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Ridgway Powdered Metals Inc.

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## Powder Metal Manufacturing of a Clutch Hub for the Valve Control Industry



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Our engineers at **Ridgway Powdered Metals** can assist customers in the development of custom powdered metal components. Powdered metal manufacturing offers unparalleled flexibility and cost effectiveness in the fabrication of complex metal components. This 3.400" O.D. clutch hub is used in the valve control industry. The complex geometry lends itself to powdered metal manufacturing. Features like the lugs at both ends would result in extensive machining time and material waste in a traditional machining. The hub is molded from FN-0405 high strength nickel steel and held to dimensional tolerances of  $\pm 0.006$ " for the inner diameter.

After compacting and sintering, the hub undergoes additional machining, heat treating, and drawing processes. For some components with fine features, a combination of powder metal manufacturing and machining is the optimal production solution. Engineers can consult with customers about the most economical way to produce accurate, high quality parts with the required dimensions and geometry. We produce of 10,000 of these hubs per year with a 4 week lead time. For more information about this custom powdered metal component project, see the table below, or [contact us](#) directly.

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### Highlights of this Custom Powdered Metal Components Project

<b>Product Description</b>	Clutch Hub
<b>Powdered Metal Capabilities Applied/Processes</b>	<b>Primary:</b> Engineering <ul style="list-style-type: none"> <li>• Tool Making</li> <li>• Process Sourcing</li> </ul> Compacting/Molding Sintering <b>Secondary:</b> Machine Heat Treat and Draw
<b>Equipment Used to Manufacture Part</b>	Standard Molding Press
<b>Overall Part Dimensions</b>	Outside Diameter: $\varnothing$ 3.400" Body Diameter: 2.173", Lugs on both ends of the part Weight: 463 grams
<b>Tightest Tolerances</b>	0.006" on the I.D
<b>Material Used</b>	FN-0405
<b>In process testing/inspection performed</b>	Dimensional Inspection, Gage Inspection, Hardness Testing
<b>Industry for Use</b>	Valve Control
<b>Volume</b>	10,000 +

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<b>Delivery/Turnaround Time</b>	4 Week Delivery
<b>Delivery Location</b>	VA
<b>Standards Met</b>	Customer Specifications, 2D CAD Drawing
<b>Product Name</b>	Clutch Hub

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