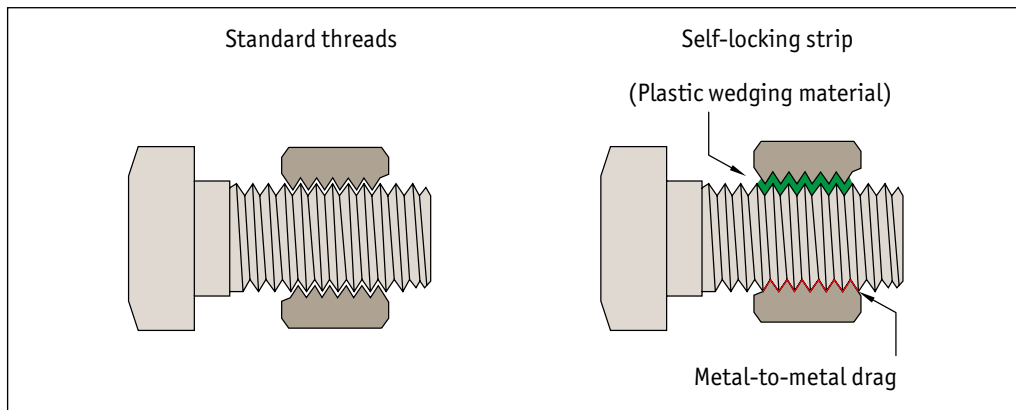


This type of fastener is the only fastener that retains its locking torque independent of an axial load. When pre-load is lost, the prevailing torque fastener can prevent the loosening of an assembly subjected to continued shock or vibration.

The nylon strip wedges the fastener against the opposite of the locking device, causing metal-to-metal drag.



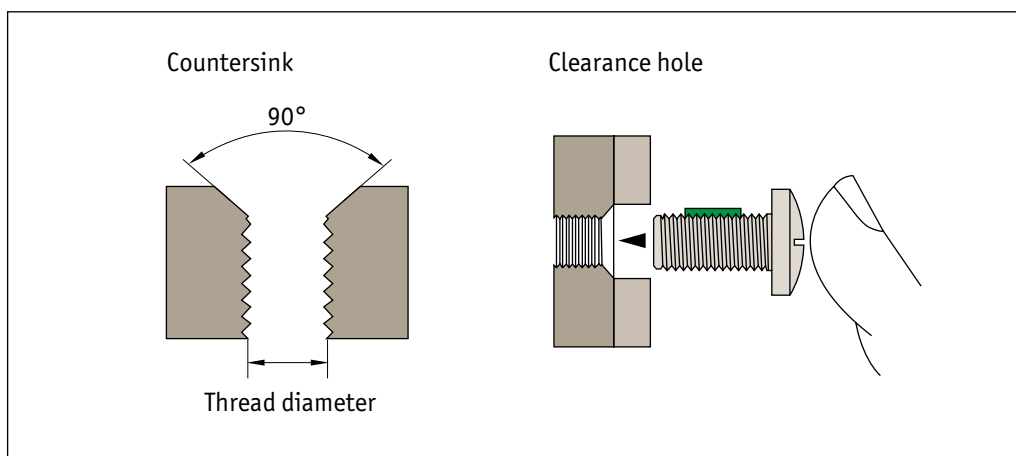
A resilient polymer (generally nylon) strip is inserted into a precisely machined slot that is milled into the thread. The strips are typically positioned one to three threads back from the end of the fastener to assure ease of starting.

When assembled with a mating part the strip is compressed and this provides a locking action in the thread. The locking strip is held in place on the thread without the use of adhesives or thread distortion. This results in a reusable fastener that is both locking and repeatedly adjustable.

These self-locking fasteners are produced to IFI 524 standard (requiring a re-usability of up to 15 on/off cycles). The strips will not dry, shrink or lose resiliency when exposed to commercial solvents, alcohol, oil etc.

Standard nylon temperature range (-50°C to $+120^{\circ}\text{C}$). Other materials available which can offer -250°C to $+300^{\circ}\text{C}$ (with lower reusability cycles).

We recommend a countersunk or counter-bored clearance hole to aid installation.

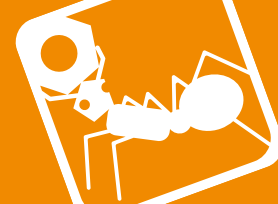


Plating

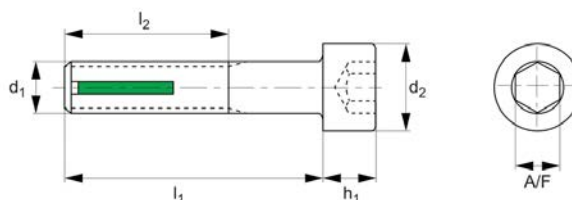
Locking inserts can be damaged by some plating processes or surface treatments so should never be attempted after user installation.

Please advise Automation components of any plating requirements when ordering so that the appropriate process can be applied.

Locking insert patches should never be removed by the end user. Removal and replacement will destroy the effectiveness of the insert.



P0110



Material

Stainless steel A2, with nylon locking patch.

A4 available on request.

Technical Notes

Screw to DIN 912 with locking patch. Vibration proof.

Standard green locking patch. Breakaway torque values are complex and can be

calculated on request.

Can be manufactured to MIL spec on request (MIL-DTL-18240 and NAS1283).

Tips

Surface finishes such as cadmium plating, nickel plating, armalloy coating, black oxide coating - all available on request. Due to the wide range of sizes, material grades and finishes, these parts are manu-

factured on demand - minimum batch size is 100 pieces.

Important Notes

For the majority of screw lengths the threads goes all the way to the head of the screw (i.e. $l_1 = l_2$).

For longer length screws the threaded portion $l_2 < l_1$.

Order No.	d ₁	l ₁	d ₂	l ₂ max.	h ₁	A/F
P0110.020-004L	M 2	4	3.8	-	2	1.5
P0110.020-005L	M 2	5	3.8	-	2	1.5
P0110.020-006L	M 2	6	3.8	-	2	1.5
P0110.020-008L	M 2	8	3.8	-	2	1.5
P0110.020-010L	M 2	10	3.8	-	2	1.5
P0110.020-012L	M 2	12	3.8	-	2	1.5
P0110.020-014L	M 2	14	3.8	-	2	1.5
P0110.020-016L	M 2	16	3.8	-	2	1.5
P0110.020-020L	M 2	20	3.8	-	2	1.5
P0110.025-004L	M2,5	4	4.5	-	2.5	2
P0110.025-005L	M2,5	5	4.5	-	2.5	2
P0110.025-006L	M2,5	6	4.5	-	2.5	2
P0110.025-008L	M2,5	8	4.5	-	2.5	2
P0110.025-010L	M2,5	10	4.5	-	2.5	2
P0110.025-012L	M2,5	12	4.5	-	2.5	2
P0110.025-014L	M2,5	14	4.5	-	2.5	2
P0110.025-016L	M2,5	16	4.5	-	2.5	2
P0110.025-020L	M2,5	20	4.5	-	2.5	2
P0110.030-004L	M 3	4	5.5	-	3	2.5
P0110.030-005L	M 3	5	5.5	-	3	2.5
P0110.030-006L	M 3	6	5.5	-	3	2.5
P0110.030-008L	M 3	8	5.5	-	3	2.5
P0110.030-010L	M 3	10	5.5	-	3	2.5
P0110.030-012L	M 3	12	5.5	-	3	2.5
P0110.030-014L	M 3	14	5.5	-	3	2.5
P0110.030-016L	M 3	16	5.5	-	3	2.5
P0110.030-018L	M 3	18	5.5	-	3	2.5
P0110.030-020L	M 3	20	5.5	-	3	2.5



Self-Locking Cap Screws

Hex cap - nylon strip

Self Locking
Screws

Order No.	d ₁	l ₁	d ₂	l ₂ max.	h ₁	A/F
P0110.030-025L	M 3	25	5.5	18	3	2.5
P0110.030-030L	M 3	30	5.5	18	3	2.5
P0110.030-035L	M 3	35	5.5	18	3	2.5
P0110.030-040L	M 3	40	5.5	18	3	2.5
P0110.030-045L	M 3	45	5.5	18	3	2.5
P0110.030-050L	M 3	50	5.5	18	3	2.5
P0110.040-005L	M 4	5	7	-	4	3
P0110.040-006L	M 4	6	7	-	4	3
P0110.040-008L	M 4	8	7	-	4	3
P0110.040-010L	M 4	10	7	-	4	3
P0110.040-012L	M 4	12	7	-	4	3
P0110.040-014L	M 4	14	7	-	4	3
P0110.040-016L	M 4	16	7	-	4	3
P0110.040-018L	M 4	18	7	-	4	3
P0110.040-020L	M 4	20	7	-	4	3
P0110.040-025L	M 4	25	7	-	4	3
P0110.040-030L	M 4	30	7	20	4	3
P0110.040-035L	M 4	35	7	20	4	3
P0110.040-040L	M 4	40	7	20	4	3
P0110.040-045L	M 4	45	7	20	4	3
P0110.040-050L	M 4	50	7	20	4	3
P0110.040-055L	M 4	55	7	20	4	3
P0110.040-060L	M 4	60	7	20	4	3
P0110.040-070L	M 4	70	7	20	4	3
P0110.050-006L	M 5	6	8.5	-	5	4
P0110.050-008L	M 5	8	8.5	-	5	4
P0110.050-010L	M 5	10	8.5	-	5	4
P0110.050-012L	M 5	12	8.5	-	5	4
P0110.050-014L	M 5	14	8.5	-	5	4
P0110.050-016L	M 5	16	8.5	-	5	4
P0110.050-018L	M 5	18	8.5	-	5	4
P0110.050-020L	M 5	20	8.5	-	5	4
P0110.050-025L	M 5	25	8.5	-	5	4
P0110.050-030L	M 5	30	8.5	22	5	4
P0110.050-035L	M 5	35	8.5	22	5	4
P0110.050-040L	M 5	40	8.5	22	5	4
P0110.050-045L	M 5	45	8.5	22	5	4
P0110.050-050L	M 5	50	8.5	22	5	4
P0110.050-055L	M 5	55	8.5	22	5	4
P0110.050-060L	M 5	60	8.5	22	5	4
P0110.050-065L	M 5	65	8.5	22	5	4
P0110.050-070L	M 5	70	8.5	22	5	4
P0110.050-080L	M 5	80	8.5	22	5	4
P0110.050-090L	M 5	90	8.5	22	5	4
P0110.050-100L	M 5	100	8.5	22	5	4
P0110.060-006L	M 6	6	10	-	6	5
P0110.060-008L	M 6	8	10	-	6	5
P0110.060-010L	M 6	10	10	-	6	5
P0110.060-012L	M 6	12	10	-	6	5
P0110.060-014L	M 6	14	10	-	6	5
P0110.060-016L	M 6	16	10	-	6	5
P0110.060-018L	M 6	18	10	-	6	5
P0110.060-020L	M 6	20	10	-	6	5
P0110.060-025L	M 6	25	10	-	6	5
P0110.060-030L	M 6	30	10	-	6	5
P0110.060-035L	M 6	35	10	24	6	5
P0110.060-040L	M 6	40	10	24	6	5
P0110.060-045L	M 6	45	10	24	6	5
P0110.060-050L	M 6	50	10	24	6	5
P0110.060-055L	M 6	55	10	24	6	5
P0110.060-060L	M 6	60	10	24	6	5
P0110.060-065L	M 6	65	10	24	6	5
P0110.060-070L	M 6	70	10	24	6	5
P0110.060-080L	M 6	80	10	24	6	5
P0110.060-090L	M 6	90	10	24	6	5
P0110.060-100L	M 6	100	10	24	6	5
P0110.060-110L	M 6	110	10	24	6	5
P0110.060-120L	M 6	120	10	24	6	5

SELF LOCKING SCREWS



Order No.	d ₁	l ₁	d ₂	l ₂ max.	h ₁	A/F
P0110.060-130L	M 6	130	10	24	6	5
P0110.060-140L	M 6	140	10	24	6	5
P0110.060-150L	M 6	150	10	24	6	5
P0110.080-010L	M 8	10	13	-	8	6
P0110.080-012L	M 8	12	13	-	8	6
P0110.080-014L	M 8	14	13	-	8	6
P0110.080-016L	M 8	16	13	-	8	6
P0110.080-018L	M 8	18	13	-	8	6
P0110.080-020L	M 8	20	13	-	8	6
P0110.080-025L	M 8	25	13	-	8	6
P0110.080-030L	M 8	30	13	-	8	6
P0110.080-035L	M 8	35	13	-	8	6
P0110.080-040L	M 8	40	13	28	8	6
P0110.080-045L	M 8	45	13	28	8	6
P0110.080-050L	M 8	50	13	28	8	6
P0110.080-055L	M 8	55	13	28	8	6
P0110.080-060L	M 8	60	13	28	8	6
P0110.080-065L	M 8	65	13	28	8	6
P0110.080-070L	M 8	70	13	28	8	6
P0110.080-080L	M 8	80	13	28	8	6
P0110.080-090L	M 8	90	13	28	8	6
P0110.080-100L	M 8	100	13	28	8	6
P0110.080-110L	M 8	110	13	28	8	6
P0110.080-120L	M 8	120	13	28	8	6
P0110.080-130L	M 8	130	13	28	8	6
P0110.080-140L	M 8	140	13	28	8	6
P0110.080-150L	M 8	150	13	28	8	6
P0110.080-160L	M 8	160	13	28	8	6
P0110.100-012L	M10	12	16	-	10	8
P0110.100-016L	M10	16	16	-	10	8
P0110.100-018L	M10	18	16	-	10	8
P0110.100-020L	M10	20	16	-	10	8
P0110.100-025L	M10	25	16	-	10	8
P0110.100-030L	M10	30	16	-	10	8
P0110.100-035L	M10	35	16	-	10	8
P0110.100-040L	M10	40	16	-	10	8
P0110.100-045L	M10	45	16	32	10	8
P0110.100-050L	M10	50	16	32	10	8
P0110.100-055L	M10	55	16	32	10	8
P0110.100-060L	M10	60	16	32	10	8
P0110.100-065L	M10	65	16	32	10	8
P0110.100-070L	M10	70	16	32	10	8
P0110.100-075L	M10	75	16	32	10	8
P0110.100-080L	M10	80	16	32	10	8
P0110.100-090L	M10	90	16	32	10	8
P0110.100-100L	M10	100	16	32	10	8
P0110.100-110L	M10	110	16	32	10	8
P0110.100-120L	M10	120	16	32	10	8
P0110.100-130L	M10	130	16	32	10	8
P0110.100-140L	M10	140	16	32	10	8
P0110.100-150L	M10	150	16	32	10	8
P0110.100-160L	M10	160	16	32	10	8
P0110.120-016L	M12	16	18	-	12	10
P0110.120-020L	M12	20	18	-	12	10
P0110.120-025L	M12	25	18	-	12	10
P0110.120-030L	M12	30	18	-	12	10
P0110.120-035L	M12	35	18	-	12	10
P0110.120-040L	M12	40	18	-	12	10
P0110.120-045L	M12	45	18	-	12	10
P0110.120-050L	M12	50	18	-	12	10
P0110.120-055L	M12	55	18	36	12	10
P0110.120-060L	M12	60	18	36	12	10
P0110.120-065L	M12	65	18	36	12	10
P0110.120-070L	M12	70	18	36	12	10
P0110.120-080L	M12	80	18	36	12	10
P0110.120-090L	M12	90	18	36	12	10
P0110.120-100L	M12	100	18	36	12	10
P0110.120-110L	M12	110	18	36	12	10



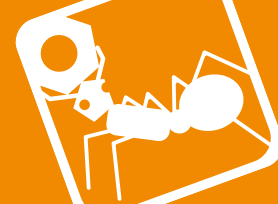
Self-Locking Cap Screws

Hex cap - nylon strip

Self Locking
Screws

Order No.	d ₁	l ₁	d ₂	l ₂ max.	h ₁	A/F
P0110.120-120L	M12	120	18	36	12	10
P0110.120-130L	M12	130	18	36	12	10
P0110.120-140L	M12	140	18	36	12	10
P0110.120-150L	M12	150	18	36	12	10
P0110.120-160L	M12	160	18	36	12	10
P0110.140-020L	M14	20	21	-	14	12
P0110.140-025L	M14	25	21	-	14	12
P0110.140-030L	M14	30	21	-	14	12
P0110.140-035L	M14	35	21	-	14	12
P0110.140-040L	M14	40	21	-	14	12
P0110.140-045L	M14	45	21	-	14	12
P0110.140-050L	M14	50	21	-	14	12
P0110.140-055L	M14	55	21	-	14	12
P0110.140-060L	M14	60	21	40	14	12
P0110.140-065L	M14	65	21	40	14	12
P0110.140-070L	M14	70	21	40	14	12
P0110.140-080L	M14	80	21	40	14	12
P0110.140-090L	M14	90	21	40	14	12
P0110.140-100L	M14	100	21	40	14	12
P0110.140-110L	M14	110	21	40	14	12
P0110.140-120L	M14	120	21	40	14	12
P0110.140-130L	M14	130	21	40	14	12
P0110.140-140L	M14	140	21	40	14	12
P0110.140-150L	M14	150	21	40	14	12
P0110.140-160L	M14	160	21	40	14	12
P0110.160-020L	M16	20	24	-	16	14
P0110.160-025L	M16	25	24	-	16	14
P0110.160-030L	M16	30	24	-	16	14
P0110.160-035L	M16	35	24	-	16	14
P0110.160-040L	M16	40	24	-	16	14
P0110.160-045L	M16	45	24	-	16	14
P0110.160-050L	M16	50	24	-	16	14
P0110.160-055L	M16	55	24	-	16	14
P0110.160-060L	M16	60	24	-	16	14
P0110.160-065L	M16	65	24	40	16	14
P0110.160-070L	M16	70	24	40	16	14
P0110.160-080L	M16	80	24	40	16	14
P0110.160-090L	M16	90	24	40	16	14
P0110.160-100L	M16	100	24	40	16	14
P0110.160-110L	M16	110	24	40	16	14
P0110.160-120L	M16	120	24	40	16	14
P0110.160-130L	M16	130	24	40	16	14
P0110.160-140L	M16	140	24	40	16	14
P0110.160-150L	M16	150	24	40	16	14
P0110.160-160L	M16	160	24	40	16	14
P0110.180-030L	M18	30	27	-	18	14
P0110.180-035L	M18	35	27	-	18	14
P0110.180-040L	M18	40	27	-	18	14
P0110.180-045L	M18	45	27	-	18	14
P0110.180-050L	M18	50	27	-	18	14
P0110.180-055L	M18	55	27	-	18	14
P0110.180-060L	M18	60	27	-	18	14
P0110.180-065L	M18	65	27	-	18	14
P0110.180-070L	M18	70	27	48	18	14
P0110.180-075L	M18	75	27	48	18	14
P0110.180-080L	M18	80	27	48	18	14
P0110.180-090L	M18	90	27	48	18	14
P0110.180-100L	M18	100	27	48	18	14
P0110.180-110L	M18	110	27	48	18	14
P0110.180-120L	M18	120	27	48	18	14
P0110.180-130L	M18	130	27	48	18	14
P0110.180-140L	M18	140	27	48	18	14
P0110.180-150L	M18	150	27	48	18	14
P0110.180-160L	M18	160	27	48	18	14
P0110.200-030L	M20	30	30	-	20	17
P0110.200-035L	M20	35	30	-	20	17
P0110.200-040L	M20	40	30	-	20	17
P0110.200-045L	M20	45	30	-	20	17

SELF LOCKING SCREWS



Order No.	d ₁	l ₁	d ₂	l ₂ max.	h ₁	A/F
P0110.200-050L	M20	50	30	-	20	17
P0110.200-055L	M20	55	30	-	20	17
P0110.200-060L	M20	60	30	-	20	17
P0110.200-065L	M20	65	30	-	20	17
P0110.200-070L	M20	70	30	-	20	17
P0110.200-080L	M20	80	30	52	20	17
P0110.200-090L	M20	90	30	52	20	17
P0110.200-100L	M20	100	30	52	20	17
P0110.200-110L	M20	110	30	52	20	17
P0110.200-120L	M20	120	30	52	20	17
P0110.200-130L	M20	130	30	52	20	17
P0110.200-140L	M20	140	30	52	20	17
P0110.200-150L	M20	150	30	52	20	17
P0110.200-160L	M20	160	30	52	20	17
P0110.240-040L	M24	40	36	-	24	19
P0110.240-045L	M24	45	36	-	24	19
P0110.240-050L	M24	50	36	-	24	19
P0110.240-055L	M24	55	36	-	24	19
P0110.240-060L	M24	60	36	-	24	19
P0110.240-065L	M24	65	36	-	24	19
P0110.240-070L	M24	70	36	-	24	19
P0110.240-080L	M24	80	36	-	24	19
P0110.240-090L	M24	90	36	-	24	19
P0110.240-100L	M24	100	36	66	24	19
P0110.240-110L	M24	110	36	66	24	19
P0110.240-120L	M24	120	36	66	24	19
P0110.240-130L	M24	130	36	66	24	19
P0110.240-140L	M24	140	36	66	24	19
P0110.240-150L	M24	150	36	66	24	19

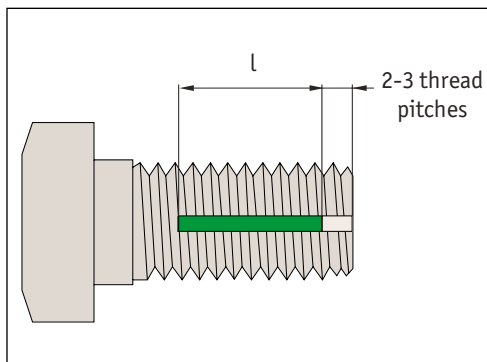
Strip materials

Materials	Colour code	Operating Temperature Range	Material Specification
Polycap Nylon	Green	-50°C to +120°C	ASTM-D-4066
Kel-F®	Blue	-200°C to +200°C	AMS 3650
Vespe®	Brown	-250°C to +300°C	-
Hot-Lok™	Silver	-250°C to +650°C	-

*These inserts are not recommended for reuse. Consult Automotion Components for technical details.

Standard "L" dimensions

Thread size	Approx "L" insert length
1,5	3,5
1,8	3,5
2,2	4,5
2,5	4,5
3,0	6,0
3,5	7,5
4,0	8,5
5,0	8,5
6,5	11,0
8,0	10,7
9,5	12,0
11,0	13,5
12,5	14,0
14,0	14,5
16,0	16,0
19,0	19,0
22,0	19,0
25,0	19,0



Insert length can be affected by overall length of thread.

Self-Locking Fasteners from Automotion Components

SELF-LOCKING SCREWS