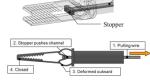
Technical NEWS LETTER MICRO MIM JAPAN HOLDINGS Inc.



Reviews of medical exhibition in last 4 years

In 2014 we first exhibited in the world's largest medical exhibition "MEDICA/Compamed" in Germany. We introduced our new MIM technology component part every year we joined the exhibition. We developed our µ-MIM technologies and also analysed our competitive advantages to serve current market's need and wants. We will introduce our latest technology in "MICRONORA" exhibition in September 2018.







Realise world's smallest check valve





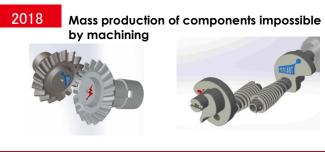
2016 The world's first internal tooth helical gear mass production





World's thinnest micro nozzle





MICRONORA

microtechnology & precision 25 - 28 September 2018 Besançon - France

Reliable medical forceps parts

µ-MIM technology capable in mass producing free shape designed, high precise component parts. We have started mass production of surgical disposable forceps which we integrated thin-walled and hollowshape parts. This integrated design forceps leads higher reliability in terms of both parts quantity and quality.

Thin wall structure impossible with additive manufacturing process

Micro check valve with hollow shape and outer diameter of 2.25mm, has undercut structure with a ceramic ball inside. The cylinder wall thickness is less than 0.2 mm at the thinness point with smooth surface not requiring any polishing, which is impossible to realise by conventional MIM or additive manufacturing.

Evaluation without using contacting probe

Non-penetrating metal component part which cannot be successfully produced by CNC machining process such as helical gear (diagonal tooth gear) in module of 0.2 or less. We introduced our advanced measurement equipment that can accurately analyse minute size and any special geometry gear.

We mass produce micro pipe parts with not only wall thickness of 0.2 mm throughout the part, but also complicated structures pipe that require development of dedicated tools if made by CNC machining. We also realise mass production of hollow parts with curved inner flow path, Y splitting, confluence, micro discharge port, and any other special hollow shape.

Show our technical strength of mass production of a hetero type gear with shaft, eccentric parts etc.

Nowadays, demand of precise small special designed parts which are used for robots in medical and other industries is increasing. Please contact us for consulting of μ -MIM production including the development lead time and processing abilities.

25th-28th September 2018 Parc des Expositions Micropolis / Boulevard Ouest Besançon <u>–</u> France <u>i.nakamura@micro-mim-japan.co.jp</u> Tel: -+49 781 63014281

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