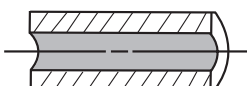
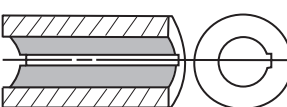
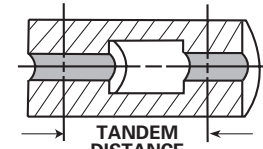
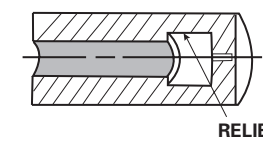
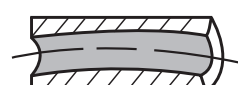
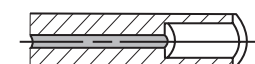


Honing Unit Selection Guide

How To Select A Honing Unit

The honing unit best suited to any particular job depends on the type and dimension of the bore, material to be honed and tolerance required. The honing unit group can be selected from the table below. Specific mandrels and honing stones are selected from pages indicated in the table. For complete information on honing stones and surface finish see pages 12.1 and 12.2.

HONING UNIT SELECTION GUIDE
 PEDESTAL MACHINES (ML, EC, MBB, & LBB)
 PLATED TOOLING (KGM & VSS MACHINES)
 CYLINDER HONING (ISV-410 & SV-10 MACHINES)
 PORTABLE, MPS & TUBE HONE ABRASIVES
 CUSTOM ABRASIVES & TOOLING

| BORE DESCRIPTION AND HONING UNIT REQUIREMENTS | | BORE DIAMETER | | | | | | |
|---|---|------------------------------|---|---|---|--|--|--|
| | | 1,52 to 2,54mm .060"-100" | 2,54 to 3,05mm .100"-120" | 3,05 to 3,81mm .120"-150" | 3,81 to 4,70mm .150"-185" | 4,70 to 6,22mm .185"-245" | 6,22 to 7,82mm .245"-308" | 7,82 to 9,40mm .308"-370" |
| OPEN HOLES WITH NO INTERRUPTIONS  Select a honing unit with stone length 2/3 to 1-1/2 times bore length. If honing units shown have stone length too long, shorten the stones as instructed on page 12.3. | SHORT HOLE (Length less than 5 times diameter.) | D2 pgs. 2.0-2.1 | K3 pgs. 2.2-2.3 | K4 pgs. 2.6-2.7 | K5 pgs. 2.10-2.11 | K6 pg. 2.14 | K8 pg. 2.18 | K10 pg. 2.22 |
| | LONG HOLE (Length more than 5 times diameter.) | D2 pgs. 2.0-2.1 | BL3 pgs. 2.4-2.5 | BL4 pgs. 2.8-2.9 | BL5 pgs. 2.12-2.13 | BL6, L6 pgs. 2.16-2.17 | BL8, L8 pgs. 2.20-2.21 | BL10, L10 pgs. 2.24-2.25 |
| OPEN HOLES WITH KEYWAYS OR SPLINES  Bores with interruptions such as these require keyway honing units. Stone should be 2/3 to 1-1/2 times bore length. Not suitable for blind hole work. | | | | | | Y8, YY8 pgs. 2.52-2.53 | Y10, YY10 pgs. 2.54-2.55 | |
| OPEN HOLES WITH TANDEM LANDS  Tandem bores require a stone length at least twice the distance. If honing units are not available with sufficient stone length, alter the stones as instructed on page 12.4. | | D2 pgs. 2.0-2.1 | K3 pgs. 2.2-2.3 BL3 pgs. 2.4-2.5 | K4 pgs. 2.6-2.7 BL4 pgs. 2.8-2.9 | K5 pgs. 2.10-2.11 BL5 pgs. 2.12-2.13 | K6 pg. 2.14 BL6, L6 pgs. 2.16-2.17 | K8 pg. 2.18 BL8, L8 pgs. 2.20-2.21 | K10 pg. 2.22 BL10, L10 pgs. 2.24-2.25 |
| BLIND HOLES  Select a honing unit with stone length 2/3 times bore length. If Honing units shown have stone length too long, shorten the stones as instructed on page 12.3. Be sure shank is long enough to permit stone to reach bottom in hole. | | | K3 pgs. 2.2-2.3 BL3 pgs. 2.4-2.5 | K4 pgs. 2.6-2.7 BL4 pgs. 2.8-2.9 | K5 pgs. 2.10-2.11 BL5 pgs. 2.12-2.13 | K6 pg. 2.14 JK6 pg. 2.15 BL6 pg. 2.16 L6 pg. 2.17 | K8 pg. 2.18 JK8 pg. 2.19 BL8 pg. 2.20 L8 pg. 2.21 | K10 pg. 2.22 JK10 pg. 2.23 BL10 pg. 2.24 L10 pg. 2.25 |
| BOWED HOLE  For bow correction use a honing unit with a long stone, preferably 1-1/2 times as long as the bore. Be sure shank is long enough to permit correct stroking. | | | | | | | | Mandrels with guide shoes generally correct bow better than tools without guide shoes. |
| HOLE WITH COUNTERBORE OR OVERHANG  Mandrel shank must be long enough to reach the surface to be honed and permit overstroke of approximately 1/3 stone length. If counterbore is only on one end, and tolerances are not critical, part may be honed from opposite end only and honing unit selection made as for a plain hole. | | | | | | | | |

To Select A Honing Unit, Follow These 2 Steps

1. Identify sketch most closely resembling bore to be honed.
2. See page listed for selection of most suitable honing unit.

NOTE: Be sure stone length fits general requirements discussed with the sketches, and that mandrel shank is long enough if a counterbore is present. Dimensions are given on each page.

| BORE DIAMETER | | | | | | | | | | | | | |
|--|--|--|---|---|--|--|---|---|--|--|---|--|--|
| 9,40 to 12,57mm .370"-.495" | 12,57 to 15,72mm .495"-.619" | 15,72 to 18,90mm .619"-.744" | 18,90 to 19,68mm .744"-.775" | 19,68 to 25,48mm .775"-1.000" | 25,40 to 26,19mm 1.000"-1.031" | 26,19 to 31,75mm 1.031"-1.250" | 31,75 to 34,93mm 1.250"-1.375" | 34,93 to 44,45mm 1.375"-1.750" | 44,45 to 69,85mm 1.750"- 2.750" | 69,85 to 92,08mm 2.750"-3.625" | 92,08 to 101,60mm 3.625"-3.875" | 101,60 to 152,40mm 3.875"-6.000" | |
| K12 pg. 2.26 | K16 pg. 2.30 | K20 pg. 2.34 | AK20 pg. 2.38 | AK20 pg. 2.38 | P28 pgs. 2.46-2.50 AK20 pg. 2.38 | P28 pgs. 2.46-2.50 AK20 pg. 2.38 | P28 pgs. 2.46-2.50 | P28 pgs. 2.46-2.50 | P28 pgs. 2.46-2.50 | P28 pgs. 2.46-2.50 AN-600 pg. 2.85 | P28 pgs. 2.46-2.50 AN-600 pg. 2.85 | P28 pgs. 2.46-2.50 AN-600 pg. 2.85 | |
| BL12, L12 pgs. 2.28-2.29 | BL16, L16 pgs. 2.32-2.33 | BL20, L20 pgs. 2.36-2.37 P20 pgs. 2.42-2.45 | BAL20, AL20 pgs. 2.40-2.41 P20 pgs. 2.42-2.45 | BAL20, AL20 pgs. 2.40-2.41 P20 pgs. 2.42-2.45 | BAL20, AL20 pgs. 2.40-2.41 P20 pgs. 2.42-2.45 | P28 pgs. 2.46-2.50 | P28 pgs. 2.46-2.50 | P28 pgs. 2.46-2.50 | P28 pgs. 2.46-2.50 | P28 pgs. 2.46-2.50 | | | |
| Y12, YY12 pgs. 2.56-2.57 | Y16, YY16 pgs. 2.58-2.59 | Y20 pgs. 2.60-2.61 YY24 pgs. 2.64-2.65 | Y20 pgs. 2.60-2.61 YY24 pgs. 2.64-2.65 | AA Y20 pgs. 2.62-2.63 | Y32 pgs. 2.66-2.67 YY32 pgs. 2.68-2.69 | Y32 pgs. 2.66-2.67 YY32 pgs. 2.68-2.69 | Y32 pgs. 2.66-2.67 YY32 pgs. 2.68-2.69 | Y44 pgs. 2.70-2.71 YY48 pgs. 2.72-2.73 | Y56 pgs. 2.74-2.75 Y72 pgs. 2.76-2.77 | Y88 pgs. 2.78-2.79 Y104 pgs. 2.80-2.81 AN-600 pg. 2.85 | Y104 pgs. 2.80-2.81 AN-600 pg. 2.85 | AN-600 pg. 2.85 | |
| K12 pg. 2.26 BL12, L12 pgs. 2.28-2.29 | K16 pg. 2.30 BL16, L16 pgs. 2.32-2.33 | K20 pg. 2.34 BL20, L20 pgs. 2.36-2.37 P20 pgs. 2.42-2.45 | AK20 pg. 2.38 BAL20, AL20 pgs. 2.40-2.41 P20 pgs. 2.42-2.45 | AK20 pg. 2.38 BAL20, AL20 pgs. 2.40-2.41 P28 pgs. 2.46-2.50 | P28 pgs. 2.46-2.50 AK20 pg. 2.38 | P28 pgs. 2.46-2.50 | P28 pgs. 2.46-2.50 | P28 pgs. 2.46-2.50 | P28 pgs. 2.46-2.50 | P28 pgs. 2.46-2.50 | P20 pgs. 2.42-2.45 | P20 pgs. 2.42-2.45 | |
| K12 pg. 2.26 JK12 pg. 2.27 BL12, L12 pgs. 2.28-2.29 | K16 pg. 2.30 JK16 pg. 2.31 BL16, L16 pgs. 2.32-2.33 | K20 pg. 2.34 JK20 pg. 2.35 BL20, L20 pgs. 2.36-2.37 | AK20 pg. 2.38 JAK20 pg. 2.39 BAL20, AL20 pgs. 2.40-2.41 | AK20 pg. 2.38 JAK20 pg. 2.39 BAL20, AL20 pgs. 2.40-2.41 | AK20 pg. 2.38 JAK20 pg. 2.39 BAL20, AL20 pgs. 2.40-2.41 R28 pg. 2.51 | AK20 pg. 2.38 JAK20 pg. 2.39 BAL20, AL20 pgs. 2.40-2.41 R28 pg. 2.51 | R28 pg. 2.51 | R28 pg. 2.51 | R28 pg. 2.51 AN-600 pg. 2.85 | R28 pg. 2.51 AN-600 pg. 2.85 | R28 pg. 2.51 AN-600 pg. 2.85 | R28 pg. 2.51 AN-600 pg. 2.85 | |

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