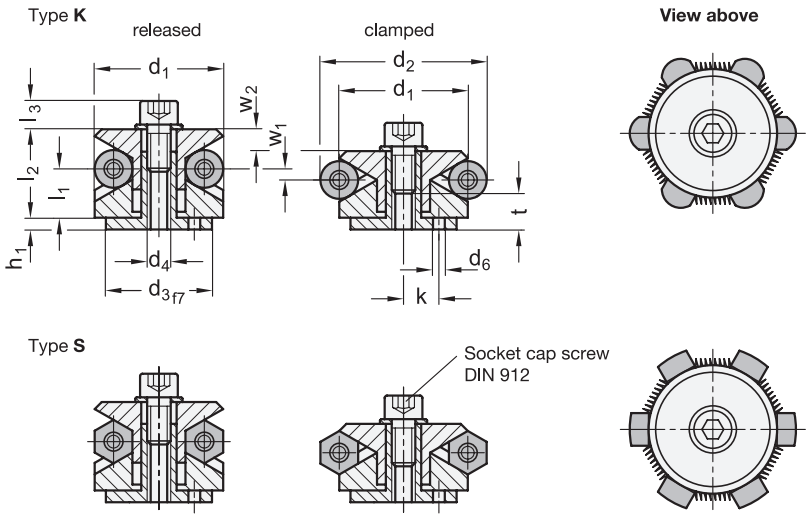


Metric

2 Type

K With clamping balls
S With clamping segments

Specification

- Clamp body
  Steel
  - Hardened
  - Blackened finish
- Clamping balls / segments
  - Hardened
  - Plain finish, ground
- *ISO Fundamental Tolerances → page QVX*
- RoHS compliant

On request

- Centering bore clamps GN 411.3 operable from the opposite side respectively for hydraulic or pneumatic operation
- Centering bore clamps with 2 clamping elements for clamping tubes

Information

With GN 411.2 centering bore clamps, workpieces can be centrally positioned and clamped from the inside of the bore.

They offer the following advantages:

- Precise self centering
- Repetitive accuracy: ± 0.025 mm
- Accuracy of concentricity: ± 0.05 mm
- Solid and stable clamping through either 3 or 6 contact points on the workpiece
- Clamping of workpieces with uneven or irregular surface (such as castings)
- Distortion free clamping
- Reduced height
- Can be mounted in any position
- Large adjustable range
- Draw-down clamping

How to order		
GN 411.2-30.5-K (1 2)	1	Diameter d_1
	2	Type

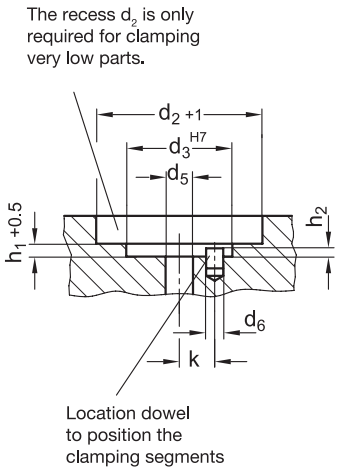
Metric table

Dimensions in: millimeters - *inches*

d_1	d_2 Clamping Ø	d_3	d_4	d_5	d_6	h_1	h_2	k ±0.1	l_1	l_2	l_3	t min.	w_1	w_2	Number of clamping elements	Max. clamping force F
11.7* *0.46*	14.2 *0.56*	10 *0.39*	M 4	4.3 *0.17*	1.5 *0.06*	3.5 *0.14*	2.5 *0.10*	3.5 *0.14*	3.9 *0.15*	8.6 *0.34*	6.3 *0.25*	4 *0.16*	0.7 *0.03*	1.3 *0.05*	3 *0.12*	0.5 kN *112 lbf*
14.5 *0.57*	18.5 *0.73*	12 *0.47*	M 4	4.3 *0.17*	2 *0.08*	5.5 *0.22*	3.5 *0.14*	4.5 *0.18*	9.8 *0.39*	14.2 *0.56*	5 *0.20*	6 *0.24*	1.2 *0.05*	2.3 *0.09*	3 *0.12*	3.5 kN *787 lbf*
18.5 *0.73*	22.5 *0.89*	15 *0.59*	M 5	5.3 *0.21*	2.5 *0.10*	7.5 *0.30*	3 *0.12*	5.5 *0.22*	11.5 *0.45*	16.5 *0.65*	6.2 *0.24*	7 *0.28*	1.2 *0.05*	2.3 *0.09*	3 *0.12*	4 kN *899 lbf*
22.5 *0.89*	26.5 *1.04*	20 *0.79*	M 6	6.4 *0.25*	3 *0.12*	6 *0.24*	4 *0.16*	7 *0.28*	14.1 *0.56*	19.6 *0.77*	9 *0.35*	8 *0.31*	1.2 *0.05*	2.3 *0.09*	3 *0.12*	4.5 kN *1012 lbf*
26.5 *1.04*	30.5 *1.20*	20 *0.79*	M 6	6.4 *0.25*	3 *0.12*	6 *0.24*	4.5 *0.18*	7 *0.28*	14.1 *0.56*	19.8 *0.78*	9 *0.35*	8 *0.31*	1.2 *0.05*	2.3 *0.09*	3 *0.12*	4.5 kN *1012 lbf*
30.5 *1.20*	38.5 *1.52*	25 *0.98*	M 6	6.4 *0.25*	4 *0.16*	7 *0.28*	4.5 *0.18*	9 *0.35*	14.1 *0.56*	23.2 *0.91*	9 *0.35*	8 *0.31*	2.3 *0.09*	4.6 *0.18*	3 *0.12*	4.5 kN *1012 lbf*
38.5 *1.52*	46.5 *1.83*	30 *1.18*	M 8	8.4 *0.33*	4 *0.16*	7.5 *0.30*	4.5 *0.18*	11 *0.43*	18 *0.71*	27.2 *1.07*	12 *0.47*	10 *0.39*	2.3 *0.09*	4.6 *0.18*	6 *0.24*	6.5 kN *1461 lbf*
46.5 *1.83*	54.5 *2.15*	30 *1.18*	M 8	8.4 *0.33*	4 *0.16*	7.5 *0.30*	4.5 *0.18*	11 *0.43*	18 *0.71*	27.1 *1.07*	12 *0.47*	10 *0.39*	2.3 *0.09*	4.6 *0.18*	6 *0.24*	6.5 kN *1461 lbf*
54.5 *2.15*	70.5 *2.78*	45 *1.77*	M 10	10.5 *0.41*	5 *0.20*	9 *0.35*	5.5 *0.22*	15 *0.59*	23.7 *0.93*	40.6 *1.60*	14 *0.55*	12 *0.47*	4.7 *0.19*	9.2 *0.36*	6 *0.24*	8 kN *1798 lbf*
70.5 *2.78*	86.5 *3.41*	60 *2.36*	M 12	13 *0.51*	5 *0.20*	10 *0.39*	5.5 *0.22*	17 *0.67*	28.3 *1.11*	46.1 *1.81*	17 *0.67*	15 *0.59*	4.7 *0.19*	9.2 *0.36*	6 *0.24*	10 kN *2248 lbf*
86.5 *3.41*	102.5 *4.04*	60 *2.36*	M 16	17 *0.67*	5 *0.20*	10 *0.39*	5.5 *0.22*	25 *0.98*	30.3 *1.19*	51.2 *2.02*	21 *0.83*	15 *0.59*	4.7 *0.19*	9.2 *0.36*	6 *0.24*	12.5 kN *2810 lbf*

*This size is only available as type K

Dimensions



Operating principle

A circular ball cage containing 3 or 6 balls is forced outwards over an accurately guided cone by means of a screw which, through the exerted thrust, will enlarge the outside diameter of the circular ball cage. This in turn will lead to a firm contact between the centring clamp and bore of the workpiece.

Type K (with balls) is used for clamping applications where minor ball marks at the contact points with the workpiece are acceptable. Type S (with clamping segments) is used in such cases where marks at the clamping points on the workpiece would be acceptable.