powercoil®

Insert Part Number		3520-12.00X3.0D
Insert Thread Form		Metric Coarse
Nominal Thread Size		M12 X 1.75
Insert Length Q (installed)	D	3.0D
Insert Length Q (installed)	mm	36.00
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	3520-12.00MIT
Mandrel Installation Tool	-
Captive Prewinder Tool	3520-12.00HIP
Non-Captive Prewinder Tool	-
Spring Loaded tang Break Tool	3500-STB12
Pneumatic Front end assembly (FEA)	-
FEA Mandrel	-
FEA Nozzle	-
Pneumatic Tool	-

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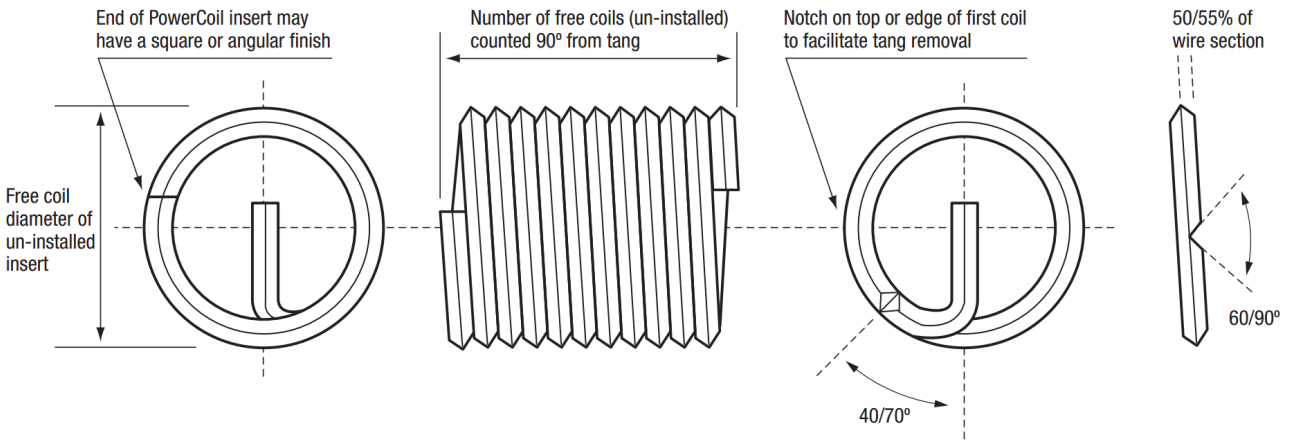
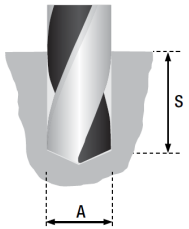
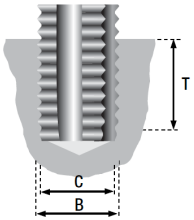


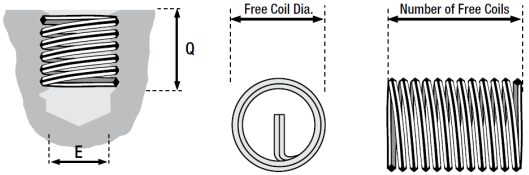
DRILLED HOLE DIMENSIONS INTERMEDIATE/PLUG TAP		
Drill Size	mm	12.50
Drill Part Number		2007-12.50
Drill Size inch	inch	31/64
Drill Part Number inch		2006-31/64
A Minor Diameter minimum	mm	12.379
A Minor Diameter maximum	mm	12.644
S Drilling Depth minimum	mm	43.88



TAPPED HOLE DIMENSIONS			
Tap Size	STI		M12 X 1.75
Tap Size	-		-
B Major Diameter		mm	14.273
C Pitch Diameter MIN		mm	13.137
C Pitch Diameter MAX	5H	mm	13.236
C Pitch Diameter MAX	6H	mm	13.271
T Tapping Depth MIN		mm	42.13
Power Coil Tap Part Number	STI	Taper	3520-12.00T
Power Coil Tap Part Number	STI	Intermediate	3520-12.00I
Power Coil Tap Part Number	STI	Bottoming	3520-12.00B
Power Coil Tap Part Number	STI	SpiralPoint	3520-12.00SP
Power Coil Tap Part Number	STI	SpiralFlute	3520-12.00SF



INSERT SPECIFICATIONS		
E Fitted Minor Diameter	mm	10.106
Q Nominal Length Installed	mm	36.00
Free Coil Diameter minimum	mm	14.13
Free Coil Diameter maximum	mm	15.00
Free Coils minimum	#	17.30
Free Coils maximum	#	18.60



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.