

# **Advanced Automotive Technology**

We produce most of the parts that the user can see, touch and feel such as automobile interiors, exteriors, and electrical products.

#AUTOMOTIVE, #BATTERY, #CAR



### COMPANY INTRODUCTION



# "Global Auto Parts Supplier" with a salient presence in both the domestic and global automotive industries.

Starting from the production of interior goods for the Pony in 1972, Seoyon E-Hwa has become a company that specializes in door trims, head lining, covering shelves, package trays, screen assemblies and pillar trims.

It has solidified its place in the global market through aggressive overseas investment even during the Asian Financial Crisis. It has also been recognized for its high quality products and advanced technology by obtaining the 'Grand Quality 5 Star' in 2011. This was the result of rigorous quality control with the determination to supply top quality products to customers.

Seoyon E-hwa is devoted to securing competitiveness through technological innovation. With excellent researchers, and proactive investment in R&D, it is equipped with up-to-date facilities to conduct research on product design, material development, and assessment.

Seoyon E-Hwa invests its utmost efforts into becoming the "Global Auto Parts Supplier," with a renowned status in the global automotive industries as well as in Korea, based on customer-satisfaction through creative management that respects humanity.

#### **HISTORY**

# Recently

Dec. 2020 Won KIPO Commissioner Prize at 2020 Korea Invention Patent Exhibition(Korea Intellectual Property Office)

Nov. 2020 Excellent thesis award for BSR Improvement Research Contest(H/KMC)

Nov. 2020 Won Gold Medal at 46th National Quality Team Competition (Ministry of Trade Industry and Energy)

**Nov. 2020** Selected as a company with excellent quality competitiveness(13 consecutive years)(Ministry of Trade, Industry and Energy)

May. 2020 Awarded the Minister of Trade, Industry and Energy prize at 14th Ulsan Automobile Day

**Apr. 2020** Changed the location of the H.Q.(Anje Tower in Yeoksam-dong, Seoul → Seoyeon Group R&D Center in Gwanyang-dong, Anyang-si, Gyeonggi-do)

#### - Worldwide Leader

2010 Entry into the Georgia

2011 Getting National Quality Award

2012 Entry into the Poland

2014 Established SEOYON Holding Company / Entry into the Mexico / Getting National Quality Award in Slovakia

2016 Completion of SEOYON R&D Center / Getting US\$500 Million Exportation Award

2017 Awarded the grand prize of this year's company in enterprise of middle standing / Entry into the Anantapur

**2018** Awarded the excellent company of quality competitiveness(11years)

#### **Global Expansion**

1996 Entry into the Turkey

2002 Entry into the China / Entry into the India

2004 Entry into the Europe

2005 Entry into the USA

#### **Establishment & Growth**

1972 Established SEOYON E-WHA

1987 Established SEOYON TOPMETAL

1994 Established SEOYON INTECH

1997 Established SEOYON CNF



#### **GENERAL STATUS**

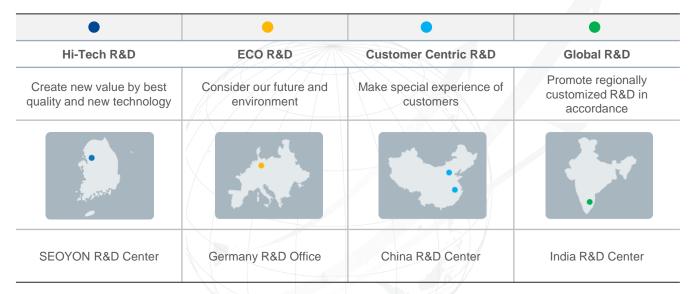
Asset	Revenue	Employees	Plant, Office, R&D Office	Consolidated Subsidiaries & Affiliates under the equity method
US\$2.5billion	US\$2.6billion	13,603person	60ea (51 Plants & Offices + 9 R&D Offices)	11ea (Korea 8, China 17, India 5, Europe 7, North America 3, Mid & South America 4

### **R&D FOR INNOVATION**



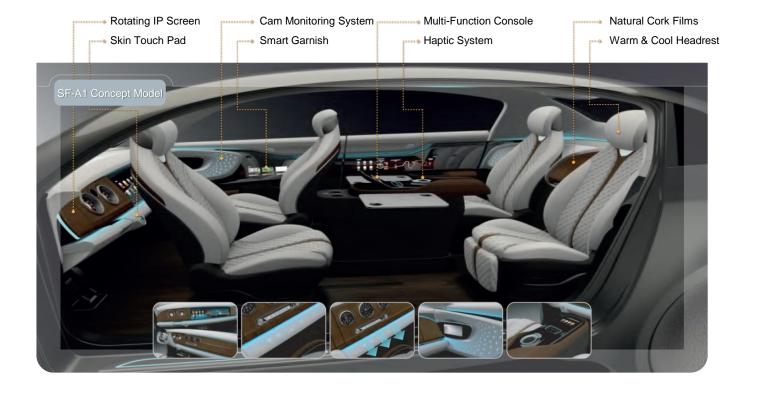
#### **R&D Strategy**

We strive for our future vision by securing the cutting-edge technology leading the market through constant research and development.



### **Future Technology**

The next paradigm represented by electric cars and autonomous vehicles of automotive industry in advance.



# PRODUCT LINE UP





#### **Advanced Automotive Technology**

The SEOYON Group is a widely recognized global automotive company since its successful mass production of pony seals in 1976. We produce most of the parts that the user can see, touch and feel such as automobile interiors, exteriors, and electrical products. Our goal is to become the leader in the industry that produces the highest quality products that the customer can experience.

#### Interior & Exterior Parts

### SEOYON E-HWA

The global automotive company that produces and supplies interior and exterior parts of automobile, such as door trims, bumpers, seats and more, worldwide.

#### Mold & Exterior Parts ETC.

### 🕹 SEOYON TOPMETAL

The company that produces various automobile body stamping die, plastic mold and exterior parts for heavy equipment.

# SECYON AUTOVISION

The company that dreams of new growth through the production of headlight bezel and door trims.

# **PRODUCT LINE UP**





#### Seat & Seat Pad Parts

### **SECYON INTECH**

The company that produces seats for commercial vehicles such as buses and heavy equipment.

# SEOYON CNF

The company that specializes in urethane foaming, which produces automotive seat foam pads and headrests for the protection and the comfort of the passengers.

# **BATTERY PACK**







# **TECHNICAL DATA**

		Technical Data Sheet	
Item		Model Name	Remarks
		Product Configuration	
Cell		SLPB100216216H	40 Ah
Module		KBM216-13S-HP-40-19-EM-A	1P13S
Rack/String		N/A	1P1S
Bank		N/A	1Rack per Bank
System		KBM216-13S-HP-40-19-EM-A	1Bank x 1String x 1P13S
Item		Specification	Remarks
		Electrical	•
Install Energy		1.914kWh	
Rated Energy		>1.761kWh	1P-rate discharge, BOL
Nominal Voltage		47.8V	@Cell 3.68V
Operating Voltage(Min	)	42.9V	@Cell 3.3V
Operating Voltage(Max		53.7V	@Cell 4.13V
Continuous Charge Pow	-	1.91kW	1.0 P-rate
Continuous Charge Curr	ent	40.0A	1.0 C-rate
Max. Charge Power(1cyc		3.8kW	2.0 P-rate
Max. Charge Current(1cy	· ·	80.0A	2.0 C-rate
Continuous Discharge Po	-	1.9kW	1.0 P-rate
Continuous Discharge Cu		40.0A	1.0 C-rate
Max. Discharge Power(1c)		5.7kW	3.0 P-rate
Max. Charge Current(1cy		120.0A	3.0 C-rate
Peak Discharge Power(10sec, S		11.5kW	6.0 P-rate
Peak Discharge Current(10sec, \$		240.0A	6.0 C-rate
Round Trip DC Efficience		>95.0%	1P-rate, BOL
	- ,	Mechanical	
Dimension		TBD	W x D x H(mm)
Weight		TBD	Approx.
- 3		Communication & Control	
Control Power		Internal Battery	
Upper Device Communica	ation	CAN, RS485, RS232	
Monitoring(for Maintenan		TBD	
g((==e		Environment	
Ambient Temperature		25°C±3°C	
Storage Humidity		60±25%	
g to tage to an interest,	1year	-20~25°C	
Storage	6months	25~35°C	
Temperature	3months	35~45°C	
•	<1week	45~60°C	
Cooling & Heating System		Air Cooling	
Fire Fighting	•	TBD	
		Certification	1
Cell		0	
Product		0	
1 TOUGGE		<u> </u>	

### **GLOBAL NETWORK**





# **CUSTOMERS**







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