

400~12000

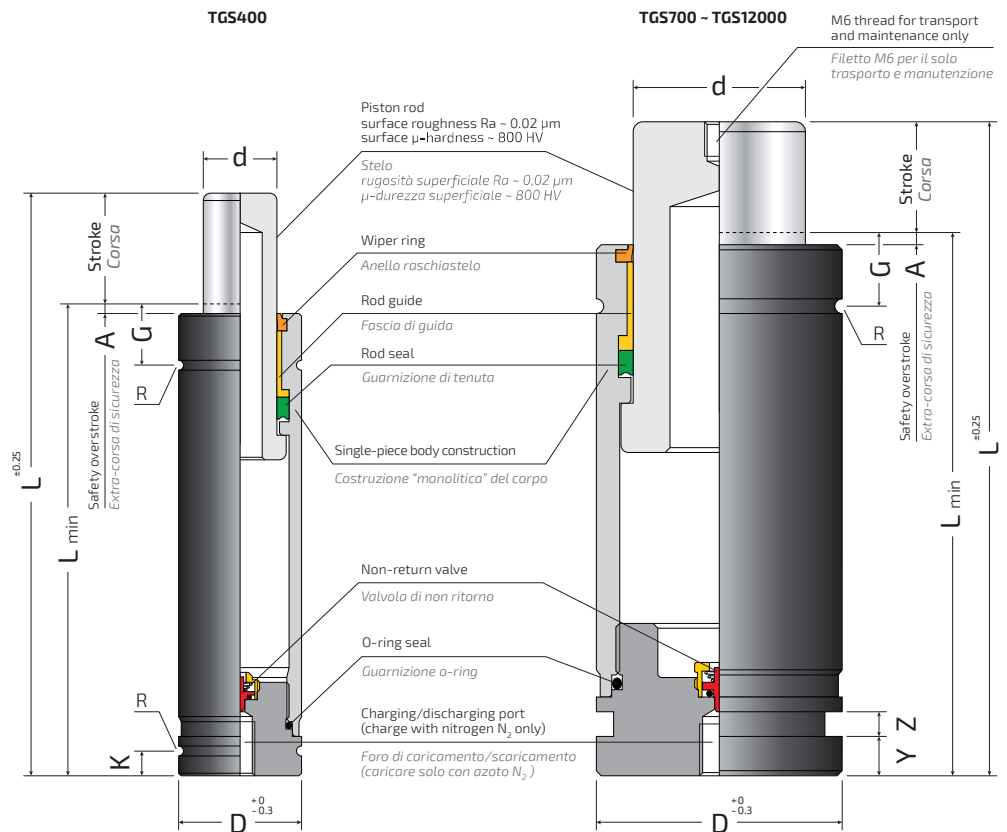
COMPACT POWER

COMPACT HEIGHT



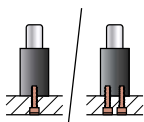
TGS series nitrogen gas springs feature high forces and compact diameters in a rod seal design. They ensure a great interchangeability (forces, dimensions and fixing possibilities) with the bore seal design nitrogen gas springs commonly available on the market, offering a higher performance (high number of cycles per minute, self-lubrication, better protection against liquid contaminants) and reliability thanks to the rod seal design. TGS series nitrogen gas springs are self-lubricated.

*I cilindri all'azoto della serie TGS hanno forze elevate e diametri compatti, con un sistema di tenuta-stelo. Assicurano un'eccellente intercambiabilità (forze, dimensioni e possibilità di fissaggio) con i cilindri all'azoto con sistema di tenuta-pistone comunemente disponibili sul mercato, offrendo superiori prestazioni (alto numero di colpi al minuto, autolubrificazione, migliore protezione contro i contaminanti liquidi) e affidabilità grazie al sistema di tenuta-stelo. I cilindri all'azoto della serie TGS sono autolubrificati.*

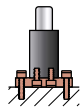


**Technical notes / Note tecniche**  
Important use instructions in the dedicated catalogue section.  
Importanti istruzioni d'uso nella relativa sezione sul catalogo.

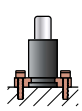
**Fixing possibilities / Fissaggi possibili**



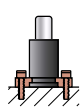
at the base with screw(s)  
alla base con vite/i



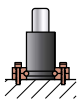
with base-plate con base di fissaggio  
**BF, BFA, BFB**  
for TGS5000 only solo per TGS5000



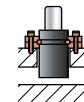
with half-flanges con semiflange  
**SF, SFA**  
for TGS700-TGS12000 per TGS700-TGS12000



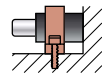
with foot brackets con staffette  
**ST, STA**  
for TGS1000-TGS12000 per TGS1000-TGS12000



with collar flange (base) con flangia a collare (base)  
**FL**  
for TGS400 only solo per TGS400

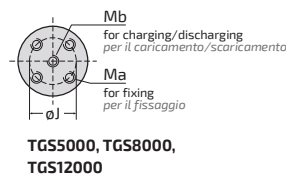
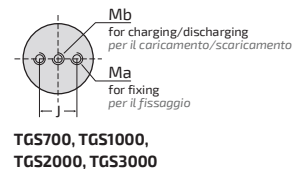
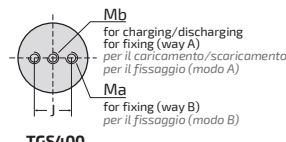


with collar flange con flangia a collare  
**FL, FLA, FLQ, FLQA**



with front support con supporto frontale  
**FT, FTA**  
(Not for all TGS models)  
(Non per tutti i modelli TGS)

**GAS SPRING BASE / BASE DEL CILINDRO**



**SAFETY PROTECTIONS / PROTEZIONI DI SICUREZZA**



UNCONTROLLED RETURN SPEED / VELOCITÀ DI RITORNO NON CONTROLLATA



OVERSTROKE / EXTRA-CORSA



OVERPRESSURE / SOVRAPRESSIONE

| Model<br>Modello          | MAX Stroke<br>Corsa MAX<br>mm | Lmin<br>mm | L<br>mm | D<br>mm | d<br>mm | G<br>mm | A<br>mm | R<br>mm | K<br>mm | Y<br>mm | Z<br>mm | Ma               | J<br>mm | Mb      | bar<br>(MPa)  | daN   | daN | Cycles per<br>minute MAX<br>Cicli al<br>minuto MAX | Gas<br>volume<br>del gas<br>Litres | Weight<br>Peso<br>kg |       |
|---------------------------|-------------------------------|------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|------------------|---------|---------|---------------|-------|-----|--|------------------------------------|----------------------|-------|
|                           |                               |            |         |         |         |         |         |         |         |         |         |                  |         |         |               |       |     |  |                                    |                      | Ma    |
| <b>TGS400</b> -10-A       | 10                            | 60         | 70      |         |         | 11.5    |         | 1       |         | -       | -       |                  |         |         |               |       |     | 510  | 300                                | 0.006                | 0.18  |
| 16-A                      | 16                            | 75         | 91      |         |         | 11.5    |         | 1       |         | -       | -       |                  |         |         |               |       |     | 510  | 190                                | 0.011                | 0.20  |
| 25-A                      | 25                            | 95         | 120     | 25      | 15      | 11.5    | 1       | 1       | 5       | -       | -       | M5 x 6<br>(2x)   | 14      | M6 x 11 | 204<br>(20.4) | 360   |     | 520  | 120                                | 0.018                | 0.24  |
| 32-A                      | 32                            | 108        | 140     |         |         | 11.5    | 1       | 1       |         | -       | -       |                  |         |         |               |       |     | 520  | 90                                 | 0.022                | 0.26  |
| 40-A                      | 40                            | 125        | 165     |         |         | 11.5    | 1       | 1       |         | -       | -       |                  |         |         |               |       |     | 530  | 75                                 | 0.028                | 0.30  |
| 50-A                      | 50                            | 145        | 195     |         |         | 11.5    | 1       | 1       |         | -       | -       |                  |         |         |               |       |     | 530  | 60                                 | 0.035                | 0.33  |
| <b>TGS700</b> -06-A ●     | 6                             | 57         | 63      |         |         | 11.5    |         | 1       |         | -       | -       |                  |         |         |               |       |     | 840  | 300                                | 0.008                | 0.27  |
| 10-A ●                    | 10                            | 65         | 75      |         |         | 11.5    |         | 1       |         | -       | -       |                  |         |         |               |       |     | 870  | 300                                | 0.014                | 0.29  |
| 16-A                      | 16                            | 77         | 93      |         |         | 11.5    |         | 1       |         | 4       | 3.5     | M6 x 8<br>(2x)   | 15      | M4      | 210<br>(21.0) | 660   |     | 940  | 190                                | 0.018                | 0.33  |
| 25-A                      | 25                            | 95         | 120     | 32      | 20      | 11.5    | 2       | 1       | -       | 4       | 3.5     |                  |         |         |               |       |     | 950  | 120                                | 0.030                | 0.38  |
| 32-A                      | 32                            | 108        | 140     |         |         | 11.5    | 1       | 1       |         | 4       | 3.5     |                  |         |         |               |       |     | 950  | 90                                 | 0.038                | 0.42  |
| 40-A                      | 40                            | 125        | 165     |         |         | 11.5    | 1       | 1       |         | 4       | 3.5     |                  |         |         |               |       |     | 960  | 75                                 | 0.049                | 0.46  |
| 50-A                      | 50                            | 145        | 195     |         |         | 11.5    | 1       | 1       |         | 4       | 3.5     |                  |         |         |               |       |     | 960  | 60                                 | 0.062                | 0.51  |
| <b>TGS1000</b> -06-A ●    | 6                             | 55         | 61      |         |         | 10.5    |         | 1       |         | -       | -       |                  |         |         |               |       |     | 1350   | 300                                | 0.010                | 0.38  |
| 10-A                      | 10                            | 68         | 78      |         |         | 10.5    |         | 1       |         | 4       | 3.5     | M6 x 8<br>(2x)   | 17      | M8      | 205<br>(20.5) | 1000  |     | 1400   | 300                                | 0.016                | 0.46  |
| 16-A                      | 16                            | 84         | 100     |         |         | 10.5    |         | 1       |         | 4       | 3.5     |                  |         |         |               |       |     | 1400   | 190                                | 0.028                | 0.52  |
| 25-A                      | 25                            | 110        | 135     | 38      | 25      | 10.5    | 2       | 1       | -       | 4       | 3.5     |                  |         |         |               |       |     | 1400   | 120                                | 0.049                | 0.63  |
| 32-A                      | 32                            | 135        | 167     |         |         | 10.5    | 1       | 1       |         | 4       | 3.5     |                  |         |         |               |       |     | 1450   | 90                                 | 0.068                | 0.73  |
| 40-A                      | 40                            | 155        | 195     |         |         | 10.5    | 1       | 1       |         | 4       | 3.5     |                  |         |         |               |       |     | 1450   | 75                                 | 0.084                | 0.81  |
| 50-A                      | 50                            | 180        | 230     |         |         | 10.5    | 1       | 1       |         | 4       | 3.5     |                  |         |         |               |       |     | 1450   | 60                                 | 0.104                | 0.92  |
| <b>TGS2000</b> -06-A ●●   | 6                             | 60         | 66      |         |         | -       |         | -       |         | -       | -       |                  |         |         |               |       |     | 3000   | 300                                | 0.02                 | 0.74  |
| 10-A ●●                   | 10                            | 70         | 80      |         |         | -       |         | -       |         | -       | -       |                  |         |         |               |       |     | 3100   | 300                                | 0.03                 | 0.82  |
| 16-A ●●                   | 16                            | 90         | 106     |         |         | 14.5    |         | 1.5     |         | -       | -       | M6 x 8<br>(2x)   | 26      | M8      | 209<br>(20.9) | 2000  |     | 3200   | 190                                | 0.05                 | 1.02  |
| 25-A                      | 25                            | 110        | 135     | 50      | 35      | 14.5    | 2       | 1.5     | -       | 8       | 5       |                  |         |         |               |       |     | 3300   | 120                                | 0.07                 | 1.25  |
| 32-A                      | 32                            | 130        | 162     |         |         | 14.5    | 2       | 1.5     | -       | 8       | 5       |                  |         |         |               |       |     | 3400   | 90                                 | 0.10                 | 1.39  |
| 40-A                      | 40                            | 150        | 190     |         |         | 14.5    | 2       | 1.5     | -       | 8       | 5       |                  |         |         |               |       |     | 3400   | 75                                 | 0.12                 | 1.54  |
| 50-A                      | 50                            | 170        | 220     |         |         | 14.5    | 2       | 1.5     | -       | 8       | 5       |                  |         |         |               |       |     | 3400   | 60                                 | 0.15                 | 1.70  |
| 65-A                      | 65                            | 206        | 271     |         |         | 14.5    | 2       | 1.5     | -       | 8       | 5       |                  |         |         |               |       |     | 3200   | 45                                 | 0.20                 | 1.99  |
| <b>TGS3000</b> -10-A ●●   | 10                            | 75         | 85      |         |         | -       |         | -       |         | -       | -       |                  |         |         |               |       |     | 4600   | 300                                | 0.05                 | 1.45  |
| 16-A ●●                   | 16                            | 87         | 103     |         |         | 19      |         | 2       |         | -       | -       | M8 x 12<br>(2x)  | 34      | M8      | 189<br>(18.9) | 3000  |     | 5000   | 190                                | 0.07                 | 1.62  |
| 25-A                      | 25                            | 105        | 130     | 63      | 45      | 19      | 2       | 2       | -       | 8       | 5       |                  |         |         |               |       |     | 5200   | 120                                | 0.10                 | 1.91  |
| 32-A                      | 32                            | 118        | 150     |         |         | 19      | 2       | 2       | -       | 8       | 5       |                  |         |         |               |       |     | 5200   | 90                                 | 0.14                 | 2.07  |
| 40-A                      | 40                            | 135        | 175     |         |         | 19      | 2       | 2       | -       | 8       | 5       |                  |         |         |               |       |     | 5300   | 75                                 | 0.18                 | 2.27  |
| 50-A                      | 50                            | 155        | 205     |         |         | 19      | 2       | 2       | -       | 8       | 5       |                  |         |         |               |       |     | 5300   | 60                                 | 0.23                 | 2.52  |
| 65-A                      | 65                            | 191        | 256     |         |         | 19      | 2       | 2       | -       | 8       | 5       |                  |         |         |               |       |     | 5000   | 45                                 | 0.31                 | 2.97  |
| <b>TGS5000</b> -10-A ●●●  | 10                            | 70         | 80      |         |         | -       |         | -       |         | -       | -       |                  |         |         |               |       |     | 7400   | 300                                | 0.08                 | 1.87  |
| 16-A ●●●                  | 16                            | 90         | 106     |         |         | 18      |         | 1.5     |         | -       | -       | M8 x 12<br>(4x)  | 40      | M8      | 190<br>(19.0) | 5000  |     | 7400   | 190                                | 0.12                 | 2.33  |
| 25-A                      | 25                            | 110        | 135     | 75      | 58      | 18      | 2       | 1.5     | -       | 8       | 5       |                  |         |         |               |       |     | 7600   | 120                                | 0.18                 | 2.74  |
| 32-A                      | 32                            | 135        | 167     |         |         | 18      | 2       | 1.5     | -       | 8       | 5       |                  |         |         |               |       |     | 7600   | 90                                 | 0.27                 | 3.05  |
| 40-A                      | 40                            | 160        | 200     |         |         | 18      | 2       | 1.5     | -       | 8       | 5       |                  |         |         |               |       |     | 7600   | 75                                 | 0.36                 | 3.38  |
| 50-A                      | 50                            | 190        | 240     |         |         | 18      | 2       | 1.5     | -       | 8       | 5       |                  |         |         |               |       |     | 7200   | 60                                 | 0.47                 | 3.78  |
| 65-A                      | 65                            | 208        | 273     |         |         | 18      | 2       | 1.5     | -       | 8       | 5       |                  |         |         |               |       |     | 8000   | 45                                 | 0.55                 | 4.12  |
| <b>TGS8000</b> -10-A ●●●  | 10                            | 80         | 90      |         |         | -       |         | -       |         | -       | -       |                  |         |         |               |       |     | 10500  | 300                                | 0.17                 | 3.29  |
| 16-A ●●●                  | 16                            | 100        | 116     |         |         | 21      |         | 1.5     |         | -       | -       | M8 x 12<br>(4x)  | 52      | M8      | 182<br>(18.2) | 8000  |     | 10800  | 190                                | 0.25                 | 3.94  |
| 25-A                      | 25                            | 120        | 145     | 95      | 75      | 21      | 2       | 1.5     | -       | 8       | 5       |                  |         |         |               |       |     | 11500  | 120                                | 0.36                 | 4.50  |
| 32-A                      | 32                            | 150        | 182     |         |         | 21      | 2       | 1.5     | -       | 8       | 5       |                  |         |         |               |       |     | 11500  | 90                                 | 0.54                 | 5.05  |
| 40-A                      | 40                            | 170        | 210     |         |         | 21      | 2       | 1.5     | -       | 8       | 5       |                  |         |         |               |       |     | 11600  | 75                                 | 0.66                 | 5.46  |
| 50-A                      | 50                            | 205        | 255     |         |         | 21      | 2       | 1.5     | -       | 8       | 5       |                  |         |         |               |       |     | 11600  | 60                                 | 0.88                 | 6.14  |
| 65-A                      | 65                            | 214        | 279     |         |         | 21      | 2       | 1.5     | -       | 8       | 5       |                  |         |         |               |       |     | 12500  | 45                                 | 0.96                 | 6.46  |
| <b>TGS12000</b> -10-A ●●● | 10                            | 90         | 100     |         |         | -       |         | -       |         | -       | -       |                  |         |         |               |       |     | 15500  | 300                                | 0.25                 | 6.22  |
| 16-A ●●●                  | 16                            | 110        | 126     |         |         | 22.5    |         | 2.5     |         | -       | -       | M10 x 15<br>(4x) | 68      | M8      | 189<br>(18.9) | 12000 |     | 16500  | 190                                | 0.35                 | 7.45  |
| 25-A                      | 25                            | 130        | 155     | 120     | 90      | 22.5    | 2       | 2.5     | -       | 8       | 5       |                  |         |         |               |       |     | 17000  | 120                                | 0.49                 | 8.59  |
| 32-A                      | 32                            | 155        | 187     |         |         | 22.5    | 2       | 2.5     | -       | 8       | 5       |                  |         |         |               |       |     | 17000  | 90                                 | 0.70                 | 9.48  |
| 40-A                      | 40                            | 180        | 220     |         |         | 22.5    | 2       | 2.5     | -       | 8       | 5       |                  |         |         |               |       |     | 17000  | 75                                 | 0.92                 | 10.41 |
| 50-A ●●                   | 50                            | 210        | 260     |         |         | 22.5    | 2       | 2.5     | -       | 8       | 5       |                  |         |         |               |       |     | 16500  | 60                                 | 1.19                 | 11.52 |
| 65-A ●●                   | 65                            | 255        | 320     |         |         | 22.5    | 2       | 2.5     | -       | 8       | 5       |                  |         |         |               |       |     | 18000  | 45                                 | 1.59                 | 13.27 |

- Without lower (square) groove / Senza gola (quadrata) inferiore
- Without upper (round) groove / Senza gola (raggiata) superiore

●● The gas spring models for which the CE symbol is indicated have an internal gas volume > 1 litre. They fall into Category II of the 2014/68/EU Pressure Equipment Directive (PED).

All the other gas spring models in this table are in accordance with Article 4.3 of the 2014/68/EU Pressure Equipment Directive (PED).

I modelli di cilindri per i quali è indicato il simbolo CE hanno un volume interno del gas > 1 litro. Rientrano nella Categoria II della Direttiva Apparecchi a Pressione (PED) 2014/68/UE.

Tutti i gli altri modelli di cilindri in questa tabella sono in accordo con l'Articolo 4.3 della Direttiva Apparecchi a Pressione (PED) 2014/68/UE.

## REPAIR KIT / KIT DI RIPARAZIONE

| Gas spring code<br>Codice cilindro | Repair kit code<br>Codice kit di riparazione |
|------------------------------------|--|
| TGS400-...-A                       | <b>KR/TGS400-A</b>                           |
| TGS700-...-A                       | <b>KR/TGS700-A</b>                           |
| TGS1000-...-A                      | <b>KR/TGS1000-A</b>                          |
| TGS2000-...-A                      | <b>KR/TGS2000-A</b>                          |
| TGS3000-...-A                      | <b>KR/TGS3000-A</b>                          |
| TGS5000-...-A                      | <b>KR/TGS5000-A</b>                          |
| TGS8000-...-A                      | <b>KR/TGS8000-A</b>                          |
| TGS12000-...-A                     | <b>KR/TGS12000-A</b>                         |

Download repair instructions from [www.bordignon.com](http://www.bordignon.com) /

Scarica le istruzioni per la riparazione da [www.bordignon.com](http://www.bordignon.com)

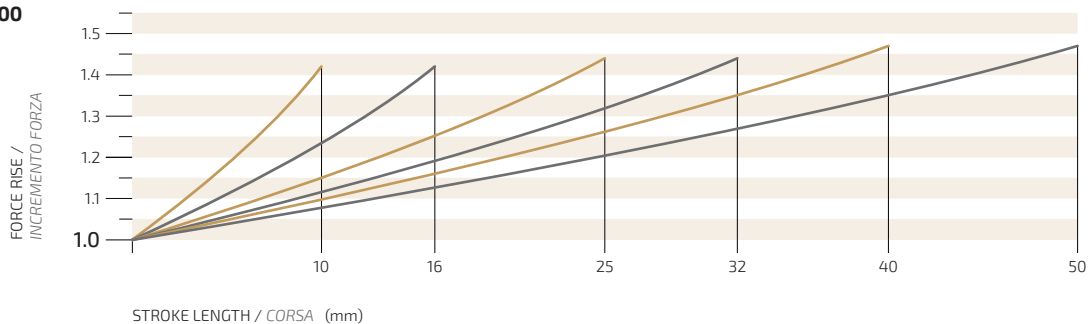
## FORCE RISE VS. USED STROKE LENGTH CHARTS

## GRAFICI INCREMENTO FORZA VS. CORSA UTILIZZATA

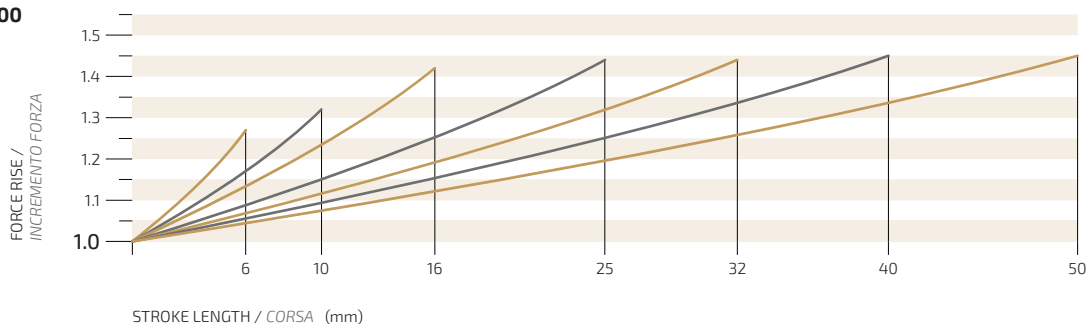
The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

Gli andamenti delle forze illustrati nei grafici seguenti sono ottenuti da valori di riferimento misurati in condizioni statiche. Le forze reali sviluppate in fase di utilizzo possono variare, in quanto dipendono dagli specifici parametri dell'applicazione, come ad esempio la velocità di lavoro (cicli al minuto).

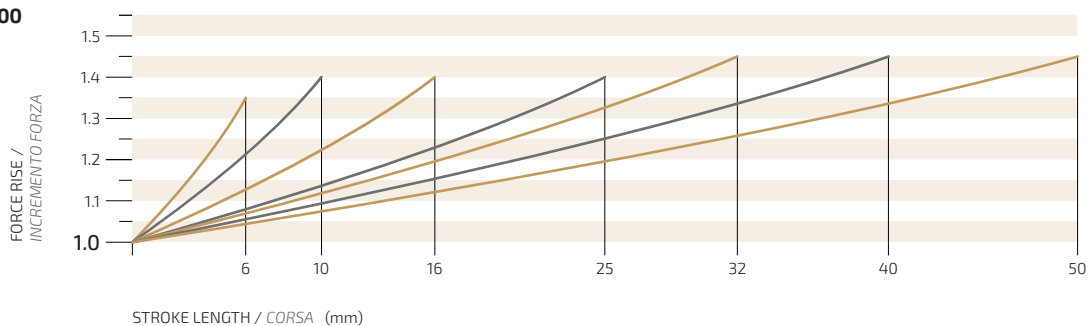
### TGS400



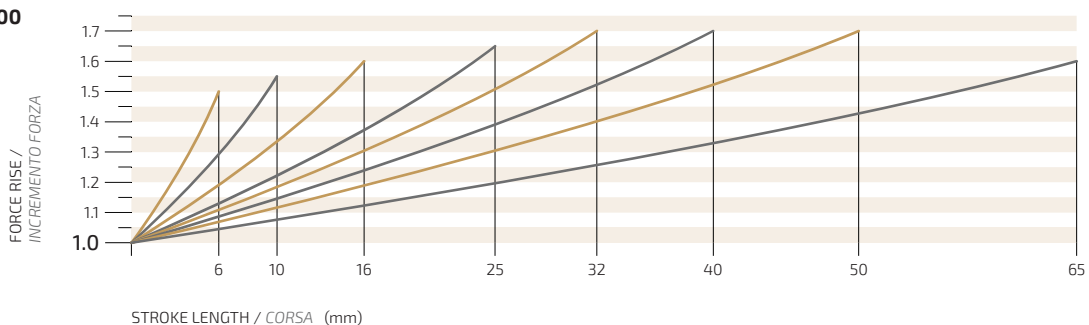
### TGS700



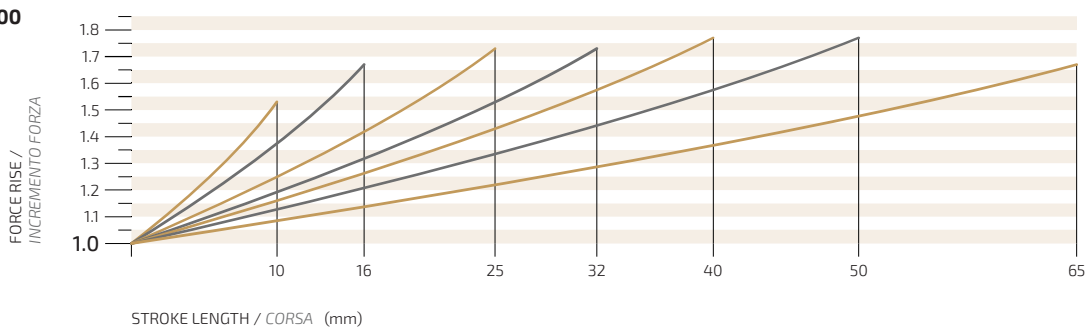
### TGS1000



### TGS2000



### TGS3000



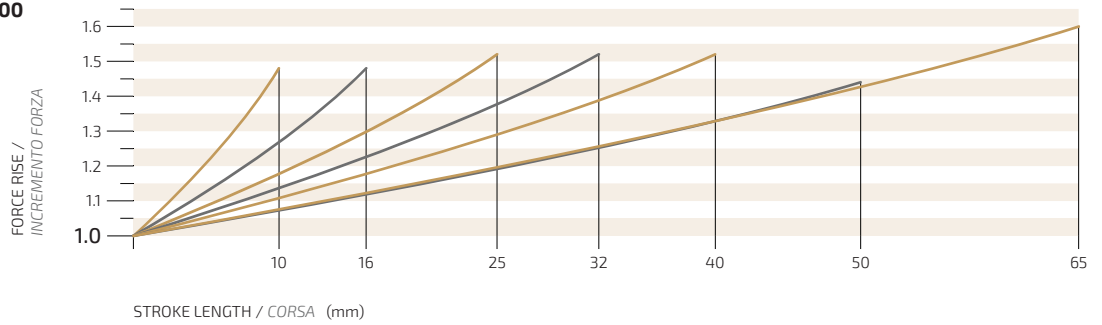
## FORCE RISE VS. USED STROKE LENGTH CHARTS

## GRAFICI INCREMENTO FORZA VS. CORSA UTILIZZATA

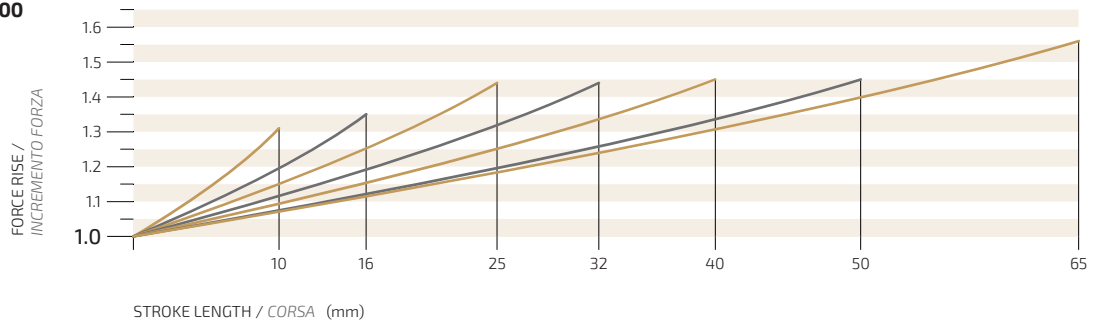
The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

*Gli andamenti delle forze illustrati nei grafici seguenti sono ottenuti da valori di riferimento misurati in condizioni statiche. Le forze reali sviluppate in fase di utilizzo possono variare, in quanto dipendono dagli specifici parametri dell'applicazione, come ad esempio la velocità di lavoro (cicli al minuto).*

### TGS5000



### TGS8000



### TGS12000

