



TPNSR gas springs are characterised by two functions:

- ▶ Reduction of initial working stroke force
- ▶ Reduction of stem speed during the expansion in the final stroke phase (Si)

MICRO

TITAN

TPH

TPS

TPSP

TPF

TPK

TPC

TPCT

TPB

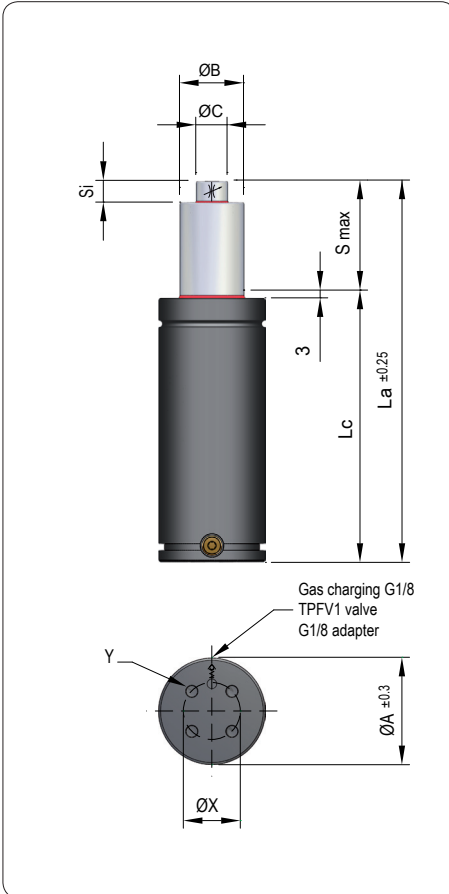
TPR

TPA

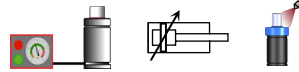
TPSR

TPSRS

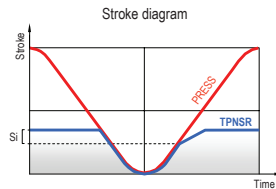
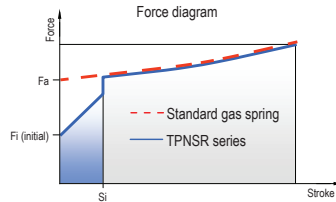
**TPNS**



Pressure medium	<b>Gas Nitrógeno (N<sub>2</sub>)</b>
Max. charging pressure	<b>150 Bar</b>
Min. charging pressure	<b>50 Bar</b>
Operating temperature	<b>0°C - 80°C</b>
Force increase by temperature	<b>0,33 %/°C</b>
Max. stem speed	<b>1 m/s</b>



### Operation graph



Code	Smax mm	La mm	Lc mm	Fi daN	Fa daN	Fc daN	Si mm	$\varnothing A$ mm	$\varnothing B$ mm	$\varnothing C$ mm	$\varnothing X$ mm	Y	P Bar	spm
TPNSR 1500x125	125	360	235	750	1500	≈ 2200	15	75	45	22	40	4 x M8	95 (20°C)	22
TPNSR 1500x160	160	430	270		±5% (20°C)									18
TPNSR 1500x200	200	510	310											14
TPNSR 3000x125	125	370	245	1200	3000	≈ 4500	24	95	60	32	60	4 x M8	105 (20°C)	18
TPNSR 3000x160	160	440	280		±5% (20°C)									15
TPNSR 3000x200	200	520	320											12

### Assembly possibilities

