

Precision Sync ER Tapping System

Reduce Tap Wear and Extend your Tap Life

- Compensates for synchronization errors in the tap cycle
- Minimal length compensation in both Tension and Compression compensates for small pitch differences between the spindle and tap reducing friction on the tap flanks
- Increases tap life at least 30%
- For tapping speeds up to 15,000 RPM's
- For use in Left or Right hand applications
- Coolant Thru, for use up to 1,500 PSI
- Compact Design with Modular Shank options to fit many machine spindles



Coolant Thru Tapping with Precision Sync

The holder is designed for coolant thru the center. To see the tap shank use a coolant cap matching the tap shank size to create the seal.

Required (each sold separately)

- Holder
- Coolant Cap Nut (page 28)
- Coolant Cap (page 28-29)
- Tap Collet (page 26-27)

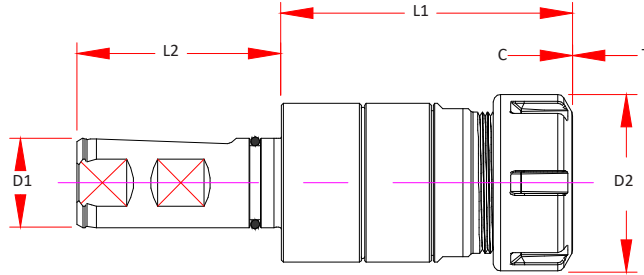
Please note the coolant tap shank must be long enough for the coolant deal to make contact on the full round diameter, tap flutes cannot enter the cap.



Precision Sync Tapping ER Straight Shank

Features

- Coolant Thru, for use up to 1,500 PSI
- Compensates for synchronization errors in the tap cycle
- Minimal length compensation in both Tension and Compression compensates for small pitch differences between the spindle and tap reducing friction on the tap flanks

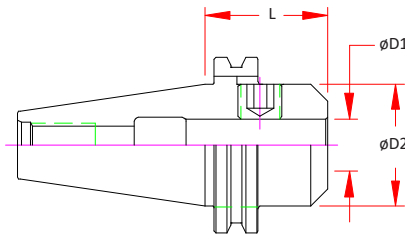
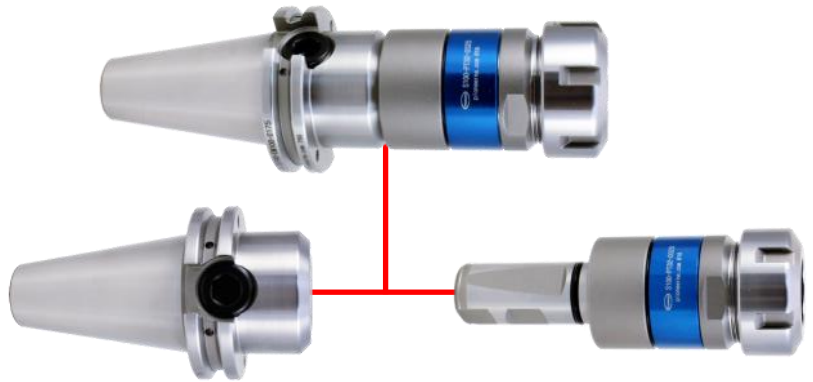


Part Number	Collet Type	D1	D2	L1	L2	C	T	Wrench
S100-PT20-0268	ER20	1.00	1.34	2.79	2.28	0.02	0.02	ERW-20HEX
S100-PT32-0325	ER32	1.00	1.97	3.25	2.28	0.02	0.02	ERW-32E

Modular Taper Assembly

Features

- Coolant Thru, for use up to 1,500 PSI
DIN B flange coolant available in some models
- For Total Projection:
Add "L" from chart below with "L1" from chart above
- Longer projections available see EM section of the catalog



Part Number	Spindle Type	D1	D2	L
BT30-EM100-0275	Standard	1.000	2.00	2.75
DBT30-EM100-0275	Dual Contact		2.00	2.75
BT40-EM100-0200	Standard		2.00	2.00
DBT40-EM100-0200	Dual Contact		2.00	2.00
CAT40-EM100-0175	Standard		1.75	1.75
DCAT40-EM100-0175	Dual Contact		1.75	1.75
CAT50-EM100-0162	Standard		2.75	1.62
DCAT50-EM100-0162	Dual Contact		2.75	1.62
HSK 63A-EM100-0400	Standard		2.00	4.00
HSK100A-EM100-0400	Standard		2.00	4.00

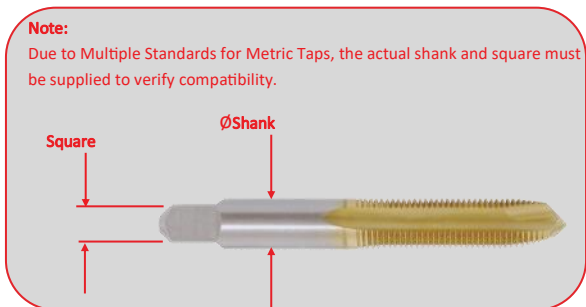
ER Rigid Tap Collets

Features

Special design locks tap flats into the collet slots preventing the tap from spinning inside the collet.

Note:

Due to Multiple Standards for Metric Taps, the actual shank and square must be supplied to verify compatibility.



ANSI

ØShank	Square	Tap Size	TER20U	TER32U
0.141	0.110	#6	TER20U-141	TER32U-141
0.168	0.131	#8	TER20U-168	TER32U-168
0.194	0.152	#10	TER20U-194	TER32U-194
0.220	0.165	#12	TER20U-220	TER32U-220
0.255	0.191	1/4"	TER20U-255	TER32U-255
0.318	0.238	5/16"	TER20U-318	TER32U-318
0.323	0.242	7/16"	TER20U-323	TER32U-323
0.367	0.275	1/2"	TER20U-367	TER32U-367
0.381	0.286	3/8"	TER20U-381	TER32U-381
0.429	0.322	9/16"		TER32U-429
0.437	0.328	1/8" NPT		TER32U-437
0.480	0.360	5/8"		TER32U-480
0.542	0.406	11/16"		TER32U-542
0.562	0.421	1/4" NPT		TER32U-562
0.590	0.442	3/4"		TER32U-590
0.652	0.489	13/16"		TER32U-652

DIN

ØShank	Inch	Square	Inch	TER20D	TER32D
4.0	0.157	3.0	0.118	TER20D-040	
4.5	0.177	3.4	0.134	TER20D-045	TER32D-045
5.5	0.217	4.3	0.169	TER20D-055	TER32D-055
6.0	0.236	4.9	0.193	TER20D-060	TER32D-060
7.0	0.276	5.5	0.217	TER20D-070	TER32D-070
8.0	0.315	6.2	0.244	TER20D-080	TER32D-080
9.0	0.354	7.0	0.276	TER20D-090	TER32D-090
10.0	0.394	8.0	0.315	TER20D-100	TER32D-100
11.0	0.433	9.0	0.354		TER32D-110
12.0	0.472	9.0	0.354		TER32D-120
14.0	0.551	11.0	0.433		TER32D-140
16.0	0.630	12.0	0.472		TER32D-160
18.0	0.709	14.5	0.571		TER32D-180
20.0	0.787	16.0	0.630		TER32D-200

ER Coolant Cap Collet Nuts

Features

- For coolant pressures up to 1,500 PSI.
- Fits standard ER collet chucks.
- Jet-Blast Caps Available Upon Request
- Uses SX Coolant Caps below and on the following page.
- Designed for use with standard ER collets



Nut Part Number	Description	Nut Diameter	Coolant Cap	Wrench Part Number	Thread	Max. Torque
ERN20-CC	ER 20 Nut - Hex	1.338 / 34mm	SXC16	ERW-20H	M25 x 1.50	60 ft/lbs Max
ERN32-CC	ER 32 Nut - E Type	1.969 / 50mm	SXC25	ERW-32	M40 x 1.50	100 ft/lbs Max

ER Coolant Caps - Inch

Features

- O-ring seal for pressures up to 1500 PSI
- Prevents chips, dust & swarf from entering the holder
- Seal range +0 / -.50mm (+0 / -.020")
- Requires Coolant Cap Nut (See Previous Page)
- Jet Slot Available, Order by adding a "J" to the end of the Cap part number



w/ Jet-Blast Option

Inch Shank		ER 20	ER 32
1/8	0.1250	SXC16-0125	SXC25-0125
3/16	0.1875	SXC16-0187	SXC25-0187
1/4	0.2500	SXC16-0250	SXC25-0250
5/16	0.3125	SXC16-0312	SXC25-0312
3/8	0.3750	SXC16-0375	SXC25-0375
7/16	0.4375	SXC16-0437	SXC25-0437
1/2	0.5000	SXC16-0500	SXC25-0500
9/16	0.5625		SXC25-0562
5/8	0.6250		SXC25-0625
3/4	0.7500		SXC25-0750



Thread Coolant Cap into ER nut, snug with wrench after the collet has been assembled.



Insert cutting tool with the seal engaged on the round part of the shank

ER Coolant Caps - Metric

Features

- O-ring seal for pressures up to 1500 PSI
- Prevents chips, dust & swarf from entering the holder
- Seal range +0 / -.50mm (+0 / -.020")
- Requires Coolant Cap Nut (See Previous Page)
- Jet Slot Available, Order by adding a "J" to the end of the Cap part number



Range	Inch Shank	ER 20	ER 32
3.0 - 2.5mm	7/64	SXC16-M030	SXC25-M030
3.5 - 3.0mm	1/8"	SXC16-M035	SXC25-M035
4.0 - 3.5mm	5/32"	SXC16-M040	SXC25-M040
4.5 - 4.0mm	11/64"	SXC16-M045	SXC25-M045
5.0 - 4.5mm	3/16"	SXC16-M050	SXC25-M050
5.5 - 5.0mm	13/64"	SXC16-M055	SXC25-M055
6.0 - 5.5mm	7/32"	SXC16-M060	SXC25-M060
6.5 - 6.0mm	1/4"	SXC16-M065	SXC25-M065
7.0 - 6.5mm	17/64"	SXC16-M070	SXC25-M070
7.5 - 7.0mm	9/32"	SXC16-M075	SXC25-M075
8.0 - 7.5mm	5/16"	SXC16-M080	SXC25-M080
8.5 - 8.0mm	21/64"	SXC16-M085	SXC25-M085
9.0 - 8.5mm	11/32"	SXC16-M090	SXC25-M090
9.5 - 9.0mm	3/8"	SXC16-M095	SXC25-M095
10.0 - 9.5mm	25/64"	SXC16-M100	SXC25-M100
10.5 - 10.0mm	13/32"	SXC16-M105	SXC25-M105
11.0 - 10.5mm	27/64"	SXC16-M110	SXC25-M110
11.5 - 11.0mm	7/16"	SXC16-M115	SXC25-M115
12.0 - 11.5mm	15/32"	SXC16-M120	SXC25-M120
12.5 - 12.0mm	31/64"	SXC16-M125	SXC25-M125
13.0 - 12.5mm	1/2"	SXC16-M130	SXC25-M130
13.5 - 13.0mm	17/32"		SXC25-M135
14.0 - 13.5mm	35/64"		SXC25-M140
14.5 - 14.0mm	9/16"		SXC25-M145
15.0 - 14.5mm	37/64"		SXC25-M150
15.5 - 15.0mm	19/32"		SXC25-M155
16.0 - 15.5mm	5/8"		SXC25-M160
16.5 - 16.0mm	41/64"		SXC25-M165
17.0 - 16.5mm	21/32"		SXC25-M170
17.5 - 17.0mm	11/16"		SXC25-M175
18.0 - 17.5mm	45/64"		SXC25-M180
18.5 - 18.0mm	23/32"		SXC25-M185
19.0 - 18.5mm	3/4"		SXC25-M190
19.5 - 19.0mm	49/64"		SXC25-M195
20.0 - 19.5mm	25/32"		SXC25-M200

Wrenches



Hex

For Torque Values see page 140

Nut Size	Metric	Type	Works On	Part Number	Drive	Torque Wrench Head #
1.18	30.0	Hex (Open End)	ER20H	WRENCH ERW-20 HEX	0.500	TWSQ050-H30



E Type

For Torque Values see page 140

Nut Size	Metric	Type	Works On	Part Number	Drive	Torque Wrench Head #
1.97	50.0	E Type	ERN32	WRENCH ERW-32 E	0.500	TWSQ050-ER32E



Nut Size	Metric	Type	Works On	Part Number
0.07	1.9	PIN SPANNER	COOLANT CAP	WRENCH SXW-CC