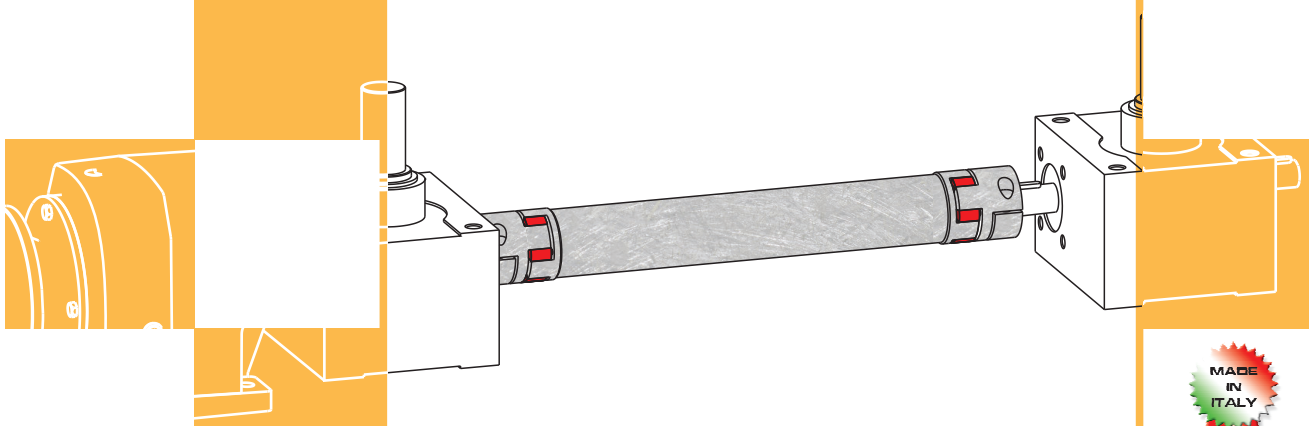
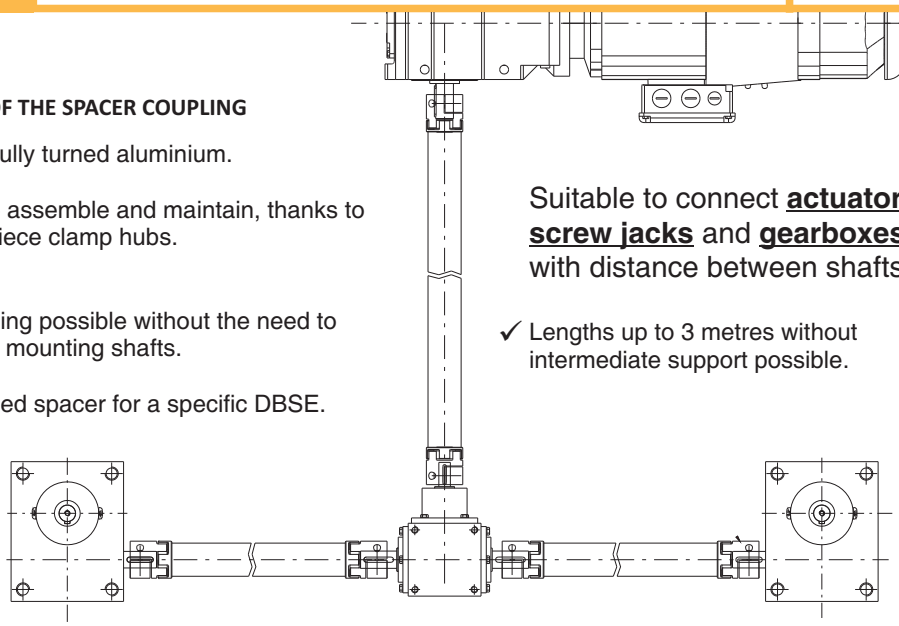
ALUMINIUM JAW SPACER COUPLING

News



MADE IN ITALY



DETAILS OF THE SPACER COUPLING

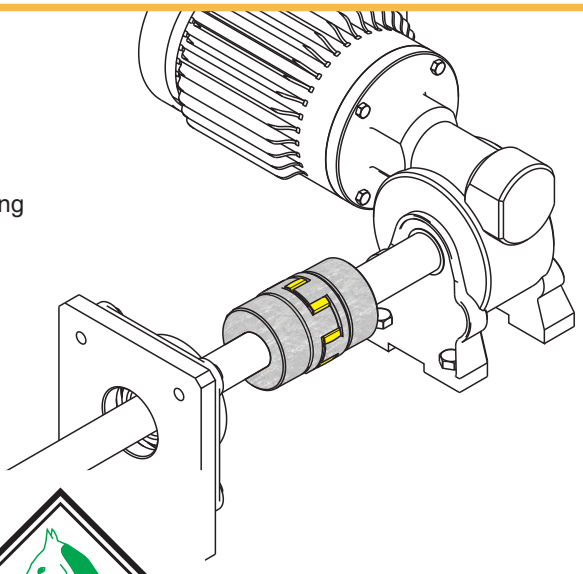
- ✓ Made in fully turned aluminium.
- ✓ Simple to assemble and maintain, thanks to the two piece clamp hubs.
- ✓ Radial fitting possible without the need to move the mounting shafts.
- ✓ Customized spacer for a specific DBSE.

Suitable to connect **actuators, screw jacks** and **gearboxes**, with distance between shafts.

- ✓ Lengths up to 3 metres without intermediate support possible.

DETAILS OF THE JAW COUPLING

- ✓ Made in aluminium and fully turned.
- ✓ Silent transmission, due to accurate machining off the connecting pieces.
- ✓ Vibration dampening, due to the different elastic element materials available.
- ✓ Reduced weight and inertia.
- ✓ Statically balanced suitable for high speeds.



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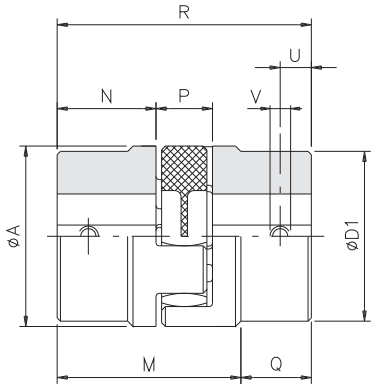
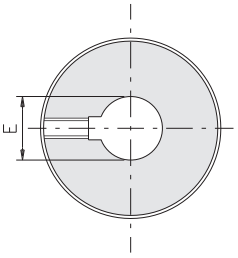
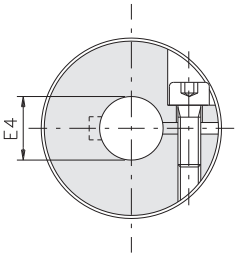
GAS - GAS/SG "AL" - standard and backlash free jaw coupling IN ALUMINIUM



Bored with keyway (standard)



Clamp locking one piece (standard), with keyway (on request)



DIMENSIONS AND TECHNICAL CHARACTERISTICS

Size	A	D1	E H7 max	E4 H7 max	M	N	P	Q	R	U	V	Clamp hub		Weight [Kg]	Max speed [Rpm]	Inertia 10^{-3} [Kgm²]
												Screws	Tightening torque [Nm]			
01 (14/16)	30	30	16	15	-	11,5	12	-	35	5	M4	M4	3,1	0,04	19000	0,007
00 (19/24)	40	40	25	20	-	25	16	16,5	66	10	M5	M5	6,2	0,14	14000	0,035
0 (24/28)	55	53	35	30	54	30	18	18,5	78	10	M5	M6	10,5	0,28	10500	0,141
1 (28/38)	65	63	40	35	62	35	20	24	90	15	M8	M8	25	0,49	9000	0,296
2 (38/45)	80	78	48	45	77	45	24	33	114	15	M8	M8	25	0,91	7000	0,918

TORQUE PERMISSIBLE WITH CLAMP LOCKING IN ONE PIECE (STANDARD)

Size	*Torque transmitted [Nm] according to the ø finished bore [mm] without keyway*																					
	6	8	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45
01 (14/16)	6	7	8	8	9	10	10															
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

Polyurethane elastomeric element **SG** 98 Sh-A

Polyurethane elastomeric element **SG** 92 Sh-A

Polyurethane elastomeric element **SG** 64 Sh-D

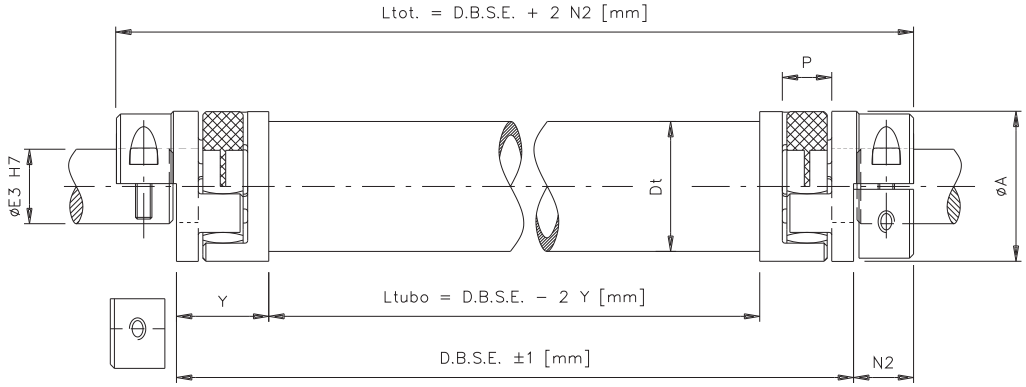
SG ELASTOMERIC ELEMENT: PERFORMANCE CHARACTERISTICS

Size	Hardness *[Sh]*	Torque *[Nm]*		Misalignments			Rigidity		
		Nom	Max	angular α[°]	axial X *[mm]*	radial K *[mm]*	torsional R_T *[Nm/rad •10³]*	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

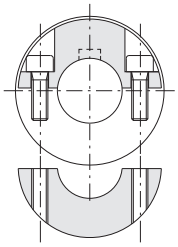
NOTES

- Pilot bore, finished bores with keyway and one section clamp locking available on stock, other kinds of locking available on request.
- the weights refer to the coupling with pilot bore, inertias refer to the coupling with maximum bore.

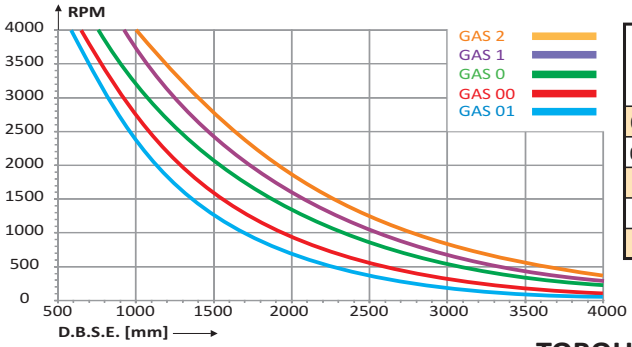
GAS/SG/DBSE - backlash free jaw coupling IN ALUMINIUM with SPACER MADE-TO-LENGTH



Clamp locking
in two piece (standard),
with keyway (on request)



PERMITTED SPEEDS



DIMENSIONS AND TECHNICAL DETAILS

Size	A	E3 H7 max	N2	P	Y	Spacer tube				Clamp hub	
						Dt	R_{Tt} [Nm/rad]	Weight [Kg/mtr]	Inertia 10^3[Kgm^2/mtr]	Screws	Tightening torque [Nm]
01 (14/16)	30	15	14	12	20,5	30	3100	1,06	0,162	M4	3,1
00 (19/24)	40	20	19	16	30,5	35	4000	1,27	0,273	M5	6,2
0 (24/28)	55	30	22	18	37,5	50	6100	1,91	0,917	M6	10,5
1 (28/38)	65	35	25	20	41	60	11000	3,34	2,184	M8	25
2 (38/45)	80	45	34	24	46	70	15000	5,09	4,341	M8	25

TORQUE PERMISSIBLE WITH CLAMP LOCKING IN TWO PIECE

Size	*Torque transmitted [Nm] according to the ø finished bore [mm] without keyway*																					
	6	8	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45
01 (14/16)	5	7	8,5	9,5	10,5	12	13															
00 (19/24)			14	15	17	20	21	22	25	27	28											
0 (24/28)					24	28	30	32	36	38	40	44	47	49	55	59						
1 (28/38)									65	69	73	80	87	91	102	109	116	127				
2 (38/45)											73	80	87	91	102	109	116	127	138	145	152	163

DIMENSIONING

$$C_{nom} > C_{mot} \cdot f_T \cdot f_R$$

Considerating the static torque:

$$C_{max} > C_{SM} \cdot \frac{J_{uti}}{J_{uti}+J_{mot}} \cdot K \cdot f_T \cdot f_A + C_{mot} \cdot f_T \cdot f_R$$

$$C_{max} > C_{SU} \cdot \frac{J_{mot}}{J_{uti}+J_{mot}} \cdot K \cdot f_T \cdot f_A + C_{mot} \cdot f_T \cdot f_R$$

In case of alternate motion, moreover:

$$C_{nom} > \frac{1}{0,25} \cdot C_{alt} \cdot f_F \cdot f_T \cdot f_R$$

Where:

- C_{nom} = theoretic nominal torque of the coupling *[Nm]*
- C_{mot} = nominal torque motor side *[Nm]*
- C_{max} = maximum torque of the coupling *[Nm]*
- C_{SU} = static torque user side *[Nm]*
- C_{SM} = static torque motor side *[Nm]*
- f_A = starting frequency factor
- f_R = rigidity factor
- f_T = thermic factor
- J_{mot} = inertia motor side *[Kgm^2]*
- J_{uti} = inertia user side *[Kgm^2]*
- K = shock factor
- C_{alt} = alternate system torque *[Nm]*
- f_F = resonance factor

Resonance factor (f_F)	
1	frequency < 10
$\sqrt{\frac{f}{10}}$	frequency > 10

Rigidity factor (f_R)	
2÷5	positioning system
3÷8	tool machines
>10	turn indicators

Shock factor (K)	
1	light shock
1,4	medium shock
1,8	hard shock

Thermic factor (f_T)	
1	-30 ÷ +30 °C
1,2	> +30 ÷ +40 °C
1,4	> +40 ÷ +60 °C
1,8	> +60 ÷ +80 °C

Starting frequency factor (f_A)	
1	0 ÷ 100 starting each hour
1,2	> 100 ÷ 200 starting each hour
1,4	> 200 ÷ 400 starting each hour
1,6	> 400 ÷ 800 starting each hour
1,8	> 800 ÷ 1600 starting each hour

NOTES

⊗ Clamp locking in two sections available on stock, other kinds of locking and customized spacers available on request.

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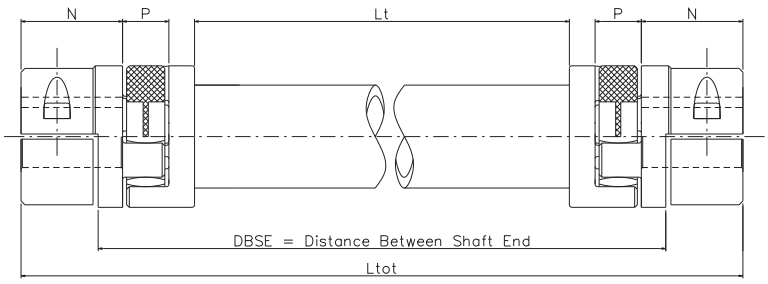
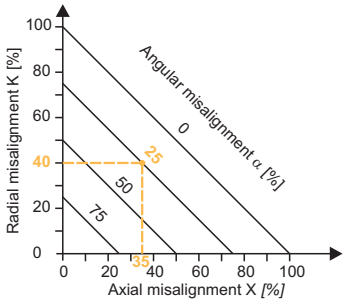
GAS/SG/DBSE - backlash free jaw coupling IN ALUMINIUM with SPACER MADE-TO-LENGTH





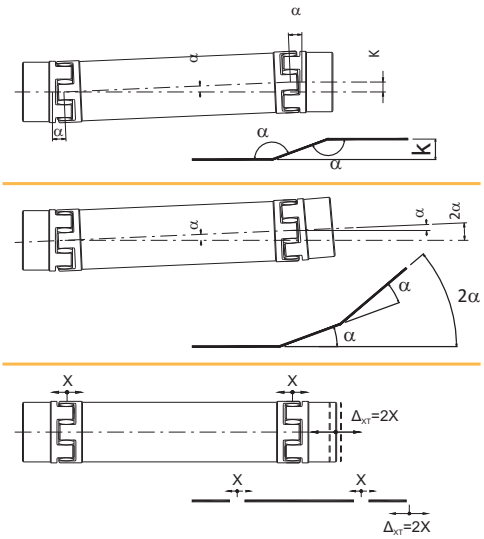
$$K = [\, L_{tot} - (2 \cdot N) - P \,] \cdot Tg\ \alpha$$

$$\beta = \frac{180 \cdot C_{mot}}{\pi \cdot R_{Ttot}}$$

$$R_{Ttot} = \frac{1}{\frac{2}{R_T} + \frac{L_t}{R_{Tt}}}$$

Where:

- L_{tot} = total length [mm]
- K = radial misalignment [mm]
- N = useful length of an half-hub [mm]
- P = useful length of an half-hub [mm]
- α = angular misalignment [°]
- β = rotation angle [°]
- C_{mot} = nominal torque motor side [Nm]
- R_T = torsional rigidity of the elastic element [Nm/rad]
- R_{Tt} = torsional rigidity of the pipe per meter [Nm/rad]
- R_{Ttot} = total torsional rigidity [Nm/rad]
- L_t = pipi lenght [m]



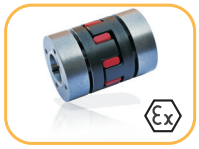
COMPLETE RANGE OF ComInTec® COUPLINGS

DISC COUPLING "GTR"

RIGID COUPLING "GRI"

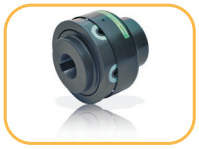
BELLOW COUPLING "GSF"

BACKLASH FREE JAW COUPLING "GAS/SG"

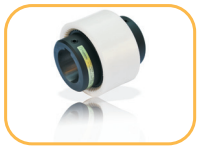


JAW COUPLING "GAS"

COMPACT ELASTIC COUPLING "GEC"



GEAR COUPLING "GD"



HIGHLY FLEXIBLE COUPLING' "GF"

CHAIN COUPLING "GC"

ComInTec®

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