Spring elements

System springs

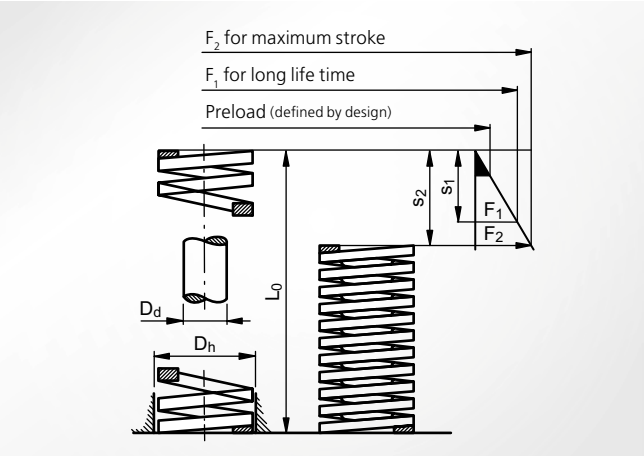
* ISO 10243

STEINEL system springs are available in eight types of load, as well as various diameters and lengths. Types of load are colour-marked so that they can be immediately told apart.

Technical features

- alloyed valve spring steel
- heat-treated
- shot-blasted
- set
- powder-coated
- Application up to 180°C
- Forces up to 4500 daN over the maximum stroke

General spring characteristic image

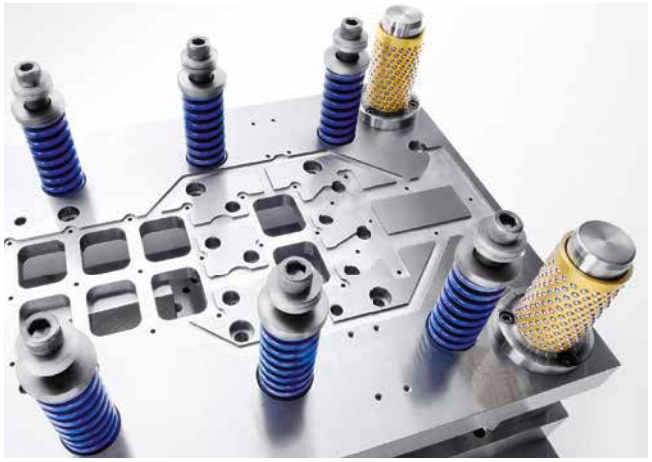
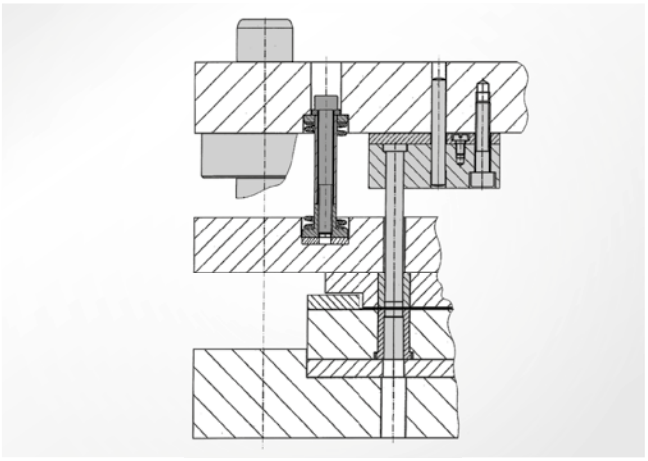


The "long life time" is recommended for the optimal design of the spring. The data on the maximum stroke can be found on the corresponding product pages. The tolerances for the length L_0 of the unloaded spring are ±1 %, at least ±0.75 mm.

D_d = Pin diameter in mm (inner guide)
D_H = Sleeve diameter in mm (outer guide)
F_1 and F_2 = Spring forces in N assigned to stroke s_1 and s_2
L_0 = Length of the unloaded spring in mm
s_1 and s_2 = Strokes in mm assigned to the spring forces F_1 and F_2

c = Spring rate in N/mm (Force increase per stroke)

System spring units

In addition to the standardised system springs, all components for pre-loaded system spring units are also available; this ensures a perfectly coordinated, ready-to-install combination.

System spring units in the tool