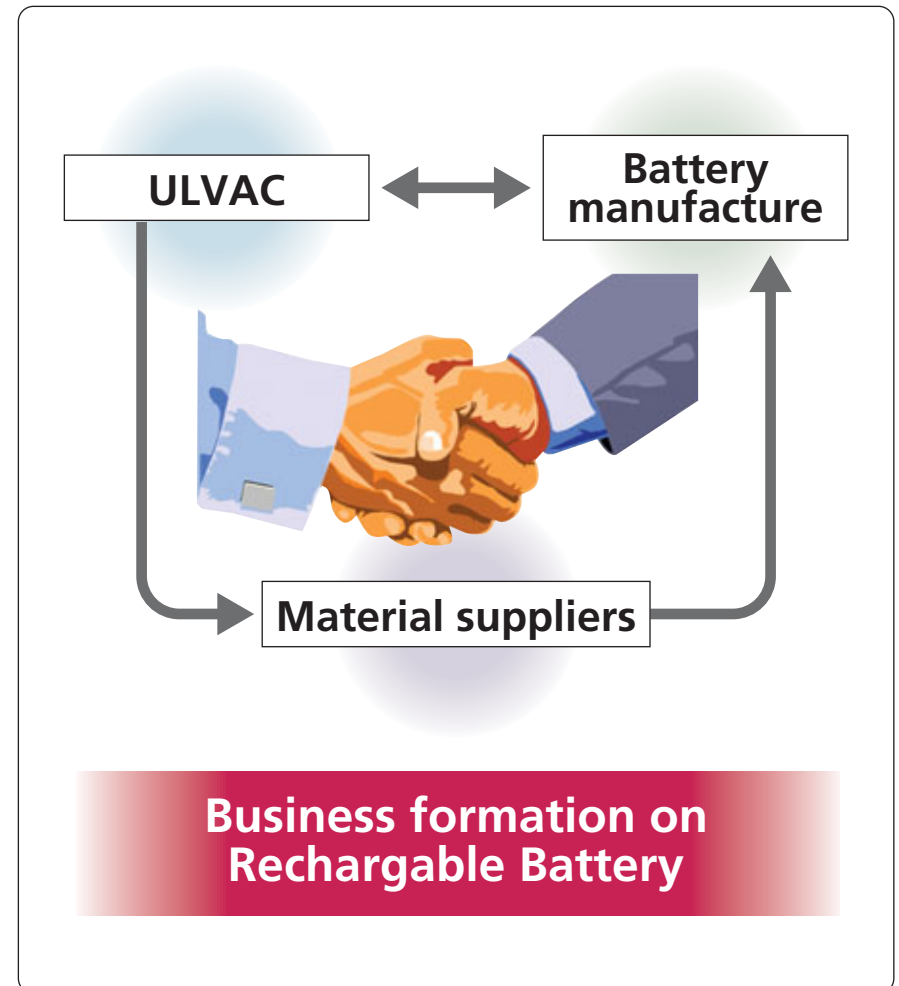
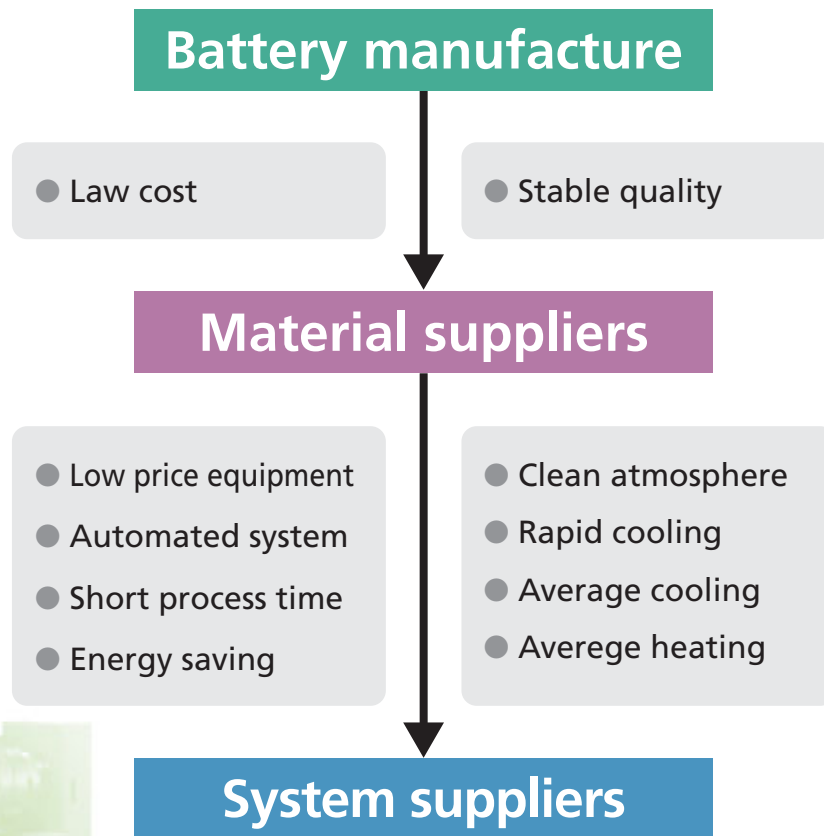


## Requirement on Rechargeable Battery Production



## Systems

Induction type Vacuum Melting Furnace

### *FMI Series*

For negative electrode materials



ULVAC, Inc.

#### Features

- 2 cooling system available (Water cooling disk / Water cooling roll method)
- Semi-continuous process with 2 chambers
- 600Kg / batch melting available
- 80% and more share

Vacuum Heating Furnace

### *FHH Series*

For negative electrode materials



ULVAC, Inc.

#### Features

- Continuous processing by 3-chamber structure
- 3ton / cycle simultaneous treatment available (cycle time; 10Hr)
- 80% and more share

## Components

### Helium Leak Detector **HALIOT**

- Suitable for vacuum equipment maintenance
- Sensitivity;  $10^{-4} \sim 10^{-12} \text{ Pa} \cdot \text{m}^3/\text{s}$



ULVAC, Inc.

### Mass Filter Type Gas Analyzer **REGA**

- For Sputtering Process and residual gas monitoring



ULVAC, Inc.

### Oil Rotary Pump **VD/VS Series**



ULVAC, Inc.

### Turbo Molecular Pump **UTM Series**



ULVAC, Inc.

### Vacuum Gauge

Gauges measurable pressure from atmosphere to UHV.  
(Pirani, Ionization, Capacitance, Manometer, etc.)



ULVAC, Inc.

## Components

Auger Electron Spectroscopy  
**PHI 700**

X-Ray photoelectron Spectroscopy  
**PHI-Quantera Series**

Secondary Ion Mass Spectrometry  
**PHI ADEPT-1010**

Time of Flight Secondary Ion mass Spectrometry  
**PHI TRIFT III Series**

\*Contract surface analysis



ULVAC-PHI, Inc.

Differential scanning calorimeter  
**DSC Series**



Thermogravimetry / Differential scanning calorimeter  
**TGD Series**

Differential scanning calorimeter  
ULVAC-RIKO, Inc.

**Crucible and tundish**  
for vacuum melting

**Heater, tray, and jig**  
for vacuum heating treatment available



ULVAC Materials, Inc.