

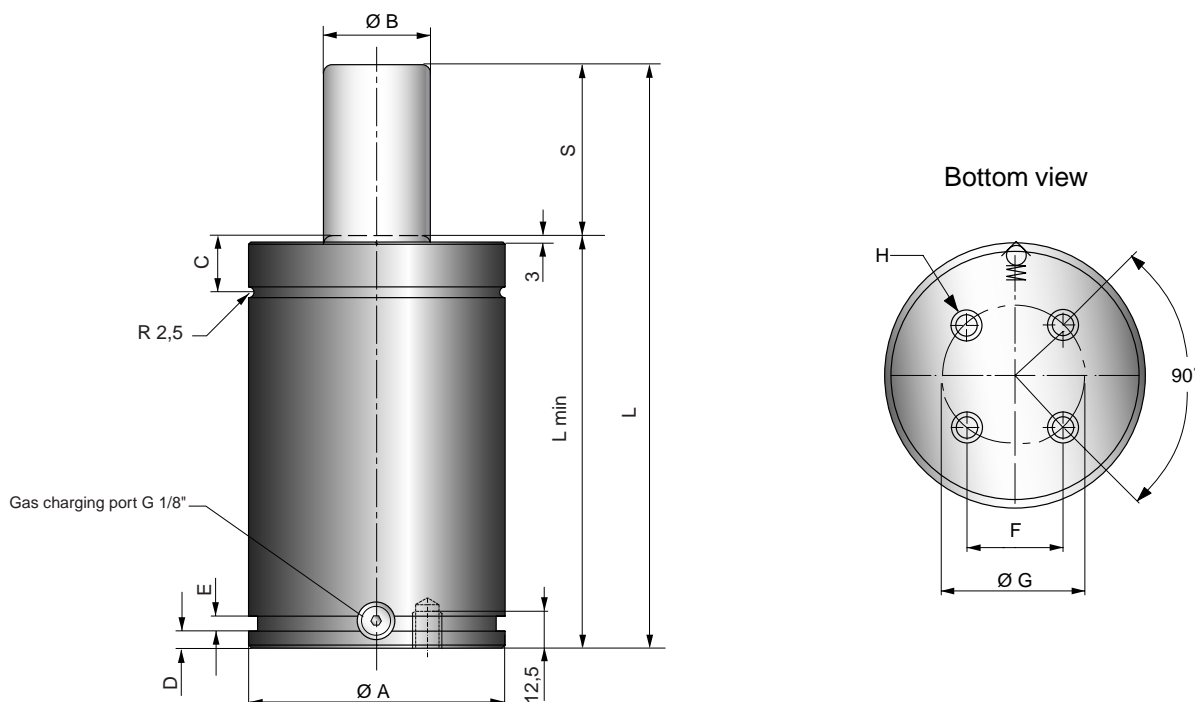
# KALLER<sup>®</sup>

## GAS SPRINGS



**TB 750-5000**

## Dimensions



Order No.	S Stroke	Force in N at 150 bar/ +20°C		L + 0,25	L min	$\varnothing A$ $\varnothing A$ + 0,1	$\varnothing B$	C	D	E	F	$\varnothing G$	H
		Initial	Max.										
TB 750-013	12,7	7400	9500	120,4	107,7	75,2	25	21	8	7	28,3	40	M8
TB 750-025	25		9000	145	120								
TB 750-038	38,1		9000	171,2	133,1								
TB 750-050	50		8900	195	145								
TB 750-064	63,5		8800	222	158,5								
TB 750-080	80		8800	255	175								
TB 750-100	100		8800	295	195								
TB 750-125	125		8800	345	220								
TB 750-160	160	8800	415	255									
TB 1500-025	25	15000	19000	160	135	95,2	36	24	8	7	42,4	60	M8
TB 1500-038	38,1		19000	186,2	148,1								
TB 1500-050	50		19000	210	160								
TB 1500-064	63,5		19000	237	173,5								
TB 1500-080	80		19000	270	190								
TB 1500-100	100		19000	310	210								
TB 1500-125	125		19000	360	235								
TB 1500-160	160		19000	430	270								
TB 3000-025	25	30000	39000	170	145	120,2	50	25,5	8	7	56,6	80	M10
TB 3000-038	38,1		39000	196,2	158,1								
TB 3000-050	50		39000	220	170								
TB 3000-064	63,5		40000	247	183,5								
TB 3000-080	80		40000	280	200								
TB 3000-100	100		39000	320	220								
TB 3000-125	125		39000	370	245								
TB 3000-160	160		39000	440	280								
TB 5000-025	25	50000	70000	190	165	150,2	65	27,5	8	8	70,7	100	M10
TB 5000-038	38,1		69000	216,2	178,1								
TB 5000-050	50		69000	240	190								
TB 5000-064	63,5		69000	267	203,5								
TB 5000-080	80		69000	300	220								
TB 5000-100	100		69000	340	240								
TB 5000-125	125		69000	390	265								
TB 5000-160	160		69000	460	300								

## Basic Information

- TB springs have a larger gas volume than our standard TU series. This reduces the pressure increase when the piston rod is depressed, which directly increases the service life.
- TB springs are recommended for draw dies where more constant blankholding force is beneficial. TB springs are also a good choice for higher cycle rates and tools that stamp over two million parts per year.

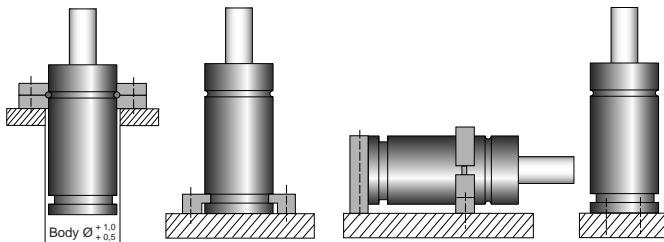
Pressure medium ..... Nitrogen  
 Max. charging pressure ..... 150 bar  
 Min. charging pressure ..... 50 bar  
 Operating temperature ..... 0 - +80°C  
 Force increase by temperature ..... ±0,3%/°C  
 Recommended max strokes/min ..... ~ 35 (at 20° C)

Surface:

Tube ..... Black Oxide  
 Rod ..... Chromium plated

All dimensions are stated in mm.  
 All dimensions are nominal unless tolerance is stated.

## Mounting possibilities



**FC, FCS,  
 FS, FAC,  
 FVC**  
 Top mount

**K, KU, FF,  
 FU, FX**  
 Foot mount

**SA, S**  
 Body mount

**B, MP**  
 Bottom

## Initial force

Calculation of filling pressure for TB, to achieve desired initial force:

X = Desired initial force in N

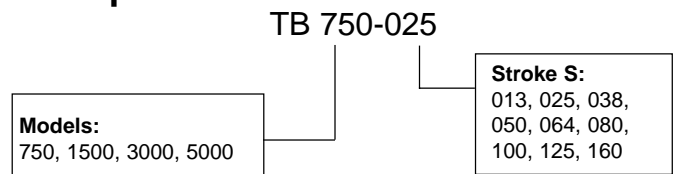
$$\text{Filling pressure} = 150 \cdot \frac{X}{\text{Initial force at 150 bar}}$$

*Example:* A TB 3000 spring to have a desired initial force of 25000 N

$$\text{Filling pressure} = 150 \cdot \frac{25000}{30000} \approx 125 \text{ bar}$$

## How to order

**Example:**



# KALLER<sup>®</sup>

## World Leader

### In Gas Springs for Metal Forming



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We reserves the right to modify components without notification.