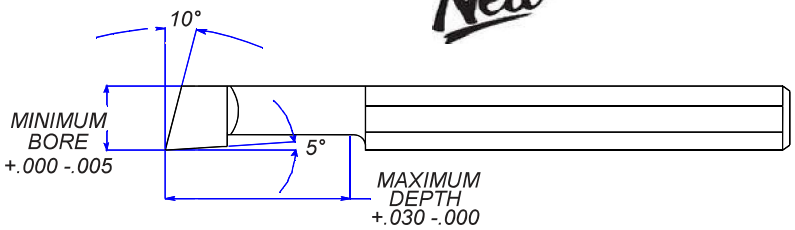
# SERIES 91 PLASTIC CUTTING BORING TOOLS

**APPLICATION: CLEARANCE AND RELIEF ANGLES FOR CUTTING PLASTIC**

| MIN BORE | OREDER EDP # | MAX DEPTH | SHANK & OVERALL LENGTH |
|---|---|---|---|
| .120 | 91-1000 | .250 | 1/8 x 2” |
| | 91-1010 | .500 | |
| | 91-1020 | .800 | |
| .180 | 91-1030 | .500 | 3/16 x 2-1/2” |
| | 91-1040 | .750 | |
| | 91-1050 | 1.250 | |
| .240 | 91-1060 | .500 | 1/4 x 2-1/2” |
| | 91-1070 | .750 | |
| | 91-1080 | 1.250 | |
| .370 | 91-1090 | .500 | 3/8 x 2-1/2” |
| | 91-1100 | .750 | |
| | 91-1110 | 1.250 | |
| .490 | 91-1120 | .750 | 1/2 x 3” |
| | 91-1130 | 1.000 | |
| | 91-1140 | 1.500 | |

New!

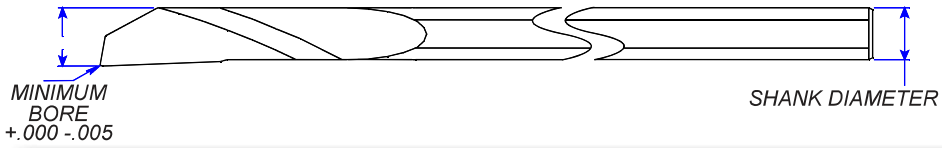


# SERIES 04 MULTI-REACH BORING TOOLS

**APPLICATION : MULTI-REACH BORING NO LONGER LIMITED BY NECK LENGTH. ONE TOOL REPLACES A SERIES OF OTHERS.**

| MIN BORE | ORDER EDP # | ALTIN COATED EDP # | SHANK DIA | CORNER RADIUS | SHANK LENGTH |
|---|---|---|---|---|---|
| .220 | 04-1095 | 04-1095-C | 3/16” | .005 | 4” |
| .280 | 04-1100 | 04-1100-C | 1/4” | .007 | 4” |
| .350 | 04-1110 | 04-1110-C | 5/16” | .007 | 4” |
| .420 | 04-1120 | 04-1120-C | 3/8” | .010 | 6” |
| .560 | 04-1130 | 04-1130-C | 1/2 | .010 | 6” |
| .700 | 04-1140 | 04-1140-C | 5/8” | .015 | 6” |

*SOLID CARBIDE SHANKS PROVIDE MAXIMUM RIGIDITY.*

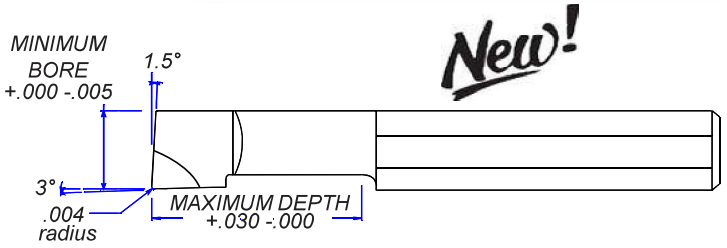



# SERIES 108 CBN AND PCD TIPPED BORING TOOLS

**APPLICATION : CBN FOR HARD FERROUS MATERIALS 45 RC AND HARDER. PCD FOR ABRASIVE NON FERROUS MATERIALS.**

| MIN BORE | CBN EDP # | PCD EDP # | MAX DEPTH | SHANK & OVERALL LENGTH |
|---|---|---|---|---|
| .120 | 108-1000 | 108-5000 | .250 | 1/8 x 2” |
| | 108-1050 | 108-5050 | .500 | |
| | 108-1100 | 108-5100 | .800 | |
| .180 | 108-1150 | 108-5150 | .500 | 3/16 x 2-1/2” |
| | 108-1200 | 108-5200 | .750 | |
| | 108-1250 | 108-5200 | 1.250 | |
| .240 | 108-1300 | 108-5250 | .500 | 1/4 x 2-1/2” |
| | 108-1350 | 108-5300 | .750 | |
| | 108-1400 | 108-5350 | 1.250 | |
| .370 | 108-1450 | 108-5450 | .500 | 3/8 x 2-1/2” |
| | 108-1500 | 108-5500 | .750 | |
| | 108-1550 | 108-5550 | 1.250 | |
| .490 | 108-1600 | 108-5600 | .750 | 1/2 x 3” |
| | 108-1650 | 108-5650 | 1.000 | |
| | 108-1700 | 108-5700 | 1.500 | |

New!



| SPEED AND FEEDS FOR BORING TOOLS | | | | DEPTH OF CUT | | |
|---|---|---|---|---|---|---|
| MATERIAL | TYPE | SPEED SURFACE FEET PER MINUTE | FEED INCHES PER REVOLUTION | INSERT BARS SERIES 16-18 PAGE 47-50 | SOLID CARBIDE BARS OUR SERIES 10 PAGE 2 | TIN COATED SOLID CARBIDE BARS OUR SERIES 11 PAGE 5 |
| PLASTIC | TEFLON | 500-600 | .003-.006 | .007 | .012 | .016 |
| | NYLON | 700-800 | .001-.003 | .007 | .012 | .016 |
| | PHENOLIC | 700-800 | .001-.003 | .007 | .012 | .016 |
| | GLASS FILLED | 700-800 | .001-.003 | .005 | .012 | .016 |
| MAGNESIUM | AZ,AM,EZ,ZE,HK | 750-1500 | .005-.012 | .008 | .012 | .016 |
| ALUMINUM | 2021 THRU 6061 | 700-1400 | .005-.012 | .008 | .014 | .018 |
| COPPER | 101-707 | 600-800 | .003-.005 | .008 | .014 | .016 |
| | 834-978 | 600-800 | .003-.005 | .008 | .014 | .016 |
| BRASS | | 350-400 | .001-.003 | .006 | .011 | .012 |
| BRONZE | | 300-400 | .001-.002 | .006 | .011 | .012 |
| CAST IRON | GRAY | 250-350 | .004-.010 | .007 | .007 | .009 |
| | DUCTILE | 250-350 | .004-.010 | .007 | .007 | .009 |
| | MALLEABLE | 250-350 | .004-.010 | .007 | .007 | .009 |
| STEEL | 1005-1029 | 100-300 | .003-.007 | .007 | .014 | .016 |
| | 1030-1055 | 100-300 | .003-.007 | .007 | .014 | .016 |
| | 1060-1095 | 150-400 | .003-.005 | .007 | .014 | .016 |
| | 10L45-10L50 | 300-500 | .004-.006 | .007 | .014 | .016 |
| | 12L13-12L15 | 300-500 | .003-.005 | .007 | .014 | .016 |
| | 41L30-41L50 | 200-400 | .003-.005 | .007 | .014 | .016 |
| | 4140-4150 | 150-400 | .003-.005 | .007 | .014 | .016 |
| | 4140 (35 HRC) | 90-125 | .001-.004 | .004 | .007 | .008 |
| | 8617-8622 | 100-300 | .002-.004 | .007 | .006 | .007 |
| | M1-M6 | 150-250 | .003-.008 | .006 | .005 | .006 |
| | H10-H19 | 150-250 | .003-.007 | .006 | .005 | .006 |
| | D2-D7 | 150-250 | .004-.010 | .006 | .005 | .006 |
| | A2-A9, 01-07 | 150-250 | .003-.008 | .006 | .005 | .006 |
| | W1, W2 | 150-250 | .003-.008 | .006 | .006 | .007 |
| | M-50, 52100 | 300-400 | .004-.010 | .007 | .006 | .007 |
| TITANIUM | TI-9AI-6V | 90-250 | .001-.003 | .005 | .008 | .011 |
| STAINLESS | 201-385 | 100-250 | .001-.004 | .005 | .008 | .012 |
| | 405-446 | 100-250 | .001-.004 | .005 | .008 | .012 |
| | 15-5PH, 16-6PH, 14-4 PH | 300-400 | .002-.004 | .005 | .008 | .012 |
| NICKEL | NICKEL 200-300 | 100-250 | .002-.005 | .004 | .007 | .009 |
| MONEY | | 80-120 | .001-.003 | .004 | .007 | .009 |
| INCONEL | | 80-120 | .001-.003 | .004 | .007 | .009 |
| WASPALOY | | 80-120 | .001-.003 | .004 | .007 | .009 |
| HASTELLOY | | 80-120 | .001-.003 | .004 | .007 | .009 |