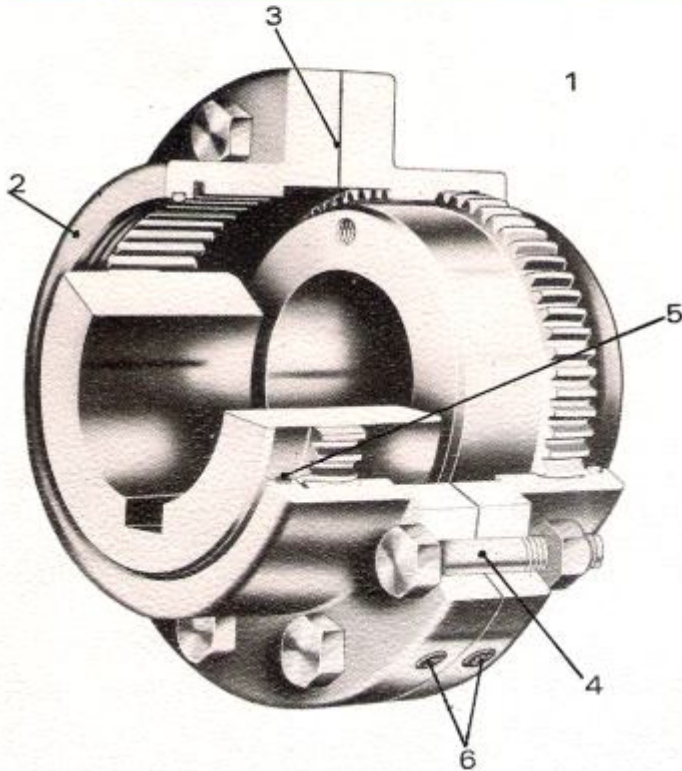
Flexible Gear Couplings



- ❑ BIGGER BORE CAPACITIES
- ❑ HIGHER TORQUE RATINGS
- ❑ WIDER APPLICATIONS
- ❑ QUICKER DELIVERIES

Alliance
ENGINEERING COMPANY

ALLFLEX gear couplings



- 1 IDENTICAL FORGED HUBS WITH EXTERNAL TEETH
- 2 ONE PIECE FORGED SLEEVES WITH INTERNAL TEETH
- 3 FLANGE GASKET
- 4 CLOSE TOLERANCE CONNECTING BOLTS
- 5 'O' RINGS
- 6 LUBRICATION PLUGS

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

CONSTRUCTION:

Full Gear type AFG Allflex Flexible Gear Coupling consists of two identical toothed hubs, two identical flanged sleeves with internal teeth, a flange gasket, a set of flange bolts nuts and lockwashers, four lube plugs with Alluminium gaskets and two oil/grease retaining Nitrile 'O' rings over the hubs.

For couplings up to size 110 flanged sleeves are made from closed die forgings and hubs from EN9/C55 steel. For the bigger couplings the sleeves are made from grade 1 cast steel and hubs from 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 the oil retaining 'O' rings.

APPLICATION:

Allflex Flexible Gear Couplings can be used effectively and economically for transmission of mechanical power for:

AGITATORS BLOWERS CRANES CONVEYORS CRUSHERS ELEVATORS ESCALATORS
EXTRUDERS FEEDERS GENERATORS HAMMERMILLS LINESHAFTS MACHINETOOLS
METALFORMING MACHINES MIXERS PULVERISERS PUMPS SCREENS WINCHES
in industries like

CEMENT BREWING AND DISTILLING FOOD LUMBER ROLLING MILLS OIL AND
PETROLEUM CHEMICAL AND FERTILISERS PAPERMILLS RUBBER INDUSTRIES
SEWAGE DISPOSAL SUGAR TEXTILE INDUSTRY THERMAL POWER HOUSES ETC.

size selection of **ALLFLEX** gear couplings

The specification sheets give the maximum torque, bore and RPM capacities of individual couplings. To arrive at final size please adopt the following procedure:

- 1 Calculate the Effective Torque to be transmitted from following formula:

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

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

- 2 Select the coupling size tentatively on the basis of bore considering the maximum diameter of driven and driving shafts. In case the rated torque capacity of coupling thus selected is equal or more to effective torque calculated above, confirm the coupling size. In case the the rated torque, is less than effective torque, increase coupling 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 refer the matter to us for special High speed couplings which are dynamically balanced.

RECOMMENDED SERVICE FACTORS (S.F.)

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

These factors are derived from long experience with average applications and they are to be considered as a general guide. For conditions not covered by the table, good judgement must be exercised and a factor selected by referring to the type of equipment most closely approximating the type of application being considered. In case of doubt please refer the matter to us.

SERVICE FACTORS

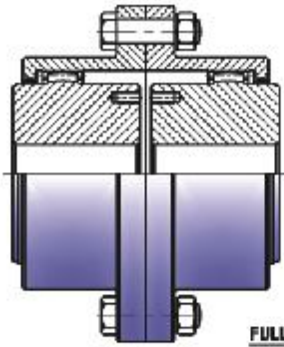
LOAD	DRIVEN EQUIPMENT	TYPE OF DRIVE	
		Motor or Turbine	Reciprocating Engine
UNIFORM	Centrifugal Pumps Conveyors—Even Loaded Exciters Fans and Blowers—Light Duty Generators—Even Loaded Mixers—Liquid	1.0	1.50
LIGHT SHOCK	Centrifugal Pumps Generators—Pulsating Load Grinders, Hydraulic Pumps Kilns, Line Shafting Machine Tools Oscillating Pumps Textile Machinery Woodworking 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 Rigs Mine Machinery Rolling Mill Drives Rubber Mixers	2.5	3.0
EXTREME SHOCK	Ore Crushers Barstock Shears Vibrating Conveyors	3.0	4.0

Service factors conform to AGMA standards.

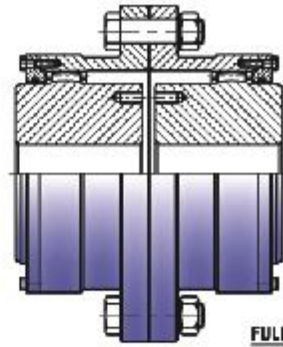
ALLFLEX

**DIFFERENT VERSIONS OF ALLFLEX
GEAR COUPLINGS**

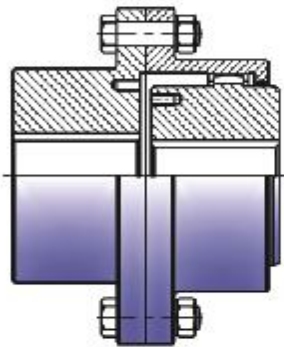
Alliance
ENGINEERING COMPANY



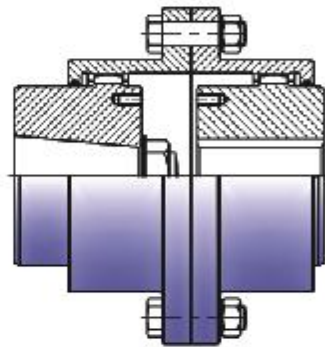
**FULL GEAR COUPLING
WITH INTEGRAL END PLATE**



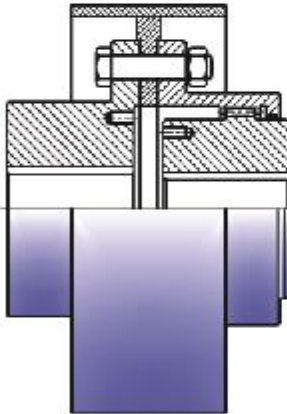
**FULL GEAR COUPLING
WITH SEPARATE END PLATES**



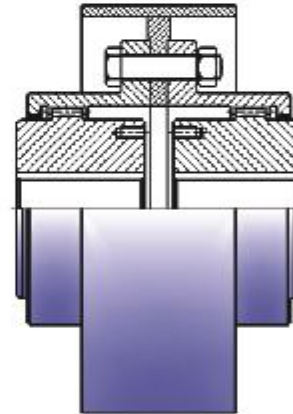
HALF RIGID HALF GEAR COUPLING



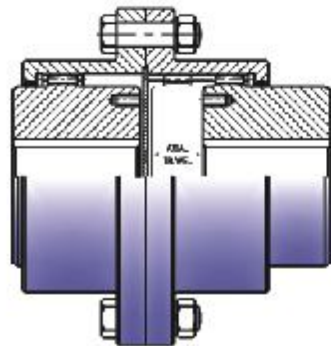
MILL MOTOR TYPE GEAR COUPLING



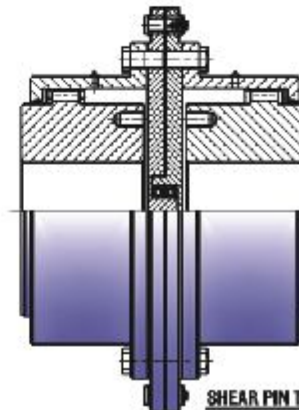
**HALF RIGID HALF GEAR BRAKE DRUM TYPE COUPLING
(CENTRALLY MOUNTED BRAKE DRUM)**



**FULL GEAR BRAKE DRUM TYPE COUPLING
(CENTRALLY MOUNTED BRAKE DRUM)**



AXIAL TRAVEL GEAR COUPLING



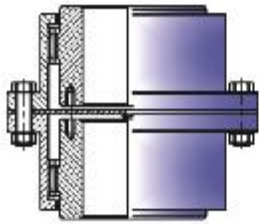
SHEAR PIN TYPE GEAR COUPLING

ALLFLEX

DIFFERENT VERSIONS OF ALLFLEX GEAR COUPLINGS

Alliance

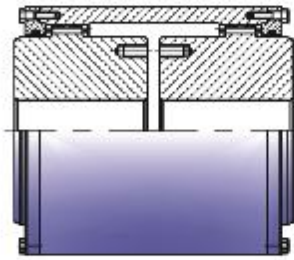
ENGINEERING COMPANY



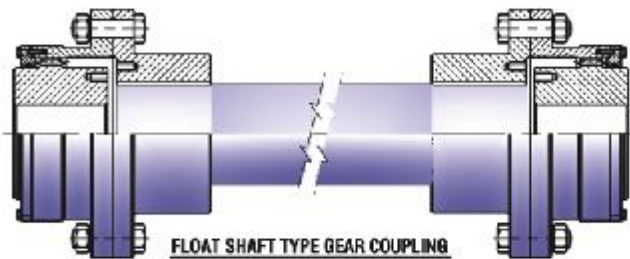
VERTICAL MOUNTING GEAR COUPLING



SPACER TYPE GEAR COUPLING



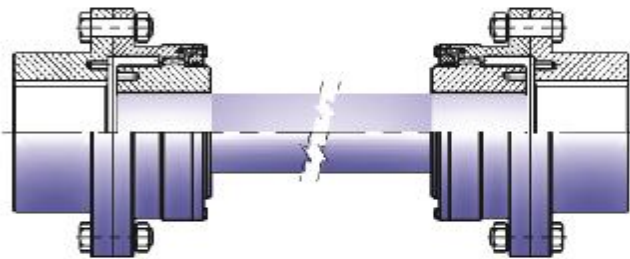
SINGLE SLEEVE TYPE GEAR COUPLING



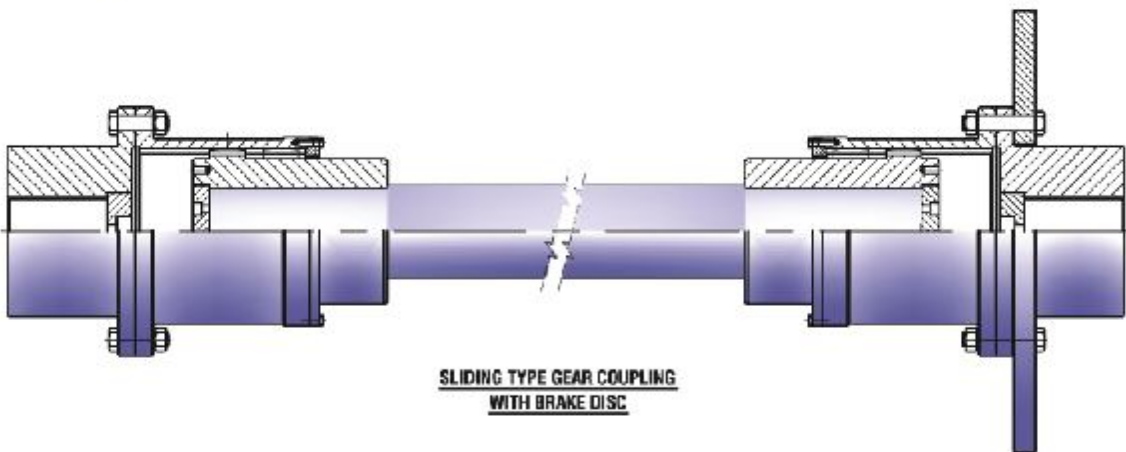
FLOAT SHAFT TYPE GEAR COUPLING
RIGID ON SHAFT



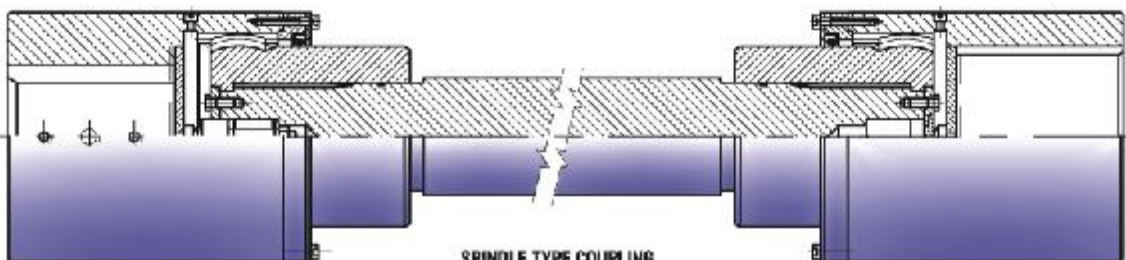
HALF RIGID HALF GEAR
DISC BRAKE TYPE COUPLING



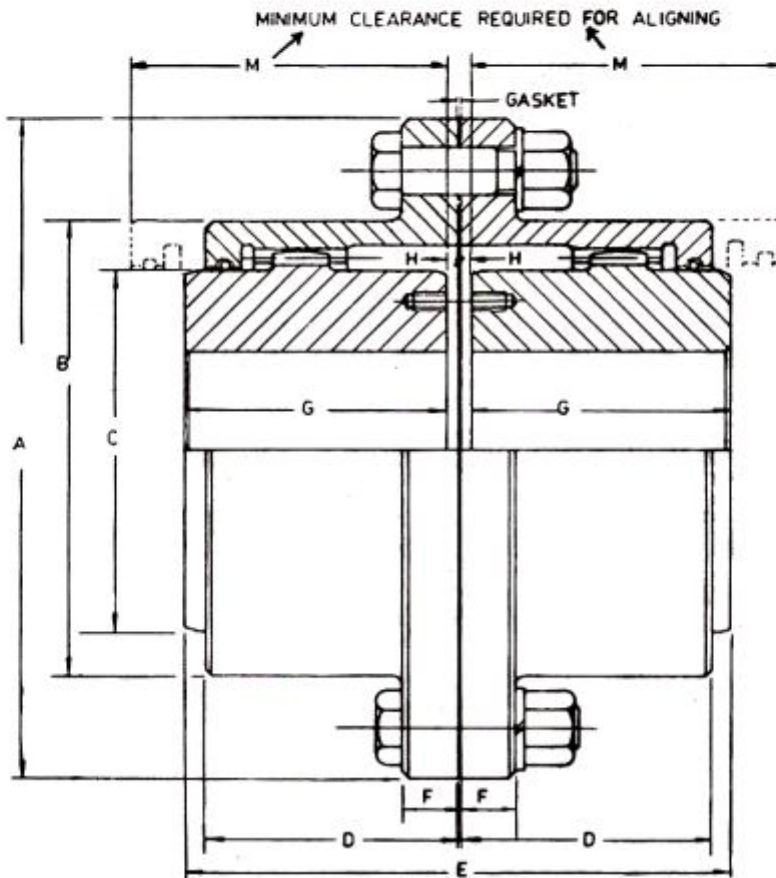
FLOAT SHAFT TYPE GEAR COUPLING
GEARED HUB ON SHAFT



SLIDING TYPE GEAR COUPLING
WITH BRAKE DISC



SPINDLE TYPE COUPLING

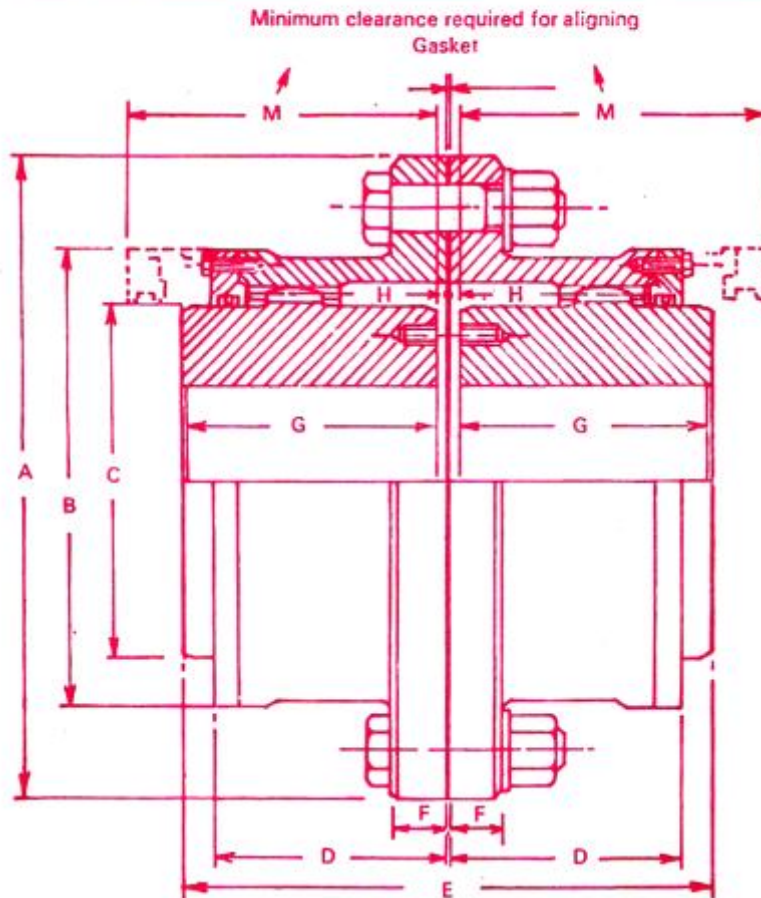
ALLFLEX**FULL GEAR COUPLINGS****TYPE AFG.****RATINGS AND DIMENSIONS. SIZES 100 TO 110**

Size AFG	Max. Bore mm.	Pilot Bore mm.	Load capacity		Max. RPM	Wt. with solid hubs Kg.	GD2 Kg. M	DIMENSIONS IN MM								
			Torque Kg. M	H.P. per 100 RPM				A	B	C	D	E	F	G	H	M
100	35	10	50	7	8000	4.2	.03	120	75	50	39.5	93	15	45	1.5	45
101	50	20	100	14	6300	10	.14	170	110	65	49	115	17	55	2.5	65
102	60	30	250	35	5000	15	.20	185	125	85	62	145	17	70	2.5	80
103	75	40	450	63	4000	26	.48	220	150	105	78	175	20	85	2.5	105
104	90	50	850	119	3350	40	.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	15.00	430	330	250	156	340	25	165	5.0	205
110	220	140	8200	1148	1400	290	30.50	490	390	310	171	370	25	180	5.0	220

Alliance
ENGINEERING COMPANY

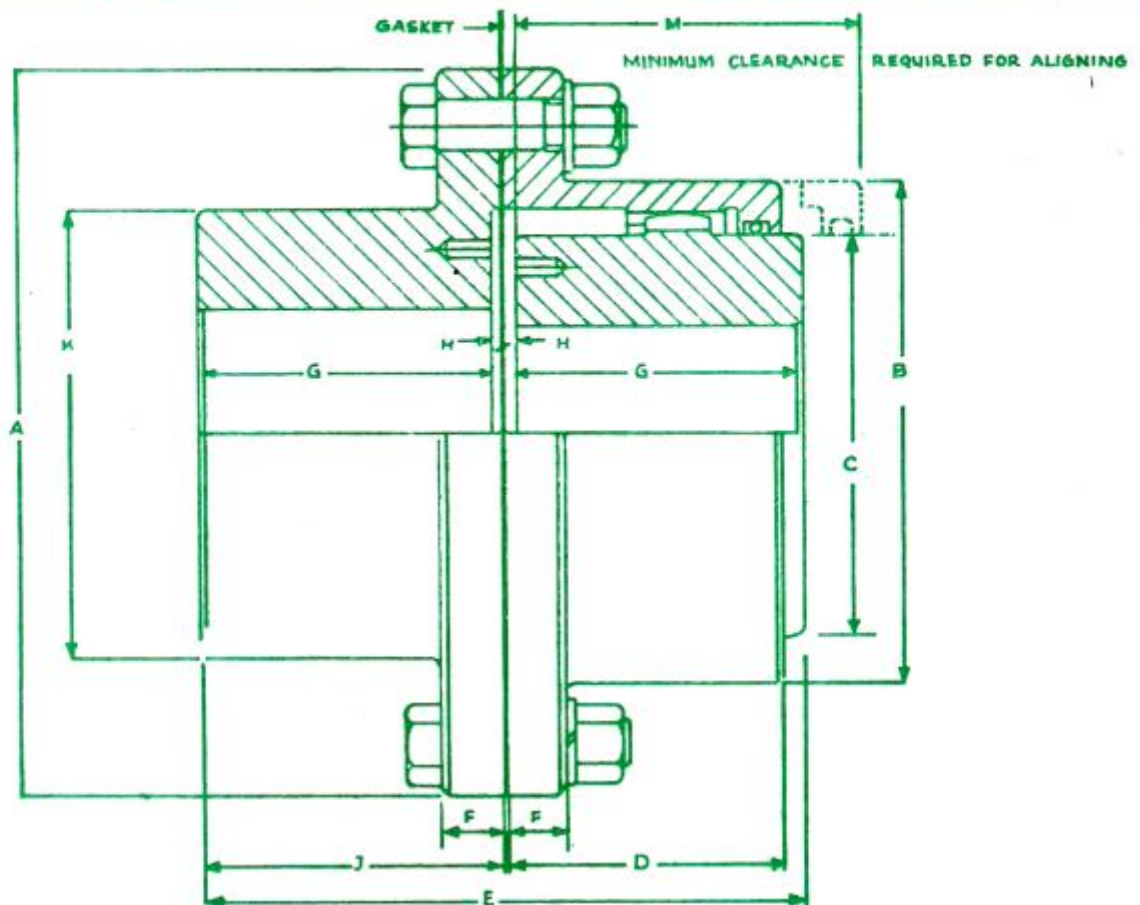
97, D. PHALKE ROAD, MUMBAI - 400 014. TEL. : 2411 24 61 / 2415 65 10 FAX : 2413 83 07 / 2451290

Email: allenco@vsnl.com



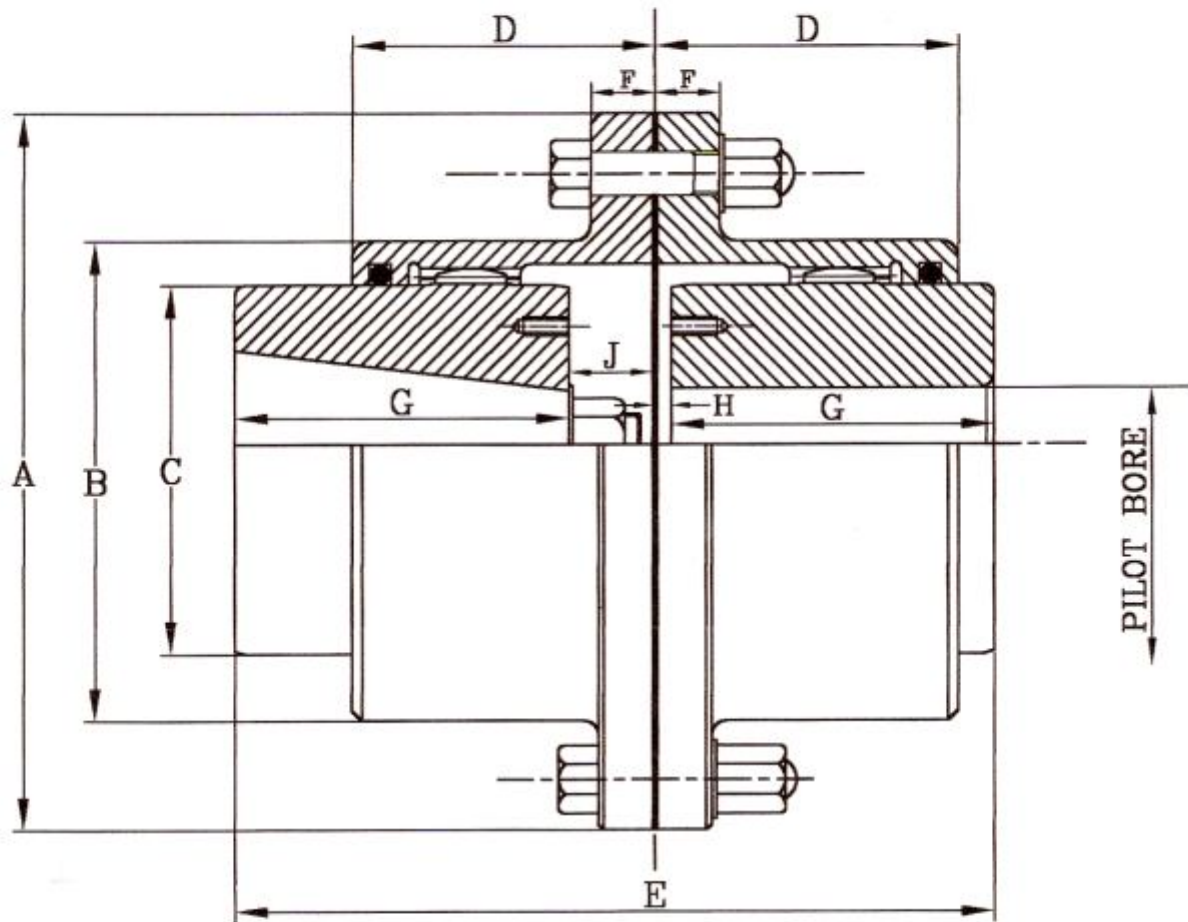
RATINGS AND DIMENSIONS SIZES 111 TO 119

Size AFG	Max bore mm	Pilot bore mm	Load capacity		Max rpm	Wt. with solid hubs kgs	GD ² Kg. M.	DIMENSIONS IN MM								
			Torque Kg. M.	HP per 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

ALLFLEX**HALF GEAR HALF RIGID COUPLINGS****TYPE AHG.****RATINGS AND DIMENSIONS. SIZER 100 TO 110**

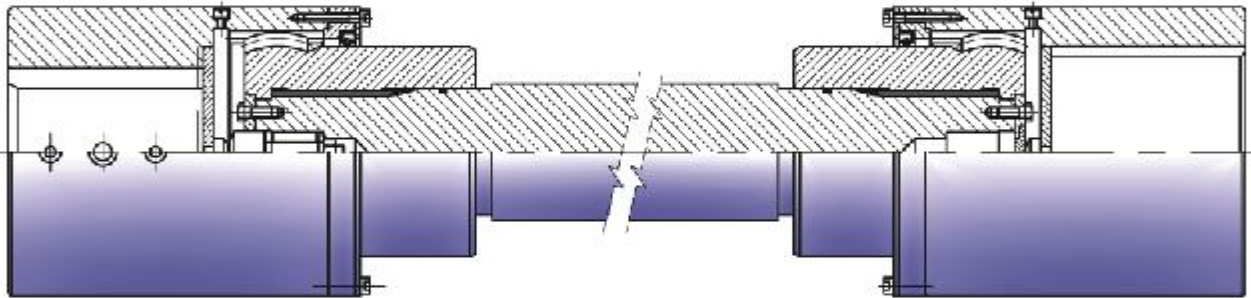
Size AHG	Max. Bore in mm.		Pilot Bore mm.	Load capacity		Max. RPM	Wt. with solid hubs Kg.	GD ² Kg. M	DIMENSIONS IN MM										
	GEAR	RIGID		Torque Kg. M	H.P. per 100RPM				A	B	C	D	E	F	G	H	J	K	M
100	35	50	10	50	7	8000	4.2	.03	120	75	50	39.5	93	15	45	1.5	46.5	70	55
101	50	60	20	100	14	6300	10	.14	170	110	65	49	115	17	55	2.5	57.5	85	65
102	60	75	30	250	35	5000	15	.20	185	125	85	62	145	17	70	2.5	72.5	110	80
103	75	90	40	450	63	4000	26	.48	220	150	105	78	175	20	85	2.5	87.5	130	105
104	90	110	50	850	119	3350	40	.95	250	175	130	96	215	20	105	2.5	107.5	160	125
105	110	130	60	1300	182	2800	62	1.90	290	200	155	106	230	25	110	5.0	115	185	140
106	125	150	75	2000	280	2500	85	3.00	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	134	290	25	140	5.0	145	240	175
108	160	200	105	4500	630	1900	180	8.50	380	290	230	147	320	25	155	5.0	160	285	190
109	180	220	125	5600	784	1700	210	15.00	430	330	250	156	340	25	165	5.0	170	315	205
110	220	260	140	8200	1148	1400	290	30.50	490	390	310	171	370	25	180	5.0	185	370	220

Alliance
ENGINEERING COMPANY97, D. PHALKE ROAD, MUMBAI - 400 014. TEL. : 2411 24 61 / 2415 65 10 FAX : 2413 83 07 / 2451290
Email.: allenco@vsnl.com



RATING AND DIMENSION SIZES 100 TO 110

Size AMG	Max. bore mm.	Pilot bore mm.	Load capacity		Max. rpm	wt. in. kg with solid hubs	GD ² Kg.M ²	DIMENSIONS IN MM.								
			Torque Kg.M	H P per 100 rpm				A	B	C	D	E	F	G	H	J
100	35	10	50	7	8000	4.2	.03	120	75	50	39.5	101.5	15	45	1.5	10
101	50	20	100	14	6300	10	.14	170	110	65	49	127.5	17	55	2.5	15
102	60	30	250	35	5000	15	.20	185	125	85	62	167.5	17	70	2.5	25
103	75	40	450	63	4000	26	.48	220	150	105	78	207.5	20	85	2.5	35
104	90	50	850	119	3350	40	.95	250	175	130	96	257.5	20	105	2.5	45
105	110	60	1300	182	2800	62	1.90	290	200	155	106	280	25	110	5.0	55
106	125	75	2000	280	2500	85	3.00	320	230	175	117	315	25	125	5.0	60
107	140	90	3500	490	2100	120	5.25	350	260	205	134	355	25	140	5.0	70
108	160	105	4500	630	1900	180	8.50	380	290	230	147	395	25	155	5.0	80
109	180	125	5600	784	1700	210	15.00	430	330	250	156	420	25	165	5.0	85
110	220	140	8200	1148	1400	290	30.50	490	390	310	171	460	25	180	5.0	95



SPINDLE COUPLINGS

Geared Spindle Couplings : -

Geared Spindle Couplings are being extensively used for modern Hot and Cold rolling mill drives.

Their compactness, high torque capacity, constant angular velocity at misalignment angles ensures even transmission of power. This results in uniform size and improved surface quality of rolled products.

We at Alliance Engineering company, have supplied a large number of ALLFLEX™ Geared Spindles Couplings to leading OEMs of Rolling Mills as well as actual users.

Materials and Heat Treatment : -

Material and Heat Treatment of ALLFLEX™ Geared Spindle Couplings is selected on the basis of torque capacity required, misalignment capacity, duty application and size (diameter) constraint.

We supply Geared Spindle Couplings with following material and heat treatment :

(AISI 1045)	Hardened and tempered with teeth induction hardened
(AISI 4140)	Hardened and tempered with teeth induction hardened
(AISI 4140)	Hardened and tempered with teeth gas nitrided
(AISI 8640)	Hardened and tempered with teeth carburized

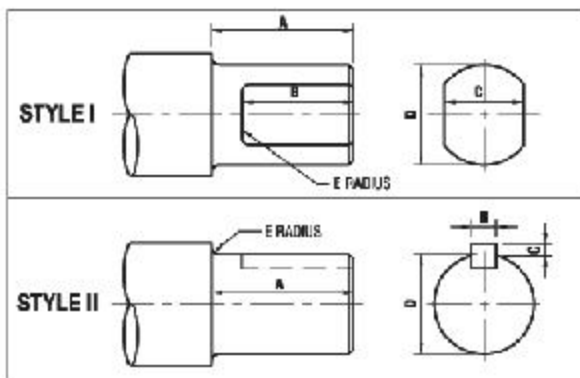
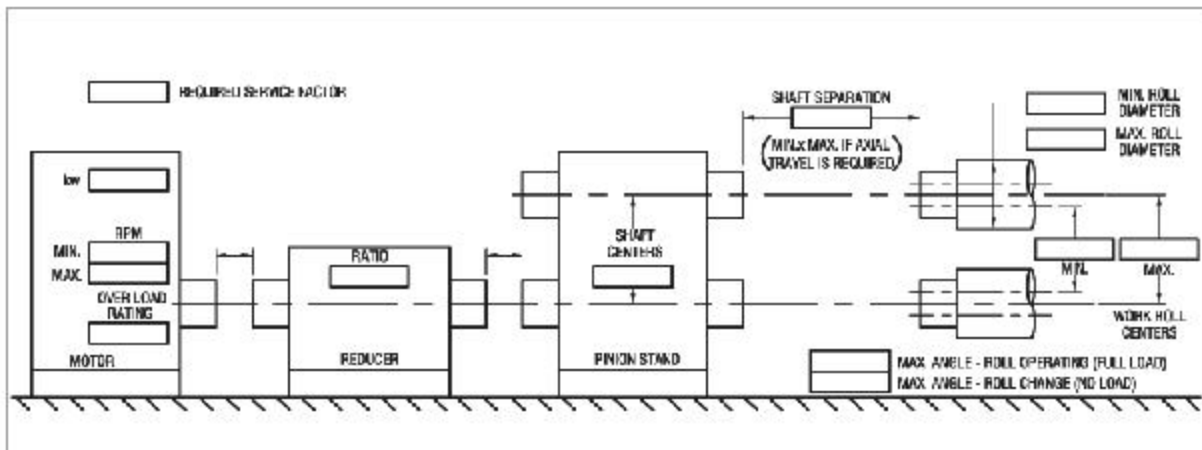
DATA FOR SELECTION AND DESIGN

CLIENT :-	_____	ENQUIRY NO. :-	_____
CONTACT NAME :-	_____	NO. OF UNITS :-	_____
TYPE OF MILL :-	_____	PHONE :-	_____
NO. OF STANDS :-	_____	FAX :-	_____
DATE :-	_____		

FILL IN THE BOXES ON THE DIAGRAMS BELOW FOR THE FOLLOWING INFORMATION :

- | | | |
|------------------------------|---|---|
| 1. MOTOR kw | 7. SHAFT SEPARATION | 11. MAXIMUM WORK ROLL CENTERS - OPERATING |
| 2. MOTOR RPM (Min. and Max.) | 8. MINIMUM WORK ROLL DIAMETER | 12. MAXIMUM OPERATING ANGLE (FULL LOAD) |
| 3. REQUIRED SERVICE FACTOR | 9. MAXIMUM WORK ROLL DIAMETER | 13. MAXIMUM ROLL CHANGE ANGLE (NO LOAD) |
| 4. MOTOR OVERLOAD RATING | 10. MINIMUM WORK ROLL CENTERS - OPERATING | 14. BORE REQUIREMENTS |
| 5. REDUCER RATIO | | |
| 6. PINION CENTERS | | |

PLEASE ADVISE WHETHER REPLACEABLE ROLL END BORE KEYS AND SPRING LOADED THRUST BUTTON FOR ROLL END REQUIRED



BORE REQUIREMENTS		
	PINION SHAFT	ROLL NECK
STYLE		
A		
B		
C		
D		
E		

Alliance Manufactured by
ENGINEERING COMPANY

97, D. Phalke Road, Dadar, Mumbai - 400 014.

TELEPHONED : (022) 2411 2461 / 2415 6510

FAX : (022) 2413 8307 / 2413 7648 Email : allenco@vsnl.com

Web : www.allflexcouplings.com / www.alliancecouplings.com