

精密加工零件 Precision Machined Parts



采用与产品相符的独特工艺，要求精度以微米为单位加工的零件从小批量到大批量均可大量生产。

在世界6大据点采用顾客至上的最佳供应的国际化体制。

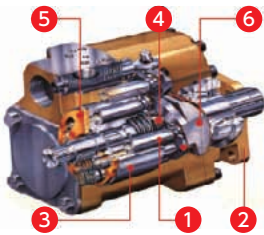
赢得了以油压相关厂家为主的各类客户的认可。

With the original and most suitable manufacturing technique, Takako can provide precision machined components which are extremely precise. Takako Group can provide smaller lot as well as large volumes. Takako's six production plants in the world will be utilized for the optimum distribution to our customers. Takako is recognized for its accuracy and consistency by leading hydraulic companies.

TAKAKO制造的优势 / Takako's strong points in manufacturing

国际化体制 Global Network	生产技术力 Production Technology	品质保证能力 Quality Guarantee
合理供应 · 合理生产 · 合理采购 Pursuing the most suitable location for procurement, production and distribution.	追求世界独有的工艺、设备 Pursuing Innovative production techniques.	构筑只生产良品的体制 Pursuing 'zero-defect' production.

液压装置零件 / Hydraulic component part



● 液压装置已经成为工程机械、机床、汽车等现代社会中需要大型动力的机械构造中不可缺少的部分。同时，这些零部件需要具有极致的超高精度和超高韧性。

● 在精密装置领域，本公司作为液压装置零部件厂家精心打造的精密加工技术及其可靠性得到了全世界的认可。

● 特别是被誉为“轴向柱塞泵心脏”的柱塞总成在国内外的年产量达2,000万个，拥有日本国内80%、全球市场65%的市场占有率。

Today hydraulic equipment is indispensable for construction & industrial machinery and vehicles that require a large amount of power. The internal component parts in these hydraulic pumps and motors have to be extremely precise and durable.

In this precision machine field, Takako's precision machining technology and reliability as a hydraulic component part manufacturer is world renown. Takako produces and ships 20 million piston assemblies each year and accounts for 80 percent of the domestic share and 65 percent of the world market share.

1 活塞 Piston 2000万个/年 20,000,000/year	2 限位板 Retainer plate 70万个/年 700,000/year	3 缸体 Cylinder block 20万个/年 200,000/year	4 限位支架 Guide Ball 70万个/年 700,000/year	5 阀板 Valve plate 20万个/年 200,000/year	6 回转斜板 Swash plate 20万个/年 200,000/year
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球形焊接零部件 / Ball Welded Parts



● 通过1/60秒的时间对钢球实施焊接的技术，不仅确保了产品的精度、硬度等，并在不改变其特性的情况下实现了低成本化。

● 焊接部无裂纹等现象出现，也不会出现摩擦焊接中产生的毛刺。

● TAKAKO的球形焊接技术，在以液压装置零部件为主的汽车零部件等众多领域赢得了广大客户的信赖。

● Technology that welds steel balls in 1/60th of a second allows for precision and strength at low costs.

● Takako's welding technique produces a joint with no cracks and no burrs as found in typical friction welding applications processes.

● Takako's ball welded parts are noted for its high reliability as a hydraulic parts and automobile parts.

精密零件搭载市场 / Typical Applications of Takako's Precision Machined Parts

工程机械 / Construction Machinery	液压挖掘机、微型挖掘机、轮式装载机、起重车、压路机 等 Excavators, Mini-excavators, Wheel loaders, Cranes, Road rollers etc.
工业机械 / Industrial Machinery	机床、压力机、叉车、搅拌车、环卫垃圾车 (垃圾收集车) 等 Machine tools, Machine press, Forklifts, Concrete mixers, Garbage cars etc.
农业机械 / Agricultural Machinery	拖拉机、花园用拖拉机、草坪割草机、除雪机、联合收割机、搬运车 等 Tractors, Garden tractors, Lawn mowers, Snow blowers, Crop harvesters, Agricultural carts etc.
汽车 / Automobile	4轮汽车、2轮车、卡车 等 Cars, Motorbikes, Trucks etc.
其他 / Others	铁路、船舶 Trains, Marine crafts.

加工精度 / Typical Accuracy

单位(mm)/units

分类 Classification	工艺 Operation	尺寸公差 Tolerance	面粗度 roughness
加工精度 Finished	无心研磨 Centerless Grinding	±0.001	0.2a
	球面研磨 Spherical Grinding	±0.003	0.4a
	平面研磨 Surface Grinding	±0.01	0.4a
	内径研磨 Bore Size	±0.005	0.4a
超精加工精度 Super Finished	超精加工 Surface Finish	—	0.1a
	球形研磨 Spherical Lapping	—	0.2a
	平面研磨 Surface Lapping	—	0.2a
	研磨 Bore Finish	—	0.2a

制造方针

Takako's Manufacturing Policy

一直坚持其他公司无法效仿的制造工艺进行产品的制造。对顾客前来咨询的图纸，我们能够在图纸内反映进我公司的工艺并给予提案。

对于我们承揽的加工设备，会将我公司的技术诀窍传达给厂家，形成TAKAKO特有规格的设备或者客户指定规格的设备。

We challenge our world by focusing on continual technology advancement, pursuing 'innovative production'.

When we receive a drawing from our customer, we make and propose our original drawing that can be realized only from our production method.

Our machine tools are the key for our originality. They are either creatively designed or custom-made by machine tool manufactures based on Takako's technical expertise.

国际化体制 / Takako's Global Network

合理采购
Optimum
Procurement

生产据点的本土化直接采购
Direct procurement at local production sites.



滋贺工厂 TSP 信乐町
Shiga plant TSP Shigaraki-cho

合理生产
Optimum
Production

考虑最佳的生产据点，推进从材料到完成品的连贯性生产
Promotion of an integrated production system from raw material to finished goods at the most economically appropriate production site.



越南第一工厂 TVC 胡志明近郊
Vietnam plant [The 1st plant]
TVC Ho Chi Minh city environs

合理供应
Optimum
Supply

由离市场最近的生产据点对客户进行供应
Delivery from the nearest production site to the customer's manufacturing location.



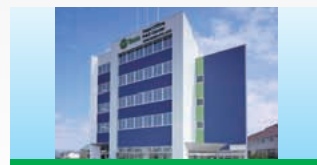
越南第二工厂 TVC 胡志明近郊
Vietnam plant [The 2nd plant]
TVC Ho Chi Minh city environs



美国工厂 TSW 堪萨斯州
U.S.A. plant TSW Kansas state



中国工厂
China plant



总公司、研究开发中心
Headquarters, R&D Center



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- 产品目录上所刊载的数值有时因规格条件会发生更改。

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