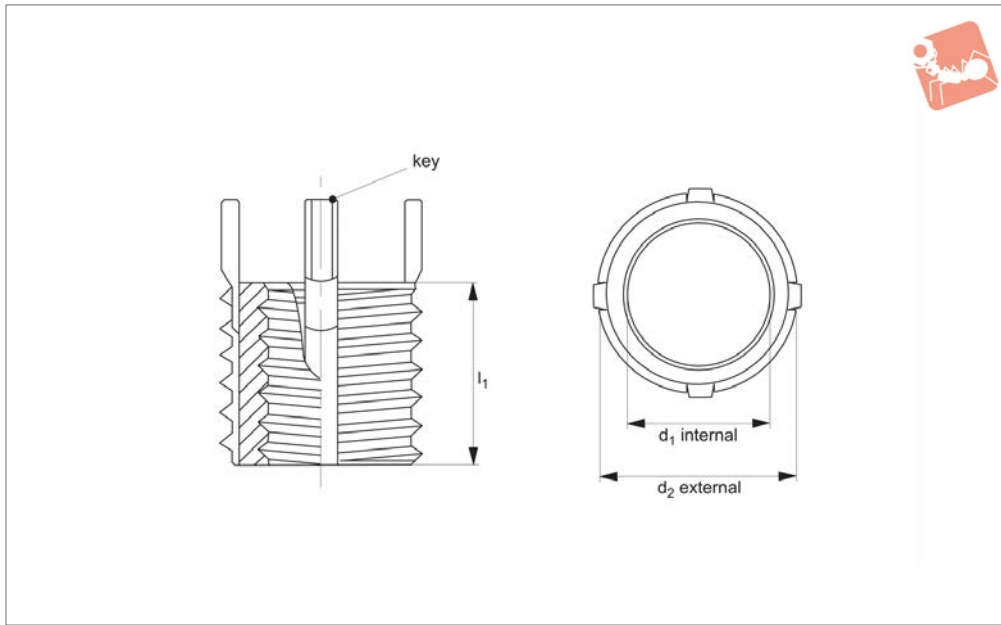




Threaded Insert - Metric - Inch heavy duty - carbon steel



Threaded Inserts



22010

THREADED INSERTS

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.

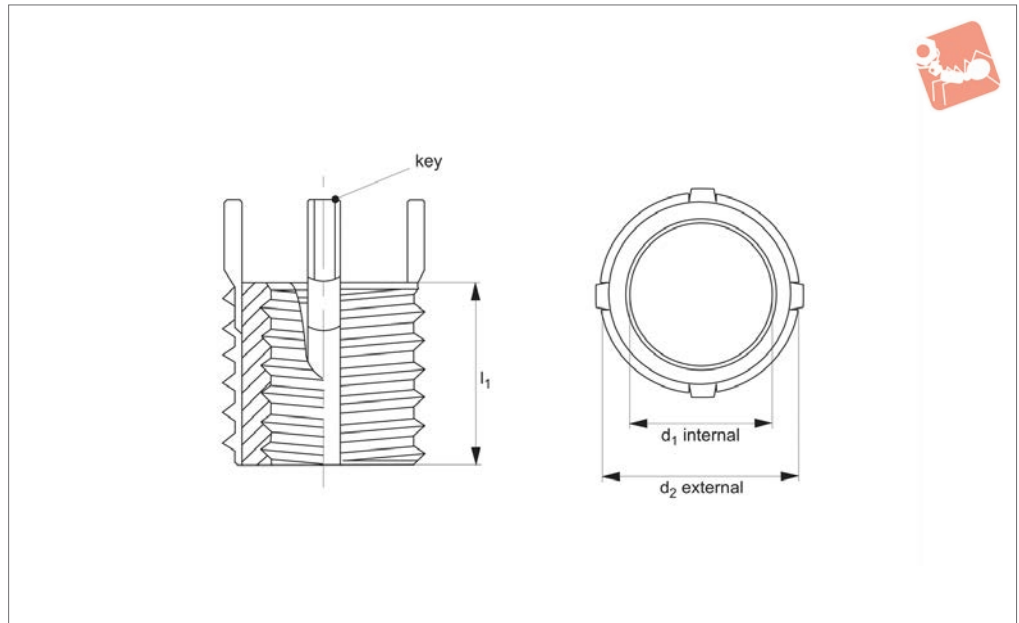
Order No.	Int. d ₁ tol. 6H	Int. thread type d ₁	Ext. d ₂ tol. 2A	Ext. thread type d ₂	l ₁	Inst. tool ref. 22064	Inst. tap drill size	Inst. c'sink dia. +0.010 - 0.000	Inst. thread tap tol. 2B	Inst. thread depth min.	Removal drill size	Removal drill depth
22010.W0430	M 6x1,00	Coarse	3/8"-16	UNC	0,31	.W0430	21/64"	0,38	3/8"-16	0,37	9/32"	1/8"
22010.W0440	M 8x1,25	Coarse	1/2"-13	UNC	0,43	.W0440	29/64"	0,51	1/2"-13	0,50	13/32"	3/16"
22010.W0450	M10x1,50	Coarse	5/8"-11	UNC	0,50	.W0450	37/64"	0,63	5/8"-11	0,56	17/32"	3/16"
22010.W0470	M12x1,75	Coarse	3/4"-16	UNF	0,62	.W0470	45/64"	0,76	3/4"-16	0,68	21/32"	3/16"
22010.W0480	M14x2,00	Coarse	7/8"-14	UNF	0,81	.W0480	53/64"	0,88	7/8"-14	0,94	25/32"	5/16"
22010.W0490	M16x2,00	Coarse	1"-12	UNF	0,87	.W0490	15/16"	1,02	1"-12	1,00	27/32"	5/16"



THREADED INSERTS



22012



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

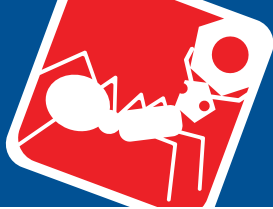
threads smaller than M8.

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
22012.W5430	M 6x1,00	Coarse	3/8"-16	UNC	0,3	.W0430	21/64"	0,38	3/8"-16	0,37	9/32"	1/8"
22012.W5440	M 8x1,25	Coarse	1/2"-13	UNC	0,4	.W0440	29/64"	0,51	1/2"-13	0,50	13/32"	3/16"
22012.W5450	M10x1,50	Coarse	5/8"-11	UNC	0,5	.W0450	37/64"	0,63	5/8"-11	0,56	17/32"	3/16"
22012.W5470	M12x1,75	Coarse	3/4"-16	UNF	0,6	.W0470	45/64"	0,76	3/4"-16	0,68	21/32"	3/16"
22012.W5480	M14x2,00	Coarse	7/8"-14	UNF	0,8	.W0480	53/64"	0,88	7/8"-14	0,94	25/32"	5/16"
22012.W5490	M16x2,00	Coarse	1"-12	UNF	0,9	.W0490	15/16"	1,02	1"-12	1,00	27/32"	5/16"



THREADED INSERTS

Threaded inserts are used to quickly repair stripped, damaged or worn out threads with new stronger threads, or are used in original equipment to guarantee stronger thread connections.

Wixroyd inserts are easy to install and remove, without the need for special drills, taps or pre-winder tools. The 'locking keys' on threaded inserts are easily driven down into the thread of the surrounding base material – locking the insert securely in place.



Carbon steel inserts



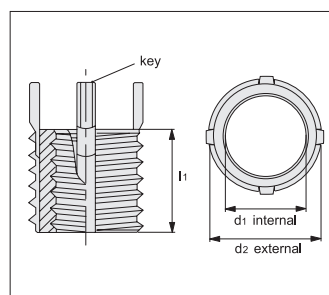
Stainless steel inserts



Solid inserts

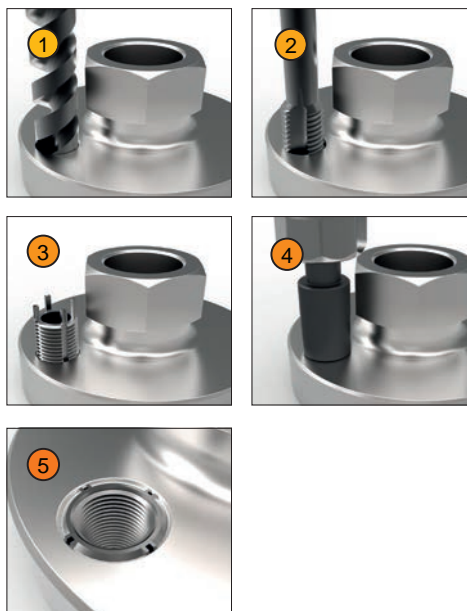
Key Features

- Solid, one-piece construction providing high pull-out strengths.
- Locking "keys" provide a positive mechanical lock against rotation of the insert.
- Easy installation and removal.
- Installation with standard drills and taps.
- No pre-winder tools required.
- No tangs to break off and account for in the assembly.
- For use in a wide variety of materials.
- Both metric and imperial sizes available in coarse and fine pitches.



Installation and Removal

- 1 Select desired threaded insert, and from the product data table identify the installation drill and tap sizes (note the drill is slightly oversized deliberately). Drill with standard tap drill as per product data table, and countersink with standard 82-100° countersink.
- 2 Tap new threads with standard tap – as specified in product data table.
- 3 Screw in the insert until it is 0.25 to 0.75mm (0.010 to 0.030 inch) below the surface.
- 4 Drive locking keys down with several hammer taps on the installation tool – see product data table for correct tool.
- 5 Insert is installed.



Installation

Wixroyd threaded inserts, can be removed (if required) without damage to the surrounding material.

- 1 Refer to product data tables to identify the drill size and drill depth required for removal. Drill out the material between the insert keys and the internal thread to specified depth.

- 2 Bend the locking keys inward and break off.
- 3 Remove the old insert using a screw extractor.
- 4 Install a replacement insert into the original tapped hole.

Removal



Stainless Steel



22000 - Thinwall - Metric
Use installation tool no. 22060.



22002 - Heavy Duty - Metric.
Use installation tool no. 22062.



22012 - Heavy Duty - Metric - Inch.
Use installation tool no. 22064.



22020, 22022, 22024 - Inch - Thinwall - Heavy Duty - Extra Heavy Duty.
Use installation tool no. 22054-58.

Carbon Steel



22004 - Thinwall - Metric
Use installation tool no. 22060.



22006 - Heavy Duty - Metric
Use installation tool no. 22062.



22010 - Heavy Duty - Metric - Inch.
Use installation tool no. 22064.



22030 - 22034 - Inch - Thinwall - Heavy Duty - Extra Heavy Duty
Use installation tool no. 22054, 20058.

Solid



22040 - Metric - Carbon
Use installation tool no. 22052.



22042 - Metric - Stainless Steel
Use installation tool no. 22052.



22044 - Inch - Carbon
Use installation tool no. 22050.



22046 - Inch - Stainless Steel
Use installation tool no. 22050.

Installation Tools



22050 for 22044 & 22046



22052 for 22040 & 22042



22054, 22058 for 22020, 22024, 22030, 22034,



22060 for 22000 & 22004



22062 for 22002 & 22006



22064 for 22010 & 22012

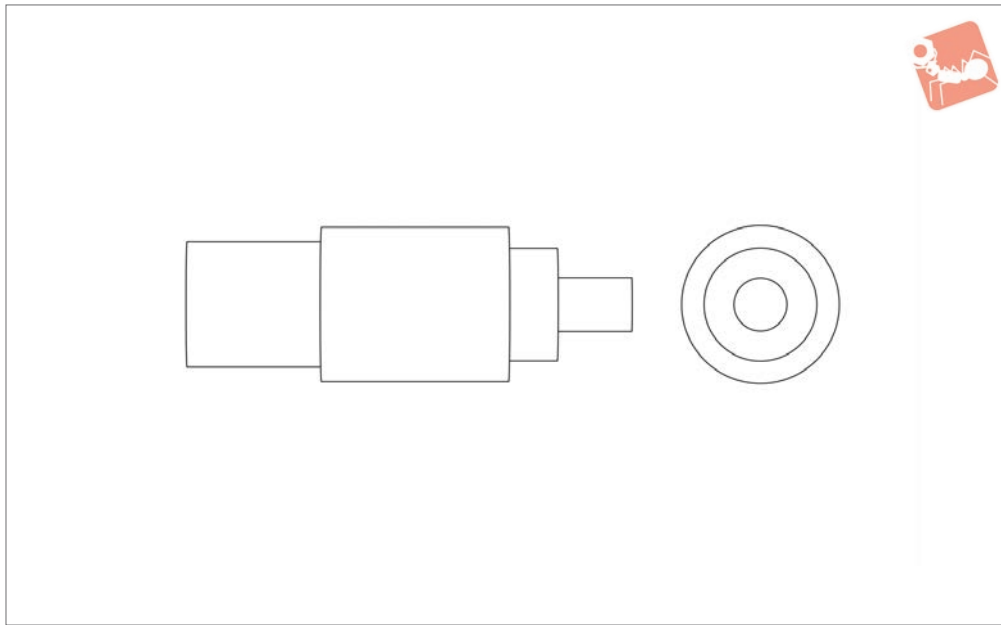


Installation Tool - Inch - Heavy Duty

for threaded inserts 22010 & 22012



Threaded Inserts



22064

THREADED INSERTS

Material

Steel, blackened.

inserts 22010 and 22012.

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.

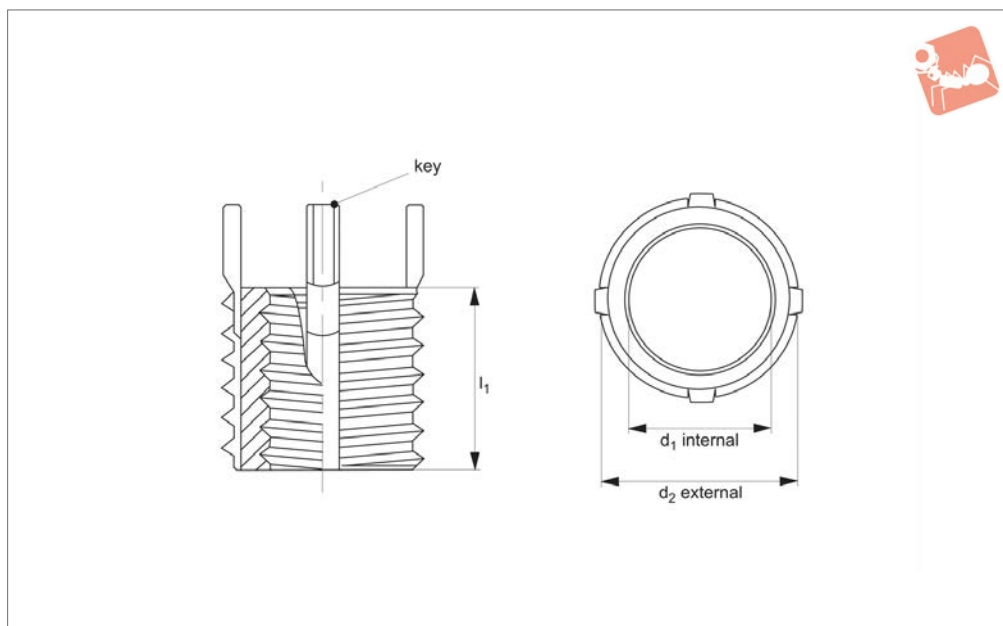
Tips

For use with inch heavy duty threaded

Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
22064.W0430	M 6x1,00	3/8"-16
22064.W0440	M 8x1,25	1/2"-13
22064.W0450	M10x1,50	5/8"-11
22064.W0470	M12x1,75	3/4"-16
22064.W0480	M14x2,00	7/8"-14
22064.W0490	M16x2,00	1"-12



22000



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
22000.W5510	M 5x0,80	Coarse	M 8x1,25	Coarse	8	6,9	.W0510	8,3	M 8x1,25	9,5	5,5	4,0
22000.W5520	M 6x1,00	Coarse	M10x1,25	Fine	10	8,8	.W0520	10,3	M10x1,25	11,5	7,5	4,8
22000.W5530	M 8x1,25	Coarse	M12x1,25	Fine	12	10,8	.W0530	12,3	M12x1,25	13,5	9,5	4,8
22000.W5531	M 8x1,00	Fine	M12x1,25	Fine	12	10,8	.W0530	12,3	M12x1,25	13,5	9,5	4,8
22000.W5550	M10x1,50	Coarse	M14x1,50	Fine	14	12,8	.W0550	14,3	M14x1,50	15,5	11,5	4,8
22000.W5551	M10x1,25	Fine	M14x1,50	Fine	14	12,8	.W0550	14,3	M14x1,50	15,5	11,5	4,8
22000.W5560	M12x1,75	Coarse	M16x1,50	Fine	16	14,2	.W0560	14,3	M16x1,50	17,5	13,5	4,8
22000.W5561	M12x1,25	Fine	M16x1,50	Fine	16	14,8	.W0560	16,3	M16x1,50	17,5	13,5	4,8

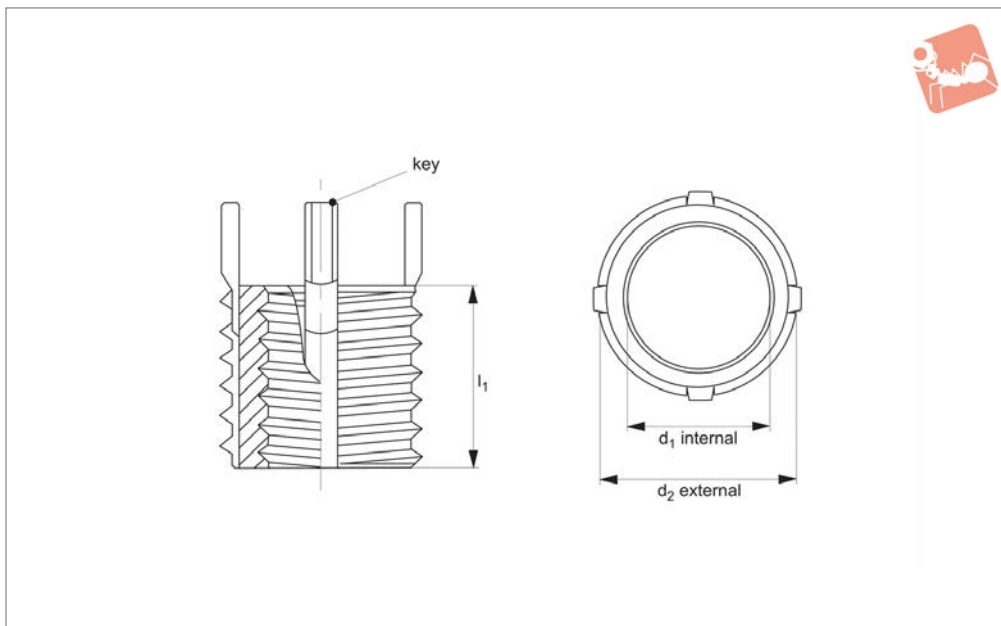


Threaded Insert - Metric

thinwall - carbon steel



Threaded Inserts



22004

THREADED INSERTS

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.

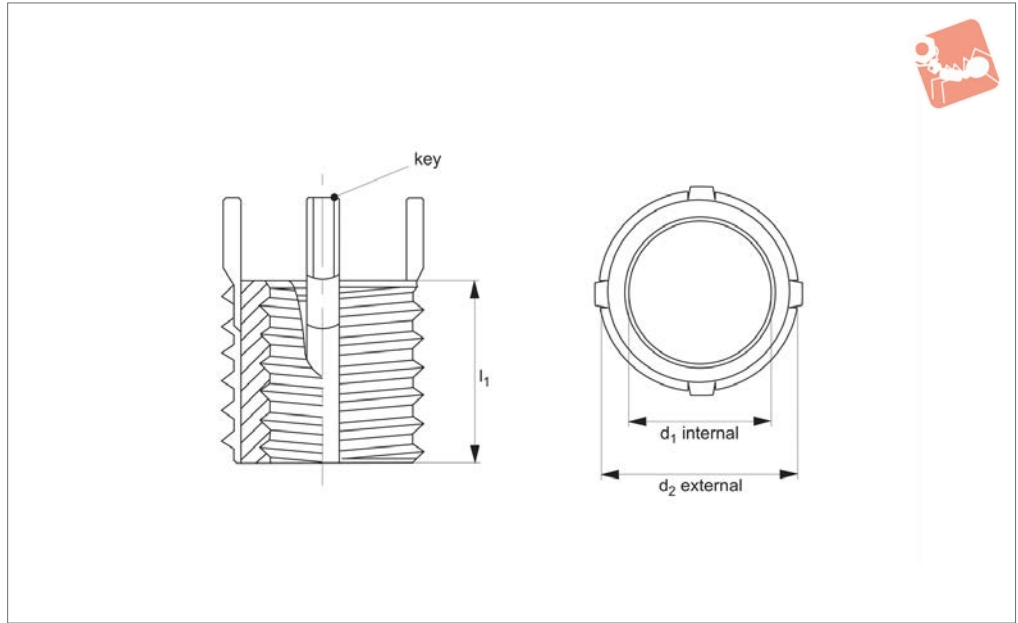
Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

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 ± 0,000	Inst. thread tap tol. 6H	Inst. thread depth min.	Removal drill size	Removal drill depth
22004.W0510	M 5x0,80	Coarse	M 8x1,25	Coarse	8	6,9	.W0510	8,3	M 8x1,25	9,5	5,5	4,0
22004.W0520	M 6x1,00	Coarse	M10x1,25	Fine	10	8,8	.W0520	10,3	M10x1,25	11,5	7,5	4,8
22004.W0530	M 8x1,25	Coarse	M12x1,25	Fine	12	10,8	.W0530	12,3	M12x1,25	13,5	9,5	4,8
22004.W0531	M 8x1,00	Fine	M12x1,25	Fine	12	10,8	.W0530	12,3	M12x1,25	13,5	9,5	4,8
22004.W0550	M10x1,50	Coarse	M14x1,50	Fine	14	12,8	.W0550	14,3	M14x1,50	15,5	11,5	4,8
22004.W0551	M10x1,25	Fine	M14x1,50	Fine	14	12,8	.W0550	14,3	M14x1,50	15,5	11,5	4,8
22004.W0560	M12x1,75	Coarse	M16x1,50	Fine	16	14,8	.W0560	16,3	M16x1,50	17,5	13,5	4,8
22004.W0561	M12x1,25	Fine	M16x1,50	Fine	16	14,8	.W0560	16,3	M16x1,50	17,5	13,5	4,8



22020



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.

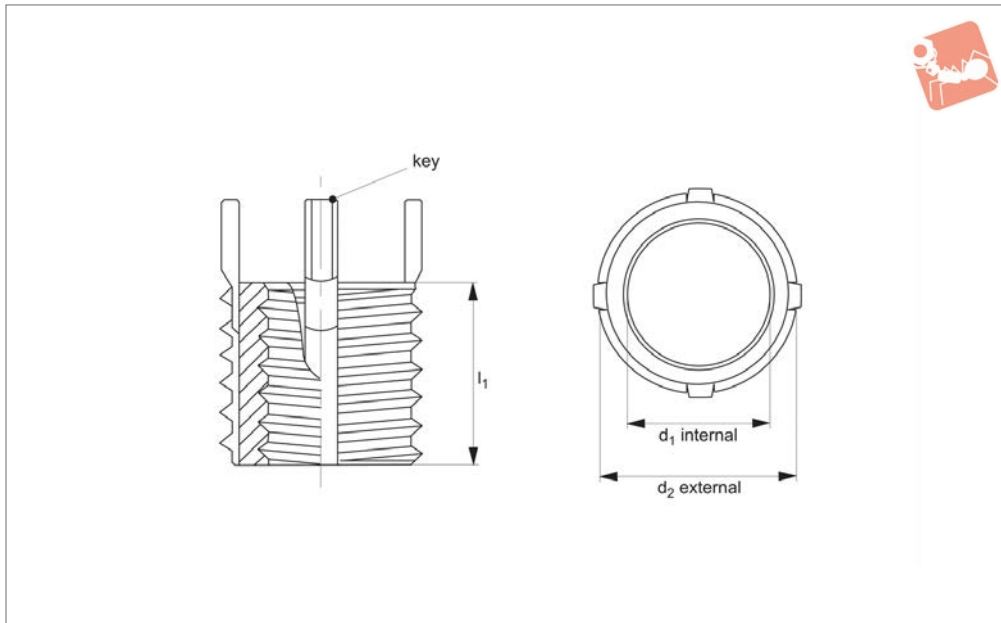
Order No.	Int. d ₁ tol. 2B	Int. thread type d ₁	Ext. d ₂ tol. 2A	Ext. thread type d ₂	l ₁	Inst. tap drill size	Inst. tool ref. 22054	Inst. c'sink dia. +0.010 - 0.000	Inst. thread tap tol. 2B	Inst. thread depth min.	Removal drill size	Removal drill depth
22020.W5210	10-24	UNC	5/16"-18	UNC	0,31	17/64"	.W0210	0,32	5/16"-18	0,37	7/32"	1/8"
22020.W5211	10-32	UNF	5/16"-18	UNC	0,31	17/64"	.W0210	0,32	5/16"-18	0,37	7/32"	1/8"
22020.W5220	1/4"-20	UNC	3/8"-16	UNC	0,37	21/64"	.W0220	0,38	3/8"-16	0,43	9/32"	3/16"
22020.W5221	1/4"-28	UNF	3/8"-16	UNC	0,37	21/64"	.W0220	0,38	3/8"-16	0,43	9/32"	3/16"
22020.W5230	5/16"-18	UNC	7/16"-14	UNC	0,43	25/64"	.W0230	0,44	7/16"-14	0,50	11/32"	3/16"
22020.W5231	5/16"-24	UNF	7/16"-14	UNC	0,43	25/64"	.W0230	0,44	7/16"-14	0,50	11/32"	3/16"
22020.W5240	3/8"-16	UNC	1/2"-13	UNC	0,50	29/64"	.W0240	0,51	1/2"-13	0,56	13/32"	3/16"
22020.W5241	3/8"-16	UNF	1/2"-13	UNC	0,50	29/64"	.W0240	0,51	1/2"-13	0,56	13/32"	3/16"
22020.W5250	7/16"-14	UNC	9/16"-12	UNC	0,56	33/64"	.W0250	0,57	9/16"-12	0,62	15/32"	3/16"
22020.W5251	7/16"-20	UNF	9/16"-12	UNC	0,56	33/64"	.W0250	0,57	9/16"-12	0,62	15/32"	3/16"
22020.W5260	1/2"-13	UNC	5/8"-11	UNC	0,62	37/64"	.W0260	0,63	5/8"-11	0,68	17/32"	3/16"
22020.W5261	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 - Inch thinwall - carbon steel



Threaded Inserts



22030

THREADED INSERTS

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.

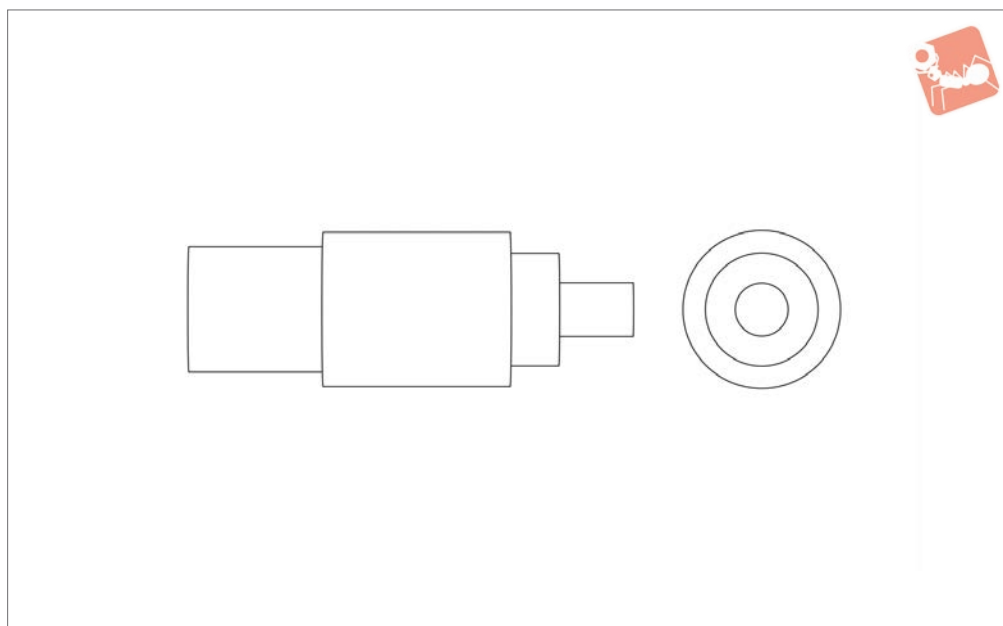
Removal drill size and drill depth as specified in table.

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
22030.W0210	10-24	UNC	5/16"-18	UNC	0,31	17/64"	.W0210	0,32	5/16"-18	0,37	7/32"	1/8"
22030.W0211	10-32	UNF	5/16"-18	UNC	0,31	17/64"	.W0210	0,32	5/16"-18	0,37	7/32"	1/8"
22030.W0220	1/4"-20	UNC	3/8"-16	UNC	0,37	21/64"	.W0220	0,38	3/8"-16	0,43	9/32"	3/16"
22030.W0221	1/4"-28	UNF	3/8"-16	UNC	0,37	21/64"	.W0220	0,38	3/8"-16	0,43	9/32"	3/16"
22030.W0230	5/16"-18	UNC	7/16"-14	UNC	0,43	25/64"	.W0230	0,44	7/16"-14	0,50	11/32"	3/16"
22030.W0231	5/16"-24	UNF	7/16"-14	UNC	0,43	25/64"	.W0230	0,44	7/16"-14	0,50	11/32"	3/16"
22030.W0240	3/8"-16	UNC	1/2"-13	UNC	0,50	29/64"	.W0240	0,51	1/2"-13	0,56	13/32"	3/16"
22030.W0241	3/8"-24	UNF	1/2"-13	UNC	0,50	29/64"	.W0240	0,51	1/2"-13	0,56	13/32"	3/16"
22030.W0250	7/16"-14	UNC	9/16"-12	UNC	0,56	33/64"	.W0250	0,57	9/16"-12	0,62	15/32"	3/16"
22030.W0251	7/16"-20	UNF	9/16"-12	UNC	0,56	33/64"	.W0250	0,57	9/16"-12	0,62	15/32"	3/16"
22030.W0260	1/2"-13	UNC	5/8"-11	UNC	0,62	37/64"	.W0260	0,63	5/8"-11	0,68	17/32"	3/16"
22030.W0261	1/2"-20	UNF	5/8"-11	UNC	0,62	37/64"	.W0260	0,63	5/8"-11	0,68	17/32"	3/16"



22054



Material

Steel, blackened.

Tips

For use with inch thinwall threaded

inserts 22020 and 22030. 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
22054.W0210	10-24/10"-32	5/16"-18
22054.W0220	1/4"-20 / 1/4"-28	3/8"-16
22054.W0230	5/16"-18/ 5/16"-24	7/16"-14
22054.W0240	3/8"-16/ 3/8"-24	1/2"-13
22054.W0250	7/16"-14/ 7/16"-20	9/16"-12
22054.W0260	1/2"-13/ 1/2"-20	5/8"-11

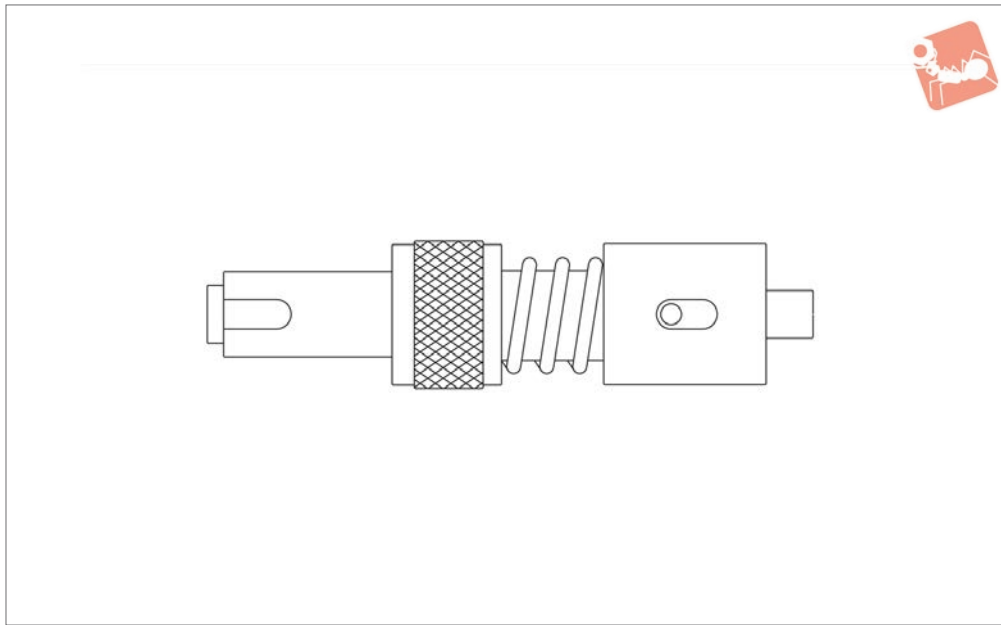


Installation Tool - Solid - Metric

for threaded inserts 22040 & 22042



Threaded Inserts



22052

THREADED INSERTS

Material

Steel, blackened.

Tips

For use with metric solid inserts 22040

and 22042.

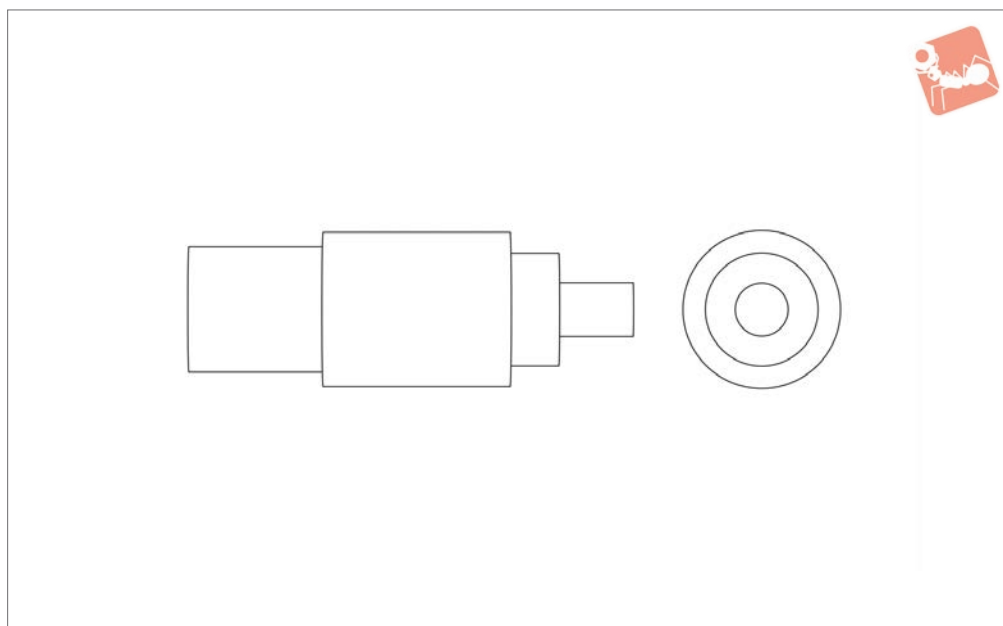
Select installation tool of corresponding insert external thread d_1 . If in doubt refer to data tables of insert where correct „Inst.

tool ref.“ is stated.

Order No.	For insert of external thread = d_1	Thread type d_1
22052.W0210	M 8x1,25	Coarse
22052.W0220	M10x1,25	Fine
22052.W0230	M12x1,25	Fine
22052.W0240	M14x1,50	Fine
22052.W0250	M16x1,50	Fine
22052.W0260	M18x1,50	Fine
22052.W0270	M20x1,50	Fine
22052.W0280	M22x1,50	Fine
22052.W0290	M24x1,50	Fine
22052.W0300	M30x2,00	Non-Std
22052.W0310	M32x2,00	Non-Std
22052.W0320	M33x2,00	Non-Std



22060



Material

Steel, blackened.

Tips

For use with metric thinwall threaded

inserts 22000 and 22004.

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.

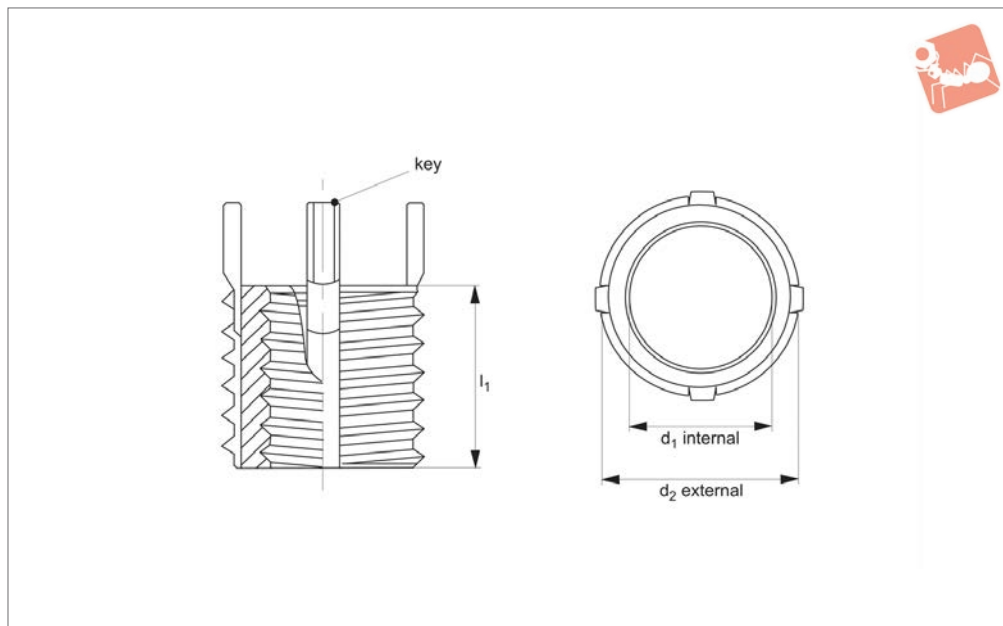
Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
22060.W0510	M 5x0,75	M 8x1,25
22060.W0520	M 6x1,00	M10x1,25
22060.W0530	M 8x1,25/ M 8x1,00	M12x1,25
22060.W0550	M10x1,50/ M10x1,25	M14x1,50
22060.W0560	M12x1,75/ M12x1,25	M16x1,50



Threaded Insert - Metric heavy duty - stainless steel



Threaded Inserts



22002

THREADED INSERTS

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.

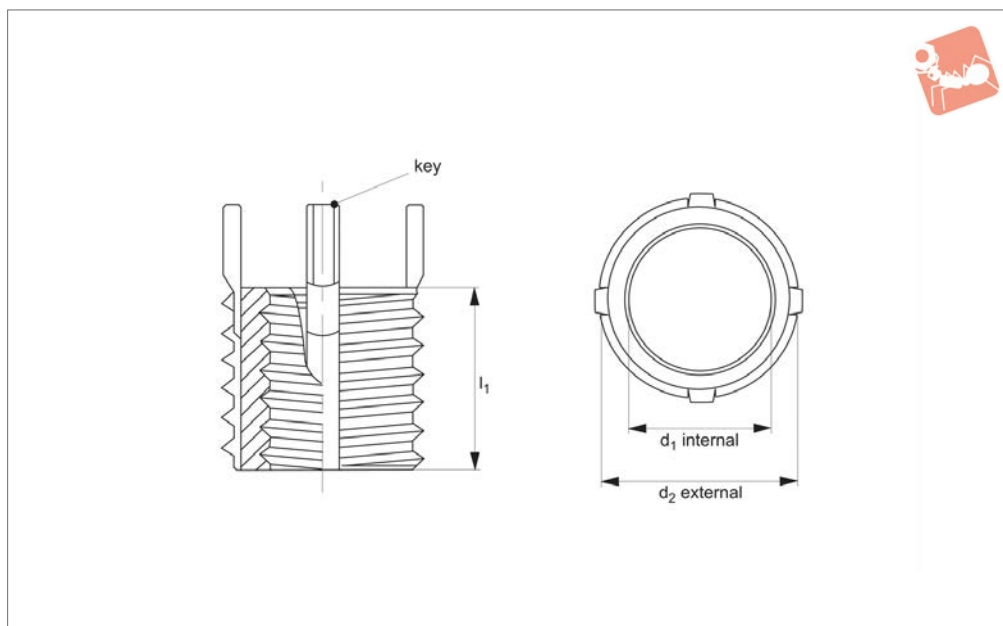
Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

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
22002.W5630	M 4x0,70	Coarse	M 8x1,25	Coarse	8	.W0630	6,9	8,3	M 8x1,25	9,5	5,5	4,0
22002.W5640	M 5x0,80	Coarse	M10x1,25	Fine	10	.W0640	8,8	10,3	M10x1,25	12,5	7,5	4,8
22002.W5650	M 6x1,00	Coarse	M12x1,25	Fine	12	.W0650	10,8	12,3	M12x1,25	14,5	9,5	4,8
22002.W5660	M 8x1,25	Coarse	M14x1,50	Fine	14	.W0660	12,8	14,3	M14x1,50	16,5	11,5	4,8
22002.W5661	M 8x1,00	Fine	M14x1,50	Fine	14	.W0660	12,8	14,3	M14x1,50	16,5	11,5	4,8
22002.W5670	M10x1,50	Coarse	M16x1,50	Fine	16	.W0670	14,8	16,3	M16x1,50	18,5	13,5	4,8
22002.W5671	M10x1,25	Fine	M16x1,50	Fine	16	.W0670	14,8	16,3	M16x1,50	18,5	13,5	4,8
22002.W5690	M12x1,75	Coarse	M18x1,50	Fine	18	.W0690	16,8	18,3	M18x1,50	20,5	15,5	4,8
22002.W5691	M12x1,25	Fine	M18x1,50	Fine	18	.W0690	16,8	18,3	M18x1,50	20,5	15,5	4,8
22002.W5700	M14x2,00	Coarse	M20x1,50	Fine	20	.W0700	18,8	20,3	M20x1,50	22,5	17,5	4,8
22002.W5701	M14x1,50	Fine	M20x1,50	Fine	20	.W0700	18,8	20,3	M20x1,50	22,5	17,5	4,8
22002.W5710	M16x2,00	Coarse	M22x1,50	Fine	22	.W0710	20,5	22,3	M22x1,50	24,5	17,8	6,4
22002.W5711	M16x1,50	Fine	M22x1,50	Fine	22	.W0710	20,5	22,3	M22x1,50	24,5	17,8	6,4
22002.W5720	M18x1,50	Fine	M24x1,50	Fine	24	.W0720	22,5	24,3	M24x1,50	26,5	19,8	6,4
22002.W5730	M20x2,50	Coarse	M30x2,00	Non-Std	30	.W0730	28,0	30,3	M30x2,00	34,5	25,8	6,4
22002.W5731	M20x1,50	Fine	M30x2,00	Non-Std	30	.W0730	28,0	30,3	M30x2,00	34,5	25,8	6,4
22002.W5740	M22x1,50	Fine	M32x2,00	Non-Std	32	.W0740	30,0	32,3	M32x2,00	36,5	27,8	6,4
22002.W5750	M24x3,00	Coarse	M33x2,00	Non-Std	33	.W0750	31,0	33,3	M33x2,00	37,5	28,8	6,4
22002.W5751	M24x2,00	Fine	M33x2,00	Non-Std	33	.W0750	31,0	33,3	M33x2,00	37,5	28,8	6,4



22006



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-

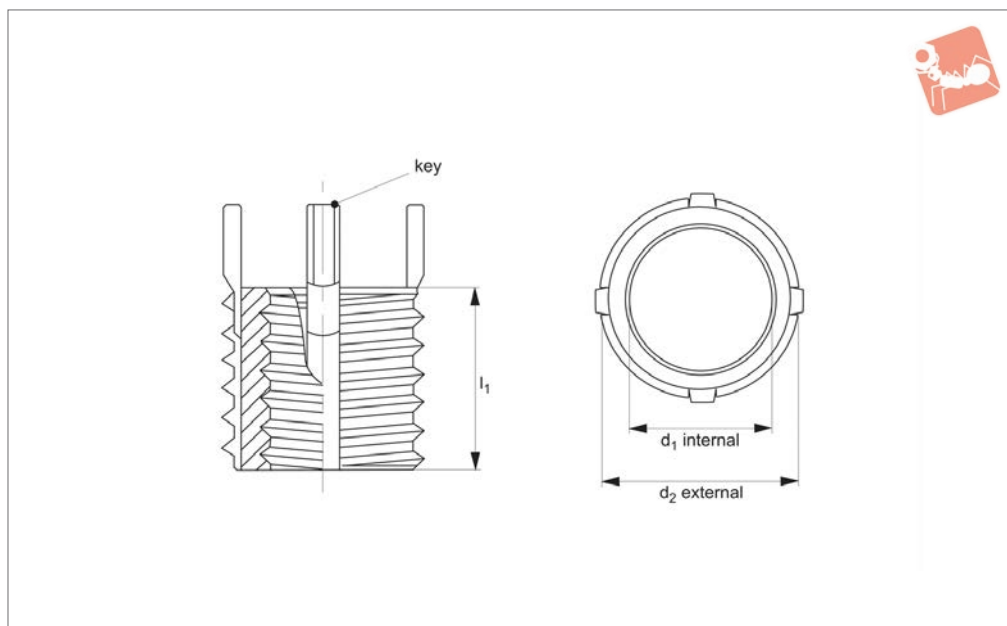
Order No.	Int. d ₁ tol. 6H	Int. thread type d ₁	Ext. d ₂ tol. 6g	Ext. thread type d ₂	l ₁	Inst. tool ref. 22062	Inst. tap drill size	Inst. c'sink dia. ±0.25 ± 0.000	Inst. thread tap tol. 6H	Inst. thread depth min.	Removal drill size	Removal drill depth
22006.W0630	M 4x0,70	Coarse	M 8x1,25	Coarse	8	.W0630	6,9	8,3	M 8x1,25	9,5	5,5	4,0
22006.W0640	M 5x0,80	Coarse	M10x1,25	Fine	10	.W0640	8,8	10,3	M10x1,25	12,5	7,5	4,8
22006.W0650	M 6x1,00	Coarse	M12x1,25	Fine	12	.W0650	10,8	12,3	M12x1,25	14,5	9,5	4,8
22006.W0660	M 8x1,25	Coarse	M14x1,50	Fine	14	.W0660	12,8	14,3	M14x1,50	16,5	11,5	4,8
22006.W0661	M 8x1,00	Fine	M14x1,50	Fine	14	.W0660	12,8	14,3	M14x1,50	16,5	11,5	4,8
22006.W0670	M10x1,50	Coarse	M16x1,50	Fine	16	.W0670	14,8	16,3	M16x1,50	18,5	13,5	4,8
22006.W0671	M10x1,25	Fine	M16x1,50	Fine	16	.W0670	14,8	16,3	M16x1,50	18,5	13,5	4,8
22006.W0690	M12x1,75	Coarse	M18x1,50	Fine	18	.W0690	16,8	18,3	M18x1,50	20,5	15,5	4,8
22006.W0691	M12x1,25	Fine	M18x1,50	Fine	18	.W0690	16,8	18,3	M18x1,50	20,5	15,5	4,8
22006.W0700	M14x2,00	Coarse	M20x1,50	Fine	20	.W0700	18,8	20,3	M20x1,50	22,5	17,5	4,8
22006.W0701	M14x1,50	Fine	M20x1,50	Fine	20	.W0700	18,8	20,3	M20x1,50	22,5	17,5	4,8
22006.W0710	M16x2,00	Coarse	M22x1,50	Fine	22	.W0710	20,5	22,3	M22x1,50	24,5	17,8	6,4
22006.W0711	M16x1,50	Fine	M22x1,50	Fine	22	.W0710	20,5	22,3	M22x1,50	24,5	17,8	6,4
22006.W0720	M18x1,50	Fine	M24x1,50	Fine	24	.W0720	22,5	24,3	M24x1,50	26,5	19,8	6,4
22006.W0730	M20x2,50	Coarse	M30x2,00	Non-Std	30	.W0730	28,0	30,3	M30x2,00	34,5	25,8	6,4
22006.W0731	M20x1,50	Fine	M30x2,00	Non-Std	30	.W0730	28,0	30,3	M30x2,00	34,5	25,8	6,4
22006.W0740	M22x1,50	Fine	M32x2,00	Non-Std	32	.W0740	30,0	32,3	M32x2,00	36,5	27,8	6,4
22006.W0750	M24x3,00	Coarse	M33x2,00	Non-Std	33	.W0750	31,0	33,3	M33x2,00	37,5	28,8	6,4
22006.W0751	M24x2,00	Fine	M33x2,00	Non-Std	33	.W0750	31,0	33,3	M33x2,00	37,5	28,8	6,4



Threaded Insert - Inch heavy duty - stainless steel



Threaded Inserts



22022

THREADED INSERTS

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.

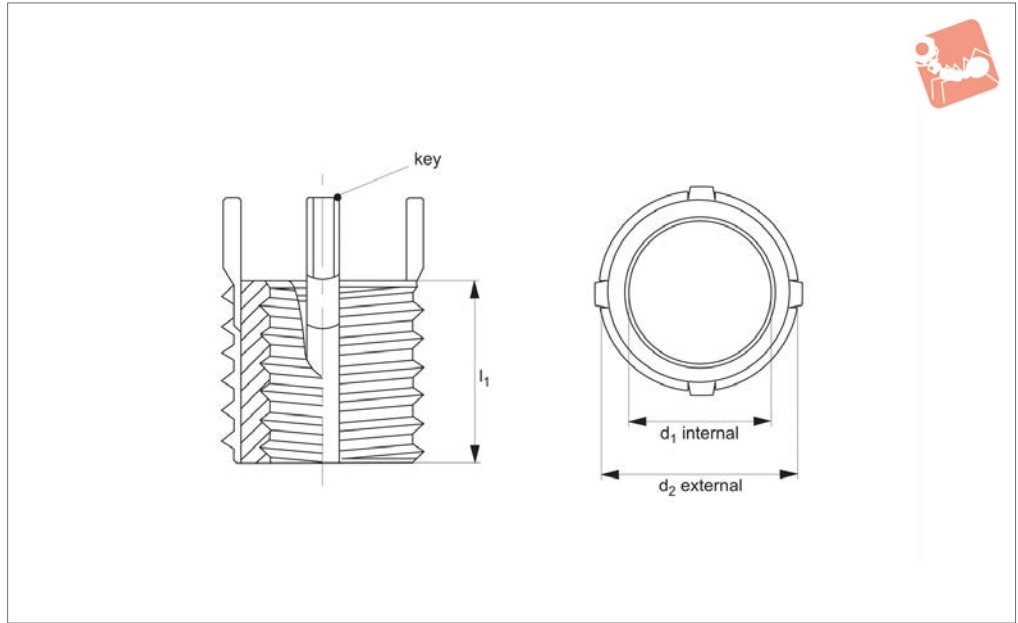
Removal drill size and drill depth as specified in table.

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
22022.W5000	8-32	UNC	5/16"-18	UNC	0,31	.W0000	17/64"	0,32	5/16"-18	0,37	7/32"	1/8"
22022.W5010	10-24	UNC	3/8"-16	UNC	0,31	.W0010	21/64"	0,38	3/8"-16	0,37	9/32"	1/8"
22022.W5011	10-32	UNF	3/8"-16	UNC	0,31	.W0010	21/64"	0,38	3/8"-16	0,37	9/32"	1/8"
22022.W5020	1/4"-20	UNC	7/16"-14	UNC	0,37	.W0020	25/64"	0,44	7/16"-14	0,43	11/32"	3/16"
22022.W5021	1/4"-28	UNF	7/16"-14	UNC	0,37	.W0020	25/64"	0,44	7/16"-14	0,43	11/32"	3/16"
22022.W5030	5/16"-18	UNC	1/2"-13	UNC	0,43	.W0030	29/64"	0,51	1/2"-13	0,50	13/32"	3/16"
22022.W5031	5/16"-24	UNF	1/2"-13	UNC	0,43	.W0030	29/64"	0,51	1/2"-13	0,50	13/32"	3/16"
22022.W5040	3/8"-16	UNC	9/16"-12	UNC	0,50	.W0040	33/64"	0,57	9/16"-12	0,56	15/32"	3/16"
22022.W5041	3/8"-24	UNF	9/16"-12	UNC	0,50	.W0040	33/64"	0,57	9/16"-12	0,56	15/32"	3/16"
22022.W5050	7/16"-14	UNC	5/8"-11	UNC	0,62	.W0050	37/64"	0,63	5/8"-11	0,68	17/32"	3/16"
22022.W5051	7/16"-20	UNF	5/8"-11	UNC	0,62	.W0050	37/64"	0,63	5/8"-11	0,68	17/32"	3/16"
22022.W5060	1/2"-13	UNC	3/4"-16	UNF	0,62	.W0060	45/64"	0,76	3/4"-16	0,68	21/32"	3/16"
22022.W5061	1/2"-20	UNF	3/4"-16	UNF	0,62	.W0060	45/64"	0,76	3/4"-16	0,68	21/32"	3/16"
22022.W5070	9/16"-12	UNC	3/4"-16	UNF	0,81	.W0070	45-64"	0,76	3/4"-16	0,94	21/32"	3/16"
22022.W5071	9/16"-18	UNF	3/4"-16	UNF	0,81	.W0070	45-64"	0,76	3/4"-16	0,94	21/32"	3/16"
22022.W5080	5/8"-11	UNC	7/8"-14	UNF	0,87	.W0080	53/64"	0,88	7/8"-14	1,00	25/32"	5/16"
22022.W5081	5/8"-18	UNF	7/8"-14	UNF	0,87	.W0080	53/64"	0,88	7/8"-14	1,00	25/32"	5/16"
22022.W5090	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"
22022.W5091	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"
22022.W5100	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"
22022.W5101	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"
22022.W5110	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"
22022.W5111	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"



22032



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
22032.W0000	8-32	UNC	5/16"-18	UNC	0,31	.W0000	17/64"	0,32	5/16"-18	0,37	7/32"	1/8"
22032.W0010	10-24	UNC	3/8"-16	UNC	0,31	.W0010	21/64"	0,38	3/8"-16	0,37	9/32"	1/8"
22032.W0011	10-32	UNF	3/8"-16	UNC	0,31	.W0010	21/64"	0,38	3/8"-16	0,37	9/32"	1/8"
22032.W0020	1/4"-20	UNC	7/16"-14	UNC	0,37	.W0020	25/64"	0,44	7/16"-14	0,43	11/32"	3/16"
22032.W0021	1/4"-28	UNF	7/16"-14	UNC	0,37	.W0020	25/64"	0,44	7/16"-14	0,43	11/32"	3/16"
22032.W0030	5/16"-18	UNC	1/2"-13	UNC	0,43	.W0030	29/64"	0,51	1/2"-13	0,50	13/32"	3/16"
22032.W0031	5/16"-24	UNF	1/2"-13	UNC	0,43	.W0030	29/64"	0,51	1/2"-13	0,50	13/32"	3/16"
22032.W0040	3/8"-16	UNC	9/16"-12	UNC	0,50	.W0040	33/64"	0,57	9/16"-12	0,56	15/32"	3/16"
22032.W0041	3/8"-24	UNF	9/16"-12	UNC	0,50	.W0040	33/64"	0,57	9/16"-12	0,56	15/32"	3/16"
22032.W0050	7/16"-14	UNC	5/8"-11	UNC	0,62	.W0050	37/64"	0,63	5/8"-11	0,68	17/32"	3/16"
22032.W0051	7/16"-20	UNF	5/8"-11	UNC	0,62	.W0050	37/64"	0,63	5/8"-11	0,68	17/32"	3/16"
22032.W0060	1/2"-13	UNC	3/4"-16	UNF	0,62	.W0060	45/64"	0,76	3/4"-16	0,68	21/32"	3/16"
22032.W0061	1/2"-20	UNF	3/4"-16	UNF	0,62	.W0060	45/64"	0,76	3/4"-16	0,68	21/32"	3/16"
22032.W0070	9/16"-12	UNC	3/4"-16	UNF	0,81	.W0070	45-64"	0,76	3/4"-16	0,94	21/32"	3/16"
22032.W0071	9/16"-18	UNF	3/4"-16	UNF	0,81	.W0070	45-64"	0,76	3/4"-16	0,94	21/32"	3/16"
22032.W0080	5/8"-11	UNC	7/8"-14	UNF	0,87	.W0080	53/64"	0,88	7/8"-14	1,00	25/32"	5/16"
22032.W0081	5/8"-18	UNF	7/8"-14	UNF	0,87	.W0080	53/64"	0,88	7/8"-14	1,00	25/32"	5/16"
22032.W0090	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"
22032.W0091	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"
22032.W0100	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"
22032.W0101	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"
22032.W0110	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"
22032.W0111	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"
22032.W0120	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"
22032.W0130	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"
22032.W0131	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"



Threaded Insert - Inch heavy duty - carbon steel



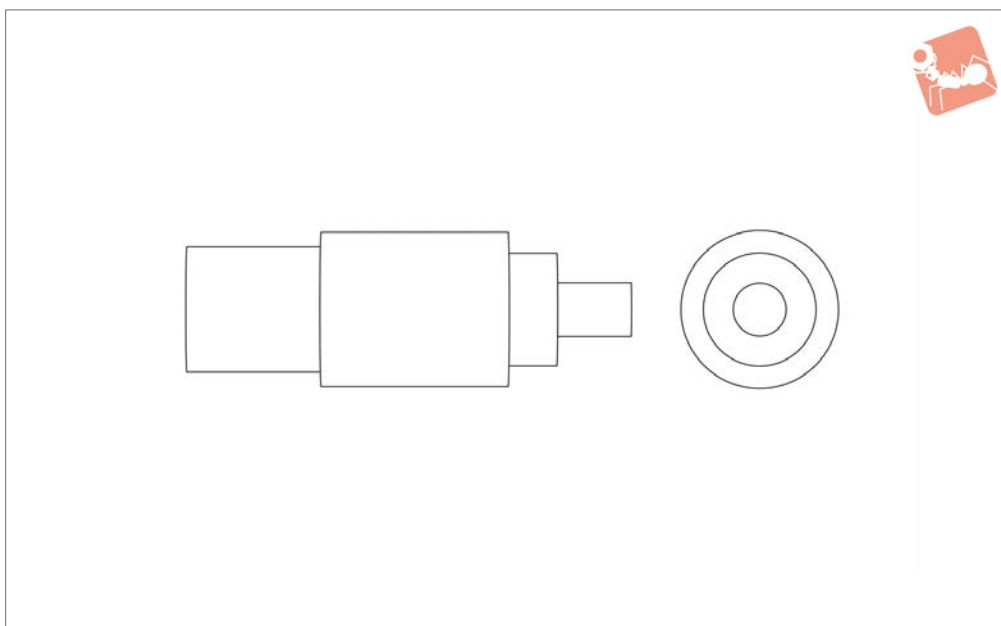
Threaded Inserts

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 tol. 2B	Inst. thread depth min.	Removal drill size	Removal drill depth
22032.W0140	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"
22032.W0141	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"
22032.W0160	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"
22032.W0161	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 INSERTS



22056



Material

Steel, blackened.

Tips

For use with inch heavy duty threaded

inserts 22022 and 22032.

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
22056.W0000	8-32	5/16"-18
22056.W0010	10-24/ 10-32	3/8"-16
22056.W0020	1/4"-20/ 1/4"-28	7/16"-14
22056.W0030	5/16"-18/ 5/16"-24	1/2"-13
22056.W0040	3/8"-16/ 3/8"-24	9/16"-12
22056.W0050	7/16"-14/ 7/16"-20	5/8"-11
22056.W0060	1/2"-13/ 1/2"-20	3/4"-16
22056.W0070	9/16"-12/ 9/16"-18	3/4"-16
22056.W0080	5/8"-11/ 5/8"-18	7/8"-14
22056.W0090	3/4"-10/ 3/4"-16	1-1/8"-12
22056.W0100	7/8"-9/ 7/8"-14	1-1/4"-12
22056.W0110	1"-8/ 1"-12/ 1"-14	1-3/8"-12
22056.W0130	1-1/8"-7/ 1-1/8"-12	1-1/2"-12
22056.W0140	1-1/4"-7/ 1-1/4"-12	1-5/8"-12
22056.W0160	1-1/2"-6/ 1-1/2"-12	1-7/8"-12

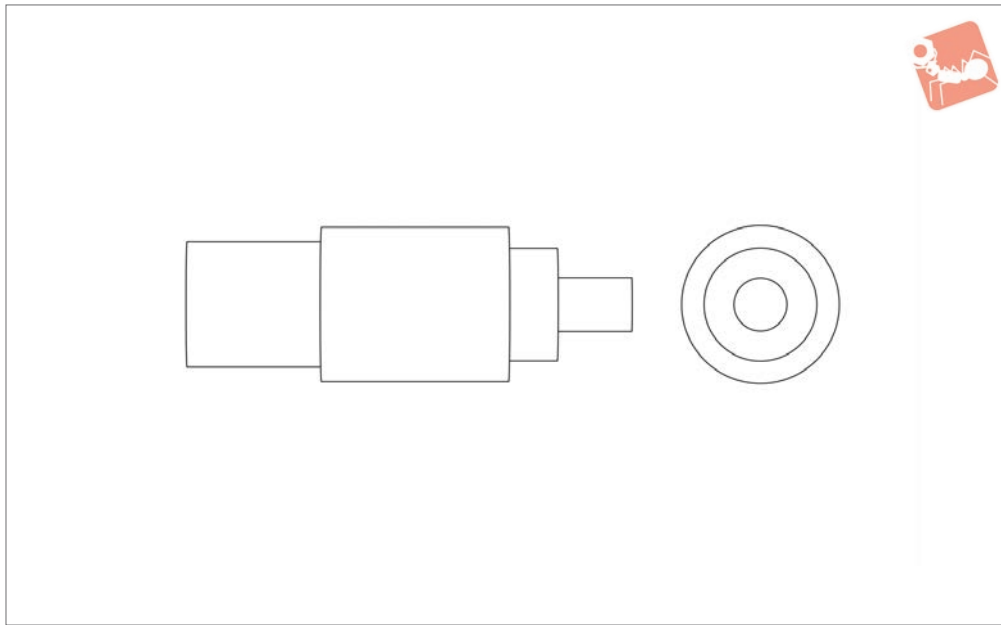


Installation Tool - Metric - Heavy Duty

for threaded inserts 22002 & 22006



Threaded Inserts



22062

THREADED INSERTS

Material

Steel, blackened.

inserts 22002 and 22006.

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 heavy duty threaded

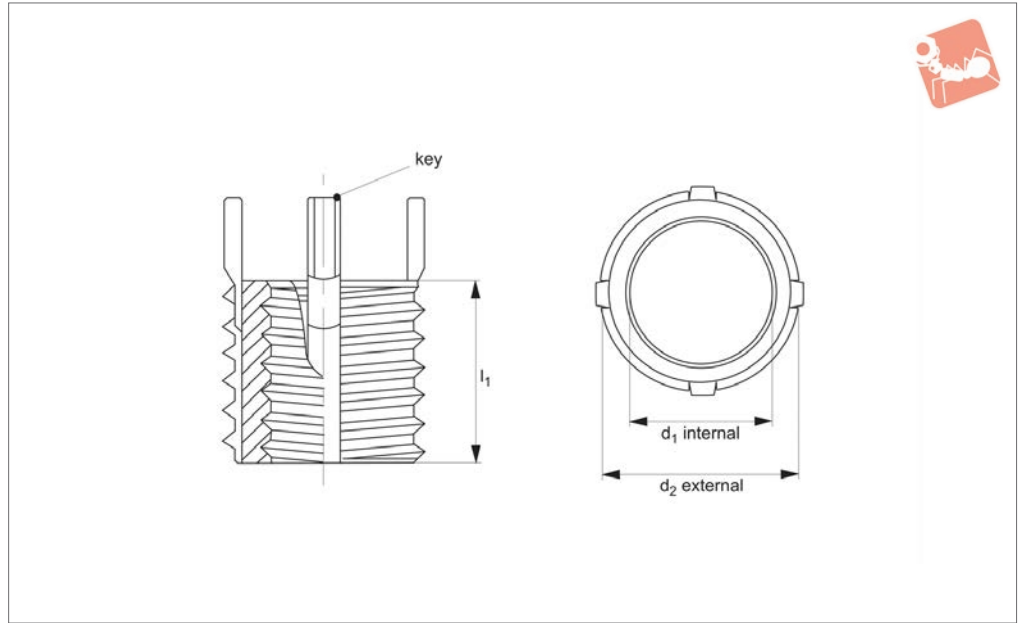
Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
22062.W0630	M 4x0,70	M 8x1,25
22062.W0640	M 5x0,75	M10x1,30
22062.W0650	M 6x1,00	M12x1,25
22062.W0660	M 8x1,25/ M 8x1,00	M14x1,50
22062.W0670	M10x1,50/ M10x1,25	M16x1,50
22062.W0690	M12x1,75/ M12x1,25	M18x1,50
22062.W0700	M14x2,00/ M14x1,50	M20x1,50
22062.W0710	M16x2,00/ M16x1,50	M22x1,50
22062.W0720	M18x1,50	M24x1,50
22062.W0730	M20x2,50/ M20x1,50	M30x2,00
22062.W0740	M22x1,50	M32x2,00
22062.W0750	M24x3,00/ M24x2,00	M33x2,00



THREADED INSERTS



22024



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
22024.W5310	6 - 32	UNC	5/16" - 18	UNC	0,31	0,32	17/64"	0,37	5/16"-18	.W0310	7/32"	1/8"
22024.W5320	8 - 32	UNC	3/8" - 16	UNC	0,31	0,38	21/64"	0,37	3/8"-16	.W0320	9/32"	1/8"
22024.W5330	10 - 24	UNC	7/16" - 14	UNC	0,31	0,44	25/64"	0,37	7/16"-14	.W0330	11/32"	3/16"
22024.W5331	10 - 32	UNF	7/16" - 14	UNC	0,31	0,44	25/64"	0,37	7/16"-14	.W0330	11/32"	3/16"
22024.W5340	1/4" - 20	UNC	1/2" - 13	UNC	0,37	0,51	29/64"	0,43	1/2"-13	.W0340	13/32"	3/16"
22024.W5341	1/4" - 28	UNF	1/2" - 13	UNC	0,37	0,51	29/64"	0,43	1/2"-13	.W0340	13/32"	3/16"
22024.W5350	5/16" -	UNC	9/16" - 12	UNC	0,43	0,57	33/64"	0,50	9/16"-12	.W0350	15/32"	3/16"
22024.W5351	5/16" -	UNF	9/16" - 12	UNC	0,43	0,57	33/64"	0,50	9/16"-12	.W0350	15/32"	3/16"
22024.W5360	3/8" - 16	UNC	5/8" - 11	UNC	0,50	0,63	37/64"	0,56	5/8"-11	.W0360	17/32"	3/16"
22024.W5361	3/8" - 24	UNF	5/8" - 11	UNC	0,50	0,63	37/64"	0,56	5/8"-11	.W0360	17/32"	3/16"
22024.W5370	7/16" -	UNC	3/4" - 16	UNF	0,62	0,76	45/64"	0,68	3/4"-16	.W0370	21/32"	3/16"
22024.W5371	7/16" -	UNF	3/4" - 16	UNF	0,62	0,76	45/64"	0,68	3/4"-16	.W0370	21/32"	3/16"
22024.W5380	1/2" - 13	UNC	7/8" - 14	UNF	0,68	0,88	53/64"	0,75	7/8"-14	.W0380	25/32"	5/16"
22024.W5381	1/2" - 20	UNF	7/8" - 14	UNF	0,68	0,88	53/64"	0,75	7/8"-14	.W0380	25/32"	5/16"
22024.W5390	9/16" -	UNC	7/8" - 14	UNF	0,81	0,88	53/64"	0,94	7/8"-14	.W0390	25/32"	5/16"
22024.W5391	9/16" -	UNF	7/8" - 14	UNF	0,81	0,88	53/64"	0,94	7/8"-14	.W0390	25/32"	5/16"
22024.W5400	5/8" - 11	UNC	1" - 12	UNF	0,87	1,02	15/16"	1,00	1"-12	.W0400	27/32"	5/16"
22024.W5401	5/8" - 18	UNF	1" - 12	UNF	0,87	1,02	15/16"	1,00	1"-12	.W0400	27/32"	5/16"
22024.W5410	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"
22024.W5411	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"
22024.W5420	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"
22024.W5421	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"
22024.W5430	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"
22024.W5431	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"

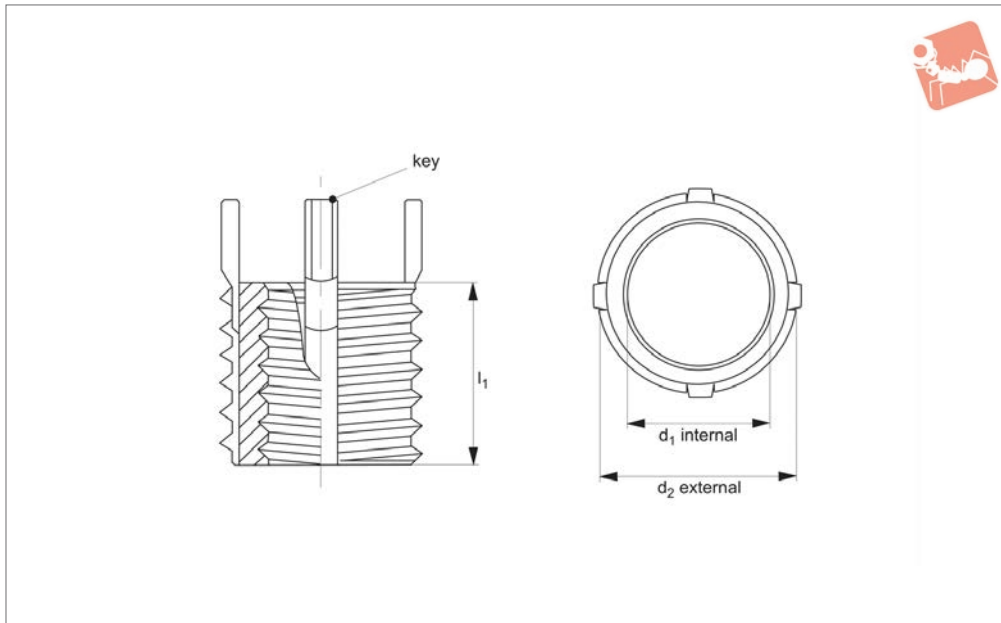


Threaded Insert - Inch

extra heavy duty - carbon steel



Threaded Inserts



22034

THREADED INSERTS

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.

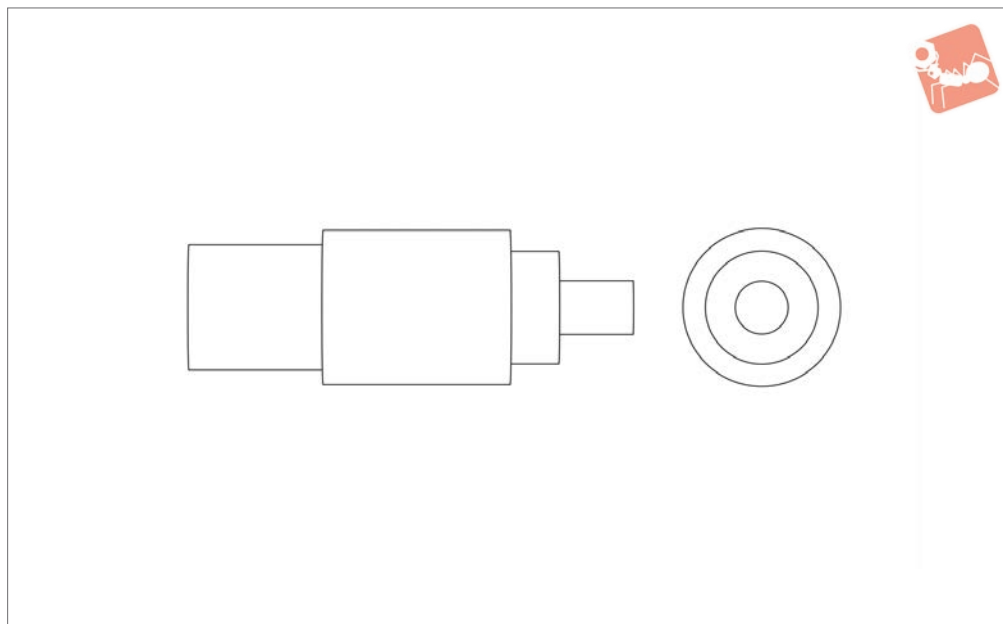
Removal drill size and drill depth as specified in table.

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
22034.W0310	6 - 32	UNC	5/16" - 18	UNC	0,31	0,32		0,37	5/16"-18	.W0310	7/32"	1/8"
22034.W0320	8 - 32	UNC	3/8" - 16	UNC	0,31	0,38		0,37	3/8"-16	.W0320	9/32"	1/8"
22034.W0330	10 - 24	UNC	7/16" - 14	UNC	0,31	0,44		0,37	7/16"-14	.W0330	11/32"	3/16"
22034.W0331	10 - 32	UNF	7/16" - 14	UNC	0,31	0,44		0,37	7/16"-14	.W0330	11/32"	3/16"
22034.W0340	1/4" - 20	UNC	1/2" - 13	UNC	0,37	0,51	29/64"	0,43	1/2"-13	.W0340	13/32"	3/16"
22034.W0341	1/4" - 28	UNF	1/2" - 13	UNC	0,37	0,51	29/64"	0,43	1/2"-13	.W0340	13/32"	3/16"
22034.W0350	5/16" - 18	UNC	9/16" - 12	UNC	0,43	0,57	33/64"	0,50	9/16"-12	.W0350	15/32"	3/16"
22034.W0351	5/16" - 24	UNF	9/16" - 12	UNC	0,43	0,57	33/64"	0,50	9/16"-12	.W0350	15/32"	3/16"
22034.W0360	3/8" - 16	UNC	5/8" - 11	UNC	0,50	0,63	37/64"	0,56	5/8"-11	.W0360	17/32"	3/16"
22034.W0361	3/8" - 24	UNF	5/8" - 11	UNC	0,50	0,63	37/64"	0,56	5/8"-11	.W0360	17/32"	3/16"
22034.W0370	7/6" - 14	UNC	3/4" - 16	UNF	0,62	0,76	45/64"	0,68	3/4"-16	.W0370	21/32"	3/16"
22034.W0371	7/6" - 20	UNF	3/4" - 16	UNF	0,62	0,76	45/64"	0,68	3/4"-16	.W0370	21/32"	3/16"
22034.W0380	1/2" - 13	UNC	7/8" - 14	UNF	0,68	0,88	53/64"	0,75	7/8"-14	.W0380	25/32"	5/16"
22034.W0381	1/2" - 13	UNF	7/8" - 14	UNF	0,68	0,88	53/64"	0,75	7/8"-14	.W0380	25/32"	5/16"
22034.W0390	9/16" - 12	UNC	7/8" - 14	UNF	0,81	0,88	53/64"	0,94	7/8"-14	.W0390	25/32"	5/16"
22034.W0391	9/16" - 18	UNF	7/8" - 14	UNF	0,81	0,88	53/64"	0,94	7/8"-14	.W0390	25/32"	5/16"
22034.W0400	5/8" - 11	UNC	1" - 12	UNF	0,87	1,02	15/16"	1,00	1"-12	.W0400	27/32"	5/16"
22034.W0401	5/8" - 18	UNF	1" - 12	UNF	0,87	1,02	15/16"	1,00	1"-12	.W0400	27/32"	5/16"
22034.W0410	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"
22034.W0411	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"
22034.W0420	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"
22034.W0421	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"
22034.W0430	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"
22034.W0431	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"



22058



Material

Steel, blackened.

threaded inserts 22024 and 22034.

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
22058.W0310	6-32	5/16"-18
22058.W0320	8-32	3/8"-16
22058.W0330	10-24/ 10-32	7/16"-14
22058.W0340	1/4"-20/ 1/4"-28	1/2"-13
22058.W0350	5/16"-18/ 5/16"-24	9/16"-12
22058.W0360	3/8"-16/ 3/8"-24	5/8"-11
22058.W0370	7/16"-14/ 7/16"-20	3/4"-16
22058.W0380	1/2"-13/ 1/2"-20	7/8"-14
22058.W0390	9/16"-12/ 9/16"-18	7/8"-14
22058.W0400	5/8"-11/ 5/8"-18	1"-12
22058.W0410	3/4"-10/ 3/4"-16	1-1/4"-12
22058.W0420	7/8"-9/ 7/8"-14	1-3/8"-12
22058.W0430	1"-8/ 1"-12	1-1/2"-12

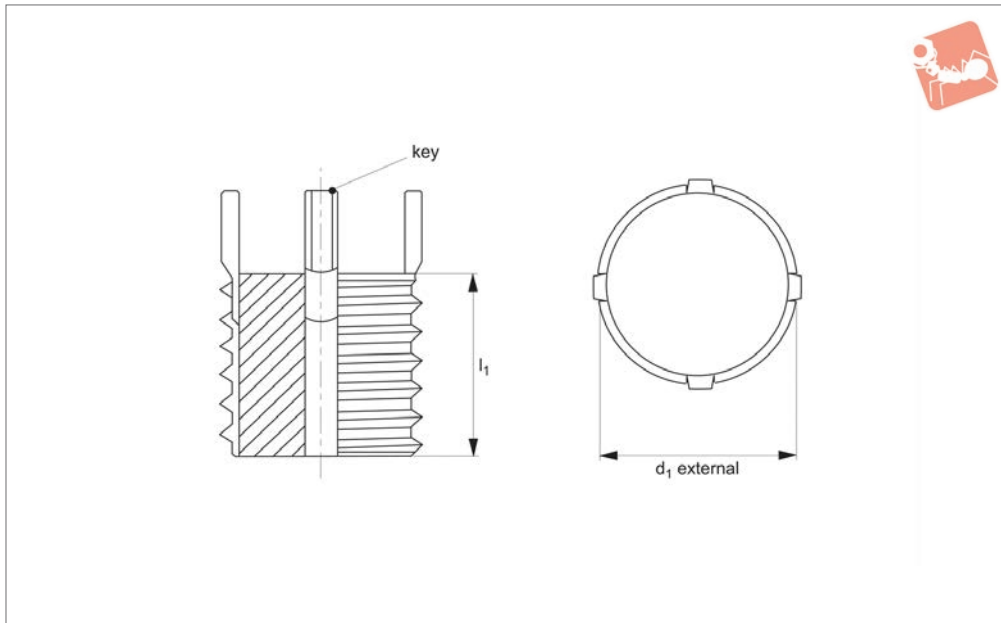


Threaded Insert - Solid - Metric

carbon steel



Threaded Inserts



22040

THREADED INSERTS

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 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.

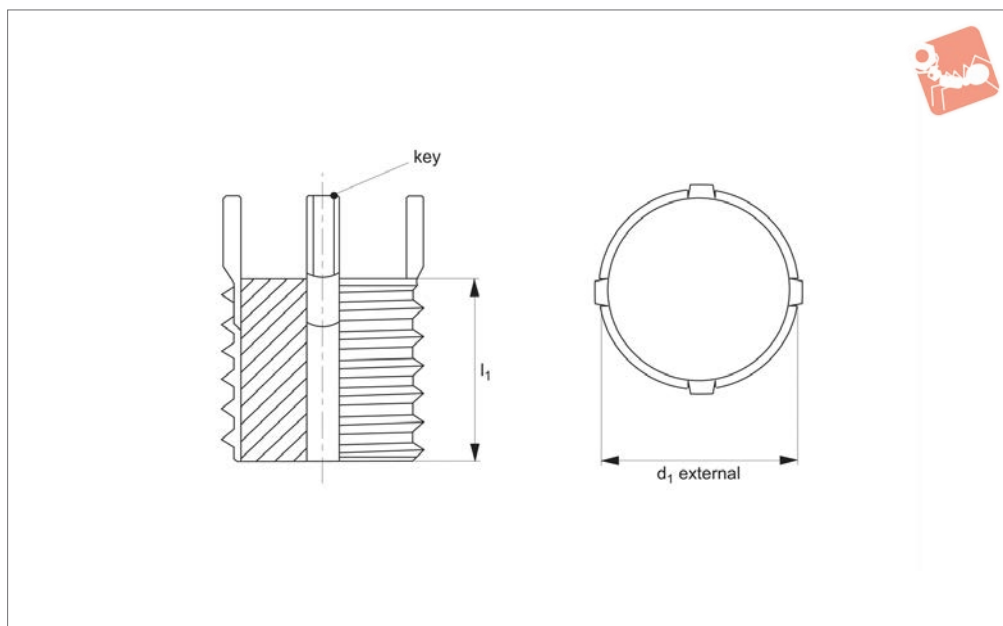
Removal drill size and drill depth as specified in table.

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 depth min.	Removal drill size	Removal drill depth
22040.W0210	M 8x1,25	Coarse	8	.W0210	6,90	8,3	M 8x1,25	9,5	5,5	4,0
22040.W0220	M10x1,25	Fine	10	.W0220	8,80	10,3	M10x1,25	12,5	7,5	4,8
22040.W0230	M12x1,25	Fine	12	.W0230	10,80	12,3	M12x1,25	14,5	9,5	4,8
22040.W0240	M14x1,50	Fine	14	.W0240	12,80	14,3	M14x1,50	16,5	11,5	4,8
22040.W0250	M16x1,50	Fine	16	.W0250	14,75	16,3	M16x1,50	18,5	13,5	4,8
22040.W0260	M18x1,50	Fine	18	.W0260	16,75	18,3	M18x1,50	20,5	15,5	4,8
22040.W0270	M20x1,50	Fine	20	.W0270	18,75	20,3	M20x1,50	22,5	17,5	4,8
22040.W0280	M22x1,50	Fine	22	.W0280	20,50	22,3	M22x1,50	24,5	17,8	6,4
22040.W0290	M24x1,50	Fine	24	.W0290	22,50	24,3	M24x1,50	26,5	19,8	6,4
22040.W0300	M30x2,00	Fine	30	.W0300	28,00	30,3	M30x2,00	34,5	25,8	6,4
22040.W0310	M32x2,00	Non-Std	32	.W0310	30,00	32,3	M32x2,00	36,5	27,8	6,4
22040.W0320	M33x2,00	Non-Std	33	.W0320	31,00	33,3	M33x2,00	37,5	28,8	6,4



22042



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 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.

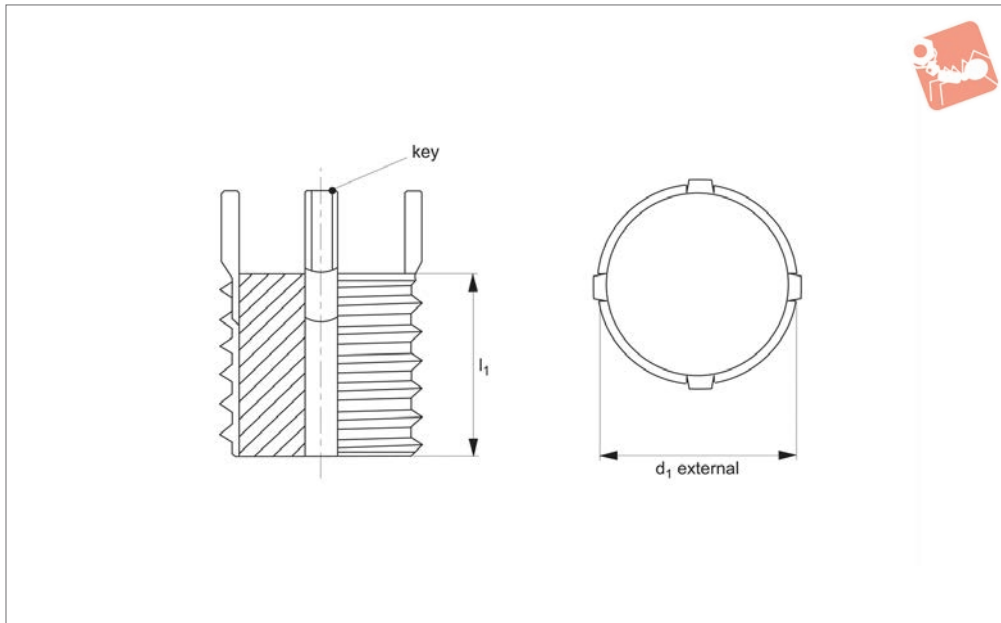
Order No.	d ₁	Thread type d ₁	l ₁	Inst. tool ref. 22052	Inst. tap drill size	Inst. c'sink dia.	Inst. thread tap	Inst. thread tap depth	Removal drill size	Removal drill depth
22042.W0210	M 8x1,2 5	Coarse	8	.W0210	6.9	8.3	M 8x1,25	9.5	5.50	4.0
22042.W0220	M10x 1,25	Fine	10	.W0220	8.8	10.3	M10x1,25	12.5	7.50	4.8
22042.W0230	M12x 1,25	Fine	12	.W0230	10.8	12.3	M12x1,25	14.5	9.50	4.8
22042.W0240	M14x 1,50	Fine	14	.W0240	12.8	14.3	M14x1,50	16.5	11.50	4.8
22042.W0250	M16x 1,50	Fine	16	.W0250	14.8	16.3	M16x1,50	18.5	13.50	4.8
22042.W0260	M18x 1,50	Fine	18	.W0260	16.8	18.3	M18x1,50	20.5	15.50	4.8
22042.W0270	M20x 1,50	Fine	20	.W0270	18.8	20.3	M20x1,50	22.5	17.50	4.8
22042.W0280	M22x 1,50	Fine	22	.W0280	20.5	22.3	M22x1,50	24.5	17.75	6.4
22042.W0290	M24x 1,50	Fine	24	.W0290	22.5	24.3	M24x1,50	26.5	19.75	6.4
22042.W0300	M30x 2,00	Non-Std	30	.W0300	28.0	30.3	M30x2,00	34.5	25.75	6.4
22042.W0310	M32x 2,00	Non-Std	32	.W0310	30.0	32.3	M32x2,00	36.5	27.75	6.4
22042.W0320	M33x 2,00	Non-Std	33	.W0320	31.0	33.3	M33x2,00	37.5	28.75	6.4



Threaded Insert - Solid - Inch carbon steel



Threaded Inserts



22044

THREADED INSERTS

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.

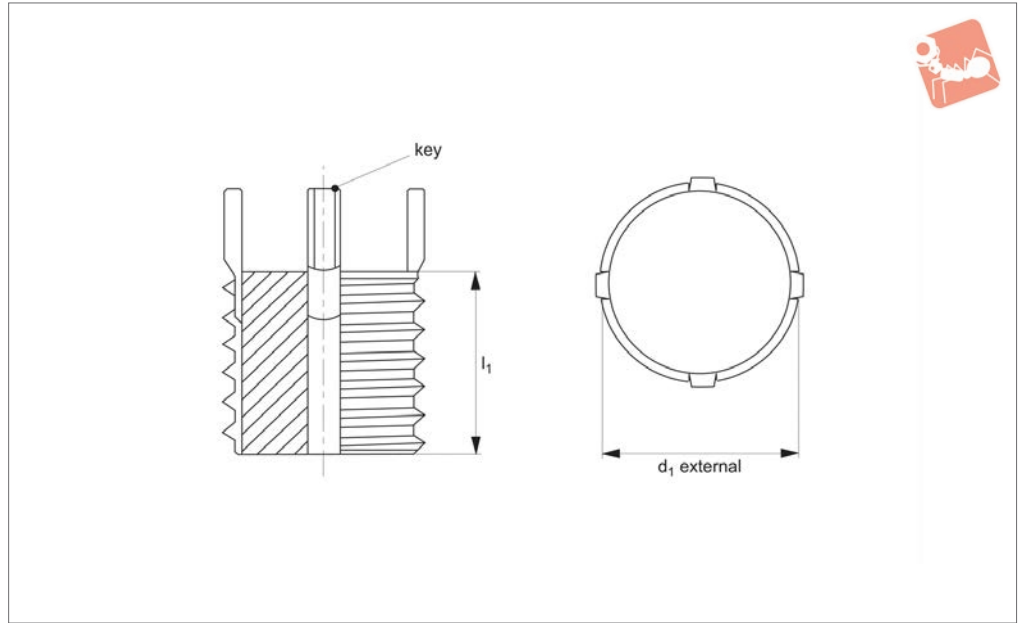
External inch thread allows you to machine your internal thread.

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
22044.W0010	5/16"-18	UNC	0,31	.W0010	0,27	0,32	5/16"-18	0,37	7/32"	1/8"
22044.W0020	3/8"-16	UNC	0,31	.W0020	0,33	0,38	3/8"-16	0,37	9/32"	1/8"
22044.W0030	7/16"-14	UNC	0,37	.W0030	0,40	0,44	7/16"-14	0,43	11/32"	3/16"
22044.W0040	1/2"-13	UNC	0,43	.W0040	0,45	0,51	1/2"-13	0,50	13/32"	3/16"
22044.W0050	9/16"-12	UNC	0,50	.W0050	0,52	0,57	9/16"-12	0,56	15/32"	3/16"
22044.W0060	5/8"-11	UNC	0,62	.W0060	0,58	0,63	5/8"-11	0,68	17/32"	3/16"
22044.W0070	3/4"-16	UNF	0,68	.W0070	0,70	0,76	3/4"-16	0,75	21/32"	3/16"
22044.W0080	7/8"-14	UNF	0,87	.W0080	0,83	0,88	7/8"-14	1,00	25/32"	5/16"
22044.W0090	1"-12	UNF	0,87	.W0090	0,94	1,02	1"-12	1,00	27/32"	5/16"
22044.W0100	1-1/8"-12	UNF	1,12	.W0100	1,06	1,14	1-1/8"-12	1,31	31/32"	5/16"
22044.W0110	1-1/4"-12	UNF	1,25	.W0110	1,19	1,27	1-1/4"-12	1,44	1-3/32"	5/16"
22044.W0120	1-3/8"-12	UNF	1,37	.W0120	1,31	1,39	1-3/8"-12	1,56	1-7/32"	5/16"



22046



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
22046.W0010	5/16"-18	UNC	0,31	.W0010	0,272	0,32	5/16"-18	0,37	7/32"	1/8"
22046.W0020	3/8"-16	UNC	0,31	.W0020	0,332	0,38	3/8"-16	0,37	9/32"	1/8"
22046.W0030	7/16"-14	UNC	0,37	.W0030	0,397	0,44	7/16"-14	0,43	11/32"	3/16"
22046.W0040	1/2"-13	UNC	0,43	.W0040	0,453	0,51	1/2"-13	0,50	13/32"	3/16"
22046.W0050	9/16"-12	UNC	0,50	.W0050	0,516	0,57	9/16"-12	0,56	15/32"	3/16"
22046.W0060	5/8"-11	UNC	0,62	.W0060	0,578	0,63	5/8"-11	0,68	17/32"	3/16"
22046.W0065	11/16"-11*	UNS	0,68	.W0065	0,641	0,70	11/16"-11*	0,75	19/32"	3/16"
22046.W0070	3/4"-16	UNF	0,68	.W0070	0,703	0,76	3/4"-16	0,75	21/32"	3/16"
22046.W0075	13/16"-16	UNF	0,81	.W0075	0,766	0,82	13/16"-16	0,94	23/32"	3/16"
22046.W0080	7/8"-14	UNF	0,87	.W0080	0,828	0,88	7/8"-14	1,00	25/32"	5/16"
22046.W0090	1"-12	UNF	0,87	.W0090	0,937	1,02	1"-12	1,00	27/32"	5/16"
22046.W0100	1-1/8"-12	UNF	1,12	.W0100	1,062	1,14	1-1/8"-12	1,31	31/32"	5/16"
22046.W0110	1-1/4"-12	UNF	1,25	.W0110	1,187	1,27	1-1/4"-12	1,44	1-3/32"	5/16"
22046.W0120	1-3/8"-12	UNF	1,37	.W0120	1,312	1,39	1-3/8"-12	1,56	1-7/32"	5/16"
22046.W0130	11/16"-11*	UNS	0,68	.W0065	0,641	0,70	11/16"-11*	0,75	19/32"	5/16"
22046.W0140	13/16"-16	UNF	0,81	.W0075	0,766	0,82	13/16"-16	0,94	23/32"	5/16"

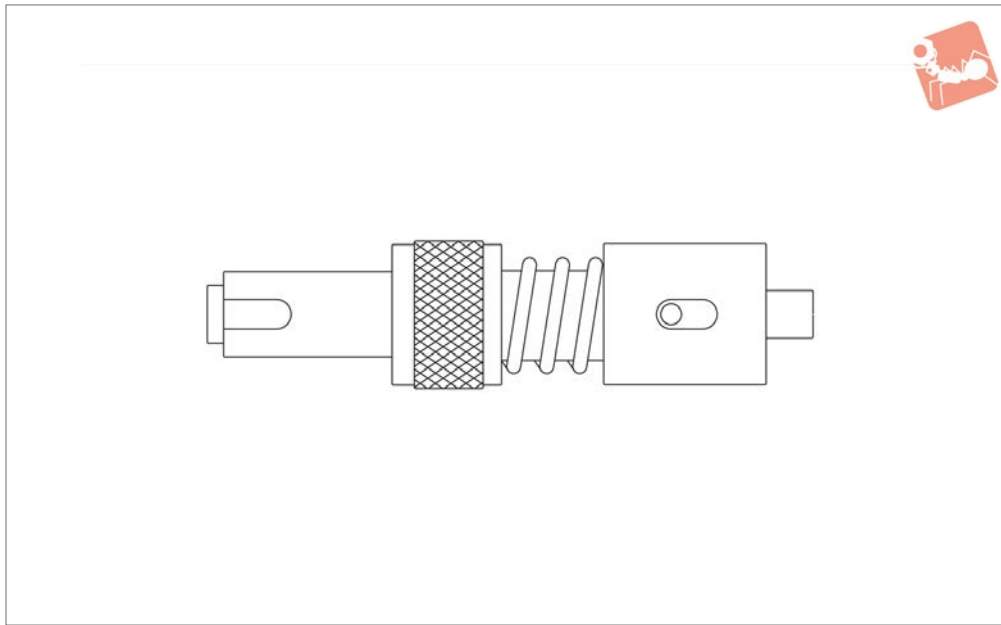


Installation Tool - Solid - Inch

for threaded inserts 22044 & 22046



Threaded Inserts



22050

THREADED INSERTS

Material

Steel, blackened.

Tips

For use with inch solid inserts 22044 and

22046.

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
22050.W0010	5/16"-18	UNC
22050.W0020	3/8"-16	UNC
22050.W0030	7/16"-14	UNC
22050.W0040	1/2"-13	UNC
22050.W0050	9/16"-12	UNC
22050.W0060	5/8"-11	UNC
22050.W0065	11/16"-11NS	UNF
22050.W0070	3/4"-16	UNF
22050.W0075	13/16"-16	UNF
22050.W0080	7/8"-14	UNF
22050.W0090	1"-12	UNF
22050.W0100	1-1/8"-12	UNF
22050.W0110	1-1/4"-12	UNF
22050.W0120	1-3/8"-12	UNF