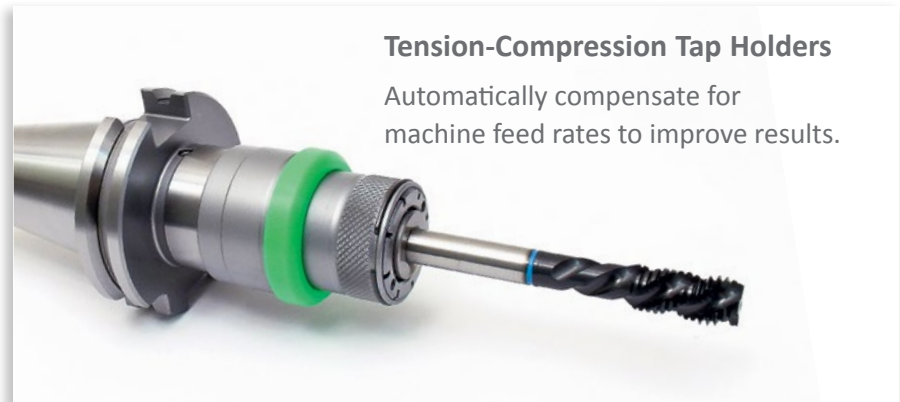


Tapping Systems – ANSI Tap Collets



<http://ow.ly/rli2o>
View the MicroFLOAT Tapping video.



Built for Speed.

All Techniks products are backed by our 100% satisfaction guarantee!

MicroFLOAT – Compensated Holders for Rigid Tapping

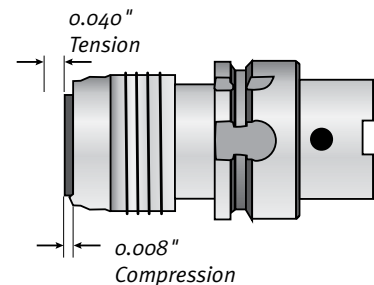


MicroFLOAT holders make rigid tapping easier and much more productive.

Advantages

- Increase tap life 295%
- Improve thread quality
- Reduces scrap rates
- Great for high pressure coolant applications

MicroFLOAT Tension / Compression



MicroFLOAT Extensible System

Techniks' MicroFLOAT quick-change tap holders feature tension/compression technology optimized specifically for rigid tapping. MicroFLOAT holders provide 0.008" of compression for hard to start or sensitive taps, and 0.040" of tension (extension) to compensate for any inaccuracy in the machine, taps, or associated tooling and fixturing.

In actual production testing customers report a great improvement in overall tap performance, and thread

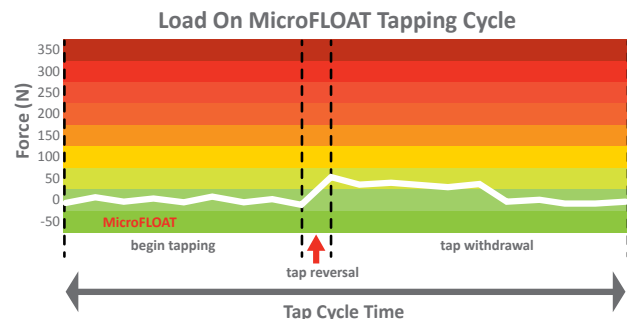
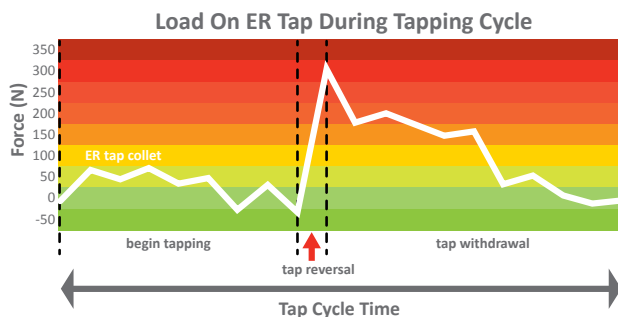
quality. MicroFLOAT compensation prevents premature wear on the tap and tool life went up an average of 295%

The MicroFLOAT modular tapping system provides a quick change tapping platform that is extensible for deep hole tapping up to 9 inches.



Extensible up to 9"

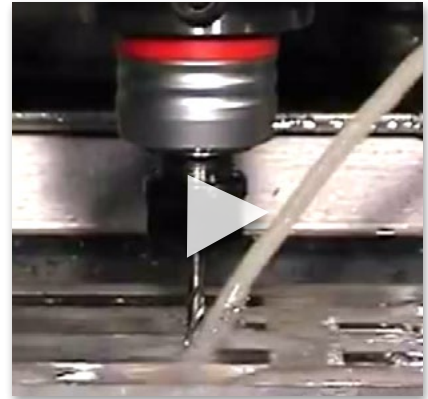
Optimized Compensation Designed For Rigid Tapping



Optimal thread quality is achieved when the tap follows the exact same path out as it did when it cut the threads. This graph shows that the load on the tap peaks when the spindle reverses direction, causing tap wear, thread damage, or tap breakage.

As this graph shows, MicroFLOAT compensation greatly reduces this load, stabilizing the tap throughout its cycle, increasing tap life up to 295%.

MicroFLOAT Case-Study – 295% Productivity Increase



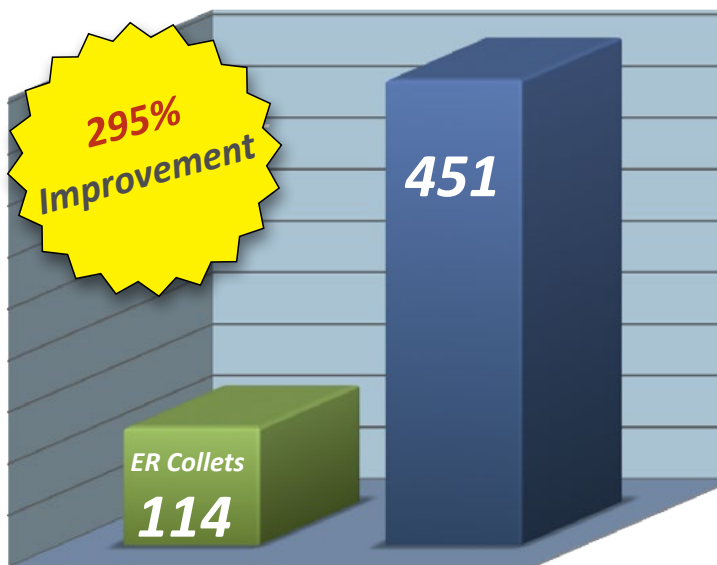
View our informative video at <http://ow.ly/u8vK2>



Case-Study Shows MicroFLOAT System Increases Tap Life by 295%

Techniks recently conducted a case-study comparing tapping using a rigid tap system and the new MicroFLOAT Tapping System.

MicroFLOAT vs. ER Chucks



Directions for Use

1. Select the MicroFLOAT chuck required for your machine spindle (see page 146)
2. Select the ER adapter size and number of extensions needed for your tapping application. (see page 147)
3. To change taps, pull the outside sleeve away from the v-flange to release the tap adapter in the toolholder so it can be changed or extensions added.
4. Start tapping at 100% of pitch feed. If issues occur, program 3–5% below the pitch feed. This will engage more tension to ensure the tap does not “drag” coming out.

Case-Study Parameters Test Results

Material: AISI 304

Speeds and Feeds:

(Vt=12m/min

Av=1 mm/rev

prof=12 mm)

- Number of tapped holes before breakage
- MicroFLOAT tapping system: 451
- Standard rigid tapping system: 114

CAT, BT, HSK, MicroFLOAT Tap Chucks and ER Adapters



Features & Benefits

- Compensates for sensitive and hard to start taps
- Great for high pressure coolant applications
- Decreases cost by increasing tap life, decreasing scrap, and reducing tap breakage

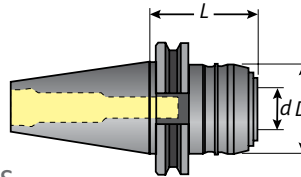


Tightening
Stands
pg. 210

Retention
Knobs
pg. 209

Wrenches
pg. 208

Use MicroFLOAT chucks with ER Tap Adapters



CAT40 & 50 MicroFLOAT Tap Chucks

| Part No. | Description | L | D | d |
|-------------|---------------------|-------|-------|-------|
| 23400-40CAT | CAT40 MicroFLOAT #1 | 2.75" | 1.7" | 0.79" |
| 23600-40CAT | CAT40 MicroFLOAT #2 | 3.54" | 2.36" | 1.26" |
| 23400-50CAT | CAT50 MicroFLOAT #1 | 2.75" | 1.7" | 0.79" |
| 23600-50CAT | CAT50 MicroFLOAT #2 | 3.54" | 2.36" | 1.26" |

High-Pressure Coolant Enabled



Coolant-thru tool is a standard feature on MicroFLOAT tap chucks

BT30 & 40 MicroFLOAT Tap Chucks

| Part No. | Description | L | D | d |
|------------|--------------------|-------|-------|-------|
| 23400-30BT | BT30 MicroFLOAT #1 | 2.09" | 1.7" | 0.79" |
| 23400-40BT | BT40 MicroFLOAT #1 | 2.40" | 1.7" | 1.26" |
| 23600-40BT | BT40 MicroFLOAT #2 | 3.22" | 2.36" | 1.26" |



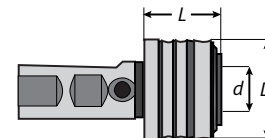
MicroFLOAT straight shank chuck

HSK63A MicroFLOAT Tap Chucks

| Part No. | Description | L | D | d |
|------------|----------------------|-------|------|------|
| 23400-H63A | HSK63A MicroFLOAT #1 | 2.52" | 1.7" | .79" |

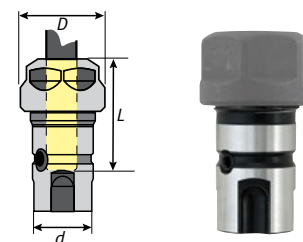
Straight Shank MicroFLOAT Chucks

| Part No. | Description | L | D | d |
|------------|----------------------|-------|-------|-------|
| 23400-INC1 | 1" SS MicroFLOAT # 1 | 1.3" | 1.7" | 0.79" |
| 23600-INC1 | 1" SS MicroFLOAT # 2 | 2.13" | 2.36" | 1.26" |



ER Tap Adapter – Required

| Part No. | Description | L | D | d |
|------------|---------------------------|-------|-------|-------|
| 23410-ER16 | ER16 MicroFLOAT 1 Adapter | 2.16" | 1.10" | .79" |
| 23610-ER25 | ER25 MicroFLOAT 2 Adapter | 3.39" | 1.65" | 1.27" |

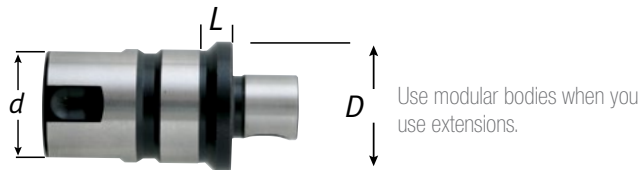


ER16 adapter takes up to 3/8" tap
ER25 takes up to 3/4" tap

MicroFLOAT Modular Tap Extensions

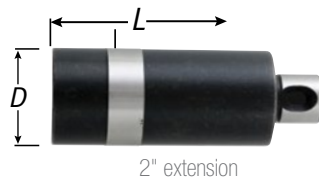


Use modular extensions to build gage lengths up to 9"



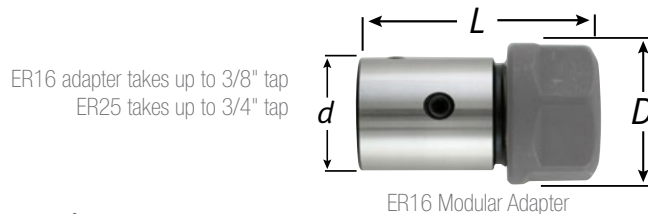
Modular Body

| Part No. | Description | L | D | d |
|-----------|----------------------------|------|-------|-------|
| 23411-MOD | Modular Body MicroFLOAT #1 | .20" | .91" | .79" |
| 23611-MOD | Modular Body MicroFLOAT #2 | .28" | 1.38" | 1.26" |



Modular Extensions

| Part No. | Description | L | D | Chuck |
|-----------|------------------------------------|-------|-------|----------|
| 42150-25 | 1" Modular Extension MicroFLOAT #1 | .98" | .91" | 23400-.. |
| 42150-50 | 2" Modular Extension MicroFLOAT #1 | 1.97" | .91" | 23400-.. |
| 42250-50 | 2" Modular Extension MicroFLOAT #2 | 1.97" | 1.38" | 23600-.. |
| 42250-100 | 4" Modular Extension MicroFLOAT #2 | 3.94" | 1.38" | 23600-.. |

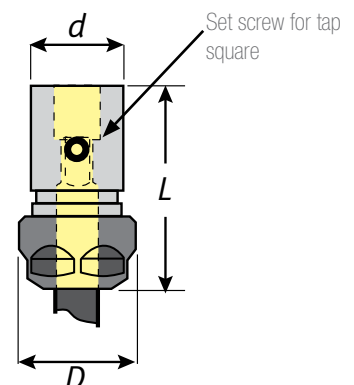
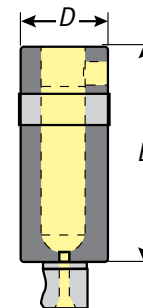
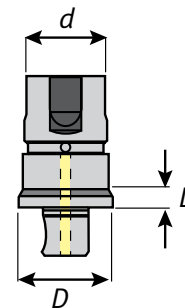


ER Modular Adapter

| Part No. | Description | L | D | d |
|------------|------------------------------------|-------|-------|-------|
| 42147-ER16 | ER16 Modular Adapter MicroFLOAT #1 | 1.97" | 1.10" | .91" |
| 42247-ER25 | ER25 Modular Adapter MicroFLOAT #2 | 3.11" | 1.65" | 1.38" |

Directions for Use

1. Select the MicroFLOAT chuck required for your machine spindle (see previous page)
2. Select the modular adapter size and number of extensions needed for your tapping application.
3. Start tapping at 100% of pitch feed. If issues occur, program 3–5% below the pitch feed. This will engage more tension to ensure the tap does not "drag" coming out.



CAT, BT Tension / Compression Tap Holders



Techniks Quality Features

- Adjustable compression helps start difficult taps
- Taper ground to AT3 accuracy or better
- Quick-Change Style



ANSI Tap
Collets
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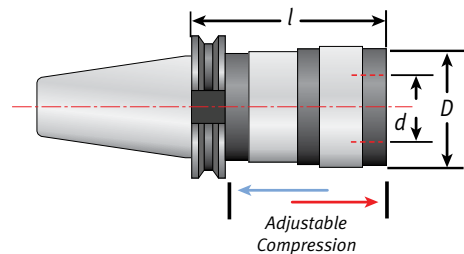
Tightening
Stands
pg. 210



Retention
Knobs
pg. 204



Wrenches
pg. 208



CAT Tension / Compression Tap Holders

| Part No. | Description | d | D | l | Size | Tap | Compensation | |
|-------------|--------------------------|--------|-------|-------|------|-----------------|--------------|-------------|
| | | | | | | Capacity | Tension | Compression |
| 32400/40CAT | CAT40 T/C Holder, Size 1 | 0.748" | 1.5" | 2.36" | 1 | 0 – 9/16" | 0.35" | 0.35" |
| 32400/50CAT | CAT50 T/C Holder, Size 1 | 0.748" | 1.5" | 2.44" | 1 | 0 – 9/16" | 0.35" | 0.35" |
| 32600/40CAT | CAT40 T/C Holder, Size 2 | 1.220" | 2.17" | 3.94" | 2 | 5/16 – 7/8" | 0.59" | 0.59" |
| 32600/50CAT | CAT50 T/C Holder, Size 2 | 1.220" | 2.17" | 3.27" | 2 | 5/16 – 7/8" | 0.59" | 0.59" |
| 32800/40CAT | CAT40 T/C Holder, Size 3 | 1.890" | 3.11" | 5.43" | 3 | 1/2 – 1-3/8" | 0.94" | 0.94" |
| 32800/50CAT | CAT50 T/C Holder, Size 3 | 1.890" | 3.11" | 5.24" | 3 | 1/2 – 1 3/8" | 0.94" | 0.94" |
| 32900/40CAT | CAT40 T/C Holder, Size 4 | 2.362" | 3.86" | 6.06" | 4 | 1-7/16 – 1-7/8" | 1.02" | 1.02" |
| 32900/50CAT | CAT50 T/C Holder, Size 4 | 2.362" | 3.86" | 5.79" | 4 | 1-7/16 – 1-7/8" | 1.02" | 1.02" |

BT Tension / Compression Tap Holders

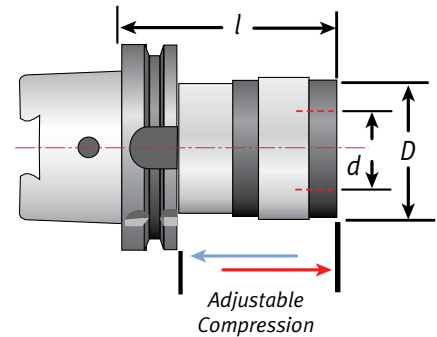
| Part No. | Description | d | D | l | Size | Tap | Compensation | |
|------------|-------------------------|--------|-------|-------|------|-----------------|--------------|-------------|
| | | | | | | Capacity | Tension | Compression |
| 32400/30BT | BT30 T/C Holder, Size 1 | 0.748" | 1.5" | 2.48" | 1 | 0 – 9/16" | 0.35" | 0.35" |
| 32400/40BT | BT40 T/C Holder, Size 1 | 0.748" | 1.5" | 2.68" | 1 | 0 – 9/16" | 0.35" | 0.35" |
| 32400/50BT | BT50 T/C Holder, Size 1 | 0.748" | 1.5" | 3.15" | 1 | 0 – 9/16" | 0.35" | 0.35" |
| 32600/30BT | BT30 T/C Holder, Size 2 | 1.220" | 2.17" | 3.78" | 2 | 5/16 – 7/8" | 0.59" | 0.59" |
| 32600/40BT | BT40 T/C Holder, Size 2 | 1.220" | 2.17" | 3.66" | 2 | 5/16 – 7/8" | 0.59" | 0.59" |
| 32600/50BT | BT50 T/C Holder, Size 2 | 1.220" | 2.17" | 4.02" | 2 | 5/16 – 7/8" | 0.59" | 0.59" |
| 32800/40BT | BT40 T/C Holder, Size 3 | 1.890" | 3.11" | 5.43" | 3 | 1/2 – 1-3/8" | 0.94" | 0.94" |
| 32800/50BT | BT50 T/C Holder, Size 3 | 1.890" | 3.11" | 5.31" | 3 | 1/2 – 1-3/8" | 0.94" | 0.94" |
| 32900/40BT | BT40 T/C Holder, Size 4 | 2.362" | 3.86" | 6.18" | 4 | 1-7/16 – 1-7/8" | 1.02" | 1.02" |
| 32900/50BT | BT50 T/C Holder, Size 4 | 2.362" | 3.86" | 5.79" | 4 | 1-7/16 – 1-7/8" | 1.02" | 1.02" |

HSK & Straight Shank Tension / Compression Tap Holders



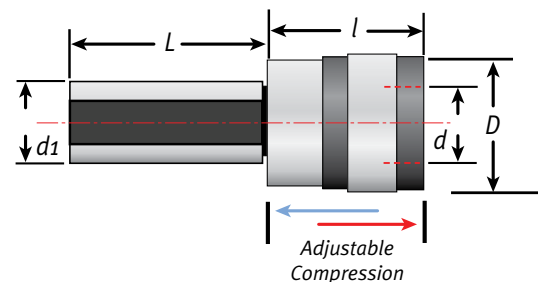
Techniks Quality Features

- Adjustable compression helps start difficult taps
- Quick-Change Style



HSK A Tension / Compression Tap Holders

| Part No. | Description | d | D | l | Size | Tap | Compensation | |
|-------------|----------------------------|--------|-------|-------|------|-------------|--------------|-------------|
| | | | | | | Capacity | Tension | Compression |
| 34400/H40A | HSK40A T/C Holder, Size 1 | 0.748" | 1.5" | 3.14" | 1 | 0 – 9/16" | 0.295" | 0.295" |
| 34400/H50A | HSK50A T/C Holder, Size 1 | 0.748" | 1.5" | 2.83" | 1 | 0 – 9/16" | 0.295" | 0.295" |
| 34400/H63A | HSK63A T/C Holder, Size 1 | 0.748" | 1.5" | 2.83" | 1 | 0 – 9/16" | 0.295" | 0.295" |
| 34400/H100A | HSK100A T/C Holder, Size 1 | 0.748" | 1.5" | 3.14" | 1 | 0 – 9/16" | 0.295" | 0.295" |
| 34600/H50A | HSK50A T/C Holder, Size 2 | 1.22" | 2.17" | 4.33" | 2 | 5/16 – 7/8" | 0.393" | 0.393" |
| 34600/H63A | HSK63A T/C Holder, Size 2 | 1.22" | 2.17" | 4.33" | 2 | 5/16 – 7/8" | 0.393" | 0.393" |
| 34600/H100A | HSK100A T/C Holder, Size 2 | 1.22" | 2.17" | 3.94" | 2 | 5/16 – 7/8" | 0.393" | 0.393" |



Straight Shank Tapping Chucks

| Part No. | Description | D1 | D | l | L | Tap | Compensation | |
|----------------|---------------------------------|-------|-------|-------|-------|--------------|--------------|-------------|
| | | | | | | Capacity | Tension | Compression |
| 32400/INC1 | 1" shank T/C Holder, Size 1 | 1.00" | 1.5" | 1.76" | 1.95" | 0 – 9/16" | 0.35" | 0.35" |
| 32600/INC1 | 1" shank T/C Holder, Size 2 | 1.00" | 2.17" | 2.52" | 2.00" | 5/16 – 7/8" | 0.59" | 0.59" |
| 32600/INC1-1/2 | 1 1/2" shank T/C Holder, Size 2 | 1.50" | 2.17" | 2.52" | 3.50" | 5/16 – 7/8" | 0.59" | 0.59" |
| 32800/INC1-1/2 | 1 1/2" shank T/C Holder, Size 3 | 1.50" | 3.38" | 3.85" | 3.50" | 1/2 – 1 3/8" | 0.94" | 0.94" |

CAT, BT Rigid Tap Holders



Techniks Quality Features

- Taper ground to AT3 accuracy or better
- Quick-Change Style



ANSI Tap
Collets
pg. 152



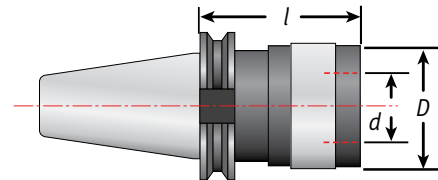
Tightening
Stands
pg. 210



Retention
Knobs
pg. 204



Wrenches
pg. 208



CAT Rigid Tap Holders

| Part No. | Description | l | D | d | Size | Tap Capacity |
|-------------|--------------------------------|-------|-------|--------|------|--------------|
| 21480/40CAT | CAT40 Rigid Tap Holder, Size 1 | 2.32" | 1.31" | 0.748" | 1 | 0 – 9/16" |
| 21480/50CAT | CAT50 Rigid Tap Holder, Size 1 | 2.95" | 1.31" | 0.748" | 1 | 0 – 9/16" |
| 21680/40CAT | CAT40 Rigid Tap Holder, Size 2 | 3.23" | 1.97" | 1.22" | 2 | 5/16 – 7/8" |
| 21680/50CAT | CAT50 Rigid Tap Holder, Size 2 | 3.86" | 1.97" | 1.22" | 2 | 5/16 – 7/8" |
| 21880/40CAT | CAT40 Rigid Tap Holder, Size 3 | 4.80" | 2.83" | 1.89" | 3 | 1/2 – 1 3/8" |
| 21880/50CAT | CAT50 Rigid Tap Holder, Size 3 | 4.80" | 2.83" | 1.89" | 3 | 1/2 – 1-3/8" |

BT Rigid Tap Holders

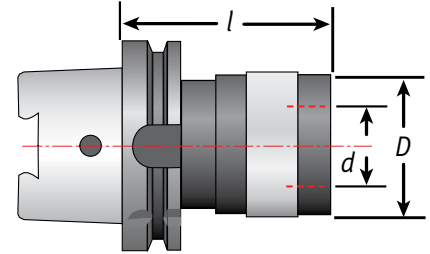
| Part No. | Description | l | D | d | Size | Tap Capacity |
|------------|-------------------------------|-------|-------|--------|------|--------------|
| 21480/30BT | BT30 Rigid Tap Holder, Size 1 | 2.80" | 1.31" | 0.748" | 1 | 0 - 9/16" |
| 21480/40BT | BT40 Rigid Tap Holder, Size 1 | 2.63" | 1.31" | 0.748" | 1 | 0 - 9/16" |
| 21480/50BT | BT50 Rigid Tap Holder, Size 1 | 3.07" | 1.31" | 0.748" | 1 | 0 - 9/16" |
| 21680/30BT | BT30 Rigid Tap Holder, Size 2 | 3.70" | 1.97" | 1.22" | 2 | 5/16 - 7/8" |
| 21680/40BT | BT40 Rigid Tap Holder, Size 2 | 3.54" | 1.97" | 1.22" | 2 | 5/16 - 7/8" |
| 21680/50BT | BT50 Rigid Tap Holder, Size 2 | 3.97" | 1.97" | 1.22" | 2 | 5/16 - 7/8" |
| 21880/40BT | BT40 Rigid Tap Holder, Size 3 | 4.61" | 2.83" | 1.89" | 3 | 1/2 - 1 3/8" |
| 21880/50BT | BT50 Rigid Tap Holder, Size 3 | 4.80" | 2.83" | 1.89" | 3 | 1/2 - 1 3/8" |

HSK and Straight Shank Rigid Tap Holders



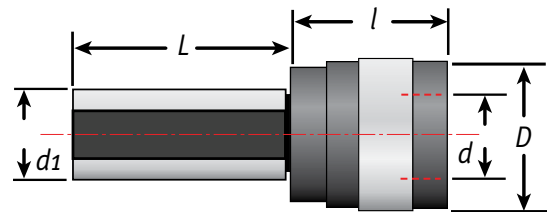
Techniks Quality Features

- Quick-Change Style



HSK Rigid Tap Holders

| Part No. | Description | l | D | d | Size | Tap Capacity |
|-------------|----------------------------------|-------|-------|--------|------|--------------|
| 21480/H50A | HSK50A Rigid Tap Holder, Size 1 | 2.30" | 1.31" | 0.748" | 1 | 0 - 9/16" |
| 21480/H63A | HSK63A Rigid Tap Holder, Size 1 | 2.32" | 1.31" | 0.748" | 1 | 0 - 9/16" |
| 21480/H100A | HSK100A Rigid Tap Holder, Size 1 | 2.95" | 1.31" | 0.748" | 1 | 0 - 9/16" |
| 21680/H50A | HSK50A Rigid Tap Holder, Size 2 | 3.23" | 1.97" | 1.22" | 2 | 5/16 - 7/8" |
| 21680/H63A | HSK63A Rigid Tap Holder, Size 2 | 3.23" | 1.97" | 1.22" | 2 | 5/16 - 7/8" |
| 21680/H100A | HSK100A Rigid Tap Holder, Size 2 | 3.86" | 1.97" | 1.22" | 2 | 5/16 - 7/8" |
| 21880/H63A | HSK63A Rigid Tap Holder, Size 3 | 4.80" | 2.83" | 1.89" | 3 | 1/2 - 1 3/8" |
| 21880/H100A | HSK100A Rigid Tap Holder, Size 3 | 4.80" | 2.83" | 1.89" | 3 | 1/2 - 1 3/8" |



Straight Shank Rigid Tap Holders

| Part No. | Description | d1 | L | l | D | d | Tap Capacity |
|----------------|--|-------|-------|-------|-------|-------|--------------|
| 21480/INC1 | 1" shank, Rigid Tap Holder, Size 1 | 1.00" | 1.95" | 1.60" | 1.31" | .748" | 0 - 9/16" |
| 21680/INC1 | 1" shank, Rigid Tap Holder, Size 2 | 1.00" | 2.00" | 2.50" | 1.97" | 1.22" | 3/8 - 7/8" |
| 21880/INC1-1/2 | 1 1/2" shank, Rigid Tap Holder, Size 3 | 1.50" | 3.50" | 3.44" | 2.83" | 1.89" | 1/2 - 1 3/8" |

ANSI Clutch Drive Tap Collets

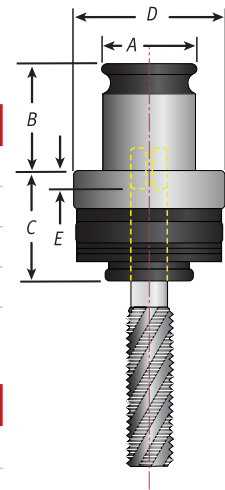


Note: Metric tap collets available on request. Please verify shank diameter when ordering metric tap collets.

ANSI Clutch Drive Tap Collet Features

- Prevents broken taps
- Automatically stops spinning when bottom is reached
- Change worn taps in seconds

| Dimensions | A | B | C | D | E |
|------------|-------|-------|-------|-------|------|
| Size 0 | .51" | .77" | .83" | .91" | .24" |
| Size 1 | .75" | .85" | .98" | 1.26" | .31" |
| Size 2 | 1.22" | 1.38" | 1.34" | 1.97" | .16" |
| Size 3 | 1.89" | 2.19" | 1.77" | 2.83" | .04" |



Collet Set

| Part No. | Description |
|----------|---|
| 48/3-SET | Size 3, 16 piece set – 1/2" thru 1" NPT |

ANSI Clutch Drive Tap Collets

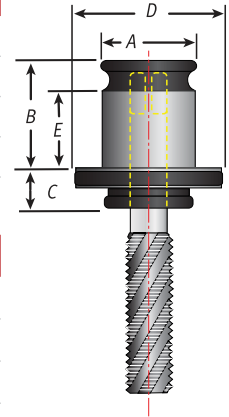
| ANSI | Metric Tap / ANSI Shank | Shank | SQ | Size 0 | Size 1 | Size 2 | Size 3 |
|----------------|-------------------------|--------|--------|-----------|-------------|------------|------------|
| 0-6" | M1.6-M3.5 | 0.141" | 0.110" | 13/0-4036 | 19/1-4036 | | |
| 8, 5/32" | M4 | 0.168" | 0.131" | 13/0-4041 | 19/1-4041 | | |
| 10, 3/16" | M4.5, M5 | 0.194" | 0.152" | 13/0-4048 | 19/1-4048 | | |
| 12, 7/32" | | 0.220" | 0.165" | 13/0-4054 | 19/1-4054 | | |
| 1/4" | M6, M6.3 | 0.255" | 0.191" | 13/0-4063 | 19/1-4063 | | |
| 5/16" | M7, M8 | 0.318" | 0.238" | | 19/1-4079 | 31/2-4079 | |
| 3/8" | M10 | 0.381" | 0.286" | | 19/1-4095 | 31/2-4095 | |
| 7/16" | M11 | 0.323" | 0.242" | | 19/1-4111 | 31/2-4111 | |
| 1/2" | M12, M12.5 | 0.367" | 0.275" | | 19/1-4127 | 31/2-4127 | 48/3-4127 |
| 9/16" | M14 | 0.429" | 0.322" | | 19/1-4142 | 31/2-4142 | 48/3-4142 |
| 5/8" | M16 | 0.480" | 0.360" | | | 31/2-4158 | 48/3-4158 |
| 11/16" | M18 | 0.542" | 0.406" | | | 31/2-4174 | 48/3-4174 |
| 3/4" | | 0.590" | 0.442" | | | 31/2-4190 | 48/3-4190 |
| 13/16" | M20 | 0.652" | 0.489" | | | 31/2-4206 | 48/3-4206 |
| 7/8" | M22 | 0.697" | 0.523" | | | 31/2-4222 | 48/3-4222 |
| 15/16" | M24 | 0.760" | 0.570" | | | | 48/3-4238 |
| 1" | M25 | 0.800" | 0.600" | | | | 48/3-4254 |
| 1 1/8, 1 1/16" | M27 | 0.896" | 0.672" | | | | 48/3-4286 |
| 1 1/4, 1 3/16" | M30 | 1.021" | 0.766" | | | | 48/3-4317 |
| 1 3/8, 1 5/16" | M33 | 1.108" | 0.831" | | | | 48/3-4349 |
| 1/8" NPT | | 0.437" | 0.328" | | 19/1 - 4097 | | |
| 1/4" NPT | | 0.562" | 0.421" | | | 31/2-4131C | |
| 3/8" NPT | | 0.700" | 0.531" | | | 31/2-4166C | 48/3-4166C |
| 1/2" NPT | | 0.687" | 0.515" | | | 31/2-4209C | 48/3-4209C |
| 3/4" NPT | | 0.906" | 0.678" | | | | 48/3-4264C |
| 1" NPT | | 1.125" | 0.843" | | | | 48/3-4332C |

ANSI Rigid Tap Collets



- Change worn taps in seconds
- Quick-Change Style

| Dimensions | A | B | C | D | E |
|------------|-------|-------|-------|-------|-------|
| Size 1 | .75" | .85" | .28" | 1.18" | .39" |
| Size 2 | 1.22" | 1.38" | .43" | 1.81" | .75" |
| Size 3 | 1.89" | 2.19" | .55" | 2.68" | 1.18" |
| Size 4 | 2.36" | 2.48" | 1.65" | 3.27" | 1.14" |



Collet Sets

| Part No. | Description |
|-----------|---|
| 19/11-SET | Size 1, 11 piece set – 0-6" thru 9/16" & 1/8" NPT |
| 31/12-SET | Size 2, 13 piece set – 5/16" thru 1/2" NPT |
| 48/13-SET | Size 3, 16 piece set – 1/2" thru 1" NPT |

ANSI Rigid Tap Collets

| ANSI | Metric Tap / ANSI Shank | Shank | SQ | Size 1 | Size 2 | Size 3 | Size 4 |
|----------------|-------------------------|--------|--------|------------|-------------|-------------|-------------|
| 0-6" | M1.6-M3.5 | 0.141" | 0.110" | 19/11-4036 | | | |
| 8, 5/32" | M4 | 0.168" | 0.131" | 19/11-4041 | | | |
| 10, 3/16" | M4.5, M5 | 0.194" | 0.152" | 19/11-4048 | | | |
| 12, 7/32" | | 0.220" | 0.165" | 19/11-4054 | | | |
| 1/4" | M6, M6.3 | 0.255" | 0.191" | 19/11-4063 | | | |
| 5/16" | M7, M8 | 0.318" | 0.238" | 19/11-4079 | 31/12-4079 | | |
| 3/8" | M10 | 0.381" | 0.286" | 19/11-4095 | 31/12-4095 | | |
| 7/16" | M11 | 0.323" | 0.242" | 19/11-4111 | 31/12-4111 | | |
| 1/2" | M12, M12.5 | 0.367" | 0.275" | 19/11-4127 | 31/12-4127 | 48/13-4127 | |
| 9/16" | M14 | 0.429" | 0.322" | 19/11-4142 | 31/12-4142 | 48/13-4142 | |
| 5/8" | M16 | 0.480" | 0.360" | | 31/12-4158 | 48/13-4158 | |
| 11/16" | M18 | 0.542" | 0.406" | | 31/12-4174 | 48/13-4174 | |
| 3/4" | | 0.590" | 0.442" | | 31/12-4190C | 48/13-4190 | |
| 13/16" | M20 | 0.652" | 0.489" | | 31/12-4206C | 48/13-4206 | |
| 7/8" | M22 | 0.697" | 0.523" | | 31/12-4222C | 48/13-4222 | |
| 15/16" | M24 | 0.760" | 0.570" | | | 48/13-4238 | |
| 1" | M25 | 0.800" | 0.600" | | | 48/13-4254 | |
| 1 1/8, 1 1/16" | M27 | 0.896" | 0.672" | | | 48/13-4286 | |
| 1 1/4, 1 3/16" | M30 | 1.021" | 0.766" | | | 48/13-4317 | |
| 1 3/8, 1 5/16" | M33 | 1.108" | 0.831" | | | 48/13-4349 | |
| 1 1/2, 1 7/16" | M36 | 1.233" | 0.925" | | | | 60/14-4381C |
| 1 5/8" | M39 | 1.305" | 0.979" | | | | 60/14-4412C |
| 1 3/4" | M42 | 1.430" | 1.072" | | | | 60/14-4444C |
| 1 7/8" | | 1.520" | 1.139" | | | | 60/14-4476C |
| 1/8" NPT | | 0.437" | 0.328" | 19/11-4097 | | | |
| 1/4" NPT | | 0.562" | 0.421" | | 31/12-4131C | | |
| 3/8" NPT | | 0.700" | 0.531" | | 31/12-4166C | 48/13-4166C | |
| 1/2" NPT | | 0.687" | 0.515" | | 31/12-4209C | 48/13-4209C | |
| 3/4" NPT | | 0.906" | 0.678" | | | 48/13-4264C | |
| 1" NPT | | 1.125" | 0.843" | | | 48/13-4332C | |

Call us for technical support Mon. thru Fri. 8:00 am to 6:00 pm EST.



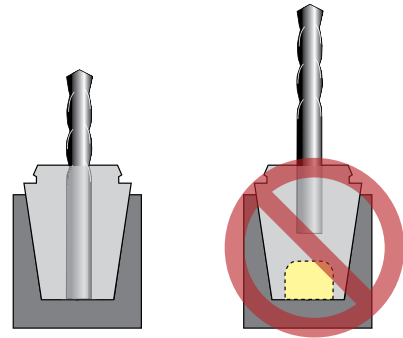
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Tightening Torque Specifications Chart

Recommended Collet & Retention Knob Tightening Torque

| Collet | Nut Type | Collets I.D. OVER 1/16" (2mm) | Collets I.D. UNDER 1/16" (2mm) | Order Torque Wrench Adapter |
|---------|----------|-------------------------------|--------------------------------|-----------------------------|
| ER16 | slotted | 42 ft/lbs | 30 ft/lbs | 04580-16 |
| ER16 | hex | 42 ft/lbs | 30 ft/lbs | 04601-16 |
| ER20 | slotted | 59 ft/lbs | 24 ft/lbs | 04580-20 |
| ER20 | hex | 59 ft/lbs | 24 ft/lbs | 04602-20 |
| ER25 | slotted | 77 ft/lbs | 77 ft/lbs | 04503-25 |
| ER25 | mini nut | 25 ft/lbs | 25 ft/lbs | 04587 |
| ER32 | slotted | 100 ft/lbs | 100 ft/lbs | 04604-32 |
| ER40 | slotted | 130 ft/lbs | 130 ft/lbs | 04605-40 |
| SYOZ 25 | hook | 90 ft/lbs | 90 ft/lbs | 03690-25 |
| TG 75 | slotted | 90 ft/lbs | 90 ft/lbs | 04604-32 |
| TG 100 | hook | 90 ft/lbs | 90 ft/lbs | 03690-25 |

| Retention Knobs | Wrench Flats | Drive | Torque | Order Socket |
|-----------------|--------------|-------|-----------|--------------|
| BT30 Taper | 0.535" | 1/4" | 36 ft/lbs | PSS-30BT |
| ISO 30 Taper | 0.535" | 3/8" | 36 ft/lbs | PSS-30ISO |
| Any 40 Taper | 0.750" | 3/8" | 76 ft/lbs | PSS-40 |
| BT50 Taper | 1.187" | 1/2" | 99 ft/lbs | PSC-50 |
| CAT50 Taper | 1.250" | 1/2" | 99 ft/lbs | PSC-50 |



For maximum holding power fill the collet all the way with the tool shank (left) and use a PowerCOAT nut.

DIRECTIONS

1. Snap collet into nut.
2. Insert cutting tool into collet. Make sure shank extends to the bottom of the collet.
3. Hand tighten collet nut assembly into toolholder.
4. Insert toolholder assembly into tightening fixture and secure it.
5. Tighten collet nut to recommended torque using a torque wrench and adapter.