LF-LSE-LS+LR-LSG

LIMITERS

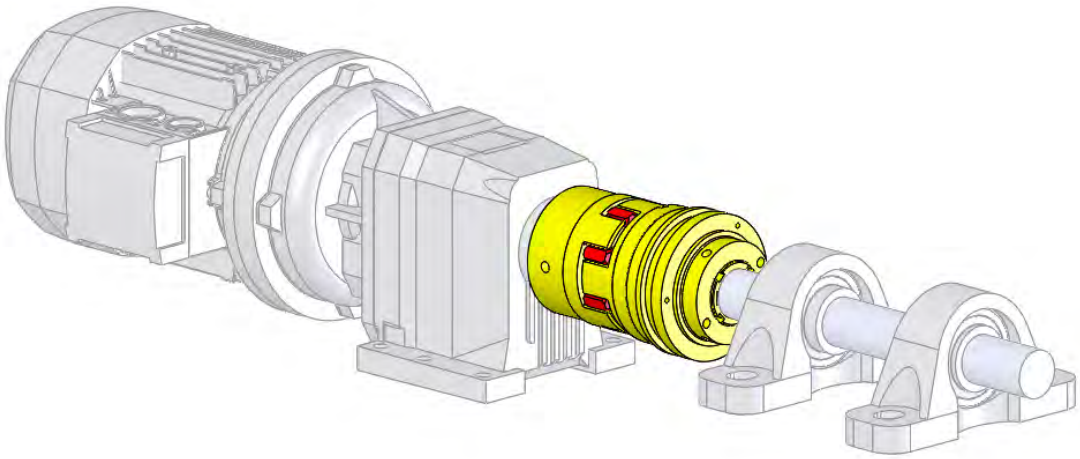
Torque limiters - couplings:

Piazzalunga torque limiters are active safety devices designed for use in the entire kinematic chain of any machine or plant.

Their versatility and reliability, ease of installation and adjustment, effective performance at high speed and in applications combined with excellent response time make them preferable to less effective electronic devices.

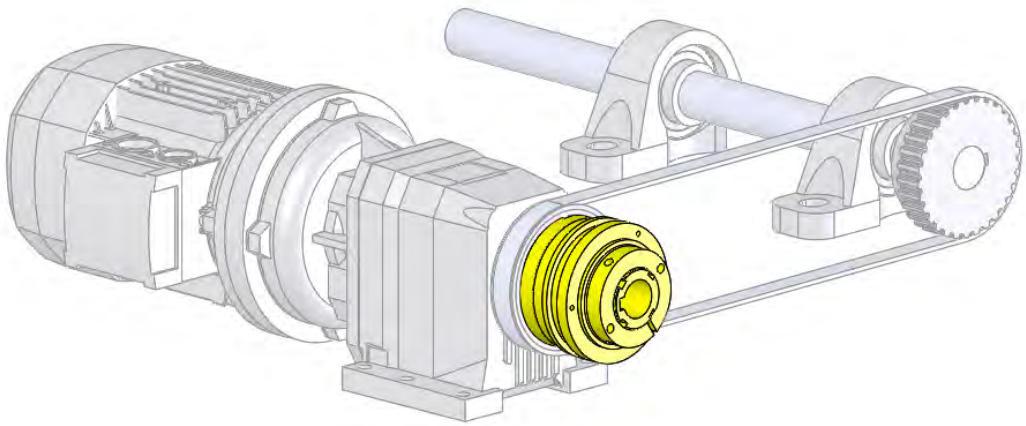
Use of our limiters resolves numerous problems connected with secure complete protection of your plant or machinery from overloads, with consequent reduction of down time and unproductive machines, entirely in compliance with standard EN ISO 13489-1.

Coaxial assembly



LF/GC | LF/GS | LF/GE | LSE/GC | LS-LR/GT | LS-LR/GR | LS-LR/GE | LSG/GS/LK | LSG/GS/MX | LSG/GF

Parallel axis assembly



LF | LF/CK | LSE | LS-LR | LS-LR/F | LR/L | LSG

Application Sectors

		PACKING	LABELLING	BOTTLING	TRANSPORTERS	TRANSPORT SYSTEMS	PAPER INDUSTRY	MACHINE TOOLS	MARINE ENGINEERING	TIMBER WORKING	HEAVY INDUSTRY	AEROSPACE INDUSTRY	OTHER
	LF	●	●	●	●	●	●	●	●	●			●
	LF/CK	●	●	●									
	LF/GC		●							●	●		●
	LF/GS		●			●							●
	LF/GE		●			●							●
	LSE/C				●	●							
	LSE/F	●		●		●	●						●
	LSE/GC												●
	LS – LR	●	●	●	●			●			●	●	●
	LS – LR/F		●										●
	LS – LR/GT					●							●
	LS – LR/GS										●		●
	LS – LR/GE	●											●
	LSG/P	●	●				●	●		●			●
	LSG/N		●										●
	LSG/GF												●
	LSG/GS					●		●					

Friction limiter LF

- Overload control by transmission part slipping
- Friction rings without asbestos
- Excellent in dusty environments
- No noise and vibrations
- Protection in both directions of rotation
- Torque adjustment system with simple precise engagement by means of an adjustable ring nut

ON REQUEST

- Complete with transmission organ (crown, pulley, etc.)
- Friction rings with different compounds for special applications
- With hole and keyway or set up for shrink discs or other locking types
- With anticorrosion surface treatment

TRANSMITTABLE TORQUES

Transmittable torques *[Nm]* in relation to the configuration of the springs									
ID	**A1S1**)	**A2S2**))	**A3S3**)))	**A1M1**)	**A1G1**)	**A2G2**))	**A3G3**)))	**ST**	**SQ**
025	1 - 8	2 - 12	2 - 20						
038	1 - 14	8 - 22	15 - 34						
050	2 - 12				4 - 40	17 - 70	23 - 100	1,5 - 9	
070	6 - 18			9 - 35	19 - 60	34 - 120	60 - 210	2 - 34	2 - 60
090				13 - 105	74 - 140	90 - 280	185 - 450	5 - 56	3 - 70
115				65 - 280	120 - 360	207 - 700	210 - 950	10 - 130	25 - 160
140					180 - 550	260 - 950	390 - 1200		
170					160 - 700	300 - 1450	1000 - 2600		

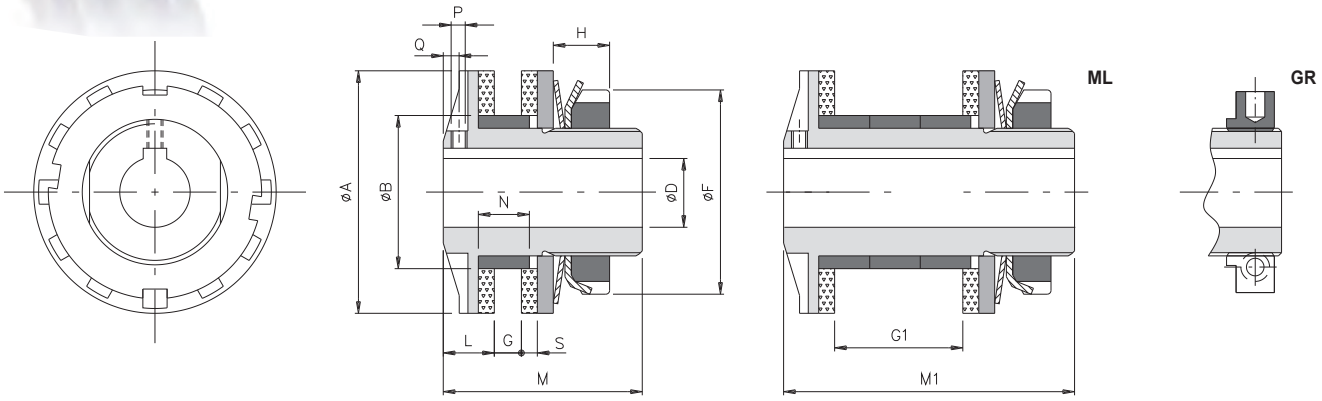
ID	**A4M1** ()()	**A4G1** ()()	**A4G2** (())						
205	300 - 1200	500 - 2400	1000 - 4800						
240	500 - 2000	1000 - 4000	2000 - 8000						
300	800 - 3500	1500 - 7000	3000 - 14000						
340	1000 - 4500	2000 - 9000	4000 - 18000						
400	1500 - 5000	3000 - 11000	5000 - 23000						

LF series friction torque limiter

- Overloads from 2 to 23000 Nm
- Hole maximum ø 140 mm

Available with:

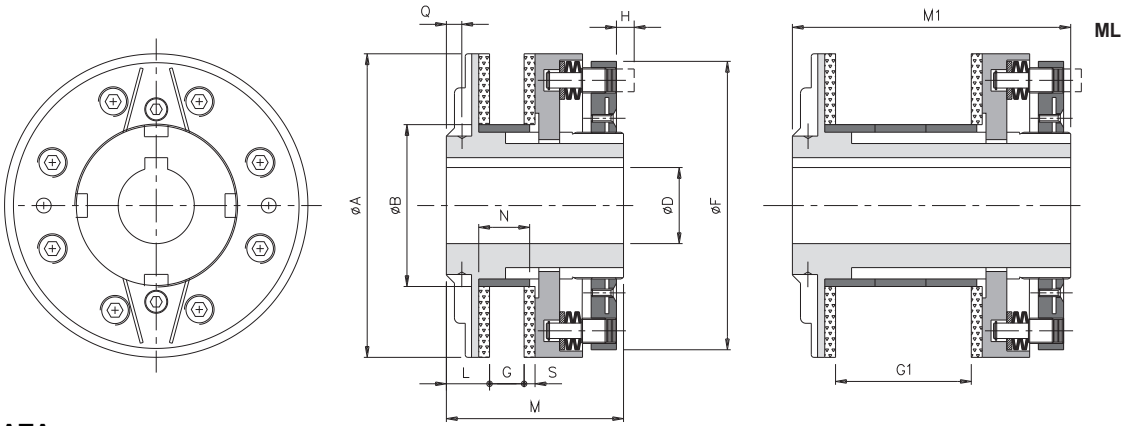
- Spiral springs as alternative to standard disc springs
- Customised alignment, interchangeable with competitors' products (distance "L")
- With statically balanced GR type radial ring nut
- Anticorrosion surface treatment



TECHNICAL DATA

ID	MT [Nm]	A	B h7	D H7		F	G		G1	L	M	M1	N	P	Q	S	Rpm Max	Kg	
				Std	Max		Min	Max	Max										/ML
025	1 - 20	25	14	-	8	22	1	3	-	5	26	-	5,5	M3*	3*	2	10000	0,1	-
038	1 - 34	38	24	-	12	32	1	5	21	8	33	46	8	M3	2	2,5	10000	0,2	0,3
050	2 - 100	50	36	-	20	44	1	6	26	10	35	57,5	10	M4	3	3	7600	0,4	0,5
070	6 - 210	70	45	-	25	63	1	10	40	15	55	85	15	M6	4,5	4	5450	1,1	1,4
090	13 - 450	90	60	-	38	82	3	12	46	16	60	95	17	M6	5,5	4	4250	2,2	2,8
115	26 - 950	115	72	18	45	105	5	16	58	18	70	113	21	M6	6	4	3350	3,7	4,8
140	80 - 1200	140	85	24	55	130	8	19	69	20	80	136	25	M8	6	5	2750	6,6	8,5
170	160 - 2600	170	98	28	65	158	10	22	78	22,5	95	153,5	28	M8	6,5	5	2250	10,9	13,5

data not binding



TECHNICAL DATA

ID	MT [Nm]	A	B h7	D H7		F	G		G1	L	M	M1	N	S	On request	Rpm Max	Kg	
				Std	Max		Min	Max	Max						Q			/ML
205	300 - 4800	205	120	38	80	193	18	26	90	27	110	174	32	5	8,5 - M8	1900	20,1	24,5
240	500 - 8000	240	145	50	100	230	18	29	99	27	116	186	35	5	8,5 - M10	1600	30,9	37,8
● **300**	800 - 14000	300	175	60	120	287	21	33	113	29	123	203	40	6	8,5 - M10	1300	49,1	60,8
● **340**	1000 - 18000	340	205	60	130	325	23	33	113	41	158	238	40	6	12 - M12	1200	85,5	102,5
● **400**	1500 - 23000	400	230	60	140	388	23	35	119	46	167	251	42	6	13 - M12	1000	124,5	147,7

● **On request**

data not binding

NOTES

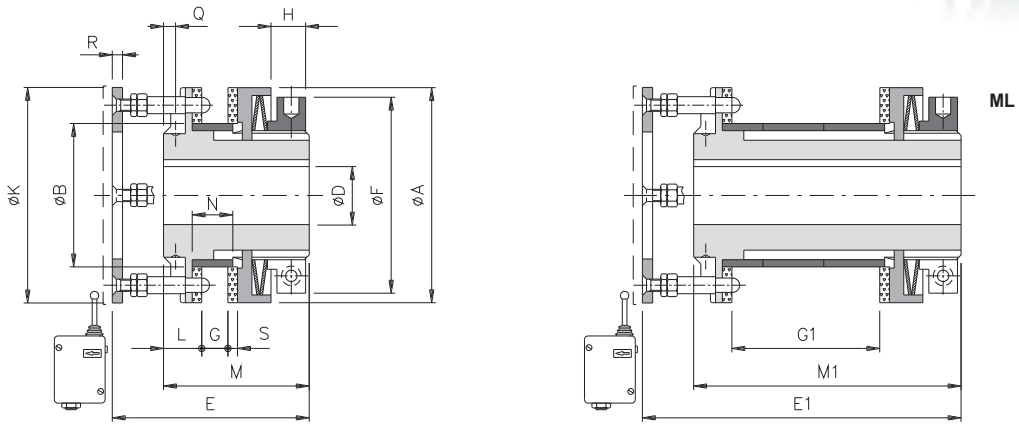
P-Q*: on the Gr.025 the hole for grub screw is made on the side of the ring nut instead of the flange side.
Technical details: the weights refer to the torque limiter (LF) pilot bore.

LF/CK model with overload response signal

- Overloads from 3 to 23000 Nm
- Hold maximum ø 140 mm
- Overload response signal
- Automatic re-engagement

Available with:

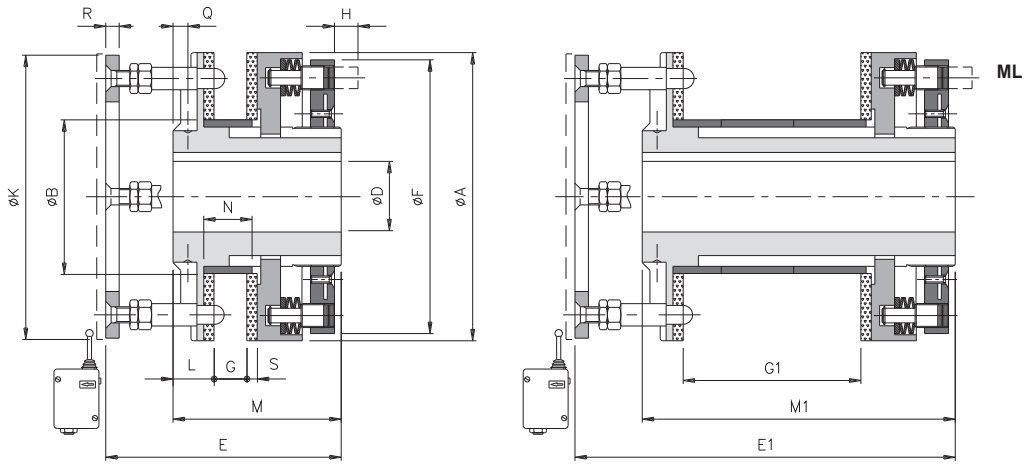
- Long hub
- Friction rings with different compounds for special applications
- Spiral springs as alternative to standard disc springs



TECHNICAL DATA

ID	MT [Nm]	A	B h7	D H7		E	E1	F	G		G1	K	L	M	M1	N	R	S	On request	Rpm Max	Kg	
				Std	Max				Min	Max	Max								Q			/ML
070	6 - 210	70	45	-	25	75	105	63	5	10	40	70	15	55	85	15	3	4	4,5 - M4	5450	1,4	1,7
090	13 - 450	90	60	-	38	80	114	82	7	12	46	90	16	61	95	17	3	4	5 - M6	4250	2,7	3,3
115	26 - 950	115	72	18	45	89	131	104	9	16	58	115	18	71	113	21	4	4	5 - M6	3350	4,9	6,0
140	80 - 1200	140	85	24	55	103	153	128	13	19	69	140	20	86	136	25	4	5	6 - M6	2750	7,8	9,7
170	160 - 2600	170	98	28	65	116	172	157	15	22	78	170	22,5	97,5	153,5	28	4	5	6,5 - M8	2250	12,9	15,5

data not binding



TECHNICAL DATA

ID	MT [Nm]	A	B h7	D H7		E	E1	F	G		G1	K	L	M	M1	N	R	S	On request	Rpm Max	Kg	
				Std	Max				Min	Max	Max								Q			/ML
205	300 - 4800	205	120	38	80	125	189	193	18	26	90	205	27	110	174	32	4	5	8,5 - M8	1900	20,9	25,2
240	500 - 8000	240	145	50	100	131	201	230	18	29	99	240	27	116	186	35	6	5	8,5 - M10	1600	32,2	39,1
● **300**	800 - 14000	300	175	60	120	136	216	287	21	33	113	300	29	123	203	40	6	6	8,5 - M10	1300	50,6	62,3
● **340**	1000 - 18000	340	205	60	130	172	252	325	23	33	113	340	41	158	238	40	6	6	12 - M12	1200	88	105
● **400**	1500 - 23000	400	230	60	140	176	260	388	23	35	119	400	46	167	251	42	6	6	13 - M12	1000	128,8	152

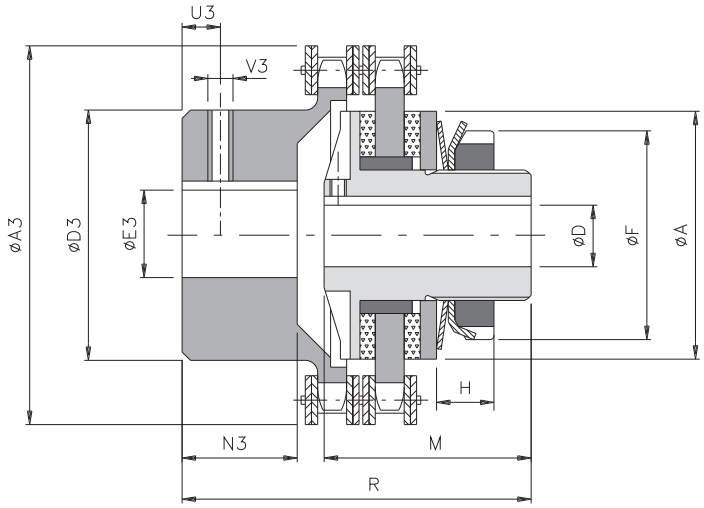
● **On request**

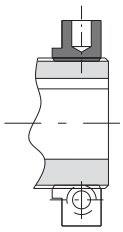
data not binding

NOTES

Technical characteristics: the weights refer to the torque limiter (LF/CK) pilot bore.

LF/GC series model with chain coupling

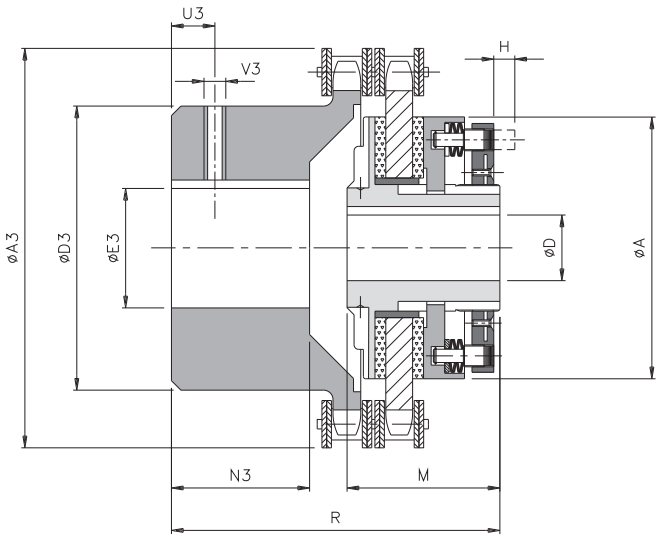




TECHNICAL DATA

ID	MT [Nm]	A	D H7		F	M	R	A3	D3	E3 H7		N3	U3	V3	Rpm Max	Kg
			Std	Max						Std	Max					
025	1 - 20	25	-	8	22	26	39	45	23	8	12	9	4	M3	5000	0,2
038	1 - 34	38	-	12	32	33	58	57	37	10	20	20	5	M3	5000	0,6
050	2 - 100	50	-	20	44	35	58	75	50	12	28	19	8	M4	3800	1,1
070	6 - 210	70	-	25	63	55	87	101	70	16	38	29	12	M6	2800	2,8
090	13 - 450	90	-	38	82	60	102	126	89	20	55	38	12	M6	2200	5,9
115	26 - 950	115	18	45	105	70	131	159	112	20	70	56,5	15	M8	1800	11,1
140	80 - 1200	140	24	55	130	80	145	184	130	28	80	59,5	15	M8	1500	20,3
170	160 - 2600	170	28	65	158	95	189	215	130	30	80	88	15	M8	1300	31,0

data not binding



TECHNICAL DATA

ID	MT [Nm]	A	D H7		M	R	A3	D3	E3 H7		N3	U3	V3	Rpm Max	Kg
			Std	Max					Std	Max					
205	300 - 4800	205	38	80	110	218	291	150	38	90	103	25	M10	1000	54,6
240	500 - 8000	240	50	100	116	245	310	170	50	110	124	25	M10	900	76,7
● **300**	800 - 14000	300	60	120	123	284	374	200	50	140	147	30	M12	700	125,5
● **340**	1000 - 18000	340	60	130	158	329	423	210	60	150	165	30	M12	600	180
● **400**	1500 - 23000	400	60	140	167	364	471	240	60	160	191	30	M16	500	260

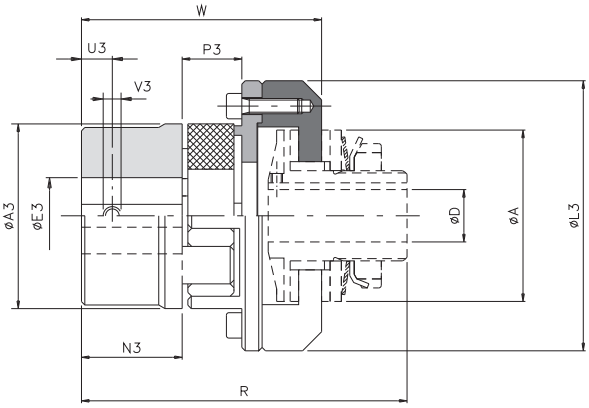
● **On request**

data not binding

NOTES

Technical characteristics: the data given refers to the complete unit (LF/GC).
Technical characteristics: the weights refer to the complete unit (LF/GC) pilot bore.

LF/GS series model with star coupling



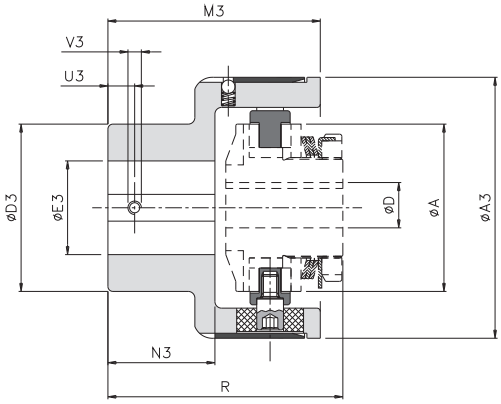
TECHNICAL DATA

ID	MT *[Nm]*		A3	E3 H7 Max	L3	N3	P3	U3	V3	D H7		R	W	Misalignments			Rpm Max	Kg
	Nom	Max								Std	Max			Angular α [°]	Axial X *[mm]*	Radial K *[mm]*		
025	12,5	25	30	16	43	11	12	5	M4	-	8	56	37,5	0°54'	1	0,09	10000	0,2
038	17	34	40	25	58	25	16	10	M5	-	12	84,5	64	1° 18'	1	0,20	10000	0,4
050	60	120	55	35	74	30	18	10	M5	-	20	94	74,5	1° 18'	1	0,22	7600	0,8
070	325	650	80	48	107	45	24	15	M8	-	25	135	104	1° 18'	1,4	0,28	5450	3,3
090	450	900	95	55	132	50	26	20	M8	-	38	148,5	115,5	1° 18'	1,6	0,32	4250	5,4
115	685	1370	120	74	164	65	30	20	M10	18	45	181,5	143,5	1° 18'	1,8	0,38	3350	10,3
140	1465	2930	160	95	208	85	40	25	M10	24	55	224	181	1° 18'	2,5	0,48	2750	21,1
170	3600	7200	200	110	246	100	45	30	M12	28	65	260	207,5	1° 18'	2,8	0,50	2250	36,3
● **205**	3300	6600	225	115	285	110	50	30	M12	38	80	295	236	1° 18'	3,0	0,52	1900	-
● **240**	4800	9600	255	125	330	120	55	33	M16	50	100	317	255	1° 18'	3,2	0,55	1600	-

● **On request**

data not binding

LF/GE series model with compact elastic coupling



TECHNICAL DATA

ID	MT *[Nm]*		A3	D3	E3 H7		M3	N3	U3	V3	A	D H7		R	Misalignments			Rpm Max	Kg
	Nom	Max			Std	Max						Std	Max		Angular α [°]	Axial X *[mm]*	Radial K *[mm]*		
038	35	50	63	42	5	20	60,5	29	8	M4	25	-	12	58	1°	±0,7	0,5	6000	0,8
050	70	110	78	50	10	28	63,5	32	10	M5	50	-	20	68	1°	±0,7	0,5	5500	1,41
070	280	420	108	70	12	38	89	49	12	M6	70	-	25	106	0° 48'	±0,7	0,5	5000	4,18
090	570	860	130	80	15	45	111	65	15	M8	90	-	38	128	0° 36'	±0,7	0,6	4250	7,45
115	980	1500	161	100	15	60	140	85	15	M8	115	18	45	158	0° 30'	±0,8	0,6	3350	13,4
140	2340	3600	206	120	20	70	168	105	20	M10	140	24	55	189,5	0° 24'	±0,8	0,6	2750	24,1
170	3880	5800	239	135	30	80	201	130	20	M10	170	28	65	229,5	0° 24'	±0,8	0,6	2250	37,9
● **205**	15000	20000	315	215	40	150	260	165	25	M12	205	38	80	290,5	0° 24'	±0,8	0,6	1900	86,8
● **240**	30000	35000	360	240	40	160	310	205	25	M12	240	50	100	341,5	0° 24'	±0,8	0,6	1500	160,5

● **On request**

data not binding

NOTES

... + GS (misalignments)*: the data refers to the normal red star 98 Sh-A.

Technical characteristics: the data and weights given refer only to the application (GS/GE), for the data of the torque limiter see page 7.