



2022

# COMPANY PROFILE

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TAKUMI Auto Parts Co., Ltd.



## Group Introduction



Since 1970s, Takumi Group started its industrial ceramic business from a small factory. Afterwards Takumi's spirit of innovation and industriousness was drawing attention of Toyota. Following the demand of Toyota, Takumi has been contributing to the development and research of electrical and electronic system such as spark plugs, igniton coils and sensors. Before 2013, Takumi Group was mainly serving Japan automotive industry as premium product supplier. In Japan, the "Takumi" concept is a kind of craftsmanship, which represents full devotion, meticulous attention to details, and excellence; having a true belief in excellence, achieving excellence at all espects.

After 2013, premium product demand from China made it possible to have manufacturing facilities in China and reach balance of performance and cost. Major milestones are in next slide.



# Company Highlights



## Year of establishment

1970

## Employees

1,850

## Production Capacity

250 Million units

## Total factory size (m<sup>2</sup>):91300

Production: 60000

Warehouse: 5000

Lab / QC / R&D: 2000

Office: 24000

Other (please specify): show room 300



# Milestones



Produced the first spark plug



Takumi started its R&D Institute serving Japan Auto Industry.

Bought Delphi (Mexico) plant



Started its production of oxygen sensor in Japan



Set up new laboratory



1970

1983

1990

2000

2003

2006

2009

2013

2014

2020

Established in Tokyo city

Produced the first mechanical seal



Started to produce ignition cable and ignition coil



Bought Delphi US spark plug plant



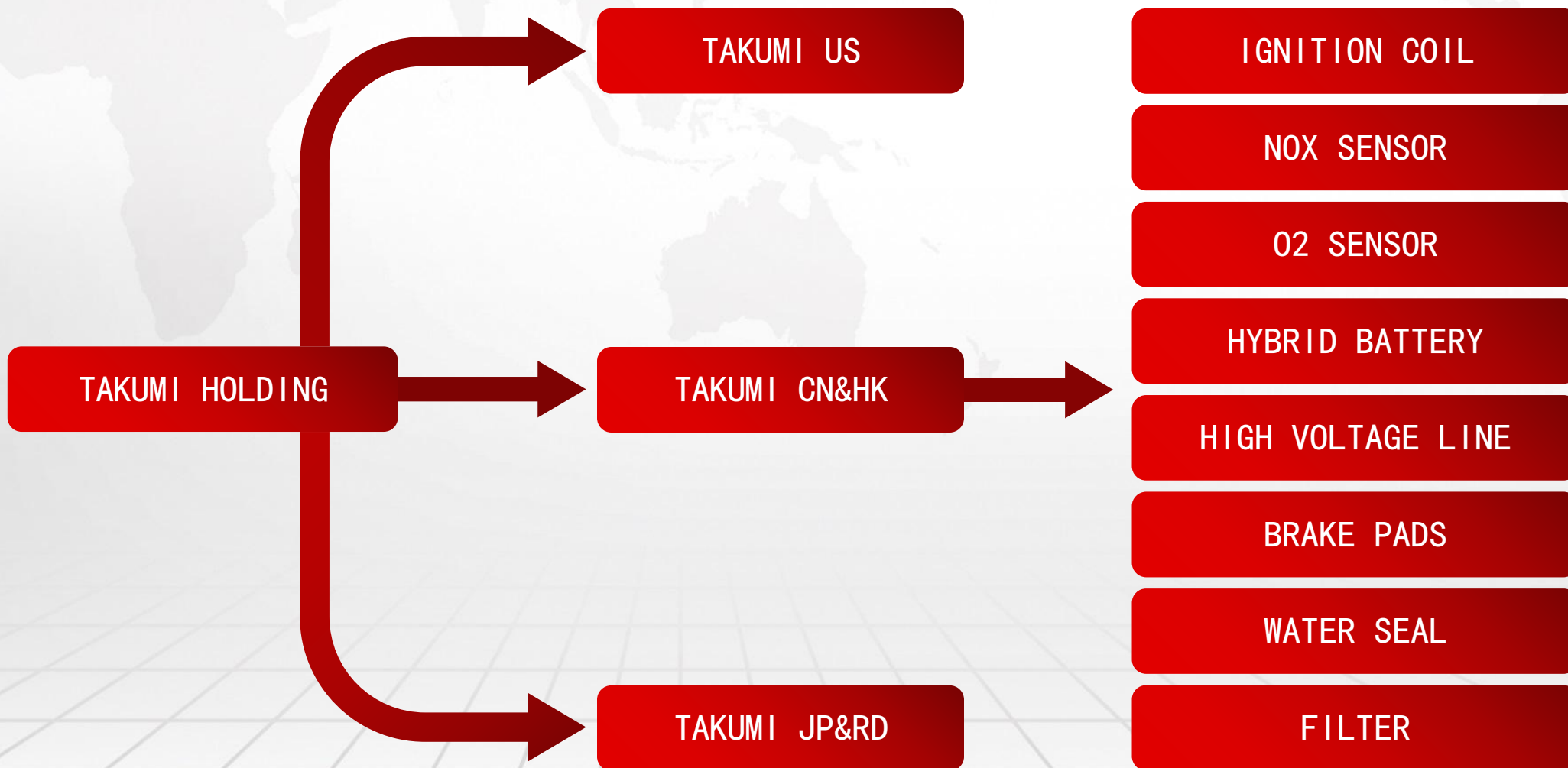
High performance ceramic (T95) developed



New operation established in Hongkong for easier business with ME.



# Organization Chart





# Global Operation



	Operation	Product Line	Location
1	Takumi Holding	HQ & Global investment	Tokyo, Japan
2	Takumi R&D Center	R&D Center	Tokyo, Japan
3	Takumi USA	North America Commercial Center	Detroit, USA
4	Takumi Auto Parts Co., Limited	Asia Pacific Commercial Center	Hongkong, China
5	Takumi Changsha	China Administration	Changsha, China
6	Takumi Spark Plug Factory	Spark Plug	Shangdong, China
7	Takumi Ignition Coil Factory	Ignition Coil	Changsha, China
8	Takumi Oxygen Sensor Factory	Oxygen Sensor	Jiansu, China
9	Takumi NOx Sensor Factory	NOx Sensor	Changsha, China



# Spark Plug Structure



## Ceramic insulator

- The five rib design is used throughout the surface
- This reduces voltage loss and prevents missed sparks
- High-purity alumina is used
- Good electrical insulation, durability and thermal conductivity
- Chemically stable

## Nickel-plated plug body

- Antioxidant
- corrosion resistant
- Electric heating riveting edge
- Reliable sealing

## Captive outer sealing ring

- Heat resistance, gives good hermeticity and low variation in heat Range

## GAP

- Precise gap makes stable ignition

## Inner seal

- Keep contact between insulator and shell, air tightness

## Terminal

- To guarantee the credibility of spark plugs and the high voltage wire connection
- Terminals adopt international standards for general size

## With a resistance glass sealing material

- Ensure the tightness and Conductivity
- Make the spark plug is environmental protection product radio interference suppression
- Terminals adopt international standards for general size

## Copper cored center electrode

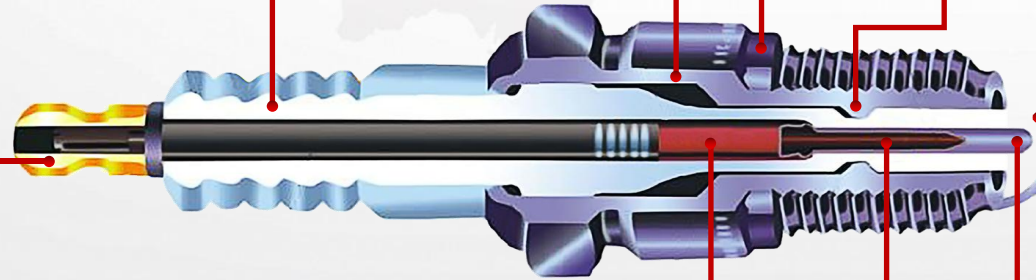
- Compared to other manufacturers there is more copper with better thermal properties.
- From low to high speeds, a strong steady spark

## Ground electrode

- Precious metals can be added as reinforcement of ground electrode
- Copper cored G/E can be used to improve heat disperse for high tension engine

## Iridium tip

- Iridium tip can be added as reinforcement of center electrode





# Manufacturing Process Flow







# Key Production Equipments



automatic assembly line



laser welding equipment  
(precious metal electrode)



Capitol insulator assembly  
equipment Capitol



high voltage isostatic  
pressing



Tunnel kiln (32m)



# Full Automatic Spark Plug Production Lines



Accurate Temperature Control Firing Process



Fine Ceramic Automatic Production line by Robots



Automatic Welding Lines



Full Automatic Insulator Assembly & Firing Line



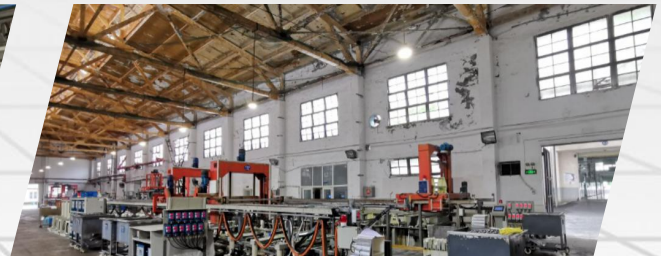
Full Automatic Assembly & Inspection Line



Full Automatic Cold Forming



Automatic Threading Lines



Automatic Surface Treatment Lines



# Key Test Equipments



High voltage dielectric performance test equipment



Infrared moisture analyzer



Fully automatic torque strength



Microscope



Thermal sealing test bench



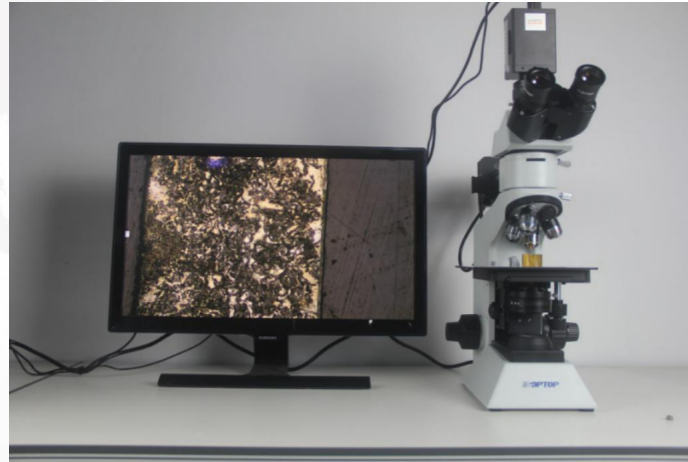
Automatic grinding and polishing machine



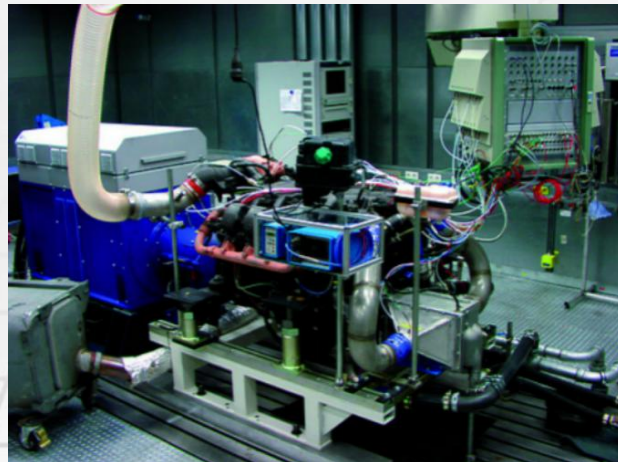
Automatic high and low temperature impact box



# R&D Instrument and Equipment



R&D Instrument and Equipment



Engine Test Lab



# TAKUMI Products





# Cooperation Partners



**HYUNDAI**



Mercedes-Benz



**TOYOTA**



**HONDA**



**SUBARU**  
A U T H O R I S E D


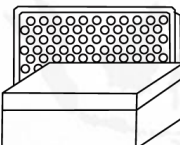
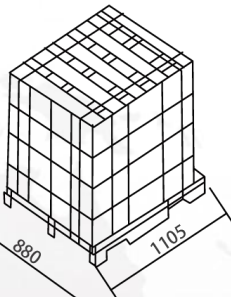




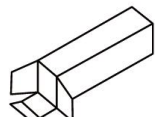
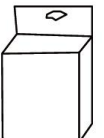
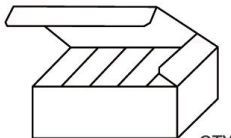
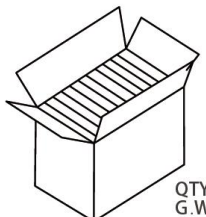
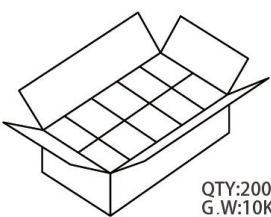
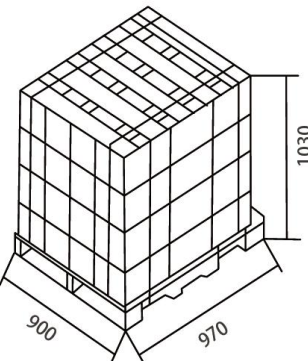
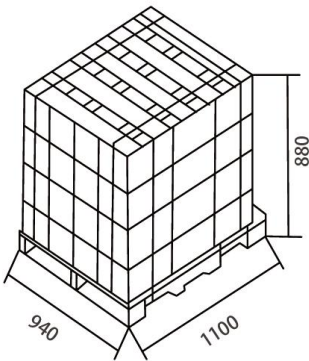
**mazda**



# PACKAGING AND LOGISTICS



	SIZE (MM)	PACKAGE	
POLYFOAM	349X204X101	 QTY:100PC	
CARTON	357X210X220	 QTY:200PC G.W:12KG	12 CARTONS / LAYER 4 LAYERS / PALLET 48 CARTONS / PALLET 9600 PCS / PALLET

	SIZE (MM)	PACKAGE	
SINGLE BOX	84X23.5X23.5	 QTY:1PC	
MID BOX	87X99X26 124X87X50	 QTY:4PC	 QTY:10PC
CARTON	315X215X220 460X265X120	 QTY:200PC G.W:12KG	 QTY:200PC G.W:10KG
PALLET	970X900X1030 1100X940X880		





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**THANKS FOR  
LISTENING**

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