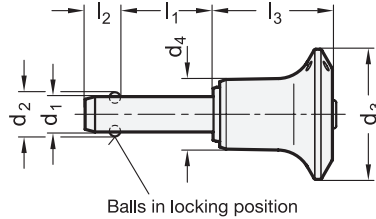


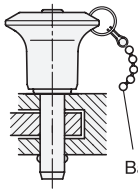
Bore for key ring  
(ball chain)



Balls in locking position

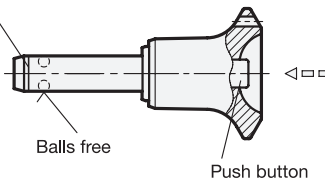


**Application example**



Ball chain GN 111

Marking for material no. AISI 630 (GN 113.10)



Balls free

Push button



$d_1$ -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**  
Plunger Stainless Steel AISI 303
- **GN 113.10**  
Plunger Stainless Steel AISI 630  
precipitation-hardened
- Knob, push button  
Stainless Steel AISI 316L
- Balls  
Stainless Steel AISI 420C
- Spring  
Stainless Steel German material no. 1.4565
- ISO-Fundamental tolerances → Page 1479
- Stainless Steel characteristics → Page 1489
- RoHS compliant

**Accessory**

- Ball chains GN 111 / GN 111.5
- Retaining cables GN 111.2
- Spiral retaining cables GN 111.4

**Information**

Stainless Steel-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.

see also...

- List of lock pin types → Page 746 ff.

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	$l_1$

