

## Ball lock pins



- **Pin and push button**  
AISI 303 stainless steel.
- **Knob**  
Polyamide based (PA) technopolymer, plastic, black-grey / red.
- **Balls**  
AISI 420 C stainless steel.
- **Spring**  
AISI S 34565 stainless steel.
- **Maximum working temperature**  
From -30 °C to +80 °C.

### Accessories on request

- Ball chains GN 111 (see page 360).
- Retaining cables GN 111.2 (see page 362).
- Spiral retaining cables GN 111.4 (see page 364).

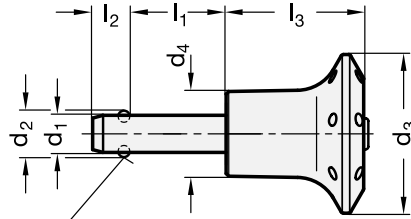
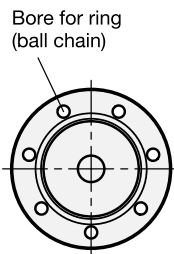
### Features and applications

Ball lock pins GN 113.5 are used for quick fixing, connecting and locking of various parts and workpieces. A typical application is locating pins which have often to be removed and installed again.

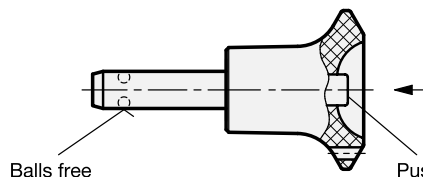
Ball lock pins GN 113.5 contrary to GN 113.6 are used for lighter duty applications with reduced stress for pins.

### Instructions of use

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



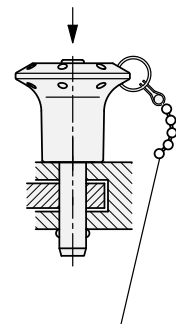
Balls in locking position



Balls free

Push button

Example for application



Ball chain GN 111

Standard Elements	Main dimensions							Location bore H11	Double sided shearing force in kN ≈	△△ g
	$d1_{-0.08}^{-0.04}$	$l1_{+0.6}$	d2	d3	d4	$l2_{\pm 0.2}$	$l3_{-0.2}$			
GN 113.5-5-10	5	10	5.5	30	16	6	26	5	14	17
GN 113.5-5-15	5	15	5.5	30	16	6	26	5	14	20
GN 113.5-5-20	5	20	5.5	30	16	6	26	5	14	20
GN 113.5-5-25	5	25	5.5	30	16	6	26	5	14	20
GN 113.5-5-30	5	30	5.5	30	16	6	26	5	14	20

Standard Elements	Main dimensions							Location bore H11	Double sided shearing force in kN $\approx$	$\Delta$
Description	$d1$ <sup>-0.04</sup> -0.08	$l1$ +0.6	$d2$	$d3$	$d4$	$l2$ $\pm 0.2$	$l3$ -0.2			g
GN 113.5-6-10	6	10	7	30	16	7.1	26	6	21	20
GN 113.5-6-15	6	15	7	30	16	7.1	26	6	21	19
GN 113.5-6-20	6	20	7	30	16	7.1	26	6	21	20
GN 113.5-6-25	6	25	7	30	16	7.1	26	6	21	20
GN 113.5-6-30	6	30	7	30	16	7.1	26	6	21	23
GN 113.5-6-35	6	35	7	30	16	7.1	26	6	21	20
GN 113.5-6-40	6	40	7	30	16	7.1	26	6	21	25
GN 113.5-6-45	6	45	7	30	16	7.1	26	6	21	26
GN 113.5-6-50	6	50	7	30	16	7.1	26	6	21	27
GN 113.5-8-20	8	20	9.5	35	19	8.2	32.5	8	38	42
GN 113.5-8-25	8	25	9.5	35	19	8.2	32.5	8	38	44
GN 113.5-8-30	8	30	9.5	35	19	8.2	32.5	8	38	50
GN 113.5-8-35	8	35	9.5	35	19	8.2	32.5	8	38	40
GN 113.5-8-40	8	40	9.5	35	19	8.2	32.5	8	38	54
GN 113.5-8-45	8	45	9.5	35	19	8.2	32.5	8	38	60
GN 113.5-8-50	8	50	9.5	35	19	8.2	32.5	8	38	54
GN 113.5-10-20	10	20	12	35	19	9.6	32.5	10	60	50
GN 113.5-10-25	10	25	12	35	19	9.6	32.5	10	60	52
GN 113.5-10-30	10	30	12	35	19	9.6	32.5	10	60	55
GN 113.5-10-35	10	35	12	35	19	9.6	32.5	10	60	58
GN 113.5-10-40	10	40	12	35	19	9.6	32.5	10	60	61
GN 113.5-10-45	10	45	12	35	19	9.6	32.5	10	60	60
GN 113.5-10-50	10	50	12	35	19	9.6	32.5	10	60	60
GN 113.5-10-60	10	60	12	35	19	9.6	32.5	10	60	60
GN 113.5-12-25	12	25	14.5	42	25	10.6	39	12	87	100
GN 113.5-12-30	12	30	14.5	42	25	10.6	39	12	87	100
GN 113.5-12-35	12	35	14.5	42	25	10.6	39	12	87	108
GN 113.5-12-40	12	40	14.5	42	25	10.6	39	12	87	100
GN 113.5-12-45	12	45	14.5	42	25	10.6	39	12	87	110
GN 113.5-12-50	12	50	14.5	42	25	10.6	39	12	87	120
GN 113.5-12-60	12	60	14.5	42	25	10.6	39	12	87	130
GN 113.5-12-70	12	70	14.5	42	25	10.6	39	12	87	140
GN 113.5-12-80	12	80	14.5	42	25	10.6	39	12	87	140
GN 113.5-16-30	16	30	19	42	25	14	39	16	155	140
GN 113.5-16-35	16	35	19	42	25	14	39	16	155	140
GN 113.5-16-40	16	40	19	42	25	14	39	16	155	15
GN 113.5-16-45	16	45	19	42	25	14	39	16	155	160
GN 113.5-16-50	16	50	19	42	25	14	39	16	155	170
GN 113.5-16-60	16	60	19	42	25	14	39	16	155	160
GN 113.5-16-70	16	70	19	42	25	14	39	16	155	198
GN 113.5-16-80	16	80	19	42	25	14	39	16	155	213