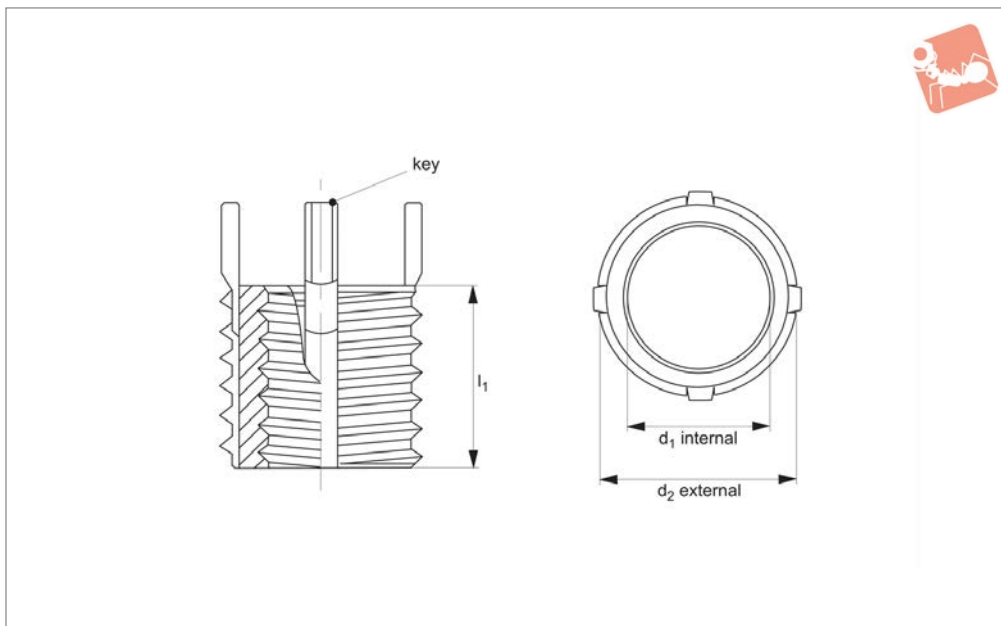




# Threaded Insert - Metric thinwall - stainless steel



## Threaded Inserts



**22000**

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.

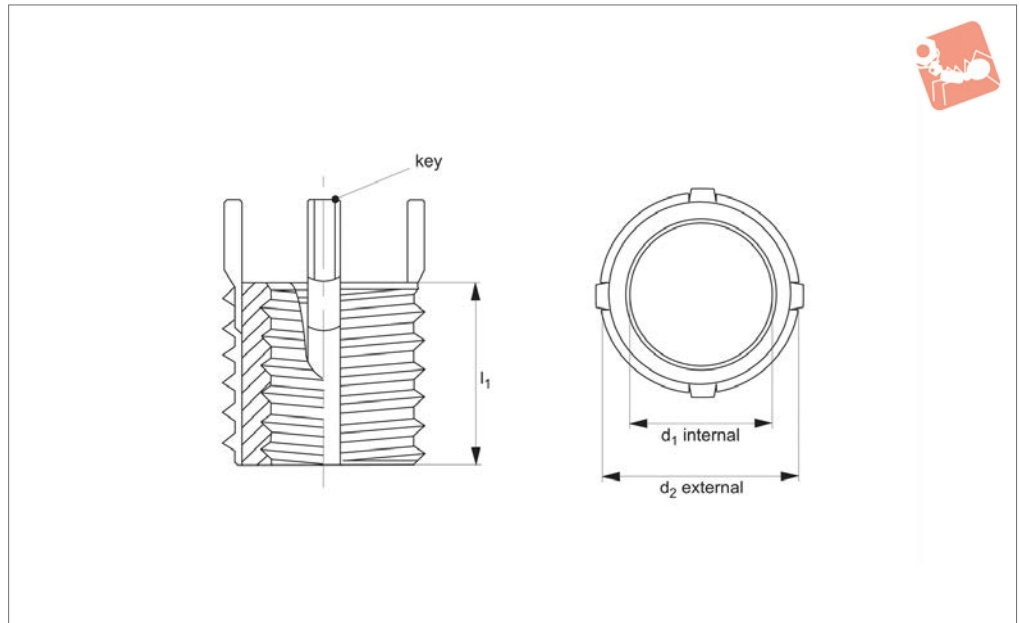
Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

Removal drill size and drill depth as speci-

Order No.	Int. d <sub>1</sub> tol. 6H	Int. thread type d <sub>1</sub>	Ext. d <sub>2</sub> tol. 6g	Ext. thread type d <sub>2</sub>	l <sub>1</sub>	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
<b>22000.W5510</b>	M 5x0,80	Coarse	M 8x1,25	Coarse	8	6,9	.W0510	8,3	M 8x1,25	9,5	5,5	4,0
<b>22000.W5520</b>	M 6x1,00	Coarse	M10x1,25	Fine	10	8,8	.W0520	10,3	M10x1,25	11,5	7,5	4,8
<b>22000.W5530</b>	M 8x1,25	Coarse	M12x1,25	Fine	12	10,8	.W0530	12,3	M12x1,25	13,5	9,5	4,8
<b>22000.W5531</b>	M 8x1,00	Fine	M12x1,25	Fine	12	10,8	.W0530	12,3	M12x1,25	13,5	9,5	4,8
<b>22000.W5550</b>	M10x1,50	Coarse	M14x1,50	Fine	14	12,8	.W0550	14,3	M14x1,50	15,5	11,5	4,8
<b>22000.W5551</b>	M10x1,25	Fine	M14x1,50	Fine	14	12,8	.W0550	14,3	M14x1,50	15,5	11,5	4,8
<b>22000.W5560</b>	M12x1,75	Coarse	M16x1,50	Fine	16	14,2	.W0560	14,3	M16x1,50	17,5	13,5	4,8
<b>22000.W5561</b>	M12x1,25	Fine	M16x1,50	Fine	16	14,8	.W0560	16,3	M16x1,50	17,5	13,5	4,8



## 22004



### 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-

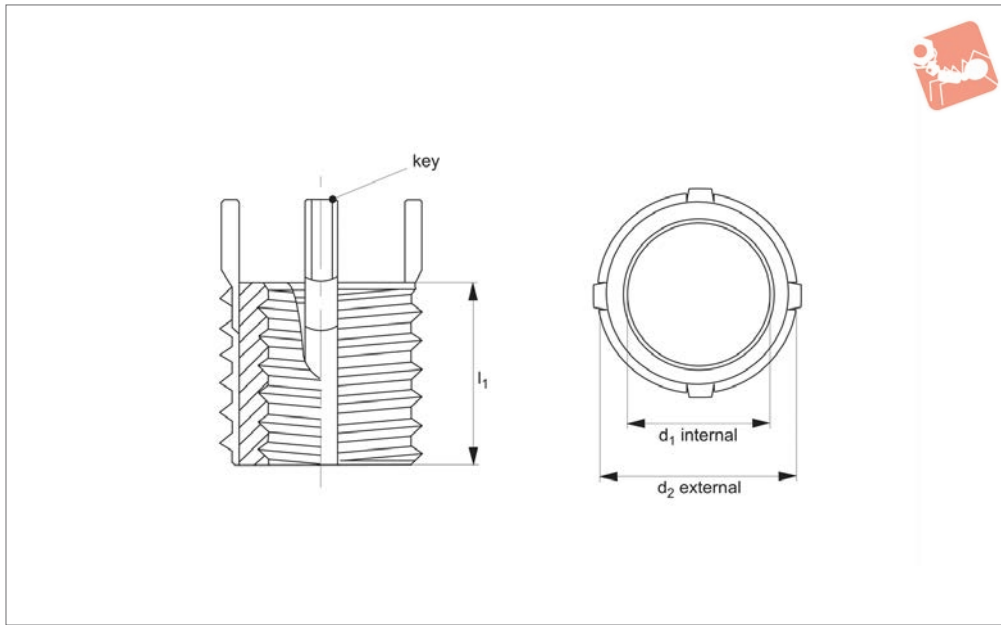
Order No.	Int. d <sub>1</sub> tol. 6H	Int. thread type d <sub>1</sub>	Ext. d <sub>2</sub> tol. 6g	Ext. thread type d <sub>2</sub>	l <sub>1</sub>	Inst. tap drill size	Inst. tool ref. 22060	Inst. c'sink dia. ±0.25 ± 0.000	Inst. thread tap tol. 6H	Inst. thread depth min.	Removal drill size	Removal drill depth
<a href="#">22004.W0510</a>	M 5x0,80	Coarse	M 8x1,25	Coarse	8	6,9	.W0510	8,3	M 8x1,25	9,5	5,5	4,0
<a href="#">22004.W0520</a>	M 6x1,00	Coarse	M10x1,25	Fine	10	8,8	.W0520	10,3	M10x1,25	11,5	7,5	4,8
<a href="#">22004.W0530</a>	M 8x1,25	Coarse	M12x1,25	Fine	12	10,8	.W0530	12,3	M12x1,25	13,5	9,5	4,8
<a href="#">22004.W0531</a>	M 8x1,00	Fine	M12x1,25	Fine	12	10,8	.W0530	12,3	M12x1,25	13,5	9,5	4,8
<a href="#">22004.W0550</a>	M10x1,50	Coarse	M14x1,50	Fine	14	12,8	.W0550	14,3	M14x1,50	15,5	11,5	4,8
<a href="#">22004.W0551</a>	M10x1,25	Fine	M14x1,50	Fine	14	12,8	.W0550	14,3	M14x1,50	15,5	11,5	4,8
<a href="#">22004.W0560</a>	M12x1,75	Coarse	M16x1,50	Fine	16	14,8	.W0560	16,3	M16x1,50	17,5	13,5	4,8
<a href="#">22004.W0561</a>	M12x1,25	Fine	M16x1,50	Fine	16	14,8	.W0560	16,3	M16x1,50	17,5	13,5	4,8



# Threaded Insert - Inch thinwall - stainless steel



## Threaded Inserts



### 22020

THREADED INSERTS

#### 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.

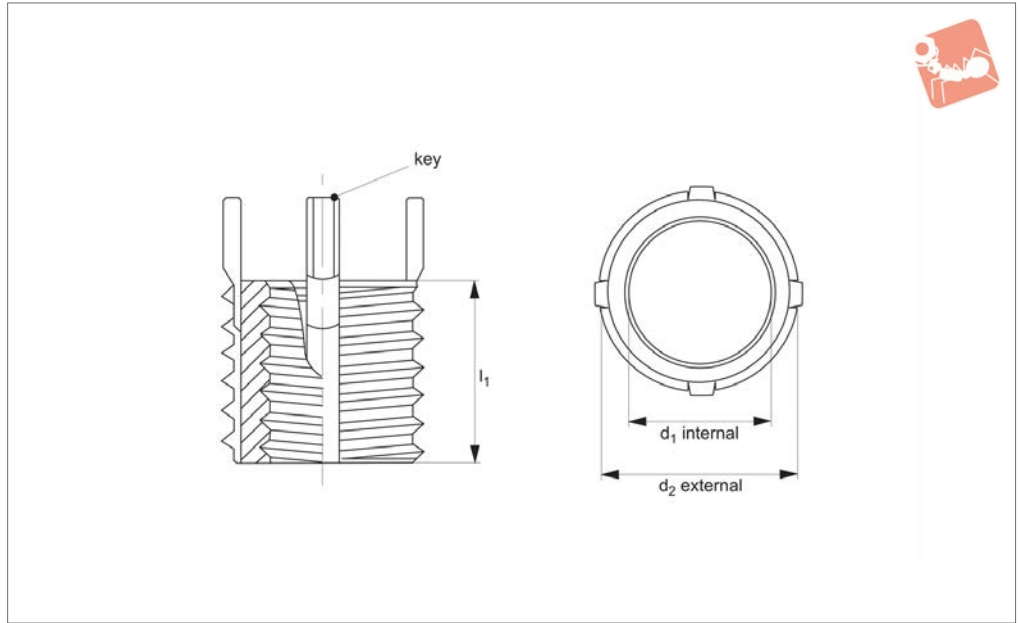
Removal drill size and drill depth as specified in table.

**All dimensions in inches.**

Order No.	Int. d <sub>1</sub> tol. 2B	Int. thread type d <sub>1</sub>	Ext. d <sub>2</sub> tol. 2A	Ext. thread type d <sub>2</sub>	l <sub>1</sub>	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"



## 22030



### 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

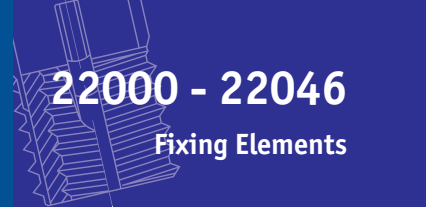
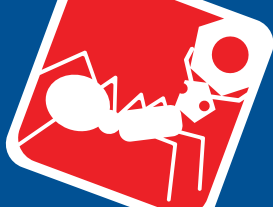
threads smaller than 5/16".

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 <sub>1</sub> tol. 2B	Int. thread type d <sub>1</sub>	Ext. d <sub>2</sub> tol. 2A	Ext. thread type d <sub>2</sub>	l <sub>1</sub>	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"



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



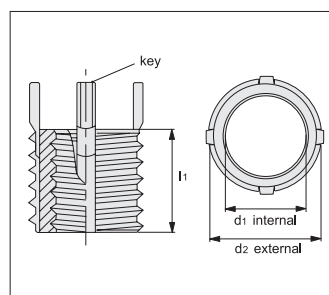
Stainless steel inserts



Solid inserts

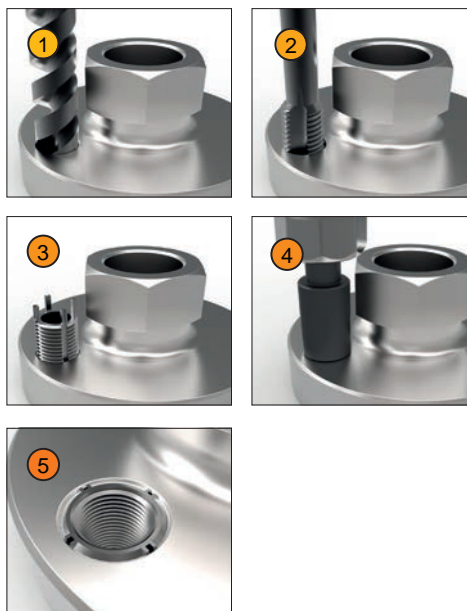
## Key Features

- 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



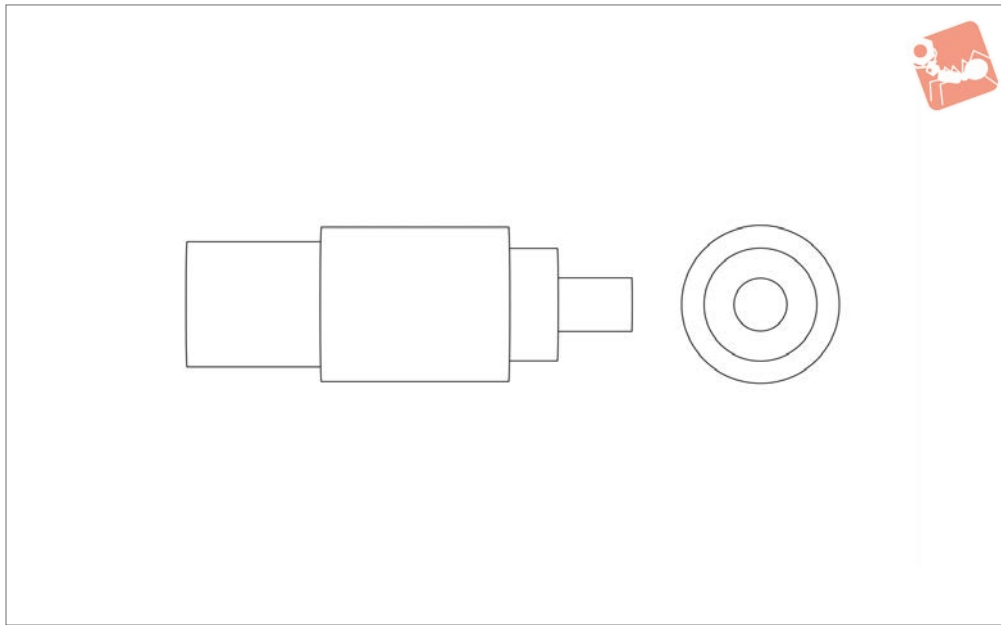


# Installation Tool - Inch - Thinwall

for inserts 22020 & 22030



## Threaded Inserts



**22054**

THREADED INSERTS

**Material**

Steel, blackened.

**Tips**

For use with inch thinwall threaded

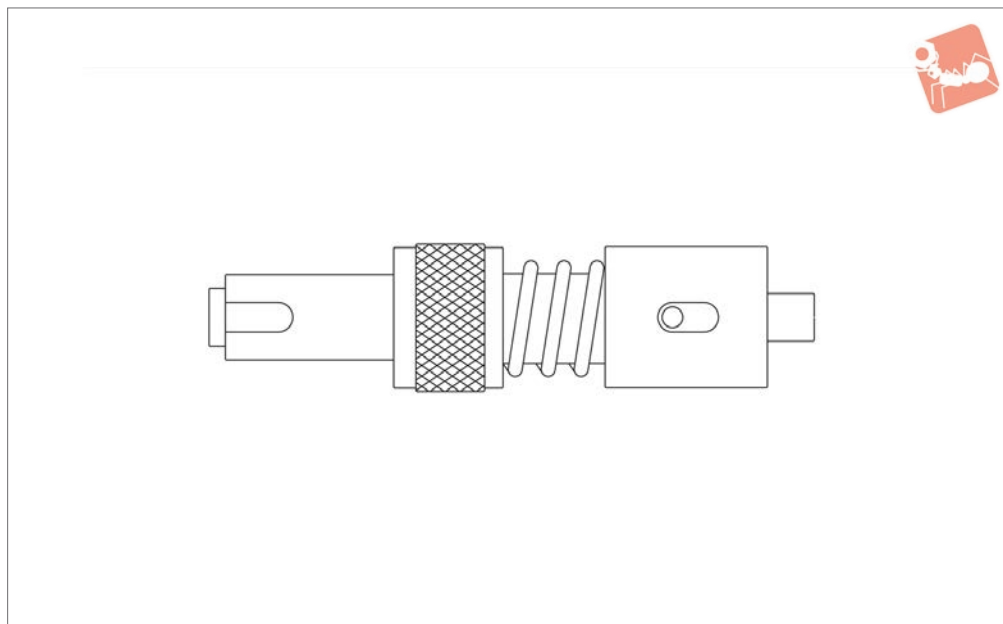
**inserts 22020 and 22030.** Select installation tool of corresponding insert internal thread  $d_1$  and external thread  $d_2$ . If in doubt refer to data tables of insert where

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



**22052**



**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



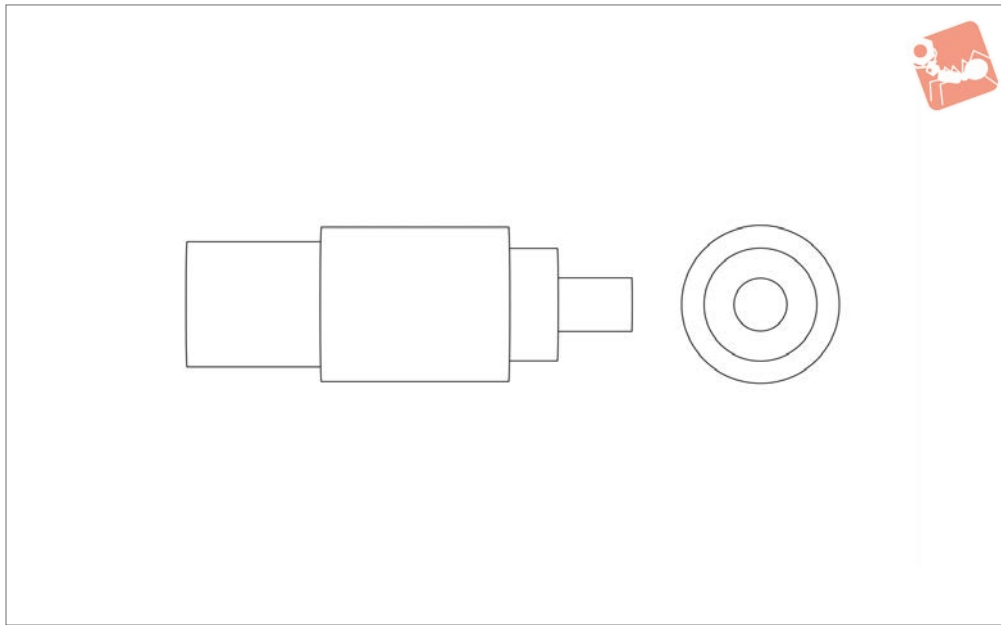


# Installation Tool - Metric - Thinwall

for threaded inserts 22000 & 22004



## Threaded Inserts



**22060**

THREADED INSERTS

**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