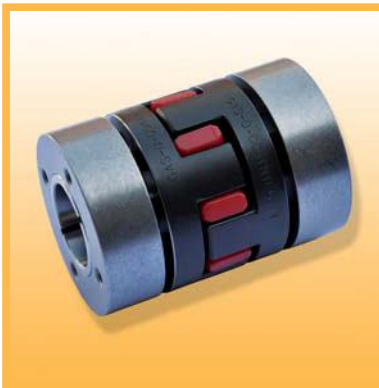


GAS/SG - backlash free jaw coupling: introduction



- Made in steel fully turned with standard phosphating treatment.
- Several elastomer hardnesses available.
- High torsional rigidity.
- Electric insulation between the parts.
- Statically balanced.
- Version with integrated locking assemblies (GAS/SG/CCE).

ON REQUEST



- Conformity to Directive ATEX possible.
- Specific surface treatments or version fully in stainless steel, aluminium, possible.
- Manufacturing made to length and customizations for specific needs.
- Connection to ComInTec TORQUE LIMITERS range possible.

The coupling GAS/SG is an elastomeric coupling with compact dimensions composed of two hubs made in steel UNI EN10083/98, fully turned and one elastomeric element.

The hub's tooth profile is designed to allow the elastomeric element to work only by compression and not in shear, allowing for long life of the coupling in high reversal or load applications.

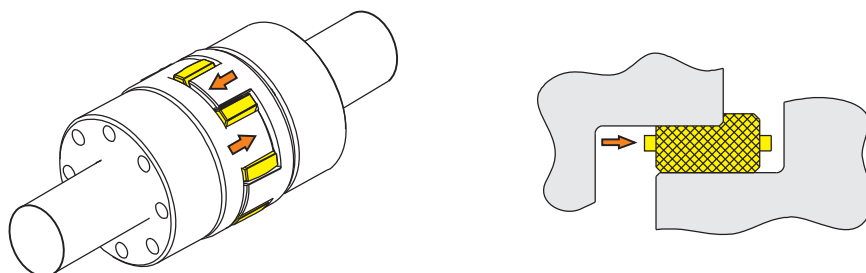
The presence of the elastomer assures:

- the possibility to absorb collisions and vibrations;
- to compensate for unavoidable misalignments between the shafts;
- silence during transmission;

DESCRIPTION OF THE ELASTOMERIC ELEMENT

The fundamental item of this coupling is the elastomeric element or elastomer, made in polyurethane and available in several hardness grades, for different uses and applications. The elastomer is manufactured to resist ageing, scoring, fatigue, hydrolysis and UV radiations, promoting long life operation. Also resisting main chemical agents, like ozone, oils, grease and hydrocarbons.

The elastomeric element becomes prestressed during the assembly between the relevant hub's teeth, in order to be able to transmit the motion without backlash, so torsionally rigid inside the prestressing load. The prestressed elastomer's surface is sufficiently wide to induce a low contact pressure on the tooth of the same elastomer, reducing the permanent deformations, promoting a long life.



ATEX CONFORMITY



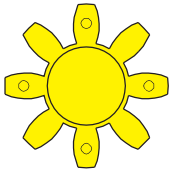
The GAS/SG coupling can be supplied in accordance to Directive 94/9/CE ATEX, which is relevant to protection apparatus and systems for use in potentially explosive spaces.

The dimensions of this coupling's version are not different from the standard version.

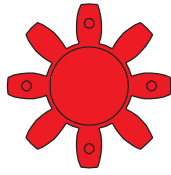
A mark relevant to the coupling's performances is printed on the hubs. It is necessary to consider planned tests, like described in the use and maintenance manual supplied together with each ATEX coupling.

The elastomeric elements used can be:

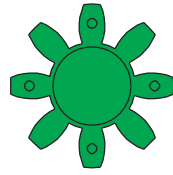
- red elastic element in polyurethane, 98 Shore-A : II 2 G D c T6 -20 ≤ Ta ≤ +60°C X U
- yellow elastic element in polyurethane, 92 Shore-A : II 2 G D c T5 -20 ≤ Ta ≤ +80°C X U



Elastomeric element SG
92 Sh-A



Elastomeric element SG
98 Sh-A



Elastomeric element SG
64 Sh-D

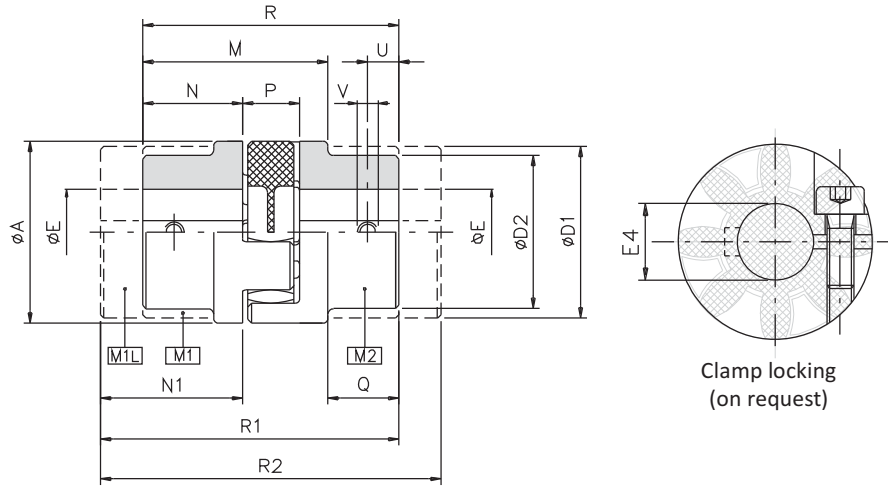
SG ELASTIC ELEMENT: TECHNICAL CHARACTERISTICS

Hardness [Shore]	Material	Color	Permitted temperature [°C]		Uses
			Working	For short period	
92 Sh-A	Polyurethane	Yellow	-40 ÷ +90	-50 ÷ +120	- low and medium power - measurement and control system - common electric motors
98 Sh-A	Polyurethane	Red	-30 ÷ +90	-40 ÷ +120	- high transmission torque - actuators, screwjacks - servomotors, right angle gearboxes
64 Sh-D	Polyurethane	Green	-20 ÷ +110	-30 ÷ +120	- high torsional rigidity - tool machines - internal combustion motors

SG ELASTOMERIC ELEMENT: PERFORMANCE CHARACTERISTICS

Size	Hardness [Sh]	Torque [Nm]		Misalignments			Rigidity		
		Nom	Max	angular α [°]	axial X [mm]	radial K [mm]	torsional R_t [Nm/rad • 10 ³]	axial R_a [N/mm]	radial R_r [N/mm]
01 (14/16)	92 Sh-A	7,5	15	1°	1	0,14	115	340	330
	98 Sh-A	12,5	25	0° 54'		0,09	170	510	650
	64 Sh-D	16	32	0° 48'		0,06	235	700	855
00 (19/24)	92 Sh-A	10	20	1°	1,2	0,10	680	1900	1200
	98 Sh-A	17	34	0° 54'		0,06	980	2300	2000
	64 Sh-D	21	42	0° 48'		0,04	1400	4280	2900
0 (24/28)	92 Sh-A	35	70	1°	1,4	0,14	1600	4410	1560
	98 Sh-A	60	120	0° 54'		0,10	2350	6300	2620
	64 Sh-D	75	150	0° 48'		0,07	3050	9600	3710
1 (28/38)	92 Sh-A	95	190	1°	1,5	0,15	2410	7060	2020
	98 Sh-A	160	320	0° 54'		0,11	3620	10900	3490
	64 Sh-D	200	400	0° 48'		0,08	4500	14500	4500
2 (38/45)	92 Sh-A	190	380	1°	1,8	0,16	5250	11950	2400
	98 Sh-A	325	650	0° 54'		0,12	7850	21850	4650
	64 Sh-D	405	810	0° 48'		0,09	9920	33600	6380
3 (42/55)	92 Sh-A	265	530	1°	2	0,18	6800	14700	2450
	98 Sh-A	450	900	0° 54'		0,15	18600	47500	5760
	64 Sh-D	560	1120	0° 48'		0,10	26400	71300	7570
4 (48/60)	92 Sh-A	310	620	1°	2,1	0,22	7800	18000	2850
	98 Sh-A	525	1050	0° 54'		0,16	20400	50600	6400
	64 Sh-D	655	1310	0° 48'		0,11	32400	96250	8900
5 (55/70)	98 Sh-A	685	1370	0° 54'	2,2	0,17	24200	61500	7150
6 (65/75)	98 Sh-A	1040	2080	0° 54'	2,6	0,18	38000	96500	6450

GAS/SG - backlash free jaw coupling: technical data



DIMENSIONS

Size	A	D1	D2	E H7 max	E4 H7 max	M	N	P	Q	R	T	U	V	N1	R1	R2
01 (14/16)	30	30	-	16	15	-	11	12	-	35	10	5	M4	18,5	42,5	50
00 (19/24)	40	40	32	25	20	-	25	16	16,5	66	18	10	M5	37	78	90
0 (24/28)	55	53	40	35	30	54	30	18	18,5	78	27	10	M5	50	98	118
1 (28/38)	65	63	48	40	35	62	35	20	24	90	30	15	M8	60	115	140
2 (38/45)	80	78	66	48	45	77	45	24	33	114	38	15	M8	70	139	164
3 (42/55)	95	93	75	55	50	86	50	26	38	126	46	20	M8	75	151	176
4 (48/60)	105	103	85	62	60	95	56	28	45	140	51	20	M8	80	164	188
5 (55/70)	120	118	98	74	65	108	65	30	49	160	60	20	M10	90	185	210
6 (65/75)	135	133	115	80	70	124	75	35	61	185	68	20	M10	100	210	235

TECHNICAL CHARACTERISTICS

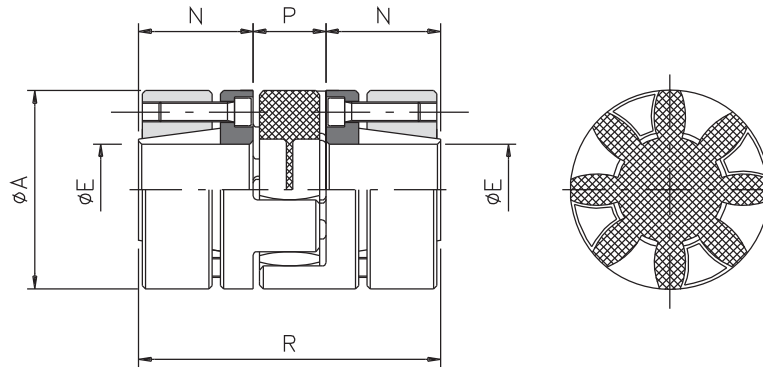
Size	Torque [Nm]	Weight [Kg]			Inertia [Kgm ²]			Max speed [Rpm]	Clamp locking	
		M1	M2	Element	M1	M2	Element		Screw	Tightening torque [Nm]
01 (14/16)		0,06	-	0,005	0,00001	-	0,0000005	25000	M4	3,1
00 (19/24)		0,2	0,2	0,009	0,00005	0,00003	0,000003	19000	M5	6,2
0 (24/28)		0,4	0,3	0,020	0,00020	0,00010	0,00001	13500	M6	10,5
1 (28/38)		0,7	0,5	0,030	0,00042	0,00022	0,00002	11800	M8	25
2 (38/45)		1,3	1,1	0,060	0,00131	0,00089	0,00005	9500	M8	25
3 (42/55)		1,9	1,8	0,980	0,00292	0,00232	0,00010	8000	M10	69
4 (48/60)		2,8	2,4	0,105	0,00483	0,00383	0,00020	7100	M12	120
5 (55/70)		4,0	3,8	0,150	0,00825	0,00740	0,00030	6300	M12	120
6 (65/75)		5,9	4,6	0,200	0,01682	0,01087	0,00050	5600	M12	120

TORQUE PERMISSIBLE WITH CLAMP LOCKING

Size	Torque transmitted [Nm] according to the ϕ finished bore [mm]																													
	6	8	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55	60	65	70		
01 (14/16)	6	7	8	8	9	10	10	11																						
00 (19/24)			21	21	22	22	23	23	24	25	25																			
0 (24/28)					43	44	44	45	46	47	47	49	50	51	53	54														
1 (28/38)									90	91	92	95	97	98	102	104	107	110												
2 (38/45)												109	111	113	114	118	120	123	126	130	133	135	139							
3 (42/55)															260	267	272	276	284	291	296	301	308	316	321					
4 (48/60)																			449	456	463	474	484	491	509	528				
5 (55/70)																					508	519	530	537	555	573	591			
6 (65/75)																						564	575	582	600	618	636	654		

⊗ Technical characteristics: the weights refer to the coupling with pilot bore; inertias refer to the coupling with maximum bore.

GAS/SG/CCE - backlash free jaw coupling with external locking assembly: technical data



DIMENSIONS

Size	Code	A	D	E H7		N	P	R	T
				min	max				
01 (14/16)	2QQ797nnuuu	30	30	6	16	11	13	35	10
00 (19/24)	2QQ807nnuuu	40	40	10	20	25	16	66	18
0 (24/28)	2QQ817nnuuu	55	55	15	28	30	18	78	27
1 (28/38)	2QQ827nnuuu	65	65	19	38	35	20	90	30
2 (38/45)	2QQ837nnuuu	80	80	20	48	45	24	114	38
3 (42/55)	2QQ847nnuuu	95	95	28	55	50	26	126	46
4 (48/60)	2QQ857nnuuu	105	105	35	62	56	28	140	51
5 (55/70)	2QQ867nnuuu	120	120	35	70	65	30	160	60
6 (65/75)	2QQ877nnuuu	135	135	40	75	75	35	185	68

TECHNICAL CHARACTERISTICS

Size	Weight [Kg]		Inertia [Kgm ²]		Max speed [Rpm]	Screw UNI 5931	Tightening screw torque [Nm]
	M1	Element	M1	Element			
01 (14/16)	0,06	0,005	0,00001	0,0000005	25000	n ⁴ x M2,5	0,75
00 (19/24)	0,2	0,009	0,00005	0,000003	19000	n ⁶ x M4	3
0 (24/28)	0,4	0,020	0,00020	0,00001	13500	n ⁴ x M5	6
1 (28/38)	0,7	0,030	0,00042	0,00002	11800	n ⁸ x M5	6
2 (38/45)	1,3	0,060	0,00131	0,00005	9500	n ⁸ x M6	10
3 (42/55)	1,9	0,980	0,00292	0,00010	8000	n ⁴ x M8	35
4 (48/60)	2,8	0,105	0,00483	0,00020	7100	n ⁴ x M8	35
5 (55/70)	4,0	0,150	0,00825	0,00030	6300	n ⁴ x M10	69
6 (65/75)	5,9	0,200	0,01682	0,00050	5600	n ⁴ x M12	120

TORQUE PERMISSIBLE WITH EXTERNAL LOCKING ASSEMBLIES

Grand.	Torque transmitted [Nm] according to the ϕ finished bore [mm]																											
	6	10	11	14	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55	60	65	70	80
01 (14/16)	7	12	13	17	18	20																						
00 (19/24)	48	53	67	72	77	81	86	91	96																			
0 (24/28)				77	82	88	93	98	103	113	124	129	144															
1 (28/38)							186	196	206	227	247	258	289	309	330	361	392											
2 (38/45)										291	320	349	364	408	437	466	510	553	582	612	655	699						
3 (42/55)														345	584	623	681	740	779	818	876	934	973	1071				
4 (48/60)																	681	740	779	818	876	934	973	1071	1168			
5 (55/70)																	1091	1184	1247	1309	1402	1496	1558	1714	1870	2026	2182	
6 (65/75)																			1852	1944	2083	2222	2315	2546	2778	3009	3241	

NOTES

- ⊗ **Code:** Item available only with finished bore. When ordering, please indicate on position "nnn" the finished bore of one hub, and on position "uuu" the finished bore of the second hub. Example: GAS/SG/CCE size 1 finished bore ϕ 28-36 → 2QQ827028036.
- ⊗ **Technical characteristics:** the weights refer to the coupling with minimum bore; inertias refer to the coupling with maximum bore.