

QUICK RELEASE BALL LOCK PINS

Selecting the proper Quick Release Ball Lock Pin

1. Select the proper pin diameter.

Our standard inch sizes are 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8". Our standard metric sizes are 5mm, 6mm, 8mm, 10mm, 12mm and 16mm.

2. Select the proper grip length.

The grip length (also referred to as the useable length) is measured from the bottom of the handle to the top of the locking balls. Our standard inch grip lengths range from 1/2" up to 6" and our metric grip lengths range from 10mm up to 100mm depending on the diameter.



3. Select the proper shank material.

17-4 SS – Made from heat treated 17-4 stainless steel, they are designed for applications where higher shear strengths are required. Because they are made from stainless steel, they offer superior corrosion resistance over alloy steel. This combination of strength and corrosion resistance makes it a good choice for a wide range of demanding applications.

300 Series Stainless Steel – Made from 300 series stainless, **these pins are not designed to be used where shear strengths are demanding.** While these pins offer lower shear strengths than other materials, they are strong enough to meet the needs for many applications. This material also offers very good corrosion resistance.

4130 Alloy Steel – Made from heat treated and plated 4130 alloy steel, these pins are ideal where high strength is required and environmental factors are not an issue.

4. Select the proper handle style.

Handle choice is based on clearance, use and appearance. Our handles are made from either aluminum alloy or stainless steel. The aluminum handles are anodized black and are available in Ring, Button, L and T configurations. Stainless handles are available in Ring, Button and Nautical Recessed configurations.



5. Select lanyard assembly.

Lanyard assemblies are used to attach the pin to a fixture so it does not get misplaced while the pin is not in use. The lanyard assemblies must be ordered separately. See pages 227 and 228 for our standard assemblies.





QUICK RELEASE BALL LOCK PINS

Material Specifications

for the Fairlane pins shown in this catalog.

	17-4 SS PINS	300 SERIES SS PINS	STEEL ALLOY 4130 PINS
SHANK – Inch	CRES 17-4PH (Stainless Steel) (AMS-5643) (UNS S17400) (DIN 1.4542) Heat Treated Min. RC-40 Tensile Strength = 190,000 lb/in ² Minimum Passivated Finish	CRES 304 (Stainless Steel) (AMS-5639) (UNS S530400) (DIN 1.4301) or CRES 303 (Stainless Steel) (AMS-5640) (UNS S30300) (DIN 1.4305) Tensile Strength = 73,000 lb/in ² Minimum Passivated Finish	4130 (Alloy Steel) (AMS-6370) (UNS G41300) (DIN 1.7218) Heat Treated RC36-40 Tensile Strength = 160,000 to 180,000 lb/in ² Cadmium Plate Finish (Yellow Chromate)
SHANK – Metric	CRES 17-4PH (Stainless Steel) (AMS-5643) (UNS S17400) (DIN 1.4542) Heat Treated Min. RC-40 Tensile Strength = 190,000 lb/in ² Minimum Passivated Finish	—	—
SPINDLE (Internal)	CRES 17-4PH (Stainless Steel) (AMS-5643) (UNS S17400) (DIN 1.4542) Heat Treated Min. RC-40 Tensile Strength = 190,000 lb/in ² Minimum Passivated Finish	CRES 17-4PH (Stainless Steel) (AMS-5643) (UNS S17400) (DIN 1.4542) Heat Treated Min. RC-40 Tensile Strength = 190,000 lb/in ² Minimum Passivated Finish	CRES 17-4PH (Stainless Steel) (AMS-5643) (UNS S17400) (DIN 1.4542) Heat Treated Min. RC-40 Tensile Strength = 190,000 lb/in ² Minimum Passivated Finish
HANDLES (Aluminum Ring & Button)	Aluminum 2024-T4 (ASTM-B211) (UNS A92024) (DIN AlCuMg2) Anodized Finish (Black)	Aluminum 2024-T4 (ASTM-B211) (UNS A92024) (DIN AlCuMg2) Anodized Finish (Black)	Aluminum 2024-T4 (ASTM-B211) (UNS A92024) (DIN AlCuMg2) Anodized Finish (Black)
HANDLES (Stainless Ring, Button & Nautical Recessed)	CRES 303 Stainless Steel (ASTM-A581) (UNS S30300) (DIN 1.4305) Passivated Finish	CRES 303 Stainless Steel (ASTM-A581) (UNS S30300) (DIN 1.4305) Passivated Finish	—
HANDLES (T & L)	Aluminum 380 Die Cast (ASTM-B85) (UNS A03800) (DIN AISi9Cu3) Anodized Finish (Black)	Aluminum 380 Die Cast (ASTM-B85) (UNS A03800) (DIN AISi9Cu3) Anodized Finish (Black)	Aluminum 380 Die Cast (ASTM-B85) (UNS A03800) (DIN AISi9Cu3) Anodized Finish (Black)
WEAR COLLAR	CRES 303 (Stainless Steel) (ASTM-A581) (UNS S30300) (DIN 1.4305) Passivated Finish	CRES 303 (Stainless Steel) (ASTM-A581) (UNS S30300) (DIN 1.4305) Passivated Finish	CRES 303 (Stainless Steel) (ASTM-A581) (UNS S30300) (DIN 1.4305) Passivated Finish
ACTUATOR BUTTON*	Aluminum 2024-T4 (ASTM-B211) (UNS A92024) (DIN AlCuMg2) Anodized Finish (Blue)	Aluminum 2024-T4 (ASTM-B211) (UNS A92024) (DIN AlCuMg2) Anodized Finish (Blue)	Aluminum 2024-T4 (ASTM-B211) (UNS A92024) (DIN AlCuMg2) Anodized Finish (Blue)
SPRING (Internal)	CRES 302 (Stainless Steel) (ASTM-A313) (UNS S30200) (DIN 1.4300) Passivated Finish	CRES 302 (Stainless Steel) (ASTM-A313) (UNS S30200) (DIN 1.4300) Passivated Finish	CRES 302 (Stainless Steel) (ASTM-A313) (UNS S30200) (DIN 1.4300) Passivated Finish
BALLS	CRES 440C (Stainless Steel) (QQ-S-763) (UNS S44004) (DIN 1.4125) Heat Treated -RC (58-62) Passivated Finish	CRES 440C (Stainless Steel) (QQ-S-763) (UNS S44004) (DIN 1.4125) Heat Treated -RC (58-62) Passivated Finish	CRES 440C (Stainless Steel) (QQ-S-763) (UNS S44004) (DIN 1.4125) Heat Treated -RC (58-62) Passivated Finish
BAIL (Ring Handle)	CRES 302 (Stainless Steel) (ASTM-A313) (UNS S30200) (DIN 1.4300) Passivated Finish	CRES 302 (Stainless Steel) (ASTM-A313) (UNS S30200) (DIN 1.4300) Passivated Finish	CRES 302 (Stainless Steel) (ASTM-A313) (UNS S30200) (DIN 1.4300) Passivated Finish
SPLIT RING	CRES 302 (Stainless Steel) (ASTM-A313) (UNS S30200) (DIN 1.4300) Passivated Finish	CRES 302 (Stainless Steel) (ASTM-A313) (UNS S30200) (DIN 1.4300) Passivated Finish	CRES 302 (Stainless Steel) (ASTM-A313) (UNS S30200) (DIN 1.4300) Passivated Finish

*Note: When a stainless Ring, Button, or Nautical Recessed handle is specified, the actuator button will be made from CRES-303 (Stainless).

Hole Size / Performance Data

Inch

Dia	Hole Size		Min. Pull-Out Strength (lbs)	Calculated Double Shear (lbs)		
	Max	Min		4130 Steel	17-4 Stainless	300 Series SS*
3/16	.1940	.1900	200	4,600	5,150	—
1/4	.2540	.2500	230	8,200	9,200	2,200
5/16	.3165	.3125	510	12,800	14,400	3,500
3/8	.3790	.3750	575	18,400	20,600	4,500
1/2	.5050	.5000	1,160	32,800	36,800	11,500
5/8	.6300	.6250	2,070	51,200	57,500	—

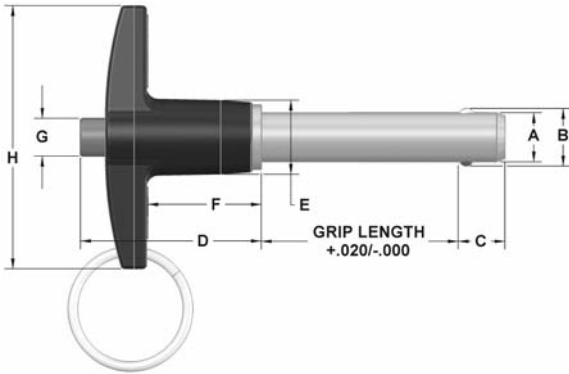
*Note: 300 Series Stainless is not recommended in applications where shear forces are a factor.

Metric

Dia	Hole Size		Min. Pull-Out Strength (N)	Calculated Double Shear (N)	
	Max	Min		4130 Steel	17-4 Stainless
5	5.1	5.0	890	24,400	—
6	6.1	6.0	1,023	35,640	—
8	8.1	8.0	2,268	63,804	—
10	10.1	10.0	2,558	100,101	—
12	12.1	12.0	5,160	144,060	—
16	16.1	16.0	9,207	257,179	—

QUICK RELEASE BALL LOCK PINS

T-Handle | Inch



Dia	Hole Size		Min. Pull-Out Strength (lbs)	Calculated Double Shear (lbs)		
	Max	Min		4130 Steel	17-4 Stainless	300 Series SS*
3/16	.1940	.1900	200	4,600	5,150	—
1/4	.2540	.2500	230	8,200	9,200	2,200
5/16	.3165	.3125	510	12,800	14,400	3,500
3/8	.3790	.3750	575	18,400	20,600	4,500
1/2	.5050	.5000	1,160	32,800	36,800	11,500
5/8	.6300	.6250	2,070	51,200	57,500	—

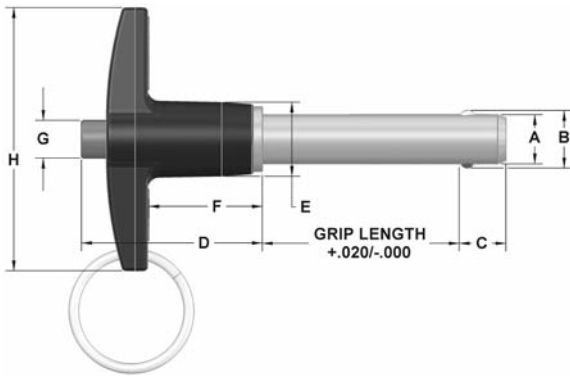
*Note: 300 Series Stainless is not recommended in applications where shear forces are a factor.

These positive locking quick release pins have a wide range of uses in fastening, locating, and alignment applications. The pins will not release until the button on the handle is depressed. Once the button is depressed, the balls retract into the shank allowing the pin to be inserted or removed into or out of a hole. They are available in three shank materials to meet your application. The handles for the pins listed below are made from 380 aluminum casting and anodized black. The pins are supplied with a stainless steel split ring for attaching a cable assembly. Pins in other grip lengths are available as special orders. See page 195 for complete specifications.

4130 Steel Part #	17-4 SS Part #	300 Series SS Part #	Nominal Diameter	A Max	A Min	Grip Length	+/- .005 B	+ .000/- .030 C	D	E	F	G	H
TAAS-18-050	TACH-18-050	—	3/16	.1885	.1870	.50	.220	.260	1.21	.47	.76	.23	1.81
TAAS-18-075	TACH-18-075	—	3/16	.1885	.1870	.75	.220	.260	1.21	.47	.76	.23	1.81
TAAS-18-100	TACH-18-100	—	3/16	.1885	.1870	1.00	.220	.260	1.21	.47	.76	.23	1.81
TAAS-18-125	TACH-18-125	—	3/16	.1885	.1870	1.25	.220	.260	1.21	.47	.76	.23	1.81
TAAS-18-150	TACH-18-150	—	3/16	.1885	.1870	1.50	.220	.260	1.21	.47	.76	.23	1.81
TAAS-18-175	TACH-18-175	—	3/16	.1885	.1870	1.75	.220	.260	1.21	.47	.76	.23	1.81
TAAS-18-200	TACH-18-200	—	3/16	.1885	.1870	2.00	.220	.260	1.21	.47	.76	.23	1.81
TAAS-18-250	TACH-18-250	—	3/16	.1885	.1870	2.50	.220	.260	1.21	.47	.76	.23	1.81
TAAS-18-300	TACH-18-300	—	3/16	.1885	.1870	3.00	.220	.260	1.21	.47	.76	.23	1.81
TAAS-18-350	TACH-18-350	—	3/16	.1885	.1870	3.50	.220	.260	1.21	.47	.76	.23	1.81
TAAS-18-400	TACH-18-400	—	3/16	.1885	.1870	4.00	.220	.260	1.21	.47	.76	.23	1.81
TAAS-25-050	TACH-25-050	TACS-25-050	1/4	.2485	.2470	.50	.289	.290	1.21	.47	.76	.23	1.81
TAAS-25-075	TACH-25-075	TACS-25-075	1/4	.2485	.2470	.75	.289	.290	1.21	.47	.76	.23	1.81
TAAS-25-100	TACH-25-100	TACS-25-100	1/4	.2485	.2470	1.00	.289	.290	1.21	.47	.76	.23	1.81
TAAS-25-125	TACH-25-125	TACS-25-125	1/4	.2485	.2470	1.25	.289	.290	1.21	.47	.76	.23	1.81
TAAS-25-150	TACH-25-150	TACS-25-150	1/4	.2485	.2470	1.50	.289	.290	1.21	.47	.76	.23	1.81
TAAS-25-175	TACH-25-175	TACS-25-175	1/4	.2485	.2470	1.75	.289	.290	1.21	.47	.76	.23	1.81
TAAS-25-200	TACH-25-200	TACS-25-200	1/4	.2485	.2470	2.00	.289	.290	1.21	.47	.76	.23	1.81
TAAS-25-250	TACH-25-250	TACS-25-250	1/4	.2485	.2470	2.50	.289	.290	1.21	.47	.76	.23	1.81
TAAS-25-300	TACH-25-300	TACS-25-300	1/4	.2485	.2470	3.00	.289	.290	1.21	.47	.76	.23	1.81
TAAS-25-350	TACH-25-350	TACS-25-350	1/4	.2485	.2470	3.50	.289	.290	1.21	.47	.76	.23	1.81
TAAS-25-400	TACH-25-400	TACS-25-400	1/4	.2485	.2470	4.00	.289	.290	1.21	.47	.76	.23	1.81
TAAS-31-050	TACH-31-050	TACS-31-050	5/16	.3110	.3095	.50	.375	.330	1.21	.47	.76	.23	1.81
TAAS-31-075	TACH-31-075	TACS-31-075	5/16	.3110	.3095	.75	.375	.330	1.21	.47	.76	.23	1.81
TAAS-31-100	TACH-31-100	TACS-31-100	5/16	.3110	.3095	1.00	.375	.330	1.21	.47	.76	.23	1.81
TAAS-31-125	TACH-31-125	TACS-31-125	5/16	.3110	.3095	1.25	.375	.330	1.21	.47	.76	.23	1.81
TAAS-31-150	TACH-31-150	TACS-31-150	5/16	.3110	.3095	1.50	.375	.330	1.21	.47	.76	.23	1.81
TAAS-31-175	TACH-31-175	TACS-31-175	5/16	.3110	.3095	1.75	.375	.330	1.21	.47	.76	.23	1.81
TAAS-31-200	TACH-31-200	TACS-31-200	5/16	.3110	.3095	2.00	.375	.330	1.21	.47	.76	.23	1.81
TAAS-31-250	TACH-31-250	TACS-31-250	5/16	.3110	.3095	2.50	.375	.330	1.21	.47	.76	.23	1.81
TAAS-31-300	TACH-31-300	TACS-31-300	5/16	.3110	.3095	3.00	.375	.330	1.21	.47	.76	.23	1.81
TAAS-31-350	TACH-31-350	TACS-31-350	5/16	.3110	.3095	3.50	.375	.330	1.21	.47	.76	.23	1.81
TAAS-31-400	TACH-31-400	TACS-31-400	5/16	.3110	.3095	4.00	.375	.330	1.21	.47	.76	.23	1.81

QUICK RELEASE BALL LOCK PINS

T-Handle | Inch (continued)



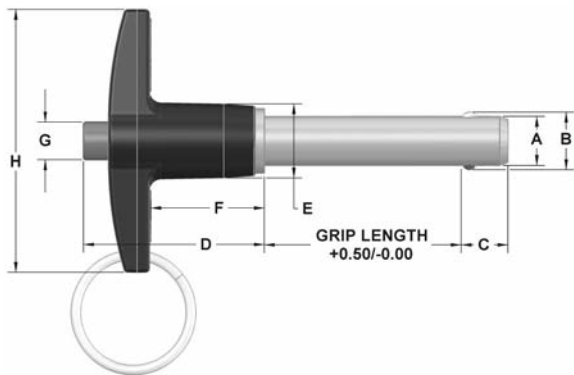
Dia	Hole Size		Min. Pull-Out Strength (lbs)	Calculated Double Shear (lbs)		
	Max	Min		4130 Steel	17-4 Stainless	300 Series SS*
3/16	.1940	.1900	200	4,600	5,150	—
1/4	.2540	.2500	230	8,200	9,200	2,200
5/16	.3165	.3125	510	12,800	14,400	3,500
3/8	.3790	.3750	575	18,400	20,600	4,500
1/2	.5050	.5000	1,160	32,800	36,800	11,500
5/8	.6300	.6250	2,070	51,200	57,500	—

*Note: 300 Series Stainless is not recommended in applications where shear forces are a factor.

4130 Steel Part #	17-4 SS Part #	300 Series SS Part #	Nominal Diameter	A Max	A Min	Grip Length	+/- .005 B	+ .000/- .030 C	D	E	F	G	H
TAAS-37-050	TACH-37-050	TACS-37-050	3/8	.3735	.3720	.50	.440	.365	1.37	.56	.87	.29	2.00
TAAS-37-075	TACH-37-075	TACS-37-075	3/8	.3735	.3720	.75	.440	.365	1.37	.56	.87	.29	2.00
TAAS-37-100	TACH-37-100	TACS-37-100	3/8	.3735	.3720	1.00	.440	.365	1.37	.56	.87	.29	2.00
TAAS-37-125	TACH-37-125	TACS-37-125	3/8	.3735	.3720	1.25	.440	.365	1.37	.56	.87	.29	2.00
TAAS-37-150	TACH-37-150	TACS-37-150	3/8	.3735	.3720	1.50	.440	.365	1.37	.56	.87	.29	2.00
TAAS-37-175	TACH-37-175	TACS-37-175	3/8	.3735	.3720	1.75	.440	.365	1.37	.56	.87	.29	2.00
TAAS-37-200	TACH-37-200	TACS-37-200	3/8	.3735	.3720	2.00	.440	.365	1.37	.56	.87	.29	2.00
TAAS-37-250	TACH-37-250	TACS-37-250	3/8	.3735	.3720	2.50	.440	.365	1.37	.56	.87	.29	2.00
TAAS-37-300	TACH-37-300	TACS-37-300	3/8	.3735	.3720	3.00	.440	.365	1.37	.56	.87	.29	2.00
TAAS-37-350	TACH-37-350	TACS-37-350	3/8	.3735	.3720	3.50	.440	.365	1.37	.56	.87	.29	2.00
TAAS-37-400	TACH-37-400	TACS-37-400	3/8	.3735	.3720	4.00	.440	.365	1.37	.56	.87	.29	2.00
TAAS-50-100	TACH-50-100	TACS-50-100	1/2	.4985	.4970	1.00	.594	.460	1.60	.72	1.00	.42	2.25
TAAS-50-125	TACH-50-125	TACS-50-125	1/2	.4985	.4970	1.25	.594	.460	1.60	.72	1.00	.42	2.25
TAAS-50-150	TACH-50-150	TACS-50-150	1/2	.4985	.4970	1.50	.594	.460	1.60	.72	1.00	.42	2.25
TAAS-50-175	TACH-50-175	TACS-50-175	1/2	.4985	.4970	1.75	.594	.460	1.60	.72	1.00	.42	2.25
TAAS-50-200	TACH-50-200	TACS-50-200	1/2	.4985	.4970	2.00	.594	.460	1.60	.72	1.00	.42	2.25
TAAS-50-250	TACH-50-250	TACS-50-250	1/2	.4985	.4970	2.50	.594	.460	1.60	.72	1.00	.42	2.25
TAAS-50-300	TACH-50-300	TACS-50-300	1/2	.4985	.4970	3.00	.594	.460	1.60	.72	1.00	.42	2.25
TAAS-50-350	TACH-50-350	TACS-50-350	1/2	.4985	.4970	3.50	.594	.460	1.60	.72	1.00	.42	2.25
TAAS-50-400	TACH-50-400	TACS-50-400	1/2	.4985	.4970	4.00	.594	.460	1.60	.72	1.00	.42	2.25
TAAS-50-450	TACH-50-450	TACS-50-450	1/2	.4985	.4970	4.50	.594	.460	1.60	.72	1.00	.42	2.25
TAAS-50-500	TACH-50-500	TACS-50-500	1/2	.4985	.4970	5.00	.594	.460	1.60	.72	1.00	.42	2.25
TAAS-50-550	TACH-50-550	TACS-50-550	1/2	.4985	.4970	5.50	.594	.460	1.60	.72	1.00	.42	2.25
TAAS-50-600	TACH-50-600	TACS-50-600	1/2	.4985	.4970	6.00	.594	.460	1.60	.72	1.00	.42	2.25
TAAS-62-150	TACH-62-150	—	5/8	.6235	.6220	1.50	.750	.580	1.77	.94	1.11	.54	3.07
TAAS-62-175	TACH-62-175	—	5/8	.6235	.6220	1.75	.750	.580	1.77	.94	1.11	.54	3.07
TAAS-62-200	TACH-62-200	—	5/8	.6235	.6220	2.00	.750	.580	1.77	.94	1.11	.54	3.07
TAAS-62-250	TACH-62-250	—	5/8	.6235	.6220	2.50	.750	.580	1.77	.94	1.11	.54	3.07
TAAS-62-300	TACH-62-300	—	5/8	.6235	.6220	3.00	.750	.580	1.77	.94	1.11	.54	3.07
TAAS-62-350	TACH-62-350	—	5/8	.6235	.6220	3.50	.750	.580	1.77	.94	1.11	.54	3.07
TAAS-62-400	TACH-62-400	—	5/8	.6235	.6220	4.00	.750	.580	1.77	.94	1.11	.54	3.07
TAAS-62-450	TACH-62-450	—	5/8	.6235	.6220	4.50	.750	.580	1.77	.94	1.11	.54	3.07
TAAS-62-500	TACH-62-500	—	5/8	.6235	.6220	5.00	.750	.580	1.77	.94	1.11	.54	3.07
TAAS-62-550	TACH-62-550	—	5/8	.6235	.6220	5.50	.750	.580	1.77	.94	1.11	.54	3.07
TAAS-62-600	TACH-62-600	—	5/8	.6235	.6220	6.00	.750	.580	1.77	.94	1.11	.54	3.07

QUICK RELEASE BALL LOCK PINS

T-Handle | Metric



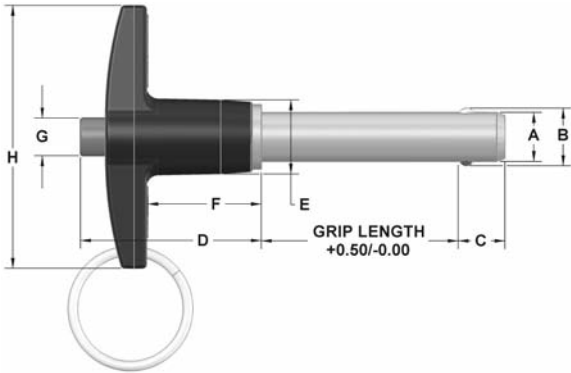
Dia mm	Hole Size Max mm	Min mm	Min. Pull-Out Strength (N)	Calculated Double Shear (N) 17-4 Stainless
5	5.1	5.0	890	24,400
6	6.1	6.0	1,023	35,640
8	8.1	8.0	2,268	63,804
10	10.1	10.0	2,558	100,101
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16	16.1	16.0	9,207	257,179

These positive locking quick release pins have a wide range of uses in fastening, locating, and alignment applications. The pins will not release until the button on the handle is depressed. Once the button is depressed, the balls retract into the shank allowing the pin to be inserted or removed into or out of a hole. The shanks are made from 17-4PH stainless steel. The handles for the pins listed below are made from 380 aluminum casting and anodized black. The pins are supplied with a stainless steel split ring for attaching a cable assembly. Pins in other grip lengths are available as special orders. See page 195 for complete specifications. Compliant to RoHS requirements.

17-4 SS Part #	Nominal Diameter mm	A Max mm	A Min mm	Grip Length mm	+/-0.25 B mm	+/-1.0 C mm	D mm	E mm	F mm	G mm	H mm
MTACH-05-010	5	4.96	4.92	10	5.54	6	30.7	11.9	19.3	5.8	46
MTACH-05-015	5	4.96	4.92	15	5.54	6	30.7	11.9	19.3	5.8	46
MTACH-05-020	5	4.96	4.92	20	5.54	6	30.7	11.9	19.3	5.8	46
MTACH-05-025	5	4.96	4.92	25	5.54	6	30.7	11.9	19.3	5.8	46
MTACH-05-030	5	4.96	4.92	30	5.54	6	30.7	11.9	19.3	5.8	46
MTACH-05-035	5	4.96	4.92	35	5.54	6	30.7	11.9	19.3	5.8	46
MTACH-05-040	5	4.96	4.92	40	5.54	6	30.7	11.9	19.3	5.8	46
MTACH-05-045	5	4.96	4.92	45	5.54	6	30.7	11.9	19.3	5.8	46
MTACH-05-050	5	4.96	4.92	50	5.54	6	30.7	11.9	19.3	5.8	46
MTACH-05-060	5	4.96	4.92	60	5.54	6	30.7	11.9	19.3	5.8	46
MTACH-05-070	5	4.96	4.92	70	5.54	6	30.7	11.9	19.3	5.8	46
MTACH-05-080	5	4.96	4.92	80	5.54	6	30.7	11.9	19.3	5.8	46
MTACH-05-090	5	4.96	4.92	90	5.54	6	30.7	11.9	19.3	5.8	46
MTACH-05-100	5	4.96	4.92	100	5.54	6	30.7	11.9	19.3	5.8	46
MTACH-06-010	6	5.96	5.92	10	6.99	7	30.7	11.9	19.3	5.8	46
MTACH-06-015	6	5.96	5.92	15	6.99	7	30.7	11.9	19.3	5.8	46
MTACH-06-020	6	5.96	5.92	20	6.99	7	30.7	11.9	19.3	5.8	46
MTACH-06-025	6	5.96	5.92	25	6.99	7	30.7	11.9	19.3	5.8	46
MTACH-06-030	6	5.96	5.92	30	6.99	7	30.7	11.9	19.3	5.8	46
MTACH-06-035	6	5.96	5.92	35	6.99	7	30.7	11.9	19.3	5.8	46
MTACH-06-040	6	5.96	5.92	40	6.99	7	30.7	11.9	19.3	5.8	46
MTACH-06-045	6	5.96	5.92	45	6.99	7	30.7	11.9	19.3	5.8	46
MTACH-06-050	6	5.96	5.92	50	6.99	7	30.7	11.9	19.3	5.8	46
MTACH-06-060	6	5.96	5.92	60	6.99	7	30.7	11.9	19.3	5.8	46
MTACH-06-070	6	5.96	5.92	70	6.99	7	30.7	11.9	19.3	5.8	46
MTACH-06-080	6	5.96	5.92	80	6.99	7	30.7	11.9	19.3	5.8	46
MTACH-06-090	6	5.96	5.92	90	6.99	7	30.7	11.9	19.3	5.8	46
MTACH-06-100	6	5.96	5.92	100	6.99	7	30.7	11.9	19.3	5.8	46
MTACH-08-010	8	7.96	7.92	10	9.42	8	30.7	11.9	19.3	5.8	46
MTACH-08-015	8	7.96	7.92	15	9.42	8	30.7	11.9	19.3	5.8	46
MTACH-08-020	8	7.96	7.92	20	9.42	8	30.7	11.9	19.3	5.8	46
MTACH-08-025	8	7.96	7.92	25	9.42	8	30.7	11.9	19.3	5.8	46
MTACH-08-030	8	7.96	7.92	30	9.42	8	30.7	11.9	19.3	5.8	46
MTACH-08-035	8	7.96	7.92	35	9.42	8	30.7	11.9	19.3	5.8	46
MTACH-08-040	8	7.96	7.92	40	9.42	8	30.7	11.9	19.3	5.8	46
MTACH-08-045	8	7.96	7.92	45	9.42	8	30.7	11.9	19.3	5.8	46
MTACH-08-050	8	7.96	7.92	50	9.42	8	30.7	11.9	19.3	5.8	46
MTACH-08-060	8	7.96	7.92	60	9.42	8	30.7	11.9	19.3	5.8	46
MTACH-08-070	8	7.96	7.92	70	9.42	8	30.7	11.9	19.3	5.8	46
MTACH-08-080	8	7.96	7.92	80	9.42	8	30.7	11.9	19.3	5.8	46
MTACH-08-090	8	7.96	7.92	90	9.42	8	30.7	11.9	19.3	5.8	46
MTACH-08-100	8	7.96	7.92	100	9.42	8	30.7	11.9	19.3	5.8	46

QUICK RELEASE BALL LOCK PINS

T-Handle | Metric (continued)

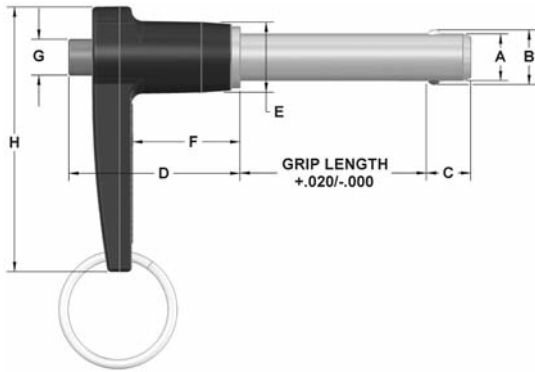


Dia mm	Hole Size Max mm	Min mm	Min. Pull-Out Strength (N)	Calculated Double Shear (N) 17-4 Stainless
5	5.1	5.0	890	24,400
6	6.1	6.0	1,023	35,640
8	8.1	8.0	2,268	63,804
10	10.1	10.0	2,558	100,101
12	12.1	12.0	5,160	144,060
16	16.1	16.0	9,207	257,179

17-4 SS Part #	Nominal Diameter mm	A Max mm	A Min mm	Grip Length mm	+/-0.25 B mm	+/-1.0 C mm	D mm	E mm	F mm	G mm	H mm
MTACH-10-015	10	9.96	9.92	15	11.86	9	34.8	14.2	22.1	7.4	50.8
MTACH-10-020	10	9.96	9.92	20	11.86	9	34.8	14.2	22.1	7.4	50.8
MTACH-10-025	10	9.96	9.92	25	11.86	9	34.8	14.2	22.1	7.4	50.8
MTACH-10-030	10	9.96	9.92	30	11.86	9	34.8	14.2	22.1	7.4	50.8
MTACH-10-035	10	9.96	9.92	35	11.86	9	34.8	14.2	22.1	7.4	50.8
MTACH-10-040	10	9.96	9.92	40	11.86	9	34.8	14.2	22.1	7.4	50.8
MTACH-10-045	10	9.96	9.92	45	11.86	9	34.8	14.2	22.1	7.4	50.8
MTACH-10-050	10	9.96	9.92	50	11.86	9	34.8	14.2	22.1	7.4	50.8
MTACH-10-060	10	9.96	9.92	60	11.86	9	34.8	14.2	22.1	7.4	50.8
MTACH-10-070	10	9.96	9.92	70	11.86	9	34.8	14.2	22.1	7.4	50.8
MTACH-10-080	10	9.96	9.92	80	11.86	9	34.8	14.2	22.1	7.4	50.8
MTACH-10-090	10	9.96	9.92	90	11.86	9	34.8	14.2	22.1	7.4	50.8
MTACH-10-100	10	9.96	9.92	100	11.86	9	34.8	14.2	22.1	7.4	50.8
MTACH-12-020	12	11.96	11.92	20	14.45	10	40.6	18.3	25.4	10.7	57.2
MTACH-12-025	12	11.96	11.92	25	14.45	10	40.6	18.3	25.4	10.7	57.2
MTACH-12-030	12	11.96	11.92	30	14.45	10	40.6	18.3	25.4	10.7	57.2
MTACH-12-035	12	11.96	11.92	35	14.45	10	40.6	18.3	25.4	10.7	57.2
MTACH-12-040	12	11.96	11.92	40	14.45	10	40.6	18.3	25.4	10.7	57.2
MTACH-12-045	12	11.96	11.92	45	14.45	10	40.6	18.3	25.4	10.7	57.2
MTACH-12-050	12	11.96	11.92	50	14.45	10	40.6	18.3	25.4	10.7	57.2
MTACH-12-060	12	11.96	11.92	60	14.45	10	40.6	18.3	25.4	10.7	57.2
MTACH-12-070	12	11.96	11.92	70	14.45	10	40.6	18.3	25.4	10.7	57.2
MTACH-12-080	12	11.96	11.92	80	14.45	10	40.6	18.3	25.4	10.7	57.2
MTACH-12-090	12	11.96	11.92	90	14.45	10	40.6	18.3	25.4	10.7	57.2
MTACH-12-100	12	11.96	11.92	100	14.45	10	40.6	18.3	25.4	10.7	57.2
MTACH-16-025	16	15.96	15.92	25	19	14	45	23.9	28.2	13.7	78
MTACH-16-030	16	15.96	15.92	30	19	14	45	23.9	28.2	13.7	78
MTACH-16-035	16	15.96	15.92	35	19	14	45	23.9	28.2	13.7	78
MTACH-16-040	16	15.96	15.92	40	19	14	45	23.9	28.2	13.7	78
MTACH-16-045	16	15.96	15.92	45	19	14	45	23.9	28.2	13.7	78
MTACH-16-050	16	15.96	15.92	50	19	14	45	23.9	28.2	13.7	78
MTACH-16-060	16	15.96	15.92	60	19	14	45	23.9	28.2	13.7	78
MTACH-16-070	16	15.96	15.92	70	19	14	45	23.9	28.2	13.7	78
MTACH-16-080	16	15.96	15.92	80	19	14	45	23.9	28.2	13.7	78
MTACH-16-090	16	15.96	15.92	90	19	14	45	23.9	28.2	13.7	78
MTACH-16-100	16	15.96	15.92	100	19	14	45	23.9	28.2	13.7	78

QUICK RELEASE BALL LOCK PINS

L-Handle | Inch



Dia	Hole Size		Min. Pull-Out Strength (lbs)	Calculated Double Shear (lbs)		
	Max	Min		4130 Steel	17-4 Stainless	300 Series SS*
3/16	.1940	.1900	200	4,600	5,150	—
1/4	.2540	.2500	230	8,200	9,200	2,200
5/16	.3165	.3125	510	12,800	14,400	3,500
3/8	.3790	.3750	575	18,400	20,600	4,500
1/2	.5050	.5000	1,160	32,800	36,800	11,500
5/8	.6300	.6250	2,070	51,200	57,500	—

*Note: 300 Series Stainless is not recommended in applications where shear forces are a factor.

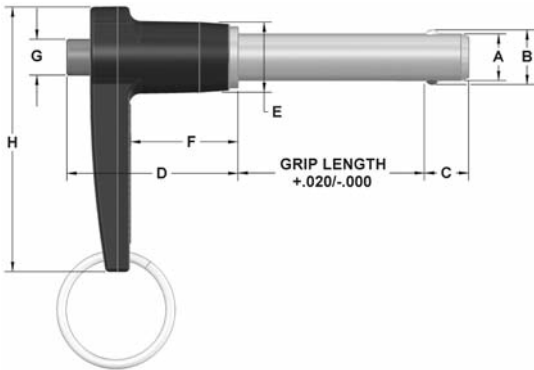
These positive locking quick release pins have a wide range of uses in fastening, locating, and alignment applications. The pins will not release until the button on the handle is depressed. Once the button is depressed, the balls retract into the shank allowing the pin to be inserted or removed into or out of a hole. They are available in three shank materials to meet your application. The handles for the pins listed below are made from 380 aluminum casting and anodized black. The pins are supplied with a stainless steel split ring for attaching a cable assembly. Pins in other grip lengths are available as special orders. See page 195 for complete specifications.

4130 Steel Part #	17-4 SS Part #	300 Series SS Part #	Nominal Diameter	A Max	A Min	Grip Length	+/- .005 B	+ .000/- .030 C	D	E	F	G	H
LAAS-18-050	LACH-18-050	—	3/16	.1885	.1870	.50	.220	.260	1.21	.47	.76	.23	1.84
LAAS-18-075	LACH-18-075	—	3/16	.1885	.1870	.75	.220	.260	1.21	.47	.76	.23	1.84
LAAS-18-100	LACH-18-100	—	3/16	.1885	.1870	1.00	.220	.260	1.21	.47	.76	.23	1.84
LAAS-18-125	LACH-18-125	—	3/16	.1885	.1870	1.25	.220	.260	1.21	.47	.76	.23	1.84
LAAS-18-150	LACH-18-150	—	3/16	.1885	.1870	1.50	.220	.260	1.21	.47	.76	.23	1.84
LAAS-18-175	LACH-18-175	—	3/16	.1885	.1870	1.75	.220	.260	1.21	.47	.76	.23	1.84
LAAS-18-200	LACH-18-200	—	3/16	.1885	.1870	2.00	.220	.260	1.21	.47	.76	.23	1.84
LAAS-18-250	LACH-18-250	—	3/16	.1885	.1870	2.50	.220	.260	1.21	.47	.76	.23	1.84
LAAS-18-300	LACH-18-300	—	3/16	.1885	.1870	3.00	.220	.260	1.21	.47	.76	.23	1.84
LAAS-18-350	LACH-18-350	—	3/16	.1885	.1870	3.50	.220	.260	1.21	.47	.76	.23	1.84
LAAS-18-400	LACH-18-400	—	3/16	.1885	.1870	4.00	.220	.260	1.21	.47	.76	.23	1.84
LAAS-25-050	LACH-25-050	LACS-25-050	1/4	.2485	.2470	.50	.289	.290	1.21	.47	.76	.23	1.84
LAAS-25-075	LACH-25-075	LACS-25-075	1/4	.2485	.2470	.75	.289	.290	1.21	.47	.76	.23	1.84
LAAS-25-100	LACH-25-100	LACS-25-100	1/4	.2485	.2470	1.00	.289	.290	1.21	.47	.76	.23	1.84
LAAS-25-125	LACH-25-125	LACS-25-125	1/4	.2485	.2470	1.25	.289	.290	1.21	.47	.76	.23	1.84
LAAS-25-150	LACH-25-150	LACS-25-150	1/4	.2485	.2470	1.50	.289	.290	1.21	.47	.76	.23	1.84
LAAS-25-175	LACH-25-175	LACS-25-175	1/4	.2485	.2470	1.75	.289	.290	1.21	.47	.76	.23	1.84
LAAS-25-200	LACH-25-200	LACS-25-200	1/4	.2485	.2470	2.00	.289	.290	1.21	.47	.76	.23	1.84
LAAS-25-250	LACH-25-250	LACS-25-250	1/4	.2485	.2470	2.50	.289	.290	1.21	.47	.76	.23	1.84
LAAS-25-300	LACH-25-300	LACS-25-300	1/4	.2485	.2470	3.00	.289	.290	1.21	.47	.76	.23	1.84
LAAS-25-350	LACH-25-350	LACS-25-350	1/4	.2485	.2470	3.50	.289	.290	1.21	.47	.76	.23	1.84
LAAS-25-400	LACH-25-400	LACS-25-400	1/4	.2485	.2470	4.00	.289	.290	1.21	.47	.76	.23	1.84
LAAS-31-050	LACH-31-050	LACS-31-050	5/16	.3110	.3095	.50	.375	.330	1.21	.47	.76	.23	1.84
LAAS-31-075	LACH-31-075	LACS-31-075	5/16	.3110	.3095	.75	.375	.330	1.21	.47	.76	.23	1.84
LAAS-31-100	LACH-31-100	LACS-31-100	5/16	.3110	.3095	1.00	.375	.330	1.21	.47	.76	.23	1.84
LAAS-31-125	LACH-31-125	LACS-31-125	5/16	.3110	.3095	1.25	.375	.330	1.21	.47	.76	.23	1.84
LAAS-31-150	LACH-31-150	LACS-31-150	5/16	.3110	.3095	1.50	.375	.330	1.21	.47	.76	.23	1.84
LAAS-31-175	LACH-31-175	LACS-31-175	5/16	.3110	.3095	1.75	.375	.330	1.21	.47	.76	.23	1.84
LAAS-31-200	LACH-31-200	LACS-31-200	5/16	.3110	.3095	2.00	.375	.330	1.21	.47	.76	.23	1.84
LAAS-31-250	LACH-31-250	LACS-31-250	5/16	.3110	.3095	2.50	.375	.330	1.21	.47	.76	.23	1.84
LAAS-31-300	LACH-31-300	LACS-31-300	5/16	.3110	.3095	3.00	.375	.330	1.21	.47	.76	.23	1.84
LAAS-31-350	LACH-31-350	LACS-31-350	5/16	.3110	.3095	3.50	.375	.330	1.21	.47	.76	.23	1.84
LAAS-31-400	LACH-31-400	LACS-31-400	5/16	.3110	.3095	4.00	.375	.330	1.21	.47	.76	.23	1.84



QUICK RELEASE BALL LOCK PINS

L-Handle | Inch (continued)



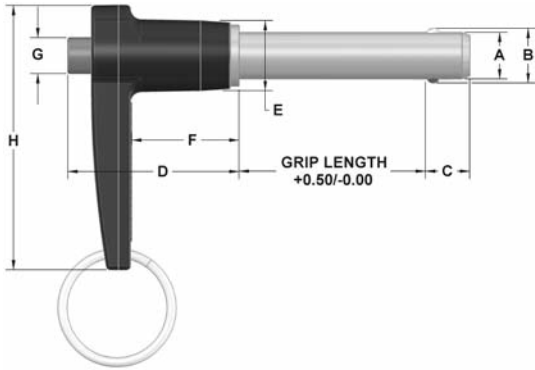
Dia	Hole Size		Min. Pull-Out Strength (lbs)	Calculated Double Shear (lbs)		
	Max	Min		4130 Steel	17-4 Stainless	300 Series SS*
3/16	.1940	.1900	200	4,600	5,150	—
1/4	.2540	.2500	230	8,200	9,200	2,200
5/16	.3165	.3125	510	12,800	14,400	3,500
3/8	.3790	.3750	575	18,400	20,600	4,500
1/2	.5050	.5000	1,160	32,800	36,800	11,500
5/8	.6300	.6250	2,070	51,200	57,500	—

*Note: 300 Series Stainless is not recommended in applications where shear forces are a factor.

4130 Steel Part #	17-4 SS Part #	300 Series SS Part #	Nominal Diameter	A Max	A Min	Grip Length	+/- .005 B	+ .000/- .030 C	D	E	F	G	H
LAAS-37-050	LACH-37-050	LACS-37-050	3/8	.3735	.3720	.50	.440	.365	1.37	.56	.87	.29	2.13
LAAS-37-075	LACH-37-075	LACS-37-075	3/8	.3735	.3720	.75	.440	.365	1.37	.56	.87	.29	2.13
LAAS-37-100	LACH-37-100	LACS-37-100	3/8	.3735	.3720	1.00	.440	.365	1.37	.56	.87	.29	2.13
LAAS-37-125	LACH-37-125	LACS-37-125	3/8	.3735	.3720	1.25	.440	.365	1.37	.56	.87	.29	2.13
LAAS-37-150	LACH-37-150	LACS-37-150	3/8	.3735	.3720	1.50	.440	.365	1.37	.56	.87	.29	2.13
LAAS-37-175	LACH-37-175	LACS-37-175	3/8	.3735	.3720	1.75	.440	.365	1.37	.56	.87	.29	2.13
LAAS-37-200	LACH-37-200	LACS-37-200	3/8	.3735	.3720	2.00	.440	.365	1.37	.56	.87	.29	2.13
LAAS-37-250	LACH-37-250	LACS-37-250	3/8	.3735	.3720	2.50	.440	.365	1.37	.56	.87	.29	2.13
LAAS-37-300	LACH-37-300	LACS-37-300	3/8	.3735	.3720	3.00	.440	.365	1.37	.56	.87	.29	2.13
LAAS-37-350	LACH-37-350	LACS-37-350	3/8	.3735	.3720	3.50	.440	.365	1.37	.56	.87	.29	2.13
LAAS-37-400	LACH-37-400	LACS-37-400	3/8	.3735	.3720	4.00	.440	.365	1.37	.56	.87	.29	2.13
LAAS-50-100	LACH-50-100	LACS-50-100	1/2	.4985	.4970	1.00	.594	.460	1.60	.72	1.00	.42	2.37
LAAS-50-125	LACH-50-125	LACS-50-125	1/2	.4985	.4970	1.25	.594	.460	1.60	.72	1.00	.42	2.37
LAAS-50-150	LACH-50-150	LACS-50-150	1/2	.4985	.4970	1.50	.594	.460	1.60	.72	1.00	.42	2.37
LAAS-50-175	LACH-50-175	LACS-50-175	1/2	.4985	.4970	1.75	.594	.460	1.60	.72	1.00	.42	2.37
LAAS-50-200	LACH-50-200	LACS-50-200	1/2	.4985	.4970	2.00	.594	.460	1.60	.72	1.00	.42	2.37
LAAS-50-250	LACH-50-250	LACS-50-250	1/2	.4985	.4970	2.50	.594	.460	1.60	.72	1.00	.42	2.37
LAAS-50-300	LACH-50-300	LACS-50-300	1/2	.4985	.4970	3.00	.594	.460	1.60	.72	1.00	.42	2.37
LAAS-50-350	LACH-50-350	LACS-50-350	1/2	.4985	.4970	3.50	.594	.460	1.60	.72	1.00	.42	2.37
LAAS-50-400	LACH-50-400	LACS-50-400	1/2	.4985	.4970	4.00	.594	.460	1.60	.72	1.00	.42	2.37
LAAS-50-450	LACH-50-450	LACS-50-450	1/2	.4985	.4970	4.50	.594	.460	1.60	.72	1.00	.42	2.37
LAAS-50-500	LACH-50-500	LACS-50-500	1/2	.4985	.4970	5.00	.594	.460	1.60	.72	1.00	.42	2.37
LAAS-50-550	LACH-50-550	LACS-50-550	1/2	.4985	.4970	5.50	.594	.460	1.60	.72	1.00	.42	2.37
LAAS-50-600	LACH-50-600	LACS-50-600	1/2	.4985	.4970	6.00	.594	.460	1.60	.72	1.00	.42	2.37
LAAS-62-150	LACH-62-150	—	5/8	.6235	.6220	1.50	.750	.580	1.77	.94	1.11	.54	2.69
LAAS-62-175	LACH-62-175	—	5/8	.6235	.6220	1.75	.750	.580	1.77	.94	1.11	.54	2.69
LAAS-62-200	LACH-62-200	—	5/8	.6235	.6220	2.00	.750	.580	1.77	.94	1.11	.54	2.69
LAAS-62-250	LACH-62-250	—	5/8	.6235	.6220	2.50	.750	.580	1.77	.94	1.11	.54	2.69
LAAS-62-300	LACH-62-300	—	5/8	.6235	.6220	3.00	.750	.580	1.77	.94	1.11	.54	2.69
LAAS-62-350	LACH-62-350	—	5/8	.6235	.6220	3.50	.750	.580	1.77	.94	1.11	.54	2.69
LAAS-62-400	LACH-62-400	—	5/8	.6235	.6220	4.00	.750	.580	1.77	.94	1.11	.54	2.69
LAAS-62-450	LACH-62-450	—	5/8	.6235	.6220	4.50	.750	.580	1.77	.94	1.11	.54	2.69
LAAS-62-500	LACH-62-500	—	5/8	.6235	.6220	5.00	.750	.580	1.77	.94	1.11	.54	2.69
LAAS-62-550	LACH-62-550	—	5/8	.6235	.6220	5.50	.750	.580	1.77	.94	1.11	.54	2.69
LAAS-62-600	LACH-62-600	—	5/8	.6235	.6220	6.00	.750	.580	1.77	.94	1.11	.54	2.69

QUICK RELEASE BALL LOCK PINS

L-Handle | Metric



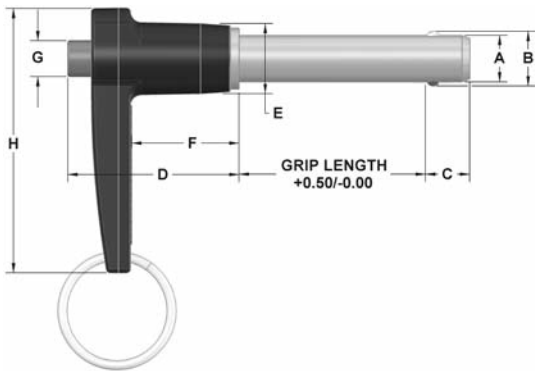
Dia mm	Hole Size Max mm	Min mm	Min. Pull-Out Strength (N)	Calculated Double Shear (N) 17-4 Stainless
5	5.1	5.0	890	24,400
6	6.1	6.0	1,023	35,640
8	8.1	8.0	2,268	63,804
10	10.1	10.0	2,558	100,101
12	12.1	12.0	5,160	144,060
16	16.1	16.0	9,207	257,179

These positive locking quick release pins have a wide range of uses in fastening, locating, and alignment applications. The pins will not release until the button on the handle is depressed. Once the button is depressed, the balls retract into the shank allowing the pin to be inserted or removed into or out of a hole. The shanks are made from 17-4PH stainless steel. The handles for the pins listed below are made from 380 aluminum casting and anodized black. The pins are supplied with a stainless steel split ring for attaching a cable assembly. Pins in other grip lengths are available as special orders. See page 195 for complete specifications. Compliant to RoHS requirements.

17-4 SS Part #	Nominal Diameter mm	A Max mm	A Min mm	Grip Length mm	+/-0.25 B mm	+/-1.0 C mm	D mm	E mm	F mm	G mm	H mm
MLACH-05-010	5	4.96	4.92	10	5.54	6	30.7	11.9	19.3	5.8	46.7
MLACH-05-015	5	4.96	4.92	15	5.54	6	30.7	11.9	19.3	5.8	46.7
MLACH-05-020	5	4.96	4.92	20	5.54	6	30.7	11.9	19.3	5.8	46.7
MLACH-05-025	5	4.96	4.92	25	5.54	6	30.7	11.9	19.3	5.8	46.7
MLACH-05-030	5	4.96	4.92	30	5.54	6	30.7	11.9	19.3	5.8	46.7
MLACH-05-035	5	4.96	4.92	35	5.54	6	30.7	11.9	19.3	5.8	46.7
MLACH-05-040	5	4.96	4.92	40	5.54	6	30.7	11.9	19.3	5.8	46.7
MLACH-05-045	5	4.96	4.92	45	5.54	6	30.7	11.9	19.3	5.8	46.7
MLACH-05-050	5	4.96	4.92	50	5.54	6	30.7	11.9	19.3	5.8	46.7
MLACH-05-060	5	4.96	4.92	60	5.54	6	30.7	11.9	19.3	5.8	46.7
MLACH-05-070	5	4.96	4.92	70	5.54	6	30.7	11.9	19.3	5.8	46.7
MLACH-05-080	5	4.96	4.92	80	5.54	6	30.7	11.9	19.3	5.8	46.7
MLACH-05-090	5	4.96	4.92	90	5.54	6	30.7	11.9	19.3	5.8	46.7
MLACH-05-100	5	4.96	4.92	100	5.54	6	30.7	11.9	19.3	5.8	46.7
MLACH-06-010	6	5.96	5.92	10	6.99	7	30.7	11.9	19.3	5.8	46.7
MLACH-06-015	6	5.96	5.92	15	6.99	7	30.7	11.9	19.3	5.8	46.7
MLACH-06-020	6	5.96	5.92	20	6.99	7	30.7	11.9	19.3	5.8	46.7
MLACH-06-025	6	5.96	5.92	25	6.99	7	30.7	11.9	19.3	5.8	46.7
MLACH-06-030	6	5.96	5.92	30	6.99	7	30.7	11.9	19.3	5.8	46.7
MLACH-06-035	6	5.96	5.92	35	6.99	7	30.7	11.9	19.3	5.8	46.7
MLACH-06-040	6	5.96	5.92	40	6.99	7	30.7	11.9	19.3	5.8	46.7
MLACH-06-045	6	5.96	5.92	45	6.99	7	30.7	11.9	19.3	5.8	46.7
MLACH-06-050	6	5.96	5.92	50	6.99	7	30.7	11.9	19.3	5.8	46.7
MLACH-06-060	6	5.96	5.92	60	6.99	7	30.7	11.9	19.3	5.8	46.7
MLACH-06-070	6	5.96	5.92	70	6.99	7	30.7	11.9	19.3	5.8	46.7
MLACH-06-080	6	5.96	5.92	80	6.99	7	30.7	11.9	19.3	5.8	46.7
MLACH-06-090	6	5.96	5.92	90	6.99	7	30.7	11.9	19.3	5.8	46.7
MLACH-06-100	6	5.96	5.92	100	6.99	7	30.7	11.9	19.3	5.8	46.7
MLACH-08-010	8	7.96	7.92	10	9.42	8	30.7	11.9	19.3	5.8	46.7
MLACH-08-015	8	7.96	7.92	15	9.42	8	30.7	11.9	19.3	5.8	46.7
MLACH-08-020	8	7.96	7.92	20	9.42	8	30.7	11.9	19.3	5.8	46.7
MLACH-08-025	8	7.96	7.92	25	9.42	8	30.7	11.9	19.3	5.8	46.7
MLACH-08-030	8	7.96	7.92	30	9.42	8	30.7	11.9	19.3	5.8	46.7
MLACH-08-035	8	7.96	7.92	35	9.42	8	30.7	11.9	19.3	5.8	46.7
MLACH-08-040	8	7.96	7.92	40	9.42	8	30.7	11.9	19.3	5.8	46.7
MLACH-08-045	8	7.96	7.92	45	9.42	8	30.7	11.9	19.3	5.8	46.7
MLACH-08-050	8	7.96	7.92	50	9.42	8	30.7	11.9	19.3	5.8	46.7
MLACH-08-060	8	7.96	7.92	60	9.42	8	30.7	11.9	19.3	5.8	46.7
MLACH-08-070	8	7.96	7.92	70	9.42	8	30.7	11.9	19.3	5.8	46.7
MLACH-08-080	8	7.96	7.92	80	9.42	8	30.7	11.9	19.3	5.8	46.7
MLACH-08-090	8	7.96	7.92	90	9.42	8	30.7	11.9	19.3	5.8	46.7
MLACH-08-100	8	7.96	7.92	100	9.42	8	30.7	11.9	19.3	5.8	46.7

QUICK RELEASE BALL LOCK PINS

L-Handle | Metric (continued)

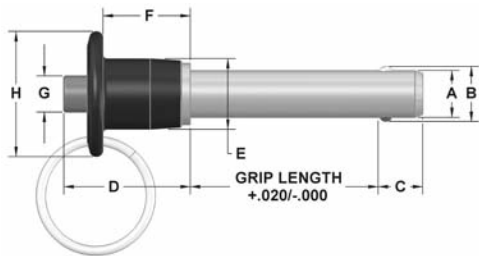


Dia mm	Hole Size Max mm	Min mm	Min. Pull-Out Strength (N)	Calculated Double Shear (N) 17-4 Stainless
5	5.1	5.0	890	24,400
6	6.1	6.0	1,023	35,640
8	8.1	8.0	2,268	63,804
10	10.1	10.0	2,558	100,101
12	12.1	12.0	5,160	144,060
16	16.1	16.0	9,207	257,179

17-4 SS Part #	Nominal Diameter mm	A Max mm	A Min mm	Grip Length mm	+/-0.25 B mm	+/-1.0 C mm	D mm	E mm	F mm	G mm	H mm
MLACH-10-015	10	9.96	9.92	15	11.86	9	34.8	14.2	22.1	7.4	54.1
MLACH-10-020	10	9.96	9.92	20	11.86	9	34.8	14.2	22.1	7.4	54.1
MLACH-10-025	10	9.96	9.92	25	11.86	9	34.8	14.2	22.1	7.4	54.1
MLACH-10-030	10	9.96	9.92	30	11.86	9	34.8	14.2	22.1	7.4	54.1
MLACH-10-035	10	9.96	9.92	35	11.86	9	34.8	14.2	22.1	7.4	54.1
MLACH-10-040	10	9.96	9.92	40	11.86	9	34.8	14.2	22.1	7.4	54.1
MLACH-10-045	10	9.96	9.92	45	11.86	9	34.8	14.2	22.1	7.4	54.1
MLACH-10-050	10	9.96	9.92	50	11.86	9	34.8	14.2	22.1	7.4	54.1
MLACH-10-060	10	9.96	9.92	60	11.86	9	34.8	14.2	22.1	7.4	54.1
MLACH-10-070	10	9.96	9.92	70	11.86	9	34.8	14.2	22.1	7.4	54.1
MLACH-10-080	10	9.96	9.92	80	11.86	9	34.8	14.2	22.1	7.4	54.1
MLACH-10-090	10	9.96	9.92	90	11.86	9	34.8	14.2	22.1	7.4	54.1
MLACH-10-100	10	9.96	9.92	100	11.86	9	34.8	14.2	22.1	7.4	54.1
MLACH-12-020	12	11.96	11.92	20	14.45	10	40.6	18.3	25.4	10.7	60.2
MLACH-12-025	12	11.96	11.92	25	14.45	10	40.6	18.3	25.4	10.7	60.2
MLACH-12-030	12	11.96	11.92	30	14.45	10	40.6	18.3	25.4	10.7	60.2
MLACH-12-035	12	11.96	11.92	35	14.45	10	40.6	18.3	25.4	10.7	60.2
MLACH-12-040	12	11.96	11.92	40	14.45	10	40.6	18.3	25.4	10.7	60.2
MLACH-12-045	12	11.96	11.92	45	14.45	10	40.6	18.3	25.4	10.7	60.2
MLACH-12-050	12	11.96	11.92	50	14.45	10	40.6	18.3	25.4	10.7	60.2
MLACH-12-060	12	11.96	11.92	60	14.45	10	40.6	18.3	25.4	10.7	60.2
MLACH-12-070	12	11.96	11.92	70	14.45	10	40.6	18.3	25.4	10.7	60.2
MLACH-12-080	12	11.96	11.92	80	14.45	10	40.6	18.3	25.4	10.7	60.2
MLACH-12-090	12	11.96	11.92	90	14.45	10	40.6	18.3	25.4	10.7	60.2
MLACH-12-100	12	11.96	11.92	100	14.45	10	40.6	18.3	25.4	10.7	60.2
MLACH-16-025	16	15.96	15.92	25	19	14	45	23.9	28.2	13.7	68.3
MLACH-16-030	16	15.96	15.92	30	19	14	45	23.9	28.2	13.7	68.3
MLACH-16-035	16	15.96	15.92	35	19	14	45	23.9	28.2	13.7	68.3
MLACH-16-040	16	15.96	15.92	40	19	14	45	23.9	28.2	13.7	68.3
MLACH-16-045	16	15.96	15.92	45	19	14	45	23.9	28.2	13.7	68.3
MLACH-16-050	16	15.96	15.92	50	19	14	45	23.9	28.2	13.7	68.3
MLACH-16-060	16	15.96	15.92	60	19	14	45	23.9	28.2	13.7	68.3
MLACH-16-070	16	15.96	15.92	70	19	14	45	23.9	28.2	13.7	68.3
MLACH-16-080	16	15.96	15.92	80	19	14	45	23.9	28.2	13.7	68.3
MLACH-16-090	16	15.96	15.92	90	19	14	45	23.9	28.2	13.7	68.3
MLACH-16-100	16	15.96	15.92	100	19	14	45	23.9	28.2	13.7	68.3

QUICK RELEASE BALL LOCK PINS

Aluminum Button Handle | Inch



Dia	Hole Size		Min. Pull-Out Strength (lbs)	Calculated Double Shear (lbs)		
	Max	Min		4130 Steel	17-4 Stainless	300 Series SS*
3/16	.1940	.1900	200	4,600	5,150	—
1/4	.2540	.2500	230	8,200	9,200	2,200
5/16	.3165	.3125	510	12,800	14,400	3,500
3/8	.3790	.3750	575	18,400	20,600	4,500
1/2	.5050	.5000	1,160	32,800	36,800	11,500
5/8	.6300	.6250	2,070	51,200	57,500	—

*Note: 300 Series Stainless is not recommended in applications where shear forces are a factor.

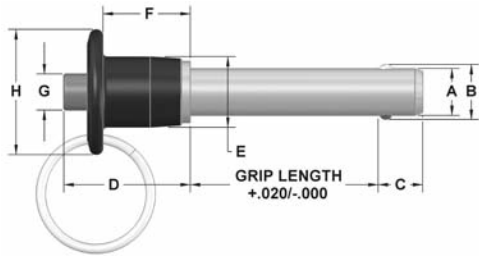
These positive locking quick release pins have a wide range of uses in fastening, locating, and alignment applications. The pins will not release until the button on the handle is depressed. Once the button is depressed, the balls retract into the shank allowing the pin to be inserted or removed into or out of a hole. They are available in three shank materials to meet your application. The handles for the pins listed below are made from 2024-T4 aluminum and anodized black. The pins are supplied with a stainless steel split ring for attaching a cable assembly. Pins in other grip lengths are available as special orders. See page 195 for complete specifications.

4130 Steel Part #	17-4 SS Part #	300 Series SS Part #	Nominal Diameter	A Max	A Min	Grip Length	+/- .005 B	+ .000/- .030 C	D	E	F	G	H
BAAS-18-050	BACH-18-050	—	3/16	.1885	.1870	.50	.220	.260	.92	.47	.63	.23	.81
BAAS-18-075	BACH-18-075	—	3/16	.1885	.1870	.75	.220	.260	.92	.47	.63	.23	.81
BAAS-18-100	BACH-18-100	—	3/16	.1885	.1870	1.00	.220	.260	.92	.47	.63	.23	.81
BAAS-18-125	BACH-18-125	—	3/16	.1885	.1870	1.25	.220	.260	.92	.47	.63	.23	.81
BAAS-18-150	BACH-18-150	—	3/16	.1885	.1870	1.50	.220	.260	.92	.47	.63	.23	.81
BAAS-18-175	BACH-18-175	—	3/16	.1885	.1870	1.75	.220	.260	.92	.47	.63	.23	.81
BAAS-18-200	BACH-18-200	—	3/16	.1885	.1870	2.00	.220	.260	.92	.47	.63	.23	.81
BAAS-18-250	BACH-18-250	—	3/16	.1885	.1870	2.50	.220	.260	.92	.47	.63	.23	.81
BAAS-18-300	BACH-18-300	—	3/16	.1885	.1870	3.00	.220	.260	.92	.47	.63	.23	.81
BAAS-18-350	BACH-18-350	—	3/16	.1885	.1870	3.50	.220	.260	.92	.47	.63	.23	.81
BAAS-18-400	BACH-18-400	—	3/16	.1885	.1870	4.00	.220	.260	.92	.47	.63	.23	.81
BAAS-25-050	BACH-25-050	BACS-25-050	1/4	.2485	.2470	.50	.289	.290	.92	.47	.63	.23	.81
BAAS-25-075	BACH-25-075	BACS-25-075	1/4	.2485	.2470	.75	.289	.290	.92	.47	.63	.23	.81
BAAS-25-100	BACH-25-100	BACS-25-100	1/4	.2485	.2470	1.00	.289	.290	.92	.47	.63	.23	.81
BAAS-25-125	BACH-25-125	BACS-25-125	1/4	.2485	.2470	1.25	.289	.290	.92	.47	.63	.23	.81
BAAS-25-150	BACH-25-150	BACS-25-150	1/4	.2485	.2470	1.50	.289	.290	.92	.47	.63	.23	.81
BAAS-25-175	BACH-25-175	BACS-25-175	1/4	.2485	.2470	1.75	.289	.290	.92	.47	.63	.23	.81
BAAS-25-200	BACH-25-200	BACS-25-200	1/4	.2485	.2470	2.00	.289	.290	.92	.47	.63	.23	.81
BAAS-25-250	BACH-25-250	BACS-25-250	1/4	.2485	.2470	2.50	.289	.290	.92	.47	.63	.23	.81
BAAS-25-300	BACH-25-300	BACS-25-300	1/4	.2485	.2470	3.00	.289	.290	.92	.47	.63	.23	.81
BAAS-25-350	BACH-25-350	BACS-25-350	1/4	.2485	.2470	3.50	.289	.290	.92	.47	.63	.23	.81
BAAS-25-400	BACH-25-400	BACS-25-400	1/4	.2485	.2470	4.00	.289	.290	.92	.47	.63	.23	.81
BAAS-31-050	BACH-31-050	BACS-31-050	5/16	.3110	.3095	.50	.375	.330	.92	.47	.63	.23	.81
BAAS-31-075	BACH-31-075	BACS-31-075	5/16	.3110	.3095	.75	.375	.330	.92	.47	.63	.23	.81
BAAS-31-100	BACH-31-100	BACS-31-100	5/16	.3110	.3095	1.00	.375	.330	.92	.47	.63	.23	.81
BAAS-31-125	BACH-31-125	BACS-31-125	5/16	.3110	.3095	1.25	.375	.330	.92	.47	.63	.23	.81
BAAS-31-150	BACH-31-150	BACS-31-150	5/16	.3110	.3095	1.50	.375	.330	.92	.47	.63	.23	.81
BAAS-31-175	BACH-31-175	BACS-31-175	5/16	.3110	.3095	1.75	.375	.330	.92	.47	.63	.23	.81
BAAS-31-200	BACH-31-200	BACS-31-200	5/16	.3110	.3095	2.00	.375	.330	.92	.47	.63	.23	.81
BAAS-31-250	BACH-31-250	BACS-31-250	5/16	.3110	.3095	2.50	.375	.330	.92	.47	.63	.23	.81
BAAS-31-300	BACH-31-300	BACS-31-300	5/16	.3110	.3095	3.00	.375	.330	.92	.47	.63	.23	.81
BAAS-31-350	BACH-31-350	BACS-31-350	5/16	.3110	.3095	3.50	.375	.330	.92	.47	.63	.23	.81
BAAS-31-400	BACH-31-400	BACS-31-400	5/16	.3110	.3095	4.00	.375	.330	.92	.47	.63	.23	.81



QUICK RELEASE BALL LOCK PINS

Aluminum Button Handle | Inch (continued)



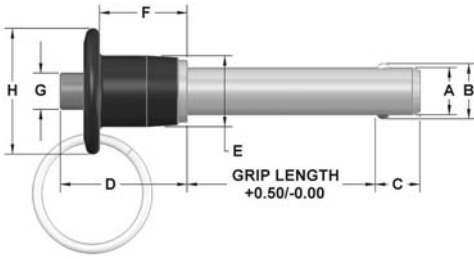
Dia	Hole Size		Min. Pull-Out Strength (lbs)	Calculated Double Shear (lbs)		
	Max	Min		4130 Steel	17-4 Stainless	300 Series SS*
3/16	.1940	.1900	200	4,600	5,150	—
1/4	.2540	.2500	230	8,200	9,200	2,200
5/16	.3165	.3125	510	12,800	14,400	3,500
3/8	.3790	.3750	575	18,400	20,600	4,500
1/2	.5050	.5000	1,160	32,800	36,800	11,500
5/8	.6300	.6250	2,070	51,200	57,500	—

*Note: 300 Series Stainless is not recommended in applications where shear forces are a factor.

4130 Steel Part #	17-4 SS Part #	300 Series SS Part #	Nominal Diameter	A Max	A Min	Grip Length	+/- .005 B	+ .000/- .030 C	D	E	F	G	H
BAAS-37-050	BACH-37-050	BACS-37-050	3/8	.3735	.3720	.50	.440	.365	1.01	.56	.70	.29	1.00
BAAS-37-075	BACH-37-075	BACS-37-075	3/8	.3735	.3720	.75	.440	.365	1.01	.56	.70	.29	1.00
BAAS-37-100	BACH-37-100	BACS-37-100	3/8	.3735	.3720	1.00	.440	.365	1.01	.56	.70	.29	1.00
BAAS-37-125	BACH-37-125	BACS-37-125	3/8	.3735	.3720	1.25	.440	.365	1.01	.56	.70	.29	1.00
BAAS-37-150	BACH-37-150	BACS-37-150	3/8	.3735	.3720	1.50	.440	.365	1.01	.56	.70	.29	1.00
BAAS-37-175	BACH-37-175	BACS-37-175	3/8	.3735	.3720	1.75	.440	.365	1.01	.56	.70	.29	1.00
BAAS-37-200	BACH-37-200	BACS-37-200	3/8	.3735	.3720	2.00	.440	.365	1.01	.56	.70	.29	1.00
BAAS-37-250	BACH-37-250	BACS-37-250	3/8	.3735	.3720	2.50	.440	.365	1.01	.56	.70	.29	1.00
BAAS-37-300	BACH-37-300	BACS-37-300	3/8	.3735	.3720	3.00	.440	.365	1.01	.56	.70	.29	1.00
BAAS-37-350	BACH-37-350	BACS-37-350	3/8	.3735	.3720	3.50	.440	.365	1.01	.56	.70	.29	1.00
BAAS-37-400	BACH-37-400	BACS-37-400	3/8	.3735	.3720	4.00	.440	.365	1.01	.56	.70	.29	1.00
BAAS-50-100	BACH-50-100	BACS-50-100	1/2	.4985	.4970	1.00	.594	.460	1.27	.72	.85	.42	1.37
BAAS-50-125	BACH-50-125	BACS-50-125	1/2	.4985	.4970	1.25	.594	.460	1.27	.72	.85	.42	1.37
BAAS-50-150	BACH-50-150	BACS-50-150	1/2	.4985	.4970	1.50	.594	.460	1.27	.72	.85	.42	1.37
BAAS-50-175	BACH-50-175	BACS-50-175	1/2	.4985	.4970	1.75	.594	.460	1.27	.72	.85	.42	1.37
BAAS-50-200	BACH-50-200	BACS-50-200	1/2	.4985	.4970	2.00	.594	.460	1.27	.72	.85	.42	1.37
BAAS-50-250	BACH-50-250	BACS-50-250	1/2	.4985	.4970	2.50	.594	.460	1.27	.72	.85	.42	1.37
BAAS-50-300	BACH-50-300	BACS-50-300	1/2	.4985	.4970	3.00	.594	.460	1.27	.72	.85	.42	1.37
BAAS-50-350	BACH-50-350	BACS-50-350	1/2	.4985	.4970	3.50	.594	.460	1.27	.72	.85	.42	1.37
BAAS-50-400	BACH-50-400	BACS-50-400	1/2	.4985	.4970	4.00	.594	.460	1.27	.72	.85	.42	1.37
BAAS-50-450	BACH-50-450	BACS-50-450	1/2	.4985	.4970	4.50	.594	.460	1.27	.72	.85	.42	1.37
BAAS-50-500	BACH-50-500	BACS-50-500	1/2	.4985	.4970	5.00	.594	.460	1.27	.72	.85	.42	1.37
BAAS-50-550	BACH-50-550	BACS-50-550	1/2	.4985	.4970	5.50	.594	.460	1.27	.72	.85	.42	1.37
BAAS-50-600	BACH-50-600	BACS-50-600	1/2	.4985	.4970	6.00	.594	.460	1.27	.72	.85	.42	1.37
BAAS-62-150	BACH-62-150	—	5/8	.6235	.6220	1.50	.750	.580	1.65	.94	1.10	.54	1.75
BAAS-62-175	BACH-62-175	—	5/8	.6235	.6220	1.75	.750	.580	1.65	.94	1.10	.54	1.75
BAAS-62-200	BACH-62-200	—	5/8	.6235	.6220	2.00	.750	.580	1.65	.94	1.10	.54	1.75
BAAS-62-250	BACH-62-250	—	5/8	.6235	.6220	2.50	.750	.580	1.65	.94	1.10	.54	1.75
BAAS-62-300	BACH-62-300	—	5/8	.6235	.6220	3.00	.750	.580	1.65	.94	1.10	.54	1.75
BAAS-62-350	BACH-62-350	—	5/8	.6235	.6220	3.50	.750	.580	1.65	.94	1.10	.54	1.75
BAAS-62-400	BACH-62-400	—	5/8	.6235	.6220	4.00	.750	.580	1.65	.94	1.10	.54	1.75
BAAS-62-450	BACH-62-450	—	5/8	.6235	.6220	4.50	.750	.580	1.65	.94	1.10	.54	1.75
BAAS-62-500	BACH-62-500	—	5/8	.6235	.6220	5.00	.750	.580	1.65	.94	1.10	.54	1.75
BAAS-62-550	BACH-62-550	—	5/8	.6235	.6220	5.50	.750	.580	1.65	.94	1.10	.54	1.75
BAAS-62-600	BACH-62-600	—	5/8	.6235	.6220	6.00	.750	.580	1.65	.94	1.10	.54	1.75

QUICK RELEASE BALL LOCK PINS

Aluminum Button Handle | Metric



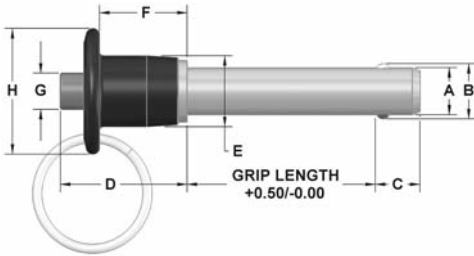
Dia mm	Hole Size Max mm	Min mm	Min. Pull-Out Strength (N)	Calculated Double Shear (N) 17-4 Stainless
5	5.1	5.0	890	24,400
6	6.1	6.0	1,023	35,640
8	8.1	8.0	2,268	63,804
10	10.1	10.0	2,558	100,101
12	12.1	12.0	5,160	144,060
16	16.1	16.0	9,207	257,179

These positive locking quick release pins have a wide range of uses in fastening, locating, and alignment applications. The pins will not release until the button on the handle is depressed. Once the button is depressed, the balls retract into the shank allowing the pin to be inserted or removed into or out of a hole. The shanks are made from 17-4PH stainless steel. The handles for the pins listed below are made from 2024-T4 aluminum and anodized black. Stainless handles are also available. The pins are supplied with a stainless steel split ring for attaching a cable assembly. Pins in other grip lengths are available as special orders. See page 195 for complete specifications. Compliant to RoHS requirements.

17-4 SS Part #	Nominal Diameter mm	A Max mm	A Min mm	Grip Length mm	+/-0.25 B mm	+/-1.0 C mm	D mm	E mm	F mm	G mm	H mm
MBACH-05-010	5	4.96	4.92	10	5.54	6	23.4	11.9	16	5.8	20.6
MBACH-05-015	5	4.96	4.92	15	5.54	6	23.4	11.9	16	5.8	20.6
MBACH-05-020	5	4.96	4.92	20	5.54	6	23.4	11.9	16	5.8	20.6
MBACH-05-025	5	4.96	4.92	25	5.54	6	23.4	11.9	16	5.8	20.6
MBACH-05-030	5	4.96	4.92	30	5.54	6	23.4	11.9	16	5.8	20.6
MBACH-05-035	5	4.96	4.92	35	5.54	6	23.4	11.9	16	5.8	20.6
MBACH-05-040	5	4.96	4.92	40	5.54	6	23.4	11.9	16	5.8	20.6
MBACH-05-045	5	4.96	4.92	45	5.54	6	23.4	11.9	16	5.8	20.6
MBACH-05-050	5	4.96	4.92	50	5.54	6	23.4	11.9	16	5.8	20.6
MBACH-05-060	5	4.96	4.92	60	5.54	6	23.4	11.9	16	5.8	20.6
MBACH-05-070	5	4.96	4.92	70	5.54	6	23.4	11.9	16	5.8	20.6
MBACH-05-080	5	4.96	4.92	80	5.54	6	23.4	11.9	16	5.8	20.6
MBACH-05-090	5	4.96	4.92	90	5.54	6	23.4	11.9	16	5.8	20.6
MBACH-05-100	5	4.96	4.92	100	5.54	6	23.4	11.9	16	5.8	20.6
MBACH-06-010	6	5.96	5.92	10	6.99	7	23.4	11.9	16	5.8	20.6
MBACH-06-015	6	5.96	5.92	15	6.99	7	23.4	11.9	16	5.8	20.6
MBACH-06-020	6	5.96	5.92	20	6.99	7	23.4	11.9	16	5.8	20.6
MBACH-06-025	6	5.96	5.92	25	6.99	7	23.4	11.9	16	5.8	20.6
MBACH-06-030	6	5.96	5.92	30	6.99	7	23.4	11.9	16	5.8	20.6
MBACH-06-035	6	5.96	5.92	35	6.99	7	23.4	11.9	16	5.8	20.6
MBACH-06-040	6	5.96	5.92	40	6.99	7	23.4	11.9	16	5.8	20.6
MBACH-06-045	6	5.96	5.92	45	6.99	7	23.4	11.9	16	5.8	20.6
MBACH-06-050	6	5.96	5.92	50	6.99	7	23.4	11.9	16	5.8	20.6
MBACH-06-060	6	5.96	5.92	60	6.99	7	23.4	11.9	16	5.8	20.6
MBACH-06-070	6	5.96	5.92	70	6.99	7	23.4	11.9	16	5.8	20.6
MBACH-06-080	6	5.96	5.92	80	6.99	7	23.4	11.9	16	5.8	20.6
MBACH-06-090	6	5.96	5.92	90	6.99	7	23.4	11.9	16	5.8	20.6
MBACH-06-100	6	5.96	5.92	100	6.99	7	23.4	11.9	16	5.8	20.6
MBACH-08-010	8	7.96	7.92	10	9.42	8	23.4	11.9	16	5.8	20.6
MBACH-08-015	8	7.96	7.92	15	9.42	8	23.4	11.9	16	5.8	20.6
MBACH-08-020	8	7.96	7.92	20	9.42	8	23.4	11.9	16	5.8	20.6
MBACH-08-025	8	7.96	7.92	25	9.42	8	23.4	11.9	16	5.8	20.6
MBACH-08-030	8	7.96	7.92	30	9.42	8	23.4	11.9	16	5.8	20.6
MBACH-08-035	8	7.96	7.92	35	9.42	8	23.4	11.9	16	5.8	20.6
MBACH-08-040	8	7.96	7.92	40	9.42	8	23.4	11.9	16	5.8	20.6
MBACH-08-045	8	7.96	7.92	45	9.42	8	23.4	11.9	16	5.8	20.6
MBACH-08-050	8	7.96	7.92	50	9.42	8	23.4	11.9	16	5.8	20.6
MBACH-08-060	8	7.96	7.92	60	9.42	8	23.4	11.9	16	5.8	20.6
MBACH-08-070	8	7.96	7.92	70	9.42	8	23.4	11.9	16	5.8	20.6
MBACH-08-080	8	7.96	7.92	80	9.42	8	23.4	11.9	16	5.8	20.6
MBACH-08-090	8	7.96	7.92	90	9.42	8	23.4	11.9	16	5.8	20.6
MBACH-08-100	8	7.96	7.92	100	9.42	8	23.4	11.9	16	5.8	20.6

QUICK RELEASE BALL LOCK PINS

Aluminum Button Handle | Metric (continued)

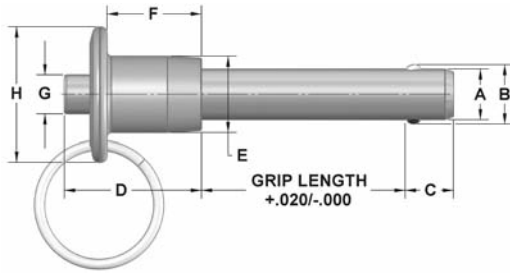


Dia mm	Hole Size Max mm	Min mm	Min. Pull-Out Strength (N)	Calculated Double Shear (N) 17-4 Stainless
5	5.1	5.0	890	24,400
6	6.1	6.0	1,023	35,640
8	8.1	8.0	2,268	63,804
10	10.1	10.0	2,558	100,101
12	12.1	12.0	5,160	144,060
16	16.1	16.0	9,207	257,179

17-4 SS Part #	Nominal Diameter mm	A Max mm	A Min mm	Grip Length mm	+/-0.25 B mm	+/-1.0 C mm	D mm	E mm	F mm	G mm	H mm
MBACH-10-015	10	9.96	9.92	15	11.86	9	25.7	14.2	17.8	7.4	25.4
MBACH-10-020	10	9.96	9.92	20	11.86	9	25.7	14.2	17.8	7.4	25.4
MBACH-10-025	10	9.96	9.92	25	11.86	9	25.7	14.2	17.8	7.4	25.4
MBACH-10-030	10	9.96	9.92	30	11.86	9	25.7	14.2	17.8	7.4	25.4
MBACH-10-035	10	9.96	9.92	35	11.86	9	25.7	14.2	17.8	7.4	25.4
MBACH-10-040	10	9.96	9.92	40	11.86	9	25.7	14.2	17.8	7.4	25.4
MBACH-10-045	10	9.96	9.92	45	11.86	9	25.7	14.2	17.8	7.4	25.4
MBACH-10-050	10	9.96	9.92	50	11.86	9	25.7	14.2	17.8	7.4	25.4
MBACH-10-060	10	9.96	9.92	60	11.86	9	25.7	14.2	17.8	7.4	25.4
MBACH-10-070	10	9.96	9.92	70	11.86	9	25.7	14.2	17.8	7.4	25.4
MBACH-10-080	10	9.96	9.92	80	11.86	9	25.7	14.2	17.8	7.4	25.4
MBACH-10-090	10	9.96	9.92	90	11.86	9	25.7	14.2	17.8	7.4	25.4
MBACH-10-100	10	9.96	9.92	100	11.86	9	25.7	14.2	17.8	7.4	25.4
MBACH-12-020	12	11.96	11.92	20	14.45	10	32.3	18.3	21.6	10.7	34.7
MBACH-12-025	12	11.96	11.92	25	14.45	10	32.3	18.3	21.6	10.7	34.7
MBACH-12-030	12	11.96	11.92	30	14.45	10	32.3	18.3	21.6	10.7	34.7
MBACH-12-035	12	11.96	11.92	35	14.45	10	32.3	18.3	21.6	10.7	34.7
MBACH-12-040	12	11.96	11.92	40	14.45	10	32.3	18.3	21.6	10.7	34.7
MBACH-12-045	12	11.96	11.92	45	14.45	10	32.3	18.3	21.6	10.7	34.7
MBACH-12-050	12	11.96	11.92	50	14.45	10	32.3	18.3	21.6	10.7	34.7
MBACH-12-060	12	11.96	11.92	60	14.45	10	32.3	18.3	21.6	10.7	34.7
MBACH-12-070	12	11.96	11.92	70	14.45	10	32.3	18.3	21.6	10.7	34.7
MBACH-12-080	12	11.96	11.92	80	14.45	10	32.3	18.3	21.6	10.7	34.7
MBACH-12-090	12	11.96	11.92	90	14.45	10	32.3	18.3	21.6	10.7	34.7
MBACH-12-100	12	11.96	11.92	100	14.45	10	32.3	18.3	21.6	10.7	34.7
MBACH-16-025	16	15.96	15.92	25	19	14	41.9	23.9	27.9	13.7	44.5
MBACH-16-030	16	15.96	15.92	30	19	14	41.9	23.9	27.9	13.7	44.5
MBACH-16-035	16	15.96	15.92	35	19	14	41.9	23.9	27.9	13.7	44.5
MBACH-16-040	16	15.96	15.92	40	19	14	41.9	23.9	27.9	13.7	44.5
MBACH-16-045	16	15.96	15.92	45	19	14	41.9	23.9	27.9	13.7	44.5
MBACH-16-050	16	15.96	15.92	50	19	14	41.9	23.9	27.9	13.7	44.5
MBACH-16-060	16	15.96	15.92	60	19	14	41.9	23.9	27.9	13.7	44.5
MBACH-16-070	16	15.96	15.92	70	19	14	41.9	23.9	27.9	13.7	44.5
MBACH-16-080	16	15.96	15.92	80	19	14	41.9	23.9	27.9	13.7	44.5
MBACH-16-090	16	15.96	15.92	90	19	14	41.9	23.9	27.9	13.7	44.5
MBACH-16-100	16	15.96	15.92	100	19	14	41.9	23.9	27.9	13.7	44.5

QUICK RELEASE BALL LOCK PINS

Stainless Steel Button Handle | Inch



Dia	Hole Size		Min. Pull-Out Strength (lbs)	Calculated Double Shear (lbs)	
	Max	Min		17-4 Stainless	300 Series SS*
3/16	.1940	.1900	200	5,150	—
1/4	.2540	.2500	230	9,200	2,200
5/16	.3165	.3125	510	14,400	3,500
3/8	.3790	.3750	575	20,600	4,500
1/2	.5050	.5000	1,160	36,800	11,500

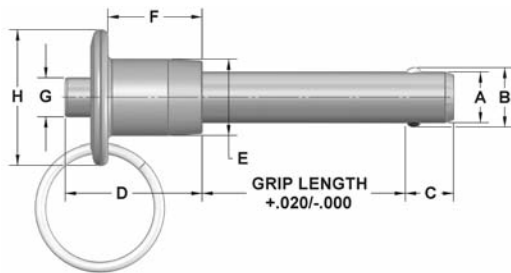
*Note: 300 Series Stainless is not recommended in applications where shear forces are a factor.

These positive locking quick release pins have a wide range of uses in fastening, locating, and alignment applications. The pins will not release until the button on the handle is depressed. Once the button is depressed, the balls retract into the shank allowing the pin to be inserted or removed into or out of a hole. They are available in two types of stainless steel to meet your application. The handles and actuator buttons for the pins listed below are made from 303 stainless steel. The pins are supplied with a stainless steel split ring for attaching a cable assembly. Pins in other grip lengths are available as special orders. See page 195 for complete specifications.

17-4 SS Part #	300 Series SS Part #	Nominal Diameter	A Max	A Min	Grip Length	+/- .005 B	+ .000/- .030 C	D	E	F	G	H
BCCH-18-050	—	3/16	.1885	.1870	.50	.220	.260	.92	.47	.63	.23	.81
BCCH-18-075	—	3/16	.1885	.1870	.75	.220	.260	.92	.47	.63	.23	.81
BCCH-18-100	—	3/16	.1885	.1870	1.00	.220	.260	.92	.47	.63	.23	.81
BCCH-18-125	—	3/16	.1885	.1870	1.25	.220	.260	.92	.47	.63	.23	.81
BCCH-18-150	—	3/16	.1885	.1870	1.50	.220	.260	.92	.47	.63	.23	.81
BCCH-18-175	—	3/16	.1885	.1870	1.75	.220	.260	.92	.47	.63	.23	.81
BCCH-18-200	—	3/16	.1885	.1870	2.00	.220	.260	.92	.47	.63	.23	.81
BCCH-18-250	—	3/16	.1885	.1870	2.50	.220	.260	.92	.47	.63	.23	.81
BCCH-18-300	—	3/16	.1885	.1870	3.00	.220	.260	.92	.47	.63	.23	.81
BCCH-18-350	—	3/16	.1885	.1870	3.50	.220	.260	.92	.47	.63	.23	.81
BCCH-18-400	—	3/16	.1885	.1870	4.00	.220	.260	.92	.47	.63	.23	.81
BCCH-25-050	BCCS-25-050	1/4	.2485	.2470	.50	.289	.290	.92	.47	.63	.23	.81
BCCH-25-075	BCCS-25-075	1/4	.2485	.2470	.75	.289	.290	.92	.47	.63	.23	.81
BCCH-25-100	BCCS-25-100	1/4	.2485	.2470	1.00	.289	.290	.92	.47	.63	.23	.81
BCCH-25-125	BCCS-25-125	1/4	.2485	.2470	1.25	.289	.290	.92	.47	.63	.23	.81
BCCH-25-150	BCCS-25-150	1/4	.2485	.2470	1.50	.289	.290	.92	.47	.63	.23	.81
BCCH-25-175	BCCS-25-175	1/4	.2485	.2470	1.75	.289	.290	.92	.47	.63	.23	.81
BCCH-25-200	BCCS-25-200	1/4	.2485	.2470	2.00	.289	.290	.92	.47	.63	.23	.81
BCCH-25-250	BCCS-25-250	1/4	.2485	.2470	2.50	.289	.290	.92	.47	.63	.23	.81
BCCH-25-300	BCCS-25-300	1/4	.2485	.2470	3.00	.289	.290	.92	.47	.63	.23	.81
BCCH-25-350	BCCS-25-350	1/4	.2485	.2470	3.50	.289	.290	.92	.47	.63	.23	.81
BCCH-25-400	BCCS-25-400	1/4	.2485	.2470	4.00	.289	.290	.92	.47	.63	.23	.81
BCCH-31-050	BCCS-31-050	5/16	.3110	.3095	.50	.375	.330	.92	.47	.63	.23	.81
BCCH-31-075	BCCS-31-075	5/16	.3110	.3095	.75	.375	.330	.92	.47	.63	.23	.81
BCCH-31-100	BCCS-31-100	5/16	.3110	.3095	1.00	.375	.330	.92	.47	.63	.23	.81
BCCH-31-125	BCCS-31-125	5/16	.3110	.3095	1.25	.375	.330	.92	.47	.63	.23	.81
BCCH-31-150	BCCS-31-150	5/16	.3110	.3095	1.50	.375	.330	.92	.47	.63	.23	.81
BCCH-31-200	BCCS-31-200	5/16	.3110	.3095	1.75	.375	.330	.92	.47	.63	.23	.81
BCCH-31-200	BCCS-31-200	5/16	.3110	.3095	2.00	.375	.330	.92	.47	.63	.23	.81
BCCH-31-250	BCCS-31-250	5/16	.3110	.3095	2.50	.375	.330	.92	.47	.63	.23	.81
BCCH-31-300	BCCS-31-300	5/16	.3110	.3095	3.00	.375	.330	.92	.47	.63	.23	.81
BCCH-31-350	BCCS-31-350	5/16	.3110	.3095	3.50	.375	.330	.92	.47	.63	.23	.81
BCCH-31-400	BCCS-31-400	5/16	.3110	.3095	4.00	.375	.330	.92	.47	.63	.23	.81

QUICK RELEASE BALL LOCK PINS

Stainless Steel Button Handle | Inch (continued)



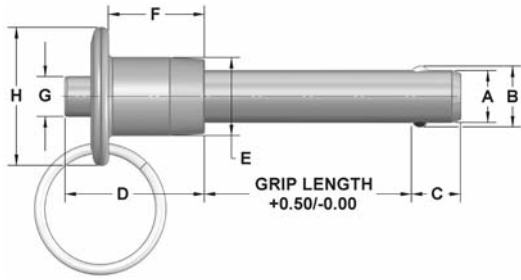
Dia	Hole Size		Min. Pull-Out Strength (lbs)	Calculated Double Shear (lbs)	
	Max	Min		17-4 Stainless	300 Series SS*
3/16	.1940	.1900	200	5,150	—
1/4	.2540	.2500	230	9,200	2,200
5/16	.3165	.3125	510	14,400	3,500
3/8	.3790	.3750	575	20,600	4,500
1/2	.5050	.5000	1,160	36,800	11,500

*Note: 300 Series Stainless is not recommended in applications where shear forces are a factor.

17-4 SS Part #	300 Series SS Part #	Nominal Diameter	A Max	A Min	Grip Length	+/- .005 B	+ .000/- .030 C	D	E	F	G	H
BCCH-37-050	BCCS-37-050	3/8	.3735	.3720	.50	.440	.365	1.01	.56	.70	.29	1.00
BCCH-37-075	BCCS-37-075	3/8	.3735	.3720	.75	.440	.365	1.01	.56	.70	.29	1.00
BCCH-37-100	BCCS-37-100	3/8	.3735	.3720	1.00	.440	.365	1.01	.56	.70	.29	1.00
BCCH-37-125	BCCS-37-125	3/8	.3735	.3720	1.25	.440	.365	1.01	.56	.70	.29	1.00
BCCH-37-150	BCCS-37-150	3/8	.3735	.3720	1.50	.440	.365	1.01	.56	.70	.29	1.00
BCCH-37-175	BCCS-37-175	3/8	.3735	.3720	1.75	.440	.365	1.01	.56	.70	.29	1.00
BCCH-37-200	BCCS-37-200	3/8	.3735	.3720	2.00	.440	.365	1.01	.56	.70	.29	1.00
BCCH-37-250	BCCS-37-250	3/8	.3735	.3720	2.50	.440	.365	1.01	.56	.70	.29	1.00
BCCH-37-300	BCCS-37-300	3/8	.3735	.3720	3.00	.440	.365	1.01	.56	.70	.29	1.00
BCCH-37-350	BCCS-37-350	3/8	.3735	.3720	3.50	.440	.365	1.01	.56	.70	.29	1.00
BCCH-37-400	BCCS-37-400	3/8	.3735	.3720	4.00	.440	.365	1.01	.56	.70	.29	1.00
BCCH-50-100	BCCS-50-100	1/2	.4985	.4970	1.00	.594	.46	1.27	.72	.85	.42	1.37
BCCH-50-125	BCCS-50-125	1/2	.4985	.4970	1.25	.594	.46	1.27	.72	.85	.42	1.37
BCCH-50-150	BCCS-50-150	1/2	.4985	.4970	1.50	.594	.46	1.27	.72	.85	.42	1.37
BCCH-50-175	BCCS-50-175	1/2	.4985	.4970	1.75	.594	.46	1.27	.72	.85	.42	1.37
BCCH-50-200	BCCS-50-200	1/2	.4985	.4970	2.00	.594	.46	1.27	.72	.85	.42	1.37
BCCH-50-250	BCCS-50-250	1/2	.4985	.4970	2.50	.594	.46	1.27	.72	.85	.42	1.37
BCCH-50-300	BCCS-50-300	1/2	.4985	.4970	3.00	.594	.46	1.27	.72	.85	.42	1.37
BCCH-50-350	BCCS-50-350	1/2	.4985	.4970	3.50	.594	.46	1.27	.72	.85	.42	1.37
BCCH-50-400	BCCS-50-400	1/2	.4985	.4970	4.00	.594	.46	1.27	.72	.85	.42	1.37
BCCH-50-450	BCCS-50-450	1/2	.4985	.4970	4.50	.594	.46	1.27	.72	.85	.42	1.37
BCCH-50-500	BCCS-50-500	1/2	.4985	.4970	5.00	.594	.46	1.27	.72	.85	.42	1.37
BCCH-50-550	BCCS-50-550	1/2	.4985	.4970	5.50	.594	.46	1.27	.72	.85	.42	1.37
BCCH-50-600	BCCS-50-600	1/2	.4985	.4970	6.00	.594	.46	1.27	.72	.85	.42	1.37

QUICK RELEASE BALL LOCK PINS

Stainless Steel Button Handle | Metric



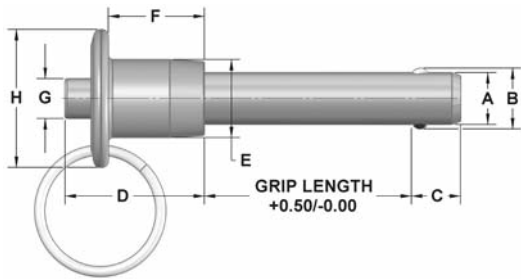
Dia mm	Hole Size Max mm	Hole Size Min mm	Min. Pull-Out Strength (N)	Calculated Double Shear (N) 17-4 Stainless
5	5.1	5.0	890	24,400
6	6.1	6.0	1,023	35,640
8	8.1	8.0	2,268	63,804
10	10.1	10.0	2,558	100,101
12	12.1	12.0	5,160	144,060

These positive locking quick release pins have a wide range of uses in fastening, locating, and alignment applications. The pins will not release until the button on the handle is depressed. Once the button is depressed, the balls retract into the shank allowing the pin to be inserted or removed into or out of a hole. The handles for the pins listed below are made from 303 stainless steel. The shanks are made from 17-4PH stainless steel. The pins are supplied with a stainless steel splitting ring for attaching a cable assembly. Pins in other grip lengths are available as special orders. See page 195 for complete specifications. Compliant to RoHS requirements.

17-4 SS Part #	Nominal Diameter mm	A Max mm	A Min mm	Grip Length mm	+/-0.25 B mm	+/-1.0 C mm	D mm	E mm	F mm	G mm	H mm
MBCCH-05-010	5	4.96	4.92	10	5.54	6	23.4	11.9	16	5.8	20.6
MBCCH-05-015	5	4.96	4.92	15	5.54	6	23.4	11.9	16	5.8	20.6
MBCCH-05-020	5	4.96	4.92	20	5.54	6	23.4	11.9	16	5.8	20.6
MBCCH-05-025	5	4.96	4.92	25	5.54	6	23.4	11.9	16	5.8	20.6
MBCCH-05-030	5	4.96	4.92	30	5.54	6	23.4	11.9	16	5.8	20.6
MBCCH-05-035	5	4.96	4.92	35	5.54	6	23.4	11.9	16	5.8	20.6
MBCCH-05-040	5	4.96	4.92	40	5.54	6	23.4	11.9	16	5.8	20.6
MBCCH-05-045	5	4.96	4.92	45	5.54	6	23.4	11.9	16	5.8	20.6
MBCCH-05-050	5	4.96	4.92	50	5.54	6	23.4	11.9	16	5.8	20.6
MBCCH-05-060	5	4.96	4.92	60	5.54	6	23.4	11.9	16	5.8	20.6
MBCCH-05-070	5	4.96	4.92	70	5.54	6	23.4	11.9	16	5.8	20.6
MBCCH-05-080	5	4.96	4.92	80	5.54	6	23.4	11.9	16	5.8	20.6
MBCCH-05-090	5	4.96	4.92	90	5.54	6	23.4	11.9	16	5.8	20.6
MBCCH-05-100	5	4.96	4.92	100	5.54	6	23.4	11.9	16	5.8	20.6
MBCCH-06-010	6	5.96	5.92	10	6.99	7	23.4	11.9	16	5.8	20.6
MBCCH-06-015	6	5.96	5.92	15	6.99	7	23.4	11.9	16	5.8	20.6
MBCCH-06-020	6	5.96	5.92	20	6.99	7	23.4	11.9	16	5.8	20.6
MBCCH-06-025	6	5.96	5.92	25	6.99	7	23.4	11.9	16	5.8	20.6
MBCCH-06-030	6	5.96	5.92	30	6.99	7	23.4	11.9	16	5.8	20.6
MBCCH-06-035	6	5.96	5.92	35	6.99	7	23.4	11.9	16	5.8	20.6
MBCCH-06-040	6	5.96	5.92	40	6.99	7	23.4	11.9	16	5.8	20.6
MBCCH-06-045	6	5.96	5.92	45	6.99	7	23.4	11.9	16	5.8	20.6
MBCCH-06-050	6	5.96	5.92	50	6.99	7	23.4	11.9	16	5.8	20.6
MBCCH-06-060	6	5.96	5.92	60	6.99	7	23.4	11.9	16	5.8	20.6
MBCCH-06-070	6	5.96	5.92	70	6.99	7	23.4	11.9	16	5.8	20.6
MBCCH-06-080	6	5.96	5.92	80	6.99	7	23.4	11.9	16	5.8	20.6
MBCCH-06-090	6	5.96	5.92	90	6.99	7	23.4	11.9	16	5.8	20.6
MBCCH-06-100	6	5.96	5.92	100	6.99	7	23.4	11.9	16	5.8	20.6
MBCCH-08-010	8	7.96	7.92	10	9.42	8	23.4	11.9	16	5.8	20.6
MBCCH-08-015	8	7.96	7.92	15	9.42	8	23.4	11.9	16	5.8	20.6
MBCCH-08-020	8	7.96	7.92	20	9.42	8	23.4	11.9	16	5.8	20.6
MBCCH-08-025	8	7.96	7.92	25	9.42	8	23.4	11.9	16	5.8	20.6
MBCCH-08-030	8	7.96	7.92	30	9.42	8	23.4	11.9	16	5.8	20.6
MBCCH-08-035	8	7.96	7.92	35	9.42	8	23.4	11.9	16	5.8	20.6
MBCCH-08-040	8	7.96	7.92	40	9.42	8	23.4	11.9	16	5.8	20.6
MBCCH-08-045	8	7.96	7.92	45	9.42	8	23.4	11.9	16	5.8	20.6
MBCCH-08-050	8	7.96	7.92	50	9.42	8	23.4	11.9	16	5.8	20.6
MBCCH-08-060	8	7.96	7.92	60	9.42	8	23.4	11.9	16	5.8	20.6
MBCCH-08-070	8	7.96	7.92	70	9.42	8	23.4	11.9	16	5.8	20.6
MBCCH-08-080	8	7.96	7.92	80	9.42	8	23.4	11.9	16	5.8	20.6
MBCCH-08-090	8	7.96	7.92	90	9.42	8	23.4	11.9	16	5.8	20.6
MBCCH-08-100	8	7.96	7.92	100	9.42	8	23.4	11.9	16	5.8	20.6

QUICK RELEASE BALL LOCK PINS

Stainless Steel Button Handle | Metric (continued)

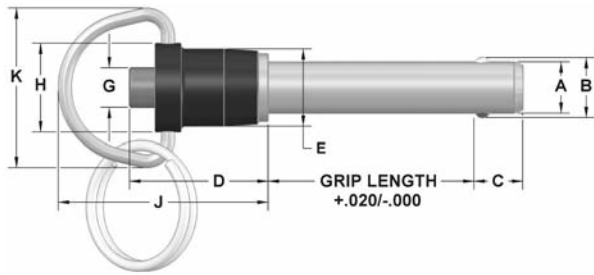


Dia mm	Hole Size Max mm	Min mm	Min. Pull-Out Strength (N)	Calculated Double Shear (N) 17-4 Stainless
5	5.1	5.0	890	24,400
6	6.1	6.0	1,023	35,640
8	8.1	8.0	2,268	63,804
10	10.1	10.0	2,558	100,101
12	12.1	12.0	5,160	144,060

17-4 SS Part #	Nominal Diameter mm	A Max mm	A Min mm	Grip Length mm	+/-0.25 B mm	+/-1.0 C mm	D mm	E mm	F mm	G mm	H mm
MBCCH-10-015	10	9.96	9.92	15	11.86	9	25.7	14.2	17.8	7.4	25.4
MBCCH-10-020	10	9.96	9.92	20	11.86	9	25.7	14.2	17.8	7.4	25.4
MBCCH-10-025	10	9.96	9.92	25	11.86	9	25.7	14.2	17.8	7.4	25.4
MBCCH-10-030	10	9.96	9.92	30	11.86	9	25.7	14.2	17.8	7.4	25.4
MBCCH-10-035	10	9.96	9.92	35	11.86	9	25.7	14.2	17.8	7.4	25.4
MBCCH-10-040	10	9.96	9.92	40	11.86	9	25.7	14.2	17.8	7.4	25.4
MBCCH-10-045	10	9.96	9.92	45	11.86	9	25.7	14.2	17.8	7.4	25.4
MBCCH-10-050	10	9.96	9.92	50	11.86	9	25.7	14.2	17.8	7.4	25.4
MBCCH-10-060	10	9.96	9.92	60	11.86	9	25.7	14.2	17.8	7.4	25.4
MBCCH-10-070	10	9.96	9.92	70	11.86	9	25.7	14.2	17.8	7.4	25.4
MBCCH-10-080	10	9.96	9.92	80	11.86	9	25.7	14.2	17.8	7.4	25.4
MBCCH-10-090	10	9.96	9.92	90	11.86	9	25.7	14.2	17.8	7.4	25.4
MBCCH-10-100	10	9.96	9.92	100	11.86	9	25.7	14.2	17.8	7.4	25.4
MBCCH-12-020	12	11.96	11.92	20	14.45	10	32.3	18.3	21.6	10.7	34.7
MBCCH-12-025	12	11.96	11.92	25	14.45	10	32.3	18.3	21.6	10.7	34.7
MBCCH-12-030	12	11.96	11.92	30	14.45	10	32.3	18.3	21.6	10.7	34.7
MBCCH-12-035	12	11.96	11.92	35	14.45	10	32.3	18.3	21.6	10.7	34.7
MBCCH-12-040	12	11.96	11.92	40	14.45	10	32.3	18.3	21.6	10.7	34.7
MBCCH-12-045	12	11.96	11.92	45	14.45	10	32.3	18.3	21.6	10.7	34.7
MBCCH-12-050	12	11.96	11.92	50	14.45	10	32.3	18.3	21.6	10.7	34.7
MBCCH-12-060	12	11.96	11.92	60	14.45	10	32.3	18.3	21.6	10.7	34.7
MBCCH-12-070	12	11.96	11.92	70	14.45	10	32.3	18.3	21.6	10.7	34.7
MBCCH-12-080	12	11.96	11.92	80	14.45	10	32.3	18.3	21.6	10.7	34.7
MBCCH-12-090	12	11.96	11.92	90	14.45	10	32.3	18.3	21.6	10.7	34.7
MBCCH-12-100	12	11.96	11.92	100	14.45	10	32.3	18.3	21.6	10.7	34.7

QUICK RELEASE BALL LOCK PINS

Aluminum Ring Handle | Inch



Dia	Hole Size		Min. Pull-Out Strength (lbs)	Calculated Double Shear (lbs)		
	Max	Min		4130 Steel	17-4 Stainless	300 Series SS*
3/16	.1940	.1900	200	4,600	5,150	—
1/4	.2540	.2500	230	8,200	9,200	2,200
5/16	.3165	.3125	510	12,800	14,400	3,500
3/8	.3790	.3750	575	18,400	20,600	4,500
1/2	.5050	.5000	1,160	32,800	36,800	11,500
5/8	.6300	.6250	2,070	51,200	57,500	—

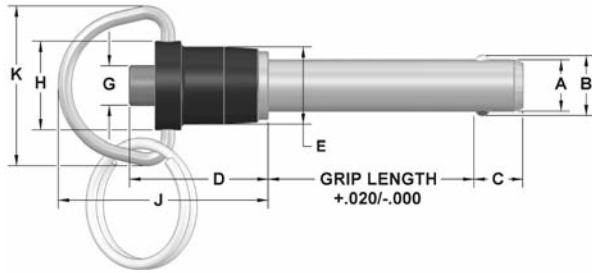
*Note: 300 Series Stainless is not recommended in applications where shear forces are a factor.

These positive locking quick release pins have a wide range of uses in fastening, locating, and alignment applications. The pins will not release until the button on the handle is depressed. Once the button is depressed, the balls retract into the shank allowing the pin to be inserted or removed into or out of a hole. They are available in three shank materials to meet your application. The handles for the pins listed below are made from 2024-T4 aluminum and anodized black. Stainless handles are also available. The pins are supplied with a stainless steel splitting ring for attaching a cable assembly. Pins in other grip lengths are available as special orders. See page 195 for complete specifications.

4130 Steel Part #	17-4 SS Part #	300 Series SS Part #	Nominal Diameter	A Max	A Min	Grip Length	+/- .005 B	+ .000/- .030 C	D	E	G	H	J	K
RAAS-18-050	RACH-18-050	—	3/16	.1885	.1870	.50	.220	.260	.92	.47	.23	.59	1.45	1.16
RAAS-18-075	RACH-18-075	—	3/16	.1885	.1870	.75	.220	.260	.92	.47	.23	.59	1.45	1.16
RAAS-18-100	RACH-18-100	—	3/16	.1885	.1870	1.00	.220	.260	.92	.47	.23	.59	1.45	1.16
RAAS-18-125	RACH-18-125	—	3/16	.1885	.1870	1.25	.220	.260	.92	.47	.23	.59	1.45	1.16
RAAS-18-150	RACH-18-150	—	3/16	.1885	.1870	1.50	.220	.260	.92	.47	.23	.59	1.45	1.16
RAAS-18-175	RACH-18-175	—	3/16	.1885	.1870	1.75	.220	.260	.92	.47	.23	.59	1.45	1.16
RAAS-18-200	RACH-18-200	—	3/16	.1885	.1870	2.00	.220	.260	.92	.47	.23	.59	1.45	1.16
RAAS-18-250	RACH-18-250	—	3/16	.1885	.1870	2.50	.220	.260	.92	.47	.23	.59	1.45	1.16
RAAS-18-300	RACH-18-300	—	3/16	.1885	.1870	3.00	.220	.260	.92	.47	.23	.59	1.45	1.16
RAAS-18-350	RACH-18-350	—	3/16	.1885	.1870	3.50	.220	.260	.92	.47	.23	.59	1.45	1.16
RAAS-18-400	RACH-18-400	—	3/16	.1885	.1870	4.00	.220	.260	.92	.47	.23	.59	1.45	1.16
RAAS-25-050	RACH-25-050	RACS-25-050	1/4	.2485	.2470	.50	.289	.290	.92	.47	.23	.59	1.45	1.16
RAAS-25-075	RACH-25-075	RACS-25-075	1/4	.2485	.2470	.75	.289	.290	.92	.47	.23	.59	1.45	1.16
RAAS-25-100	RACH-25-100	RACS-25-100	1/4	.2485	.2470	1.00	.289	.290	.92	.47	.23	.59	1.45	1.16
RAAS-25-125	RACH-25-125	RACS-25-125	1/4	.2485	.2470	1.25	.289	.290	.92	.47	.23	.59	1.45	1.16
RAAS-25-150	RACH-25-150	RACS-25-150	1/4	.2485	.2470	1.50	.289	.290	.92	.47	.23	.59	1.45	1.16
RAAS-25-175	RACH-25-175	RACS-25-175	1/4	.2485	.2470	1.75	.289	.290	.92	.47	.23	.59	1.45	1.16
RAAS-25-200	RACH-25-200	RACS-25-200	1/4	.2485	.2470	2.00	.289	.290	.92	.47	.23	.59	1.45	1.16
RAAS-25-250	RACH-25-250	RACS-25-250	1/4	.2485	.2470	2.50	.289	.290	.92	.47	.23	.59	1.45	1.16
RAAS-25-300	RACH-25-300	RACS-25-300	1/4	.2485	.2470	3.00	.289	.290	.92	.47	.23	.59	1.45	1.16
RAAS-25-350	RACH-25-350	RACS-25-350	1/4	.2485	.2470	3.50	.289	.290	.92	.47	.23	.59	1.45	1.16
RAAS-25-400	RACH-25-400	RACS-25-400	1/4	.2485	.2470	4.00	.289	.290	.92	.47	.23	.59	1.45	1.16
RAAS-31-050	RACH-31-050	RACS-31-050	5/16	.3110	.3095	.50	.375	.330	.92	.47	.23	.59	1.45	1.16
RAAS-31-075	RACH-31-075	RACS-31-075	5/16	.3110	.3095	.75	.375	.330	.92	.47	.23	.59	1.45	1.16
RAAS-31-100	RACH-31-100	RACS-31-100	5/16	.3110	.3095	1.00	.375	.330	.92	.47	.23	.59	1.45	1.16
RAAS-31-125	RACH-31-125	RACS-31-125	5/16	.3110	.3095	1.25	.375	.330	.92	.47	.23	.59	1.45	1.16
RAAS-31-150	RACH-31-150	RACS-31-150	5/16	.3110	.3095	1.50	.375	.330	.92	.47	.23	.59	1.45	1.16
RAAS-31-175	RACH-31-175	RACS-31-175	5/16	.3110	.3095	1.75	.375	.330	.92	.47	.23	.59	1.45	1.16
RAAS-31-200	RACH-31-200	RACS-31-200	5/16	.3110	.3095	2.00	.375	.330	.92	.47	.23	.59	1.45	1.16
RAAS-31-250	RACH-31-250	RACS-31-250	5/16	.3110	.3095	2.50	.375	.330	.92	.47	.23	.59	1.45	1.16
RAAS-31-300	RACH-31-300	RACS-31-300	5/16	.3110	.3095	3.00	.375	.330	.92	.47	.23	.59	1.45	1.16
RAAS-31-350	RACH-31-350	RACS-31-350	5/16	.3110	.3095	3.50	.375	.330	.92	.47	.23	.59	1.45	1.16
RAAS-31-400	RACH-31-400	RACS-31-400	5/16	.3110	.3095	4.00	.375	.330	.92	.47	.23	.59	1.45	1.16

QUICK RELEASE BALL LOCK PINS

Aluminum Ring Handle | Inch (continued)



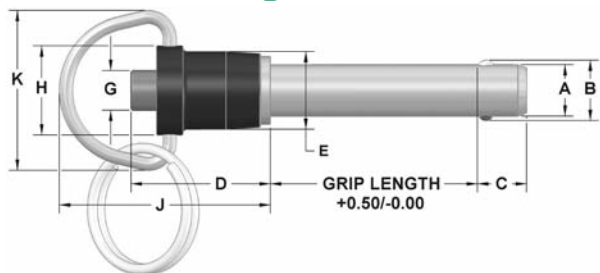
Dia	Hole Size		Min. Pull-Out Strength (lbs)	Calculated Double Shear (lbs)		
	Max	Min		4130 Steel	17-4 Stainless	300 Series SS*
3/16	.1940	.1900	200	4,600	5,150	—
1/4	.2540	.2500	230	8,200	9,200	2,200
5/16	.3165	.3125	510	12,800	14,400	3,500
3/8	.3790	.3750	575	18,400	20,600	4,500
1/2	.5050	.5000	1,160	32,800	36,800	11,500
5/8	.6300	.6250	2,070	51,200	57,500	—

*Note: 300 Series Stainless is not recommended in applications where shear forces are a factor.

4130 Steel Part #	17-4 SS Part #	300 Series SS Part #	Nominal Diameter	A Max	A Min	Grip Length	+/-0.005 B	+0.000/-0.030 C	D	E	G	H	J	K
RAAS-37-050	RACH-37-050	RACS-37-050	3/8	.3735	.3720	.50	.440	.365	1.01	.56	.29	.65	1.52	1.16
RAAS-37-075	RACH-37-075	RACS-37-075	3/8	.3735	.3720	.75	.440	.365	1.01	.56	.29	.65	1.52	1.16
RAAS-37-100	RACH-37-100	RACS-37-100	3/8	.3735	.3720	1.00	.440	.365	1.01	.56	.29	.65	1.52	1.16
RAAS-37-125	RACH-37-125	RACS-37-125	3/8	.3735	.3720	1.25	.440	.365	1.01	.56	.29	.65	1.52	1.16
RAAS-37-150	RACH-37-150	RACS-37-150	3/8	.3735	.3720	1.50	.440	.365	1.01	.56	.29	.65	1.52	1.16
RAAS-37-175	RACH-37-175	RACS-37-175	3/8	.3735	.3720	1.75	.440	.365	1.01	.56	.29	.65	1.52	1.16
RAAS-37-200	RACH-37-200	RACS-37-200	3/8	.3735	.3720	2.00	.440	.365	1.01	.56	.29	.65	1.52	1.16
RAAS-37-250	RACH-37-250	RACS-37-250	3/8	.3735	.3720	2.50	.440	.365	1.01	.56	.29	.65	1.52	1.16
RAAS-37-300	RACH-37-300	RACS-37-300	3/8	.3735	.3720	3.00	.440	.365	1.01	.56	.29	.65	1.52	1.16
RAAS-37-350	RACH-37-350	RACS-37-350	3/8	.3735	.3720	3.50	.440	.365	1.01	.56	.29	.65	1.52	1.16
RAAS-37-400	RACH-37-400	RACS-37-400	3/8	.3735	.3720	4.00	.440	.365	1.01	.56	.29	.65	1.52	1.16
RAAS-50-100	RACH-50-100	RACS-50-100	1/2	.4985	.4970	1.00	.594	.460	1.27	.72	.42	.81	1.88	1.43
RAAS-50-125	RACH-50-125	RACS-50-125	1/2	.4985	.4970	1.25	.594	.460	1.27	.72	.42	.81	1.88	1.43
RAAS-50-150	RACH-50-150	RACS-50-150	1/2	.4985	.4970	1.50	.594	.460	1.27	.72	.42	.81	1.88	1.43
RAAS-50-175	RACH-50-175	RACS-50-175	1/2	.4985	.4970	1.75	.594	.460	1.27	.72	.42	.81	1.88	1.43
RAAS-50-200	RACH-50-200	RACS-50-200	1/2	.4985	.4970	2.00	.594	.460	1.27	.72	.42	.81	1.88	1.43
RAAS-50-250	RACH-50-250	RACS-50-250	1/2	.4985	.4970	2.50	.594	.460	1.27	.72	.42	.81	1.88	1.43
RAAS-50-300	RACH-50-300	RACS-50-300	1/2	.4985	.4970	3.00	.594	.460	1.27	.72	.42	.81	1.88	1.43
RAAS-50-350	RACH-50-350	RACS-50-350	1/2	.4985	.4970	3.50	.594	.460	1.27	.72	.42	.81	1.88	1.43
RAAS-50-400	RACH-50-400	RACS-50-400	1/2	.4985	.4970	4.00	.594	.460	1.27	.72	.42	.81	1.88	1.43
RAAS-50-450	RACH-50-450	RACS-50-450	1/2	.4985	.4970	4.50	.594	.460	1.27	.72	.42	.81	1.88	1.43
RAAS-50-500	RACH-50-500	RACS-50-500	1/2	.4985	.4970	5.00	.594	.460	1.27	.72	.42	.81	1.88	1.43
RAAS-50-550	RACH-50-550	RACS-50-550	1/2	.4985	.4970	5.50	.594	.460	1.27	.72	.42	.81	1.88	1.43
RAAS-50-600	RACH-50-600	RACS-50-600	1/2	.4985	.4970	6.00	.594	.460	1.27	.72	.42	.81	1.88	1.43
RAAS-62-150	RACH-62-150	—	5/8	.6235	.6220	1.50	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RAAS-62-175	RACH-62-175	—	5/8	.6235	.6220	1.75	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RAAS-62-200	RACH-62-200	—	5/8	.6235	.6220	2.00	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RAAS-62-250	RACH-62-250	—	5/8	.6235	.6220	2.50	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RAAS-62-300	RACH-62-300	—	5/8	.6235	.6220	3.00	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RAAS-62-350	RACH-62-350	—	5/8	.6235	.6220	3.50	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RAAS-62-400	RACH-62-400	—	5/8	.6235	.6220	4.00	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RAAS-62-450	RACH-62-450	—	5/8	.6235	.6220	4.50	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RAAS-62-500	RACH-62-500	—	5/8	.6235	.6220	5.00	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RAAS-62-550	RACH-62-550	—	5/8	.6235	.6220	5.50	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RAAS-62-600	RACH-62-600	—	5/8	.6235	.6220	6.00	.750	.580	1.65	.94	.54	1.06	2.57	1.72

QUICK RELEASE BALL LOCK PINS

Aluminum Ring Handle | Metric



Dia mm	Hole Size Max mm	Min mm	Min. Pull-Out Strength (N)	Calculated Double Shear (N) 17-4 Stainless
5	5.1	5.0	890	24,400
6	6.1	6.0	1,023	35,640
8	8.1	8.0	2,268	63,804
10	10.1	10.0	2,558	100,101
12	12.1	12.0	5,160	144,060
16	16.1	16.0	9,207	257,179

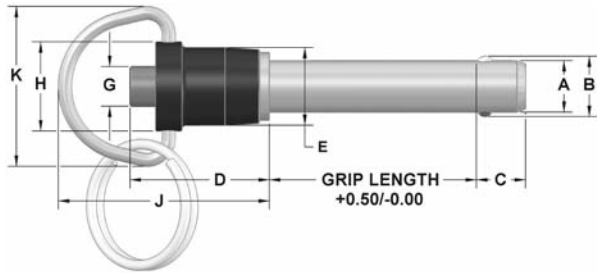
These positive locking quick release pins have a wide range of uses in fastening, locating, and alignment applications. The pins will not release until the button on the handle is depressed. Once the button is depressed, the balls retract into the shank allowing the pin to be inserted or removed into or out of a hole. The shanks are made from 17-4PH stainless steel. The handles for the pins listed below are made from 2024-T4 aluminum and anodized black. Stainless handles are also available. The pins are supplied with a stainless steel split ring for attaching a cable assembly. Pins in other grip lengths are available as special orders. See page 195 for complete specifications. Compliant to RoHS requirements.

17-4 SS Part #	Nominal Diameter mm	A Max mm	A Min mm	Grip Length mm	+/-0.25 B mm	+/-1.0 C mm	D mm	E mm	G mm	H mm	J mm	K mm
MRACH-05-010	5	4.96	4.92	10	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRACH-05-015	5	4.96	4.92	15	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRACH-05-020	5	4.96	4.92	20	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRACH-05-025	5	4.96	4.92	25	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRACH-05-030	5	4.96	4.92	30	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRACH-05-035	5	4.96	4.92	35	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRACH-05-040	5	4.96	4.92	40	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRACH-05-045	5	4.96	4.92	45	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRACH-05-050	5	4.96	4.92	50	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRACH-05-060	5	4.96	4.92	60	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRACH-05-070	5	4.96	4.92	70	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRACH-05-080	5	4.96	4.92	80	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRACH-05-090	5	4.96	4.92	90	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRACH-05-100	5	4.96	4.92	100	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRACH-06-010	6	5.96	5.92	10	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRACH-06-015	6	5.96	5.92	15	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRACH-06-020	6	5.96	5.92	20	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRACH-06-025	6	5.96	5.92	25	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRACH-06-030	6	5.96	5.92	30	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRACH-06-035	6	5.96	5.92	35	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRACH-06-040	6	5.96	5.92	40	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRACH-06-045	6	5.96	5.92	45	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRACH-06-050	6	5.96	5.92	50	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRACH-06-060	6	5.96	5.92	60	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRACH-06-070	6	5.96	5.92	70	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRACH-06-080	6	5.96	5.92	80	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRACH-06-090	6	5.96	5.92	90	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRACH-06-100	6	5.96	5.92	100	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRACH-08-010	8	7.96	7.92	10	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRACH-08-015	8	7.96	7.92	15	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRACH-08-020	8	7.96	7.92	20	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRACH-08-025	8	7.96	7.92	25	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRACH-08-030	8	7.96	7.92	30	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRACH-08-035	8	7.96	7.92	35	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRACH-08-040	8	7.96	7.92	40	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRACH-08-045	8	7.96	7.92	45	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRACH-08-050	8	7.96	7.92	50	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRACH-08-060	8	7.96	7.92	60	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRACH-08-070	8	7.96	7.92	70	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRACH-08-080	8	7.96	7.92	80	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRACH-08-090	8	7.96	7.92	90	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRACH-08-100	8	7.96	7.92	100	9.42	8	23.4	11.9	5.8	15	36.8	29.5



QUICK RELEASE BALL LOCK PINS

Aluminum Ring Handle | Metric (continued)

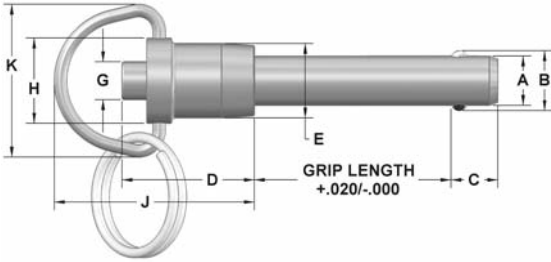


Dia mm	Hole Size Max mm	Min mm	Min. Pull-Out Strength (N)	Calculated Double Shear (N) 17-4 Stainless
5	5.1	5.0	890	24,400
6	6.1	6.0	1,023	35,640
8	8.1	8.0	2,268	63,804
10	10.1	10.0	2,558	100,101
12	12.1	12.0	5,160	144,060
16	16.1	16.0	9,207	257,179

17-4 SS Part #	Nominal Diameter mm	A Max mm	A Min mm	Grip Length mm	+/-0.25 B mm	+/-1.0 C mm	D mm	E mm	G mm	H mm	J mm	K mm
MRACH-10-015	10	9.96	9.92	15	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRACH-10-020	10	9.96	9.92	20	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRACH-10-025	10	9.96	9.92	25	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRACH-10-030	10	9.96	9.92	30	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRACH-10-035	10	9.96	9.92	35	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRACH-10-040	10	9.96	9.92	40	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRACH-10-045	10	9.96	9.92	45	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRACH-10-050	10	9.96	9.92	50	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRACH-10-060	10	9.96	9.92	60	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRACH-10-070	10	9.96	9.92	70	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRACH-10-080	10	9.96	9.92	80	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRACH-10-090	10	9.96	9.92	90	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRACH-10-100	10	9.96	9.92	100	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRACH-12-020	12	11.96	11.92	20	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRACH-12-025	12	11.96	11.92	25	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRACH-12-030	12	11.96	11.92	30	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRACH-12-035	12	11.96	11.92	35	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRACH-12-040	12	11.96	11.92	40	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRACH-12-045	12	11.96	11.92	45	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRACH-12-050	12	11.96	11.92	50	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRACH-12-060	12	11.96	11.92	60	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRACH-12-070	12	11.96	11.92	70	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRACH-12-080	12	11.96	11.92	80	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRACH-12-090	12	11.96	11.92	90	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRACH-12-100	12	11.96	11.92	100	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRACH-16-025	16	15.96	15.92	25	19.00	14	41.9	23.9	13.7	26.9	65.3	43.7
MRACH-16-030	16	15.96	15.92	30	19.00	14	41.9	23.9	13.7	26.9	65.3	43.7
MRACH-16-035	16	15.96	15.92	35	19.00	14	41.9	23.9	13.7	26.9	65.3	43.7
MRACH-16-040	16	15.96	15.92	40	19.00	14	41.9	23.9	13.7	26.9	65.3	43.7
MRACH-16-045	16	15.96	15.92	45	19.00	14	41.9	23.9	13.7	26.9	65.3	43.7
MRACH-16-050	16	15.96	15.92	50	19.00	14	41.9	23.9	13.7	26.9	65.3	43.7
MRACH-16-060	16	15.96	15.92	60	19.00	14	41.9	23.9	13.7	26.9	65.3	43.7
MRACH-16-070	16	15.96	15.92	70	19.00	14	41.9	23.9	13.7	26.9	65.3	43.7
MRACH-16-080	16	15.96	15.92	80	19.00	14	41.9	23.9	13.7	26.9	65.3	43.7
MRACH-16-090	16	15.96	15.92	90	19.00	14	41.9	23.9	13.7	26.9	65.3	43.7
MRACH-16-100	16	15.96	15.92	100	19.00	14	41.9	23.9	13.7	26.9	65.3	43.7

QUICK RELEASE BALL LOCK PINS

Stainless Steel Ring Handle | Inch



Dia	Hole Size		Min. Pull-Out Strength (lbs)	Calculated Double Shear (lbs)		
	Max	Min		4130 Steel	17-4 Stainless	300 Series SS*
3/16	.1940	.1900	200	4,600	5,150	—
1/4	.2540	.2500	230	8,200	9,200	2,200
5/16	.3165	.3125	510	12,800	14,400	3,500
3/8	.3790	.3750	575	18,400	20,600	4,500
1/2	.5050	.5000	1,160	32,800	36,800	11,500
5/8	.6300	.6250	2,070	51,200	57,500	—

*Note: 300 Series Stainless is not recommended in applications where shear forces are a factor.

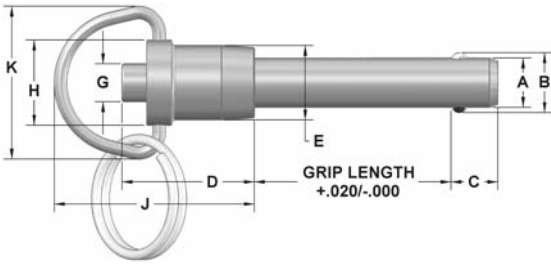
These positive locking quick release pins have a wide range of uses in fastening, locating, and alignment applications. The pins will not release until the button on the handle is depressed. Once the button is depressed, the balls retract into the shank allowing the pin to be inserted or removed into or out of a hole. They are available in two types of stainless steel to meet your application. The handles and actuator buttons for the pins listed below are made from 303 stainless steel. The pins are supplied with a stainless steel split ring for attaching a cable assembly. Pins in other grip lengths are available as special orders. See page 195 for complete specifications.

17-4 SS Part #	300 Series SS Part #	Nominal Diameter	A Max	A Min	Grip Length	+/- .005 B	+ .000/- .030 C	D	E	G	H	J	K
RCCH-18-050	—	3/16	.1885	.1870	.50	.220	.260	92	.47	.23	.59	1.45	1.16
RCCH-18-075	—	3/16	.1885	.1870	.75	.220	.260	92	.47	.23	.59	1.45	1.16
RCCH-18-100	—	3/16	.1885	.1870	1.00	.220	.260	92	.47	.23	.59	1.45	1.16
RCCH-18-125	—	3/16	.1885	.1870	1.25	.220	.260	92	.47	.23	.59	1.45	1.16
RCCH-18-150	—	3/16	.1885	.1870	1.50	.220	.260	92	.47	.23	.59	1.45	1.16
RCCH-18-175	—	3/16	.1885	.1870	1.75	.220	.260	92	.47	.23	.59	1.45	1.16
RCCH-18-200	—	3/16	.1885	.1870	2.00	.220	.260	92	.47	.23	.59	1.45	1.16
RCCH-18-250	—	3/16	.1885	.1870	2.50	.220	.260	92	.47	.23	.59	1.45	1.16
RCCH-18-300	—	3/16	.1885	.1870	3.00	.220	.260	92	.47	.23	.59	1.45	1.16
RCCH-18-350	—	3/16	.1885	.1870	3.50	.220	.260	92	.47	.23	.59	1.45	1.16
RCCH-18-400	—	3/16	.1885	.1870	4.00	.220	.260	92	.47	.23	.59	1.45	1.16
RCCH-25-050	RCCS-25-050	1/4	.2485	.2470	.50	.289	.290	92	.47	.23	.59	1.45	1.16
RCCH-25-075	RCCS-25-075	1/4	.2485	.2470	.75	.289	.290	92	.47	.23	.59	1.45	1.16
RCCH-25-100	RCCS-25-100	1/4	.2485	.2470	1.00	.289	.290	92	.47	.23	.59	1.45	1.16
RCCH-25-125	RCCS-25-125	1/4	.2485	.2470	1.25	.289	.290	92	.47	.23	.59	1.45	1.16
RCCH-25-150	RCCS-25-150	1/4	.2485	.2470	1.50	.289	.290	92	.47	.23	.59	1.45	1.16
RCCH-25-175	RCCS-25-175	1/4	.2485	.2470	1.75	.289	.290	92	.47	.23	.59	1.45	1.16
RCCH-25-200	RCCS-25-200	1/4	.2485	.2470	2.00	.289	.290	92	.47	.23	.59	1.45	1.16
RCCH-25-250	RCCS-25-250	1/4	.2485	.2470	2.50	.289	.290	92	.47	.23	.59	1.45	1.16
RCCH-25-300	RCCS-25-300	1/4	.2485	.2470	3.00	.289	.290	92	.47	.23	.59	1.45	1.16
RCCH-25-350	RCCS-25-350	1/4	.2485	.2470	3.50	.289	.290	92	.47	.23	.59	1.45	1.16
RCCH-25-400	RCCS-25-400	1/4	.2485	.2470	4.00	.289	.290	92	.47	.23	.59	1.45	1.16
RCCH-31-050	RCCS-31-050	5/16	.3110	.3095	.50	.375	.330	92	.47	.23	.59	1.45	1.16
RCCH-31-075	RCCS-31-075	5/16	.3110	.3095	.75	.375	.330	92	.47	.23	.59	1.45	1.16
RCCH-31-100	RCCS-31-100	5/16	.3110	.3095	1.00	.375	.330	92	.47	.23	.59	1.45	1.16
RCCH-31-125	RCCS-31-125	5/16	.3110	.3095	1.25	.375	.330	92	.47	.23	.59	1.45	1.16
RCCH-31-150	RCCS-31-150	5/16	.3110	.3095	1.50	.375	.330	92	.47	.23	.59	1.45	1.16
RCCH-31-175	RCCS-31-175	5/16	.3110	.3095	1.75	.375	.330	92	.47	.23	.59	1.45	1.16
RCCH-31-200	RCCS-31-200	5/16	.3110	.3095	2.00	.375	.330	92	.47	.23	.59	1.45	1.16
RCCH-31-250	RCCS-31-250	5/16	.3110	.3095	2.50	.375	.330	92	.47	.23	.59	1.45	1.16
RCCH-31-300	RCCS-31-300	5/16	.3110	.3095	3.00	.375	.330	92	.47	.23	.59	1.45	1.16
RCCH-31-350	RCCS-31-350	5/16	.3110	.3095	3.50	.375	.330	92	.47	.23	.59	1.45	1.16
RCCH-31-400	RCCS-31-400	5/16	.3110	.3095	4.00	.375	.330	92	.47	.23	.59	1.45	1.16



QUICK RELEASE BALL LOCK PINS

Stainless Steel Ring Handle | Inch (continued)



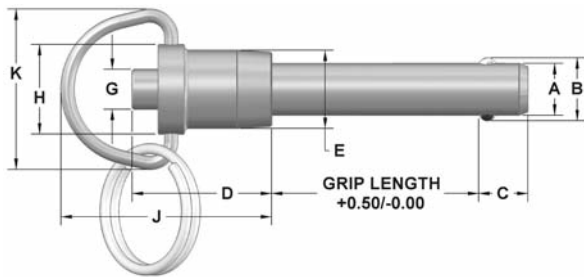
Dia	Hole Size		Min. Pull-Out Strength (lbs)	Calculated Double Shear (lbs)		
	Max	Min		4130 Steel	17-4 Stainless	300 Series SS*
3/16	.1940	.1900	200	4,600	5,150	—
1/4	.2540	.2500	230	8,200	9,200	2,200
5/16	.3165	.3125	510	12,800	14,400	3,500
3/8	.3790	.3750	575	18,400	20,600	4,500
1/2	.5050	.5000	1,160	32,800	36,800	11,500
5/8	.6300	.6250	2,070	51,200	57,500	—

*Note: 300 Series Stainless is not recommended in applications where shear forces are a factor.

17-4 SS Part #	300 Series SS Part #	Nominal Diameter	A Max	A Min	Grip Length	+/- .005 B	+ .000/- .030 C	D	E	G	H	J	K
RCCH-37-050	RCCS-37-050	3/8	.3735	.3720	.50	.440	.365	1.01	.56	.29	.65	1.52	1.16
RCCH-37-075	RCCS-37-075	3/8	.3735	.3720	.75	.440	.365	1.01	.56	.29	.65	1.52	1.16
RCCH-37-100	RCCS-37-100	3/8	.3735	.3720	1.00	.440	.365	1.01	.56	.29	.65	1.52	1.16
RCCH-37-125	RCCS-37-125	3/8	.3735	.3720	1.25	.440	.365	1.01	.56	.29	.65	1.52	1.16
RCCH-37-150	RCCS-37-150	3/8	.3735	.3720	1.50	.440	.365	1.01	.56	.29	.65	1.52	1.16
RCCH-37-175	RCCS-37-175	3/8	.3735	.3720	1.75	.440	.365	1.01	.56	.29	.65	1.52	1.16
RCCH-37-200	RCCS-37-200	3/8	.3735	.3720	2.00	.440	.365	1.01	.56	.29	.65	1.52	1.16
RCCH-37-250	RCCS-37-250	3/8	.3735	.3720	2.50	.440	.365	1.01	.56	.29	.65	1.52	1.16
RCCH-37-300	RCCS-37-300	3/8	.3735	.3720	3.00	.440	.365	1.01	.56	.29	.65	1.52	1.16
RCCH-37-350	RCCS-37-350	3/8	.3735	.3720	3.50	.440	.365	1.01	.56	.29	.65	1.52	1.16
RCCH-37-400	RCCS-37-400	3/8	.3735	.3720	4.00	.440	.365	1.01	.56	.29	.65	1.52	1.16
RCCH-50-100	RCCS-50-100	1/2	.4985	.4970	1.00	.594	.460	1.27	.72	.42	.81	1.88	1.43
RCCH-50-125	RCCS-50-125	1/2	.4985	.4970	1.25	.594	.460	1.27	.72	.42	.81	1.88	1.43
RCCH-50-150	RCCS-50-150	1/2	.4985	.4970	1.50	.594	.460	1.27	.72	.42	.81	1.88	1.43
RCCH-50-175	RCCS-50-175	1/2	.4985	.4970	1.75	.594	.460	1.27	.72	.42	.81	1.88	1.43
RCCH-50-200	RCCS-50-200	1/2	.4985	.4970	2.00	.594	.460	1.27	.72	.42	.81	1.88	1.43
RCCH-50-250	RCCS-50-250	1/2	.4985	.4970	2.50	.594	.460	1.27	.72	.42	.81	1.88	1.43
RCCH-50-300	RCCS-50-300	1/2	.4985	.4970	3.00	.594	.460	1.27	.72	.42	.81	1.88	1.43
RCCH-50-350	RCCS-50-350	1/2	.4985	.4970	3.50	.594	.460	1.27	.72	.42	.81	1.88	1.43
RCCH-50-400	RCCS-50-400	1/2	.4985	.4970	4.00	.594	.460	1.27	.72	.42	.81	1.88	1.43
RCCH-50-450	RCCS-50-450	1/2	.4985	.4970	4.50	.594	.460	1.27	.72	.42	.81	1.88	1.43
RCCH-50-500	RCCS-50-500	1/2	.4985	.4970	5.00	.594	.460	1.27	.72	.42	.81	1.88	1.43
RCCH-50-550	RCCS-50-550	1/2	.4985	.4970	5.50	.594	.460	1.27	.72	.42	.81	1.88	1.43
RCCH-50-600	RCCS-50-600	1/2	.4985	.4970	6.00	.594	.460	1.27	.72	.42	.81	1.88	1.43
RCCH-62-150	—	5/8	.6235	.6220	1.50	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RCCH-62-175	—	5/8	.6235	.6220	1.75	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RCCH-62-200	—	5/8	.6235	.6220	2.00	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RCCH-62-250	—	5/8	.6235	.6220	2.50	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RCCH-62-300	—	5/8	.6235	.6220	3.00	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RCCH-62-350	—	5/8	.6235	.6220	3.50	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RCCH-62-400	—	5/8	.6235	.6220	4.00	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RCCH-62-450	—	5/8	.6235	.6220	4.50	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RCCH-62-500	—	5/8	.6235	.6220	5.00	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RCCH-62-550	—	5/8	.6235	.6220	5.50	.750	.580	1.65	.94	.54	1.06	2.57	1.72
RCCH-62-600	—	5/8	.6235	.6220	6.00	.750	.580	1.65	.94	.54	1.06	2.57	1.72

QUICK RELEASE BALL LOCK PINS

Stainless Steel Ring Handle | Metric



Dia mm	Hole Size Max mm	Min mm	Min. Pull-Out Strength (N)	Calculated Double Shear (N) 17-4 Stainless
5	5.1	5.0	890	24,400
6	6.1	6.0	1,023	35,640
8	8.1	8.0	2,268	63,804
10	10.1	10.0	2,558	100,101
12	12.1	12.0	5,160	144,060
16	16.1	16.0	9,207	257,179

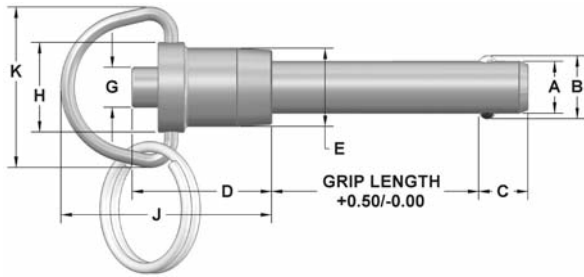
These positive locking quick release pins have a wide range of uses in fastening, locating, and alignment applications. The pins will not release until the button on the handle is depressed. Once the button is depressed, the balls retract into the shank allowing the pin to be inserted or removed into or out of a hole. The handles for the pins listed below are made from 303 stainless steel. The shanks are made from 17-4PH stainless steel. The pins are supplied with a stainless steel splitting ring for attaching a cable assembly. Pins in other grip lengths are available as special orders. See page 195 for complete specifications. Compliant to RoHS requirements.

17-4 SS Part #	Nominal Diameter mm	A Max mm	A Min mm	Grip Length mm	+/-0.25 B mm	+/-1.0 C mm	D mm	E mm	G mm	H mm	J mm	K mm
MRCCH-05-010	5	4.96	4.92	10	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRCCH-05-015	5	4.96	4.92	15	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRCCH-05-020	5	4.96	4.92	20	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRCCH-05-025	5	4.96	4.92	25	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRCCH-05-300	5	4.96	4.92	30	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRCCH-05-035	5	4.96	4.92	35	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRCCH-05-040	5	4.96	4.92	40	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRCCH-05-045	5	4.96	4.92	45	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRCCH-05-050	5	4.96	4.92	50	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRCCH-05-060	5	4.96	4.92	60	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRCCH-05-070	5	4.96	4.92	70	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRCCH-05-080	5	4.96	4.92	80	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRCCH-05-090	5	4.96	4.92	90	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRCCH-05-100	5	4.96	4.92	100	5.54	6	23.4	11.9	5.8	15	36.8	29.5
MRCCH-06-010	6	5.96	5.92	10	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRCCH-06-015	6	5.96	5.92	15	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRCCH-06-020	6	5.96	5.92	20	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRCCH-06-025	6	5.96	5.92	25	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRCCH-06-030	6	5.96	5.92	30	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRCCH-06-035	6	5.96	5.92	35	6.99	7	23.1	11.9	5.8	15	36.8	29.5
MRCCH-06-040	6	5.96	5.92	40	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRCCH-06-045	6	5.96	5.92	45	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRCCH-06-050	6	5.96	5.92	50	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRCCH-06-060	6	5.96	5.92	60	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRCCH-06-070	6	5.96	5.92	70	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRCCH-06-080	6	5.96	5.92	80	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRCCH-06-090	6	5.96	5.92	90	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRCCH-06-100	6	5.96	5.92	100	6.99	7	23.4	11.9	5.8	15	36.8	29.5
MRCCH-08-010	8	7.96	7.92	10	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRCCH-08-015	8	7.96	7.92	15	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRCCH-08-020	8	7.96	7.92	20	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRCCH-08-025	8	7.96	7.92	25	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRCCH-08-030	8	7.96	7.92	30	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRCCH-08-035	8	7.96	7.92	35	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRCCH-08-040	8	7.96	7.92	40	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRCCH-08-045	8	7.96	7.92	45	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRCCH-08-050	8	7.96	7.92	50	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRCCH-08-060	8	7.96	7.92	60	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRCCH-08-070	8	7.96	7.92	70	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRCCH-08-080	8	7.96	7.92	80	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRCCH-08-090	8	7.96	7.92	90	9.42	8	23.4	11.9	5.8	15	36.8	29.5
MRCCH-08-100	8	7.96	7.92	100	9.42	8	23.4	11.9	5.8	15	36.8	29.5



QUICK RELEASE BALL LOCK PINS

Stainless Steel Ring Handle | Metric (continued)

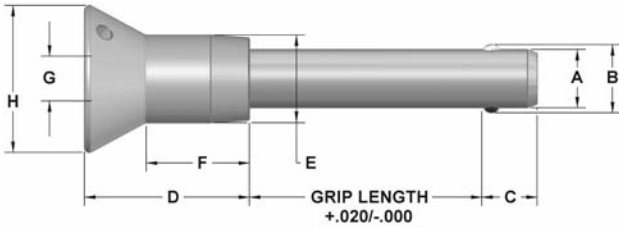


Dia mm	Hole Size Max mm	Min mm	Mn. Pull-Out Strength (N)	Calculated Double Shear (N) 17-4 Stainless
5	5.1	5.0	890	24,400
6	6.1	6.0	1,023	35,640
8	8.1	8.0	2,268	63,804
10	10.1	10.0	2,558	100,101
12	12.1	12.0	5,160	144,060
16	16.1	16.0	9,207	257,179

17-4 SS Part #	Nominal Diameter mm	A Max mm	A Min mm	Grip Length mm	+/-0.25 B mm	+/-1.0 C mm	D mm	E mm	G mm	H mm	J mm	K mm
MRCCH-10-015	10	9.96	9.92	15	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRCCH-10-020	10	9.96	9.92	20	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRCCH-10-025	10	9.96	9.92	25	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRCCH-10-030	10	9.96	9.92	30	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRCCH-10-035	10	9.96	9.92	35	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRCCH-10-040	10	9.96	9.92	40	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRCCH-10-045	10	9.96	9.92	45	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRCCH-10-050	10	9.96	9.92	50	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRCCH-10-060	10	9.96	9.92	60	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRCCH-10-070	10	9.96	9.92	70	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRCCH-10-080	10	9.96	9.92	80	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRCCH-10-090	10	9.96	9.92	90	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRCCH-10-100	10	9.96	9.92	100	11.86	9	25.7	14.2	7.4	16.5	38.6	29.5
MRCCH-12-020	12	11.96	11.92	20	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRCCH-12-025	12	11.96	11.92	25	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRCCH-12-030	12	11.96	11.92	30	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRCCH-12-035	12	11.96	11.92	35	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRCCH-12-040	12	11.96	11.92	40	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRCCH-12-045	12	11.96	11.92	45	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRCCH-12-050	12	11.96	11.92	50	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRCCH-12-060	12	11.96	11.92	60	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRCCH-12-070	12	11.96	11.92	70	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRCCH-12-080	12	11.96	11.92	80	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRCCH-12-090	12	11.96	11.92	90	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRCCH-12-100	12	11.96	11.92	100	14.45	10	32.3	18.3	10.7	20.6	47.8	36.3
MRCCH-16-025	16	15.96	15.92	25	19	14	41.9	23.9	13.7	26.9	65.3	43.7
MRCCH-16-030	16	15.96	15.92	30	19	14	41.9	23.9	13.7	26.9	65.3	43.7
MRCCH-16-035	16	15.96	15.92	35	19	14	41.9	23.9	13.7	26.9	65.3	43.7
MRCCH-16-040	16	15.96	15.92	40	19	14	41.9	23.9	13.7	26.9	65.3	43.7
MRCCH-16-045	16	15.96	15.92	45	19	14	41.9	23.9	13.7	26.9	65.3	43.7
MRCCH-16-050	16	15.96	15.92	50	19	14	41.9	23.9	13.7	26.9	65.3	43.7
MRCCH-16-060	16	15.96	15.92	60	19	14	41.9	23.9	13.7	26.9	65.3	43.7
MRCCH-16-070	16	15.96	15.92	70	19	14	41.9	23.9	13.7	26.9	65.3	43.7
MRCCH-16-080	16	15.96	15.92	80	19	14	41.9	23.9	13.7	26.9	65.3	43.7
MRCCH-16-090	16	15.96	15.92	90	19	14	41.9	23.9	13.7	26.9	65.3	43.7
MRCCH-16-100	16	15.96	15.92	100	19	14	41.9	23.9	13.7	26.9	65.3	43.7

QUICK RELEASE BALL LOCK PINS

Stainless Steel Nautical - Recessed Handle | Inch



Dia	Hole Size		Min. Pull-Out Strength (lbs)	Calculated Double Shear (lbs)	
	Max	Min		17-4 Stainless	300 Series SS*
3/16	.1940	.1900	200	5,150	—
1/4	.2540	.2500	230	9,200	2,200
5/16	.3165	.3125	510	14,400	3,500
3/8	.3790	.3750	575	20,600	4,500
1/2	.5050	.5000	1,160	36,800	11,500
5/8	.6300	.6250	2,070	57,500	—

*Note: 300 Series Stainless is not recommended in applications where shear forces are a factor.

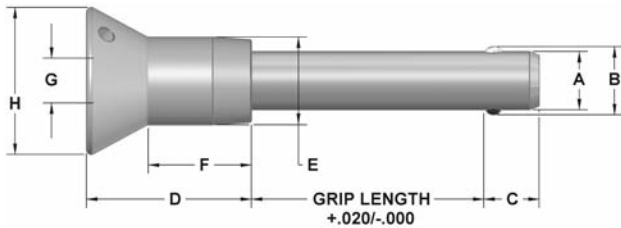
These positive locking quick release pins have a wide range of uses in fastening, locating, and alignment applications. The pins will not release until the button on the handle is depressed. Once the button is depressed, the balls retract into the shank allowing the pin to be inserted or removed into or out of a hole. They are available in two stainless shank materials to meet your application. The handles are designed to prevent accidental release and are machined from 303 stainless steel. These pins are not supplied with stainless steel split rings. Pins in other grip lengths are available as special orders. See page 195 for complete specifications. If a lanyard is ordered with the recessed handle, the lanyard will be attached directly to the pin without a split ring.

17-4 SS Part #	300 Series SS Part #	Nominal Diameter	A Max	A Min	Grip Length	+/-0.005 B	+0.000/-0.030 C	D	E	F	Button G	H
NCCH-18-050	—	3/16	.1885	.1870	.50	.220	.260	.97	.47	.64	.23	.81
NCCH-18-075	—	3/16	.1885	.1870	.75	.220	.260	.97	.47	.64	.23	.81
NCCH-18-100	—	3/16	.1885	.1870	1.00	.220	.260	.97	.47	.64	.23	.81
NCCH-18-125	—	3/16	.1885	.1870	1.25	.220	.260	.97	.47	.64	.23	.81
NCCH-18-150	—	3/16	.1885	.1870	1.50	.220	.260	.97	.47	.64	.23	.81
NCCH-18-175	—	3/16	.1885	.1870	1.75	.220	.260	.97	.47	.64	.23	.81
NCCH-18-200	—	3/16	.1885	.1870	2.00	.220	.260	.97	.47	.64	.23	.81
NCCH-18-250	—	3/16	.1885	.1870	2.50	.220	.260	.97	.47	.64	.23	.81
NCCH-18-300	—	3/16	.1885	.1870	3.00	.220	.260	.97	.47	.64	.23	.81
NCCH-18-350	—	3/16	.1885	.1870	3.50	.220	.260	.97	.47	.64	.23	.81
NCCH-18-400	—	3/16	.1885	.1870	4.00	.220	.260	.97	.47	.64	.23	.81
NCCH-25-050	NCCS-25-050	1/4	.2485	.2470	.50	.289	.290	.97	.47	.64	.23	.81
NCCH-25-075	NCCS-25-075	1/4	.2485	.2470	.75	.289	.290	.97	.47	.64	.23	.81
NCCH-25-100	NCCS-25-100	1/4	.2485	.2470	1.00	.289	.290	.97	.47	.64	.23	.81
NCCH-25-125	NCCS-25-125	1/4	.2485	.2470	1.25	.289	.290	.97	.47	.64	.23	.81
NCCH-25-150	NCCS-25-150	1/4	.2485	.2470	1.50	.289	.290	.97	.47	.64	.23	.81
NCCH-25-175	NCCS-25-175	1/4	.2485	.2470	1.75	.289	.290	.97	.47	.64	.23	.81
NCCH-25-200	NCCS-25-200	1/4	.2485	.2470	2.00	.289	.290	.97	.47	.64	.23	.81
NCCH-25-250	NCCS-25-250	1/4	.2485	.2470	2.50	.289	.290	.97	.47	.64	.23	.81
NCCH-25-300	NCCS-25-300	1/4	.2485	.2470	3.00	.289	.290	.97	.47	.64	.23	.81
NCCH-25-350	NCCS-25-350	1/4	.2485	.2470	3.50	.289	.290	.97	.47	.64	.23	.81
NCCH-25-400	NCCS-25-400	1/4	.2485	.2470	4.00	.289	.290	.97	.47	.64	.23	.81
NCCH-31-050	NCCS-31-050	5/16	.3110	.3095	.50	.375	.330	.97	.47	.64	.23	.81
NCCH-31-075	NCCS-31-075	5/16	.3110	.3095	.75	.375	.330	.97	.47	.64	.23	.81
NCCH-31-100	NCCS-31-100	5/16	.3110	.3095	1.00	.375	.330	.97	.47	.64	.23	.81
NCCH-31-125	NCCS-31-125	5/16	.3110	.3095	1.25	.375	.330	.97	.47	.64	.23	.81
NCCH-31-150	NCCS-31-150	5/16	.3110	.3095	1.50	.375	.330	.97	.47	.64	.23	.81
NCCH-31-175	NCCS-31-175	5/16	.3110	.3095	1.75	.375	.330	.97	.47	.64	.23	.81
NCCH-31-200	NCCS-31-200	5/16	.3110	.3095	2.00	.375	.330	.97	.47	.64	.23	.81
NCCH-31-250	NCCS-31-250	5/16	.3110	.3095	2.50	.375	.330	.97	.47	.64	.23	.81
NCCH-31-300	NCCS-31-300	5/16	.3110	.3095	3.00	.375	.330	.97	.47	.64	.23	.81
NCCH-31-350	NCCS-31-350	5/16	.3110	.3095	3.50	.375	.330	.97	.47	.64	.23	.81
NCCH-31-400	NCCS-31-400	5/16	.3110	.3095	4.00	.375	.330	.97	.47	.64	.23	.81



QUICK RELEASE BALL LOCK PINS

Stainless Steel Nautical - Recessed Handle | Inch (continued)



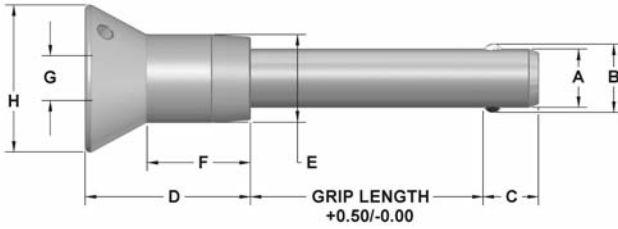
Dia	Hole Size		Min. Pull-Out Strength (lbs)	Calculated Double Shear (lbs)	
	Max	Min		17-4 Stainless	300 Series SS*
3/16	.1940	.1900	200	5,150	—
1/4	.2540	.2500	230	9,200	2,200
5/16	.3165	.3125	510	14,400	3,500
3/8	.3790	.3750	575	20,600	4,500
1/2	.5050	.5000	1,160	36,800	11,500
5/8	.6300	.6250	2,070	57,500	—

*Note: 300 Series Stainless is not recommended in applications where shear forces are a factor.

17-4 SS Part #	300 Series SS Part #	Nominal Diameter	A Max	A Min	Grip Length	+/-0.005 B	+0.000/-0.030 C	D	E	F	Button G	H
NCCH-37-050	NCCS-37-050	3/8	.3735	.3720	.50	.440	.365	1.06	.56	.66	.29	.94
NCCH-37-075	NCCS-37-075	3/8	.3735	.3720	.75	.440	.365	1.06	.56	.66	.29	.94
NCCH-37-100	NCCS-37-100	3/8	.3735	.3720	1.00	.440	.365	1.06	.56	.66	.29	.94
NCCH-37-125	NCCS-37-125	3/8	.3735	.3720	1.25	.440	.365	1.06	.56	.66	.29	.94
NCCH-37-150	NCCS-37-150	3/8	.3735	.3720	1.50	.440	.365	1.06	.56	.66	.29	.94
NCCH-37-175	NCCS-37-175	3/8	.3735	.3720	1.75	.440	.365	1.06	.56	.66	.29	.94
NCCH-37-200	NCCS-37-200	3/8	.3735	.3720	2.00	.440	.365	1.06	.56	.66	.29	.94
NCCH-37-250	NCCS-37-250	3/8	.3735	.3720	2.50	.440	.365	1.06	.56	.66	.29	.94
NCCH-37-300	NCCS-37-300	3/8	.3735	.3720	3.00	.440	.365	1.06	.56	.66	.29	.94
NCCH-37-350	NCCS-37-350	3/8	.3735	.3720	3.50	.440	.365	1.06	.56	.66	.29	.94
NCCH-37-400	NCCS-37-400	3/8	.3735	.3720	4.00	.440	.365	1.06	.56	.66	.29	.94
NCCH-50-100	NCCS-50-100	1/2	.4985	.4970	1.00	.594	.460	1.31	.72	.89	.42	1.12
NCCH-50-125	NCCS-50-125	1/2	.4985	.4970	1.25	.594	.460	1.31	.72	.89	.42	1.12
NCCH-50-150	NCCS-50-150	1/2	.4985	.4970	1.50	.594	.460	1.31	.72	.89	.42	1.12
NCCH-50-175	NCCS-50-175	1/2	.4985	.4970	1.75	.594	.460	1.31	.72	.89	.42	1.12
NCCH-50-200	NCCS-50-200	1/2	.4985	.4970	2.00	.594	.460	1.31	.72	.89	.42	1.12
NCCH-50-250	NCCS-50-250	1/2	.4985	.4970	2.50	.594	.460	1.31	.72	.89	.42	1.12
NCCH-50-300	NCCS-50-300	1/2	.4985	.4970	3.00	.594	.460	1.31	.72	.89	.42	1.12
NCCH-50-350	NCCS-50-350	1/2	.4985	.4970	3.50	.594	.460	1.31	.72	.89	.42	1.12
NCCH-50-400	NCCS-50-400	1/2	.4985	.4970	4.00	.594	.460	1.31	.72	.89	.42	1.12
NCCH-50-450	NCCS-50-450	1/2	.4985	.4970	4.50	.594	.460	1.31	.72	.89	.42	1.12
NCCH-50-500	NCCS-50-500	1/2	.4985	.4970	5.00	.594	.460	1.31	.72	.89	.42	1.12
NCCH-50-550	NCCS-50-550	1/2	.4985	.4970	5.50	.594	.460	1.31	.72	.89	.42	1.12
NCCH-50-600	NCCS-50-600	1/2	.4985	.4970	6.00	.594	.460	1.31	.72	.89	.42	1.12
NCCH-62-150	—	5/8	.6235	.6220	1.50	.750	.580	1.69	.94	1.12	.54	1.44
NCCH-62-175	—	5/8	.6235	.6220	1.75	.750	.580	1.69	.94	1.12	.54	1.44
NCCH-62-200	—	5/8	.6235	.6220	2.00	.750	.580	1.69	.94	1.12	.54	1.44
NCCH-62-250	—	5/8	.6235	.6220	2.50	.750	.580	1.69	.94	1.12	.54	1.44
NCCH-62-300	—	5/8	.6235	.6220	3.00	.750	.580	1.69	.94	1.12	.54	1.44
NCCH-62-350	—	5/8	.6235	.6220	3.50	.750	.580	1.69	.94	1.12	.54	1.44
NCCH-62-400	—	5/8	.6235	.6220	4.00	.750	.580	1.69	.94	1.12	.54	1.44
NCCH-62-450	—	5/8	.6235	.6220	4.50	.750	.580	1.69	.94	1.12	.54	1.44
NCCH-62-500	—	5/8	.6235	.6220	5.00	.750	.580	1.69	.94	1.12	.54	1.44
NCCH-62-550	—	5/8	.6235	.6220	5.50	.750	.580	1.69	.94	1.12	.54	1.44
NCCH-62-600	—	5/8	.6235	.6220	6.00	.750	.580	1.69	.94	1.12	.54	1.44

QUICK RELEASE BALL LOCK PINS

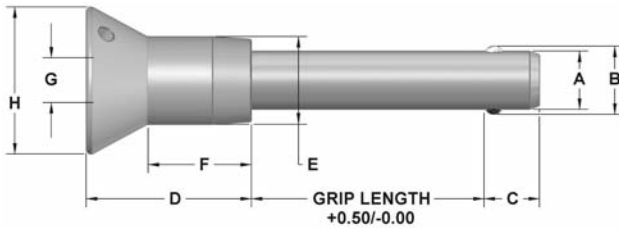
Stainless Steel Nautical - Recessed Handle | Metric



Dia mm	Hole Size Max mm	Min mm	Min. Pull-Out Strength (N)	Calculated Double Shear (N) 17-4 Stainless
5	5.1	5.0	890	24,400
6	6.1	6.0	1,023	35,640
8	8.1	8.0	2,268	63,804
10	10.1	10.0	2,558	100,101
12	12.1	12.0	5,160	144,060
16	16.1	16.0	9,207	257,179

These positive locking quick release pins have a wide range of uses in fastening, locating, and alignment applications. The pins will not release until the button on the handle is depressed. Once the button is depressed, the balls retract into the shank allowing the pin to be inserted or removed into or out of a hole. The handles are designed to prevent accidental release and are machined from 303 stainless steel. The shafts are made from 17-4PH stainless steel. These pins are not supplied with stainless steel split rings. Pins in other grip lengths are available as special orders. See page 195 for complete specifications. Compliant to RoHS requirements. If a lanyard is ordered with the recessed handle, the lanyard will be attached directly to the pin without a split ring.

17-4 SS Part #	Nominal Diameter mm	A Max mm	A Min mm	Grip Length mm	+/-0.25 B mm	+/-1.0 C mm	D mm	E mm	F mm	Button G mm	H mm
MNCCH-05-010	5	4.96	4.92	10	5.54	6	24.6	11.9	16.3	5.8	20.6
MNCCH-05-015	5	4.96	4.92	15	5.54	6	24.6	11.9	16.3	5.8	20.6
MNCCH-05-020	5	4.96	4.92	20	5.54	6	24.6	11.9	16.3	5.8	20.6
MNCCH-05-025	5	4.96	4.92	25	5.54	6	24.6	11.9	16.3	5.8	20.6
MNCCH-05-030	5	4.96	4.92	30	5.54	6	24.6	11.9	16.3	5.8	20.6
MNCCH-05-035	5	4.96	4.92	35	5.54	6	24.6	11.9	16.3	5.8	20.6
MNCCH-05-040	5	4.96	4.92	40	5.54	6	24.6	11.9	16.3	5.8	20.6
MNCCH-05-045	5	4.96	4.92	45	5.54	6	24.6	11.9	16.3	5.8	20.6
MNCCH-05-050	5	4.96	4.92	50	5.54	6	24.6	11.9	16.3	5.8	20.6
MNCCH-05-060	5	4.96	4.92	60	5.54	6	24.6	11.9	16.3	5.8	20.6
MNCCH-05-070	5	4.96	4.92	70	5.54	6	24.6	11.9	16.3	5.8	20.6
MNCCH-05-080	5	4.96	4.92	80	5.54	6	24.6	11.9	16.3	5.8	20.6
MNCCH-05-090	5	4.96	4.92	90	5.54	6	24.6	11.9	16.3	5.8	20.6
MNCCH-05-100	5	4.96	4.92	100	5.54	6	24.6	11.9	16.3	5.8	20.6
MNCCH-06-010	6	5.96	5.92	10	6.99	7	24.6	11.9	16.3	5.8	20.6
MNCCH-06-015	6	5.96	5.92	15	6.99	7	24.6	11.9	16.3	5.8	20.6
MNCCH-06-020	6	5.96	5.92	20	6.99	7	24.6	11.9	16.3	5.8	20.6
MNCCH-06-025	6	5.96	5.92	25	6.99	7	24.6	11.9	16.3	5.8	20.6
MNCCH-06-030	6	5.96	5.92	30	6.99	7	24.6	11.9	16.3	5.8	20.6
MNCCH-06-035	6	5.96	5.92	35	6.99	7	24.6	11.9	16.3	5.8	20.6
MNCCH-06-040	6	5.96	5.92	40	6.99	7	24.6	11.9	16.3	5.8	20.6
MNCCH-06-045	6	5.96	5.92	45	6.99	7	24.6	11.9	16.3	5.8	20.6
MNCCH-06-050	6	5.96	5.92	50	6.99	7	24.6	11.9	16.3	5.8	20.6
MNCCH-06-060	6	5.96	5.92	60	6.99	7	24.6	11.9	16.3	5.8	20.6
MNCCH-06-070	6	5.96	5.92	70	6.99	7	24.6	11.9	16.3	5.8	20.6
MNCCH-06-080	6	5.96	5.92	80	6.99	7	24.6	11.9	16.3	5.8	20.6
MNCCH-06-090	6	5.96	5.92	90	6.99	7	24.6	11.9	16.3	5.8	20.6
MNCCH-06-100	6	5.96	5.92	100	6.99	7	24.6	11.9	16.3	5.8	20.6
MNCCH-08-010	8	7.96	7.92	10	9.42	8	24.6	11.9	16.3	5.8	20.6
MNCCH-08-015	8	7.96	7.92	15	9.42	8	24.6	11.9	16.3	5.8	20.6
MNCCH-08-020	8	7.96	7.92	20	9.42	8	24.6	11.9	16.3	5.8	20.6
MNCCH-08-025	8	7.96	7.92	25	9.42	8	24.6	11.9	16.3	5.8	20.6
MNCCH-08-030	8	7.96	7.92	30	9.42	8	24.6	11.9	16.3	5.8	20.6
MNCCH-08-035	8	7.96	7.92	35	9.42	8	24.6	11.9	16.3	5.8	20.6
MNCCH-08-040	8	7.96	7.92	40	9.42	8	24.6	11.9	16.3	5.8	20.6
MNCCH-08-045	8	7.96	7.92	45	9.42	8	24.6	11.9	16.3	5.8	20.6
MNCCH-08-050	8	7.96	7.92	50	9.42	8	24.6	11.9	16.3	5.8	20.6
MNCCH-08-060	8	7.96	7.92	60	9.42	8	24.6	11.9	16.3	5.8	20.6
MNCCH-08-070	8	7.96	7.92	70	9.42	8	24.6	11.9	16.3	5.8	20.6
MNCCH-08-080	8	7.96	7.92	80	9.42	8	24.6	11.9	16.3	5.8	20.6
MNCCH-08-090	8	7.96	7.92	90	9.42	8	24.6	11.9	16.3	5.8	20.6
MNCCH-08-100	8	7.96	7.92	100	9.42	8	24.6	11.9	16.3	5.8	20.6

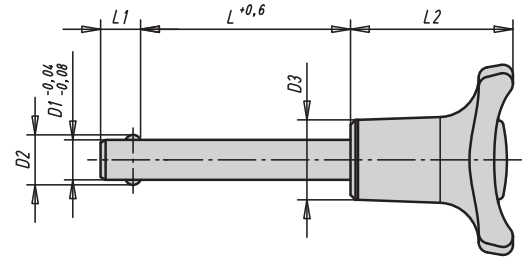
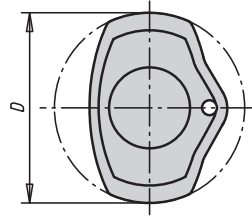
QUICK RELEASE BALL LOCK PINS
Stainless Steel Nautical - Recessed Handle | Metric (continued)


Dia mm	Hole Size Max mm	Min mm	Min. Pull-Out Strength (N)	Calculated Double Shear (N) 17-4 Stainless
5	5.1	5.0	890	24,400
6	6.1	6.0	1,023	35,640
8	8.1	8.0	2,268	63,804
10	10.1	10.0	2,558	100,101
12	12.1	12.0	5,160	144,060
16	16.1	16.0	9,207	257,179

17-4 SS Part #	Nominal Diameter mm	A Max mm	A Min mm	Grip Length mm	+/-0.25 B mm	+/-1.0 C mm	D mm	E mm	F mm	Button G mm	H mm
MNCCH-10-015	10	9.96	9.92	15	11.86	9	26.9	14.2	16.8	7.4	23.9
MNCCH-10-020	10	9.96	9.92	20	11.86	9	26.9	14.2	16.8	7.4	23.9
MNCCH-10-025	10	9.96	9.92	25	11.86	9	26.9	14.2	16.8	7.4	23.9
MNCCH-10-030	10	9.96	9.92	30	11.86	9	26.9	14.2	16.8	7.4	23.9
MNCCH-10-035	10	9.96	9.92	35	11.86	9	26.9	14.2	16.8	7.4	23.9
MNCCH-10-040	10	9.96	9.92	40	11.86	9	26.9	14.2	16.8	7.4	23.9
MNCCH-10-045	10	9.96	9.92	45	11.86	9	26.9	14.2	16.8	7.4	23.9
MNCCH-10-050	10	9.96	9.92	50	11.86	9	26.9	14.2	16.8	7.4	23.9
MNCCH-10-060	10	9.96	9.92	60	11.86	9	26.9	14.2	16.8	7.4	23.9
MNCCH-10-070	10	9.96	9.92	70	11.86	9	26.9	14.2	16.8	7.4	23.9
MNCCH-10-080	10	9.96	9.92	80	11.86	9	26.9	14.2	16.8	7.4	23.9
MNCCH-10-090	10	9.96	9.92	90	11.86	9	26.9	14.2	16.8	7.4	23.9
MNCCH-10-100	10	9.96	9.92	100	11.86	9	26.9	14.2	16.8	7.4	23.9
MNCCH-12-020	12	11.96	11.92	20	14.45	10	33.3	18.3	22.6	10.7	28.4
MNCCH-12-025	12	11.96	11.92	25	14.45	10	33.3	18.3	22.6	10.7	28.4
MNCCH-12-030	12	11.96	11.92	30	14.45	10	33.3	18.3	22.6	10.7	28.4
MNCCH-12-035	12	11.96	11.92	35	14.45	10	33.3	18.3	22.6	10.7	28.4
MNCCH-12-040	12	11.96	11.92	40	14.45	10	33.3	18.3	22.6	10.7	28.4
MNCCH-12-045	12	11.96	11.92	45	14.45	10	33.3	18.3	22.6	10.7	28.4
MNCCH-12-050	12	11.96	11.92	50	14.45	10	33.3	18.3	22.6	10.7	28.4
MNCCH-12-060	12	11.96	11.92	60	14.45	10	33.3	18.3	22.6	10.7	28.4
MNCCH-12-070	12	11.96	11.92	70	14.45	10	33.3	18.3	22.6	10.7	28.4
MNCCH-12-080	12	11.96	11.92	80	14.45	10	33.3	18.3	22.6	10.7	28.4
MNCCH-12-090	12	11.96	11.92	90	14.45	10	33.3	18.3	22.6	10.7	28.4
MNCCH-12-100	12	11.96	11.92	100	14.45	10	33.3	18.3	22.6	10.7	28.4
MNCCH-16-025	16	15.96	15.92	25	19	14	42.9	23.8	28.5	13.7	36.5
MNCCH-16-030	16	15.96	15.92	30	19	14	42.9	23.8	28.5	13.7	36.5
MNCCH-16-035	16	15.96	15.92	35	19	14	42.9	23.8	28.5	13.7	36.5
MNCCH-16-040	16	15.96	15.92	40	19	14	42.9	23.8	28.5	13.7	36.5
MNCCH-16-045	16	15.96	15.92	45	19	14	42.9	23.8	28.5	13.7	36.5
MNCCH-16-050	16	15.96	15.92	50	19	14	42.9	23.8	28.5	13.7	36.5
MNCCH-16-060	16	15.96	15.92	60	19	14	42.9	23.8	28.5	13.7	36.5
MNCCH-16-070	16	15.96	15.92	70	19	14	42.9	23.8	28.5	13.7	36.5
MNCCH-16-080	16	15.96	15.92	80	19	14	42.9	23.8	28.5	13.7	36.5
MNCCH-16-090	16	15.96	15.92	90	19	14	42.9	23.8	28.5	13.7	36.5
MNCCH-16-100	16	15.96	15.92	100	19	14	42.9	23.8	28.5	13.7	36.5

BALL LOCK PINS

Plastic Handle | Stainless Steel | Metric

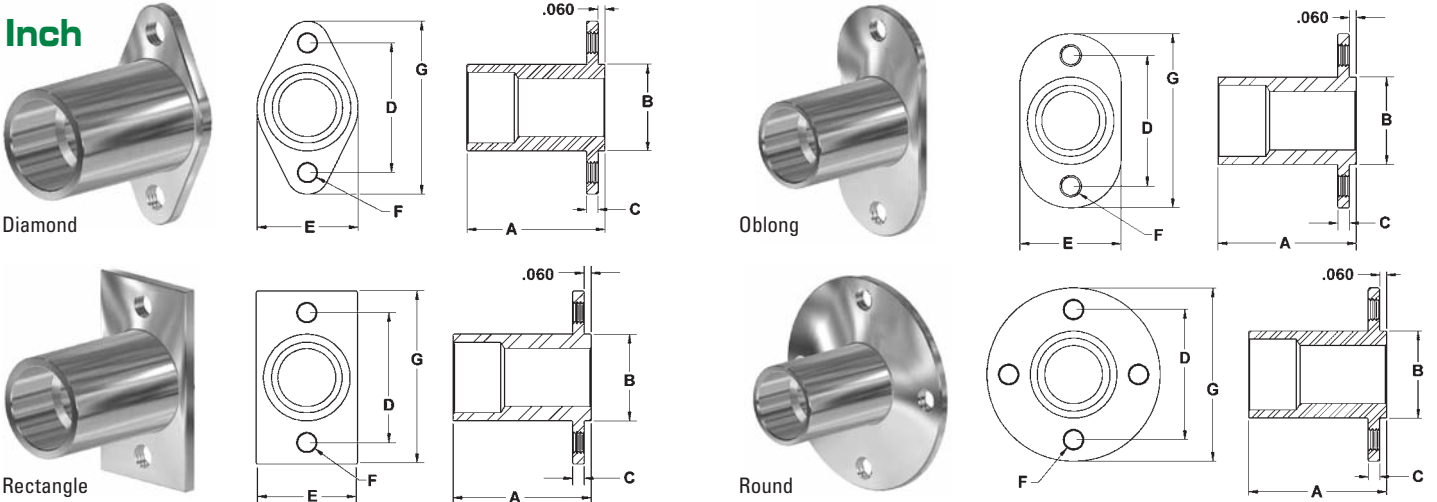


These pins have a wide range of uses for both fastening and locating operations. These positive locking pins will not release until the button on the handle is depressed which allow the balls to retract into the pin for insertion and removal. The handle is black thermoplastic and the push button is red thermoplastic. The shaft and balls are 300 series stainless steel.

Part #	D mm	-0.04/-0.08 D1 mm	+0.6 L mm	D2 mm	D3 mm	L1 mm	L2 mm	Shear Strength double-edged kN	Shear Force double-edged kN
03193-3805010	38	5	10	5.5	16	6	32.5	24	9
03193-3805015	38	5	15	5.5	16	6	32.5	24	9
03193-3805020	38	5	20	5.5	16	6	32.5	24	9
03193-3805025	38	5	25	5.5	16	6	32.5	24	9
03193-3805030	38	5	30	5.5	16	6	32.5	24	9
03193-3806010	38	6	10	7	16	7	32.5	35	13
03193-3806015	38	6	15	7	16	7	32.5	35	13
03193-3806020	38	6	20	7	16	7	32.5	35	13
03193-3806025	38	6	25	7	16	7	32.5	35	13
03193-3806030	38	6	30	7	16	7	32.5	35	13
03193-3806035	38	6	35	7	16	7	32.5	35	13
03193-3806040	38	6	40	7	16	7	32.5	35	13
03193-3806045	38	6	45	7	16	7	32.5	35	13
03193-3806050	38	6	50	7	16	7	32.5	35	13
03193-3808020	38	8	20	9.5	16	8	32.5	63	23
03193-3808025	38	8	25	9.5	16	8	32.5	63	23
03193-3808030	38	8	30	9.5	16	8	32.5	63	23
03193-3808035	38	8	35	9.5	16	8	32.5	63	23
03193-3808040	38	8	40	9.5	16	8	32.5	63	23
03193-3808045	38	8	45	9.5	16	8	32.5	63	23
03193-3808050	38	8	50	9.5	16	8	32.5	63	23
03193-4710020	47	10	20	12	23	9	40	100	35
03193-4710025	47	10	25	12	23	9	40	100	35
03193-4710030	47	10	30	12	23	9	40	100	35
03193-4710035	47	10	35	12	23	9	40	100	35
03193-4710040	47	10	40	12	23	9	40	100	35
03193-4710045	47	10	45	12	23	9	40	100	35
03193-4710050	47	10	50	12	23	9	40	100	35
03193-4710060	47	10	60	12	23	9	40	100	35
03193-4712025	47	12	25	14.5	23	10	40	144	51
03193-4712030	47	12	30	14.5	23	10	40	144	51
03193-4712035	47	12	35	14.5	23	10	40	144	51
03193-4712040	47	12	40	14.5	23	10	40	144	51
03193-4712045	47	12	45	14.5	23	10	40	144	51
03193-4712050	47	12	50	14.5	23	10	40	144	51
03193-4712060	47	12	60	14.5	23	10	40	144	51
03193-4712070	47	12	70	14.5	23	10	40	144	51
03193-4712080	47	12	80	14.5	23	10	40	144	51
03193-4716030	47	16	30	19	23	13	40	257	90
03193-4716035	47	16	35	19	23	13	40	257	90
03193-4716040	47	16	40	19	23	13	40	257	90
03193-4716045	47	16	45	19	23	13	40	257	90
03193-4716050	47	16	50	19	23	13	40	257	90
03193-4716060	47	16	60	19	23	13	40	257	90
03193-4716070	47	16	70	19	23	13	40	257	90
03193-4716080	47	16	80	19	23	13	40	257	90

BALL LOCK PIN FLANGE RECEPTACLES

Inch

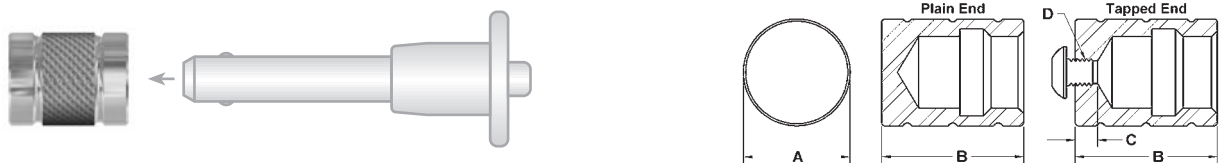


The flanged receptacles provide a permanent and proper mating hole for quick release ball lock pins. They are designed for use on materials and in applications where the pin does not have anything to lock against. Because the pin does not protrude out the bottom of the receptacles, they are ideal for blind-hole applications. The receptacles can be mounted with screws, rivets or bolts. They are made from 303 stainless steel. The "Grip Length Reduction" is the amount of pin that is inside the receptacle and reducing the useable length of the pin by this amount. The quick release ball lock pins are inserted from the flanged end.

Part #	For Use With Pin Diameter	Flange Style	+0.000/-0.005 A	+/-0.005 B	+/-0.005 C	+/-0.005 D	+/-0.010 E	F	+/-0.010 G	Grip Length Reduction
DIFR-187	3/16	Diamond	.650	.375	.060	1.000	.625	6-32	1.250	.375
DIFR-250	1/4	Diamond	.650	.375	.060	1.000	.625	6-32	1.250	.375
DIFR-312	5/16	Diamond	.783	.469	.060	1.000	.625	6-32	1.250	.500
DIFR-375	3/8	Diamond	.913	.562	.060	1.000	.625	6-32	1.250	.562
DIFR-500	1/2	Diamond	1.195	.750	.100	1.125	.875	10-32	1.500	.750
OBFR-187	3/16	Oblong	.650	.375	.060	1.000	.625	6-32	1.250	.375
OBFR-250	1/4	Oblong	.650	.375	.060	1.000	.625	6-32	1.250	.375
OBFR-312	5/16	Oblong	.783	.469	.060	1.000	.625	6-32	1.250	.500
OBFR-375	3/8	Oblong	.913	.562	.060	1.000	.625	6-32	1.250	.562
OBFR-500	1/2	Oblong	1.195	.750	.100	1.125	.875	10-32	1.500	.750
REFR-187	3/16	Rectangle	.650	.375	.060	1.000	.625	6-32	1.250	.375
REFR-250	1/4	Rectangle	.650	.375	.060	1.000	.625	6-32	1.250	.375
REFR-312	5/16	Rectangle	.783	.469	.060	1.000	.625	6-32	1.250	.500
REFR-375	3/8	Rectangle	.913	.562	.060	1.000	.625	6-32	1.250	.562
ROFR-187	3/16	Round	.650	.375	.060	1.000	—	6-32	1.250	.375
ROFR-250	1/4	Round	.650	.375	.060	1.000	—	6-32	1.250	.375
ROFR-312	5/16	Round	.783	.469	.060	1.000	—	6-32	1.250	.500
ROFR-375	3/8	Round	.913	.562	.060	1.000	—	6-32	1.250	.562
ROFR-500	1/2	Round	1.195	.750	.100	1.125	—	10-32	1.500	.750

BALL LOCK PIN END CAPS

Inch



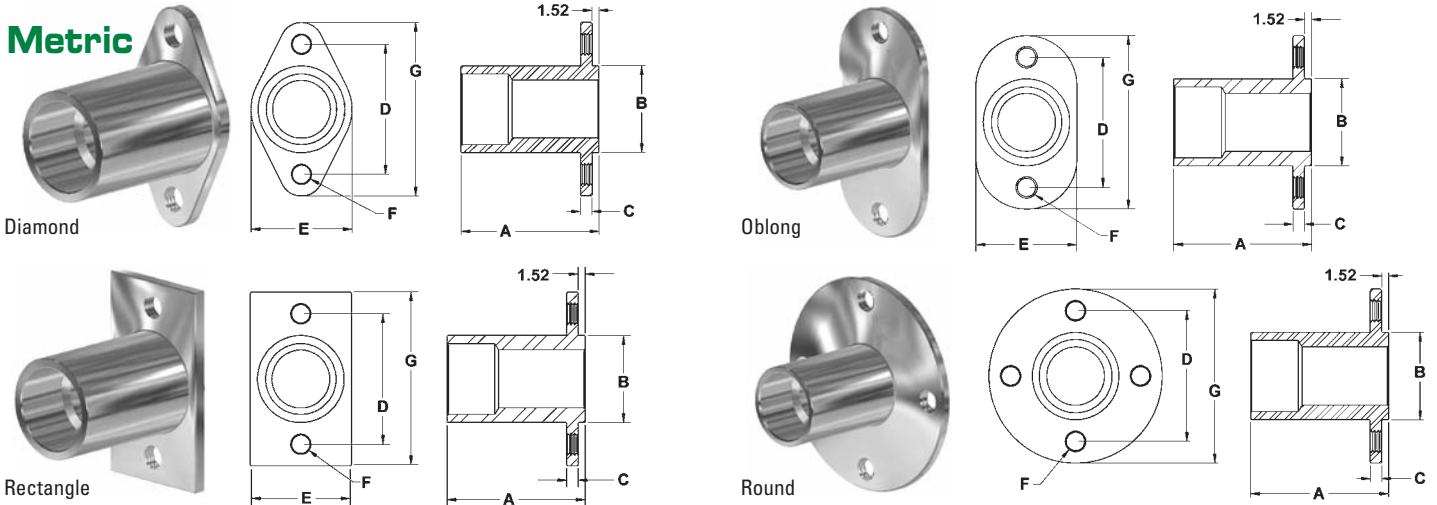
These end caps fit over the end of the quick release ball lock pin and allow the pins to be used in applications where the receiving hole is not within tolerance or is out of round. The receiver caps can replace cotter pins and hitch pins to allow you to take advantage of quick changing and fieldwork without tools. The caps are made from 303 stainless steel. The "Grip Length Reduction" is the amount of pin that is inside the end cap which reduces the useable length of the pin by this amount. The end caps with the tapped ends allow the user to attach a lanyard to the end cap so it does not get lost while not in use. A stainless button head cap screw is included with the tapped hole style.

Plain End Part #	Tapped End Part #	For Use With Pin Diameter	A Diameter	B Length	C* Screw Depth	D Thread	Grip Length Reduction
RC-187	RCT-187	3/16	.375	.580	.12	10-32	.125
RC-250	RCT-250	1/4	.375	.580	.12	10-32	.125
RC-312	RCT-312	5/16	.500	.625	.12	10-32	.125
RC-375	RCT-375	3/8	.563	.730	.18	10-32	.187
RC-500	RCT-500	1/2	.750	1.000	.18	10-32	.250
RC-625	RCT-625	5/8	1.000	1.250	.18	1/4-28	.250

* Maximum Screw Depth

BALL LOCK PIN FLANGE RECEPTACLES

Metric

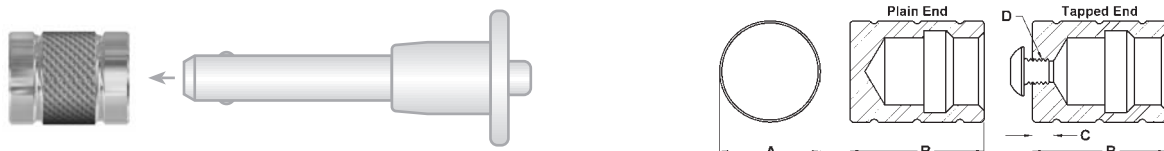


These flanged receptacles provide a permanent and proper mating hole for quick release ball lock pins. They are designed for use on materials and in applications where the pin does not have anything to lock against. Because the pin does not protrude out the bottom of the receptacles, they are ideal for blind-hole applications. The receptacles can be mounted with screws, rivets or bolts. They are made from 303 stainless steel. The "Grip Length Reduction" is the amount of pin that is inside the receptacle and reducing the useable length of the pin by this amount. The quick release ball lock pins are inserted from the flanged end.

Part#	For Use With Pin Diameter	Flange Style	+0.00/ -0.13 A mm	+/-0.13 B mm	+/-0.13 C mm	+/-0.13 D mm	+/-0.25 E mm	F mm	+/-0.25 G mm	Grip Length Reduction mm
MDIFR-05	5mm	Diamond	16.51	9.53	1.52	25	15.88	M4	31.75	10
MDIFR-06	6mm	Diamond	16.51	9.53	1.52	25	15.88	M4	31.75	10
MDIFR-08	8mm	Diamond	19.89	11.91	1.52	25	15.88	M4	31.75	13
MDIFR-10	10mm	Diamond	23.19	14.29	1.52	25	15.88	M4	31.75	15
MDIFR-12	12mm	Diamond	30.35	19.05	2.54	29	22.23	M5	38.10	20
MOBFR-05	5mm	Oblong	16.51	9.53	1.52	25	15.88	M4	31.75	10
MOBFR-06	6mm	Oblong	16.51	9.53	1.52	25	15.88	M4	31.75	10
MOBFR-08	8mm	Oblong	19.89	11.91	1.52	25	15.88	M4	31.75	13
MOBFR-10	10mm	Oblong	23.19	14.29	1.52	25	15.88	M4	31.75	15
MOBFR-12	12mm	Oblong	30.35	19.05	2.54	29	22.23	M5	38.10	20
MREFR-05	5mm	Rectangle	16.51	9.53	1.52	25	15.88	M4	31.75	10
MREFR-06	6mm	Rectangle	16.51	9.53	1.52	25	15.88	M4	31.75	10
MREFR-08	8mm	Rectangle	19.89	11.91	1.52	25	15.88	M4	31.75	13
MREFR-10	10mm	Rectangle	23.19	14.29	1.52	25	15.88	M4	31.75	15
MROFR-05	5mm	Round	16.51	9.53	1.52	25	—	M4	31.75	10
MROFR-06	6mm	Round	16.51	9.53	1.52	25	—	M4	31.75	10
MROFR-08	8mm	Round	19.89	11.91	1.52	25	—	M4	31.75	13
MROFR-10	10mm	Round	23.19	14.29	1.52	25	—	M4	31.75	15
MROFR-12	12mm	Round	30.35	19.05	2.54	29	—	M5	38.10	20

BALL LOCK PIN END CAPS

Metric



These end caps fit over the end of the quick release ball lock pin and allow the pins to be used in applications where the receiving hole is not within tolerance or is out of round. The receiver caps can replace cotter pins and hitch pins to allow you to take advantage of quick changing and fieldwork without tools. The caps are made from 303 stainless steel. The "Grip Length Reduction" is the amount of pin that is inside the end cap which reduces the useable length of the pin by this amount. The end caps with the tapped ends allow the user to attach a lanyard to the end cap so it does not get lost while not in use. A stainless button head cap screw is included with the tapped hole style.

Plain End Part #	Tapped End Part #	For Use With Pin Diameter	A Diameter mm	B Length mm	C* Screw Depth mm	D Thread mm	Grip Length Reduction mm
MRC-05	MRCT-05	5mm	9.53	14.73	3	M5	3
MRC-06	MRCT-06	6mm	9.53	14.73	3	M5	3
MRC-08	MRCT-08	8mm	12.70	15.88	3	M5	3
MRC-10	MRCT-10	10mm	14.29	18.54	4	M5	5
MRC-12	MRCT-12	12mm	19.05	25.40	4	M5	6
MRC-16	MRCT-16	16mm	25.40	31.75	5	M6	6

* Maximum Screw Depth

WIRE ROPE LANYARD ASSEMBLIES



Wire rope lanyard assemblies are used to attach quick release pins to a fixture or frame, to prevent the pins from being misplaced while they are not in use. All of the wire rope lanyard assemblies listed below are supplied with 7 x 7 stainless steel wire and are available either uncovered (bare cable) or covered. The vinyl covered assemblies are available in either clear, black, or green and have a temperature range of -30°/+180°F. All tabs and eyelets are manufactured from 300 series stainless steel. The assemblies are available with either zinc plated copper sleeves or stainless sleeves. In addition to the standard parts listed below, we can provide custom lanyards based on your exact requirements.

Wire Rope Lanyard Assembly Specifications

Wire Rope:	7x7 Stainless Steel Wire (RR-W-410)
Covering:	Vinyl (MIL-I-631)
Covered Wire Sizes:	3/64" Wire – Covering to 1/16" 1/16" Wire – Covering to 1/8"
Rated Strengths:	3/64" Wire = 270 lbs. 1/16" Wire = 480 lbs. Assemblies with Eyelets = 30 lbs.
Sleeves:	Copper - Zinc Plated (MIL-51844) Stainless Steel (MIL-51844)
Tabs:	300 Series Stainless Steel (ASTM AA240/A666)
Eyelets:	300 Series Stainless Steel

Loop / Rectangular Tab



ZINC PLATED COPPER SLEEVES

Clear Part #	Black Part #	Green Part #	Uncovered Part #
LCL-3-06-R20	LBK-3-06-R20	LGR-3-06-R20	LNC-3-06-R20
LCL-3-08-R20	LBK-3-08-R20	LGR-3-08-R20	LNC-3-08-R20
LCL-3-10-R20	LBK-3-10-R20	LGR-3-10-R20	LNC-3-10-R20
LCL-3-12-R20	LBK-3-12-R20	LGR-3-12-R20	LNC-3-12-R20
LCL-3-06-R28	LBK-3-06-R28	LGR-3-06-R28	LNC-3-06-R28
LCL-3-08-R28	LBK-3-08-R28	LGR-3-08-R28	LNC-3-08-R28
LCL-3-10-R28	LBK-3-10-R28	LGR-3-10-R28	LNC-3-10-R28
LCL-3-12-R28	LBK-3-12-R28	LGR-3-12-R28	LNC-3-12-R28
LCL-1-06-R20	LBK-1-06-R20	LGR-1-06-R20	LNC-1-06-R20
LCL-1-08-R20	LBK-1-08-R20	LGR-1-08-R20	LNC-1-08-R20
LCL-1-10-R20	LBK-1-10-R20	LGR-1-10-R20	LNC-1-10-R20
LCL-1-12-R20	LBK-1-12-R20	LGR-1-12-R20	LNC-1-12-R20
LCL-1-06-R28	LBK-1-06-R28	LGR-1-06-R28	LNC-1-06-R28
LCL-1-08-R28	LBK-1-08-R28	LGR-1-08-R28	LNC-1-08-R28
LCL-1-10-R28	LBK-1-10-R28	LGR-1-10-R28	LNC-1-10-R28
LCL-1-12-R28	LBK-1-12-R28	LGR-1-12-R28	LNC-1-12-R28

STAINLESS STEEL SLEEVES

Clear Part #	Black Part #	Green Part #	Uncovered Part #	Wire Diameter	Length	A
LCLC3-06R20	LBKC3-06R20	LGRC3-06R20	LNCC3-06R20	3/64	6	.20
LCLC3-08R20	LBKC3-08R20	LGRC3-08R20	LNCC3-08R20	3/64	8	.20
LCLC3-10R20	LBKC3-10R20	LGRC3-10R20	LNCC3-10R20	3/64	10	.20
LCLC3-12R20	LBKC3-12R20	LGRC3-12R20	LNCC3-12R20	3/64	12	.20
LCLC3-06R28	LBKC3-06R28	LGRC3-06R28	LNCC3-06R28	3/64	6	.28
LCLC3-08R28	LBKC3-08R28	LGRC3-08R28	LNCC3-08R28	3/64	8	.28
LCLC3-10R28	LBKC3-10R28	LGRC3-10R28	LNCC3-10R28	3/64	10	.28
LCLC3-12R28	LBKC3-12R28	LGRC3-12R28	LNCC3-12R28	3/64	12	.28
LCLC1-06R20	LBKC1-06R20	LGRC1-06R20	LNCC1-06R20	1/16	6	.20
LCLC1-08R20	LBKC1-08R20	LGRC1-08R20	LNCC1-08R20	1/16	8	.20
LCLC1-10R20	LBKC1-10R20	LGRC1-10R20	LNCC1-10R20	1/16	10	.20
LCLC1-12R20	LBKC1-12R20	LGRC1-12R20	LNCC1-12R20	1/16	12	.20
LCLC1-06R28	LBKC1-06R28	LGRC1-06R28	LNCC1-06R28	1/16	6	.28
LCLC1-08R28	LBKC1-08R28	LGRC1-08R28	LNCC1-08R28	1/16	8	.28
LCLC1-10R28	LBKC1-10R28	LGRC1-10R28	LNCC1-10R28	1/16	10	.28
LCLC1-12R28	LBKC1-12R28	LGRC1-12R28	LNCC1-12R28	1/16	12	.28

Loop / Loop



ZINC PLATED COPPER SLEEVES

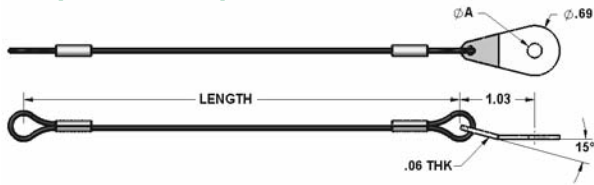
Clear Part #	Black Part #	Green Part #	Uncovered Part #
LCL-3-06	LBK-3-06	LGR-3-06	LNC-3-06
LCL-3-08	LBK-3-08	LGR-3-08	LNC-3-08
LCL-3-10	LBK-3-10	LGR-3-10	LNC-3-10
LCL-3-12	LBK-3-12	LGR-3-12	LNC-3-12
LCL-1-06	LBK-1-06	LGR-1-06	LNC-1-06
LCL-1-08	LBK-1-08	LGR-1-08	LNC-1-08
LCL-1-10	LBK-1-10	LGR-1-10	LNC-1-10
LCL-1-12	LBK-1-12	LGR-1-12	LNC-1-12

STAINLESS STEEL SLEEVES

Clear Part #	Black Part #	Green Part #	Uncovered Part #	Wire Diameter	Length
LCLC3-06	LBKC3-06	LGRC3-06	LNCC3-06	3/64	6
LCLC3-08	LBKC3-08	LGRC3-08	LNCC3-08	3/64	8
LCLC3-10	LBKC3-10	LGRC3-10	LNCC3-10	3/64	10
LCLC3-12	LBKC3-12	LGRC3-12	LNCC3-12	3/64	12
LCLC1-06	LBKC1-06	LGRC1-06	LNCC1-06	1/16	6
LCLC1-08	LBKC1-08	LGRC1-08	LNCC1-08	1/16	8
LCLC1-10	LBKC1-10	LGRC1-10	LNCC1-10	1/16	10
LCLC1-12	LBKC1-12	LGRC1-12	LNCC1-12	1/16	12

WIRE ROPE LANYARD ASSEMBLIES

Loop / Teardrop Tab



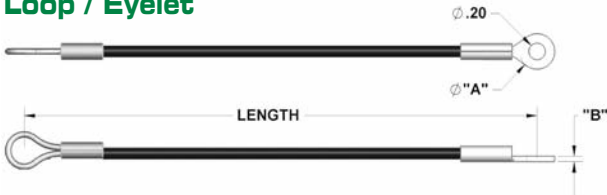
ZINC PLATED COPPER SLEEVES

Clear Part #	Black Part #	Green Part #	Uncovered Part #
LCL-3-06-T20	LBK-3-06-T20	LGR-3-06-T20	LNC-3-06-T20
LCL-3-08-T20	LBK-3-08-T20	LGR-3-08-T20	LNC-3-08-T20
LCL-3-10-T20	LBK-3-10-T20	LGR-3-10-T20	LNC-3-10-T20
LCL-3-12-T20	LBK-3-12-T20	LGR-3-12-T20	LNC-3-12-T20
LCL-3-06-T28	LBK-3-06-T28	LGR-3-06-T28	LNC-3-06-T28
LCL-3-08-T28	LBK-3-08-T28	LGR-3-08-T28	LNC-3-08-T28
LCL-3-10-T28	LBK-3-10-T28	LGR-3-10-T28	LNC-3-10-T28
LCL-3-12-T28	LBK-3-12-T28	LGR-3-12-T28	LNC-3-12-T28
LCL-1-06-T20	LBK-1-06-T20	LGR-1-06-T20	LNC-1-06-T20
LCL-1-08-T20	LBK-1-08-T20	LGR-1-08-T20	LNC-1-08-T20
LCL-1-10-T20	LBK-1-10-T20	LGR-1-10-T20	LNC-1-10-T20
LCL-1-12-T20	LBK-1-12-T20	LGR-1-12-T20	LNC-1-12-T20
LCL-1-06-T28	LBK-1-06-T28	LGR-1-06-T28	LNC-1-06-T28
LCL-1-08-T28	LBK-1-08-T28	LGR-1-08-T28	LNC-1-08-T28
LCL-1-10-T28	LBK-1-10-T28	LGR-1-10-T28	LNC-1-10-T28
LCL-1-12-T28	LBK-1-12-T28	LGR-1-12-T28	LNC-1-12-T28

STAINLESS STEEL SLEEVES

Clear Part #	Black Part #	Green Part #	Uncovered Part #	Wire Diameter	Length	A
LCLC3-06T20	LBKC3-06T20	LGRC3-06T20	LNCC3-06T20	3/64	6	.20
LCLC3-08T20	LBKC3-08T20	LGRC3-08T20	LNCC3-08T20	3/64	8	.20
LCLC3-10T20	LBKC3-10T20	LGRC3-10T20	LNCC3-10T20	3/64	10	.20
LCLC3-12T20	LBKC3-12T20	LGRC3-12T20	LNCC3-12T20	3/64	12	.20
LCLC3-06T28	LBKC3-06T28	LGRC3-06T28	LNCC3-06T28	3/64	6	.28
LCLC3-08T28	LBKC3-08T28	LGRC3-08T28	LNCC3-08T28	3/64	8	.28
LCLC3-10T28	LBKC3-10T28	LGRC3-10T28	LNCC3-10T28	3/64	10	.28
LCLC3-12T28	LBKC3-12T28	LGRC3-12T28	LNCC3-12T28	3/64	12	.28
LCLC1-06T20	LBKC1-06T20	LGRC1-06T20	LNCC1-06T20	1/16	6	.20
LCLC1-08T20	LBKC1-08T20	LGRC1-08T20	LNCC1-08T20	1/16	8	.20
LCLC1-10T20	LBKC1-10T20	LGRC1-10T20	LNCC1-10T20	1/16	10	.20
LCLC1-12T20	LBKC1-12T20	LGRC1-12T20	LNCC1-12T20	1/16	12	.20
LCLC1-06T28	LBKC1-06T28	LGRC1-06T28	LNCC1-06T28	1/16	6	.28
LCLC1-08T28	LBKC1-08T28	LGRC1-08T28	LNCC1-08T28	1/16	8	.28
LCLC1-10T28	LBKC1-10T28	LGRC1-10T28	LNCC1-10T28	1/16	10	.28
LCLC1-12T28	LBKC1-12T28	LGRC1-12T28	LNCC1-12T28	1/16	12	.28

Loop / Eyelet



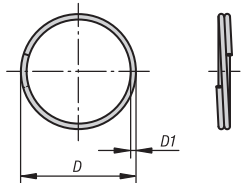
ZINC PLATED COPPER SLEEVES

Clear Part #	Black Part #	Green Part #	Uncovered Part #
LCL-3-06-E20	LBK-3-06-E20	LGR-3-06-E20	LNC-3-06-E20
LCL-3-08-E20	LBK-3-08-E20	LGR-3-08-E20	LNC-3-08-E20
LCL-3-10-E20	LBK-3-10-E20	LGR-3-10-E20	LNC-3-10-E20
LCL-3-12-E20	LBK-3-12-E20	LGR-3-12-E20	LNC-3-12-E20
LCL-1-06-E20	LBK-1-06-E20	LGR-1-06-E20	LNC-1-06-E20
LCL-1-08-E20	LBK-1-08-E20	LGR-1-08-E20	LNC-1-08-E20
LCL-1-10-E20	LBK-1-10-E20	LGR-1-10-E20	LNC-1-10-E20
LCL-1-12-E20	LBK-1-12-E20	LGR-1-12-E20	LNC-1-12-E20

STAINLESS STEEL SLEEVES

Clear Part #	Black Part #	Green Part #	Uncovered Part #	Wire Diameter	Length	A	B
LCLC3-06E20	LBKC3-06E20	LGRC3-06E20	LNCC3-06E20	3/64	6	.33	.04
LCLC3-08E20	LBKC3-08E20	LGRC3-08E20	LNCC3-08E20	3/64	8	.33	.04
LCLC3-10E20	LBKC3-10E20	LGRC3-10E20	LNCC3-10E20	3/64	10	.33	.04
LCLC3-12E20	LBKC3-12E20	LGRC3-12E20	LNCC3-12E20	3/64	12	.33	.04
LCLC1-06E20	LBKC1-06E20	LGRC1-06E20	LNCC1-06E20	1/16	6	.41	.06
LCLC1-08E20	LBKC1-08E20	LGRC1-08E20	LNCC1-08E20	1/16	8	.41	.06
LCLC1-10E20	LBKC1-10E20	LGRC1-10E20	LNCC1-10E20	1/16	10	.41	.06
LCLC1-12E20	LBKC1-12E20	LGRC1-12E20	LNCC1-12E20	1/16	12	.41	.06

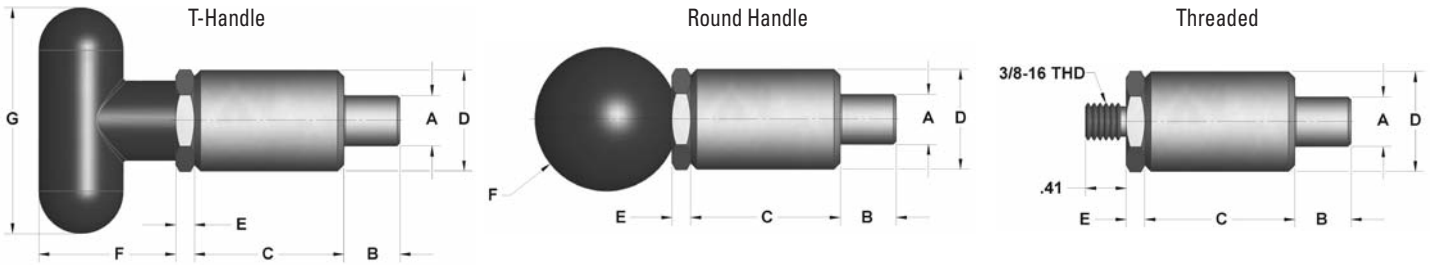
Split Rings



Used for attaching ball lock pins to a lanyard. Prevents the pin from being lost when not in use. Made from 302 stainless steel.

Part #	D	D1
RSC-37	.962	.072

PULL PINS



These spring loaded pull pins allow you to quickly retract and engage the plunger for locating, fastening and quick change operations. They consist of two parts which include a housing (barrel) and a plunger assembly. The plunger assembly screws into the housing. The housing is designed to be welded into place for strength. Pulling on the handle of the plunger assembly retracts the plunger into the housing. Releasing the handle allows the spring loaded plunger to extend. The lockout style allows you to pull and rotate the handle 1/4 turn to hold the plunger in the retracted position. The style without handles feature a 3/8-16 threaded end so the user can add a different handle or other method of actuation. The zinc plated steel plunger assemblies are made from C1038 steel on all sizes except the 5/8 which is made from 12L15 steel. The steel housing is made from 12L15 steel for welding to the fixture and is not plated. The aluminum housings are made from 6061-T6. The stainless steel models (plunger assembly and housing) are made from 303 stainless steel. Pull up force is approximately 5 lbs. Handles are made from black plastic.

T-HANDLE - NON-LOCKING

Steel Plunger Steel Housing Part #	Steel Plunger Alum Housing Part #	SS Plunger SS Housing Part #	+0.002 -.004 A	B	C	+0.000 -.005 D	E	F	G
CP-K25T	CP-K25TAL	—	1/4	9/16	1-1/2	1.000	3/16	1-7/16	2-1/4
CP-K100T	CP-K100TAL	CP-K100TSS	3/8	9/16	1-1/2	1.000	3/16	1-7/16	2-1/4
CP-K200T	CP-K200TAL	CP-K200TSS	1/2	9/16	1-1/2	1.000	3/16	1-7/16	2-1/4
CP-K320T	CP-K320TAL	CP-K320TSS	1/2	9/16	2-1/4	1.000	3/16	1-7/16	2-1/4
CP-K420T	CP-K420TAL	—	5/8	9/16	2-1/4	1.000	3/16	1-7/16	2-1/4

T-HANDLE - WITH LOCKOUT

Steel Plunger Steel Housing Part #	Steel Plunger Alum Housing Part #	SS Plunger SS Housing Part #	+0.002 -.004 A	B	C	+0.000 -.005 D	E	F	G
CP-K25TLO	CP-K25TLOAL	—	1/4	9/16	1-1/2	1.000	3/16	1-7/16	2-1/4
CP-K100TLO	CP-K100TLOAL	CP-K100TLOSS	3/8	9/16	1-1/2	1.000	3/16	1-7/16	2-1/4
CP-K200TLO	CP-K200TLOAL	CP-K200TLOSS	1/2	9/16	1-1/2	1.000	3/16	1-7/16	2-1/4
CP-K320TLO	CP-K320TLOAL	CP-K320TLOSS	1/2	9/16	2-1/4	1.000	3/16	1-7/16	2-1/4
CP-K420TLO	CP-K420TLOAL	—	5/8	9/16	2-1/4	1.000	3/16	1-7/16	2-1/4

ROUND HANDLE - NON-LOCKING

Steel Plunger Steel Housing Part #	Steel Plunger Alum Housing Part #	SS Plunger SS Housing Part #	+0.002 -.004 A	B	C	+0.000 -.005 D	E	F
CP-K25R	CP-K25RAL	—	1/4	9/16	1-1/2	1.000	3/16	1-3/8
CP-K100R	CP-K100RAL	CP-K100RSS	3/8	9/16	1-1/2	1.000	3/16	1-3/8
CP-K200R	CP-K200RAL	CP-K200RSS	1/2	9/16	1-1/2	1.000	3/16	1-3/8
CP-K320R	CP-K320RAL	CP-K320RSS	1/2	9/16	2-1/4	1.000	3/16	1-3/8
CP-K420R	CP-K420RAL	—	5/8	9/16	2-1/4	1.000	3/16	1-3/8

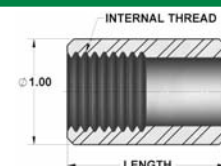
ROUND HANDLE - WITH LOCKOUT

Steel Plunger Steel Housing Part #	Steel Plunger Alum Housing Part #	SS Plunger SS Housing Part #	+0.002 -.004 A	B	C	+0.000 -.005 D	E	F
CP-K25RLO	CP-K25RLOAL	—	1/4	9/16	1-1/2	1.000	3/16	1-3/8
CP-K100RLO	CP-K100RLOAL	CP-K100RLOSS	3/8	9/16	1-1/2	1.000	3/16	1-3/8
CP-K200RLO	CP-K200RLOAL	CP-K200RLOSS	1/2	9/16	1-1/2	1.000	3/16	1-3/8
CP-K320RLO	CP-K320RLOAL	CP-K320RLOSS	1/2	9/16	2-1/4	1.000	3/16	1-3/8
CP-K420RLO	CP-K420RLOAL	—	5/8	9/16	2-1/4	1.000	3/16	1-3/8

THREADED END - NON-LOCKING

Steel Plunger Steel Housing Part #	Steel Plunger Alum Housing Part #	SS Plunger SS Housing Part #	+0.002 -.004 A	B	C	+0.000 -.005 D	E
CP-K25NK	CP-K25NKAL	—	1/4	9/16	1-1/2	1.000	3/16
CP-K100NK	CP-K100NKAL	CP-K100NKSS	3/8	9/16	1-1/2	1.000	3/16
CP-K200NK	CP-K200NKAL	CP-K200NKSS	1/2	9/16	1-1/2	1.000	3/16
CP-K320NK	CP-K320NKAL	CP-K320NKSS	1/2	9/16	2-1/4	1.000	3/16
CP-K420NK	CP-K420NKAL	—	5/8	9/16	2-1/4	1.000	3/16

HOUSINGS ONLY



Steel Housing Part #	Alum Housing Part #	SS Housing Part #	Internal Thread	Length
CP-K102-BO	CP-K102AL-BO	CP-K102SS-BO	3/4-10	1-1/2
CP-K102L-BO	CP-K102LAL-BO	CP-K102LSS-BO	3/4-10	2-1/4