

Attracting Tomorrow



Power electronic capacitors (PEC)

High-power (HP) series



TDK ELECTRONICS COMPONENTS S.A.U.
Aluminum & Film Capacitors Business Group
Málaga, Spain
November 2020



Key figures

Key data

Headquarters	Munich, Germany
Number of plants	9
Employees total	5600
Management	<p>Karl Stoll CEO</p> <p>Bernhard Koch Deputy General Manager</p> <p>Auxi Fernandez CFO</p>

Portfolio

Aluminum electrolytic capacitors with terminals

- Screw
- Snap-in/solder pins
- Axial-lead/soldering star
- Single-ended

Film capacitors for industrial & automotive

- DC capacitors
- AC capacitors
- Power chip capacitors (PCC)
- Power electronic capacitors (MKP)/ **HP**

Film capacitors for energy

- **Power electronic capacitors (HP)**
- Power factor correction (PFC) capacitors and key components (LV, MV)
- Power quality solutions (PQS)

Comprehensive portfolio: Aluminum & Film Capacitors Business Group

- **Aluminum electrolytic capacitors**

- Screw terminals
- Snap-in/solder pins
- Axial-lead/soldering star
- Single-ended

- **Film capacitors for industrial & automotive**

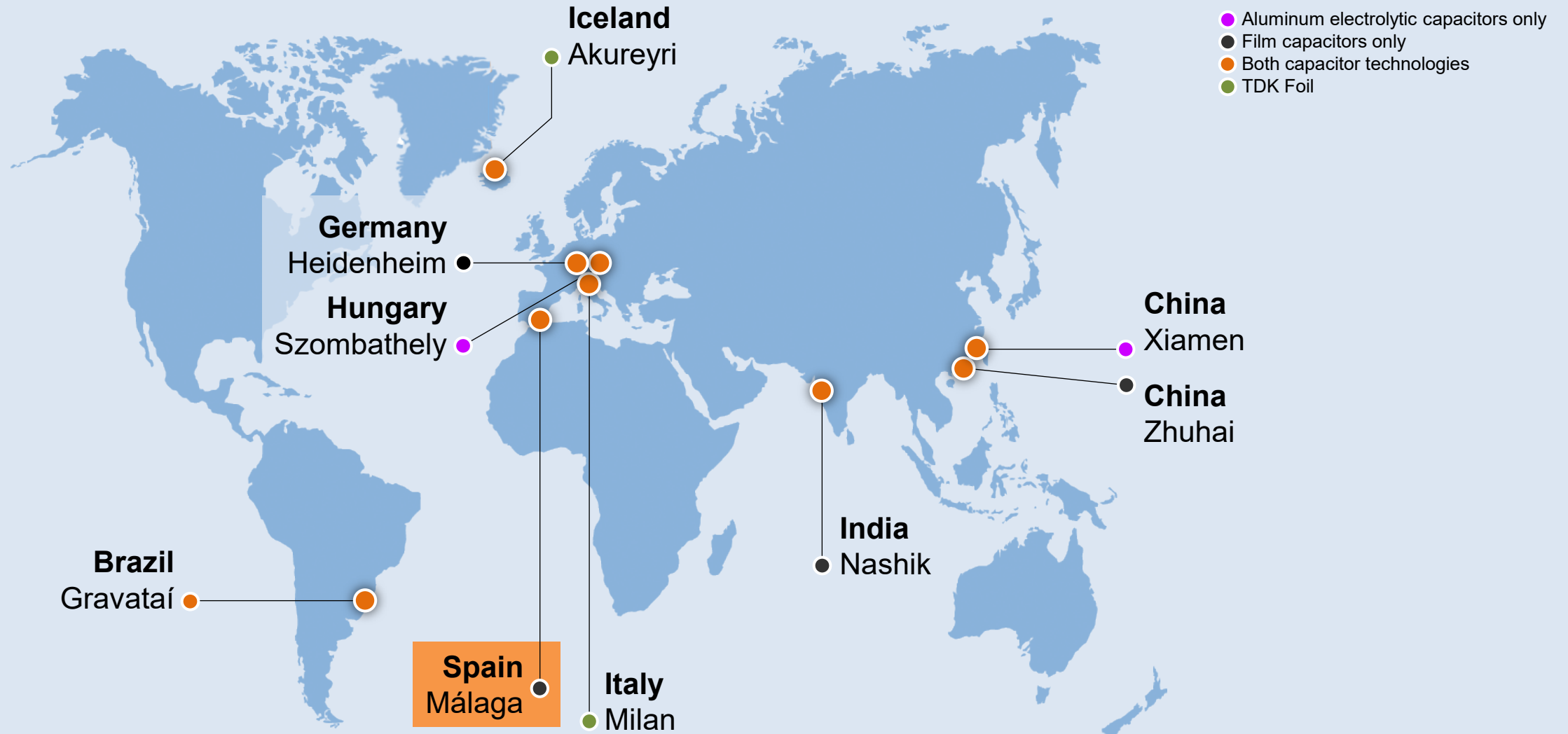
- DC capacitors
- AC capacitors
- Power chip capacitors (PCC)
- Power electronic capacitors (HP)
- Power electronic capacitors (MKP)

- **Film capacitors for energy**

- Power electronic capacitors (HP)
- Power factor correction (PFC) capacitors and key components (LV, MV)
- Power quality solutions (PQS)



Global manufacturing: Aluminum & Film Capacitors Business Group



Málaga plant, Spain

Product range

Film capacitors

- DC capacitors
- Power electronic capacitors (HP)

Technology competence center

- Basic R&D for film capacitors
- Film capacitors product development
- Applications center
- Simulations and mechanical development
- Center of know-how film metalization
- Process innovation, Industry 4.0, and data science center
- Automation concepts for high-power capacitors

Film metalization center



10,200 m²

Startup in 2011 (new facilities)

Certifications

- ISO 9001
- IRIS (ISO/TS 22163)
- IATF 16949
- ISO 14001
- ISO 3834/EN 15085
- ISO 50001/CSR

Product portfolio



AC filter



MKK HP



DC link/DC filter



ModCap™





MKK DCR

MKK DCi-H

DC link & DC filter applications



Applications vs products

	 Renewable energies		 Traction		  Industry	
	Solar	Wind	Locomotive & EMU	Light trains	LV drives	MV drives
ModCap™	NEW ✓	NEW ✓	NEW ✓	NEW ✓	NEW ✓	
MKK DCR	✓	✓	✓	✓	✓	✓
MKK DCi-H		✓	✓			✓
MKK HP			✓			✓

Get more info [here](#)

Key figures B25645 series



ModCap MF (dry-modular-medium frequency)



Features

- Capacitance range from 335 to 2525 μF and voltage from 900 to 2300 V
- Low ESL <14 nH
- Temperature range up to 90 °C hotspot
- IEC 61071, IEC 61881-1, EN 45545-2 HL3 R23 (fire and smoke), UL recognized
- Filled with polyurethane resin (dry technology)
- Plastic case (opened)
- Flat windings

Benefits

- High energy density, ultra compact solution
- Modular concept for parallelization
- Snubber avoidance/low voltage overshoot
- Lifetime up to 200,000 hours
- ANSYS™ simulations available for the whole series
- Cost-oriented solution
- Reduced time to market & lead time



Recommended applications

Key figures B25647 series

= ModCap HF (dry-modular-high frequency)

NEW



UL Recognized 

Features

- Capacitance range from 640 μ F up to 1850 μ F and voltage from 900 V up to 1,600 V
- Low ESL (8 nH)
- Temperature range up to 90 °C hotspot
- IEC 61071, IEC 61881-1, EN 45545-2 HL3 R23 (fire and smoke), UL recognized
- Filled with polyurethane resin (dry technology)
- Plastic case (opened), 8 terminals construction
- Flat windings

Benefits

- High power density, high frequency performance
- Modular concept for parallelization
- Snubber avoidance / low voltage overshoot
- Lifetime up to 200,000 hours
- Finite elements analysis available for the whole series
- Specially recommended for SiC semiconductors
- Reduced time to market & lead time



Recommended applications

Key figures B25640D series

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MKK DCR (dry)



Features

- Capacitance range 100 to 20,000 μF and voltage 700 to 1500 V DC
- Low ESL <30 nH
- Temperature range up to 85 °C hotspot
- IEC 61071, IEC 61881-1, EN 45545-2 (HL2 R22, HL3 R23)
- Filled with polyurethane resin (dry technology)
- Aluminum case (opened)
- Segmented film
- Flat windings

Benefits

- 100% customized solution
- Open design specially suitable for low inductance requirements
- Homogeneous internal current distribution
- Design compatible with bus bar integration
- Life time >150,000 hours at hotspot temperature +85 °C
- ANSYS™ simulations available upon request

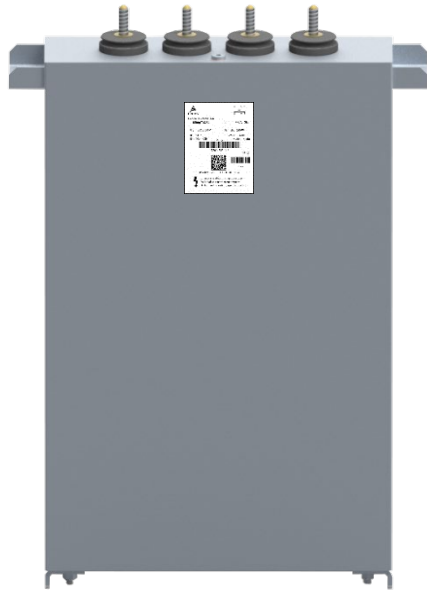


Recommended applications

Key figures B25641 series

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MKK DCR (dry)



Features

- Capacitance range 100 to 20,000 μF and voltage 700 to 4000 V DC
- Filled with polyurethane resin (dry technology)
- Temperature range up to 85 °C hotspot
- IEC 61071, IEC 61881-1
- Stainless steel case (sealed)
- Flat windings

Benefits

- 100% customized solution
- Hermetically sealed
- Compatible with pressure switch device
- Design compatible with aggressive environmental conditions
- Life time up to 200,000 hours at hotspot temperature +85 °C
- ANSYS™ simulations available upon request



Recommended applications

Key figures B25750H series

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MKK DCi-H (oil)



Recommended applications

Features

- Capacitance range 100 to 24 mF and voltage 900 to 5400 V DC
- Applications with high ripple voltage >400 Vrms
- Temperature range up to 85 °C hotspot
- Impregnation with vegetable (rapeseed) oil
- IEC 61071, IEC 61881-1
- Oil technology
- Stainless steel case
- Flat windings

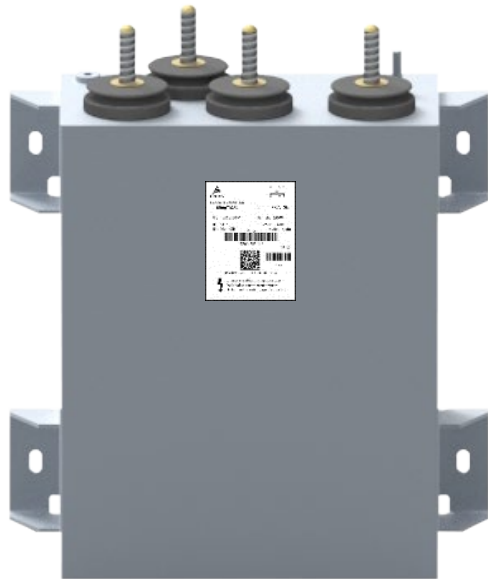
Benefits

- 100% customized solution
- Hermetically sealed
- Ultra compact solution
- Life time up to 200,000 hours at hotspot temperature +85 °C
- Compatible with pressure switch device
- Design compatible with aggressive environmental conditions
- ANSYS™ simulations available upon request

Key figures B25610 series

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MKK HP (dry)



Recommended applications

Features

- Capacitance range 3 x 200 to 3 x 3000 μ F and voltage 230 to 690 VAC
- Customized design for filters
- Temperature range up to 85 °C hotspot
- Impregnation with polyurethan resin
- IEC 61071, IEC 61881-1
- Filled with polyurethane resin (dry technology)
- Stainless steel case
- Flat windings

Benefits

- 100% customized solution
- Hermetically sealed
- Ultra compact solution for filtering (customized)
- Life time up to 200,000 hours at hotspot temperature +85 °C
- Compatible with pressure switch device
- Design compatible with aggressive environmental conditions
- ANSYS™ simulations available upon request



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