

Advanced Materials for Medical Applications

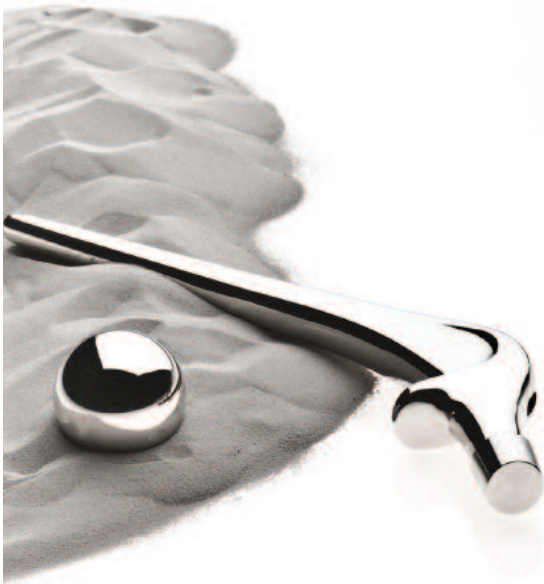


CARPENTER

EXPERTISE, QUALITY AND COMMITMENT TO THE MEDICAL INDUSTRY

BIOMEDICAL MATERIALS FROM A LEADING PRODUCER

For more than a century, Carpenter has been developing and producing specialty alloys that meet exacting standards of performance and quality. Our metallurgists, research scientists and engineers work in close cooperation with the medical industry's best to continually define and redefine the leading edge of technology. We understand the challenges design engineers face when considering materials for use in or on the body. You need the best you can get. And at Carpenter, that's precisely what we deliver.



A WIDE RANGE OF MATERIALS SOLUTIONS

At Carpenter, we've spent years developing alloys that have helped to advance the aerospace, automotive, consumer, industrial, medical and power generation industries. The result of that experience is cleaner steels for medical implants, superior edge retention for sharper instruments and reliable corrosion resistance where you need it.

Carpenter CTS™ alloys have been used in precision blades such as scalpels and bone saws. And soft-magnetic alloys have been used for a range of applications from simple magnetic cores to complex electronic circuitry found in today's sophisticated imaging and diagnostic equipment.



The family of Carpenter BioDur® alloys offers a range of properties including biocompatibility and strength for a variety of orthopedic, cardiovascular and dental applications. BioDur alloys used for implants have met the exacting standards of the ASTM F04 and ISO 5832 series of specifications.

In all, Carpenter gives you one of the broadest ranges of specialty alloy materials solutions available today.

Carpenter Technology Corporation (NYSE:CRS) manufactures a variety of stainless steels, specialty alloys and titanium products that have been used in medical applications throughout the world. We combine an industry-leading product offering with knowledgeable materials support and responsive, on-time delivery. Whether the application is a medical device or instrument for an orthodontic, orthopedic, cardiovascular or dental procedure, you can count on Carpenter to deliver materials that last. And as medical technology continues to advance, we'll provide the innovative next generation alloys that enable tomorrow's medical breakthroughs as well.





Titanium bar, wire and custom engineered shapes from Dynamet Inc., a Carpenter subsidiary, can be found in surgical staples, orthopedic implants and catheter wire.

**MANUFACTURING EXCELLENCE,
GLOBAL DISTRIBUTION AND
OUTSTANDING CUSTOMER SERVICE**

To meet the demanding requirements of medical technology advancements, Carpenter combines a highly skilled workforce with modern equipment. Exacting processes support the relentless drive toward product quality and variation reduction. What's more, our quality systems are approved to ISO 9001:2000 and AS9100 standards. The result: high-quality materials consistently produced to your specifications, lot after lot.

We have strategically located warehouses and operations centers throughout the world and an integrated communications system linking our worldwide offices to each other and to our mills. Our skilled and responsive sales and service professionals can quickly and accurately track order status, inventory and other essential delivery data.

MATERIALS YOU CAN COUNT ON

That's what Carpenter is known for: Assisting our customers in the design and engineering process. Pioneering innovative new materials for new applications. Continually improving our materials and processing. Committed to the success of the medical industry.






CARPENTER manufactures hundreds of stainless steels and specialty alloys in loose powder, billet, round bar, shaped bar, precision strip, wire, and fine wire and ribbon forms in a wide variety of shapes, sizes and conditions. Below is a listing of some of our alloys that have been used in medical device and instrumentation applications.

<p>Cobalt-Base Implant Alloys BioDur® Carpenter CCM® alloy Micro-Melt® BioDur Carpenter CCM alloy BioDur CCM Plus® alloy BioDur Conichrome Carpenter L-605 MP35N* alloy MP35N* low Ti alloy</p> <p>Stainless Implant Alloys BioDur 108 alloy BioDur 22Cr-13Ni-5Mn BioDur Type 316LS stainless BioDur 734 alloy</p>	<p>Non-Implant Alloys AerMet® alloys Custom 450® stainless Custom 455® stainless Custom 465® stainless Custom 470 Custom 475® stainless Project 70+® Custom 630 Gall-Tough® stainless Micro-Melt® 440-XH® alloy TrimRite® stainless Trinamet® stainless Type 302 Type 304/304L Project 70+ Type 304/304L Project 70+ Type 316L Type 316LS</p>	<p>Project 70+ Type 416 Type 420 Type 431 Type 440A Type 440C</p> <p>Titanium Alloys <i>Manufactured by Dynamet Inc., a Carpenter company.</i></p> <p>CP Titanium Grade 1 CP Titanium Grade 2 CP Titanium Grade 4 Ti 6Al-4V Ti 6Al-4V ELI Ti 6Al-7Nb Ti 15Mo Ti 3Al-2.5V Titanium ULTRABAR®</p>
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* MP35N is a trademark of SPS Technologies, Inc.

CARPENTER'S SPECIALTY ALLOYS HAVE BEEN USED IN A WIDE VARIETY OF APPLICATIONS FOR THE MEDICAL INDUSTRY

<p>Cardiology</p> <ul style="list-style-type: none"> ▶ Arterial plaque removers ▶ Catheters ▶ Chest closure wire ▶ Hypodermic needles ▶ Pacemakers and defibrillators ▶ Surgical instruments ▶ Surgical needles ▶ Vascular repair (stents) <p>Dental</p> <ul style="list-style-type: none"> ▶ Fixation and orthodontia ▶ Instruments ▶ Implants 	<p>General Surgery</p> <ul style="list-style-type: none"> ▶ Blades ▶ Endoscopic/arthroscopic instruments ▶ Hypodermic needles ▶ Reamers ▶ Staples ▶ Surgical needles ▶ Surgical instruments <p>Instrumentation</p> <ul style="list-style-type: none"> ▶ Diagnostic equipment (MRI, X-ray) ▶ Microsurgery 	<p>Orthopedic</p> <ul style="list-style-type: none"> ▶ Fracture fixation ▶ Guide wire ▶ Joint replacement ▶ Spinal fixation ▶ Artificial discs ▶ Surgical instruments ▶ Spinal motion preservation 	 <p>For more information on Carpenter products, including detailed technical information on hundreds of alloys, visit www.cartech.com.</p> <p>Call toll-free 1-800-654-6543 in the U.S.</p>
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