powercoil®

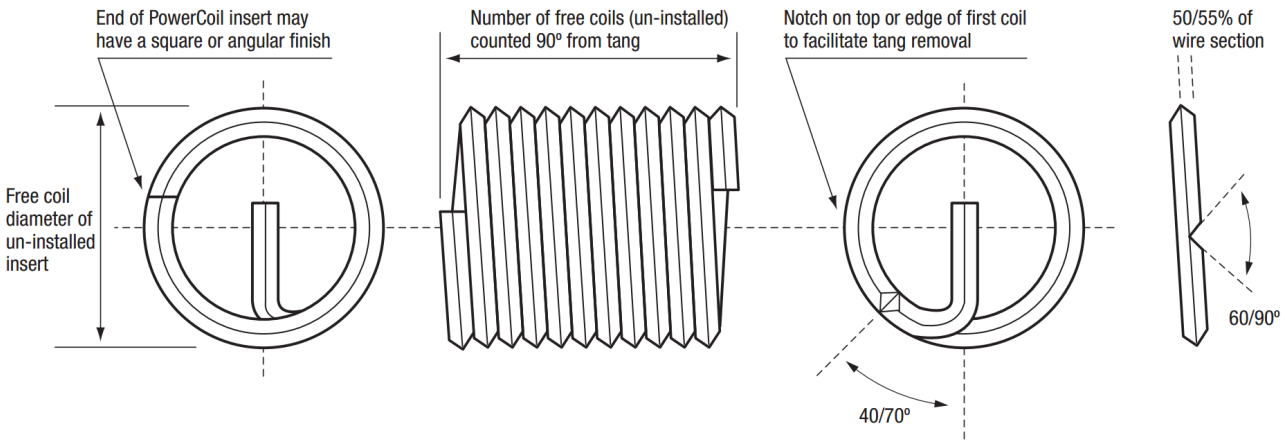
| | | |
|---|---|---|
| **Insert Part Number** | | 3521-12.00X1.0DP |
| **Insert Thread Form** | | Metric Fine |
| **Nominal Thread Size** | | M12 X 1.50 |
| **Insert Length Q** (installed) | D | 1.0D |
| **Insert Length Q** (installed) | mm | 12.00 |
| **Insert Material** | | 304 Stainless Steel |
| **Insert Coating/Plating** | | - |
| Military Standard | # | |
| National Aerospace Standard | # | |
| Federal Stock | # | |
| National Stock / NATO | # | |

**Optimum thread performance with Wire Thread Inserts is achieved when the inserts are installed 1/2 to 1 pitch below the surface of the tapped hole. This means that the actual length of an installed insert is equal to dimension Q less 1/2 to 1 pitch. Dimensions S and T allow for tap end clearance of intermediate taps. When using Bottoming and Spiral Flute Taps these dimensions maybe reduced by an amount equal to 2 thread pitches. Any countersink depths must be added to these dimensions.**

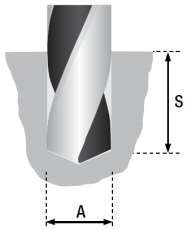
| COMPATIBLE POWERCOIL INSTALLATION AND REMOVAL TOOLS | |
|---|---|
| TOOL TYPE | Part # |
| Hand Installation Tool | 3500-HIT15 |
| Tang Break Tool | 3500-TB15 |
| Removal Tool | 3500-RT3 |
| Machine Installation Tool | 3521-12.00MIT |
| Mandrel Installation Tool | - |
| Captive Prewinder Tool | 3521-12.00HIP |
| Non-Captive Prewinder Tool | - |
| Spring Loaded tang Break Tool | 3500-STB12 |
| Pneumatic Front end assembly (FEA) | 3521-12.00MIP |
| FEA Mandrel | 3521-12.00MIPM |
| FEA Nozzle | 3521-12.00MIPN |
| Pneumatic Tool | 3500-MIP2 |

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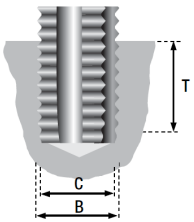
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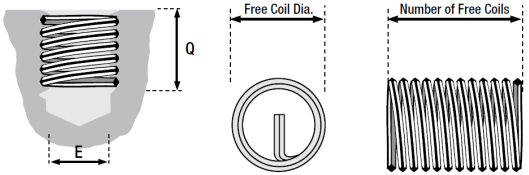

| DRILLED HOLE DIMENSIONS INTERMEDIATE/PLUG TAP | | |
|---|---|---|
| Drill Size | mm | 12.40 |
| Drill Part Number | | 2007-12.40 |
| Drill Size inch | inch | 31/64 |
| Drill Part Number inch | | 2006-31/64 |
| **A** Minor Diameter inimum | mm | 12.325 |
| **A** Minor Diameter maximum | mm | 12.561 |
| **S** Drilling Depth minimum | mm | 18.75 |




| TAPPED HOLE DIMENSIONS | | | |
|---|---|---|---|
| Tap Size | STI | | M12 X 1.50 |
| Tap Size | - | | - |
| **B** Major Diameter | | mm | 13.949 |
| **C** Pitch Diameter MIN | | mm | 12.974 |
| **C** Pitch Diameter MAX | 5H | mm | 13.067 |
| **C** Pitch Diameter MAX | 6H | mm | 13.099 |
| **T** Tapping Depth MIN | | mm | 17.25 |
| Power Coil Tap Part Number | STI | Taper | 3521-12.00T |
| Power Coil Tap Part Number | STI | Intermediate | 3521-12.00I |
| Power Coil Tap Part Number | STI | Bottoming | 3521-12.00B |
| Power Coil Tap Part Number | STI | SpiralPoint | 3521-12.00SP |
| Power Coil Tap Part Number | STI | SpiralFlute | 3521-12.00SF |




| INSERT SPECIFICATIONS | | |
|---|---|---|
| **E** Fitted Minor Diameter | mm | 10.376 |
| **Q** Nominal Length Installed | mm | 12.00 |
| Free Coil Diameter minimum | mm | 14.09 |
| Free Coil Diameter maximum | mm | 15.20 |
| Free Coils minimum | # | 5.60 |
| Free Coils maximum | # | 6.10 |




**IMPORTANT** The success of any drilling and tapping operation is dependant upon many factors -type of material being cut, cutting speed, coolant, equipment being used - and it is not possible to give specific drill sizes for each material. Drill sizes shown are recommendations only and PowerCoil would strongly suggest that independent testing be performed for specific and critical applications.
When using wire thread inserts it is important that the drilling and tapping diameters and lengths shown are adhered to.
The figures outlined in these tables encompass effective free coil tolerances for most globally recognized standards and manufacturers, including those of reduced diameter wire thread inserts.

Number of Free Coils – the number of coils on an un-installed insert counted along the insert length 90° from the tang.