# **Electro-Plated Diamond Wire**

### **RTD** Series

Application	Core Diameter (microns)	Diamond Size	Concentration	Outer Diameter (microns)
Sapphire and Alternate Material Wafering	120	10-20	Standard / High	149
		12-25	Standard / High	156
		22-36	Standard / High	169
	140	10-20	Standard / High	167
		12-25	Standard / High	174
		22-36	Standard / High	187
	160	12-25	Standard / High	192
		22-36	Standard / High	212
		30-40	Standard	221
		40-50	Standard	225
	175	22-36	Standard / High	225
		30-40	Standard / High	240
		40-50	Standard	256
	200	22-36	Standard	241
		30-40	Standard	257
		40-50	Standard	279

Beams

## Additional Consumable Offerings\*

### **Cutting Fluids**

# Saw Cleaners

- WaferKool 2010
- WaferKool 3010
- SawKleen

- Anti-Foam IWT 710 beam
- SAG 2001 custom sizes available

# Questions | Request for Quote

To facilitate your order, please provide the following information			
Required information:	Useful information, if known:		
- Diamond wire	- Wire core diameter		
- Wire outer diameter or kerf	- Wire speed		
- Type of spool	- Wire tension at slicing		
	- Diamond grit size		
	- Process time		
*Detailed consumable product information can be provided upon request			

## Point of Contact:

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Designed and manufactured by IWT Part of the Thermo Technologies Group



# **RTD** Series

Ideal for Low to Medium Volume Production House or R&D Facility

### Low Cost of Ownership and High Yield

- Yield increase resulting from minimally destructive low-kerf cutting method
- Versatile equipment for multi-use cutting
- Increased wafer quality, consistency, and quantity over single-cut technology
- Low consumable costs offer increased savings
- Simplified maintenance for increased availability
- Cost-effective cutting method reduces or eliminates secondary processes
- Increased throughput versus blade saws
- Optimized wire management reduces costs and wire usage

### **Quality Guarantee due to Process Management**

- Lowest set-up time on the market for a multi-wire production saw
- Flexible software for a variety of materials
- Recipe management 32 programmable cutting programs provide increased throughput
- Reproducible high-quality cuts
- Collection and data logging standard on the RTD Series

### Maintenance and environment friendly

- Simple to maintain due to accessibility and minimal parts
- Quiet operation benefits the operator and the environment
- Ecological use of all substances and media
- Small footprint compact, maintenance-friendly design
- Compliance with relevant environment and safety standards (CE)





# Features | Options | Data

### Features

- 15 inch LCD touchscreen
- PLC control
- Flexible graphic user interface
- Splash guards to fully enclose the wire reels, reduces maintenance and extends machine life
- Fully CE compliant safety controls
- Password protected calibration and hardware setting screen
- Password protection for saved parameters
- Accomodates a variety of wire diameters
- 3-color light tower to indicate saw status
- Multiple wire break detection systems
- 32 programmable cutting programs



### Options

- Extended web option, extends web to 225mm (pitch dependent)
- Application Engineering Assistance available for process development
- Precision table with two dovetails, eases mounting of the sample and maintains proper orientation
- Remote set-up and monitoring software via Ethernet
- Ingot-Mounting Station, a stand-alone unit, allows precise mounting of sample to sacrificial beam and dovetail. Simplifies and reduces set-up time
- Development and design consultation / custom fixturing
- Accumount Dovetail System for improved accuracy
- Manual 90° dicing table
- Rotation table and goniometer table are also available

## Technical

### Technical data at a glance

	RTD 6400	RTD 6800	
Workpiece Dimensions (I x w x h)	150 mm x 100 mm x 200 mm	150 mm x 200 mm x 200 mm	
Loading Length	150 mm - 225 mm (with extended web option)		
Workpiece Weight - max	180 kg		
Yoke Feed - min   max	.0005 mm/s   1.5 mm/s		
Power Requirements	30 amp, 3-phase, 220 volt, 50/60 Hz		
Compressed Air	Pressure: 207 kPa (80 psi)	Volume: 0.14 m <sup>3</sup> /min (5 cfm)	
Cutting Fluid Tank Capacity	11	01	

# Summary of Benefits

## Summary

- Smallest footprint available in a multi-wire saw (1.3 m<sup>2</sup>)
- Ideal for cutting hard and brittle materials such as: silicon, silicon carbide, quartz, fused silicon glass, ceramics, graphite, germanium, etc.
- 32 programmable cutting programs
- Processes ingots up to 225 mm long and up to 200 mm diameter Low kerf loss
- High throughput

## **Tangential Cutting**

- 0° 6° rock
- Lower TTV Superb surface finish
- Faster cuts Higher precision
- Reduced bow and warp

## **RTD Series Footprint**

### RTD 6400 - 6800

Front View





Top View

