

"GIFLEX®" GF COUPLINGS with POLYAMIDE SLEEVE

DUAL CURVATURE FLEXIBLE TOOTHED COUPLINGS

PRESENTATION

The GIFLEX range of flexible toothed couplings are commercial couplings for general applications, which are however manufactured to a high quality standard and offer technical and performance features that are typical of industrial couplings.

The specific application sector refers to power transmissions for the flexible connection of rotating parts, with the possibility of compensating radial and angular misalignments and absorbing axial slippage.

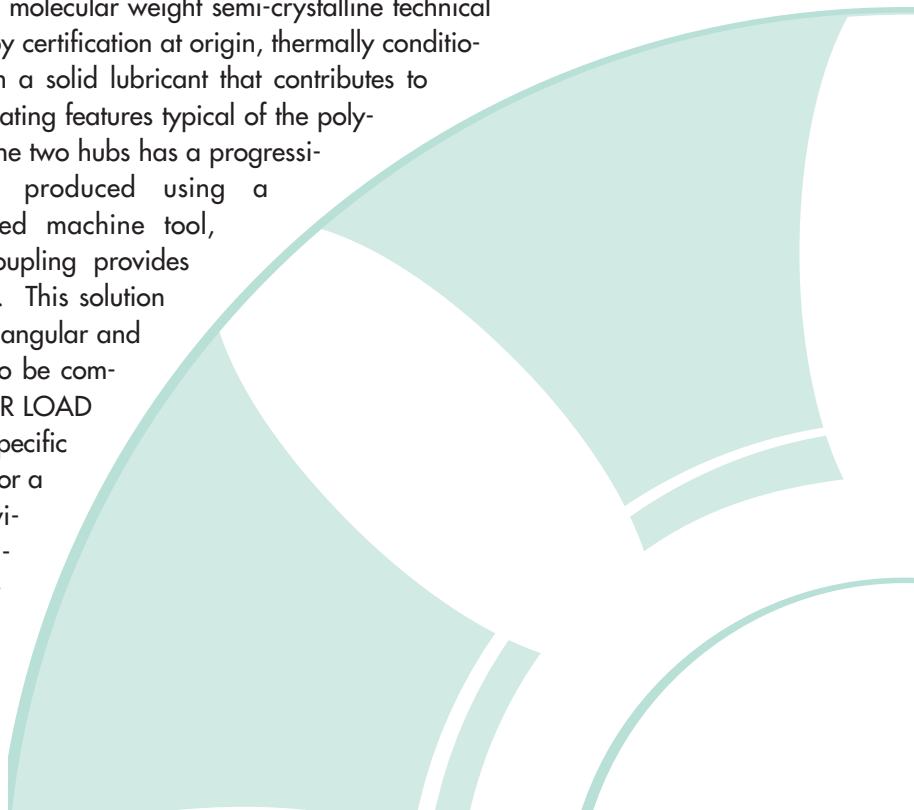
The performance is in line with this class of couplings, rendered more demanding and better suited to the needs of industrial requirements by the design criteria adopted and the precision with which the couplings are machined and systematically tested.

CONSTRUCTION

In structural terms, the flexible toothed couplings consist of two symmetrical steel hubs and a synthetic resin sleeve, which ensures the coupling and power transmission between the two hubs.

The two hubs are manufactured from low carbon content steel and have been subjected to anti-corrosion surface treatment and are each fitted with a toothed ring.

The hollow sleeve with internal toothing formed by injection moulding comprises a high molecular weight semi-crystalline technical polymer, guaranteed by certification at origin, thermally conditioned and charged with a solid lubricant that contributes to enhance the self-lubricating features typical of the polymer. The toothing of the two hubs has a progressive dual curvature, produced using a Numerically Controlled machine tool, which ensures the coupling provides optimum performance. This solution enables dynamic type angular and radial misalignments to be compensated **ALSO UNDER LOAD CONDITIONS**. The specific geometry of the tooth for a given transmitted twisting moment significantly reduces the surface pressure, thereby increasing the coupling's capacity to



transmit the load and fatigue resistance.

The polymer's relative insensitivity to atmospheric humidity and its capacity to withstand temperatures between -20° and $+120^{\circ}$ with brief peaks of up to $+150^{\circ}$ enable the coupling to withstand demanding working conditions also in an aggressive environment.

CHARACTERISTICS

The couplings provide the following performance in practical applications:

- Reduced overall dimensions, weight and inertia moment;
- Constant velocity behaviour at speed;
- Silent operation and the ability to absorb impacts and vibrations flexibly;
- Withstand the most common aggressive chemical agents and moderate heat, max. temp. 80° ;
- Self-lubricating, electrically insulated and maintenance-free;
- Inexpensive, easily assembled and are suited to a variety of applications, also in demanding conditions.



" GIFLEX[®] " GF FLEXIBLE COUPLINGS

Code interpretation

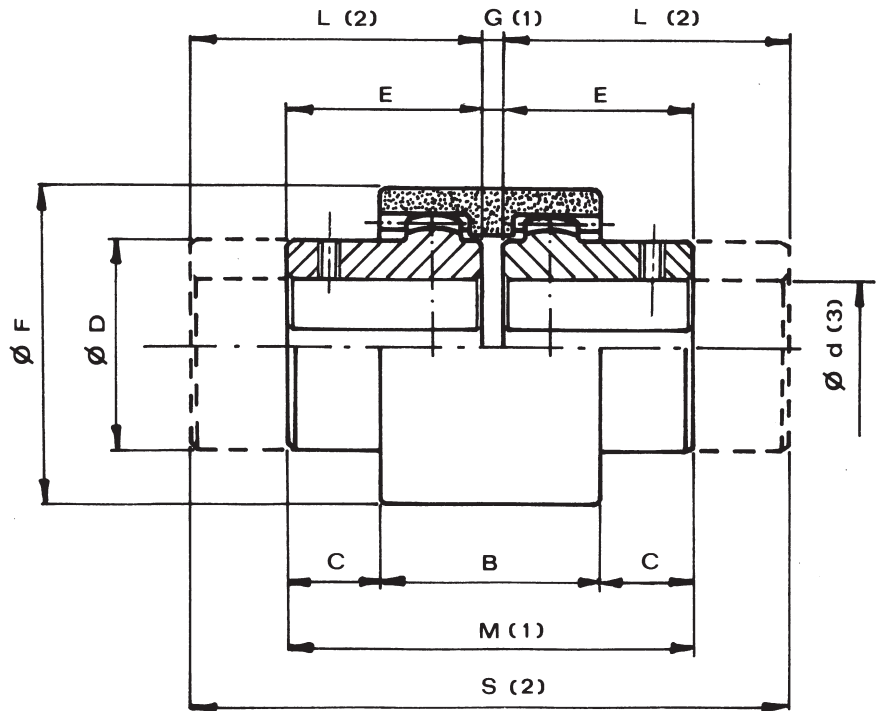
Example:

GF - 14-NN = with 2 normal hubs

GF - 14-NL = with one normal hub and a long hub

GF - 14-LL = with 2 long hubs

DIMENSIONS



The coupling's characteristic size is defined by the maximum bore diameter.

MEASUREMENTS - WEIGHTS

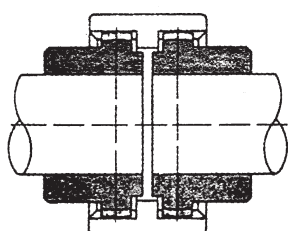
COUPLING TYPE	WITHOUT BORE	Finished bore d ⁽³⁾		Measurements in mm.									Mass Kg.		
		nom.	max.	Normal range						Long Range			Sleeve	Normal Hub	Long Hub
				B	C	ØD	E	ØF	G ⁽¹⁾	M ⁽¹⁾	L ⁽²⁾	S ⁽²⁾			
GF-14	-	6	14	38	6.5	25	23.5	41	4	51	30	64	0.022	0.10	0.13
GF-19	-	8	19	38	8.5	32	25.5	48	4	55	40	84	0.028	0.18	0.28
GF-24	-	10	24	42	7.5	36	26.5	52	4	57	50	104	0.037	0.23	0.42
GF-28	-	10	28	48	19	45	41	68	4	86	60	124	0.086	0.54	0.79
GF-32	-	12	32	48	18	50	40	75	4	84	60	124	0.104	0.66	0.97
GF-38	-	14	38	50	17	58	40	85	4	84	80	164	0.131	0.93	1.83
GF-42	-	20	42	50	19	63	42	95	4	88	110	224	0.187	1.10	2.76
GF-48	-	20	48	50	27	68	50	100	4	104	110	224	0.198	1.50	3.21
GF-55	-	25	55	65	29.5	82	60	120	4	124	110	224	0.357	2.63	5.12
GF-65	-	25	65	72	36	95	70	140	4	144	140	284	0.595	4.02	7.92

(1) Assembly distances.

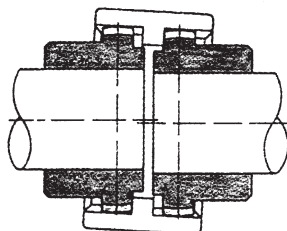
(2) Couplings with hub lengths to fully cover normal shafts for the UNEL-MEC range of motors.

(3) **On request:** finished bore in compliance with ISO standards, H7 tolerance, keyway DIN 6885, sheet 1, JS9 tolerance. Dowel bore.

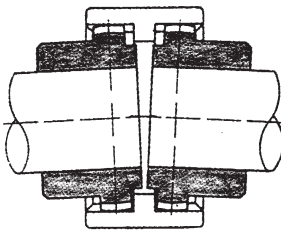
MISALIGNMENTS



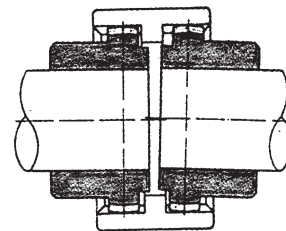
Aligned shafts



Radially displaced shafts



Angularly displaced shafts



Radially and angularly displaced shafts

COUPLING SELECTION

Torque based selection: the coupling must be selected so that the max motor torque does not exceed the coupling's permitted peak twisting moment.

TECHNICAL DATA

COUPLING TYPE	POWER FACTOR KW r.p.m.		TORQUE Nm		POWER TRANSMITTED IN KW AT R.P.M.								Max. R.P.M.	Mass Kg.	J Kg cm ² (1)	Maximum misalignment for each hub (1)		Axial displacement mm.
	norm.	max.	norm.	max.	750		1000		1500		3000					Angular α (2)	Radial mm.	
					norm.	max.	norm.	max.	norm.	max.	norm.	max.						
GF-14	0.0011	0.0023	11.5	23	0.8	1.5	1.1	2.0	1.6	3.0	3.3	6.0	14000	0.166	0.27	±2°	0.7	±1
GF-19	0.0019	0.0037	18.5	36.5	1.3	2.7	1.8	3.7	2.7	5.5	5.4	11.1	12000	0.276	0.64	±2°	0.8	±1
GF-24	0.0023	0.0047	23	46	1.7	3.5	2.3	4.7	3.4	7.0	6.9	14.1	10000	0.312	0.92	±2°	0.8	±1
GF-28	0.0053	0.0106	51.5	103.5	3.9	7.9	5.2	10.6	7.8	15.9	15.6	31.8	8000	0.779	3.45	±2°	1	±1
GF-32	0.0071	0.0142	69	138	5.2	10.5	7.0	14.1	10.5	21.1	21.0	42.3	7100	0.918	5.03	±2°	1	±1
GF-38	0.0090	0.0181	88	176	6.7	13.5	9.0	18.0	13.5	27.0	27.0	54.0	6300	1.278	9.59	±2°	0.9	±1
GF-42	0.0113	0.0226	110	220	8.4	16.8	11.2	22.5	16.8	33.7	33.6	67.5	6000	1.473	13.06	±2°	0.9	±1
GF-48	0.0158	0.0317	154	308	11.8	23.6	15.8	31.6	23.7	47.4	47.4	94.8	5600	1.777	18.15	±2°	0.9	±1
GF-55	0.029	0.058	285	570	21.7	43.5	29.0	58.0	43.5	87.0	87.0	174.0	4800	3.380	49.44	±2°	1.2	±1
GF-65	0.0432	0.0865	420	840	32.1	64.3	42.9	85.8	64.3	128.7	128.7	257.4	4000	4.988	106.34	±2°	1.3	±1

(1) Normal coupling reference complete with maximum bore without keyway.

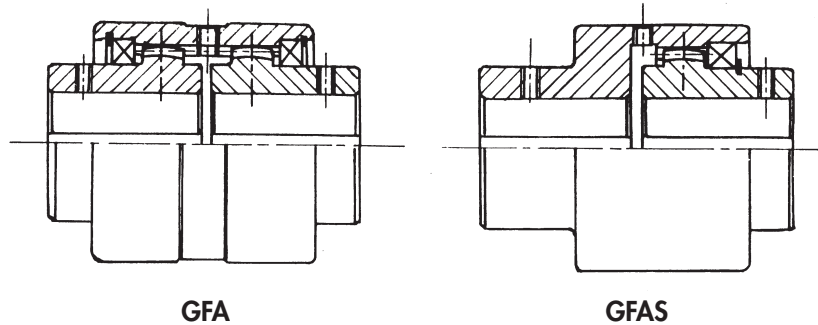
(2) Per hub.

ASSEMBLY GUIDELINES

- Position the two semi-couplings on the shafts, taking care that the internal surfaces are in line with the shaft ends.
- Insert the sleeve on the two semi-couplings adjusting their distance (distance "G"), while the two shafts are aligned at the same time.
- Clamp the two parts to be coupled together in position.
- Check that the sleeve is free to move in an axial direction before the coupling is rotated.

"GIFLEX®" GFA-GFAS COUPLINGS with STEEL SLEEVE

DUAL CURVATURE, FLEXIBLE TOOTHED COUPLINGS



PRESENTATION

The "GIFLEX" GFA - GFAS range of flexible couplings represent couplings designed with a compact structure for industrial applications, torsionally rigid and capable of compensating angular, parallel and combined misalignments.

The special configuration with the single-piece sleeve and the seals at the two ends renders the couplings suitable for use in aggressive environments and in particularly demanding operating conditions. The performance complies with the characteristics of a dual articulation, constant-velocity coupling intended to be used both for general and specific applications and with the possibility of also being mounted on shafts with a large free gap.

The operating limits defined by the maximum torque, by the rotating speed and the permitted angular misalignment are the result of a design based on a targeted choice of materials, the heat treatment and the toothing geometry.

The reliability of the stated operating limits has been confirmed by testing the fatigue limits both at the surface pressure (Hertzian pressure) and at bending and to destructive wear in accordance with calculation schemes based on the most authoritative international standards.

The CHIARAVALLI Trasmissioni Technical Department is available however, to examine problems that relate to the choice, application and maintenance of couplings in collaboration with users.

**On specific request,
special couplings by**

their shape, execution and performance can be offered and produced, as an alternative to the normal execution couplings. For example:

- Couplings designed for high angular and parallel misalignments.
- Couplings manufactured using high resistance steel and with surface hardening heat treatment.
- Couplings with case hardened and hardened hubs and tothing finished by machine tools after heat treatment (skiving using a hard metal tool).
- Special couplings manufactured to a drawing.

STRUCTURAL CHARACTERISTICS

The **GFA** range of compact couplings, comprise two toothed hubs and an external connecting single-piece sleeve.

The lubricant seal inside the coupling is ensured by two ring gaskets, arranged at the two ends of the sleeve and held in position by spring washers (Seeger washers).

Two threaded dowels arranged radially on the sleeve in a counter-position allow a solid lubricant to be adopted.

The tothing adopted for the two hubs is profile corrected and has a progressive dual curvature achieved by machine the tothing on a fully Numerically Controlled gear cutting machine.

The sleeve's profile corrected tothing, which has a parallel generatrix, is obtained using a shaping tool.

The tothing is produced to category 7 precision, in compliance with DIN 3972 and has a degree of finish with a surface roughness of not more than $Ra = 1.4$ micrometres, thanks to the machining technology adopted.

Both the hubs and the sleeve are manufactured using hardened and tempered carbon steel with a tensile stress resistance of 800 N/mm. The couplings are subjected to a surface hardening thermo-chemical treatment at the end of the machining stage, which ensures a high resistance to wear and seizure and also confers a high resistance to corrosion caused by atmospheric agents.

The perfect seal achieved by the gaskets ensures the required lubricant containment and prevents penetration of contaminating elements from outside, thereby contributing to increase the average useful working life of the coupling, even if operating in an aggressive environment.

The two toothed hub bands are positioned at the maximum distance permitted by the sleeve length. This arrangement ensures a minimum angular misalignment for a given parallel misalignment and enhances the coupling's constant-velocity features.

" GIFLEX[®] " GFA FLEXIBLE COUPLINGS

Code interpretation

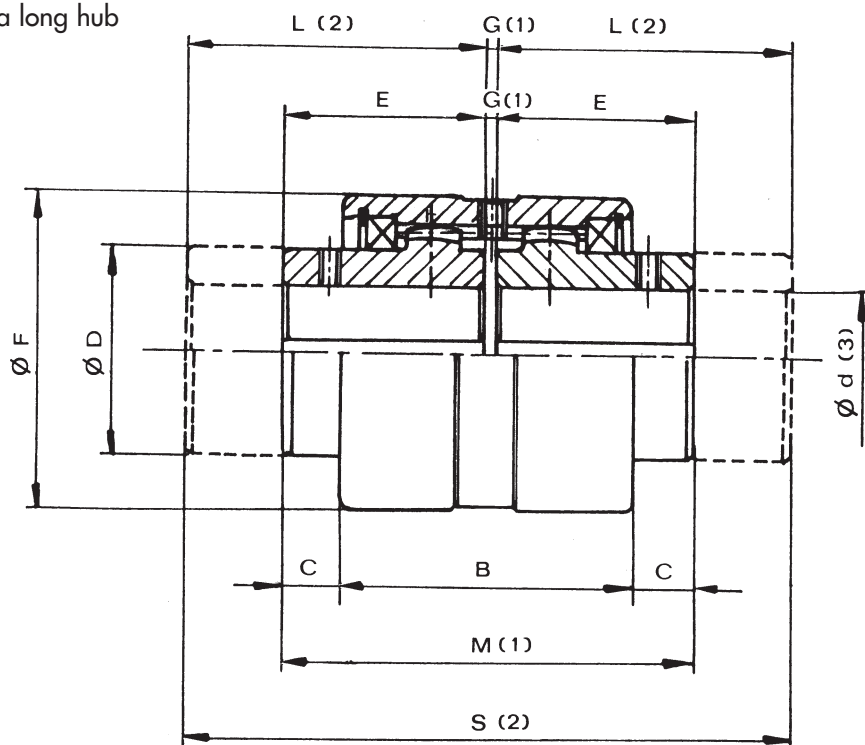
Example:

GFA - 25-NN = with 2 normal hubs

GFA - 25-NL = with one normal hub and a long hub

GFA - 25-LL = with 2 long hubs

DIMENSIONS



The coupling's characteristic size is defined by the maximum bore diameter.

MISURE - PESO

COUPLING TYPE	BORE	Finished bore d ⁽³⁾		Measurements in mm.									Mass Kg		
		nom.	max.	Normal range						Long Range			Sleeve	Normal Hub	Long Hub
				B	C	$\varnothing D$	E	$\varnothing F$	G ⁽¹⁾	M ⁽¹⁾	L ⁽²⁾	S ⁽²⁾			
GFA-25	-	25	28	61	12	42	41	68	3	85	60	123	0.72	0.48	0.69
GFA-32	-	32	38	73	13.5	55	48.5	85	3	100	80	163	1.14	0.99	1.58
GFA-40	-	40	48	82	16.5	64	56	95	3	115	80	163	1.68	1.49	2.10
GFA-56	-	56	60	97	21.5	80	68	120	4	140	100	204	2.86	2.96	4.22
GFA-63	-	63	70	108	22.5	100	74.5	140	4	153	119.5	243	3.75	4.90	7.67
GFA-80	-	80	90	125	22.5	125	82.5	175	5	170	140	285	5.58	8.72	14.26
GFA-100	-	100	110	148	34	150	105	198	6	216	174.5	355	6.63	15.76	25.40
(4) GFA-125	40	125	140	214	39	190	140	245	8	288	207.5	423	17.70	32.60	49.50
(4) GFA-155	40	155	175	240	64	240	180	300	10	370	245	498	28.30	65.50	91.40

(1) Assembly distances.

(2) Couplings with hub lengths to fully cover normal shafts for the UNEL-MEC range of motors.

(3) **On request:** finished bore in compliance with ISO standards, H7 tolerance, keyway DIN 6885, sheet 1, JS9 tolerance. Dowel bore.

(4) Construction material: hardened and tempered 39NiCrMo3.

"GIFLEX®" GFAS FLEXIBLE COUPLINGS

Code interpretation

Example:

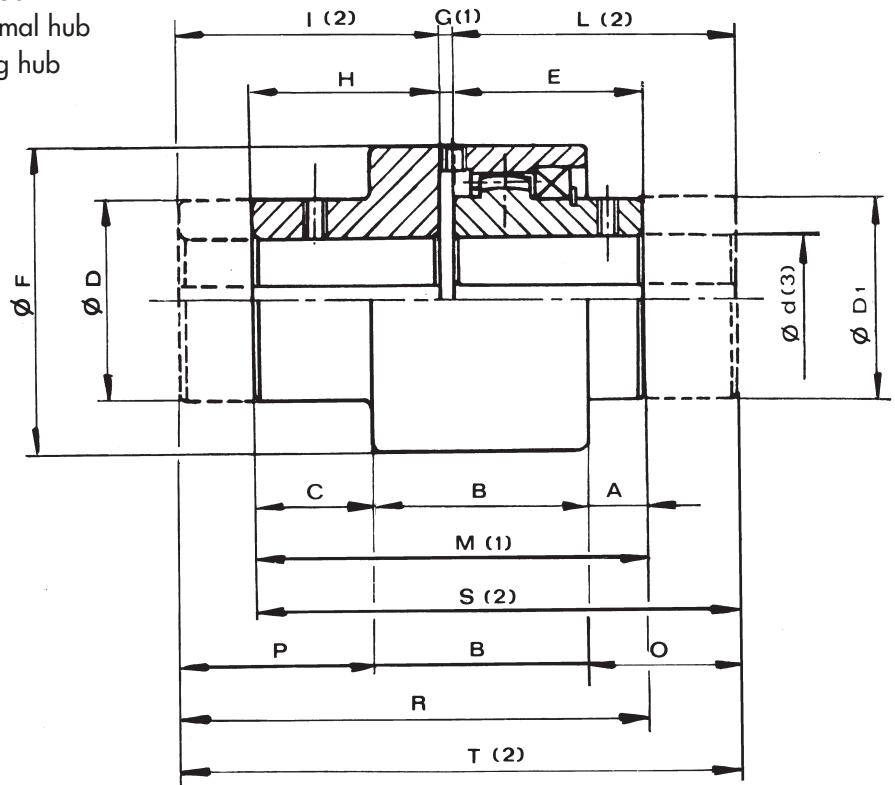
GFAS - 25-NN = with cone and a normal hub

GFAS - 25-NL = with cone and a long hub

GFAS - 25-LN = with long cone and normal hub

GFAS - 25-LL = with long cone and long hub

DIMENSIONS



The coupling's characteristic size is defined by the maximum bore diameter.

MEASUREMENTS - WEIGHTS

COUPLING TYPE	WITHOUT BORE	Finished bore d ⁽³⁾		Measurements in mm.																	Mass Kg.			
				Normal range								Long Range ⁽²⁾									Normal cone	Normal Hub	Long Cone	Long Hub
				A	B	C	ØD	ØD1	E	ØF	G ⁽¹⁾	H	M ⁽¹⁾	I ⁽²⁾	L ⁽²⁾	O	P	R	S ⁽²⁾	T ⁽²⁾				
GFAS-25	-	25	28	13	43	29	42	40	41	70	3	41	85	60	60	32	48	104	104	123	1.03	0.48	1.30	0.69
GFAS-32	-	32	38	16	49	35	55	55	48.5	85	3	48.5	100	80	80	47.5	66.5	131.5	131.5	163	1.75	0.99	2.50	1.58
GFAS-40	-	40	48	18.5	54.5	42	64	64	56	95	3	56	115	80	80	42.5	66	139	139	163	2.71	1.49	3.40	2.10
GFAS-56	-	56	60	27	60	45	80	80	68	120	4	60	132	100	100	59	85	172	164	204	4.43	2.96	6.10	4.22
GFAS-63	-	63	75	31	63	46	100	100	74.5	140	4	61.5	140	119.5	119.5	76	104	198	185	243	6.62	4.90	10.20	7.67
GFAS-80	-	80	90	26	76	51	125	125	82.5	175	5	65.5	153	138	140	83.5	123.5	225.5	210.5	283	10.50	8.68	17.90	14.22
GFAS-100	-	100	110	38	92	71	150	150	105	198	6	90	201	162	174.5	107.5	143	273	270.5	342.5	28.20	15.70	38.10	25.30

(1) Assembly distances.

(2) Couplings with hub lengths to fully cover normal shafts for the UNEL-MEC range of motors.

(3) **On request:** finished bore in compliance with ISO standards, H7 tolerance, keyway DIN 6885, sheet 1, JS9 tolerance. Dowel bore.

COUPLING SELECTION AND SIZING CRITERIA

The satisfactory operation and the useful working life of flexible toothed couplings depends on the correct selection of the couplings, as well as on the compatibility of the operating conditions with the performance provided by the coupling.

It is essential therefore, to highlight the limiting performance of the couplings and to clarify the actions of the external loads that are exerted on the corresponding couplings.

The basic design ensures that all the couplings are capable of compensating a static angular or assembly misalignment equal to 1 degree and this is ensured by the minimum construction tolerance between the teeth.

The dynamic angular or operating misalignment must never be greater than 0.5 degrees, even if the recommended values should not be greater than 0.25 degrees.

The declared nominal torque values and the maximum rotating speeds indicated refer to an angular or composite misalignment that does not exceed 1/12 of a degree (5 prime divisions).

The 'exceptional' torque values that can be supported as a transient and during the acceleration phases must not be exerted for more than 10-15 seconds and must not occur for more than 5 events/hour.

Fatigue durations are calculated for a conventional limit of 50 million cycles, considering two load cycles for each revolution of the coupling.

Misalignments exceeding 1/8 degrees (7.5 prime divisions) penalise by decreasing the nominal torque and the maximum rotating speed declared for the individual couplings.

The performance of the coupling in terms of torque, limiting speed and useful working life will decrease or increase compared with the declared values in the case of operating conditions that differ from the conditions specified above or for "fixed-term" durations.

The design data has been tested for the purpose of ensuring a reasonable safety margin. The declared performance therefore, is to be understood as valid for a Service Factor equal to 1.

Use of the prescribed lubricants and compliance with the recommended restore time intervals represent the pre-conditions to achieve the performance as described in the catalogue.

The CHIARAVALLI Trasmissioni Technical Department is available to advise users in selecting the type of coupling most appropriate for the actual operating conditions and to make recommendations in relation to special operating conditions.

TECHNICAL DATA

COUPLING TYPE	POWER FACTOR KW r.p.m.		TORQUE Nm		POWER TRANSMITTED IN KW AT R.P.M.				Max. R.P.M.	R.P.M. Recommended limit	Max. radial misalignment mm.	Mass Kg.	J Kg cm ²
	norm.	except.	norm.	except.	750 norm.	1000 norm.	1500 norm.	3000 norm.					
GFA-25	0.061	0.157	600	1524	45	61	91	183	6000	5000	0.20	1.36	8.68
GFAS-25											-	1.35	7.31
GFA-32	0.103	0.259	1000	2520	77	103	154	309	5000	4000	0.26	2.51	25.10
GFAS-32											-	2.43	19.15
GFA-40	0.128	0.322	1250	3125	96	128	192	384	4200	3000	0.32	3.55	44.82
GFAS-40											-	3.64	34.13
GFA-56	0.257	0.639	2500	6200	192	257	385		3500	2200	0.37	6.15	132.60
GFAS-56											-	6.07	96.56
GFA-63	0.412	0.985	4000	9260	309	412	618		3000	1600	0.40	9.91	278.20
GFAS-63											-	10.00	207.32
GFA-80	0.773	1.855	7500	18000	579	773			2600	1200	0.48	16.20	558.6
GFAS-80											-	19.18	492.6
GFA-100	1.236	2.937	12000	28500	927				1400	700	0.65	23.00	1044.50
GFAS-100											-	28.00	1064.00
GFA-125	2.431	5.795	23600	56250	1823				950	460	0.70	49.15	3650
GFA-155	4.121	9.273	40000	90000	3090				700	350	0.80	91.30	9982

(1) Referred to the normal coupling complete with maximum bore without keyway.

N.B. Class G 2.5 dynamic balancing in compliance with ISO 1940 is recommended for actual operating speeds that exceed 3,600 r.p.m.

Couplings can operate with a parallel misalignment value that is double the suggested value and assembly with a misalignment value that is four times greater than the suggested value in exceptional cases.

COUPLING SIZE SELECTION INSTRUCTIONS

The torque, speed and useful working life data declared for the couplings are to be understood as valid referred to a Service Factor SF = 1.

The service factor must be determined therefore, based on the type of load, the load intensity and the range factor that characterises the type of load exerted on the coupling.

The values shown in the following table can be considered as a precautionary measure in the absence of reliable service factor design data.

It is appropriate to multiply the service factor taken from the table by an increasing factor equal to 1.4 in the case of continuously reversible operations under load.

LOAD CONDITION

SERVICE FACTORS

UNIFORM
LIGHT
MEDIUM
HEAVY

OPERATING CONDITIONS

Regular operation without impacts or overloads
Regular operation with minor and infrequent impacts and overloads
Irregular operation with medium overloads for a short duration and frequent but moderate impacts
Markedly irregular operation with very frequent impacts and overloads and of major intensity.

TYPE OF DRIVE

Electric motor	Diesel engine
1.25	1.5
1.50	2.0
2.0	2.5
2.5	3.0

TEST BASED ON THE POWER TO BE TRANSMITTED

Use the following formula to calculate the value of the operating torque (M_e) expressed in Nm, considering the drive motor power output (P) in kW and the operating speed (n) in r.p.m.

$$M_e = \frac{9549 \times P}{n}$$

Establish the nominal torque to be transmitted (M_n) based on the service factor taken from the table.

$$M_n = M_e \times S_f$$

Select the coupling with a nominal torque which is GREATER than the value calculated.

WARNING

The declared nominal torques must be progressively decreased for angular misalignments that exceed 0.125 degrees.

TEST BASED ON THE SHAFT DIAMETER

Check that the largest of the shafts to be connected has a diameter equal to or less than the nominal bore declared for the coupling.

Adopting the maximum permitted diameter for the selected coupling should be limited to UNIFORM or LIGHT load conditions.

TEST BASED ON THE ROTATING SPEED

The maximum rotating speed indicated for each coupling represents an operating limit calculated for an angular misalignment that does not exceed 1/12 of a degree. Both the nominal torque and the permitted rotating speed are reduced for greater angular misalignments. Adopt a coefficient equal to 1.12 to increase the service factor and select the coupling as described previously when both the misalignment and the operating speed are less than the suggested reference values, but are close to these values. Contact our Technical Services for operating conditions with misalignments and operating speeds that exceed the suggested reference values.

TEST BASED ON THE REQUIRED USEFUL WORKING LIFE

Couplings are calculated for a standard operating lifespan under nominal operating conditions (torque, misalignment and rotating speed). Operating lifespans that exceed the standard duration cause the nominal torque to decrease.

The service factor must be multiplied by a lifespan coefficient defined as follows if a given operating lifespan, which exceeds the standard working lifespan, is required.

OPERATING LIFESPAN IN HOURS	3.800	4.000	6.000	8.000	12.000	20.000
LIFESPAN COEFFICIENT	1	1.06	1.17	1.26	1.39	1.58

The nominal torque verified for the lifespan must be further decreased in the fairly improbable circumstance in which the actual operating speed is greater than the maximum permitted operating speed for the misalignment conditions of the coupling when in operation.

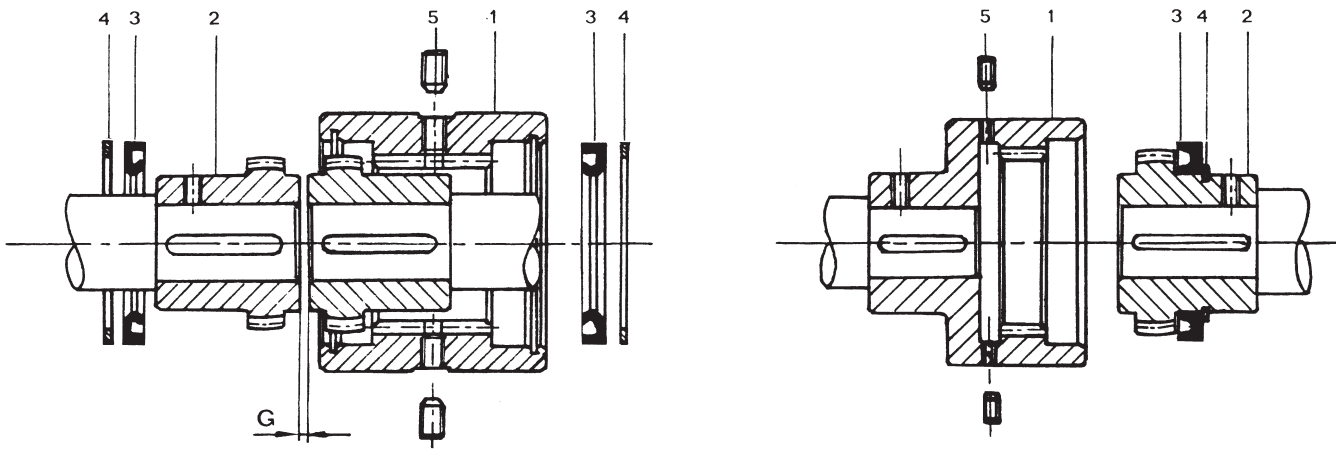
COMPONENT PARTS OF THE "GIFLEX®" GFA COUPLING

COUPLING TYPE	POS. 1		POS. 2		POS. 3		POS. 4		POS. 5		Allen wrench	No. of pieces
	Description	No. of pieces	Description	No. of pieces	Seal ring Corteco NBR DIN 3760 A	No. of pieces	Flexible ring for bores DIN 472	No. of pieces	Flat dowel UNI 5923	No. of pieces		
GFA-25	Sleeve	1	Hub	2	BA 42x56x7	2	56 I	2	M6x8	2	D.3	1
GFA-32	Sleeve	1	Hub	2	BA 55x72x8	2	72 I	2	M6x8	2	D.3	1
GFA-40	Sleeve	1	Hub	2	BA 64x80x8	2	80 I	2	M6x8	2	D.3	1
GFA-56	Sleeve	1	Hub	2	BA 80X100X10	2	100 I	2	M6x8	2	D.3	1
GFA-63	Sleeve	1	Hub	2	BA 100x125x12	2	125 I	2	M6x8	2	D.3	1
GFA-80	Sleeve	1	Hub	2	BA 125x160x12	2	160 I	2	M6x8	2	D.3	1
GFA-100	Sleeve	1	Hub	2	SMIM 150x180x12	2	180 I	2	M6x8	2	D.3	1
GFA-125	Sleeve	1	Hub	2	SM 190x220x15	2	220 I	2	M6x8	2	D.3	1
GFA-155	Sleeve	1	Hub	2	SMIM 240X280X15	2	280 I	2	M6x8	2	D.3	1

COMPONENT PARTS OF THE "GIFLEX®" GFA COUPLING

COUPLING TYPE	POS. 1		POS. 2		POS. 3		POS. 4		POS. 5		Allen wrench	No. of pieces
	Description	No. of pieces	Description	No. of pieces	Seal ring Corteco NBR	No. of pieces	Flexible ring for bores DIN 471	No. of pieces	Flat dowel UNI 5923	No. of pieces		
GFAS-25	Sleeve	1	Hub	1	UM 60X40X10	1	40 E	1	M6x8	2	D.3	1
GFAS-32	Sleeve	1	Hub	1	UM 75x55x10	1	55 E	1	M6x8	2	D.3	1
GFAS-40	Sleeve	1	Hub	1	UM 85x65x10	1	65 E	1	M6x8	2	D.3	1
GFAS-56	Sleeve	1	Hub	1	UM 100x80x10	1	80 E	1	M6x8	2	D.3	1
GFAS-63	Sleeve	1	Hub	1	UM 120x100x10	1	100 E	1	M6x8	2	D.3	1
GFAS-80	Sleeve	1	Hub	1	UM 155x125x15	1	125 E	1	M6x8	2	D.3	1
GFAS-100	Sleeve	1	Hub	1	UM 180x150x15	1	150 E	1	M6x8	2	D.3	1

ASSEMBLY INSTRUCTIONS



— GFA ASSEMBLY

- A) Insert the stop ring (4) and the seal ring (2) on the shaft.
- B) Assemble the hubs (2) on the relative shafts.
- C) Sleeve (1) is to be fitted on the longest shaft.
- D) Position the shafts close together and check that the distance G corresponds to the value indicated in the table.
- E) Align the shafts and check the parallelism then tighten the hubs on the shaft.
- F) Fill the tothing and the gap between the hubs with grease.
- G) At this stage slide the sleeve (1) down and position the sealing rings (3) in its place and tighten the stop rings (4) in their seat.
- H) Proceed as follows for disassembly: remove the stop rings (4) using a pair of pliers, separate the sleeve (1) from the hubs (2) and the GFA coupling is fully disassembled.

MAINTENANCE

Unscrew both plugs (5) then introduce grease using the grease gun through the greasing holes until the grease exits from the other hole positioned at 180°. Replace the plugs. Repeat this operation every 1.000 working hours.

— GFAS ASSEMBLY

- A) The seal ring (3) and stop ring (4) are already fitted on the extractable hub (2).
- B) Assembly in closed cone mode only requires the sleeve (1) to be fixed onto one shaft and the extractable hub (2) to be tightened on the other shaft.
- C) Then arrange the shafts to be connected closely together, positioning the hub (2) over the sleeve (1).
- D) To disassemble, separate the shafts then extract the hub (2) from the sleeve (1).

Couplings require lubrication with grease, the quantity of grease used should half fill the available gap.

Use of Lithium soap grease with a base mineral oil and consistency index 2 (in compliance with NLGI) is recommended for moderate loads and normal operating conditions.

Use Barium complex soap grease, PAO synthetic base oil and consistency index 2 for heavy-duty operating conditions as regards temperatures and with heavy loads.

Contact the CHIARAVALLI Trasmissioni spa Technical Department for extreme operating conditions.

The lubricant complying with the formulation and with the recommended characteristics can be selected from among the range of products indicated below by consulting the Producer.

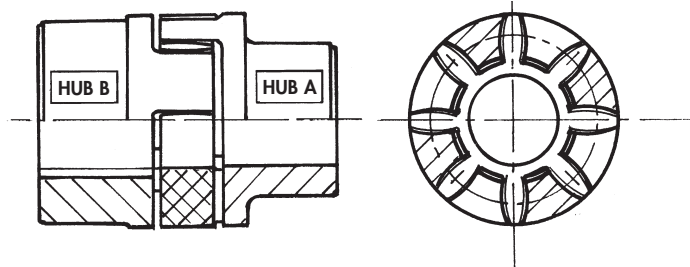
Equivalent recommended greases are as follows:

TYPE	PRODUCER
Sovarex L-O	MOBIL OIL
Gulfrown EP-O	GULF OIL
Alesia EP-2	SHELL OIL
Litholine Multi-Purpose	SINCLAIR
PGX-2 API	
Mariax 1	TEXACO
GR MUIEP2	AGIP
SPHEEROL EPL 2 SUPERGREASE 2	CASTROL

N.B. - The technical characteristics, the dimensions and all other data contained in this catalogue are not binding. CHIARAVALLI Trasmissioni spa reserves the right to change the measurements indicated at any time and without notice.

"GIFLEX®" GE-T COUPLINGS with FLEXIBLE SPIDER

TORSIONAL FLEXIBLE COUPLINGS PRECISE EXECUTION



INTRODUCTION

Flexible torsion couplings, which are connecting devices between rotating shafts, are designed to ensure shock-free torque transmission and to compensate minor alignment deviations in operation between the shafts in industrial use.

The GE-T range of flexible couplings ensures this level of performance and also provides excellent quality thanks to the machining accuracy and the choice of the materials used.

The general level of reliability provided by the GE-T couplings is ensured by a satisfactory useful working life of the couplings.

GENERAL

The GE-T range of flexible couplings represents torsionally flexible, mechanical couplings capable of transmitting a twisting moment proportional to the flexible yield of the intermediate component.

The couplings must also be capable of effectively absorbing possible torsional vibrations due to the load or self-induced, to attenuate impacts and torque peaks during the start-up phase and to compensate minor angular and parallel misalignments between the shafts, however ensuring an acceptable useful working life.

These features and more in general the performance required from the coupling depend almost exclusively on the quality of the intermediate component. The choice of the material used to manufacture the coupling is therefore fundamental. The curve that expresses the flexible characteristic of the intermediate component must have a progressive trend (yielding at low torque values and remaining rigid at higher torque values) to ensure operation without jerks at start-up and with a limited torsional yield at steady state conditions.

It is essential for the intermediate component to have a certain flexible hysteresis, proportional to the required absorbing effect that ensures the coupling can effi-

ciently absorb possible torsional oscillations. Furthermore, the useful working life of the coupling depends on the flexible yield of the material comprising the intermediary component. The physical characteristics as described above are frequently in contrast with each other and compared with other basic mechanical and technological parameters. The performance of the intermediary component therefore cannot be adapted to the variety of operating conditions when only one type of material is used and therefore the materials adopted for the flexible ring gear must be differentiated. A selected thermoplastic elastomer is selected to meet medium level needs in the basic execution. This refers to an elastomer with medium rigidity, characterised by an optimum internal dampening effect, resistant to ageing, to fatigue, to abrasion, as well as hydrolysis and to the principal chemical agents with special reference to oils and ozone. Operating temperatures lying between -40°C and $+125^{\circ}\text{C}$ with brief peaks of up to 150°C are permitted in the case of couplings in the base execution. Alternative mixes capable of meeting every practical need have been designed and are available on request for use in extremely demanding operating conditions, or for needs that exceed average requirements.

OPERATING AND ASSEMBLY CONDITIONS

Operation of the flexible torsion couplings, such as the GE-T type or similar couplings is characterised by a proportional feature between the twisting torque and the torsion angle and by the ability to compensate limited angular and radial misalignments.

Key features of equal importance, but which are more difficult to interpret are represented by the absorbing factor and the natural frequency or resonance. To qualify its couplings, **CHIARAVALLI Trasmissioni spa** declares permitted twisting torque values correlated to well defined torsion angle values, which has the limiting value of 5° corresponding to the maximum torque value. This provides a valid guide for the progressive characteristic of the flexible curve. The maximum permitted values are shown in the case of the angular and radial misalignments, with the warning that these refer to extreme values that cannot be added together (only angular compensation or only radial compensation) and apply to "standard" operating conditions characterised by the following: operating torque not exceeding the nominal torque, a rotating speed of less than 1,450 r.p.m and coupling temperature not exceeding 40°C . The maximum rotating speed expressed in r.p.m. that corresponds to a maximum peripheral speed of 30 m/sec. is indicated for each coupling of the GE-T range. This speed can be achieved with a sufficient safety margin compared to the danger of failure due to centrifugal force stress thanks to the characteristics of the material used. Class G 2.5 dynamic balancing in compliance with ISO

1940 is recommended despite the fact that the half-couplings are fully machined on both external surfaces, if the actual operating speed exceeds 2.800 r.p.m.

COUPLING SELECTION AND SIZING CRITERIA

Couplings are sized on the basis of the physical laws of mechanics and the resistance of the materials and also complies with the provisions established in the DIN 740 standards Sheet 2.

The coupling is selected on the basis of the criteria, which establishes that the maximum permitted stress is never exceeded even in the most demanding operating conditions. It follows that the nominal torque declared for the coupling must be compared with a reference torque that takes into account the overloads due to the way the load is exerted and the operating conditions. The reference torque is obtained by multiplying the operating torque by a series of multiplying factors depending on the nature of the load or on the ambient temperature conditions.

Symbols:	TKN	= coupling maximum torque (Nm)	
	TK max	= coupling maximum torque (Nm)	
	TKw	= torque with coupling inversion (Nm)	
	TLN	= driven side operating torque (Nm)	
	TLs	= driven side static torque (Nm)	
	TAs	= motor side static torque (Nm)	
	Ts	= plant static torque (Nm)	
	PLn	= driven side operating power (kW)	
	nLn	= driven side rotating speed (r.p.m.)	
	St	= temperature factor	
	SA	= motor side impact factor	
	SL	= driven side impact factor	
	Sz	= start-up factor	
	MA	= control side mass factor	$\frac{JL}{JA+JL}$
	ML	= driven side mass factor	$\frac{JA}{JA+JL}$

LOAD DUE TO NOMINAL TORQUE

The permitted nominal coupling torque TKN must apply for any operating temperature value equal to or greater than the driven side operating torque TLN.

$$TLN = 9549 \frac{(PLn)}{nLn} \text{ [Nm]}$$

The following condition must be satisfied, where St represents the temperature factor, to take into account overloads due to the operating temperature for the coupling.

$$TKN = > TLN * St$$

START-UP LOAD

The drive motor delivers a drive torque during the start-up transient period, which is a multiple of the nominal torque and depends on the way the masses are distributed. A similar situation occurs in the braking phase therefore, these two phases are characterised by torque impacts that have an intensity which depends on the distribution of the masses on the drive side MA and on the driven side ML, as well as the frequency of the number of start-ups on which the start-up factor Sz depends. The static torques for the drive side and the driven side are expressed by the following relationships:

- drive side $TS = TAS * MA * SA$
- driven side $TS = TLS * MM * SL$

MA and ML are assumed to be equal to 1, to a first approximation, and if the distribution of the masses is unknown. The SA factor can be assumed as being equal to the relationship between the start-up torque and the nominal torque in the case of drives based on an electric motor.

LOAD CAUSED BY TORQUE IMPACTS

The permitted nominal coupling torque TKN max must be equal to or greater than the start-up torque increased by the temperature factor and by St and by the start-up factor Sz for any operating temperature value.

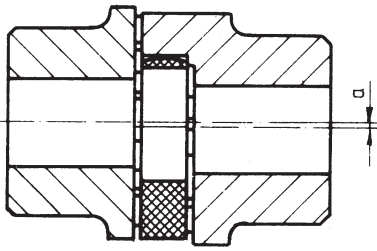
$$TKN \max > TS * St * Sz$$

Consult the CHIARAVALLI Trasmissioni Technical Department for operating conditions that foresee periodic variations or torque inversions, as well as alternate torsional stresses.

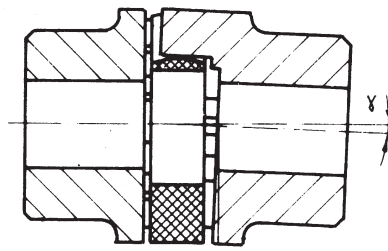
NAME		INDICATIVE VALUES FOR ADJUSTMENT FACTORS:				
	SYMBOL	DEFINITION				
Temperature Factor	St.	St. °C	1 -30 +30	1.2 +40	1.4 +80	1.8 +120
Start-up Factor	Sz.	Number of start-ups per hour				
		Start-up/hr. Sz.	100 1	200 1.2	400 1.4	800 1.6
Impact Factor	SA/SL	SA/SL				
		Minor start-up impacts	1.5			
		Medium start-up impacts	1.8			
		Major start-up impacts	2.2			

LOAD CONDITION		SERVICE FACTORS	
	OPERATING CONDITIONS	TYPE OF DRIVE	
		Electric motor	Diesel engine
UNIFORM	Regular operation without impacts or overloads	1.25	1.5
LIGHT	Regular operation with minor and infrequent impacts and overloads	1.50	2.0
MEDIUM	Irregular operation with medium overloads for a short duration and frequent but moderate impacts	2.0	2.5
HEAVY	Markedly irregular operation with very frequent impacts and overloads and of major intensity.	2.5	3.0

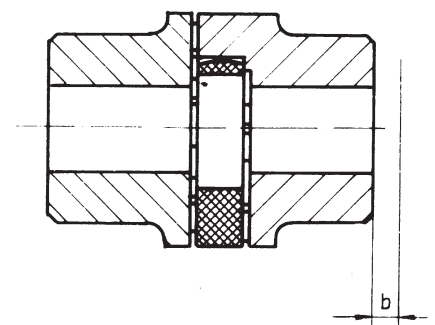
"GIFLEX®" G-E-T FLEXIBLE COUPLINGS



Radially displaced shafts



Angularly displaced shafts



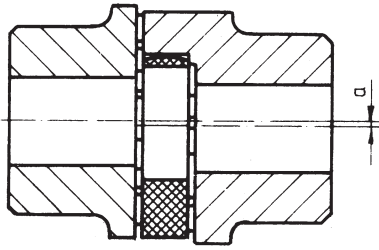
Axially displaced shafts

94 SHORE A BLACK SPIDER THERMOPLASTIC RUBBER

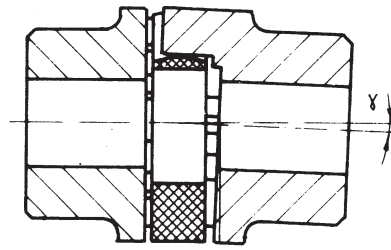
TECHNICAL DATA

TYPE	Max. R.p.m. n. (min ⁻¹)	Torsion Angle		Toothed Star Hardness	Twisting Moment (Nm)			Torsional Rigidity (kNm/rad)				Axial displacement b m m	Maximum misalignment	
		TKN	TKmax		TKN Norm.	MAX TKmax	TKW with Invers.	1.0 TKN	0.75 TKN	0.5 TKN	0.25 TKN		Radial α mm	Angular γ°
19/24	14000			94	10	20	2.6	0.68	0.57	0.44	0.28	1.2	0.2	1.2°
24/32	10600			94	35	70	9	2.19	1.82	1.40	0.90	1.4	0.2	0.9°
28/38	8500			94	95	190	25	5.20	4.31	3.32	2.12	1.5	0.25	0.9°
38/45	7100			94	190	380	49	10.00	8.30	6.39	4.08	1.8	0.28	1.0°
42/55	6000	3.0°	5°	94	265	530	69	17.00	14.11	10.86	6.94	2.0	0.32	1.0°
48/60	5600			94	310	620	81	20.00	16.59	12.77	8.16	2.1	0.36	1.1°
55/70	4750			94	410	820	105	21.99	18.25	14.05	8.98	2.2	0.38	1.1°
65/75	4250			94	625	1250	163	28.20	23.39	18.01	11.51	2.6	0.42	1.2°
75/90	3550			94	975	1950	254	67.99	56.41	43.44	27.75	3.0	0.48	1.2°
90/100	2800			94	2400	4800	624	110.0	91.26	70.27	44.89	3.4	0.50	1.2°

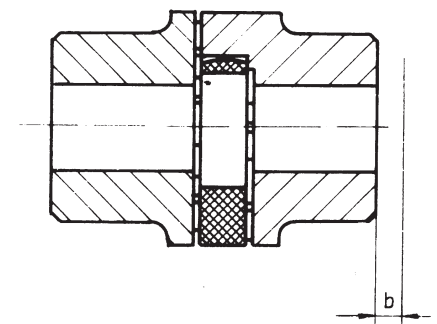
"GIFLEX®" GE-T FLEXIBLE COUPLINGS



Radially displaced shafts



Angularly displaced shafts



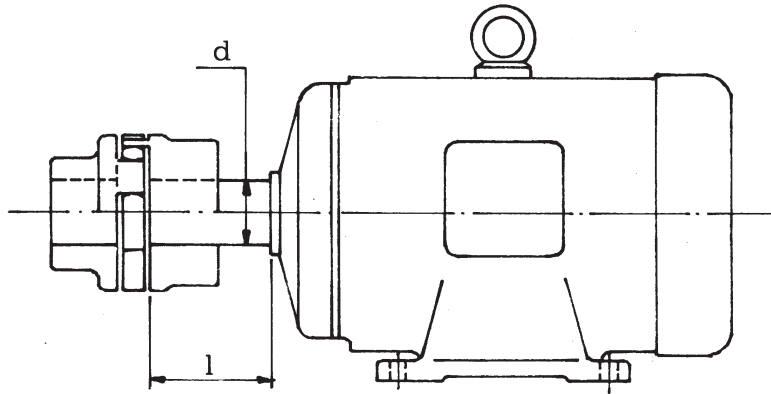
Axially displaced shafts

96 SHORE A RED SPIDER THERMOPLASTIC RUBBER
96 SHORE A YELLOW SPIDER POLYURETHANE

TECHNICAL DATA

TYPE	Max. R.p.m. n. (min ⁻¹)	Torsion Angle		Toothed Star Hardness	Twisting Moment (Nm)			Torsional Rigidity (kNm/rad)				Axial displacement b mm	Maximum misalignment	
		TKN	TKmax		TKN Norm.	MAX TKmax	TKW with Inversion	1.0 TKN	0.75 TKN	0.5 TKN	0.25 TKN		Radial α mm	Angular γ°
19/24	14000			96	17	34	4.4	1.09	0.90	0.68	0.42	1.2	0.2	1.2°
24/32	10600			96	60	120	16	3.70	3.04	2.31	1.44	1.4	0.2	0.9°
28/38	8500			96	160	320	42	9.5	7.80	5.92	3.68	1.5	0.25	0.9°
38/45	7100			96	325	650	85	29.0	23.8	18.06	11.24	1.8	0.28	1.0°
42/55	6000	3.0°	5°	96	450	900	117	40.5	33.24	25.21	15.70	2.0	0.32	1.0°
48/60	5600			96	525	1050	137	48.56	39.86	30.23	18.82	2.1	0.36	1.1°
55/70	4750			96	625	1250	163	52.78	43.32	32.86	20.46	2.2	0.38	1.1°
65/75	4250			95	640	1280	166	57.5	47.19	35.80	22.29	2.6	0.42	1.2°
75/90	3550			95	1465	2930	381	150.0	123.12	93.39	58.14	3.0	0.48	1.2°
90/100	2800			95	3600	7200	936	250.0	205.19	155.65	96.90	3.4	0.50	1.2°

"GIFLEX®" GE-T FLEXIBLE COUPLINGS



GE-T COUPLINGS designed for CEI standardised motors

ELECTRIC MOTOR TYPE	Motor power output at 50 Hz, n = 3000 min.		COUPLING		Motor power output at 50 Hz, n = 1500 min.		COUPLING		Motor power output at 50 Hz, n = 1000 min.		COUPLING		Motor power output at 50 Hz, n = 750 min.		COUPLING		Shaft end d x l (mm)
	P (kW)	T (Nm)	GE-T TYPE	Fs	P (kW)	T (Nm)	GE-T TYPE	Fs	P (kW)	T (Nm)	GE-T TYPE	Fs	P (kW)	T (Nm)	GE-T TYPE	Fs	
80	0.75	2.4		8.0	0.55	3.6		5.4	0.37	3.6		5.1	0.18	2.3		8.0	3000<1500
	1.1	3.6	19/24	5.4	0.75	4.9	19/24	3.9	0.55	5.4	19/24	3.4	0.25	3.2	19/24	5.7	19x40
90 S	1.5	4.9		4.0	1.1	7.6		2.7	0.75	7.3		2.5	0.37	4.8		3.8	24x50
90 L	2.2	7.2		2.7	1.5	9.8		2.0	1.1	10.8		5.8	0.55	7.2		2.5	
					2.2	14.4		4.7					0.75	9.8		6.4	
100 L	3	9.8		7.1					1.5	14.7		4.7					
			24/32		3	19.6	24/32	3.5					1.1	14.4	24/32	4.4	28x60
112 M	4	13.1		5.4	4	26.2		2.6	2.2	21.6		3.2	1.5	19.7		3.3	
	5.5	18.0		10.6													
132 S					5.5	36		5.3	3	29.5		6.3	2.2	28.8		6.6	
	7.5	24.6	28/38	7.6					4	39	28/38	4.8			28/38		38x80
132 M					7.5	49		3.9					3	39		4.8	
									5.5	54		3.5					
160 M	11	36		10.6	11	72		5.3	7.5	73		5.1	4	52		7.0	
	15	49	38/45	7.8									5.5	72	38/45	5.1	42x110
160 L	18.5	60		6.3	15	98	38/45	3.9	11	108	38/45	3.5	7.5	98		3.8	
180 M	22	72		7.5	18.5	121		4.4									48x110
180 L					22	144		3.7	15	147		3.6	11	144		3.7	
	30	98		5.5			42/55		18.5	182	42/55	2.9			42/55		
200 L					30	196		2.7					15	197		2.7	55x110
	37	121	42/55	4.4					22	216		2.5					
225 S					37	242		2.6					18.5	242	48/60	2.5	
225 M	45	147		3.7	45	295	48/60	2.1	30	295	48/60	2.1	22	288		2.1	55x110 60x140
250 M	55	180	48/60	3.5	55	360	55/70	2.1	37	364	55/70	2.1	30	394	65	2.2	60x140 65x140
280 S	75	246		3.1	75	492		4.0	45	442		4.4	37	485	75	4.0	75x140
280 M	90	295	55/70	2.6	90	590	75	3.4	55	541	75	3.6	45	591		3.3	
315 S	110	360		2.1	110	721		2.8	75	738		2.7	55	722	75/90	2.7	
315 M	132	433		4.6	132	866	75/90	2.3	90	885	75/90	2.3					65x140 80x170
	160	525		3.8	160	1030		4.7	110	1070		4.5	90	1170		4.1	
315 L			75/90				90				90				90		
	200	656		3.0	200	1290		3.7	132	1280		3.8	110	1420		3.4	
	250	820	75/90	2.4	250	1610		3.0	160	1550	90/100	3.1	132	1710	70/100	2.8	
355 L							90/100	2.4	200	1930		2.5	160	2070		3.2	75x140 95x170
	315	1010		4.8	315	2020		2.9	250	2420	100	2.7	200	2580	100	2.6	
	355	1140		4.2	355	2280											
400 L			90/100	3.8			100		315	3040							80x170 100x210
	400	1280			400	2560		2.6									

" GIFLEX® " GE-T PRECISION RANGE

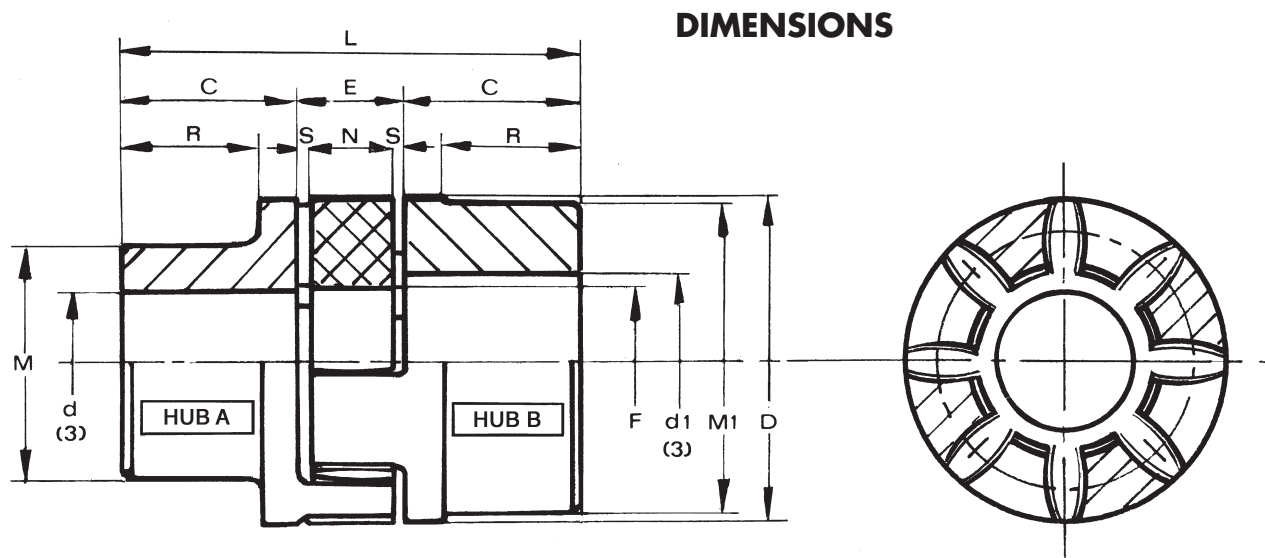
Code interpretation

Example:

GE-T 19A - 24B = with hub A +hub B

GE-T 19A - 19A = with 2 hubs A

GE-T 24B - 24B = with 2 hubs B



DIMENSIONS

The characteristic size of the coupling is defined by the maximum bore diameter.

Material: G25 CAST IRON * STEEL

MEASUREMENTS - WEIGHTS

COUPLING TYPE	WITHOUT BORE		Finished bore d ⁽³⁾		Measurements in mm.										Mass Kg.			J Kg. cm ² Hubs A+B ⁽²⁾
	A	B	d max.	d1 max.	Normal range										Flexible Component	Hub A	Hub B	
					C	D	E ⁽¹⁾	F	M	M1	N	R	S	L				
GE-T 19A-24B*	-	-	19	24	25	40	16	18	30	40	12	19	2	66	0.004	0.18	0.25	0.8
GE-T 24A-32B	-	-	24	32	30	55	18	27	40	55	14	24	2	78	0.014	0.36	0.55	3
GE-T 28A-38B	-	-	28	38	35	65	20	30	48	65	15	27.5	2.5	90	0.025	0.60	0.85	7
GE-T 38A-45B	-	-	38	45	45	80	24	38	66	78	18	36.5	3	114	0.042	1.35	1.65	20
GE-T 42A-55B	-	-	42	55	50	95	26	46	75	94	20	40	3	126	0.066	2.00	2.30	50
GE-T 48A-60B	-	-	48	60	56	105	28	51	85	104	21	45	3.5	140	0.088	2.75	3.10	80
GE-T 55A-70B	-	-	55	70	65	120	30	60	98	118	22	52	4	160	0.116	4.20	4.50	160
GE-T 65A-75B	-	-	65	75	75	135	35	68	115	134	26	61	4.5	185	0.172	6.50	6.80	310
GE-T 75A-90B	-	-	75	90	85	160	40	60	135	158	30	69	5	210	0.325	10.00	10.80	680
GE-T 90A-100B	38	38	90	100	100	200	45	100	160	180	34	81	5.5	245	0.440	14.00	15.80	1590

(1) Assembly distances

(2) Coupling inertia moment with hubs A-B and max. bore \varnothing

(3) **On request:** Finished bore in compliance with ISO standards, H7 tolerance, keyway DIN 6885, sheet 1, JS9 tolerance. Dowel bore.

" GIFLEX[®] " GE-T PRECISION RANGE

EXECUTION WITH TAPER-LOCK[®] BUSH

Code interpretation

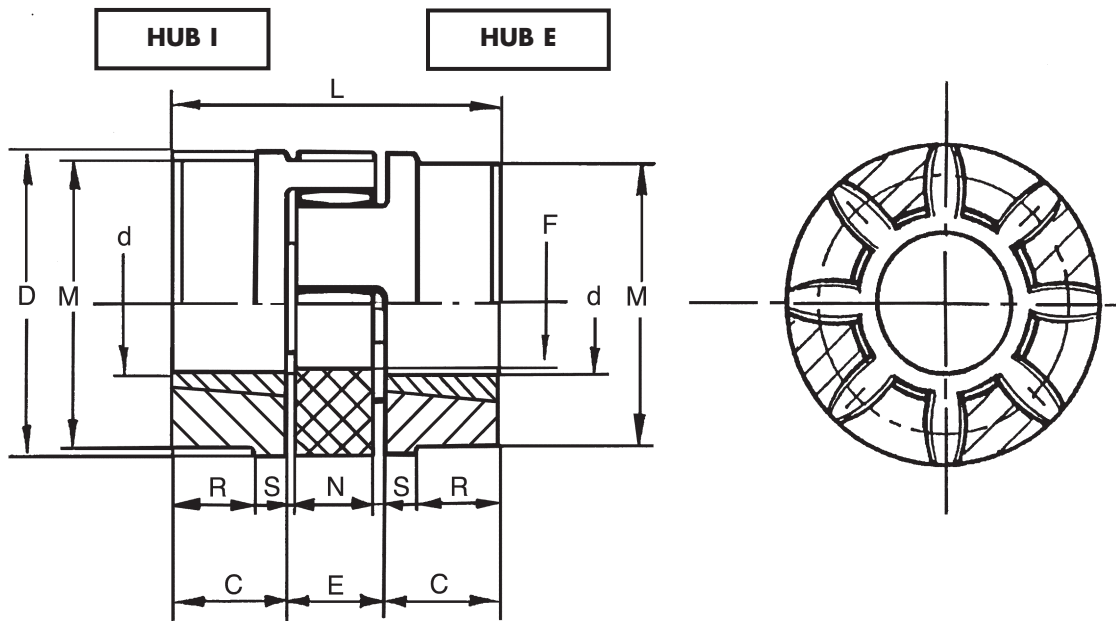
Example:

GE-T 28I - 38E = with hub I + hub E

GE-T 28I - 28I = with 2 hubs I

GE-T 38E - 38E = with 2 hubs E

DIMENSIONS



Material: G25 CAST IRON

MEASUREMENTS - WEIGHTS

COUPLING TYPE	Taper Lock Bush	Finished bore d		Measurements in mm.									Mass Kg.		
		d min.	d max.	Normal range									Flexible Component	Hubs B ₁ Max. Bore	J ⁽²⁾ Kg. cm ² Hubs B ₁
				C	D	E ⁽¹⁾	F	M	N	S	L	R			
GE-T28-38 B1-TL	1108	14	25	23	65	20	30	65	15	2.5	66		0.025	0.50	7
GE-T38-45 B1-TL	1108	14	25	23	80	24	38	78	18	3	70	15	0.042	0.88	26
GE-T42-55 B1-TL	1610	14	42	26	95	26	46	94	20	3	78	16	0.066	1.40	36
GE-T48-60 B1-TL	1615	19	40	39	105	28	51	104	21	3.5	106	28	0.088	2.33	78
GE-T55-70 B1-TL	2012	19	50	33	120	30	60	118	22	4	96	20	0.116	2.42	120
GE-T75-90 B1-TL	2517	19	65	52	160	40	80	158	30	5	144	36	0.325	6.80	630

(1) Assembly distances

(2) Coupling inertia moment with hubs I and E max. bore

"GIFLEX®" GE-T PRECISION RANGE

ALUMINIUM ALLOY EXECUTION

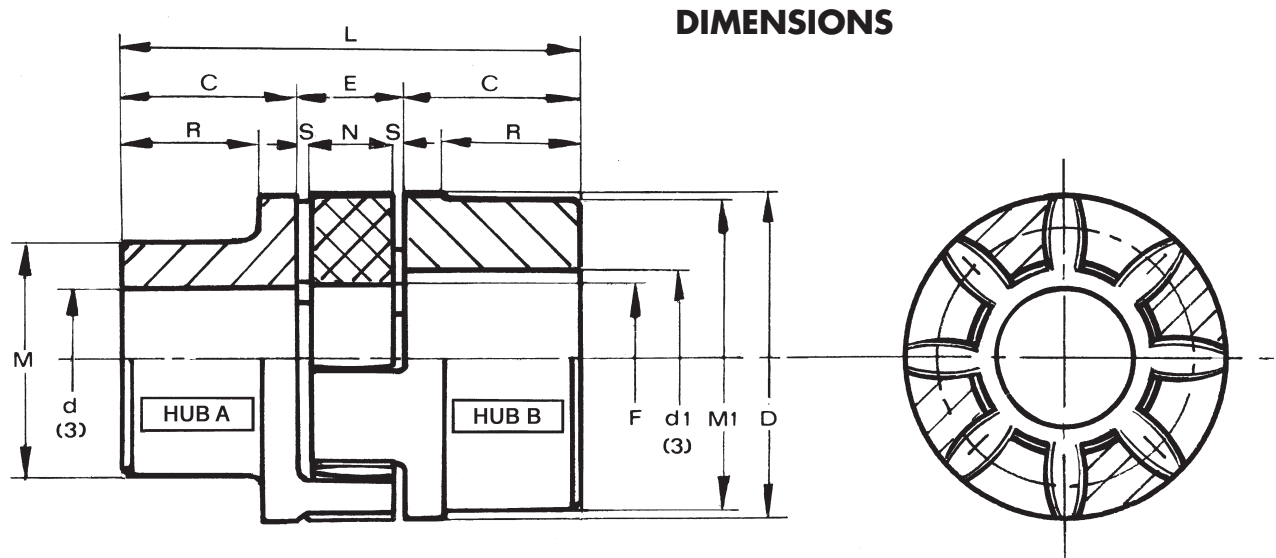
Code interpretation

Example:

GE-T 19A - 24B/AL = with hub A + hub B

GE-T 19A - 19A/AL = with 2 hubs A

GE-T 24B - 24B/AL = with 2 hubs B



DIMENSIONS

Material: ALUMINIUM ALLOY

MEASUREMENTS - WEIGHTS

COUPLING TYPE	WITHOUT BORE		Finished bore d ⁽³⁾		Measurements in mm.										Mass Kg.			J Kg. cm ² Hubs A+B ⁽²⁾
	A	B	d max.	d1 max.	Normal range										Flexible Component	Hub A	Hub B	
					C	D	E ⁽¹⁾	F	M	M1	N	R	S	L				
GE-T 19A-24B/AL	-	10	19	24	25	40	16	18	30	40	12	19	2	66	0.005	0.07	0.08	0.4
GE-T 24A-32B/AL	8	14	24	32	30	55	18	27	40	55	14	24	2	78	0.014	0.13	0.18	1.0
GE-T 28A-38B/AL	10	16	28	38	35	65	20	30	48	65	15	27.5	2.5	90	0.025	0.22	0.30	3.0
GE-T 38A-45B/AL	12	20	38	45	45	80	24	38	66	78	18	36.5	3	114	0.042	0.48	0.55	8.0

(1) Assembly distances

(2) Coupling inertia moment with hubs A and B and max. bore Ø

(3) **On request:** Finished bore in compliance with ISO standards, H7 tolerance, keyway DIN 6885, sheet 1, JS9 tolerance. Dowel bore.

N.B.: use of a polyurethane elastomer is recommended

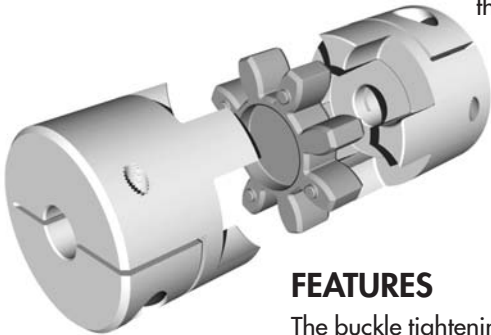
"GIFLEX®" GE-T SG BACKLASH-FREE TORSIONAL COUPLING

INTRODUCTION

The aluminium flexible couplings GE-T SG are made of three pre-tensioned elements in backlash-free execution.

They are meant for the coupling mounting and they are designed to fit low torque working units and industrial processing, where they must satisfy certain requirements.

Thanks to their limited dimensions and their easy mounting, they can operate in little space and any project can take big advantages of it.

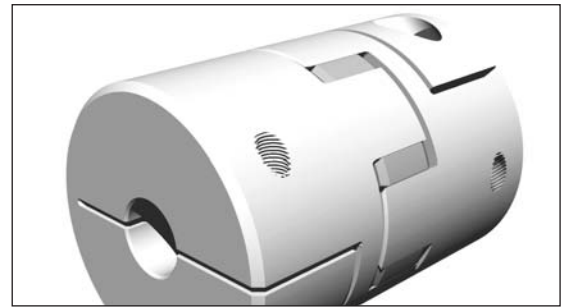
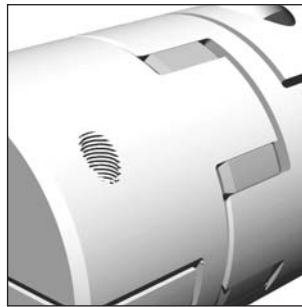
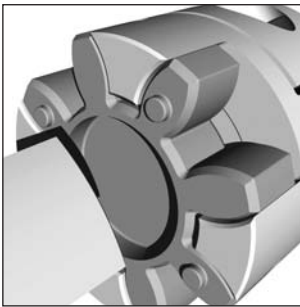


FEATURES

The buckle tightening guarantees a quick and sure fixing without extension between shaft and hub. It is however important to keep the screw tightening torque (MS) shown in the table.

Besides testing the size of the coupling given in the table, it is suggested to test the maximum torque of buckle to diameter (F).

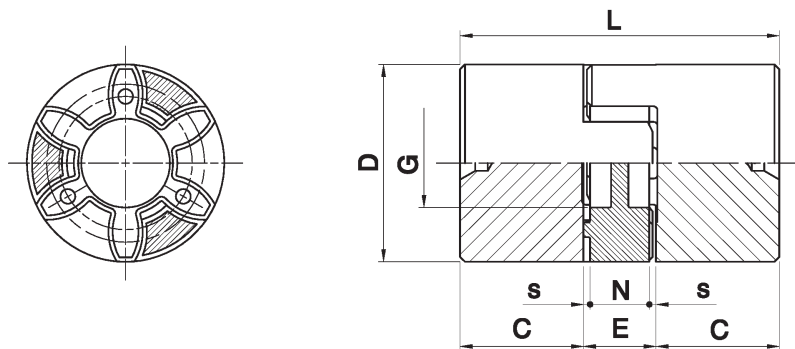
The elastomeric element, that has a star shape, is set into the hubs' hollow seats with a light pre-tensioning, ensuring the needed transmission torque backlash-free execution.



TECHNICAL DATA (Polyurethane elastomeric element in blu colour 80 shore A - in yellow colour 92 shore A - in red colour 98 shore A).

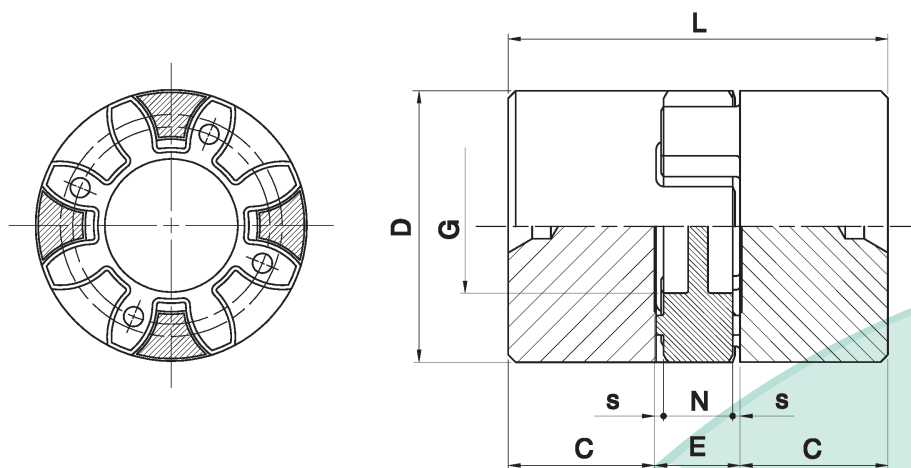
COUPLING GE-T SG	Elastomeric element hardness Shore A	N. max speed revolution V=30m/s	TORQUE (Nm)			STIFFNESS			WEIGHT		Mass inertia moment Kgm ² x 10 ⁻⁶
			Tksg	Tkn	Tk mx	Torsion statica Nm/rad	Torsion dinam. Nm/rad	radial N/mm	Hub	Star	
9	80	28000		1,8	3,6	17,02	52	125	0,009	0,002	0,57
	92		0,45	3,0	6,0	31,5	95	262			
	98			5,0	10,0	51,5	150	518			
14	80	19000		4,0	8,0	60,2	180	153	0,020	0,005	3,25
	92		1,0	7,5	15,0	114,6	344	336			
	98			12,5	25,0	172,0	513	604			
19/24	80	14000		4,9	9,8	343,8	1030	582	0,066	0,007	21,90
	92		2,5	10,0	20,0	573,0	1720	1120			
	98			17,0	34,0	859,0	2580	2010			
24/28	80	10600		17,0	34,0				0,132	0,018	58,30
	92			35,0	70,0	1432,0	4296	1480			
	98			60,0	120,0	2063,0	6189	2560			
28/38	80	8500		46,0	92,0				0,253	0,029	216,80
	92			95,0	190,0	2292,0	6879	1780			
	98			160,0	320,0	3438,0	10315	3200			
38/45	80	7100		94,0	188,0				0,455	0,049	445,20
	92			190,0	380,0	4589,0	13752	2350			
	98			325,0	650,0	7160,0	21485	4400			

N.B. FOR EXTERNAL SPEED MORE THAN V=30m/s DYNAMIC BALANCING IS NEEDED.



DIMENSIONS: EXECUTION A IN ALUMINIUM ALLOY WITH PLAIN HUB

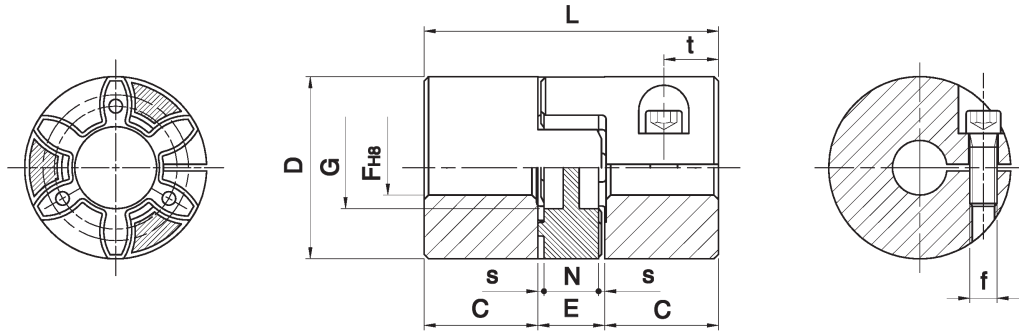
COUPLING TYPE	F min.	F max	D	G	L	C	E	N	s
9	4	10	20	7,2	30	10	10	8	1,0
14	4	16	30	10,5	35	11	13	10	1,5
19/24	8	20	40	18	66	25	16	12	2,0



DIMENSIONS: EXECUTION B IN ALUMINIUM ALLOY WITH PLAIN HUB

COUPLING TYPE	F min.	F max	D	G	L	C	E	N	s
24/28	12	28	55	27	78	30	18	14	2,0
28/38	18	35	65	30	90	35	20	20	2,5
38/45	18	45	80	38	114	45	24	18	3,0

" GIFLEX® " GE-T SG

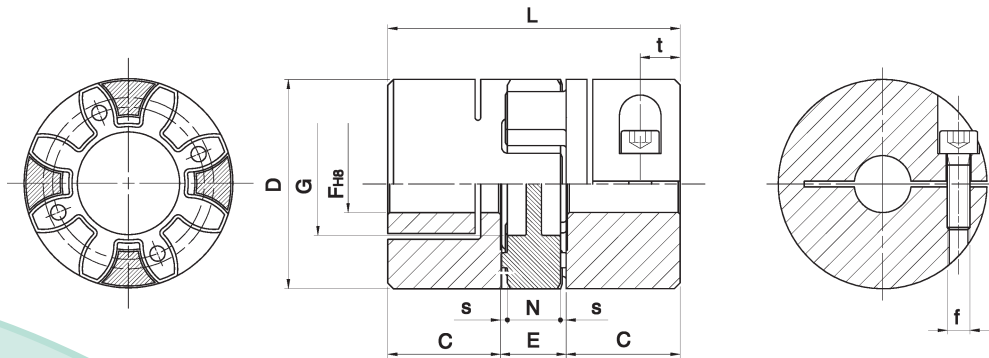


DIMENSION: EXECUTION C IN ALUMINIUM ALLOY WITH SIMPLE SPLIT

COUPLING TYPE	Execution	F min.	F max	D	G	L	C	E	N	s	f	Ms screws (Nm)	t
9	A	4	10	20	7,2	30	10	10	8	1,0	M2,5	0,75	5
14	A	4	16	30	10,5	35	11	13	10	1,5	M3	1,40	5
19/24	A	8	20	40	18	66	25	16	12	2,0	M6	11,0	12

ALLOWED TORQUE (Nm)

COUPLING TYPE	PRODUCED DIAMETER OF BORES (F)																			
	5	6	8	10	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40
9	1,55	1,63	1,79	1,94																
14	3,32	3,43	3,67	3,91	4,14	4,38	4,5	4,6												
19/24			18	19	20	21	21,5	22	22,5	23	24									



DIMENSIONS: EXECUTION D IN ALUMINIUM ALLOY WITH DOUBLE SPLIT

COUPLING TYPE	Execution	F min.	F max	D	G	L	C	E	N	s	f	Ms screws (Nm)	t
24/28	B	12	28	55	27	78	30	18	14	2,0	M6	11,0	14
28/38	B	18	35	65	30	90	35	20	15	2,5	M8	25,0	15
38/45	B	18	45	80	38	114	45	24	18	3,0	M8	25,0	20

ALLOWED TORQUE (Nm)

COUPLING TYPE	PRODUCED DIAMETER OF BORES (F)																			
	5	6	8	10	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40
24/28					25	26	27	27,5	28	28,5	29	30	31	32	33					
28/38									60	61	62	63	65	66	69	71	73	75		
38/45									69	70	71	73	74	78	78	80	81	84	87	88