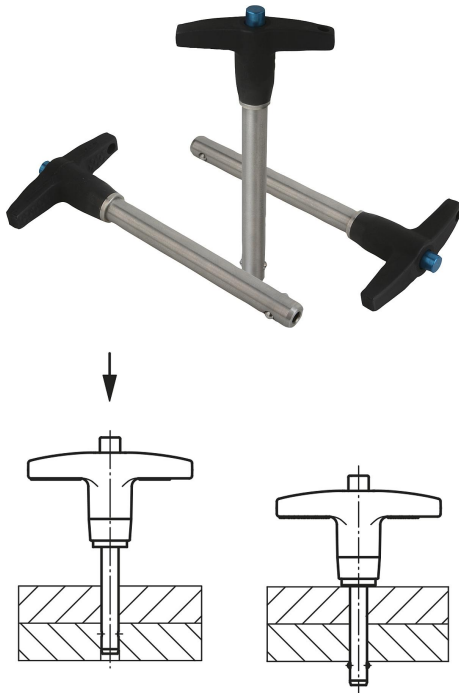


## Item description/product images

**Description****Material:**

Pin 1.4542 stainless steel.  
 Grip die-cast aluminium EN-AC 46000.  
 Push button aluminium EN-AW 2024 T4.  
 Balls 1.4125 stainless steel.  
 Spring stainless steel wire.

**Version:**

All stainless steel parts passivated.  
 Pin hardened to min. 40 HRC.  
 Grip black anodised.  
 Push button blue anodised.  
 Balls hardened to 58 +4 HRC.

**Note:**

Ball lock pins are used for easy fastening or joining of components or workpieces. The two balls are disengaged by pressing the push button and the pin can be slipped into holes in the workpieces. Release the button to lock the balls and secure the connection. If required, the ball lock pins can be fitted with a retaining cable.

The hardened, high-tensile stainless steel pin permits extreme loads with low wear.

Shear force double shear (F) = S · τ aB max.

The values given for the shear force are the theoretical breaking load. These are non-binding reference values without consideration of safety factors and exclude any liability. The values given are for information purposes only and do not constitute a legally binding assurance of properties.

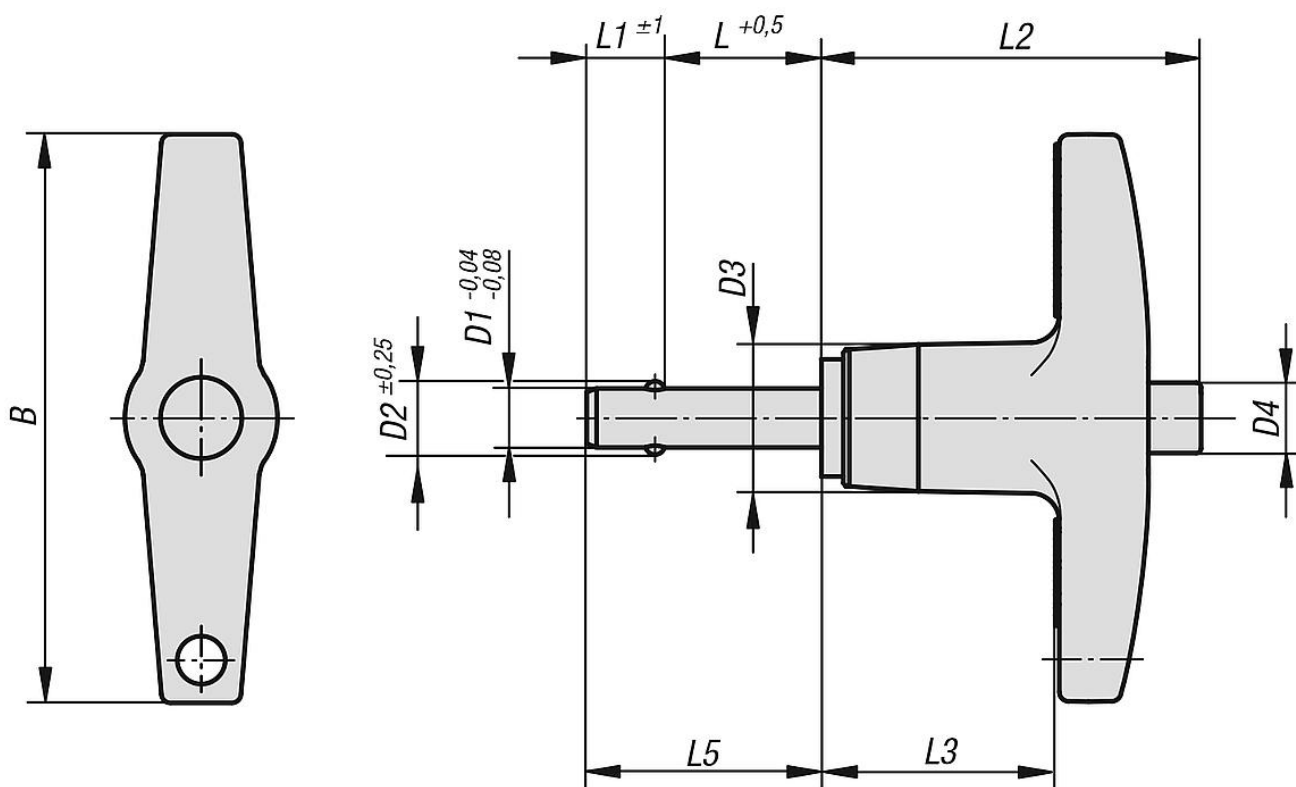
The load values have been calculated in accordance with DIN 50141. Each user must determine individually whether the ball lock pin is suitable for the respective application.

Different materials in which the ball lock pins are used, weather conditions and wear can influence the determined values.

**Accessory:**

Safety spiral cable 03199-10200  
 Retaining cable with loop 03199-....  
 Key ring 03199-15/19/23/28  
 Bushing for ball lock pins 03197....

Drawings



Overview of items

Order No.	B	D1	D2	D3	D4	L	L1	L2	L3	L5	Receiving hole H11	Shearing force double shear max.kN
03196-24605***	46	5	5,54	11,9	5,8	10/15/20/25/30/35/40/50/60/70	6	30,7	19,3	16/21/26/31/36/41/46/56/66/76	5	24,4
03196-24606***	46	6	6,99	11,9	5,8	10/15/20/25/30/35/40/50/60/70/80	7	30,7	19,3	17/22/27/32/37/42/47/57/67/77/87	6	35,64
03196-24608***	46	8	9,42	11,9	5,8	10/15/20/25/30/35/40/50/60/70/80	8	30,7	19,3	18/23/28/33/38/43/48/58/68/78/88	8	63,8
03196-25110***	50,8	10	11,86	14,2	7,4	15/20/25/30/35/40/50/60/70/80/90/100	9	34,8	22,1	24/29/34/39/44/49/59/69/79/89/99/109	10	100,1
03196-25812***	57,2	12	14,45	18,3	10,7	20/25/30/35/40/50/60/70/80/90/100	10	40,6	25,4	30/35/40/45/50/60/70/80/90/100/110	12	144,06
03196-27816***	78	16	19	23,9	13,7	25/30/35/40/50/60/70/80/90/100	14	45	28,2	39/44/49/54/64/74/84/94/104/114	16	257,18