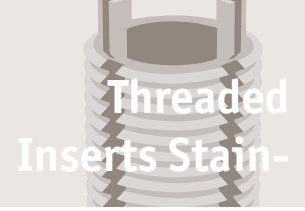
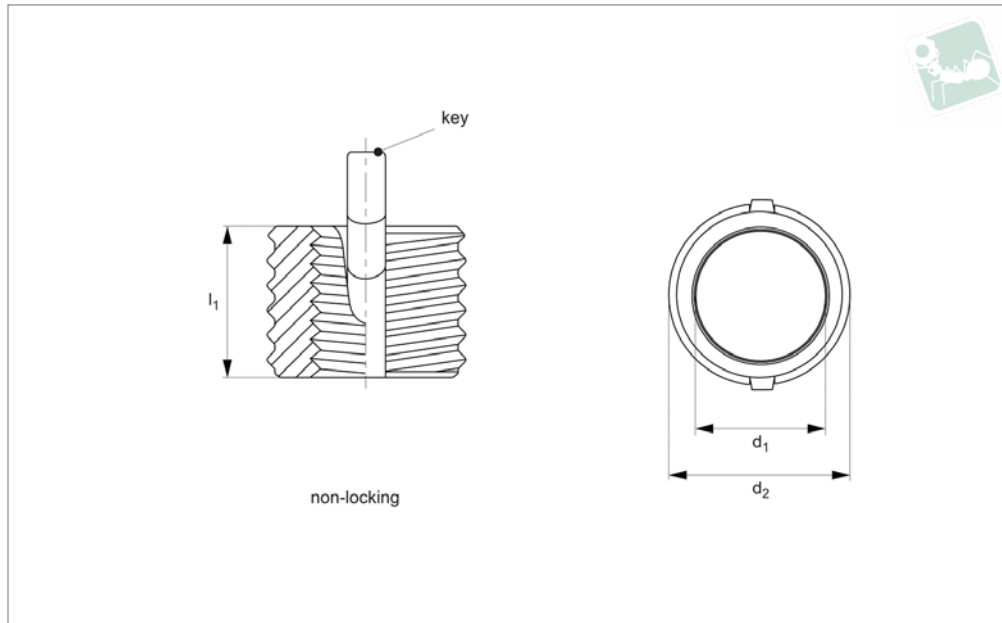




Threaded Insert MS/NAS - Mini - 303 stainless steel - non-locking - MS/NAS grade



Threaded
Inserts Stain-



TR1600

THREADED INSERTS STAINLESS

Material

Inserts - 303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

General tolerances -

+/- 0,25mm, unless specified.
Tap drill hole tolerances -
6,9 to 10,8 = +0,100/-0,025
12,8 and over = +0,130/-0,025
NL = Non-Locking type.

Important Notes

Four locking keys on internal threads M6 and over. Two locking keys on internal threads smaller than M6.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.

Technical Notes

All dimensions in millimetres.
Internal threads: to Fed. Std. H28/21, MJ Form

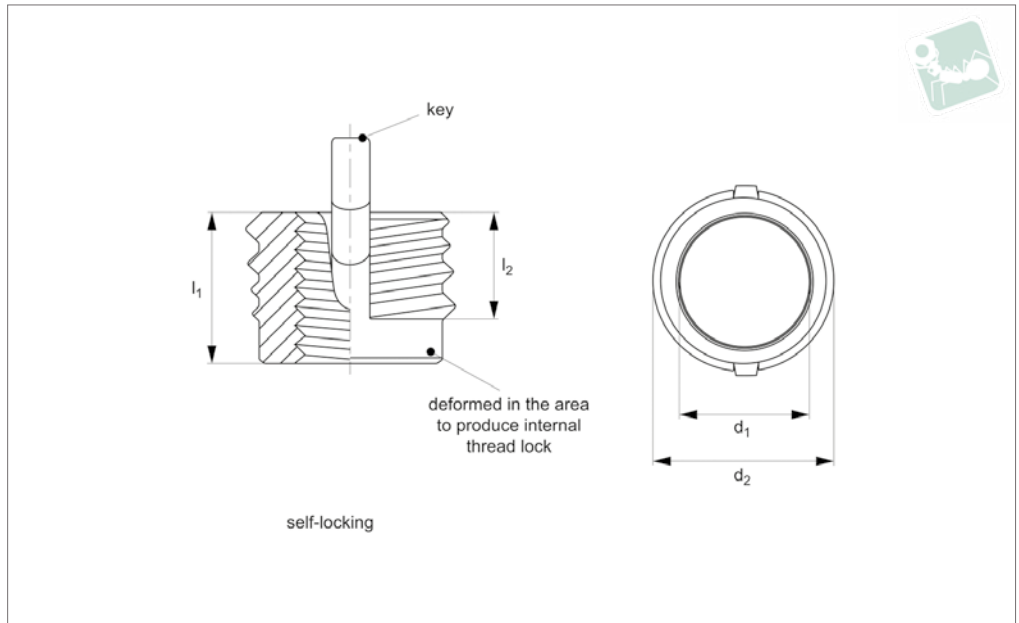
Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Order No.	Type	d ₁ tol. 4H 6H	Thread type d ₁	d ₂ tol. 4h	Thread type d ₂	l ₁	Inst. c'sink hole size +0.25 -0.00	Inst. tap drill size +0.080 - 0.025	Inst. tap to depth min.	Inst. thread tap tol. 6H	Inst. tool ref. TR1710	Removal drill size	Removal drill depth
TR1600.76382	NL	M 2x0, 4	Coarse	M 4x0, 7	Coarse	3.00	4.1	3.4	4.0	M 4x0,7	.0820	2.8	2.00
TR1600.76383	NL	M2,5 x0,4 5	Coarse	M4,5 x0,7 5	Coarse	3.81	4.6	3.9	5.0	M4,5x0 ,75	.0830	3.0	2.00
TR1600.76384	NL	M 3x0, 5	Coarse	M 5x0, 8	Coarse	4.25	5.1	4.4	5.5	M 5x0,8	.0840	3.5	2.25
TR1600.76386	NL	M 4x0, 7	Coarse	M 6x0, 75	Fine	5.25	6.1	5.5	6.5	M 6x0,75	.0860	4.6	2.50



TR1601



Material

Inserts - 303 CRES.

Keys - 302 CRES.

Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in millimetres.

Internal threads: to Fed. Std. H28/21, MJ Form

General tolerances -

+/- 0,25mm, unless specified.

Tap drill hole tolerances -

6,9 to 10,8 = +0,100/-0,025

12,8 and over = +0,130/-0,025

SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads M6 and over. Two locking keys on internal threads smaller than M6.

Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.

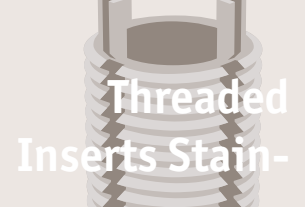
Removal (Rem.) drill size and drill depth as specified in table.

Order No.	Type	d_1 tol. 4H 6H	Thread type d_1	d_2 tol. 4h	Thread type d_2	l_1	l_2	Inst. c'sink hole size +0.25 -0.00	Inst. tap drill size +0.080 -0.025	Inst. tap to depth min.	Inst. thread tap tol. 6H	Inst. tool ref. TR1710	Removal drill size	Removal drill depth
TR1601.77382	SL	M 2x0, 4	Coarse	M 4x0, 7	Coarse	3.00	2.20	4.1	3.4	4.0	M 4x0,7	.0820	2.8	2.00
TR1601.77383	SL	M2,5 x0,4 5	Coarse	M4,5 x0,7 5	Coarse	3.81	2.70	4.6	3.9	5.0	M4,5x 0,75	.0830	3.0	2.00
TR1601.77384	SL	M 3x0, 5	Coarse	M 5x0, 8	Coarse	4.25	3.10	5.1	4.4	5.5	M 5x0,8	.0840	3.5	2.25
TR1601.77386	SL	M 4x0, 7	Coarse	M 6x0, 75	Fine	5.25	4.11	6.1	5.5	6.5	M 6x0,75	.0860	4.6	2.50

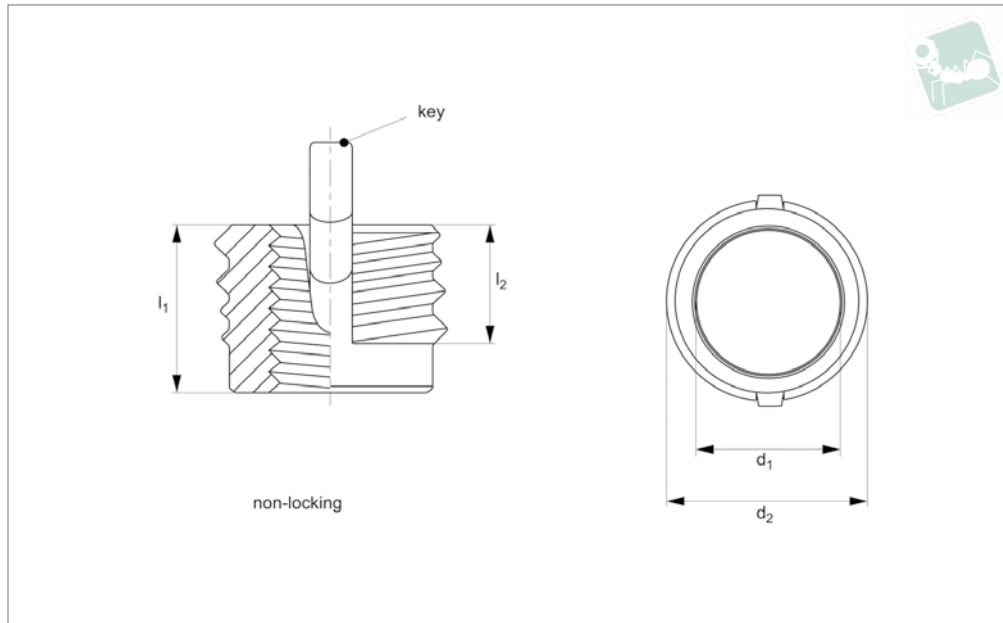


Threaded Insert MS/NAS - Mini - Inch

303 stainless steel - non-locking - MS/NAS grade



Threaded Inserts Stain-



TR1650

THREADED INSERTS STAINLESS

Material

Inserts - 303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -
+/- 0,010 unless specified.

Tap drill hole tolerances -
0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
NL = Non-Locking type.

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

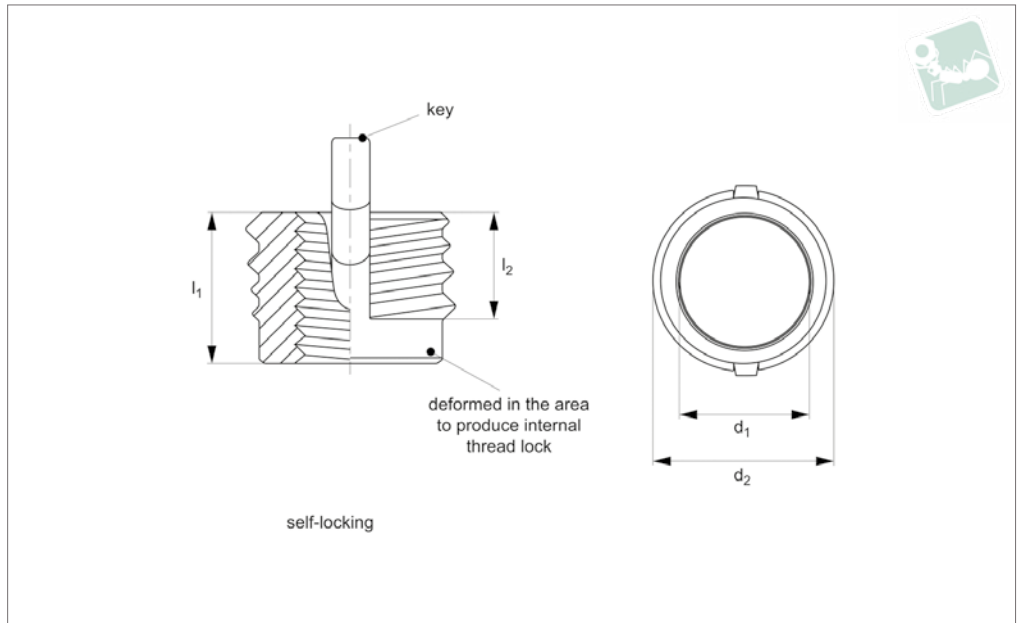
Four locking keys on internal threads 5/16

and over. Two locking keys on internal threads smaller than 5/16.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: MIL-I-45914A (MS51830)
* Modified minor dia.

Order No.	Type	d ₁ tol. 3B type	Thread d ₁	d ₂ tol. 2A type	Thread d ₂	l ₁	l ₂	C'sink hole size	Inst. tap drill size +0.00 3 - 0 - 0.000	Inst. thread tap depth min.	Inst. thread tap size tol. 6B	Inst. tool ref. TR1700	Removal drill size	Removal drill depth
TR1650.76283	NL	2-56	UNC	8-32	UNC	,120	,090	,166	,134	,140	8-32	.0830	#33	1/16
TR1650.76284	NL	4-40	UNC	10-32	UNF	,170	,125	,194	,161	,160	10-32	.0840	#29	3/32
TR1650.76285	NL	6-32	UNC	12-28	UNF	,170	,125	,220	,187	,160	12-28	.0850	#21	3/32
TR1650.76286	NL	8-32	UNC	1/4-28*	UNF	,220	,175	,255	,228	,210	1/4-28	.0860	#8	1/8



TR1651



Material

Inserts - 303 CRES.
 Keys - 302 CRES.
 Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
 Internal threads: to SAE AS8879.
 General tolerances -
 +/- 0,010 unless specified.
 Tap drill hole tolerances -

0,234 to 0,500 = +0,004/-0,001
 0,500 and over = +0,005/-0,001
SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/16

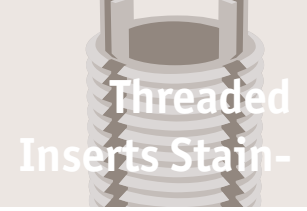
and over. Two locking keys on internal threads smaller than 5/16.
 Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
 Removal (Rem.) drill size and drill depth as specified in table.
 Perform to standards: MIL-I-45914A (MS51830)
 * Modified minor dia.

Order No.	Type	d ₁ tol. 3B type	Thread d ₁	d ₂ tol. 2A type	Thread d ₂	l ₁	l ₂	C'sink hole size	Inst. tap drill +0.00 3 -0.001	Inst. thread tap depth min.	Inst. thread tap size tol. 6B	Inst. tool ref. TR1700	Removal drill size	Removal drill depth
TR1651.77283	SL	2-56	UNC	8-32	UNC	,120	,090	,166	,134	,140	8-32	.0830	#33	1/16
TR1651.77284	SL	4-40	UNC	10-32	UNF	,170	,125	,194	,161	,160	10-32	.0840	#29	3/32
TR1651.77285	SL	6-32	UNC	12-28	UNF	,170	,125	,220	,187	,160	12-28	.0850	#21	3/32
TR1651.77286	SL	8-32	UNC	1/4-28*	UNF	,220	,175	,255	,228	,210	1/4-28	.0860	#8	1/8

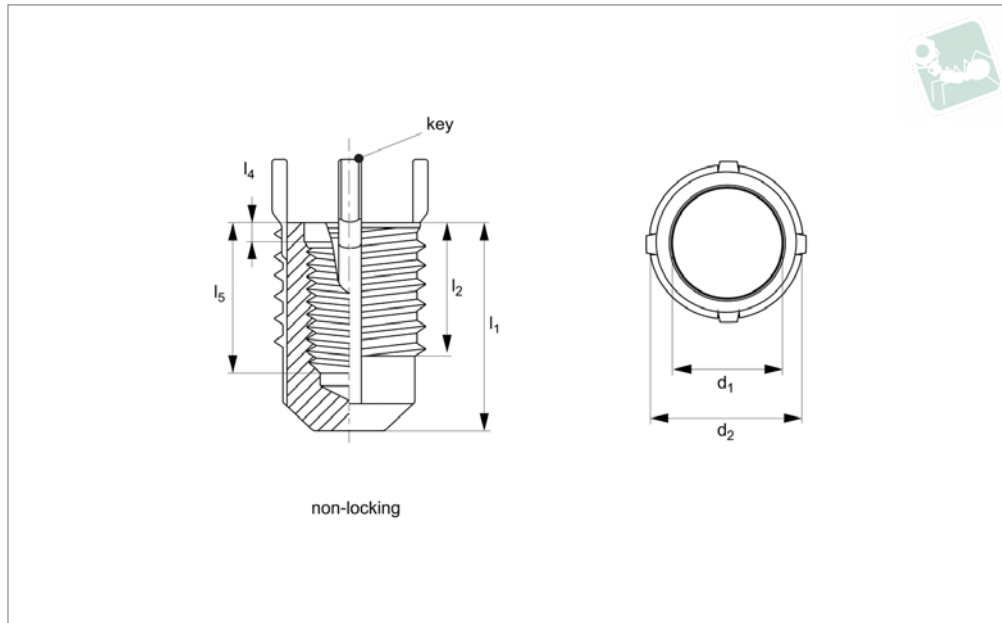


Blind Threaded Insert - Mini - Inch

303 stainless steel - non-locking



Threaded Inserts Stain-



TR1670

THREADED INSERTS STAINLESS

Material

Inserts - A303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -
+/- 0,010 unless specified.

Tap drill hole tolerances -
0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
NL = Non-Locking type.

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

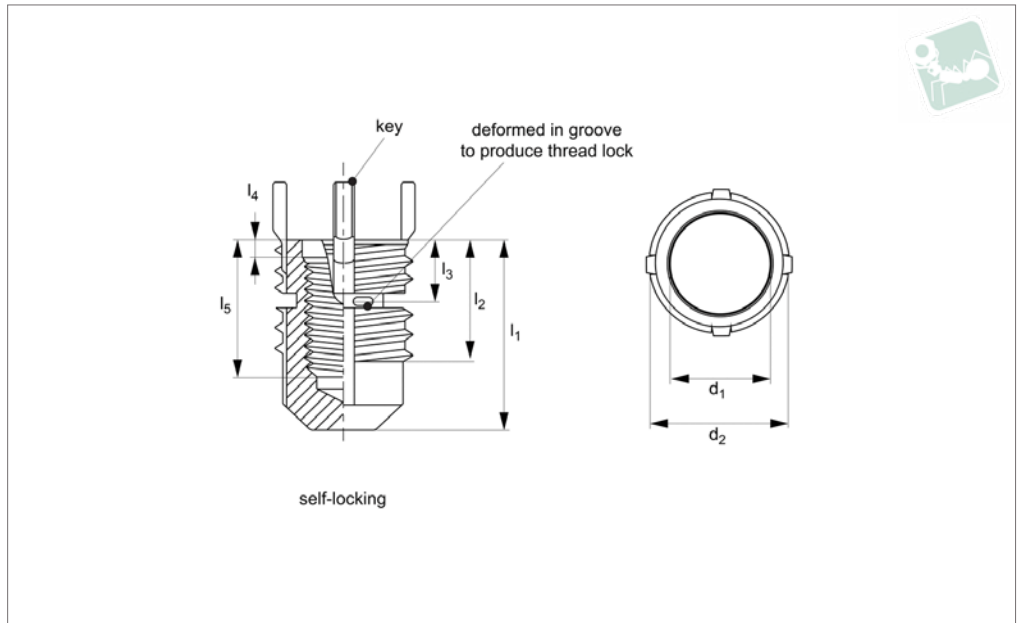
Four locking keys on internal threads 5/16

and over. Two locking keys on internal threads smaller than 5/16.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: MIL-I-45914A

Order No.	Type	d ₁ tol. 3B	Thre ad type d ₁	d ₂ tol. 2A	Thre ad type d ₂	l ₁	l ₂	l ₄ c'bore depth	l ₅	Inst. c'sink hole size +0.010 -0.000	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1700	Remo val drill size	Removal drill depth
TR1670.83290	NL	2-56	UNC	8-32	UNC	,24	,18	C'Sin k	,13	,166	,134	,24	8-32	.0830	#33	1/16
TR1670.83291	NL	4-40	UNC	10-32	UNF	,31	,22	C'Sin k	,17	,194	.161	,28	10-32	.0840	#29	3/32
TR1670.83292	NL	6-32	UNC	12-28	UNF	,39	,22	C'Sin k	,21	,220	,187	,28	12-28	.0850	#21	3/32
TR1670.83294	NL	8-32	UNC	1/4-28	UNF	,43	,24	C'Sin k	,25	,255	,228	,30	1/4-28	.0860	#8	3/32



TR1671



Material

Inserts - A303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -
+/- 0,010 unless specified.

Tap drill hole tolerances -

0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

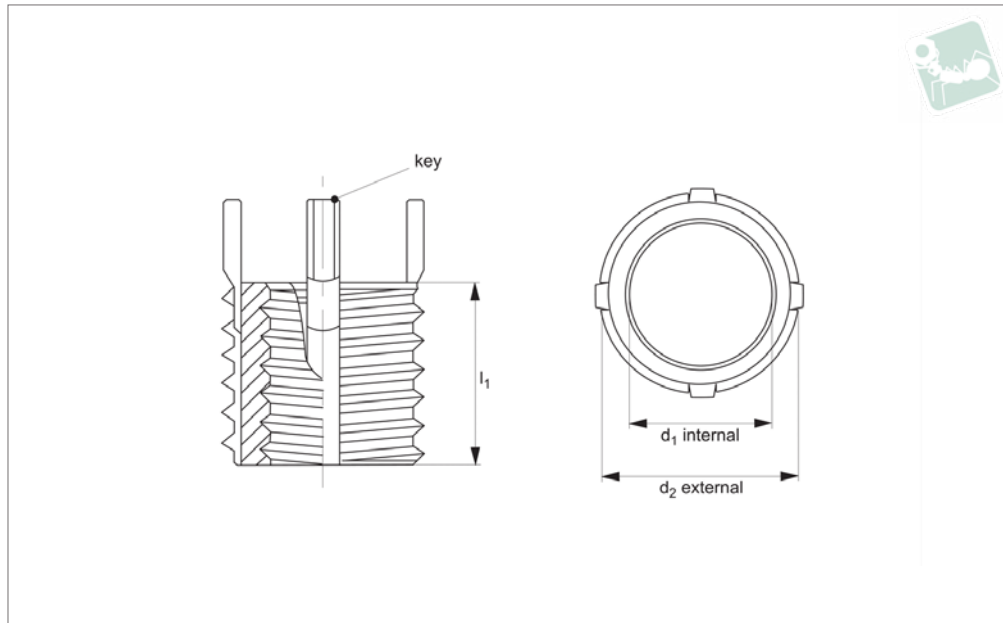
Four locking keys on internal threads 5/16 and over. Two locking keys on internal threads smaller than 5/16.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: MIL-I-45914A

Order No.	Type	d ₁ tol. 3B	Thre ad type d ₁	d ₂ tol. 2A	Thre ad type d ₂	l ₁	l ₂	l ₃ ±0.0 30	l ₄ c'bore depth	l ₅	Inst. c'sink hole size +0.010 -0.000	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1700	Rem oval drill size	Removal drill depth size
TR1671.84290	SL	2-56	UNC	,166	UNC	,24	,18	,10	C'Sin k	,13	,166	,134	,24	8-32	.0830	#33	1/16
TR1671.84291	SL	4-40	UNC	,194	UNF	,31	,22	,12	C'Sin k	,17	,194	,161	,28	10-32	.0840	#29	3/32
TR1671.84292	SL	6-32	UNC	,220	UNF	,39	,22	,12	C'Sin k	,21	,220	,187	,28	12-28	.0850	#21	3/32
TR1671.84294	SL	8-32	UNC	,255	UNF	,43	,24	,13	C'Sin k	,25	,255	,228	,30	1/4-28	.0860	#8	3/32



Threaded Insert - Metric

thinwall - stainless steel



TR1510

THREADED INSERTS STAINLESS

Material

Inserts: stainless steel (AISI 303) or equivalent. Passivated.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

±0,25, unless specified.

Tap drill hole tolerances:

6,9 to 10,8 = +0,10/-0,025.

12,8 and over = +0,13/-0,025.

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on internal threads M 8 and over. Two locking keys on internal threads smaller than M 8.

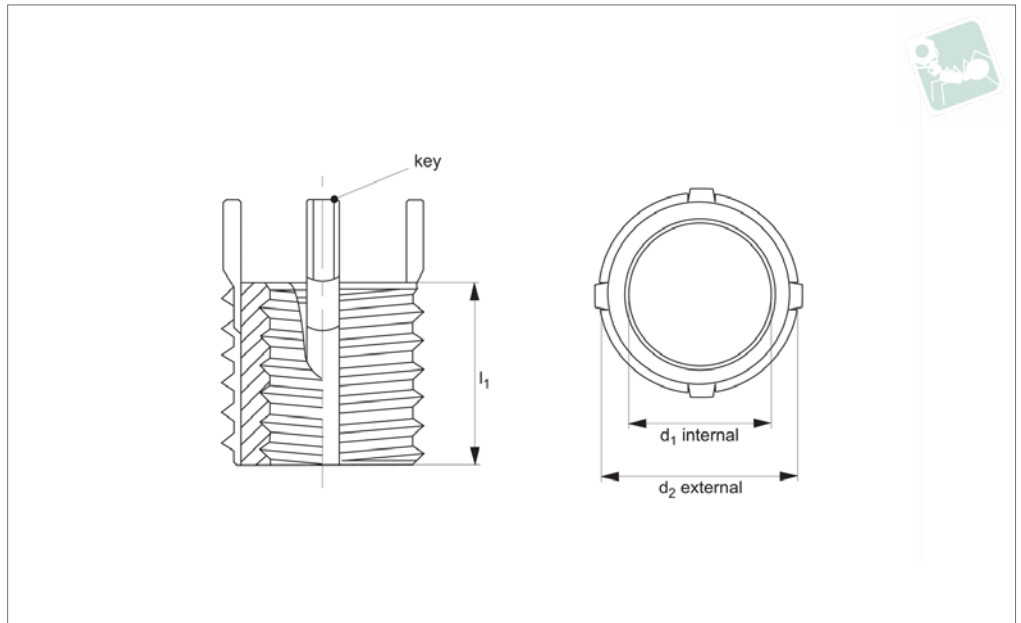
Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

Removal drill size and drill depth as speci-

Order No.	Int. d ₁ tol. 6H	Int. thread type d ₁	Ext. d ₂ tol. 6g	Ext. thread type d ₂	l ₁	Inst. tap drill size	Inst. tool ref. 22060	Inst. c'sink dia. ±0,25 ± 0,000	Inst. thread tap tol. 6H	Inst. thread depth min.	Removal drill size	Removal drill depth
TR1510.66351	M 5x0,80	Coarse	M 8x1,25	Coarse	8	6,9	.W0510	8,3	M 8x1,25	9,5	5,5	4,0
TR1510.66352	M 6x1,00	Coarse	M10x1,25	Fine	10	8,8	.W0520	10,3	M10x1,25	11,5	7,5	4,8
TR1510.66353	M 8x1,25	Coarse	M12x1,25	Fine	12	10,8	.W0530	12,3	M12x1,25	13,5	9,5	4,8
TR1510.66553	M 8x1,00	Fine	M12x1,25	Fine	12	10,8	.W0530	12,3	M12x1,25	13,5	9,5	4,8
TR1510.66355	M10x1,50	Coarse	M14x1,50	Fine	14	12,8	.W0550	14,3	M14x1,50	15,5	11,5	4,8
TR1510.66555	M10x1,25	Fine	M14x1,50	Fine	14	12,8	.W0550	14,3	M14x1,50	15,5	11,5	4,8
TR1510.66356	M12x1,75	Coarse	M16x1,50	Fine	16	14,2	.W0560	14,3	M16x1,50	17,5	13,5	4,8
TR1510.66556	M12x1,25	Fine	M16x1,50	Fine	16	14,8	.W0560	16,3	M16x1,50	17,5	13,5	4,8



TR1560



Material

Inserts: stainless steel (AISI 303) or equivalent. Passivated.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

All dimensions in inches.

General tolerances:

± 0,010" unless specified.

Tap drill hole tolerances:

0,234 to 0,500 = +0,004/-0,001"

0,500 and over = +0,005/-0,001"

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/

16" and over. Two locking keys on internal threads smaller than 5/16".

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

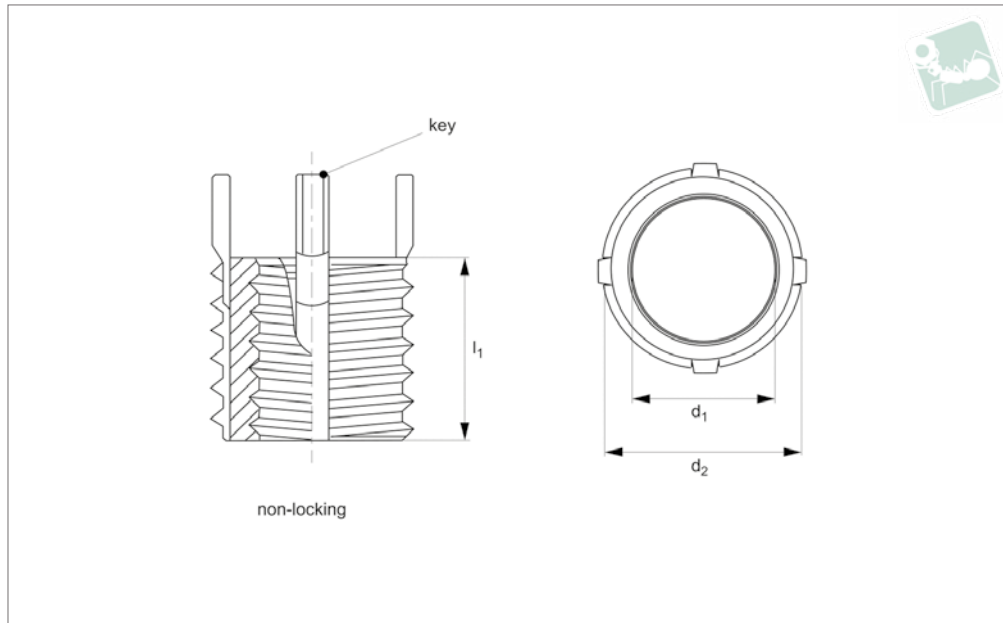
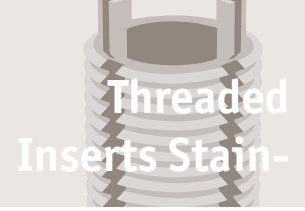
Removal drill size and drill depth as specified in table.

All dimensions in inches.

Order No.	Int. d ₁ tol. 2B	Int. thread type d ₁	Ext. d ₂ tol. 2A	Ext. thread type d ₂	l ₁	Inst. tap drill size	Inst. tool ref. 22054	Inst. c'sink dia. +0.010 - 0.000	Inst. thread tap tol. 2B	Inst. thread depth min.	Removal drill size	Removal drill depth
TR1560.66321	10-24	UNC	5/16"-18	UNC	0,31	17/64"	.W0210	0,32	5/16"-18	0,37	7/32"	1/8"
TR1560.66521	10-32	UNF	5/16"-18	UNC	0,31	17/64"	.W0210	0,32	5/16"-18	0,37	7/32"	1/8"
TR1560.66322	1/4"-20	UNC	3/8"-16	UNC	0,37	21/64"	.W0220	0,38	3/8"-16	0,43	9/32"	3/16"
TR1560.66522	1/4"-28	UNF	3/8"-16	UNC	0,37	21/64"	.W0220	0,38	3/8"-16	0,43	9/32"	3/16"
TR1560.66323	5/16"-18	UNC	7/16"-14	UNC	0,43	25/64"	.W0230	0,44	7/16"-14	0,50	11/32"	3/16"
TR1560.66523	5/16"-24	UNF	7/16"-14	UNC	0,43	25/64"	.W0230	0,44	7/16"-14	0,50	11/32"	3/16"
TR1560.66324	3/8"-16	UNC	1/2"-13	UNC	0,50	29/64"	.W0240	0,51	1/2"-13	0,56	13/32"	3/16"
TR1560.66524	3/8"-16	UNF	1/2"-13	UNC	0,50	29/64"	.W0240	0,51	1/2"-13	0,56	13/32"	3/16"
TR1560.66325	7/16"-14	UNC	9/16"-12	UNC	0,56	33/64"	.W0250	0,57	9/16"-12	0,62	15/32"	3/16"
TR1560.66525	7/16"-20	UNF	9/16"-12	UNC	0,56	33/64"	.W0250	0,57	9/16"-12	0,62	15/32"	3/16"
TR1560.66326	1/2"-13	UNC	5/8"-11	UNC	0,62	37/64"	.W0260	0,63	5/8"-11	0,68	17/32"	3/16"
TR1560.66526	1/2"-20	UNF	5/8"-11	UNC	0,62	37/64"	.W0260	0,63	5/8"-11	0,68	17/32"	3/16"



Threaded Insert MS/NAS - Thinwall - 303 stainless steel - non-locking - MS/NAS grade



TR1602

THREADED INSERTS STAINLESS

Material

Inserts - 303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in millimetres.
Internal threads: to Fed. Std. H28/21, MJ Form

General tolerances -

+/- 0,25mm, unless specified.
Tap drill hole tolerances -
6,9 to 10,8 = +0,100/-0,025
12,8 and over = +0,130/-0,025
NL = Non-Locking type.

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads M 6 and over. Two locking keys on internal threads smaller than M 6.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.

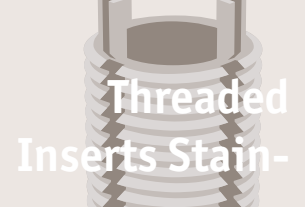
Order No.	Type	d ₁ tol. 4H type 5H	Thread d ₁	d ₂ tol. 4h type	Thread d ₂	Inst. tap drill size	l ₁	l ₄ c'bore depth	C'sink hole size +0.25 -0.00	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Inst. tool ref. TR1712	Removal drill depth	Removal drill size
TR1602.76351	NL	M 5x0,8	Coars e	M 8x1,25	Coars e	6.90	8.0	1.27	8.25	M 8x1,25	9.5	.0510	4.00	5.50
TR1602.76551	NL	M 5x0,5	Fine	M 8x1,25	Coars e	6.90	8.0	1.27	8.25	M 8x1,25	9.5	.0510	4.00	5.50
TR1602.76352	NL	M 6x1,0	Coars e	M10 x1,25	Fine	8.80	10.0	1.78	10.25	M10x1,25	11.5	.0520	4.75	7.50
TR1602.76552	NL	M 6x0,75	Fine	M10 x1,25	Fine	8.80	10.0	1.78	10.25	M10x1,25	11.5	.0520	4.75	7.50
TR1602.76353	NL	M 8x1,25	Coars e	M12 x1,25	Fine	10.80	12.0	1.78	12.25	M12.1,25	13.5	.0530	4.75	9.50
TR1602.76553	NL	M 8x1,0	Fine	M12 x1,25	Fine	10.80	12.0	1.78	12.25	M12.1,25	13.5	.0530	4.75	9.50
TR1602.76355	NL	M10 x1,5	Coars e	M14 x1,5	Fine	12.80	14.0	2.29	14.25	M14x1,5	15.5	.0550	4.75	11.50
TR1602.76555	NL	M10 x1,25	Fine	M14 x1,5	Fine	12.80	14.0	2.29	14.25	M14x1,5	15.5	.0550	4.75	11.50



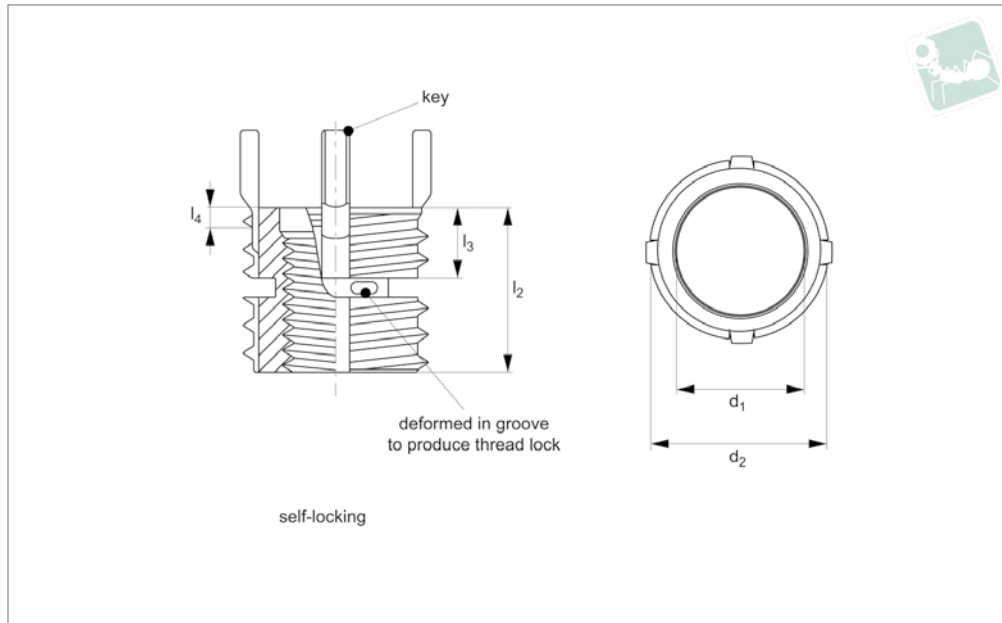
Order No.	Type	d ₁ tol. 4H 5H	Thread type d ₁	d ₂ tol. 4h	Thread type d ₂	Inst. tap drill size	l ₁	l ₄ c'bore depth	C'sink hole size +0.25 -0.00	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Inst. tool ref. TR1712	Removal drill depth	Removal drill size
TR1602.76356	NL	M12 x1,7 5	Coars e	M16 x1,5	Fine	14.75	16.0	2.29	16.25	M16x1 ,5	17.5	.0560	4.75	13.50
TR1602.76556	NL	M12 x1,2 5	Fine	M16 x1,5	Fine	14.75	16.0	2.29	16.25	M16x1 ,5	17.5	.0560	4.75	13.50



Threaded Insert MS/NAS - Thinwall - 303 stainless steel - self-locking - MS/NAS grade



Threaded
Inserts Stain-



TR1603

THREADED INSERTS STAINLESS

Material

Inserts - 303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in millimetres.
Internal threads: to Fed. Std. H28/21, MJ Form
General tolerances -

+/- 0,25mm, unless specified.

Tap drill hole tolerances -
6,9 to 10,8 = +0,100/-0,025
12,8 and over = +0,130/-0,025

SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads M 6 and over. Two locking keys on internal threads smaller than M 6.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.

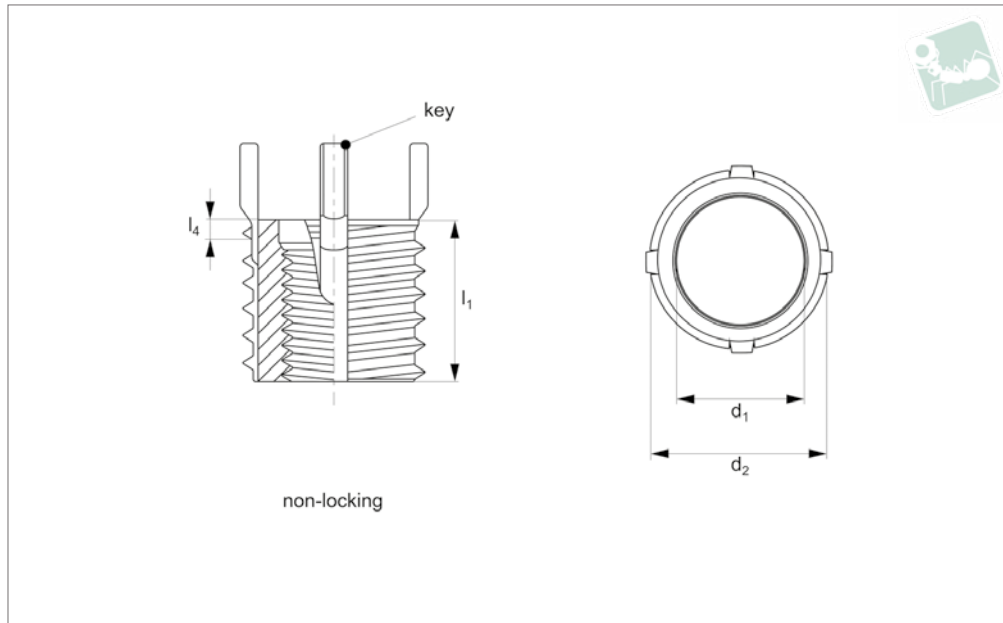
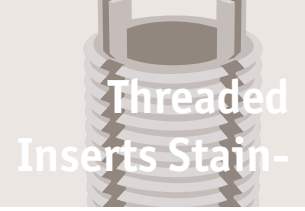
Order No.	Type	d ₁ tol. 4H 5H	Thread type	d ₂ tol. 4h	Thread type	Inst. tap drill size	l ₁	l ₃ ±0.76	l ₄ e ±0.76	c'bor h	C'sink hole size +0.25 -0.00	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Inst. tool ref. TR1712	Removal drill depth	Removal drill size
TR1603.77351	SL	M 5x0,8	Coars e	M 8x1,25	Coars e	6.90	8.0	3.73	1.27	8.25	M 8x1,25	9.5	.0510	4.00	5.50	
TR1603.77551	SL	M 5x0,5	Fine	M 8x1,25	Coars e	6.90	8.0	3.73	1.27	8.25	M 8x1,25	9.5	.0510	4.00	5.50	
TR1603.77352	SL	M 6x1,0	Coars e	M10 x1,25	Fine	8.80	10.0	6.02	1.78	10.25	M10x 1,25	11.5	.0520	4.75	7.50	
TR1603.77552	SL	M 6x0,75	Fine	M10 x1,25	Fine	8.80	10.0	6.02	1.78	10.25	M10x 1,25	11.5	.0520	4.75	7.50	
TR1603.77353	SL	M 8x1,25	Coars e	M12 x1,25	Fine	10.80	12.0	6.28	1.78	12.25	M12x 1,25	13.5	.0530	4.75	9.50	
TR1603.77553	SL	M 8x1,0	Fine	M12 x1,25	Fine	10.80	12.0	6.28	1.78	12.25	M12x 1,25	13.5	.0530	4.75	9.50	
TR1603.77355	SL	M10 x1,5	Coars e	M14 x1,5	Fine	12.80	14.0	6.46	2.29	14.25	M14x 1,5	15.5	.0550	4.75	11.50	
TR1603.77555	SL	M10 x1,25	Fine	M14 x1,5	Fine	12.80	14.0	6.46	2.29	14.25	M14x 1,5	15.5	.0550	4.75	11.50	



Order No.	Type	d ₁ tol. 4H 5H	Thread type d ₁	d ₂ tol. 4h	Thread type d ₂	Inst. tap drill size	l ₁	l ₃ ±0.76	l ₄ e	c'bor dept h	C'sink hole size +0.25 -0.00	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Inst. tool ref. TR1712	Removal drill depth	Removal drill size
TR1603.77356	SL	M12 x1,7 5	Coars e	M16 x1,5	Fine	14.75	16.0	6.46	2.29	16.25	M16x 1,5	17.5	.0560		4.75	13.50
TR1603.77556	SL	M12 x1,2 5	Fine	M16 x1,5	Fine	14.75	16.0	6.46	2.29	16.25	M16x 1,5	17.5	.0560		4.75	13.50



Threaded Insert MS/NAS - Thinwall - 303 stainless steel - non-locking - MS/NAS grade



TR1652

THREADED INSERTS STAINLESS

Material

Inserts - 303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -
+/- 0,010 unless specified.

Tap drill hole tolerances -
0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
NL = Non-Locking type.

Tips

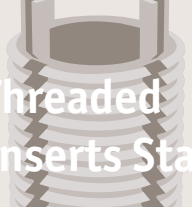
Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/16

and over. Two locking keys on internal threads smaller than 5/16.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: MIL-I-45914A (MS51830 & NAS1394)

Order No.	Type	d ₁ tol. 3B	Thread type d ₁	d ₂ (mod.) class 2A	Thread type d ₂	Inst. tap drill size	l ₁	l ₄ c'bor e dept h	C'sink hole size +0.01 0 - 0.000	Inst. thread tap depth min.	Inst. thread tap size tol. 2B	Inst. tool ref. TR1702	Removal drill depth	Removal drill size
TR1652.76321	NL	10-24	UNC	5/16-18	UNC	,397	,437	,07	,447	,50	7/16-14	.0210	3/16	11/32
TR1652.76521	NL	10-32	UNF	5/16-18	UNC	,397	,437	,07	,447	,50	7/16-14	.0211	3/16	11/32
TR1652.76322	NL	1/4-20	UNC	3/8-16	UNC	,272	,312	,07	,323	,37	5/16-18	.0220	5/32	7/32
TR1652.76522	NL	1/4-28	UNF	3/8-16	UNC	,272	,312	,07	,323	,37	5/16-18	.0221	5/32	7/32
TR1652.76323	NL	5/16-18	UNC	7/16-14	UNC	,332	,375	,07	,385	,43	3/8-16	.0230	3/16	9/32
TR1652.76523	NL	5/16-24	UNF	7/16-14	UNC	,332	,375	,07	,385	,43	3/8-16	.0231	3/16	9/32
TR1652.76324	NL	3/8-16	UNC	1/2-13	UNC	,453	,500	,07	,510	,56	1/2-13	.0240	3/16	13/32
TR1652.76524	NL	3/8-24	UNF	1/2-13	UNC	,453	,500	,07	,510	,56	1/2-13	.0241	3/16	13/32
TR1652.76325	NL	7/16-14	UNC	9/16-12	UNC	,516	,562	,07	,572	,62	9/16-12	.0250	3/16	15/32

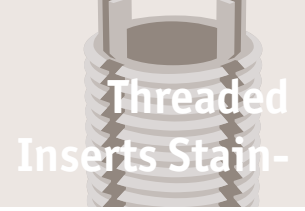


THREADED INSERTS STAINLESS

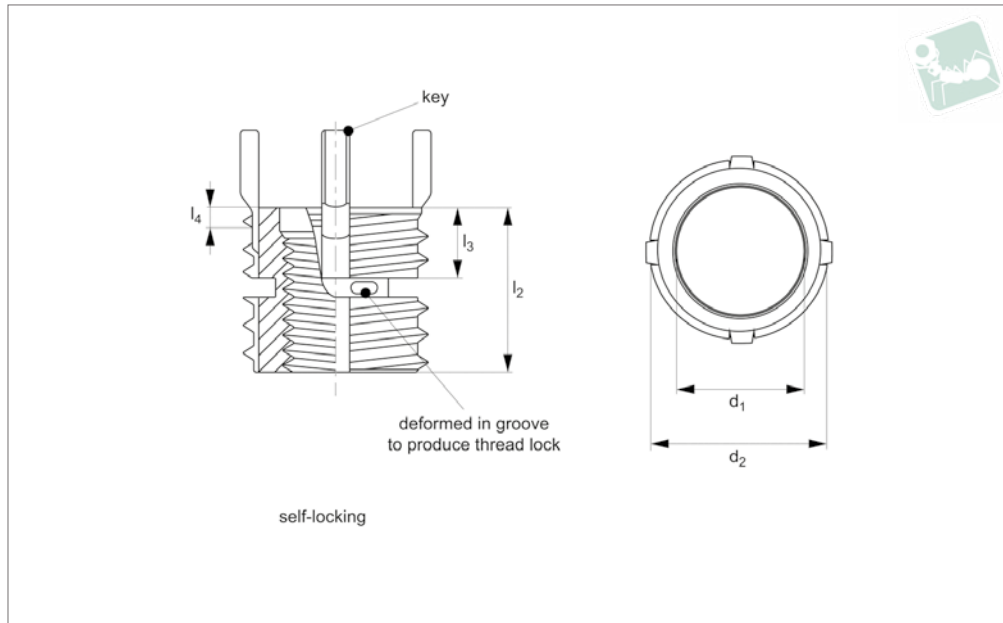
Order No.	Type	d ₁ tol. 3B	Thread type d ₁	d ₂ (mod.) class 2A	Thread type d ₂	Inst. tap drill size	l ₁	l ₄ c'bor e dept h	C'sink hole size +0.01 0 -0.000	Inst. thread tap depth min.	Inst. thread tap size tol. 2B	Inst. tool ref. TR1702	Removal drill depth	Removal drill size
TR1652.76525	NL	7/16-20	UNF	9/16-12	UNC	,516	.562	,07	,572	,62	9/16-12	.0251	3/16	15/32
TR1652.76326	NL	1/2-13	UNC	5/8-11	UNC	,578	,625	,07	,635	,68	5/8-11	.0260	3/16	17/32
TR1652.76526	NL	1/2-20	UNF	5/8-11	UNC	,578	,625	,07	,635	,68	5/8-11	.0261	3/16	17/32



Threaded Insert MS/NAS - Thinwall - 303 stainless steel - self-locking - MS/NAS grade



Threaded
Inserts Stain-



TR1653

THREADED INSERTS STAINLESS

Material

Inserts - 303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -
+/- 0,010 unless specified.
Tap drill hole tolerances -

0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

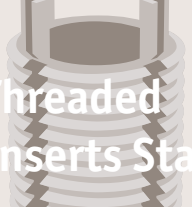
Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/16

and over. Two locking keys on internal threads smaller than 5/16.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: MIL-I-45914A (MS51830 & NAS1394)

Order No.	Type	d ₁ tol. 3B	Thre ad type d ₁	d ₂ (mod.) class 2A	Thre ad type d ₂	Inst. tap drill size	l ₁	l ₃ ±0.30 c'bore	l ₄ depth	C'sink hole size +0.0 10 - 0.000	Inst. thread tap depth min.	Inst. thread tap size tol. 2B	Inst. tool ref. TR1702	Removal drill depth	Removal drill size
TR1653.77321	SL	10-24	UNC	5/16-18	UNC	,272	,312	.22	,07	,323	,37	5/16-18	.0210	5/32	7/32
TR1653.77521	SL	10-32	UNF	5/16-18	UNC	,272	,312	.22	,07	,323	,37	5/16-18	.0211	5/32	7/32
TR1653.77322	SL	1/4-20	UNC	3/8-16	UNC	,332	,375	.22	,07	,385	,43	3/8-16	.0220	3/16	9/32
TR1653.77522	SL	1/4-28	UNF	3/8-16	UNC	,332	,375	.22	,07	,385	,43	3/8-16	.0221	3/16	9/32
TR1653.77323	SL	5/16-18	UNC	7/16-14	UNC	,397	,437	.22	,07	,447	,50	7/16-14	.0230	3/16	11/32
TR1653.77523	SL	5/16-24	UNF	7/16-14	UNC	,397	,437	.22	,07	,447	,50	7/16-14	.0231	3/16	11/32
TR1653.77324	SL	3/8-16	UNC	1/2-13	UNC	,453	,500	.24	,07	,510	,56	1/2-13	.0240	3/16	13/32
TR1653.77524	SL	3/8-24	UNF	1/2-13	UNC	,453	,500	.24	,07	,510	,56	1/2-13	.0241	3/16	13/32
TR1653.77325	SL	7/16-14	UNC	9/16-12	UNC	,516	,562	.27	,07	,572	,62	9/16-12	.0250	3/16	15/32

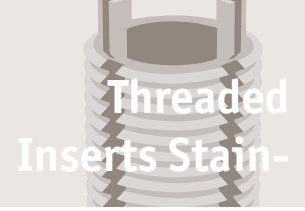


THREADED INSERTS STAINLESS

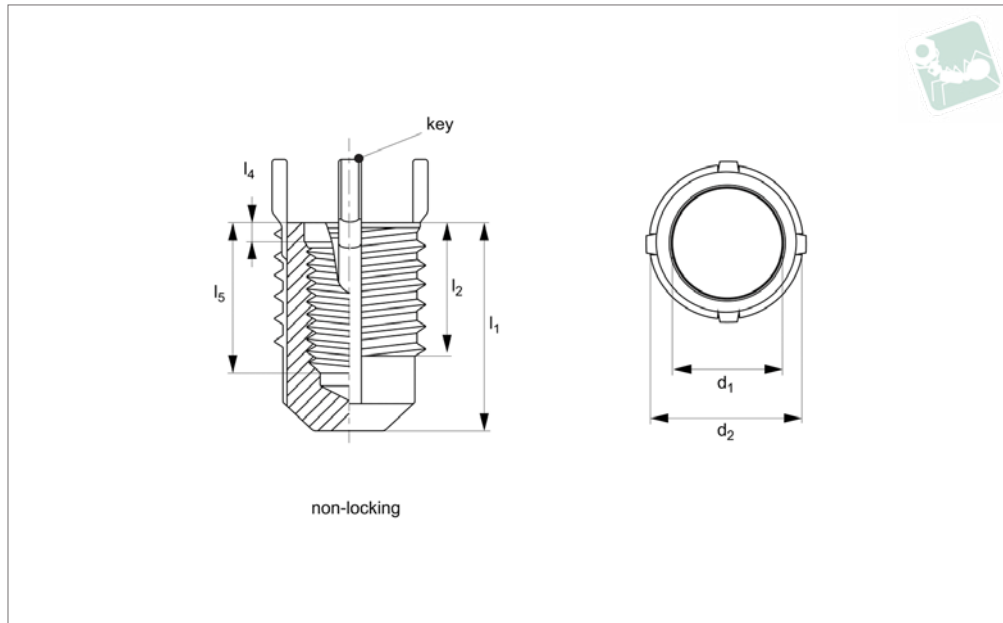
Order No.	Type	d ₁ tol. 3B	Thre ad type d ₁	d ₂ (mod.) class 2A	Thre ad type d ₂	Inst. tap drill size	l ₁	l ₃ ±0.30	l ₄ c'bore depth	C'sink hole size +0.0 10 - 0.000	Inst. thread tap depth min.	Inst. thread tap size tol. 2B	Inst. tool ref. TR1702	Removal drill depth	Removal drill size
TR1653.77525	SL	7/ 16- 20	UNF	9/16- 12	UNC	,516	.562	.27	,07	,572	,62	9/16-12	.0251	3/16	15/32
TR1653.77326	SL	1/2- 13	UNC	5/8- 11	UNC	,578	,625	.28	,07	,635	,68	5/8-11	.0260	3/16	17/32
TR1653.77526	SL	1/2- 20	UNF	5/8- 11	UNC	,578	,625	.28	,07	,635	,68	5/8-11	.0261	3/16	17/32



Blind Threaded Insert - Thinwall - 303 stainless steel - non-locking



Threaded
Inserts Stain-



TR1672

THREADED INSERTS STAINLESS

Material

Inserts - A303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -
+/- 0,010 unless specified.

Tap drill hole tolerances -
0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
NL = Non-Locking type.

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/16

and over. Two locking keys on internal threads smaller than 5/16.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: MIL-I-45914A

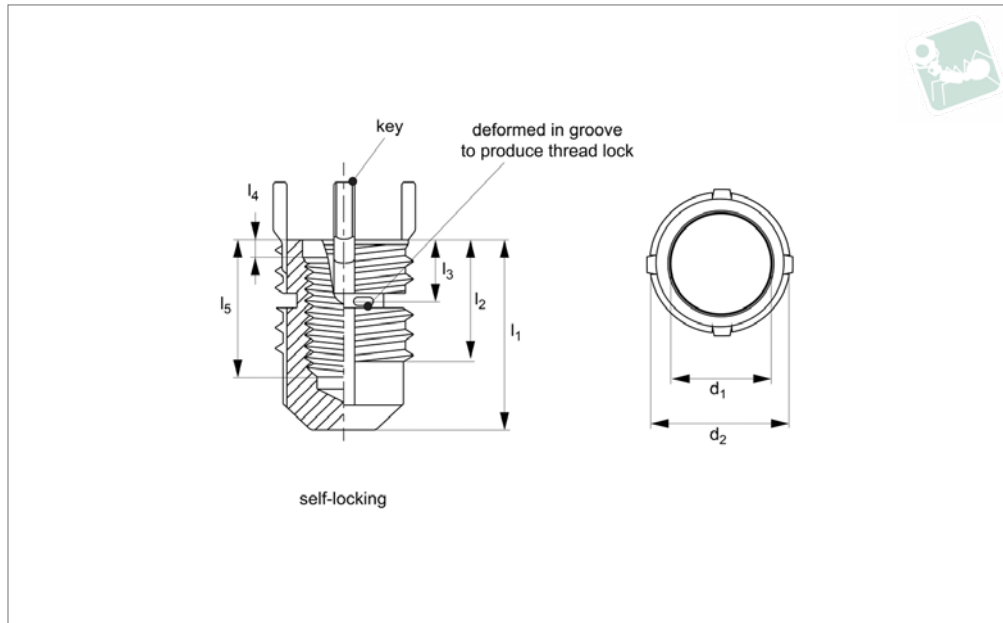
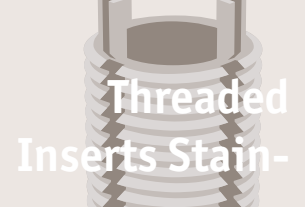
Order No.	Type	d ₁ tol. 3B	Thre ad type d ₁	d ₂ (mod.) class 2A	Thre ad type d ₂	Inst. tap drill size	l ₁	l ₂	l ₄ c'bore depth	l ₅	Inst. c'sink hole size +0.010 -0.000	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1702	Removal drill depth	Remo val drill size
TR1672.83321	NL	10-24	UNC	5/16-18	UNC	,272	,50	,31	,07	,31	,323	,37	5/16-18	.0210	5/32	7/32
TR1672.83521	NL	10-32	UNF	5/16-18	UNC	,272	,50	,31	,07	,31	,323	,37	5/16-18	.0210	5/32	7/32
TR1672.83322	NL	1/4-20	UNC	3/8-16	UNC	,332	,62	,37	,07	,37	,385	,43	3/8-16	.0220	3/16	9/32
TR1672.83522	NL	1/4-28	UNF	3/8-16	UNC	,332	,62	,37	,07	,37	,385	,43	3/8-16	.0220	3/16	9/32
TR1672.83323	NL	5/16-18	UNC	7/16-14	UNC	,397	,75	,43	,07	,43	,447	,50	7/16-14	.0230	3/16	11/32
TR1672.83523	NL	5/16-18	UNF	7/16-14	UNC	,397	,75	,43	,07	,43	,447	,50	7/16-14	.0230	3/16	11/32
TR1672.83324	NL	3/8-16	UNC	1/2-13	UNC	,453	,81	,50	,07	,50	,510	,56	1/2-13	.0240	3/16	13/32
TR1672.83524	NL	3/8-24	UNF	1/2-13	UNC	,453	,81	,50	,07	,50	,510	,56	1/2-13	.0240	3/16	13/32
TR1672.83325	NL	7/16-14	UNC	9/16-12	UNC	,516	,87	,56	,07	,56	,572	,62	9/16-12	.0250	3/16	15/32



Order No.	Type	d ₁ tol. 3B	Thre ad type d ₁	d ₂ (mod.) class 2A	Thre ad type d ₂	Inst. tap drill size	l ₁	l ₂	l ₄ c'bore depth	l ₅	Inst. c'sink hole size +0.010 -0.000	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1702	Removal drill depth	Remo val drill size
TR1672.83525	NL	7/ 16- 20	UNF	9/ 16- 12	UNC	,516	,87	,56	,07	,56	,572	,62	9/16-12	.0250	3/16	15/32
TR1672.83326	NL	1/2- 13	UNC	5/8- 11	UNC	,578	1.06	,62	,07	,62	,635	,68	5/8-11	.0260	3/16	17/32
TR1672.83526	NL	1/2- 20	UNF	5/8- 11	UNC	,578	1.06	,62	,07	,62	,635	,68	5/8-11	.0260	3/16	17/32



Blind Threaded Insert - Thinwall - 303 stainless steel - self-locking



TR1673

THREADED INSERTS STAINLESS

Material

Inserts - A303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -
+/- 0,010 unless specified.

Tap drill hole tolerances -

0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/16 and over. Two locking keys on internal threads smaller than 5/16.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: MIL-I-45914A

Order No.	Type	d ₁ tol. 3B	Thre ad type d ₁	d ₂ (mod.) class 2A	Thre ad type d ₂	Inst. tap drill size	l ₁	l ₂	l ₃ ±0.0 30	l ₄ c'bore depth	l ₅	Inst. c'sink hole size +0.010 -0.000	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1702	Removal drill depth	Rem oval drill size
TR1673.84321	SL	10-24	UNC	5/16-18	UNC	,272	,50	,31	,22	,07	,31	,323	,37	5/16-18	.0210	5/32	7/32
TR1673.84521	SL	10-32	UNF	5/16-18	UNC	,272	,50	,31	,22	,07	,31	,323	,37	5/16-18	.0210	5/32	7/32
TR1673.84322	SL	1/4-20	UNC	3/8-16	UNC	,332	,62	,37	,22	,07	,37	,385	,43	3/8-16	.0220	3/16	9/32
TR1673.84522	SL	1/4-28	UNF	3/8-16	UNC	,332	,62	,37	,22	,07	,37	,385	,43	3/8-16	.0220	3/16	9/32
TR1673.84323	SL	5/16-18	UNC	7/16-14	UNC	,397	,75	,43	,22	,07	,43	,447	,50	7/16-14	.0230	3/16	11/32
TR1673.84523	SL	5/16-18	UNF	7/16-14	UNC	,397	,75	,43	,22	,07	,43	,447	,50	7/16-14	.0230	3/16	11/32
TR1673.84324	SL	3/8-16	UNC	1/2-13	UNC	,453	,81	,50	,24	,07	,50	,510	,56	1/2-13	.0240	3/16	13/32
TR1673.84524	SL	3/8-24	UNF	1/2-13	UNC	,453	,81	,50	,24	,07	,50	,510	,56	1/2-13	.0240	3/16	13/32
TR1673.84325	SL	7/16-14	UNC	9/16-12	UNC	,516	,87	,56	,27	,07	,56	,572	,62	9/16-12	.0250	3/16	15/32

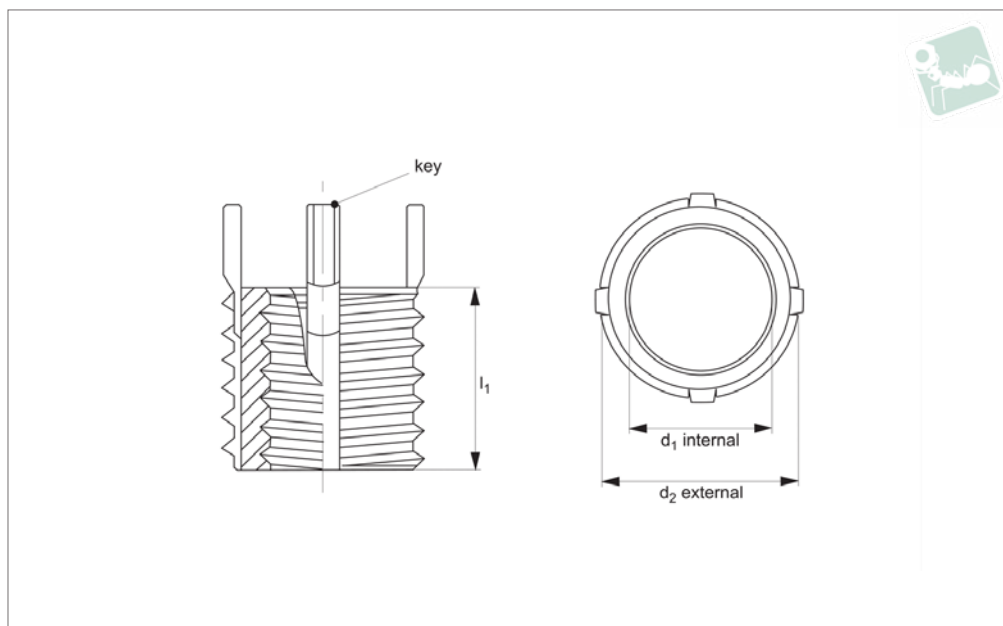
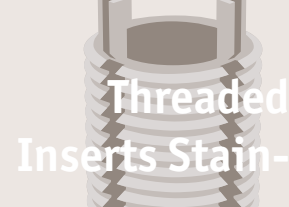


Order No.	Type	d ₁ tol. 3B	Thre ad type d ₁	d ₂ (mod.) class 2A	Thre ad type d ₂	Inst. tap drill size	l ₁	l ₂	l ₃ ±0.0 30	l ₄ c'bore depth	l ₅	Inst. c'sink hole size +0.010 -0.000	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1702	Removal drill depth	Rem oval drill size
TR1673.84525	SL	7/ 16- 20	UNF	9/ 16- 12	UNC	,516	,87	,56	,27	,07	,56	,572	,62	9/16- 12	.0250	3/16	15/ 32
TR1673.84326	SL	1/2- 13	UNC	5/8- 11	UNC	,578	1.06	,62	,28	,07	,62	,635	,68	5/8-11	.0260	3/16	17/ 32
TR1673.84526	SL	1/2- 20	UNF	5/8- 11	UNC	,578	1.06	,62	,28	,07	,62	,635	,68	5/8-11	.0260	3/16	17/ 32



Threaded Insert - Metric

heavy duty - stainless steel



TR1515

THREADED INSERTS STAINLESS

Material

Inserts: stainless steel (AISI 303) or equivalent. Passivated.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

±0,25, unless specified.

Tap drill hole tolerances:

6,9 to 10,8 = +0,10/-0,025.

12,8 and over = +0,13/-0,025.

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on internal threads M 8 and over. Two locking keys on internal threads smaller than M 8.

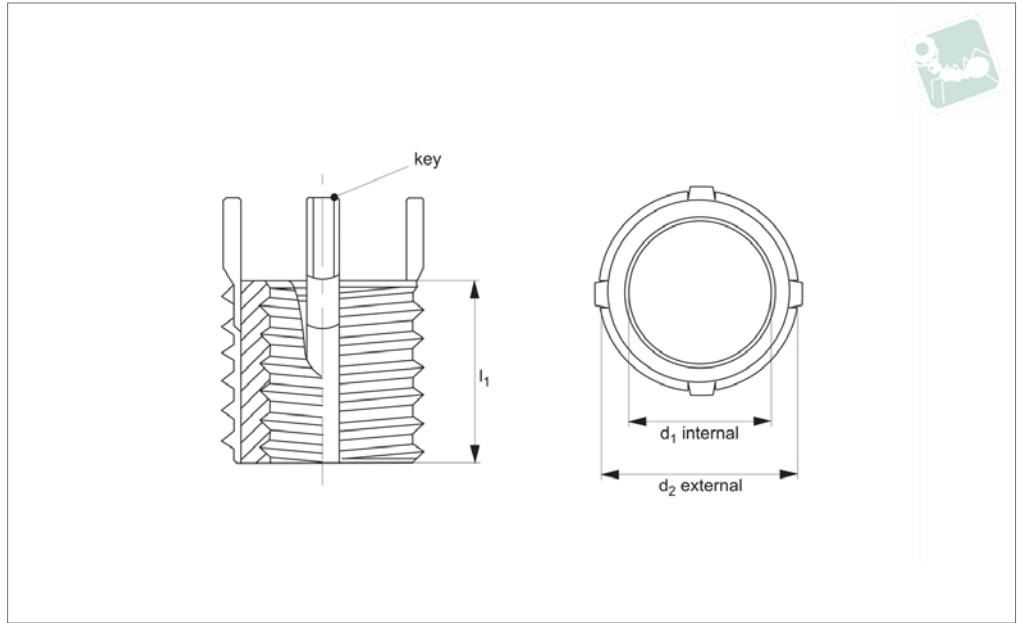
Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

Removal drill size and drill depth as speci-

Order No.	Int. d ₁ tol. 6H	Int. thread type d ₁	Ext. d ₂ tol. 6g	Ext. thread type d ₂	l ₁	Inst. tool ref. 22062	Inst. tap drill size	Inst. c'sink dia. ±0.25 ± 0.000	Inst. thread tap tol. 6H	Inst. thread depth min.	Removal drill size	Removal drill depth
TR1515.66363	M 4x0,70	Coarse	M 8x1,25	Coarse	8	.W0630	6,9	8,3	M 8x1,25	9,5	5,5	4,0
TR1515.66364	M 5x0,80	Coarse	M10x1,25	Fine	10	.W0640	8,8	10,3	M10x1,25	12,5	7,5	4,8
TR1515.66365	M 6x1,00	Coarse	M12x1,25	Fine	12	.W0650	10,8	12,3	M12x1,25	14,5	9,5	4,8
TR1515.66366	M 8x1,25	Coarse	M14x1,50	Fine	14	.W0660	12,8	14,3	M14x1,50	16,5	11,5	4,8
TR1515.66566	M 8x1,00	Fine	M14x1,50	Fine	14	.W0660	12,8	14,3	M14x1,50	16,5	11,5	4,8
TR1515.66367	M10x1,50	Coarse	M16x1,50	Fine	16	.W0670	14,8	16,3	M16x1,50	18,5	13,5	4,8
TR1515.66567	M10x1,25	Fine	M16x1,50	Fine	16	.W0670	14,8	16,3	M16x1,50	18,5	13,5	4,8
TR1515.66369	M12x1,75	Coarse	M18x1,50	Fine	18	.W0690	16,8	18,3	M18x1,50	20,5	15,5	4,8
TR1515.66569	M12x1,25	Fine	M18x1,50	Fine	18	.W0690	16,8	18,3	M18x1,50	20,5	15,5	4,8
TR1515.66370	M14x2,00	Coarse	M20x1,50	Fine	20	.W0700	18,8	20,3	M20x1,50	22,5	17,5	4,8
TR1515.66570	M14x1,50	Fine	M20x1,50	Fine	20	.W0700	18,8	20,3	M20x1,50	22,5	17,5	4,8
TR1515.66371	M16x2,00	Coarse	M22x1,50	Fine	22	.W0710	20,5	22,3	M22x1,50	24,5	17,8	6,4
TR1515.66571	M16x1,50	Fine	M22x1,50	Fine	22	.W0710	20,5	22,3	M22x1,50	24,5	17,8	6,4
TR1515.66572	M18x1,50	Fine	M24x1,50	Fine	24	.W0720	22,5	24,3	M24x1,50	26,5	19,8	6,4
TR1515.66373	M20x2,50	Coarse	M30x2,00	Non-Std	30	.W0730	28,0	30,3	M30x2,00	34,5	25,8	6,4
TR1515.66573	M20x1,50	Fine	M30x2,00	Non-Std	30	.W0730	28,0	30,3	M30x2,00	34,5	25,8	6,4
TR1515.66574	M22x1,50	Fine	M32x2,00	Non-Std	32	.W0740	30,0	32,3	M32x2,00	36,5	27,8	6,4
TR1515.66375	M24x3,00	Coarse	M33x2,00	Non-Std	33	.W0750	31,0	33,3	M33x2,00	37,5	28,8	6,4
TR1515.66575	M24x2,00	Fine	M33x2,00	Non-Std	33	.W0750	31,0	33,3	M33x2,00	37,5	28,8	6,4



TR1530



Material

Inserts: stainless steel (AISI 303) or equivalent. Passivated.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

±0,010" unless specified.

Tap drill hole tolerances:

0,234 to 0,500 = +0,004/-0,001"
0,500 and over = +0,005/-0,001"

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads M8 and over. Two locking keys on internal

threads smaller than M8.

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

Removal drill size and drill depth as specified in table.

Internal thread in metric. External thread in inches.

Order No.	Int. d ₁ tol. 6H	Int. thread type d ₁	Ext. d ₂ tol. 2A	Ext. thread type d ₂	l ₁	Inst. tool ref. 22064	Inst. tap drill size	Inst. c'sink dia. +0.010 - 0.000	Inst. thread tap tol. 2B	Inst. thread depth min.	Removal drill size	Removal drill depth
TR1530.66643	M 6x1,00	Coarse	3/8"-16	UNC	0,3	.W0430	21/64"	0,38	3/8"-16	0,37	9/32"	1/8"
TR1530.66644	M 8x1,25	Coarse	1/2"-13	UNC	0,4	.W0440	29/64"	0,51	1/2"-13	0,50	13/32"	3/16"
TR1530.66645	M10x1,50	Coarse	5/8"-11	UNC	0,5	.W0450	37/64"	0,63	5/8"-11	0,56	17/32"	3/16"
TR1530.66647	M12x1,75	Coarse	3/4"-16	UNF	0,6	.W0470	45/64"	0,76	3/4"-16	0,68	21/32"	3/16"
TR1530.66648	M14x2,00	Coarse	7/8"-14	UNF	0,8	.W0480	53/64"	0,88	7/8"-14	0,94	25/32"	5/16"
TR1530.66649	M16x2,00	Coarse	1"-12	UNF	0,9	.W0490	15/16"	1,02	1"-12	1,00	27/32"	5/16"

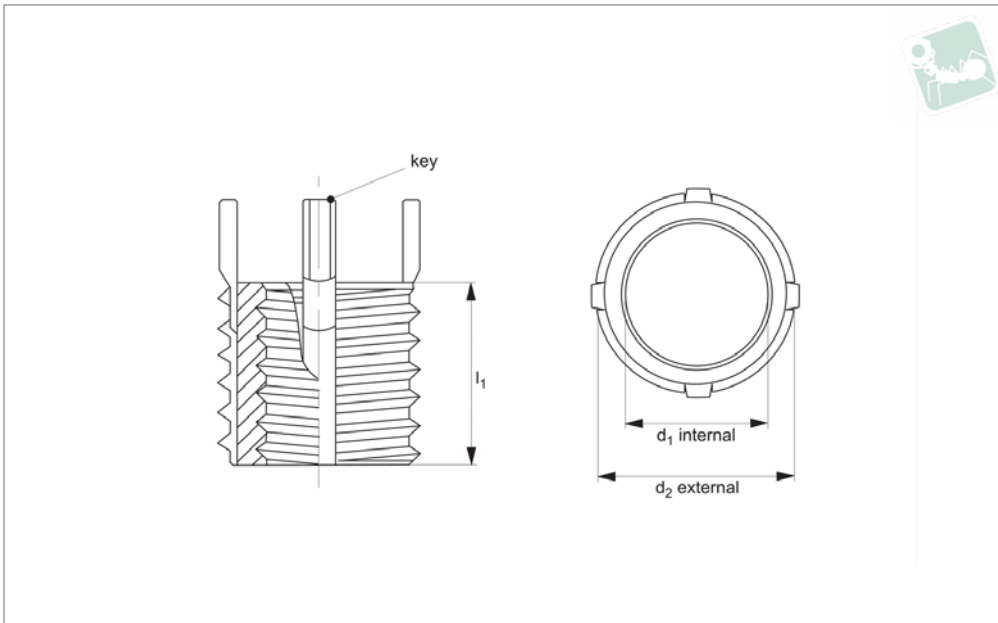
Threaded Insert - Inch heavy duty - stainless steel

Threaded
Inserts Stain-



TR1565

THREADED INSERTS STAINLESS



Material

Inserts: stainless steel (AISI 303) or equivalent. Passivated.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

± 0,010" unless specified.

Tap drill hole tolerances:

0,234 to 0,500 = +0,004/-0,001".

0,500 and over = +0,005/-0,001".

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/16" and over. Two locking keys on internal

threads smaller than 5/16".

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

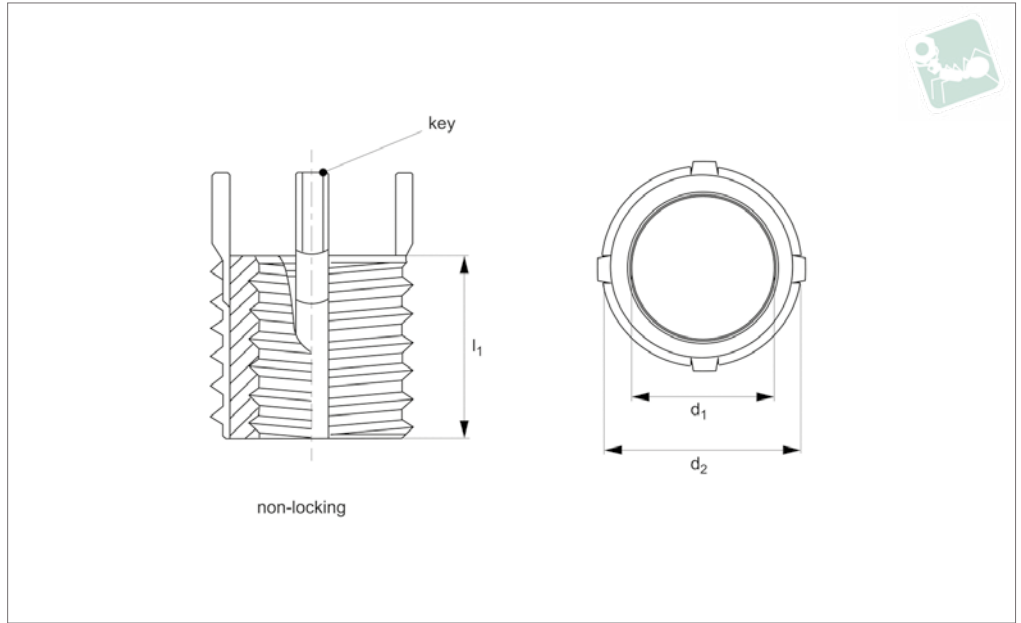
Removal drill size and drill depth as specified in table.

All dimensions in inches.

Order No.	Int. d ₁ tol. 2B	Int. thread type d ₁	Ext. d ₂ tol. 2A	Ext. thread type d ₂	l ₁	Inst. tool ref. 22056	Inst. tap drill size	Inst. c'sink dia. +0.010 - 0.000	Inst. thread tap tol. 2B	Inst. thread depth min.	Removal drill size	Removal drill depth
TR1565.66300	8-32	UNC	5/16"-18	UNC	0,31	.W0000	17/64"	0,32	5/16"-18	0,37	7/32"	1/8"
TR1565.66301	10-24	UNC	3/8"-16	UNC	0,31	.W0010	21/64"	0,38	3/8"-16	0,37	9/32"	1/8"
TR1565.66501	10-32	UNF	3/8"-16	UNC	0,31	.W0010	21/64"	0,38	3/8"-16	0,37	9/32"	1/8"
TR1565.66302	1/4"-20	UNC	7/16"-14	UNC	0,37	.W0020	25/64"	0,44	7/16"-14	0,43	11/32"	3/16"
TR1565.66502	1/4"-28	UNF	7/16"-14	UNC	0,37	.W0020	25/64"	0,44	7/16"-14	0,43	11/32"	3/16"
TR1565.66303	5/16"-18	UNC	1/2"-13	UNC	0,43	.W0030	29/64"	0,51	1/2"-13	0,50	13/32"	3/16"
TR1565.66503	5/16"-24	UNF	1/2"-13	UNC	0,43	.W0030	29/64"	0,51	1/2"-13	0,50	13/32"	3/16"
TR1565.66304	3/8"-16	UNC	9/16"-12	UNC	0,50	.W0040	33/64"	0,57	9/16"-12	0,56	15/32"	3/16"
TR1565.66504	3/8"-24	UNF	9/16"-12	UNC	0,50	.W0040	33/64"	0,57	9/16"-12	0,56	15/32"	3/16"
TR1565.66305	7/16"-14	UNC	5/8"-11	UNC	0,62	.W0050	37/64"	0,63	5/8"-11	0,68	17/32"	3/16"
TR1565.66505	7/16"-20	UNF	5/8"-11	UNC	0,62	.W0050	37/64"	0,63	5/8"-11	0,68	17/32"	3/16"
TR1565.66306	1/2"-13	UNC	3/4"-16	UNF	0,62	.W0060	45/64"	0,76	3/4"-16	0,68	21/32"	3/16"
TR1565.66506	1/2"-20	UNF	3/4"-16	UNF	0,62	.W0060	45/64"	0,76	3/4"-16	0,68	21/32"	3/16"
TR1565.66307	9/16"-12	UNC	3/4"-16	UNF	0,81	.W0070	45-64"	0,76	3/4"-16	0,94	21/32"	3/16"
TR1565.66507	9/16"-18	UNF	3/4"-16	UNF	0,81	.W0070	45-64"	0,76	3/4"-16	0,94	21/32"	3/16"
TR1565.66308	5/8"-11	UNC	7/8"-14	UNF	0,87	.W0080	53/64"	0,88	7/8"-14	1,00	25/32"	5/16"
TR1565.66508	5/8"-18	UNF	7/8"-14	UNF	0,87	.W0080	53/64"	0,88	7/8"-14	1,00	25/32"	5/16"
TR1565.66309	3/4"-10	UNC	1-1/8"-12	UNF	1,12	.W0090	1-1/16"	1,14	1-1/8"-12	1,31	31/32"	5/16"
TR1565.66509	3/4"-16	UNF	1-1/8"-12	UNF	1,12	.W0090	1-1/16"	1,14	1-1/8"-12	1,31	31/32"	5/16"
TR1565.66310	7/8"-9	UNC	1-1/4"-12	UNF	1,25	.W0100	1-3/16"	1,27	1-1/4"-12	1,44	1-3/32"	5/16"
TR1565.66510	7/8"-14	UNF	1-1/4"-12	UNF	1,25	.W0100	1-3/16"	1,27	1-1/4"-12	1,44	1-3/32"	5/16"
TR1565.66311	1"-8	UNC	1-3/8"-12	UNF	1,37	.W0110	1-5/16"	1,39	1-3/8"-12	1,56	1-7/32"	5/16"
TR1565.66511	1"-12	UNF	1-3/8"-12	UNF	1,37	.W0110	1-5/16"	1,39	1-3/8"-12	1,56	1-7/32"	5/16"



TR1604



Material

Inserts - 303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in millimetres.
Internal threads: to Fed. Std. H28/21, MJ Form

General tolerances -

+/- 0,25mm, unless specified.
Tap drill hole tolerances -
6,9 to 10,8 = +0,100/-0,025
12,8 and over = +0,130/-0,025
NL = Non-Locking type.

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

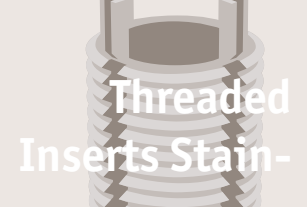
Important Notes

Four locking keys on internal threads M6 and over. Two locking keys on internal threads smaller than M6.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.

Order No.	Type	d ₁ tol. 4H type 5H	Thread type d ₁	d ₂ tol. 4h type d ₂	Thread type d ₂	l ₁	l ₄ c'bore depth	C'bore hole dia. +0.25 -0.00	Inst. tap drill size	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Inst. tool ref. TR1715	Removal drill size	Removal drill depth
TR1604.76363	NL	M 4x0,7	Coars e	M 8x1,25	Coars e	8.0	1.27	8.25	6.90	M 8x1,25	9.5	.0630	5.50	4.00
TR1604.76364	NL	M 5x0,8	Coars e	M10 x1,25	Fine	10.0	1.27	10.25	8.80	M10x1,25	12.5	.0640	7.50	4.75
TR1604.76365	NL	M 6x1,0	Coars e	M12 x1,25	Fine	12.0	1.78	12.25	10.80	M12x1,25	14.5	.0650	9.50	4.75
TR1604.76366	NL	M 8x1,25	Coars e	M14 x1,5	Fine	14.0	1.78	14.25	12.80	M14x1,5	16.5	.0660	11.50	4.75
TR1604.76566	NL	M 8x1,0	Fine	M14 x1,5	Fine	14.0	1.78	14.25	12.80	M14x1,5	16.5	.0660	11.50	4.75
TR1604.76367	NL	M10 x1,5	Coars e	M16 x1,5	Fine	16.0	2.29	16.25	14.75	M16x1,5	18.5	.0670	13.50	4.75
TR1604.76567	NL	M10 x1,25	Fine	M16 x1,5	Fine	16.0	2.29	16.25	14.75	M16x1,5	18.5	.0670	13.50	4.75
TR1604.76369	NL	M12 x1,75	Coars e	M18 x1,5	Fine	18.0	2.29	18.25	16.75	M18x1,5	20.5	.0690	15.50	4.75



Threaded Insert MS/NAS - H Duty - 303 stainless steel - non-locking - MS/NAS grade

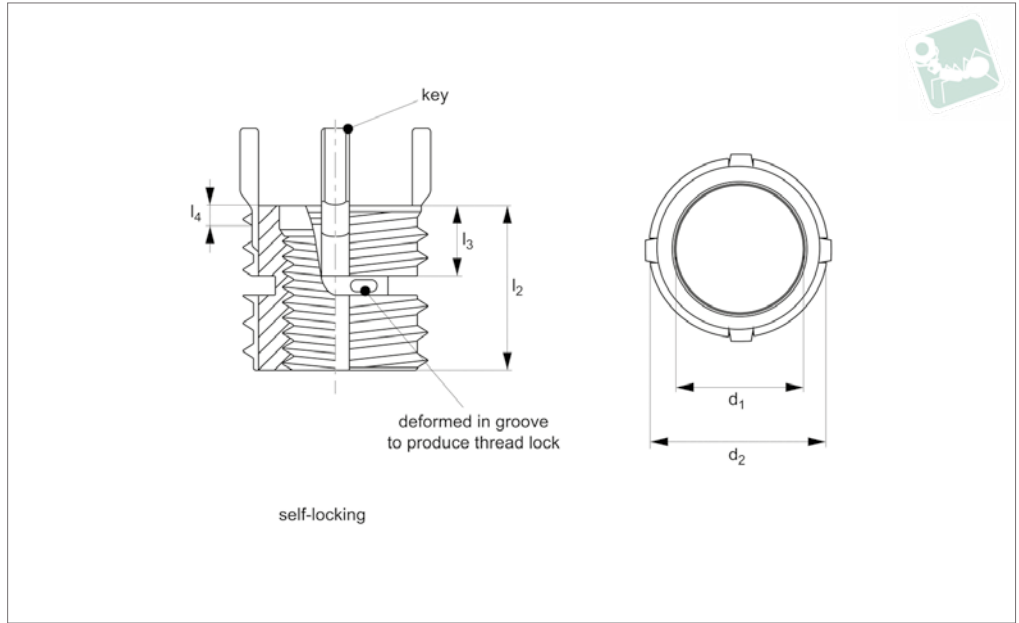


Order No.	Type	d ₁ tol. 4H 5H	Thread type d ₁	d ₂ tol. 4h	Thread type d ₂	l ₁	l ₄ c'bore depth	C'bore hole dia. +0.25 -0.00	Inst. tap drill size	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Inst. tool ref. TR1715	Removal drill size	Removal drill depth
TR1604.76569	NL	M12 x1,2 5	Fine	M18 x1,5	Fine	18.0	2.29	18.25	16.75	M18x1 ,5	20.5	.0690	15.50	4.75
TR1604.76370	NL	M14 x2,0	Coars e	M20 x1,5	Fine	20.0	2.79	20.25	18.75	M20x1 ,5	22.5	.0700	17.50	4.75
TR1604.76570	NL	M14 x1,5	Fine	M20 x1,5	Fine	20.0	2.79	20.25	18.75	M20x1 ,5	22.5	.0700	17.50	4.75
TR1604.76371	NL	M16 x2,0	Coars e	M22 x1,5	Fine	22.0	2.79	22.25	20.50	M22x1 ,5	24.5	.0710	17.75	6.35
TR1604.76571	NL	M16 x1,5	Fine	M22 x1,5	Fine	22.0	2.79	22.25	20.50	M22x1 ,5	24.5	.0710	17.75	6.35
TR1604.76572	NL	M18 x1,5	Fine	M24 x2,0	Fine	24.0	2.79	24.25	22.50	M24x2 ,0	28.5	.0720	19.75	6.35
TR1604.76373	NL	M20 x2,5	Coars e	M30 x2,0	Fine	30.0	2.79	30.25	28.00	M30x2 ,0	34.5	.0730	25.75	6.35
TR1604.76573	NL	M20 x1,5	Fine	M30 x2,0	Fine	30.0	2.79	30.25	28.00	M30x2 ,0	34.5	.0730	25.75	6.35
TR1604.76574	NL	M22 x1,5	Fine	M32 x2,0	Non- Std	32.0	2.79	32.25	30.00	M32x2 ,0	36.5	.0740	27.75	6.35
TR1604.76375	NL	M24 x3,0	Coars e	M33 x2,0	Non- Std	33.0	3.81	33.25	31.00	M33x2 ,0	37.5	.0750	28.75	6.35
TR1604.76575	NL	M24 x2,0	Fine	M33 x2,0	Non- Std	33.0	3.81	33.25	31.00	M33x2 ,0	37.5	.0750	28.75	6.35

THREADED INSERTS STAINLESS



TR1605



Material

Inserts - 303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in millimetres.
Internal threads: to Fed. Std. H28/21, MJ Form
General tolerances -

+/- 0,25mm, unless specified.

Tap drill hole tolerances -
6,9 to 10,8 = +0,100/-0,025
12,8 and over = +0,130/-0,025

SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads M6 and over. Two locking keys on internal threads smaller than M6.

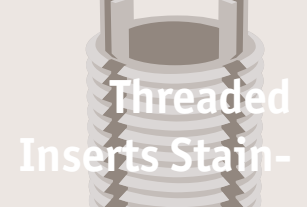
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.

Removal (Rem.) drill size and drill depth as specified in table.

Order No.	Type	d ₁ tol. 5H	Thread type	d ₂ tol. 4h	Thread type	l ₁	l ₃ ±0.76	l ₄ c'bor dept h	C'bore hole dia. +0.25 -0.00	Inst. tap drill size	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Inst. tool ref. TR1715	Removal drill size	Removal drill depth
TR1605.77363	SL	M 4x0,7	Coars e	M 8x1,25	Coars e	8.0	5.00	1.27	8.25	6.90	M 8x1,25	9.5	.0630	5.50	4.00
TR1605.77364	SL	M 5x0,8	Coars e	M10 x1,25	Fine	10.0	5.50	1.27	10.25	8.80	M10x 1,25	12.5	.0640	7.50	4.75
TR1605.77365	SL	M 6x1,0	Coars e	M12 x1,25	Fine	12.0	6.46	1.78	12.25	10.80	M 2x1,25	14.5	.0650	9.50	4.75
TR1605.77366	SL	M 8x1,25	Coars e	M14 x1,5	Fine	14.0	6.46	1.78	14.25	12.80	M14x 1,5	16.5	.0660	11.50	4.75
TR1605.77566	SL	M 8x1,0	Fine	M14 x1,5	Fine	14.0	6.46	1.78	14.25	12.80	M14x 1,5	16.5	.0660	11.50	4.75
TR1605.77367	SL	M10 x1,5	Coars e	M16 x1,5	Fine	16.0	6.46	2.29	16.25	14.75	M16x 1,5	18.5	.0670	13.50	4.75
TR1605.77567	SL	M10 x1,25	Fine	M16 x1,5	Fine	16.0	6.46	2.29	16.25	14.75	M16x 1,5	18.5	.0670	13.50	4.75
TR1605.77369	SL	M12 x1,75	Coars e	M18 x1,5	Fine	18.0	7.23	2.29	18.25	16.75	M18x 1,5	20.5	.0690	15.50	4.75



Threaded Insert MS/NAS - H Duty - 303 stainless steel - self-locking - MS/NAS grade



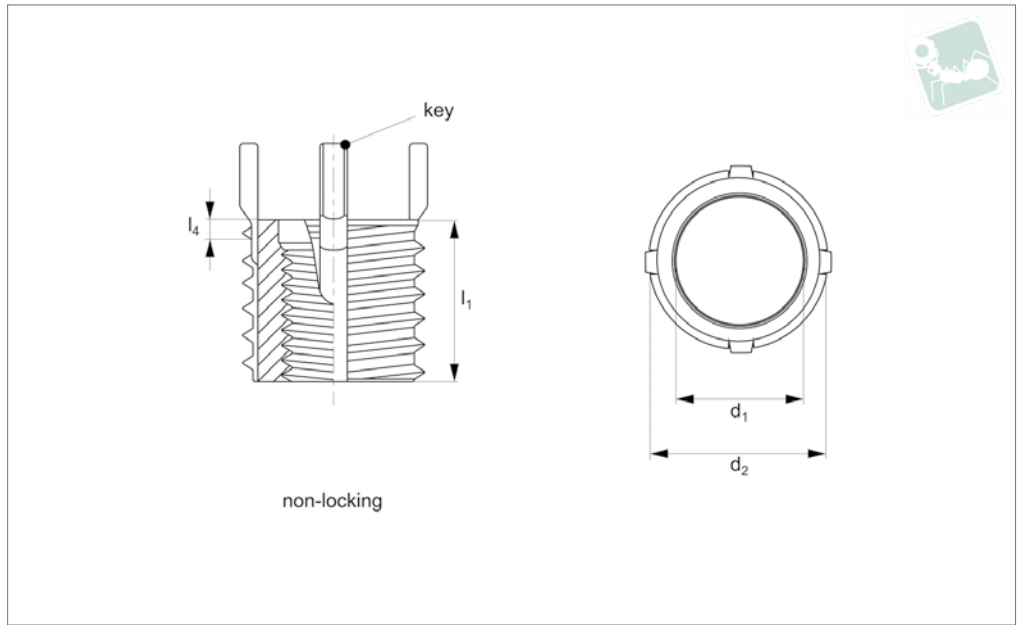
Threaded
Inserts Stain-

Order No.	Type	d ₁ tol. 4H 5H	Thread type d ₁	d ₂ tol. 4h	Thread type d ₂	l ₁	l ₃ ±0.76	l ₄ e	c'bor h	C'bore hole dia. +0.25 - 0.00	Inst. tap drill size	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Inst. tool ref. TR1715	Removal drill size	Removal drill depth
TR1605.77569	SL	M12 x1,2 5	Fine	M18 x1,5	Fine	18.0	7.23	2.29	18.25	16.75	M18x 1,5	20.5	.0690	15.50	4.75	
TR1605.77370	SL	M14 x2,0	Coars e	M20 x1,5	Fine	20.0	7.73	2.79	20.25	18.75	M20x 1,5	22.5	.0700	17.50	4.75	
TR1605.77570	SL	M14 x1,5	Fine	M20 x1,5	Fine	20.0	7.73	2.79	20.25	18.75	M20x 1,5	22.5	.0700	17.50	4.75	
TR1605.77371	SL	M16 x2,0	Coars e	M22 x1,5	Fine	22.0	8.50	2.79	22.25	20.50	M22x 1,5	24.5	.0710	17.75	6.35	
TR1605.77571	SL	M16 x1,5	Fine	M22 x1,5	Fine	22.0	8.50	2.79	22.25	20.50	M22x 1,5	24.5	.0710	17.75	6.35	
TR1605.77572	SL	M18 x1,5	Fine	M24 x2,0	Fine	24.0	9.25	2.79	24.25	22.50	M24x 2,0	28.5	.0720	19.75	6.35	
TR1605.77373	SL	M20 x2,5	Coars e	M30 x2,0	Fine	30.0	12.5 1	2.79	30.25	28.00	M30x 2,0	34.5	.0730	25.75	6.35	
TR1605.77573	SL	M20 x1,5	Fine	M30 x2,0	Fine	30.0	12.5 1	2.79	30.25	28.00	M30x 2,0	34.5	.0730	25.75	6.35	
TR1605.77574	SL	M22 x1,5	Fine	M32 x2,0	Non- Std	32.0	12.5 1	2.79	32.25	30.00	M32x 2,0	36.5	.0740	27.75	6.35	
TR1605.77375	SL	M24 x3,0	Coars e	M33 x2,0	Non- Std	33.0	13.9 7	3.81	33.25	31.00	M33x 2,0	37.5	.0750	28.75	6.35	
TR1605.77575	SL	M24 x2,0	Fine	M33 x2,0	Non- Std	33.0	13.9 7	3.81	33.25	31.00	M33x 2,0	37.5	.0750	28.75	6.35	

THREADED INSERTS STAINLESS



TR1654



Material

Inserts - 303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -
+/- 0,010 unless specified.

Tap drill hole tolerances -
0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
NL = Non-Locking type.

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

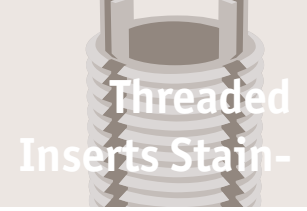
Four locking keys on internal threads 5/16

and over. Two locking keys on internal threads smaller than 5/16.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: MIL-I-45914A (MS51830 & NAS1394)

Order No.	Type	d ₁ tol. 3B	Thread type d ₁	d ₂ (mod.) class 2A	Thread type d ₂	l ₁	l ₄ c'bore depth	Inst. c'sink hole size +0.010 -0.000	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class B	Inst. tool ref. TR1705	Removal drill size	Removal drill depth
TR1654.76300	NL	8-32	UNC	5/16-18	UNC	,312	,04	,323	,272	,37	5/16-18	.0000	7/32	1/8
TR1654.76301	NL	10-24	UNC	3/8-16	UNC	,312	,07	,385	,332	,37	3/8-16	.0010	9/32	1/8
TR1654.76501	NL	10-32	UNF	3/8-16	UNC	,312	,07	,385	,332	,37	3/8-16	.0011	9/32	1/8
TR1654.76302	NL	1/4-20	UNC	7/16-14	UNC	,375	,07	,447	,397	,43	7/16-14	.0020	11/32	3/16
TR1654.76502	NL	1/4-28	UNF	7/16-14	UNC	,375	,07	,447	,397	,43	7/16-14	.0021	11/32	3/16
TR1654.76303	NL	5/16-18	UNC	1/2-13	UNC	,437	,07	,510	,453	,50	1/2-13	.0030	13/32	3/16
TR1654.76503	NL	5/16-24	UNF	1/2-13	UNC	,437	,07	,510	,453	,50	1/2-13	.0031	13/32	3/16
TR1654.76304	NL	3/8-16	UNC	9/16-12	UNC	,500	,07	,572	,516	,56	9-16-12	.0040	15/32	3/16
TR1654.76504	NL	3/8-24	UNF	9/16-12	UNC	,500	,07	,572	,516	,56	9-16-12	.0041	15/32	3/16
TR1654.76305	NL	7/16-14	UNC	5/8-11	UNC	,625	,10	,635	,578	,68	5/8-11	.0050	17/32	3/16



Threaded Insert MS/NAS - H Duty - 303 stainless steel - non-locking - MS/NAS grade

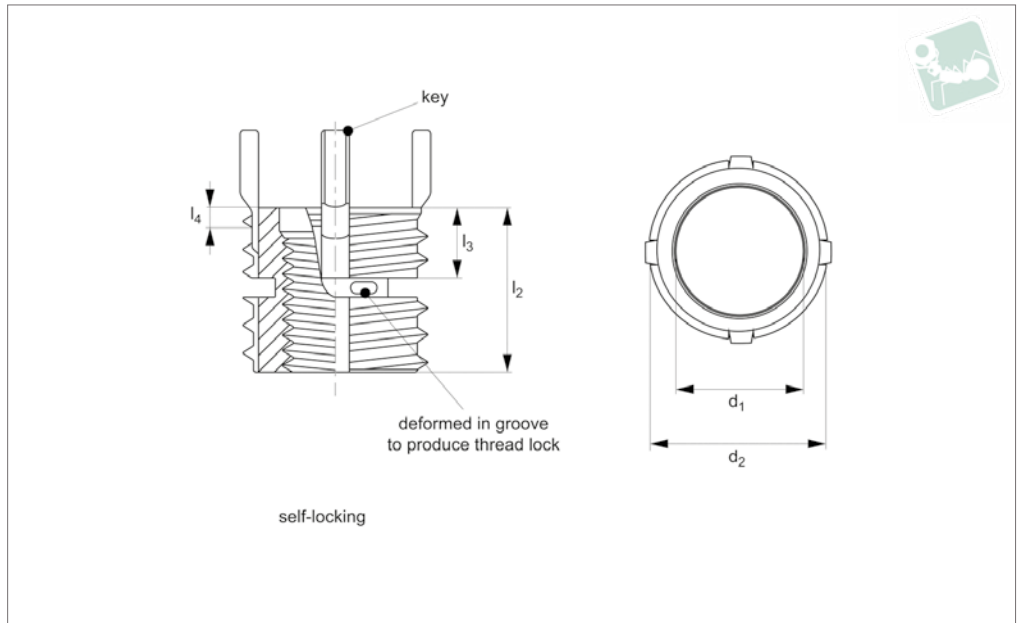


Order No.	Type	d ₁ tol. 3B	Thread type d ₁	d ₂ (mod.) class 2A	Thread type d ₂	l ₁	l ₄ c'bore depth	Inst. c'sink hole size +0.010 - 0.000	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class B	Inst. tool ref. TR1705	Removal drill size	Removal drill depth
TR1654.76505	NL	7/ 16- 20	UNF	5/8- 11	UNC	,625	,10	,635	,578	,68	5/8-11	.0051	17/32	3/16
TR1654.76306	NL	1/2- 13	UNC	11/ 16- 11NS	UNS	,688	,10	,700	,641	,75	11/16- 11NS	.0060	19/32	3/16
TR1654.76506	NL	1/2- 20	UNF	11/ 16- 11NS	UNS	,688	,10	,700	,641	,75	11/16- 11NS	.0061	19/32	3/16
TR1654.76307	NL	9/ 16- 12	UNC	13/ 16-16	UNF	,812	,10	,822	,766	,94	13/16-16	.0070	23/32	3/16
TR1654.76507	NL	9/ 16- 18	UNF	13/ 16-16	UNF	,812	,10	,822	,766	,94	13/16-16	.0071	23/32	3/16
TR1654.76308	NL	5/8- 11	UNC	7/8- 14	UNF	,875	,10	,885	,828	1.00	7/8-14	.0080	25/32	3/16
TR1654.76508	NL	5/8- 18	UNF	7/8- 14	UNF	,875	,10	,885	,828	1.00	7/8-14	.0081	25/32	3/16
TR1654.76309	NL	3/4- 10	UNC	1-1/ 8-12	UNF	1.12 5	,10	1.145	1.062	1.31	1-1/8-12	.0090	31/32	5/16
TR1654.76509	NL	3/4- 16	UNF	1-1/ 8-12	UNF	1.12 5	,10	1.145	1.062	1.31	1-1/8-12	.0091	31/32	5/16
TR1654.76310	NL	7/8- 9	UNC	1-1/ 4-12	UNF	1.25 0	,10	1.270	1.187	1.44	1-1/4-12	.0100	1-3/32	5/16
TR1654.76510	NL	7/8- 14	UNF	1-1/ 4-12	UNF	1.25 0	,10	1.270	1.187	1.44	1-1/4-12	.0101	1-3/32	5/16
TR1654.76311	NL	1-8	UNC	1-3/ 8-12	UNF	1.37 5	,10	1.395	1.312	1.56	1-3/8-12	.0110	1-7/32	5/16
TR1654.76511	NL	1-12	UNF	1-3/ 8-12	UNF	1.37 5	,10	1.395	1.312	1.56	1-3/8-12	.0111	1-7/32	5/16

THREADED INSERTS STAINLESS



TR1655



Material

Inserts - 303 CRES.

Keys - 302 CRES.

Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.

Internal threads: to SAE AS8879.

General tolerances -

+/- 0,010 unless specified.

Tap drill hole tolerances -

0,234 to 0,500 = +0,004/-0,001

0,500 and over = +0,005/-0,001

SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/16

and over. Two locking keys on internal threads smaller than 5/16.

Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.

Removal (Rem.) drill size and drill depth as specified in table.

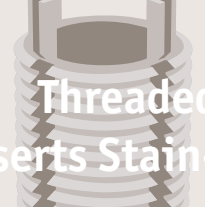
Perform to standards: MIL-I-45914A (MS51830 & NAS1394)

Order No.	Type	d ₁ tol. 3B	Thread type d ₁	d ₂ (mod.) class 2A	Thread type d ₂	l ₁	l ₃ ±0.0 30	c'bore depth	c'sink hole size +0.010 - 0.000	Inst. drill size	Inst. thread tap depth min.	Inst. thread tap size class B	Inst. tool ref. TR1705	Removal drill size	Removal drill depth
TR1655.77300	SL	8-32	UNC	5/16-18	UNC	,312	,22	,04	,323	,272	,37	5/16-18	.0000	7/32	1/8
TR1655.77301	SL	10-24	UNC	3/8-16	UNC	,312	,22	,07	,385	,332	,37	3/8-16	.0010	9/32	1/8
TR1655.77501	SL	10-32	UNF	3/8-16	UNC	,312	,22	,07	,385	,332	,37	3/8-16	.0011	9/32	1/8
TR1655.77302	SL	1/4-20	UNC	7/16-14	UNC	,375	,22	,07	,447	,397	,43	7/16-14	.0020	11/32	3/16
TR1655.77502	SL	1/4-28	UNF	7/16-14	UNC	,375	,22	,07	,447	,397	,43	7/16-14	.0021	11/32	3/16
TR1655.77303	SL	5/16-18	UNC	1/2-13	UNC	,437	,22	,07	,510	,453	,50	1/2-13	.0030	13/32	3/16
TR1655.77503	SL	5/16-24	UNF	1/2-13	UNC	,437	,22	,07	,510	,453	,50	1/2-13	.0031	13/32	3/16
TR1655.77304	SL	3/8-16	UNC	9/16-12	UNC	,500	,25	,07	,572	,516	,56	9/16-12	.0040	15/32	3/16
TR1655.77504	SL	3/8-24	UNF	9/16-12	UNC	,500	,25	,07	,572	,516	,56	9/16-12	.0041	15/32	3/16
TR1655.77305	SL	7/16-14	UNC	5/8-11	UNC	,625	,28	,10	,635	,578	,68	5/8-11	.0050	17/32	3/16
TR1655.77505	SL	7/16-20	UNF	5/8-11	UNC	,625	,28	,10	,635	,578	,68	5/8-11	.0051	17/32	3/16
TR1655.77306	SL	1/2-13	UNC	11/16-11NS	UNS	,688	,28	,10	,700	,641	,75	11/16-11NS	.0060	19/32	3/16
TR1655.77506	SL	1/2-20	UNF	11/16-11NS	UNS	,688	,28	,10	,700	,641	,75	11/16-11NS	.0061	19/32	3/16
TR1655.77307	SL	9/16-12	UNC	13/16-16	UN	,812	,32	,10	,822	,766	,94	13/16-16	.0070	23/32	3/16
TR1655.77507	SL	9/16-18	UNF	13/16-16	UN	,812	,32	,10	,822	,766	,94	13/16-16	.0071	23/32	3/16
TR1655.77308	SL	5/8-11	UNC	7/8-14	UNF	,875	,33	,10	,885	,828	1,00	7/8-14	.0080	25/32	3/16
TR1655.77508	SL	5/8-18	UNF	7/8-14	UNF	,875	,33	,10	,885	,828	1,00	7/8-14	.0081	25/32	3/16
TR1655.77309	SL	3/4-10	UNC	1-1/8-12	UNF	1,250	,49	,10	1,145	1,062	1,44	1-1/8-12	.0090	31/32	5/16
TR1655.77509	SL	3/4-16	UNF	1-1/8-12	UNF	1,250	,49	,10	1,145	1,062	1,44	1-1/8-12	.0091	31/32	5/16
TR1655.77310	SL	7/8-9	UNC	1-1/4-12	UNF	1,375	,49	,10	1,270	1,187	1,56	1-1/4-12	.0100	1-3/32	5/16
TR1655.77510	SL	7/8-14	UNF	1-1/4-12	UNF	1,375	,49	,10	1,270	1,187	1,56	1-1/4-12	.0101	1-3/32	5/16
TR1655.77311	SL	1-8	UNC	1-3/8-12	UNF	1,500	,55	,10	1,395	1,312	1,68	1-3/8-12	.0110	1-7/32	5/16



Threaded Insert MS/NAS - H Duty - 303 stainless steel - self-locking - MS/NAS grade

Threaded
Inserts Stain-

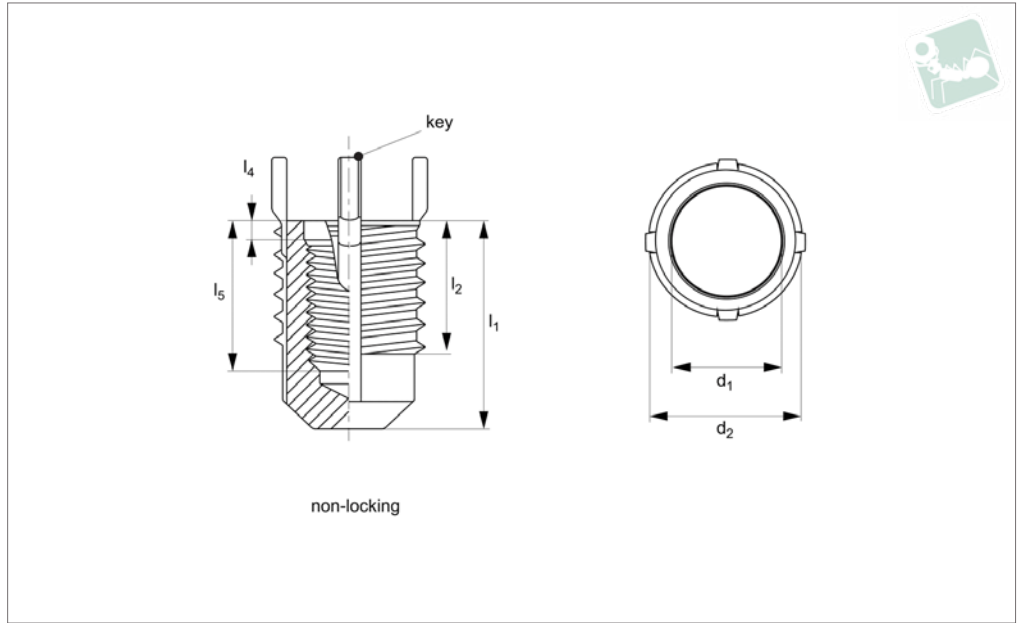


Order No.	Type	d ₁ tol. 3B	Thread type d ₁	d ₂ (mod.) class 2A	Thread type d ₂	l ₁	l ₃ ±0.0 c'bore 30	l ₄ depth	Inst. c'sink hole size +0.010 - 0.000	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class B	Inst. tool ref. TR1705	Removal drill size	Removal drill depth
TR1655.77511	SL	1-12	UNF	1-3/8-12	UNF	1,500	,55	,10	1,395	1,312	1,68	1-3/8-12	.0111	1-7/32	5/16

THREADED INSERTS STAINLESS



TR1675



Material

Inserts - 303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -
+/- 0,010 unless specified.

Tap drill hole tolerances -

0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
NL = Non-Locking type.

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/16

and over. Two locking keys on internal threads smaller than 5/16.

Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.

Removal (Rem.) drill size and drill depth as specified in table.

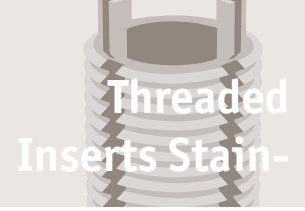
Perform to standards: MIL-I-45914A

Order No.	Type	d ₁ tol. 3B	Thread type d ₁	d ₁ (mod.) class 2A	Thread type d ₂	l ₁	l ₂	l ₄ c'bore depth	l ₅	Inst. c'sink hole size +0.010 - 0.000	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1705	Removal drill size	Removal drill depth
TR1675.83300	NL	8-32	UNC	5/16-18	UNC	,50	,31	,04	,31	,323	,272	,37	5/16-18	.0000	7/32	1/8
TR1675.83301	NL	10-24	UNC	3/8-16	UNC	,56	,31	,07	,31	,385	,332	,37	3/8-16	.0010	9/32	1/8
TR1675.83501	NL	10-32	UNF	3/8-16	UNC	,56	,31	,07	,31	,385	,332	,37	3/8-16	.0011	9/32	1/8
TR1675.83302	NL	1/4-20	UNC	7/16-14	UNC	,62	,37	,07	,37	,447	,397	,43	7/16-14	.0020	11/32	3/16
TR1675.83502	NL	1/4-28	UNF	7/16-14	UNC	,62	,37	,07	,37	,447	,397	,43	7/16-14	.0021	11/32	3/16
TR1675.83303	NL	5/16-18	UNC	1/2-13	UNC	,75	,43	,07	,43	,510	,453	,50	1/2-13	.0030	13/32	3/16
TR1675.83503	NL	5/16-24	UNF	1/2-13	UNC	,75	,43	,07	,43	,510	,453	,50	1/2-13	.0031	13/32	3/16
TR1675.83304	NL	3/8-16	UNC	9/16-12	UNC	,81	,50	,07	,50	,572	,516	,56	9/16-12	.0040	15/32	3/16
TR1675.83504	NL	3/8-24	UNF	9/16-12	UNC	,81	,50	,07	,50	,572	,516	,56	9/16-12	.0041	15/32	3/16
TR1675.83305	NL	7/16-14	UNC	5/8-11	UNC	1,00	,62	,10	,62	,635	,578	,68	5/8-11	.0050	17/32	3/16
TR1675.83505	NL	7/16-20	UNF	5/8-11	UNC	1,00	,62	,10	,62	,635	,578	,68	5/8-11	.0051	17/32	3/16
TR1675.83306	NL	1/2-13	UNC	11/16-11NS	UNS	1,06	,68	,10	,68	,700	,641	,75	11/16-11NS	.0060	19/32	3/16
TR1675.83506	NL	1/2-20	UNF	11/16-11NS	UNS	1,06	,68	,10	,68	,700	,641	,75	11/16-11NS	.0061	19/32	3/16
TR1675.83307	NL	9/16-12	UNC	13/16-16	UN	1,25	,81	,10	,81	,822	,766	,94	13/16-16	.0070	23/32	3/16
TR1675.83507	NL	9/16-18	UNF	13/16-16	UN	1,25	,81	,10	,81	,822	,766	,94	13/16-16	.0071	23/32	3/16
TR1675.83308	NL	5/8-11	UNC	7/8-14	UNF	1,31	,87	,10	,87	,885	,828	1,00	7/8-14	.0080	25/32	3/16
TR1675.83508	NL	5/8-18	UNF	7/8-14	UNF	1,31	,87	,10	,87	,885	,828	1,00	7/8-14	.0081	25/32	3/16
TR1675.83509	NL	3/4-16	UNF	1-1/8-12	UNF	1,75	1,25	,10	1,25	1,145	1,062	1,44	1-1/8-12	.0091	31/32	5/16
TR1675.83310	NL	7/8-9	UNF	1-1/4-12	UNF	1,94	1,37	,10	1,37	1,270	1,187	1,56	1-1/4-12	.0100	1-3/32	5/16
TR1675.83510	NL	7/8-14	UNC	1-1/4-12	UNF	1,94	1,37	,10	1,37	1,270	1,187	1,56	1-1/4-12	.0101	1-3/32	5/16
TR1675.83311	NL	1-8	UNF	1-3/8-12	UNF	2,12	1,50	,10	1,50	1,395	1,312	1,68	1-3/8-12	.0110	1-7/32	5/16
TR1675.83511	NL	1-12	UNC	1-3/8-12	UNF	2,12	1,50	,10	1,50	1,395	1,312	1,68	1-3/8-12	.0111	1-7/32	5/16

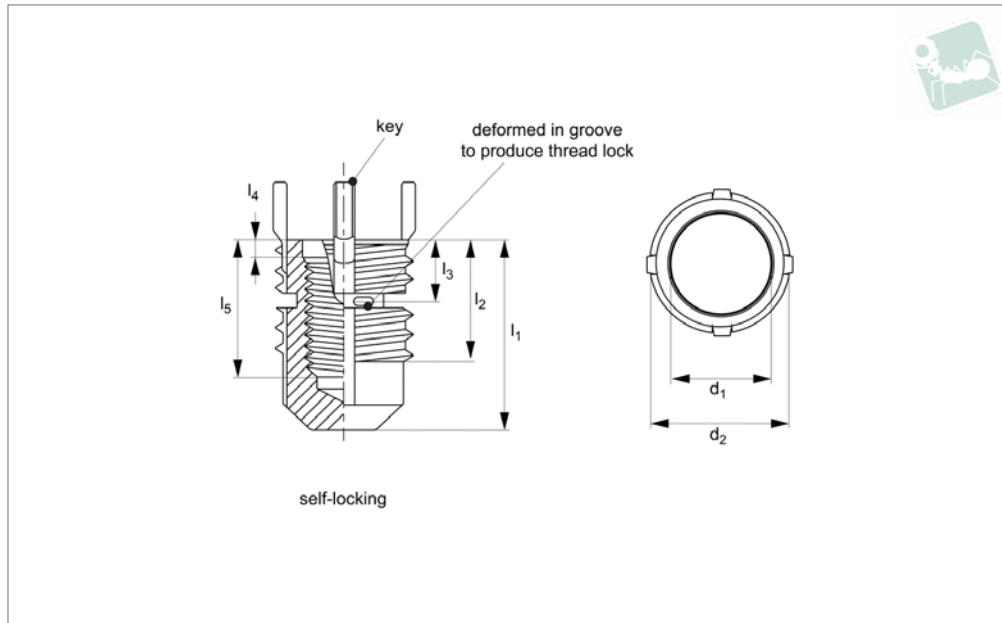


Blind Threaded Insert - H Duty - Inch

303 stainless steel - self-locking



Threaded Inserts Stain-



TR1676

THREADED INSERTS STAINLESS

Material

Inserts - 303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -
+/- 0,010 unless specified.

Tap drill hole tolerances -

0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/16 and over. Two locking keys on internal threads smaller than 5/16.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: MIL-I-45914A

Order No.	Type	d ₁ tol. 3B	Thread type d ₁	d ₂ (mod.) class 2A	Thread type d ₂	l ₁	l ₂	l ₃ ±0,030
TR1676.84300	SL	8-32	UNC	5/16-18	UNC	,50	,31	,22
TR1676.84301	SL	10-24	UNC	3/8-16	UNC	,56	,31	,22
TR1676.84501	SL	10-32	UNF	3/8-16	UNC	,56	,31	,22
TR1676.84302	SL	1/4-20	UNC	7/16-14	UNC	,62	,37	,22
TR1676.84502	SL	1/4-28	UNF	7/16-14	UNC	,62	,37	,22
TR1676.84303	SL	5/16-18	UNC	1/2-13	UNC	,75	,43	,22
TR1676.84503	SL	5/16-24	UNF	1/2-13	UNC	,75	,43	,22
TR1676.84304	SL	3/8-16	UNC	9/16-12	UNC	,81	,50	,25
TR1676.84504	SL	3/8-24	UNF	9/16-12	UNC	,81	,50	,25
TR1676.84305	SL	7/16-14	UNC	5/8-11	UNC	1.00	,62	,28
TR1676.84505	SL	7/16-20	UNF	5/8-11	UNC	1.00	,62	,28
TR1676.84306	SL	1/2-13	UNC	11/16-11NS	UNS	1.06	,68	,28
TR1676.84506	SL	1/2-20	UNF	11/16-11NS	UNS	1.06	,68	,28
TR1676.84307	SL	9/16-12	UNC	13/16-16	UN	1.25	,81	,32
TR1676.84507	SL	9/16-18	UNF	13/16-16	UN	1.25	,81	,32
TR1676.84308	SL	5/8-11	UNC	7/8-14	UNF	1.31	,87	,33
TR1676.84508	SL	5/8-18	UNF	7/8-14	UNF	1.31	,87	,33
TR1676.84309	SL	3/4-10	UNF	1-1/8-12	UNF	1.75	1.25	,49
TR1676.84509	SL	3/4-16	UNF	1-1/8-12	UNF	1.75	1.25	,49
TR1676.84310	SL	7/8-9	UNC	1-1/4-12	UNF	1.94	1.37	,49
TR1676.84510	SL	7/8-14	UNF	1-1/4-12	UNF	1.94	1.37	,49
TR1676.84311	SL	1-8	UNC	1-3/8-12	UNF	2.12	1.50	,55
TR1676.84511	SL	1-12	UNF	1-3/8-12	UNF	2.12	1.50	,55

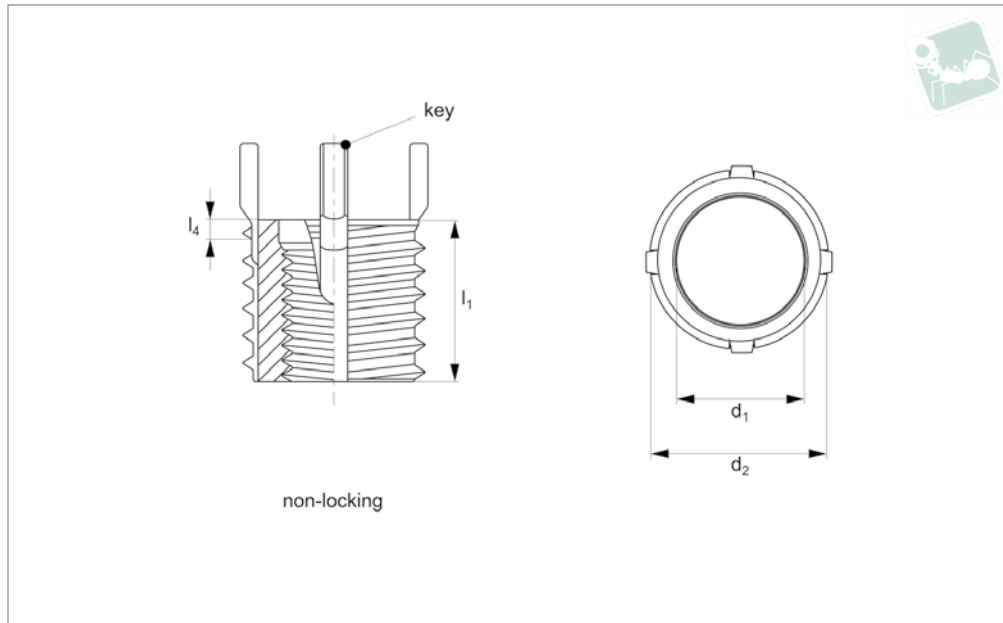
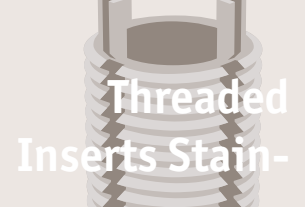


Order No.	l ₄ c'bore depth	l ₅	Inst. c'sink hole size +0.010 -0.000	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1705	Removal drill size	Removal drill depth
TR1676.84300	,04	,31	,323	,272	,37	5/16-18	.0000	7/32	3/16
TR1676.84301	,07	,31	,385	,332	,37	3/8-16	.0010	9/32	3/16
TR1676.84501	,07	,31	,385	,332	,37	3/8-16	.0011	9/32	3/16
TR1676.84302	,07	,37	,447	,397	,43	7/16-14	.0020	11/32	3/16
TR1676.84502	,07	,37	,447	,397	,43	7/16-14	.0021	11/32	3/16
TR1676.84303	,07	,43	,510	,453	,50	1/2-13	.0030	13/32	3/16
TR1676.84503	,07	,43	,510	,453	,50	1/2-13	.0031	13/32	3/16
TR1676.84304	,07	,50	,572	,516	,56	9/16-12	.0040	15/32	3/16
TR1676.84504	,07	,50	,572	,516	,56	9/16-12	.0041	15/32	3/16
TR1676.84305	,10	,62	,635	,578	,68	5/8-11	.0050	17/32	3/16
TR1676.84505	,10	,62	,635	,578	,68	5/8-11	.0051	17/32	3/16
TR1676.84306	,10	,68	,700	,641	,75	11/16-11NS	.0060	19/32	3/16
TR1676.84506	,10	,68	,700	,641	,75	11/16-11NS	.0061	19/32	3/16
TR1676.84307	,10	,81	,822	,766	,94	13/16-16	.0070	23/32	3/16
TR1676.84507	,10	,81	,822	,766	,94	13/16-16	.0071	23/32	3/16
TR1676.84308	,10	,87	,885	,828	1.00	7/8-14	.0080	25/32	3/16
TR1676.84508	,10	,87	,885	,828	1.00	7/8-14	.0081	25/32	3/16
TR1676.84309	,10	1.25	1.145	1.062	1.44	1-1/8-12	.0090	31/32	5/16
TR1676.84509	,10	1.25	1.145	1.062	1.44	1-1/8-12	.0091	31/32	5/16
TR1676.84310	,10	1.37	1.270	1.187	1.56	1-1/4-12	.0100	1-3/32	5/16
TR1676.84510	,10	1.37	1.270	1.187	1.56	1-1/4-12	.0101	1-3/32	5/16
TR1676.84311	,10	1.50	1.395	1.312	1.68	1-3/8-12	.0110	1-7/32	5/16
TR1676.84511	,10	1.50	1.395	1.312	1.68	1-3/8-12	.0111	1-7/32	5/16



Threaded Insert MS/NAS - Extra H

303 stainless steel - non-locking - MS/NAS grade



TR1656

THREADED INSERTS STAINLESS

Material

Inserts - 303 CRES.
 Keys - 302 CRES.
 Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
 Internal threads: to SAE AS8879.
 General tolerances -
 +/- 0,010 unless specified.

Tap drill hole tolerances -

0,234 to 0,500 = +0,004/-0,001
 0,500 and over = +0,005/-0,001
NL = Non-Locking type.

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads 1/4

and over. Two locking keys on internal threads smaller than 1/4.

Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.

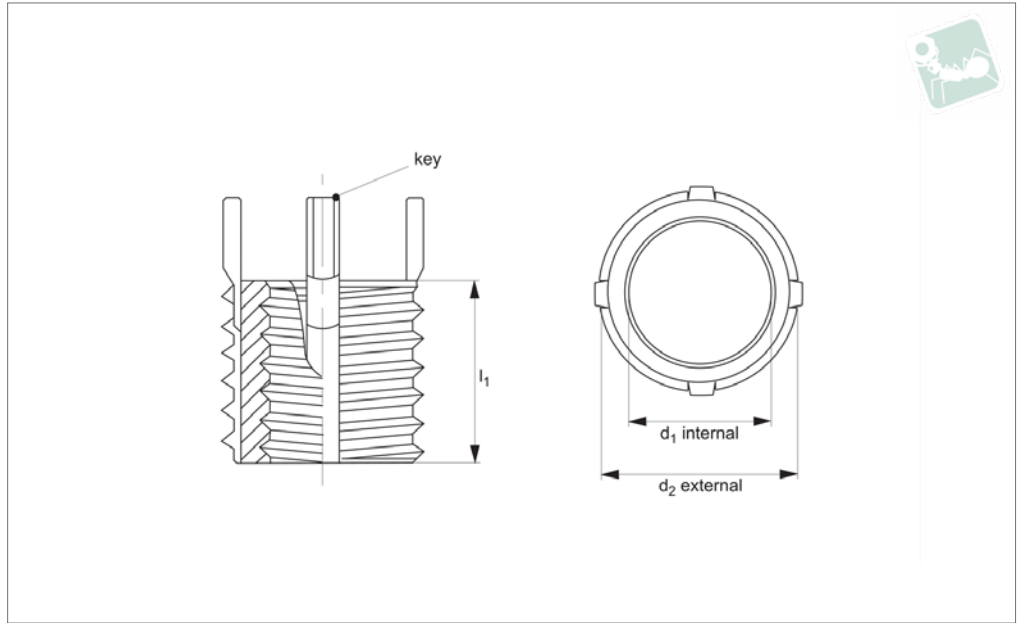
Removal (Rem.) drill size and drill depth as specified in table.

Perform to standards: MIL-I-45914A (MS51832)

Order No.	Type	d ₁ tol. 3B	Thread type d ₁	d ₂ (mod.) class 2A	Thread type d ₂	l ₁	l ₄ c'bore depth	Inst. c'sink hole size +0.010 - 0.000	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1706	Removal drill size	Removal drill depth
TR1656.76333	NL	10-24	UNC	7/16-14	UNC	,312	,07	,447	,397	,37	7/16-14	.0330	11/32	3/16
TR1656.76533	NL	10-32	UNF	7/16-14	UNC	,312	,07	,447	,397	,37	7/16-14	.0331	11/32	3/16
TR1656.76334	NL	1/4-20	UNC	1/2-13	UNC	,375	,07	,510	,453	,44	1/2-13	.0340	13/32	3/16
TR1656.76534	NL	1/4-28	UNF	1/2-13	UNC	,375	,07	,510	,453	,44	1/2-13	.0341	13/32	3/16
TR1656.76335	NL	5/16-18	UNC	9/16-12	UNC	,437	,07	,572	,516	,50	9/16-12	.0350	15/32	3/16
TR1656.76535	NL	5/16-24	UNF	9/16-12	UNC	,437	,07	,572	,516	,50	9/16-12	.0351	15/32	3/16
TR1656.76336	NL	3/8-16	UNC	5/8-11	UNC	,500	,07	,635	,578	,56	5/8-11	.0360	17/32	3/16
TR1656.76536	NL	3/8-24	UNF	5/8-11	UNC	,500	,07	,635	,578	,56	5/8-11	.0361	17/32	3/16
TR1656.76337	NL	7/16-14	UNC	11/16-11NS	UNS	,625	,10	,700	,641	,68	11/16-11NS	.0370	19/32	3/16
TR1656.76537	NL	7/16-20	UNF	11/16-11NS	UNS	,625	,10	,700	,641	,68	11/16-11NS	.0371	19/32	3/16
TR1656.76338	NL	1/2-13	UNC	13/16-16	UNF	,688	,10	,822	,766	,75	13/16-16	.0380	23/32	3/16
TR1656.76538	NL	1/2-20	UNF	13/16-16	UNF	,688	,10	,822	,766	,75	13/16-16	.0381	23/32	3/16
TR1656.76339	NL	9/16-12	UNC	7/8-14	UNF	,812	,10	,885	,828	,94	7/8-14	.0390	25/32	3/16
TR1656.76539	NL	9/16-18	UNF	7/8-14	UNF	,812	,10	,885	,828	,94	7/8-14	.0391	25/32	3/16
TR1656.76340	NL	5/8-11	UNC	1-12	UNF	,875	,10	1,020	,937	1,00	1-12	.0400	27/32	5/16
TR1656.76540	NL	5/8-18	UNF	1-12	UNF	,875	,10	1,020	,937	1,00	1-12	.0401	27/32	5/16
TR1656.76341	NL	3/4-10	UNC	1-1/4-12	UNF	1,125	,10	1,270	1,187	1,31	1-1/4-12	.0410	1-3/32	5/16
TR1656.76541	NL	3/4-16	UNF	1-1/4-12	UNF	1,125	,10	1,270	1,187	1,31	1-1/4-12	.0411	1-3/32	5/16
TR1656.76342	NL	7/8-9	UNC	1-3/8-12	UNF	1,250	,10	1,395	1,312	1,44	1-3/8-12	.0420	1-7/32	5/16
TR1656.76542	NL	7/8-14	UNF	1-3/8-12	UNF	1,250	,10	1,395	1,312	1,44	1-3/8-12	.0421	1-7/32	5/16
TR1656.76343	NL	1-8	UNC	1-1/2-12	UNF	1,375	,10	1,520	1,437	1,56	1-1/2-12	.0430	1-11/32	5/16
TR1656.76543	NL	1-12	UNF	1-1/2-12	UNF	1,375	,10	1,520	1,437	1,56	1-1/2-12	.0431	1-11/32	5/16



TR1566



Material

Inserts: stainless steel (AISI 303) or equivalent. Passivated.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

± 0,010" unless specified.

Tap drill hole tolerances:

0,234 to 0,500 = +0,004/-0,001"
0,500 and over = +0,005/-0,001"

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/16" and over. Two locking keys on internal

threads smaller than 5/16".

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

Removal drill size and drill depth as specified in table.

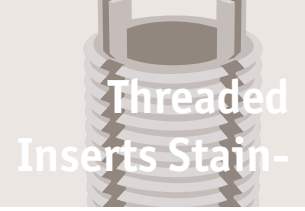
All dimensions in inches.

Order No.	Int. d ₁ tol. 2B	Int. thread type d ₁	Ext. d ₂ (mod.) class 2A	Ext. thread type d ₂	l ₁	Inst. c'sink dia. +0.010 - 0.000	Inst. tap drill size	Inst. thread depth min.	Inst. thread tap tol. 2B	Inst. tool ref. 22058	Removal drill size	Removal drill depth
TR1566.66331	6 - 32	UNC	5/16" - 18	UNC	0,31	0,32	17/64"	0,37	5/16"-18	.W0310	7/32"	1/8"
TR1566.66332	8 - 32	UNC	3/8" - 16	UNC	0,31	0,38	21/64"	0,37	3/8"-16	.W0320	9/32"	1/8"
TR1566.66333	10 - 24	UNC	7/16" - 14	UNC	0,31	0,44	25/64"	0,37	7/16"-14	.W0330	11/32"	3/16"
TR1566.66533	10 - 32	UNF	7/16" - 14	UNC	0,31	0,44	25/64"	0,37	7/16"-14	.W0330	11/32"	3/16"
TR1566.66334	1/4" - 20	UNC	1/2" - 13	UNC	0,37	0,51	29/64"	0,43	1/2"-13	.W0340	13/32"	3/16"
TR1566.66534	1/4" - 28	UNF	1/2" - 13	UNC	0,37	0,51	29/64"	0,43	1/2"-13	.W0340	13/32"	3/16"
TR1566.66335	5/16" -	UNC	9/16" - 12	UNC	0,43	0,57	33/64"	0,50	9/16"-12	.W0350	15/32"	3/16"
TR1566.66535	5/16" -	UNF	9/16" - 12	UNC	0,43	0,57	33/64"	0,50	9/16"-12	.W0350	15/32"	3/16"
TR1566.66336	3/8" - 16	UNC	5/8" - 11	UNC	0,50	0,63	37/64"	0,56	5/8"-11	.W0360	17/32"	3/16"
TR1566.66536	3/8" - 24	UNF	5/8" - 11	UNC	0,50	0,63	37/64"	0,56	5/8"-11	.W0360	17/32"	3/16"
TR1566.66337	7/16" -	UNC	3/4" - 16	UNF	0,62	0,76	45/64"	0,68	3/4"-16	.W0370	21/32"	3/16"
TR1566.66537	7/16" -	UNF	3/4" - 16	UNF	0,62	0,76	45/64"	0,68	3/4"-16	.W0370	21/32"	3/16"
TR1566.66338	1/2" - 13	UNC	7/8" - 14	UNF	0,68	0,88	53/64"	0,75	7/8"-14	.W0380	25/32"	5/16"
TR1566.66538	1/2" - 20	UNF	7/8" - 14	UNF	0,68	0,88	53/64"	0,75	7/8"-14	.W0380	25/32"	5/16"
TR1566.66339	9/16" -	UNC	7/8" - 14	UNF	0,81	0,88	53/64"	0,94	7/8"-14	.W0390	25/32"	5/16"
TR1566.66539	9/16" -	UNF	7/8" - 14	UNF	0,81	0,88	53/64"	0,94	7/8"-14	.W0390	25/32"	5/16"
TR1566.66340	5/8" - 11	UNC	1" - 12	UNF	0,87	1,02	15/16"	1,00	1"-12	.W0400	27/32"	5/16"
TR1566.66540	5/8" - 18	UNF	1" - 12	UNF	0,87	1,02	15/16"	1,00	1"-12	.W0400	27/32"	5/16"
TR1566.66341	3/4" - 10	UNC	1 - 1/4" - 12	UNF	1,12	1,27	1-3/16"	1,31	1-1/4"-12	.W0410	1-3/32"	5/16"
TR1566.66541	3/4" - 16	UNF	1 - 1/4" - 12	UNF	1,12	1,27	1-3/16"	1,31	1-1/4"-12	.W0410	1-3/32"	5/16"
TR1566.66342	7/8" - 9	UNC	1 - 3/8" - 12	UNF	1,25	1,39	1-5/16"	1,44	1-3/8"-12	.W0420	1-7/32"	5/16"
TR1566.66542	7/8" - 14	UNF	1 - 3/8" - 12	UNF	1,25	1,39	1-5/16"	1,44	1-3/8"-12	.W0420	1-7/32"	5/16"
TR1566.66343	1" - 8	UNC	1 - 1/2" - 12	UNF	1,37	1,52	1-7/16"	1,56	1-1/2"-12	.W0430	1-11/32"	5/16"
TR1566.66543	1" - 12	UNF	1 - 1/2" - 12	UNF	1,37	1,52	1-7/16"	1,56	1-1/2"-12	.W0430	1-11/32"	5/16"

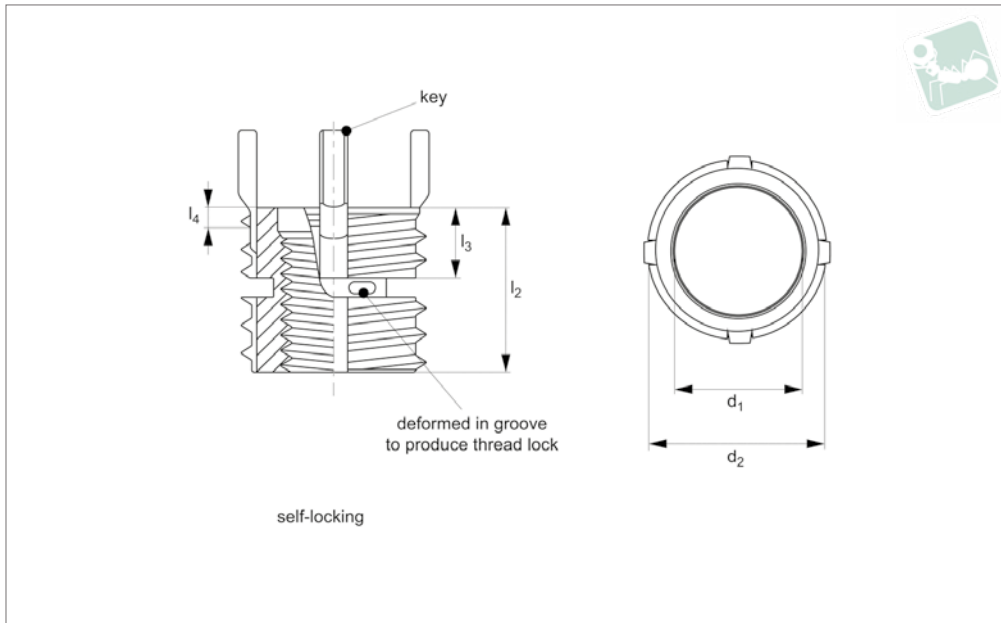


Threaded Insert MS/NAS - Extra H

303 stainless steel - self-locking - MS/NAS grade



Threaded Inserts Stain-



TR1657

THREADED INSERTS STAINLESS

Material

Inserts - 303 CRES.
Keys - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -
+/- 0,010 unless specified.
Tap drill hole tolerances -

0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads 1/4

and over. Two locking keys on internal threads smaller than 1/4.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: MIL-I-45914A (MS51832)

Order No.	Type	d ₁ tol. 3B	Thread type d ₁	d ₂ (mod.) class 2A	Thread type d ₂	l ₁	l ₃ ±0.030
TR1657.77333	SL	10-24	UNC	7/16-14	UNC	,312	,22
TR1657.77533	SL	10-32	UNF	7/16-14	UNC	,312	,22
TR1657.77334	SL	1/4-20	UNC	1/2-13	UNC	,375	,22
TR1657.77534	SL	1/4-28	UNF	1/2-13	UNC	,375	,22
TR1657.77335	SL	5/16-18	UNC	9/16-12	UNC	,437	,22
TR1657.77535	SL	5/16-24	UNF	9/16-12	UNC	,437	,22
TR1657.77336	SL	3/8-16	UNC	5/8-11	UNC	,500	,25
TR1657.77536	SL	3/8-24	UNF	5/8-11	UNC	,500	,25
TR1657.77337	SL	7/16-14	UNC	11/16-11NS	UNS	,625	,28
TR1657.77537	SL	7/16-20	UNF	11/16-11NS	UNS	,625	,28
TR1657.77338	SL	1/2-13	UNC	13/16-16	UNF	,688	,28
TR1657.77538	SL	1/2-20	UNF	13/16-16	UNF	,688	,28
TR1657.77339	SL	9/16-12	UNC	7/8-14	UNF	,812	,32
TR1657.77539	SL	9/16-18	UNF	7/8-14	UNF	,812	,32
TR1657.77340	SL	5/8-11	UNC	1-12	UNF	,875	,33
TR1657.77540	SL	5/8-18	UNF	1-12	UNF	,875	,33
TR1657.77341	SL	3/4-10	UNC	1-1/4-12	UNF	1.250	,49
TR1657.77541	SL	3/4-16	UNF	1-1/4-12	UNF	1.250	,49
TR1657.77342	SL	7/8-9	UNC	1-3/8-12	UNF	1.375	,49
TR1657.77542	SL	7/8-14	UNF	1-3/8-12	UNF	1.375	,49
TR1657.77343	SL	1-8	UNC	1-1/2-12	UNF	1.500	,55
TR1657.77543	SL	1-12	UNF	1-1/2-12	UNF	1.500	,55

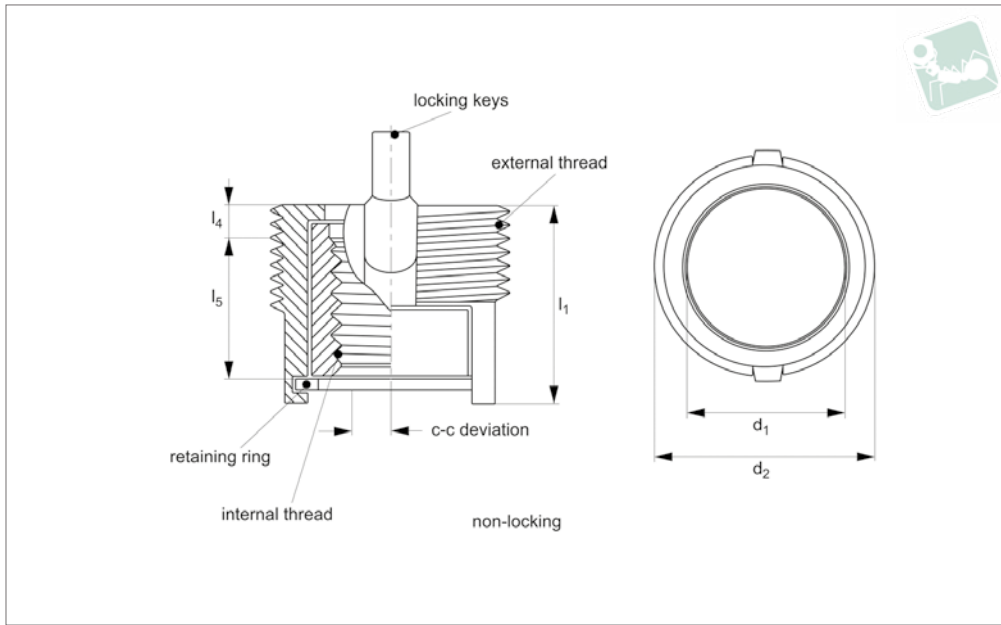
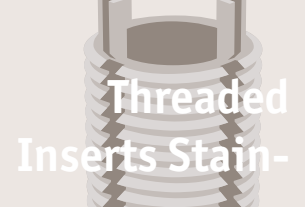


Order No.	1/4 c'bore depth	Inst. c'sink hole size +0.010 -0.000	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1706	Removal drill size	Removal drill depth
TR1657.77333	,07	,447	,397	,37	7/16-14	.0330	11/32	3/16
TR1657.77533	,07	,447	,397	,37	7/16-14	.0331	11/32	3/16
TR1657.77334	,07	,510	,453	,44	1/2-13	.0340	13/32	3/16
TR1657.77534	,07	,510	,453	,44	1/2-13	.0341	13/32	3/16
TR1657.77335	,07	,572	,516	,50	9/16-12	.0350	15/32	3/16
TR1657.77535	,07	,572	,516	,50	9/16-12	.0351	15/32	3/16
TR1657.77336	,07	,635	,578	,56	5/8-11	.0360	17/32	3/16
TR1657.77536	,07	,635	,578	,56	5/8-11	.0361	17/32	3/16
TR1657.77337	,10	,700	,641	,68	11/16-11NS	.0370	19/32	3/16
TR1657.77537	,10	,700	,641	,68	11/16-11NS	.0371	19/32	3/16
TR1657.77338	,10	,822	,766	,75	13/16-16	.0380	23/32	3/16
TR1657.77538	,10	,822	,766	,75	13/16-16	.0381	23/32	3/16
TR1657.77339	,10	,885	,828	,94	7/8-14	.0390	25/32	3/16
TR1657.77539	,10	,885	,828	,94	7/8-14	.0391	25/32	3/16
TR1657.77340	,10	1.020	,937	1.00	1-12	.0400	27/32	5/16
TR1657.77540	,10	1.020	,937	1.00	1-12	.0401	27/32	5/16
TR1657.77341	,10	1.270	1.187	1.44	1-1/4-12	.0410	1-3/32	5/16
TR1657.77541	,10	1.270	1.187	1.44	1-1/4-12	.0411	1-3/32	5/16
TR1657.77342	,10	1.395	1.312	1.56	1-3/8-12	.0420	1-7/32	5/16
TR1657.77542	,10	1.395	1.312	1.56	1-3/8-12	.0421	1-7/32	5/16
TR1657.77343	,10	1.520	1.437	1.68	1-1/2-12	.0430	1-11/32	5/16
TR1657.77543	,10	1.520	1.437	1.68	1-1/2-12	.0431	1-11/32	5/16



Floating Threaded Insert - Mini - Inch

303 stainless steel - non-locking



TR1680

THREADED INSERTS STAINLESS

Material

Inserts - 303 CRES.
 Keys and retaining ring - 302 CRES.
 Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
 Internal threads: to SAE AS8879.
 General tolerances -

+/- 0,010 unless specified.
 Tap drill hole tolerances -
 0,130 to 0,233 = +0,003/-0,001
NL = Non-thread locking type.

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

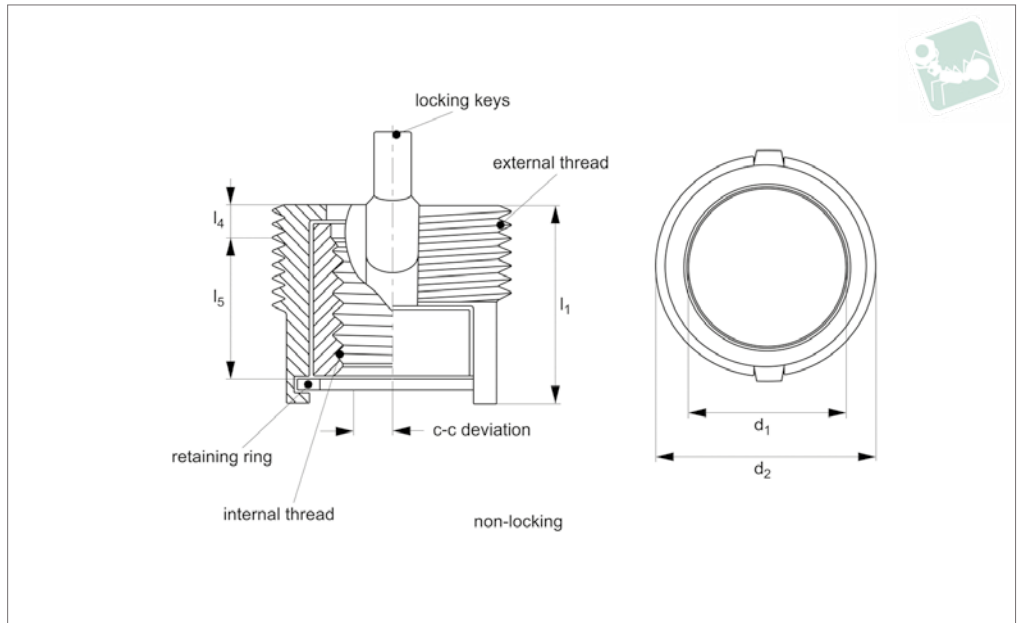
Important Notes

Four locking keys on internal threads 5/16 and over. Two locking keys on internal threads smaller than 5/16.
 Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
 Removal (Rem.) drill size and drill depth as specified in table.

Order No.	Type	d ₁ tol. 3B	Thread type d ₁	l ₁ ±0.01 5	d ₂ tol. 2A	Thread type d ₂	l ₄	l ₅	c-c float	Inst. c'sink dia.	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1720	Removal drill size	Removal drill depth
TR1680.87283	NL	2-56	UNC	,19	1/4-28	UNF	,05	,10	,015	,250	,228	,12	1/4-28	.0830	#8	3/32
TR1680.87284	NL	4-40	UNC	,32	5/16-24	UNF	,07	,21	,020	,323	,272	,31	5/16-24	.0840	7/32	1/8
TR1680.87285	NL	6-32	UNC	,36	3/8-24	UNF	,08	,22	,030	,385	,332	,38	3/8-24	.0850	9/32	1/8
TR1680.87286	NL	8-32	UNC	,36	3/8-24	UNF	,08	,22	,030	,385	,332	,38	3/8-24	.0860	9/32	1/8



TR1681



Material

Inserts - 303 CRES.
Keys and retaining ring - 302 CRES.
Passivated. Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -
+/- 0,010 unless specified.

Tap drill hole tolerances -

0,130 to 0,233 = +0,003/-0,001
SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

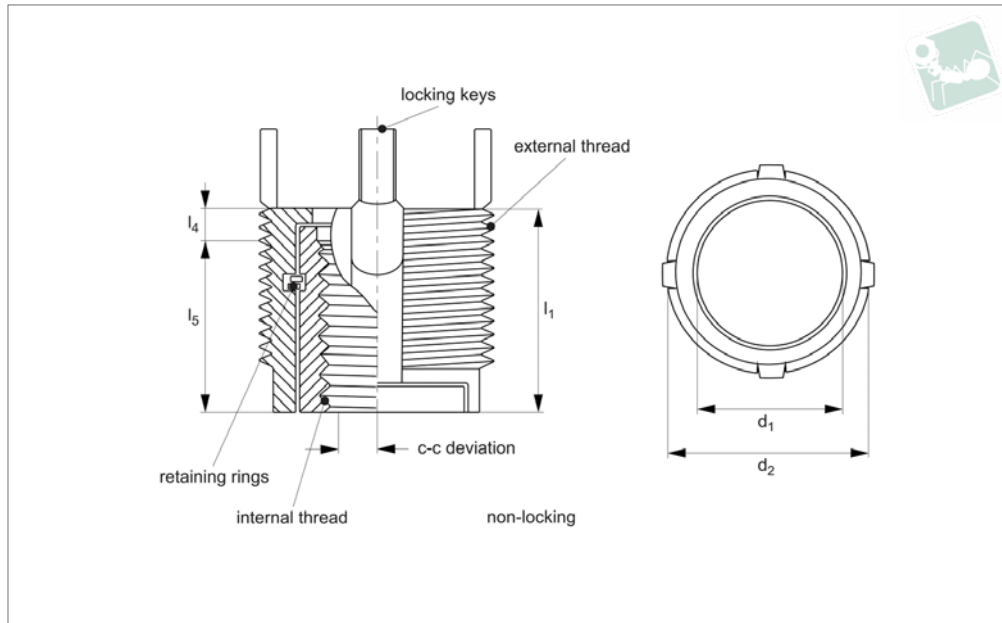
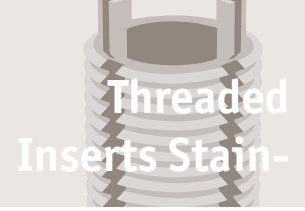
Important Notes

Four locking keys on internal threads 5/16 and over. Two locking keys on internal threads smaller than 5/16.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards

Order No.	Type	d ₁ Thread tol. 3B type	d ₁ Thread type	l ₁ ±0,01 5	d ₂ tol. 2A	Thread type	d ₂	l ₄	l ₅	c-c float min.	Inst. c'sink dia. +0,01 0 -0,000	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1720	Removal drill size	Removal drill depth
TR1681.87583	SL	2-56	UNC	,19	1/4-28	UNF	,05	,10	,015	,250	,228	,12	1/4-28	.0830	#8	3/32	
TR1681.87584	SL	4-40	UNC	,32	5/16-24	UNF	,07	,21	,020	,323	,272	,31	5/16-24	.0840	7/32	1/8	
TR1681.87585	SL	6-32	UNC	,36	3/8-24	UNF	,08	,22	,030	,385	,332	,38	3/8-24	.0850	9/32	1/8	
TR1681.87586	SL	8-32	UNC	,36	3/8-24	UNF	,08	,22	,030	,385	,332	,38	3/8-24	.0860	9/32	1/8	



Floating Threaded Insert - H Duty - 4140 steel - non-locking



TR1685

THREADED INSERTS STAINLESS

Material

Inserts - 4140 alloy steel (160 KSI Min).
Keys - 302 CRES.
Cadmium plate (QQ-P-416 Type II, Cl. 2).
Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -

+/- 0,010 unless specified.
Tap drill hole tolerances -
0,130 to 0,233 = +0,003/-0,001
NL = Non-thread locking type.

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

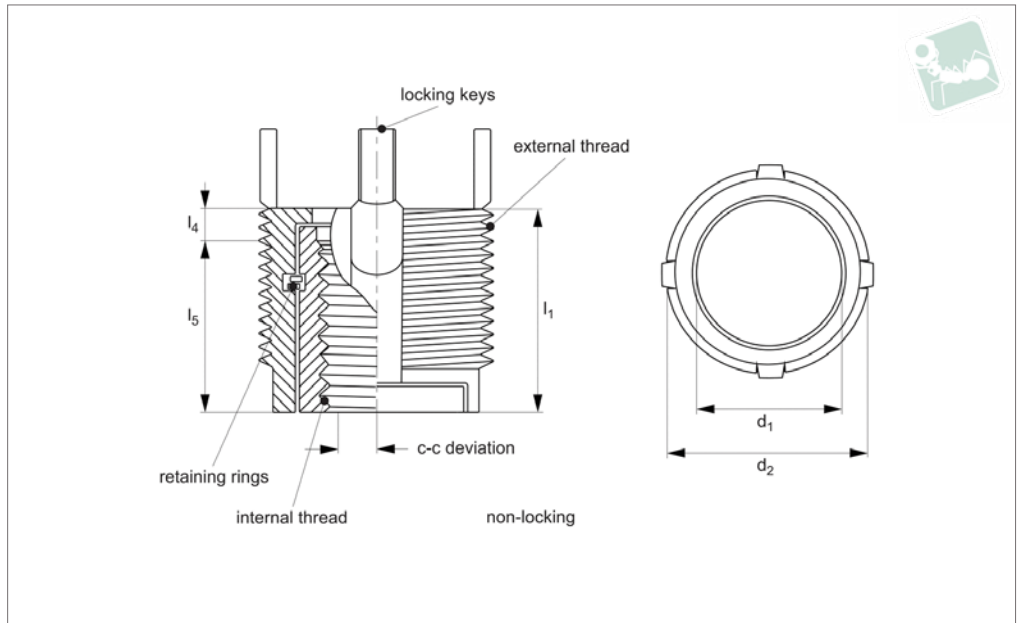
Four locking keys on internal threads 5/16

and over. Two locking keys on internal threads smaller than 5/16.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards:

Order No.	Type	d ₁ tol. 3B	Thread type d ₁ ±0.0 15	l ₁	d ₂ (mod.) class 2A	Thread type d ₂	l ₄	l ₅	c-c float min.	Inst. c'sink dia. +0.010 - 0.000	Inst. tap drill size	Inst. thread tap depth min.	Inst. tap size class 2B	Inst. tool ref. TR1725	Removal drill size	Removal drill depth
TR1685.89301	NL	10-24	UNC	,40	7/16-20	UNC	,15	,25	,040	,447	,406	,39	7/16-20	.0010	11/32	5/32
TR1685.89401	NL	10-32	UNF	,40	7/16-20	UNC	,15	,25	,040	,447	,406	,39	7/16-20	.0010	11/32	5/32
TR1685.89302	NL	1/4-20	UNC	,40	1/2-20	UNF	,15	,25	,040	,510	,486	,39	1/2-20	.0020	13/32	5/32
TR1685.89402	NL	1/4-28	UNF	,40	1/2-20	UNF	,15	,25	,040	,510	,486	,39	1/2-20	.0020	13/32	5/32
TR1685.89303	NL	5/16-18	UNC	,53	5/8-18	UNF	,13	,39	,040	,635	,578	,50	5/8-18	.0030	17/32	3/16
TR1685.89403	NL	5/16-24	UNF	,53	5/8-18	UNF	,13	,39	,040	,635	,578	,50	5/8-18	.0030	17/32	3/16
TR1685.89304	NL	3/8-16	UNC	,65	3/4-16	UNF	,20	,45	,040	,760	,703	,62	3/4-16	.0040	21/32	3/16
TR1685.89404	NL	3/8-24	UNF	,65	3/4-16	UNF	,20	,45	,040	,760	,703	,62	3/4-16	.0040	21/32	3/16
TR1685.89305	NL	7/16-14	UNC	,67	7/8-14	UNF	,20	,45	,040	,885	,828	,62	7/8-14	.0050	25/32	3/16
TR1685.89405	NL	7/16-20	UNF	,67	7/8-14	UNF	,20	,45	,040	,885	,828	,62	7/8-14	.0050	25/32	3/16
TR1685.89306	NL	1/2-13	UNC	,73	1-12	UNF	,23	,50	,040	1,020	,937	,65	1-12	.0060	27/32	5/16
TR1685.89406	NL	1/2-20	UNF	,73	1-12	UNF	,23	,50	,040	1,020	,937	,65	1-12	.0060	27/32	5/16



TR1686



Material

Inserts - 4140 alloy steel (160 KSI Min).
 Keys - 302 CRES.
 Cadmium plate (QQ-P-416 Type II, Cl. 2).
 Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
 Internal threads: to SAE AS8879.
 General tolerances -

+/- 0,010 unless specified.

Tap drill hole tolerances -
 0,130 to 0,233 = +0,003/-0,001

SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

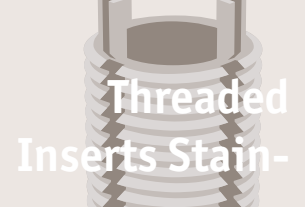
Important Notes

Four locking keys on internal threads 5/16 and over. Two locking keys on internal threads smaller than 5/16.
 Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
 Removal (Rem.) drill size and drill depth as specified in table.
 Perform to standards:

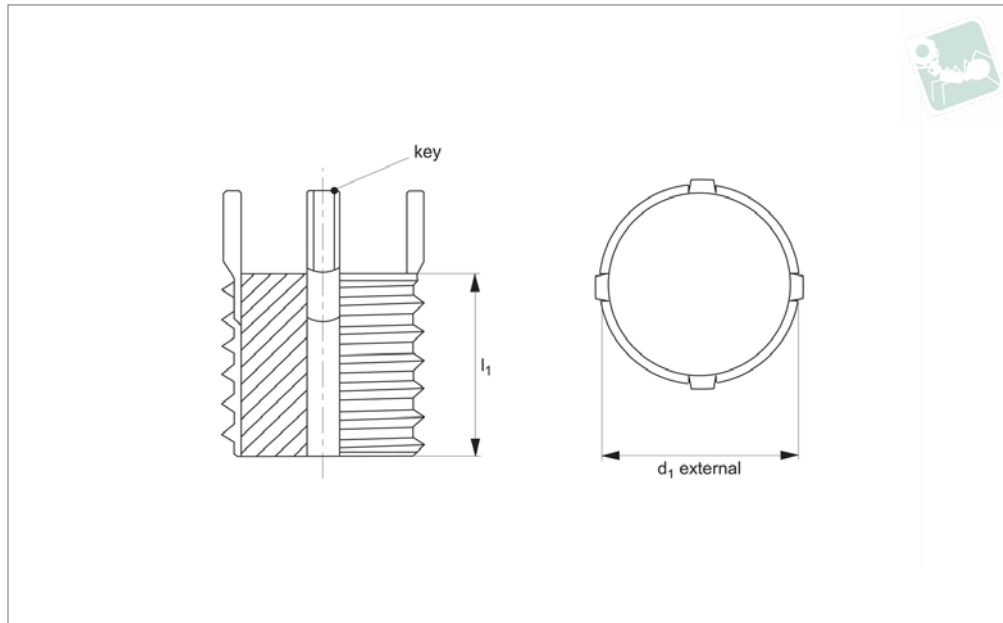
Order No.	Type	d ₁ tol. 3B	Thread type d ₁	l ₁ ±0,015	d ₂ (mod.) class 2A	Thread type d ₂	l ₄	l ₅	c-c float min.	Inst. c'sink dia. +0,010 -0,000	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1725	Removal drill size	Removal drill depth
TR1686.89501	SL	10-24	UNC	,40	7/16-20	UNC	,15	,25	,040	,447	,406	,39	7/16-20	.0010	11/32	5/32
TR1686.89601	SL	10-32	UNF	,40	7/16-20	UNC	,15	,25	,040	,447	,406	,39	7/16-20	.0010	11/32	5/32
TR1686.89502	SL	1/4-20	UNC	,40	1/2-20	UNF	,15	,25	,040	,510	,486	,39	1/2-20	.0020	13/32	5/32
TR1686.89602	SL	1/4-28	UNF	,40	1/2-20	UNF	,15	,25	,040	,510	,486	,39	1/2-20	.0020	13/32	5/32
TR1686.89503	SL	5/16-18	UNC	,53	5/8-18	UNF	,13	,39	,040	,635	,578	,50	5/8-18	.0030	17/32	3/16
TR1686.89603	SL	5/16-24	UNF	,53	5/8-18	UNF	,13	,39	,040	,635	,578	,50	5/8-18	.0030	17/32	3/16
TR1686.89504	SL	3/8-16	UNC	,65	3/4-16	UNF	,20	,45	,040	,760	,703	,62	3/4-16	.0040	21/32	3/16
TR1686.89604	SL	3/8-24	UNF	,65	3/4-16	UNF	,20	,45	,040	,760	,703	,62	3/4-16	.0040	21/32	3/16
TR1686.89505	SL	7/16-14	UNC	,67	7/8-14	UNF	,20	,45	,040	,885	,828	,62	7/8-14	.0050	25/32	3/16
TR1686.89605	SL	7/16-20	UNF	,67	7/8-14	UNF	,20	,45	,040	,885	,828	,62	7/8-14	.0050	25/32	3/16
TR1686.89506	SL	1/2-13	UNC	,73	1-12	UNF	,23	,50	,040	1,020	,937	,65	1-12	.0060	27/32	5/16
TR1686.89606	SL	1/2-20	UNF	,73	1-12	UNF	,23	,50	,040	1,020	,937	,65	1-12	.0060	27/32	5/16



Threaded Insert - Solid - Metric stainless steel



Threaded
Inserts Stain-



TR1690

THREADED INSERTS STAINLESS

Material

Inserts: stainless steel (AISI 303) or equivalent. Passivated.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

$\pm 0,25$ unless specified.

Tap drill hole tolerances:

6,9 to 10,8 = $+0,10/-0,025$.

12,8 and over = $+0,13/-0,025$.

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on external threads M12 and over. Two locking keys on external

threads smaller than M12.

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

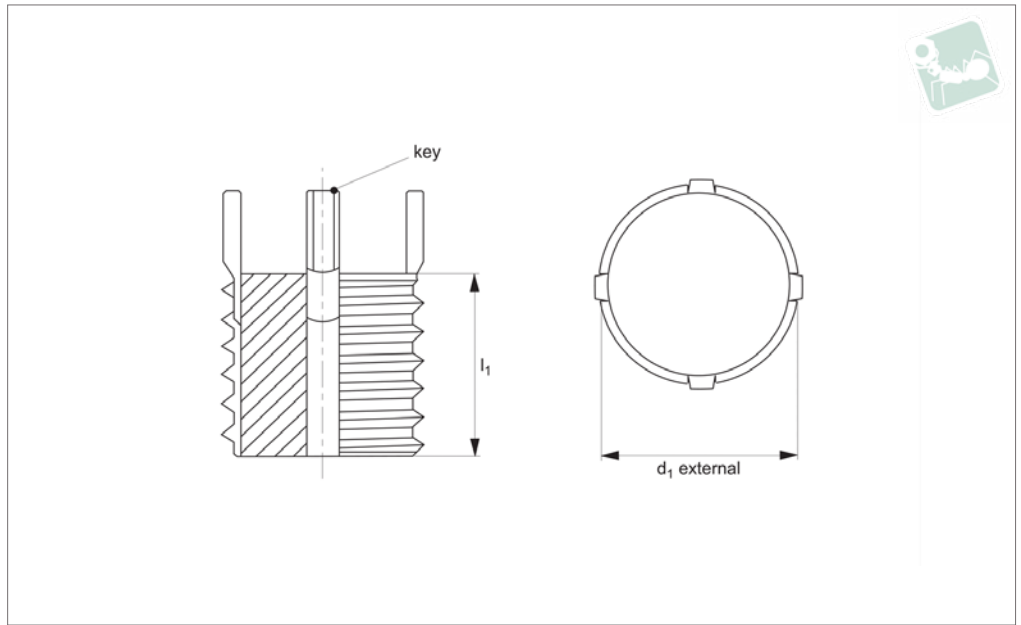
Removal drill size and drill depth as specified in table.

External metric thread allows you to machine your internal thread.

Order No.	d ₁	Thread type d ₁	l ₁	Inst. tool ref. 22052	Inst. tap drill size	Inst. c'sink dia.	Inst. thread tap	Inst. thread tap depth	Removal drill size	Removal drill depth
TR1690.66421	M 8x1,25	Coarse	8	.W0210	6.9	8.3	M 8x1,25	9.5	5.50	4.0
TR1690.66422	M10x1,25	Fine	10	.W0220	8.8	10.3	M10x1,25	12.5	7.50	4.8
TR1690.66423	M12x1,25	Fine	12	.W0230	10.8	12.3	M12x1,25	14.5	9.50	4.8
TR1690.66424	M14x1,50	Fine	14	.W0240	12.8	14.3	M14x1,50	16.5	11.50	4.8
TR1690.66425	M16x1,50	Fine	16	.W0250	14.8	16.3	M16x1,50	18.5	13.50	4.8
TR1690.66426	M18x1,50	Fine	18	.W0260	16.8	18.3	M18x1,50	20.5	15.50	4.8
TR1690.66427	M20x1,50	Fine	20	.W0270	18.8	20.3	M20x1,50	22.5	17.50	4.8
TR1690.66428	M22x1,50	Fine	22	.W0280	20.5	22.3	M22x1,50	24.5	17.75	6.4
TR1690.66429	M24x1,50	Fine	24	.W0290	22.5	24.3	M24x1,50	26.5	19.75	6.4
TR1690.66430	M30x2,00	Non-Std	30	.W0300	28.0	30.3	M30x2,00	34.5	25.75	6.4
TR1690.66431	M32x2,00	Non-Std	32	.W0310	30.0	32.3	M32x2,00	36.5	27.75	6.4
TR1690.66432	M33x2,00	Non-Std	33	.W0320	31.0	33.3	M33x2,00	37.5	28.75	6.4



TR1696



Material

Inserts: stainless steel (AISI 303) or equivalent. Passivated.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

± 0,010" unless specified.

Tap drill hole tolerances:

0,234 to 0,500 = +0,004/-0,001".

0,500 and over = +0,005/-0,001".

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on external threads

7/16" and over. Two locking keys on external threads smaller than 7/16".

Installation (Inst.) drill size, countersink,

thread tap and thread depth as specified in table.

Removal drill size and drill depth as specified in table.

External inch thread allows you to machine your internal thread.

*Unified special pitch thread.

All dimensions in inches.

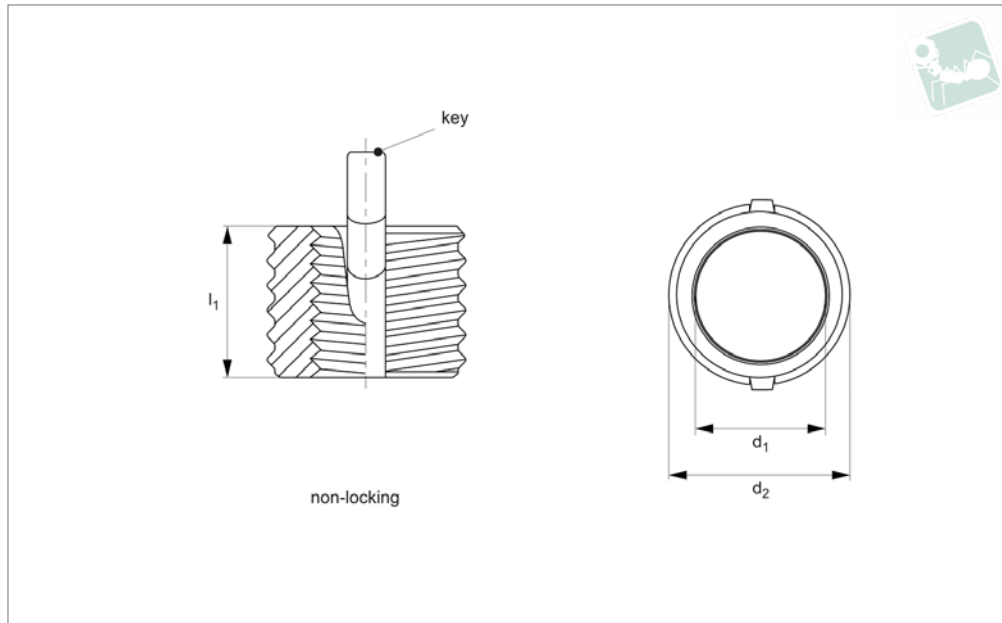
Order No.	d ₁ (mod.) tol. 2A	Thread type d ₁	l ₁	Inst. tool ref. 22050	Inst. tap drill size	Inst. c'sink dia. +0.010 - 0.000	Inst. thread tap tol. 2B	Inst. thread tap depth min.	Removal drill size	Removal drill depth
TR1696.66401	5/16"-18	UNC	0,31	.W0010	0,272	0,32	5/16"-18	0,37	7/32"	1/8"
TR1696.66402	3/8"-16	UNC	0,31	.W0020	0,332	0,38	3/8"-16	0,37	9/32"	1/8"
TR1696.66403	7/16"-14	UNC	0,37	.W0030	0,397	0,44	7/16"-14	0,43	11/32"	3/16"
TR1696.66404	1/2"-13	UNC	0,43	.W0040	0,453	0,51	1/2"-13	0,50	13/32"	3/16"
TR1696.66405	9/16"-12	UNC	0,50	.W0050	0,516	0,57	9/16"-12	0,56	15/32"	3/16"
TR1696.66406	5/8"-11	UNC	0,62	.W0060	0,578	0,63	5/8"-11	0,68	17/32"	3/16"
TR1696.66413	11/16"-11*	UNS	0,68	.W0065	0,641	0,70	11/16"-11*	0,75	19/32"	3/16"
TR1696.66407	3/4"-16	UNF	0,68	.W0070	0,703	0,76	3/4"-16	0,75	21/32"	3/16"
TR1696.66414	13/16"-16	UNF	0,81	.W0075	0,766	0,82	13/16"-16	0,94	23/32"	3/16"
TR1696.66408	7/8"-14	UNF	0,87	.W0080	0,828	0,88	7/8"-14	1,00	25/32"	5/16"
TR1696.66409	1"-12	UNF	0,87	.W0090	0,937	1,02	1"-12	1,00	27/32"	5/16"
TR1696.66410	1-1/8"-12	UNF	1,12	.W0100	1,062	1,14	1-1/8"-12	1,31	31/32"	5/16"
TR1696.66411	1-1/4"-12	UNF	1,25	.W0110	1,187	1,27	1-1/4"-12	1,44	1-3/32"	5/16"
TR1696.66412	1-3/8"-12	UNF	1,37	.W0120	1,312	1,39	1-3/8"-12	1,56	1-7/32"	5/16"



Threaded Insert MS/NAS - Mini - 4140 steel - non-locking - MS/NAS grade



Threaded
Inserts Steel



TR1606

THREADED INSERTS STEEL

Material

Inserts - 4140 alloy steel (160 KSI Min).
Keys - 302 CRES.
Cadmium plate (QQ-P-416 Type II, Cl. 2).
Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in millimetres.
Internal threads: to Fed. Std. H28/21, MJ Form

General tolerances -

+/- 0,25mm, unless specified.
Tap drill hole tolerances -
6,9 to 10,8 = +0,100/-0,025
12,8 and over = +0,130/-0,025
NL = Non-Locking type.

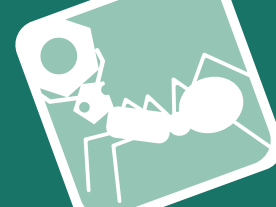
Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

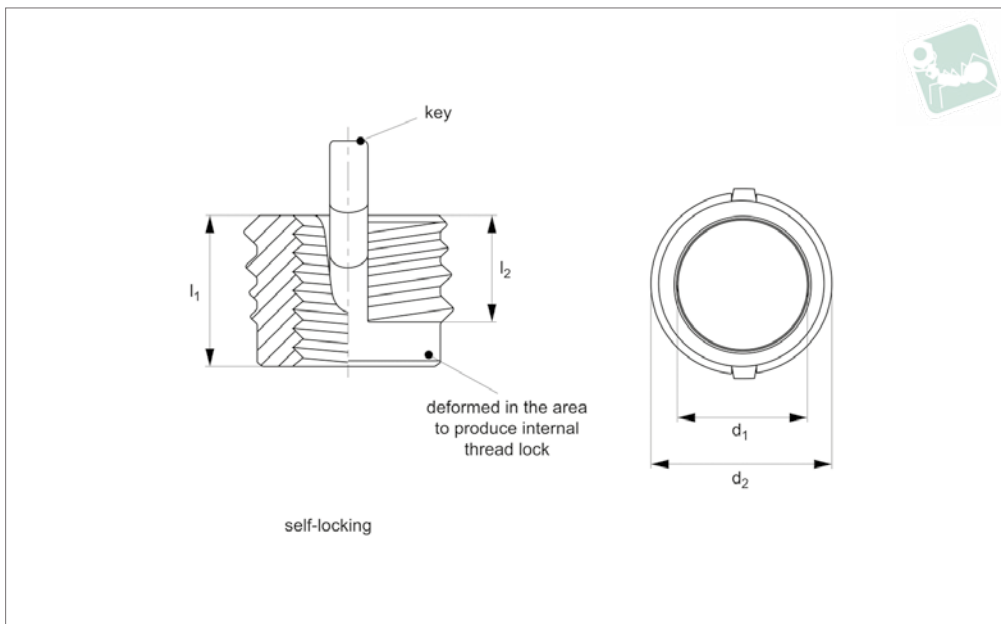
Important Notes

Four locking keys on internal threads M6 and over. Two locking keys on internal threads smaller than M6.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: NA0148

Order No.	Type	d ₁ tol. 4H 6H	Thread type d ₁	d ₂ tol. 4h	Thread type d ₂	l ₁	Inst. c'sink hole size +0.25 - 0.00	Inst. tap drill size +0.080 -0.025	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Inst. tool ref. TR1710	Removal drill size	Removal drill depth
TR1606.80382	NL	M 2x0,4	Coarse	M 4x0,7	Coarse	3,00	4,1	3,4	M 4x0,7	4,0	.0820	2,8	2,00
TR1606.80383	NL	M2,5x0,45	Coarse	M4,5x0,75	Coarse	3,81	4,6	3,9	M4,5x0,75	5,0	.0830	3,0	2,00
TR1606.80384	NL	M 3x0,5	Coarse	M 5x0,8	Coarse	4,25	5,1	4,4	M 5x0,8	5,5	.0840	3,5	2,25
TR1606.80386	NL	M 4x0,7	Coarse	M 6x0,75	Fine	5,25	6,1	5,5	M 6x0,75	6,5	.0860	4,6	2,50



TR1607



Material

Inserts - 4140 alloy steel (160 KSI Min).
Keys - 302 CRES.
Cadmium plate (QQ-P-416 Type II, Cl. 2).
Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in millimetres.
Internal threads: to Fed. Std. H28/21, MJ Form
General tolerances -

+/- 0,25mm, unless specified.

Tap drill hole tolerances -
6,9 to 10,8 = +0,100/-0,025
12,8 and over = +0,130/-0,025

SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads M6 and over. Two locking keys on internal threads smaller than M6.

Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.

Removal (Rem.) drill size and drill depth as specified in table.

Perform to standards: NA0148

Order No.	Type	d ₁ tol. 4H 6H	Thread type d ₁	d ₂ tol. 4h	Thread type d ₂	l ₁	l ₂	Inst. c'sink hole size +0.25 - 0.00	Inst. tap drill size +0.080 -0.025	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Inst. tool ref. TR1710	Removal drill size	Removal drill depth
TR1607.81382	SL	M 2x0,4	Coarse	M 4x0,7	Coarse	3,00	2,20	4,1	3,4	M 4x0,7	4,0	.0820	2,8	2,00
TR1607.81383	SL	M2,5x0,45	Coarse	M4,5x0,75	Coarse	3,81	2,70	4,6	3,9	M4,5x0,75	5,0	.0830	3,0	2,00
TR1607.81384	SL	M 3x0,5	Coarse	M 5x0,8	Coarse	4,25	3,10	5,1	4,4	M 5x0,8	5,5	.0840	3,5	2,25
TR1607.81386	SL	M 4x0,7	Coarse	M 6x0,75	Fine	5,25	4,11	6,1	5,5	M 6x0,75	6,5	.0860	4,6	2,50

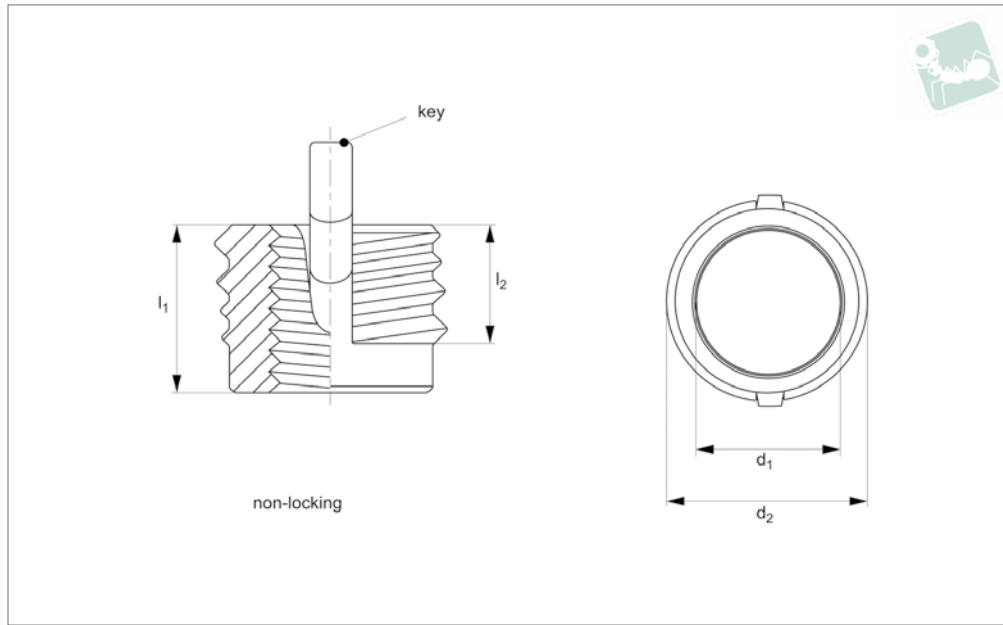


Threaded Insert MS/NAS - Mini - Inch

4140 steel - non-locking - MS/NAS grade



Threaded Inserts Steel



TR1660

THREADED INSERTS STEEL

Material

Inserts - 4140 alloy steel (160 KSI Min).
Keys - 302 CRES.
Cadmium plate (QQ-P-416 Type II, Cl. 2).
Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -
+/- 0,010 unless specified.

Tap drill hole tolerances -
0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
NL = Non-Locking type.

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/16 and over. Two locking keys on internal

threads smaller than 5/16.

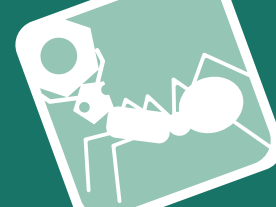
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.

Removal (Rem.) drill size and drill depth as specified in table.

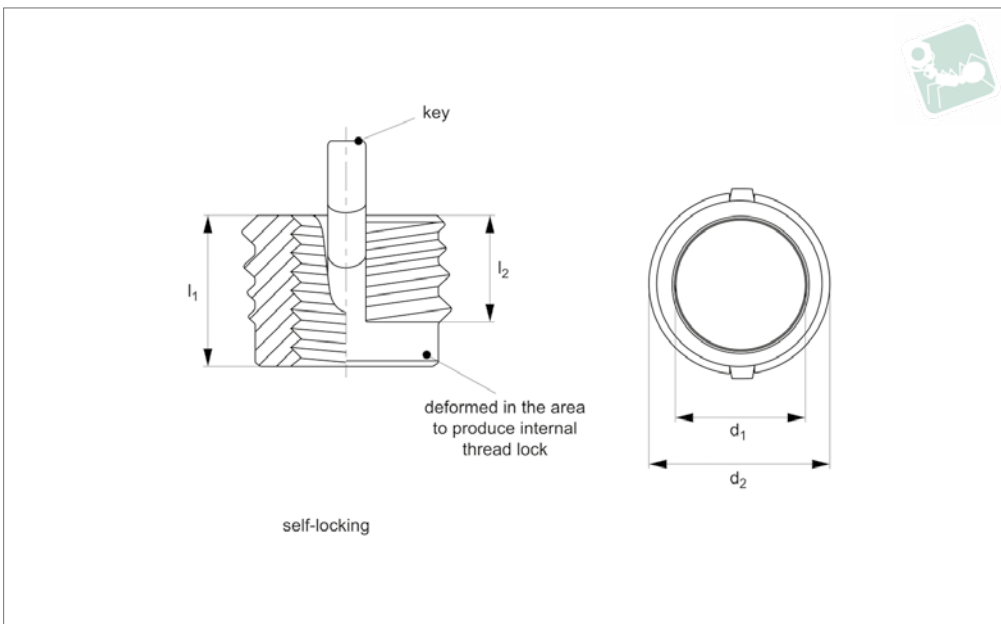
Perform to standards: MIL-I-45914A (MS51830)

* Modified minor dia.

Order No.	Type	d ₁ class 3B	Thread type d ₁	d ₂ class 2A	Thread type d ₂	l ₁	l ₂ thread length	Inst. c'sink hole size +0.010 - 0.000	Inst. tap drill size +0.003 -0.001	Inst. thread depth min.	Inst. tap thread tap size class 2B	Inst. tool ref. TR1700	Removal drill size	Removal drill depth
TR1660.80283	NL	2-56	UNC	8-32	UNC	,120	,90	,166	,134	,140	8-32	.0830	#33	1/16
TR1660.80284	NL	4-40	UNC	10-32	UNF	,170	,125	,194	,161	,160	10-32	.0840	#29	3/32
TR1660.80285	NL	6-32	UNC	12-28	UNF	,170	,125	,220	,187	,160	2-28	.0850	#21	3/32
TR1660.80286	NL	8-32	UNC	1/4-28*	UNF	,220	,175	,255	,228	,210	1/4-28	.0860	# 8	1/8



TR1661



Material

Inserts - 4140 alloy steel (160 KSI Min).
Keys - 302 CRES.
Cadmium plate (QQ-P-416 Type II, Cl. 2).
Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -
+/- 0,010 unless specified.

Tap drill hole tolerances -

0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

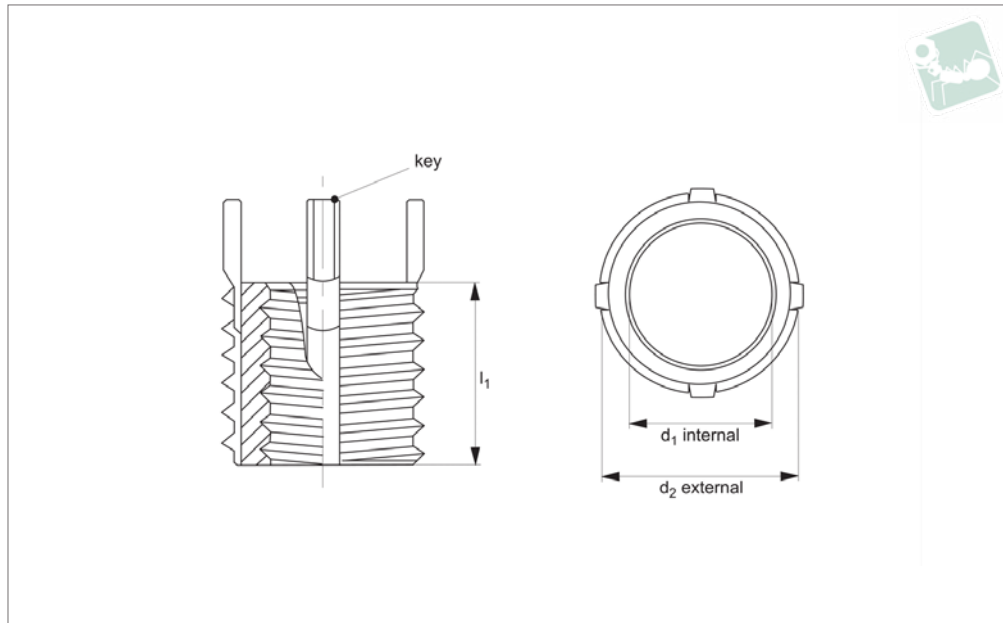
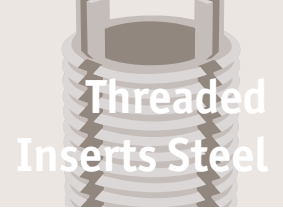
Four locking keys on internal threads 5/16 and over. Two locking keys on internal threads smaller than 5/16.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: MIL-I-45914A (MS51830)

Order No.	Type	d ₁ class 3B	Thread type d ₁	d ₂ class 2A	Thread type d ₂	l ₁	l ₂ thread length	Inst. c'sink hole size +0.010 - 0.000	Inst. tap drill size +0.003 -0.001	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1700	Removal drill size	Removal drill depth
TR1661.81283	SL	2-56	UNC	8-32	UNC	,120	,90	,166	,134	,140	8-32	.0830	#33	1/16
TR1661.81284	SL	4-40	UNC	10-32	UNF	,170	,125	,194	,161	,160	10-32	.0840	#29	3/32
TR1661.81285	SL	6-32	UNC	12-28	UNF	,170	,125	,220	,187	,160	2-28	.0850	#21	3/32
TR1661.81286	SL	8-32	UNC	1/4-28*	UNF	,220	,175	,255	,228	,210	1/4-28	.0860	# 8	1/8



Threaded Insert - Metric

thinwall - carbon steel



TR1520

THREADED INSERTS STEEL

Material

Inserts: carbon steel (C1215) or equivalent. Zinc phosphate.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

±0,25, unless specified.

Tap drill hole tolerances:

6,9 to 10,8 = +0,10/-0,025.

12,8 and over = +0,13/-0,025.

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on internal threads M 8 and over. Two locking keys on internal threads smaller than M 8.

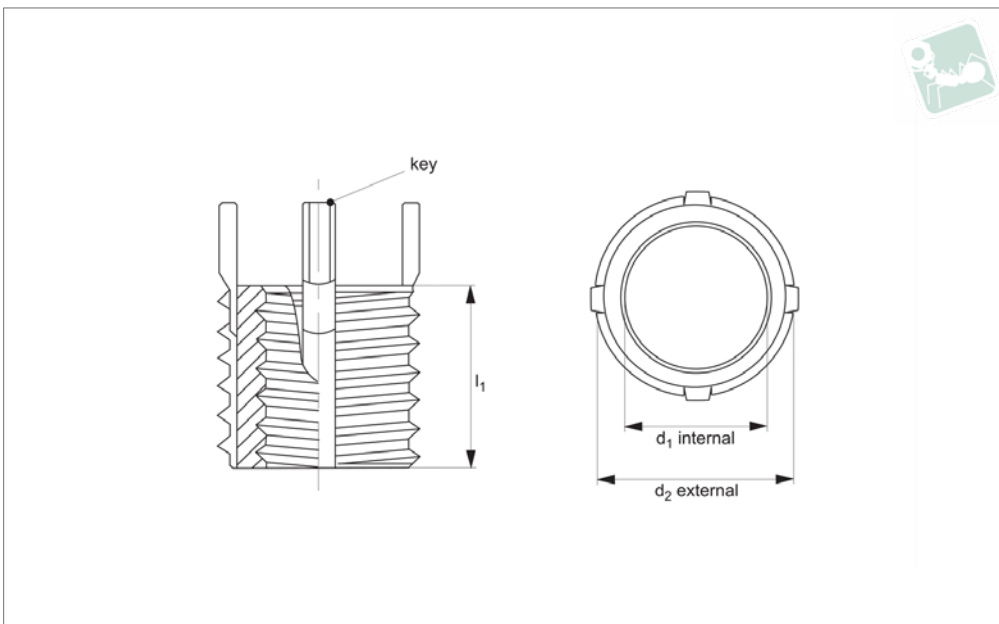
Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

Removal drill size and drill depth as speci-

Order No.	Int. d ₁ tol. 6H	Int. thread type d ₁	Ext. d ₂ tol. 6g	Ext. thread type d ₂	l ₁	Inst. tap drill size	Inst. tool ref. 22060	Inst. c'sink dia. ±0.25 ±0	Inst. thread tap tol. 6H	Inst. thread depth min.	Removal drill size	Removal drill depth
TR1520.65951	M 5x0,80	Coarse	M 8x1,25	Coarse	8	6,9	.W0510	8,3	M 8x1,25	9,5	5,5	4,0
TR1520.65952	M 6x1,00	Coarse	M10x1,25	Fine	10	8,8	.W0520	10,3	M10x1,25	11,5	7,5	4,8
TR1520.65953	M 8x1,25	Coarse	M12x1,25	Fine	12	10,8	.W0530	12,3	M12x1,25	13,5	9,5	4,8
TR1520.65153	M 8x1,00	Fine	M12x1,25	Fine	12	10,8	.W0530	12,3	M12x1,25	13,5	9,5	4,8
TR1520.65955	M10x1,50	Coarse	M14x1,50	Fine	14	12,8	.W0550	14,3	M14x1,50	15,5	11,5	4,8
TR1520.65155	M10x1,25	Fine	M14x1,50	Fine	14	12,8	.W0550	14,3	M14x1,50	15,5	11,5	4,8
TR1520.65956	M12x1,75	Coarse	M16x1,50	Fine	16	14,8	.W0560	16,3	M16x1,50	17,5	13,5	4,8
TR1520.65156	M12x1,25	Fine	M16x1,50	Fine	16	14,8	.W0560	16,3	M16x1,50	17,5	13,5	4,8



TR1570



Material

Inserts: carbon steel (C1215) or equivalent. Zinc phosphate.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

± 0,010" unless specified.

Tap drill hole tolerances:

0,234 to 0,500 = +0,004/-0,001"
0,500 and over = +0,005/-0,001"

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/16" and over. Two locking keys on internal

threads smaller than 5/16".

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

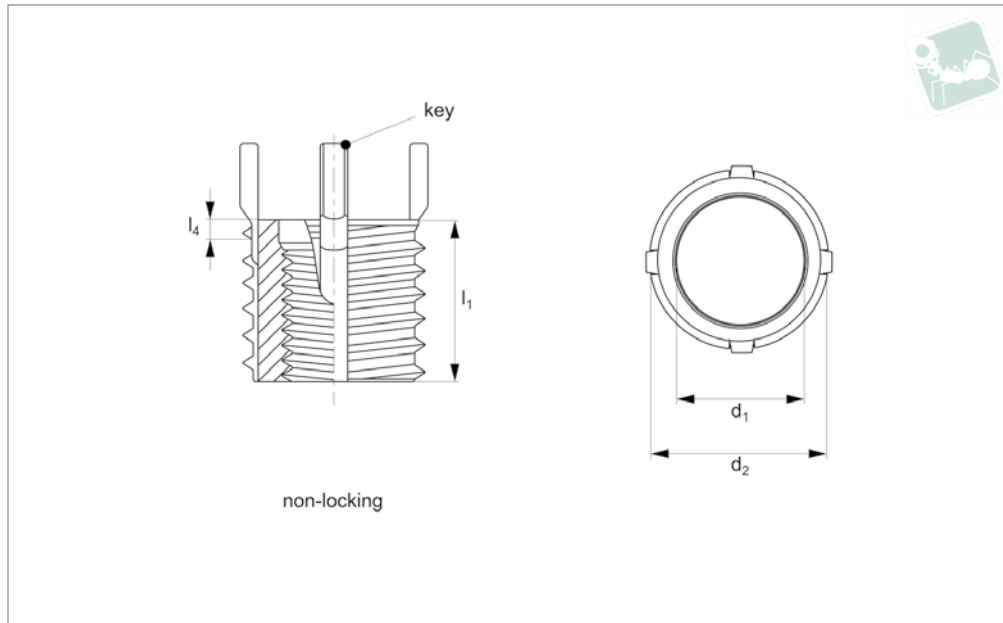
Removal drill size and drill depth as specified in table.

All dimensions in inches.

Order No.	Int. d ₁ tol. 2B	Int. thread type d ₁	Ext. d ₂ tol. 2A	Ext. thread type d ₂	l ₁	Inst. tap drill size	Inst. tool ref. 22054	Inst. c'sink dia. +0.010 - 0.000	Inst. thread tap tol. 2B	Inst. thread depth min.	Removal drill size	Removal drill depth
TR1570.65921	10-24	UNC	5/16"-18	UNC	0,31	17/64"	.W0210	0,32	5/16"-18	0,37	7/32"	1/8"
TR1570.66121	10-32	UNF	5/16"-18	UNC	0,31	17/64"	.W0210	0,32	5/16"-18	0,37	7/32"	1/8"
TR1570.65922	1/4"-20	UNC	3/8"-16	UNC	0,37	21/64"	.W0220	0,38	3/8"-16	0,43	9/32"	3/16"
TR1570.66122	1/4"-28	UNF	3/8"-16	UNC	0,37	21/64"	.W0220	0,38	3/8"-16	0,43	9/32"	3/16"
TR1570.65923	5/16"-18	UNC	7/16"-14	UNC	0,43	25/64"	.W0230	0,44	7/16"-14	0,50	11/32"	3/16"
TR1570.66123	5/16"-24	UNF	7/16"-14	UNC	0,43	25/64"	.W0230	0,44	7/16"-14	0,50	11/32"	3/16"
TR1570.65924	3/8"-16	UNC	1/2"-13	UNC	0,50	29/64"	.W0240	0,51	1/2"-13	0,56	13/32"	3/16"
TR1570.66124	3/8"-24	UNF	1/2"-13	UNC	0,50	29/64"	.W0240	0,51	1/2"-13	0,56	13/32"	3/16"
TR1570.65925	7/16"-14	UNC	9/16"-12	UNC	0,56	33/64"	.W0250	0,57	9/16"-12	0,62	15/32"	3/16"
TR1570.66125	7/16"-20	UNF	9/16"-12	UNC	0,56	33/64"	.W0250	0,57	9/16"-12	0,62	15/32"	3/16"
TR1570.65926	1/2"-13	UNC	5/8"-11	UNC	0,62	37/64"	.W0260	0,63	5/8"-11	0,68	17/32"	3/16"
TR1570.66126	1/2"-20	UNF	5/8"-11	UNC	0,62	37/64"	.W0260	0,63	5/8"-11	0,68	17/32"	3/16"



Threaded Insert MS/NAS - L Duty - 4140 steel - non-locking - MS/NAS grade



TR1608

THREADED INSERTS STEEL

Material

Inserts - 4140 alloy steel (160 KSI Min).
Keys - 302 CRES.
Cadmium plate (QQ-P-416 Type II, Cl. 2).
Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in millimetres.
Internal threads: to Fed. Std. H28/21, MJ Form

General tolerances -

+/- 0,25mm, unless specified.
Tap drill hole tolerances -
6,9 to 10,8 = +0,100/-0,025
12,8 and over = +0,130/-0,025
NL = Non-Locking type.

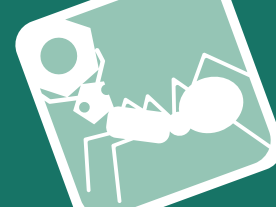
Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

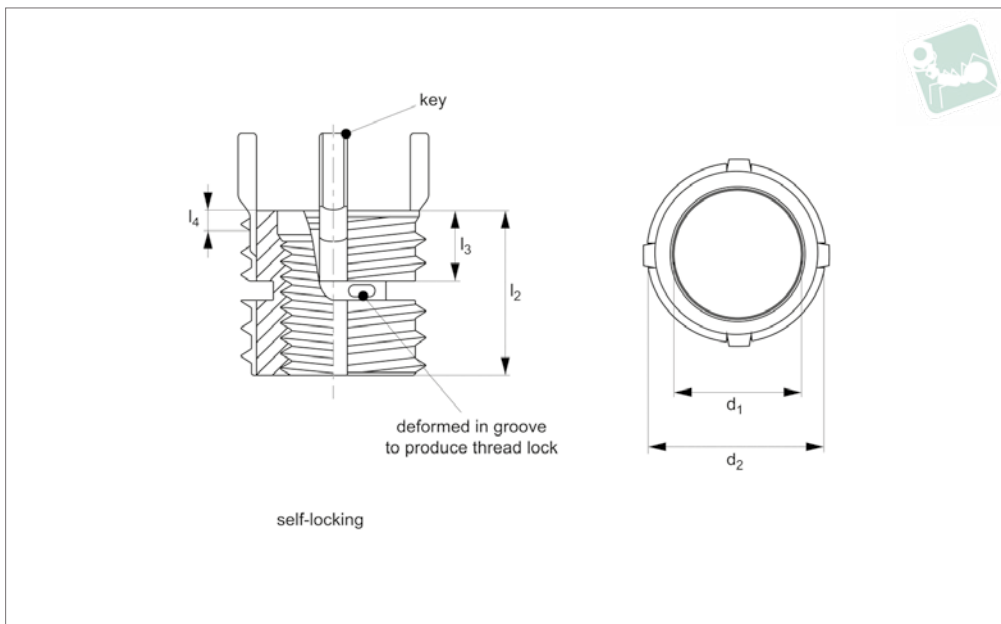
Important Notes

Four locking keys on internal threads M 6 and over. Two locking keys on internal threads smaller than M 6.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: NA0148

Order No.	Type	d ₁ tol. 4H 5H	Thread type d ₁	d ₂ tol. 4h	Thread type d ₂	Inst. tap drill size	l ₁	l ₄ c'bore depth	C'sink hole size +0.25 - 0.00	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Inst. tool ref. TI1712	Removal drill depth	Removal drill size
TR1608.80351	NL	M 5x0,8	Coarse	M 8x1,25	Coarse	6,90	8,0	1,27	8,25	M 8x1,25	9,5	.0510	4,00	5,50
TR1608.80551	NL	M 5x0,5	Fine	M 8x1,25	Coarse	6,90	8,0	1,27	8,25	M 8x1,25	9,5	.0510	4,00	5,50
TR1608.80352	NL	M 6x1,0	Coarse	M10x1,25	Fine	8,80	10,0	1,78	10,25	M10x1,25	11,5	.0520	4,75	7,50
TR1608.80552	NL	M 6x0,75	Fine	M10x1,25	Fine	8,80	10,0	1,78	10,25	M10x1,25	11,5	.0520	4,75	7,50
TR1608.80353	NL	M 8x1,25	Coarse	M12x1,25	Fine	10,80	12,0	1,78	12,25	M12x1,25	13,5	.0530	4,75	9,50
TR1608.80553	NL	M 8x1,0	Fine	M12x1,25	Fine	10,80	12,0	1,78	12,25	M12x1,25	13,5	.0530	4,75	9,50
TR1608.80355	NL	M10x1,5	Coarse	M14x1,5	Fine	12,80	14,0	2,29	14,25	M14x1,5	15,5	.0550	4,75	11,50
TR1608.80555	NL	M10x1,25	Fine	M14x1,5	Fine	12,80	14,0	2,29	14,25	M14x1,5	15,5	.0550	4,75	11,50
TR1608.80356	NL	M12x1,75	Coarse	M16x1,5	Fine	14,75	16,0	2,29	16,25	M16x1,5	17,5	.0560	4,75	13,50
TR1608.80556	NL	M12x1,25	Fine	M16x1,5	Fine	14,75	16,0	2,29	16,25	M16x1,5	17,5	.0560	4,75	13,50



TR1609



Material

Inserts - 4140 alloy steel (160 KSI Min).
 Keys - 302 CRES.
 Cadmium plate (QQ-P-416 Type II, Cl. 2).
 Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in millimetres.
 Internal threads: to Fed. Std. H28/21, MJ Form
 General tolerances -

+/- 0,25mm, unless specified.

Tap drill hole tolerances -
 6,9 to 10,8 = +0,100/-0,025
 12,8 and over = +0,130/-0,025

SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

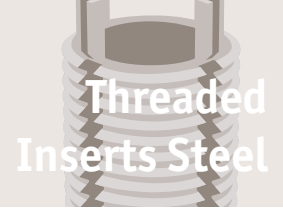
Four locking keys on internal threads M 6 and over. Two locking keys on internal threads smaller than M 6.
 Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
 Removal (Rem.) drill size and drill depth as specified in table.
 Perform to standards: NA0148

Order No.	Type	d ₁ tol. 4H 5H	Thread type d ₁	d ₂ tol. 4h	Thread type d ₂	Inst. tap drill size	l ₁
TR1609.81351	SL	M 5x0,8	Coarse	M 8x1,25	Coarse	6.90	8.0
TR1609.81551	SL	M 5x0,5	Fine	M 8x1,25	Coarse	6.90	8.0
TR1609.81352	SL	M 6x1,0	Coarse	M10x1,25	Fine	8.80	10.0
TR1609.81552	SL	M 6x0,75	Fine	M10x1,25	Fine	8.80	10.0
TR1609.81353	SL	M 8x1,25	Coarse	M12x1,25	Fine	10.80	12.0
TR1609.81553	SL	M 8x1,0	Fine	M12x1,25	Fine	10.80	12.0
TR1609.81355	SL	M10x1,5	Coarse	M14x1,5	Fine	12.80	14.0
TR1609.81555	SL	M10x1,25	Fine	M14x1,5	Fine	12.80	14.0
TR1609.81356	SL	M12x1,75	Coarse	M16x1,5	Fine	14.75	16.0
TR1609.81556	SL	M12x1,25	Fine	M16x1,5	Fine	14.75	16.0

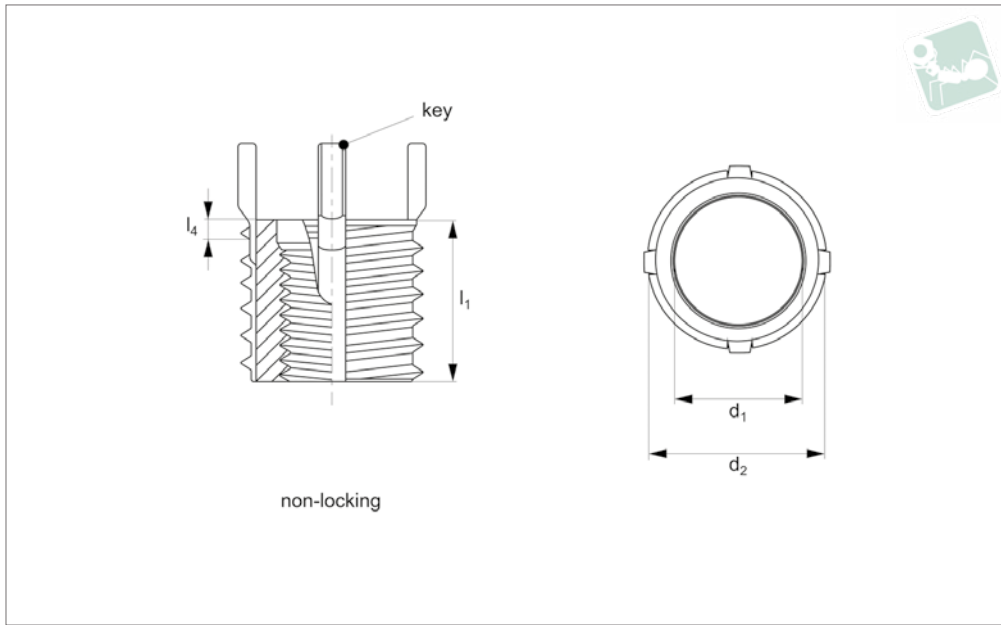
Order No.	l ₃ ±0.76	l ₄ c'bore depth	C'sink hole size +0.25 -0.00	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Inst. tool ref. T11712	Removal drill depth	Removal drill size
TR1609.81351	3.73	1.27	8.25	M 8x1,25	9.5	.0510	4.00	5.50
TR1609.81551	3.73	1.27	8.25	M 8x1,25	9.5	.0510	4.00	5.50
TR1609.81352	6.02	1.78	10.25	M10x1,25	11.5	.0520	4.75	7.50
TR1609.81552	6.02	1.78	10.25	M10x1,25	11.5	.0520	4.75	7.50
TR1609.81353	6.28	1.78	12.25	M12x1,25	13.5	.0530	4.75	9.50
TR1609.81553	6.28	1.78	12.25	M12x1,25	13.5	.0530	4.75	9.50
TR1609.81355	6.46	2.29	14.25	M14x1,5	15.5	.0550	4.75	11.50
TR1609.81555	6.46	2.29	14.25	M14x1,5	15.5	.0550	4.75	11.50
TR1609.81356	6.46	2.29	16.25	M16x1,5	17.5	.0560	4.75	13.50
TR1609.81556	6.46	2.29	16.25	M16x1,5	17.5	.0560	4.75	13.50



Threaded Insert MS/NAS - Thinwall - 4140 steel - non-locking - MS/NAS grade



Threaded
Inserts Steel



TR1662

THREADED INSERTS STEEL

Material

Inserts - 4140 alloy steel (160 KSI Min).
Keys - 302 CRES.
Cadmium plate (QQ-P-416 Type II, Cl. 2).
Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -

+/- 0,010 unless specified.

Tap drill hole tolerances -
0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
NL = Non-Locking type.

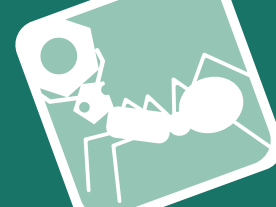
Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

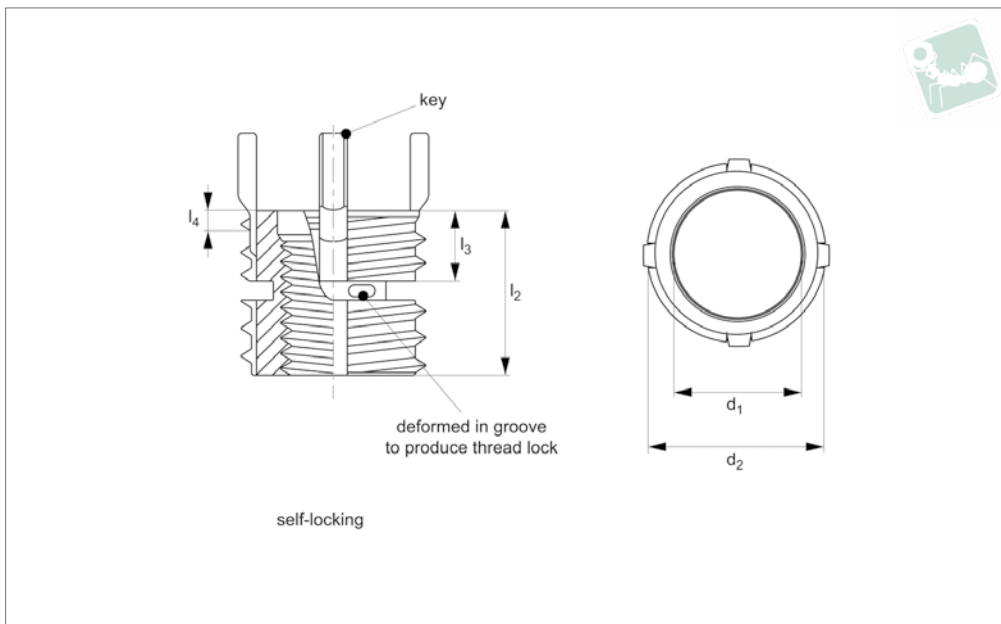
Important Notes

Four locking keys on internal threads 5/16 and over. Two locking keys on internal threads smaller than 5/16.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: MIL-I-45914A

Order No.	Type	d ₁ class 3B	Thread type d ₁	d ₂ (mod.) class 2A	Thread type d ₂	Inst. tap drill size	l ₁	l ₄ c'bore depth	Inst. c'sink hole size +0.010 - 0.000	Inst. thread depth min.	Inst. tap size class 2B	Inst. tool ref. TR1702	Removal drill depth	Removal drill size
TR1662.80321	NL	10-24	UNC	5/16-18	UNC	,272	,312	,07	,323	,37	5/16-18	.0210	5/32	7/32
TR1662.80521	NL	10-32	UNF	5/16-18	UNC	,272	,312	,07	,323	,37	5/16-18	.0211	5/32	7/32
TR1662.80322	NL	1/4-20	UNC	3/8-16	UNC	,332	,375	,07	,385	,43	3/8-16	.0220	3/16	9/32
TR1662.80522	NL	1/4-28	UNF	3/8-16	UNC	,332	,375	,07	,385	,43	3/8-16	.0221	3/16	9/32
TR1662.80323	NL	5/16-18	UNC	7/16-14	UNC	,397	,437	,07	,447	,50	7/16-14	.0230	3/16	11/32
TR1662.80523	NL	5/16-24	UNF	7/16-14	UNC	,397	,437	,07	,447	,50	7/16-14	.0231	3/16	11/32
TR1662.80324	NL	3/8-16	UNC	1/2-13	UNC	,453	,500	,07	,510	,56	1/2-13	.0240	3/16	13/32
TR1662.80524	NL	3/8-24	UNF	1/2-13	UNC	,453	,500	,07	,510	,56	1/2-13	.0241	3/16	13/32
TR1662.80325	NL	7/16-14	UNC	9/16-12	UNC	,516	,562	,07	,572	,62	9/16-12	.0250	3/16	15/32
TR1662.80525	NL	7/16-20	UNF	9/16-12	UNC	,516	,562	,07	,572	,62	9/16-12	.0251	3/16	15/32
TR1662.80326	NL	1/2-13	UNC	5/8-11	UNC	,578	,625	,07	,635	,68	5/8-11	.0260	3/16	17/32
TR1662.80526	NL	1/2-20	UNF	5/8-11	UNC	,578	,625	,07	,635	,68	5/8-11	.0261	3/16	17/32



TR1663



Material

Inserts - 4140 alloy steel (160 KSI Min).
 Keys - 302 CRES.
 Cadmium plate (QQ-P-416 Type II, Cl. 2).
 Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
 Internal threads: to SAE AS8879.
 General tolerances -
 +/- 0,010 unless specified.

Tap drill hole tolerances -

0,234 to 0,500 = +0,004/-0,001
 0,500 and over = +0,005/-0,001
SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

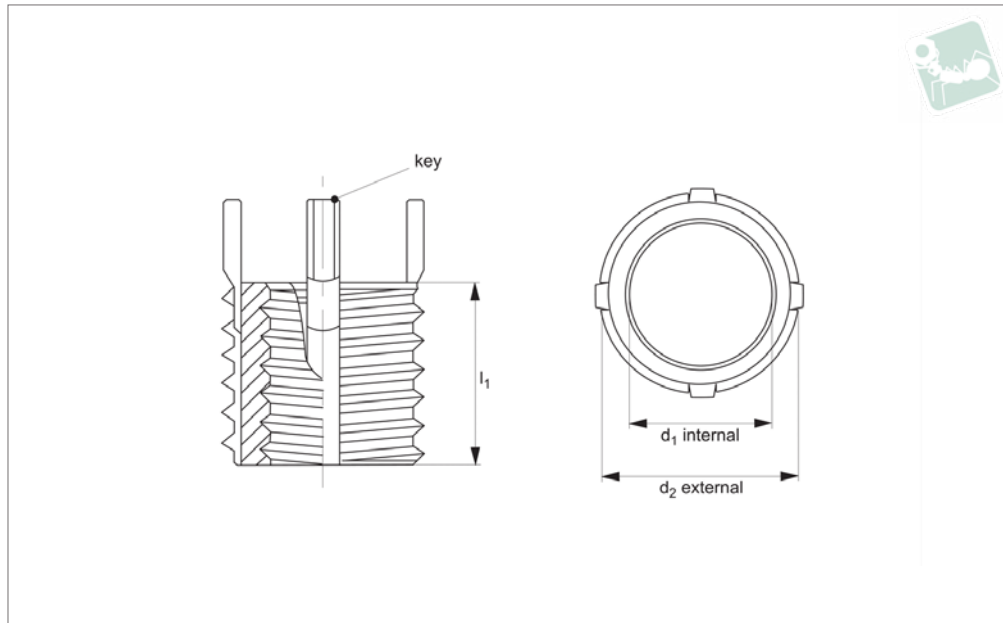
Four locking keys on internal threads 5/16 and over. Two locking keys on internal threads smaller than 5/16.
 Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
 Removal (Rem.) drill size and drill depth as specified in table.
 Perform to standards: MIL-I-45914A (MS51830 & NAS1394)

Order No.	Type	d ₁ class 3B	Thread type d ₁	d ₂ (mod.) class 2A	Thread type d ₂	Inst. tap drill size	l ₁	l ₃ ±0.03 0	l ₄ c'bore depth	Inst. c'sink hole size +0.010 - 0.000	Inst. thread depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1702	Removal drill depth	Removal drill size
TR1663.81321	SL	10-24	UNC	5/16-18	UNC	,272	,312	,22	,07	,323	,37	5/16-18	.0210	5/32	7/32
TR1663.81521	SL	10-32	UNF	5/16-18	UNC	,272	,312	,22	,07	,323	,37	5/16-18	.0211	5/32	7/32
TR1663.81322	SL	1/4-20	UNC	3/8-16	UNC	,332	,375	,22	,07	,385	,43	3/8-16	.0220	3/16	9/32
TR1663.81522	SL	1/4-28	UNF	3/8-16	UNC	,332	,375	,22	,07	,385	,43	3/8-16	.0221	3/16	9/32
TR1663.81323	SL	5/16-18	UNC	7/16-14	UNC	,397	,437	,22	,07	,447	,50	7/16-14	.0230	3/16	11/32
TR1663.81523	SL	5/16-24	UNF	7/16-14	UNC	,397	,437	,22	,07	,447	,50	7/16-14	.0231	3/16	11/32
TR1663.81324	SL	3/8-16	UNC	1/2-13	UNC	,453	,500	,24	,07	,510	,56	1/2-13	.0240	3/16	13/32
TR1663.81524	SL	3/8-24	UNF	1/2-13	UNC	,453	,500	,24	,07	,510	,56	1/2-13	.0241	3/16	13/32
TR1663.81325	SL	7/16-14	UNC	9/16-12	UNC	,516	,562	,27	,07	,572	,62	9/16-12	.0250	3/16	15/32
TR1663.81525	SL	7/16-20	UNF	9/16-12	UNC	,516	,562	,27	,07	,572	,62	9/16-12	.0251	3/16	15/32
TR1663.81326	SL	1/2-13	UNC	5/8-11	UNC	,578	,625	,28	,07	,635	,68	5/8-11	.0260	3/16	17/32
TR1663.81526	SL	1/2-20	UNF	5/8-11	UNC	,578	,625	,28	,07	,635	,68	5/8-11	.0261	3/16	17/32



Threaded Insert - Metric

heavy duty - carbon steel



TR1525

THREADED INSERTS STEEL

Material

Inserts: carbon steel (C1215) or equivalent. Zinc phosphate.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

±0,25, unless specified.

Tap drill hole tolerances:

6,9 to 10,8 = +0,10/-0,025.

12,8 and over = +0,13/-0,025.

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

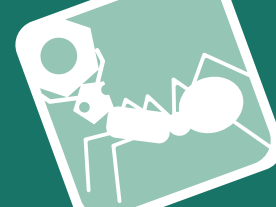
Important Notes

Four locking keys on internal threads M 8 and over. Two locking keys on internal threads smaller than M 8.

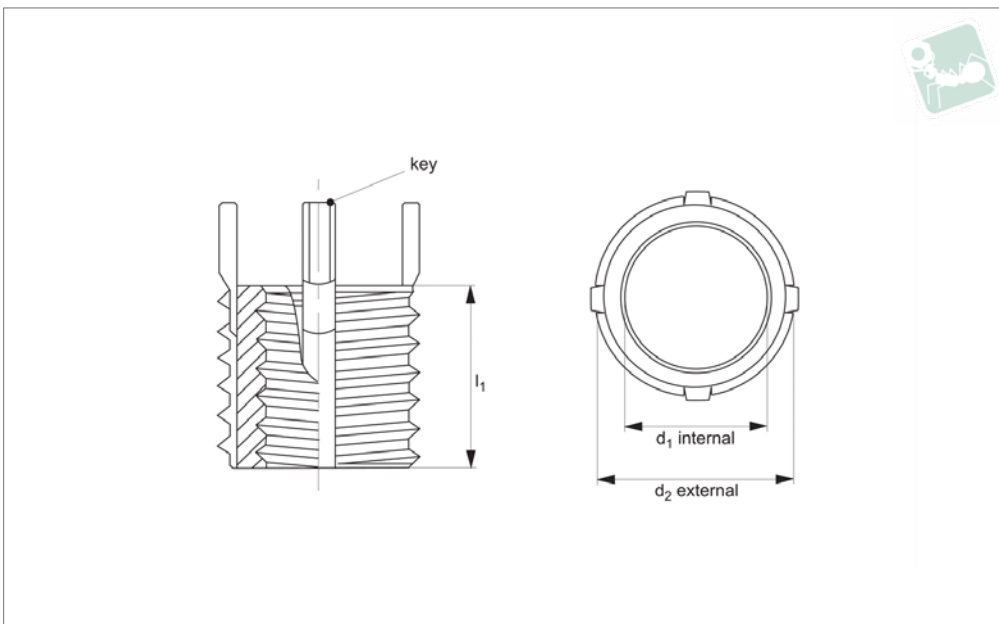
Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

Removal drill size and drill depth as speci-

Order No.	Int. d ₁ tol. 6H	Int. thread type d ₁	Ext. d ₂ tol. 6g	Ext. thread type d ₂	l ₁	Inst. tool ref. 22062	Inst. tap drill size	Inst. c'sink dia. ±0,25 ± 0,000	Inst. thread tap tol. 6H	Inst. thread depth min.	Removal drill size	Removal drill depth
TR1525.65963	M 4x0,70	Coarse	M 8x1,25	Coarse	8	.W0630	6,9	8,3	M 8x1,25	9,5	5,5	4,0
TR1525.65964	M 5x0,80	Coarse	M10x1,25	Fine	10	.W0640	8,8	10,3	M10x1,25	12,5	7,5	4,8
TR1525.65965	M 6x1,00	Coarse	M12x1,25	Fine	12	.W0650	10,8	12,3	M12x1,25	14,5	9,5	4,8
TR1525.65966	M 8x1,25	Coarse	M14x1,50	Fine	14	.W0660	12,8	14,3	M14x1,50	16,5	11,5	4,8
TR1525.66166	M 8x1,00	Fine	M14x1,50	Fine	14	.W0660	12,8	14,3	M14x1,50	16,5	11,5	4,8
TR1525.65967	M10x1,50	Coarse	M16x1,50	Fine	16	.W0670	14,8	16,3	M16x1,50	18,5	13,5	4,8
TR1525.66167	M10x1,25	Fine	M16x1,50	Fine	16	.W0670	14,8	16,3	M16x1,50	18,5	13,5	4,8
TR1525.65969	M12x1,75	Coarse	M18x1,50	Fine	18	.W0690	16,8	18,3	M18x1,50	20,5	15,5	4,8
TR1525.66169	M12x1,25	Fine	M18x1,50	Fine	18	.W0690	16,8	18,3	M18x1,50	20,5	15,5	4,8
TR1525.65970	M14x2,00	Coarse	M20x1,50	Fine	20	.W0700	18,8	20,3	M20x1,50	22,5	17,5	4,8
TR1525.66170	M14x1,50	Fine	M20x1,50	Fine	20	.W0700	18,8	20,3	M20x1,50	22,5	17,5	4,8
TR1525.65971	M16x2,00	Coarse	M22x1,50	Fine	22	.W0710	20,5	22,3	M22x1,50	24,5	17,8	6,4
TR1525.66171	M16x1,50	Fine	M22x1,50	Fine	22	.W0710	20,5	22,3	M22x1,50	24,5	17,8	6,4
TR1525.66172	M18x1,50	Fine	M24x1,50	Fine	24	.W0720	22,5	24,3	M24x1,50	26,5	19,8	6,4
TR1525.65973	M20x2,50	Coarse	M30x2,00	Non-Std	30	.W0730	28,0	30,3	M30x2,00	34,5	25,8	6,4
TR1525.66173	M20x1,50	Fine	M30x2,00	Non-Std	30	.W0730	28,0	30,3	M30x2,00	34,5	25,8	6,4
TR1525.66174	M22x1,50	Fine	M32x2,00	Non-Std	32	.W0740	30,0	32,3	M32x2,00	36,5	27,8	6,4
TR1525.65975	M24x3,00	Coarse	M33x2,00	Non-Std	33	.W0750	31,0	33,3	M33x2,00	37,5	28,8	6,4
TR1525.66175	M24x2,00	Fine	M33x2,00	Non-Std	33	.W0750	31,0	33,3	M33x2,00	37,5	28,8	6,4



TR1535



Material

Inserts: carbon steel (C1215) or equivalent. Zinc phosphate.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

± 0,010" unless specified.

Tap drill hole tolerances:

0,234 to 0,500 = +0,004/-0,001"
0,500 and over = +0,005/-0,001"

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on internal threads M8 and over. Two locking keys on internal

threads smaller than M8.

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

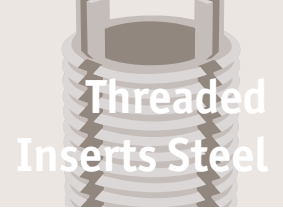
Removal drill size and drill depth as specified in table.

Internal thread in metric. External thread in inches.

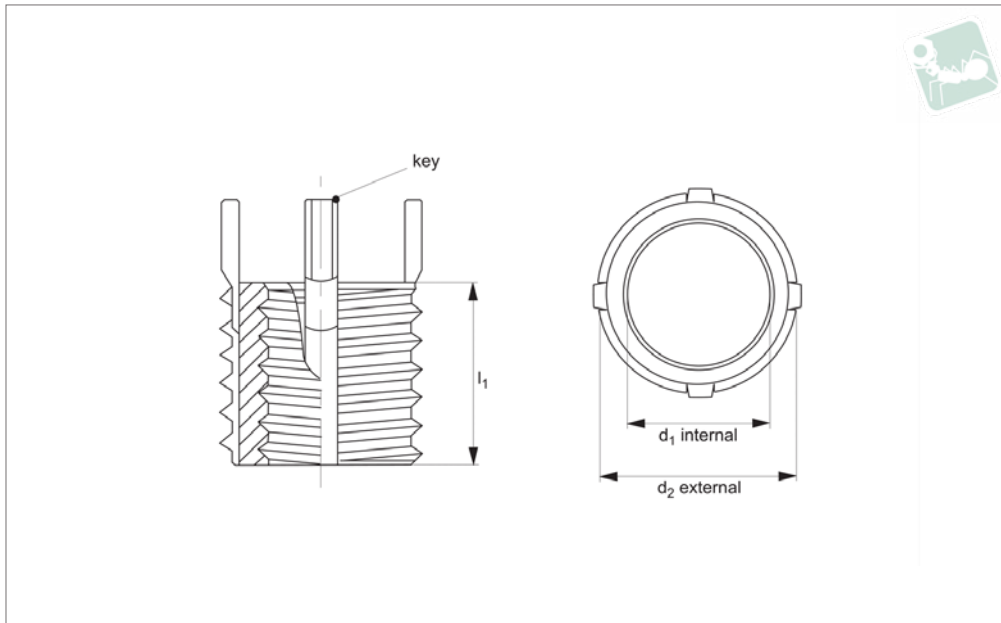
Order No.	Int. d ₁ tol. 6H	Int. thread type d ₁	Ext. d ₂ tol. 2A	Ext. thread type d ₂	l ₁	Inst. tool ref. 22064	Inst. tap drill size	Inst. c'sink dia. +0.010 - 0.000	Inst. thread tap tol. 2B	Inst. thread depth min.	Removal drill size	Removal drill depth
TR1535.66243	M 6x1,00	Coarse	3/8"-16	UNC	0,31	.W0430	21/64"	0,38	3/8"-16	0,37	9/32"	1/8"
TR1535.66244	M 8x1,25	Coarse	1/2"-13	UNC	0,43	.W0440	29/64"	0,51	1/2"-13	0,50	13/32"	3/16"
TR1535.66245	M10x1,50	Coarse	5/8"-11	UNC	0,50	.W0450	37/64"	0,63	5/8"-11	0,56	17/32"	3/16"
TR1535.66247	M12x1,75	Coarse	3/4"-16	UNF	0,62	.W0470	45/64"	0,76	3/4"-16	0,68	21/32"	3/16"
TR1535.66248	M14x2,00	Coarse	7/8"-14	UNF	0,81	.W0480	53/64"	0,88	7/8"-14	0,94	25/32"	5/16"
TR1535.66249	M16x2,00	Coarse	1"-12	UNF	0,87	.W0490	15/16"	1,02	1"-12	1,00	27/32"	5/16"



Threaded Insert - Inch heavy duty - carbon steel



TR1575



THREADED INSERTS STEEL

Material

Inserts: carbon steel (C1215) or equivalent. Zinc phosphate.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

± 0,010" unless specified.

Tap drill hole tolerances:

0,234 to 0,500 = +0,004/-0,001".
0,500 and over = +0,005/-0,001".

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/16" and over. Two locking keys on internal

threads smaller than 5/16".

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

Removal drill size and drill depth as specified in table.

All dimensions in inches.

Order No.	Int. d ₁ tol. 2B	Int. thread type d ₁	Ext. d ₂ tol. 2A	Ext. thread type d ₂	l ₁	Inst. tool ref. 22056	Inst. tap drill size	Inst. c'sink dia. +0.010 - 0.000	Inst. thread tap tol. 2B	Inst. thread depth min.	Removal drill size	Removal drill depth
TR1575.65900	8-32	UNC	5/16"-18	UNC	0,31	.W0000	17/64"	0,32	5/16"-18	0,37	7/32"	1/8"
TR1575.65901	10-24	UNC	3/8"-16	UNC	0,31	.W0010	21/64"	0,38	3/8"-16	0,37	9/32"	1/8"
TR1575.66101	10-32	UNF	3/8"-16	UNC	0,31	.W0010	21/64"	0,38	3/8"-16	0,37	9/32"	1/8"
TR1575.65902	1/4"-20	UNC	7/16"-14	UNC	0,37	.W0020	25/64"	0,44	7/16"-14	0,43	11/32"	3/16"
TR1575.66102	1/4"-28	UNF	7/16"-14	UNC	0,37	.W0020	25/64"	0,44	7/16"-14	0,43	11/32"	3/16"
TR1575.65903	5/16"-18	UNC	1/2"-13	UNC	0,43	.W0030	29/64"	0,51	1/2"-13	0,50	13/32"	3/16"
TR1575.66103	5/16"-24	UNF	1/2"-13	UNC	0,43	.W0030	29/64"	0,51	1/2"-13	0,50	13/32"	3/16"
TR1575.65904	3/8"-16	UNC	9/16"-12	UNC	0,50	.W0040	33/64"	0,57	9/16"-12	0,56	15/32"	3/16"
TR1575.66104	3/8"-24	UNF	9/16"-12	UNC	0,50	.W0040	33/64"	0,57	9/16"-12	0,56	15/32"	3/16"
TR1575.65905	7/16"-14	UNC	5/8"-11	UNC	0,62	.W0050	37/64"	0,63	5/8"-11	0,68	17/32"	3/16"
TR1575.66105	7/16"-20	UNF	5/8"-11	UNC	0,62	.W0050	37/64"	0,63	5/8"-11	0,68	17/32"	3/16"
TR1575.65906	1/2"-13	UNC	3/4"-16	UNF	0,62	.W0060	45/64"	0,76	3/4"-16	0,68	21/32"	3/16"
TR1575.66106	1/2"-20	UNF	3/4"-16	UNF	0,62	.W0060	45/64"	0,76	3/4"-16	0,68	21/32"	3/16"
TR1575.65907	9/16"-12	UNC	3/4"-16	UNF	0,81	.W0070	45-64"	0,76	3/4"-16	0,94	21/32"	3/16"
TR1575.66107	9/16"-18	UNF	3/4"-16	UNF	0,81	.W0070	45-64"	0,76	3/4"-16	0,94	21/32"	3/16"
TR1575.65908	5/8"-11	UNC	7/8"-14	UNF	0,87	.W0080	53/64"	0,88	7/8"-14	1,00	25/32"	5/16"
TR1575.66108	5/8"-18	UNF	7/8"-14	UNF	0,87	.W0080	53/64"	0,88	7/8"-14	1,00	25/32"	5/16"
TR1575.65909	3/4"-10	UNC	1-1/8"-12	UNF	1,12	.W0090	1-1/16"	1,14	1-1/8"-12	1,31	31/32"	5/16"
TR1575.66109	3/4"-16	UNF	1-1/8"-12	UNF	1,12	.W0090	1-1/16"	1,14	1-1/8"-12	1,31	31/32"	5/16"
TR1575.65910	7/8"-9	UNC	1-1/4"-12	UNF	1,25	.W0100	1-3/16"	1,27	1-1/4"-12	1,44	1-3/32"	5/16"
TR1575.66110	7/8"-14	UNF	1-1/4"-12	UNF	1,25	.W0100	1-3/16"	1,27	1-1/4"-12	1,44	1-3/32"	5/16"
TR1575.65911	1"-8	UNC	1-3/8"-12	UNF	1,37	.W0110	1-5/16"	1,39	1-3/8"-12	1,56	1-7/32"	5/16"
TR1575.66111	1"-12	UNF	1-3/8"-12	UNF	1,37	.W0110	1-5/16"	1,39	1-3/8"-12	1,56	1-7/32"	5/16"
TR1575.66112	1"-14	UNF	1-3/8"-12	UNF	1,37	.W0110	1-5/16"	1,39	1-3/8"-12	1,56	1-7/32"	5/16"
TR1575.65913	1-1/8"-7	UNC	1-1/2"-12	UNF	1,62	.W0130	1-7/16"	1,52	1-1/2"-12	1,84	1-11/32"	5/16"
TR1575.66113	1-1/8"-12	UNF	1-1/2"-12	UNF	1,62	.W0130	1-7/16"	1,52	1-1/2"-12	1,84	1-11/32"	5/16"

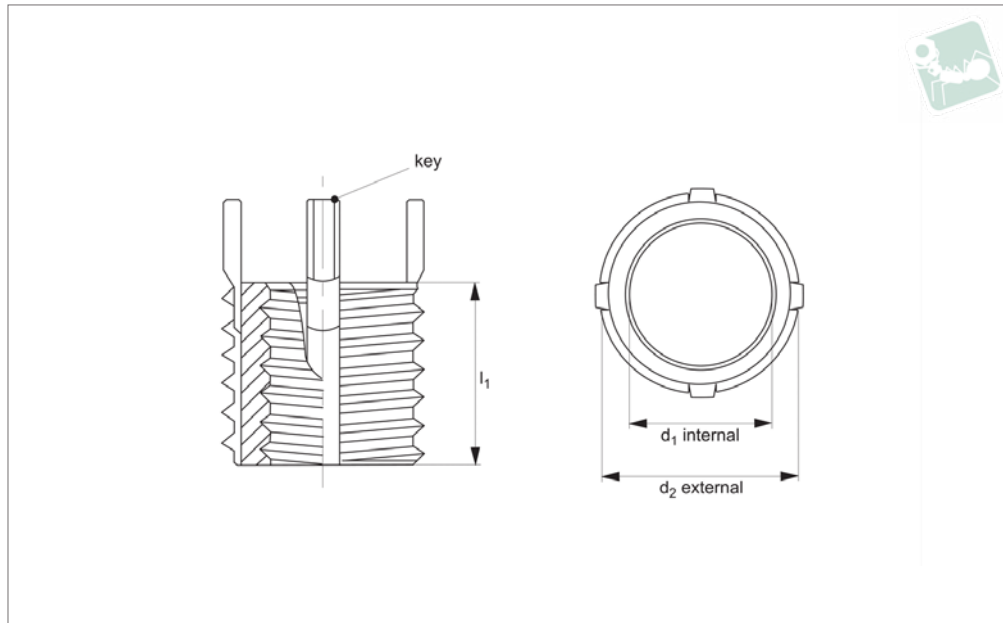
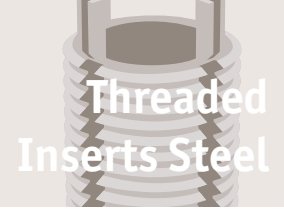


Order No.	Int. d ₁ tol. 2B	Int. thread type d ₁	Ext. d ₂ tol. 2A	Ext. thread type d ₂	l ₁	Inst. tool ref. 22056	Inst. tap drill size	Inst. c'sink dia. +0.010 - 0.000	Inst. thread tap tol. 2B	Inst. thread depth min.	Removal drill size	Removal drill depth
TR1575.65914	1-1/4"-7	UNC	1-5/8"-12	UNF	1,81	.W0140	1-9/16"	1,64	1-5/8"-12	2,06	1-15/32"	5/16"
TR1575.66114	1-1/4"-12	UNF	1-5/8"-12	UNF	1,81	.W0140	1-9/16"	1,64	1-5/8"-12	2,06	1-15/32"	5/16"
TR1575.65916	1-1/2"-6	UNC	1-7/8"-12	UNF	2,00	.W0160	1-13/16"	1,89	1-7/8"-12	2,28	1-23/32"	5/16"
TR1575.66116	1-1/2"-12	UNF	1-7/8"-12	UNF	2,00	.W0160	1-13/16"	1,89	1-7/8"-12	2,28	1-23/32"	5/16"



Threaded Insert - Inch

extra heavy duty - carbon steel



TR1576

THREADED INSERTS STEEL

Material

Inserts: carbon steel (C1215) or equivalent. Zinc phosphate.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

± 0,010" unless specified.

Tap drill hole tolerances:

0,234 to 0,500 = +0,004/-0,001".
0,500 and over = +0,005/-0,001".

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/16" and over. Two locking keys on internal

threads smaller than 5/16".

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

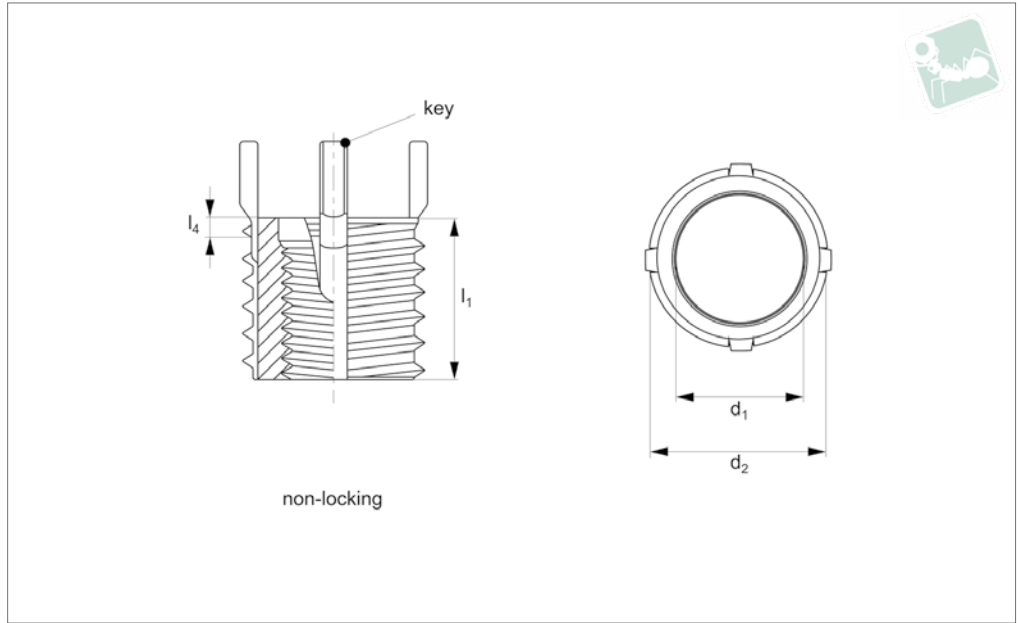
Removal drill size and drill depth as specified in table.

All dimensions in inches.

Order No.	Int. d ₁ tol. 2B	Int. thread type d ₁	Ext. d ₂ (mod.) class 2A	Ext. thread type d ₂	l ₁	Inst. c'sink dia. +0.010 - 0.000	Inst. tap drill size	Inst. thread depth min.	Inst. thread tap tol. 2B	Inst. tool ref. 22058	Removal drill size	Removal drill depth
TR1576.65931	6 - 32	UNC	5/16" - 18	UNC	0,31	0,32		0,37	5/16"-18	.W0310	7/32"	1/8"
TR1576.65932	8 - 32	UNC	3/8" - 16	UNC	0,31	0,38		0,37	3/8"-16	.W0320	9/32"	1/8"
TR1576.65933	10 - 24	UNC	7/16" - 14	UNC	0,31	0,44		0,37	7/16"-14	.W0330	11/32"	3/16"
TR1576.66133	10 - 32	UNF	7/16" - 14	UNC	0,31	0,44		0,37	7/16"-14	.W0330	11/32"	3/16"
TR1576.65934	1/4" - 20	UNC	1/2" - 13	UNC	0,37	0,51	29/64"	0,43	1/2"-13	.W0340	13/32"	3/16"
TR1576.66134	1/4" - 28	UNF	1/2" - 13	UNC	0,37	0,51	29/64"	0,43	1/2"-13	.W0340	13/32"	3/16"
TR1576.65935	5/16" - 18	UNC	9/16" - 12	UNC	0,43	0,57	33/64"	0,50	9/16"-12	.W0350	15/32"	3/16"
TR1576.66135	5/16" - 24	UNF	9/16" - 12	UNC	0,43	0,57	33/64"	0,50	9/16"-12	.W0350	15/32"	3/16"
TR1576.65936	3/8" - 16	UNC	5/8" - 11	UNC	0,50	0,63	37/64"	0,56	5/8"-11	.W0360	17/32"	3/16"
TR1576.66136	3/8" - 24	UNF	5/8" - 11	UNC	0,50	0,63	37/64"	0,56	5/8"-11	.W0360	17/32"	3/16"
TR1576.65937	7/6" - 14	UNC	3/4" - 16	UNF	0,62	0,76	45/64"	0,68	3/4"-16	.W0370	21/32"	3/16"
TR1576.66137	7/6" - 20	UNF	3/4" - 16	UNF	0,62	0,76	45/64"	0,68	3/4"-16	.W0370	21/32"	3/16"
TR1576.65938	1/2" - 13	UNC	7/8" - 14	UNF	0,68	0,88	53/64"	0,75	7/8"-14	.W0380	25/32"	5/16"
TR1576.66138	1/2" - 13	UNF	7/8" - 14	UNF	0,68	0,88	53/64"	0,75	7/8"-14	.W0380	25/32"	5/16"
TR1576.65939	9/16" - 12	UNC	7/8" - 14	UNF	0,81	0,88	53/64"	0,94	7/8"-14	.W0390	25/32"	5/16"
TR1576.66139	9/16" - 18	UNF	7/8" - 14	UNF	0,81	0,88	53/64"	0,94	7/8"-14	.W0390	25/32"	5/16"
TR1576.65940	5/8" - 11	UNC	1" - 12	UNF	0,87	1,02	15/16"	1,00	1"-12	.W0400	27/32"	5/16"
TR1576.66140	5/8" - 18	UNF	1" - 12	UNF	0,87	1,02	15/16"	1,00	1"-12	.W0400	27/32"	5/16"
TR1576.65941	3/4" - 10	UNC	1 - 1/4" - 12	UNF	1,12	1,27	1-3/16"	1,31	1-1/4"-12	.W0410	1-3/32"	5/16"
TR1576.66141	3/4" - 16	UNF	1 - 1/4" - 12	UNF	1,12	1,27	1-3/16"	1,31	1-1/4"-12	.W0410	1-3/32"	5/16"
TR1576.65942	7/8" - 9	UNC	1 - 3/8" - 12	UNF	1,25	1,39	1-5/16"	1,44	1-3/8"-12	.W0420	1-7/32"	5/16"
TR1576.66142	7/8" - 14	UNF	1 - 3/8" - 12	UNF	1,25	1,39	1-5/16"	1,44	1-3/8"-12	.W0420	1-7/32"	5/16"
TR1576.65943	1" - 8	UNC	1 - 1/2" - 12	UNF	1,37	1,52	1-7/16"	1,56	1-1/2"-12	.W0430	1-11/32"	5/16"
TR1576.66143	1" - 12	UNF	1 - 1/2" - 12	UNF	1,37	1,52	1-7/16"	1,56	1-1/2"-12	.W0430	1-11/32"	5/16"



TR1610



Material

Inserts - 4140 alloy steel (160 KSI Min).
 Keys - 302 CRES.
 Cadmium plate (QQ-P-416 Type II, Cl. 2).
 Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in millimetres.
 Internal threads: to Fed. Std. H28/21, MJ Form

General tolerances -

+/- 0,25mm, unless specified.
 Tap drill hole tolerances -
 6,9 to 10,8 = +0,100/-0,025
 12,8 and over = +0,130/-0,025
NL = Non-Locking type.

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads M 6 and over. Two locking keys on internal threads smaller than M 6.
 Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
 Removal (Rem.) drill size and drill depth as specified in table.
 Perform to standards: NA0150

Order No.	Type	d ₁ tol. 4H 5H	Thread type d ₁	d ₂ tol. 4h	Thread type d ₂	l ₁	l ₄ c'bore depth	C'sink hole size +0.25 - 0.00	Inst. tap drill size	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Inst. tool ref. TR1715	Removal drill size	Removal drill size
TR1610.80363	NL	M 4x0,7	Coarse	M 8x1,25	Coarse	8,0	1,27	8,25	6,90	M 8x1,25	9,5	.0630	5,50	5,50
TR1610.80364	NL	M 5x0,8	Coarse	M10x1,25	Fine	10,0	1,27	10,25	8,80	M10x1,25	12,5	.0640	7,50	7,50
TR1610.80365	NL	M 6x1,0	Coarse	M12x1,25	Fine	12,0	1,78	12,25	10,80	M12x1,25	14,5	.0650	9,50	9,50
TR1610.80366	NL	M 8x1,25	Coarse	M14x1,5	Fine	14,0	1,78	14,25	12,80	M14x1,5	16,5	.0660	11,50	11,50
TR1610.80566	NL	M 8x1,0	Fine	M14x1,5	Fine	14,0	1,78	14,25	12,80	M14x1,5	16,5	.0660	11,50	11,50
TR1610.80367	NL	M10x1,5	Coarse	M16x1,5	Fine	16,0	2,29	16,25	14,75	M16x1,5	18,5	.0670	13,50	13,50
TR1610.80567	NL	M10x1,25	Fine	M16x1,5	Fine	16,0	2,29	16,25	14,75	M16x1,5	18,5	.0670	13,50	13,50
TR1610.80369	NL	M12x1,75	Coarse	M18x1,5	Coarse	18,0	2,29	18,25	16,75	M18x1,5	20,5	.0690	15,50	15,50
TR1610.80569	NL	M12x1,25	Fine	M18x1,5	Coarse	18,0	2,29	18,25	16,75	M18x1,5	20,5	.0690	15,50	15,50
TR1610.80370	NL	M14x2,0	Coarse	M20x1,5	Fine	20,0	2,79	20,25	18,75	M20x1,5	22,5	.0700	17,50	17,50
TR1610.80570	NL	M14x1,5	Fine	M20x1,5	Fine	20,0	2,79	20,25	18,75	M20x1,5	22,5	.0700	17,50	17,50
TR1610.80371	NL	M16x2,0	Coarse	M22x1,5	Fine	22,0	2,79	22,25	20,50	M22x1,5	24,5	.0710	17,75	17,75
TR1610.80571	NL	M16x1,5	Fine	M22x1,5	Fine	22,0	2,79	22,25	20,50	M22x1,5	24,5	.0710	17,75	17,75
TR1610.80572	NL	M18x1,5	Coarse	M24x2,0	Fine	24,0	2,79	24,25	22,50	M 24x2,0	28,5	.0720	19,75	19,75
TR1610.80373	NL	M20x2,5	Coarse	M30x2,0	Fine	30,0	2,79	30,25	28,00	M30x2,0	34,5	.0730	25,75	25,75
TR1610.80573	NL	M20x1,5	Fine	M30x2,0	Fine	30,0	2,79	30,25	28,00	M30x2,0	34,5	.0730	25,75	25,75
TR1610.80574	NL	M22x1,5	Fine	M32x2,0	Non-Std	32,0	2,79	32,25	30,00	M32x2,0	36,5	.0740	27,75	27,75
TR1610.80375	NL	M24x3,0	Coarse	M33x2,0	Non-Std	33,0	3,81	33,25	31,00	M33x2,0	37,5	.0750	28,75	28,75
TR1610.80575	NL	M24x2,0	Fine	M33x2,0	Non-Std	33,0	3,81	33,25	31,00	M33x2,0	37,5	.0750	28,75	28,75

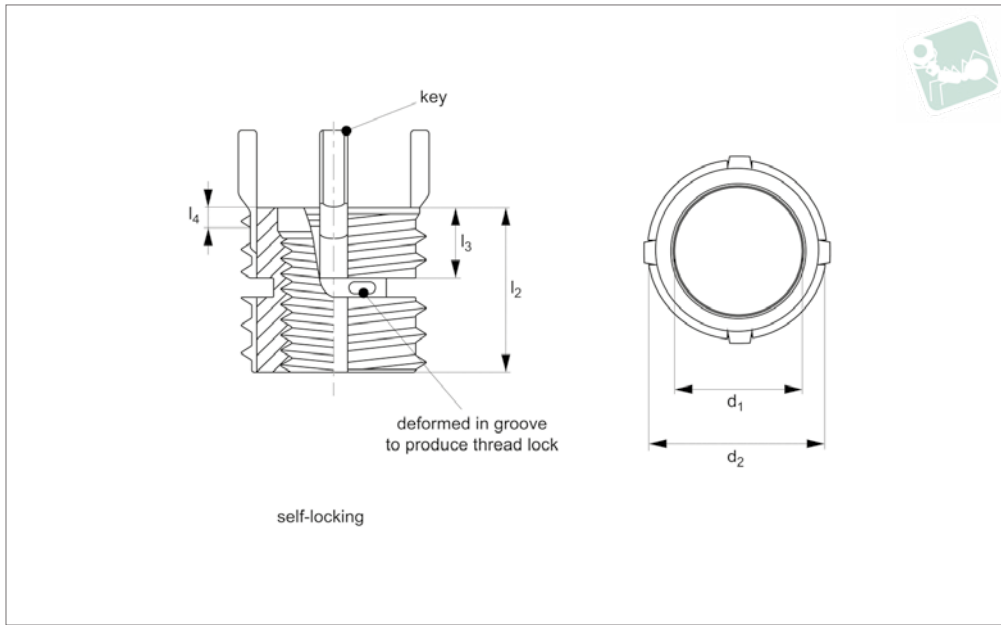


Threaded Insert MS/NAS - H Duty - 4140 steel - self-locking - MS/NAS grade



TR1611

THREADED INSERTS STEEL



Material

Inserts - 4140 alloy steel (160 KSI Min).
Keys - 302 CRES.
Cadmium plate (QQ-P-416 Type II, Cl. 2).
Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in millimetres.
Internal threads: to Fed. Std. H28/21, MJ Form
General tolerances -

+/- 0,25mm, unless specified.

Tap drill hole tolerances -
6,9 to 10,8 = +0,100/-0,025
12,8 and over = +0,130/-0,025

SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads M 6 and over. Two locking keys on internal threads smaller than M 6.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: NA0150

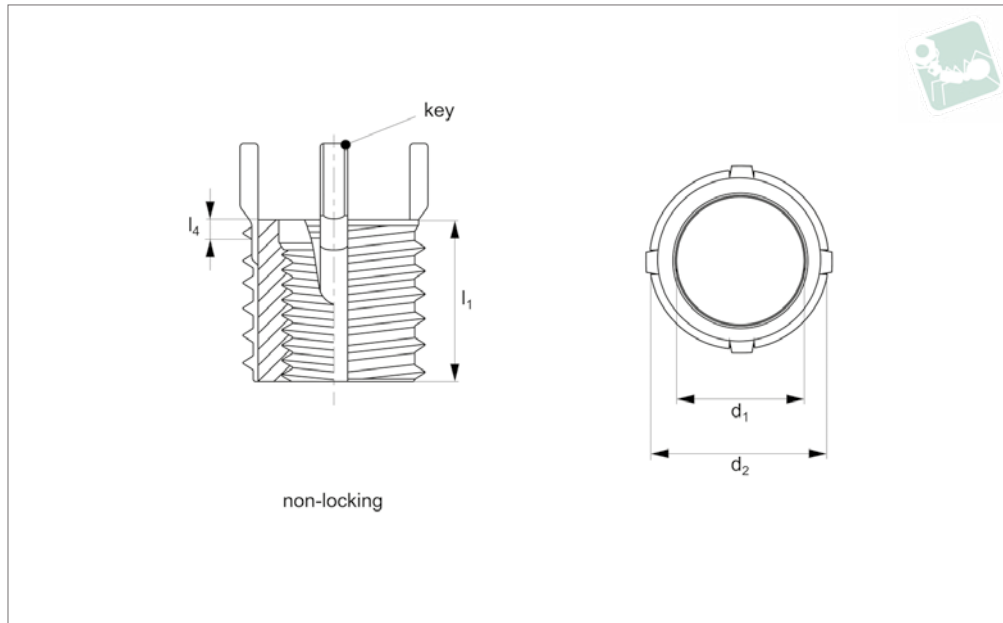
Order No.	Type	d ₁ tol. 4H 5H	Thread type d ₁	d ₂ tol. 4h	Thread type d ₂	l ₁	l ₃ ±0,76	l ₄ c'bore depth	C'sink hole size +0,25 - 0,00	Inst. tap drill size	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Inst. tool ref. TR1715	Removal drill size	Removal drill depth
TR1611.81363	SL	M 4x0,7	Coarse	M 8x1,25	Coarse	8,0	5,00	1,27	8,25	6,90	M 8x1,25	9,5	.0630	5,50	4,00
TR1611.81364	SL	M 5x0,8	Coarse	M10x1,25	Fine	10,0	5,50	1,27	10,25	8,80	M10x1,25	12,5	.0640	7,50	4,75
TR1611.81365	SL	M 6x1,0	Coarse	M12x1,25	Fine	12,0	6,46	1,78	12,25	10,80	M12x1,25	14,5	.0650	9,50	4,75
TR1611.81366	SL	M 8x1,25	Coarse	M14x1,5	Fine	14,0	6,46	1,78	14,25	12,80	M14x1,5	16,5	.0660	11,50	4,75
TR1611.81566	SL	M 8x1,0	Fine	M14x1,5	Fine	14,0	6,46	1,78	14,25	12,80	M14x1,5	16,5	.0660	11,50	4,75
TR1611.81367	SL	M10x1,5	Coarse	M16x1,5	Fine	16,0	6,46	2,29	16,25	14,75	M16x1,5	18,5	.0670	13,50	4,75
TR1611.81567	SL	M10x1,25	Fine	M16x1,5	Fine	16,0	6,46	2,29	16,25	14,75	M16x1,5	18,5	.0670	13,50	4,75
TR1611.81369	SL	M12x1,75	Coarse	M18x1,5	Coarse	18,0	7,23	2,29	18,25	16,75	M18x1,5	20,5	.0690	15,50	4,75
TR1611.81569	SL	M12x1,25	Fine	M18x1,5	Coarse	18,0	7,23	2,29	18,25	16,75	M18x1,5	20,5	.0690	15,50	4,75
TR1611.81370	SL	M14x2,0	Coarse	M20x1,5	Fine	20,0	7,23	2,79	20,25	18,75	M20x1,5	22,5	.0700	17,50	4,75
TR1611.81570	SL	M14x1,5	Fine	M20x1,5	Fine	20,0	7,23	2,79	20,25	18,75	M20x1,5	22,5	.0700	17,50	4,75
TR1611.81371	SL	M16x2,0	Coarse	M22x1,5	Fine	22,0	8,50	2,79	22,25	20,50	M22x1,5	24,5	.0710	17,75	6,35
TR1611.81571	SL	M16x1,5	Fine	M22x1,5	Fine	22,0	8,50	2,79	22,25	20,50	M22x1,5	24,5	.0710	17,75	6,35
TR1611.81572	SL	M18x1,5	Coarse	M24x2,0	Fine	24,0	9,25	2,79	24,25	22,50	M24x2,0	28,5	.0720	19,75	6,35
TR1611.81373	SL	M20x2,5	Coarse	M30x2,0	Fine	30,0	12,51	2,79	30,25	28,00	M30x2,0	34,5	.0730	25,75	6,35
TR1611.81573	SL	M20x1,5	Fine	M30x2,0	Fine	30,0	12,51	2,79	30,25	28,00	M30x2,0	34,5	.0730	25,75	6,35
TR1611.81574	SL	M22x1,5	Fine	M32x2,0	Non-Std	32,0	12,51	2,79	32,25	30,00	M32x2,0	36,5	.0740	27,75	6,35
TR1611.81375	SL	M24x3,0	Coarse	M33x2,0	Non-Std	33,0	13,97	3,81	33,25	31,00	M33x2,0	37,5	.0750	28,75	6,35
TR1611.81575	SL	M24x2,0	Fine	M33x2,0	Non-Std	33,0	13,97	3,81	33,25	31,00	M33x2,0	37,5	.0750	28,75	6,35



Order No.	1/4 c'bore depth	C'sink hole size	Inst. tap drill size	Inst. thread tap	Inst. thread tap depth	Inst. tool ref. TR1715	Removal drill size	Removal drill depth
TR1611.81363	1.27	8.25	6.90	M 8x1,25	9.5	.0630	5.50	4.00
TR1611.81364	1.27	10.25	8.80	M10x1,25	12.5	.0640	7.50	4.75
TR1611.81365	1.78	12.25	10.80	M12x1,25	14.5	.0650	9.50	4.75
TR1611.81366	1.78	14.25	12.80	M14x1,5	16.5	.0660	11.50	4.75
TR1611.81566	1.78	14.25	12.80	M14x1,5	16.5	.0660	11.50	4.75
TR1611.81367	2.29	16.25	14.75	M16x1,5	18.5	.0670	13.50	4.75
TR1611.81567	2.29	16.25	14.75	M16x1,5	18.5	.0670	13.50	4.75
TR1611.81369	2.29	18.25	16.75	M18x1,5	20.5	.0690	15.50	4.75
TR1611.81569	2.29	18.25	16.75	M18x1,5	20.5	.0690	15.50	4.75
TR1611.81370	2.79	20.25	18.75	M20x1,5	22.5	.0700	17.50	4.75
TR1611.81570	2.79	20.25	18.75	M20x1,5	22.5	.0700	17.50	4.75
TR1611.81371	2.79	22.25	20.50	M22x1,5	24.5	.0710	17.75	6.35
TR1611.81571	2.79	22.25	20.50	M22x1,5	24.5	.0710	17.75	6.35
TR1611.81572	2.79	24.25	22.50	M24x2,0	28.5	.0720	19.75	6.35
TR1611.81373	2.79	30.25	28.00	M30x2,0	34.5	.0730	25.75	6.35
TR1611.81573	2.79	30.25	28.00	M30x2,0	34.5	.0730	25.75	6.35
TR1611.81574	2.79	32.25	30.00	M32x2,0	36.5	.0740	27.75	6.35
TR1611.81375	3.81	33.25	31.00	M33x2,0	37.5	.0750	28.75	6.35
TR1611.81575	3.81	33.25	31.00	M33x2,0	37.5	.0750	28.75	6.35



Threaded Insert MS/NAS - H Duty - 4140 steel - non-locking - MS/NAS grade



TR1664

THREADED INSERTS STEEL

Material

Inserts - 4140 alloy steel (160 KSI Min).
Keys - 302 CRES.
Cadmium plate (QQ-P-416 Type II, Cl. 2).
Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -

+/- 0,010 unless specified.

Tap drill hole tolerances -
0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
NL = Non-Locking type.

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

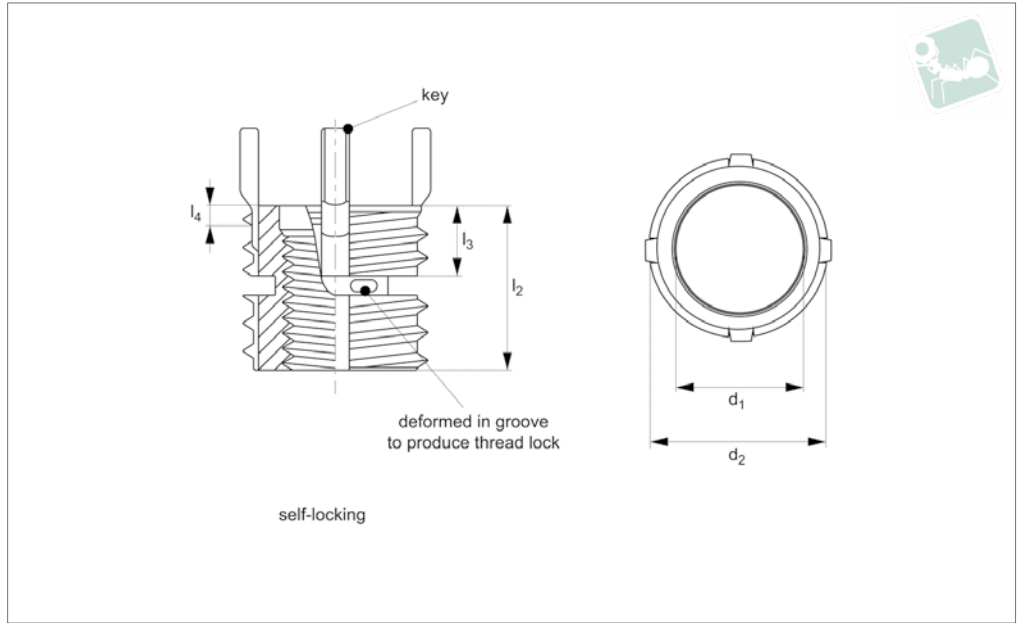
Important Notes

Four locking keys on internal threads 5/16 and over. Two locking keys on internal threads smaller than 5/16.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: MIL-I-45914A

Order No.	Type	d ₁ class 3B	Thread type d ₁	d ₂ (mod.) class 2A	Thread type d ₂	l ₁	l ₄ c'bore depth	Inst. c'sink hole size +0.010 - 0.000	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. Removal tool ref. TR1705	Removal drill size	Removal drill depth
TR1664.80300	NL	8-32	UNC	5/16-18	UNF	,312	,04	,323	,272	,37	5/16-18	.0000	7/32	1/8
TR1664.80301	NL	10-24	UNC	3/8-16	UNC	,312	,07	,385	,332	,37	3/8-16	.0010	9/32	1/8
TR1664.80501	NL	10-32	UNF	3/8-16	UNC	,312	,07	,385	,332	,37	3/8-16	.0011	9/32	1/8
TR1664.80302	NL	1/4-20	UNC	7/16-14	UNC	,375	,07	,447	,397	,43	7/16-14	.0020	11/32	3/16
TR1664.80502	NL	1/4-28	UNF	7/16-14	UNC	,375	,07	,447	,397	,43	7/16-14	.0021	11/32	3/16
TR1664.80303	NL	5/16-18	UNC	1/2-13	UNC	,437	,07	,510	,453	,50	1/2-13	.0030	13/32	3/16
TR1664.80503	NL	5/16-24	UNF	1/2-13	UNC	,437	,07	,510	,453	,50	1/2-13	.0031	13/32	3/16
TR1664.80304	NL	3/8-16	UNC	9/16-12	UNC	,500	,07	,572	,516	,56	9/16-12	.0040	15/32	3/16
TR1664.80504	NL	3/8-24	UNF	9/16-12	UNC	,500	,07	,572	,516	,56	9/16-12	.0041	15/32	3/16
TR1664.80305	NL	7/16-14	UNC	5/8-11	UNC	,625	,10	,635	,578	,68	5/8-11	.0050	17/32	3/16
TR1664.80505	NL	7/16-20	UNF	5/8-11	UNC	,625	,10	,635	,578	,68	5/8-11	.0051	17/32	3/16
TR1664.80306	NL	1/2-13	UNC	11/16-11NS	UNS	,688	,10	,700	,641	,75	11/16-11NS	.0060	19/32	3/16
TR1664.80506	NL	1/2-20	UNF	11/16-11NS	UNS	,688	,10	,700	,641	,75	11/16-11NS	.0061	19/32	3/16
TR1664.80307	NL	9/16-12	UNC	13/16-16	UN	,812	,10	,822	,766	,94	13/16-16	.0070	23/32	3/16
TR1664.80507	NL	9/16-12	UNF	13/16-16	UN	,812	,10	,885	,766	,94	13/16-16	.0071	23/32	3/16
TR1664.80308	NL	5/8-11	UNC	7/8-14	UNF	,875	,10	,885	,828	1,00	7/8-14	.0080	25/32	3/16
TR1664.80508	NL	5/8-18	UNF	7/8-14	UNF	,875	,10	,885	,828	1,00	7/8-14	.0081	25/32	3/16
TR1664.80309	NL	3/4-10	UNC	1-1/8-12	UNF	1,250	,10	1,145	1,062	1,44	1-1/8-12	.0090	31/32	5/16
TR1664.80509	NL	3/4-16	UNF	1-1/8-12	UNF	1,250	,10	1,145	1,062	1,44	1-1/8-12	.0091	31/32	5/16
TR1664.80310	NL	7/8-9	UNC	1-1/4-12	UNF	1,375	,10	1,270	1,187	1,56	1-1/4-12	.0100	1-3/32	5/16
TR1664.80510	NL	7/8-14	UNF	1-1/4-12	UNF	1,375	,10	1,270	1,187	1,56	1-1/4-12	.0101	1-3/32	5/16
TR1664.80311	NL	1-8	UNC	1-3/8-12	UNF	1,500	,10	1,395	1,312	1,68	1-3/8-12	.0110	1-7/32	5/16
TR1664.80511	NL	1-12	UNF	1-3/8-12	UNF	1,500	,10	1,395	1,312	1,68	1-3/8-12	.0111	1-7/32	5/16



TR1665



THREADED INSERTS STEEL

Material

Inserts - 4140 alloy steel (160 KSI Min).
Keys - 302 CRES.
Cadmium plate (QQ-P-416 Type II, Cl. 2).
Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -
+/- 0,010 unless specified.

Tap drill hole tolerances -

0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads 5/16 and over. Two locking keys on internal threads smaller than 5/16.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: MIL-I-45914A (MS51831 & NAS1395)

Order No.	Type	d ₁ class 3B	Thread type d ₁	d ₂ (mod.) class 2A	Thread type d ₂	l ₁	l ₃ ±0.0 30	c'bore depth	c'sink hole size +0.010 - 0.000	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1705	Removal drill size	Removal drill depth
TR1665.81300	SL	8-32	UNC	5/16-18	UNF	,312	,22	,04	,323	,272	,37	5/16-18	.0000	7/32	1/8
TR1665.81301	SL	10-24	UNC	3/8-16	UNC	,312	,22	,07	,385	,332	,37	3/8-16	.0010	9/32	1/8
TR1665.81501	SL	10-32	UNF	3/8-16	UNC	,312	,22	,07	,385	,332	,37	3/8-16	.0011	9/32	1/8
TR1665.81302	SL	1/4-20	UNC	7/16-14	UNC	,375	,22	,07	,447	,397	,43	7/16-14	.0020	11/32	3/16
TR1665.81502	SL	1/4-28	UNF	7/16-14	UNC	,375	,22	,07	,447	,397	,43	7/16-14	.0021	11/32	3/16
TR1665.81303	SL	5/16-18	UNC	1/2-13	UNC	,437	,22	,07	,510	,453	,50	1/2-13	.0030	13/32	3/16
TR1665.81503	SL	5/16-24	UNF	1/2-13	UNC	,437	,22	,07	,510	,453	,50	1/2-13	.0031	13/32	3/16
TR1665.81304	SL	3/8-16	UNC	9/16-12	UNC	,500	,25	,07	,572	,516	,56	9/16-12	.0040	15/32	3/16
TR1665.81504	SL	3/8-24	UNF	9/16-12	UNC	,500	,25	,07	,572	,516	,56	9/16-12	.0041	15/32	3/16
TR1665.81305	SL	7/16-14	UNC	5/8-11	UNC	,625	,28	,10	,635	,578	,68	5/8-11	.0050	17/32	3/16
TR1665.81505	SL	7/16-20	UNF	5/8-11	UNC	,625	,28	,10	,635	,578	,68	5/8-11	.0051	17/32	3/16
TR1665.81306	SL	1/2-13	UNC	11/16-11NS	UNS	,688	,28	,10	,700	,641	,75	11/16-11NS	.0060	19/32	3/16
TR1665.81506	SL	1/2-20	UNF	11/16-11NS	UNS	,688	,28	,10	,700	,641	,75	11/16-11NS	.0061	19/32	3/16
TR1665.81307	SL	9/16-12	UNC	13/16-16	UN	,812	,32	,10	,822	,766	,94	13/16-16	.0070	23/32	3/16
TR1665.81507	SL	9/16-12	UNF	13/16-16	UN	,812	,32	,10	,885	,766	,94	13/16-16	.0071	23/32	3/16
TR1665.81308	SL	5/8-11	UNC	7/8-14	UNF	,875	,33	,10	,885	,828	1,00	7/8-14	.0080	25/32	3/16
TR1665.81508	SL	5/8-18	UNF	7/8-14	UNF	,875	,33	,10	,885	,828	1,00	7/8-14	.0081	25/32	3/16
TR1665.81309	SL	3/4-10	UNC	1-1/8-12	UNF	1,250	,49	,10	1,145	1,062	1,44	1-1/8-12	.0090	31/32	5/16
TR1665.81509	SL	3/4-16	UNF	1-1/8-12	UNF	1,250	,49	,10	1,145	1,062	1,44	1-1/8-12	.0091	31/32	5/16
TR1665.81310	SL	7/8-9	UNC	1-1/4-12	UNF	1,375	,49	,10	1,270	1,187	1,56	1-1/4-12	.0100	1-3/32	5/16
TR1665.81510	SL	7/8-14	UNF	1-1/4-12	UNF	1,375	,49	,10	1,270	1,187	1,56	1-1/4-12	.0101	1-3/32	5/16
TR1665.81311	SL	1-8	UNC	1-3/8-12	UNF	1,500	,55	,10	1,395	1,312	1,68	1-3/8-12	.0110	1-7/32	5/16



Threaded Insert MS/NAS - H Duty - 4140 steel - self-locking - MS/NAS grade

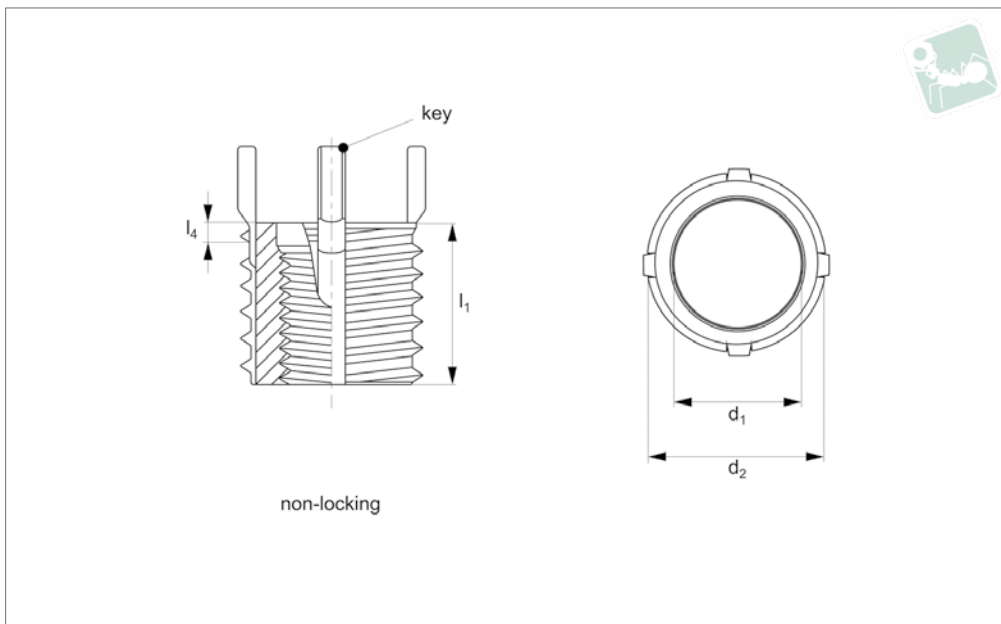


Order No.	Type	d ₁ class 3B	Thread type d ₁	d ₂ (mod.) class 2A	Thread type d ₂	l ₁	l ₃ ±0.0 c'bore 30	l ₄ depth	Inst. c'sink hole size +0.010 - 0.000	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1705	Removal drill size	Removal drill depth
TR1665.81511	SL	1-12	UNF	1-3/8-12	UNF	1,500	,55	,10	1,395	1,312	1,68	1-3/8-12	.0111	1-7/32	5/16

THREADED INSERTS STEEL



TR1666



Material

Inserts - 4140 alloy steel (160 KSI Min).
Keys - 302 CRES.
Cadmium plate (QQ-P-416 Type II, Cl. 2).
Dry film lubricatoin on self-locking inserts only.

Technical Notes

All dimensions in inches.
Internal threads: to SAE AS8879.
General tolerances -

+/- 0,010 unless specified.
Tap drill hole tolerances -
0,234 to 0,500 = +0,004/-0,001
0,500 and over = +0,005/-0,001
NL = Non-Locking type.

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads 1/4

and over. Two locking keys on internal threads smaller than 1/4.
Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
Removal (Rem.) drill size and drill depth as specified in table.
Perform to standards: MIL-I-45914A (MS51832)

Order No.	Type	d ₁ class 3B	Thread type d ₁	d ₂ (mod.) class 2A	Thread type d ₂	l ₁	l ₄ c'bore depth	Inst. c'sink hole size +0.010 - 0.000	Inst. tap drill size	Inst. thread tap depth min.	Inst. thread tap size class 2B	Inst. tool ref. TR1706	Removal drill size	Removal drill depth
TR1666.80333	NL	10-24	UNC	7/16-14	UNC	,312	,07	,447	,397	,37	7/16-14	.0330	11/32	3/16
TR1666.80533	NL	10-32	UNF	7/16-14	UNC	,312	,07	,447	,397	,37	7/16-14	.0331	11/32	3/16
TR1666.80334	NL	1/4-20	UNC	1/2-13	UNC	,375	,07	,510	,453	,44	1/2-13	.0340	13/32	3/16
TR1666.80534	NL	1/4-28	UNF	1/2-13	UNC	,375	,07	,510	,453	,44	1/2-13	.0341	13/32	3/16
TR1666.80335	NL	5/16-18	UNC	9/16-12	UNC	,437	,07	,572	,516	,50	9/16-12	.0350	15/32	3/16
TR1666.80535	NL	5/16-24	UNF	9/16-12	UNC	,437	,07	,572	,516	,50	9/16-12	.0351	15/32	3/16
TR1666.80336	NL	3/8-16	UNC	5/8-11	UNC	,500	,07	,635	,578	,56	5/8-11	.0360	17/32	3/16
TR1666.80536	NL	3/8-24	UNF	5/8-11	UNC	,500	,07	,635	,578	,56	5/8-11	.0361	17/32	3/16
TR1666.80337	NL	7/16-14	UNC	11/16-11NS	UNS	,625	,10	,700	,641	,68	11/16-11NS	.0370	19/32	3/16
TR1666.80537	NL	7/16-20	UNF	11/16-11NS	UNS	,625	,10	,700	,641	,68	11/16-11NS	.0371	19/32	3/16
TR1666.80338	NL	1/2-13	UNC	13/16-16	UN	,688	,10	,822	,766	,75	13/16-16	.0380	23/32	3/16
TR1666.80538	NL	1/2-20	UNF	13/16-16	UN	,688	,10	,822	,766	,75	13/16-16	.0381	23/32	3/16
TR1666.80339	NL	9/16-12	UNC	7/8-14	UNF	,812	,10	,885	,828	,94	7/8-14	.0390	25/32	3/16
TR1666.80539	NL	9/16-18	UNF	7/8-14	UNF	,812	,10	,885	,828	,94	7/8-14	.0391	25/32	3/16
TR1666.80340	NL	5/8-11	UNC	1"-12	UNF	,875	,10	1,020	,937	1,00	1"-12	.0400	27/32	3/16
TR1666.80540	NL	5/8-18	UNF	1"-12	UNF	,875	,10	1,020	,937	1,00	1"-12	.0401	27/32	5/16
TR1666.80341	NL	3/4-10	UNC	1-1/4-12	UNF	1,125	,10	1,270	1.187	1,31	1-1/4-12	.0410	1-3/32	5/16
TR1666.80541	NL	3/4-16	UNF	1-1/4-12	UNF	1,125	,10	1,270	1.187	1,31	1-1/4-12	.0411	1-3/32	5/16
TR1666.80342	NL	7/8-9	UNC	1-3/8-12	UNF	1,250	,10	1,395	1,312	1,44	1-3/8-12	.0420	1-7/32	5/16
TR1666.80542	NL	7/8-14	UNF	1-3/8-12	UNF	1,250	,10	1,395	1,312	1,44	1-3/8-12	.0421	1-7/32	5/16
TR1666.80343	NL	1-8	UNC	1-1/2-12	UNF	1,375	,10	1,520	1,437	1,56	1-1/2-12	.0430	1-11/32	5/16
TR1666.80543	NL	1-12	UNF	1-1/2-12	UNF	1,375	,10	1,520	1,437	1,56	1-1/2-12	.0431	1-11/32	5/16



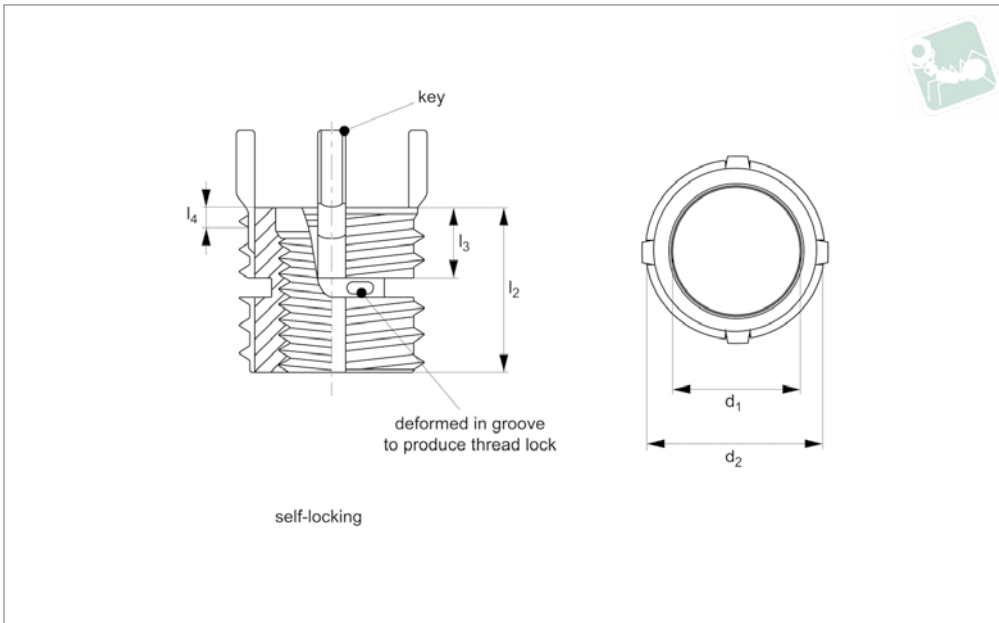
Threaded Insert MS/NAS - Extra H

4140 steel - self-locking - MS/NAS grade



TR1667

THREADED INSERTS STEEL



Material

Inserts - 4140 alloy steel (160 KSI Min).
 Keys - 302 CRES.
 Cadmium plate (QQ-P-416 Type II, Cl. 2).
 Dry film lubrication on self-locking inserts only.

Technical Notes

All dimensions in inches.
 Internal threads: to SAE AS8879.
 General tolerances -

+/- 0,010 unless specified.

Tap drill hole tolerances -
 0,234 to 0,500 = +0,004/-0,001
 0,500 and over = +0,005/-0,001

SL = Self-Locking type, deliberate deformity in thread produces self-affect once installed (see technical diagram).

Tips

Order installation tool separately, as identified by „Inst. Tool ref.“ in table.

Important Notes

Four locking keys on internal threads 1/4 and over. Two locking keys on internal threads smaller than 1/4.
 Installation (Inst.) drill size, counter sink, thread tap and thread depth as specified in table.
 Removal (Rem.) drill size and drill depth as specified in table.
 Perform to standards: MIL-I-45914A (MS51832)

Order No.	Type	d ₁	Thread type d ₁	d ₂	Thread type d ₂	l ₁	l ₃
TR1667.81333	SL	10-24	UNC	7/16-14	UNC	,312	,22
TR1667.81533	SL	10-32	UNF	7/16-14	UNC	,312	,22
TR1667.81334	SL	1/4-20	UNC	1/2-13	UNC	,375	,22
TR1667.81534	SL	1/4-28	UNF	1/2-13	UNC	,375	,22
TR1667.81335	SL	5/16-18	UNC	9/16-12	UNC	,437	,22
TR1667.81535	SL	5/16-24	UNF	9/16-12	UNC	,437	,22
TR1667.81336	SL	3/8-16	UNC	5/8-11	UNC	,500	,25
TR1667.81536	SL	3/8-24	UNF	5/8-11	UNC	,500	,25
TR1667.81337	SL	7/16-14	UNC	11/16-11NS	UNS	,625	,28
TR1667.81537	SL	7/16-20	UNF	11/16-11NS	UNS	,625	,28
TR1667.81338	SL	1/2-13	UNC	13/16-16	UN	,688	,28
TR1667.81538	SL	1/2-20	UNF	13/16-16	UN	,688	,28
TR1667.81339	SL	9/16-12	UNC	7/8-14	UNF	,812	,32
TR1667.81539	SL	9/16-18	UNF	7/8-14	UNF	,812	,32
TR1667.81340	SL	5/8-11	UNC	1-12	UNF	,875	,33
TR1667.81540	SL	5/8-18	UNF	1-12	UNF	,875	,33
TR1667.81341	SL	3/4-10	UNC	1-1/4-12	UNF	1.250	,49
TR1667.81541	SL	3/4-16	UNF	1-1/4-12	UNF	1.250	,49
TR1667.81342	SL	7/8-9	UNC	1-3/8-12	UNF	1.375	,49
TR1667.81542	SL	7/8-14	UNF	1-3/8-12	UNF	1.375	,49
TR1667.81343	SL	1-8	UNC	1-1/2-12	UNF	1.500	,55
TR1667.81543	SL	1-12	UNF	1-1/2-12	UNF	1.500	,55

Order No.	l ₄ c'bore depth	Inst. c'sink hole size	Inst. tap drill size	Inst. thread tap depth	Inst. thread tap size	Inst. tool ref. TR1706	Removal drill size	Removal drill depth
TR1667.81333	,07	,447	,397	,37	7/16-14	.0330	11/32	3/16



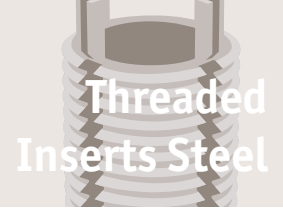
THREADED INSERTS STEEL

Order No.	I ₄ c'bore depth	Inst. c'sink hole size	Inst. tap drill size	Inst. thread tap depth	Inst. thread tap size	Inst. tool ref. TR1706	Removal drill size	Removal drill depth
TR1667.81533	,07	,447	,397	,37	7/16-14	.0331	11/32	3/16
TR1667.81334	,07	,510	,453	,44	1/2-13	.0340	13/32	3/16
TR1667.81534	,07	,510	,453	,44	1/2-13	.0341	13/32	3/16
TR1667.81335	,07	,572	,516	,50	9/16-12	.0350	15/32	3/16
TR1667.81535	,07	,572	,516	,50	9/16-12	.0351	15/32	3/16
TR1667.81336	,07	,635	,578	,56	5/8-11	.0360	17/32	3/16
TR1667.81536	,07	,635	,578	,56	5/8-11	.0361	17/32	3/16
TR1667.81337	,10	,700	,641	,68	11/16-11NS	.0370	19/32	3/16
TR1667.81537	,10	,700	,641	,68	11/16-11NS	.0371	19/32	3/16
TR1667.81338	,10	,822	,766	,75	13/16-16	.0380	23/32	3/16
TR1667.81538	,10	,822	,766	,75	13/16-16	.0381	23/32	3/16
TR1667.81339	,10	,885	,828	,94	7/8-14	.0390	25/32	3/16
TR1667.81539	,10	,885	,828	,94	7/8-14	.0391	25/32	3/16
TR1667.81340	,10	1.020	,937	1.00	1-12	.0400	27/32	5/16
TR1667.81540	,10	1.020	,937	1.00	1-12	.0401	27/32	5/16
TR1667.81341	,10	1.270	1.187	1.44	1-1/4-12	.0410	1-3/32	5/16
TR1667.81541	,10	1.270	1.187	1.44	1-1/4-12	.0411	1-3/32	5/16
TR1667.81342	,10	1.395	1.312	1.56	1-3/8-12	.0420	1-7/32	5/16
TR1667.81542	,10	1.395	1.312	1.56	1-3/8-12	.0421	1-7/32	5/16
TR1667.81343	,10	1.520	1.437	1.68	1-1/2-12	.0430	1-11/32	5/16
TR1667.81543	,10	1.520	1.437	1.68	1-1/2-12	.0431	1-11/32	5/16

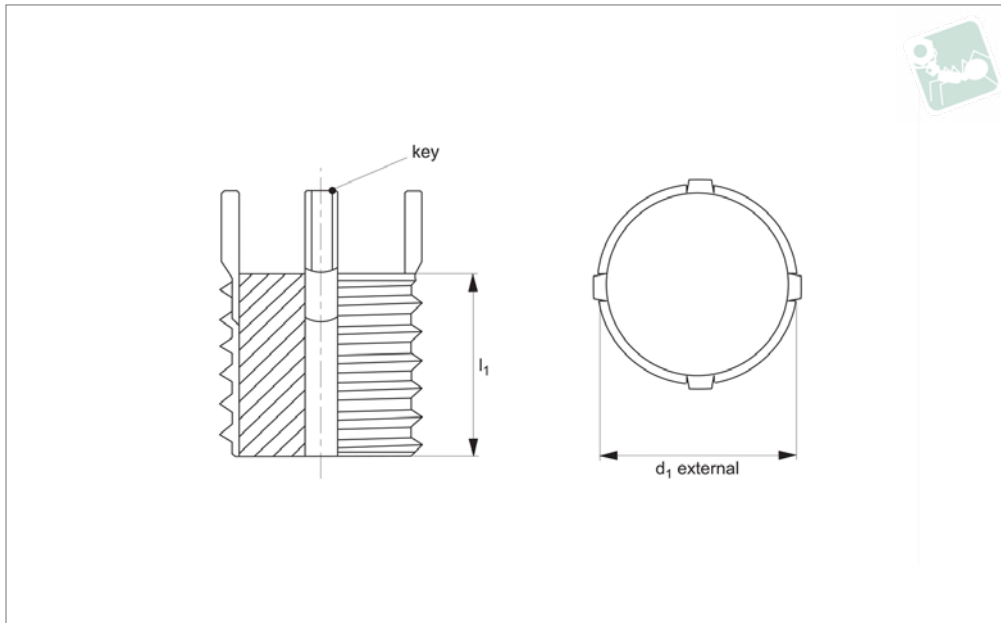


Threaded Insert - Solid - Metric

carbon steel



Threaded Inserts Steel



TR1692

THREADED INSERTS STEEL

Material

Inserts: carbon steel (C1215) or equivalent. Zinc phosphate.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

$\pm 0,25''$ unless specified.

Tap drill hole tolerances:

6,9 to 10,8 = $+0,10/-0,025''$.

12,8 and over = $+0,13/-0,025''$.

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on external threads M12 and over. Two locking keys on external

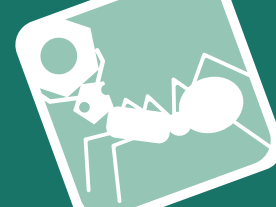
threads smaller than M12.

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

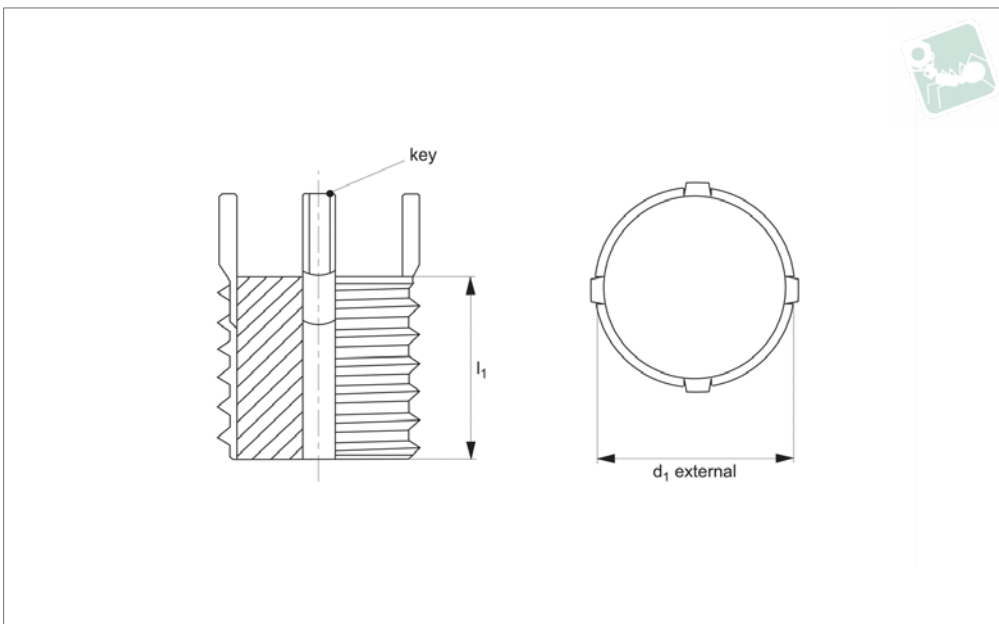
Removal drill size and drill depth as specified in table.

External metric thread allows you to machine your internal thread.

Order No.	d ₁ tol. 6g	Thread type d ₁	l ₁	Inst. tool ref. 22052	Inst. tap drill size	Inst. c'sink dia. +0.25 -0.00	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Removal drill size	Removal drill depth
TR1692.66021	M 8x1,25	Coarse	8	.W0210	6,90	8,3	M 8x1,25	9,5	5,5	4,0
TR1692.66022	M10x1,25	Fine	10	.W0220	8,80	10,3	M10x1,25	12,5	7,5	4,8
TR1692.66023	M12x1,25	Fine	12	.W0230	10,80	12,3	M12x1,25	14,5	9,5	4,8
TR1692.66024	M14x1,50	Fine	14	.W0240	12,80	14,3	M14x1,50	16,5	11,5	4,8
TR1692.66025	M16x1,50	Fine	16	.W0250	14,75	16,3	M16x1,50	18,5	13,5	4,8
TR1692.66026	M18x1,50	Fine	18	.W0260	16,75	18,3	M18x1,50	20,5	15,5	4,8
TR1692.66027	M20x1,50	Fine	20	.W0270	18,75	20,3	M20x1,50	22,5	17,5	4,8
TR1692.66028	M22x1,50	Fine	22	.W0280	20,50	22,3	M22x1,50	24,5	17,8	6,4
TR1692.66029	M24x1,50	Fine	24	.W0290	22,50	24,3	M24x1,50	26,5	19,8	6,4
TR1692.66030	M30x2,00	Fine	30	.W0300	28,00	30,3	M30x2,00	34,5	25,8	6,4
TR1692.66031	M32x2,00	Non-Std	32	.W0310	30,00	32,3	M32x2,00	36,5	27,8	6,4
TR1692.66032	M33x2,00	Non-Std	33	.W0320	31,00	33,3	M33x2,00	37,5	28,8	6,4



TR1698



Material

Inserts: carbon steel (C1215) or equivalent. Zinc phosphate.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

± 0,010" unless specified.

Tap drill hole tolerances:

0,234 to 0,500 = +0,004/-0,001".
0,500 and over = +0,005/-0,001".

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on external threads 7/16" and over. Two locking keys on

external threads smaller than 7/16".

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

Removal drill size and drill depth as specified in table.

External inch thread allows you to machine your internal thread.

All dimensions in inches.

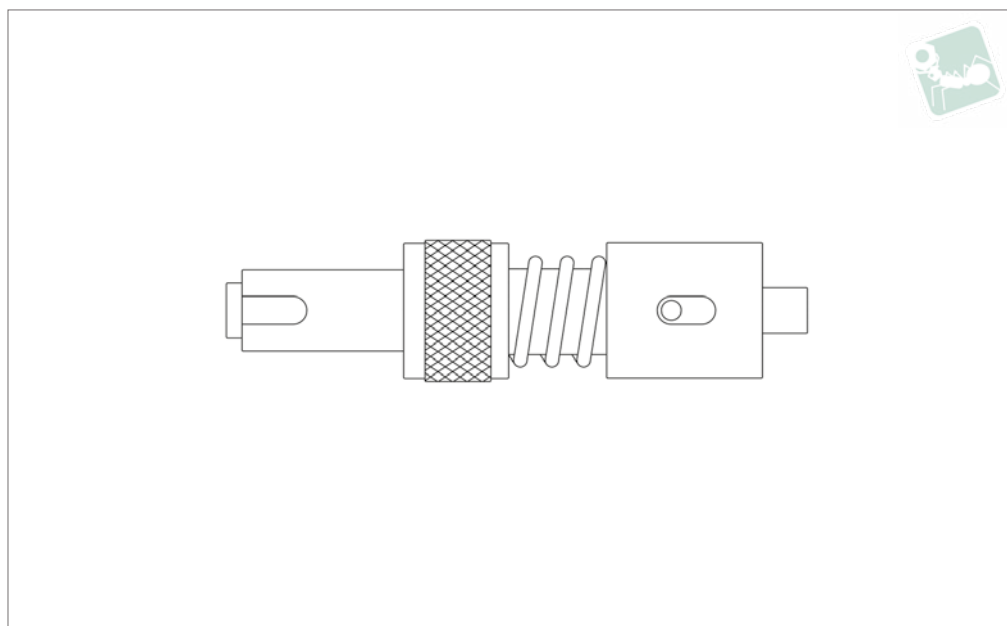
Order No.	d ₁ (mod.) tol. 2A	Thread type d ₁	l ₁	Inst. tool ref. 22050	Inst. tap drill size	Inst. c'sink dia. +0.010 - 0.000	Inst. thread tap tol. 2B	Inst. thread tap depth min.	Removal drill size	Removal drill depth
TR1698.66001	5/16"-18	UNC	0,31	.W0010	0,27	0,32	5/16"-18	0,37	7/32"	1/8"
TR1698.66002	3/8"-16	UNC	0,31	.W0020	0,33	0,38	3/8"-16	0,37	9/32"	1/8"
TR1698.66003	7/16"-14	UNC	0,37	.W0030	0,40	0,44	7/16"-14	0,43	11/32"	3/16"
TR1698.66004	1/2"-13	UNC	0,43	.W0040	0,45	0,51	1/2"-13	0,50	13/32"	3/16"
TR1698.66005	9/16"-12	UNC	0,50	.W0050	0,52	0,57	9/16"-12	0,56	15/32"	3/16"
TR1698.66006	5/8"-11	UNC	0,62	.W0060	0,58	0,63	5/8"-11	0,68	17/32"	3/16"
TR1698.66007	3/4"-16	UNF	0,68	.W0070	0,70	0,76	3/4"-16	0,75	21/32"	3/16"
TR1698.66008	7/8"-14	UNF	0,87	.W0080	0,83	0,88	7/8"-14	1,00	25/32"	5/16"
TR1698.66009	1"-12	UNF	0,87	.W0090	0,94	1,02	1"-12	1,00	27/32"	5/16"
TR1698.66010	1-1/8"-12	UNF	1,12	.W0100	1,06	1,14	1-1/8"-12	1,31	31/32"	5/16"
TR1698.66011	1-1/4"-12	UNF	1,25	.W0110	1,19	1,27	1-1/4"-12	1,44	1-3/32"	5/16"
TR1698.66012	1-3/8"-12	UNF	1,37	.W0120	1,31	1,39	1-3/8"-12	1,56	1-7/32"	5/16"



Installation Tool

for inserts TR1650/51/60/61/70/71

Installation
Tools



TR1700

INSTALLATION TOOLS

Material

Steel blackened.

Tips

For use with threaded inserts TR1650, TR1651, TR1660, TR1661, TR1670 and

TR1671.

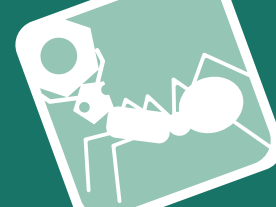
Select installation tool of corresponding insert internal thread d_1 AND external thread d_2 .

If in doubt refer to data tables of insert

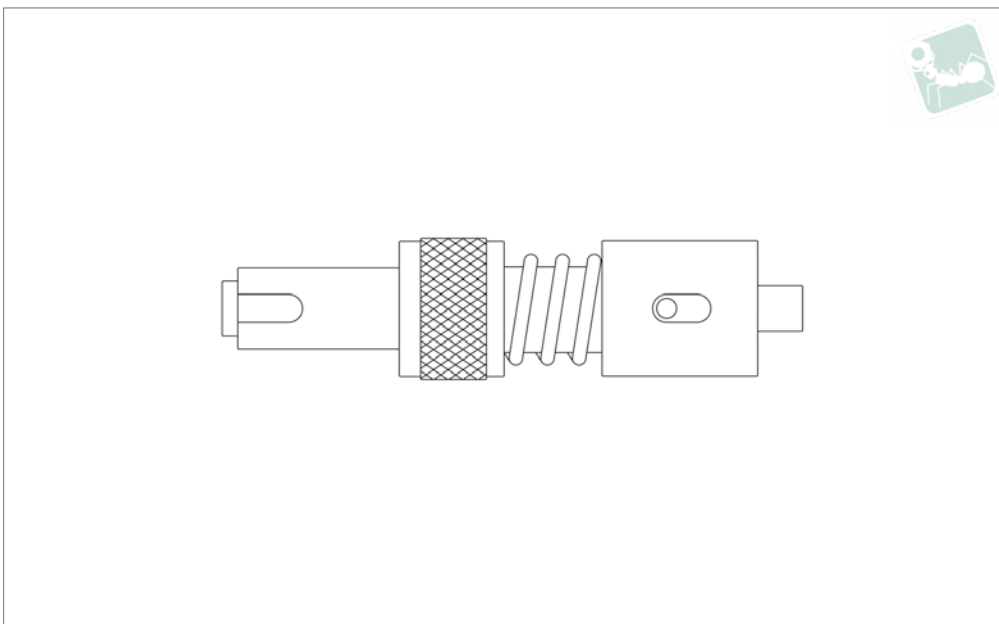
where „inst. tool ref“ is stated.

Important Notes
All dimensions in imperial.

Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
TR1700.0830	2 - 56	8 - 32
TR1700.0840	4 - 40	10 - 32
TR1700.0850	6 - 32	12 - 28
TR1700.0860	8 - 32	1/4 - 28†



TR1702



Material

Steel blackened.

Tips

For use with threaded inserts TR1652, TR1653, TR1662, TR1663. TR1672 and TR1673.

Select installation tool of corresponding insert internal thread d_1 AND external thread d_2 .

If in doubt refer to data tables of insert where correct "Inst. tool ref" is stated.

Important Notes

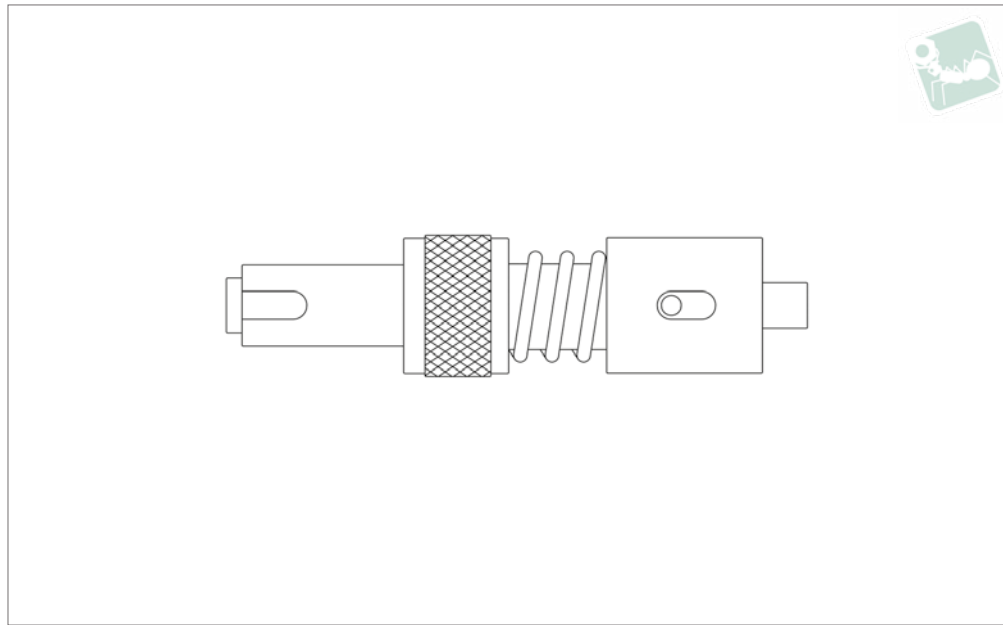
All dimensions in imperial.

Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
TR1702.0210	10 - 24	5/16 - 18
TR1702.0211	10 - 32	5/16 - 18
TR1702.0220	1/4 - 20	3/8 - 16
TR1702.0221	1/4 - 28	3/8 - 16
TR1702.0230	5/16 - 18	7/16 - 14
TR1702.0231	5/16 - 24	7/16 - 14
TR1702.0240	3/8 - 16	1/2 - 13
TR1702.0241	3/8 - 24	1/2 - 13
TR1702.0250	7/16 - 14	9/16 - 12
TR1702.0251	7/16 - 20	9/16 - 12
TR1702.0260	1/2 - 13	5/8 - 11
TR1702.0261	1/2 - 20	5/8 - 11



Installation Tool

for inserts TR1654/55/64/65/75/76



TR1705

INSTALLATION TOOLS

Material

Steel blackened.

Tips

For use with threaded inserts TR1654, TR1655, TR1664, TR1665, TR1675 and

TR1676.

Select installation tool of corresponding insert internal thread d_1 AND external thread d_2 .

If in doubt refer to data tables of insert

where correct "Inst. tool ref" is stated.

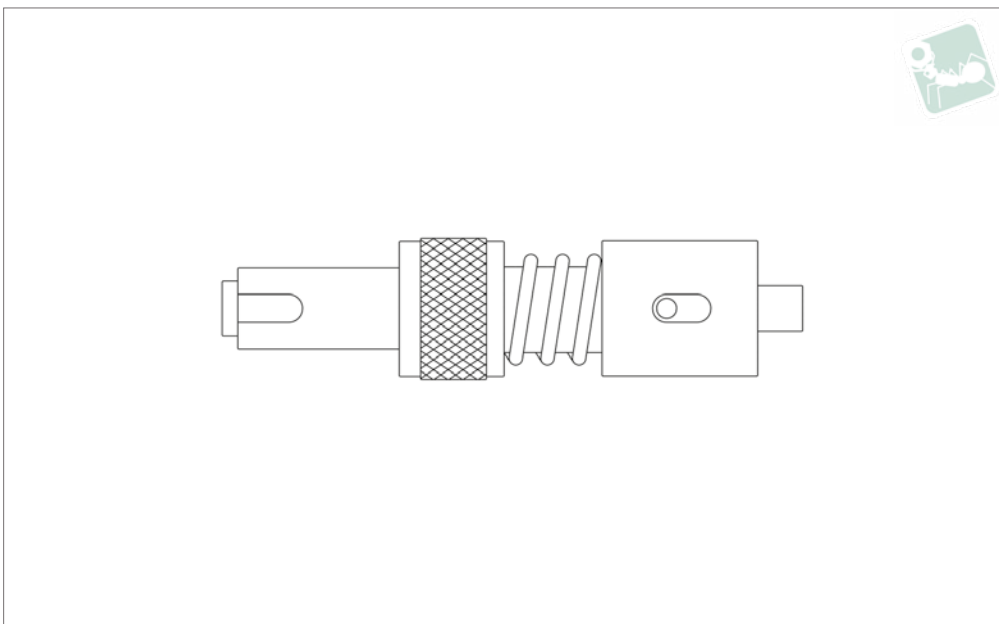
Important Notes

All dimensions in imperial.

Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
TR1705.0000	8 - 32	5/16 - 18
TR1705.0010	10 - 24	3/8 - 16
TR1705.0011	10 - 32	3/8 - 16
TR1705.0020	1/4 - 20	7/16 - 14
TR1705.0021	1/4 - 28	7/16 - 14
TR1705.0030	5/16 - 18	1/2 - 13
TR1705.0031	5/16 - 24	1/2 - 13
TR1705.0040	3/8 - 16	9/16 - 12
TR1705.0041	3/8 - 24	9/16 - 12
TR1705.0050	7/16 - 14	5/8 - 11
TR1705.0051	7/16 - 20	5/8 - 11
TR1705.0060	1/2 - 13	11/16 - 11 NS
TR1705.0061	1/2 - 20	11/16 - 11 NS
TR1705.0070	9/16 - 14	13/16 - 16
TR1705.0071	9/16 - 20	13/16 - 16
TR1705.0080	5/8 - 11	7/8 - 14
TR1705.0081	5/8 - 18	7/8 - 14
TR1705.0090	3/4 - 10	1-1/8 - 12
TR1705.0091	3/4 - 16	1-1/8 - 12
TR1705.0100	7/8 - 9	1-1/4 - 12
TR1705.0101	7/8 - 14	1-1/4 - 12
TR1705.0110	1" - 8	1-3/8 - 12
TR1705.0111	1" - 12	1-3/8 - 12



TR1706



Material

Steel blackened.

Tips

For use with threaded inserts TR1656, TR1657, TR1666 and TR1667.

Select installation tool of corresponding insert internal thread d_1 AND external thread d_2 .

If in doubt refer to data tables of insert where correct "Inst. tool ref" is stated.

Important Notes

All dimensions in imperial.

Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
TR1706.0330	10 - 24	7/16 - 14
TR1706.0331	10 - 32	7/16 - 14
TR1706.0340	1/4 - 20	1/2 - 13
TR1706.0341	1/4 - 28	1/2 - 13
TR1706.0350	5/16 - 18	9/16 - 12
TR1706.0351	5/16 - 24	9/16 - 12
TR1706.0360	3/8 - 16	5/8 - 11
TR1706.0361	3/8 - 24	5/8 - 11
TR1706.0370	7/16 - 14	11/16 - 11 NS
TR1706.0371	7/16 - 20	11/16 - 11 NS
TR1706.0380	1/2 - 13	13/16 - 16
TR1706.0381	1/2 - 20	13/16 - 16
TR1706.0390	9/16 - 12	7/8 - 14
TR1706.0391	9/16 - 18	7/8 - 14
TR1706.0400	5/8 - 11	1 - 12
TR1706.0401	5/8 - 18	1 - 12
TR1706.0410	3/4 - 10	1-1/4 - 12
TR1706.0411	3/4 - 16	1-1/4 - 12
TR1706.0420	7/8 - 9	1-3/8 - 12
TR1706.0421	7/8 - 14	1-3/8 - 12
TR1706.0430	1 - 8	1-1/2 - 12
TR1706.0431	1 - 12	1-1/2 - 12

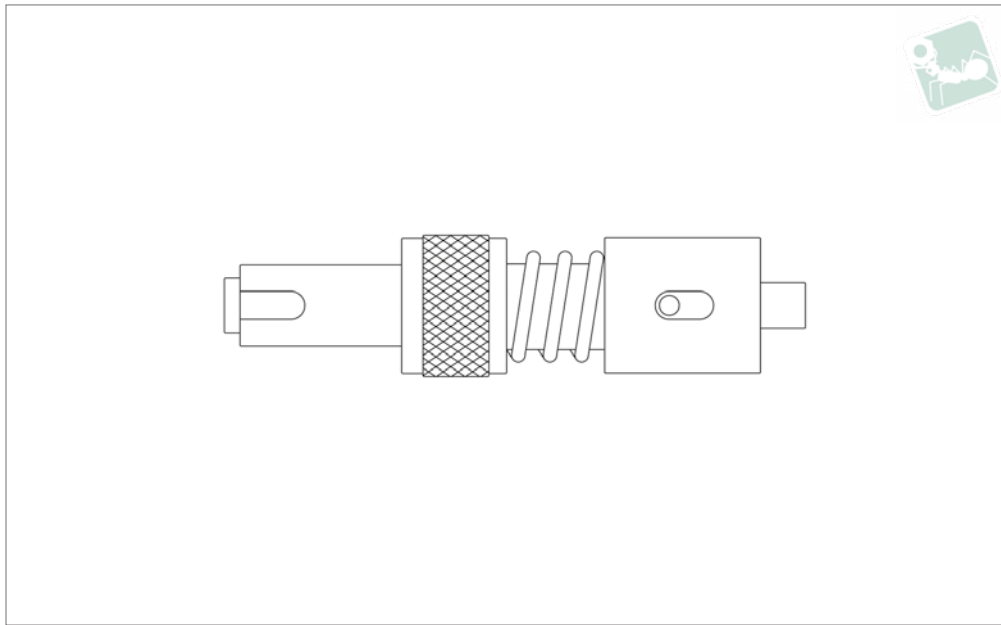


Installation Tool

for inserts TR1600/01/06/07



Installation
Tools



TR1710

INSTALLATION TOOLS

Material

Steel blackened.

TR1601, TR1606 and TR1607.

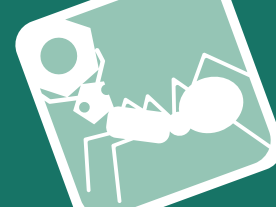
Select installation tool of corresponding insert internal thread d_1 AND external thread d_2 .

If in doubt refer to data tables of insert where correct "Inst. tool ref" is stated.

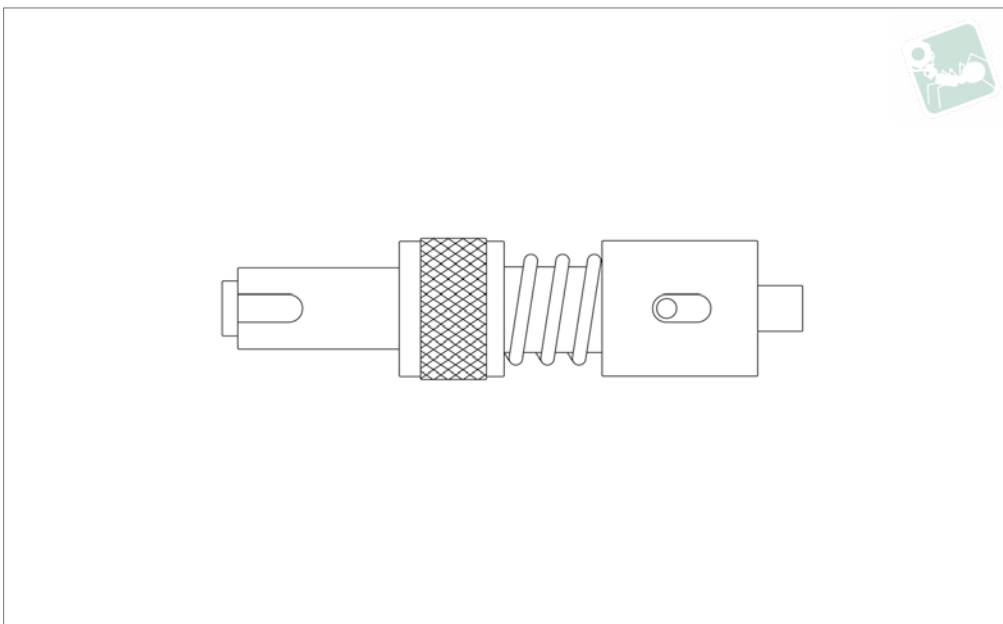
Tips

For use with threaded inserts TR1600,

Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
TR1710.0820	M 2 x 0,4	M 4 x 0,7
TR1710.0830	M2,5 x 0,45	M 4,5 x 0,75
TR1710.0840	M 3 x 0,5	M 5 x 0,8
TR1710.0860	M 4 x 0,7	M 6 x 0,75



TR1712



Material

Steel blackened.

TR1603, TR1608 and TR1609.

Select installation tool of corresponding insert internal thread d_1 AND external thread d_2 .

If in doubt refer to data tables of insert where correct "Inst. tool ref" is stated.

Tips

For use with threaded inserts TR1602.

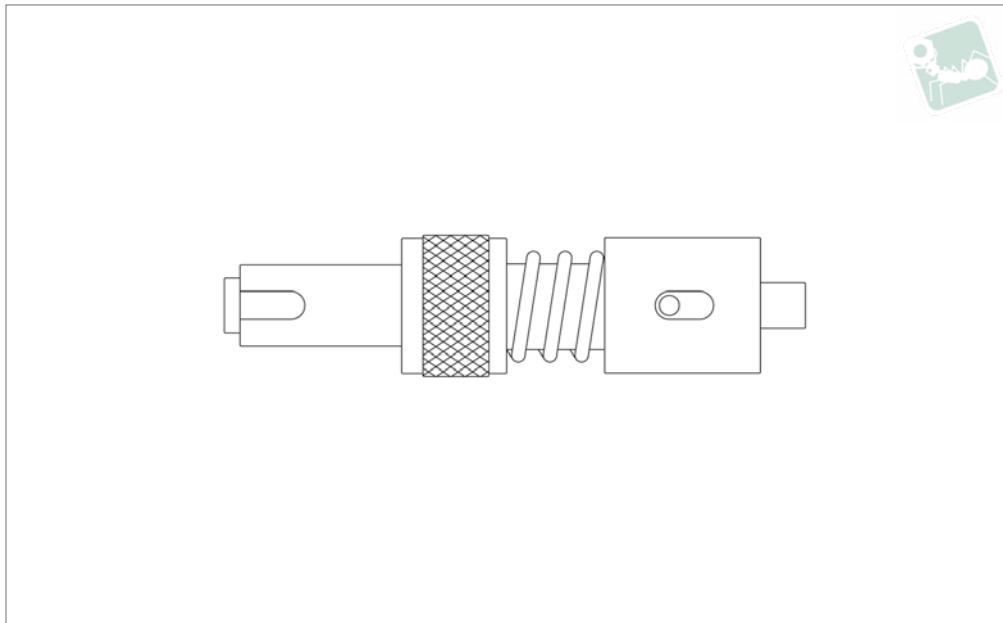
Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
TR1712.0510	M 5 x 0,8/M 5 x 0,5	M 8 x 1,25
TR1712.0520	M 6 x 1,0/M 6 x 0,75	M10 x 1,25
TR1712.0530	M 8 x 1,25/M8 1,0	M 12 x 1,25
TR1712.0550	M10 x 1,5/M10 x 1,25	M14 x 1,5
TR1712.0560	M12 x 1,75/M 12 x 1,25	M16 x 1,5



Installation Tool

for inserts TR1604/05/10/11

Installation
Tools



TR1715

INSTALLATION TOOLS

Material

Steel blackened.

TR1605, TR1610 and TR1611.

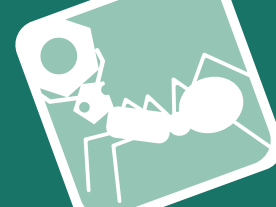
Select installation tool of corresponding insert internal thread d_1 AND external thread d_2 .

If in doubt refer to data tables of insert where correct "Inst. tool ref" is stated.

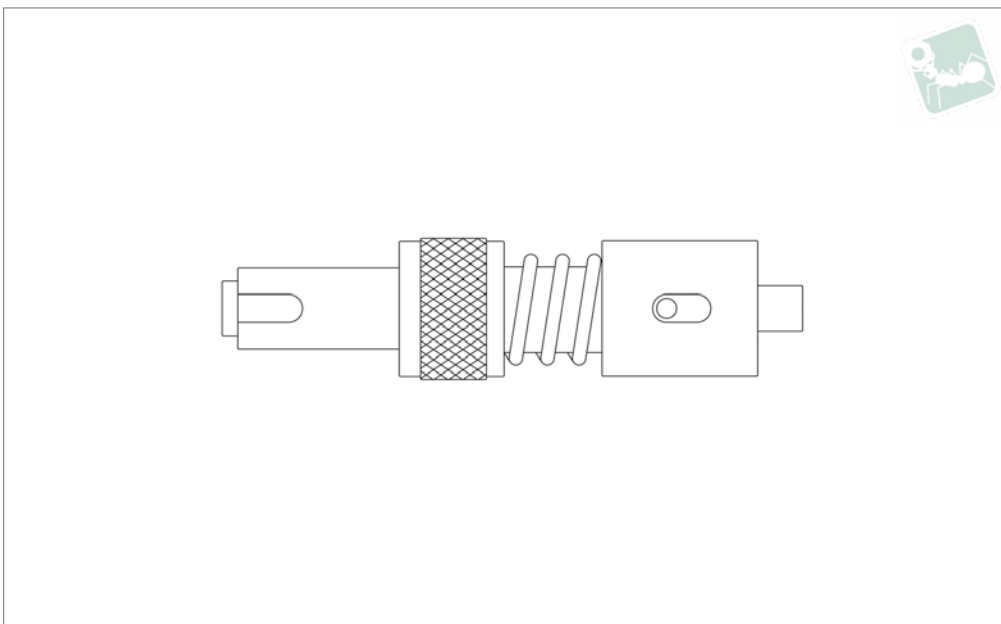
Tips

For use with threaded inserts TR1604,

Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
TR1715.0630	M 4 x 1,25	M 8 x 1,25
TR1715.0640	M 5 x 0,8	M 10 x 1,25
TR1715.0650	M 6 x 1,0	M 12 x 1,25
TR1715.0660	M 8 x 1,25/M8 x 1,0	M 14 x 1,5
TR1715.0670	M 10 x 1,5/M 10 x 1,25	M 16 x 1,5
TR1715.0690	M 12 x 1,75/M 12 x 1,25	M 18 x 1,5
TR1715.0700	M 14 x 2,0/M 14 x 1,5	M 20 x 1,5
TR1715.0710	M 16 x 2,0/M 16 x 1,5	M 22 x 1,
TR1715.0720	M 18 x 1,5	M 24 x 2,0
TR1715.0730	M 20 x 2,5/M 20 x 1,5	M 30 x 2,0
TR1715.0740	M 22 x 1,5	M 32 x 2,0
TR1715.0750	M24 x 3,0/M 24 x 2,0	M 33 x 2,0



TR1720



Material

Steel blackened.

Tips

For use with threaded insert TR1680 and TR1681.

Select installation tool of corresponding insert internal thread d_1 AND external thread d_2 .

If in doubt refer to data tables of insert where correct "Inst. tool ref" is stated.

Important Notes

All dimensions in imperial.

Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
TR1720.0830	2 - 56	1/4 - 28†
TR1720.0840	4 - 40	5/16 - 24
TR1720.0850	6 - 32	3/8 - 24
TR1720.0860	8 - 32	3/8 - 24

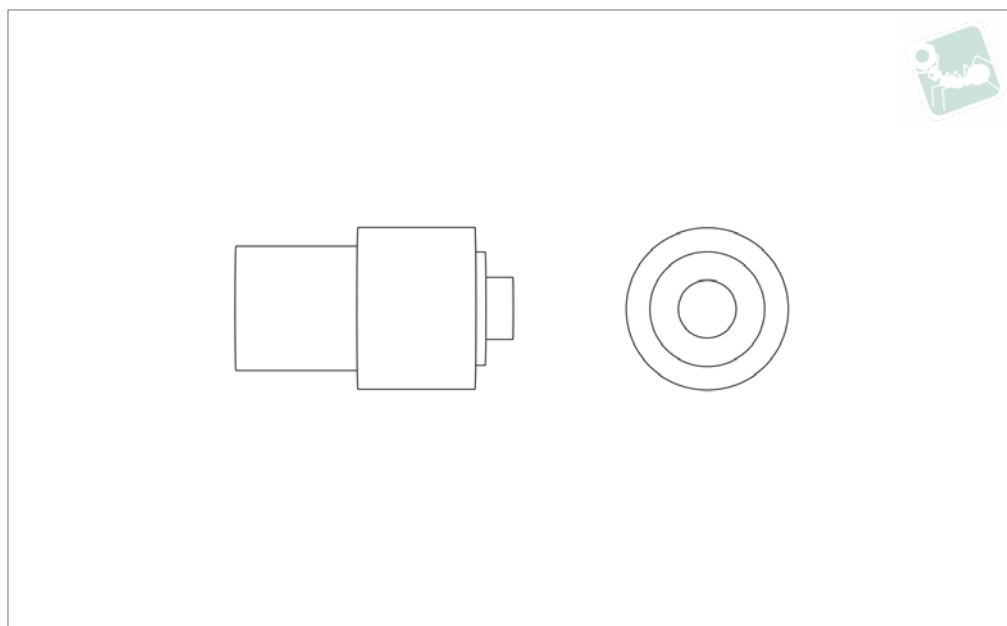


Installation Tool

for inserts TR1685 and TR1686



Installation
Tools



TR1725

INSTALLATION TOOLS

Material

Steel blackened.

Tips

For use with threaded insert TR1685 and TR1686.

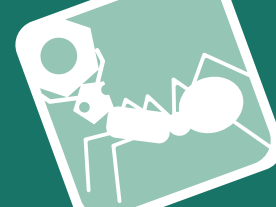
Select installation tool of corresponding insert internal thread d_1 AND external thread d_2 .

If in doubt refer to data tables of insert where correct "Inst. tool ref" is stated.

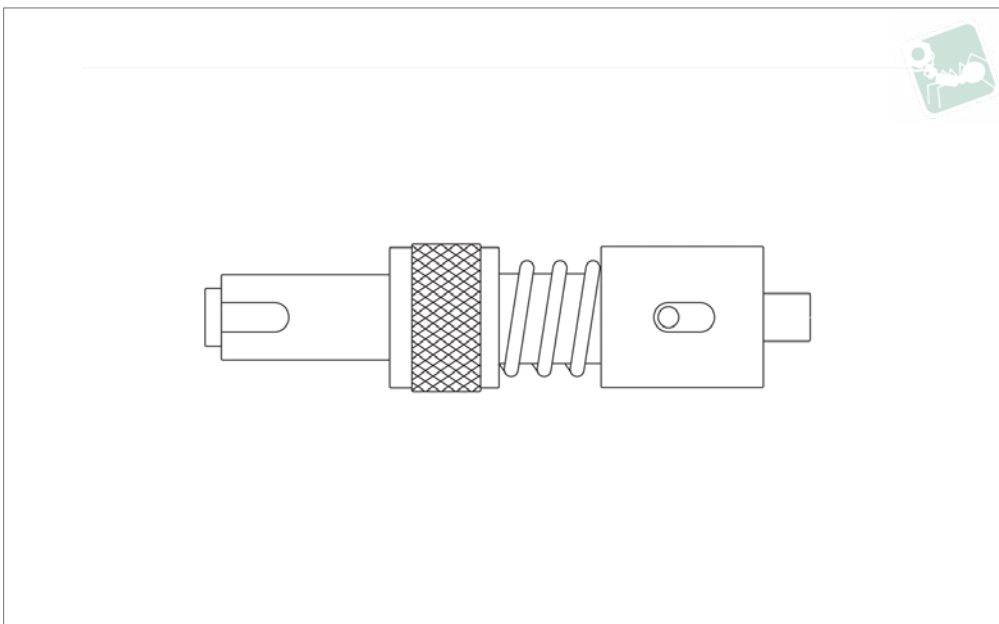
Important Notes

All dimensions in imperial.

Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
TR1725.0010	10 - 24/ 10 - 32	7/16 - 20
TR1725.0020	1/4 - 20/ 1/4 - 28	1/2 - 20
TR1725.0030	5/16 - 18/ 5/16 - 24	5/8 - 18
TR1725.0040	3/8 - 16/ 3/8 - 24	3/4 - 16
TR1725.0050	7/16 - 14/ 7/16 - 20	7/8 - 14
TR1725.0060	1/2 - 13/ 1/2 - 20	1" - 12



TR1730



Material
Steel, blackened.

Tips
For use with inch solid inserts TR1698

and TR1696.
Select installation tool of corresponding insert external thread d_1 . If in doubt refer to data tables of insert where correct „Inst.

tool ref.“ is stated.

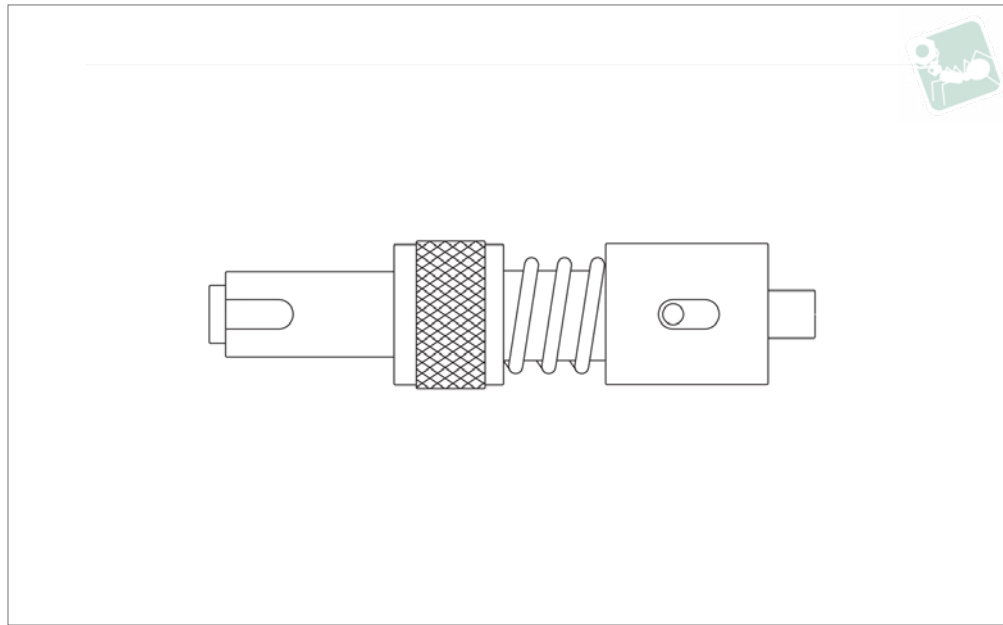
Order No.	For insert of external thread = d_1	Thread type d_1
TR1730.0010	5/16"-18	UNC
TR1730.0020	3/8"-16	UNC
TR1730.0030	7/16"-14	UNC
TR1730.0040	1/2"-13	UNC
TR1730.0050	9/16"-12	UNC
TR1730.0060	5/8"-11	UNC
TR1730.0065	11/16"-11NS	UNF
TR1730.0070	3/4"-16	UNF
TR1730.0075	13/16"-16	UNF
TR1730.0080	7/8"-14	UNF
TR1730.0090	1"-12	UNF
TR1730.0100	1-1/8"-12	UNF
TR1730.0110	1-1/4"-12	UNF
TR1730.0120	1-3/8"-12	UNF



Installation Tool - Solid - Metric

for threaded inserts TR1692 & TR1690

Installation
Tools



TR1732

INSTALLATION TOOLS

Material

Steel, blackened.

Tips

For use with metric solid inserts TR1692

and TR1690.

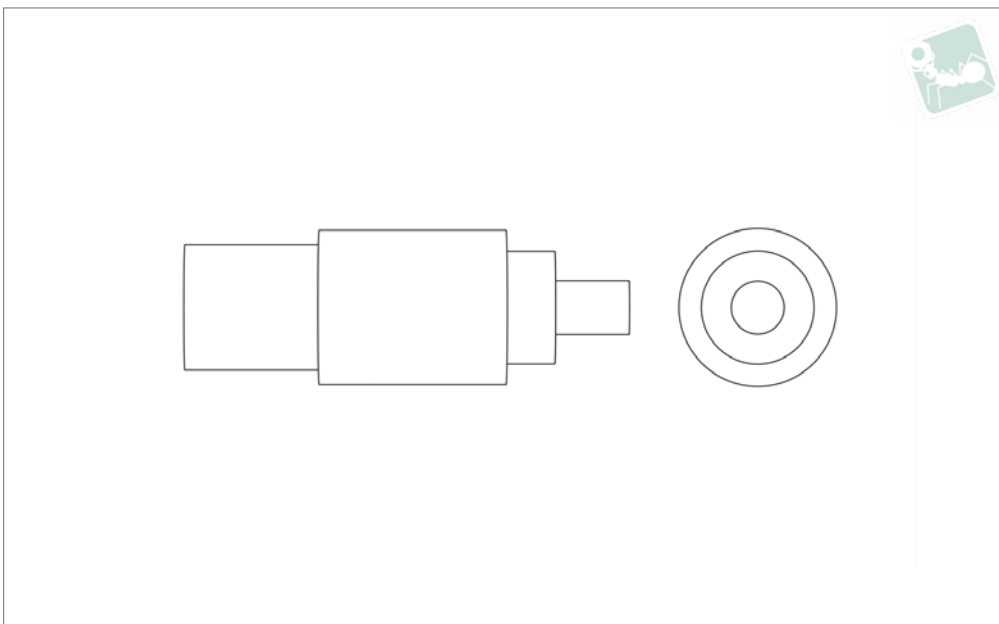
Select installation tool of corresponding insert external thread d_1 . If in doubt refer to data tables of insert where correct „Inst.

tool ref.“ is stated.

Order No.	For insert of external thread = d_1	Thread type d_1
TR1732.0210	M 8x1,25	Coarse
TR1732.0220	M10x1,25	Fine
TR1732.0230	M12x1,25	Fine
TR1732.0240	M14x1,50	Fine
TR1732.0250	M16x1,50	Fine
TR1732.0260	M18x1,50	Fine
TR1732.0270	M20x1,50	Fine
TR1732.0280	M22x1,50	Fine
TR1732.0290	M24x1,50	Fine
TR1732.0300	M30x2,00	Non-Std
TR1732.0310	M32x2,00	Non-Std
TR1732.0320	M33x2,00	Non-Std



TR1740



Material
Steel, blackened.

Tips
For use with inch thinwall threaded

inserts TR1560 and TR1570. Select installation tool of corresponding insert internal thread d_1 and external thread d_2 . If in doubt refer to data tables of insert where

correct „Inst. tool ref.“ is stated.

Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
TR1740.0210	10-24/10"-32	5/16"-18
TR1740.0220	1/4"-20 / 1/4"-28	3/8"-16
TR1740.0230	5/16"-18/ 5/16"-24	7/16"-14
TR1740.0240	3/8"-16/ 3/8"-24	1/2"-13
TR1740.0250	7/16"-14/ 7/16"-20	9/16"-12
TR1740.0260	1/2"-13/ 1/2"-20	5/8"-11

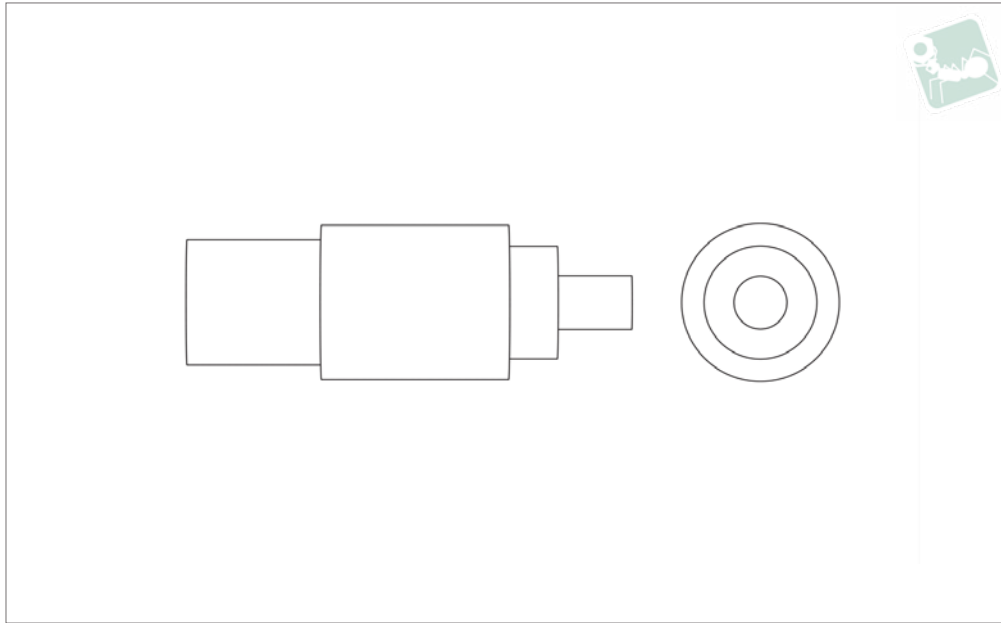


Installation Tool - Inch - Heavy Duty

for threaded inserts TR1565 & TR1575



Installation
Tools



TR1745

INSTALLATION TOOLS

Material

Steel, blackened.

inserts TR1565 and TR1575.

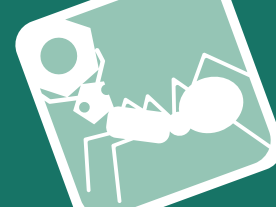
Select installation tool of corresponding insert internal thread d_1 and external thread d_2 . If in doubt refer to data tables of

insert where correct „Inst. tool ref.“ is stated.

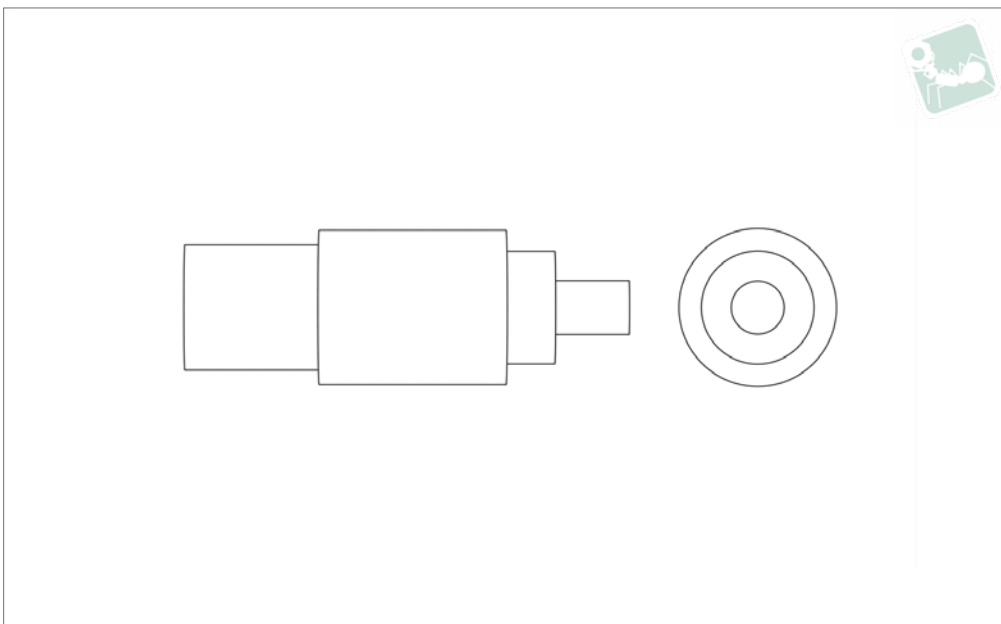
Tips

For use with inch heavy duty threaded

Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
TR1745.0000	8-32	5/16"-18
TR1745.0010	10-24/ 10-32	3/8"-16
TR1745.0020	1/4"-20/ 1/4"-28	7/16"-14
TR1745.0030	5/16"-18/ 5/16"-24	1/2"-13
TR1745.0040	3/8"-16/ 3/8"-24	9/16"-12
TR1745.0050	7/16"-14/ 7/16"-20	5/8"-11
TR1745.0060	1/2"-13/ 1/2"-20	3/4"-16
TR1745.0070	9/16"-12/ 9/16"-18	3/4"-16
TR1745.0080	5/8"-11/ 5/8"-18	7/8"-14
TR1745.0090	3/4"-10/ 3/4"-16	1-1/8"-12
TR1745.0100	7/8"-9/ 7/8"-14	1-1/4"-12
TR1745.0110	1"-8/ 1"-12/ 1"-14	1-3/8"-12
TR1745.0130	1-1/8"-7/ 1-1/8"-12	1-1/2"-12
TR1745.0140	1-1/4"-7/ 1-1/4"-12	1-5/8"-12
TR1745.0160	1-1/2"-6/ 1-1/2"-12	1-7/8"-12



TR1746



Material

Steel, blackened.

threaded inserts TR1566 and TR1576.

Select installation tool of corresponding insert internal thread d_1 and external thread d_2 . If in doubt refer to data tables of

solid insert where correct „Inst. tool ref.“ is stated.

Tips

For use with metric extra heavy duty

Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
TR1746.0310	6-32	5/16"-18
TR1746.0320	8-32	3/8"-16
TR1746.0330	10-24/ 10-32	7/16"-14
TR1746.0340	1/4"-20/ 1/4"-28	1/2"-13
TR1746.0350	5/16"-18/ 5/16"-24	9/16"-12
TR1746.0360	3/8"-16/ 3/8"-24	5/8"-11
TR1746.0370	7/16"-14/ 7/16"-20	3/4"-16
TR1746.0380	1/2"-13/ 1/2"-20	7/8"-14
TR1746.0390	9/16"-12/ 9/16"-18	7/8"-14
TR1746.0400	5/8"-11/ 5/8"-18	1"-12
TR1746.0410	3/4"-10/ 3/4"-16	1-1/4"-12
TR1746.0420	7/8"-9/ 7/8"-14	1-3/8"-12
TR1746.0430	1"-8/ 1"-12	1-1/2"-12

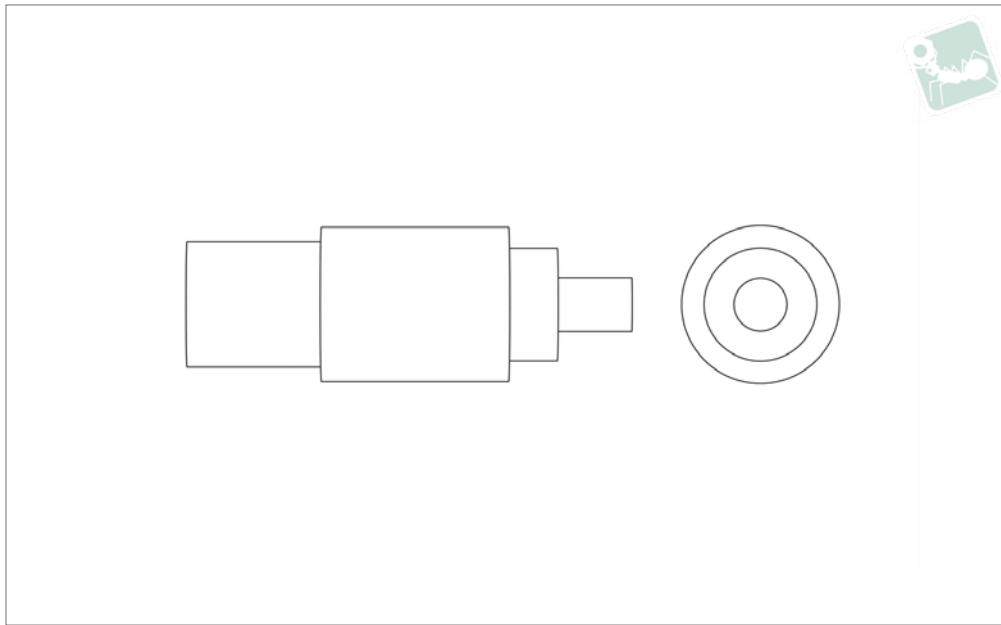


Installation Tool - Metric - Thinwall

for threaded inserts TR1510 & TR1520



Installation
Tools



TR1750

INSTALLATION TOOLS

Material

Steel, blackened.

inserts TR1510 and TR1520.

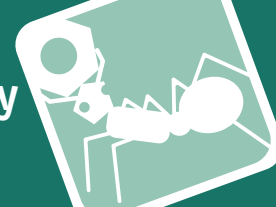
Select installation tool of corresponding insert internal thread d_1 and external thread d_2 . If in doubt refer to data tables of

insert where correct „Inst. tool ref.“ is stated.

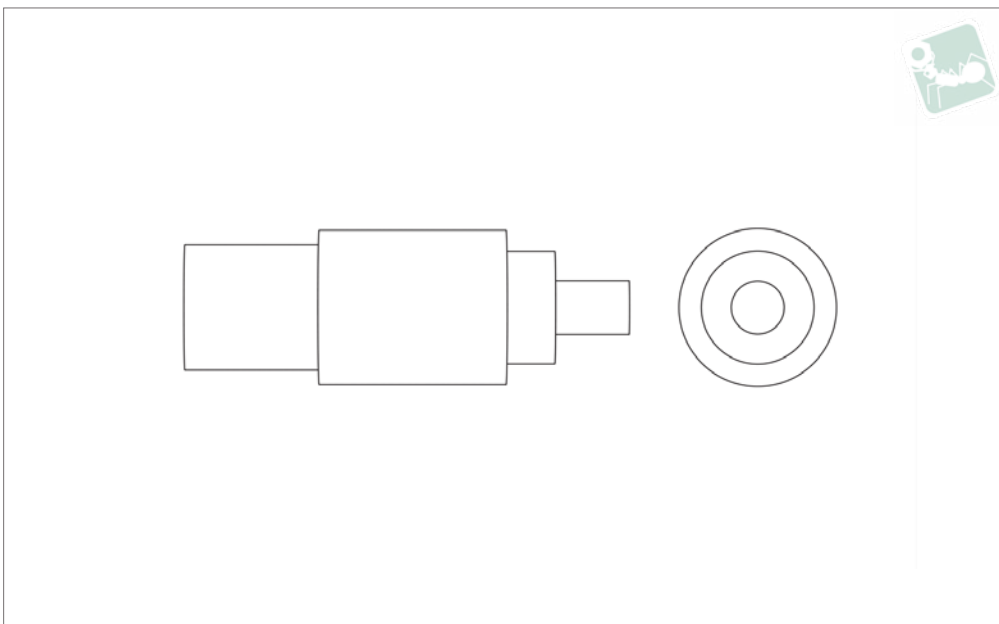
Tips

For use with metric thinwall threaded

Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
TR1750.0510	M 5x0,75	M 8x1,25
TR1750.0520	M 6x1,00	M 10x1,25
TR1750.0530	M 8x1,25/ M 8x1,00	M 12x1,25
TR1750.0550	M 10x1,50/ M 10x1,25	M 14x1,50
TR1750.0560	M 12x1,75/ M 12x1,25	M 16x1,50



TR1755



Material
Steel, blackened.

Tips
For use with metric heavy duty threaded

inserts TR1515 and TR1525.
Select installation tool of corresponding
insert internal thread d_1 and external
thread d_2 . If in doubt refer to data tables of

insert where correct „Inst. tool ref.“ is
stated.

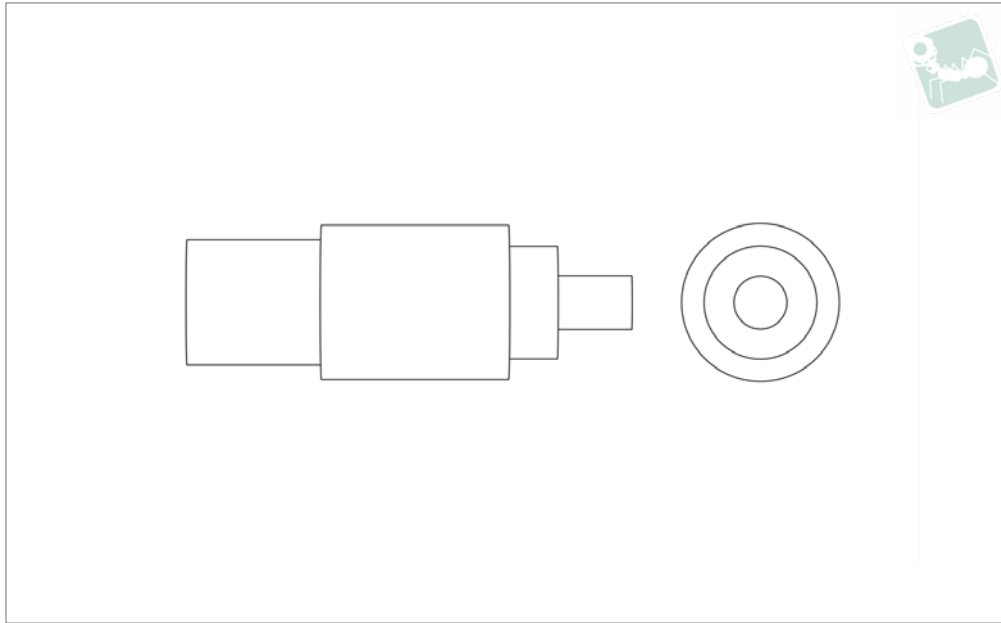
Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
TR1755.0630	M 4x0,70	M 8x1,25
TR1755.0640	M 5x0,75	M10x1,30
TR1755.0650	M 6x1,00	M12x1,25
TR1755.0660	M 8x1,25/ M 8x1,00	M14x1,50
TR1755.0670	M10x1,50/ M10x1,25	M16x1,50
TR1755.0690	M12x1,75/ M12x1,25	M18x1,50
TR1755.0700	M14x2,00/ M14x1,50	M20x1,50
TR1755.0710	M16x2,00/ M16x1,50	M22x1,50
TR1755.0720	M18x1,50	M24x1,50
TR1755.0730	M20x2,50/ M20x1,50	M30x2,00
TR1755.0740	M22x1,50	M32x2,00
TR1755.0750	M24x3,00/ M24x2,00	M33x2,00



Installation Tool - Inch - Heavy Duty

for threaded inserts TR1535 & TR1530

Installation
Tools



TR1760

INSTALLATION TOOLS

Material

Steel, blackened.

inserts TR1535 and TR1530.

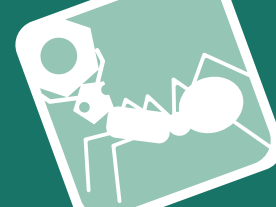
Select installation tool of corresponding insert internal thread d_1 and external thread d_2 . If in doubt refer to data tables of

insert where correct „Inst. tool ref.“ is stated.

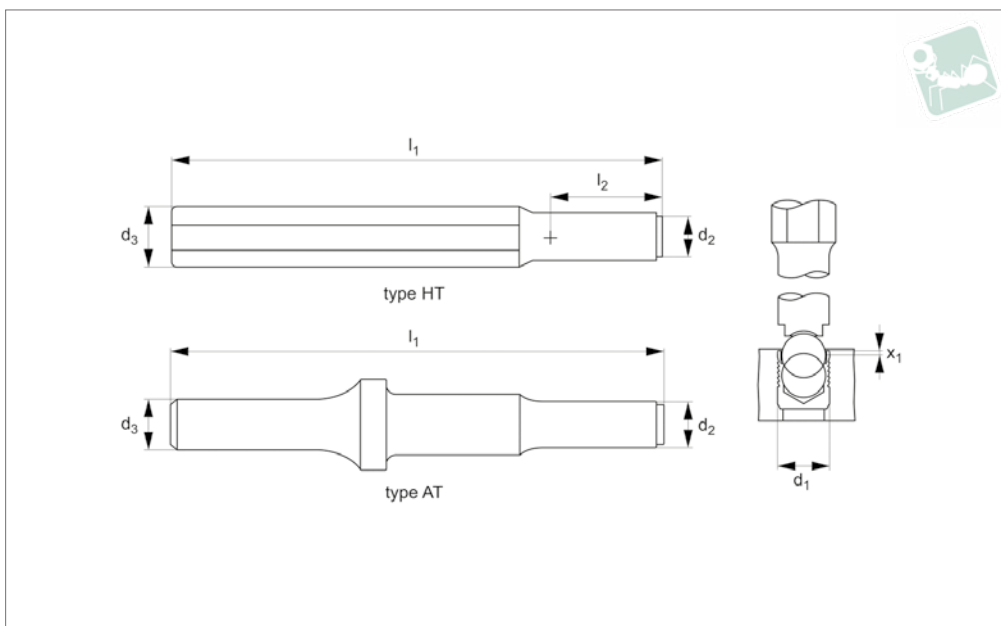
Tips

For use with inch heavy duty threaded

Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
TR1760.0430	M 6x1,00	3/8"-16
TR1760.0440	M 8x1,25	1/2"-13
TR1760.0450	M10x1,50	5/8"-11
TR1760.0470	M12x1,75	3/4"-16
TR1760.0480	M14x2,00	7/8"-14
TR1760.0490	M16x2,00	1"-12



SE0508



Material

Tool steel, heat-treated.

Technical Notes

Please consult technical pages for installa-

tion instructions and performance data.

Hand tool version and air tool (for multiple installations).

Ensure the ball is fully seated before

applying pressure.

Tips

Metric dimensions in mm.

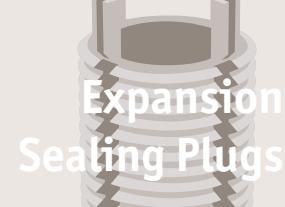
Inch dimensions in inches.

Order No.	d ₁	d ₂	d ₃	l ₁	l ₂	x ±0.2	Type
SE0508.030-C	3.0	2.8	9.53	127	10	0.4	Hand
SE0508.040-C	4.0	3.8	9.53	127	10	0.2	Hand
SE0508.050-C	5.0	4.7	9.53	127	12	0.4	Hand
SE0508.060-C	6.0	5.8	9.53	127	15	0.4	Hand
SE0508.070-C	7.0	6.8	9.53	127	18	0.4	Hand
SE0508.080-C	8.0	7.8	9.53	127	20	0.3	Hand
SE0508.090-C	9.0	8.7	15.88	127	22	0.4	Hand
SE0508.100-C	10.0	9.8	15.88	127	25	0.4	Hand
SE0508.120-C	12.0	11.7	15.88	127	30	0.4	Hand
SE0508.140-C	14.0	13.7	19.05	127	35	0.4	Hand
SE0508.160-C	16.0	15.7	19.05	127	40	0.6	Hand
SE0508.180-C	18.0	17.7	19.05	127	45	0.6	Hand
SE0509.030-C	3.0	2.8	10.19	100	0.4	0.4	Air
SE0509.040-C	4.0	3.8	10.19	100	0.2	0.2	Air
SE0509.050-C	5.0	4.7	10.19	100	0.4	0.4	Air
SE0509.060-C	6.0	5.8	10.19	100	0.4	0.4	Air
SE0509.070-C	7.0	6.8	10.19	100	0.4	0.4	Air
SE0509.080-C	8.0	7.8	10.19	100	0.3	0.3	Air
SE0509.090-C	9.0	8.7	10.19	100	0.4	0.4	Air
SE0509.100-C	10.0	9.8	10.19	100	0.4	0.4	Air
SE0509.200-C	20.0	19.7	10.19	100	0.8	0.8	Air
SE0508.220-C	22.0	21.7	10.19	100	0.8	0.8	Air

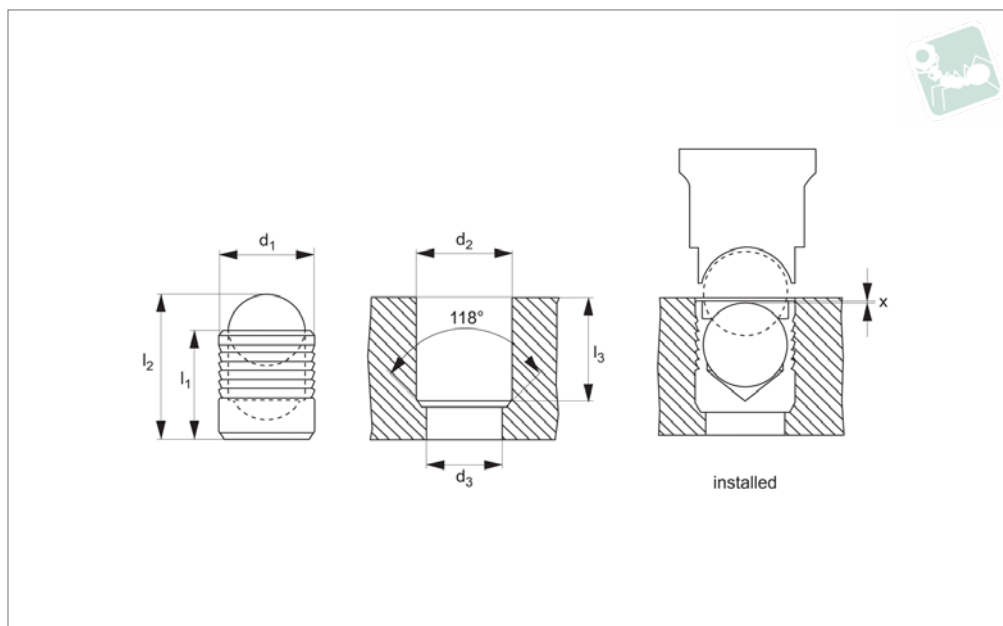


Expansion Sealing Plugs

Metric - standard



Expansion Sealing Plugs



SE0501

EXPANSION SEALING PLUGS

Material

Plug body: case hardened steel (zinc-plated), stainless steel (A2, AISI 303 & A4 AISI 316) or aluminium (2024-T4).

Ball: heat-treated bearing steel or stainless steel (A2, AISI 303 & A4 AISI 316).

Technical Notes

These high pressure sealing plugs are used to blank off externally drilled holes for air

and gas.

No need for tapping, reaming, machining of O-ring grooves or the use of tapes or sealants.

Ensure the ball is fully seated before applying pressure.

Tips

Working pressure up to 450 bar (dependent on body material and material into which

installed).

Please consult technical pages for installation instructions and performance data.

Important Notes

Please refer to technical pages for product installation details.

Order No.	d ₁	l ₁	l ₂	d ₂ +0.1 -0.0	d ₃ max.	l ₃ min.	x ±0.2	Body	Ball
SE0501.01-030-C	3.0	3.6	4.6	3.0	2.2	3.4	0.4	Steel ZP	Steel
SE0501.01-040-C	4.0	4.0	5.2	4.0	3.3	3.8	0.2	Steel ZP	Steel
SE0501.01-050-C	5.0	5.5	7.1	5.0	4.3	5.3	0.4	Steel ZP	Steel
SE0501.01-060-C	6.0	6.5	8.7	6.0	5.3	6.3	0.4	Steel ZP	Steel
SE0501.01-070-C	7.0	7.5	10.2	7.0	6.4	7.3	0.4	Steel ZP	Steel
SE0501.01-080-C	8.0	8.5	11.6	8.0	7.4	8.3	0.3	Steel ZP	Steel
SE0501.01-090-C	9.0	10.0	13.6	9.0	8.4	9.8	0.4	Steel ZP	Steel
SE0501.01-100-C	10.0	11.0	15.2	10.0	9.4	10.8	0.4	Steel ZP	Steel
SE0501.01-120-C	12.0	13.0	17.9	12.0	10.6	12.8	0.4	Steel ZP	Steel
SE0501.01-140-C	14.0	15.0	20.6	14.0	12.7	14.5	0.4	Steel ZP	Steel
SE0501.01-160-C	16.0	17.0	23.4	16.0	14.7	16.5	0.6	Steel ZP	Steel
SE0501.01-180-C	18.0	19.0	26.4	18.0	16.7	18.5	0.6	Steel ZP	Steel
SE0501.01-200-C	20.0	22.0	30.1	20.0	18.7	21.5	0.8	Steel ZP	Steel
SE0501.01-220-C	22.0	25.0	34.0	22.0	20.7	24.5	0.8	Steel ZP	Steel
SE0501.02-030-S	3.0	3.6	4.6	3.0	2.2	3.4	0.4	A2 s/s	Steel
SE0501.02-040-S	4.0	4.0	5.2	4.0	3.3	3.8	0.2	A2 s/s	Steel
SE0501.02-050-S	5.0	5.5	7.1	5.0	4.3	5.3	0.4	A2 s/s	Steel
SE0501.02-060-S	6.0	6.5	8.7	6.0	5.3	6.3	0.4	A2 s/s	Steel
SE0501.02-070-S	7.0	7.5	10.2	7.0	6.4	7.3	0.4	A2 s/s	Steel
SE0501.02-080-S	8.0	8.5	11.6	8.0	7.4	8.3	0.3	A2 s/s	Steel
SE0501.02-090-S	9.0	10.0	13.6	9.0	8.4	9.8	0.4	A2 s/s	Steel
SE0501.02-100-S	10.0	11.0	15.2	10.0	9.4	10.8	0.4	A2 s/s	Steel
SE0501.02-120-S	12.0	13.0	17.9	12.0	10.6	12.8	0.4	A2 s/s	Steel
SE0501.02-140-S	14.0	15.0	20.6	14.0	12.7	14.5	0.4	A2 s/s	Steel
SE0501.02-160-S	16.0	17.0	23.4	16.0	14.7	16.5	0.6	A2 s/s	Steel
SE0501.02-180-S	18.0	19.0	26.4	18.0	16.7	18.5	0.6	A2 s/s	Steel
SE0501.02-200-S	20.0	22.0	30.1	20.0	18.7	21.5	0.8	A2 s/s	Steel
SE0501.02-220-S	22.0	25.0	34.0	22.0	20.7	24.5	0.8	A2 s/s	Steel

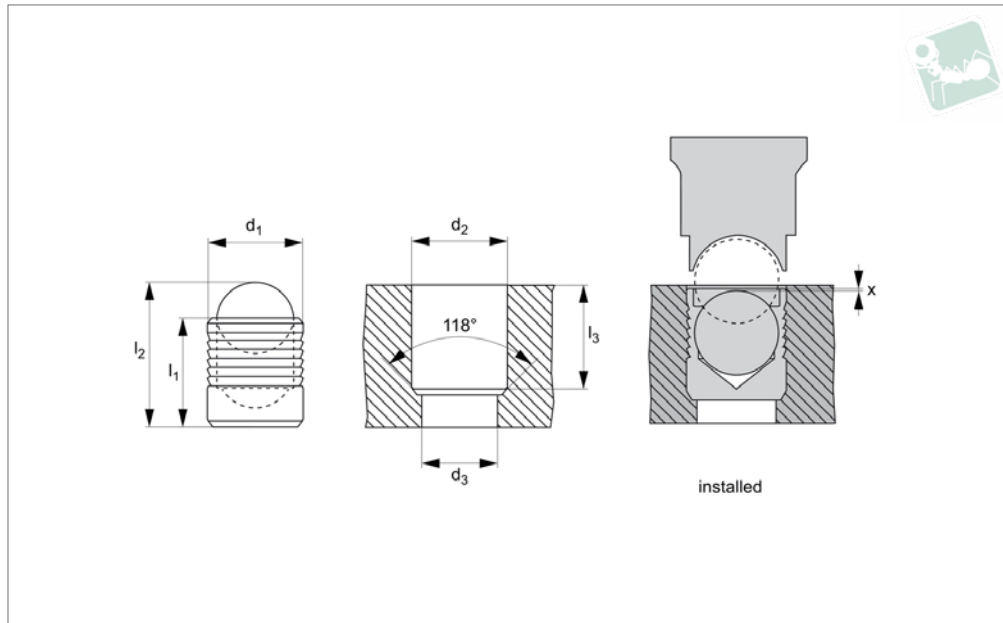
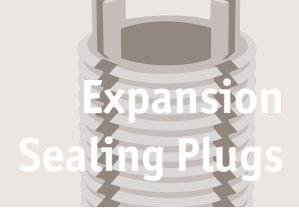


Order No.	d ₁	l ₁	l ₂	d ₂ +0.1 -0.0	d ₃ max.	l ₃ min.	x ±0.2	Body	Ball
SE0501.04-030-T	3.0	3.6	4.6	3.0	2.2	3.4	0.4	A4 s/s	A4 s/s
SE0501.04-040-T	4.0	4.0	5.2	4.0	3.3	3.8	0.2	A4 s/s	A4 s/s
SE0501.04-050-T	5.0	5.5	7.1	5.0	4.3	5.3	0.4	A4 s/s	A4 s/s
SE0501.04-060-T	6.0	6.5	8.7	6.0	5.3	6.3	0.4	A4 s/s	A4 s/s
SE0501.04-070-T	7.0	7.5	10.2	7.0	6.4	7.3	0.4	A4 s/s	A4 s/s
SE0501.04-080-T	8.0	8.5	11.6	8.0	7.4	8.3	0.3	A4 s/s	A4 s/s
SE0501.04-090-T	9.0	10.0	13.6	9.0	8.4	9.8	0.4	A4 s/s	A4 s/s
SE0501.04-100-T	10.0	11.0	15.2	10.0	9.4	10.8	0.4	A4 s/s	A4 s/s
SE0501.04-120-T	12.0	13.0	17.9	12.0	10.6	12.8	0.4	A4 s/s	A4 s/s
SE0501.04-140-T	14.0	15.0	20.6	14.0	12.7	14.5	0.4	A4 s/s	A4 s/s
SE0501.04-160-T	16.0	17.0	23.4	16.0	14.7	16.5	0.6	A4 s/s	A4 s/s
SE0501.04-180-T	18.0	19.0	26.4	18.0	16.7	18.5	0.6	A4 s/s	A4 s/s
SE0501.04-200-T	20.0	22.0	30.1	20.0	18.7	21.5	0.8	A4 s/s	A4 s/s
SE0501.04-220-T	22.0	25.0	34.0	22.0	20.7	24.5	0.8	A4 s/s	A4 s/s
SE0501.05-030-A	3.0	3.6	4.6	3.0	2.2	3.4	0.4	Aluminium	A2 s/s
SE0501.05-040-A	4.0	4.0	5.2	4.0	3.3	3.8	0.2	Aluminium	A2 s/s
SE0501.05-050-A	5.0	5.5	7.1	5.0	4.3	5.3	0.4	Aluminium	A2 s/s
SE0501.05-060-A	6.0	6.5	8.7	6.0	5.3	6.3	0.4	Aluminium	A2 s/s
SE0501.05-070-A	7.0	7.5	10.2	7.0	6.4	7.3	0.4	Aluminium	A2 s/s
SE0501.05-080-A	8.0	8.5	11.6	8.0	7.4	8.3	0.3	Aluminium	A2 s/s
SE0501.05-090-A	9.0	10.0	13.6	9.0	8.4	9.8	0.4	Aluminium	A2 s/s
SE0501.05-100-A	10.0	11.0	15.2	10.0	9.4	10.8	0.4	Aluminium	A2 s/s
SE0501.05-120-A	12.0	13.0	17.9	12.0	10.6	12.8	0.4	Aluminium	A2 s/s
SE0501.05-140-A	14.0	15.0	20.6	14.0	12.7	14.5	0.4	Aluminium	A2 s/s
SE0501.05-160-A	16.0	17.0	23.4	16.0	14.7	16.5	0.6	Aluminium	A2 s/s
SE0501.05-180-A	18.0	19.0	26.4	18.0	16.7	18.5	0.6	Aluminium	A2 s/s
SE0501.05-200-A	20.0	22.0	30.1	20.0	18.7	21.5	0.8	Aluminium	A2 s/s
SE0501.05-220-A	22.0	25.0	34.0	22.0	20.7	24.5	0.8	Aluminium	A2 s/s
SE0501.03-030-S	3.0	3.6	4.6	3.0	2.2	3.4	0.4	A2 s/s	A2 s/s
SE0501.03-040-S	4.0	4.0	5.2	4.0	3.3	3.8	0.2	A2 s/s	A2 s/s
SE0501.03-050-S	5.0	5.5	7.1	5.0	4.3	5.3	0.4	A2 s/s	A2 s/s
SE0501.03-060-S	6.0	6.5	8.7	6.0	5.3	6.3	0.4	A2 s/s	A2 s/s
SE0501.03-070-S	7.0	7.5	10.2	7.0	6.4	7.3	0.4	A2 s/s	A2 s/s
SE0501.03-080-S	8.0	8.5	11.6	8.0	7.4	8.3	0.3	A2 s/s	A2 s/s
SE0501.03-090-S	9.0	10.0	13.6	9.0	8.4	9.8	0.4	A2 s/s	A2 s/s
SE0501.03-100-S	10.0	11.0	15.2	10.0	9.4	10.8	0.4	A2 s/s	A2 s/s
SE0501.03-120-S	12.0	13.0	17.9	12.0	10.6	12.8	0.4	A2 s/s	A2 s/s
SE0501.03-140-S	14.0	15.0	20.6	14.0	12.7	14.5	0.4	A2 s/s	A2 s/s
SE0501.03-160-S	16.0	17.0	23.4	16.0	14.7	16.5	0.6	A2 s/s	A2 s/s
SE0501.03-180-S	18.0	19.0	26.4	18.0	16.7	18.5	0.6	A2 s/s	A2 s/s
SE0501.03-200-S	20.0	22.0	30.1	20.0	18.7	21.5	0.8	A2 s/s	A2 s/s
SE0501.03-220-S	22.0	25.0	34.0	22.0	20.7	24.5	0.8	A2 s/s	A2 s/s



Expansion Sealing Plugs - Inch

Inch - short



SE0505

EXPANSION SEALING PLUGS

Material

Plug body: case hardened steel (zinc-plated), stainless steel (A2, AISI 303 & A4 AISI 316) or aluminium (2024-T4).

Ball: heat-treated bearing steel or stainless steel (A2, AISI 303 & A4 AISI 316).

Technical Notes

These high pressure sealing plugs are used to blank off externally drilled holes for air

and gas.

No need for tapping, reaming, machining of O-ring grooves or the use of tapes or sealants.

Ensure the ball is fully seated before applying pressure.

Dimensions in inches.

Tips

Working pressure up to 450 bar (dependent

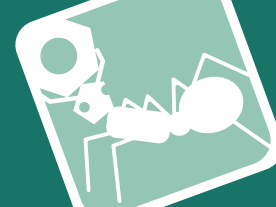
on body material and material into which installed).

Please consult technical pages for installation instructions and performance data.

Important Notes

Please refer to technical pages for product installation details.

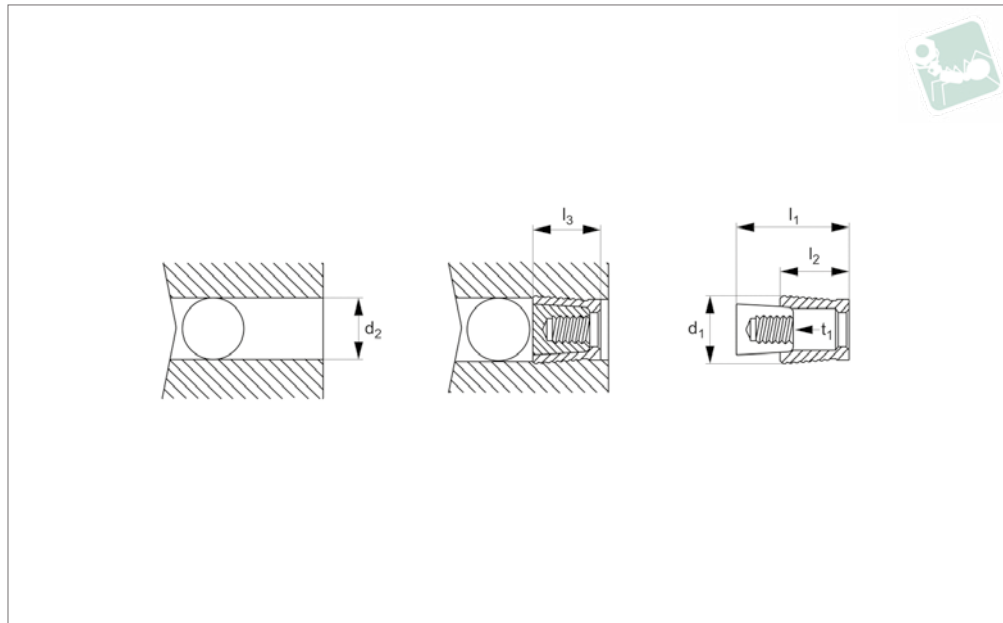
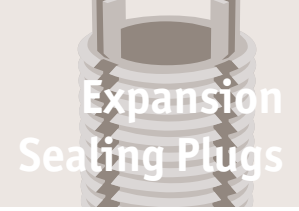
Order No.	d ₁	l ₁	l ₂	d ₂ +0.004 -0.000	d ₃ max.	l ₃ min.	x +0.01 -0.010	Body	Ball
SE0505.01-093-C	0.0937	0.098	0.12	0.0937	0.070	0.081	0.010	Steel ZP	Steel
SE0505.01-125-C	0.1250	0.125	0.16	0.1250	0.100	0.113	0.010	Steel ZP	Steel
SE0505.01-156-C	0.1562	0.125	0.17	0.1562	0.130	0.113	0.010	Steel ZP	Steel
SE0505.01-187-C	0.1875	0.187	0.24	0.1875	0.160	0.170	0.010	Steel ZP	Steel
SE0505.01-218-C	0.2187	0.187	0.25	0.2187	0.190	0.170	0.010	Steel ZP	Steel
SE0505.01-250-C	0.2500	0.225	0.30	0.2500	0.220	0.196	0.010	Steel ZP	Steel
SE0505.01-281-C	0.2812	0.225	0.35	0.2812	0.250	0.233	0.010	Steel ZP	Steel
SE0505.01-312-C	0.3125	0.280	0.39	0.3125	0.281	0.255	0.010	Steel ZP	Steel
SE0505.01-343-C	0.3437	0.307	0.43	0.3437	0.312	0.275	0.010	Steel ZP	Steel
SE0505.01-406-C	0.4062	0.365	0.52	0.4062	0.375	0.308	0.010	Steel ZP	Steel
SE0505.02-093-S	0.0937	0.098	0.12	0.0937	0.070	0.081	0.010	A2 s/s	Steel
SE0505.02-125-S	0.1250	0.125	0.16	0.1250	0.100	0.113	0.010	A2 s/s	Steel
SE0505.02-156-S	0.1562	0.125	0.17	0.1562	0.130	0.113	0.010	A2 s/s	Steel
SE0505.02-187-S	0.1875	0.187	0.24	0.1875	0.160	0.170	0.010	A2 s/s	Steel
SE0505.02-218-S	0.2187	0.187	0.25	0.2187	0.190	0.170	0.010	A2 s/s	Steel
SE0505.02-250-S	0.2500	0.225	0.30	0.2500	0.220	0.196	0.010	A2 s/s	Steel
SE0505.02-281-S	0.2812	0.225	0.35	0.2812	0.250	0.233	0.010	A2 s/s	Steel
SE0505.02-312-S	0.3125	0.280	0.39	0.3125	0.281	0.255	0.010	A2 s/s	Steel
SE0505.02-343-S	0.3437	0.307	0.43	0.3437	0.312	0.275	0.010	A2 s/s	Steel
SE0505.02-406-S	0.4062	0.365	0.52	0.4062	0.375	0.308	0.010	A2 s/s	Steel
SE0505.03-093-S	0.0937	0.098	0.12	0.0937	0.070	0.081	0.010	A2 s/s	A2 s/s
SE0505.03-125-S	0.1250	0.125	0.16	0.1250	0.100	0.113	0.010	A2 s/s	A2 s/s
SE0505.03-156-S	0.1562	0.125	0.17	0.1562	0.130	0.113	0.010	A2 s/s	A2 s/s
SE0505.03-187-S	0.1875	0.187	0.24	0.1875	0.160	0.170	0.010	A2 s/s	A2 s/s
SE0505.03-218-S	0.2187	0.187	0.25	0.2187	0.190	0.170	0.010	A2 s/s	A2 s/s
SE0505.03-250-S	0.2500	0.225	0.30	0.2500	0.220	0.196	0.010	A2 s/s	A2 s/s
SE0505.03-281-S	0.2812	0.225	0.35	0.2812	0.250	0.233	0.010	A2 s/s	A2 s/s
SE0505.03-312-S	0.3125	0.280	0.39	0.3125	0.281	0.255	0.010	A2 s/s	A2 s/s



Order No.	d ₁	l ₁	l ₂	d ₂ +0.004 -0.000	d ₃ max.	l ₃ min.	x +0.0 -0.010	Body	Ball
SE0505.03-343-S	0.3437	0.307	0.43	0.3437	0.312	0.275	0.010	A2 s/s	A2 s/s
SE0505.03-406-S	0.4062	0.365	0.52	0.4062	0.375	0.308	0.010	A2 s/s	A2 s/s
SE0505.04-125-T	0.1250	0.125	0.16	0.1250	0.100	0.113	0.010	A4 s/s	A4 s/s
SE0505.04-156-T	0.1562	0.125	0.17	0.1562	0.130	0.113	0.010	A4 s/s	A4 s/s
SE0505.04-187-T	0.1875	0.187	0.24	0.1875	0.160	0.170	0.010	A4 s/s	A4 s/s
SE0505.04-218-T	0.2187	0.187	0.25	0.2187	0.190	0.170	0.010	A4 s/s	A4 s/s
SE0505.04-250-T	0.2500	0.225	0.30	0.2500	0.220	0.196	0.010	A4 s/s	A4 s/s
SE0505.04-281-T	0.2812	0.225	0.35	0.2812	0.250	0.233	0.010	A4 s/s	A4 s/s
SE0505.04-312-T	0.3125	0.280	0.39	0.3125	0.281	0.255	0.010	A4 s/s	A4 s/s
SE0505.04-343-T	0.3437	0.307	0.43	0.3437	0.312	0.275	0.010	A4 s/s	A4 s/s
SE0505.04-406-T	0.4062	0.365	0.52	0.4062	0.375	0.308	0.010	A4 s/s	A4 s/s
SE0505.05-125-A	0.1250	0.125	0.16	0.1250	0.100	0.113	0.010	Aluminium	A2 s/s
SE0505.05-156-A	0.1562	0.125	0.17	0.1562	0.130	0.113	0.010	Aluminium	A2 s/s
SE0505.05-187-A	0.1875	0.187	0.24	0.1875	0.160	0.170	0.010	Aluminium	A2 s/s
SE0505.05-218-A	0.2187	0.187	0.25	0.2187	0.190	0.170	0.010	Aluminium	A2 s/s
SE0505.05-250-A	0.2500	0.225	0.30	0.2500	0.220	0.196	0.010	Aluminium	A2 s/s
SE0505.05-281-A	0.2812	0.225	0.35	0.2812	0.250	0.233	0.010	Aluminium	A2 s/s
SE0505.05-312-A	0.3125	0.280	0.39	0.3125	0.281	0.255	0.010	Aluminium	A2 s/s
SE0505.05-343-A	0.3437	0.307	0.43	0.3437	0.312	0.275	0.010	Aluminium	A2 s/s
SE0505.05-406-A	0.4062	0.365	0.52	0.4062	0.375	0.308	0.010	Aluminium	A2 s/s



Pull Sealing Plugs



SE0522

EXPANSION SEALING PLUGS

Material

Sleeve: case-hardened steel, black oxide finish.

Pin: heat-treatable steel, black oxide finish.

to blank off externally drilled holes for air and gas.

No need for tapping, reaming, machining of O-ring grooves or the use of tapes or sealants.

product installation details.

Technical Notes

These high pressure sealing plugs are used

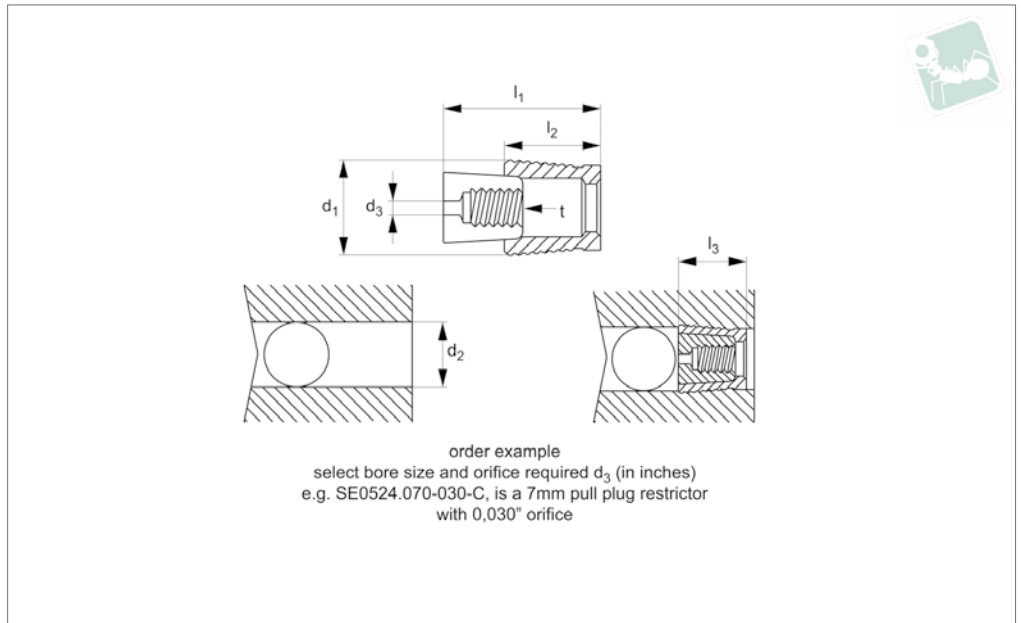
Important Notes

Please refer to technical pages for

Order No.	d_1	d_2 +0.1 -0.0	l_1	l_2	l_3	t_1
SE0522.070-C	7.0	7.0	13.0	7.5	8.0	4-40 UNC
SE0522.080-C	8.0	8.0	14.0	8.5	9.0	6-32 UNC
SE0522.090-C	9.0	9.0	16.0	9.5	10.0	8-32 UNC
SE0522.100-C	10.0	10.0	18.0	10.5	11.0	10-32 UNC
SE0522.120-C	12.0	12.0	21.0	12.5	13.0	10-32 UNC
SE0522.140-C	14.0	14.0	25.0	14.5	15.0	1/4-20 UNC
SE0522.160-C	16.0	16.0	28.0	16.5	17.0	1/4-20 UNC
SE0522.180-C	18.0	18.0	31.5	18.5	19.0	5/16-18 UNC
SE0522.200-C	20.0	20.0	35.0	20.5	21.0	3/8-16 UNC
SE0522.220-C	22.0	22.0	38.5	22.5	23.0	3/8-16 UNC



SE0524



Material

Sleeve: case-hardened steel, black oxide finish.

Pin: heat-treatable steel, black oxide finish.

Technical Notes

To order please specify orifice size d_3

required (-xxx) and add to order no.

Ordering example:

Select the bore size and d_3 required (in inches).

eg. SE0524-070-030 is a 7mm pull plug restrictor with 0.030" orifice.

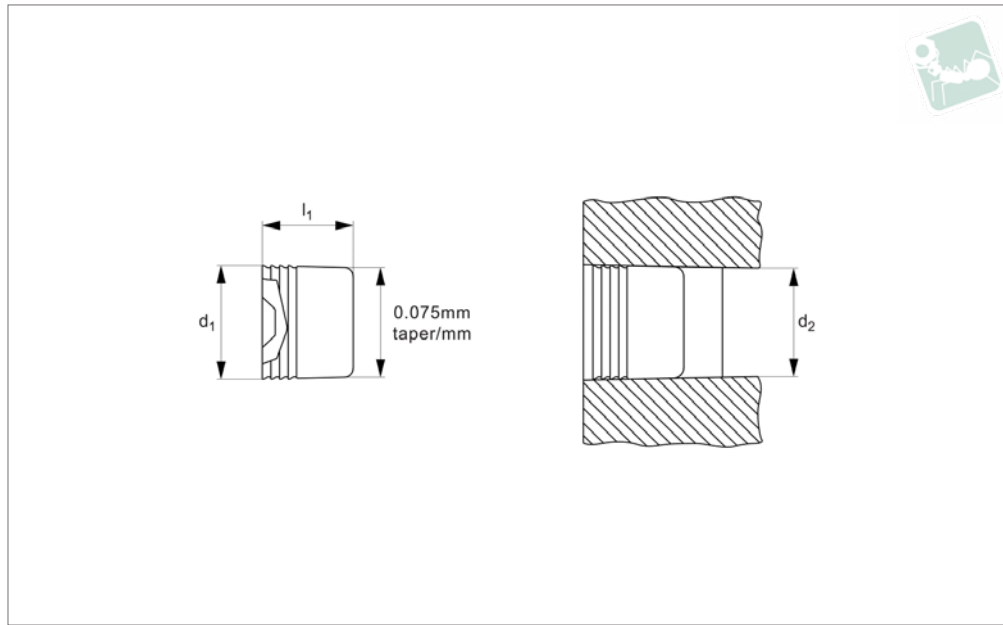
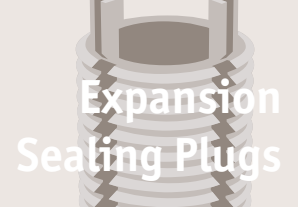
Important Notes

Please refer to technical pages for product installation details.

Order No.	d_1	l_1	l_2	d_2 +0.1 -0.0	l_3	d_3 inch	t
SE0524.070-XXX-C	7.0	13.0	7.5	7.0	8.0	0,012-0,13	4-40 UNC
SE0524.080-XXX-C	8.0	14.0	8.5	8.0	9.0	0,012-0,15	6-32 UNC
SE0524.090-XXX-C	9.0	16.0	9.5	9.0	10.0	0,012-0,17	8-32 UNC
SE0524.100-XXX-C	10.0	18.0	10.5	10.0	11.0	0,012-0,20	10-32 UNC
SE0524.120-XXX-C	12.0	21.0	12.5	12.0	13.0	0,012-0,24	10-32 UNC
SE0524.140-XXX-C	14.0	25.0	14.5	14.0	15.0	0,012-0,28	1/4-20 UNC
SE0524.160-XXX-C	16.0	28.0	16.5	16.0	17.0	0,012-0,30	1/4-20 UNC
SE0524.180-XXX-C	18.0	31.5	18.5	18.0	19.0	0,012-0,35	5/16-18 UNC
SE0524.200-XXX-C	20.0	35.0	20.5	20.0	21.0	0,012-0,40	3/8-16 UNC
SE0524.220-XXX-C	22.0	38.5	22.5	22.0	23.0	0,012-0,43	3/8-16 UNC



Blocker Sealing Plugs Aluminium



SE0526

EXPANSION SEALING PLUGS

Material

Aluminium (6061).

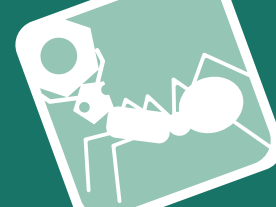
a 0.075mm/mm taper over their length.

Burst pressure 35 bar (500 psi).

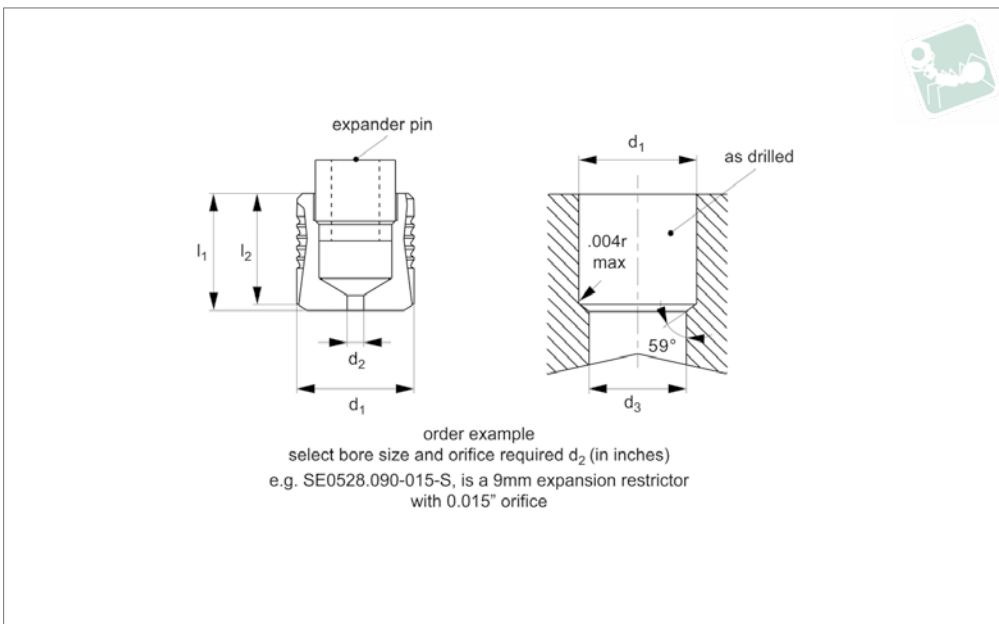
Technical Notes

These are high pressure sealing plugs with

Order No.	d_1	d_2 max.	l_1	Size
SE0526.070-A	7.01	6.50	5.5	7
SE0526.090-A	9.01	8.38	5.5	9



SE0528



Material

A2 Stainless steel.
Calibrated hole diameter (d_2).

Technical Notes

For restricting flow.
To order please specify orifice size d_2 required (-xxx) and add to order number.

Ordering example:

Select size required then add -xxx which indicate reduced hole diameter (d_2), eg SE0528.090-015-S indicated a 9mm bore size with a 0.015" orifice.

Tips

Metric dimensions in mm.

Imperial dimensions in inches. (Length Tolerance $\pm 0,006$)

Important Notes

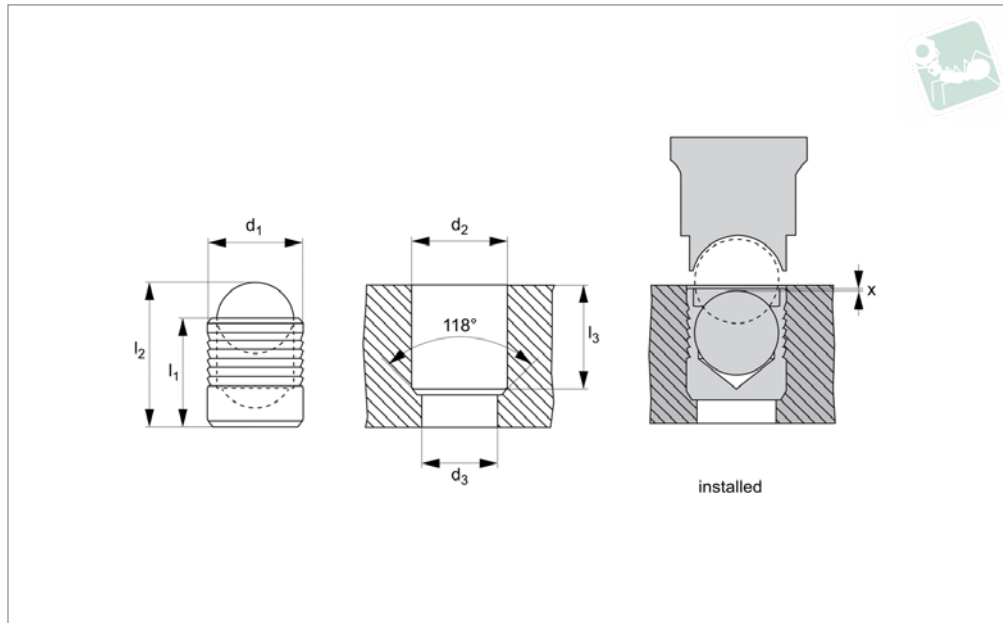
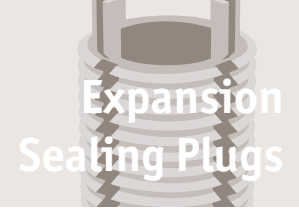
Please refer to technical pages for product installation details.

Order No.	d_1 +0	l_1 $\pm 0,010$	l_2 $\pm 0,010$	d_2 $\pm 0,001$	d_3 $\pm 0,010$	l_3 min.	d_4 max.
SE0528.040-XXX-S	4,00	4.0	3.7	0,012-0,015"	4.00	3.8	3.3
SE0528.050-XXX-S	5,00 ^{-0,030}	5.0	5.2	0,012-0,075"	5.00	5.3	4.3
SE0528.060-XXX-S	6,00 ^{-0,030}	6.0	6.2	0,012-0,100"	6.00	6.3	5.3
SE0528.070-XXX-S	7,00 ^{-0,036}	7.0	7.2	0,012-0,130"	7.00	7.3	6.2
SE0528.080-XXX-S	8,00 ^{-0,036}	8.0	8.2	0,012-0,150"	8.00	8.3	7.2
SE0528.090-XXX-S	9,00 ^{-0,036}	9.0	9.70	0,012-0,170"	9.00	9.8	8.2
SE0528.100-XXX-S	10,00 ^{-0,036}	10.0	10.70	0,012-0,195"	10.00	10.8	9.2
SE0528.120-XXX-S	12,00 ^{-0,043}	12.0	12.70	0,012-0,240"	12.00	12.8	11.0
SE0528.140-XXX-S	14,00 ^{-0,043}	14.0	14.40	0,012-0,280"	14.00	14.5	13.0
SE0528.156-XXX-S	0,1562 ^{-0,0012"}	0,161"	0,149"	0,012-0,050"	0,1562"	0,149"	0,130"
SE0528.187-XXX-S	0,1875 ^{-0,0012"}	0,220"	0,208"	0,012-0,070"	0,1875"	0,208"	0,160"
SE0528.218-XXX-S	0,2187 ^{-0,0012"}	0,220"	0,208"	0,012-0,085"	0,2187"	0,208"	0,190"
SE0528.250-XXX-S	0,2500 ^{-0,0012"}	0,259"	0,247"	0,012-0,105"	0,2500"	0,247"	0,220"
SE0528.281-XXX-S	0,2817 ^{-0,0014"}	0,299"	0,287"	0,012-0,130"	0,2812"	0,287"	0,250"
SE0528.312-XXX-S	0,3125 ^{-0,0014"}	0,338"	0,326"	0,012-0,150"	0,3125"	0,326"	0,281"
SE0528.343-XXX-S	0,3437 ^{-0,0014"}	0,397"	0,385"	0,012-0,160"	0,3437"	0,385"	0,312"
SE0528.375-XXX-S	0,3750 ^{-0,0014"}	0,397"	0,385"	0,012-0,180"	0,3750"	0,385"	0,343"
SE0528.406-XXX-S	0,4062 ^{-0,0014"}	0,437"	0,425"	0,012-0,195"	0,4062"	0,425"	0,375"
SE0528.437-XXX-S	0,4375 ^{-0,0014"}	0,515"	0,503"	0,012-0,220"	0,4375"	0,503"	0,406"
SE0528.468-XXX-S	0,4687 ^{-0,0017"}	0,515"	0,503"	0,012-0,240"	0,4687"	0,503"	0,437"
SE0528.562-XXX-S	0,5625 ^{-0,0017"}	0,594"	0,570"	0,012-0,290"	0,5625"	0,570"	0,510"



Expansion Sealing Plugs - Inch

Inch - standard



SE0507

EXPANSION SEALING PLUGS

Material

Plug body: case hardened steel (zinc-plated), stainless steel (A2, AISI 303 & A4 AISI 316) or aluminium (2024-T4).

Ball: heat-treated bearing steel or stainless steel (A2, AISI 303 & A4 AISI 316).

Technical Notes

These high pressure sealing plugs are used to blank off externally drilled holes for air

and gas.

No need for tapping, reaming, machining of O-ring grooves or the use of tapes or sealants.

Ensure the ball is fully seated before applying pressure.

Dimensions in inches.

Tips

Working pressure up to 450 bar (dependent

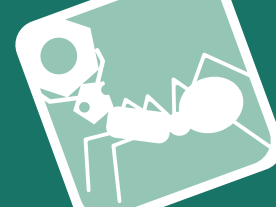
on body material and material into which installed).

Please consult technical pages for installation instructions and performance data.

Important Notes

Please refer to technical pages for product installation details.

Order No.	d ₁	l ₁	l ₂	d ₂ +0.004 -0.000	d ₃ max.	l ₃ min.	x +0.01 -0.010	Body	Ball
SE0507.01-015-C	0.1562	0.157	0.21	0.1562	0.130	0.150	0.010	Steel ZP	Steel
SE0507.01-018-C	0.1875	0.216	0.28	0.1875	0.160	0.209	0.010	Steel ZP	Steel
SE0507.01-021-C	0.2187	0.220	0.28	0.2187	0.190	0.208	0.010	Steel ZP	Steel
SE0507.01-025-C	0.2500	0.256	0.34	0.2500	0.220	0.248	0.010	Steel ZP	Steel
SE0507.01-028-C	0.2812	0.295	0.40	0.2812	0.250	0.287	0.010	Steel ZP	Steel
SE0507.01-031-C	0.3125	0.334	0.46	0.3125	0.281	0.327	0.010	Steel ZP	Steel
SE0507.01-034-C	0.3437	0.394	0.53	0.3437	0.312	0.385	0.010	Steel ZP	Steel
SE0507.01-037-C	0.3750	0.433	0.60	0.3750	0.343	0.425	0.010	Steel ZP	Steel
SE0507.01-040-C	0.4062	0.437	0.59	0.4062	0.375	0.425	0.010	Steel ZP	Steel
SE0507.01-043-C	0.4375	0.515	0.68	0.4375	0.406	0.503	0.010	Steel ZP	Steel
SE0507.01-046-C	0.4687	0.512	0.71	0.4687	0.437	0.504	0.010	Steel ZP	Steel
SE0507.02-018-S	0.1875	0.216	0.28	0.1875	0.160	0.209	0.010	A2 s/s	A2 s/s
SE0507.02-021-S	0.2187	0.220	0.28	0.2187	0.190	0.208	0.010	A2 s/s	A2 s/s
SE0507.02-025-S	0.2500	0.256	0.34	0.2500	0.220	0.248	0.010	A2 s/s	A2 s/s
SE0507.02-028-S	0.2812	0.295	0.40	0.2812	0.250	0.287	0.010	A2 s/s	A2 s/s
SE0507.02-031-S	0.3125	0.334	0.46	0.3125	0.281	0.327	0.010	A2 s/s	A2 s/s
SE0507.02-034-S	0.3437	0.394	0.53	0.3437	0.312	0.385	0.010	A2 s/s	A2 s/s
SE0507.02-037-S	0.3750	0.433	0.60	0.3750	0.343	0.425	0.010	A2 s/s	A2 s/s
SE0507.02-040-S	0.4062	0.437	0.59	0.4062	0.375	0.425	0.010	A2 s/s	A2 s/s
SE0507.02-043-S	0.4375	0.515	0.68	0.4375	0.406	0.503	0.010	A2 s/s	A2 s/s
SE0507.02-046-S	0.4687	0.512	0.71	0.4687	0.437	0.504	0.010	A2 s/s	A2 s/s
SE0507.03-018-S	0.1875	0.216	0.28	0.1875	0.160	0.209	0.010	A4 s/s	A4 s/s
SE0507.03-021-S	0.2187	0.220	0.28	0.2187	0.190	0.208	0.010	A4 s/s	A4 s/s
SE0507.03-025-S	0.2500	0.256	0.34	0.2500	0.220	0.248	0.010	A4 s/s	A4 s/s
SE0507.03-028-S	0.2812	0.295	0.40	0.2812	0.250	0.287	0.010	A4 s/s	A4 s/s
SE0507.03-031-S	0.3125	0.334	0.46	0.3125	0.281	0.327	0.010	A4 s/s	A4 s/s
SE0507.03-034-S	0.3437	0.394	0.53	0.3437	0.312	0.385	0.010	A4 s/s	A4 s/s
SE0507.03-040-S	0.4062	0.437	0.59	0.4062	0.375	0.425	0.010	A4 s/s	A4 s/s

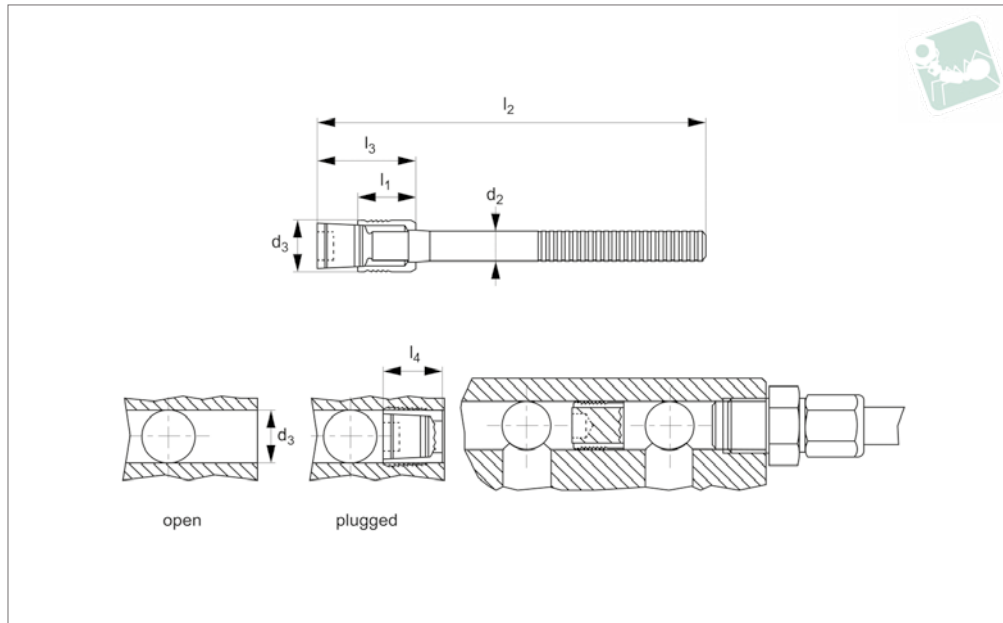


Order No.	d ₁	l ₁	l ₂	d ₂ +0.004 -0.000	d ₃ max.	l ₃ min.	x +0.0 -0.010	Body	Ball
SE0507.03-043-S	0.4375	0.515	0.68	0.4375	0.406	0.503	0.010	A4 s/s	A4 s/s
SE0507.03-046-S	0.4687	0.512	0.71	0.4687	0.437	0.504	0.010	A4 s/s	A4 s/s
SE0507.04-018-T	0.1875	0.216	0.28	0.1875	0.160	0.209	0.010	Aluminium	A2 s/s
SE0507.04-021-T	0.2187	0.220	0.28	0.2187	0.190	0.208	0.010	Aluminium	A2 s/s
SE0507.04-025-T	0.2500	0.256	0.34	0.2500	0.220	0.248	0.010	Aluminium	A2 s/s
SE0507.04-028-T	0.2812	0.295	0.40	0.2812	0.250	0.287	0.010	Aluminium	A2 s/s
SE0507.04-031-T	0.3125	0.334	0.46	0.3125	0.281	0.327	0.010	Aluminium	A2 s/s
SE0507.04-034-T	0.3437	0.394	0.53	0.3437	0.312	0.385	0.010	Aluminium	A2 s/s
SE0507.04-037-T	0.3750	0.433	0.60	0.3750	0.343	0.425	0.010	Aluminium	A2 s/s
SE0507.04-040-T	0.4062	0.437	0.59	0.4062	0.375	0.425	0.010	Aluminium	A2 s/s
SE0507.04-043-T	0.4375	0.515	0.68	0.4375	0.406	0.503	0.010	Aluminium	A2 s/s
SE0507.04-046-T	0.4687	0.512	0.71	0.4687	0.437	0.504	0.010	Aluminium	A2 s/s



Pull Expansion Sealing Plugs

Expansion Sealing Plugs



SE0520

EXPANSION SEALING PLUGS

Material

Sleeve: case-hardened steel, black oxide finish.

Mandrel: heat-treated steel, black oxide finish.

Technical Notes

These high pressure sealing plugs are used to blank off externally drilled holes for air and gas.

No need for tapping, reaming, machining

of O-ring grooves or the use of tapes or sealants.

Short version - with short mandrel.

Long version - with long mandrel.

Tips

Working pressure up to 450 bar (dependent on body material and material into which installed).

Pulling on the mandrel forces the plug insert into the plug body, expanding the

body out to grip on the channel walls.

At a set pressure the mandrel then breaks off and is removed with the plug remaining firmly set inside the bore.

Important Notes

Please refer to technical pages for product installation details.

Order No.	d ₁	d ₂	d ₃ +0.12 -0.0	l ₁	l ₂	l ₃ max.	l ₄ max.	Type
SE0520.01-040-C	4.0	2.50	4.0	4.0	39	9.0	6.5	Short
SE0520.01-050-C	5.0	3.00	5.0	5.5	41	10.0	7.5	Short
SE0520.01-060-C	6.0	3.40	6.0	6.5	43	12.0	8.0	Short
SE0520.01-080-C	8.0	4.20	8.0	8.5	40	15.0	10.5	Short
SE0520.01-090-C	9.0	4.50	9.0	9.5	43	17.0	11.0	Short