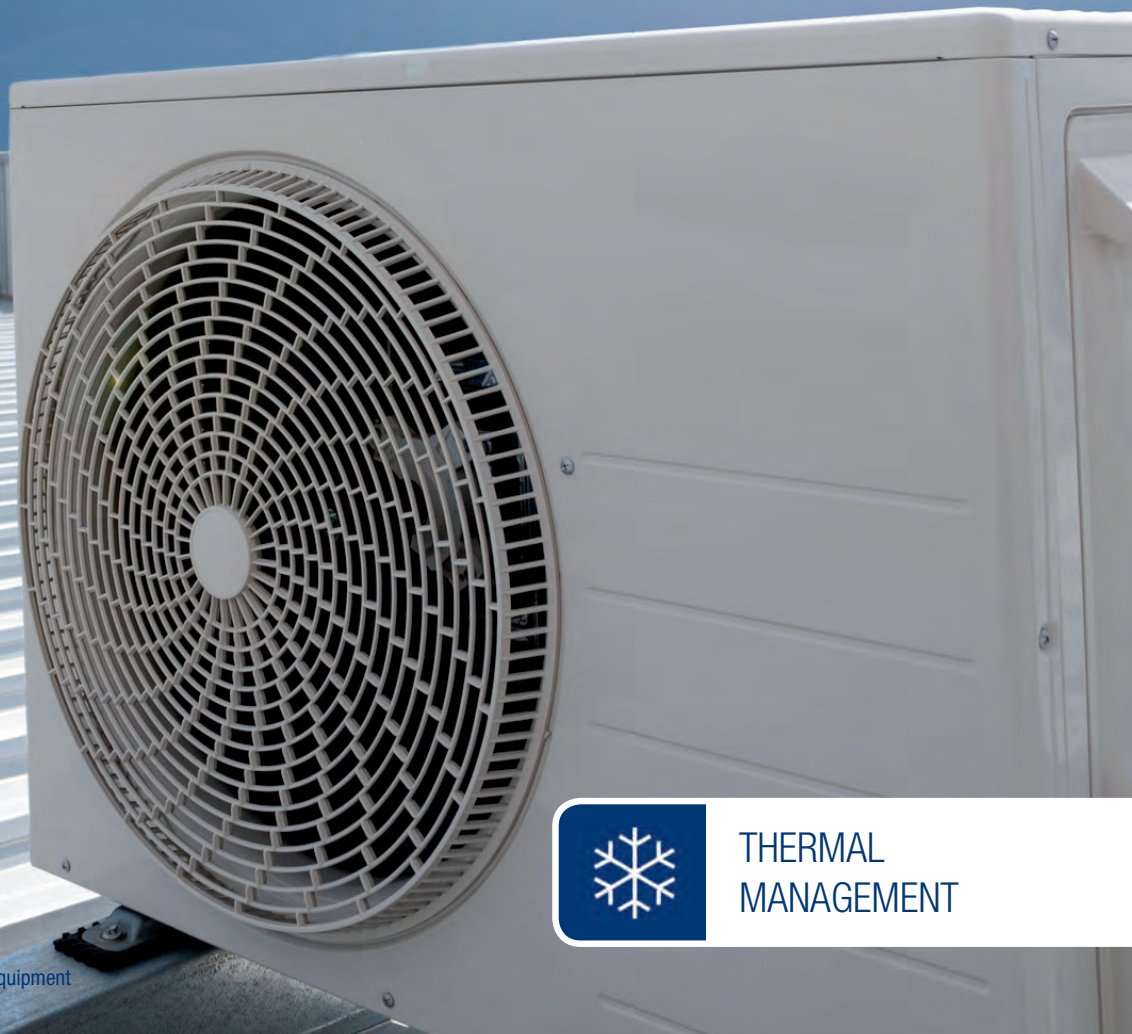


Climatisation and Lighting Equipment for Enclosures

Heating, Ventilation, Air conditioning & Lighting systems



- Cabinet Cooler
- Heaters & Dehumidifiers
- Fans, Lighting and Accessories



THERMAL
MANAGEMENT

AMS Technologies is Europe's leading solution provider and distributor for Optical, Power and Thermal Management Technologies

WHERE TECHNOLOGIES MEET SOLUTIONS

For more than 30 years, we at AMS Technologies have been supporting the European market with leading, innovative technologies and products that have allowed our customers to take prime position in their chosen markets.

AMS Technologies is a leading solution provider and distributor of high-tech, leading-edge components, systems and equipment, with more than 30 years of experience to date and currently serving more than 2000 European customers.

We are the specialists in both componentry and complete solutions for Optical technology, Thermal Management and Power Technology fields, with access to and long standing relationships with the most advanced manufacturers in each of those fields. Drawing extensively on our experience in each of these differing technologies, and coupling this with our broad system-level competence, we are able to offer seamless and comprehensive solutions incorporating complementary aspects from all three key technology fields.

With an appropriate technical education, an element of entrepreneurial spirit and many years of design and consultancy expertise, our sales engineers can rapidly comprehend system requirements and provide you the customer with a solution that goes way beyond a simple understanding of our product datasheets. We take active involvement in the design cycle, defining and re-defining your specifications, and

leading in many cases to highly specific, customized products and solutions. Helping you to effectively outsource your production line, we can even provide you with the necessary leading turnkey contract manufacturing services in our key competency fields.

AMS Technologies has been delivering solutions into a variety of high-tech markets, including renewable energies, medical, defence & aerospace, research & scientific and various other industrial segments. Our customer base consists of Europe's largest leading technology corporations, a network of universities and research institutes as well as the most promising start-ups.

We thrive by working in a 'customer first' environment. Our pan-European customers are serviced from a network of local offices in Germany, the UK, France, Italy, Spain, Poland and Sweden, with a focused operations and logistics centre located in Munich, Germany.

Our commitment: Identifying the best solution for your project enabling you to become your customers' first choice!

Your AMS Technologies team



- Optical Technologies
- Power Technologies
- Thermal Management

Heating, Ventilation, Air conditioning & Lighting systems for Industrial Enclosures

Electronics is sensitive to extreme and fluctuating temperatures. Unpleasant humidity can form, which leads to malfunctions and losses of electrical systems. To avoid this problem, cabinets and enclosures must be air-conditioned.

Cabinet cooling & heating

Cabinet coolers are the ideal solution to cool and remove heat from cabinets, control panels and consoles. Its technology and design make them especially suitable for harsh environments like food industry or traffic engineering.

Our cabinet coolers use either Peltier, heat pipe or compressor technology. Internal air circulation and ambient external air flow are separated by a hermetical seal. Most of our cabinet coolers are also protected against water and have IP67 (NEMA4X) rating.

Our heaters protect components in a switchgear cabinet from excessively low temperatures and prevent condensation occurring in the cabinet as a result of marked fluctuations in temperature or increased humidity.



We offer air-conditioning and dehumidifying systems, which operate safely and position-independent also in rotating rotor hubs. Compatible accessories make for a comprehensive product range.

Dehumidifiers for enclosures

With variations of temperature in enclosures it comes to condensation and precipitation of humidity. That causes corrosion, disturbances and breakdown of electrical controls. Our dehumidifying devices work with the maintenance-free Peltier-technology and are available with different versions for various cases of application. They can be installed into the side panel or inside the enclosure. The dehumidifiers offer significant energy saving in comparison to conventional heaters.

Filter fans

For removing dissipated heat out of cabinets and enclosures filter fans can be used as an effective and low cost solution. The ambient air with lower temperature is filtered and blown into the bottom of the cabinet and the warm air is carried out with a exhaust filter in the upper part of the enclosure.

Lighting for switchgear cabinets

To create a suitable working environment for customers and service engineers, it is important to provide very good lighting for the inside of a switchgear cabinet. Lights need to work reliably; they are essential for the electrician called to fix a system fault or failure. We manufacture high-voltage LED switchgear cabinet lights that offer brightness, robustness and longevity for industrial applications.



Cabinet Cooler

Product	Cooling Capacity	I Operating Amps	U Operating Volts	Power consumption Watts	Length mm	Width mm	Height mm	Weight kg	Working temp range	Approvals	Environmental protection	Orientation
PK 30-24	110 W	2,3	24	56	130	160	112	1,7	-10...60° C	UL, CE	IP67	any
PK 50-12	130 W	5	12	60	134,5	200	155,5	3,9	-10...60° C	UL, CE	IP67	any
PK 50-24	130 W	2,5	24	60	134,5	200	155,5	3,9	-10...60° C	UL, CE	IP67	any
PK 75-24	160 W	3,6	24	87	145	250	203	5,5	-10...60° C	UL, CE	IP67	any
PK 100-12	195 W	5,2	12	125	134,5	307	200	7,2	-10...60° C	UL, CE	IP67	any
PK 100-24	195 W	10,4	24	125	134,5	307	200	7,2	-10...60° C	UL, CE	IP67	any
PK 150-24	245 W	7,2	24	173	134,5	307	200	7,3	-10...60° C	UL, CE	IP67	any
PK 300-24	450 W	15	24	360	195	333	330	18,5	-10...60° C	CE	IP67	any
60-24-AA	90 W	2,8	24	67	240	150,2	155	2,8	-30... 70° C			any
60-12-AA	55 W	9	12	108	240	150,2	155	2,8	-30... 70° C			any
120-24-AA	76 W	5,3	24	127	320	150,2	155	3,7	-30... 70° C			any
120-12-AA	76 W	15,2	12	182	320	150,2	155	3,7	-30... 70° C			any
180-24-AA	140 W	5,8	24	139	480	150,2	155	5,7	-30... 70° C			any
380-24-AA	275 W	10,4	24	250	252	200	210	6,4	-10... 70° C			any
CC200-24	165 W	1,2	24	28,8	117,48	130,18	292,1	2,72	-10... 70° C		Nema12 (IP52 equivalent)	drop in
CC254F-24	165 W	1,2	24	28,8	101,6	304,8	327	3,63	-10... 70° C		Nema12 (IP52 equivalent)	flush mount
CC400F-24	204 W	1,2	24	28,8	101,6	158,75	571,5	4,54	-10... 70° C		Nema12 (IP52 equivalent)	flush mount
CC450F-24	210 W	1,2	24	28,8	203,2	134,71	317,5	4,08	-10... 70° C		Nema12 (IP52 equivalent)	flush mount
CC600F-24	494 W	2,4	24	57,6	101,6	222,25	762	6,35	-10... 70° C		Nema12 (IP52 equivalent)	flush mount
CC800-24	552 W	2,4	24	57,6	177,8	196,85	381	7,26	-10... 70° C		Nema12 (IP52 equivalent)	drop in
CC900F-24	660 W	2,4	24	57,6	200	352,43	381	7,26	-10... 70° C		Nema12 (IP52 equivalent)	flush mount
CC2000-24	1104 W	4,8	24	115,2	177,8	196,85	762	12,7	-10... 70° C		Nema12 (IP52 equivalent)	drop in
CC2500F-24	1040 W	4,8	24	115,2	200	352,4	736,6	13,6	-10... 70° C		Nema12 (IP52 equivalent)	flush mount
CC4000F-24	2000 W	9,6	24	230,4	200	352,4	1473,2	27,21	-10... 70° C		Nema12 (IP52 equivalent)	flush mount
DEK04	516 W	1,5	230 1ph	270	486	259	264	18	20... 55° C	CE	IP54 / IP34	flush mount
EGO04	480 W	1,6	230 1ph	280	180	285	460	17	20... 55° C	CE	IP54 / IP34	flush mount rooftop
EGO06	796 W	2,1	230 1ph	400	212	316	606	21	20... 55° C	CE	IP54 / IP34	flush mount side wall or door
DEK08	976 W	2,9	230 1ph	510	600	340	340	23	20... 55° C	CE	IP54 / IP34	flush mount side wall or door
EGO08	977 W	2,6	230 1ph	440	215	348	783	27	20... 55° C	CE	IP54 / IP34	flush mount rooftop
SKY10	1251 W	3,1	230 1ph	570	233	400	950	37	20... 55° C	CE	IP54 / IP34	flush mount side wall or door/ side wall or door flush mount internal/external/drop in

Dehumidifiers

Product	Power input	Voltage	Operating temperature	Degree of protection (outside)	Degree of protection (inside)
PSE 30	47 W	24V DC	-40 to +60°C	IP 65	IP 20
PSE 30L	50 W	24V DC	-40 to +60°C	IP 65	IP 20
PSE 30LP	56 W	24V DC	-40 to +60°C	IP 65	IP 20



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Heaters

Product	Configuration	Voltage	Thermal output at 20°C2
SM 10	PTC heating element	12 - 24 V & 110 - 240V AC/DC	10 W
SM 20	PTC heating element	12 - 24 V & 110 - 240V AC/DC	20 W
SM 30	PTC heating element	12 - 24 V & 110 - 240V AC/DC	30 W
SM 45	PTC heating element	12 - 24 V & 110 - 240V AC/DC	45 W
SH 60	PTC heating element	12 - 24V & 110 - 240V AC/DC	50 W
SH 75	PTC heating element	110 - 240V AC/DC	75 W
SH 75D	Invariable resistor	400V AC/DC	70 W
SH 100	PTC heating element	110 - 240V AC/DC	100 W
SH 100D	Invariable resistor	400V AC/DC	100 W
SH 150	PTC heating element	110 - 240V AC/DC	150 W



Filter Fans LV series

Product	Voltage	Air flow free air m³/h	Air flow with exhaust filter m³/h	Mounting cut-out mm	Dimensions outside mm
LV 80	12V DC / 24V DC / 230V AC	15	12	68 x 68	80 x 80
LV 85	24V DC	20	16	68 x 68	80 x 80
LV 100	12V / 24V DC / 230V AC	25	15	92 x 92	105 x 105
LV 200	24V DC / 230V AC	58	40	116 x 116	130 x 130
LV 250	24V DC / 230V	63	42	125 x 125	148 x 148
LV 300	24V DC / 230V	115	90	177 x 177	204 x 204
LV 400	24V DC / 230V	250	195	223 x 223	250 x 250
LV 405	24V DC / 230V	160 / 170	115 / 125	223 x 223	250 x 250
LV 410	24V DC / 230V	250 / 290	205 / 230	223 x 223	250 x 250
LV 500	230V AC / 400V 3 ph.	315	235	223 x 223	250 x 250
LV 550	230V AC	370	260	223 x 223	250 x 250
LV 600	24V DC / 230V	580	385	292 x 292	323 x 323
LV 605	230V AC	470	365	292 x 292	323 x 323
LV 700	230V AC / 400V 3 ph.	730	530	292 x 292	323 x 323
LV 800	230V AC / 400V 3 ph.	930	610	292 x 292	323 x 323



Filter Fans LS series

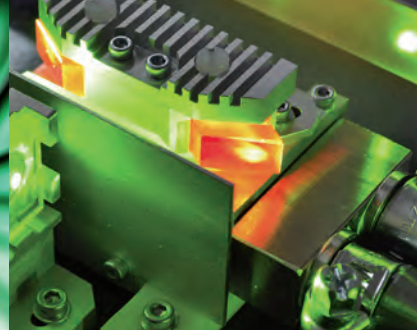
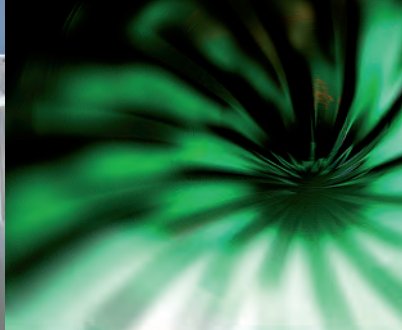
Product	Voltage	Air flow free air m³/h	Air flow with exhaust filter m³/h	Mounting cut-out mm	Dimensions outside mm	Suitable exhaust grille
LS 10KX	24V DC / 230V AC / 115V AC	59	38	116 x 116	128 x 128 x 30	LG 10 (k)
LS 0K	24V DC / 230V AC / 115V AC	120	90	200 x 200	238 x 238 x 30	LG 11 (k)
LS 1K	24V DC / 230V AC / 115V AC	125	105	298 x 200	339 x 238 x 30	LG 12 (k)
LS 2K	230V AC / 115V AC	190	155	298 x 200	339 x 238 x 30	LG 12 (k)
LS 25K	24V DC / 230V AC / 115V AC	245	205	223 x 223	255 x 255 x 30	LG 25 (k)
LS 3K	230V AC / 115V AC / 400V 3 ph.	730	555	300 x 300	344 x 344 x 30	LG 13 (k)

LED Lamps and LED Enclosure Lighting

Product	Voltage	Amperage mA	Power input W
LE-150-SX	24V DC	125	3
LE-150-L	24V DC / 230V AC / 230V AC	22 or 125	read data sheet
LE-150-SL	24V DC / 230V AC	22 or 125	read data sheet
LE-300-SX	24V DC	295	7
LE-300-L	24V DC / 230V AC	43 or 210	read data sheet
LE-300-SL	24V DC / 230V AC	43 or 210	read data sheet
LE-300-LRW	24V DC	330	8
LE-300-M	24V DC	295	7
LE-300-MD	24V DC	295	7
LE-600-L	24V DC / 230V AC	86 or 420	read data sheet
LE-600-SL	24V DC / 230V AC	86 or 420	read data sheet
LE-600-M	24V DC	590	14
LE-600-MD	24V DC	590	14

Product	Voltage V AC	Power input W	Mounting	Variant
LLE-400-B	230	10	Rear fastening	Motion detector
LLE-400-S	230	10	Rear fastening	Door position switch
LLE-700-B	230	20	Rear fastening	Motion detector
LLE-700-S	230	20	Rear fastening	Door position switch
LLE-400-BM	230	10	Magnetic attachment	Motion detector
LLE-400-BW	230	10	Fastening brackets at the sides	Motion detector





Accessories

Thermostats and Controllers, Condensate Vaporiser, Filter mats, Cover hoods and plates, Ground straps and Plug sockets are just a few of the practical accessories available for switchgear cabinets.

We are sure to have the right products for your cabinet. If not, give us a call or drop us a line. Customized solutions can be realized swiftly at any time.

Thermostats and Controllers



Condensate vaporiser



Exhaust filters



Filter mats & Gill plates



Extension frames



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Our solution approach

AMS Technologies' solution approach has helped hundreds of customer projects to move from concept to production. Helping you to understand our capabilities, we invite you to browse a list of the many projects that we have successfully completed over a timeframe closely approaching 30 years.

Our three key competencies Optical, Power and Thermal Management have no logical bits and bytes, nor industry qualification standards. Hence the design of a system and the choice of the right technology, supplier and products can only be based on knowledge and experience in those fields. AMS Technologies has built a comprehensive knowledge base in those three key competencies, enabling us to provide customers with complete solutions, over and above the mere product support for standard design aspheres we can provide.

- Development of customized specification sheets
- Effective project management of any product development
- Higher level design services for system-level prototypes
- Interdisciplinary system-level integrated design
- Appropriate subcontractor selection and production support
- Proper vetting of technologies and suppliers
- Simulations and modeling of system-level designs
- Installation, training and servicing

„Thermal inside“ AMS solutions

Cabinet cooler for sensitive LIDAR equipment

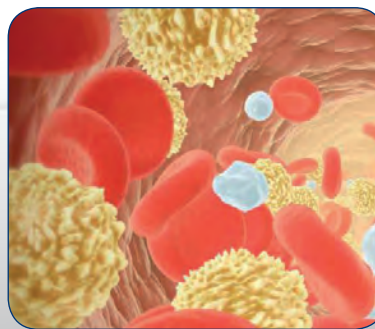


Internal space was limited to 80 mm in depth which made AMS Technologies design a very flat split cooling unit integrated into the cabinet door. The internal side carries 2 mini compressors, evaporator heat exchanger, fans, heater, control board,

AC/DC converter and other components of a vapor compression circuit. The outside of the door carries the condenser heat exchanger.

The 24 VDC mini compressors are driven by a linear speed control that not only allows for a temperature stability of $\pm 0,1^{\circ}\text{C}$ but also minimizes the vibration level which is a key parameter in laser applications. The cooling capacity exceeds 600 W at 55°C ambient and 35°C internal temperature. The electrical power consumption is less than 350 W.

Temperature control of reagents in Haemostasis analyzer



In a Haemostasis analyzing instrument various tests are performed to measure blood coagulation or the effect of an anticoagulant treatment that is given to reduce the risk of thrombosis.

The cooling capacity requirement was investigated and determined

empirically by AMS Technologies during the course of the development of the cooling unit. Its powerful 24 VDC mini compressor has a linear speed control. Small evaporator and condenser heat exchangers, fans, compressor and other components of a refrigeration cycles were placed inside the given restricted space. Air flow rate and duct were optimized to achieve uniform temperatures across the reagents.

Image: STAGO

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