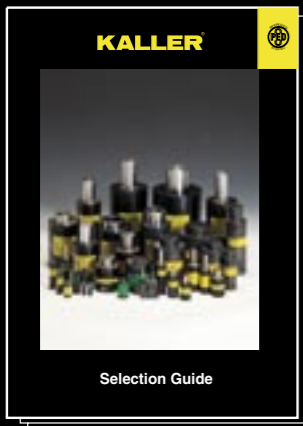


# KALLER®

## The Safer Choice



Selection Guide

### Gas Springs

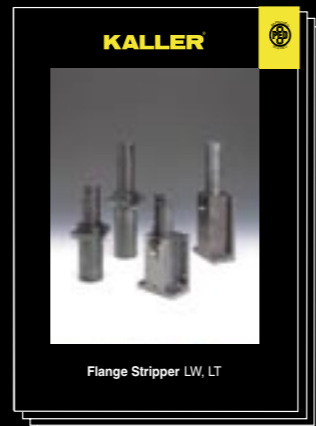
Kaller developed the first nitrogen gas spring for press tools and today offers a comprehensive selection of high quality gas springs for use in different tool & die applications.



Controllable Gas Spring - KF2

### Controllable Gas Springs-KF2

Kaller controllable springs are a family of gas springs, for use in press tools, that can be locked in their bottom position and where the return stroke of the spring can be controlled.



Flange Stripper LW, LT

### Flange Stripper Unit

Kaller Flange Stripper Unit is used in flanging dies for stripping/lifting a flanged part after forming. It provides 200 daN of stripping force, can be top or bottom mounted and is self guiding.



Flex Cam™

### Flex Cam™

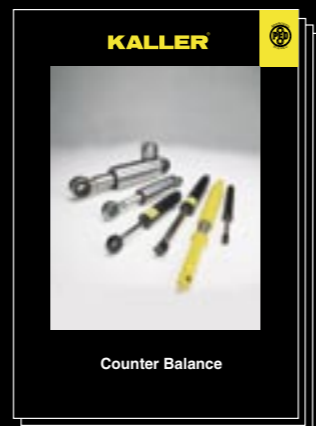
The Flex Cam is used for piercing, cutting, forming and flanging operations. The system allows for a flexible distribution of forces with optimal direction and velocity. By using a Flex Cam, fewer tools are required in production.



Roller Cam RC2, RCP2

### Roller Cam

Kaller Roller Cam is used for piercing, trimming, flanging and restriking. The Roller Cam can be mounted in both vertical and horizontal angles.



Counter Balance

### Counter Balance

Kaller Counter Balance gas springs can be used to lift, lower, assist, balance, and hold in a multitude of applications.



## Selection Guide



Box 216 • SE-573 23 Tranås • Sweden  
Phone +46 140-571 00 • Fax +46 140-571 99  
info@kaller.com • www.kaller.com



33280 Groesbeck Highway, Fraser,  
MI 48026  
Phone: +1 586 415 6677, Fax +1 586 415 6699

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With unique safety features

# KALLER®

## The Safer Choice

Gas Spring Selection Guide - December 2005



| Series     | Description  | Image | Gas Spring Model       | Available Stroke Lengths* (mm)  | Initial Force at Max Pressure |        | Total Length* (mm)      | Cylinder Diameter (mm) |
|------------|--|-------|------------------------|---|-------------------------------|--------|-------------------------|------------------------|
|            |  |       |                        |   | (daN)                         | (lbf)  |                         |                        |
| EP2        | <b>EP2 series:</b><br>Colour coded gas Ejector-Pins that are fully interchangeable with mechanical spring plungers!  |       | EP2 16x1.5 <b>New!</b> | 10 - 125  | 40                            | 90     | 45 + (2 x Stroke)       | M16x1.5                |
|            |  |       | EP2 16x2 <b>New!</b>   | 10 - 125  | 40                            | 90     | 45 + (2 x Stroke)       | M16x2                  |
|            |  |       | EP2 24 <b>New!</b>     | 10 - 125  | 170                           | 380    | 45 + (2 x Stroke)       | M24x1.5                |
|            |  |       | EPS2 24 <b>New!</b>    | 10 - 125  | 170                           | 380    | 45 + (2 x Stroke)       | M24x1.5                |
| R12, R19   | <b>R12 &amp; R19 series:</b><br>Rod sealed and colour coded gas springs that are compact and fully adjustable!   |       | R12 6-50 <b>New!</b>   | 7 - 125   | 50                            | 110    | 42 or 42 + (2 x Stroke) | Ø 12                   |
|            |  |       | R12 XX <b>New!</b>     | 7 - 125   | 13-50                         | 30-110 | 42 or 45 + (2 x Stroke) | Ø 12                   |
|            |  |       | R19 30-90              | 7 - 125   | 90                            | 200    | 42 or 45 + (2 x Stroke) | Ø 19                   |
|            |  |       | R19 XX                 | 7 - 125   | 30-90                         | 70-200 | 42 or 45 + (2 x Stroke) | Ø 19                   |
| Mini       | <b>Mini series:</b><br>Repairable, colour coded and fully adjustable gas springs available with or without threaded cylinders!   |       | M2 50-200              | 10 - 125  | 200                           | 450    | 42 or 45 + (2 x Stroke) | Ø 25                   |
|            |  |       | MM2 50-200             | 10 - 125  | 200                           | 450    | 42 + (2 x Stroke)       | M28x1.5                |
|            |  |       | MC3 50-200             | 10 - 125  | 200                           | 450    | 50 + (2 x Stroke)       | Ø 32                   |
| CU         | <b>CU series:</b><br>Super-Compact gas springs that provide extreme forces with minimal Cylinder Diameters.  |       | CU 420                 | 6 - 50 <b>New!</b>  | 425                           | 960    | 56 - 195                | Ø 25                   |
|            |  |       | CU 740 <b>New!</b>     | 6 - 50  | 740                           | 1660   | 63 - 195                | Ø 32                   |
|            |  |       | CU 1000                | 6 - 50  | 1060                          | 2380   | 61 - 230                | Ø 38                   |
|            |  |       | CU 1800                | 6 - 50  | 1800                          | 4050   | 66 - 220                | Ø 50                   |
|            |  |       | CU 2900 <b>New!</b>    | 10 - 50   | 2950                          | 6630   | 85 - 205                | Ø 63                   |
|            |  |       | CU 4700                | 10 - 50   | 4700                          | 10570  | 80 - 240                | Ø 75                   |
|            |  |       | CU 7500                | 10 - 50   | 7500                          | 16860  | 90 - 255                | Ø 95                   |
|            |  |       | CU 11800               | 10 - 50   | 11800                         | 26530  | 100 - 260               | Ø 120                  |
|            |  |       | CU 18300               | 10 - 50   | 18300                         | 41140  | 110 - 270               | Ø 150                  |
| Power Line | <b>Power Line series:</b><br>The World's shortest, strongest and most advanced rod sealed gas springs!   |       | X 170 <b>New!</b>      | 7 - 125   | 170                           | 380    | 30 or 35 + (2 x Stroke) | Ø 19                   |
|            |  |       | X 320 <b>New!</b>      | 7 - 125   | 320                           | 720    | 30 or 35 + (2 x Stroke) | Ø 25                   |
|            |  |       | X 350                  | 10 - 125  | 360                           | 810    | 30 + (2 x Stroke)       | Ø 32                   |
|            |  |       | X 500                  | 10 - 125  | 470                           | 1060   | 30 + (2 x Stroke)       | Ø 38                   |
|            |  |       | X 750                  | 10 - 125  | 740                           | 1660   | 32 + (2 x Stroke)       | Ø 45                   |
|            |  |       | X 1000                 | 13 - 125  | 920                           | 2070   | 38 + (2 x Stroke)       | Ø 50                   |
|            |  |       | X 1500                 | 13 - 125  | 1500                          | 3370   | 44 + (2 x Stroke)       | Ø 63                   |
|            |  |       | X 2400                 | 16 - 125  | 2400                          | 5400   | 45 + (2 x Stroke)       | Ø 75                   |
|            |  |       | X 4200                 | 16 - 125  | 4200                          | 9440   | 58 + (2 x Stroke)       | Ø 95                   |
|            |  |       | X 6600                 | 16 - 125  | 6630                          | 14910  | 68 + (2 x Stroke)       | Ø 120                  |
| TU         | <b>TU series:</b><br>TU gas springs dimensions are the basis of the International Standards Organisation (ISO-11 901) for gas springs as well as the Ford WDX and GM M-1500 gas spring standards.              |       | TU 250                 | 10 - 125  | 265                           | 600    | 50 + (2 x Stroke)       | Ø 38                   |
|            |  |       | TU 500                 | 10 - 160  | 470                           | 14060  | 85 + (2 x Stroke)       | Ø 45                   |
|            |  |       | TU 750                 | 12.7 - 300  | 740                           | 1660   | 95 + (2 x Stroke)       | Ø 50                   |
|            |  |       | TU 1500                | 25 - 300  | 1500                          | 3370   | 110 + (2 x Stroke)      | Ø 75                   |
|            |  |       | TU 3000                | 25 - 300  | 3000                          | 6740   | 120 + (2 x Stroke)      | Ø 95                   |
|            |  |       | TU 5000                | 25 - 300  | 5000                          | 11240  | 140 + (2 x Stroke)      | Ø 120                  |
|            |  |       | TU 7500                | 25 - 300  | 7500                          | 16860  | 155 + (2 x Stroke)      | Ø 150                  |
| TB         | <b>TB series:</b><br>Low force increase version of the TU series, sharing the same Total Length but with larger Cylinder Diameters. These springs are ideal for deep draw forming tools.                       |       | TB 750                 | 12.7 - 300  | 740                           | 1660   | 95 + (2 x Stroke)       | Ø 75                   |
|            |  |       | TB 1500                | 25 - 300  | 1500                          | 3370   | 110 + (2 x Stroke)      | Ø 95                   |
|            |  |       | TB 3000                | 25 - 300  | 3000                          | 6740   | 120 + (2 x Stroke)      | Ø 120                  |
|            |  |       | TB 5000                | 25 - 300  | 5000                          | 11240  | 140 + (2 x Stroke)      | Ø 150                  |
|            |  |       | SL                     | <b>SL series:</b><br>Same Initial Force and Cylinder Diameter as the TU series, but with inch based Total Lengths and Stroke Lengths! |                               | SL 750 | 12.7 - 127              | 740                    |
| SL 1500    | 12.7 - 152.4   | 1500  |                        |   |                               | 3370   | 101.6 + (2 x Stroke)    | Ø 75                   |
| SL 3000    | 12.7 - 177.8   | 3000  |                        |   |                               | 6740   | 101.6 + (2 x Stroke)    | Ø 95                   |
| SL 5000    | 12.7 - 203.2   | 5000  |                        |   |                               | 11240  | 101.6 + (2 x Stroke)    | Ø 120                  |
| LCF        | <b>LCF series:</b><br>These innovative Low Contact Force series of gas spring are 100% interchangeable with ISO gas springs (i.e. our TU series) and reduce shock loads, noise levels and pad bounce problems. |       | LCF 750                | 12.7 - 300  | 470                           | 1060   | 95 + (2 x Stroke)       | Ø 50                   |
|            |  |       | LCF 1500               | 25 - 300  | 700                           | 1570   | 110 + (2 x Stroke)      | Ø 75                   |
|            |  |       | LCF 3000               | 25 - 300  | 1600                          | 3600   | 120 + (2 x Stroke)      | Ø 95                   |
|            |  |       | LCF 5000               | 25 - 300  | 2500                          | 5620   | 140 + (2 x Stroke)      | Ø 120                  |
|            |  |       | LCF 7500               | 25 - 300  | 3000                          | 6740   | 155 + (2 x Stroke)      | Ø 150                  |
| HT         | <b>HT series:</b><br>High Temperature gas springs for applications with working temperatures up to 180°C!  |       | HT 250                 | 10 - 100  | 210                           | 470    | 50 + (2 x Stroke)       | Ø 38                   |
|            |  |       | HTM 250                | 10 - 100  | 210                           | 470    | 50 + (2 x Stroke)       | M38x1.5                |
|            |  |       | HT 750                 | 12.7 - 300  | 590                           | 1330   | 95 + (2 x Stroke)       | Ø 50                   |
| HG         | <b>HG series:</b><br>Hollow Gas springs that have a hole bored right through the centre axis of the spring, allowing for pillar or rod mounting!   |       | HG 270                 | 16 - 80   | 250                           | 560    | 76 + (2 x Stroke)       | Ø 38                   |
|            |  |       | HG 490                 | 16 - 80   | 470                           | 1060   | 80 + (2 x Stroke)       | Ø 50                   |
|            |  |       | HG 1060                | 16 - 100  | 1030                          | 2320   | 90 + (2 x Stroke)       | Ø 75                   |

### Other KALLER Products



**Flex Cam™**  
The Flex Cam is used for piercing, cutting, forming and flanging operations. The system allows for a flexible distribution of forces with optimal direction and velocity. By using a Flex Cam, fewer tools are required in production.



**Controllable Gas Springs-KF2**  
Kaller Controllable Springs (Patented product) are a family of gas springs, for use in press tools, that can be locked in their bottom position and where the return stroke of the spring can be controlled.



**Roller Cam - RC2, RCP2**  
Kaller Roller Cam is used for piercing, trimming, flanging and restriking. The Roller Cam can be mounted in both vertical and horizontal planes.



**Stock Lifters & Flange Strippers**  
Kaller Stock Lifters and Flange Strippers are used in transfer and progression dies to provide self-guiding, non-rotating and easily adjustable lifting or stripping forces.

### Sales & Service World - Wide



For more information see our website

[www.kaller.com](http://www.kaller.com)

\*For more information see main catalogue

Note: 1" = 25.4 mm 1 daN ≈ 1 kgf 1 daN ≈ 2.25 lbf 1 bar = 14.5 psi