# HUB BLADE



Hub Blades are a perfect solution for the optimization of the dicing process for various types of materials such as: Silicon, GaAs and other wafers.

## **FEATURES & BENEFITS**

Improved cut quality Longer blade life Higher UPH

OD = 2.187"		Part Number Definition									
00	757	-	5	3	50	-	115	-	2	00	
Special Specification	Product Family		Grit size (Mesh)	Diamond %	Max. Thickness (um)		Min. Exposure (um)		Bond Hardness	Special Specification	
			1 = 5000	1 = Low	20		380		1 = Soft	0	
			2 = 4500	2	25		510		2 = Medium		
			3 = 4000	3 = Medium	30		640				
			4 = 3500	4	35		760				
			5 = 3000	5 = High	40		890				
			7 = 2000		50		1020				
					/////		1150				

		O.											
	Available Dimensions												
	Min. Exposure [um]	380	510	640	760	890	1020	1150					
Max. Thickness [um]	Tolerance Range [um]	380-510	510-640	640-760	760-890	890-1020	1020-1150	1150-1270					
20	17-20												
25	20-25												
30	25-30												
35	30-35												
40	35-40												
50	40-50												

\*Other dimensions are available upon request

# **FLANGES**



Available for all blade types in the range of 2"-5", ADT's extensive line of flanges exhibits high-accuracy, excellent performance, ease-of-use and affordabillity.

## **FLANGE SET OPTIONS**

A unique High Cooling Flange set (HCF) design spreads the coolant from the center of the flange to the outer edge of the blade on both sides to improve results in dicing hard and thick materials. High cooling flanges are available in 2" and 4" configurations.

## 88 82 mm Blade I D (3 497")\*\*

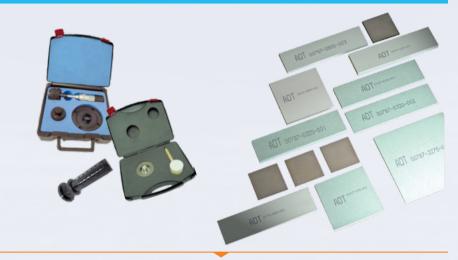
88.82 mm Blade I.D. (3.497")										
	Flange O.D.			D. 4.256"		D. 4.600"	Blade O.			
Part Number	_		Exposure		Expo	sure	Exposure			
	Inch	mm	Inch	mm	Inch	mm	Inch	mm		
00785-3515-000	4.550	115.57		-	.025	0.63	.225	5.72		
00785-3534-000	4.530	115.06	- 1	I	.035	0.89	.235	5.97		
00785-3514-000	4.500	114.30	-	-	.050	1.27	.250	6.35		
00785-3525-000	4.474	113.64	1 0 0	(C+ (3)	.063	1.60	.263	6.68		
00785-3513-000	4.450	113.03	-	-	.075	1.90	.275	6.99		
00785-3512-000	4.400	111.76	1 6 6	<u> </u>	.100	2.54	.300	7.62		
00785-3511-000	4.350	110.49	100	10-10	.125	3.18	.325	8.26		
00785-3510-000	4.300	109.22	-	-	.150	3.81	.350	8.89		
00785-3509-000	4.260	108.20		-	.170	4.32	.370	9.40		
00785-3508-000	4.236	107.59	.010	0.25	.182	4.62	.382	9.70		
00785-3507-000	4.220	107.19	.018	0.46	.190	4.83	.390	9.91		
00785-3506-000	4.213	107.01	.022	0.55	.194	4.91	.394	9.99		
00785-3505-000	4.200	106.68	.028	0.71	.200	5.08	.400	10.16		
00785-3504-000	4.180	106.17	.038	0.97	.210	5.33	-	11-0		
00785-3503-000	4.140	105.15	.058	1.47	.230	5.84	-	-		
00785-3502-000	4.100	104.14	.078	1.98	.250	6.35	0-	- 0		
00785-3563-000	4.050	102.87	.103	2.62	.275	6.99	-	-		
00785-3501-000	4.000	101.60	.128	3.25	.300	7.62	1 -//	-		
00785-3521-000	3.900	99.06	.178	4.52	.350	8.89	-	1 - 0		
00785-3522-000	3.800	96.52	.228	5.79	.400	10.16	-	- 1		
00785-3523-000	3.700	93.98	.278	7.06	~ (-/ L	0-	- 0	11-/		
00785-3524-000	3.600	91.44	.328	8.33	*)) <u>-</u>					

## 40 mm Blade I.D. (1.575")\*\*\*

	-	_						
Part Number 2 Inch	Flang	e O.D.		D. 2.188" sure		D. 2.250" sure	Blade O.D. 3.000" Exposure	
2 111011	Inch	mm	Inch	mm	Inch	mm	Inch	mm
4A785-4175-000-BBD	1.750	44.45	.219	5.56	.250	6.35	.625	15.88
4A785-4176-000-BBD	1.760	44.70	.214	5.44	.245	6.22	.620	15.75
4A785-4242-000-BBD	2.420	61.47	((((		Z [ [		.290	7.37
3 Inch	2.420	01.47					.230	7.57
4C785-4243-000	2.430	61.72	-	1.0			.285	7.24
4C785-4244-000	2.440	61.98	- 1	HH	0 -/	<b>7</b> - 11	.280	7.11
						68' I I I I		6.16
4C785-4299-000	2.990	75.95			( 8 )	االربرك	.005	0.13
**For blade I D of 2 E" (99	Omm) the D	/N chould b	0 0079F 2 0	vv 000		7/19/07/		

\*\*For blade I.D. of 3.5" (88.9mm) the P/N should be 00785-3 **8** xx-000 \*\*\* Available from 1.75" to 2.99" with .010" (0.254mm) increment

# **ACCESSORIES**



A wide selection of Tools and Accessories designed to facilitate and improve the Dicing Process.

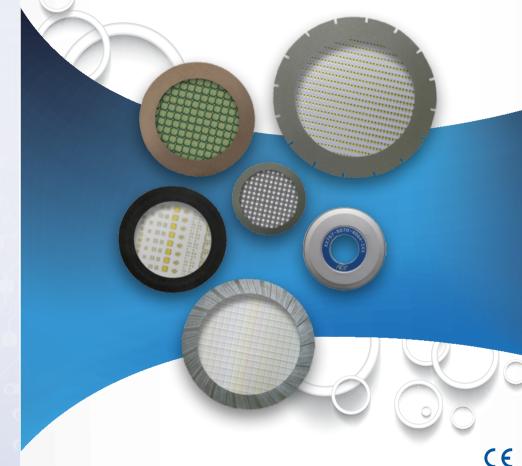
Desc	ription	P/N	
Handling Tool for:	2" flange set	00757-8711-000   00757-8711-000-BBD	
Lapping Kit for:	2"-3" flange set 4" flange set	00785-2099-000	
Separator Tool for:	2"-3" flange set	4B785-4000-000	
GO Gauge set for:	2"-3" flange set 4" flange set	4B785-0029-000 00785-0009-000	
4" Flange Extractor		4B785-3002-000	
Dressing Boards		Available in various mesh & dimensions	



# DICING BLADES & ACCESSORIES

# **A Winning Combination**

for your Complete Dicing Process



## www.adt-co.com

### **FACTORIES AND R&D CENTER - ISRAEL** ADVANCED DICING TECHNOLOGIES LTD

Hi-Tech Park (south), PO Box 87, Yokneam 2069202 Tel: 972-4-8545222 Fax: 972-4-8550007 Email: sales@adt-co.com

## ADVANCED DICING TECHNOLOGIES LTD.

PuDong, Shanghai, China Tel: 86-21-5093-9293 Fax: 86-21-5093-9890 Email: china\_support@adt-co.com

## Email: ADT-USA-Sales@adt-co.com TAIWAN ADVANCED DICING TECHNOLOGIES, LTD.

East Coast Office - Horsham, PA

West Coast Office - Tempe, AZ

ADVANCED DICING TECHNOLOGIES INC.

New Taipei City, Taiwan Tel: 886-2-2680-2027 Fax: 886-2-2608-3710 Email: adt-tw@adt-co.com

NORTH AMERICA

Tel: 215-773-9155

Tel: 480-666-9620

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# METAL SINTERED BLADES

# **RESIN-BOND BLADES**

# NICKEL-BOND BLADES



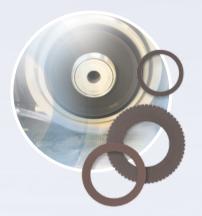
# The optimum way to dice your Glass & BGA applications

► Novus "G" Series for superior dicing quality on Glass applications.

Available with OD 2"-3" and Thickness ranges of 40-200µm

► Novus "B" Series for longer blade life on BGA applications. Available with OD 2"-3" and Thickness ranges of 200-400μm

Thickness Tolerance	Edge Geometry	O.D.	I.D.	Diamond grit size (mic)	THICKNESS Micron (only)
2 = +/00010" 3 = +/00020"	0 =Standard N =Non Standard	A = 3.0" B = 2.5" C = 2.25" D = 2.188" E = 2.0" F = 58mm H = 53mm I = 60mm J = 59mm K = 54mm M = 56mm N = 75mm P = 52mm S = 2.75" Q = 53.5mm V = 555mm V = 55.5mm 1 = 53.2mm 2 = 51.4mm 4 = 51.5mm	6 = 40mm	OA = 3-6 OB = 4-6 02 = 1-2 03 = 2-4 07 = 6-8 10 = 10 12 = 8-16	(060) = 050 (300) = 300
EXAMPLE PART N	UMBER	RSXX X	-X 6 XX	-XXX-MXX	product family



In a unique close-mold sintering process, diamond grit size, diamond concentration and metal binder are optimized to meet the precision and blade life requirements of your specific application. The metal binder provides a very stable, stress-free blade matrix and can be custom tailored to meet the required hardness and load resistance for dicing a variety of applications.

Metal Steel Core blades for hard and thick substrates. Available with OD of 3"- 8" and at thickness range of 0.032"-0.062"

## **FEATURES & BENEFITS**

The widest variety of matrixes for a broad range of applications

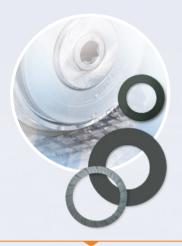
Less wear/higher blade life

Highly accurate blade dimensions

High precision dicing

Attractive Cost-of-Ownership (CoO)

THICKNESS TOLERANCE*	EDGE GEOMETRY**	O.D.	I.D.	GRIT SIZE (μm)	THICKNESS* M=mm I=tenths
2 = ±.0001" 3 = ±.0002" 4 = ±.0005" B = ±.0003"	0 = Standards N = Non Standard SERRATED: A = x16 slots (for 2" blades) x60 slots (for 4" blades) B = x32 slots (for 2" blades)	2 = 4.8" 3 = 4.7" 4 = 4.6" 5 = 4.5" 6 = 4.4" 7 = 4.3" 8 = 4.256" 9 = 4.0" A = 3.0" B = 2.5" C = 2.25" D = 2.188" E = 2.0" F = 58 mm H = 77 mm I = 60 mm K = 54 mm L = 82 mm M = 56 mm N = 75 mm P = 52 mm S = 2.75" T = 78 mm Z = 74 mm W = 79 mm	1 = 3.5" 2 = 88.82mm 6 = 40 mm	OA = 3-6 02 = 1-2 03 = 2-4 07 = 6-8 10 = 10	(050) = 050 (200) = 200 (600) = 600
		W = 79111111		10-70	(000) = 000
EXAMPLE PAR	450 3 0-	52 10-	120-I D	X proc	luct family
±.0002"	STANDARD	4.5" O.D.	88.82" I.D.	10 µm GRIT	12 mil



ADT's Resin-bond Blades are manufactured through a unique proprietary molding process. When cutting hard and brittle materials, the edge of the blade wears out at a controlled rate exposing new diamonds to constantly sharpen the blade and thus achieve highly accurate kerf, outstanding yield and exceptional blade life.

'D' Matrix for best dicing results for QFN applications

Metal Steel Core blades for hard and thick substrates. Available with OD of 3"-12" and at thickness range of 0.032"-0.062"

### **FEATURES & BENEFITS**

Self-sharpening matrix to expose new diamonds

Superior cut quality

Best performing matrix for hard, brittle and composite materials

The widest variety of combinations for your most challenging applications

High precision dicing

Attractive Cost-of-Ownership (CoO)

EDGE TYPE	O.D.	& I.D.	GRIT SIZE** (μm)	THICKNESS* (mil)
1=Serrated, 16 slots 2=Shaped edge 4=Blade I.D.3.5" (88.9) 5=Serrated, 8 slots	1 = 2.188" x 40mm 2 = 4.256" x 88.82mm 3 = 3.0" x 40mm 4 = 4.5" x 88.82mm 5 = 5.0" x 88.82mm 6 = 4.6" x 88.82mm 7 = 4.7" x 88.82mm 8 = 2.25" x 40mm 9 = 2.5" x 40mm A = 53mm x 40mm C = 56mm x 40mm D = 52mm x 40mm E = 54mm x 40mm F = 60mm x 40mm G = 4.4" x 88.82mm H = 58mm x 40mm	K = 4.45" x 88.82mm J = 57mm x 40mm M= 50mm x 40mm N = 52.5mm x 40mm P = 78mm x 40mm R = 64mm x 40mm T = 74mm x 40mm U = 76.4mm x 40mm Q = 4.8" x 88.82mm W= 72mm x 40mm L = 80mm x 40mm V = 55mm x 40mm X = 59mm x 40mm Y = 77mm x 40mm Y = 77mm x 40mm Y = 77mm x 40mm	(003) = 3 (006) = 6 (009) = 9 (015) = 15 (020) = 20 (025) = 25 (030) = 30 (035) = 35 (045) = 45 (053) = 53 (063) = 63 (075) = 75 (088) = 88 (105) = 105 (125) = 125 (150) = 150 (200) = 200	(003) = 3 - (010) = 10 - (811) = 11.8 - (512) = 12.5 - (020) = 20 (099) = 99
EXAMPLE X5	777 - 4 006	- 010 - XXX		product family
Serrated 8 slots	4.5" 88.8.	O.D. 2 I.D.	6µm GRIT SIZE	10 mil



ADT's Annular Nickel Blades are produced using a state-of-the-art, tightly controlled electroforming process which guarantees a uniform distribution of diamonds througout the Nickel layer.

This process not only allows for blades to be produced to very tight tolerances but also permits optimization of grit size, hardness and geometry to meet the particular requirements of your application.

### **FEATURES & BENEFITS**

The hardest binder for superior wear resistance The thinnest blade available (down to .0008")

Excellent rigidity for higher exposure

Exceptionally long blade life

High precision dicing

Attractive Cost-of-Ownership (CoO)

The full dimensions range can be found in ADT website.

Following	are e	examp	oies (	OT P/I	N dei	inition	:						
I.D.	0.0	D. G	GRIT SIZE (µm)		O.D. SHAPE		EDGE GEOMETRY**		THICKNESS (mil)*		THICK! TOLERA		
4=3.5" (88.9mm)	8=4	.8"	2=3-6	μm	0=Standart		1=Pre-dressed		sed 040=4mil		C=+/-,0	003"	
EXAMPLE PART NUMBER X4776-8201-040-C XX product family													
		00	100										
I.D.		O.D				DGE T METRY**			KNESS nil)*		THICKNESS TOLERANCE*		
3=Special 2" b 40mm I.D. Or		2=50.2m	nm	3=10	0μm 1=Pre-dres		e-dress	sed	045=	-4.5mil		B=+/000	12"
EXAMPLE PA						323				XX	proc	duct far	nily
*Depends on o	diamono	d grit size	e **D	epends	on bla	de thickne	ss and	diamond	grit size		-	1	1