

## HEAD OFFICE

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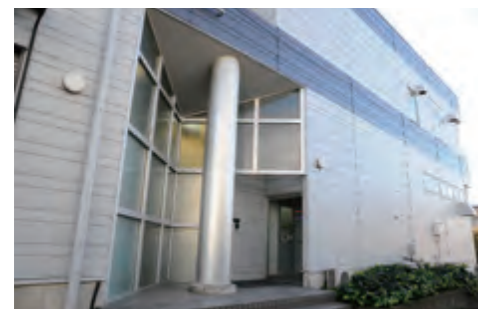


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## ATSUGI OFFICE

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# ***PUES EV***

## CORPORATE PROFILE



## Corporate

Company Name	PUES Corporation	
Established	10th December 1999	
Present Capital	10 million yen(as of April,2020)	
Employees	62(as of jan.,2020)	
Board Members	Representative Director President	Hiroyuki Matsumoto
	Representative Director Vice President	Ryota Okamura
	Representative Director Vice President	Izumi Miyashita
	Director	Kiyoto Takeda
	Director	Masaaki Yoshikawa
	Director	Asato Hirano
	Director	Shigeo Kishi
	Auditor	Shuhei Naito
	Auditor	Satsuki Kojima

## Business

- Overseas EV/HEV component sales
- EV/HEV system technology proposals and R&D(multiple patent applications and theses presented locally and overseas)
- EV/HEV component development, design and manufacturing
- EV/HEV(2-wheeler,4-wheeler) development, design and manufacturing

## Corporate History

- |      |   |
|------|---|
| 1981 | Established Tokyo R&D Co., Ltd.   |
| 1984 | Launched an independent study of EVs  |
| 1993 | Signed a Distributorship Agreement with TAG Electronic Systems(currently known as McLaren Applied)  |
| 1999 | Established PUES Corporation<br>Started developing the derivative system "PUES21" for compact EVs<br>Introduced the "PUES21" and electric scooter "es-x2" at the Tokyo Motor Show   |
| 2003 | Developed an electric scooter "ELE-ZOO" with "PUES21". 50 units were produced and sold on a limited basis.<br>Started accepting development consignments with a strong emphasis on "electrification" from customers from various fields such as automotive and construction machinery manufacturers and parts suppliers<br>Started consigned development projects, mainly for automotive manufacturers, for the development of permanent synchronous motor and its inverter |
| 2006 | Started Li-ion battery pack developments mainly for automobile OEMs   |
| 2008 | Signed a distributor agreement in the Asian-Pacific region with BRUSA Elektronik AG, a Swiss manufacturer of electric drive systems, controllers and battery chargers.  |
| 2009 | Released the intelligent battery management system (BMS) for Li-ion battery packs   |
| 2019 | We take part in the proof business as joint implementation with Tokyo R&D "Fuel cell small truck technical development and the proof" which are CO <sub>2</sub> emission reduction measure reinforcement lead type technical development of the Ministry of the Environment.  |
| 2020 | Signed a strategic partnership agreement with Webasto Thermo & Comfort Japan Co.,Ltd.   |

## Greetings

PUES Corporation, which used to be the EV system business department of one of our group companies Tokyo R&D Co., Ltd., was formally established as an independent company in December 1991.

Even before its establishment as an independent company, we have continuously worked in line with our mission to "promote and support the digitalization and electrification of vehicles" and with about 40 years of experience in the field, we strive to use our expertise in vehicle development to expand to other new fields such as aerospace, robotics, medical.

PUES mainly provides three services: engineering, trading and manufacturing services. We conduct individual sales of imported components but also have experience with combining various high-end parts from overseas into an integrated system and providing this system to Japanese automotive manufacturers as a Tier 1 supplier.

Should you be considering entering the Japanese market, one of the key markets for electrification, we are fully capable of being your Japanese market partner by providing your company and customers here with flexible engineering support during the development process.

The automotive industry is switching to a service-based model and we are currently approaching an industrial revolution that takes place only once every 100 years which requires environmental consideration and autonomous capabilities from our vehicles. With the concept of vehicles constantly changing by the day, we will also need to continually evolve to be able to continue providing highly satisfactory services to our customers. We, at PUES, place engineering at the center of our services and will continue to strive to contribute to the world's ever-changing needs.

Representative Director President Hiroyuki Matsumoto



Meaning of Company Name

**Power Unit for Electric Systems**

# Trading Service

Would you like to expand your business to Japan?

## Merits of entering the Japanese market with PUES

- ✓ Necessary certifications in Japan acquired by PUES
- ✓ Provide solutions that take into account overall system design
- ✓ Negotiations handled by PUES
- ✓ Receive customer feedback regarding your product
- ✓ Technical support provided by PUES
- ✓ Pick up from factory, logistics handled by PUES
- ✓ Aftersales support provided by PUES
- ✓ No need to learn Japanese
- ✓ PUES markets your product in Japan (Strategic Partnership Agreement)

### PUES ⇒ Manufacturer

PUES will support the manufacturer in its expansion to the Japanese market and in finding customers

### PUES ⇒ OEM, Tier 1

PUES will propose the manufacturer's product to OEM and Tier 1s and handle the sales and technical support to the customer

### OEM, Tier 1 ⇒ PUES ⇒ Manufacturer

PUES will gather feedback and data from the OEM and Tier 1 in behalf of the manufacturer

## PUES' capabilities

	PUES	Trading comp
Negotiation with OEM and Tier 1	○	×
On-site technical support	○	×
Engineering, specification review	○	×
Certification acquisition	○	×
Defect and incidence handling	○	×
Provide product feedback	○	×
Delivery	○	○

## Partners/Distribution Partner for:

'BRUSA Elektronik AG, located in Switzerland, develops and manufactures power electronics devices and drive units for EVs and HEVs. The company has proven technology that earns the trust of many automotive manufacturers in EU. PUES is the sole distributor of BRUSA in the Asia-Pacific region.



'McLaren Applied has developed its core technologies from over 20 years of experience at the leading edge of motorsports competition. It has supplied various electronic components to the field of high-end motorsports, and the products are compact and lightweight with superb durability and excellent reliability. PUES is the sole distributor of McLaren Applied Ltd. in the Asia-Pacific region.

We offer high-end electronic components for motorsport applications.



'Webasto (Germany) is an automotive component provider that designs, manufactures and sells a wide range of automotive components with customers around the world. PUES provided sales and technical support services for Webasto's initial battery pack project in Japan. The battery pack was mounted into an electric vehicle manufactured by PUES and has started its trial operations.





Would you like to expand your business to Japan?

## Why do Japanese OEMs and Tier 1 choose PUES? What are the merits of working with PUES?

- ✓ Can handle wide range of development activities for land, sea and air vehicles
- ✓ Decades of development expertise through consigned development business experience
- ✓ Flexible handling from prototyping to mass production stages
- ✓ Provides aftersales support to customers
- ✓ Business relationship with majority of Japanese OEMs
- ✓ Close relationship with OEM development departments

## PUES' services are backed by a solid engineering foundation!

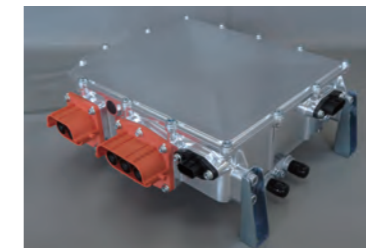


PUES is trusted and has long-running relationships with OEMs and Tier 1 via its consigned development business. By partnering with a company with solid engineering foundation such as PUES, we are able to effectively market your product's strengths and help you secure a stable sales channel in Japan.

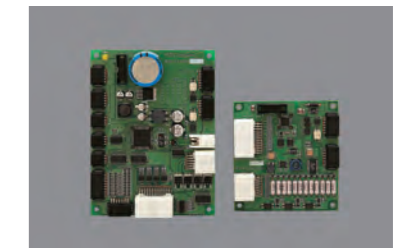
## PUES' Consigned Development Business



Motor Development



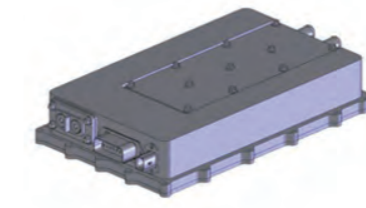
Inverter Development



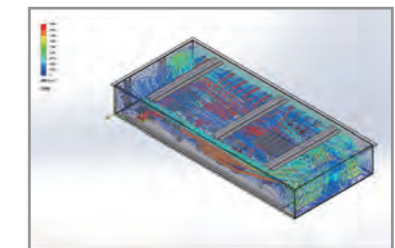
Battery Management System Development



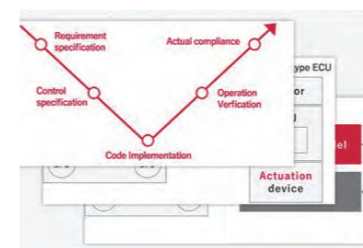
Battery Pack Development



DCDC, DCAC Development



CAE Analysis



Model-based Development



Charging System Development



Testing/Evaluation/Measurement Device Development