



# ENAPART



93 S Railroad Avenue Unit C  
Bergenfield NJ 07621 USA  
[www.enapart.com](http://www.enapart.com)  
[sales@enapart.com](mailto:sales@enapart.com)



Friedrich-Ebert-Anlage 36, 60325  
Frankfurt am Main, Germany  
[www.enapart.de](http://www.enapart.de)  
[anfrage@enapart.de](mailto:anfrage@enapart.de)



〒584-0023 大阪府富田林市若松町  
東2丁目2番16号  
[www.enapart.co.jp](http://www.enapart.co.jp)  
[sales@enapart.co.jp](mailto:sales@enapart.co.jp)



Via del Canneto 35,  
Borgosatollo, Brescia - Italia  
[www.enapart.it](http://www.enapart.it)  
[vendite@enapart.it](mailto:vendite@enapart.it)



4 boulevard Carnot, 95400  
villiers-le-bel, Paris, France  
[www.enapart.fr](http://www.enapart.fr)  
[sales@enapart.fr](mailto:sales@enapart.fr)



Barbaros Mah. Ihlamur Bul. Aĝaoĝlu  
My Newwork No:3/15 Ataşehir / İstanbul  
[www.enapart.net](http://www.enapart.net)  
[satis@enapart.net](mailto:satis@enapart.net)



65049, ОДЕСА, ВУЛИЦЯ ІВАНА  
ФРАНКА, БУДИНОК 55, ПОВЕРХ 3  
[www.enapart.com.ua](http://www.enapart.com.ua)  
[sales@enapart.com.ua](mailto:sales@enapart.com.ua)



Складова база „Онĝл“, Склад А2, п.к.  
4006, гр. Пловдив, България  
[www.enapart.bg](http://www.enapart.bg)  
[sales@enapart.bg](mailto:sales@enapart.bg)



PRIVADA 10 B SUR #3908 COL.  
ANZUREZ, C.P. 72530, PUEBLA, PUE  
[www.enapart.com.mx](http://www.enapart.com.mx)  
[sales@enapart.com.mx](mailto:sales@enapart.com.mx)



MUNICIPIUL BUCUREȘTI, SECTOR 3,  
B-DUL BASARABIA, NR.250, CORP P+5  
[www.enapart.ro](http://www.enapart.ro)  
[sales@enapart.ro](mailto:sales@enapart.ro)



3 Austin Mews, High Street, Hemel  
Hempstead, HP1 3AF, United Kingdom  
[www.enapart.co.uk](http://www.enapart.co.uk)  
[sales@enapart.co.uk](mailto:sales@enapart.co.uk)









## Explanations to tables

d, D, L, l = Basic dimensions, Locking Elements not tightened

$C_1$  = shaft tolerances

$C_b$  = hub bore tolerances

$C_2$  = bore tolerances

$A_t$  = effective bearing surface  $A_t = \pi \cdot d \cdot l$

X = travel distance for 1,2,3 or 4 Locking Elements. This value includes a safety allowance to ensure that the thrust flange will not contact the face of the hub or shaft. Any reduction of this value could cause a block and the transmission values of the connection would not be achieved.

T = transmissible torque

$F_{ax}$  = axial forces

T and  $F_{ax}$  refer to a pressure between the Locking Element and shaft of 14500 psi .

When solid Locking Elements the required total clamping force  $F_A$  is obtained by:

$$F_A = F_{A'} + F_O$$

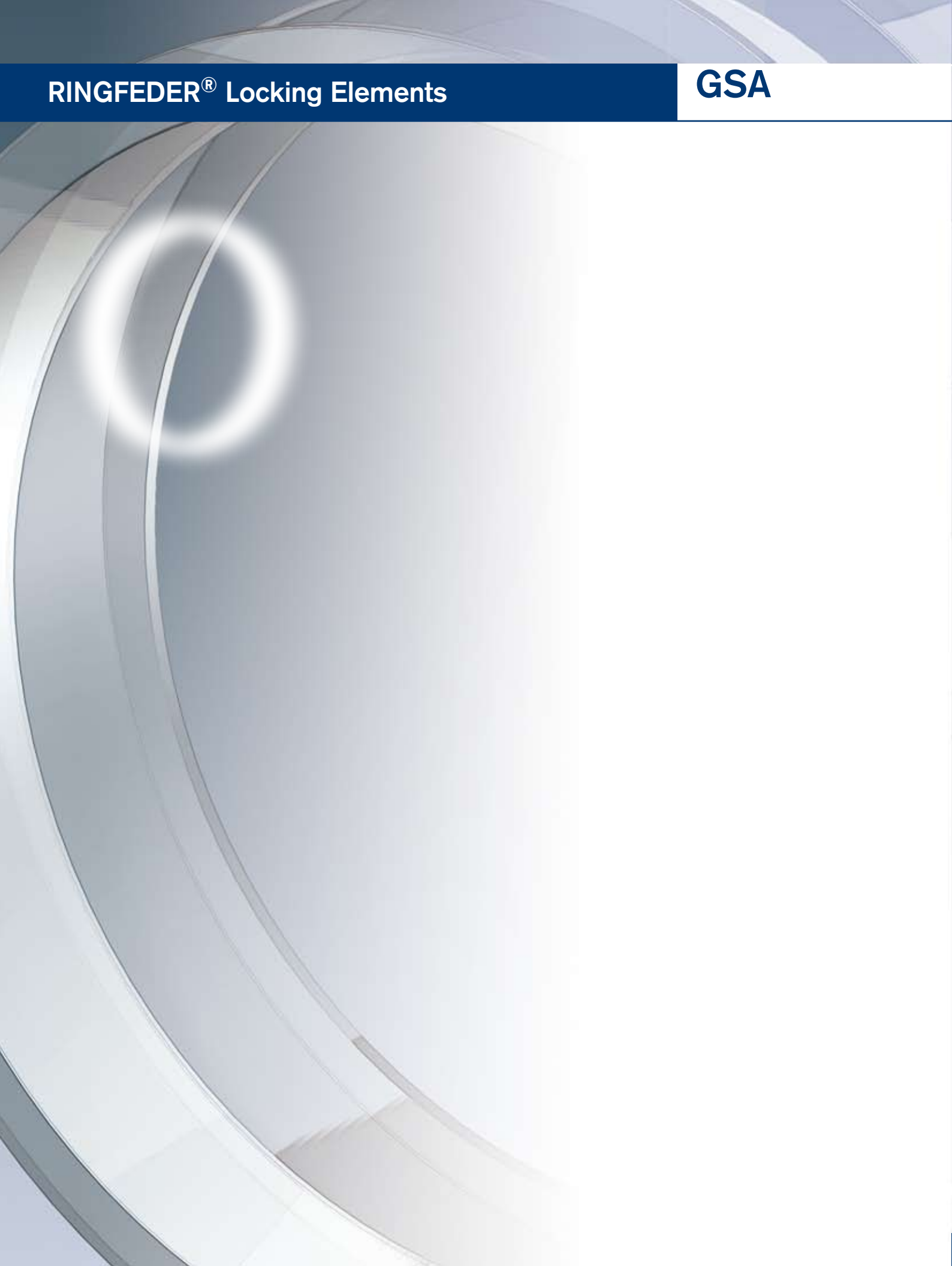
$F_{A'}$  = Screw number x Fv, see screw table page 40

$F_O$  = approximate clamping force required to bridge the clearances where the tolerances given in the table are fully exploited during manufacture, not applicable if slit Locking Elements are used.

$d_1$  = clamp plate bore

$D_1$  = spacer sleeve OD

$T_{max}$  = transmissible torque by one Locking Element at a shaft contact pressure of = 47850 psi



Size	GSA dimensions						F <sub>o</sub>	F <sub>A</sub> '	Transmissible torques or axial forces		Weight WT
	d	C <sub>1</sub>	D	C <sub>2</sub>	L	I			T	F <sub>ax</sub>	
	Inch								psi	lb-in	
GSA-250	0.2500		0.3750		0.126	0.094	580	450	14	112	0.76
GSA-312	0.3125	+0	0.4375	-0	0.143	0.112	686	670	26	166	1.04
GSA-375	0.3750	-0.0005	0.5000	+0.0005	0.160	0.128	673	920	43	229	1.35
GSA-437	0.4375		0.5937		0.176	0.143	796	1196	65	297	2.20
GSA-500	0.5000		0.6562		0.193	0.158	944	1512	94	376	2.69
GSA-562	0.5625		0.7500	-0	0.210	0.174	1259	1872	132	469	3.97
GSA-625	0.6250		0.8125	+0.001	0.226	0.187	1231	2237	175	560	4.69
GSA-687	0.6875		0.8750		0.243	0.203	1414	2670	230	669	5.47
GSA-750	0.7500	+0	0.9375		0.260	0.219	1413	3145	295	787	6.33
GSA-812	0.8125	-0.001	1.0312		0.276	0.234	1617	3637	370	911	8.56
GSA-875	0.8750		1.0937	-0	0.293	0.250	1611	4188	458	1047	10.14
GSA-937	0.9375		1.1875	+0.0015	0.310	0.267	2087	4790	561	1197	12.36
GSA-1000	1.0000		1.2500		0.326	0.284	2090	5437	680	1360	14.05
GSA-1125	1.1250	+0	1.4060		0.359	0.312	2220	6620	840	1493	19.55
GSA-1250	1.2500	-0.0015	1.5310		0.393	0.344	2240	8105	1140	1824	23.54
GSA-1375	1.3750		1.6870		0.426	0.376	2745	9750	1510	2196	31.22
GSA-1500	1.5000		1.8120	-0	0.459	0.407	3030	11510	1940	2587	36.38
GSA-1625	1.6250	+0	1.9680	+0.002	0.492	0.437	3295	13390	2450	3015	46.43
GSA-1750	1.7500	-0.002	2.1250		0.526	0.469	3585	15475	3045	3480	58.53
GSA-1875	1.8750		2.2500		0.559	0.500	3595	17675	3730	3979	66.22
GSA-2000	2.0000		2.4060		0.592	0.528	5365	19910	4480	4480	81.09
GSA-2250	2.2500		2.6560		0.592	0.528	4795	22400	5670	5040	90.30
GSA-2437	2.4375		2.8430	-0	0.592	0.528	4430	24260	6655	5461	97.07
GSA-2500	2.5000	+0	2.9060	+0.003	0.592	0.528	4330	24885	7000	5600	99.50
GSA-2687	2.6875	-0.003	3.0930		0.592	0.528	4035	26750	8090	6020	106.26
GSA-2750	2.7500		3.1560		0.592	0.528	3950	27370	8470	6160	108.70
GSA-3000	3.0000		3.4060		0.592	0.528	3890	29860	10080	6720	117.90

\* Stainless steel available upon request.

\* Delivery on request; other sizes stocked. Contact Ringfeder Corporation for additional sizes and information.

## ■ Selection Guide

1. Determine the shaft diameter to be used and the maximum torque (T) to be transmitted.

$$T = \frac{63,000 \text{ (lb-in)} \times \text{HP}}{\text{RPM}}$$

2. Select a locking element from the specification table for the shaft diameter. Verify that the transmissible torque (T) for the element meets the torque requirement.

*Note: Required peak torque should never exceed specified transmissible torque (T). Higher torque capacities can be obtained by increasing the locking force.*

3. Determine the required locking force (F<sub>A</sub>'). A pre-load (F<sub>O</sub>) is required to bridge the clearance for the specified fits. The total required locking force is F<sub>A</sub>' = F<sub>O</sub> + F<sub>A</sub>'. The locking force is normally obtained by using one or more screws and a clamp plate.

4. Refer to screw tables on page 40 to determine the number, size and grade of screws needed for the required locking force and individual screw clamp load.

$$\text{Clamp load/screw} = \frac{\text{required locking force (F}_{A}'\text{) or F}_{A}'\text{'}}{\text{number of screws (z)}}$$



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**RINGFEDER POWER TRANSMISSION GMBH**

Werner-Heisenberg-Straße 18, D-64823 Groß-Umstadt, Germany · Phone: +49 (0) 6078 9385-0 · Fax: +49 (0) 6078 9385-100  
E-mail: sales.international@ringfeder.com · E-mail: sales.international@gerwah.com

**RINGFEDER POWER TRANSMISSION USA CORPORATION**

165 Carver Avenue, P.O. Box 691 Westwood, NJ 07675, USA · Toll Free: +1 888 746-4333 · Phone: +1 201 666 3320  
Fax: +1 201 664 6053 · E-mail: sales.usa@ringfeder.com · E-mail: sales.usa@gerwah.com

**RINGFEDER POWER TRANSMISSION INDIA PRIVATE LIMITED**

Plot No. 4, Door No. 220, Mount - Poonamallee Road, Kattupakkam, Chennai – 600 056, India  
Phone: +91 (0) 44-2679-1411 · Fax: +91 (0) 44-2679-1422 · E-mail: sales.india@ringfeder.com · E-mail: sales.india@gerwah.com

**KUNSHAN RINGFEDER POWER TRANSMISSION COMPANY LIMITED**

German Industry Park, No. 508 Hengguanjiang Road, Zhangpu Town 215321, Kunshan City, P.R. China  
Phone: +86 (0) 512-5745-3960 · Fax: +86 (0) 512-5745-3961 · E-mail sales.china@ringfeder.com