

Ball Lock Pins

Stainless Steel

SPECIFICATION

Pin
Stainless steel AISI 303
Knob, push button
Stainless steel AISI 316L
Balls
Stainless steel AISI 420C
Pressure spring
Stainless steel
German material no. 1.4565

INFORMATION

Ball lock pins GN 113.9 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. The technical appendix contains the load capacities for the double-sided shearing resistance (breaking strength).

ACCESSORY

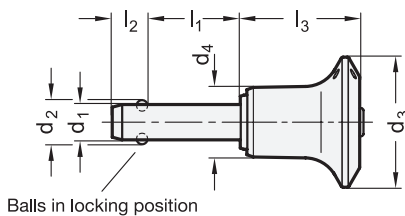
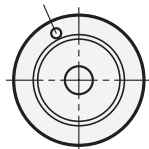
- Ball Chains GN 111 (see page 904) / GN 111.5 (see page 905)
- Retaining Cables GN 111.2 (see page 906)
- Spiral Retaining Cables GN 111.4 (see page 908)

TECHNICAL INFORMATION

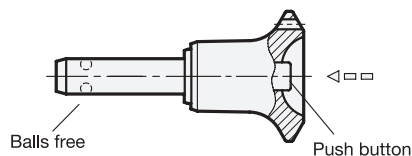
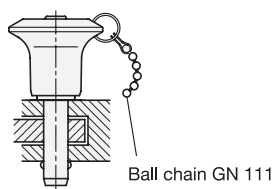
- ISO-Fundamental Tolerances (see page A21)
- Stainless Steel characteristics (see page A26)



Bore for key ring
(ball chain)



Application example



GN 113.9

STAINLESS STEEL

Description	d1 0.04/-0.08	l1 +0.6	d2	d3	d4	l2 ±1	l3 -0.2	Location bore H11	Load capacity F in kN ≈ Double sided shearing resistance according DIN 50141 (Breaking strength)	⚖
GN 113.9-5-10	5	10	5.5	23	10.2	6.2	20.2	5	14	21
GN 113.9-5-15	5	15	5.5	23	10.2	6.2	20.2	5	14	22
GN 113.9-5-20	5	20	5.5	23	10.2	6.2	20.2	5	14	23
GN 113.9-5-25	5	25	5.5	23	10.2	6.2	20.2	5	14	24
GN 113.9-5-30	5	30	5.5	23	10.2	6.2	20.2	5	14	25
GN 113.9-5-35	5	35	5.5	23	10.2	6.2	20.2	5	14	26
GN 113.9-5-40	5	40	5.5	23	10.2	6.2	20.2	5	14	27
GN 113.9-5-45	5	45	5.5	23	10.2	6.2	20.2	5	14	28
GN 113.9-5-50	5	50	5.5	23	10.2	6.2	20.2	5	14	29
GN 113.9-5-60	5	60	5.5	23	10.2	6.2	20.2	5	14	30
GN 113.9-5-70	5	70	5.5	23	10.2	6.2	20.2	5	14	32
GN 113.9-5-80	5	80	5.5	23	10.2	6.2	20.2	5	14	33
GN 113.9-6-10	6	10	7	23	10.2	7.2	20.2	6	21	24
GN 113.9-6-15	6	15	7	23	10.2	7.2	20.2	6	21	25
GN 113.9-6-20	6	20	7	23	10.2	7.2	20.2	6	21	26
GN 113.9-6-25	6	25	7	23	10.2	7.2	20.2	6	21	27
GN 113.9-6-30	6	30	7	23	10.2	7.2	20.2	6	21	28
GN 113.9-6-35	6	35	7	23	10.2	7.2	20.2	6	21	29
GN 113.9-6-40	6	40	7	23	10.2	7.2	20.2	6	21	30
GN 113.9-6-45	6	45	7	23	10.2	7.2	20.2	6	21	31
GN 113.9-6-50	6	50	7	23	10.2	7.2	20.2	6	21	32
GN 113.9-6-60	6	60	7	23	10.2	7.2	20.2	6	21	34
GN 113.9-6-70	6	70	7	23	10.2	7.2	20.2	6	21	36
GN 113.9-6-80	6	80	7	23	10.2	7.2	20.2	6	21	38
GN 113.9-8-10	8	10	9.5	27	13.2	8.4	26.8	8	38	43
GN 113.9-8-15	8	15	9.5	27	13.2	8.4	26.8	8	38	45
GN 113.9-8-20	8	20	9.5	27	13.2	8.4	26.8	8	38	47
GN 113.9-8-25	8	25	9.5	27	13.2	8.4	26.8	8	38	49
GN 113.9-8-30	8	30	9.5	27	13.2	8.4	26.8	8	38	50
GN 113.9-8-35	8	35	9.5	27	13.2	8.4	26.8	8	38	52
GN 113.9-8-40	8	40	9.5	27	13.2	8.4	26.8	8	38	55
GN 113.9-8-45	8	45	9.5	27	13.2	8.4	26.8	8	38	57
GN 113.9-8-50	8	50	9.5	27	13.2	8.4	26.8	8	38	59
GN 113.9-8-60	8	60	9.5	27	13.2	8.4	26.8	8	38	62
GN 113.9-8-70	8	70	9.5	27	13.2	8.4	26.8	8	38	66
GN 113.9-8-80	8	80	9.5	27	13.2	8.4	26.8	8	38	69
GN 113.9-8-90	8	90	9.5	27	13.2	8.4	26.8	8	38	73
GN 113.9-8-100	8	100	9.5	27	13.2	8.4	26.8	8	38	77
GN 113.9-10-15	10	15	12	27	13.2	9.9	26.8	10	60	51
GN 113.9-10-20	10	20	12	27	13.2	9.9	26.8	10	60	53
GN 113.9-10-25	10	25	12	27	13.2	9.9	26.8	10	60	57
GN 113.9-10-30	10	30	12	27	13.2	9.9	26.8	10	60	60
GN 113.9-10-35	10	35	12	27	13.2	9.9	26.8	10	60	62
GN 113.9-10-40	10	40	12	27	13.2	9.9	26.8	10	60	65
GN 113.9-10-45	10	45	12	27	13.2	9.9	26.8	10	60	68
GN 113.9-10-50	10	50	12	27	13.2	9.9	26.8	10	60	72
GN 113.9-10-60	10	60	12	27	13.2	9.9	26.8	10	60	77
GN 113.9-10-70	10	70	12	27	13.2	9.9	26.8	10	60	82
GN 113.9-10-80	10	80	12	27	13.2	9.9	26.8	10	60	88
GN 113.9-10-90	10	90	12	27	13.2	9.9	26.8	10	60	94
GN 113.9-10-100	10	100	12	27	13.2	9.9	26.8	10	60	101
GN 113.9-10-110	10	110	12	27	13.2	9.9	26.8	10	60	106
GN 113.9-10-120	10	120	12	27	13.2	9.9	26.8	10	60	112



Indexing elements

GN 113.9

STAINLESS STEEL

Description	d _i 0.04/-0.08	l ₁ +0.6	d ₂	d ₃	d ₄	l ₂ ±1	l ₃ -0.2	Location bore H11	Load capacity F in kN ≈ Double sided shearing resistance according DIN 50141 (Breaking strength)	⚖
GN 113.9-12-20	12	20	14.5	31	16.4	10.9	32.7	12	87	83
GN 113.9-12-25	12	25	14.5	31	16.4	10.9	32.7	12	87	88
GN 113.9-12-30	12	30	14.5	31	16.4	10.9	32.7	12	87	90
GN 113.9-12-35	12	35	14.5	31	16.4	10.9	32.7	12	87	96
GN 113.9-12-40	12	40	14.5	31	16.4	10.9	32.7	12	87	105
GN 113.9-12-45	12	45	14.5	31	16.4	10.9	32.7	12	87	110
GN 113.9-12-50	12	50	14.5	31	16.4	10.9	32.7	12	87	115
GN 113.9-12-60	12	60	14.5	31	16.4	10.9	32.7	12	87	118
GN 113.9-12-70	12	70	14.5	31	16.4	10.9	32.7	12	87	120
GN 113.9-12-80	12	80	14.5	31	16.4	10.9	32.7	12	87	135
GN 113.9-12-90	12	90	14.5	31	16.4	10.9	32.7	12	87	144
GN 113.9-12-100	12	100	14.5	31	16.4	10.9	32.7	12	87	148
GN 113.9-12-110	12	110	14.5	31	16.4	10.9	32.7	12	87	152
GN 113.9-12-120	12	120	14.5	31	16.4	10.9	32.7	12	87	169
GN 113.9-16-30	16	30	19	38	23.4	14.5	42.6	16	155	207
GN 113.9-16-35	16	35	19	38	23.4	14.5	42.6	16	155	215
GN 113.9-16-40	16	40	19	38	23.4	14.5	42.6	16	155	223
GN 113.9-16-45	16	45	19	38	23.4	14.5	42.6	16	155	231
GN 113.9-16-50	16	50	19	38	23.4	14.5	42.6	16	155	236
GN 113.9-16-60	16	60	19	38	23.4	14.5	42.6	16	155	254
GN 113.9-16-70	16	70	19	38	23.4	14.5	42.6	16	155	270
GN 113.9-16-80	16	80	19	38	23.4	14.5	42.6	16	155	285
GN 113.9-16-90	16	90	19	38	23.4	14.5	42.6	16	155	302
GN 113.9-16-100	16	100	19	38	23.4	14.5	42.6	16	155	333
GN 113.9-16-110	16	110	19	38	23.4	14.5	42.6	16	155	340
GN 113.9-16-120	16	120	19	38	23.4	14.5	42.6	16	155	348
GN 113.9-16-130	16	130	19	38	23.4	14.5	42.6	16	155	364
GN 113.9-16-140	16	140	19	38	23.4	14.5	42.6	16	155	379
GN 113.9-16-150	16	150	19	38	23.4	14.5	42.6	16	155	396
GN 113.9-20-50	20	50	24.8	38	23.4	17.4	42.6	20	244	297
GN 113.9-20-60	20	60	24.8	38	23.4	17.4	42.6	20	244	324
GN 113.9-20-70	20	70	24.8	38	23.4	17.4	42.6	20	244	348
GN 113.9-20-80	20	80	24.8	38	23.4	17.4	42.6	20	244	372
GN 113.9-20-90	20	90	24.8	38	23.4	17.4	42.6	20	244	397
GN 113.9-20-100	20	100	24.8	38	23.4	17.4	42.6	20	244	422
GN 113.9-20-110	20	110	24.8	38	23.4	17.4	42.6	20	244	446
GN 113.9-20-120	20	120	24.8	38	23.4	17.4	42.6	20	244	471
GN 113.9-20-130	20	130	24.8	38	23.4	17.4	42.6	20	244	496
GN 113.9-20-140	20	140	24.8	38	23.4	17.4	42.6	20	244	518
GN 113.9-20-150	20	150	24.8	38	23.4	17.4	42.6	20	244	544
GN 113.9-25-50	25	50	30.8	50	30.4	22.3	54.3	25	386	551
GN 113.9-25-60	25	60	30.8	50	30.4	22.3	54.3	25	386	591
GN 113.9-25-70	25	70	30.8	50	30.4	22.3	54.3	25	386	630
GN 113.9-25-80	25	80	30.8	50	30.4	22.3	54.3	25	386	667
GN 113.9-25-90	25	90	30.8	50	30.4	22.3	54.3	25	386	705
GN 113.9-25-100	25	100	30.8	50	30.4	22.3	54.3	25	386	744
GN 113.9-25-110	25	110	30.8	50	30.4	22.3	54.3	25	386	781
GN 113.9-25-120	25	120	30.8	50	30.4	22.3	54.3	25	386	820
GN 113.9-25-130	25	130	30.8	50	30.4	22.3	54.3	25	386	858
GN 113.9-25-140	25	140	30.8	50	30.4	22.3	54.3	25	386	897
GN 113.9-25-150	25	150	30.8	50	30.4	22.3	54.3	25	386	933