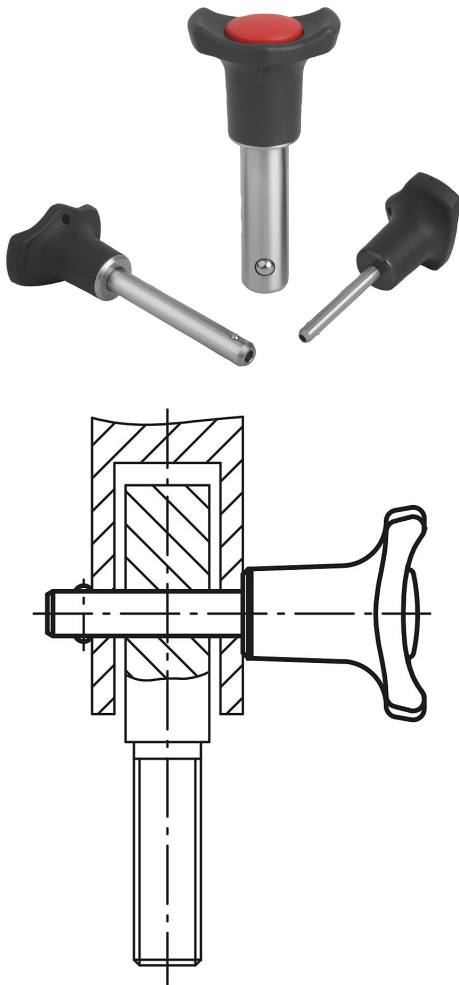


Item description/product images

**Description****Material:**

Grip and push button thermoplastic.
Metal parts stainless steel.

Version:

Grip black.
Push button traffic red.
Steel parts bright.

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.

Form A is suitable for applications where high demands and precision are required.

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.

Features:

Form A:

Pin ground, metal collar, high axial pull-out force

Form B:

Pin h9, plastic collar, low axial pull-out force

Accessory:

Bushing for ball lock pins 03197

Safety spiral cable 03199

Retaining cable with loop 03199

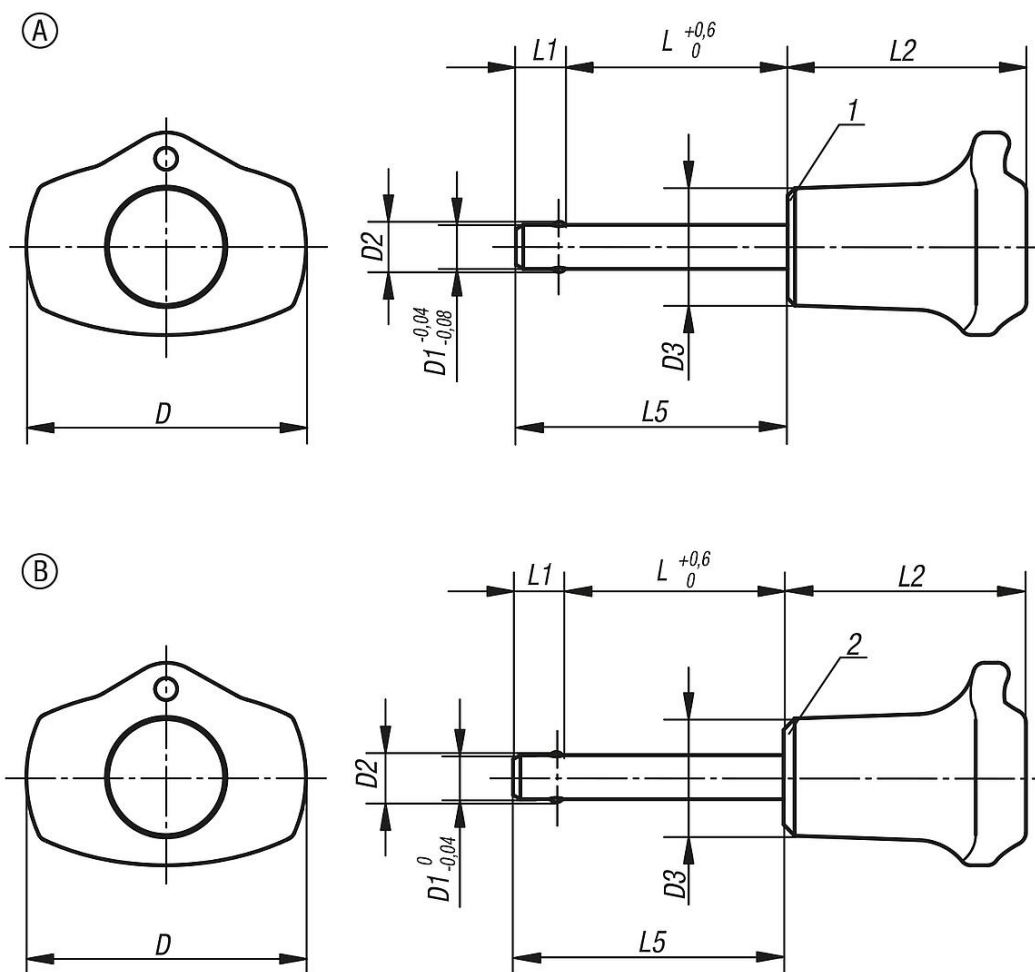
Key ring 03199

Drawing reference:

1) Metal collar

2) Plastic collar

Drawings



Overview of items

Ball lock pins, Form A, metal collar

Order No.	Form	D	D1	D2	D3	L	L1	L2	L5	Receiving hole H11	Shearing force double shear max. kN
03193-3805010	A	38	5	5,5	16	10	6	32,5	16	5	15
03193-3805015	A	38	5	5,5	16	15	6	32,5	21	5	15
03193-3805020	A	38	5	5,5	16	20	6	32,5	26	5	15
03193-3805025	A	38	5	5,5	16	25	6	32,5	31	5	15
03193-3805030	A	38	5	5,5	16	30	6	32,5	36	5	15
03193-3806010	A	38	6	6,85	16	10	7	32,5	17	6	22
03193-3806015	A	38	6	6,85	16	15	7	32,5	22	6	22
03193-3806020	A	38	6	6,85	16	20	7	32,5	27	6	22
03193-3806025	A	38	6	6,85	16	25	7	32,5	32	6	22
03193-3806030	A	38	6	6,85	16	30	7	32,5	37	6	22
03193-3806035	A	38	6	6,85	16	35	7	32,5	42	6	22
03193-3806040	A	38	6	6,85	16	40	7	32,5	47	6	22
03193-3806045	A	38	6	6,85	16	45	7	32,5	52	6	22
03193-3806050	A	38	6	6,85	16	50	7	32,5	57	6	22
03193-3808020	A	38	8	9,5	16	20	8	32,5	28	8	38
03193-3808025	A	38	8	9,5	16	25	8	32,5	33	8	38
03193-3808030	A	38	8	9,5	16	30	8	32,5	38	8	38
03193-3808035	A	38	8	9,5	16	35	8	32,5	43	8	38
03193-3808040	A	38	8	9,5	16	40	8	32,5	48	8	38
03193-3808045	A	38	8	9,5	16	45	8	32,5	53	8	38

Overview of items

Order No.	Form	D	D1	D2	D3	L	L1	L2	L5	Receiving hole H11	Shearing force double shear max.kN
03193-3808050	A	38	8	9,5	16	50	8	32,5	58	8	38
03193-4710020	A	47	10	12	23	20	9	40	29	10	60
03193-4710025	A	47	10	12	23	25	9	40	34	10	60
03193-4710030	A	47	10	12	23	30	9	40	39	10	60
03193-4710035	A	47	10	12	23	35	9	40	44	10	60
03193-4710040	A	47	10	12	23	40	9	40	49	10	60
03193-4710045	A	47	10	12	23	45	9	40	54	10	60
03193-4710050	A	47	10	12	23	50	9	40	59	10	60
03193-4710060	A	47	10	12	23	60	9	40	69	10	60
03193-4712025	A	47	12	14,5	23	25	10	40	35	12	86
03193-4712030	A	47	12	14,5	23	30	10	40	40	12	86
03193-4712035	A	47	12	14,5	23	35	10	40	45	12	86
03193-4712040	A	47	12	14,5	23	40	10	40	50	12	86
03193-4712045	A	47	12	14,5	23	45	10	40	55	12	86
03193-4712050	A	47	12	14,5	23	50	10	40	60	12	86
03193-4712060	A	47	12	14,5	23	60	10	40	70	12	86
03193-4712070	A	47	12	14,5	23	70	10	40	80	12	86
03193-4712080	A	47	12	14,5	23	80	10	40	90	12	86
03193-4716030	A	47	16	19	23	30	13	40	43	16	153
03193-4716035	A	47	16	19	23	35	13	40	48	16	153
03193-4716040	A	47	16	19	23	40	13	40	53	16	153
03193-4716045	A	47	16	19	23	45	13	40	58	16	153
03193-4716050	A	47	16	19	23	50	13	40	63	16	153
03193-4716060	A	47	16	19	23	60	13	40	73	16	153
03193-4716070	A	47	16	19	23	70	13	40	83	16	153
03193-4716080	A	47	16	19	23	80	13	40	93	16	153
03193-13805015	B	38	5	5,5	16	15	5,9	33	20,9	5	15
03193-13805020	B	38	5	5,5	16	20	5,9	33	25,9	5	15
03193-13805025	B	38	5	5,5	16	25	5,9	33	30,9	5	15
03193-13805030	B	38	5	5,5	16	30	5,9	33	35,9	5	15
03193-13806030	B	38	6	6,85	16	30	6,8	33	36,8	6	22
03193-13806040	B	38	6	6,85	16	40	6,8	33	46,8	6	22
03193-13806050	B	38	6	6,85	16	50	6,8	33	56,8	6	22
03193-13808030	B	38	8	9,5	16	30	7,8	33	37,8	8	38
03193-13808040	B	38	8	9,5	16	40	7,8	33	47,8	8	38
03193-13808050	B	38	8	9,5	16	50	7,8	33	57,8	8	38