



Semiconductor Backend Tools Catalog



2022



AT A GLANCE



Oricus Semicon Solutions is an innovative Semiconductor Tools manufacturing company who, with almost 100 years of collective expertise, craft high tech bespoke tooling solutions for the global Semiconductor Assembly and Test industry.

From one-off customised products to large scale production, our R&D strength, precision manufacturing experience and problem-solving capabilities are impeccable. With a passion for engineering and customer oriented service, we deliver price competitive precision Semiconductor Tooling solutions to a global market with a local presence.

Oricus is made up of a global network of professionals with strong commitment and passion for our work. The company is managed and operated with a spirit of professionalism based on the foundation of integrity, equality and respect. We are determined, objective with a sense of ownership to deliver on our goals. We value our values, professionalism, passion, perseverance and our relentless pursuit to deliver value for our customers.



Authenticity



Expertise



Professionalism



Perseverance



Passion



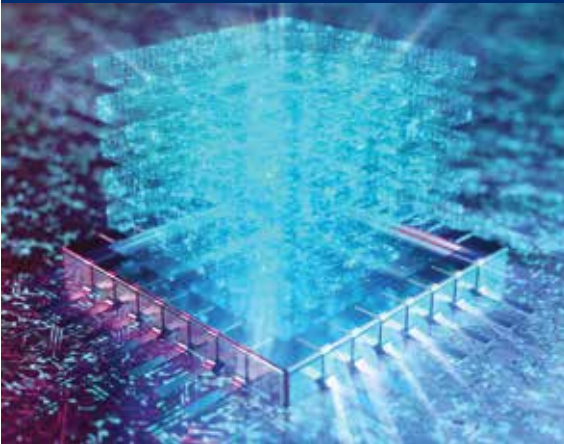
Community

Oriented to Customer's needs



We excel at creating specials – one of a kind pieces, with one of a kind craftsmanship combining with the latest in manufacturing technology to produce micro precision tooling. Oricus can Design and Manufacture either one-offs or high volume orders to your unique specifications, from High Temperature resistant tools for Power Devices to tools with complex geometries for 3D Advanced Packaging.

Industry Leading Solutions



Our Technical Sales Consultants and R&D teams of seasoned Semiconductor Assembly and Test industry professionals will study your chip and package requirements and offer effective and competitive tooling solutions that will work right out of the box. Oricus has the solution to your tooling requirements. Leave it to us and you can focus on your key processes.

Research and Development



R&D is the cornerstone of our commitment to deliver market leading tooling solutions. Our Material Science know-how, coupled with our Manufacturing Expertise and knowledge on the latest demands of Integrated Circuits Packaging allow us to offer tools that maximizes productivity and minimizes downtime.

Wire Bond. Product Families



Window Clamp Inserts

Custom designed to your package, the Window Clamp holds leadframe fingers to the Heat Block Insert for precise wirebonding of interconnects to be performed.



Heat Block Inserts

Consists of a frame supporting face and a die pad supporting face and used as a leadframe support plate during the Wirebond process.



Finger Clamps and Bridges

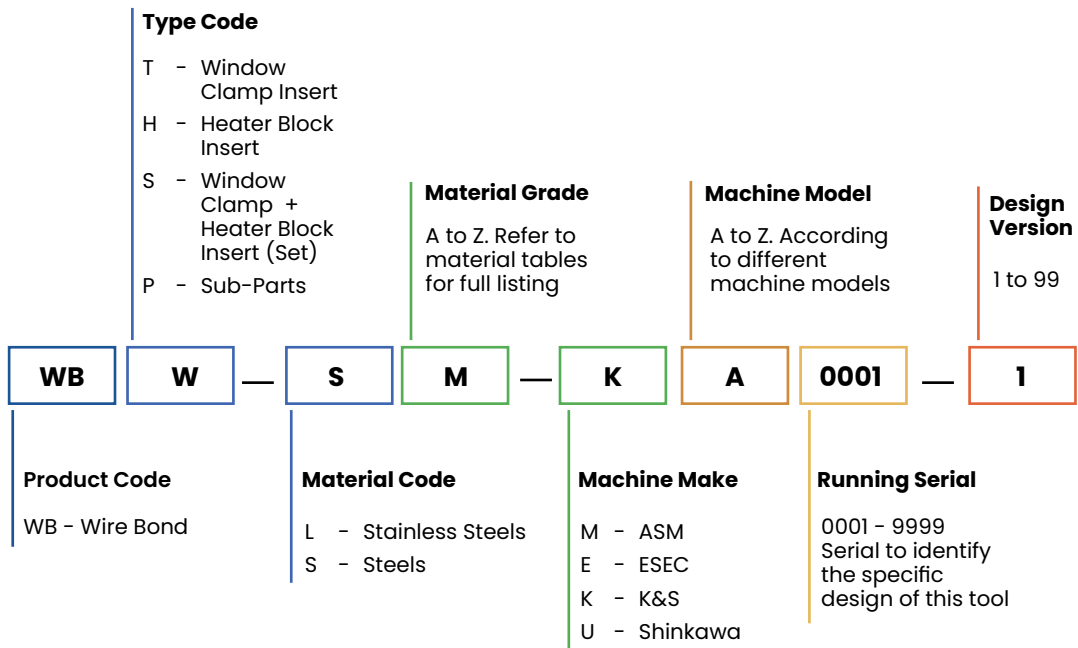
Bridges are used to hold the Finger Clamps in place, while the Finger Clamps contact the lead of the leadframe for the Wedge Bonding process.



Anvil Blocks

Wedge Bonding Anvil Blocks are used as a platform to support the leadframe pad and fingers when the finger clamps applies a downward force for the bonding process.

Part Numbers And Ordering



Window Clamp Insert

Wire Bond

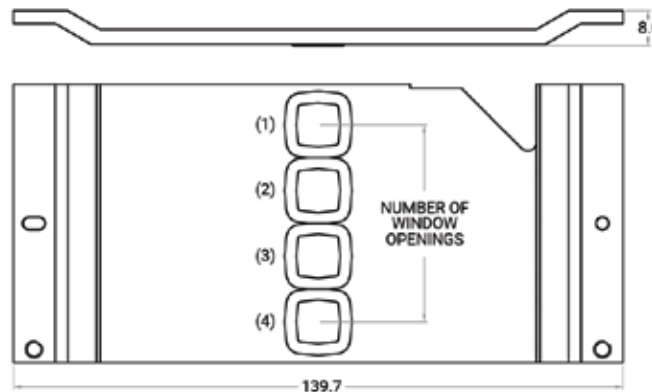


Window Clamp Inserts are made up of an array of multiple Wirebonding windows with corresponding cavities that are designed and manufactured to the relative position of Semiconductor dies that are to be wirebonded.

The Window Clamp Insert holds leadframe fingers to the Heat Block Insert to allow for wirebonding interconnects to be made between the leadframes and Integrated Circuit (IC) components.

Oricus manufactures a wide range of Window Clamp Inserts to fit a wide range of machines from OEMs such as K&S, ASM, Shinkawa and more.

Ball Bonding



Features

- Suitable for use in a wide range of Wirebonding machines
- Cavity openings are designed and manufactured according to exacting standards to avoid the common issues such as Non-Stick On Lead (NSOL)
- Width cavity openings machined to precision tolerances for optimal perpendicularity, concentricity and minimum hole-to-hole offset

Benefits

- Our Window Clamp Inserts are designed and manufactured for a perfect fit to your specific application and equipment
- Plug-and-Play convenience that reduces set up time
- Manufactured to allow for uniform clamping force to be applied around the lead fingers or substrate for maximum stability
- Designs are catered towards the elimination of float during the wirebonding process
- In depth understanding of the benefits and limitations of various Wirebond equipment allows us to design the best tool for your particular application

Part Number	Number of Window Openings
WBW-SM-KA0001-01	4
WBW-SM-KA0002-01	5
WBW-SM-KB0001-01	4
WBW-SM-KB0002-01	6
WBW-SM-KC0001-01	5
WBW-SM-KC0002-01	5

ESD Properties

Conductive < $10^5 \Omega$

Applications

Ball Bonding

Material

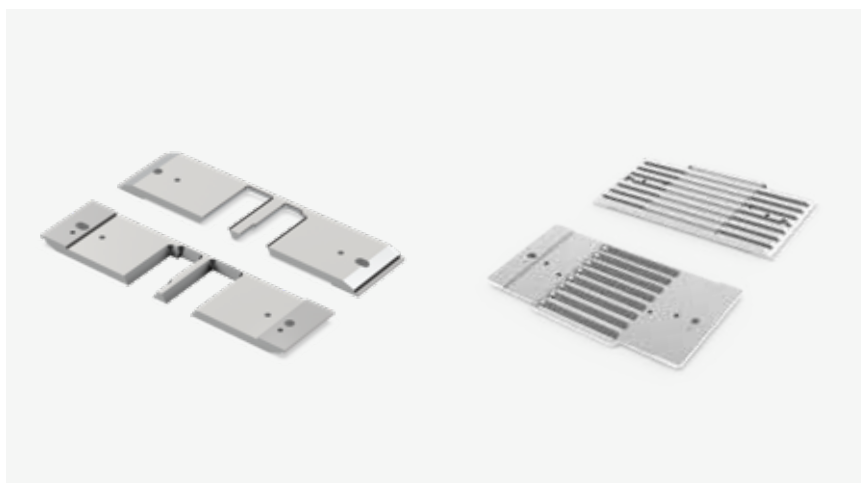
Stainless Steels

Tool Steels

Customization

Number of window openings

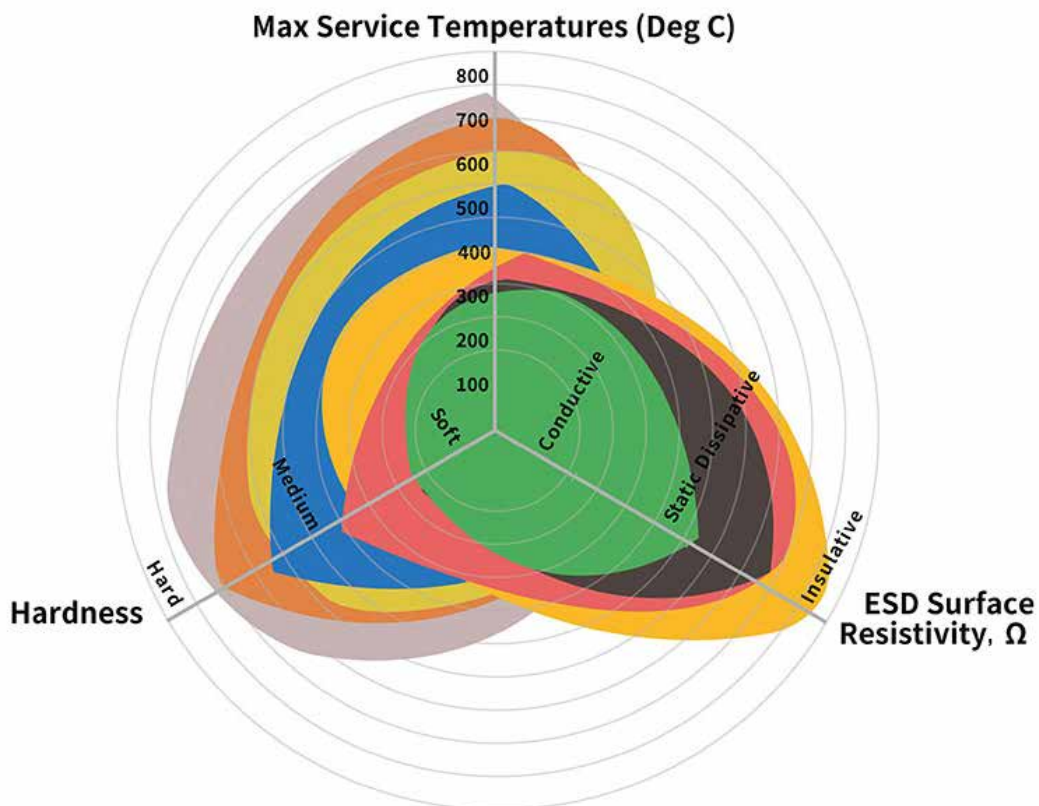
Designs of window profiles



MATERIALS

Oricus's extensive line of engineered materials specially developed and selected to offer optimal tooling performance for your specific Semiconductor Backend process. Our in-house materials are closely developed in partnership with Original Equipment Manufacturers with input from our customers. For externally procured materials, each material goes through a rigorous Quality Assurance and Performance Assessment programme before making it into our material list.

Oricus' in depth understanding and experience of materials allows us to formulate tooling solutions that work for you. As part of our value proposition, we study the conditions of your application and suggest the most appropriate material that meets your needs.



 Tungsten Carbide *WC Line*

 Superalloy *SA Line*

 Stainless Steel *SS Line*

 Tool Steel *TS Line*

 Non Ferrous Metals *NF Line*

 Performance Engineering Plastics *SP Line*

 Engineering Plastics *EP Line*

 Rubber *R Line*

<p>WC LINE</p> <p>Tungsten Carbide</p> <p>High Wear & High Temp Resistance</p> <p>Carbide, K15 Carbide, K30 Carbide, M30 Carbide K40 Carbide, MG30</p>	<p>SA LINE</p> <p>Superalloy</p> <p>All-Round Superior Performance</p> <p>Haynes 25 (L605) Inconel Alloy 625 Inconel Alloy 718 Incoloy Alloy 925 Nitronic 50 Nitronic 60 Titanium Grade 2 Stellite 6 Stellite 31</p>	<p>SS LINE</p> <p>Stainless Steel</p> <p>Balanced Properties</p> <p>15-5 PH 17-4PH SUS 430F SUS 420 SUS 440C SUS 316 SUS 301 SUS 304 SUS 303</p>	<p>TS LINE</p> <p>Tool Steel</p> <p>High Strength</p> <p>CPM-10V SKD 11 SKH 51 Mirrax 40 ASP 23 Stavax XW 10 XW 42 Assab 718 - HH HSS DF2 DF3 Ramax HH Rochling 2315</p>
<p>NF LINE</p> <p>Non Ferrous Metals</p> <p>Special Applications</p> <p>Aluminium 7075 Aluminium 6061 Copper Brass Hovadur K350</p>	<p>SP LINE</p> <p>Performance Engineering Plastics</p> <p>Advantageous Performance & Value</p> <p>Torlon 4432 (PAI) Torlon 4301 (PAI) Torlon 5030 (PAI) Toriion 7130 (PAI) Vespel SCP5050 (P) Vespel SP 21 (PD) Vespel SP1 (PI) ESD Semitron 520 ESD Semitron 420 ESD Semitron 410C ESD Semitron 225</p>	<p>EP LINE</p> <p>Engineering Plastics</p> <p>Economical And Versatile</p> <p>Acrylic/ Polycarbonate TECAFORM SD Delrin ESD Delrin White Delrin Black POM PEEK PEEK HT PEEK GF 30% PEEK CF 30%</p>	<p>R LINE</p> <p>Rubber</p> <p>Geometric Flexibility ESD Protection</p> <p>NBR NBR (Soft) NBR (Hard) NBR (Coated) HPR HPR (Soft) HPR (Hard) UPR CR (ESD) CR</p>

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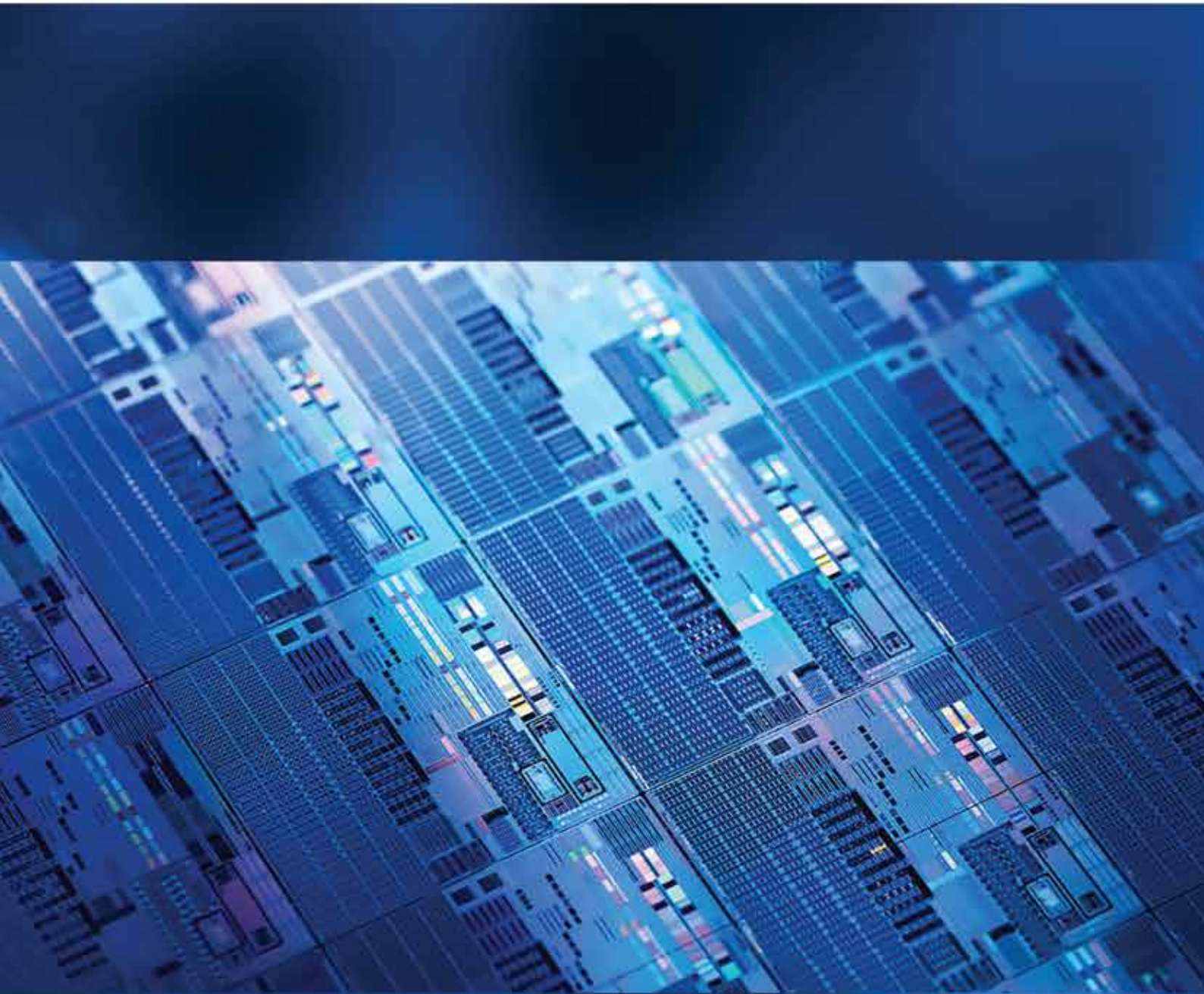
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