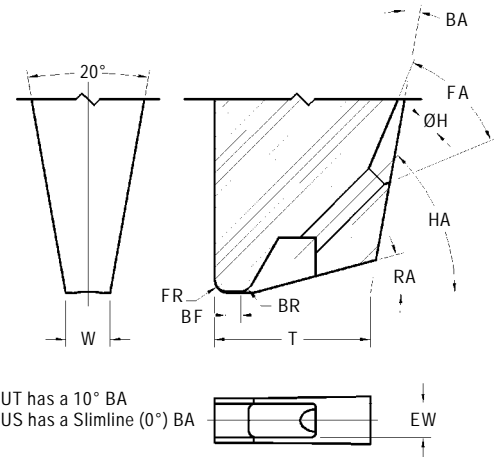
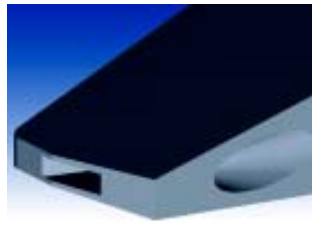


## US/UT SERIES - UNIVERSAL BONDING TOOL

The US/UT design incorporates all the latest technical features in semiconductor wire bonding tool designs and is widely used by every bonder manufacturer in the world. The 60° heel with the more squared back or radius area normally will produce a short tail. This tool style is most commonly used where fine pitch bonding is not required.



### STANDARD DIMENSIONS

Tool Styles Radius Set	Wire Feed Angle	Hole / Bond Flat	Hole H in / $\mu\text{m}$ $\pm .0002/5$	Bond Flat BF in / $\mu\text{m}$ $\pm .0002/5$	Foot Width W in / $\mu\text{m}$ $\pm .0002/5$	Tip Thickness T in / $\mu\text{m}$ $\pm .0005/13$	Useable Wire Diameter in / $\mu\text{m}$		
UT30A US30A	30°	2020	.0020 / 51	.0020 / 51	.0040 / 102	.0150 / 381	.0010 / 25 through .0013 / 33		
		2025	.0020 / 51	.0025 / 64	.0040 / 102	.0150 / 381			
		2520	.0025 / 64	.0020 / 51	.0040 / 102	.0150 / 381			
		2525	.0025 / 64	.0025 / 64	.0040 / 102	.0150 / 381			
	UT38A US38A	38°	3020	.0030 / 76	.0020 / 51	.0050 / 127	.0200 / 508	.0013 / 33 through .0015 / 38	
			3025	.0030 / 76	.0025 / 64	.0050 / 127	.0200 / 508		
			3030	.0030 / 76	.0030 / 76	.0050 / 127	.0200 / 508		
			3035	.0030 / 76	.0035 / 89	.0050 / 127	.0200 / 508		
			3530	.0035 / 89	.0030 / 76	.0060 / 152	.0250 / 635		.0015 / 38 through .0022 / 55
			3535	.0035 / 89	.0035 / 89	.0060 / 152	.0250 / 635		
			3540	.0035 / 89	.0040 / 102	.0060 / 152	.0250 / 635		
			4540	.0045 / 114	.0040 / 102	.0085 / 216	.0190 / 483		.0024 / 61 through .0030 / 76
4545	.0045 / 114	.0045 / 114	.0085 / 216	.0190 / 483					
4550	.0045 / 114	.0050 / 127	.0085 / 216	.0190 / 483					
UT30C US30C	30°	2020	.0020 / 51	.0020 / 51	.0040 / 102	.0140 / 356	.0010 / 25 through .0013 / 33		
		2025	.0020 / 51	.0025 / 64	.0040 / 102	.0140 / 356			
UT38C US38C	38°	2030	.0020 / 51	.0030 / 76	.0040 / 102	.0140 / 356			
UT45A US45A	45°	2020	.0020 / 51	.0020 / 51	.0040 / 102	.0140 / 356	.0010 / 25 through .0013 / 33		
		2025	.0020 / 51	.0025 / 64	.0040 / 102	.0140 / 356			
		2520	.0025 / 64	.0020 / 51	.0040 / 102	.0140 / 356			
		2525	.0025 / 64	.0025 / 64	.0040 / 102	.0140 / 356			
		3020	.0030 / 76	.0020 / 51	.0050 / 127	.0180 / 457	.0013 / 33 through .0015 / 38		
		3025	.0030 / 76	.0025 / 64	.0050 / 127	.0180 / 457			
		3030	.0030 / 76	.0030 / 76	.0050 / 127	.0180 / 457			
		3035	.0030 / 76	.0035 / 89	.0050 / 127	.0180 / 457			
		3530	.0035 / 89	.0030 / 76	.0060 / 152	.0200 / 508	.0015 / 38 through .0022 / 55		
		3535	.0035 / 89	.0035 / 89	.0060 / 152	.0200 / 508			
		3540	.0035 / 89	.0040 / 102	.0060 / 152	.0200 / 508			
		4540	.0045 / 114	.0040 / 102	.0085 / 216	.0250 / 635	.0024 / 61 through .0030 / 76		
4545	.0045 / 114	.0045 / 114	.0085 / 216	.0250 / 635					
4550	.0045 / 114	.0050 / 127	.0085 / 216	.0250 / 635					
UT45C US45C	45°	2020	.0020 / 51	.0020 / 51	.0040 / 102	.0140 / 356	.0010 / 25 through .0013 / 33		
		2025	.0020 / 51	.0025 / 64	.0040 / 102	.0140 / 356			
		2030	.0020 / 51	.0030 / 76	.0040 / 102	.0140 / 356			

## US/UT SERIES - GENERAL GUIDELINES ON HOW TO ORDER

STYLE		FEED ANGLE
US	0° Back Angle	30°, 38°, 45°
UT	10° Back Angle	

RADIUS SET	Wire Material	Wire Diameter	Hole Size	FR ± .0001/3	BR ± .0001/3
A	Aluminum	.0010 / 25 - .0013 / 33	.0020/51 - .0025/64	.0010 / 25	.0010 / 25
A	Aluminum	.0013 / 33 - .0015 / 38	.0030 / 76	.0015 / 38	.0015 / 38
A	Aluminum	.0015 / 38 - .0022 / 56	.0035 / 89	.0020 / 51	.0020 / 51
A	Aluminum	.0024 / 61 - .0030 / 76	.0045 / 114	.0025 / 64	.0025 / 64
C	Aluminum/Gold	.0008 / 20 - .0013 / 33	.0020 / 51	.0010 / 25	.0006 / 15

	MATERIAL	HOLE / BOND FLAT	TOOL LENGTH (TL)
C	Cermet composite for Gold Wire (recommended for Low Temperature bonding)	Will rely on specific application requirements (wire diameter used, bond pad size) – see dimension Table  * For Oval Hole options please specify HH (Hole Height) & HW (Hole Width)	S = .437 / 11.1 mm
TI	Titanium Carbide Composite for Gold Wire		¾ = .750 / 19.05 mm
W	Tungsten Carbide Ultra Fine Grain for Aluminum Wire		L = .828 / 21.0 mm
			1.00 = 1.00 / 25.4 mm Longer lengths are available consult Bonder manufacturer for specifications.

FOOT OPTIONS	
C	Concave foot design with polished FR and BR with fine matte finish on BF (matte most commonly used with <i>Aluminum wire</i> ) for best results specify when the BF is greater than .0015"/38µm.
CM	Concave foot design with FR, BR and BF matte (for <i>Aluminum and Gold wire</i> )
CGM	Cross Groove with FR and BR matte (for <i>Gold Wire</i> ) with a Flat BF. Most commonly used on manual and semi automatic bonders where pad size restrictions is not an issue.
CCM	Cross Groove with FR and BR matte (for <i>Gold Wire</i> ) with a Concave used on automatic bonders where wire control is critical and pad size is limited
Flat (Optional)	
F	The FR and BR are polished. A fine matte finish within the area of the BF.
FM	The FR, BR and BF are matte.  Special foot options are available. Consult the factory for recommended dimensions for special foot options.

HOW TO ORDER	
SPECIFY	<b>Style/Radius Set – Material – Hole/Bond Flat – Tool Length – Foot Option</b> (For modifications to standard tools, use part number and specify modified dimensions) or contact our technical support staff for assistance with your requirements. For Special Shank Style refer to page 61.
EXAMPLE	UT30A - W - 2520 - S - CM US38C - TI - 2020 - ¾ - CGM UT45A - W - 3030 - L - C US45A - C - 2025 - L - CGM  180 - DEG - REV (For DIAS Wire Bonder or K&S 8060)