



Product Catalogue

Electromechanical Components
around the Control Cabinet

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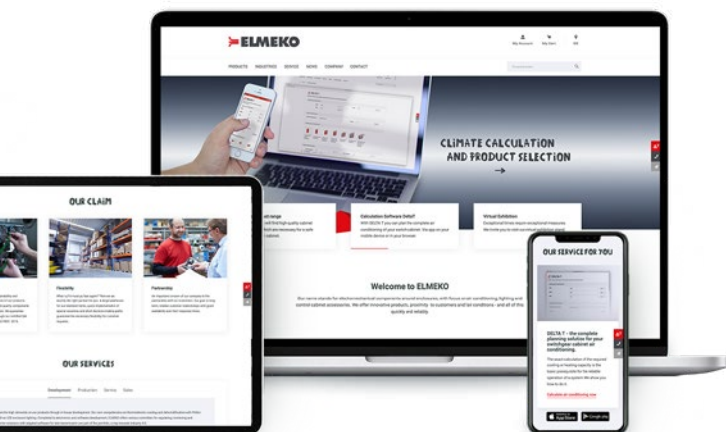
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More products and information at:
www.elmeko.de



History

ELMEKO was founded as a trading company in 2004, with the aim of providing its customers with the largest possible range of switchgear cabinets and accessories. Only a few years later, the company had progressed from simply trading to manufacturing. The idea was to implement not only customer requests, but also the company's own ideas. The first home-grown product was launched in 2008: the LED lamp LE-300-SX. In-house production of lamps and air conditioning components began in 2012, and it was necessary to double production floor area by 2017. Within only a few years, a wide variety of new, innovative products was added to the range.

2004

Foundation of ELMEKO GmbH + Co. KG as a distribution company for switchgear cabinet accessories, air conditioning and lighting

2006

Online shop, expansion of the range by the addition of signalling devices

2008

New development of the first LED lamp LE-300-SX

2010

Expansion of the LE series by the addition of high-voltage lamps for 230 V and other versions

2012

Relocation to newly built company premises in Liebenscheid, start of production of Peltier coolers, switchgear cabinet heaters and electric control units, presentation of the new SL 250 – 650 range of heaters

2013

New development of dehumidifier devices PSE 30 with Peltier technology

2014

New LED switchgear cabinet lighting, LLE series

2015

Presentation of patented Peltier coolers PM

2016

Distribution agreement with nVent (Pentair), distribution of cooling units

2017

Expansion of production area and warehouse space, market launch of multi-functional LED light LEX-350

2018

New LED switch gear cabinet lights LLX series

2019

ATEX approval PK 150 and new Peltier controller TPC 300

2020

New introduction: Drainage with OUT-FIT

Our Expertise

As a result of decades of experience in switchgear cabinet air-conditioning and the construction of electrical switchgear, and our direct contact with planners and customers, we create products that meet the demands of the market. Short decision paths and rapid conversion of a product idea into a serial product are important to us, but we always take care to maintain our high quality standards and guarantee that products remain available for many years.



QUALITY

In the manufacture of our products, we attach great importance to the label “Made in Germany”. ISO 9001:2015 certification confirms the quality of our products, which are made using high-quality components from well-known manufacturers. No product leaves our premises untested. So you are guaranteed technology you can rely on and we have satisfied customers in every sector of the industry.



FLEXIBILITY

And if fast delivery is required, we are the perfect partner. Large stocks of standard items, swift realisation of customized solutions and short decision paths guarantee the flexibility needed to meet customer requirements. You are very welcome to put us to the test. Send us an inquiry for the products you need.



PARTNERSHIP WITH CUSTOMERS

Close cooperation with customers is an important element of our business. That may seem obvious, but it is not something you can expect everywhere today. At ELMEKO, you can. We identify with your needs and make meeting your requirements our mission. These are not just words; they are a pledge. Put us to the test!

WE STAY ON COURSE FOR GROWTH...

with innovative ideas and state-of-the-art products. Our top priorities are product quality, fast and punctual delivery, and being a reliable partner. In conjunction with competitive prices, this is the basis of our long-term customer ties and sustainable success.

Burkhard Herr



BURKHARD HERR,
MANAGING DIRECTOR



**MACHINE TOOLS, FOOD INDUSTRY,
WAREHOUSE TECHNOLOGY, CHEMICAL
PLANTS**

Industries

MECHANICAL AND PLANT ENGINEERING

Mechanical and plant engineering is one of the most innovative sectors of German industry. Around 1 million people are employed in mechanical and plant engineering, a sector with an annual turnover of more than 200 billion euros which makes it a key factor in the German economy. The most important sub-sector in the industry is machine tools. We maintain close ties with the entire industry, and deliver our products to many reputable machine manufacturers.



**RENEWABLE ENERGY SOURCES, WIND
POWER, ENERGY DISTRIBUTION AND
STORAGE TECHNOLOGY**

ENERGY TECHNOLOGY

One of the most important challenges of our age is the environment-friendly and efficient production, storage and use of power. The fast-growing, high-revenue energy technology sector is one of the most important branches of the electrical engineering industry, whose success depends strongly on the innovative strength of many of its manufacturers – and suppliers like us. We're a partner of the energy technology industry.

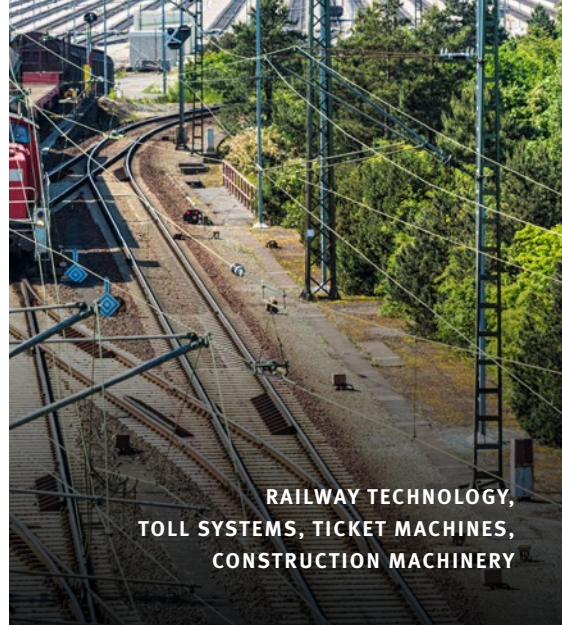


TRANSPORT TECHNOLOGY AND INFRASTRUCTURE

Modern transport technology would be inconceivable without electronic, measuring and communications engineering. Road, rail, sea and air traffic are kept running with an increasing number of decentralised systems packed with sensitive electronics that need to function reliably under the toughest ambient conditions and in all weathers. To make sure this happens, we have developed a range of coolers, heaters and dehumidifiers that are robust, require minimal maintenance and function properly even under extreme conditions.

INFORMATION TECHNOLOGY

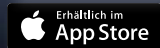
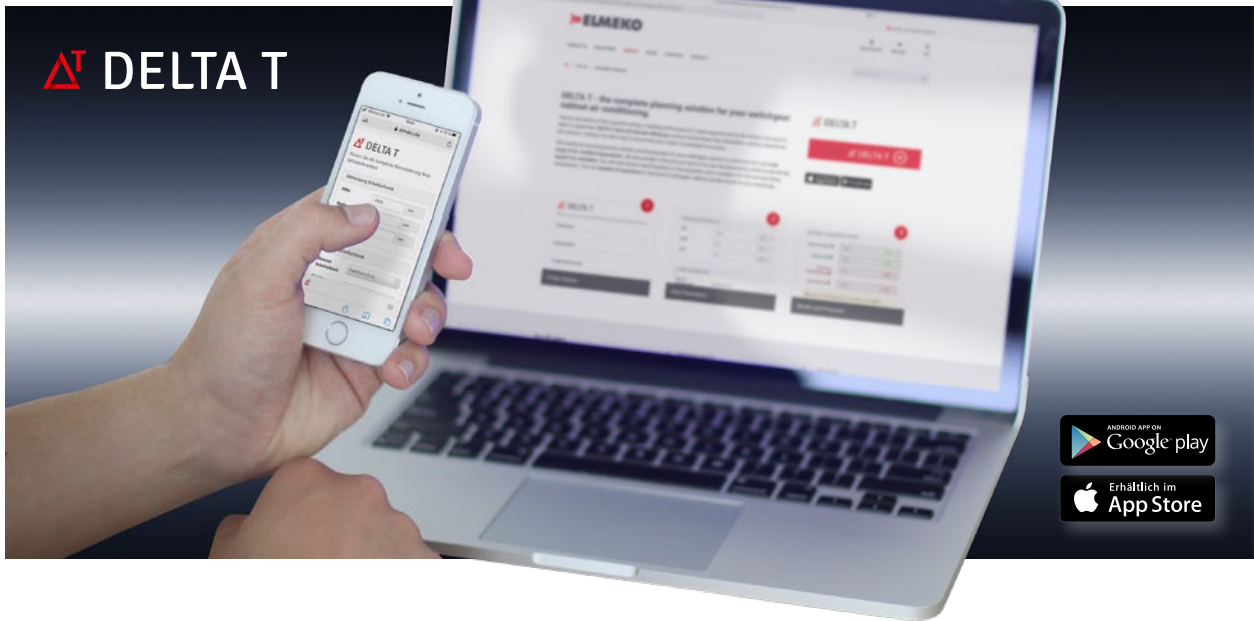
In the IT area, reliability and a long service life have a high status. Optimum environmental conditions and trouble-free operation around the clock have the highest priority. Roof mounted fans and 19 "fan units ensure efficient airflow through the IT cabinets and prevent heat accumulation. A bright cabinet lighting facilitates maintenance.



**RAILWAY TECHNOLOGY,
TOLL SYSTEMS, TICKET MACHINES,
CONSTRUCTION MACHINERY**



**CLIMATISATION AND LIGHTING FOR
SERVER CABINETS AND SYSTEMS**



Calculation Software DELTA T

Precise calculation of the required cooling or heating performance is a basic requirement for the reliable running of a plant or equipment. DELTA T takes all relevant influences such as temperature, heat dissipation, cabinet material etc. into account, making it an ideal way to ensure that your project is evaluated accurately.



The results are accompanied by climate control proposals for your switchgear cabinet or enclosure from our wide range of air-conditioning products. We also provide a free print-out service for your documentation, which is **sent to our experts for evaluation**.

You will then receive rapid feedback on the evaluation and a quotation for the corresponding components. Turn our decades of experience in the field of switchgear cabinet climate control to your advantage.

From customer request to serial production

We manufacture all our products at our plant in Liebenscheid, which ensures that we stay flexible and maintain our high quality standards – Made in Germany. We keep standard articles permanently in stock and use reputable logistics partners for the rapid despatch of products to our customers all over the world – availability guaranteed!



NEW
PRODUCT IDEA



CONCEPT FOR
IMPLEMENTATION



PROTOTYPES
FOR TESTS AND
RELEASES



EXAMINATIONS
AND CERTIFICA-
TIONS



SERIES
PRODUCTION



MARKET LAUNCH,
SALES



Thermoelectric Coolers

As Peltier coolers operate on the thermoelectric principle, without coolants and filter pad, and with separate inner and outer air circulation, operation is practically maintenance-free and eco-friendly. The coolers are protection-rated up to IP67, so they are suitable for adverse environmental conditions and can be deployed at any location. The devices, which have a service life of 60,000 hours, are ideal for both cooling and heating purposes.

THERMOELECTRIC COOLERS SERIES PM

The extremely flat design of the new PM series of Peltier coolers – which was achieved by combining new high-performance heat sinks with radial fans – is particularly impressive. Both surface mounting and semi-recessed installation in the switchgear cabinet are possible as standard. The improved separation of air intake and outlet ensures optimum air circulation inside the cabinet. Connection is via a plug-in terminal.

Peltier coolers operate without compressor, coolant and filter pad and require practically no maintenance

THERMOELECTRIC COOLERS SERIES PK

The PK series, with cooling capacities ranging from 30 to 280 W, was designed as air-conditioning for switchgear cabinets, control panel consoles and many other applications. The PK series is UL-listed for the US and Canadian market.

FEATURES

- Installation possible in any position
- Resistant to adverse environmental conditions
- Protection rating up to IP67, robust stainless steel built-on enclosure
- Operating voltage 24 V DC
- Perfect for mobile applications

VERSIONS PK

The different versions can be identified with the description of the item, for example PK 30 HK

HK	Cooling and heating
AG	with outer cover
HD	Hygienic Design
4X	NEMA 4X, UL Type 4X
EX	with ATEX certification
PS(-C)	Power supply unit (and controller) integrated

THERMOELECTRIC COOLERS PM AND PK TECHNICAL DATA



Type	PM 50	PM 100	PK 30	PK 30 HK	PK 30 HK+AG	PK 50	PK 50 HK	PK 50 HK+AG
Part number	40 M05 570	40 M10 570	40 P03 570	40 P03 57H	40 P03 57HAG	40 P05 570	40 P05 57H	40 P05 57HAG
Operating voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Cooling capacity [W]	50	100	30	30	30	50	50	50
Heating capacity [W]	50	100	–	45	45	–	70	70
Width [mm]	120	195	112	112	115	155	155	158
Height [mm]	293	430	160	160	230	200	200	300
Depth [mm]	82	96.5	130	130	145	134.5	134.5	150
Installation depth [mm]	45	48	70	70	–	64.5	64.5	–
Amperage [A]	3.7	6.5	2.3	2.3	2.3	2.5	2.5	2.5
Weight [kg]	2.4	5.3	1.9	1.9	3.1	3.2	3.2	5.0
Operating temperature [°C]	-20 to +60	-25 to +50	-20 to +70	-20 to +70	-20 to +70	-20 to +70	-20 to +70	-20 to +70
Service life [h]	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Degree of protection	IP 55	IP 55	IP 65	IP 65	IP 65	IP 67	IP 67	IP 65
Approval/s	CE	CE	cURus / CE	cURus / CE	cURus / CE	cURus / CE	cURus / CE	cURus / CE

THERMOELECTRIC COOLERS PM AND PK ACCESSORIES

Type	Part number							
Thermostat TES 60	15 TES 060	15 TES 060	15 TES 060	–	–	15 TES 060	–	–
Controller for Heating and Cooling TRP 205	45 TRP 205	45 TRP 205	–	45 TRP 205	45 TRP 205	–	45 TRP 205	45 TRP 205
Controller for Heating and Cooling TPC 300 V2	45 TPC 300V2	45 TPC 300V2	–	45 TPC 300V2	45 TPC 300V2	–	45 TPC 300V2	45 TPC 300V2
Condensation trough KRP *	–	–	49 KRP 150	49 KRP 150	49 KRP 150	49 KRP 200	49 KRP 200	49 KRP 200
Power supply unit 24 V DC	42 05A 500	42 10A 500	42 05A 500	42 05A 500	42 05A 500	42 05A 500	42 05A 500	42 05A 500

* KRP 150, KRP 200 and KRP 300 see page 28

SPECIAL VERSION WITH BUILT-ON ENCLOSURE

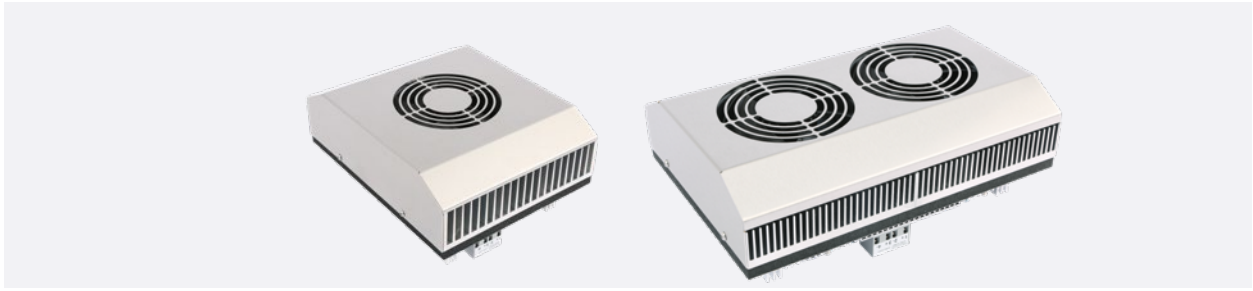


PK 30 HK+AG



PK 50 HK+AG

THERMOELECTRIC COOLERS PK TECHNICAL DATA CONTINUED



Type	PK 75	PK 75 HK	PK 75 HK+AG	PK 100	PK 100 HK	PK 100 HK+AG
Part number	40 P75 570	40 P75 57H	40 P75 57HAG	40 P10 570	40 P10 57H	40 P10 57HAG
Operating voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Cooling capacity [W]	75	75	75	100	100	100
Heating capacity [W]	–	100	100	–	140	140
Width [mm]	203	203	207	200	200	310
Height [mm]	255	255	360	307	307	310
Depth [mm]	145	145	150	134.5	134.5	135
Installation depth [mm]	70	70	–	64.5	64.5	–
Amperage [A]	3.6	3.6	3.6	5.2	5.2	5.2
Weight [kg]	5.5	5.5	7.0	7.2	7.2	8.8
Operating temperature [°C]	-20 to +70	-20 to +70	-20 to +70	-20 to +70	-20 to +70	-20 to +70
Service life [h]	60,000	60,000	60,000	60,000	60,000	60,000
Degree of protection	IP 67	IP 67	IP 65	IP 67	IP 67	IP 65
Approvals	cURus / CE	cURus / CE	cURus / CE	cURus / CE	cURus / CE	cURus / CE

THERMOELECTRIC COOLERS PK ACCESSORIES

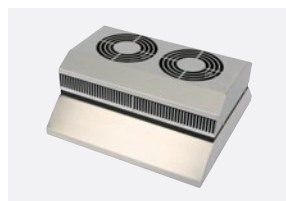
Type	Part number					
Thermostat TES 60	15 TES 060	–	–	15 TES 060	–	–
Controller for Heating and Cooling TRP 205	–	45 TRP 205	45 TRP 205	–	45 TRP 205	45 TRP 205
Controller for Heating and Cooling TPC 300V2	–	45 TPC 300V2	45 TPC 300V2	–	45 TPC 300V2	45 TPC 300V2
Condensation trough KRP*	49 KRP 200	49 KRP 200	49 KRP 200	49 KRP 200	49 KRP 200	49 KRP 200
	49 KRP 300	49 KRP 300	49 KRP 300	49 KRP 300	49 KRP 300	49 KRP 300
Power supply unit 24 V DC	42 05A 500	42 05A 500	42 05A 500	42 10A 500	42 10A 500	42 10A 500

* KRP 150, KRP 200 and KRP 300 see page 28

SPECIAL VERSION WITH BUILT-ON ENCLOSURE



PK 75 HK+AG



PK 100 HK+AG

THERMOELECTRIC COOLERS PK TECHNICAL DATA CONTINUED



Type	PK 150	PK 150 HK	PK 150 HK+AG	PK 300 HK	PK 300 HK+AG
Part number	40 P15 570	40 P15 57H	40 P15 57HAG	40 P30 57H	40 P30 57HAG
Operating voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Cooling capacity [W]	150	150	150	280	280
Heating capacity [W]	–	200	200	400	400
Width [mm]	200	200	310	333	333
Height [mm]	307	307	310	330	330
Depth [mm]	134.5	134.5	135	195	195
Installation depth [mm]	64.5	64.5	–	90	–
Amperage [A]	7.2	7.2	7.2	15.0	15.0
Weight [kg]	7.3	7.4	9.0	18.5	21.0
Operating temperature [°C]	-20 to +70	-20 to +70	-20 to +70	-20 to +70	-20 to +70
Service life [h]	60,000	60,000	60,000	60,000	60,000
Degree of protection	IP 67	IP 67	IP 65	IP 65	IP 65
Approval/s	cURus / CE	cURus / CE	cURus / CE	CE	CE

THERMOELECTRIC COOLERS PK ACCESSORIES

Type	Part number				
Thermostat TES 60	15 TES 060	–	–	–	–
Controller for Heating and Cooling TRP 205	–	45 TRP 205	45 TRP 205	45 TRP 205	45 TRP 205
Controller for Heating and Cooling TPC 300 V2	–	45 TPC 300V2	45 TPC 300V2	45 TPC 300V2	45 TPC 300V2
Condensation trough KRP*	49 KRP 200 49 KRP 300	49 KRP 200 49 KRP 300	49 KRP 200 49 KRP 300	49 KRP 300	49 KRP 300
Power supply unit 24 V DC	42 10A 500	42 10A 500	42 10A 500	42 20A 500	42 20A 500

* KRP 150, KRP 200 and KRP 300 see page 28

SPECIAL VERSION WITH BUILT-ON ENCLOSURE



PK 150 HK+AG



PK 300 HK+AG

THERMOELECTRIC COOLERS FOR SPECIAL APPLICATIONS



THERMOELECTRIC COOLER PK 50 HD

The PK 50 HD is designed for use in hygienic areas. Stainless steel housings, anodized heatsinks with large rib spacing and removable hood and fan make cleaning easy.

FEATURES

- Approved materials: stainless steel V2A, anodized aluminium
- Plain and rounded transitions and edges
- Easy to clean due to large distances
- FDA-compliant special seal
- Degree of protection IP67

TECHNICAL DATA

Type	PK-50-HD
Part number	40 P05 57HD
Operating voltage	24 V DC
Cooling capacity [W]	50
Heating capacity [W]	50
Width [mm]	182
Height [mm]	200
Depth [mm]	145
Installation depth [mm]	65
Amperage [A]	2.5
Weight [kg]	3.2
Operating temperature [°C]	-10 to +60
Service life [h]	60,000
Degree of protection (outside)	IP67
Approval	CE



THERMOELECTRIC COOLER PK 150 HK-EX WITH ATEX APPROVAL

The PK 150 HK-EX is a thermoelectric cooler for applications in potentially explosive atmospheres of category 3 according to Directive 2014/34/EU (Zone 2), gas group IIB and temperature class T4. The enclosure must have a protection degree of at least IP54 in order to comply with the directive.

FEATURES

- Resistant to adverse environment conditions
- Reinforced stainless steel hood
- Fans with potted electronics on the outside and inside
- For cooling and heating operation
- Degree of protection IP67

TECHNICAL DATA

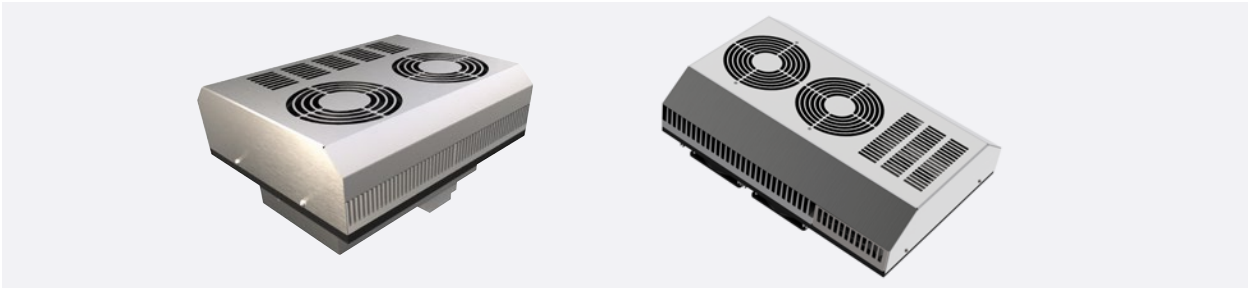
Type	PK 150 HK-EX
Part number	40 P15 57HEX
Operating voltage	24 V DC
Cooling capacity [W]	150
Heating capacity [W]	150
Width [mm]	306
Height [mm]	200
Depth [mm]	135
Installation depth [mm]	60
Amperage [A]	7.2
Weight [kg]	8.1
Operating temperature [°C]	-20 to +70
Service life [h]	60,000
Degree of protection (outside)	IP67
Approval	CE / EX II 3G Ex ec IIC T4 Gc

ACCESSORIES

Temperature controller TRP 205-EX for heating and cooling, built into Ex d enclosure, with external sensor



THERMOELECTRIC COOLERS WITH INTEGRATED POWER SUPPLY



The thermoelectric cooling units PK 150-PS and PK 300-PS have a wide-range voltage input of 100 – 240 V. The power supply is integrated in these devices. The protected power supply is located on the outside of the cooler and thus outside the cabinet to be cooled. It eliminates a heat source inside. This results in a simple and faster installation and less space in the housing.

PK 150-PS-C and PK 300-PS-C are equipped with the controller TRP 205. The PK 300-PS-TPC has the Peltier controller TPC 300 integrated.

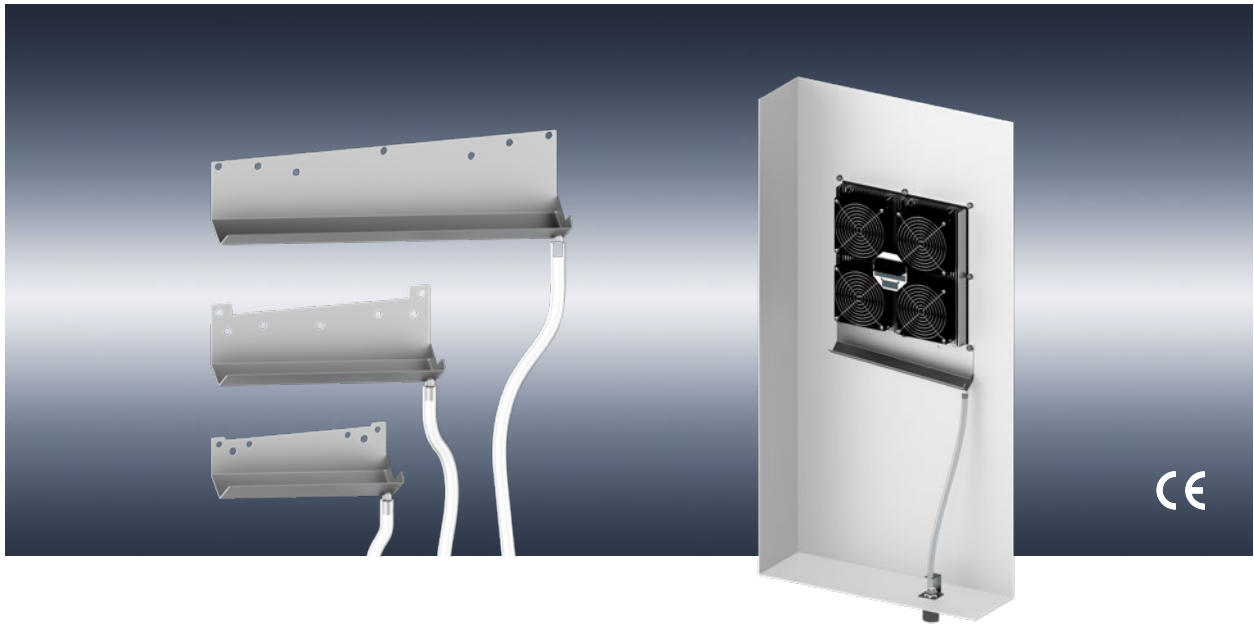
FEATURES

- Integrated power supply on the outside of enclosure
- Wide input voltage range 100 – 240 V 50/60 Hz
- Resistant to adverse environment conditions
- Versions with built-on housing available
- For cooling and heating operation
- Degree of protection IP65



TECHNICAL DATA

Type	PK 150-PS-C	PK 150 PS-C+AG	PK 300 PS-C	PK 300 PS-C+AG
			PK 300 PS-TPC	PK 300 PS-TPC+AG
Part number	40 P15 57HPSC	40 P15 57HPSCAG	40 P30 57HPSC 40 P30 57HPSPC	40 P30 HPSCAG 40 P30 HPSPCAG
Operating voltage	100 – 240 V AC	100 – 240 V AC	100 – 240 V AC	100 – 240 V AC
Cooling capacity [W]	150	150	280	280
Heating capacity [W]	150	150	280	280
Width [mm]	306	306	480	485
Height [mm]	250	300	332	430
Depth [mm]	180	180	190	190
Installation depth [mm]	90	15	80	10
Amperage [A]	0.8 (at 240 V)	0.8 (at 240 V)	1.6 (at 240 V)	1.6 (at 240 V)
Weight [kg]	9.5	11	24.5	27.5
Operating temperature [°C]	-20 to +50	-20 to +50	-20 to +50	-20 to +50
Service life [h]	60,000	60,000	60,000	60,000
Degree of protection	IP65	IP65	IP65	IP65
Approval	CE	CE	CE	CE



Condensation Trough KRP

High humidity and leaks in the enclosure can result in higher quantities of condensation. A condensation trough is installed underneath the cooler to capture and drain off condensation. Condensation is drained off through the attached hose, which is included in delivery.

FEATURES

- 3 different sizes suitable for the PK series
- Material: Stainless steel, thickness 1 mm
- With hose connection, ID = 8 mm
- Hose with length 2 m is included

TECHNICAL DATA

Type	KRP 150	KRP 200	KRP 300
Part number	49 KRP 150	49 KRP 200	49 KRP 300
W x H x D [mm]	160 x 60 x 43	200 x 80 x 38	316 x 90 x 39
Suitable for PK	30, 50	50, 75, 100/150	75, 100/150, 300



KWP 150

- Condensate tray for PK 100 – 150 for horizontal installation in the roof
- other sizes on request



OUT-FIT

- Pressure equalisation and drainage in enclosures with high protection class (see pages 56 + 57)

TEMPERATURE CONTROLLER FOR THERMOELECTRIC COOLERS ACCESSORIES



TES 60 (15 TES 060)

- Cooling function



TRP 205 (45 TRP 205)

- Heating and cooling function



TPC 300 V2 (45 TPC 300V2)

- Peltier controller with monitoring



Switching Power Supplies 24 V DC

Peltier cooling units and dehumidification units are operated on 24 V DC. ELMEKO offers suitable single-phase primary switched-mode power supplies with stabilised output voltage and high efficiency. The units are short-circuit and overload proof and have a wide input voltage range. They are mounted on DIN rails according to EN 60715.

EMPARRO SERIES

- Wide AC and DC input voltage range
- Temperature range -25 to +60 °C
- Alarm contact

ECO-RAIL SERIES

- Wide AC input voltage range
- Temperature range 0 to +40 °C
- Cost-effective alternative to

SWITCHING POWER SUPPLIES 24 V DC TECHNICAL DATA

Type	EMPARRO 5A	EMPARRO 10A	EMPARRO 20A	ECO-RAIL 5A	ECO-RAIL 10A	ECO-RAIL 20 A
Part number	42 05A 500	42 10A 500	42 20A 500	42 05A 5ER	42 10A 5ER	42 20A 5ER
Input voltage	85 – 265 V AC 90 – 250 V DC	85 – 265 V AC 90 – 250 V DC	85 – 265 V AC 90 – 250 V DC	90 ... 132 V AC, 50/60 Hz 173 ... 264 V AC, 50/60 Hz		
Input current	1.3 A (100 V) 0.61 A (240 V)	2.6 A (100 V) 1.1 A (240 V)	5.2 A (100 V) 2.2 A (240 V)	2.4 A (100 V AC) 1.2 A (230 V AC)	4.3 A (100 V AC) 2.1 A (230 V AC)	7.8 A (100 V AC) 4.0 A (230 V AC)
Output voltage	24 V DC (24 – 28 V adjustable)	24 V DC (24 – 28 V adjustable)	24 V DC (24 – 28 V adjustable)	24 V DC ±1% (23 ... 28 V adjustable)	24 V DC ±1% (23 ... 28 V adjustable)	24 V DC ±1% (23 ... 28 V adjustable)
Nom output current [A]	5	10	20	5	10	20
Efficiency	0.87 (230 V)	0.95 (230 V)	0.96 (230 V)	88 %	87 %	90 %
Protection	Short circuit and overload protected	Short circuit and overload protected	Short circuit and overload protected	Short circuit and overload protected	Short circuit and overload protected	Short circuit and overload protected
Temperatur range [°C]	-25 to +60	-25 to +60	-25 to +60	0 °C ... +40 °C, ...+55 °C Derating (Storage -20 °C ... +85 °C)		
Dimensions H x W x D [mm]	125 x 50 x 138	125 x 65 x 138	125 x 85 x 138	125 x 50 x 123	125 x 68 x 125	125 x 105 x 124
Weight [kg]	0.80	0.94	1.38	0.7	0.9	1.6