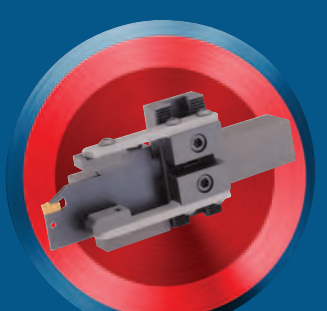
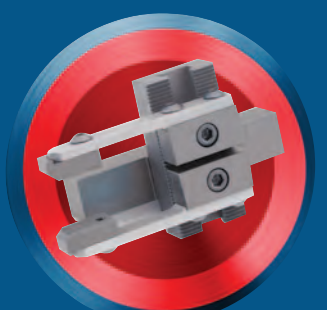




CNC BAR PULLERS

EASILY AUTOMATE ANY CNC LATHE
FOR LIGHTS-OUT PRODUCTION





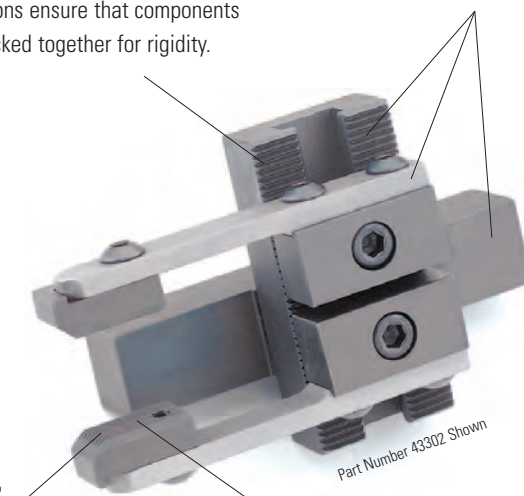
ROYAL COMPACT CNC BAR PULLERS

Automate Any CNC Lathe

- Great for use with small CNC lathes – compact design **minimizes tool interference**.
- Very easy to setup and use.
- Unit can pull round, square, and hex stock.
- Flexible heat-treated steel fingers provide strong gripping force.
- Each compact bar puller includes one set of serrated jaws and one blank spindle bushing.
- Additional sizes and shank styles are available. Please contact Royal for information.

All parts subject to wear are hardened for strength and durability.

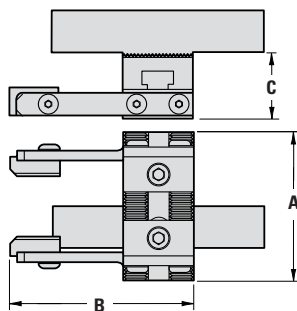
Serrations ensure that components stay locked together for rigidity.



Part Number 43302 Shown

Unit is very easy to use – simply set gap between jaws 1/8" smaller than stock size. As the bar puller slides over the bar along the x-axis, the fingers flex to provide the gripping force. The turret then retracts along the z-axis, pulling the bar out to the desired position.

Serrated jaws provide positive grip. Smooth jaws are available for softer materials.



Royal Compact CNC Bar Pullers

| SHANK SIZE | GRIPPING RANGE | A | B | C | PART NUMBER | PRICE ¹ |
|------------|----------------|--------|--------|---------|-------------|--------------------|
| 3/4" SQ | 1/8"–2 1/4" | 2 5/8" | 3 1/4" | 1 3/16" | 43302 | \$1,115 |
| 1" SQ | 1/8"–2 1/4" | 2 5/8" | 3 1/4" | 1 3/16" | 43304 | 1,115 |
| 1" SQ | 1/8"–3" | 3 5/8" | 3 1/4" | 1 3/16" | 43306 | 1,180 |

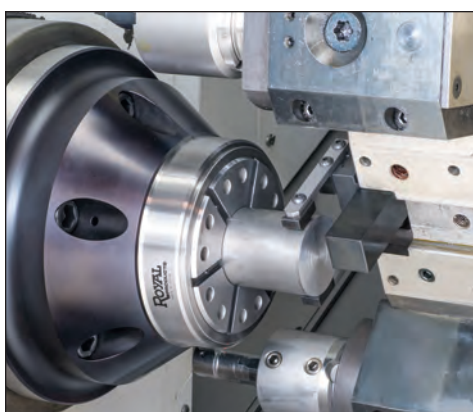
Royal Compact CNC Bar Pullers (Metric)

| SHANK SIZE | GRIPPING RANGE | A | B | C | PART NUMBER | PRICE ¹ |
|------------|----------------|------|------|------|-------------|--------------------|
| 20mm | 3–57mm | 67mm | 83mm | 30mm | 43680 | \$1,390 |
| 25mm | 3–57mm | 67mm | 83mm | 30mm | 43684 | 1,390 |
| 25mm | 3–76mm | 92mm | 83mm | 30mm | 43688 | 1,440 |

¹Includes bar puller, one set of standard jaws and one blank spindle bushing.

Replacement Parts

| DESCRIPTION | PART NUMBER | PRICE/SET |
|-------------------|-------------|--------------|
| Spring Finger Set | 43505 | \$139 |
| Serrated Jaw Set | 43500 | 198 |
| Smooth Jaw Set | 43502 | 245 |



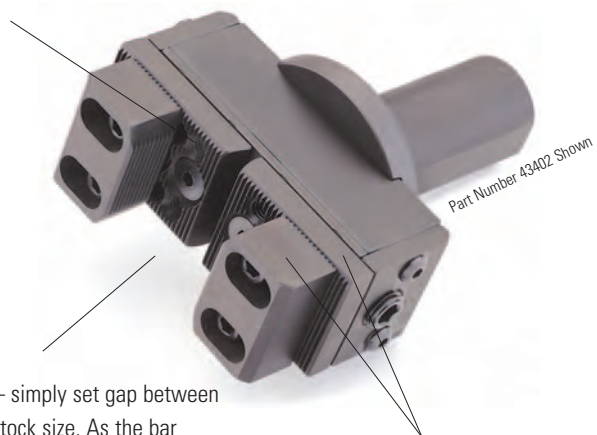
ROYAL HEAVY-DUTY CNC BAR PULLERS

Automate Any CNC Lathe



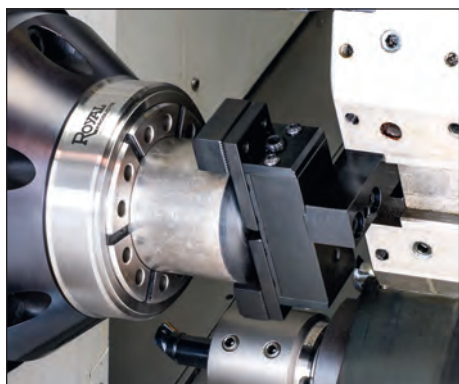
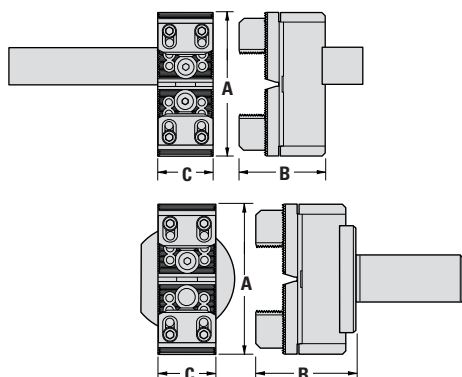
- ❑ Rugged, heavy-duty design withstands the toughest manufacturing environments.
- ❑ Very easy to setup and use.
- ❑ Unit can pull round, square, and hex stock.
- ❑ Large internal die springs provide **very strong gripping force**.
- ❑ Each bar puller includes one set of standard jaws and one blank spindle bushing. Extra capacity jaws sold separately.
- ❑ Additional sizes and shank styles available. Please contact Royal for information.

Serrations ensure that components stay locked together for rigidity.



Unit is very easy to use – simply set gap between jaws $1/8"$ smaller than stock size. As the bar puller slides over the bar along the x-axis, the jaws compress heavy-duty internal die springs to provide high gripping force. The turret then retracts along the z-axis, pulling the bar out to the desired position.

All parts subject to wear are hardened for strength and durability.



Replacement Parts

| DESCRIPTION | PART NUMBER | PRICE/SET |
|------------------------|-------------|-----------|
| Standard Jaw Set | 43510 | \$260 |
| Extra-Capacity Jaw Set | 43512 | 288 |

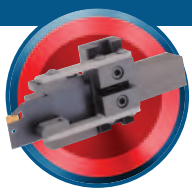
Royal Heavy-Duty CNC Bar Pullers – Square Shank

| SHANK SIZE | GRIPPING RANGE | | A | B | C | PART NUMBER RIGHT HAND MODEL* | PRICE |
|------------|----------------|---------------------|--------|---------|--------|----------------------------------|---------|
| | STANDARD JAWS | EXTRA-CAPACITY JAWS | | | | | |
| 3/4" SQ | 1/8"–2 1/4" | 1 7/8"–3 3/4" | 3 7/8" | 2 9/16" | 1 1/2" | 43360 | \$1,875 |
| 1" SQ | 1/8"–2 1/4" | 1 7/8"–3 3/4" | 3 7/8" | 2 9/16" | 1 1/2" | 43366 | 1,995 |
| 1" SQ | 1/8"–3 1/2" | 1 7/8"–5 3/8" | 4 3/4" | 2 9/16" | 1 1/2" | 43370 | 2,085 |
| 1" SQ | 1/8"–3 5/8" | 1 7/8"–5 1/2" | 5" | 2 3/4" | 1 3/4" | 43372 | 2,250 |
| 1" SQ | 1/8"–4 7/8" | 1 7/8"–6 1/2" | 6 3/4" | 2 3/4" | 1 3/4" | 43376 | 2,515 |

* Most machines require a right-hand unit. If you need a left-hand unit please contact one of our engineers at 1-800-645-4174.

Royal Heavy-Duty CNC Bar Pullers – Round Shank

| SHANK SIZE | GRIPPING RANGE | | A | B | C | PART NUMBER | PRICE |
|-------------|----------------|---------------------|--------|----------|--------|-------------|---------|
| | STANDARD JAWS | EXTRA-CAPACITY JAWS | | | | | |
| 1" Dia. | 1/8"–2 1/4" | 1 7/8"–3 3/4" | 3 7/8" | 2 15/16" | 1 1/2" | 43400 | \$2,375 |
| 1 1/4" Dia. | 1/8"–2 1/4" | 1 7/8"–3 3/4" | 3 7/8" | 2 15/16" | 1 1/2" | 43402 | 2,375 |
| 1 1/4" Dia. | 1/8"–3 1/2" | 1 7/8"–5 3/8" | 5 3/8" | 2 15/16" | 1 1/2" | 43404 | 2,480 |



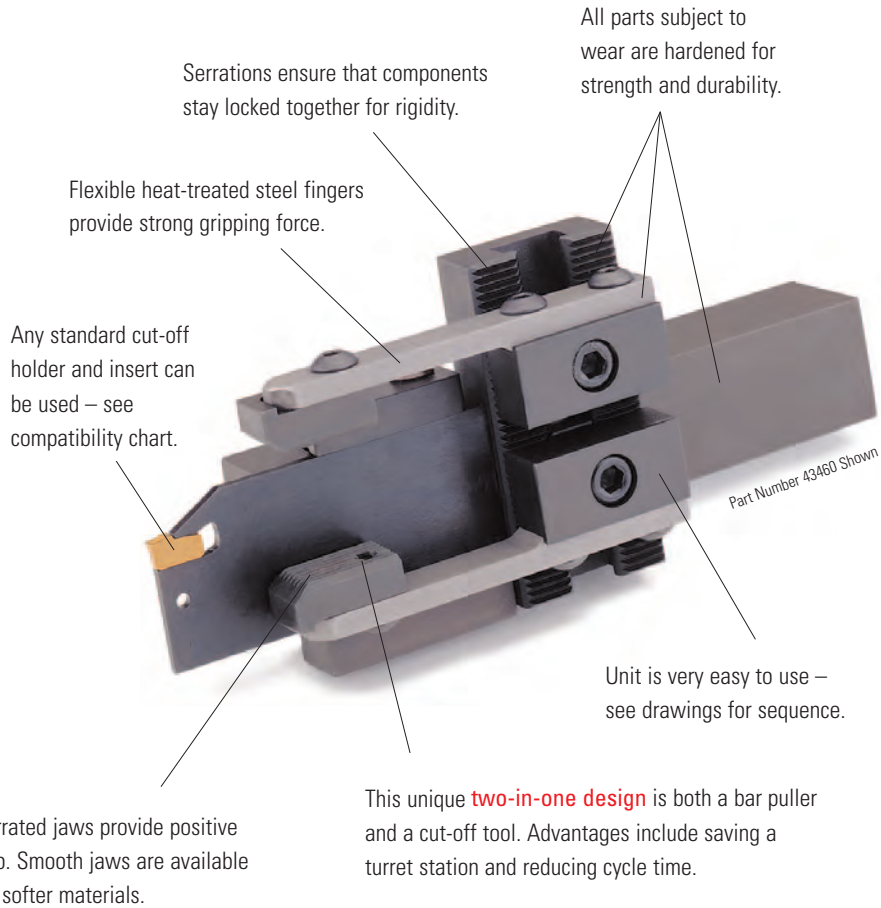
ROYAL COMBO CNC BAR PULLERS

Automate Any CNC Lathe

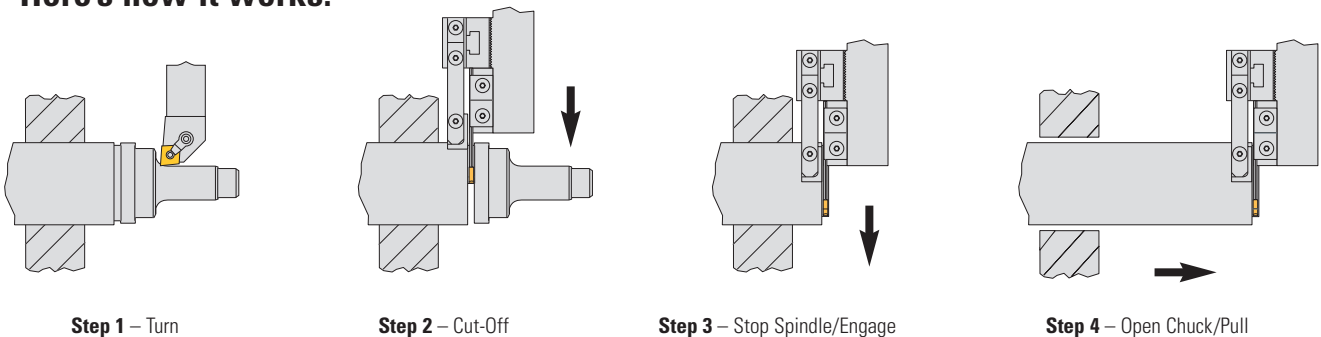
□ The Royal Combo CNC Bar Puller is both a bar puller and a cut-off tool in one unit. Benefits of this design include:

- **Saving a turret station.**
- Reduced cycle time because the turret does not need to index between the cut-off and pulling operations.

- Very easy to setup and use.
- Unit can pull round, square, and hex stock.
- Compact design enables it to be used on most CNC lathes.
- Each Combo Bar Puller includes one set of standard jaws and one blank spindle bushing. Order cut-off insert and holder separately.



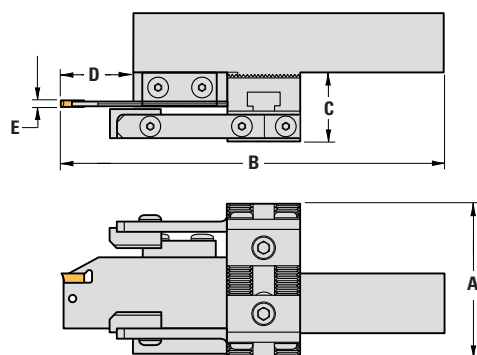
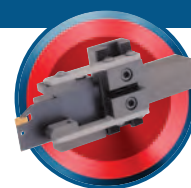
Here's how it works:



Check out the Royal Bar Puller Video at www.barpullers.com

ROYAL COMBO CNC BAR PULLERS

Automate Any CNC Lathe



Cycle times are reduced because the turret does not need to index between cut-off and pulling operations.

Part Number 43460 Shown.

Please note dimension D (maximum depth of cut). If a greater depth of cut is required, we suggest using a separate cut-off tool and only using the bar puller for the pulling operation.

Royal Combo CNC Bar Pullers

| SHANK SIZE | GRIPPING RANGE | A | B | C | MAX DEPTH OF CUT D ¹ | E | PART NUMBER RIGHT HAND ² MODEL | PRICE ³ |
|------------|----------------|--------|--------|---------|---------------------------------|--------|---|--------------------|
| 3/4" SQ | 1/8" - 2 1/4" | 2 5/8" | 4 3/4" | 1 3/16" | 9/16" | 0.125" | 43456 | \$1,585 |
| 1" SQ | 1/8" - 2 1/4" | 2 5/8" | 6 3/8" | 1 3/16" | 1 1/4" | 0.125" | 43460 | 1,595 |
| 1" SQ | 1/8" - 3" | 3 5/8" | 6 3/8" | 1 3/16" | 1 1/4" | 0.125" | 43464 | 1,665 |
| 1" SQ | 1/8" - 4" | 3 5/8" | 6 3/8" | 1 3/16" | 1 1/4" | 0.125" | 43468 | 1,885 |

- Cut-off holder and insert can be purchased separately from Royal Products or through your tooling supplier.
- Bar puller accepts many popular brands of holders and inserts (see chart).
- Cut-off holders not purchased from Royal must be slightly modified before being used with bar puller.

Royal Combo CNC Bar Pullers (Metric)

| SHANK SIZE | GRIPPING RANGE | A | B | C | MAX DEPTH OF CUT D ¹ | E | PART NUMBER RIGHT HAND ² MODEL | PRICE ³ |
|------------|----------------|------|-------|------|---------------------------------|-----|---|--------------------|
| 20mm | 3-57mm | 67mm | 121mm | 30mm | 14.5mm | 3mm | 43615 | \$1,840 |
| 25mm | 3-57mm | 67mm | 162mm | 30mm | 32mm | 3mm | 43625 | 1,860 |
| 25mm | 3-76mm | 92mm | 162mm | 30mm | 32mm | 3mm | 43635 | 1,935 |

¹Maximum depth of cut may not reach bar centerline.

²Most machines require a right-hand unit. If you need a left hand unit please contact one of our engineers at 1-800-645-4174.

³Includes bar puller, one set of standard jaws and one blank spindle bushing. Order insert holder and insert separately.

Replacement Parts — Combo Model

| DESCRIPTION | PART NUMBER | PRICE/SET |
|-------------------|-------------|--------------|
| Spring Finger Set | 43505 | \$139 |
| Serrated Jaw Set | 43500 | 198 |
| Smooth Jaw Set | 43502 | 245 |

Holder with Insert

| BAR PULLER SHANK SIZE | PART NUMBER | PRICE* |
|-----------------------|-------------|--------------|
| 3/4" or 20mm | 43520 | \$270 |
| 1" or 25mm | 43522 | 294 |



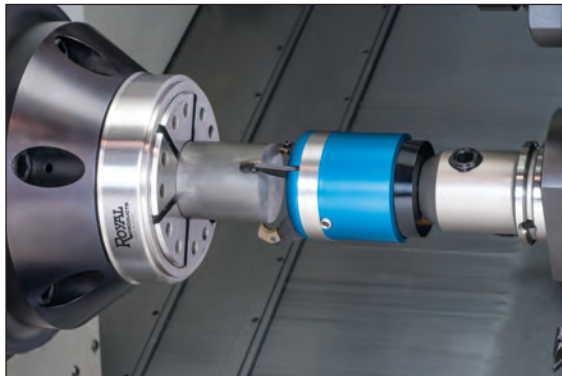
*Includes one modified holder, one neutral cut-off insert, and one installation/removal tool.

Compatibility Chart

| BRAND | 1/2", 3/4" AND 20mm SHANK | 1" AND 25mm SHANK |
|------------|---------------------------|-------------------|
| Carboly | 150.10-20-3 | 150.10-25-3 |
| Iscar | SGFH26-3 | SGFH32-3 |
| Kennametal | EVBSN26M0340 | EVBSN32M0350 |
| Manchester | 340-105 | 340-110 |
| Sandvik | 151.2-21-30 | 151.2-25-30 |
| Valenite | VH101 26 3 | VH101 32 3 |



ROYAL GRIPPEX 20L **COOLANT-ACTUATED** CNC BAR PULLERS — Automate Any CNC Lathe



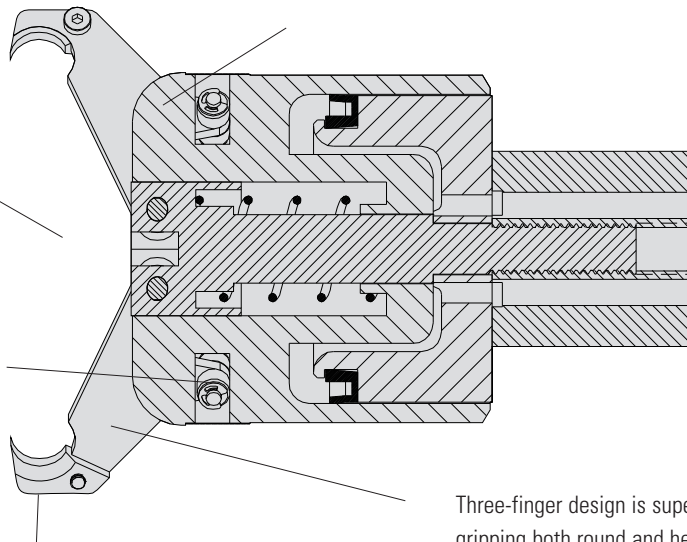
- ❑ The Royal Grippex 20L bar puller is actuated by a CNC lathe's coolant system. As coolant is fed through the unit, it pushes a piston forward which causes the fingers to close around the bar stock. When the coolant is turned off, the fingers automatically spring open.
- ❑ Self-adjusting mechanism – fingers will close down until they contact the bar stock so no presetting is necessary. This feature allows the Grippex to **make multiple pulls on the same workpiece**, even after the OD has been turned.
- ❑ Unit can also be operated by air pressure.
- ❑ When fitted with robot gripper jaws, the Grippex can:
 - Remove a bar remnant from a bar-fed lathe and drop it into the parts catcher. This eliminates the risk of the remnant falling into the chip conveyor where it can become jammed and cause damage.
 - Remove a finished workpiece from a sub-spindle and place it into the parts catcher. This eliminates the need for ejectors and also **allows the sub-spindle to swallow longer parts**.

Thick-walled heavy-duty construction helps to protect unit and allows it to be used at coolant pressures of up to 280 psi.

The Grippex has a wide gripping range of $\frac{1}{8}$ " – $3\frac{1}{8}$ ". Higher capacity gripping fingers are also available.

Very high gripping force and smooth operation is achieved through an optimized mechanism where each finger pivots on two roller bearings. As little as 15 psi of coolant pressure is enough to enable the Grippex to pull a 210 lb. bar!

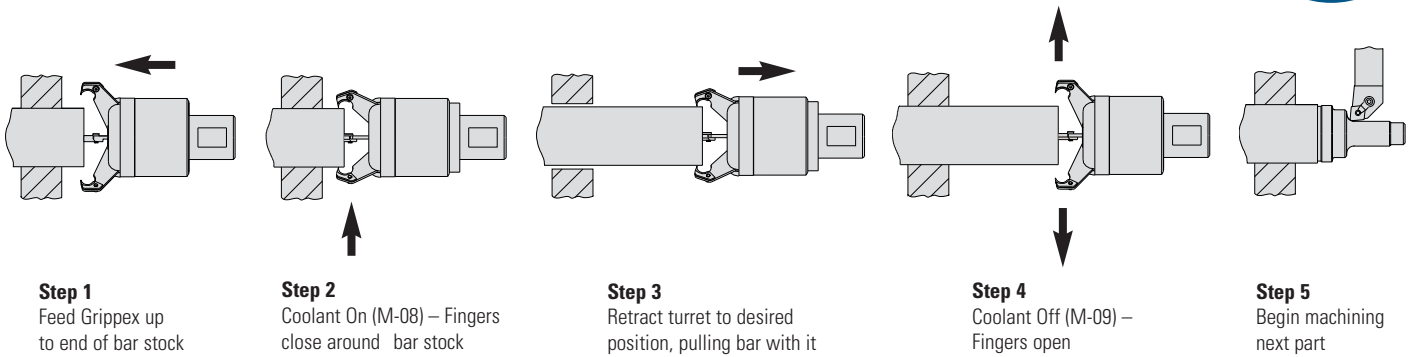
Hardened finger inserts reduce wear and help the Grippex penetrate hard materials like stainless steel.



Input ports for coolant or air.

Three-finger design is superior for gripping both round and hex stock. Special two-finger model also available. Contact Royal for information.

ROYAL GRIPPEX 20L COOLANT-ACTUATED CNC BAR PULLERS – Automate Any CNC Lathe



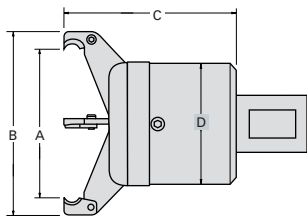
Step 1
Feed Grippex up to end of bar stock

Step 2
Coolant On (M-08) – Fingers close around bar stock

Step 3
Retract turret to desired position, pulling bar with it

Step 4
Coolant Off (M-09) – Fingers open

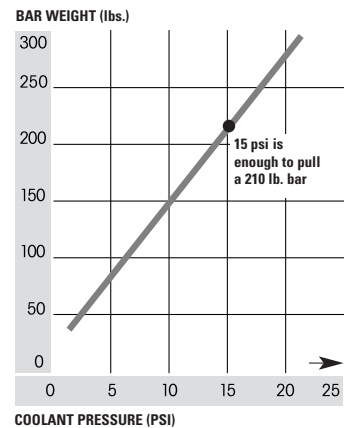
Step 5
Begin machining next part



20L Clearance Dimensions

| GRIPPING RANGE | FINGER PART NUMBER | A | B | C | D |
|----------------|--------------------|--------|---------|----------|----------|
| 1/8" – 2 3/8" | 43170 | 2 3/8" | 3 1/4" | 3 1/2" | 2 11/16" |
| 1/8" – 3 1/8" | 43175 | 3 1/8" | 4" | 3 11/16" | 2 11/16" |
| 5/16" – 4 1/8" | 43180 | 4 1/8" | 5 1/16" | 4 1/4" | 2 11/16" |

Grippex 20L Pulling Force Graph



Royal Grippex 20L Bar Pullers



| SHANK | PART NUMBER | PRICE* |
|--------------|-------------|---------|
| 1" Round | 43140 | \$2,020 |
| 1 1/4" Round | 43145 | 2,020 |
| 1 1/2" Round | 43150 | 2,020 |

*Includes one set of standard fingers (3 3/8" cap), and one set of inserts.



Replacement Finger Sets

| CAPACITY | PART NUMBER | PRICE/SET |
|----------------------|-------------|-----------|
| 1/8" – 2 3/8" | 43170 | \$230 |
| 1/8" – 3 1/8" (Std.) | 43175 | 252 |
| 5/16" – 4 1/8" | 43180 | 467 |

Contact us if you need fingers for an older model Grippex unit.



Replacement Insert Sets

| DESCRIPTION | PART NUMBER | PRICE/SET |
|----------------|-------------|-----------|
| 20L Insert Set | 43185 | \$168 |

Coolant Adapter

Provides an easy method for feeding coolant or air to unit. Not necessary for most applications.



| DESCRIPTION | PART NUMBER | PRICE/SET |
|-----------------|-------------|-----------|
| Coolant Adapter | 43190 | \$168 |



Robot Gripper Jaw Sets

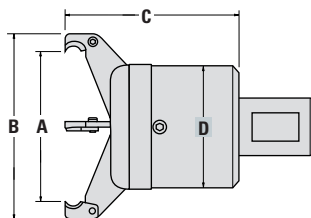
For removing finished parts from a subspindle or removing bar remnants from main spindle.

| DESCRIPTION | PART NUMBER | PRICE/SET |
|---------------------------|-------------|-----------|
| 20L Robot Gripper Jaw Set | 43106 | \$296 |



ROYAL GRIPPEX 20S **COOLANT-ACTUATED** CNC BAR PULLERS – Automate Any CNC Lathe

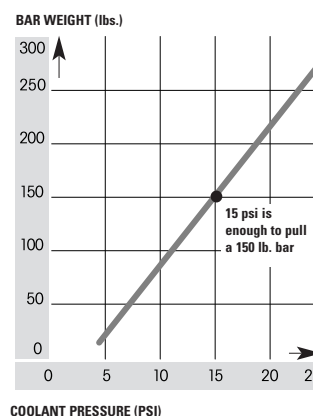
- Same great features as Model 20L featured on previous pages.
- **Smaller body diameter** enables 20S units to be used on machines with less tool clearance and smaller turrets.
- Gripping force for the 20S is quite high, but not as high as the 20L models (see chart).
- 140 psi maximum coolant pressure.



20S Clearance Dimensions

| GRIPPING RANGE | A | B | C | D |
|----------------|---------|----------|--------|--------|
| 1/8" - 2 1/16" | 2 1/16" | 2 15/16" | 3 3/8" | 2 3/8" |

Grippex 20S Pulling Force Graph



Royal Grippex 20S Bar Pullers

| SHANK | PART NUMBER | PRICE |
|--------|-------------|----------------|
| 1" | 43340 | \$1,885 |
| 1 1/4" | 43345 | 1,885 |



Grippex 20S Replacement Finger Sets

| CAPACITY | PART NUMBER | PRICE/SET |
|----------------|-------------|--------------|
| 1/8" - 2 1/16" | 43339 | \$230 |



Coolant Adapter

Provides an easy method for feeding coolant or air to unit. Not necessary for most applications.

| DESCRIPTION | PART NUMBER | PRICE/SET |
|-----------------|-------------|--------------|
| Coolant Adapter | 43190 | \$168 |



Grippex 20S Replacement Insert Sets

| CAPACITY | PART NUMBER | PRICE/SET |
|----------------|-------------|--------------|
| 20S Insert Set | 43185 | \$168 |