

## PO Series Precision Steel Body 3-Jaw & 4-Jaw Self-Centering Scroll Chucks

### Forged Steel Body, High Speed

- Extremely accurate, and guaranteed to maintain this exceptional accuracy for an extended period of time.
- Chucks have a modern and compact design.
- Able to fulfill the highest demands of our customers, and are used whenever high precision machining is demanded.



#### ■ Chuck Body

Drop forged of high grade steel, then put through precise machining operations. All bearing surfaces are carefully hardened and precisely ground.

#### ■ Scroll Plate

Drop forged of fine quality alloy steel, and carefully case hardened. Thread flanks are ground on both sides. Each scroll is balanced.

#### ■ Jaws

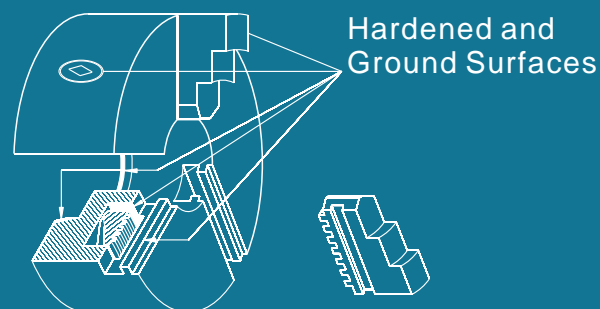
Made of fine alloy steel. Teeth and Guides hardened and fully Ground on both sides.

#### ■ Pinions

Hardened and ground fine alloy steel.

#### ■ Bushings

Made of fine alloy steel. Hardened and ground, then pressed into the pinion seats.



#### ■ Precision grinding of scroll plate and jaw teeth allows you to:

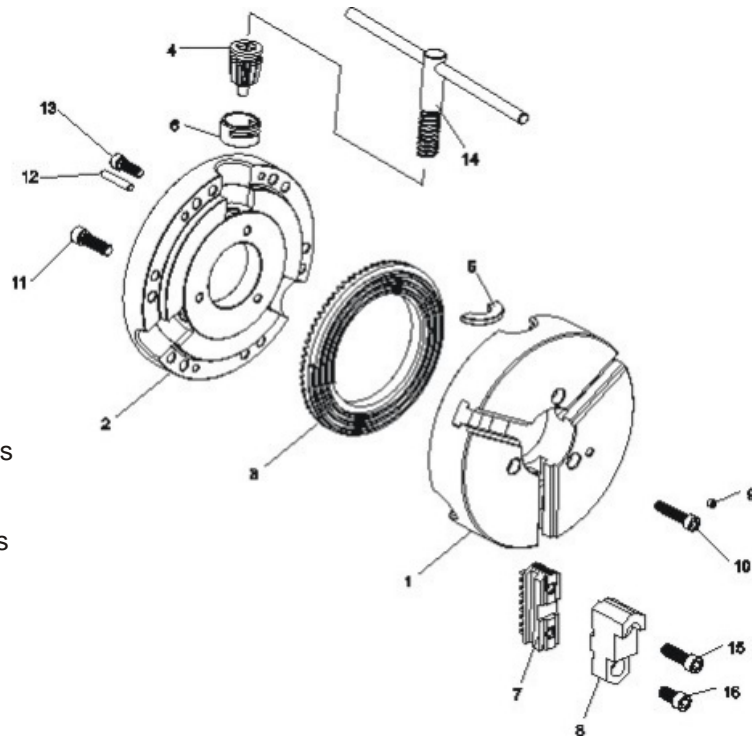
Eliminate the possibility of deformation as a result of heat treatment.

Reach uniform radial gripping force on all teeth of jaws.

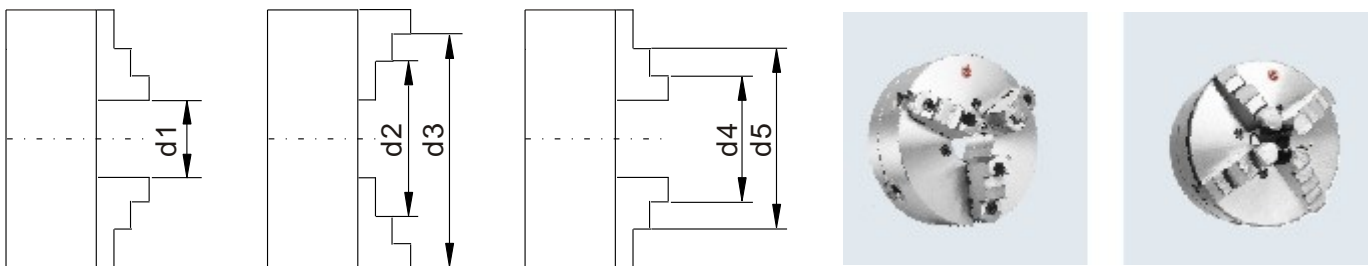
Increase guarantee period for high centering accuracy.

## PO Series Precision Steel Body 3-Jaw & 4-Jaw Self-Centering Scroll Chucks

- 1. Chuck Body
- 2. Back Cover
- 3. Scroll Plate
- 4. Pinion
- 5. Pinion Half Ring
- 6. Pinion Sleeve
- 7. Hard Master Jaws
- 8. Hard Top Jaws
- 9. Grease Nipple
- 10. Back Cover Mounting Bolts
- 11. Chuck Mounting Bolts
- 12. Back Cover Mounting Pin
- 13. Back Cover Mounting Bolts
- 14. Chuck Wrench
- 15&16. Jaw mounting bolts



## Clamping Ranges for 3 & 4 Jaw Chucks with Two-Piece Reversible Jaws & Solid Jaws

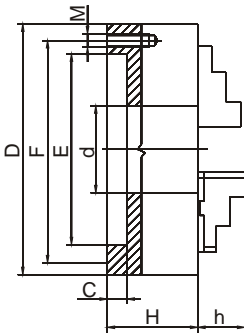


| Chuck Diameter | 4" | 5"        | 6-1/4"    | 8"        | 10"       | 12-1/2"    | 15-3/4"    | 20"        | 25"        |            |
|----------------|----|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|
| Solid Jaws     | d1 | .118-1.30 | .118-1.97 | .118-2.52 | .157-3.54 | .197-4.65  | .394-5.16  | -          | -          |            |
|                | d2 | 1.26-2.44 | 1.54-3.27 | 1.97-4.21 | 2.36-5.71 | 3.03-7.40  | 3.54-8.46  | -          | -          |            |
|                | d3 | 2.44-3.27 | 3.15-4.92 | 3.86-6.30 | 5.12-7.87 | 6.30-9.84  | 7.48-12.40 | -          | -          |            |
|                | d4 | .98-2.20  | 1.34-2.91 | 1.65-3.94 | 2.05-5.31 | 2.44-6.85  | 3.07-7.87  | -          | -          |            |
|                | d5 | 2.20-3.43 | 2.83-4.53 | 3.70-6.06 | 4.72-7.95 | 5.71-10.08 | 6.77-11.77 | -          | -          |            |
| Two-Piece Jaws | d1 | -         | .118-1.97 | .118-2.52 | .157-3.54 | .197-4.65  | .394-5.16  | .394-7.09  | .787-9.25  | 1.18-13.19 |
|                | d2 | -         | 2.05-3.78 | 2.44-4.76 | 2.83-6.14 | 3.39-7.76  | 4.06-8.90  | 5.00-11.57 | 4.33-15.75 | 4.72-22.44 |
|                | d3 | -         | 3.74-4.92 | 4.53-6.30 | 5.24-7.87 | 6.30-9.84  | 7.48-12.40 | 9.06-15.75 | 7.48-19.69 | 7.87-24.80 |
|                | d4 | -         | 1.34-2.99 | 1.65-3.81 | 1.97-5.12 | 2.28-6.50  | 2.56-7.17  | 2.84-8.98  | 4.72-16.14 | 5.51-23.23 |
|                | d5 | -         | 2.95-4.65 | 3.46-5.75 | 4.13-7.48 | 4.92-9.25  | 5.71-10.43 | 6.50-12.95 | 7.87-19.09 | 8.27-26.18 |

**PO Series Precision Steel Body  
3-Jaw & 4-Jaw Self-Centering Scroll Chucks**

Forged Steel Body, Plain Back Chucks, Adapter Plates Required

■ 3 & 4 Jaw Self-Centering Scroll Chucks



Principal Dimensions - Back Mounting

| Chuck Dia. D | F       | E       | d      | C     | H     | h     | Adapter Mounting Bolts |      |              |
|--------------|---------|---------|--------|-------|-------|-------|------------------------|------|--------------|
|              |         |         |        |       |       |       | Thread M               | L    | No. of Bolts |
| 4"           | 3.2677  | 2.7559  | 0.7874 | .1181 | 1.969 | -     | M8 x 1.25              | 0.98 | 3            |
| 5"           | 4.2520  | 3.7402  | 1.3976 | .1575 | 2.422 | 1.575 |                        |      |              |
| 6-1/4"       | 5.5118  | 4.9213  | 1.6535 | .1575 | 2.756 | 1.693 |                        |      |              |
| 8"           | 6.9291  | 6.2992  | 2.1654 | .1575 | 3.150 | 1.772 | M10 x 1.5              | 1.18 | 6            |
| 10"          | 8.8189  | 7.8740  | 2.9921 | .1969 | 3.543 | 2.087 |                        |      |              |
| 12-1/2"      | 11.2598 | 10.2362 | 4.0551 | .1969 | 3.937 | 2.244 | M12 x 1.75             |      |              |
| 15-3/4"      | 14.2519 | 12.9921 | 5.3543 | .1969 | 4.331 | 2.693 |                        |      |              |
| 20"          | 18.0314 | 16.5354 | 7.4803 | .1969 | 4.685 | 3.150 |                        |      |              |
| 25"          | 23.0709 | 21.4567 | 9.9212 | .2756 | 5.079 | 3.425 | M16 x 2                | 1.57 |              |

■ 3-Jaw Scroll Chuck with Two-Piece Hard Reversible Jaws



Each chuck is provided with:

- 1 set of hard master jaws
- 1 set of hard top reversible jaws
- 1 chuck wrench
- 1 set of mounting bolts
- 2 hex keys
- Forged steel body
- 3 pinion design
- 2 eye bolts for chuck size 15-3/4" diameter and larger

| Chuck Dia. | Hole Dia. | RPM max. | Model    | Part No.   |
|------------|-----------|----------|----------|------------|
| 5"         | 1.3976    | 4800     | PO3-5"A  | 1-105-0500 |
| 6-1/4"     | 1.6535    | 4500     | PO3-6"A  | 1-105-0600 |
| 8"         | 2.1654    | 4000     | PO3-8"A  | 1-105-0800 |
| 10"        | 2.9921    | 3500     | PO3-10"A | 1-105-1000 |
| 12-1/2"    | 4.0551    | 2800     | PO3-12"A | 1-105-1200 |
| 15-3/4"    | 5.3543    | 2000     | PO3-16"A | 1-105-1600 |
| 20"        | 7.480     | 1200     | PO3-20"A | 1-105-2000 |
| 25"        | 9.921     | 1000     | PO3-25"A | 1-105-2500 |

■ 3-Jaw Scroll Chucks with Two Sets of Hard Solid Jaws



Each chuck is provided with:

- 1 set of hard solid ID jaws
- 1 set of hard solid OD jaws
- 1 chuck wrench
- 1 set of mounting bolts
- 2 hex keys
- Forged steel body
- 3 pinion design
- 2 eye bolts for chuck sizes 15-3/4" diameter and larger

| Chuck Dia. | Hole Dia. | RPM max. | Model   | Part No.   |
|------------|-----------|----------|---------|------------|
| 3"         | .6299     | 6000     | PO3-3"  | 1-106-0300 |
| 4"         | .7874     | 5200     | PO3-4"  | 1-106-0400 |
| 5"         | 1.3786    | 4800     | PO3-5"  | 1-106-0500 |
| 6-1/4"     | 1.6535    | 4500     | PO3-6"  | 1-106-0600 |
| 8"         | 2.1654    | 4000     | PO3-8"  | 1-106-0800 |
| 10"        | 2.9921    | 3500     | PO3-10" | 1-106-1000 |
| 12-1/2"    | 4.0551    | 2800     | PO3-12" | 1-106-1200 |

■ 4-Jaw Scroll Chuck with Two-Piece Hard Reversible Jaws



Each chuck is provided with:

- 1 set of hard master jaws
- 1 set of hard top reversible jaws
- 1 chuck wrench
- 1 set of mounting bolts
- 2 hex keys
- Forged steel body
- 3 pinion design
- 2 eye bolts for chuck size 15-3/4" diameter and larger

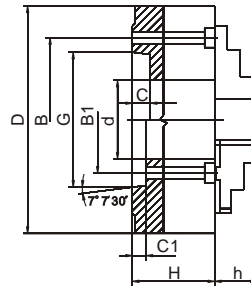
| Chuck Dia. | Hole Dia. | RPM max. | Model    | Part No.   |
|------------|-----------|----------|----------|------------|
| 5"         | 1.3976    | 4800     | PO4-5"A  | 1-107-0500 |
| 6-1/4"     | 1.6535    | 4500     | PO4-6"A  | 1-107-0600 |
| 8"         | 2.1654    | 4000     | PO4-8"A  | 1-107-0800 |
| 10"        | 2.9921    | 3500     | PO4-10"A | 1-107-1000 |
| 12-1/2"    | 4.0551    | 2800     | PO4-12"A | 1-107-1200 |
| 15-3/4"    | 5.3543    | 2000     | PO4-16"A | 1-107-1600 |
| 20"        | 7.480     | 1200     | PO4-20"A | 1-107-2000 |
| 25"        | 9.921     | 1000     | PO4-25"A | 1-107-2500 |

### ➔ 3-Jaw ,Type A1/A2, Direct Mount Self-Centering Scroll Chucks With Two Piece Hard Reversible Jaws

- Forged steel body.      ■ High speed.
- Type A1 spindle has a 2 bolt hole pattern, inside (size B1), and outside the taper (size B). Either an A1 or A2 chuck will fit on it.
- Type A2 spindle has 1 bolt pattern, outside the taper (size B).



Type A



| Chuck Dia. | Taper Size | Hole Dia.(d) | RPM max. | wt. lbs. | Model           | Chuck Part No . | B (A2) | B1 (A1) | G      | C/C1* | H      | h     | Screws M |        |          |          |
|------------|------------|--------------|----------|----------|-----------------|-----------------|--------|---------|--------|-------|--------|-------|----------|--------|----------|----------|
|            |            |              |          |          |                 |                 |        |         |        |       |        |       | Thread   | L      | Qty.     | Part NO. |
| 6-1/4"     | A1-5       | 1.6535       | 4500     | 22       | PO3-6"/A/A1-5   | 1-115-0605      | -      | 2.4374  | 3.2505 | .563  | 2.6772 | 1.693 | 7/16-14  | 2-3/8  | 3        | BA-06-05 |
| 8"         | A1-5       | 1.6535       | 4000     | 42       | PO3-8"/A/A1-5   | 1-115-0805      | -      | 3.2500  | 4.1880 | .625  | 3.5039 | 2.087 |          |        |          | 1-2/13   |
|            | A1-6       | 2.1653       |          |          | PO3-8"/A/A1-6   | 1-115-0806      | -      |         |        |       |        |       | 3.0709   | 1.772  | 2-3/4    |          |
| 10"        | A1-6       | 2.1635       | 3500     | 71       | PO3-10"/A/A1-6  | 1-115-1006      | -      | 4.3750  | 5.5007 | .688  | 3.7874 | 2.244 | 5/8-11   | 2-3/4  | BA-10-06 |          |
|            | A1-8       | 2.9921       |          |          | PO3-10"/A/A1-8  | 1-115-1008      | -      |         |        |       |        |       |          |        | 5.5007   | .688     |
| 12-1/2"    | A2-6       | 4.0551       | 2800     | 121      | PO3-12"/A/A2-6  | 1-115-1206      | 5.2520 | -       | 4.1880 | .630  | 3.7874 | 2.244 | 1-2/13   | 4      | BA-12-06 |          |
|            | A1-8       | 3.1496       |          |          | PO3-12"/A/A1-8  | 1-115-1208      | -      | 4.3750  |        |       |        |       |          |        | .688     | 3-1/8    |
| 15-3/4"    | A2-8       | 5.3543       | 2000     | 203      | PO3-16"/A/A2-8  | 1-115-1608      | 6.7480 | -       | 5.5007 | .709  | 4.2520 | 2.639 | 5/8-11   | 4-5/16 | BA-16-08 |          |
|            | A1-11      | 5.1181       |          |          | PO3-16"/A/A1-11 | 1-115-1611      | -      | 6.5000  |        |       |        |       |          |        | 7.7507   | .750     |
| 20"        | A2-8       | 5.3543       | 1200     | 353      | PO3-20"/A/A2-8  | 1-115-2008      | 6.7480 | -       | 5.5007 | .709  | 4.6850 | 3.091 | 5/8-11   | 4-3/4  | BA-20-08 |          |
|            | A2-11      | 7.4803       |          |          | PO3-20"/A/A2-11 | 1-115-2011      | 9.2520 | -       |        |       |        |       |          |        | 7.7507   | .787     |
| 25"        | A2-11      | 7.4803       | 1000     | 628      | PO3-25"/A/A2-11 | 1-115-2511      | 9.2520 | -       | 7.7507 | .750  | 5.0787 | 3.425 | 3/4-10   | 5-5/16 | BA-25-11 |          |
|            | A2-15      | 9.9213       |          |          | PO3-25"/A/A2-15 | 1-115-2515      | 13.000 | -       |        |       |        |       |          |        | 11.251   | .813     |

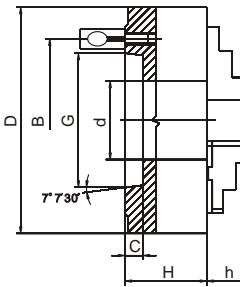
\*C-C1, depth of counterbore.

### ➔ 3-Jaw ,Type D1, Direct Mount Self-Centering Scroll Chucks With Two Piece Hard Reversible Jaws

- Forged steel body.      ■ High speed.



Type D1

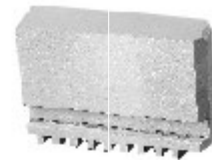
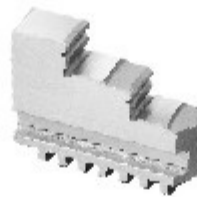
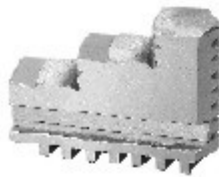


| Chuck Dia. | Taper Size | Hole Dia.(d) | RPM max. | wt. lbs. | Model           | Chuck Part No . | B      | G      | C     | H      | h     | Camlock Studs |         |         |          |         |         |         |
|------------|------------|--------------|----------|----------|-----------------|-----------------|--------|--------|-------|--------|-------|---------------|---------|---------|----------|---------|---------|---------|
|            |            |              |          |          |                 |                 |        |        |       |        |       | OD            | Thread  | Qty.    | Part No. |         |         |         |
| 6-1/4"     | D1-3       | 1.6535       | 4500     | 20       | PO3-6"/A/D1-3   | 1-125-0603      | 2.7795 | 2.1250 | .5118 | 2.6772 | 1.693 | 9-16          | M10x1   | 3       | CA-D-03  |         |         |         |
|            | D1-4       |              |          |          | PO3-6"/A/D1-4   | 1-125-0604      | 3.2520 | 2.5005 |       |        |       |               |         |         | 5/8      | CA-D-04 |         |         |
|            | D1-5       |              |          |          | PO3-6"/A/D1-5   | 1-125-0605      | 4.1260 | 3.7505 |       |        |       |               |         |         | 3/4      | M12x1   | CA-D-05 |         |
| 8"         | D1-5       | 2.1653       | 4000     | 42       | PO3-8"/A/D1-5   | 1-125-0805      | 4.1260 | 3.2505 | .5629 | 3.0719 | 1.772 | 7/8           | M16x1.5 | CA-D-06 |          |         |         |         |
|            | D1-6       |              |          |          | PO3-8"/A/D1-6   | 1-125-0806      | 5.2520 | 4.1880 |       |        |       |               |         | 1       | M20x1.5  | CA-D-08 |         |         |
| 10"        | D1-6       | 2.9921       | 3500     | 71       | PO3-10"/A/D1-6  | 1-125-1006      | 5.2520 | 4.1880 | .6299 | 3.5039 | 2.087 | 7/8           | M16x1.5 | CA-D-06 |          |         |         |         |
|            | D1-8       |              |          |          | PO3-10"/A/D1-8  | 1-125-1008      | 6.7480 | 5.5007 |       |        |       |               |         | .7087   | 1        | M20x1.5 | CA-D-08 |         |
| 12-1/2"    | D1-6       | 4.0551       | 2800     | 112      | PO3-12"/A/D1-6  | 1-125-1206      | 5.2520 | 4.1880 | .6299 | 3.7874 | 2.244 | 7/8           | M16x1.5 | 6       | CA-D-06  |         |         |         |
|            | D1-8       |              |          |          | PO3-12"/A/D1-8  | 1-125-1208      | 6.7480 | 5.5007 |       |        |       |               |         |         | .7087    | 1       | M20x1.5 | CA-D-08 |
|            | D1-11      |              |          |          | PO3-12"/A/D1-11 | 1-125-1211      | 9.2520 | 7.7507 |       |        |       |               |         |         | .7874    | 4.3976  | 1-3/16  | M22x1.5 |
| 15-3/4"    | D1-8       | 5.3543       | 2000     | 223      | PO3-16"/A/D1-8  | 1-125-1608      | 6.7480 | 5.5007 | .7087 | 4.2570 | 2.639 | 1             | M20x1.5 | CA-D-08 |          |         |         |         |
|            | D1-11      |              |          |          | PO3-16"/A/D1-11 | 1-125-1611      | 9.2520 | 7.7507 |       |        |       |               |         | .7874   | 1-3/16   | M22x1.5 | CA-D-11 |         |
| 20"        | D1-8       | 5.3543       | 1200     | 331      | PO3-20"/A/D1-8  | 1-125-2008      | 6.7480 | 5.5007 | .7087 | 4.6850 | 3.150 | 1             | M20x1.5 | CA-D-08 |          |         |         |         |
|            | D1-11      |              |          |          | PO3-20"/A/D1-11 | 1-125-2011      | 9.2520 | 7.7507 |       |        |       |               |         | .7874   | 1-3/16   | M22x1.5 | CA-D-11 |         |
| 25"        | D1-8       | 5.3543       | 1000     | 604      | PO3-25"/A/D1-8  | 1-125-2508      | 6.7480 | 5.5007 | .7087 | 5.0787 | 3.425 | 1             | M20x1.5 | CA-D-08 |          |         |         |         |
|            | D1-11      |              |          |          | PO3-25"/A/D1-11 | 1-125-2511      | 9.2520 | 7.7507 |       |        |       |               |         | .7874   | 1-3/16   | M22x1.5 | CA-D-11 |         |

# SPARE PART FOR PO Series Precision Steel Body 3-Jaw & 4-Jaw Self-Centering Scroll Chucks



| Part No.   | Hard Top Jaws |            | Hard Master Jaws |            | Soft Top Jaws |             |
|------------|---------------|------------|------------------|------------|---------------|-------------|
|            | 3-Jaw         | 4-Jaw      | 3-Jaw            | 4-Jaw      | 3-Jaw         | 4-Jaw       |
| Chuck Dia. |               |            |                  |            |               |             |
| 5"         | TJ-PS3-125    | TJ-PS4-125 | MJ-PS3-125       | MJ-PS4-125 | STJ-PS3-125   | STJ-PS4-125 |
| 6-1/4"     | TJ-PS3-160    | TJ-PS4-160 | MJ-PS3-160       | MJ-PS4-160 | STJ-PS3-160   | STJ-PS4-160 |
| 8"         | TJ-PS3-200    | TJ-PS4-200 | MJ-PS3-200       | MJ-PS4-200 | STJ-PS3-200   | STJ-PS4-200 |
| 10"        | TJ-PS3-250    | TJ-PS4-250 | MJ-PS3-250       | MJ-PS4-250 | STJ-PS3-250   | STJ-PS4-250 |
| 12-1/2"    | TJ-PS3-315    | TJ-PS4-315 | MJ-PS3-315       | MJ-PS4-315 | STJ-PS3-315   | STJ-PS4-315 |
| 15-3/4"    | TJ-PS3-400    | TJ-PS4-400 | MJ-PS3-400       | MJ-PS4-400 | STJ-PS3-400   | STJ-PS4-400 |
| 20"        | TJ-PS3-500    | TJ-PS4-500 | MJ-PS3-500       | MJ-PS4-500 | STJ-PS3-500   | STJ-PS4-500 |
| 25"        | TJ-PS3-630    | TJ-PS4-630 | MJ-PS3-630       | MJ-PS4-630 | STJ-PS3-630   | STJ-PS4-630 |



| Part No.   | I.D. Hard Solid Jaws |            | O.D. Hard Solid Jaws |            | Soft Solid Jaws |            |
|------------|----------------------|------------|----------------------|------------|-----------------|------------|
|            | 3-Jaw                | 4-Jaw      | 3-Jaw                | 4-Jaw      | 3-Jaw           | 4-Jaw      |
| Chuck Dia. |                      |            |                      |            |                 |            |
| 3"         | OJ-PS3-80            | -          | IJ-PS3-80            | -          | SJ-PS3-80       | -          |
| 4"         | OJ-PS3-100           | OJ-PS4-125 | IJ-PS3-100           | IJ-PS4-100 | SJ-PS3-100      | SJ-PS4-100 |
| 5"         | OJ-PS3-125           | OJ-PS4-125 | IJ-PS3-125           | IJ-PS4-125 | SJ-PS3-125      | SJ-PS4-125 |
| 6-1/4"     | OJ-PS3-160           | OJ-PS4-160 | IJ-PS3-160           | IJ-PS4-160 | SJ-PS3-160      | SJ-PS4-160 |
| 8"         | OJ-PS3-200           | OJ-PS4-200 | IJ-PS3-200           | IJ-PS4-200 | SJ-PS3-200      | SJ-PS4-200 |
| 10"        | OJ-PS3-250           | OJ-PS4-250 | IJ-PS3-250           | IJ-PS4-250 | SJ-PS3-250      | SJ-PS4-250 |
| 12-1/2"    | OJ-PS3-315           | OJ-PS4-315 | IJ-PS3-315           | IJ-PS4-315 | SJ-PS3-315      | SJ-PS4-315 |
| 15-3/4"    | OJ-PS3-400           | OJ-PS4-400 | IJ-PS3-400           | IJ-PS4-400 | SJ-PS3-400      | SJ-PS4-400 |
| 20"        | OJ-PS3-500           | OJ-PS4-500 | IJ-PS3-500           | IJ-PS4-500 | SJ-PS3-500      | SJ-PS4-500 |
| 25"        | OJ-PS3-630           | OJ-PS4-630 | IJ-PS3-630           | IJ-PS4-630 | SJ-PS3-630      | SJ-PS4-630 |



Part No.

| Chuck Dia. | Scroll Plate | Pinion    | Wrench  | Pinion Sleeve | Half Ring |
|------------|--------------|-----------|---------|---------------|-----------|
| 3"         | SC-PS-80     | PI-PS-80  | W-P-80  | -             | -         |
| 4"         | SC-PS-100    | PI-PS-100 | W-P-100 | -             | -         |
| 5"         | SC-PO-125    | PI-PO-125 | W-P-125 | PS-P-125      | HR-P-125  |
| 6-1/4"     | SC-PO-160    | PI-PO-160 | W-P-160 | PS-P-160      | HR-P-160  |
| 8"         | SC-PO-200    | PI-PO-200 | W-P-200 | PS-P-200      | HR-P-200  |
| 10"        | SC-PO-250    | PI-PO-250 | W-P-250 | PS-P-250      | HR-P-250  |
| 12-3/2"    | SC-PO-315    | PI-PO-315 | W-P-315 | PS-P-315      | HR-P-315  |
| 15-3/4"    | SC-PO-400    | PI-PO-400 | W-P-400 | PS-P-400      | HR-P-400  |
| 20"        | SC-PO-500    | PI-PO-500 | W-P-500 | PS-P-500      | HR-P-500  |
| 25"        | SC-PO-630    | PI-PO-630 | W-P-630 | PS-P-630      | HR-P-630  |