

# GFA and GFAS Gear Couplings



Coupling types GFA and GFAS are designed for heavy industrial applications, providing a torsionally stiff connection of shafts which can accommodate angular and parallel misalignment and axial movement.

The GFA coupling consists of two hardened steel hubs with external crowned and barrelled gear teeth, connected by a hardened steel sleeve with matching gear teeth. The hub teeth are positioned a maximum distance apart to minimise angular and parallel misalignment. The double articulation in the GFA series permits high misalignment.

The GFAS coupling has only one hub with external teeth, which connects to a sleeve with integral hub, to reduce weight and inertia. This series provides a stiffer connection, particularly suited to cardan shaft applications.

Hubs and sleeves are produced from high strength steel (800N/mm<sup>2</sup> tensile strength) with chemical surface-hardening to enhance wear and corrosion resistance, and avoid seizure. All teeth are to DIN 3992 Class 7 accuracy, with surface finish 1.4µm Ra. Lubrication is retained by sprung loaded seals which also prevent ingress of contaminants to ensure long operating life. Re-lubrication is via two grub screws positioned on the sleeve.



GFA Series

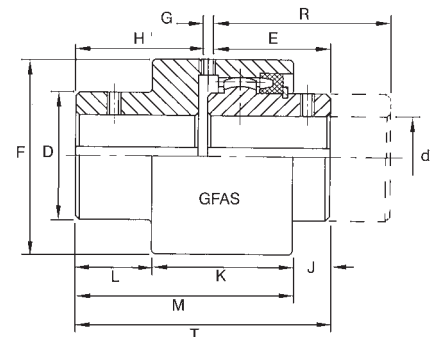
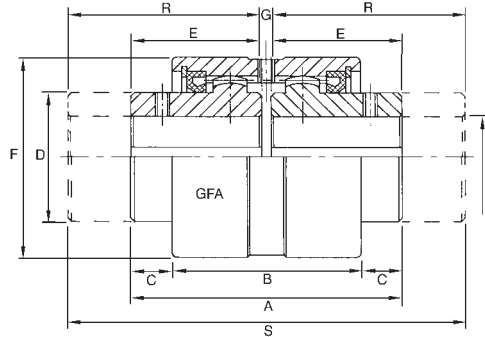


GFAS Series

Couplings are offered with two hub lengths; standard hub suitable for most applications, and long hub for shafts of standard series motors.

Hubs of different lengths can be combined in one coupling (GFA type) with refs. modified as below:-

- GFA - Has two std. hubs.
- GFAL - Has one long and std. hub.
- GFALL - Has two long hubs.
- GFAS - Has std. length hub.
- GFASL - Has long length hub.



## GFA and GFAS Series Couplings - Power Capacities and Technical Data

For coupling selection procedure refer page 13. Max. motor torque must never exceed max. torque rating of coupling.

Coupling Size	Power Capacity kW/rpm Normal	Torque Nm		Power Capacity in kW at selected shaft speeds				Shaft speed <sup>(2)</sup>		Radial Misalign Max. mm GFA only	Inertia kg-cm <sup>2</sup> GFA <sup>(1)</sup>	Inertia kg-cm <sup>2</sup> GFAS <sup>(1)</sup>	Weights kg <sup>(3)</sup>				
		Rated	Max.	500	1000	1500	3000	Normal Running Max-rpm	Absolute Max-rpm				GFA Sleeve	GFAS Sleeve	Standard Hub	Long Hub	
GFA-25	GFAS-25	0.063	600	1524	31	63	94	189	5000	6000	0.20	8.7	7.3	0.72	1.03	0.48	0.69
GFA-32	GFAS-32	0.104	1000	2520	52	104	156	312	4000	5000	0.26	25.1	19.2	1.14	1.75	0.99	1.58
GFA-40	GFAS-40	0.130	1250	3125	65	130	195	370	3000	4200	0.32	44.8	34.1	1.68	2.71	1.49	2.10
GFA-56	GFAS-56	0.261	2500	6200	130	261	391	-	2200	3500	0.37	132.6	95.6	2.86	4.43	2.96	4.22
GFA-63	GFAS-63	0.419	4000	9260	209	419	628	-	1600	3000	0.40	278.2	207.3	3.75	6.62	4.90	7.67
GFA-80	GFAS-80	0.785	7500	18000	392	785	-	-	1200	2600	0.48	558.6	492.6	5.58	10.50	8.72	14.26
GFA-100	GFAS-100	1.236	12000	28500	618	1236	-	-	700	1400	0.65	1044.5	1064.5	6.63	28.20	15.76	25.40
GFA-125	-	2.431	23600	56250	1215	2431	-	-	460	950	0.70	3650.0	-	17.70	32.60	49.50	-
GFA-155	-	4.121	40000	90000	2060	-	-	-	350	700	0.80	9982.0	-	28.30	65.50	91.40	-

(1) Moments of inertia refer to standard couplings bored to maximum bore size.

(2) For operating speeds in excess of 3,600 rpm couplings should be balanced in accordance with ISO 1940 to class G2.5.

(3) Weights are for unbored coupling hubs - total weight is the addition of two hubs plus sleeve (GFA), or sleeve plus hub (GFAS).

## GFA and GFAS Series Couplings - Dimensions in mm

Coupling Size		Finished Bore Sizes d <sup>(1)</sup>		Standard Length Hubs												Long Hubs		
GFA	GFAS	Normal Max.	Max.	A <sup>(2)</sup>	B	C	D	E	F	G <sup>(2)</sup>	H	J	K	L	M <sup>(2)</sup>	R	S <sup>(2)</sup>	T <sup>(2)</sup>
GFA-25	GFAS-25	25	28	85	61	12.0	42*	41.0	68*	3	41	13	43	29	85	60	123	104
GFA-32	GFAS-32	32	38	100	73	13.5	55	48.5	85	3	48.5	16	49	35	100	80	163	131.5
GFA-40	GFAS-40	40	48	115	82	16.5	64	56.0	95	3	56	18.5	54.5	42	115	80	163	139
GFA-56	GFAS-56	56	60	140	97	21.5	80	68.0	120	4	60	27	60	45	132	100	204	164
GFA-63	GFAS-63	63	75	153	108	22.5	100	74.5	140	4	61.5	31	63	46	140	119.5	243	185
GFA-80	GFAS-80	80	90	170	125	22.5	125	82.5	175	5	65.5	26	76	51	153	140	285	210.5
GFA-100	GFAS-100	100	110	216	148	34	150	105	198	6	90	38	92	71	201	174.5	355	270.5
GFA-125	-	125	140	288	214	39	190	140	245	8	-	-	-	-	-	207.5	423	-
GFA-155	-	155	175	370	240	64	240	180	300	10	-	-	-	-	-	245	498	-

(1) Stock hubs are all unbored, but can be modified to customer's bore and keyway requirements, up to maximum bores indicated.

(2) Dimensions G, M, S, and T relate to couplings correctly positioned on shafts.

\* For GFAS 25 dimension D on hub only is 40mm, and dimension F is 70mm.

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