

Type **K** with clamping balls

Type **S** with clamping segments

d ₁	d _s Clamping-∅		d ₂ g6 / H7	d ₃	d ₄	d ₅	h ₁	h ₂	k ± 0,1	l ₁		l ₂		l ₃	t min.	Number of clamping points	Clamping force [kN]
	min.	max.								min.	max.	min.	max.				
11,7 ¹⁾	11,7	14,2	10	M 3	3,3	1,5	2,5	2,5	3,5	7,2	7,8	9	10,5	4	5	3	0,75
14,5	14,5	18,5	12	M 4	4,3	2	2,5	3,5	4,5	5,9	7,1	9,8	12,1	5,5	5	3	3,5
18,5	18,5	22,5	15	M 5	5,3	2,5	3	3	5,5	8,4	9,6	12,3	14,6	7	6	3	4,5
22,5	22,5	26,5	20	M 6	6,4	3	3	4	7	11,4	12,6	15,3	17,6	8,8	7	3	5
26,5	26,5	30,5	20	M 6	6,4	3	3	4,5	7	11,4	12,6	15,3	17,6	8,8	7	3	5
30,5	30,5	38,5	25	M 6	6,4	4	3,5	4,5	9	10,3	12,7	17,1	21,7	8,8	9	3	5
38,5	38,5	46,5	30	M 8	8,4	4	3,5	5	11	12,7	15,1	19,5	24,1	11,5	8	6	6,5
46,5	46,5	54,5	30	M 8	8,4	4	3,5	5	11	12,7	15,1	19,5	24,1	11,5	8	6	6,5
54,5	54,5	70,5	45	M 10	10,5	5	5	7	11	16	20,7	28,4	37,7	13,5	15	6	8
70,5	70,5	86,5	60	M 12	13	5	5	9,5	17	20,6	25,3	33,3	42,6	16,5	20	6	10
86,5	86,5	102,5	60	M 12	13	5	5	9,5	17	20,6	25,3	33,3	42,6	16,5	20	6	10

Specification

Steel
hardened
blackened

Clamping balls / -segments
hardened
blank

ISO-Fundamental
Tolerances

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¹⁾ this size is only available
for type K

Information

With Centring bore clamps GN 411 workpieces can be centrally positioned and clamped from the inside of the bore.

In addition they offer the following advantages:

- Precise self centering
- Repetitive accuracy: ± 0,025
- Accuracy of concentricity: ± 0,025
- 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 fitted in any position
- Large adjustable clamping range
- Down force clamping

How to order

**Centring bore clamp
GN 411-30,5-K**

Code No. | | |
d₁ | | |
Type | | |



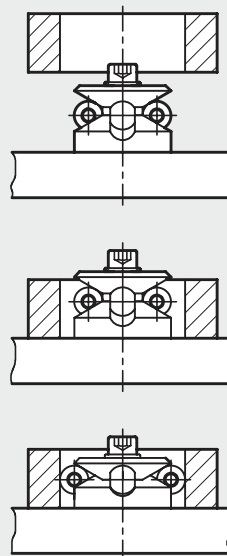
2.3

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 the bore of the workpiece.

Type K (with balls) is used for clamping applications where minute 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 not be acceptable.



Dimensions

