

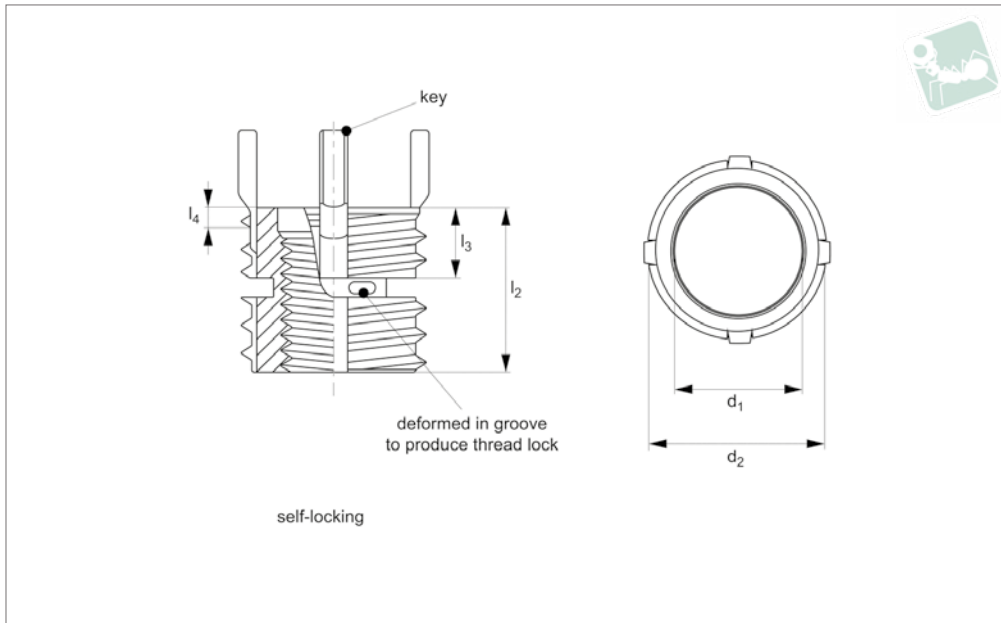


# Threaded Insert MS/NAS - Thinwall - 4140 steel - self-locking - MS/NAS grade



## TR1663

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 (MS51830 & NAS1394)

Order No.	Type	d <sub>1</sub> class 3B	Thread type d <sub>1</sub>	d <sub>2</sub> (mod.) class 2A	Thread type d <sub>2</sub>	Inst. tap drill size	l <sub>1</sub>	l <sub>3</sub> ±0.03 0	l <sub>4</sub> c'bore depth	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	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