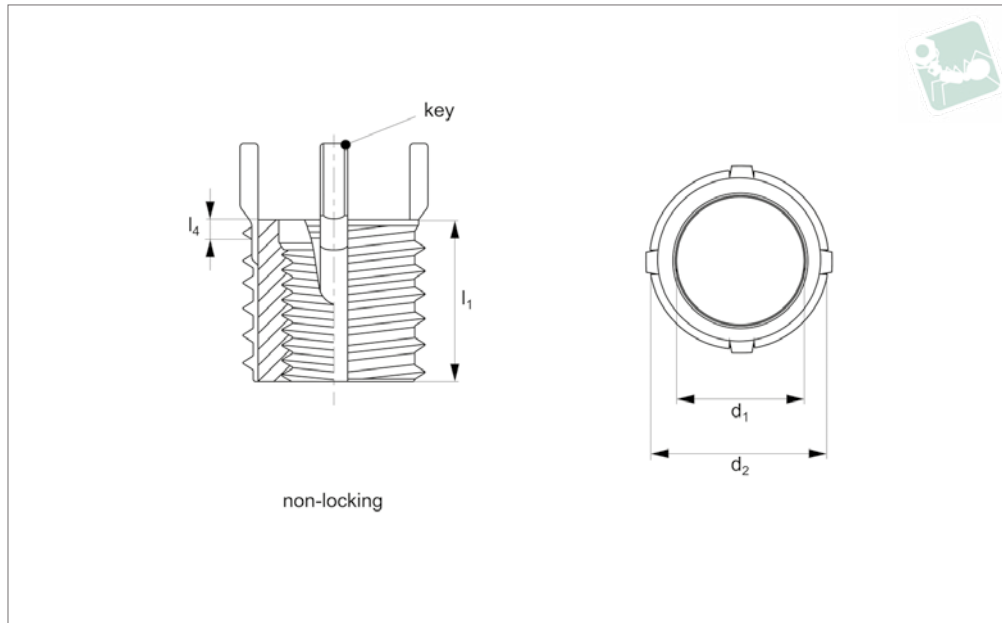




Threaded Insert MS/NAS - Extra H

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

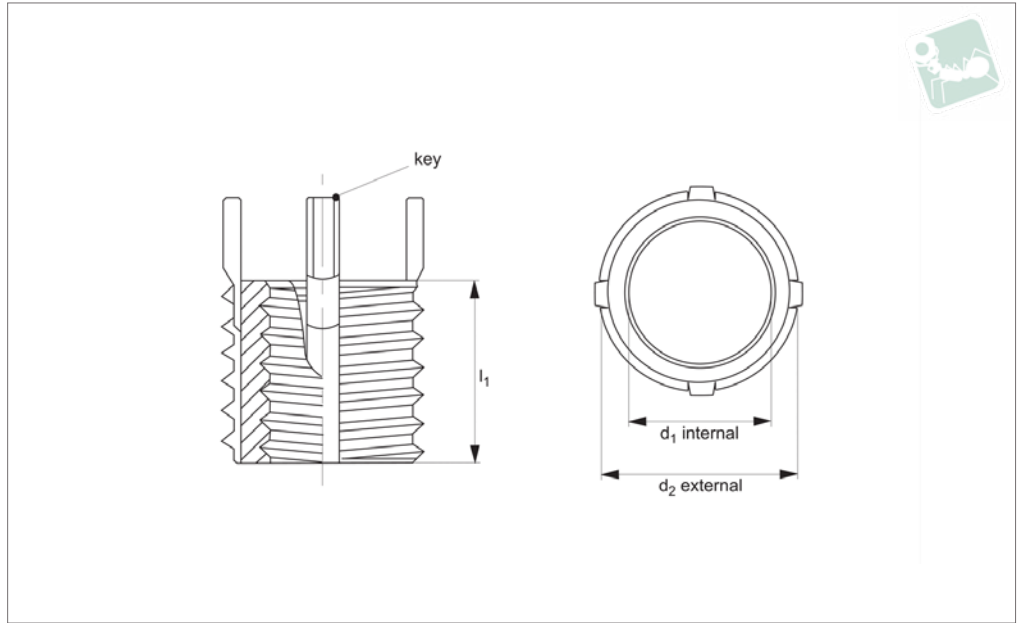
Four locking keys on internal threads 1/4

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.

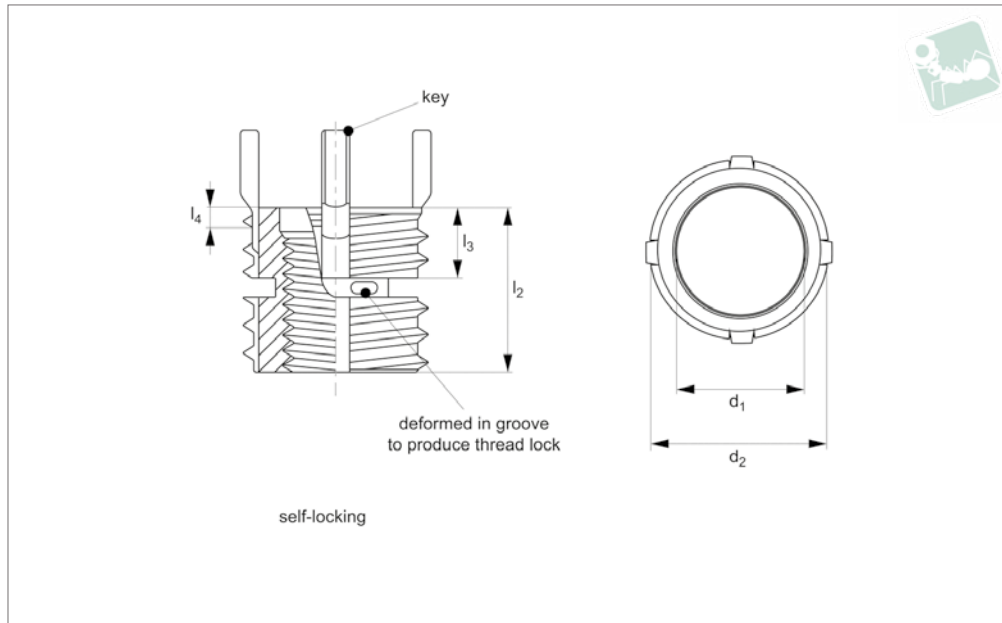
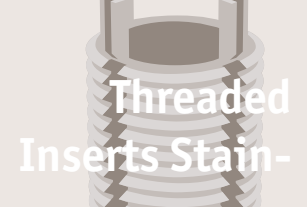
All dimensions in inches.

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



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.	I 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