Insert Part Number		3521-27.00X1.5D
Insert Thread Form		Metric Fine
Nominal Thread Size		M27 X 2.00
Insert Length Q (installed)	D	1.5D
Insert Length Q (installed)	mm	40.50
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-HIT24
Tang Break Tool	-
Removal Tool	3500-RT4
Machine Installation Tool	-
Mandrel Installation Tool	-
Captive Prewinder Tool	-
Non-Captive Prewinder Tool	-
Spring Loaded tang Break Tool	-
Pneumatic Front end assembly (FEA)	-
FEA Mandrel	-
FEA Nozzle	-
Pneumatic Tool	-

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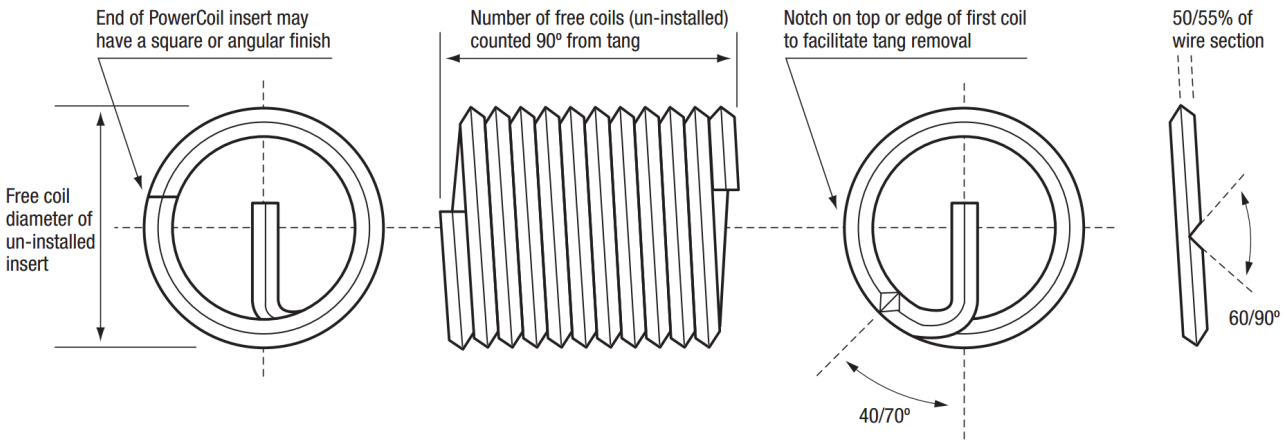
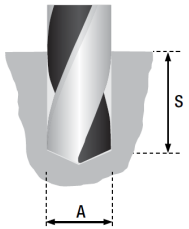
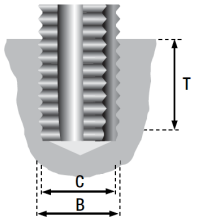


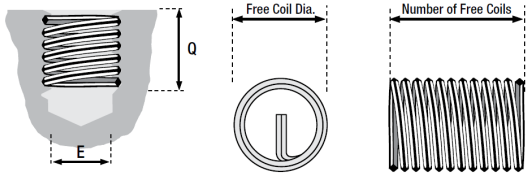
DRILLED HOLE DIMENSIONS INTERMEDIATE/PLUG TAP		
Drill Size	mm	27.50
Drill Part Number		2608-27.50
Drill Size inch	inch	1.5/64
Drill Part Number inch		-
A Minor Diameter minimum	mm	27.433
A Minor Diameter maximum	mm	27.733
S Drilling Depth minimum	mm	49.50



TAPPED HOLE DIMENSIONS			
Tap Size	STI		M27 X 2.00
Tap Size	-		-
B Major Diameter		mm	29.598
C Pitch Diameter MIN		mm	28.299
C Pitch Diameter MAX	5H	mm	28.414
C Pitch Diameter MAX	6H	mm	28.454
T Tapping Depth MIN		mm	47.50
Power Coil Tap Part Number	STI	Taper	3521-27.00T
Power Coil Tap Part Number	STI	Intermediate	3521-27.00I
Power Coil Tap Part Number	STI	Bottoming	3521-27.00B
Power Coil Tap Part Number	STI	SpiralPoint	-
Power Coil Tap Part Number	STI	SpiralFlute	-



INSERT SPECIFICATIONS		
E Fitted Minor Diameter	mm	24.835
Q Nominal Length Installed	mm	40.50
Free Coil Diameter minimum	mm	29.32
Free Coil Diameter maximum	mm	32.30
Free Coils minimum	#	16.70
Free Coils maximum	#	18.10



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.