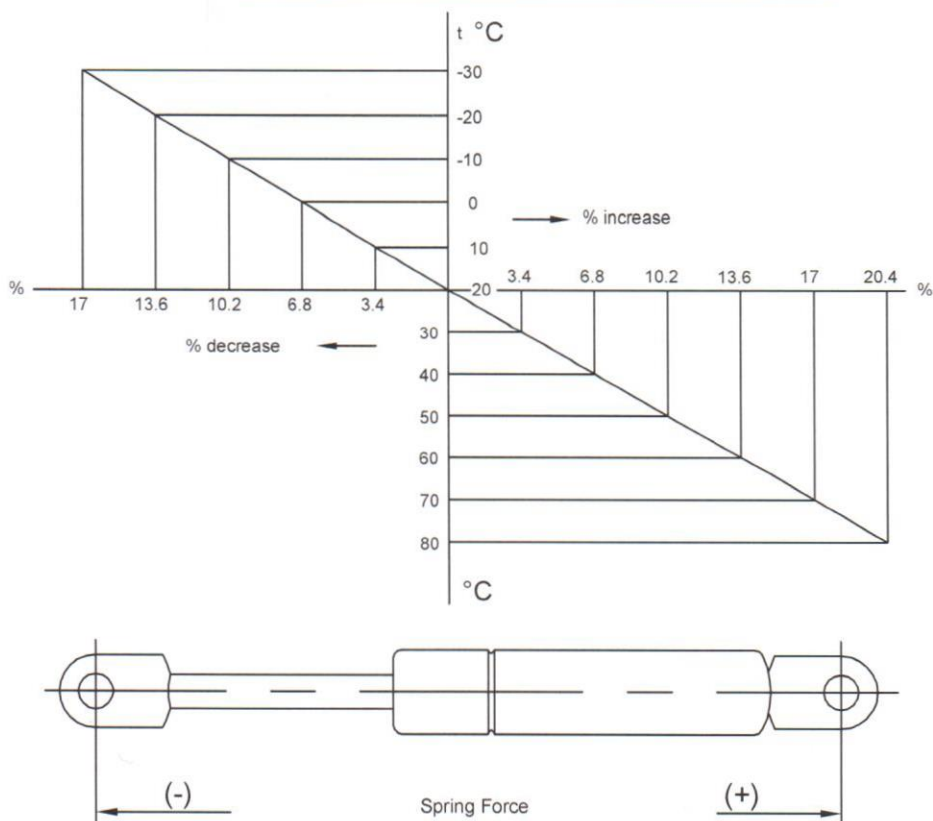


FORCE VARIATION WITH TEMPERATURE



Gas springs are manufactured at a temperature of 20°C

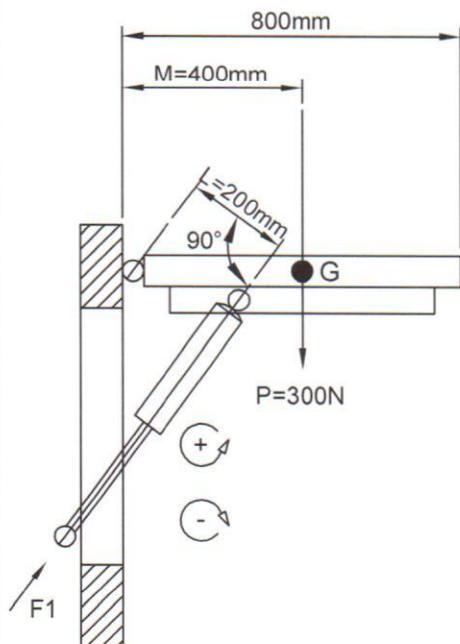
Compressed gas react very strongly to temperature changes

So that the spring force rises and falls according to the temperature variation

The above diagram shows how many percent the gas spring forces deviate from the standart filling pressure

3.4%per 10°C variation from the nominal temperature

CALCULATION OF GAS SPRING FORCE



- G: CENTRE OF GRAVITY
- M: HORIZONTAL DISTANCE FROM CENTRE OF GRAVITY TO PIVOT CENTRE
- X: NUMBER OF GAS SPRING
- P: WEIGHT OF FLAP
- F1: GAS SPRING FORCE
- L: DISTANCE FROM THE GAS SPRING TO PIVOT CENTRE

$$F1(N) = \frac{P \cdot M}{X \cdot L} + (10 \sim 15\%)$$

$$F1(N) = \frac{300N \times 400mm}{2 \times 200mm} + \%10 = 330N$$

$$F1 = 330N$$