



*ONE STOP TOOLING AND MACHINE SHOP*

# PRODUCT AND PRICE LISTS

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## V-BLOCKS

| Catalog Number | Description         | Size | Holding Capacity | Brand | Price    |
|----------------|---------------------|------|------------------|-------|----------|
| 41101-90       | 1" Magnetic V-Block | 1"   | .030"Ø-.625"Ø    | NTM   | \$286.00 |
| 41102-90       | 2" Magnetic V-Block | 2"   | .062"Ø-1.250"Ø   | NTM   | \$435.75 |

## NU-HEAD SERVICE (reuse old carbide boring bars and replace head)

| Boring Bar Size | Diameter | Type  | Price    |
|-----------------|----------|-------|----------|
| NTM size -04    | 1/4"     | SOLID | \$118.80 |
| NTM size -05    | 5/16"    | SOLID | \$118.80 |
| NTM size -06    | 3/8"     | SOLID | \$118.80 |
| NTM size -08    | 1/2"     | SOLID | \$122.10 |
| NTM size -10    | 5/8"     | SOLID | \$157.30 |
| NTM size -12    | 3/4"     | SOLID | \$189.20 |
| NTM size -16    | 1"       | SOLID | \$226.60 |
| NTM size -20    | 1-1/4"   | SOLID | CALL     |
| NTM size -24    | 1-1/2"   | SOLID | CALL     |

| Boring Bar Size | Diameter | Type         | Price    |
|-----------------|----------|--------------|----------|
| NTM size -04    | 1/4"     | COOLANT THRU | \$137.50 |
| NTM size -05    | 5/16"    | COOLANT THRU | \$137.50 |
| NTM size -06    | 3/8"     | COOLANT THRU | \$137.50 |
| NTM size -08    | 1/2"     | COOLANT THRU | \$141.90 |
| NTM size -10    | 5/8"     | COOLANT THRU | \$182.60 |
| NTM size -12    | 3/4"     | COOLANT THRU | \$214.50 |
| NTM size -16    | 1"       | COOLANT THRU | \$264.00 |
| NTM size -20    | 1-1/4"   | COOLANT THRU | CALL     |
| NTM size -24    | 1-1/2"   | COOLANT THRU | CALL     |

| CARBIDE BORING BARS |                                  |             |              |        |                    |          |            |       |             |              |              |              |        |       |                     |                |              |                     |               |          |
|---------------------|----------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|-------------|--------------|--------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|---------------|----------|
|                     |                                  |             | Ø            | OAL    | F Dim              |          |            |       |             |              |              |              |        |       |                     |                |              |                     |               |          |
| Catalog Number      | Description                      | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw | Insert Screw | Insert       | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category      | Price    |
| C03-SWLCR-1.2       | 3/16 Ø STUBBY Carbide Boring Bar | Right       | 0.187        | 4-1/2" | 0.114              | 0.217    | -5°        | Solid |             | TS21         | WCMT-1.21    | 80° Trigon   | STUBBY | NTM   | 17°                 | Carbide        |              | 80° Trigon No Cool  | ID Boring Bar | \$219.51 |
| C03-SWLPL-1.5       | 3/16 Ø STUBBY Carbide Boring Bar | Left        | 0.187        | 4-1/2" | 0.126              | 0.230    | -5°        | Solid |             | MS-1438      | WPMT-1.51.21 | 80° Trigon   | STUBBY | NTM   | 10°                 | Carbide        |              | 80° Trigon No Cool  | ID Boring Bar | \$219.51 |
| C03-SWLPR-1.5       | 3/16 Ø STUBBY Carbide Boring Bar | Right       | 0.187        | 4-1/2" | 0.126              | 0.230    | -5°        | Solid |             | MS-1438      | WPMT-1.51.21 | 80° Trigon   | STUBBY | NTM   | 10°                 | Carbide        |              | 80° Trigon No Cool  | ID Boring Bar | \$219.51 |
| C04-SWLCR-1.2       | 1/4 Ø STUBBY Carbide Boring Bar  | Right       | 0.25         | 4-1/2" | 0.156              | 0.291    | -5°        | Solid |             | TS2          | WCMT-1.21    | 80° Trigon   | STUBBY | NTM   | 17°                 | Carbide        |              | 80° Trigon No Cool  | ID Boring Bar | \$219.51 |
| C04-SWLPL-1.5       | 1/4 Ø STUBBY Carbide Boring Bar  | Left        | 0.25         | 4-1/2" | 0.156              | 0.291    | -5°        | Solid |             | MS-1438      | WPMT-1.51.21 | 80° Trigon   | STUBBY | NTM   | 8°                  | Carbide        |              | 80° Trigon No Cool  | ID Boring Bar | \$219.51 |
| C04-SWLPR-1.5       | 1/4 Ø STUBBY Carbide Boring Bar  | Right       | 0.25         | 4-1/2" | 0.156              | 0.291    | -5°        | Solid |             | MS-1438      | WPMT-1.51.21 | 80° Trigon   | STUBBY | NTM   | 8°                  | Carbide        |              | 80° Trigon No Cool  | ID Boring Bar | \$219.51 |
| C05-SCLCL-2         | 5/16 Ø STUBBY Carbide Boring Bar | Left        | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Solid |             | 5513-020-03  | CCMT-21.51   | 80° Rhomboid | STUBBY | NTM   | 15°                 | Carbide        |              | 80° Diamond No Cool | ID Boring Bar | \$219.51 |
| C05-SCLCR-2         | 5/16 Ø STUBBY Carbide Boring Bar | Right       | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Solid |             | 5513-020-03  | CCMT-21.51   | 80° Rhomboid | STUBBY | NTM   | 15°                 | Carbide        |              | 80° Diamond No Cool | ID Boring Bar | \$219.51 |
| C05-SCLPL-1.8       | 5/16 Ø STUBBY Carbide Boring Bar | Left        | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Solid |             | MS-1152      | CPMT-1.81.51 | 80° Rhomboid | STUBBY | NTM   | 7°                  | Carbide        |              | 80° Diamond No Cool | ID Boring Bar | \$219.51 |
| C05-SCLPR-1.8       | 5/16 Ø STUBBY Carbide Boring Bar | Right       | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Solid |             | MS-1152      | CPMT-1.81.51 | 80° Rhomboid | STUBBY | NTM   | 7°                  | Carbide        |              | 80° Diamond No Cool | ID Boring Bar | \$219.51 |
| C05-SCLPR-2         | 5/16 Ø STUBBY Carbide Boring Bar | Right       | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Solid |             | MS-1153      | CPMT-21.51   | 80° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        |              | 80° Diamond No Cool | ID Boring Bar | \$219.51 |
| C05-SWLCR-1.5       | 5/16 Ø STUBBY Carbide Boring Bar | Right       | 0.312        | 4-1/2" | 0.188              | 0.354    | -5°        | Solid |             | TS2          | WCMT-1.51.5  | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        |              | 80° Trigon No Cool  | ID Boring Bar | \$219.51 |
| C05-SWLCR-2         | 5/16 Ø STUBBY Carbide Boring Bar | Right       | 0.312        | 4-1/2" | 0.203              | 0.369    | -5°        | Solid |             | TS25         | WCMT-21.51   | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        |              | 80° Trigon No Cool  | ID Boring Bar | \$219.51 |
| C05-SWLPL-1.5       | 5/16 Ø STUBBY Carbide Boring Bar | Left        | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Solid |             | MS-1438      | WPMT-1.51.21 | 80° Trigon   | STUBBY | NTM   | 8°                  | Carbide        |              | 80° Trigon No Cool  | ID Boring Bar | \$219.51 |
| C05-SWLPR-1.5       | 5/16 Ø STUBBY Carbide Boring Bar | Right       | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Solid |             | MS-1438      | WPMT-1.51.21 | 80° Trigon   | STUBBY | NTM   | 8°                  | Carbide        |              | 80° Trigon No Cool  | ID Boring Bar | \$219.51 |

| CARBIDE BORING BARS |                                 |             |              |        |                    |          |            |       |             |              |            |              |        |       |                     |                |              |                      |               |          |
|---------------------|---------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|---------------|----------|
|                     |                                 |             | Ø            | OAL    | F Dim              |          |            |       |             |              |            |              |        |       |                     |                |              |                      |               |          |
| Catalog Number      | Description                     | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category      | Price    |
| C06-SCLCL-2         | 3/8 Ø STUBBY Carbide Boring Bar | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Solid |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 15°                 | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$219.51 |
| C06-SCLCR-2         | 3/8 Ø STUBBY Carbide Boring Bar | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Solid |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 15°                 | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$219.51 |
| C06-SCLPL-2         | 3/8 Ø STUBBY Carbide Boring Bar | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Solid |             | MS-1153      | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$219.51 |
| C06-SCLPR-2         | 3/8 Ø STUBBY Carbide Boring Bar | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Solid |             | MS-1153      | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$219.51 |
| C06-SDUCL-2         | 3/8 Ø STUBBY Carbide Boring Bar | Left        | 0.375        | 4-3/4" | 0.375              | 0.573    | -3°        | Solid |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Carbide        |              | 55° Diamond          | ID Boring Bar | \$219.51 |
| C06-SDUCR-2         | 3/8 Ø STUBBY Carbide Boring Bar | Right       | 0.375        | 4-3/4" | 0.375              | 0.573    | -3°        | Solid |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Carbide        |              | 55° Diamond          | ID Boring Bar | \$219.51 |
| C06-SDUPL-2         | 3/8 Ø STUBBY Carbide Boring Bar | Left        | 0.375        | 4-3/4" | 0.375              | 0.573    | -3°        | Solid |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        |              | 55° Diamond          | ID Boring Bar | \$219.51 |
| C06-SDUPR-2         | 3/8 Ø STUBBY Carbide Boring Bar | Right       | 0.375        | 4-3/4" | 0.375              | 0.573    | -3°        | Solid |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        |              | 55° Diamond          | ID Boring Bar | \$219.51 |
| C06-STFCL-2         | 3/8 Ø STUBBY Carbide Boring Bar | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | 0°         | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 10°                 | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$219.51 |
| C06-STFCR-2         | 3/8 Ø STUBBY Carbide Boring Bar | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | 0°         | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 10°                 | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$219.51 |
| C06-STFPL-2         | 3/8 Ø STUBBY Carbide Boring Bar | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | 0°         | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$219.51 |
| C06-STFPR-2         | 3/8 Ø STUBBY Carbide Boring Bar | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | 0°         | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$219.51 |
| C06-STUCL-2         | 3/8 Ø STUBBY Carbide Boring Bar | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 10°                 | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$219.51 |
| C06-STUCR-2         | 3/8 Ø STUBBY Carbide Boring Bar | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 10°                 | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$219.51 |
| C06-STUNL-2         | 3/8 Ø STUBBY Carbide Boring Bar | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Solid |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   | 17°                 | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$219.51 |

| CARBIDE BORING BARS |                                         |             |              |        |                    |          |            |       |              |              |            |              |        |       |                     |                |              |                      |                  |          |
|---------------------|-----------------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|--------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|------------------|----------|
|                     |                                         |             | Ø            | OAL    | F Dim              |          |            |       |              |              |            |              |        |       |                     |                |              |                      |                  |          |
| Catalog Number      | Description                             | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw  | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category         | Price    |
| C06-STUNR-2         | 3/8 Ø STUBBY Carbide Boring Bar         | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Solid |              | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   | 17°                 | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$219.51 |
| C06-STUPL-2         | 3/8 Ø STUBBY Carbide Boring Bar         | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Solid |              | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$219.51 |
| C06-STUPR-2         | 3/8 Ø STUBBY Carbide Boring Bar         | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Solid |              | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$219.51 |
| C06-SWLCR-2         | 3/8 Ø STUBBY Carbide Boring Bar         | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Solid |              | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar    | \$219.51 |
| C06-SWLCR-2-218     | 3/8 Ø STUBBY Carbide Boring Bar         | Right       | 0.375        | 4-3/4" | 0.218              | 0.416    | -5°        | Solid |              | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar    | \$219.51 |
| C06-SWLPL-2         | 3/8 Ø STUBBY Carbide Boring Bar         | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Solid |              | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   | 6°                  | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar    | \$219.51 |
| C06-SWLPR-2         | 3/8 Ø STUBBY Carbide Boring Bar         | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Solid |              | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   | 6°                  | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar    | \$219.51 |
| C08-CTFPL-2         | 1/2 Ø STUBBY Carbide Boring Bar         | Left        | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Solid | CK-27/STC-27 |              | TPG-221    | 60° Triangle | STUBBY | NTM   |                     | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$260.74 |
| C08-CTFPR-2         | 1/2 Ø STUBBY Carbide Boring Bar         | Right       | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Solid | CK-27/STC-27 |              | TPG-221    | 60° Triangle | STUBBY | NTM   |                     | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$260.74 |
| C08-LSER-3          | 1/2 Ø STUBBY Carbide Laydown Thread Bar | Right       | 0.5          | 5"     | 0.39               | 0.650    | 0°         | Solid |              | MS-1155      | LT16       | 60° Triangle | STUBBY | NTM   | 18°                 | Carbide        |              | Laydown Thread       | OD/ID Thread-ing | \$260.75 |
| C08-NKLCL05         | 1/2 Ø STUBBY Carbide Profile Bar        | Left        | 0.5          | 5"     | 0.375              | 0.670    | -5°        | Solid | CM-105/S-518 |              | NPGR-51R   | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        |              | Profiling            | OD/ID Profiling  | \$316.53 |
| C08-NKLCR05         | 1/2 Ø STUBBY Carbide Profile Bar        | Right       | 0.5          | 5"     | 0.375              | 0.670    | -5°        | Solid | CM-106/S-518 |              | NPGR-51L   | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        |              | Profiling            | OD/ID Profiling  | \$316.53 |
| C08-SCLCL-2         | 1/2 Ø STUBBY Carbide Boring Bar         | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |              | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 12°                 | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar    | \$260.74 |
| C08-SCLCL-3         | 1/2 Ø STUBBY Carbide Boring Bar         | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |              | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 12°                 | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar    | \$260.74 |
| C08-SCLCR-2         | 1/2 Ø STUBBY Carbide Boring Bar         | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |              | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 12°                 | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar    | \$260.74 |

| CARBIDE BORING BARS |                                 |             |              |        |                    |          |            |       |             |              |            |              |        |       |                     |                |              |                      |               |          |
|---------------------|---------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|---------------|----------|
|                     |                                 |             | Ø            | OAL    | F Dim              |          |            |       |             |              |            |              |        |       |                     |                |              |                      |               |          |
| Catalog Number      | Description                     | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category      | Price    |
| C08-SCLCR-3         | 1/2 Ø STUBBY Carbide Boring Bar | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 12°                 | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$260.74 |
| C08-SCLPL-2         | 1/2 Ø STUBBY Carbide Boring Bar | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$260.74 |
| C08-SCLPL-3         | 1/2 Ø STUBBY Carbide Boring Bar | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$260.74 |
| C08-SCLPR-2         | 1/2 Ø STUBBY Carbide Boring Bar | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$260.74 |
| C08-SCLPR-3         | 1/2 Ø STUBBY Carbide Boring Bar | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$260.74 |
| C08-SDUCL-2         | 1/2 Ø STUBBY Carbide Boring Bar | Left        | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Solid |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 10°                 | Carbide        |              | 55° Diamond          | ID Boring Bar | \$260.74 |
| C08-SDUCR-2         | 1/2 Ø STUBBY Carbide Boring Bar | Right       | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Solid |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 10°                 | Carbide        |              | 55° Diamond          | ID Boring Bar | \$260.74 |
| C08-SDUPL-2         | 1/2 Ø STUBBY Carbide Boring Bar | Left        | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Solid |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 2°                  | Carbide        |              | 55° Diamond          | ID Boring Bar | \$260.74 |
| C08-SDUPR-2         | 1/2 Ø STUBBY Carbide Boring Bar | Right       | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Solid |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 2°                  | Carbide        |              | 55° Diamond          | ID Boring Bar | \$260.74 |
| C08-STFCL-2         | 1/2 Ø STUBBY Carbide Boring Bar | Left        | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 9°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$260.74 |
| C08-STFCR-2         | 1/2 Ø STUBBY Carbide Boring Bar | Right       | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 9°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$260.74 |
| C08-STFPL-2         | 1/2 Ø STUBBY Carbide Boring Bar | Left        | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 4°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$260.74 |
| C08-STFPR-2         | 1/2 Ø STUBBY Carbide Boring Bar | Right       | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 4°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$260.74 |
| C08-STUCL-2         | 1/2 Ø STUBBY Carbide Boring Bar | Left        | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$260.74 |
| C08-STUCR-2         | 1/2 Ø STUBBY Carbide Boring Bar | Right       | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$260.74 |

| CARBIDE BORING BARS |                                         |             |              |        |                    |          |            |       |             |              |            |              |        |       |                     |                |              |                      |                  |          |
|---------------------|-----------------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|------------------|----------|
|                     |                                         |             | Ø            | OAL    | F Dim              |          |            |       |             |              |            |              |        |       |                     |                |              |                      |                  |          |
| Catalog Number      | Description                             | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category         | Price    |
| C08-STUNL-2         | 1/2 Ø STUBBY Carbide Boring Bar         | Left        | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Solid |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   | 13°                 | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$260.74 |
| C08-STUNR-2         | 1/2 Ø STUBBY Carbide Boring Bar         | Right       | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Solid |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   | 13°                 | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$260.74 |
| C08-STUPL-2         | 1/2 Ø STUBBY Carbide Boring Bar         | Left        | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 7°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$260.74 |
| C08-STUPR-2         | 1/2 Ø STUBBY Carbide Boring Bar         | Right       | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 7°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$260.74 |
| C08-SWLCR-2         | 1/2 Ø STUBBY Carbide Boring Bar         | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   | 12°                 | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar    | \$260.74 |
| C08-SWLPL-2         | 1/2 Ø STUBBY Carbide Boring Bar         | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |             | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   | 4°                  | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar    | \$260.74 |
| C08-SWLPR-2         | 1/2 Ø STUBBY Carbide Boring Bar         | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |             | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   | 4°                  | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar    | \$260.74 |
| C10-CTFPL-2         | 5/8 Ø STUBBY Carbide Boring Bar         | Left        | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Solid | CK-19/STC-9 |              | TPG-221    | 60° Triangle | STUBBY | NTM   | 3°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$372.31 |
| C10-CTFPR-2         | 5/8 Ø STUBBY Carbide Boring Bar         | Right       | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Solid | CK-19/STC-9 |              | TPG-221    | 60° Triangle | STUBBY | NTM   | 3°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$372.31 |
| C10-LSER-3          | 5/8 Ø STUBBY Carbide Laydown Thread Bar | Right       | 0.625        | 7"     | 0.439              | 0.762    | 0°         | Solid |             | MS-1155      | LT16       | 60° Triangle | STUBBY | NTM   | 16°                 | Carbide        |              | Laydown Thread       | OD/ID Thread-ing | \$372.31 |
| C10-MWLNR-3         | 5/8 Ø STUBBY Carbide Boring Bar         | Right       | 0.625        | 7"     | 0.438              | 0.761    | -5°        | Solid | CK-5/STC-5  | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   | 14°                 | Carbide        |              | Clamp                | ID Boring Bar    | \$372.31 |
| C10-NKLCLO5         | 5/8 Ø STUBBY Carbide Profile Bar        | Left        | 0.625        | 7"     | 0.5                | 0.870    | -5°        | Solid | CM-71/S-524 |              | NPGR-51R   | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        |              | Profiling            | OD/ID Profiling  | \$426.89 |
| C10-NKLCRO5         | 5/8 Ø STUBBY Carbide Profile Bar        | Right       | 0.625        | 7"     | 0.5                | 0.870    | -5°        | Solid | CM-79/S-524 |              | NPGR-51L   | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        |              | Profiling            | OD/ID Profiling  | \$426.89 |
| C10-SCLCL-2         | 5/8 Ø STUBBY Carbide Boring Bar         | Left        | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 7°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar    | \$372.31 |
| C10-SCLCL-3         | 5/8 Ø STUBBY Carbide Boring Bar         | Left        | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 7°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar    | \$372.31 |

| CARBIDE BORING BARS |                                 |             |              |        |                    |          |            |       |             |              |            |              |        |       |                     |                |              |                      |               |          |
|---------------------|---------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|---------------|----------|
|                     |                                 |             | Ø            | OAL    | F Dim              |          |            |       |             |              |            |              |        |       |                     |                |              |                      |               |          |
| Catalog Number      | Description                     | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category      | Price    |
| C10-SCLCR-2         | 5/8 Ø STUBBY Carbide Boring Bar | Right       | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 7°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$372.31 |
| C10-SCLCR-3         | 5/8 Ø STUBBY Carbide Boring Bar | Right       | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 7°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$372.31 |
| C10-SCLPL-2         | 5/8 Ø STUBBY Carbide Boring Bar | Left        | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 4°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$372.31 |
| C10-SCLPL-3         | 5/8 Ø STUBBY Carbide Boring Bar | Left        | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 4°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$372.31 |
| C10-SCLPR-2         | 5/8 Ø STUBBY Carbide Boring Bar | Right       | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 4°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$372.31 |
| C10-SCLPR-3         | 5/8 Ø STUBBY Carbide Boring Bar | Right       | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 4°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$372.31 |
| C10-SDUCL-2         | 5/8 Ø STUBBY Carbide Boring Bar | Left        | 0.625        | 7"     | 0.5                | 0.823    | -3°        | Solid |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        |              | 55° Diamond          | ID Boring Bar | \$372.31 |
| C10-SDUCR-2         | 5/8 Ø STUBBY Carbide Boring Bar | Right       | 0.625        | 7"     | 0.5                | 0.823    | -3°        | Solid |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        |              | 55° Diamond          | ID Boring Bar | \$372.31 |
| C10-SDUPL-2         | 5/8 Ø STUBBY Carbide Boring Bar | Left        | 0.625        | 7"     | 0.5                | 0.823    | -3°        | Solid |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 2°                  | Carbide        |              | 55° Diamond          | ID Boring Bar | \$372.31 |
| C10-SDUPR-2         | 5/8 Ø STUBBY Carbide Boring Bar | Right       | 0.625        | 7"     | 0.5                | 0.823    | -3°        | Solid |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 2°                  | Carbide        |              | 55° Diamond          | ID Boring Bar | \$372.31 |
| C10-STFCL-2         | 5/8 Ø STUBBY Carbide Boring Bar | Left        | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$372.31 |
| C10-STFCR-2         | 5/8 Ø STUBBY Carbide Boring Bar | Right       | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$372.31 |
| C10-STFPL-2         | 5/8 Ø STUBBY Carbide Boring Bar | Left        | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 5°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$372.31 |
| C10-STFPR-2         | 5/8 Ø STUBBY Carbide Boring Bar | Right       | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 5°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$372.31 |
| C10-STUCL-2         | 5/8 Ø STUBBY Carbide Boring Bar | Left        | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$372.31 |

| CARBIDE BORING BARS |                                         |             |                   |               |                             |          |            |       |             |              |            |              |        |       |                     |                |              |                      |                  |          |
|---------------------|-----------------------------------------|-------------|-------------------|---------------|-----------------------------|----------|------------|-------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|------------------|----------|
| Catalog Number      | Description                             | Hand of Cut | Ø<br>Bar Diameter | OAL<br>Length | F Dim<br>C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category         | Price    |
| C10-STUCL-3         | 5/8 Ø STUBBY Carbide Boring Bar         | Left        | 0.625             | 7"            | 0.406                       | 0.729    | -3°        | Solid |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$372.31 |
| C10-STUCR-2         | 5/8 Ø STUBBY Carbide Boring Bar         | Right       | 0.625             | 7"            | 0.406                       | 0.729    | -3°        | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$372.31 |
| C10-STUCR-3         | 5/8 Ø STUBBY Carbide Boring Bar         | Right       | 0.625             | 7"            | 0.406                       | 0.729    | -3°        | Solid |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$372.31 |
| C10-STUNL-2         | 5/8 Ø STUBBY Carbide Boring Bar         | Left        | 0.625             | 7"            | 0.406                       | 0.729    | -3°        | Solid |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   | 12°                 | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$372.31 |
| C10-STUNR-2         | 5/8 Ø STUBBY Carbide Boring Bar         | Right       | 0.625             | 7"            | 0.406                       | 0.729    | -3°        | Solid |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   | 12°                 | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$372.31 |
| C10-STUPL-2         | 5/8 Ø STUBBY Carbide Boring Bar         | Left        | 0.625             | 7"            | 0.406                       | 0.729    | -3°        | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 0°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$372.31 |
| C10-STUPR-2         | 5/8 Ø STUBBY Carbide Boring Bar         | Right       | 0.625             | 7"            | 0.406                       | 0.729    | -3°        | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 0°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$372.31 |
| C10-SWLCR-2         | 5/8 Ø STUBBY Carbide Boring Bar         | Right       | 0.625             | 7"            | 0.375                       | 0.697    | -5°        | Solid |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   | 10°                 | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar    | \$372.31 |
| C10-SWLCR-3         | 5/8 Ø STUBBY Carbide Boring Bar         | Right       | 0.625             | 7"            | 0.375                       | 0.697    | -5°        | Solid |             | TS4          | WCMT-32.52 | 80° Trigon   | STUBBY | NTM   | 10°                 | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar    | \$372.31 |
| C10-SWLPL-3         | 5/8 Ø STUBBY Carbide Boring Bar         | Left        | 0.625             | 7"            | 0.406                       | 0.729    | -5°        | Solid |             | MS-1155      | WPMT-32.52 | 80° Trigon   | STUBBY | NTM   | 3°                  | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar    | \$372.31 |
| C10-SWLPR-3         | 5/8 Ø STUBBY Carbide Boring Bar         | Right       | 0.625             | 7"            | 0.406                       | 0.729    | -5°        | Solid |             | MS-1155      | WPMT-32.52 | 80° Trigon   | STUBBY | NTM   | 3°                  | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar    | \$372.31 |
| C12-CTFPL-3         | 3/4 Ø STUBBY Carbide Boring Bar         | Left        | 0.75              | 7"            | 0.5                         | 0.885    | 0°         | Solid | CK-7/STC-9  |              | TPG-322    | 60° Triangle | STUBBY | NTM   | 0°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$499.65 |
| C12-CTFPR-3         | 3/4 Ø STUBBY Carbide Boring Bar         | Right       | 0.75              | 7"            | 0.5                         | 0.885    | 0°         | Solid | CK-7/STC-9  |              | TPG-322    | 60° Triangle | STUBBY | NTM   | 0°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar    | \$499.65 |
| C12-LSER-3          | 3/4 Ø STUBBY Carbide Laydown Thread Bar | Right       | 0.75              | 7"            | 0.51                        | 0.895    | 0°         | Solid |             | MS-1155      | LT16       | 60° Triangle | STUBBY | NTM   | 14°                 | Carbide        |              | Laydown Thread       | OD/ID Thread-ing | \$499.65 |
| C12-MWLNL-3         | 3/4 Ø STUBBY Carbide Boring Bar         | Left        | 0.75              | 7"            | 0.5                         | 0.885    | -5°        | Solid | CK-6/STC-5  | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   | 14°                 | Carbide        |              | Clamp                | ID Boring Bar    | \$499.65 |

| CARBIDE BORING BARS |                                  |             |              |        |                    |          |            |       |             |              |            |              |        |       |                     |                |              |                      |                 |          |
|---------------------|----------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|-----------------|----------|
|                     |                                  |             | Ø            | OAL    | F Dim              |          |            |       |             |              |            |              |        |       |                     |                |              |                      |                 |          |
| Catalog Number      | Description                      | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category        | Price    |
| C12-MWLNR-3         | 3/4 Ø STUBBY Carbide Boring Bar  | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Solid | CK-6/STC-5  | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   | 14°                 | Carbide        |              | Clamp                | ID Boring Bar   | \$499.65 |
| C12-MWLNR-33        | 3/4 Ø STUBBY Carbide Boring Bar  | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Solid | CK-7/STC-9  | NL-33        | WNMG-332   | 80° Trigon   | STUBBY | NTM   |                     | Carbide        |              | Clamp                | ID Boring Bar   | \$499.65 |
| C12-NKLCL05         | 3/4 Ø STUBBY Carbide Profile Bar | Left        | 0.75         | 7"     | 0.562              | 1.000    | -5°        | Solid | CM-68/S-524 |              | NPGR-51R   | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        |              | Profiling            | OD/ID Profiling | \$561.50 |
| C12-NKLCR05         | 3/4 Ø STUBBY Carbide Profile Bar | Right       | 0.75         | 7"     | 0.562              | 1.000    | -5°        | Solid | CM-68/S-524 |              | NPGR-51L   | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        |              | Profiling            | OD/ID Profiling | \$561.50 |
| C12-SCLCL-3         | 3/4 Ø STUBBY Carbide Boring Bar  | Left        | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Solid |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar   | \$499.65 |
| C12-SCLCR-3         | 3/4 Ø STUBBY Carbide Boring Bar  | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Solid |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar   | \$499.65 |
| C12-SCLPL-2         | 3/4 Ø STUBBY Carbide Boring Bar  | Left        | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Solid |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 2°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar   | \$499.65 |
| C12-SCLPL-3         | 3/4 Ø STUBBY Carbide Boring Bar  | Left        | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Solid |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 3°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar   | \$499.65 |
| C12-SCLPR-3         | 3/4 Ø STUBBY Carbide Boring Bar  | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Solid |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 3°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar   | \$499.65 |
| C12-SDUCL-3         | 3/4 Ø STUBBY Carbide Boring Bar  | Left        | 0.75         | 7"     | 0.625              | 1.010    | -3°        | Solid |             | 5513-020-09  | DCMT-32.52 | 55° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        |              | 55° Diamond          | ID Boring Bar   | \$499.65 |
| C12-SDUCR-3         | 3/4 Ø STUBBY Carbide Boring Bar  | Right       | 0.75         | 7"     | 0.625              | 1.010    | -3°        | Solid |             | 5513-020-09  | DCMT-32.52 | 55° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        |              | 55° Diamond          | ID Boring Bar   | \$499.65 |
| C12-SDUPL-3         | 3/4 Ø STUBBY Carbide Boring Bar  | Left        | 0.75         | 7"     | 0.562              | 0.947    | -3°        | Solid |             | MS-1155      | DPMT-32.52 | 55° Rhomboid | STUBBY | NTM   | 2°                  | Carbide        |              | 55° Diamond          | ID Boring Bar   | \$499.65 |
| C12-SDUPR-3         | 3/4 Ø STUBBY Carbide Boring Bar  | Right       | 0.75         | 7"     | 0.562              | 0.947    | -3°        | Solid |             | MS-1155      | DPMT-32.52 | 55° Rhomboid | STUBBY | NTM   | 2°                  | Carbide        |              | 55° Diamond          | ID Boring Bar   | \$499.65 |
| C12-STFCL-2         | 3/4 Ø STUBBY Carbide Boring Bar  | Left        | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Carbide        |              | 60° Triangle No Cool | ID Boring Bar   | \$499.65 |
| C12-STFCL-3         | 3/4 Ø STUBBY Carbide Boring Bar  | Left        | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Solid |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar   | \$499.65 |

| CARBIDE BORING BARS |                                 |             |              |        |                    |          |            |       |              |              |            |              |        |       |                     |                |              |                      |               |          |
|---------------------|---------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|--------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|---------------|----------|
|                     |                                 |             | Ø            | OAL    | F Dim              |          |            |       |              |              |            |              |        |       |                     |                |              |                      |               |          |
| Catalog Number      | Description                     | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw  | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category      | Price    |
| C12-STFCR-2         | 3/4 Ø STUBBY Carbide Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Solid |              | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$499.65 |
| C12-STFCR-3         | 3/4 Ø STUBBY Carbide Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Solid |              | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$499.65 |
| C12-STFPL-3         | 3/4 Ø STUBBY Carbide Boring Bar | Left        | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Solid |              | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   | 2°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$499.65 |
| C12-STFPR-3         | 3/4 Ø STUBBY Carbide Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Solid |              | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   | 2°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$499.65 |
| C12-STUCL-3         | 3/4 Ø STUBBY Carbide Boring Bar | Left        | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Solid |              | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$499.65 |
| C12-STUCR-2         | 3/4 Ø STUBBY Carbide Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Solid |              | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$499.65 |
| C12-STUCR-3         | 3/4 Ø STUBBY Carbide Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Solid |              | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$499.65 |
| C12-STUNL-3         | 3/4 Ø STUBBY Carbide Boring Bar | Left        | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Solid |              | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   | 10°                 | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$499.65 |
| C12-STUNR-3         | 3/4 Ø STUBBY Carbide Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Solid |              | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   | 10°                 | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$499.65 |
| C12-STUPL-3         | 3/4 Ø STUBBY Carbide Boring Bar | Left        | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Solid |              | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   | 3°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$499.65 |
| C12-STUPR-3         | 3/4 Ø STUBBY Carbide Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Solid |              | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   | 3°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$499.65 |
| C12-SWLCR-3         | 3/4 Ø STUBBY Carbide Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Solid |              | TS4          | WCMT-32.52 | 80° Trigon   | STUBBY | NTM   | 8°                  | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar | \$499.65 |
| C12-SWLPL-3         | 3/4 Ø STUBBY Carbide Boring Bar | Left        | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Solid |              | MS-1155      | WPMT-32.52 | 80° Trigon   | STUBBY | NTM   | 2°                  | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar | \$499.65 |
| C12-SWLPR-3         | 3/4 Ø STUBBY Carbide Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Solid |              | MS-1155      | WPMT-32.52 | 80° Trigon   | STUBBY | NTM   | 2°                  | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar | \$499.65 |
| C16-CTFPL-3         | 1.0 Ø STUBBY Carbide Boring Bar | Left        | 1            | 7"     | 0.625              | 1.135    | 0°         | Solid | CK-20/STC-11 |              | TPG-322    | 60° Triangle | STUBBY | NTM   | 0°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$654.89 |

| CARBIDE BORING BARS |                                 |             |              |        |                    |          |            |       |              |              |            |              |        |       |                     |                |              |                      |               |          |
|---------------------|---------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|--------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|---------------|----------|
|                     |                                 |             | Ø            | OAL    | F Dim              |          |            |       |              |              |            |              |        |       |                     |                |              |                      |               |          |
| Catalog Number      | Description                     | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw  | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category      | Price    |
| C16-CTFPR-3         | 1.0 Ø STUBBY Carbide Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | 0°         | Solid | CK-20/STC-11 |              | TPG-322    | 60° Triangle | STUBBY | NTM   | 0°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$654.89 |
| C16-DCLNL-4         | 1.0 Ø STUBBY Carbide Boring Bar | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid | Ck-7/STC-9   | LP-59        | CNMG 432   | 80° Rhomboid | STUBBY | NTM   |                     | Carbide        |              | Clamp                | ID Boring Bar | \$654.89 |
| C16-DCLNR-4         | 1.0 Ø STUBBY Carbide Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid | Ck-7/STC-9   | LP-59        | CNMG 432   | 80° Rhomboid | STUBBY | NTM   |                     | Carbide        |              | Clamp                | ID Boring Bar | \$654.89 |
| C16-MCLNL-4         | 1.0 Ø STUBBY Carbide Boring Bar | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid | CK-20/STC-11 | NL-44        | CNMG-432   | 80° Rhomboid | STUBBY | NTM   | 14°                 | Carbide        |              | Clamp                | ID Boring Bar | \$654.89 |
| C16-MCLNR-4         | 1.0 Ø STUBBY Carbide Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid | CK-20/STC-11 | NL-44        | CNMG-432   | 80° Rhomboid | STUBBY | NTM   | 14°                 | Carbide        |              | Clamp                | ID Boring Bar | \$654.89 |
| C16-MTLNR-3         | 1.0 Ø STUBBY Carbide Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid | Ck-7/STC-9   | NL-33L       | TNGA-332   | 60° Triangle | STUBBY | NTM   | 12°                 | Carbide        |              | Clamp                | ID Boring Bar | \$654.89 |
| C16-MWLNL-3         | 1.0 Ø STUBBY Carbide Boring Bar | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid | CK-6/STC-5   | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   | 14°                 | Carbide        |              | Clamp                | ID Boring Bar | \$654.89 |
| C16-MWLNR-3         | 1.0 Ø STUBBY Carbide Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid | CK-6/STC-5   | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   | 14°                 | Carbide        |              | Clamp                | ID Boring Bar | \$654.89 |
| C16-MWLNR-4         | 1.0 Ø STUBBY Carbide Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid | CK-20/STC-11 | NL-44        | WNMG-432   | 80° Trigon   | STUBBY | NTM   | 14°                 | Carbide        |              | Clamp                | ID Boring Bar | \$654.89 |
| C16-SCLCL-3         | 1.0 Ø STUBBY Carbide Boring Bar | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid |              | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$654.89 |
| C16-SCLCL-4         | 1.0 Ø STUBBY Carbide Boring Bar | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid |              | 5513-020-17  | CCMT-432   | 80° Rhomboid | STUBBY | NTM   |                     | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$654.89 |
| C16-SCLCR-3         | 1.0 Ø STUBBY Carbide Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid |              | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$654.89 |
| C16-SCLCR-4         | 1.0 Ø STUBBY Carbide Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid |              | 5513-020-17  | CCMT-432   | 80° Rhomboid | STUBBY | NTM   |                     | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$654.89 |
| C16-SCLPL-3         | 1.0 Ø STUBBY Carbide Boring Bar | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid |              | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$654.89 |
| C16-SCLPR-3         | 1.0 Ø STUBBY Carbide Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid |              | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$654.89 |

| CARBIDE BORING BARS |                                              |             |              |        |                    |          |            |              |              |              |            |              |        |       |                     |                |              |                      |               |            |
|---------------------|----------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|--------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|---------------|------------|
|                     |                                              |             | Ø            | OAL    | F Dim              |          |            |              |              |              |            |              |        |       |                     |                |              |                      |               |            |
| Catalog Number      | Description                                  | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw  | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category      | Price      |
| C16-STUCR-3         | 1.0 Ø STUBBY Carbide Boring Bar              | Right       | 1            | 7"     | 0.625              | 1.135    | -3°        | Solid        |              | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   | 3°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$654.89   |
| C16-STUNL-3         | 1.0 Ø STUBBY Carbide Boring Bar              | Left        | 1            | 7"     | 0.625              | 1.135    | -3°        | Solid        |              | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   | 8°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$654.89   |
| C16-STUNR-3         | 1.0 Ø STUBBY Carbide Boring Bar              | Right       | 1            | 7"     | 0.625              | 1.135    | -3°        | Solid        |              | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   | 8°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$654.89   |
| C16-STUPR-3         | 1.0 Ø STUBBY Carbide Boring Bar              | Right       | 1            | 7"     | 0.625              | 1.135    | -3°        | Solid        |              | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$654.89   |
| C20-MCLNR-4         | 1-1/4 Ø STUBBY Carbide Boring Bar            | Right       | 1.25         | 12"    | 0.765              | 1.470    | -5°        | Solid        | CK-20/STC-11 | NL-44        | CNMG-432   | 80° Rhomboid | STUBBY | NTM   | 14°                 | Carbide        |              | Clamp                | ID Boring Bar | \$1,465.00 |
| C20-MWLNR-4         | 1-1/4 Ø STUBBY Carbide Boring Bar            | Right       | 1.25         | 12"    | 0.765              | 1.470    | -5°        | Solid        | CK-20/STC-11 | NL-44        | WNMG-432   | 80° Trigon   | STUBBY | NTM   |                     | Carbide        |              | Clamp                | ID Boring Bar | \$1,465.00 |
| C20-SCLCL-4         | 1-1/4 Ø STUBBY Carbide Boring Bar            | Left        | 1.25         | 12"    | 0.765              | 1.470    | -5°        | Solid        |              | 5513-020-17  | CCMT-432   | 80° Rhomboid | STUBBY | NTM   |                     | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$1,465.00 |
| C20-SCLCR-4         | 1-1/4 Ø STUBBY Carbide Boring Bar            | Right       | 1.25         | 12"    | 0.765              | 1.470    | -5°        | Solid        |              | 5513-020-17  | CCMT-432   | 80° Rhomboid | STUBBY | NTM   |                     | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$1,465.00 |
| C20-SCLPR-3         | 1-1/4 Ø STUBBY Carbide Boring Bar            | Right       | 1.25         | 12"    | 0.765              | 1.470    | -5°        | Solid        |              | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Carbide        |              | 80° Diamond No Cool  | ID Boring Bar | \$1,465.00 |
| CSTJOL 062          | 3/8 Ø STUBBY Carbide Boring Bar              | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -2°        | Solid        |              | BHF0306R     | TPGA-221   | 60° Triangle | STUBBY | NTM   | 5°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$219.51   |
| CSTJOL 062C         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -2°        | Coolant Thru |              | BHF0306R     | TPGA-221   | 60° Triangle | STUBBY | NTM   | 5°                  | Carbide        | End Coolant  | 60° Triangle w/Cool  | ID Boring Bar | \$254.68   |
| CSTJOL 082          | 1/2 Ø STUBBY Carbide Boring Bar              | Left        | 0.5          | 5"     | 0.312              | 0.572    | -2°        | Solid        |              | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   | 2°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$260.74   |
| CSTJOL 082C         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.312              | 0.572    | -2°        | Coolant Thru |              | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   | 2°                  | Carbide        | End Coolant  | 60° Triangle w/Cool  | ID Boring Bar | \$300.76   |
| CSTJOL 102          | 5/8 Ø STUBBY Carbide Boring Bar              | Left        | 0.625        | 7"     | 0.375              | 0.698    | -2°        | Solid        |              | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | \$372.31   |
| CSTJOL 102C         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.625        | 7"     | 0.375              | 0.698    | -2°        | Coolant Thru |              | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Carbide        | End Coolant  | 60° Triangle w/Cool  | ID Boring Bar | \$417.19   |

## CARBIDE BORING BARS

| Catalog Number     | Description                                   | Hand of Cut | Ø<br>Bar Diameter | OAL<br>Length | F Dim<br>C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category      | Price           |
|--------------------|-----------------------------------------------|-------------|-------------------|---------------|-----------------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|---------------|-----------------|
| <b>CSTJOL 123</b>  | 3/4 Ø STUBBY Carbide Boring Bar               | Left        | 0.75              | 7"            | 0.5                         | 0.885    | -2°        | Solid        |             | BFTX0410A    | TPGA-332   | 60° Triangle | STUBBY | NTM   | 2°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | <b>\$499.65</b> |
| <b>CSTJOL 123C</b> | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Left        | 0.75              | 7"            | 0.5                         | 0.885    | -2°        | Coolant Thru |             | BFTX0410A    | TPGA-332   | 60° Triangle | STUBBY | NTM   | 2°                  | Carbide        | End Coolant  | 60° Triangle w/Cool  | ID Boring Bar | <b>\$555.44</b> |
| <b>CSTJOR 062</b>  | 3/8 Ø STUBBY Carbide Boring Bar               | Right       | 0.375             | 4-3/4"        | 0.25                        | 0.448    | -2°        | Solid        |             | BHF0306R     | TPGA-221   | 60° Triangle | STUBBY | NTM   | 5°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | <b>\$219.51</b> |
| <b>CSTJOR 062C</b> | 3/8 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.375             | 4-3/4"        | 0.25                        | 0.448    | -2°        | Coolant Thru |             | BHF0306R     | TPGA-221   | 60° Triangle | STUBBY | NTM   | 5°                  | Carbide        | End Coolant  | 60° Triangle w/Cool  | ID Boring Bar | <b>\$254.68</b> |
| <b>CSTJOR 082</b>  | 1/2 Ø STUBBY Carbide Boring Bar               | Right       | 0.5               | 5"            | 0.312                       | 0.572    | -2°        | Solid        |             | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   | 2°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | <b>\$260.74</b> |
| <b>CSTJOR 082C</b> | 1/2 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.5               | 5"            | 0.312                       | 0.572    | -2°        | Coolant Thru |             | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   | 2°                  | Carbide        | End Coolant  | 60° Triangle w/Cool  | ID Boring Bar | <b>\$300.76</b> |
| <b>CSTJOR 102</b>  | 5/8 Ø STUBBY Carbide Boring Bar               | Right       | 0.625             | 7"            | 0.375                       | 0.698    | -2°        | Solid        |             | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | <b>\$372.31</b> |
| <b>CSTJOR 102C</b> | 5/8 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.625             | 7"            | 0.375                       | 0.698    | -2°        | Coolant Thru |             | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Carbide        | End Coolant  | 60° Triangle w/Cool  | ID Boring Bar | <b>\$418.40</b> |
| <b>CSTJOR 123</b>  | 3/4 Ø STUBBY Carbide Boring Bar               | Right       | 0.75              | 7"            | 0.5                         | 0.885    | -2°        | Solid        |             | BFTX0410A    | TPGA-332   | 60° Triangle | STUBBY | NTM   | 2°                  | Carbide        |              | 60° Triangle No Cool | ID Boring Bar | <b>\$499.65</b> |
| <b>CSTJOR 123C</b> | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.75              | 7"            | 0.5                         | 0.885    | -2°        | Coolant Thru |             | BFTX0410A    | TPGA-332   | 60° Triangle | STUBBY | NTM   | 2°                  | Carbide        | End Coolant  | 60° Triangle w/Cool  | ID Boring Bar | <b>\$555.44</b> |
| <b>CSWLO504L</b>   | 5/16 Ø STUBBY Carbide Boring Bar              | Left        | 0.312             | 4-1/2"        | 0.203                       | 0.369    | -5°        | Solid        |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar | <b>\$219.54</b> |
| <b>CSWLO504LC</b>  | 5/16 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.312             | 4-1/2"        | 0.203                       | 0.369    | -5°        | Coolant Thru |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        | End Coolant  | 80° Trigon w/Cool    | ID Boring Bar | <b>\$254.68</b> |
| <b>CSWLO504R</b>   | 5/16 Ø STUBBY Carbide Boring Bar              | Right       | 0.312             | 4-1/2"        | 0.203                       | 0.369    | -5°        | Solid        |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar | <b>\$219.51</b> |
| <b>CSWLO504RC</b>  | 5/16 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.312             | 4-1/2"        | 0.203                       | 0.369    | -5°        | Coolant Thru |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        | End Coolant  | 80° Trigon w/Cool    | ID Boring Bar | <b>\$254.68</b> |
| <b>CSWLOR 055</b>  | 3/16 Ø STUBBY Carbide Boring Bar              | Right       | 0.187             | 4-1/2"        | 0.114                       | 0.218    | -5°        | Solid        |             | TS21         | WCMT-1.21  | 80° Trigon   | STUBBY | NTM   | 17°                 | Carbide        |              | 80° Trigon No Cool   | ID Boring Bar | <b>\$219.51</b> |

| CARBIDE BORING BARS |                                               |             |              |        |                    |          |            |              |             |              |             |              |        |       |                     |                |              |                    |               |          |
|---------------------|-----------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|-------------|--------------|-------------|--------------|--------|-------|---------------------|----------------|--------------|--------------------|---------------|----------|
|                     |                                               |             | Ø            | OAL    | F Dim              |          |            |              |             |              |             |              |        |       |                     |                |              |                    |               |          |
| Catalog Number      | Description                                   | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert      | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image              | Category      | Price    |
| CSWLOR 062          | 3/8 Ø STUBBY Carbide Boring Bar               | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Solid        |             | TS25         | WCMT-21.51  | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        |              | 80° Trigon No Cool | ID Boring Bar | \$219.51 |
| CSWLOR 062C         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Coolant Thru |             | TS25         | WCMT-21.51  | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        | End Coolant  | 80° Trigon w/ Cool | ID Boring Bar | \$254.68 |
| CSWLOR 065          | 1/4 Ø STUBBY Carbide Boring Bar               | Right       | 0.25         | 4-1/2" | 0.156              | 0.291    | -5°        | Solid        |             | TS2          | WCMT-1.21   | 80° Trigon   | STUBBY | NTM   | 17°                 | Carbide        |              | 80° Trigon No Cool | ID Boring Bar | \$219.51 |
| CSWLOR 065C         | 1/4 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.25         | 4-1/2" | 0.156              | 0.291    | -5°        | Coolant Thru |             | TS2          | WCMT-1.21   | 80° Trigon   | STUBBY | NTM   | 17°                 | Carbide        | End Coolant  | 80° Trigon w/ Cool | ID Boring Bar | \$254.68 |
| CSWLOR 066          | 5/16 Ø STUBBY Carbide Boring Bar              | Right       | 0.312        | 4-1/2" | 0.188              | 0.354    | -5°        | Solid        |             | TS2          | WCMT-1.51.5 | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        |              | 80° Trigon No Cool | ID Boring Bar | \$219.51 |
| CSWLOR 066C         | 5/16 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.312        | 4-1/2" | 0.188              | 0.354    | -5°        | Coolant Thru |             | TS2          | WCMT-1.51.5 | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        | End Coolant  | 80° Trigon w/ Cool | ID Boring Bar | \$254.68 |
| CSWLOR 070          | 3/8 Ø STUBBY Carbide Boring Bar               | Right       | 0.375        | 4-3/4" | 0.218              | 0.416    | -5°        | Solid        |             | TS25         | WCMT-21.51  | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        |              | 80° Trigon No Cool | ID Boring Bar | \$219.51 |
| CSWLOR 070C         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.375        | 4-3/4" | 0.218              | 0.416    | -5°        | Coolant Thru |             | TS25         | WCMT-21.51  | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        | End Coolant  | 80° Trigon w/ Cool | ID Boring Bar | \$254.68 |
| CSWLOR 082          | 1/2 Ø STUBBY Carbide Boring Bar               | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid        |             | TS25         | WCMT-21.51  | 80° Trigon   | STUBBY | NTM   | 12°                 | Carbide        |              | 80° Trigon No Cool | ID Boring Bar | \$260.74 |
| CSWLOR 082C         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |             | TS25         | WCMT-21.51  | 80° Trigon   | STUBBY | NTM   | 12°                 | Carbide        | End Coolant  | 80° Trigon w/ Cool | ID Boring Bar | \$300.76 |
| CSWLOR 102          | 5/8 Ø STUBBY Carbide Boring Bar               | Right       | 0.625        | 7"     | 0.375              | 0.698    | -5°        | Solid        |             | TS25         | WCMT-21.51  | 80° Trigon   | STUBBY | NTM   | 10°                 | Carbide        |              | 80° Trigon No Cool | ID Boring Bar | \$372.31 |
| CSWLOR 102C         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.625        | 7"     | 0.375              | 0.698    | -5°        | Coolant Thru |             | TS25         | WCMT-21.51  | 80° Trigon   | STUBBY | NTM   | 10°                 | Carbide        | End Coolant  | 80° Trigon w/ Cool | ID Boring Bar | \$418.40 |
| CSWLOR 103          | 5/8 Ø STUBBY Carbide Boring Bar               | Right       | 0.625        | 7"     | 0.375              | 0.698    | -5°        | Solid        |             | TS4          | WCMT-32.52  | 80° Trigon   | STUBBY | NTM   | 10°                 | Carbide        |              | 80° Trigon No Cool | ID Boring Bar | \$372.31 |
| CSWLOR 103C         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.625        | 7"     | 0.375              | 0.698    | -5°        | Coolant Thru |             | TS4          | WCMT-32.52  | 80° Trigon   | STUBBY | NTM   | 10°                 | Carbide        | End Coolant  | 80° Trigon w/ Cool | ID Boring Bar | \$418.40 |
| CSWLOR 123          | 3/4 Ø STUBBY Carbide Boring Bar               | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Solid        |             | TS4          | WCMT-32.52  | 80° Trigon   | STUBBY | NTM   | 8°                  | Carbide        |              | 80° Trigon No Cool | ID Boring Bar | \$499.65 |

| CARBIDE BORING BARS |                                               |             |              |        |                    |          |            |              |             |              |              |              |        |       |                     |                |              |                    |               |          |
|---------------------|-----------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|-------------|--------------|--------------|--------------|--------|-------|---------------------|----------------|--------------|--------------------|---------------|----------|
|                     |                                               |             | Ø            | OAL    | F Dim              |          |            |              |             |              |              |              |        |       |                     |                |              |                    |               |          |
| Catalog Number      | Description                                   | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert       | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image              | Category      | Price    |
| CSWLOR 123C         | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru |             | TS4          | WCMT-32.52   | 80° Trigon   | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 80° Trigon w/ Cool | ID Boring Bar | \$555.44 |
| E04-SWLCR-1.2       | 1/4 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.25         | 4-1/2" | 0.156              | 0.291    | -5°        | Coolant Thru |             | TS2          | WCMT-1.21    | 80° Trigon   | STUBBY | NTM   | 17°                 | Carbide        | End Coolant  | 80° Trigon w/ Cool | ID Boring Bar | \$254.68 |
| E04-SWLPL-1.5       | 1/4 Ø STUBBY Carbide Boring Bar With Coolant  | Left        | 0.25         | 4-1/2" | 0.156              | 0.291    | -5°        | Coolant Thru |             | MS-1438      | WPMT-1.51.21 | 80° Trigon   | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 80° Trigon w/ Cool | ID Boring Bar | \$254.68 |
| E04-SWLPR-1.5       | 1/4 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.25         | 4-1/2" | 0.156              | 0.291    | -5°        | Coolant Thru |             | MS-1438      | WPMT-1.51.21 | 80° Trigon   | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 80° Trigon w/ Cool | ID Boring Bar | \$254.68 |
| E05-SCLCL-2         | 5/16 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Coolant Thru |             | 5513-020-03  | CCMT-21.51   | 80° Rhomboid | STUBBY | NTM   | 15°                 | Carbide        | End Coolant  | 80° Diamond w/Cool | ID Boring Bar | \$254.68 |
| E05-SCLCR-2         | 5/16 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Coolant Thru |             | 5513-020-03  | CCMT-21.51   | 80° Rhomboid | STUBBY | NTM   | 15°                 | Carbide        | End Coolant  | 80° Diamond w/Cool | ID Boring Bar | \$254.68 |
| E05-SCLPL-1.8       | 5/16 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Coolant Thru |             | MS-1152      | CPMT-1.81.51 | 80° Rhomboid | STUBBY | NTM   | 7°                  | Carbide        | End Coolant  | 80° Diamond w/Cool | ID Boring Bar | \$254.68 |
| E05-SCLPR-1.8       | 5/16 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Coolant Thru |             | MS-1152      | CPMT-1.81.51 | 80° Rhomboid | STUBBY | NTM   | 7°                  | Carbide        | End Coolant  | 80° Diamond w/Cool | ID Boring Bar | \$254.68 |
| E05-SCLPR-2         | 5/16 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Coolant Thru |             | MS-1153      | CPMT-21.51   | 80° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 80° Diamond w/Cool | ID Boring Bar | \$254.68 |
| E05-SWLCR-1.5       | 5/16 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.312        | 4-1/2" | 0.188              | 0.354    | -5°        | Coolant Thru |             | TS2          | WCMT-1.51.5  | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        | End Coolant  | 80° Trigon w/ Cool | ID Boring Bar | \$254.68 |
| E05-SWLCR-2         | 5/16 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.312        | 4-1/2" | 0.203              | 0.369    | -5°        | Coolant Thru |             | TS25         | WCMT-21.51   | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        | End Coolant  | 80° Trigon w/ Cool | ID Boring Bar | \$254.68 |
| E05-SWLPL-1.5       | 5/16 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Coolant Thru |             | MS-1438      | WPMT-1.51.21 | 80° Trigon   | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 80° Trigon w/ Cool | ID Boring Bar | \$254.68 |
| E05-SWLPR-1.5       | 5/16 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Coolant Thru |             | MS-1438      | WPMT-1.51.21 | 80° Trigon   | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 80° Trigon w/ Cool | ID Boring Bar | \$254.68 |
| E06-SCLCL-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant  | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Coolant Thru |             | 5513-020-03  | CCMT-21.51   | 80° Rhomboid | STUBBY | NTM   | 15°                 | Carbide        | End Coolant  | 80° Diamond w/Cool | ID Boring Bar | \$254.68 |
| E06-SCLCR-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Coolant Thru |             | 5513-020-03  | CCMT-21.51   | 80° Rhomboid | STUBBY | NTM   | 15°                 | Carbide        | End Coolant  | 80° Diamond w/Cool | ID Boring Bar | \$254.68 |

| CARBIDE BORING BARS |                                              |             |                   |               |                             |          |            |              |             |              |            |              |        |       |                     |                |              |                     |               |          |
|---------------------|----------------------------------------------|-------------|-------------------|---------------|-----------------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|---------------|----------|
| Catalog Number      | Description                                  | Hand of Cut | Ø<br>Bar Diameter | OAL<br>Length | F Dim<br>C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category      | Price    |
| E06-SCLPL-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.375             | 4-3/4"        | 0.25                        | 0.448    | -5°        | Coolant Thru |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | \$254.68 |
| E06-SCLPR-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.375             | 4-3/4"        | 0.25                        | 0.448    | -5°        | Coolant Thru |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | \$254.68 |
| E06-SDUCL-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.375             | 4-3/4"        | 0.375                       | 0.573    | -3°        | Coolant Thru |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar | \$254.68 |
| E06-SDUCR-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.375             | 4-3/4"        | 0.375                       | 0.573    | -3°        | Coolant Thru |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar | \$254.68 |
| E06-SDUPL-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.375             | 4-3/4"        | 0.375                       | 0.573    | -3°        | Coolant Thru |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar | \$254.68 |
| E06-SDUPR-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.375             | 4-3/4"        | 0.375                       | 0.573    | -3°        | Coolant Thru |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar | \$254.68 |
| E06-STFCL-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.375             | 4-3/4"        | 0.25                        | 0.448    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 10°                 | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$254.68 |
| E06-STFCR-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.375             | 4-3/4"        | 0.25                        | 0.448    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 10°                 | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$254.68 |
| E06-STFPL-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.375             | 4-3/4"        | 0.25                        | 0.448    | 0°         | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$254.68 |
| E06-STFPR-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.375             | 4-3/4"        | 0.25                        | 0.448    | 0°         | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$254.68 |
| E06-STUCL-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.375             | 4-3/4"        | 0.25                        | 0.448    | -3°        | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 10°                 | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$254.68 |
| E06-STUCR-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.375             | 4-3/4"        | 0.25                        | 0.448    | -3°        | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 10°                 | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$254.68 |
| E06-STUNL-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.375             | 4-3/4"        | 0.25                        | 0.448    | -3°        | Coolant Thru |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   | 17°                 | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$254.68 |
| E06-STUNR-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.375             | 4-3/4"        | 0.25                        | 0.448    | -3°        | Coolant Thru |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   | 17°                 | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$254.68 |
| E06-STUPL-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.375             | 4-3/4"        | 0.25                        | 0.448    | -3°        | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$254.68 |

| CARBIDE BORING BARS |                                                      |             |              |        |                    |          |            |              |              |              |            |              |        |       |                     |                |              |                     |                 |          |
|---------------------|------------------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|--------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|-----------------|----------|
|                     |                                                      |             | Ø            | OAL    | F Dim              |          |            |              |              |              |            |              |        |       |                     |                |              |                     |                 |          |
| Catalog Number      | Description                                          | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw  | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category        | Price    |
| E06-STUPR-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Coolant Thru |              | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | \$254.68 |
| E06-SWLCR-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.375        | 4-3/4" | 0.25               | 0.447    | -5°        | Coolant Thru |              | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        | End Coolant  | 80° Trigon w/Cool   | ID Boring Bar   | \$254.68 |
| E06-SWLCR-2-218     | 3/8 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.375        | 4-3/4" | 0.218              | 0.416    | -5°        | Coolant Thru |              | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   | 15°                 | Carbide        | End Coolant  | 80° Trigon w/Cool   | ID Boring Bar   | \$254.68 |
| E06-SWLPL-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant         | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Coolant Thru |              | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 80° Trigon w/Cool   | ID Boring Bar   | \$254.68 |
| E06-SWLPR-2         | 3/8 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Coolant Thru |              | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 80° Trigon w/Cool   | ID Boring Bar   | \$254.68 |
| E08-CTFPL-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant         | Left        | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Coolant Thru | CK-27/STC-27 |              | TPG-221    | 60° Triangle | STUBBY | NTM   |                     | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | \$300.76 |
| E08-CTFPR-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Coolant Thru | CK-27/STC-27 |              | TPG-221    | 60° Triangle | STUBBY | NTM   |                     | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | \$300.76 |
| E08-LSER-3          | 1/2 Ø STUBBY Carbide Laydown Thread Bar With Coolant | Right       | 0.5          | 5"     | 0.39               | 0.650    | 0°         | Coolant Thru |              | MS-1155      | LT16       | 60° Triangle | STUBBY | NTM   | 18°                 | Carbide        | End Coolant  | Laydown Thread      | OD/ID Threading | \$300.76 |
| E08-NKLCLO5         | 1/2 Ø STUBBY Carbide Profile Bar With Coolant        | Left        | 0.5          | 5"     | 0.375              | 0.670    | -5°        | Coolant Thru | CM-105/S-518 |              | NPGR-51R   | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        | End Coolant  | Profiling           | OD/ID Profiling | \$365.04 |
| E08-NKLCRO5         | 1/2 Ø STUBBY Carbide Profile Bar With Coolant        | Right       | 0.5          | 5"     | 0.375              | 0.670    | -5°        | Coolant Thru | CM-106/S-518 |              | NPGR-51L   | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        | End Coolant  | Profiling           | OD/ID Profiling | \$365.04 |
| E08-SCLCL-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant         | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |              | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 12°                 | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar   | \$300.76 |
| E08-SCLCL-3         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant         | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |              | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 12°                 | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar   | \$300.76 |
| E08-SCLCR-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |              | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 12°                 | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar   | \$300.76 |
| E08-SCLCR-3         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |              | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 12°                 | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar   | \$300.76 |
| E08-SCLPL-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant         | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |              | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar   | \$300.76 |

| CARBIDE BORING BARS |                                              |             |              |        |                    |          |            |              |             |              |            |              |        |       |                     |                |              |                     |               |          |
|---------------------|----------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|---------------|----------|
|                     |                                              |             | Ø            | OAL    | F Dim              |          |            |              |             |              |            |              |        |       |                     |                |              |                     |               |          |
| Catalog Number      | Description                                  | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category      | Price    |
| E08-SCLPL-3         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | \$300.76 |
| E08-SCLPR-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | \$300.76 |
| E08-SCLPR-3         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | \$300.76 |
| E08-SDUCL-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Coolant Thru |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 10°                 | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar | \$300.76 |
| E08-SDUCR-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Coolant Thru |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 10°                 | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar | \$300.76 |
| E08-SDUPL-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Coolant Thru |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 2°                  | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar | \$300.76 |
| E08-SDUPR-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Coolant Thru |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 2°                  | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar | \$300.76 |
| E08-STFCL-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 9°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$300.76 |
| E08-STFCR-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 9°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$300.76 |
| E08-STFPL-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 4°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$300.76 |
| E08-STFPR-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 4°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$300.76 |
| E08-STUCL-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$300.76 |
| E08-STUCR-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$300.76 |
| E08-STUNL-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Coolant Thru |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   | 13°                 | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$300.76 |
| E08-STUNR-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Coolant Thru |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   | 13°                 | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$300.76 |

| CARBIDE BORING BARS |                                                      |             |                   |               |                             |          |            |              |             |              |            |              |        |       |                     |                |              |                     |                 |          |
|---------------------|------------------------------------------------------|-------------|-------------------|---------------|-----------------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|-----------------|----------|
| Catalog Number      | Description                                          | Hand of Cut | Ø<br>Bar Diameter | OAL<br>Length | F Dim<br>C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category        | Price    |
| E08-STUPL-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant         | Left        | 0.5               | 5"            | 0.312                       | 0.572    | -3°        | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 7°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | \$300.76 |
| E08-STUPR-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.5               | 5"            | 0.312                       | 0.572    | -3°        | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 7°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | \$300.76 |
| E08-SWLCR-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.5               | 5"            | 0.312                       | 0.572    | -5°        | Coolant Thru |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   | 12°                 | Carbide        | End Coolant  | 80° Trigon w/Cool   | ID Boring Bar   | \$300.76 |
| E08-SWLPL-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant         | Left        | 0.5               | 5"            | 0.312                       | 0.572    | -5°        | Coolant Thru |             | M3-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   | 4°                  | Carbide        | End Coolant  | 80° Trigon w/Cool   | ID Boring Bar   | \$300.76 |
| E08-SWLPR-2         | 1/2 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.5               | 5"            | 0.312                       | 0.572    | -5°        | Coolant Thru |             | M3-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   | 4°                  | Carbide        | End Coolant  | 80° Trigon w/Cool   | ID Boring Bar   | \$300.76 |
| E10-CTFPL-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Left        | 0.625             | 7"            | 0.406                       | 0.729    | 0°         | Coolant Thru | CK-19/STC-9 |              | TPG-221    | 60° Triangle | STUBBY | NTM   | 3°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | \$418.40 |
| E10-CTFPR-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.625             | 7"            | 0.406                       | 0.729    | 0°         | Coolant Thru | CK-19/STC-9 |              | TPG-221    | 60° Triangle | STUBBY | NTM   | 3°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | \$418.40 |
| E10-LSER-3          | 5/8 Ø STUBBY Carbide Laydown Thread Bar With Coolant | Right       | 0.625             | 7"            | 0.439                       | 0.762    | 0°         | Coolant Thru |             | MS-1155      | LT16       | 60° Triangle | STUBBY | NTM   | 16°                 | Carbide        | End Coolant  | Laydown Thread      | OD/ID Threading | \$418.40 |
| E10-MWLN-3          | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.625             | 7"            | 0.438                       | 0.761    | -5°        | Coolant Thru | CK-5/STC-5  | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   | 14°                 | Carbide        | End Coolant  | Clamp               | ID Boring Bar   | \$418.40 |
| E10-NKLCLO5         | 5/8 Ø STUBBY Carbide Profile Bar With Coolant        | Left        | 0.625             | 7"            | 0.5                         | 0.870    | -5°        | Coolant Thru | CM-71/S-524 |              | NPGR-51R   | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        | End Coolant  | Profiling           | OD/ID Profiling | \$474.19 |
| E10-NKLCRO5         | 5/8 Ø STUBBY Carbide Profile Bar With Coolant        | Right       | 0.625             | 7"            | 0.5                         | 0.870    | -5°        | Coolant Thru | CM-79/S-524 |              | NPGR-51L   | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        | End Coolant  | Profiling           | OD/ID Profiling | \$474.19 |
| E10-SCLCL-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Left        | 0.625             | 7"            | 0.406                       | 0.729    | -5°        | Coolant Thru |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 7°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar   | \$418.40 |
| E10-SCLCL-3         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Left        | 0.625             | 7"            | 0.406                       | 0.729    | -5°        | Coolant Thru |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 7°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar   | \$418.40 |
| E10-SCLCR-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.625             | 7"            | 0.406                       | 0.729    | -5°        | Coolant Thru |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 7°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar   | \$418.40 |
| E10-SCLCR-3         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.625             | 7"            | 0.406                       | 0.729    | -5°        | Coolant Thru |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 7°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar   | \$418.40 |

| CARBIDE BORING BARS |                                              |             |                   |               |                             |          |            |              |             |              |            |              |        |       |                     |                |              |                     |               |          |
|---------------------|----------------------------------------------|-------------|-------------------|---------------|-----------------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|---------------|----------|
| Catalog Number      | Description                                  | Hand of Cut | Ø<br>Bar Diameter | OAL<br>Length | F Dim<br>C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category      | Price    |
| E10-SCLPL-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.625             | 7"            | 0.406                       | 0.729    | -5°        | Coolant Thru |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 4°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | \$418.40 |
| E10-SCLPL-3         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.625             | 7"            | 0.406                       | 0.729    | -5°        | Coolant Thru |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 4°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | \$418.40 |
| E10-SCLPR-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.625             | 7"            | 0.406                       | 0.729    | -5°        | Coolant Thru |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 4°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | \$418.40 |
| E10-SCLPR-3         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.625             | 7"            | 0.406                       | 0.729    | -5°        | Coolant Thru |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 4°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | \$418.40 |
| E10-SDUCL-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.625             | 7"            | 0.5                         | 0.823    | -3°        | Coolant Thru |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar | \$418.40 |
| E10-SDUCR-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.625             | 7"            | 0.5                         | 0.823    | -3°        | Coolant Thru |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar | \$418.40 |
| E10-SDUPL-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.625             | 7"            | 0.5                         | 0.823    | -3°        | Coolant Thru |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 2°                  | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar | \$418.40 |
| E10-SDUPR-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.625             | 7"            | 0.5                         | 0.823    | -3°        | Coolant Thru |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   | 2°                  | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar | \$418.40 |
| E10-STFCL-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.625             | 7"            | 0.406                       | 0.729    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$418.40 |
| E10-STFCR-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.625             | 7"            | 0.406                       | 0.729    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$418.40 |
| E10-STFPL-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.625             | 7"            | 0.406                       | 0.729    | 0°         | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 5°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$418.40 |
| E10-STFPR-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.625             | 7"            | 0.406                       | 0.729    | 0°         | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 5°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$418.40 |
| E10-STUCL-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.625             | 7"            | 0.406                       | 0.729    | -3°        | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$418.40 |
| E10-STUCL-3         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.625             | 7"            | 0.406                       | 0.729    | -3°        | Coolant Thru |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$418.40 |
| E10-STUCR-2         | 5/8 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.625             | 7"            | 0.406                       | 0.729    | -3°        | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$418.40 |

## CARBIDE BORING BARS

| Catalog Number      | Description                                          | Hand of Cut | Ø<br>Bar Diameter | OAL<br>Length | F Dim<br>C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category        | Price           |
|---------------------|------------------------------------------------------|-------------|-------------------|---------------|-----------------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|-----------------|-----------------|
| <b>E10-STUCR-3</b>  | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.625             | 7"            | 0.406                       | 0.729    | -3°        | Coolant Thru |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | <b>\$418.40</b> |
| <b>E10-STUNL-2</b>  | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Left        | 0.625             | 7"            | 0.406                       | 0.729    | -3°        | Coolant Thru |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   | 12°                 | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | <b>\$418.40</b> |
| <b>E10-STUNR-2</b>  | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.625             | 7"            | 0.406                       | 0.729    | -3°        | Coolant Thru |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   | 12°                 | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | <b>\$418.40</b> |
| <b>E10-STUPL-2</b>  | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Left        | 0.625             | 7"            | 0.406                       | 0.729    | -3°        | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 0°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | <b>\$418.40</b> |
| <b>E10-STUPR-2</b>  | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.625             | 7"            | 0.406                       | 0.729    | -3°        | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   | 0°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | <b>\$418.40</b> |
| <b>E10-SWLCR-2</b>  | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.625             | 7"            | 0.375                       | 0.697    | -5°        | Coolant Thru |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   | 10°                 | Carbide        | End Coolant  | 80° Trigon w/Cool   | ID Boring Bar   | <b>\$418.40</b> |
| <b>E10-SWLCR-3</b>  | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.625             | 7"            | 0.375                       | 0.697    | -5°        | Coolant Thru |             | TS4          | WCMT-32.52 | 80° Trigon   | STUBBY | NTM   | 10°                 | Carbide        | End Coolant  | 80° Trigon w/Cool   | ID Boring Bar   | <b>\$418.40</b> |
| <b>E10-SWLPL-3</b>  | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Left        | 0.625             | 7"            | 0.406                       | 0.729    | -5°        | Coolant Thru |             | MS-1155      | WPMT-32.52 | 80° Trigon   | STUBBY | NTM   | 3°                  | Carbide        | End Coolant  | 80° Trigon w/Cool   | ID Boring Bar   | <b>\$418.40</b> |
| <b>E10-SWLPR-3</b>  | 5/8 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.625             | 7"            | 0.406                       | 0.729    | -5°        | Coolant Thru |             | MS-1155      | WPMT-32.52 | 80° Trigon   | STUBBY | NTM   | 3°                  | Carbide        | End Coolant  | 80° Trigon w/Cool   | ID Boring Bar   | <b>\$418.40</b> |
| <b>E12-CTFPL-3</b>  | 3/4 Ø STUBBY Carbide Boring Bar With Coolant         | Left        | 0.75              | 7"            | 0.5                         | 0.885    | 0°         | Coolant Thru | CK-7/STC-9  |              | TPG-322    | 60° Triangle | STUBBY | NTM   | 0°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | <b>\$555.44</b> |
| <b>E12-CTFPR-3</b>  | 3/4 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.75              | 7"            | 0.5                         | 0.885    | 0°         | Coolant Thru | CK-7/STC-9  |              | TPG-322    | 60° Triangle | STUBBY | NTM   | 0°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | <b>\$555.44</b> |
| <b>E12-LSER-3</b>   | 3/4 Ø STUBBY Carbide Laydown Thread Bar With Coolant | Right       | 0.75              | 7"            | 0.51                        | 0.895    | 0°         | Coolant Thru |             | MS-1155      | LT16       | 60° Triangle | STUBBY | NTM   | 14°                 | Carbide        | End Coolant  | Laydown Thread      | OD/ID Threading | <b>\$555.44</b> |
| <b>E12-MWLNL-3</b>  | 3/4 Ø STUBBY Carbide Boring Bar With Coolant         | Left        | 0.75              | 7"            | 0.5                         | 0.885    | -5°        | Coolant Thru | CK-6/STC-5  | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   | 14°                 | Carbide        | End Coolant  | Clamp               | ID Boring Bar   | <b>\$555.44</b> |
| <b>E12-MWLNR-3</b>  | 3/4 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.75              | 7"            | 0.5                         | 0.885    | -5°        | Coolant Thru | CK-6/STC-5  | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   | 14°                 | Carbide        | End Coolant  | Clamp               | ID Boring Bar   | <b>\$555.44</b> |
| <b>E12-MWLNR-33</b> | 3/4 Ø STUBBY Carbide Boring Bar With Coolant         | Right       | 0.75              | 7"            | 0.5                         | 0.885    | -5°        | Coolant Thru | CK-7/STC-9  | NL-33        | WNMG-332   | 80° Trigon   | STUBBY | NTM   |                     | Carbide        | End Coolant  | Clamp               | ID Boring Bar   | <b>\$555.44</b> |

| CARBIDE BORING BARS |                                               |             |              |        |                    |          |            |              |             |              |            |              |        |       |                     |                |              |                     |                 |           |
|---------------------|-----------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|-----------------|-----------|
|                     |                                               |             | Ø            | OAL    | F Dim              |          |            |              |             |              |            |              |        |       |                     |                |              |                     |                 |           |
| Catalog Number      | Description                                   | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category        | Price     |
| E12-NKLCLO5         | 3/4 Ø STUBBY Carbide Profile Bar With Coolant | Left        | 0.75         | 7"     | 0.562              | 1.000    | -5°        | Coolant Thru | CM-68/S-524 |              | NPGR-51R   | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        | End Coolant  | Profiling           | OD/ID Profiling | \$624.57  |
| E12-NKLCR05         | 3/4 Ø STUBBY Carbide Profile Bar With Coolant | Right       | 0.75         | 7"     | 0.562              | 1.000    | -5°        | Coolant Thru | CM-68/S-524 |              | NPGR-51L   | 55° Rhomboid | STUBBY | NTM   | 5°                  | Carbide        | End Coolant  | Profiling           | OD/ID Profiling | \$624..57 |
| E12-SCLCL-3         | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Left        | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar   | \$555.44  |
| E12-SCLCR-3         | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar   | \$555.44  |
| E12-SCLPL-2         | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Left        | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   | 2°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar   | \$555.44  |
| E12-SCLPL-3         | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Left        | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 3°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar   | \$555.44  |
| E12-SCLPR-3         | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 3°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar   | \$555.44  |
| E12-SDUCL-3         | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Left        | 0.75         | 7"     | 0.625              | 1.010    | -3°        | Coolant Thru |             | 5513-020-09  | DCMT-32.52 | 55° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar   | \$555.44  |
| E12-SDUCR-3         | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.75         | 7"     | 0.625              | 1.010    | -3°        | Coolant Thru |             | 5513-020-09  | DCMT-32.52 | 55° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar   | \$555.44  |
| E12-SDUPL-3         | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Left        | 0.75         | 7"     | 0.562              | 0.947    | -3°        | Coolant Thru |             | MS-1155      | DPMT-32.52 | 55° Rhomboid | STUBBY | NTM   | 2°                  | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar   | \$555.44  |
| E12-SDUPR-3         | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.75         | 7"     | 0.562              | 0.947    | -3°        | Coolant Thru |             | MS-1155      | DPMT-32.52 | 55° Rhomboid | STUBBY | NTM   | 2°                  | Carbide        | End Coolant  | 55° Diamond         | ID Boring Bar   | \$555.44  |
| E12-STFCL-2         | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Left        | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | \$555.44  |
| E12-STFCL-3         | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Left        | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Coolant Thru |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | \$555.44  |
| E12-STFCR-2         | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | \$555.44  |
| E12-STFCR-3         | 3/4 Ø STUBBY Carbide Boring Bar With Coolant  | Right       | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Coolant Thru |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar   | \$555.44  |

## CARBIDE BORING BARS

| Catalog Number     | Description                                  | Hand of Cut | Ø<br>Bar Diameter | OAL<br>Length | F Dim<br>C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw  | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category      | Price           |
|--------------------|----------------------------------------------|-------------|-------------------|---------------|-----------------------------|----------|------------|--------------|--------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|---------------|-----------------|
| <b>E12-STFPL-3</b> | 3/4 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.75              | 7"            | 0.5                         | 0.885    | 0°         | Coolant Thru |              | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   | 2°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | <b>\$555.44</b> |
| <b>E12-STFPR-3</b> | 3/4 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.75              | 7"            | 0.5                         | 0.885    | 0°         | Coolant Thru |              | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   | 2°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | <b>\$555.44</b> |
| <b>E12-STUCL-3</b> | 3/4 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.75              | 7"            | 0.5                         | 0.885    | -3°        | Coolant Thru |              | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | <b>\$555.44</b> |
| <b>E12-STUCR-2</b> | 3/4 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.75              | 7"            | 0.5                         | 0.885    | -3°        | Coolant Thru |              | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | <b>\$555.44</b> |
| <b>E12-STUCR-3</b> | 3/4 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.75              | 7"            | 0.5                         | 0.885    | -3°        | Coolant Thru |              | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | <b>\$555.44</b> |
| <b>E12-STUNL-3</b> | 3/4 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.75              | 7"            | 0.5                         | 0.885    | -3°        | Coolant Thru |              | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   | 10°                 | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | <b>\$555.44</b> |
| <b>E12-STUNR-3</b> | 3/4 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.75              | 7"            | 0.5                         | 0.885    | -3°        | Coolant Thru |              | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   | 10°                 | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | <b>\$555.44</b> |
| <b>E12-STUPL-3</b> | 3/4 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.75              | 7"            | 0.5                         | 0.885    | -3°        | Coolant Thru |              | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   | 3°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | <b>\$555.44</b> |
| <b>E12-STUPR-3</b> | 3/4 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.75              | 7"            | 0.5                         | 0.885    | -3°        | Coolant Thru |              | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   | 3°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | <b>\$555.44</b> |
| <b>E12-SWLCR-3</b> | 3/4 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.75              | 7"            | 0.5                         | 0.885    | -5°        | Coolant Thru |              | TS4          | WCMT-32.52 | 80° Trigon   | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 80° Trigon w/Cool   | ID Boring Bar | <b>\$555.44</b> |
| <b>E12-SWLPL-3</b> | 3/4 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 0.75              | 7"            | 0.5                         | 0.885    | -5°        | Coolant Thru |              | MS-1155      | WPMT-32.52 | 80° Trigon   | STUBBY | NTM   | 2°                  | Carbide        | End Coolant  | 80° Trigon w/Cool   | ID Boring Bar | <b>\$555.44</b> |
| <b>E12-SWLPR-3</b> | 3/4 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 0.75              | 7"            | 0.5                         | 0.885    | -5°        | Coolant Thru |              | MS-1155      | WPMT-32.52 | 80° Trigon   | STUBBY | NTM   | 2°                  | Carbide        | End Coolant  | 80° Trigon w/Cool   | ID Boring Bar | <b>\$555.44</b> |
| <b>E16-CTFPL-3</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 1                 | 7"            | 0.625                       | 1.135    | 0°         | Coolant Thru | CK-20/STC-11 |              | TPG-322    | 60° Triangle | STUBBY | NTM   | 0°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-CTFPR-3</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 1                 | 7"            | 0.625                       | 1.135    | 0°         | Coolant Thru | CK-20/STC-11 |              | TPG-322    | 60° Triangle | STUBBY | NTM   | 0°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-DCLNL-4</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 1                 | 7"            | 0.625                       | 1.135    | -5°        | Coolant Thru | Ck-7/STC-9   | LP-59        | CNMG 432   | 80° Rhomboid | STUBBY | NTM   |                     | Carbide        | End Coolant  | Clamp               | ID Boring Bar | <b>\$731.29</b> |

## CARBIDE BORING BARS

| Catalog Number     | Description                                  | Hand of Cut | Ø<br>Bar Diameter | OAL<br>Length | F Dim<br>C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw  | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category      | Price           |
|--------------------|----------------------------------------------|-------------|-------------------|---------------|-----------------------------|----------|------------|--------------|--------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|---------------|-----------------|
| <b>E16-DCLNR-4</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 1                 | 7"            | 0.625                       | 1.135    | -5°        | Coolant Thru | Ck-7/STC-9   | LP-59        | CNMG 432   | 80° Rhomboid | STUBBY | NTM   |                     | Carbide        | End Coolant  | Clamp               | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-MCLNL-4</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 1                 | 7"            | 0.625                       | 1.135    | -5°        | Coolant Thru | CK-20/STC-11 | NL-44        | CNMG-432   | 80° Rhomboid | STUBBY | NTM   | 14°                 | Carbide        | End Coolant  | Clamp               | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-MCLNR-4</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 1                 | 7"            | 0.625                       | 1.135    | -5°        | Coolant Thru | CK-20/STC-11 | NL-44        | CNMG-432   | 80° Rhomboid | STUBBY | NTM   | 14°                 | Carbide        | End Coolant  | Clamp               | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-MTLNR-3</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 1                 | 7"            | 0.625                       | 1.135    | -5°        | Coolant Thru | Ck-7/STC-9   | NL-33L       | TNGA-332   | 60° Triangle | STUBBY | NTM   | 12°                 | Carbide        | End Coolant  | Clamp               | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-MWLNL-3</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 1                 | 7"            | 0.625                       | 1.135    | -5°        | Coolant Thru | CK-6/STC-5   | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   | 14°                 | Carbide        | End Coolant  | Clamp               | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-MWLNR-3</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 1                 | 7"            | 0.625                       | 1.135    | -5°        | Coolant Thru | CK-6/STC-5   | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   | 14°                 | Carbide        | End Coolant  | Clamp               | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-MWLNR-4</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 1                 | 7"            | 0.625                       | 1.135    | -5°        | Coolant Thru | CK-20/STC-11 | NL-44        | WNMG-432   | 80° Trigon   | STUBBY | NTM   | 14°                 | Carbide        | End Coolant  | Clamp               | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-SCLCL-3</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 1                 | 7"            | 0.625                       | 1.135    | -5°        | Coolant Thru |              | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-SCLCL-4</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 1                 | 7"            | 0.625                       | 1.135    | -5°        | Coolant Thru |              | 5513-020-17  | CCMT-432   | 80° Rhomboid | STUBBY | NTM   |                     | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-SCLCR-3</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 1                 | 7"            | 0.625                       | 1.135    | -5°        | Coolant Thru |              | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 6°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-SCLCR-4</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 1                 | 7"            | 0.625                       | 1.135    | -5°        | Coolant Thru |              | 5513-020-17  | CCMT-432   | 80° Rhomboid | STUBBY | NTM   |                     | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-SCLPL-3</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 1                 | 7"            | 0.625                       | 1.135    | -5°        | Coolant Thru |              | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-SCLPR-3</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 1                 | 7"            | 0.625                       | 1.135    | -5°        | Coolant Thru |              | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-STUCR-3</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 1                 | 7"            | 0.625                       | 1.135    | -3°        | Coolant Thru |              | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   | 3°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | <b>\$731.29</b> |
| <b>E16-STUNL-3</b> | 1.0 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 1                 | 7"            | 0.625                       | 1.135    | -3°        | Coolant Thru |              | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | <b>\$731.29</b> |

| CARBIDE BORING BARS |                                                |             |              |        |                    |          |            |              |              |              |            |              |        |       |                     |                |              |                     |               |            |
|---------------------|------------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|--------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|---------------|------------|
|                     |                                                |             | Ø            | OAL    | F Dim              |          |            |              |              |              |            |              |        |       |                     |                |              |                     |               |            |
| Catalog Number      | Description                                    | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw  | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category      | Price      |
| E16-STUNR-3         | 1.0 Ø STUBBY Carbide Boring Bar With Coolant   | Right       | 1            | 7"     | 0.625              | 1.135    | -3°        | Coolant Thru |              | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   | 8°                  | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$731.29   |
| E16-STUPR-3         | 1.0 Ø STUBBY Carbide Boring Bar With Coolant   | Right       | 1            | 7"     | 0.625              | 1.135    | -3°        | Coolant Thru |              | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Carbide        | End Coolant  | 60° Triangle w/Cool | ID Boring Bar | \$731.29   |
| E20-MCLNR-4         | 1-1/4 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 1.25         | 12"    | 0.765              | 1.470    | -5°        | Coolant Thru | CK-20/STC-11 | NL-44        | CNMG-432   | 80° Rhomboid | STUBBY | NTM   | 14°                 | Carbide        | End Coolant  | Clamp               | ID Boring Bar | \$1,574.27 |
| E20-MWLNR-4         | 1-1/4 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 1.25         | 12"    | 0.765              | 1.470    | -5°        | Coolant Thru | CK-20/STC-11 | NL-44        | WNMG-432   | 80° Trigon   | STUBBY | NTM   |                     | Carbide        | End Coolant  | Clamp               | ID Boring Bar | \$1,574.27 |
| E20-SCLCL-4         | 1-1/4 Ø STUBBY Carbide Boring Bar With Coolant | Left        | 1.25         | 12"    | 0.765              | 1.470    | -5°        | Coolant Thru |              | 5513-020-17  | CCMT-432   | 80° Rhomboid | STUBBY | NTM   |                     | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | \$1,574.27 |
| E20-SCLCR-4         | 1-1/4 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 1.25         | 12"    | 0.765              | 1.470    | -5°        | Coolant Thru |              | 5513-020-17  | CCMT-432   | 80° Rhomboid | STUBBY | NTM   |                     | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | \$1,574.27 |
| E20-SCLPR-3         | 1-1/4 Ø STUBBY Carbide Boring Bar With Coolant | Right       | 1.25         | 12"    | 0.765              | 1.470    | -5°        | Coolant Thru |              | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Carbide        | End Coolant  | 80° Diamond w/Cool  | ID Boring Bar | \$1,574.27 |

| STEEL BORING BARS |                                             |             |                   |               |                             |          |            |              |             |              |            |              |        |       |                     |                |              |                     |               |            |
|-------------------|---------------------------------------------|-------------|-------------------|---------------|-----------------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|---------------|------------|
| Catalog Number    | Description                                 | Hand of Cut | Ø<br>Bar Diameter | OAL<br>Length | F Dim<br>C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category      | 2025 Price |
| A05-SCLCL-2       | 5/16 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.312             | 4.5"          | 0.219                       | 0.385    | -5°        | Coolant Thru |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$129.80   |
| A05-SCLCR-2       | 5/16 Ø STUBBY SteelBoring Bar With Coolant  | Right       | 0.312             | 4.5"          | 0.219                       | 0.385    | -5°        | Coolant Thru |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$129.80   |
| A06-SCLCL-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.375             | 4-3/4"        | 0.25                        | 0.448    | -5°        | Coolant Thru |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$129.80   |
| A06-SCLCR-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.375             | 4-3/4"        | 0.25                        | 0.448    | -5°        | Coolant Thru |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$129.80   |
| A06-SCLPL-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.375             | 4-3/4"        | 0.25                        | 0.448    | -5°        | Coolant Thru |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$129.80   |
| A06-SCLPR-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.375             | 4-3/4"        | 0.25                        | 0.448    | -5°        | Coolant Thru |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$129.80   |
| A06-SDUCL-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.375             | 4-3/4"        | 0.375                       | 0.573    | -3°        | Coolant Thru |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$129.80   |
| A06-SDUCR-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.375             | 4-3/4"        | 0.375                       | 0.573    | -3°        | Coolant Thru |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$129.80   |
| A06-SDUPL-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.375             | 4-3/4"        | 0.375                       | 0.573    | -3°        | Coolant Thru |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$129.80   |
| A06-SDUPR-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.375             | 4-3/4"        | 0.375                       | 0.573    | -3°        | Coolant Thru |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$129.80   |
| A06-STFCL-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.375             | 4-3/4"        | 0.25                        | 0.448    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$129.80   |
| A06-STFCR-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.375             | 4-3/4"        | 0.25                        | 0.448    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$129.80   |
| A06-STFPL-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.375             | 4-3/4"        | 0.25                        | 0.448    | 0°         | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$129.80   |
| A06-STFPR-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.375             | 4-3/4"        | 0.25                        | 0.448    | 0°         | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$129.80   |
| A06-STUCL-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.375             | 4-3/4"        | 0.25                        | 0.448    | -3°        | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$129.80   |

| STEEL BORING BARS |                                             |             |              |        |                    |          |            |              |              |              |            |              |        |       |                     |                |              |                     |                 |            |
|-------------------|---------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|--------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|-----------------|------------|
|                   |                                             |             | Ø            | OAL    | F Dim              |          |            |              |              |              |            |              |        |       |                     |                |              |                     |                 |            |
| Catalog Number    | Description                                 | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw  | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category        | 2025 Price |
| A06-STUCR-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Coolant Thru |              | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$129.80   |
| A06-STUNL-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Coolant Thru |              | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$129.80   |
| A06-STUNR-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Coolant Thru |              | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$129.80   |
| A06-STUPL-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Coolant Thru |              | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$129.80   |
| A06-STUPR-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Coolant Thru |              | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$129.80   |
| A06-SWLPL-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Coolant Thru |              | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon w/Cool   | ID Boring Bar   | \$129.80   |
| A06-SWLPR-2       | 3/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Coolant Thru |              | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon w/Cool   | ID Boring Bar   | \$129.80   |
| A08-CTFPL-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Coolant Thru | CK-27/STC-27 |              | TPG-221    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$136.40   |
| A08-CTFPR-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Coolant Thru | CK-27/STC-27 |              | TPG-221    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$136.40   |
| A08-NKLCL05       | 1/2 Ø STUBBY Steel Profile Bar With Coolant | Left        | 0.5          | 5"     | 0.375              | 0.670    | -5°        | Coolant Thru | CM-105/S-518 |              | NPGR-51R   | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Profiling           | OD/ID Profiling | \$156.20   |
| A08-NKLCR05       | 1/2 Ø STUBBY Steel Profile Bar With Coolant | Right       | 0.5          | 5"     | 0.375              | 0.670    | -5°        | Coolant Thru | CM-106/S-518 |              | NPGR-51L   | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Profiling           | OD/ID Profiling | \$156.20   |
| A08-SCLCL-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |              | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar   | \$136.40   |
| A08-SCLCL-3       | 1/2 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |              | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar   | \$136.40   |
| A08-SCLCR-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |              | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar   | \$136.40   |
| A08-SCLCR-3       | 1/2 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |              | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar   | \$136.40   |

| STEEL BORING BARS |                                            |             |              |        |                    |          |            |              |             |              |            |              |        |       |                     |                |              |                     |               |            |
|-------------------|--------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|---------------|------------|
|                   |                                            |             | Ø            | OAL    | F Dim              |          |            |              |             |              |            |              |        |       |                     |                |              |                     |               |            |
| Catalog Number    | Description                                | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category      | 2025 Price |
| A08-SCLPL-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$136.40   |
| A08-SCLPL-3       | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$136.40   |
| A08-SCLPR-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$136.40   |
| A08-SCLPR-3       | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$136.40   |
| A08-SDUCL-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Coolant Thru |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$136.40   |
| A08-SDUCR-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Coolant Thru |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$136.40   |
| A08-SDUPL-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Coolant Thru |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$136.40   |
| A08-SDUPR-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Coolant Thru |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$136.40   |
| A08-STFCL-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$136.40   |
| A08-STFCR-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$136.40   |
| A08-STFPL-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$136.40   |
| A08-STFPR-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$136.40   |
| A08-STUCL-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$136.40   |
| A08-STUCR-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$136.40   |
| A08-STUNL-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Coolant Thru |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$136.40   |

| STEEL BORING BARS |                                             |             |              |        |                    |          |            |              |             |              |            |              |        |       |                     |                |              |                     |                 |            |
|-------------------|---------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|-----------------|------------|
|                   |                                             |             | Ø            | OAL    | F Dim              |          |            |              |             |              |            |              |        |       |                     |                |              |                     |                 |            |
| Catalog Number    | Description                                 | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category        | 2025 Price |
| A08-STUNR-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Coolant Thru |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$136.40   |
| A08-STUPL-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$136.40   |
| A08-STUPR-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$136.40   |
| A08-SWLPL-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |             | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon w/Cool   | ID Boring Bar   | \$136.40   |
| A08-SWLPR-2       | 1/2 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |             | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon w/Cool   | ID Boring Bar   | \$136.40   |
| A10-CTFPL-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Coolant Thru | CK-19/STC-9 |              | TPG-221    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$150.70   |
| A10-CTFPR-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Coolant Thru | CK-19/STC-9 |              | TPG-221    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$150.70   |
| A10-MWLN-3        | 5/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.625        | 7"     | 0.438              | 0.761    | -5°        | Coolant Thru | CK-5/STC-5  | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | Clamp               | ID Boring Bar   | \$150.70   |
| A10-NKLC05        | 5/8 Ø STUBBY Steel Profile Bar With Coolant | Left        | 0.625        | 7"     | 0.5                | 0.870    | -5°        | Coolant Thru | CM-71/S-524 |              | NPGR-51R   | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Profiling           | OD/ID Profiling | \$174.90   |
| A10-NKLCR05       | 5/8 Ø STUBBY Steel Profile Bar With Coolant | Right       | 0.625        | 7"     | 0.5                | 0.870    | -5°        | Coolant Thru | CM-79/S-524 |              | NPGR-51L   | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Profiling           | OD/ID Profiling | \$174.90   |
| A10-SCLCL-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Coolant Thru |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar   | \$150.70   |
| A10-SCLCL-3       | 5/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Coolant Thru |             | 5513-020-03  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar   | \$150.70   |
| A10-SCLCR-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Coolant Thru |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar   | \$150.70   |
| A10-SCLCR-3       | 5/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Coolant Thru |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar   | \$150.70   |
| A10-SCLPL-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Coolant Thru |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar   | \$150.70   |

| STEEL BORING BARS |                                            |             |              |        |                    |          |            |              |             |              |            |              |        |       |                     |                |              |                     |               |            |
|-------------------|--------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|---------------|------------|
|                   |                                            |             | Ø            | OAL    | F Dim              |          |            |              |             |              |            |              |        |       |                     |                |              |                     |               |            |
| Catalog Number    | Description                                | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category      | 2025 Price |
| A10-SCLPL-3       | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Coolant Thru |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$150.70   |
| A10-SCLPR-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Coolant Thru |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$150.70   |
| A10-SCLPR-3       | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Coolant Thru |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$150.70   |
| A10-SDUCL-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.625        | 7"     | 0.5                | 0.823    | -3°        | Coolant Thru |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$150.70   |
| A10-SDUCR-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.625        | 7"     | 0.5                | 0.823    | -3°        | Coolant Thru |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$150.70   |
| A10-SDUPL-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.625        | 7"     | 0.5                | 0.823    | -3°        | Coolant Thru |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$150.70   |
| A10-SDUPR-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.625        | 7"     | 0.5                | 0.823    | -3°        | Coolant Thru |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$150.70   |
| A10-STFCL-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$150.70   |
| A10-STFCR-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$150.70   |
| A10-STFPL-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$150.70   |
| A10-STFPR-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$150.70   |
| A10-STUCL-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$150.70   |
| A10-STUCL-3       | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Coolant Thru |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$150.70   |
| A10-STUCR-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$150.70   |
| A10-STUCR-3       | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Coolant Thru |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$150.70   |

| STEEL BORING BARS |                                             |             |              |        |                    |          |            |              |             |              |            |              |        |       |                     |                |              |                     |                 |            |
|-------------------|---------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|-----------------|------------|
|                   |                                             |             | Ø            | OAL    | F Dim              |          |            |              |             |              |            |              |        |       |                     |                |              |                     |                 |            |
| Catalog Number    | Description                                 | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category        | 2025 Price |
| A10-STUNL-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Coolant Thru |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$150.70   |
| A10-STUNR-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Coolant Thru |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$150.70   |
| A10-STUPL-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$150.70   |
| A10-STUPR-2       | 5/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Coolant Thru |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$150.70   |
| A10-SWLPL-3       | 5/8 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Coolant Thru |             | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon w/Cool   | ID Boring Bar   | \$150.70   |
| A10-SWLPR-3       | 5/8 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Coolant Thru |             | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon w/Cool   | ID Boring Bar   | \$150.70   |
| A12-CTFPL-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Coolant Thru | CK-7/STC-9  |              | TPG-322    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$167.20   |
| A12-CTFPR-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Coolant Thru | CK-7/STC-9  |              | TPG-322    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar   | \$167.20   |
| A12-MWLNL-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru | CK-6/STC-5  | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | Clamp               | ID Boring Bar   | \$167.20   |
| A12-MWLNR-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru | CK-6/STC-5  | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | Clamp               | ID Boring Bar   | \$167.20   |
| A12-MWLNR-33      | 3/4 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru | CK-7/STC-9  | NL-33        | WNMG-332   | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | Clamp               | ID Boring Bar   | \$167.20   |
| A12-NKLCLO5       | 3/4 Ø STUBBY Steel Profile Bar With Coolant | Left        | 0.75         | 7"     | 0.562              | 1.000    | -5°        | Coolant Thru | CM-68/S-524 |              | NPGR-51R   | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Profiling           | OD/ID Profiling | \$192.50   |
| A12-NKLCRO5       | 3/4 Ø STUBBY Steel Profile Bar With Coolant | Right       | 0.75         | 7"     | 0.562              | 1.000    | -5°        | Coolant Thru | CM-68/S-524 |              | NPGR-51L   | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Profiling           | OD/ID Profiling | \$192.50   |
| A12-SCLCL-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant  | Left        | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar   | \$167.20   |
| A12-SCLCR-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant  | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar   | \$167.20   |

| STEEL BORING BARS |                                            |             |              |        |                    |          |            |              |             |              |            |              |        |       |                     |                |              |                     |               |            |
|-------------------|--------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|---------------|------------|
|                   |                                            |             | Ø            | OAL    | F Dim              |          |            |              |             |              |            |              |        |       |                     |                |              |                     |               |            |
| Catalog Number    | Description                                | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category      | 2025 Price |
| A12-SCLPL-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$167.20   |
| A12-SCLPR-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$167.20   |
| A12-SDUCL-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.75         | 7"     | 0.625              | 1.010    | -3°        | Coolant Thru |             | 5513-020-09  | DCMT-32.52 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$167.20   |
| A12-SDUCR-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.75         | 7"     | 0.625              | 1.010    | -3°        | Coolant Thru |             | 5513-020-09  | DCMT-32.52 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$167.20   |
| A12-SDUPL-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.75         | 7"     | 0.562              | 0.947    | -3°        | Coolant Thru |             | MS-1155      | DPMT-32.52 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$167.20   |
| A12-SDUPR-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.75         | 7"     | 0.562              | 0.947    | -3°        | Coolant Thru |             | MS-1155      | DPMT-32.52 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond         | ID Boring Bar | \$167.20   |
| A12-STFCL-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Coolant Thru |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$167.20   |
| A12-STFCL-2       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$167.20   |
| A12-STFCR-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Coolant Thru |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$167.20   |
| A12-STFCR-2       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$167.20   |
| A12-STFPL-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Coolant Thru |             | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$167.20   |
| A12-STFPR-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Coolant Thru |             | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$167.20   |
| A12-STUCL-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Coolant Thru |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$167.20   |
| A12-STUCR-2       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Coolant Thru |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$167.20   |
| A12-STUCR-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Coolant Thru |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$167.20   |

| STEEL BORING BARS |                                            |             |              |        |                    |          |            |              |              |              |            |              |        |       |                     |                |              |                     |               |            |
|-------------------|--------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|--------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|---------------|------------|
|                   |                                            |             | Ø            | OAL    | F Dim              |          |            |              |              |              |            |              |        |       |                     |                |              |                     |               |            |
| Catalog Number    | Description                                | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw  | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category      | 2025 Price |
| A12-STUNL-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Coolant Thru |              | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$167.20   |
| A12-STUNR-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Coolant Thru |              | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$167.20   |
| A12-STUPL-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Coolant Thru |              | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$167.20   |
| A12-STUPR-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Coolant Thru |              | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$167.20   |
| A12-SWLPL-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru |              | MS-1155      | WPMT-32.52 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon w/Cool   | ID Boring Bar | \$167.20   |
| A12-SWLPR-3       | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru |              | MS-1155      | WPMT-32.52 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon w/Cool   | ID Boring Bar | \$167.20   |
| A16-CTFPL-3       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Left        | 1            | 7"     | 0.625              | 1.135    | 0°         | Coolant Thru | CK-20/STC-11 |              | TPG-322    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$204.60   |
| A16-CTFPR-3       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Right       | 1            | 7"     | 0.625              | 1.135    | 0°         | Coolant Thru | CK-20/STC-11 |              | TPG-322    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$204.60   |
| A16-MCLNL-4       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Coolant Thru | CK-20/STC-11 | NL-44        | CNMG-432   | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Clamp               | ID Boring Bar | \$204.60   |
| A16-MCLNR-4       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Coolant Thru | CK-20/STC-11 | NL-44        | CNMG-432   | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Clamp               | ID Boring Bar | \$204.60   |
| A16-MTLNR-3       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Coolant Thru | Ck-7/STC-9   | NL-33L       | TNGA-332   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | Clamp               | ID Boring Bar | \$204.60   |
| A16-MWLNL-3       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Coolant Thru | CK-6/STC-5   | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | Clamp               | ID Boring Bar | \$204.60   |
| A16-MWLNR-3       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Coolant Thru | CK-6/STC-5   | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | Clamp               | ID Boring Bar | \$204.60   |
| A16-MWLNR-4       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Coolant Thru | CK-20/STC-11 | NL-44        | WNMG-432   | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | Clamp               | ID Boring Bar | \$204.60   |
| A16-SCLCL-3       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Coolant Thru |              | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$204.60   |

| STEEL BORING BARS |                                            |             |              |        |                    |          |            |              |             |              |            |              |        |       |                     |                |              |                     |               |            |
|-------------------|--------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|---------------------|---------------|------------|
|                   |                                            |             | Ø            | OAL    | F Dim              |          |            |              |             |              |            |              |        |       |                     |                |              |                     |               |            |
| Catalog Number    | Description                                | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image               | Category      | 2025 Price |
| A16-SCLCL-4       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Coolant Thru |             | 5513-020-17  | CCMT-432   | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$204.60   |
| A16-SCLCR-3       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Coolant Thru |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$204.60   |
| A16-SCLCR-4       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Coolant Thru |             | 5513-020-17  | CCMT-432   | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$204.60   |
| A16-SCLPL-3       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Coolant Thru |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$204.60   |
| A16-SCLPR-3       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Coolant Thru |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond w/Cool  | ID Boring Bar | \$204.60   |
| A16-STUCR-3       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Right       | 1            | 7"     | 0.625              | 1.135    | -3°        | Coolant Thru |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$204.60   |
| A16-STUNL-3       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Left        | 1            | 7"     | 0.625              | 1.135    | -3°        | Coolant Thru |             | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$204.60   |
| A16-STUNR-3       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Right       | 1            | 7"     | 0.625              | 1.135    | -3°        | Coolant Thru |             | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$204.60   |
| A16-STUPR-3       | 1.0 Ø STUBBY Steel Boring Bar With Coolant | Right       | 1            | 7"     | 0.625              | 1.135    | -3°        | Coolant Thru |             | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool | ID Boring Bar | \$204.60   |
| S05-SCLCL-2       | 5/16 Ø STUBBY Steel Boring Bar             | Left        | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Solid        |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool | ID Boring Bar | \$105.60   |
| S05-SCLCR-2       | 5/16 Ø STUBBY Steel Boring Bar             | Right       | 0.312        | 4-1/2" | 0.219              | 0.385    | -5°        | Solid        |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool | ID Boring Bar | \$105.60   |
| S06-SCLCL-2       | 3/8 Ø STUBBY Steel Boring Bar              | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Solid        |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool | ID Boring Bar | \$105.60   |
| S06-SCLCR-2       | 3/8 Ø STUBBY Steel Boring Bar              | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Solid        |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool | ID Boring Bar | \$105.60   |
| S06-SCLPL-2       | 3/8 Ø STUBBY Steel Boring Bar              | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Solid        |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool | ID Boring Bar | \$105.60   |
| S06-SCLPR-2       | 3/8 Ø STUBBY Steel Boring Bar              | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Solid        |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool | ID Boring Bar | \$105.60   |

| STEEL BORING BARS |                               |             |              |        |                    |          |            |       |             |              |            |              |        |       |                     |                |              |                      |               |            |
|-------------------|-------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|---------------|------------|
|                   |                               |             | Ø            | OAL    | F Dim              |          |            |       |             |              |            |              |        |       |                     |                |              |                      |               |            |
| Catalog Number    | Description                   | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category      | 2025 Price |
| S06-SDUCL-2       | 3/8 Ø STUBBY Steel Boring Bar | Left        | 0.375        | 4-3/4" | 0.375              | 0.573    | -3°        | Solid |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar | \$105.60   |
| S06-SDUCR-2       | 3/8 Ø STUBBY Steel Boring Bar | Right       | 0.375        | 4-3/4" | 0.375              | 0.573    | -3°        | Solid |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar | \$105.60   |
| S06-SDUPL-2       | 3/8 Ø STUBBY Steel Boring Bar | Left        | 0.375        | 4-3/4" | 0.375              | 0.573    | -3°        | Solid |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar | \$105.60   |
| S06-SDUPR-2       | 3/8 Ø STUBBY Steel Boring Bar | Right       | 0.375        | 4-3/4" | 0.375              | 0.573    | -3°        | Solid |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar | \$105.60   |
| S06-STFCL-2       | 3/8 Ø STUBBY Steel Boring Bar | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | 0°         | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$105.60   |
| S06-STFCR-2       | 3/8 Ø STUBBY Steel Boring Bar | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | 0°         | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$105.60   |
| S06-STFPL-2       | 3/8 Ø STUBBY Steel Boring Bar | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | 0°         | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$105.60   |
| S06-STFPR-2       | 3/8 Ø STUBBY Steel Boring Bar | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | 0°         | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$105.60   |
| S06-STUCL-2       | 3/8 Ø STUBBY Steel Boring Bar | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$105.60   |
| S06-STUCR-2       | 3/8 Ø STUBBY Steel Boring Bar | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$105.60   |
| S06-STUNL-2       | 3/8 Ø STUBBY Steel Boring Bar | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Solid |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$105.60   |
| S06-STUNR-2       | 3/8 Ø STUBBY Steel Boring Bar | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Solid |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$105.60   |
| S06-STUPL-2       | 3/8 Ø STUBBY Steel Boring Bar | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$105.60   |
| S06-STUPR-2       | 3/8 Ø STUBBY Steel Boring Bar | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -3°        | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$105.60   |
| S06-SWLPL-2       | 3/8 Ø STUBBY Steel Boring Bar | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Solid |             | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon No Cool   | ID Boring Bar | \$105.60   |

| STEEL BORING BARS |                                |             |              |        |                    |          |            |       |              |              |            |              |        |       |                     |                |              |                      |                 |            |
|-------------------|--------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|--------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|-----------------|------------|
|                   |                                |             | Ø            | OAL    | F Dim              |          |            |       |              |              |            |              |        |       |                     |                |              |                      |                 |            |
| Catalog Number    | Description                    | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw  | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category        | 2025 Price |
| S06-SWLPR-2       | 3/8 Ø STUBBY Steel Boring Bar  | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Solid |              | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon No Cool   | ID Boring Bar   | \$105.60   |
| S08-CTFPL-2       | 1/2 Ø STUBBY Steel Boring Bar  | Left        | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Solid | CK-27/STC-27 |              | TPG-221    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar   | \$114.40   |
| S08-CTFPR-2       | 1/2 Ø STUBBY Steel Boring Bar  | Right       | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Solid | CK-27/STC-27 |              | TPG-221    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar   | \$114.40   |
| S08-NKLCL05       | 1/2 Ø STUBBY Steel Profile Bar | Left        | 0.5          | 5"     | 0.375              | 0.670    | -5°        | Solid | CM-105/S-518 |              | NPGR-51R   | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Profiling            | OD/ID Profiling | \$130.90   |
| S08-NKLCR05       | 1/2 Ø STUBBY Steel Profile Bar | Right       | 0.5          | 5"     | 0.375              | 0.670    | -5°        | Solid | CM-106/S-518 |              | NPGR-51L   | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Profiling            | OD/ID Profiling | \$130.90   |
| S08-SCLCL-2       | 1/2 Ø STUBBY Steel Boring Bar  | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |              | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$114.40   |
| S08-SCLCL-3       | 1/2 Ø STUBBY Steel Boring Bar  | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |              | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$114.40   |
| S08-SCLCR-2       | 1/2 Ø STUBBY Steel Boring Bar  | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |              | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$114.40   |
| S08-SCLCR-3       | 1/2 Ø STUBBY Steel Boring Bar  | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |              | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$114.40   |
| S08-SCLPL-2       | 1/2 Ø STUBBY Steel Boring Bar  | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |              | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$114.40   |
| S08-SCLPL-3       | 1/2 Ø STUBBY Steel Boring Bar  | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |              | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$114.40   |
| S08-SCLPR-2       | 1/2 Ø STUBBY Steel Boring Bar  | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |              | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$114.40   |
| S08-SCLPR-3       | 1/2 Ø STUBBY Steel Boring Bar  | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |              | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$114.40   |
| S08-SDUCL-2       | 1/2 Ø STUBBY Steel Boring Bar  | Left        | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Solid |              | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar   | \$114.40   |
| S08-SDUCR-2       | 1/2 Ø STUBBY Steel Boring Bar  | Right       | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Solid |              | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar   | \$114.40   |

| STEEL BORING BARS |                               |             |              |        |                    |          |            |       |             |              |            |              |        |       |                     |                |              |                      |               |            |
|-------------------|-------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|---------------|------------|
|                   |                               |             | Ø            | OAL    | F Dim              |          |            |       |             |              |            |              |        |       |                     |                |              |                      |               |            |
| Catalog Number    | Description                   | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category      | 2025 Price |
| S08-SDUPL-2       | 1/2 Ø STUBBY Steel Boring Bar | Left        | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Solid |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar | \$114.40   |
| S08-SDUPR-2       | 1/2 Ø STUBBY Steel Boring Bar | Right       | 0.5          | 5"     | 0.437              | 0.697    | -3°        | Solid |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar | \$114.40   |
| S08-STFCL-2       | 1/2 Ø STUBBY Steel Boring Bar | Left        | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$114.40   |
| S08-STFCR-2       | 1/2 Ø STUBBY Steel Boring Bar | Right       | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$114.40   |
| S08-STFPL-2       | 1/2 Ø STUBBY Steel Boring Bar | Left        | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$114.40   |
| S08-STFPR-2       | 1/2 Ø STUBBY Steel Boring Bar | Right       | 0.5          | 5"     | 0.312              | 0.572    | 0°         | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$114.40   |
| S08-STUCL-2       | 1/2 Ø STUBBY Steel Boring Bar | Left        | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$114.40   |
| S08-STUCR-2       | 1/2 Ø STUBBY Steel Boring Bar | Right       | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$114.40   |
| S08-STUNL-2       | 1/2 Ø STUBBY Steel Boring Bar | Left        | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Solid |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$114.40   |
| S08-STUNR-2       | 1/2 Ø STUBBY Steel Boring Bar | Right       | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Solid |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$114.40   |
| S08-STUPL-2       | 1/2 Ø STUBBY Steel Boring Bar | Left        | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$114.40   |
| S08-STUPR-2       | 1/2 Ø STUBBY Steel Boring Bar | Right       | 0.5          | 5"     | 0.312              | 0.572    | -3°        | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$114.40   |
| S08-SWLPL-2       | 1/2 Ø STUBBY Steel Boring Bar | Left        | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid | MS-1153     | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon No Cool   | ID Boring Bar | \$114.40   |
| S08-SWLPR-2       | 1/2 Ø STUBBY Steel Boring Bar | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid |             | MS-1153      | WPMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon No Cool   | ID Boring Bar | \$114.40   |
| S10-CTFPL-2       | 5/8 Ø STUBBY Steel Boring Bar | Left        | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Solid | CK-19/STC-9 |              | TPG-221    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$129.80   |

| STEEL BORING BARS |                                |             |              |        |                    |          |            |       |             |              |            |              |        |       |                     |                |              |                      |                 |            |
|-------------------|--------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|-----------------|------------|
|                   |                                |             | Ø            | OAL    | F Dim              |          |            |       |             |              |            |              |        |       |                     |                |              |                      |                 |            |
| Catalog Number    | Description                    | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category        | 2025 Price |
| S10-CTFPR-2       | 5/8 Ø STUBBY Steel Boring Bar  | Right       | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Solid | CK-19/STC-9 |              | TPG-221    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar   | \$129.80   |
| S10-MWLNR-3       | 5/8 Ø STUBBY Steel Boring Bar  | Right       | 0.625        | 7"     | 0.438              | 0.761    | -5°        | Solid | CK-5/STC-5  | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | Clamp                | ID Boring Bar   | \$129.80   |
| S10-NKLCL05       | 5/8 Ø STUBBY Steel Profile Bar | Left        | 0.625        | 7"     | 0.5                | 0.870    | -5°        | Solid | CM-71/S-524 |              | NPGR-51R   | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Profiling            | OD/ID Profiling | \$149.60   |
| S10-NKLCR05       | 5/8 Ø STUBBY Steel Profile Bar | Right       | 0.625        | 7"     | 0.5                | 0.870    | -5°        | Solid | CM-79/S-524 |              | NPGR-51L   | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Profiling            | OD/ID Profiling | \$149.60   |
| S10-SCLCL-2       | 5/8 Ø STUBBY Steel Boring Bar  | Left        | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$129.80   |
| S10-SCLCL-3       | 5/8 Ø STUBBY Steel Boring Bar  | Left        | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$129.80   |
| S10-SCLCR-2       | 5/8 Ø STUBBY Steel Boring Bar  | Right       | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | 5513-020-03  | CCMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$129.80   |
| S10-SCLCR-3       | 5/8 Ø STUBBY Steel Boring Bar  | Right       | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$129.80   |
| S10-SCLPL-2       | 5/8 Ø STUBBY Steel Boring Bar  | Left        | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$129.80   |
| S10-SCLPL-3       | 5/8 Ø STUBBY Steel Boring Bar  | Left        | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | MS-1155      | CPMT-32.62 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$129.80   |
| S10-SCLPR-2       | 5/8 Ø STUBBY Steel Boring Bar  | Right       | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | MS-1153      | CPMT-21.51 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$129.80   |
| S10-SCLPR-3       | 5/8 Ø STUBBY Steel Boring Bar  | Right       | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$129.80   |
| S10-SDUCL-2       | 5/8 Ø STUBBY Steel Boring Bar  | Left        | 0.625        | 7"     | 0.5                | 0.823    | -3°        | Solid |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar   | \$129.80   |
| S10-SDUCR-2       | 5/8 Ø STUBBY Steel Boring Bar  | Right       | 0.625        | 7"     | 0.5                | 0.823    | -3°        | Solid |             | 5513-020-03  | DCMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar   | \$129.80   |
| S10-SDUPL-2       | 5/8 Ø STUBBY Steel Boring Bar  | Left        | 0.625        | 7"     | 0.5                | 0.823    | -3°        | Solid |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar   | \$129.80   |

| STEEL BORING BARS |                               |             |              |        |                    |          |            |       |             |              |            |              |        |       |                     |                |              |                      |               |            |
|-------------------|-------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|---------------|------------|
|                   |                               |             | Ø            | OAL    | F Dim              |          |            |       |             |              |            |              |        |       |                     |                |              |                      |               |            |
| Catalog Number    | Description                   | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category      | 2025 Price |
| S10-SDUPR-2       | 5/8 Ø STUBBY Steel Boring Bar | Right       | 0.625        | 7"     | 0.5                | 0.823    | -3°        | Solid |             | MS-1153      | DPMT-21.51 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar | \$129.80   |
| S10-STFCL-2       | 5/8 Ø STUBBY Steel Boring Bar | Left        | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$129.80   |
| S10-STFCR-2       | 5/8 Ø STUBBY Steel Boring Bar | Right       | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$129.80   |
| S10-STFPL-2       | 5/8 Ø STUBBY Steel Boring Bar | Left        | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$129.80   |
| S10-STFPR-2       | 5/8 Ø STUBBY Steel Boring Bar | Right       | 0.625        | 7"     | 0.406              | 0.729    | 0°         | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$129.80   |
| S10-STUCL-2       | 5/8 Ø STUBBY Steel Boring Bar | Left        | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$129.80   |
| S10-STUCL-3       | 5/8 Ø STUBBY Steel Boring Bar | Left        | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Solid |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$129.80   |
| S10-STUCR-2       | 5/8 Ø STUBBY Steel Boring Bar | Right       | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$129.80   |
| S10-STUCR-3       | 5/8 Ø STUBBY Steel Boring Bar | Right       | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Solid |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$129.80   |
| S10-STUNL-2       | 5/8 Ø STUBBY Steel Boring Bar | Left        | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Solid |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$129.80   |
| S10-STUNR-2       | 5/8 Ø STUBBY Steel Boring Bar | Right       | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Solid |             | S-930        | T-221P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$129.80   |
| S10-STUPL-2       | 5/8 Ø STUBBY Steel Boring Bar | Left        | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$129.80   |
| S10-STUPR-2       | 5/8 Ø STUBBY Steel Boring Bar | Right       | 0.625        | 7"     | 0.406              | 0.729    | -3°        | Solid |             | MS-1153      | TPMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$129.80   |
| S10-SWLPL-3       | 5/8 Ø STUBBY Steel Boring Bar | Left        | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | MS-1155      | WPMT-32.52 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon No Cool   | ID Boring Bar | \$129.80   |
| S10-SWLPR-3       | 5/8 Ø STUBBY Steel Boring Bar | Right       | 0.625        | 7"     | 0.406              | 0.729    | -5°        | Solid |             | MS-1155      | WPMT-32.52 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon No Cool   | ID Boring Bar | \$129.80   |

| STEEL BORING BARS |                                |             |                   |               |                             |          |            |       |             |              |            |              |        |       |                     |                |              |                      |                 |            |
|-------------------|--------------------------------|-------------|-------------------|---------------|-----------------------------|----------|------------|-------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|-----------------|------------|
| Catalog Number    | Description                    | Hand of Cut | Ø<br>Bar Diameter | OAL<br>Length | F Dim<br>C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category        | 2025 Price |
| S12-CTFPL-3       | 3/4 Ø STUBBY Steel Boring Bar  | Left        | 0.75              | 7"            | 0.5                         | 0.885    | 0°         | Solid | CK-7/STC-9  |              | TPG-322    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar   | \$145.20   |
| S12-CTFPR-3       | 3/4 Ø STUBBY Steel Boring Bar  | Right       | 0.75              | 7"            | 0.5                         | 0.885    | 0°         | Solid | CK-7/STC-9  |              | TPG-322    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar   | \$145.20   |
| S12-MWLNL-3       | 3/4 Ø STUBBY Steel Boring Bar  | Left        | 0.75              | 7"            | 0.5                         | 0.885    | -5°        | Solid | CK-6/STC-5  | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | Clamp                | ID Boring Bar   | \$145.20   |
| S12-MWLNR-3       | 3/4 Ø STUBBY Steel Boring Bar  | Right       | 0.75              | 7"            | 0.5                         | 0.885    | -5°        | Solid | CK-6/STC-5  | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | Clamp                | ID Boring Bar   | \$145.20   |
| S12-MWLNR-33      | 3/4 Ø STUBBY Steel Boring Bar  | Right       | 0.75              | 7"            | 0.5                         | 0.885    | -5°        | Solid | CK-7/STC-9  | NL-33        | WNMG-332   | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | Clamp                | ID Boring Bar   | \$145.20   |
| S12-NKLCL05       | 3/4 Ø STUBBY Steel Profile Bar | Left        | 0.75              | 7"            | 0.562                       | 1.000    | -5°        | Solid | CM-68/S-524 |              | NPGR-51R   | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Profiling            | OD/ID Profiling | \$168.30   |
| S12-NKLCR05       | 3/4 Ø STUBBY Steel Profile Bar | Right       | 0.75              | 7"            | 0.562                       | 1.000    | -5°        | Solid | CM-68/S-524 |              | NPGR-51L   | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Profiling            | OD/ID Profiling | \$168.30   |
| S12-SCLCL-3       | 3/4 Ø STUBBY Steel Boring Bar  | Left        | 0.75              | 7"            | 0.5                         | 0.885    | -5°        | Solid |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$145.20   |
| S12-SCLCR-3       | 3/4 Ø STUBBY Steel Boring Bar  | Right       | 0.75              | 7"            | 0.5                         | 0.885    | -5°        | Solid |             | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$145.20   |
| S12-SCLPL-3       | 3/4 Ø STUBBY Steel Boring Bar  | Left        | 0.75              | 7"            | 0.5                         | 0.885    | -5°        | Solid |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$145.20   |
| S12-SCLPR-3       | 3/4 Ø STUBBY Steel Boring Bar  | Right       | 0.75              | 7"            | 0.5                         | 0.885    | -5°        | Solid |             | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$145.20   |
| S12-SDUCL-3       | 3/4 Ø STUBBY Steel Boring Bar  | Left        | 0.75              | 7"            | 0.625                       | 1.010    | -3°        | Solid |             | 5513-020-09  | DCMT-32.52 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar   | \$145.20   |
| S12-SDUCR-3       | 3/4 Ø STUBBY Steel Boring Bar  | Right       | 0.75              | 7"            | 0.625                       | 1.010    | -3°        | Solid |             | 5513-020-09  | DCMT-32.52 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar   | \$145.20   |
| S12-SDUPL-3       | 3/4 Ø STUBBY Steel Boring Bar  | Left        | 0.75              | 7"            | 0.562                       | 0.947    | -3°        | Solid |             | MS-1155      | DPMT-32.52 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar   | \$145.20   |
| S12-SDUPR-3       | 3/4 Ø STUBBY Steel Boring Bar  | Right       | 0.75              | 7"            | 0.562                       | 0.947    | -3°        | Solid |             | MS-1155      | DPMT-32.52 | 55° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar   | \$145.20   |

| STEEL BORING BARS |                               |             |              |        |                    |          |            |       |             |              |            |              |        |       |                     |                |              |                      |               |            |
|-------------------|-------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|---------------|------------|
|                   |                               |             | Ø            | OAL    | F Dim              |          |            |       |             |              |            |              |        |       |                     |                |              |                      |               |            |
| Catalog Number    | Description                   | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category      | 2025 Price |
| S12-STFCL-2       | 3/4 Ø STUBBY Steel Boring Bar | Left        | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 55° Diamond          | ID Boring Bar | \$145.20   |
| S12-STFCL-3       | 3/4 Ø STUBBY Steel Boring Bar | Left        | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Solid |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$145.20   |
| S12-STFCR-2       | 3/4 Ø STUBBY Steel Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$145.20   |
| S12-STFCR-3       | 3/4 Ø STUBBY Steel Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Solid |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$145.20   |
| S12-STFPL-3       | 3/4 Ø STUBBY Steel Boring Bar | Left        | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Solid |             | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$145.20   |
| S12-STFPR-3       | 3/4 Ø STUBBY Steel Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | 0°         | Solid |             | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$145.20   |
| S12-STUCL-3       | 3/4 Ø STUBBY Steel Boring Bar | Left        | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Solid |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$145.20   |
| S12-STUCR-2       | 3/4 Ø STUBBY Steel Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Solid |             | 5513-020-03  | TCMT-21.51 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$145.20   |
| S12-STUCR-3       | 3/4 Ø STUBBY Steel Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Solid |             | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$145.20   |
| S12-STUNL-3       | 3/4 Ø STUBBY Steel Boring Bar | Left        | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Solid |             | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$145.20   |
| S12-STUNR-3       | 3/4 Ø STUBBY Steel Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Solid |             | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$145.20   |
| S12-STUPL-3       | 3/4 Ø STUBBY Steel Boring Bar | Left        | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Solid |             | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$145.20   |
| S12-STUPR-3       | 3/4 Ø STUBBY Steel Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | -3°        | Solid |             | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$145.20   |
| S12-SWLPL-3       | 3/4 Ø STUBBY Steel Boring Bar | Left        | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Solid |             | MS-1155      | WPMT-32.52 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon No Cool   | ID Boring Bar | \$145.20   |
| S12-SWLPR-3       | 3/4 Ø STUBBY Steel Boring Bar | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Solid |             | MS-1155      | WPMT-32.52 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon No Cool   | ID Boring Bar | \$145.20   |

| STEEL BORING BARS |                               |             |              |        |                    |          |            |       |              |              |            |              |        |       |                     |                |              |                      |               |            |
|-------------------|-------------------------------|-------------|--------------|--------|--------------------|----------|------------|-------|--------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|---------------|------------|
|                   |                               |             | Ø            | OAL    | F Dim              |          |            |       |              |              |            |              |        |       |                     |                |              |                      |               |            |
| Catalog Number    | Description                   | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type  | Clamp/Screw  | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category      | 2025 Price |
| S16-CTFPL-3       | 1.0 Ø STUBBY Steel Boring Bar | Left        | 1            | 7"     | 0.625              | 1.135    | 0°         | Solid | CK-20/STC-11 |              | TPG-322    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$182.60   |
| S16-CTFPR-3       | 1.0 Ø STUBBY Steel Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | 0°         | Solid | CK-20/STC-11 |              | TPG-322    | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$182.60   |
| S16-MCLNL-4       | 1.0 Ø STUBBY Steel Boring Bar | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid | CK-20/STC-11 | NL-44        | CNMG-432   | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Clamp                | ID Boring Bar | \$182.60   |
| S16-MCLNR-4       | 1.0 Ø STUBBY Steel Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid | CK-20/STC-11 | NL-44        | CNMG-432   | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | Clamp                | ID Boring Bar | \$182.60   |
| S16-MTLNR-3       | 1.0 Ø STUBBY Steel Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid | Ck-7/STC-9   | NL-33L       | TNGA-332   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | Clamp                | ID Boring Bar | \$182.60   |
| S16-MWLNL-3       | 1.0 Ø STUBBY Steel Boring Bar | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid | CK-6/STC-5   | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | Clamp                | ID Boring Bar | \$182.60   |
| S16-MWLNR-3       | 1.0 Ø STUBBY Steel Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid | CK-6/STC-5   | NL-33        | WNMG-322   | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | Clamp                | ID Boring Bar | \$182.60   |
| S16-MWLNR-4       | 1.0 Ø STUBBY Steel Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid | CK-20/STC-11 | NL-44        | WNMG-432   | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | Clamp                | ID Boring Bar | \$182.60   |
| S16-SCLCL-3       | 1.0 Ø STUBBY Steel Boring Bar | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid |              | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar | \$182.60   |
| S16-SCLCL-4       | 1.0 Ø STUBBY Steel Boring Bar | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid |              | 5513-020-17  | CCMT-432   | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar | \$182.60   |
| S16-SCLCR-3       | 1.0 Ø STUBBY Steel Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid |              | 5513-020-09  | CCMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar | \$182.60   |
| S16-SCLCR-4       | 1.0 Ø STUBBY Steel Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid |              | 5513-020-17  | CCMT-432   | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar | \$182.60   |
| S16-SCLPL-3       | 1.0 Ø STUBBY Steel Boring Bar | Left        | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid |              | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar | \$182.60   |
| S16-SCLPR-3       | 1.0 Ø STUBBY Steel Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -5°        | Solid |              | MS-1155      | CPMT-32.52 | 80° Rhomboid | STUBBY | NTM   |                     | Steel          |              | 80° Diamond No Cool  | ID Boring Bar | \$182.60   |
| S16-STUCR-3       | 1.0 Ø STUBBY Steel Boring Bar | Right       | 1            | 7"     | 0.625              | 1.135    | -3°        | Solid |              | 5513-020-09  | TCMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$182.60   |

| STEEL BORING BARS |                                            |             |              |        |                    |          |            |              |             |              |            |              |        |       |                     |                |              |                      |               |            |
|-------------------|--------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|---------------|------------|
|                   |                                            |             | Ø            | OAL    | F Dim              |          |            |              |             |              |            |              |        |       |                     |                |              |                      |               |            |
| Catalog Number    | Description                                | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category      | 2025 Price |
| S16-STUNL-3       | 1.0 Ø STUBBY Steel Boring Bar              | Left        | 1            | 7"     | 0.625              | 1.135    | -3°        | Solid        |             | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$182.60   |
| S16-STUNR-3       | 1.0 Ø STUBBY Steel Boring Bar              | Right       | 1            | 7"     | 0.625              | 1.135    | -3°        | Solid        |             | S-944        | T-321P     | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$182.60   |
| S16-STUPR-3       | 1.0 Ø STUBBY Steel Boring Bar              | Right       | 1            | 7"     | 0.625              | 1.135    | -3°        | Solid        |             | MS-1155      | TPMT-32.52 | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$182.60   |
| S-STJOL 062       | 3/8 Ø STUBBY Steel Boring Bar              | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -2°        | Solid        |             | BHF0306R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$105.60   |
| S-STJOL 062C      | 3/8 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.375        | 4-3/4" | 0.25               | 0.448    | -2°        | Coolant Thru |             | BHF0306R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool  | ID Boring Bar | \$129.80   |
| S-STJOL 082       | 1/2 Ø STUBBY Steel Boring Bar              | Left        | 0.5          | 5"     | 0.312              | 0.572    | -2°        | Solid        |             | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$114.40   |
| S-STJOL 082C      | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.5          | 5"     | 0.312              | 0.572    | -2°        | Coolant Thru |             | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool  | ID Boring Bar | \$136.40   |
| S-STJOL 102       | 5/8 Ø STUBBY Steel Boring Bar              | Left        | 0.625        | 7"     | 0.375              | 0.698    | -2°        | Solid        |             | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$129.80   |
| S-STJOL 102C      | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.625        | 7"     | 0.375              | 0.698    | -2°        | Coolant Thru |             | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool  | ID Boring Bar | \$150.70   |
| S-STJOL 123       | 3/4 Ø STUBBY Steel Boring Bar              | Left        | 0.75         | 7"     | 0.5                | 0.885    | -2°        | Solid        |             | BFTX0410A    | TPGA-332   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$145.20   |
| S-STJOL 123C      | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Left        | 0.75         | 7"     | 0.5                | 0.885    | -2°        | Coolant Thru |             | BFTX0410A    | TPGA-332   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool  | ID Boring Bar | \$167.20   |
| S-STJOR 062       | 3/8 Ø STUBBY Steel Boring Bar              | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -2°        | Solid        |             | BHF0306R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$105.60   |
| S-STJOR 062C      | 3/8 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -2°        | Coolant Thru |             | BHF0306R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool  | ID Boring Bar | \$129.80   |
| S-STJOR 082       | 1/2 Ø STUBBY Steel Boring Bar              | Right       | 0.5          | 5"     | 0.312              | 0.572    | -2°        | Solid        |             | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$114.40   |
| S-STJOR 082C      | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.312              | 0.572    | -2°        | Coolant Thru |             | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool  | ID Boring Bar | \$136.40   |

| STEEL BORING BARS |                                            |             |              |        |                    |          |            |              |             |              |            |              |        |       |                     |                |              |                      |               |            |
|-------------------|--------------------------------------------|-------------|--------------|--------|--------------------|----------|------------|--------------|-------------|--------------|------------|--------------|--------|-------|---------------------|----------------|--------------|----------------------|---------------|------------|
|                   |                                            |             | Ø            | OAL    | F Dim              |          |            |              |             |              |            |              |        |       |                     |                |              |                      |               |            |
| Catalog Number    | Description                                | Hand of Cut | Bar Diameter | Length | C/L to Insert edge | Min Bore | Lead Angle | Type         | Clamp/Screw | Insert Screw | Insert     | Insert Shape | Series | Brand | Radial Relief Angle | Shank Material | Coolant Port | Image                | Category      | 2025 Price |
| S-STJOR 102       | 5/8 Ø STUBBY Steel Boring Bar              | Right       | 0.625        | 7"     | 0.375              | 0.698    | -2°        | Solid        |             | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$129.80   |
| S-STJOR 102C      | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.625        | 7"     | 0.375              | 0.698    | -2°        | Coolant Thru |             | BHF0308R     | TPGA-221   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool  | ID Boring Bar | \$150.70   |
| S-STJOR 123       | 3/4 Ø STUBBY Steel Boring Bar              | Right       | 0.75         | 7"     | 0.5                | 0.885    | -2°        | Solid        |             | BFTX0410A    | TPGA-332   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle No Cool | ID Boring Bar | \$145.20   |
| S-STJOR 123C      | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.75         | 7"     | 0.5                | 0.885    | -2°        | Coolant Thru |             | BFTX0410A    | TPGA-332   | 60° Triangle | STUBBY | NTM   |                     | Steel          |              | 60° Triangle w/Cool  | ID Boring Bar | \$167.20   |
| S-SWLOR 062       | 3/8 Ø STUBBY Steel Boring Bar              | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Solid        |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon No Cool   | ID Boring Bar | \$105.60   |
| S-SWLOR 062C      | 3/8 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.375        | 4-3/4" | 0.25               | 0.448    | -5°        | Coolant Thru |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon w/ Cool   | ID Boring Bar | \$129.80   |
| S-SWLOR 070       | 3/8 Ø STUBBY Steel Boring Bar              | Right       | 0.375        | 4-3/4" | 0.218              | 0.416    | -5°        | Solid        |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon No Cool   | ID Boring Bar | \$105.60   |
| S-SWLOR 070C      | 3/8 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.375        | 4-3/4" | 0.218              | 0.416    | -5°        | Coolant Thru |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon w/ Cool   | ID Boring Bar | \$129.80   |
| S-SWLOR 082       | 1/2 Ø STUBBY Steel Boring Bar              | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Solid        |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon No Cool   | ID Boring Bar | \$114.40   |
| S-SWLOR 082C      | 1/2 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.5          | 5"     | 0.312              | 0.572    | -5°        | Coolant Thru |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon w/ Cool   | ID Boring Bar | \$136.40   |
| S-SWLOR 102       | 5/8 Ø STUBBY Steel Boring Bar              | Right       | 0.625        | 7"     | 0.375              | 0.698    | -5°        | Solid        |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon No Cool   | ID Boring Bar | \$129.80   |
| S-SWLOR 102C      | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.625        | 7"     | 0.375              | 0.698    | -5°        | Coolant Thru |             | TS25         | WCMT-21.51 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon w/ Cool   | ID Boring Bar | \$150.70   |
| S-SWLOR 103       | 5/8 Ø STUBBY Steel Boring Bar              | Right       | 0.625        | 7"     | 0.375              | 0.698    | -5°        | Solid        |             | TS4          | WCMT-32.52 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon No Cool   | ID Boring Bar | \$129.80   |
| S-SWLOR 103C      | 5/8 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.625        | 7"     | 0.375              | 0.698    | -5°        | Coolant Thru |             | TS4          | WCMT-32.52 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon w/ Cool   | ID Boring Bar | \$150.70   |
| S-SWLOR 123       | 3/4 Ø STUBBY Steel Boring Bar              | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Solid        |             | TS4          | WCMT-32.52 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon No Cool   | ID Boring Bar | \$145.20   |
| S-SWLOR 123C      | 3/4 Ø STUBBY Steel Boring Bar With Coolant | Right       | 0.75         | 7"     | 0.5                | 0.885    | -5°        | Coolant Thru |             | TS4          | WCMT-32.52 | 80° Trigon   | STUBBY | NTM   |                     | Steel          |              | 80° Trigon w/ Cool   | ID Boring Bar | \$167.20   |