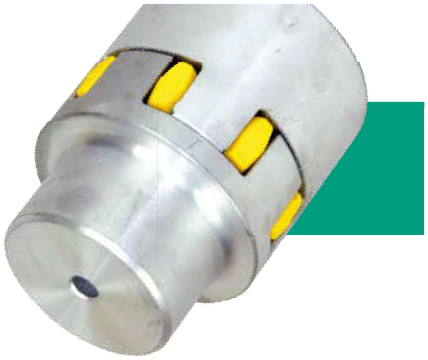
CHIARAVALLI® GROUP SpA



GIFLEX®
FLEXIBLE COUPLINGS

TORQUE LIMITERS

V. 01.21

GIFLEX® GE-T COUPLINGS with FLEXIBLE SPIDER

SERIES GE-T

GE-T COUPLING STANDARD

GE-T COUPLING TAPER LOCK®

GE-T COUPLING ALUMINIUM

GE-T COUPLING SG

HUB A

HUB B

HUB I

internal bushes

HUB E

external bushes

YELLOW POLYURETHANE SPIDER

RED ELASTOMER SPIDER

BLACK ELASTOMER SPIDER

INTRODUCTION

Flexible torsion couplings, which are connecting devicesbetween 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 materials.

The general level of reliability provided by the GE-T couplings results in a long life operation.

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 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 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 requiredabsorbing effect that ensures the coupling can efficiently 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 has 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 principle chemical agents with special reference to oils and ozone. Operating temperatures lying between -40 °C and + 125 °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 characterized 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 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 ° C 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 torquenot 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 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 CRITERION

Couplings are sized on the basis of the physical laws of mechanics and the resistance of the materials and also complies on the provisions established in the DIN 740 standards.
the coupling is selected on the basis of the criterion, 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.

LOAD DUE TO NOMINAL TORQUE

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

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

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.

Tk n = > 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, this two phases are characterised by torque impacts that have an intensitive 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 * ML * SL

MA and ML are assumed to be equal to 1, to 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.

Tk n max > TS * St * Sz

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

SYMBOLS

Tk n	= coupling maximum torque (Nm)
Tk max	= coupling maximum torque (Nm)
Tk w	= 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 (Nm)
nLn	= driven side rotating speed (r.p.m)
St	= temperature factor
JA	= inertia moment drive site
JL	= exit side
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 $\frac{JA}{JA + JL}$

INDICATIVE VALUES FOR ADJUSTMENT FACTORS:

Name	Symbol	Definition				
Temperature factor	St.	St.	1	1	1,4	1,8
		C°	-30°	+40°	+80°	+120°
			+30°			
Start-up factor	Sz.	Number of start-ups per hour				
		Start-up/hr	100	200	400	800
		Sz.	1	1,2	1,4	1,6
Impact factor	S_A/S_L					S_A/S_L
		minor start-up impacts				1,5
		medium start-up impacts				1,8
		major start-up impacts				2,2

SERVICE FACTORS:

Load condition	Operating conditins	Type of Drive	
		Electric motor	Diesel engine
UNIFORM	Regular operation without impacts or overloads	1,25	1,50
LIGHT	Regular operations with minor and infrequent impacts and overloads	1,50	2,00
MEDIUM	Irregular operation with medium overloads for a short duration and frequent but moderate impacts	2,00	2,50
HEAVY	Markedly irregular operation with very frequent impacts and overloads and of major intensity	2,50	3,00

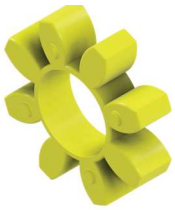
CHIARAVALLI GROUP BRAND GIFLEX ®
AXIS MISALIGNMENTS COMPENSATED WITH COUPLING GE-T

TECHNICAL DATA

Spider for GE-T
Employment temperature

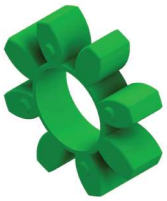
- Black	-40° +140°
- Yellow	-40° +90°
- Red	-30° +90°
- Green	-30° +110°

BLACK SPIDER 92-94Sh A
THERMOPLASTIC



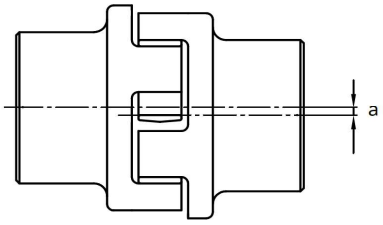
YELLOW SPIDER 92-94Sh A
POLYURETHAN

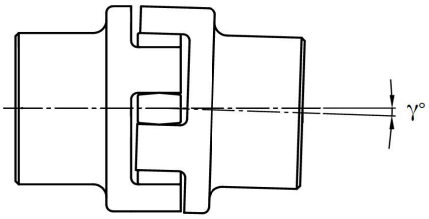
RED SPIDER 96-98 Sh A
POLYURETHAN

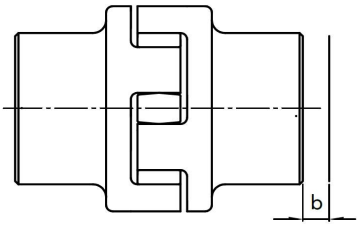


GREEN SPIDER 64 Sh D
POLYURETHAN

TECHNICAL DATA







TECHNICAL DATA

SPIDER TYPE	MAX R.p:M.	SPIDER	COLOR	TORSION ANGLE		TORQUES (Nm)			Torsional rigidity (NMrad)				displacement		
	min. 1	Shore		Tk n	tk MAX	Norm.	Max	with invers.	1.0	0.75	0.5	0.25	axial	radial	angular
						TkN	Tk MAX	Tk w	Tk n	Tk n	Tk n	Tk n	b (mm)	a (mm)	U° (degree)
GE-T 19-24	1400	92/94 Sh a	BLACK	3°	5°	10	20	2,6	1280	1050	800	470	1,2	0,2	1,2°
		92/94 Sh a	YELLOW												
		96/98 Sh a	RED			17	34	4,4	2920	2390	1810	1070			
		64 Sh D	GREEN			21	42	5,5	5350	4390	3320	1970			
GE-T 24-32	10600	92/94 Sh a	BLACK			35	70	9	4860	3980	3010	1790	1,4	0,2	0,9°
		92/94 Sh a	YELLOW												
		96/98 Sh a	RED			60	120	16	9930	8140	6160	3650			
		64 Sh D	GREEN			75	150	19,5	15110	12390	9370	5950			
GE-T 28-38	8500	92/94 Sh a	BLACK			95	190	25	10900	8940	6760	4010	1,5	0,25	0,9°
		92/94 Sh a	YELLOW												
		96/98 Sh a	RED			160	320	42	26770	21950	16600	9840			
		64 Sh D	GREEN			200	400	52	27520	22570	17060	10120			
GE-T 38-45	7100	92/94 Sh a	BLACK			190	380	49	21050	17260	13050	7740	1,8	0,28	1,0°
		92/94 Sh a	YELLOW												
		96/98 Sh a	RED			325	650	85	48570	39830	30110	17850			
		64 Sh D	GREEN			405	810	105	70150	57520	43490	25780			
GE-T 42-55	6000	92/94 Sh a	BLACK			265	530	69	23740	19470	14720	8730	2,0	0,32	1,0°
		92/94 Sh a	YELLOW												
		96/98 Sh a	RED			450	900	117	54500	44690	33790	20030			
		64 Sh D	GREEN			560	1120	145	79860	65490	49520	29350			
GE-T 48-60	5600	92/94 Sh a	BLACK			310	620	81	36700	30090	22750	13490	2,1	0,36	1,1°
		92/94 Sh a	YELLOW												
		96/98 Sh a	RED			525	1050	137	65290	53540	40480	24000			
		64 Sh D	GREEN			655	1310	170	95510	78320	59220	35100			
GE-T 55-70	4750	92/94 Sh a	BLACK			410	820	105	50720	41590	31450	18640	2,2	0,38	1,1°
		92/94 Sh a	YELLOW												
		96/98 Sh a	RED			625	1250	163	94970	77880	58880	34900			
		64 Sh D	GREEN			825	1650	215	107920	88500	66910	39660			
GE-T 65-75	4250	92/94 Sh a	BLACK			625	1250	163	97130	79650	60220	35700	2,6	0,42	1,2°
		92/94 Sh a	YELLOW												
		96/98 Sh a	RED			940	1880	166	129510	106200	80300	47600			
		64 Sh D	GREEN			1175	2350	305	151090	123900	93680	55530			
GE-T 75-90	3550	92/94 Sh a	BLACK			1250	2500	330	113320	92920	70260	41650	3,0	0,48	1,2°
		92/94 Sh a	YELLOW												
		96/98 Sh a	RED			1910	3850	490	197500	161950	122450	72580			
		64 Sh D	GREEN			2410	4820	624	248220	203540	153900	91220			
GE-T 90-100	2800	92/94 Sh a	BLACK			2400	4800	624	190090	155870	117860	69860	3,4	0,5	1,2°
		92/94 Sh a	YELLOW												
		96/98 Sh a	RED			3600	7200	936	312200	256000	193560	114730			
		64 Sh D	GREEN			4500	9000	1170	674520	553110	418200	247890			

with radial speed more than v=30m/s dynamic balancing is needed

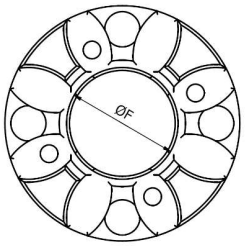
EXAMPLE SPIDER CODE: 0200 24 14 → 010 BLACK
012 YELLOW
013 GREEN
014 RED

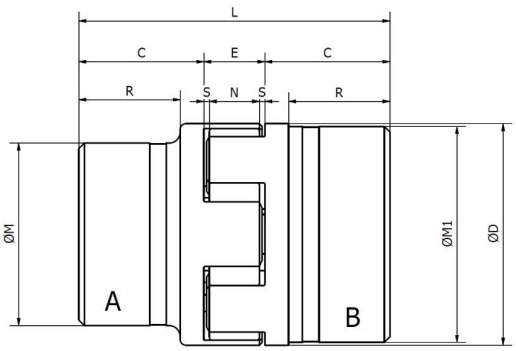
TYPE

SPIDER GE-T

TECHNICAL DATA

CAST IRON	GG	25





COUPLING TYPE	Ø BORE		Ø MAX BORE ALLOWED		DIMENSIONS											
			A	B/BL	A-B										BL	
	A	B/BL	max	max	C	ØD	E	ØG	ØM	ØM1	N	R	S	L	CL	RL
GE-T 19A-24B*	-	-	19	24	25	40	16	18	30	40	12	19	2	66	37	31
GE-T 24A-32B	-	-	24	32	30	55	18	27	40	55	14	24	2	78	50	44
GE-T 28A-38B	-	-	28	38	35	65	20	30	48	65	15	27,5	2,5	90	60	52,5
GE-T 38A-45B	-	-	38	45	45	80	24	38	66	78	18	36,5	3	114	70	61,5
GE-T 42A-55B	-	-	42	55	50	95	26	46	75	94	20	40	3	126	75	65
GE-T 48A-60B	-	-	48	60	56	105	28	51	85	104	21	45	3,5	140	80	69
GE-T 55A-70B	-	-	55	70	65	120	30	60	98	118	22	52	4	160	90	88
GE-T 65A-75B	-	-	65	75	75	135	35	68	115	134	26	61	4,5	185	100	86
GE-T 75A-90B	-	-	75	90	85	160	40	80	135	158	30	69	5	210	110	97
GE-T 90A-100B	38	38	90	100	100	200	45	100	160	180	34	81	5,5	245	125	106

COUPLING TYPE	WEIGHT Kg				J
	SPIDER	HUB	HUB	HUB	Kg cm2 mozzi
	elastico	A	B	BL	A+B
GE-T 19A-24B*	0,004	0,18	0,25		0,8
GE-T 24A-32B	0,014	0,36	0,55		3
GE-T 28A-38B	0,025	0,6	0,85		7
GE-T 38A-45B	0,042	1,35	1,65		20
GE-T 42A-55B	0,066	2	2,3		50
GE-T 48A-60B	0,088	2,75	3,1		80
GE-T 55A-70B	0,116	4,2	4,5		160
GE-T 65A-75B	0,172	6,5	6,8		310
GE-T 75A-90B	0,325	10	10,8		680
GE-T 90A-100B	0,44	14	15,8		1590

J Inertia moment hub A+B with max bore allowed

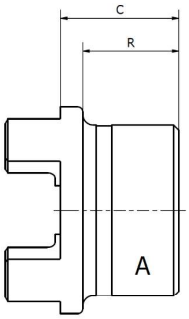
EXAMPLE HUB CODE:

0220 24 20 → 20 DESIGN A
40 DESIGN B
40L DESIGN BL

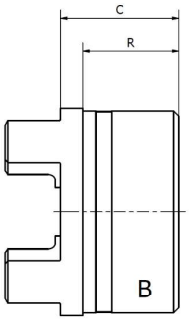
TYPE

220 HUB GE-T CAST IRON

MAT. C45 EN 10083
MAT CAST IRON G20/25 EN 1561



DESIGN A



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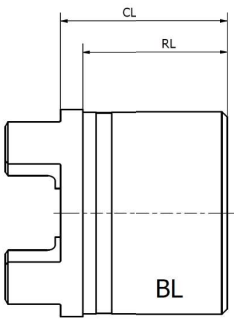


DESIGN BL

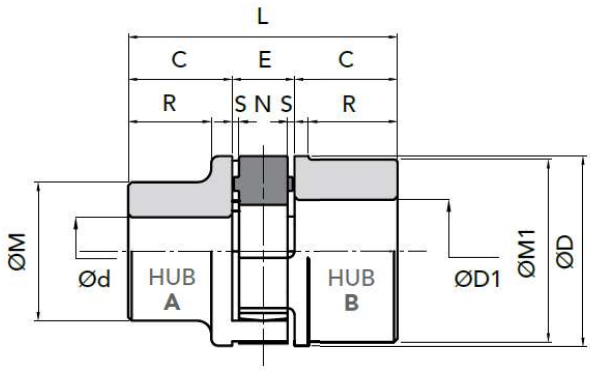
ALUMINIUM ALLOY

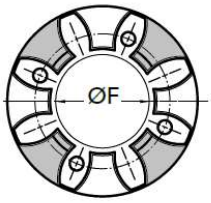
INTERPRETATION CODES

EXAMPLE

GE-T 19A-24B/Al = HUB A + HUB B
GE-T 19A-19A/Al = 2 hubs A
GE-T 24B-24B/Al = 2 hubs B

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





PART NUMBERS

COUPLING TYPE	PART NUMBER HUB A	PART NUMBER HUB B
GE-T 19A-24B/Al	02301920	02301940
GE-T 24A-32B/Al	02302420	02302440
GE-T 28A-38B/Al	02302820	02302840
GE-T 38A-45B/Al	02303820	02303840

MEASUREMENTS - WEIGHTS

COUPLING TYPE	Ø pilot bore		Ø finished bore		measurement in mm normal range										Weight Kg			J Kg cm²
	A	B	Ød max	ØD1 max	C	ØD	E	ØF	ØM	ØM1	N	R	S	L	spider	HUB A	HUB B	hubs A+B
GE-T 19A-24B/Al	6	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
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	0,3	3
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

J inertia torque HUB A+B with bore max Ø

CAST-IRON GG25

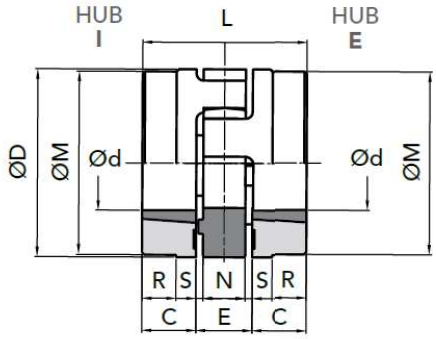
with TAPER BUSH® LOCK

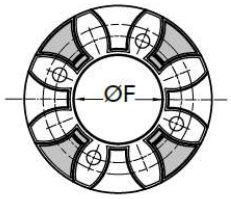
INTERPRETATION CODES

EXAMPLE

GE-T 28I-38E = HUB I + HUB E
GE-T 28E-38I = HUB E + HUB I
GE-T 28I-28I = 2 hubs I
GE-T 38E-38E = 2 hubs E

Insertion bush:
HUB **I** with internal assembled bush
HUB **E** with external assembled bush





PART NUMBERS FOR COMPLETE COUPLINGS

COUPLING TYPE	PART NUMBER HUB I	PART NUMBER HUB E
GE-T 28-38 TL	03202841	03202840
GE-T 38-45 TL	03203841	03203840
GE-T 42-55 TL	03204241	03204240
GE-T 48-60 TL	03204841	03204840
GE-T 55-70 TL	03205541	03205540
GE-T 75-90 TL	03207541	03207540

MEASUREMENTS - WEIGHTS

COUPLING TYPE	Ø pilot bore	finished bore		measurement in mm normal range									Weight Kg		J Kg cm² hubs
		Ød max	ØD1 max	C	ØD	E	ØF	ØM	N	S	L	R	spider	HUB bore max	
GE-T 28-38 TL	1108	14	25	23	65	20	30	65	15	2,5	66	-	0,025	0,50	7
GE-T 38-45 TL	1108	14	25	23	80	24	38	78	18	3	70	15	0,042	0,88	26
GE-T 42-55 TL	1610	14	42	26	95	26	46	94	20	3	78	16	0,066	1,40	36
GE-T 48-60 TL	1615	19	40	39	105	28	51	104	21	3,5	106	28	0,088	2,33	78
GE-T 55-70 TL	2012	19	50	33	120	30	60	118	22	4	96	20	0,116	2,42	120
GE-T 75-90 TL	2517	19	65	57	160	40	80	158	30	5	154	41	0,325	6,80	630

INTRODUCTION

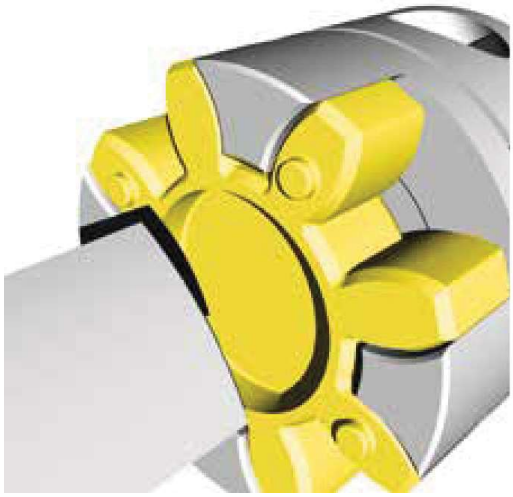
The aluminium flexible couplings GE-T SG are made of three pre-tensioned elements in backlash-free execution. They are meant for the coupling mounting and they are designed to fit low torque working units and industrial processing, where they must satisfy certain requirements.

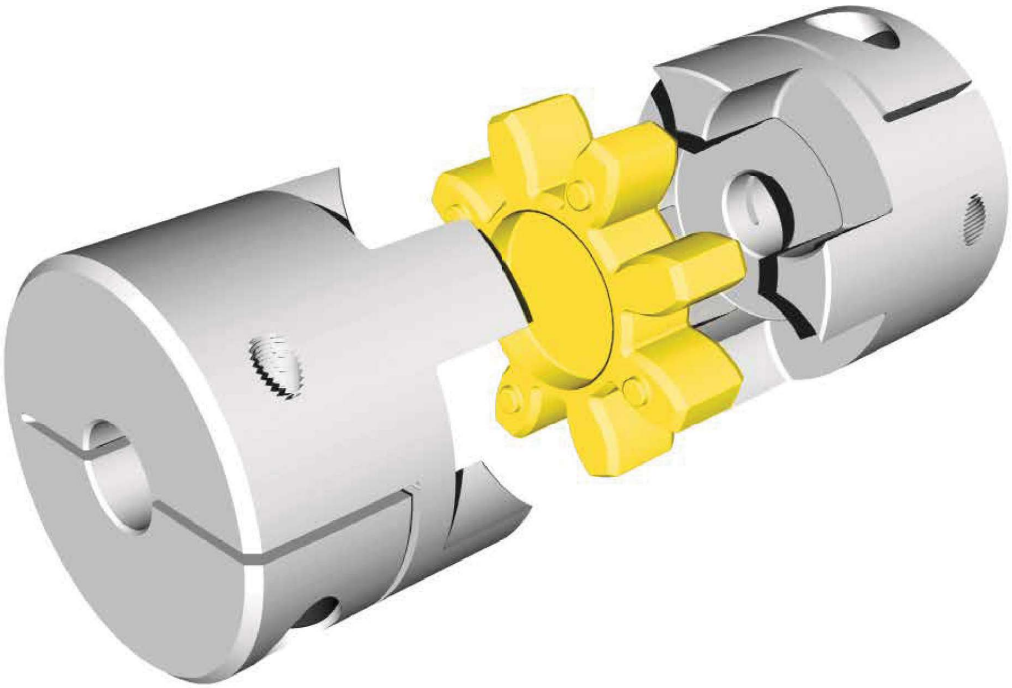
Thanks to their limited dimensions and their easy mounting, they can operate in little space and any project can take big advantages of it.

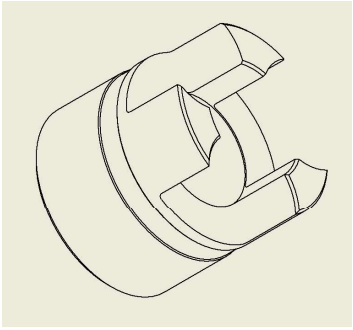
FEATURES

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.

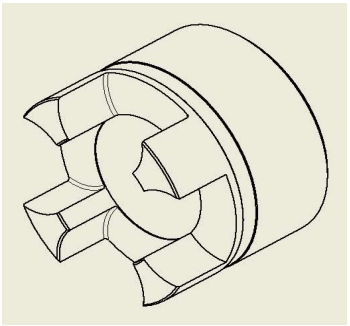






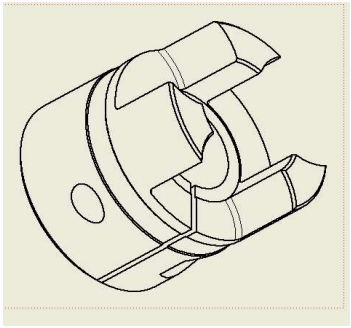
DESIGN A

Solid hub size 9 and 14 for 4-spikes elastomer, size 19 for 6-spikes elastomer



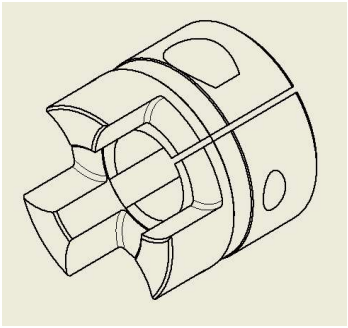
DESIGN B

Solid hub from size 24 to 38 for 8-spikes elastomer



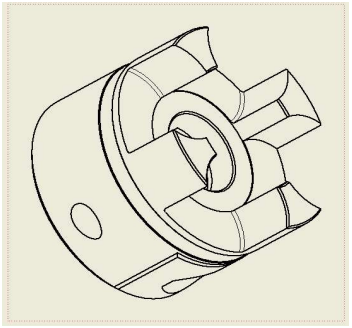
DESIGN C

With single-cut clamp from size 9 to size 19, torques suitable according to hole-diameter.
Also available with the compact version from size 9 to size 38



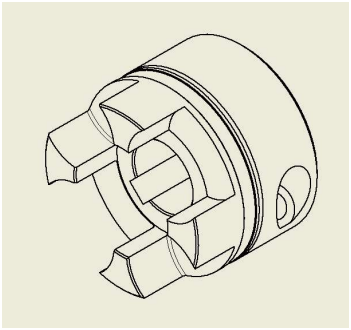
DESIGN CK

With single-cut clamp and keyway acc.to DIN 6885 - JS9 , from size 14 to size 19. Also available with the compact version from size 9 to size 38



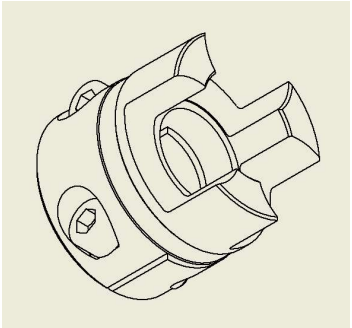
DESIGN D

With double-cut clamp from size 24 to size 38, torques suitable according to hole-diameter



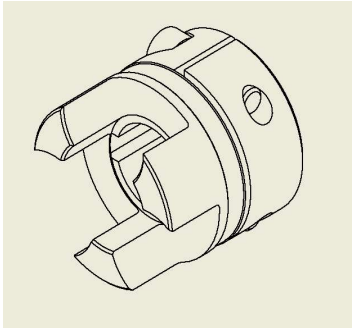
DESIGN DK

With double-cut clamp and keyway acc.to DIN 6885 - JS9 , from size 24 to size 38



DESIGN H

With 2x screws fixing clamp for radial mounting, torques suitable according to hole-diameter. Available from size 14 to size 42



DESIGN HK

With 2x Screws fixing clamp for radial mounting and keyway acc.to DIN 6885-JS9. Available from size 14 to size 42

CHIARAVALLI GROUP BRAND GIFLEX ®
GE-T SERIES WITH ELASTIC ELEMENT – TRANSFERABLE PAIRS

BLUE 80 Sh A
POLYURETHAN

YELLOW 92/94 Sh A
POLYURETHAN

RED 96/98 Sh A
POLYURETHAN

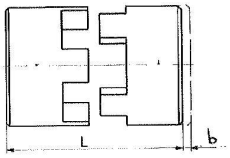
GREEN 64 Sh D
POLYURETHAN

TECHNICAL DATA

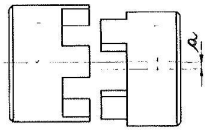
COUPLING TYPE	HARDNESS WITH SPIDER	MAX speed for type				Nm		Stiffness			Max inertia moment Kgm2 x 10^{-6}
		Design C	Design D	Design H	max	Tk n couple	Tk max couple	tors. static Nm/rad	tors. dynamic Nm/rad	radial Nm	
GE-T 9 SG	80 Sh A	19000			28000	1,8	3,6	17,02	52	125	0,57
	92/94 Sh A					3	6	31,5	95	262	
	96/98 Sh A					5	10	51,5	150	518	
GE-T 14 SG	80 Sh A	12700		12700	19000	4	8	60,2	180	153	3,25
	92/94 Sh A					7,5	15	114,6	344	336	
	96/98 Sh A					12,5	25	172	513	604	
	64 Sh D					16	32	238	702	856	
GE-T 19-24 SG	80 Sh A	9550		9550	14000	4,9	9,8	343,8	1030	740	21,9
	92/94 Sh A					10	20	573	1720	1260	
	96/98 Sh A					17	34	859	2580	2210	
	64 Sh D					21	42	2450	3820	2970	
GE-T 24-28 SG	80 Sh A		6950	6950	10600	17	34	850	1385	840	58,3
	92/94 Sh A					35	70	2280	4296	1900	
	96/98 Sh A					60	120	3700	8125	2940	
	64 Sh D					75	150	5000	11000	3700	
GE-T 28-38 SG	80 Sh A		5850	5850	8500	46	92	1360	2345	990	216,8
	92/94 Sh A					95	190	3820	7260	2100	
	96/98 Sh A					160	320	4190	10315	3680	
	64 Sh D					200	400	10010	20035	4400	
GE-T 38-45 SG	80 Sh A		4750	4750	7100	95	190	3000	6100	1400	445,2
	92/94 Sh A					190	380	4589	13752	2900	
	96/98 Sh A					325	650	7160	21485	5040	
	64 Sh D					405	810	25600	40250	6445	
GE-T 42 SG	80 Sh A		4000	4000	6000	46	92			990	2802
	92/94 Sh A					95	190	2292	6879	2100	
	96/98 Sh A					160	320	3438	10315	3680	
	64 Sh D									4400	

with radial speed more than v=30m/s dynamic balancing is needed

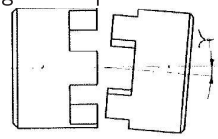
Axial Displacement



Radial Displacement



Angular Displacement



COUPLING TYPE	Displacement			
	spider GE-T SG	AXIAL b (mm)	RADIAL a (mm)	ANGULAR U(degree)
GE-T 9 SG	80 Sh A	+0,9 -0,9	0,19	1,1°
	92/94 Sh A		0,13	1,0°
	96/98 Sh A		0,08	0,9°
	64 Sh D		0,05	0,8°
GE-T 14 SG	80 Sh A	+1,0 -0,5	0,21	1,1°
	92/94 Sh A		0,15	1,0°
	96/98 Sh A		0,09	0,9°
	64 Sh D		0,08	0,8°
GE-T 19-24 SG	80 Sh A	+1,2 -0,5	0,15	1,1°
	92/94 Sh A		0,10	1,0°
	96/98 Sh A		0,08	0,9°
	64 Sh D		0,04	0,8°
GE-T 24-28 SG	80 Sh A	+1,4 -0,5	0,14	1,0°
	92/94 Sh A		0,10	0,9°
	96/98 Sh A		0,07	0,8°
	64 Sh D		0,04	0,7°
GE-T 28-38 SG	80 Sh A	+1,5 -0,5	0,15	1,0°
	92/94 Sh A		0,11	0,9°
	96/98 Sh A		0,08	0,8°
	64 Sh D		0,05	0,7°
GE-T 38-45 SG	80 Sh A	+1,8 -0,7	0,17	1,0°
	92/94 Sh A		0,12	0,9°
	96/98 Sh A		0,09	0,8°
	64 Sh D		0,06	0,7°
GE-T 42 SG	80 Sh A	+2,0 -1,0	0,19	1,0°
	92/94 Sh A		0,14	0,9°
	96/98 Sh A		0,10	0,8°
	64 Sh D		0,07	0,7°

EXAMPLE SPIDER CODE:

25 14 100 → COLOR:
100 YELLOW
102 BLUE
104 RED
106 GREEN

14 → TYPE

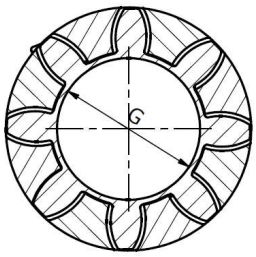
025 COUPLING GE-T SG

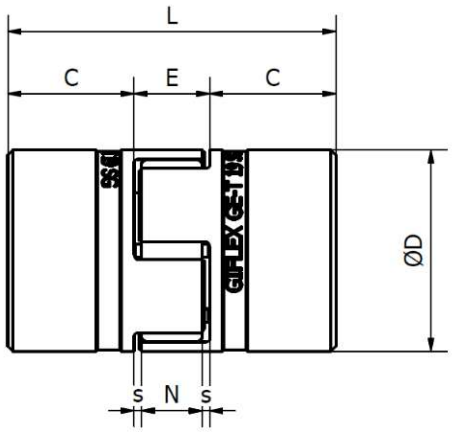
TECHNICAL DATA

HUB DESIGN A AND B - SOLID HUB
MAT ALUMINIUM

With spider
4 pointed **GE-T 09 SG**
GE-T 14 SG

6 pointed **GE-T 19-24 SG**
8 pointed **GE-T 24-28 SG**
GE-T 28-38 SG
GE-T 38-45 SG



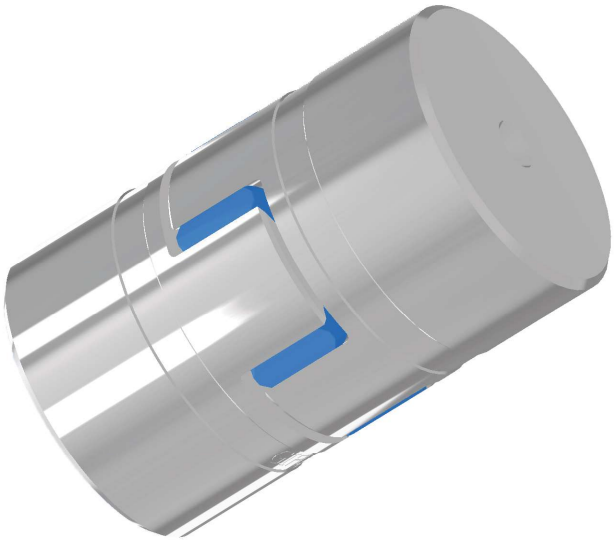


DIMENSIONS										
Coupling Type	achievable minumum bore Ø	achievable maximum bore Ø	Ø D	Ø G	L	C	E	N	S	Design
GE-T 09 SG	4	9	20	7,2	30	10	10	8	1	A
GE-T 14 SG	4	14	30	10,5	35	11	13	10	1,5	A
GE-T 19-24 SG	10	20	40	18	66	25	16	12	2	A
GE-T 24-28 SG	15	28	55	27	78	30	18	14	2	B
GE-T 28-38 SG	19	35	65	30	90	35	20	15	2,5	B
GE-T 38-45 SG	20	45	80	38	114	45	24	18	3	B

MAT: Aluminium 6082-T6 EN 573

EXAMPLE HUB CODE:

025 14 200 ⟶ 200 SOLID HUB
↓ ↓
TYPE
↓
025 COUPLING GE-T SG

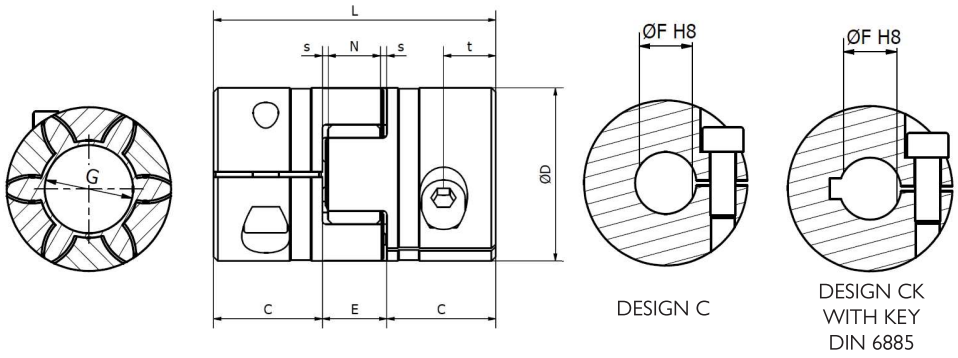


TECHNICAL DATA

HUB DESIGN C
WITH SINGLE CUT

With spider
4 pointed **GE-T 09 SG**
GE-T 14 SG

6 pointed **GE-T 19-24 SG**



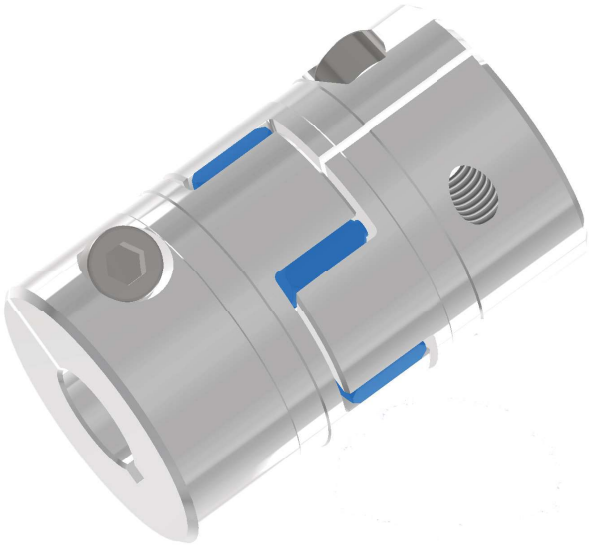
DESIGN C

DESIGN CK
WITH KEY
DIN 6885

DIMENSIONS											
COUPLING TYPE	ØF H8 - friction torque for design C	Ø D	Ø G	L	C	E	N	s	f	Ms screw (Nm) clamping torque	t
GE-T 09 SG	5 - 6 - 8 - 10	20	7,2	30	10	10	8	1	M2,5	0,75	5
FRICTION TORQUE Nm	1,55 - 1,63 - 1,79 - 1,94										
GE-T 14 SG	5 - 6 - 8 - 10 - 12 - 14 - 15 - 16	30	10,5	35	11	13	10	1,5	M3	1,4	5
FRICTION TORQUE Nm	3,32 - 3,43 - 3,67 - 3,91 - 4,14 - 4,38 - 4,5 - 4,6										
GE-T 19-24 SG	8 - 10 - 12 - 14 - 15 - 16 - 18 - 19 - 20	40	18	66	25	16	12	2	M6	11	12
FRICTION TORQUE Nm	18 - 19 - 20 - 21 - 21,5 - 22 - 22,5 -23 - 24										

EXAMPLE HUB CODE:

025 14 2 12 K → 200 SOLID HUB
Ø BORE
MAT 2 - ALUMINIUM
3 - STEEL C45
TYPE
025 COUPLING GE-T SG



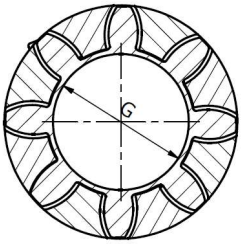
MAT: ALUMINIUM 6082 - T6 EN 573
MAT: STEEL C45 EN 10083

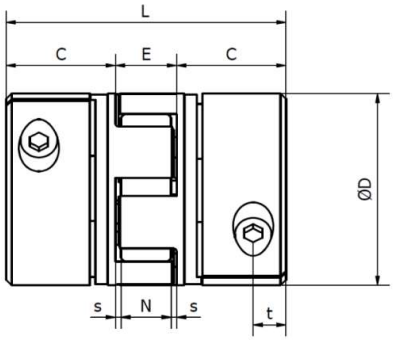
TECHNICAL DATA

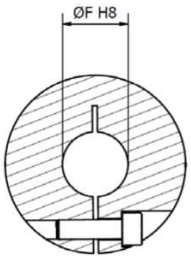
HUB DESIGN D WITH DOUBLE CUT

with spider

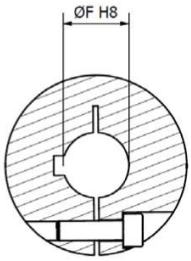
8 pointed







Design D



Design DK WITH KEY DIN 6885

DIMENSIONS											
COUPLING TYPE	ØF H8 - friction torque for design D	Ø D	Ø G	L	C	E	N	s	f	Ms screw (Nm) clamping torque	t
GE-T 24-28 SG	12 14 15 16 18 19 20 22 24 25 28	55	27	78	30	18	14	2	M6	11	14
FRICTION TORQUE Nm	25 - 26 - 27 - 27,5 - 28 - 28,5 - 29 - 30 - 31 - 32 - 33										
GE-T 28-38 SG	18 19 20 22 24 25 28 30 32 35	65	30	90	35	20	15	2,5	M8	25	15
FRICTION TORQUE Nm	60 - 61 - 62 - 63 - 65 - 66 - 69 - 71 - 73 - 75										
GE-T 38-45 SG	18 19 20 22 24 25 28 30 32 35 38 40	80	38	114	45	24	18	3	M8	25	20
FRICTION TORQUE Nm	69 - 70 - 71 - 73 - 74 - 78 - 78 - 80 - 81 - 84 - 87 - 88										

EXAMPLE HUB CODE:

025 24 2 20 K → WITH KEYWAY

→ Ø BORE

→ MAT 2 - ALUMINIUM
3 - STEEL C45

→ TYPE

025 COUPLING GE-T SG

MAT: ALUMINIUM 6082 - T6 EN 573

MAT: STEEL C45 EN 10083

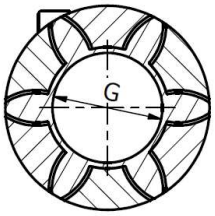
TECHNICAL DATA

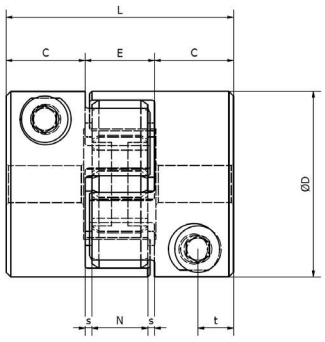
HUB EXECUTION C COMPACT VERSION WITH SINGLE CUT

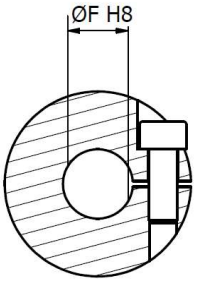
MAT ALUMINIUM

With spider
4 pointed — **GE-T 09 SG**, **GE-T 14 SG**

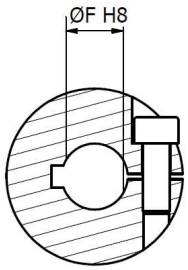
6 pointed — **GE-T 19-24 SG**
8 pointed — **GE-T 24-28 SG**, **GE-T 28-38 SG**, **GE-T 38-45 SG**







Design C



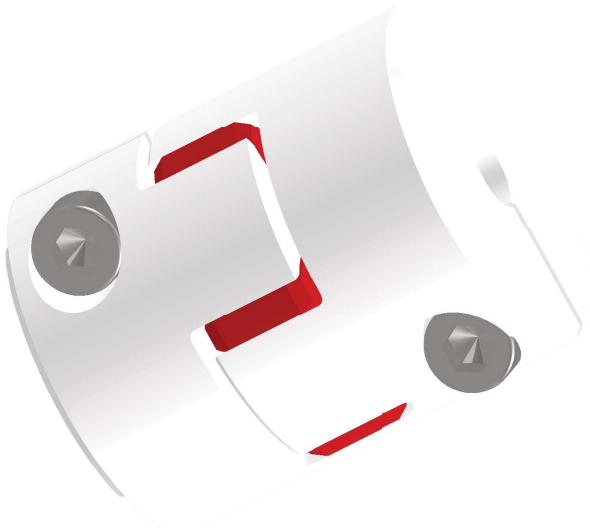
Design CK with key DIN 6885

DIMENSIONS

COUPLING TYPE	ØF H8 - friction torque Nm for design C	Ø D	Ø G	L	C	E	N	S	SCREW	Ms screw (Nm) clamping torque	t
GE-T 09 SG C	5 - 6 - 8 - 10	20	7,2	24	7	10	8	1	M2,5	0,75	3,5
FRICTION TORQUE Nm	2 2.1 2.3 2,5										
GE-T 14 SG C	5 - 6 - 8 - 10 - 12 - 14 - 15 - 16	30	10,5	32	10,0	13	10	1,5	M4	3,1	5
FRICTION TORQUE Nm	7.1 7.4 8 8.5 9.1 10.2 10.5 11										
GE-T 19-24 SG C	8 - 10 - 12 - 14 - 15 - 16 - 18 - 19 - 20	40	18	50	17	16	12	2	M6	11	8,5
FRICTION TORQUE Nm	24.3 25.7 27 28.4 29 29.7 33.1 31.7 32,4										
GE-T 24-28 SG C	12 - 14 - 15 - 16 - 18 - 19 - 20 - 22 - 24 - 25 - 28	55	27	54	18	18	14	2	M6	11	9
FRICTION TORQUE Nm	36 37 38 39 40 41 41 42 44 44 46										
GE-T 28-38 SG C	18 - 19 - 20 - 22 - 24 - 25 - 28 - 30 - 32 - 35	65	30	62	21	20	15	2,5	M8	25	10,5
FRICTION TORQUE Nm	83 84 85 88 90 91 95 98 100 104										
GE-T 38-45 SG C	18 - 19 - 20 - 22 - 24 - 25 - 28 - 30 - 32 - 35 - 38 - 40	80	38	76	26	24	18	3	M10	45	13
FRICTION TORQUE Nm	105 108 112 120 125 129 135 143 150 160 172 181										

EXAMPLE HUB CODE:

025 14 6 12 K → WITH KEYWAY
→ Ø BORE
→ MAT 6 - ALUMINIUM
→ TYPE
025 COUPLING GE-T SG

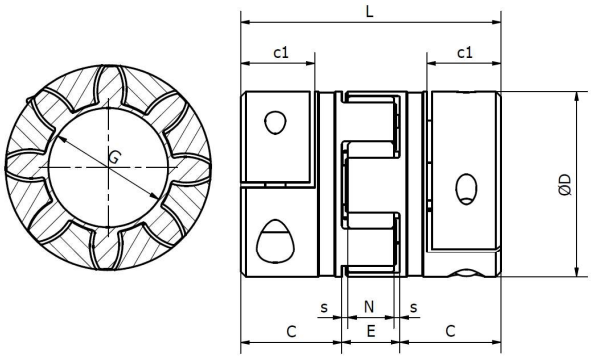


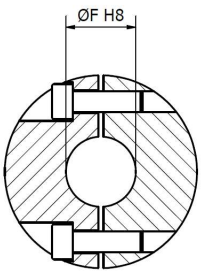
MAT: ALUMINIUM 6082 - T6 EN 573
MAT: ■ UPON REQUEST

TECHNICAL DATA

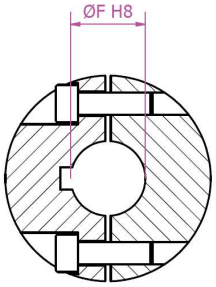
HUB DESIGN H
WITH HALFSHELL CLAMP

With spider
4 pointed **GE-T 14 SG**
6 pointed **GE-T 19-24 SG**
8 pointed **GE-T 24-28 SG**
GE-T 28-38 SG
GE-T 38-45 SG
GE-T 42-55 SG





Design H

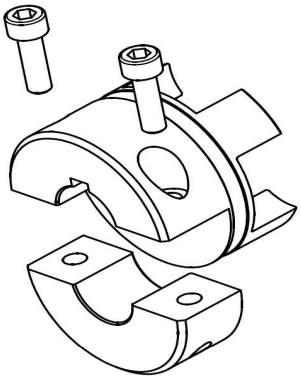


Design HK
with key
DIN 6885

DIMENSIONS											
COUPLING TYPE	ØF H8 - friction torque Nm for design H	D	G	L	C	c1	E	N	s	SCREW	Ms screw (Nm) clamping torque
GE-T 14SG	5 - 6 - 8 - 10 - 12 - 14 - 15 - 16	30	10,5	50	18	13,3	13	10	1,5	M4	5
FRICTION TORQUE Nm	8 8.3 8.9 9.5 10.1 10.7 11 11,3										
GE-T 19-24SG	8 - 10 - 12 - 14 - 15 - 16 - 18 - 19 - 20	40	18	66	25	17,5	16	12	2	M6	10
FRICTION TORQUE Nm	17 21 24 30 32 34 38 40 42										
GE-T 24-28SG	12 - 14 - 15 - 16 - 18 - 19 - 20 - 22 - 24 - 25 - 28	55	27	78	30	20,5	18	14	2	M6	10
FRICTION TORQUE Nm	28 30 32 34 38 40 42 47 51 53 59										
GE-T 28-38SG	18 - 19 - 20 - 22 - 24 - 25 - 28 - 30 - 32 - 35	65	30	90	35	25	20	15	2,5	M8	25
FRICTION TORQUE Nm	70 74 78 88 93 97 109 117 124 136										
GE-T 38-45SG	18 - 19 - 20 - 22 - 24 - 25 - 28 - 30 - 32 - 35 - 38 - 40	80	38	114	45	33	24	18	3	M8	25
FRICTION TORQUE Nm	70 74 78 88 93 97 109 117 124 136 148 156										
GE-T 42-55SG	22 - 24 - 25 - 28 - 30 - 32 - 35 - 38 - 40 - 42 - 45 - 48 - 50	95	46	126	50	39	26	20	3	M10	45
FRICTION TORQUE Nm	136 149 155 174 188 198 217 235 248 260 279 297 310										

EXAMPLE HUB CODE:

025 24 2 20 K → WITH KEYWAY
→ Ø BORE
→ MAT 2 - ALUMINIUM
3 - STEEL C45
→ TYPE
025 COUPLING GE-T SG

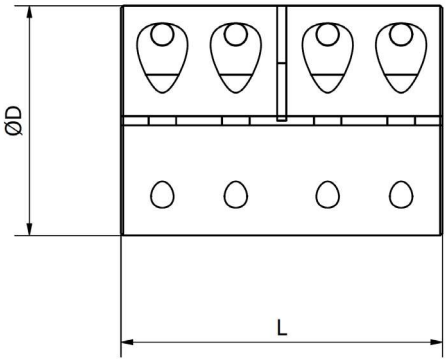


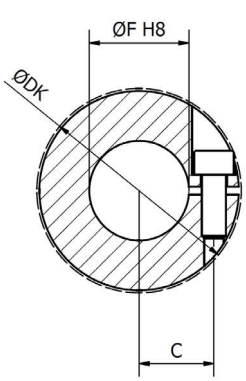
MAT: ALUMINIUM 6082 - T6 EN 573
MAT: STEEL C45 10083
MAT: ■ UPON REQUEST

TECHNICAL DATA

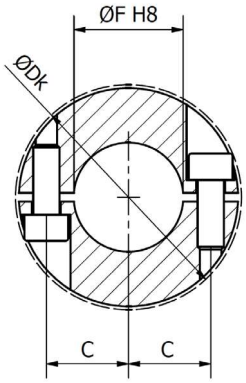
DESIGN B
One piece

DESIGN C
Two pieces





Design B



Design C

COUPLING TYPE	DIMENSIONS				
	Ø D	Ø DK	Ø F H8	L	C
JR001	32	33	10	45	10,5
JR002	40	-	15	50	13,5
JR003	45	47	20	65	16,25
JR004	50	52	25	70	18,75
JR005	55	57	30	75	21,25
JR006	65	70	35	85	25
JR007	70	74	40	90	27,5
JR008	80	83	45	10	31,25
JR009	90	95	50	110	35
MAT: STEEL C45 EN 10083					

CH CODE	
DESIGN B	DESIGN C
RJ001B	RJ001C
RJ002B	RJ002C
RJ003B	RJ003C
RJ004B	RJ004C
RJ005B	RJ005C
RJ006B	RJ006C
RJ007B	RJ007C
RJ008B	RJ008C
RJ009B	RJ009C

COUPLING TYPE	TECHNICAL DATA						
	WEIGHT	FRICTION TORQUE Nm		MAX SPEED	SCREW 12.9		
	Kg	DEISGN B	DESIGN C	RPM	DESIGN B	DESIGN C	TIGHTENING TORQUE
RJ001	0,25	65	50	5500	n°4 x M4	n°8 x M4	4,9
RJ002	0,42	140	125	4200	n°4 x M5	n°8 x M5	9,7
RJ003	0,65	250	230	3800	n°4 x M6	n°8 x M6	17
RJ004	0,87	295	285	3500	n°4 x M6	n°8 x M6	17
RJ005	1,11	350	345	3200	n°4 x M6	n°8 x M6	17
RJ006	1,75	800	760	2700	n°4 x M8	n°8 x M8	41
RJ007	2,13	880	870	2500	n°4 x M8	n°8 x M8	41
RJ008	2,96	990	980	2200	n°4 x M8	n°8 x M8	41
RJ009	4,31	1420	1360	1900	n°4 x M10	n°8 x M10	83

GF COUPLINGS with POLYAMIDE SLEEVE

GF COUPLINGS with POLYAMIDE SLEEVE

SERIES GF

GF COUPLINGS
with POLYAMIDE SLEEVE

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° with brief peaks of up to +150° 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.

TIPOLOGY of HUBS for SERIES **GF**

NORMAL HUB

LONG HUB

SLEEVE

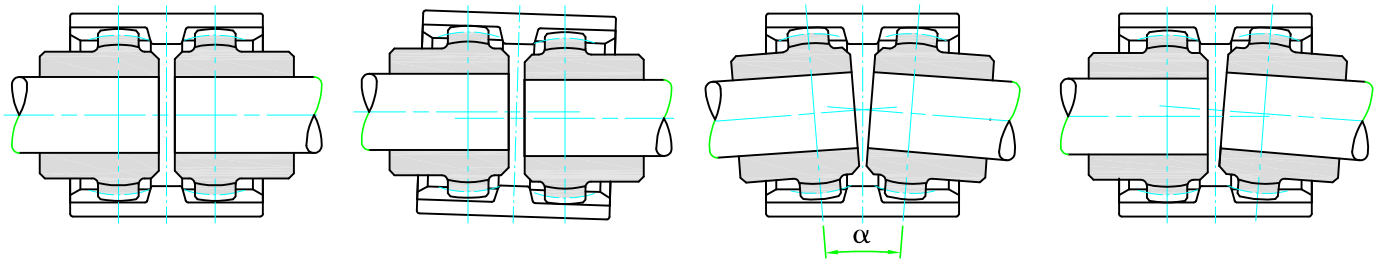
COUPLING SELECTION

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

ASSEMBLY GUIDELINES

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

Aligned Shafts	Radially displaced shafts	Angularly displaced shafts	Radially and angularly displaced shafts



TECHNICAL DATA

COUPLING TYPE	Power factor Kw r.p.m.		Torque Nm		power transmitted in kw at r.p.m. 750		1000		1500		3000		r.p.m.	mass	J	Maximum misalignement for each hub Angular	Radial	Axial displacement
	norm	max	norm	max	norm	max	norm	max	norm	max	norm	max	max	kg	kg cm²	a	mm	mm
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	14.000	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	12.000	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	10.000	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	8.000	0,779	3,45	± 2°	1,0	± 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	7.100	0,918	5,03	± 2°	1,0	± 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	6.300	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	6.000	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	5.600	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	4.800	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	4.000	4,988	106,34	± 2°	1,3	± 1

J inertia moment HUB A+B
with bore Ø max

CAD drawings available on our site
www.chiaravalli.com

Quantity, availability and prices on B2B Chiaravalli

POLYAMIDE SLEEVE

INTERPRETATION CODES

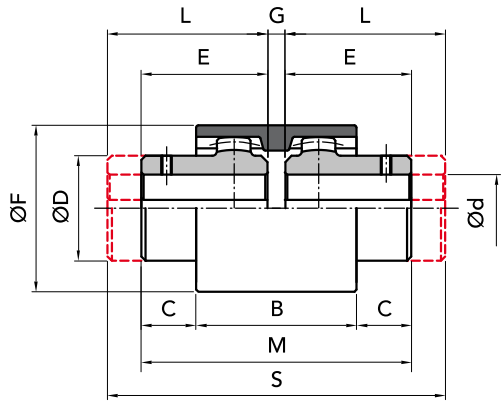
EXAMPLE

GF 14-NN with 2 normal hubs

GF 14-NL with 1 normal hubs and 1 long hub

GF 14-LL with 2 long hubs

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

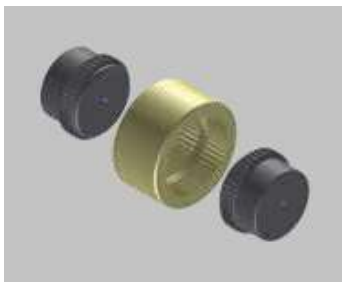


	PART NUMBERS FOR COMPLETE COUPLING			PART NUMBERS FOR SIMPLE COMPONENTS		
COUPLING TYPE	P. NUMBER GF NN	P. NUMBER GF NL	P. NUMBER GF LL	HUB NORMAL	HUB LONG	Sleeve NYLON
GF 14	00101402	00101400	00101404	00101420	00101440	00101410
GF 19	00101902	00101900	00101904	00101920	00101940	00101910
GF 24	00102402	00102400	00102404	00102420	00102440	00102410
GF 28	00102802	00102800	00102804	00102820	00102840	00102810
GF 32	00103202	00103200	00103204	00103220	00103240	00103210
GF 38	00103802	00103800	00103804	00103820	00103840	00103810
GF 42	00104202	00104200	00104204	00104220	00104240	00104210
GF 48	00104802	00104800	00104804	00104820	00104840	00104810
GF 55	00105502	00105500	00105504	00105520	00105540	00105510
GF 65	00106502	00106500	00106504	00106520	00106540	00106510

MEASUREMENTS - WEIGHTS

COUPLING TYPE	without bore	Ød avalaible holes with H7 tollerance ON REQUEST		measurement in mm									Kg		
				for normal range hubs							long hubs series				
		min	max	B	C	ØD	E	ØF	G	M	L	S	sleeve	HUB normal	HUB long
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	7,90

GF **NN** GF **NL** GF **LL**



IMPORTANT
The GF couplings can be ordered complete or for single items.

CAD drawings available on our site
www.chiaravalli.com

Quantity, availability and prices on B2B Chiaravalli

FLEXIBLE TOOTHED COUPLINGS WITH DUAL CURVATURE

SERIES GFA

FLEXIBLE TOOTHED COUPLINGS WITH DUAL CURVATURE "GIFLEX®" SERIES GFA

GFA COUPLING with Steel Sleeve

PRESENTATION

The **"GIFLEX®" GFA** 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 GROUP SpA 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 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 counterposition allow a solid lubricant to be adopted.
The toothing adopted for the two hubs is profile corrected and has a progressive dual curvature achieved by machine the toothing on a fully Numerically Controlled gear cutting machine.
The sleeve's profile corrected toothing, which has a parallel gene-ratrix, is obtained using a shaping tool.
The toothing 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.

CHIARAVALLI GROUP BRAND **GIFLEX®**
GFA 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 preconditions to achieve the performance as described
in the catalogue. The CHIARAVALLI GROUP SpA 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. normal	except.	Torque Nm normal	Nm except.	Power transmitted in Kw at r.p.m. 750 normal	1000 normal	1500 normal	3000 normal	r.p.m. max	r.p.m. recommended limit	max radial misalignment mm	mass kg	J kg cm²
GFA 25	0,061	0,157	600	1.524	45	61	91	183	6.000	5.000	0,20	1,36	8,68
GFA 32	0,103	0,259	1.000	2.520	77	103	154	309	5.000	4.000	0,26	2,51	25,10
GFA 40	0,128	0,322	1.250	3.125	96	128	192	384	4.200	3.000	0,32	3,55	44,82
GFA 56	0,257	0,639	2.500	6.200	192	257	385	-	3.500	2.200	0,37	6,15	132,60
GFA 63	0,412	0,985	4.000	9.260	309	412	618	-	3.000	1.600	0,40	9,91	278,20
GFA 80	0,773	1,855	7.500	18.000	579	773	-	-	2.600	1.200	0,48	16,20	558,6
GFA 100	1,236	2,937	12.000	28.500	927	-	-	-	1.400	700	0,65	23,00	1.044,50
GFA 125	2,431	5,795	23.600	56.250	1.823	-	-	-	950	460	0,70	49,15	3.650
GFA 155	4,121	9,273	40.000	90.000	3.090	-	-	-	700	350	0,80	91,30	9.982

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.

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

CAD drawings available on our site
www.chiaravalli.com

Quantity, availability and prices on B2B Chiaravalli

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.

LOAD CONDITION	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 infrequen 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

TEST BASED ON THE POWER TO BE TRANSMITTED

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

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

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

$$Mn = Me \times FS$$

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.

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

CHIARAVALLI GROUP BRAND **GIFLEX®**
COUPLING SIZE SELECTION INSTRUCTIONS

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

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	3800	4000	6000	8000	12000	20000
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 description	N° of pieces	POS.2 description	N° of pieces	POS.3 Seal ring Corteco NBR DIN 3760 A	N° of pieces	POS.4 Flexible ring for bores DIN 472	N° of pieces	POS.5 Flat dowel UNI 5923	N° of pieces	Allen wrench	N° of pieces
GFA 25	sleeve	1	HUB	2	BA 42x56x7	2	56 I	2	M 6x8	2	D.3	1
GFA 32	sleeve	1	HUB	2	BA 56x72x8	2	72 I	2	M 6x8	2	D.3	1
GFA 40	sleeve	1	HUB	2	BA 64x80x8	2	80 I	2	M 6x8	2	D.3	1
GFA 56	sleeve	1	HUB	2	BA 80x100x10	2	100 I	2	M 6x8	2	D.3	1
GFA 63	sleeve	1	HUB	2	BA 100x125x12	2	125 I	2	M 6x8	2	D.3	1
GFA 80	sleeve	1	HUB	2	BA 125x160x12	2	160 I	2	M 6x8	2	D.3	1
GFA 100	sleeve	1	HUB	2	SMIM 150x180x12	2	180 I	2	M 6x8	2	D.3	1
GFA 125	sleeve	1	HUB	2	SM 190x220x15	2	220 I	2	M 6x8	2	D.3	1
GFA 155	sleeve	1	HUB	2	SMIM 240x280x15	2	280 I	2	M 6x8	2	D.3	1

COMPONENT PARTS OF THE "GIFLEX®" GFA COUPLING

COUPLING TYPE	POS. 1 description	N° of pieces	POS.2 description	N° of pieces	POS.3 Seal ring Serie UM Gaco NBR	N° of pieces	POS.4 Flexible ring for bores DIN 471	N° of pieces	POS.5 Flat dowel UNI 5923	N° of pieces	Allen wrench	N° of pieces
GFAS 25	sleeve	1	HUB	1	UM 60x40x10	1	40 E	1	M 6x8	2	D.3	1
GFAS 32	sleeve	1	HUB	1	UM 75x55x10	1	55 E	1	M 6x8	2	D.3	1
GFAS 40	sleeve	1	HUB	1	UM 85x65x10	1	65 E	1	M 6x8	2	D.3	1
GFAS 56	sleeve	1	HUB	1	UM 100x80x10	1	80 E	1	M 6x8	2	D.3	1
GFAS 63	sleeve	1	HUB	1	UM 120x100x10	1	100 E	1	M 6x8	2	D.3	1
GFAS 80	sleeve	1	HUB	1	UM 155x125x15	1	125 E	1	M 6x8	2	D.3	1
GFAS 100	sleeve	1	HUB	1	UM 180x150x15	1	150 E	1	M 6x8	2	D.3	1

NORMAL HUB

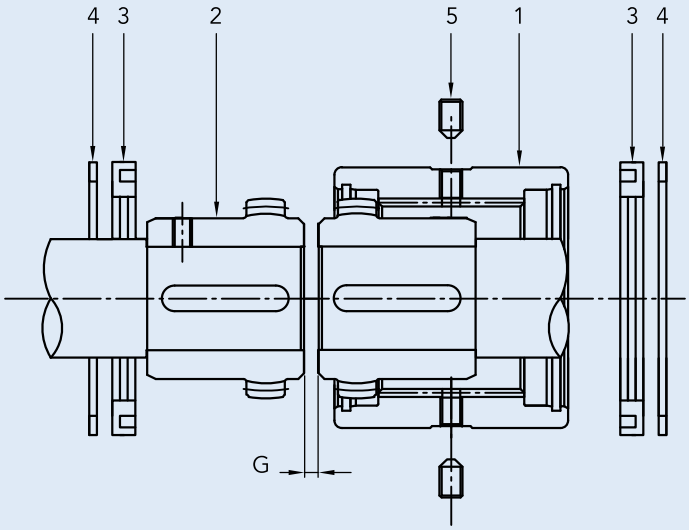
LONG HUB

SLEEVE STEEL

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 toothing 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.

Equivalent recommended greases are as follows:

TYPE	PRODUCER
Sovarex L-O	MOBIL OIL
Gulfrown EP-O	GULF OIL
Alesia EP-2	SHELL OIL
....	....

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 GROUP 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.

N.B.
The technical characteristics, the dimensions and all other data contained in this catalogue are not bin ding.
CHIARAVALLI GROUP SpA reserves the right to change the measurements indicated at any time and without notice.

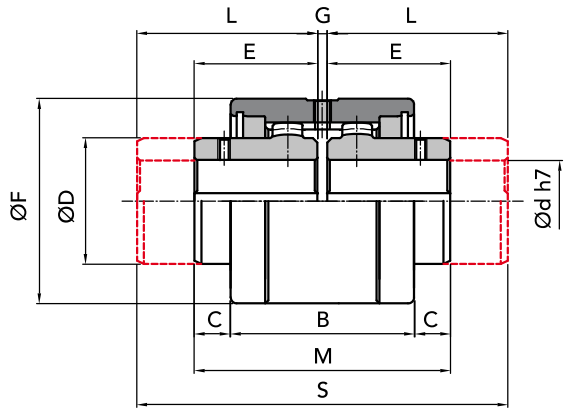
STEEL SLEEVE

INTERPRETATION CODES

EXAMPLE

GFA 25-NN with 2 normal hubs
GFA 25-NL with 1 normal hubs and 1 long hub
GFA 25-LL with 2 long hubs

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



	PART NUMBERS FOR COMPLETE COUPLING			PART NUMBERS FOR SIMPLE COMPONENTS			
COUPLING TYPE	P. NUMBER GFA NN	P. NUMBER GFA NL	P. NUMBER GFA LL	SLEEVE	HUB NORMAL	HUB LONG	COMPONENTS to assembled coupling
GFA 25	00202502	00202500	00202504	00202510	00202520	00202540	00202560
GFA 32	00203202	00203200	00203204	00203210	00203220	00203240	00203260
GFA 40	00204002	00204000	00204004	00204010	00204020	00204040	00204060
GFA 56	00205602	00205600	00205604	00205610	00205620	00205640	00205660
GFA 63	00206302	00206300	00206304	00206310	00206320	00206340	00206360
GFA 80	00208002	00208000	00208004	00208010	00208020	00208040	00208060
GFA 100	00210002	00210000	00210004	00210010	00210020	00210040	00210060
GFA 125	00212502	00212500	00212504	00212510	00212520	00212540	00212560
GFA 155	00215502	00215502	00215504	00215510	00215520	00215540	00215560

MEASUREMENTS - WEIGHTS

COUPLING TYPE	Ø bore nom.	Ød avalaible holes with H7 tollerance ON REQUEST min	max	measures in mm normal series B	C	ØD	E	ØF	G	M	long series L	S	Kg sleeve	HUB normal	HUB long
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
GFA 125*	40	125	140	214	39	190	140	245	8	288	207,5	423	17,70	32,60	49,50
GFA 155*	40	155	175	240	64	240	180	300	10	370	245	498	28,30	65,50	91,40

* Row material quenched steel 39NiCrMo3

GFA **NN** GFA **NL** GFA **LL**

On request: we execute machining for finish bore and keyway.

IMPORTANT
The GFA couplings can be ordered complete or for single items.

CAD drawings available on our site
www.chiaravalli.com

Quantity, availability and prices on B2B Chiaravalli

FLEXIBLE TOOTHED COUPLINGS WITH DUAL CURVATURE

SERIES GFAS

FLEXIBLE TOOTHED COUPLINGS WITH DUAL CURVATURE "GIFLEX® " SERIES GFAS

GFAS COUPLING WITH STEEL BELL

PRESENTATION

The **"GIFLEX®" 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 GROUP SpA 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 toothing finished by machine tools after heat treatment (skiving using a hard metal tool).
- Special couplings manufactured to a drawing.

STRUCTURAL CHARACTERISTICS

The **GFAS** 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 toothing adopted for the two hubs is profile corrected and has a progressive dual curvature achieved by machine the toothing on a fully Numerically Controlled gear cutting machine.
The sleeve's profile corrected toothing, which has a parallel generatrix, is obtained using a shaping tool.
The toothing 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 machi-ning 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.

CHIARAVALLI GROUP BRAND **GIFLEX®**
GFAS COUPLINGS: SIZING AND SELECTION 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 preconditions to achieve the performance as described
in the catalogue. The CHIARAVALLI GROUP SpA 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. normal	except.	Torque Nm normal	Nm except.	Power transmitted in Kw at r.p.m. 750 normal	1000 normal	1500 normal	3000 normal	r.p.m. max	r.p.m. recommended limit	max radial misalignment mm	mass kg	J kg cm²
GFAS 25	0,061	0,157	600	1.524	45	61	91	183	6.000	5.000	-	1,35	7,31
GFAS 32	0,103	0,259	1.000	2.520	77	103	154	309	5.000	4.000	-	2,43	19,15
GFAS 40	0,128	0,322	1.250	3.125	96	128	192	384	4.200	3.000	-	3,64	34,13
GFAS 56	0,257	0,639	2.500	6.200	192	257	385	-	3.500	2.200	-	6,07	96,56
GFAS 63	0,412	0,985	4.000	9.260	309	412	618	-	3.000	1.600	-	10,00	207,32
GFAS 80	0,773	1,855	7.500	18.000	579	773	-	-	2.600	1.200	-	19,18	492,6
GFAS 100	1,236	2,937	12.000	28.500	927	-	-	-	1.400	700	-	28,00	1.064,00

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.

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

CAD drawings available on our site
www.chiaravalli.com

Quantity, availability and prices on B2B Chiaravalli

NORMAL HUB

LONG HUB

NORMAL CONE

LONG CONE

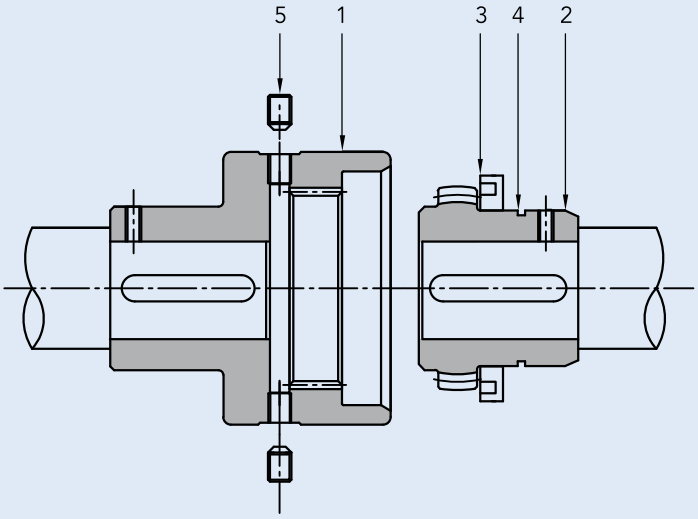
GFAS ASSEMBLY

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 to gether, positio ning the hub (2) over the sleeve (1).

D) To disassemble, separate the shafts then extract the hub (2) from the sleeve (1).



Equivalent recommended greases are as follows:

TYPE	PRODUCER
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Gulfrown EP-O	GULF OIL
Alesia EP-2	SHELL OIL
....	....

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

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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.

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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.

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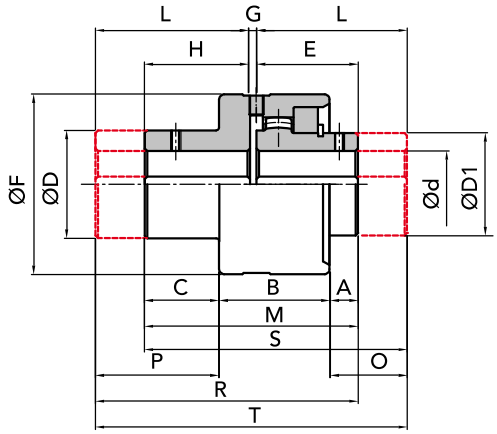
CONE IN STEEL

INTERPRETATION CODES

Example
GFAS 25-NN with cone and a normal hub
GFAS 25-NL with cone and a long hub
GFAS 25-LL with long cone and a long hub
GFAS 25-LN with long cone and a normal hub

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



	PART NUMBERS FOR COMPLETE COUPLING				PART NUMBERS FOR SIMPLE COMPONENTS				
COUPLING TYPE	P.NUMBER GFAS NN	P.NUMBER GFAS NL	P.NUMBER GFAS LN	P.NUMBER GFAS LL	CONE NORMAL	CONE LONG	HUB NORMAL	HUB LONG	COMPONENTS to assembled coupling
GFAS 25	00302502	00302500	00302506	00302504	00302510	00302511	00302520	00302540	00302560
GFAS 32	00303202	00303200	00303206	00303204	00303210	00302511	00303220	00303240	00303260
GFAS 40	00304002	00304000	00304006	00304004	00304010	00304011	00304020	00304040	00304060
GFAS 56	00305602	00305600	00305606	00305604	00305610	00305611	00305620	00305640	00305660
GFAS 63	00306302	00306300	00306306	00306304	00306310	00306311	00306320	00306340	00306360
GFAS 80	00308002	00308000	00308006	00308004	00308010	00308011	00308020	00308040	00308060
GFAS 100	00310002	00310000	00310006	00310004	00310010	00310011	00310020	00310040	00310060

MEASUREMENTS - WEIGHTS

COUPLING TYPE	without bore	Ød finished bore		measures in mm																Kg			
				normal series										long series									
		min	max	A	B	C	ØD	ØD1	E	ØF	G	H	M	I	L	O	P	R	S	T	normal bell	normal HUB	long bell	long HUB
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	28,2	15,70	38,1	25,30

GFAS **NN** | GFAS **NL** | GFAS **LL** | GFAS **LN**





NORMAL HUB


LONG HUB


NORMAL BELL


LONG BELL

IMPORTANT
The GFAS couplings can be ordered complete or for single items.

CAD drawings available on our site
www.chiaravalli.com

Quantity, availability and prices on B2B Chiaravalli

FLEXIBLE TOOTHED COUPLINGS WITH NYLON SLEEVE

FLEXIBLE TOOTHED COUPLINGS WITH NYLON SLEEVE "GIFLEX®" SERIES FBX

SERIES FBX

GIFLEX® **FBX** COUPLING WITH NYLON SLEEVE

NORMAL HUB

LONG HUB

NYLON SLEEVE

COUPLING SELECTION

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

TECHNICAL DATA

COUPLING TYPE	Power factor Kw r.p.m.		Torque Nm		power transmitted in kw at r.p.m. 750		1000		1500		3000		r.p.m.	mass	J	Maximum misalignement for each hub Angular	Radial	Axial displacement
	norm	max	norm	max	norm	max	norm	max	norm	max	norm	max	max	kg	kg cm²	a	mm	mm
FBX 14	0,0010	0,0 020	10	20	0,80	1,56	1,05	2,10	1,58	3,14	3,12	6,24	14.000	0,12	0,27	± 2°	0,7	± 1
FBX 19	0,0017	0,0033	16	32	1,25	2,50	1,67	3,34	2,52	5,02	5,04	10,08	12.000	0,19	0,55	± 2°	0,8	± 1
FBX 24	0,0021	0,0042	20	40	1,58	3,15	2,10	4,20	3,14	6,28	6,26	12,52	10.500	0,23	0,96	± 2°	0,8	± 1
FBX 28	0,0047	0,0092	45	90	3,52	7,07	4,72	9,43	7,08	14,12	14,14	28,28	8.500	0,59	3,20	± 2°	1	± 1
FBX 32	0,0063	0,0127	60	120	4,70	9,43	6,28	12,58	9,40	18,85	18,83	37,66	7.500	0,78	5,60	± 2°	1	± 1
FBX 38	0,0084	0,0168	80	160	6,28	12,57	8,38	16,76	12,56	25,12	25,12	50,24	6.500	0,95	9,59	± 2°	0,9	± 1
FBX 42	0,0105	0,0210	100	200	7,85	15,72	10,47	20,93	15,70	31,40	31,42	62,84	6.000	1,32	13,90	± 2°	0,9	± 1
FBX 48	0,0147	0,0292	140	280	11,00	22,00	14,67	29,32	22,00	43,98	43,96	87,92	5.600	1,53	18,15	± 2°	0,9	± 1
FBX 55	0,0280	0,0565	275	555	20,80	39,50	27,80	52,00	42,50	85,00	84,60	169,20	4.800	2,30	49,44	± 2°	1,2	± 1
FBX 65	0,0398	0,0798	380	760	29,85	59,70	39,78	79,58	59,70	119,36	119,37	238,74	4.000	3,25	108,40	± 2°	1,3	± 1

CAD drawings available on our site
www.chiaravalli.com

Quantity, availability and prices on B2B Chiaravalli

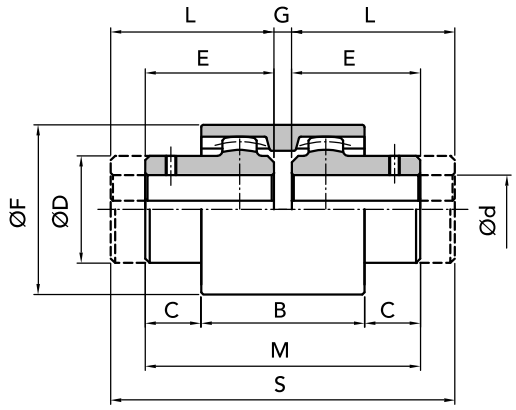
NYLON SLEEVE

INTERPRETATION CODES

Example

FBX 19-NN with 2 normal hubs
FBX 19-NL with 1 normal hubs and 1 long hub
FBX 19-LL with 2 long hubs

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



PART NUMBERS

COUPLING TYPE	PART NUMBER FBX NN	PART NUMBER FBX NL	PART NUMBER FBX LL	HUB NORMAL	HUB LONG	NYLON SLEEVE
FBX 14	00501402	00501400	00501404	00501420	00501440	00501410
FBX 19	00501902	00501900	00501904	00501920	00501940	00501910
FBX 24	00502402	00502400	00502404	00502420	00502440	00502410
FBX 28	00502802	00502800	00502804	00502820	00502840	00502810
FBX 32	00503202	00503200	00503204	00503220	00503240	00503210
FBX 38	00503802	00503800	00503804	00503820	005033840	00503810
FBX 42	00504202	00504200	00504204	00504220	00504240	00504210
FBX 48	00504802	00504800	00504804	00504820	00504840	00504810
FBX 55	00505502	00505500	00505504	00505520	00505540	00505510
FBX 65	00506502	00506500	00506504	00506520	00506540	00506510

MEASUREMENTS - WEIGHTS

COUPLING TYPE	hub without hole	Ød finished bore		measurement in mm									Kg		
				normal series							long	series	SLEEVE	HUB	HUB
		min.	max	B	C	ØD	E	ØF	G	M	L	S		normal	long
FBX 14	-	6	14	37	6,5	25	23	40	4	50	40	84	0,02	0,06	0,10
FBX 19	-	8	19	37	8,5	32	25	48	4	54	40	84	0,03	0,09	0,13
FBX 24	-	10	24	41	7,5	36	26	52	4	56	50	104	0,04	0,11	0,21
FBX 28	-	10	28	46	19	44	40	66	4	84	55	114	0,07	0,28	0,38
FBX 32	-	12	32	48	18	50	40	76	4	84	60	114	0,09	0,37	0,50
FBX 38	-	14	38	48	18	58	40	83	4	84	60	124	0,11	0,46	0,70
FBX 42	-	20	42	50	19	65	42	92	4	88	60	124	0,14	0,64	0,90
FBX 48	-	20	48	50	27	68	50	95	4	104	60	124	0,16	0,74	1,00
FBX 55	-	25	55	58	25	82	52	114	4	108	65	134	0,26	1,12	1,41
FBX 65	-	25	65	68	23	96	55	132	4	114	70	144	0,39	1,59	2,04

FBX **NN** FBX **NL** FBX **LL**

IMPORTANT
The FBX couplings can be ordered complete or for single items.

CAD drawings available on our site
www.chiaravalli.com

Quantity, availability and prices on B2B Chiaravalli