

- 2 Type**
K with clamping balls
S with clamping segments

1

d ₁	d _s Clamping-Ø		d ₂	d ₃	d ₄	d ₅	h ₁	h ₂	k ±0,1	l ₁		l ₂		l ₃	t min.	Number of clamping elements	Clamping force in kN
	min.	max.								min.	max.	min.	max.				
11,7*	11,7	14,2	10	M 4	3,3	1,5	3,5	2,5	3,5	3	4	8,5	10	3,5	6	3	0,5
14,5	14,5	18,5	12	M 4	4,3	2	5,5	3,5	4,5	7,9	9,5	11,8	14	5,6	6	3	3,5
18,5	18,5	22,5	15	M 5	5,3	2,5	7,5	3	5,5	10,4	11,6	14,3	16,5	7	10	3	4
22,5	22,5	26,5	20	M 6	6,4	3	6	4	7	13,9	14,1	17,3	19,6	9	10	3	4,5
26,5	26,5	30,5	20	M 6	6,4	3	6	4,5	7	13,9	14,1	17,3	19,6	9	10	3	4,5
30,5	30,5	38,5	25	M 6	6,4	4	7	4,5	9	12,8	14,2	18,5	23,1	9,2	12	3	4,5
38,5	38,5	46,5	30	M 8	8,4	4	7,5	4,5	11	15,7	17,8	22,5	27,1	10,5	13	6	6,5
46,5	46,5	54,5	30	M 8	8,4	4	7,5	4,5	11	15,7	18	22,5	27,2	10,5	13	6	6,5
54,5	54,5	70,5	45	M 10	10,5	5	9	5,5	15	19	23,7	31,4	40,6	13,5	14	6	8
70,5	70,5	86,5	60	M 12	13	5	10	5,5	17	23,6	28,3	36,8	46,1	16	16	6	10
86,5	86,5	102,5	60	M 16	13	5	10	5,5	25	23,6	30,2	41,7	51	16	16	6	12,5

* This size is only available as type K.

Specification

- Steel
 - hardened
 - blackened
- Clamping balls / -segments
 - hardened
 - blank, ground
- ISO-Fundamental Tolerances → page 1132
- RoHS compliant

On request

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

Information

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

They offer the following advantages:

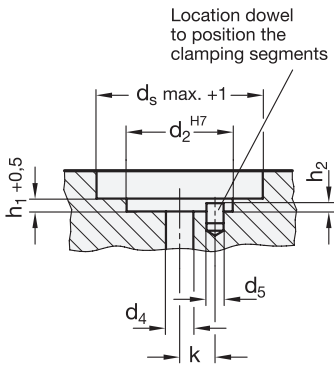
- Precise self centering
- Repetitive accuracy: ± 0,025
- Accuracy of concentricity: ± 0,05
- Solid and stable clamping through either 3 or 6 contact points on the workpiece
- Clamping of workpieces with uneven or irregular surface (such as castings)
- Distortion free clamping
- Reduced height
- Can be fitted in any position
- Large adjustable range
- Draw-down clamping

How to order	1	d ₁
	2	Type

GN 411.2-30,5-K



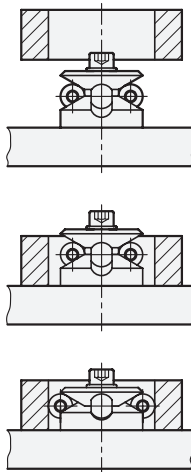
Dimensions



The recess d_5 is only required for clamping very low parts.

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 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 be acceptable.