

● Feature

- ☑ Endurance: **105°C 2,000h** (with ripple)
- ☑ Voltage: 400V_{dc} / 420V_{dc} / 450V_{dc}
- ☑ Capacitance : 210 to 1,500μF
- ☑ Size: φ25.4×25L to φ35×60L
- ☑ **One size smaller** than KMZ series

● Product Chart

- ☑ **Recommended to replace in KMR/KMW to KHE**

*Super downsizing series (Snap-in type)

KMR

- Standard
- 470μF (450V, φ30×50L)

Since 2005.12

KMW

- **Downsizing**
- 560μF (450V, φ30×50L)

Since 2012.07

KMZ

- **Downsizing**
- 680μF (450V, φ30×50L)
- **-40 to 105°C**

Since 2016.05

2021.07
Upgrade!
KHE

- **Upgrade all KHE series items!!**

- **Downsizing/Higher Cap.**
- **790μF** (450V, φ30×50L)
- **-40 to 105°C**



Since 2020.04

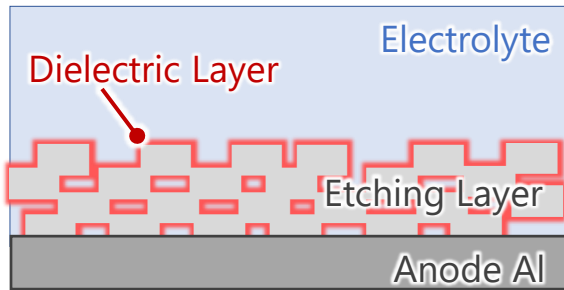
● Recommended Application

- ☑ For general, Infrastructure power supply (Input filtering, PFC circuit)
- ☑ For inverter (DC Link)



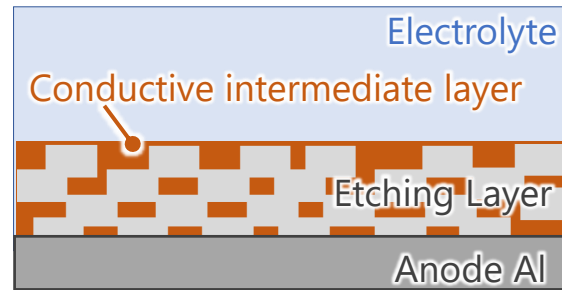
● **Advantage**

Conventional Foil



Dielectric layer

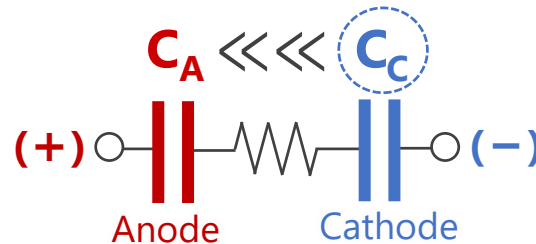
New Cathode Foil



Conductive intermediate layer

✓ **Total capacitance calculation**

$$C = \frac{C_A \times C_C}{C_A + C_C} \approx C_A$$



✓ **Three advantages from KMZ to KHE**



- ① **Downsizing**
- ② **Higher capacitance**
- ③ **Higher ripple current**

Conventional
KMZ

【 Key Technologies 】

Aluminum Foil (Anode)

- Optimized oxide layer
⇒ Higher capacitance

Separator

- Thin / high density

Aluminum Foil (Cathode)

- Increased foil capacitance
⇒ Increased total capacitance

New Cathode Foil

Patented

KHE

2021.07

Upgrade!

**Upgrade all
KHE series items!!**

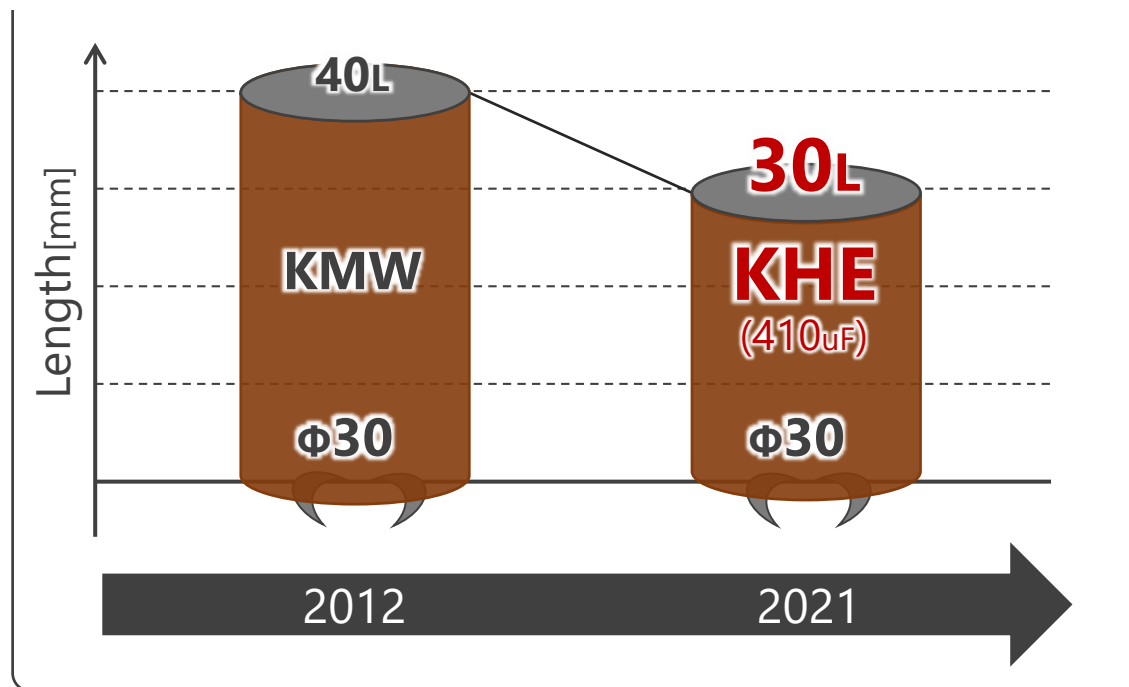
● Benefit/Evidence

➔ ① Downsizing . . . Equipment downsizing, Low height, Light weight

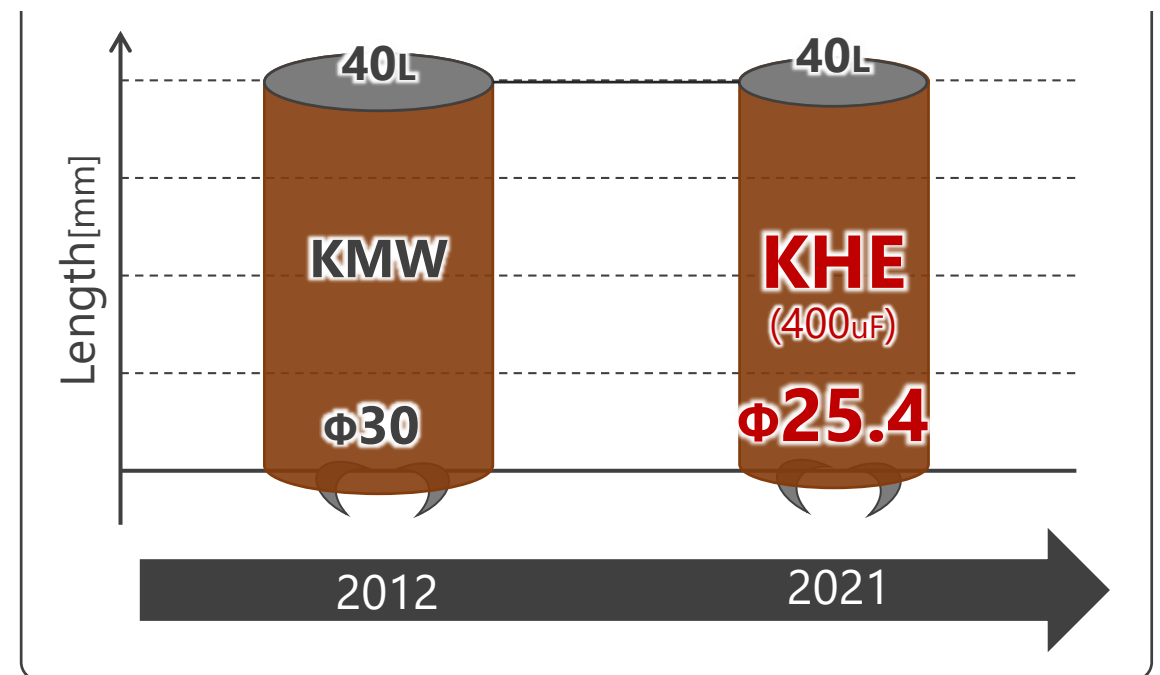
② Higher cap. / ③ Higher ripple . . . Longer equipment life, Reduced # of capacitors



☑ Comparison at height (450V390 μ F, Φ 30)



☑ Comparison at diameter (450V390 μ F, 40L)



● Benefit/Evidence

① Downsizing . . . Equipment downsizing, Low height, Light weight

➔ ② Higher cap. / ③ Higher ripple . . . Longer equipment life, Reduced # of capacitors

