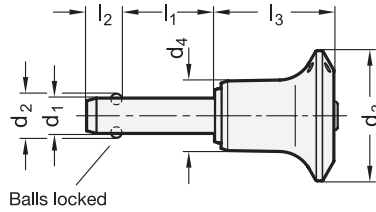
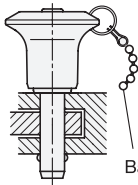


Bore for key ring  
(ball chain)

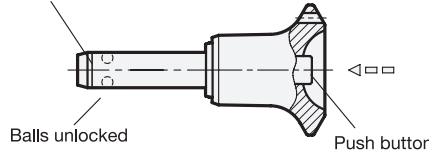


Application example



Ball chain GN 111

Marking for material  
AISI 630 (GN 113.10)



$d_1$ -0,04 -0,08	$l_1 + 0,6$														$d_2$	$d_3$	$d_4$	$l_2 \pm 1$	$l_3$ -0,2	Location bore H11	
5	10	15	20	25	30	35	40	45	50	60	70	80	-	-	-	5,5	23	10,2	6,2	20,2	5
6	10	15	20	25	30	35	40	45	50	60	70	80	-	-	-	7	23	10,2	7,2	20,2	6
8	10	15	20	25	30	35	40	45	50	60	70	80	90	100	-	9,5	27	13,2	8,4	26,8	8
10	15	20	25	30	35	40	45	50	60	70	80	90	100	110	120	12	27	13,2	9,9	26,8	10
12	20	25	30	35	40	45	50	60	70	80	90	100	110	120	-	14,5	31	16,4	10,9	32,7	12
16	30	35	40	45	50	60	70	80	90	100	110	120	130	140	150	19	38	23,4	14,5	42,6	16
20	50	60	70	80	90	100	110	120	130	140	150	-	-	-	-	24,8	38	23,4	17,4	42,6	20
25	50	60	70	80	90	100	110	120	130	140	150	-	-	-	-	30,8	50	30,4	22,3	54,3	25

**Specification**

- **GN 113.9**  
Pin stainless steel AISI 303
- **GN 113.10**  
Pin stainless steel AISI 630  
Precipitation-hardened
- Knob, push button  
Stainless steel AISI 316L
- Balls  
Stainless steel AISI 420C
- Pressure spring  
Stainless steel  
German material no. 1.4565
- *Load Capacity* → Page 2131
- *ISO Fundamental Tolerances* → Page 2151
- *Stainless Steel Characteristics* → Page 2166
- **RoHS**

**Accessory**

- Ball Chains GN 111 / GN 111.5 → Page 1174
- Retaining Cables GN 111.2 → Page 1176
- Spiral Retaining Cables GN 111.4  
→ Page 1175

**Information**

Ball lock pins GN 113.9 / GN 113.10 are used for quick fixing, connecting and locking of various parts and workpieces. A typical application is location pins which have to be often removed and replaced again.

By pressing the spring loaded push button both balls are unlocked and by releasing it, the balls are locked again.

Ball lock pins GN 113.10 have an extreme load capacity, the pin is made of heavy duty, hardened and highly abrasion-resistant stainless steel.

The technical appendix contains the load capacities for the double-sided shearing resistance (breaking strength).

see also...

- *List of Lock Pin Types* → Page 1008 ff.
- *Guide Bushings DIN 172 (Cylindrical, with Collar)* → Page 1112
- *Guide Bushings DIN 179 (Cylindrical, without Collar)* → Page 1112

How to order (Stainless steel AISI 303)	1	$d_1$
<b>GN 113.9-6-60</b>	2	$l_1$

How to order (Stainless steel AISI 630)	1	$d_1$
<b>GN 113.10-20-100</b>	2	$l_1$