

Tool Holding

For improved thread quality
- CNC Rigid Tapping

suttontools

GNID70H7001 TOOL HOLDING



Synchro Tapping Attachment with unique Double Flexure

Unlike other "synchronous" tap drivers that use soft plastic components or belleville washers similar as above, to cushion the taps' entry into the hole, Synchro utilizes a (computer generated, precisely machined, special steel alloy) Double Flexure between the mount and the chuck.

It compensates both axially for the unavoidable discrepancies between the machine's programmed RPM, feed and traverse and the exact thread pitch and precise hole location.

The Synchro is dependable and predictable. You can expect long life performance under all working conditions. What's more, you'll make significant savings when it comes to tap costs.

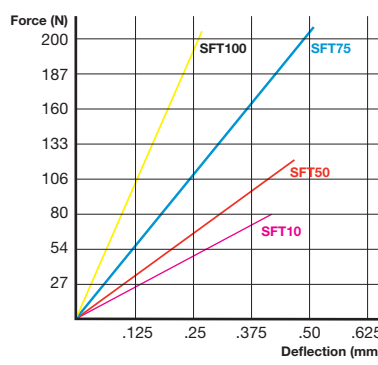


Synchro Proven Results

Independent tests in real world applications confirm Synchro is unmatched in performance

- Tap life increased by 100% or more
- Thread quality improved
- Increased production due to less tap breakage
- Less down time
- Reduced costs. The most economical rigid tapping

Synchro exerts lower thrust and torque forces than any other tap holder on the market. In any given material the lower the thrust and torque forces on the tap, the longer the tap life.



Consistent and predictable tap starting force

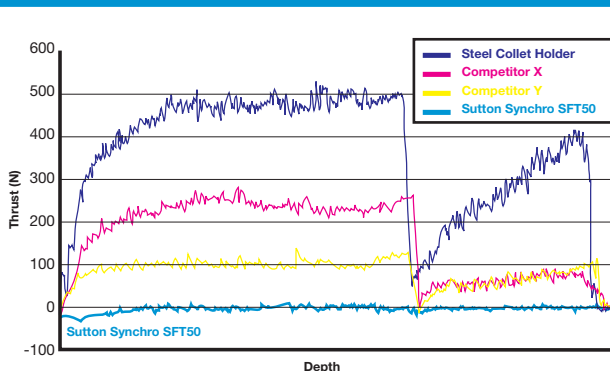
Deflection Rates
Only Synchro's computer generated flexure technology produces a progressively higher tap starting force for each 0.025mm of deflection. It's predictable and consistent throughout the life of the tool.

Test One (Thrust): 10 holes, M6 R45A1, 2 flute tap, 3x Dia. deep in AL7075 at 1000 RPM

Holder Type	Average Thrust (N)	Average Down Cut Thrust (N) Entering Hole	Average Reverse Thrust (N) Exiting Hole
Steel Collet Holder (Rigid)	1008	1379	930
Competitor X	681	879	445
Competitor Y	320	425	266
Synchro	-12	-29	-31

Test Two (Torque): 10 holes, M6 R45A1, 2 flute tap, 3x Dia. deep in AL7075 at 2000 RPM

Holder Type	Average Torque (Ncm)	Average Down Cut Torque (Ncm) Entering Hole	Average Reverse Torque (Ncm) Exiting Hole
Steel Collet Holder (Rigid)	481	631	-387
Competitor X	593	639	-354
Competitor Y	542	730	-392
Synchro	268	371	-190



Graph illustrates the final hole tapped by each tap driver.

suttontools

- For the best rigid tapping results
- Holder designed for machines with rigid tapping
- Machine reversal required
- Increases tap life by 100% or more
- Improve thread quality
- Flexure design, acts like shock absorber



BT-40 Arbor



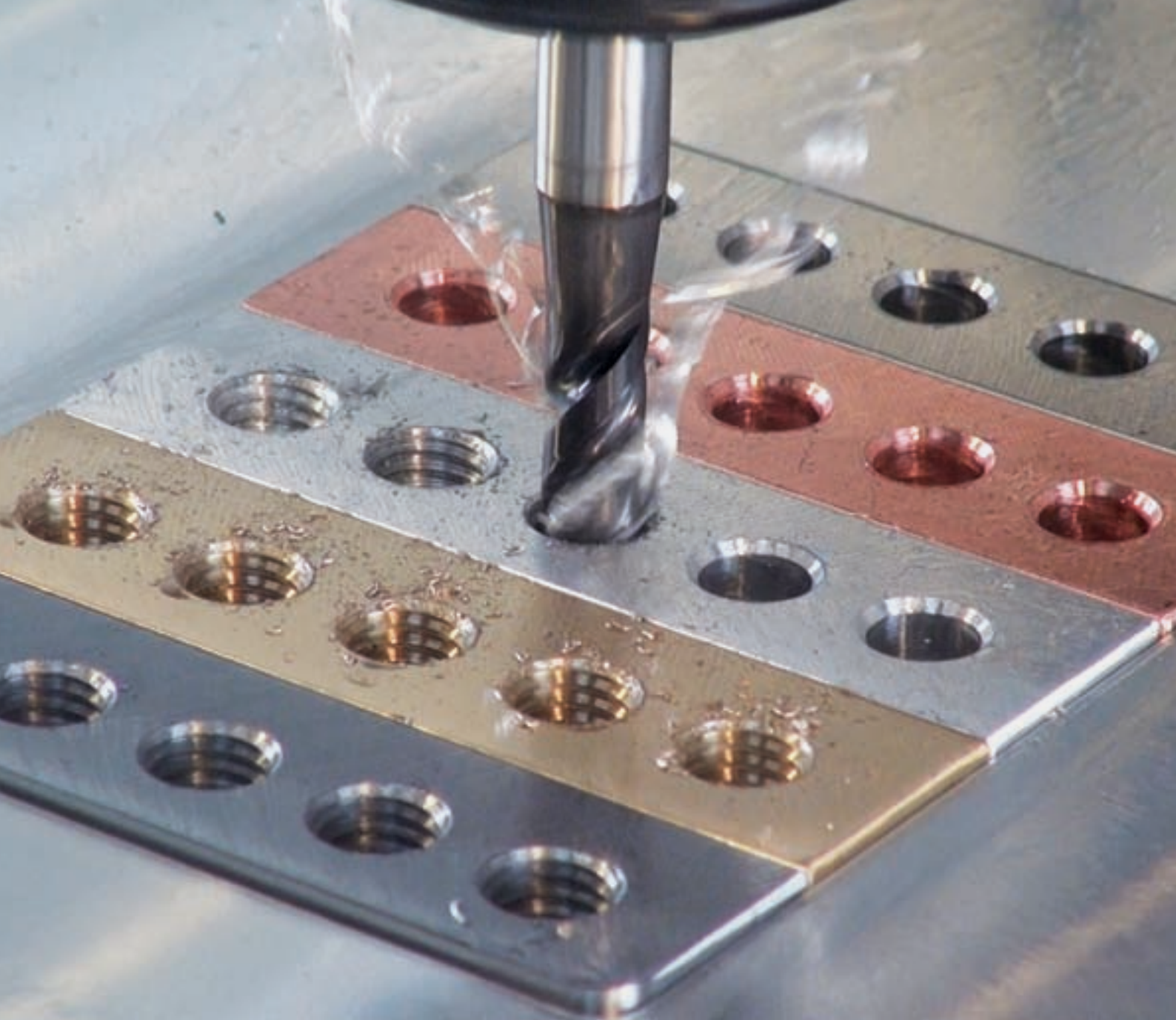
ER25 Collet (Sq. Drive)



Patented Flexure Design



Size Ref.	Description	Size Capacity	Mount	Collet Series	Ref Code	Item #
Tapping Attachments (Discount Group Z1104)						Z101
SFT10	Synchro SFT10	M1-M6 #2-#10	25mm SS	ER11	43102511	Z101 SFT10
SFT50	Synchro SFT50	M4-M12 #8-1/2	25mm SS	ER20	43502520	Z101 SFT50
SFT75	Synchro SFT75	M4-M16 3/8 - 3/4	25mm SS	ER25	43752525	Z101 SFT75
SFT100	Synchro SFT100	M8-M30	25mm SS	ER40	431002540	Z101 SFT100
Collets - SFT10 (Round Drive) (Discount Group Z1110)						Z110
0025	2-2.5mm	M1-1.8	-	ER11		Z110 0025
0030	2.5-3mm	M2-2.6	-	ER11		Z110 0030
0035	3-3.5mm	M3	-	ER11		Z110 0035
0040	3.5-4mm	M3.5	-	ER11		Z110 0040
0045	4-4.5mm	M4	-	ER11		Z110 0045
0050	4.5-5mm	M4 JIS	-	ER11		Z110 0050
0055	5-5.5mm	M5 JIS	-	ER11		Z110 0055
0060	5.5-6mm	M5/M6 / M2-M6 Synchro	-			Z110 0060
Collets - SFT50 (Square Drive) (Discount Group Z1110)						Z111
0045	∅ 4.5mm	M4 DIN371	-	ER20		Z111 0045
0050	∅ 5mm	ISO	-	ER20		Z111 0050
0060	∅ 6mm	M5/M6 DIN371 / M2-M6 Synchro	-	ER20		Z111 0060
0070	∅ 7mm	M10 DIN376	-	ER20		Z111 0070
0080	∅ 8mm	M8 DIN371 / M8 Synchro	-	ER20		Z111 0080
0090	∅ 9mm	M12 DIN376	-	ER20		Z111 0090
0100	∅ 10mm	M10 DIN371 / M10 Synchro	-	ER20		Z111 0100
Collets - SFT75 (Square Drive) (Discount Group Z1110)						Z112
0045	∅ 4.5mm	M4 DIN371	-	ER25		Z112 0045
0060	∅ 6mm	M5/M6 DIN371 / M2-M6 Synchro	-	ER25		Z112 0060
0070	∅ 7mm	M10 DIN371	-	ER25		Z112 0070
0080	∅ 8mm	M8 DIN371 / M8 Synchro	-	ER25		Z112 0080
0090	∅ 9mm	M12 DIN376	-	ER25		Z112 0090
0100	∅ 10mm	M10 DIN371 / M10 Synchro	-	ER25		Z112 0100
0110	∅ 11mm	M14 DIN376	-	ER25		Z112 0110
0120	∅ 12mm	M16 DIN376 / M12 Synchro	-	ER25		Z112 0120
Collets - SFT100 (Square Drive) (Discount Group Z1110)						Z113
0080	∅ 8mm	M8 DIN371 / M8 Synchro	-	ER40		Z113 0080
0100	∅ 10mm	M10 DIN371 / M10 Synchro	-	ER40		Z113 0100
0120	∅ 12mm	M16 DIN376 / M12 Synchro	-	ER40		Z113 0120
0140	∅ 14mm	M18 DIN376 / M14 Synchro	-	ER40		Z113 0140
0160	∅ 16mm	M20 DIN376 / M16 Synchro	-	ER40		Z113 0160
Accessories (Discount Group Z1108)						Z130
3943	BT-40 Arbor W/25mm Bore		-	-	23943	Z130 3943
3945	BT-50 Arbor W/25mm Bore		-	-	23945	Z130 3945
Accessories (Discount Group Z135)						Z135
BT40	Pull stud BT40		-	-		Z135 BT40
BT50	Pull stud BT50		-	-		Z135 BT50



Black Magic Taps ***Truly multi-purpose...***



Watch the demo

When tapping in a wide range of materials, one of the challenges for manufacturers is to reduce tooling & inventory costs. Sutton Tools new universal high performance tap is capable of tapping a wide range of material groups including stainless steel, aluminium, copper and alloy steels. Not only will it tap a wide range of materials, but also with improvements to thread quality due to a combination of tool design, material and surface finish.

Manufactured from PM-HSSE V3 which incorporates a much finer grain & homogeneous structure than conventional HSS. This allows for greater toughness of the tool, whilst maintaining high hardness.

Hardlube is a multi layer PVD coating combining the hardness and thermal stability of TiAlN with the sliding and lubrication properties of Tungsten Carbide/Carbon (WC/C). The lamellar structure enables the layers to slide as they wear providing low friction in the contact zone. Hardlube provides excellent friction and lubricating properties for optimal chip flow, and is suitable for minimum quantity lubrication (MQL) and dry machining.

Features:

- Made from PM-HSSE V3
- Hardlube coating minimises friction
- 50° helix for better chip transportation in blind holes
- Higher reliefs, allowing the tap to cut freely and generate less heat

The Bottom Line For You:

- Longer tool life
- Improved surface finish
- Increased productivity
- Reduced production costs