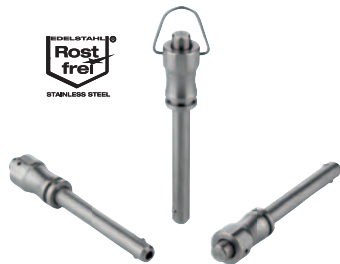


## Ball lock pins

stainless steel



**Material:**

Grip and push button 1.4305 stainless steel.  
 Pin 1.4305 stainless steel.  
 Balls 1.4125 stainless steel.  
 Spring and hanger 1.4310 stainless steel wire.

**Version:**

Bright.

**Sample order:**

nIm 03415-001508050  
 (include length L e.g. 050 for L = 50 mm)

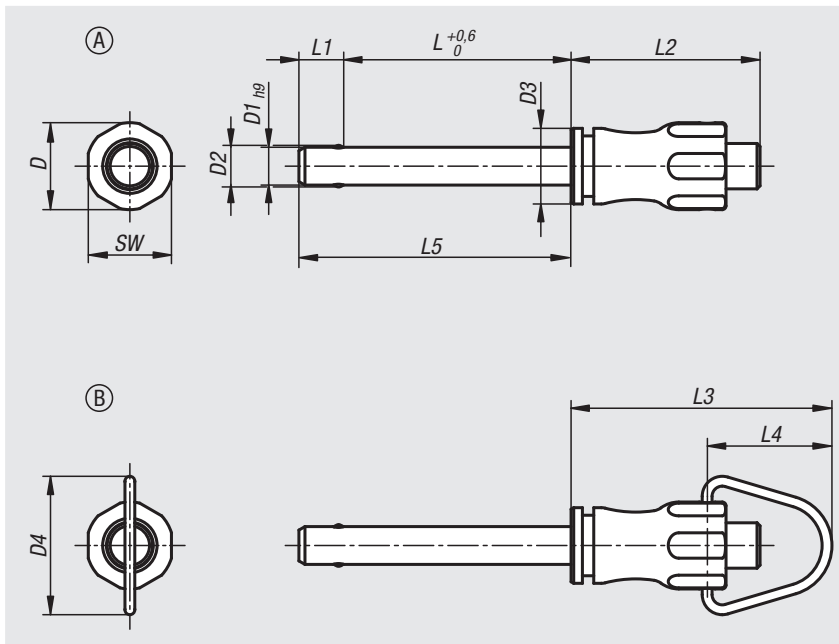
**Note:**

Ball lock pins are used for easy fastening or joining of components. The two balls are disengaged by pressing the push button and the pin can be slipped into holes in the workpieces. When the push button is released, the balls lock the connection securely.

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.

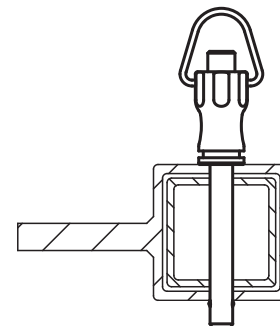


The load values have been calculated in accordance with DIN 50141. Each user must determine individually whether the ball lock pin is suitable for the respective application.

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

**Accessories:**

- Bushing for ball lock pins 03197
- Safety spiral cable 03199
- Retaining cable with loop 03199
- Key ring 03199



### Ball lock pins, in stainless steel, Form A

Order No. Form A	D	D1	D2	D3	L	L1	L2	L5	SW	Receiving hole H11	Shearing force double shear max.kN
03415-001205***	11,5	5	5,5	10	10/15/20/25/30	5,9	25	15,9/20,9/25,9/30,9/35,9	11	5	15
03415-001206***	11,5	6	6,85	10	10/15/20/25/30/35/40/45/50	6,8	25	16,8/21,8/26,8/31,8/36,8/41,8/46,8/51,8/56,8	11	6	22
03415-001508***	15,5	8	9,5	13,5	20/25/30/35/40/45/50	7,8	33	27,8/32,8/37,8/42,8/47,8/52,8/57,8	15	8	38
03415-001510***	15,5	10	12	13,5	20/25/30/35/40/45/50/60	8,9	33	28,9/33,9/38,9/43,9/48,9/53,9/58,9/68,9	15	10	60
03415-002112***	22	12	14,5	20	25/30/35/40/45/50/60/70/80	9,9	39,5	34,9/39,9/44,9/49,9/54,9/59,9/69,9/79,9/89,9	21	12	86
03415-002116***	22	16	19	20	30/35/40/45/50/60/70/80	13,1	39,5	43,1/48,1/53,1/58,1/63,1/73,1/83,1/93,1	21	16	153

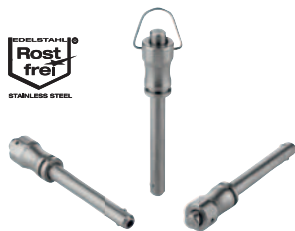
### Ball lock pins, stainless steel, Form B

Order No. Form B	D	D1	D2	D3	D4	L	L1	L2	L3	L4	L5	SW	Receiving hole H11	Shearing force double shear max.kN
03415-101205***	11,5	5	5,5	10	18,3	10/15/20/25/30	5,9	25	34,6	16,6	15,9/20,9/25,9/30,9/35,9	11	5	15
03415-101206***	11,5	6	6,85	10	18,3	10/15/20/25/30/35/40/45/50	6,8	25	34,6	16,6	16,8/21,8/26,8/31,8/36,8/41,8/46,8/51,8/56,8	11	6	22
03415-101508***	15,5	8	9,5	13,5	24	20/25/30/35/40/45/50	7,8	33	46,7	22,7	27,8/32,8/37,8/42,8/47,8/52,8/57,8	15	8	38
03415-101510***	15,5	10	12	13,5	24	20/25/30/35/40/45/50/60	8,9	33	46,7	22,7	28,9/33,9/38,9/43,9/48,9/53,9/58,9/68,9	15	10	60
03415-102112***	22	12	14,5	20	33	25/30/35/40/45/50/60/70/80	9,9	39,5	59,3	30,3	34,9/39,9/44,9/49,9/54,9/59,9/69,9/79,9/89,9	21	12	86
03415-102116***	22	16	19	20	33	30/35/40/45/50/60/70/80	13,1	39,5	59,3	30,3	43,1/48,1/53,1/58,1/63,1/73,1/83,1/93,1	21	16	153

01000 02000 03000 04000 05000 06000 07000 08000 09000 10000 12000

# Ball lock pins, stainless steel

with high shear strength



## Material:

Grip and push button 1.4305 stainless steel.  
Pin 1.4542 stainless steel.  
Balls 1.4125 stainless steel.  
Spring and hanger 1.4310 stainless steel wire.

## Version:

Bright.

## Sample order:

n1m 03415-011508050  
(include length L e.g. 050 for L = 50 mm)

## Note:

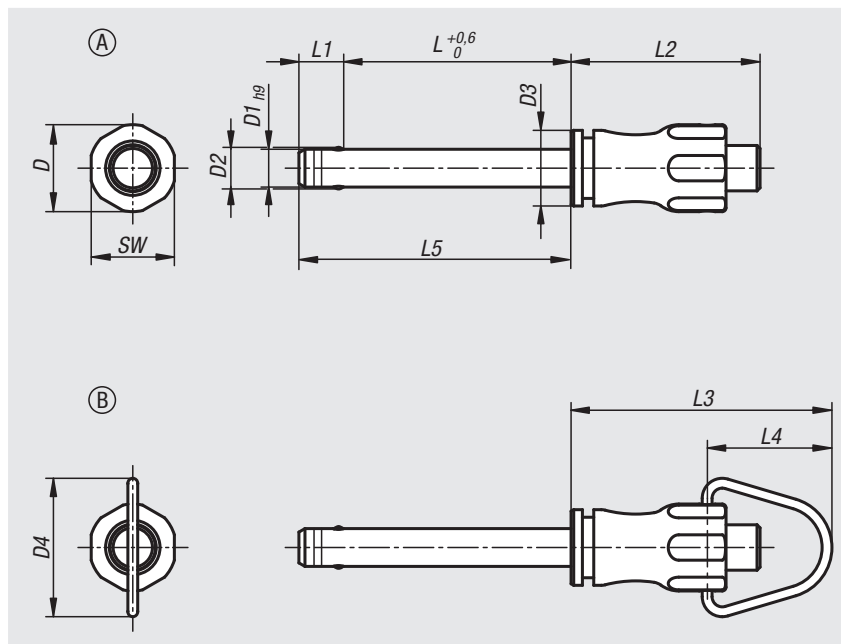
Ball lock pins are used for easy fastening or joining of components.  
The two balls are disengaged by pressing the push button and the pin can be slipped into holes in the workpieces. When the push button is released, the balls lock the connection securely.

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.

Ball lock pins with high shear strength are identified by a groove marking on the pin.

## Advantages:

Higher loading in comparison to standard ball lock pins.  
The pins made from 1.4542 stainless steel is hardened, has a higher shear resistance and is extremely durable.

## Accessories:

Adapter bushes for ball lock pins 03197.

For Form B:

Safety spiral cable 03199

Retaining cable with eyelet 03199

Key ring 03199

## Ball lock pins, stainless steel, with high shear strength, Form A

Order No. Form A	D	D1	D2	D3	L	L1	L2	L5	SW	Receiving hole H11	Shearing force double shear max.kN
03415-011205***	11,5	5	5,5	10	10/15/20/25/30	5,9	25	15,9/20,9/25,9/30,9/35,9	11	5	24
03415-011206***	11,5	6	6,85	10	10/15/20/25/30/35/40/45/50	6,8	25	16,8/21,8/26,8/31,8/36,8/41,8/46,8/51,8/56,8	11	6	35
03415-011508***	15,5	8	9,5	13,5	20/25/30/35/40/45/50	7,8	33	27,8/32,8/37,8/42,8/47,8/52,8/57,8	15	8	63
03415-011510***	15,5	10	12	13,5	20/25/30/35/40/45/50/60	8,9	33	28,9/33,9/38,9/43,9/48,9/53,9/58,9/68,9	15	10	100
03415-012112***	22	12	14,5	20	25/30/35/40/45/50/60/70/80	9,9	39,5	34,9/39,9/44,9/49,9/54,9/59,9/69,9/79,9/89,9	21	12	144
03415-012116***	22	16	19	20	30/35/40/45/50/60/70/80	13,1	39,5	43,1/48,1/53,1/58,1/63,1/73,1/83,1/93,1	21	16	257

## Ball lock pins, stainless steel, with high shear strength, Form B

Order No. Form B	D	D1	D2	D3	D4	L	L1	L2	L3	L4	L5	SW	Receiving hole H11	Shearing force double shear max.kN
03415-111205***	11,5	5	5,5	10	18,3	10/15/20/25/30	5,9	25	34,6	16,6	15,9/20,9/25,9/30,9/35,9	11	5	24
03415-111206***	11,5	6	6,85	10	18,3	10/15/20/25/30/35/40/45/50	6,8	25	34,6	16,6	16,8/21,8/26,8/31,8/36,8/41,8/46,8/51,8/56,8	11	6	35
03415-111508***	15,5	8	9,5	13,5	24	20/25/30/35/40/45/50	7,8	33	46,7	22,7	27,8/32,8/37,8/42,8/47,8/52,8/57,8	15	8	63
03415-111510***	15,5	10	12	13,5	24	20/25/30/35/40/45/50/60	8,9	33	46,7	22,7	28,9/33,9/38,9/43,9/48,9/53,9/58,9/68,9	15	10	100
03415-112112***	22	12	14,5	20	33	25/30/35/40/45/50/60/70/80	9,9	39,5	59,3	30,3	34,9/39,9/44,9/49,9/54,9/59,9/69,9/79,9/89,9	21	12	144
03415-112116***	22	16	19	20	33	30/35/40/45/50/60/70/80	13,1	39,5	59,3	30,3	43,1/48,1/53,1/58,1/63,1/73,1/83,1/93,1	21	16	257