

ONE-STOP CUSTOMIZED ENGINEERING SOLUTION

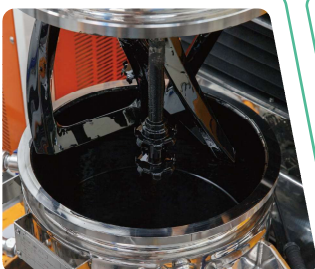
We design, produce, and test based on data accumulated from diverse developments, creating a new battery ecosystem rooted in extensive project experiences with leading global companies.

Leveraging the know-how acquired from over 150 production and testing runs, we offer a comprehensive one-stop solution that covers everything from design to production for testing.



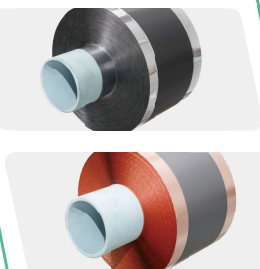
ONE- STOP PROCESS ENGINEERING

We can seamlessly provide everything from slurry to cell development, production, and testing in a single step to meet your requirements.



- Anode
- Cathode
- Common/Special material
- Process optimization

Customized Slurry



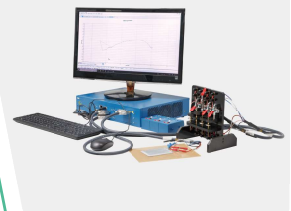
- Anode
- Cathode
- Slot Die/Comma
- Pattern/Multi-Lane
- Narrow/Wide width
- Special Material (Metalized Film, etc)

Customized Electrodes



- Pouch Cell (Full Cell)
- Pouch cell without Electrolyte (Dry cell)
- Coin Cell
- Mono Cell
- Bi Cell

Customized Cell



- Cell or material performance testing for R&D purposes
- Providing consultation and analysis including performance and mechanical test items

Performance Test

Standard Slurry Specification

ITEM			Cathode		Anode	
			NCM Series / LCO / NCA	LFP	LTO	Graphite
Active Composition			94 %	89 %	≤ 88 %	90 % ~ 94.5 %
Viscosity	Comma	cp	15,000 (± 5,000)		TBD	15,000 (± 5,000)
	Slot Die		7,500 (± 5,000)			7,500 (± 5,000)
Slurry prod. volume	Weight	kg	8 ~ 30		4 ~ 15	5 ~ 20
	Volume	L	4 ~ 15			

*Customization is available according to customer requirements.

*Establishing a basic dehumidification environment for high nickel-based active material formulation and R&D special material testing, optimizing conditions.

*Silicone active materials and polymeric binders are also available.

Standard Coating/Pressing Specification

ITEM				Cathode				Anode		
				NCM Series	LCO	NCA	LFP	LTO	Graphite	
Dimension	Coating Width (Slot Die)		mm		50 ~ 420 (± 1)				50 ~ 420 (± 1)	
	Single / Double				Both				Both	
	Loading Level	Single	mg/cm ² (± 3%)	14 ~ 23		8 ~ 15		6 ~ 10		
		Double	mg/cm ² (± 3%)	28 ~ 46		16 ~ 30		12 ~ 20		
	Mismatch		mm (± 0.5)		≤ 0.5				≤ 0.5	
Coater	Coating Type			Multi Coater (Comma Direct / Reverse, Slot Die)						
	Speed	m/min		1 ~ 3						
Pressing	Width	mm (± 1.0)		50 ~ 420						
	Single / Double			Both						
	Loading Density	g/cm ² (± 5%)		2.8 ~ 3.5	2.8 ~ 3.7	2.8 ~ 3.5	1.5 ~ 2.0	1.2 ~ 1.5		

*Customization is available according to customer requirements.

*Establishing a basic dehumidification environment for high nickel-based active material formulation and R&D special material testing, optimizing conditions.

Standard Assembly Specification (Pouch Cell)

Stacking	Cathode (W * L)	mm	57.0 * 84.5
	Anode (W * L)	mm	59.0 * 86.5
	Separator material	PE, Ceramic coated	
	Separator width	mm	88
	Stack Number	5 ~ 50	
	Stack Type	Z Stacking	
Welding	Al. Lead (W * T)	mm	5 * 0.1
	Ni. Lead (W * T)	mm	5 * 0.1
	Welding type	Ultrasonic welding	
Sealing	Pouch film Thick.	μm	113
	Pouch forming Depth	mm	1.2 ~ 5.0
	Sealing Width	mm	4.5
Injection	Electrolyte solution	Internal standards	
Formation & Etc.	Formation Condition	Internal standards	
	Degassing Condition	Internal standards	
	Cell inspection	OCV / IR / Size	
	Cell Test(Capacity)	Internal standards	
Capacity	Ah	1~5Ah	

* Customized production is available upon material grade and customer requirements.

