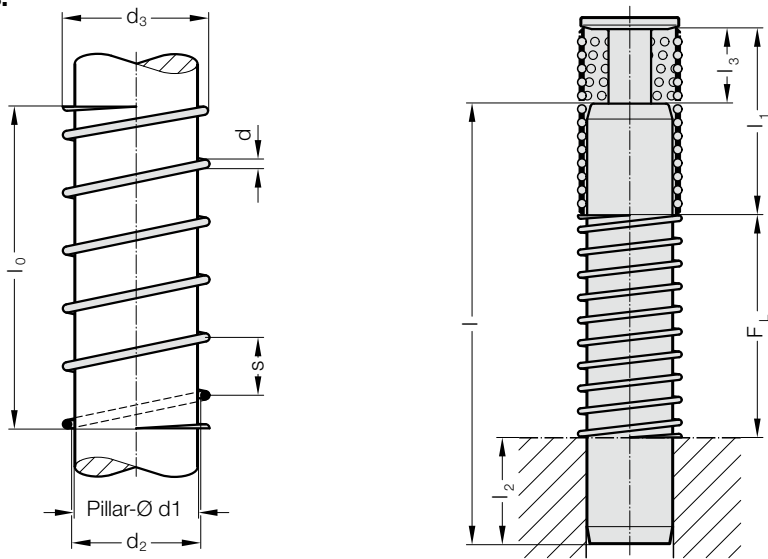


HELICAL SPRING FOR BALL CAGE RETENTION

241.18.



241.18. Helical spring for ball cage retention

d ₁	d ₂	d ₃	s	d	l ₀	Gradation l ₀
19/20	20.5	22.5	14	1	40 - 140	10
24/25	25.5	27.9	14	1.2	40 - 160	10
30/32	32.5	35.7	16	1.6	50 - 230	10
38	38.5	42.5	18	2	60 - 230	10
40	40.5	45.1	20	2.3	60 - 230	10
48/50	50.5	55.7	20	2.6	70 - 280	10
60	60.5	66.9	20	3.2	80 - 250	10
63	63.5	69.9	20	3.2	80 - 250	10

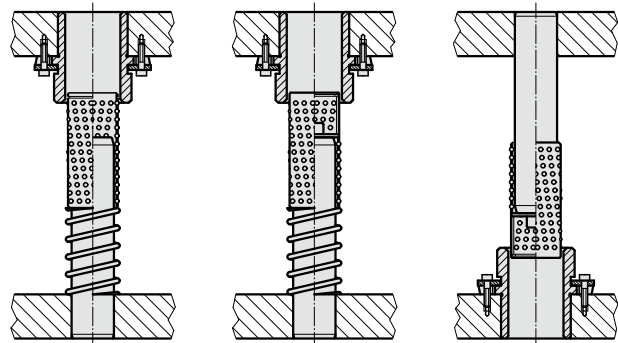
Calculation:

Formula for selecting spring 241.18.:
 $F_L = [l - (l_2 + (l_1 - l_3))] \times 1,1$
Formula for calculating the block length L_{BL} of the selected spring:
 $L_{BL} = (l_0 \times d : s) + 2 \times d$
F_L = Length of compressed spring
l = Length of guide pillar (Customer specified)
l₁ = Cage length (Customer specified)
l₂ = Compression length of guide pillar (Customer specified)
l₃ = Ball cage retainer size (Customer specified)
1.1 = Safety factor
l₀ = Length of uncompressed spring
d = Spring wire diameter
s = Pitch

Ordering Code (example):

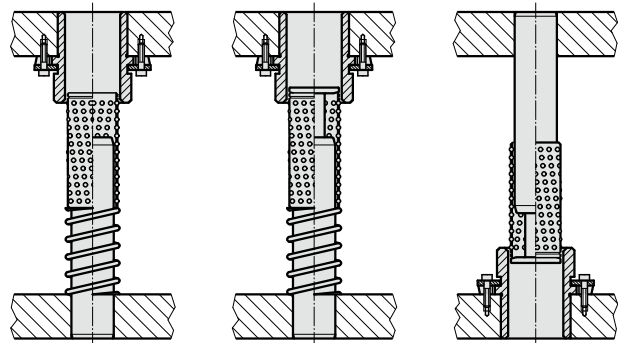
Helical spring for ball cage retention	=	241.18.
Inner diameter d ₂	40.5 mm	= 405.
Length l ₀	60 mm	= 060
Order No	=	241.18. 405.060

Mounting example



Without ball cage retainer
With ball cage retainer 202.92.1.
With ball cage retainer 202.92.1.

Mounting example



Without ball cage retainer
With ball cage retainer 202.91.
With ball cage retainer 202.91.