

## SMALL WIRE SHANK STYLE

### VERTICAL HOLE SHANK - V STYLE, J STYLE, H STYLE, P STYLE

Some wedge bonders position the wire clamp mechanisms above the tool in order to accommodate deep access or tight clearance packages. By moving the clamps above the tool, you can bond closer to the sides of the package or other devices.

The tool itself has a hole running down the center, exiting above the wire feed hole. The angle of the wire feed is usually 45deg or 55deg, in order to minimize the bending of the wire.

Note : For Delvotec bonders, specify VBL = 060

**How To Order:** The vertical hole shank style can be ordered by modifying the beginning of the style field in the part number format. Use the letter 'V' to begin the part numbers when you need a vertical hole tool.

Tool Style	Tool Style with vertical hole
UT	VU
FP	VF
COB	VC
M	VM
RW	VR
ABT	VA

### SPECIAL CLEARANCE FOR VERTICAL HOLE SHANK - J STYLE

Special Clearance with vertical hole shank is commonly used where deep access is required during bonding to the IC. The double relief allows for maximum clearance of the package while containing the wire in the vertical hole, preventing it to contact the package walls. This prevents wire damage and wire drag which can cause poor looping performance.

**How To Order:** The vertical hole shank style can be ordered by modifying the beginning of the style field in the part number format. Use the letter 'J' to begin the part numbers when you need a vertical hole tool.

Tool Style	Tool Style with vertical hole (special clearance)
UT	JU
FP	JF
COB	JC
M	JM
RW	JR
ABT	JA

### DOUBLE FLAT SHANK - H STYLE

Another deep access shank configuration is the double flat shank. The wire is fed from the top of the tool, in between the tool and the transducer, down to the wire feed hole. A clamp presses the wire against the back side of the tool. The wire feed angles are usually 45deg or 55deg.

**How To Order:** The double flat shank style can be ordered by modifying the beginning of the style field in the part number format. Use the letter 'H' to begin the part numbers when you need a double flat tool.

Tool Style	Tool Style with vertical hole
UT	HU
FP	HF
COB	HC
M	HM
RW	HR
ABT	HA

### DOUBLE FLAT SHANK, ENHANCED TRANSDUCER CONTACT - P STYLE

A design enhancement of the double flat shank puts a full diameter at the top of the tool where it is mounted to the transducer. This increased tool to transducer contact transmits the ultrasonic energy more efficiently down the tool.

**How To Order:** The enhanced transducer contact design can be ordered by modifying the beginning of the style field in the part number format. Use the letter 'P' to begin the part numbers when you need a double flat tool.

Tool Style	Tool Style with vertical hole
UT	PU
FP	PF
COB	PC
M	PM
RW	PR
ABT	PA

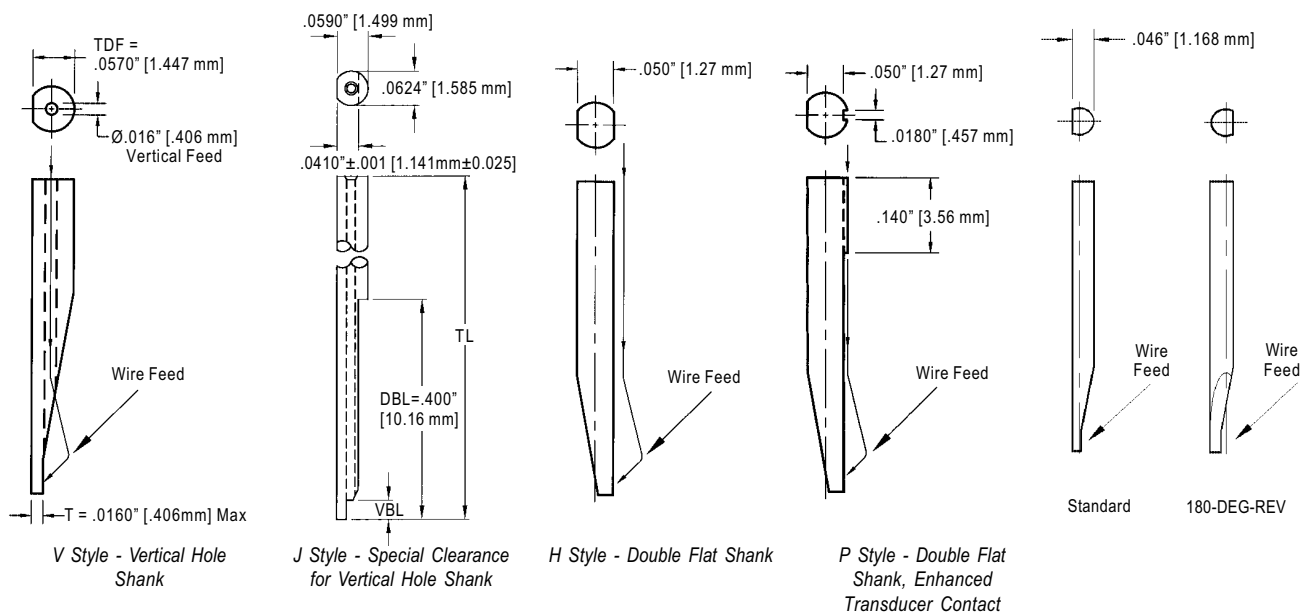
### 180-DEG-REV SHANK

This shank design feeds the wire from the flat side of the tool. Specify '180-DEG-REV' at the end of the part number.

For DIAS wedge bonders and K&S 8060.

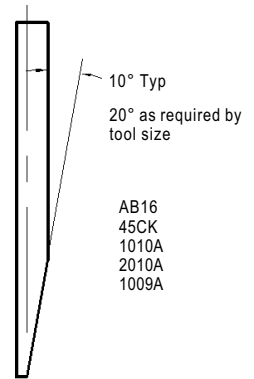
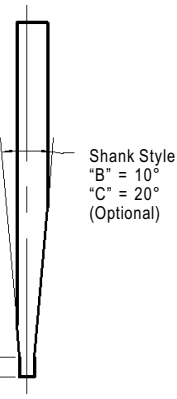
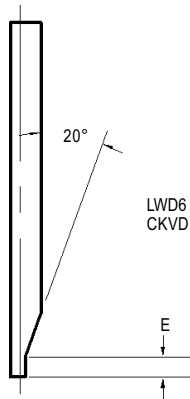
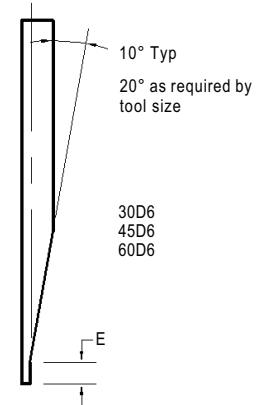
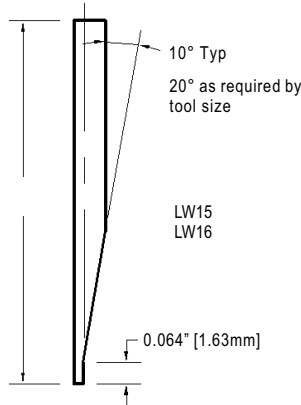
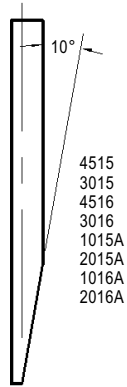
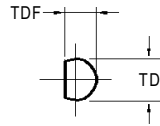
Max Ribbon Width .010"

EXAMPLE : FP30A - W - 2520 - .540 - CM  
180 - DEG - REV



SMALL / LARGE WIRE SHANK STYLES

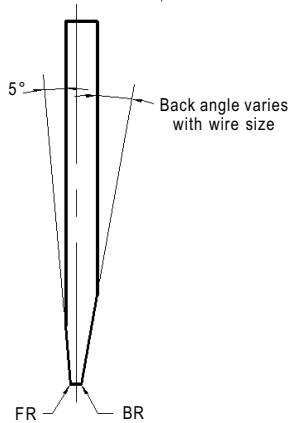
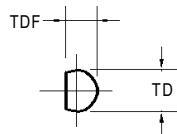
# LARGE WIRE SHANK STYLES



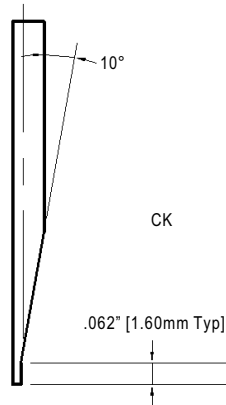
**Shank Style A**

**Shank Style B**  
in 2mm only

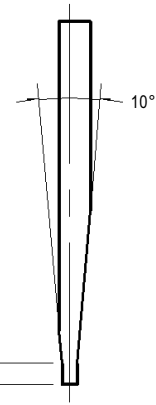
Shank Style A used unless specified at end of a part number



**OSG7**



**Shank Style A**  
(Standard)



**Shank Style B**  
(Optional)  
in 2mm only

Shank Style A used unless specified at end of a part number

## TIP TO SHANK RATIOS

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When selecting a wedge,

- \* The amplitude of the tools vibration at its foot is a ratio of the input (shank) diameter to the output (foot) diameter..
- \* Bonding wedges are designed with varying tip-to shank dimensional ratios.
- \* The smaller the tip the higher the amplitude which will rapidly dampen in contact with the bond surface.
- \* As the tip grows with the same input amplitude, will vibrate at a comparatively lower amplitude but dampens more slowly, presenting the hazards of over-working the bond.
- \* In general, larger wire requires more energy to bond than small wire.
- \* Stiffer wedges works best as wire size increases.

