Opticooler®

Temperature. That Arrives.

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DoKaSch TEMPERATURE SOLUTIONS

WHO WE ARE AND WHAT WE DO

The **DoKaSch-Group** is a family-owned supplier of loading equipment to the global aviation industry. With over 25 years of experience, DoKaSch has acquired a far-reaching set of skills to develop, manufacture, maintain and market all sorts of unit load devices (ULD) for the transportation of goods and luggage in aircrafts around the world.

These containers are designed to reliably master the harsh day to day cargo handling environment and keep the goods safe from external influences. All DoKaSch ULDs are »made in Germany« and are certified by the aviation authorities. Many airlines around the world trust DoKaSch equipment. We at DoKaSch operate our own production and maintenance facilities in Germany located in Montabaur and close to Frankfurt International Airport.

At **DoKaSch Temperature Solutions**, we focus on electric air-conditioned containers, that are designed to transport and safeguard high value, temperature sensitive cargo such as pharmaceuticals on intercontinental flights. The Opticooler® RKN and RAP work autonomously and ensure that throughout all climate zones the cargo stays safe and undamaged with an extremely high reliability.

Only occasional connection to the power grid is required to recharge the batteries and keep the unit running for longer periods of time, just like a small and smart mobile warehouse. In some respects, even better than a stationary one.

The Opticooler® RAP (4-5 pallets) and RKN (1 pallet), can be hired globally at a variety of airlines. We operate large deployment areas in Europe and the United States where the delivery of Opticoolers® is almost free of charge.

www.dokasch-ts.com

Reliable Service

CUSTOMER SATISFACTION GUARANTEED

Availability

ALWAYS READY FOR LIFT-OFF

DoKaSch has a history of almost 100% order confirmation and on-time-delivery fulfillment and this will continue to be our objective for the future. DoKaSch keeps substantial reserve stocks to always meet customer demands.

We will even take our promise of availability a step further and install a dedicated stock at our client's facility on request. This will guarantee a fast and trouble-free access to units without lead times.

Delivery Network

THE KEY TO COSTUMER SATISFACTION

DoKaSch operates a large free delivery area in Europe and the United States. Within these free delivery areas, Opticooler® units will be delivered to any location almost free of charge. Regardless of distance and country merely a small handling fee will be charged. Apart from the free delivery zones, Opticooler® units can be globally hired directly from a variety of airlines.

Flexibility

MUCH MORE THAN A MUST HAVE

We process all incoming orders within hours and dispatch the requested units in time, so they can be expected at the customers doorstep the evening before. Rest assured, there will be enough time for preconditioning and intervention in the case of unexpected events and that you will have a good feeling that everything is ready for your next day shipment. Within our delivery network, we will not charge any trucking costs or additional lease days for the "day-before" delivery.

Besides the standard rental terms, we offer long trip terms at very competitive lease rates that can be individually extended by a number of days. The longer the lease term, the lower the daily rental rates.

Reliable Technology

MADE FOR ENDURANCE

Active Air Cargo Container

The DoKaSch Opticoolers® are high-tech, air-conditioned RKN and RAP containers with battery powered temperature management systems. Compared to other technologies such as dry-ice or passive boxes, an electrically powered unit offers significant advantages in terms of safety, operating time and ease of handling.
It can be operated for an almost unlimited period of time, as if you had a stationary warehouse, if connected to the power grid. Passive solutions, even the best ones, always have a hard runtime limit. The Opticooler® further has the capability to keep a set temperature, even if unexpected complications or unforeseen weather changes occur. The arduous resupply of dry-ice is entirely unnecessary. While passive containers require specific care and knowledge, the Opticooler® with its powerful climate technology is ready for operation in only a few hours by just pressing a button.

Safety

Keeping pharmaceuticals within strict temperature ranges throughout the supply chain is vital to maintain the efficacy of the medication and the wellbeing of patients. That's why we at DoKaSch have put reliability at the top of our priorities.
With more than 25 years of experience in this field of engineering, DoKaSch has acquired extensive know-how in developing and manufacturing robust and reliable containers. The rugged construction of the Opticooler® will easily master the harsh day to day cargo handling environment. In the unlikely event of an individual component failure, a redundancy of vital components and a carefully considered arrangement of the individual modules should ensure the continuous operation of the container. The RAP for example is equipped with four separated cooling and heating units that run independently of each other. In addition, every unit is subjected to maintenance after every trip, so that only fully functional units are delivered to the customer. Tightly scheduled service intervals and preventative maintenance further adds to the reliability of the Opticooler®.

Temperature Performance

The Opticooler® is designed to maintain any set temperature between +2°C and +30°C at ambient temperatures from -30°C to +50°C. Even under extreme conditions at +50°C, it keeps the cargo very well within the 2° to 8°C or 15° to 25°C range. A team of DoKaSch engineers have designed the cooling and heating circuit and have carefully tuned all components to each other. The temperature regulation will register the smallest deviation of +/- 0,5°C and will immediately initiate the cooling or heating cycle.
Thanks to a powerful cooling technology, a short preconditioning time can be achieved with a rate of 8°C/h, in most cases even faster. The continuous operation of ventilators, the high turnaround rate of air and the application of special door gaskets ensure an even temperature distribution inside the Opticooler®.

Runtime

The global air freight business is a complex process with numerous handovers and involved parties that pose a challenge to the consistency of the cold chain. The Opticooler® reduces this complexity to its utmost and is nothing less than a flying air-conditioned warehouse. By connecting the Opticooler® to a power source the time of operation generally has no limitations. The ability to quick charge the batteries in only a few hours further adds to the safety, in particular during short transit times. A set of attached cables and adapters ensure that the Opticooler® can be connected to any power outlet.

Handling & Training

With the global deployment of containers and many people involved in the transportation process, training can become an issue. That's why we at DoKaSch have designed a container that is so easy to operate, that just little training is required. Both, the RKN and RAP Opticooler®, share the same technology simplifying the necessary training effort. Only one manual is needed to explain the operation of both types. The Opticooler® features an intuitive touch screen, that enables the operator to easily precondition it with just two clicks. Alarms are raised and are displayed on the control panel, once the batteries are low on power, doors have been opened or the temperature is out of range. With an easy connection to an external power source the batteries are automatically recharged. Both types are forkliftable while the base of the RKN has been specially designed for a forklift.

Airline Network

AIRLINE RENTALS

The Opticooler® has already been approved by a large variety of airlines, for the transportation of highly temperature sensitive cargo. More and more airlines are going to join. RKN and RAP Opticoolers® can be booked directly from the airlines listed below, from anywhere in the world and for different trip durations. With our continuously growing airline network, pharmaceutical companies can rely on a global connection of their facilities on all continents.

Interested in booking a unit? Please get in touch with the GSA agent of the individual airlines.

Airline Rentals:

Lufthansa Cargo
Emirates SkyCargo
Cathay Pacific
KLM
Air France
cargolux
TAP Portugal
SWISS WorldCargo
Asiana Cargo
Volga-Dnepr Group AirBridgeCargo
Qatar Airways Cargo
LATAM Cargo
Singapore Airlines
Alitalia Cargo
IAG Cargo
British Airways
Iberia
Saudia
Air China
Ethiopian
China Airlines

Shipper / Forwarder Rentals:

AeroLogic
Turkish Cargo
El Al

Europe

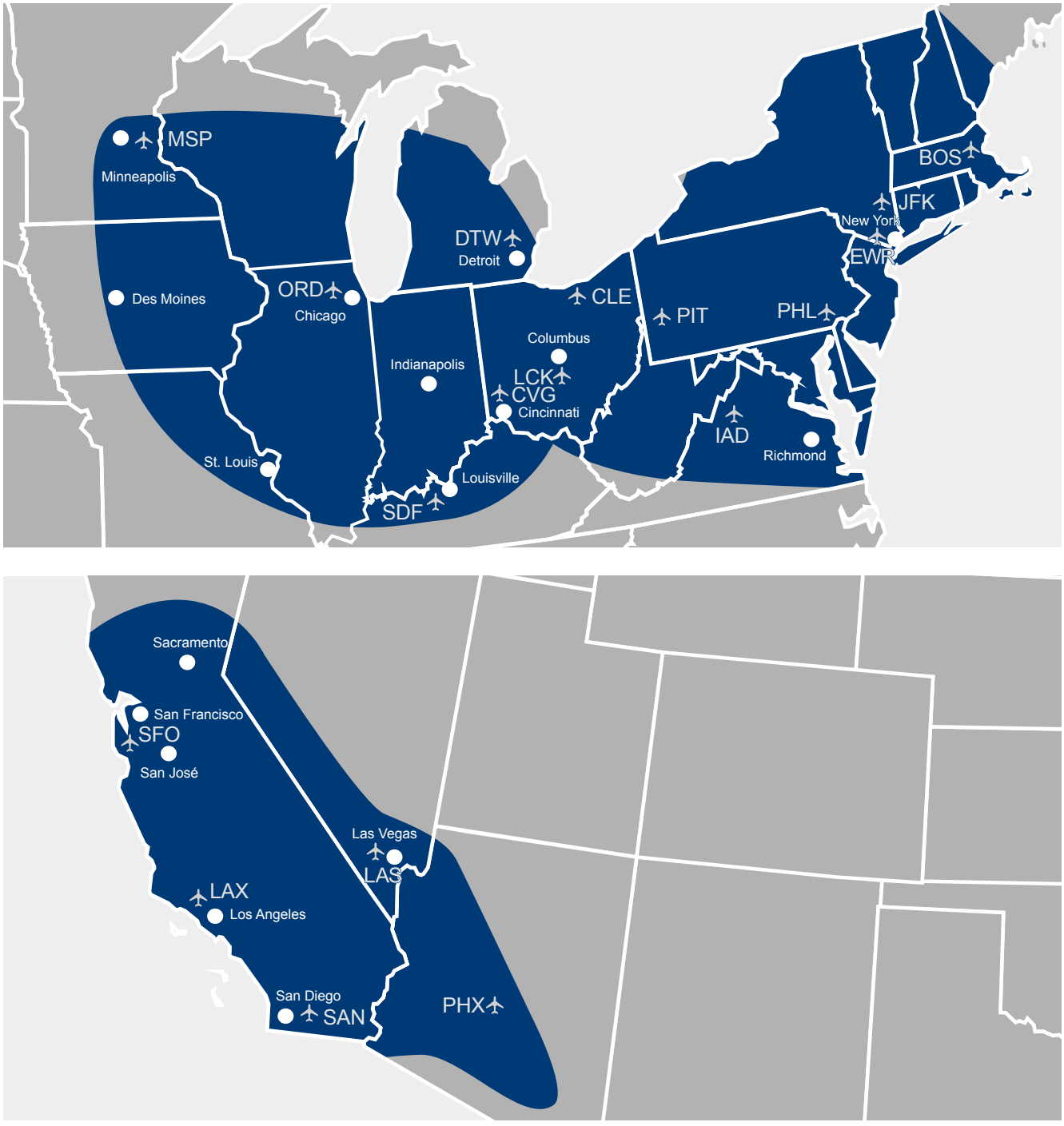
FREE DELIVERY AREAS

DoKaSch

United States

FREE DELIVERY AREAS

DoKaSch operates two very large free delivery areas in the United States. Within this area, a delivery is almost free. Merely a small handling fee will be charged regardless of distance. Trucking costs will not apply. Located outside the delivery area? Not a problem! Just send us a request and we will get back to you with several options.



LEGEND

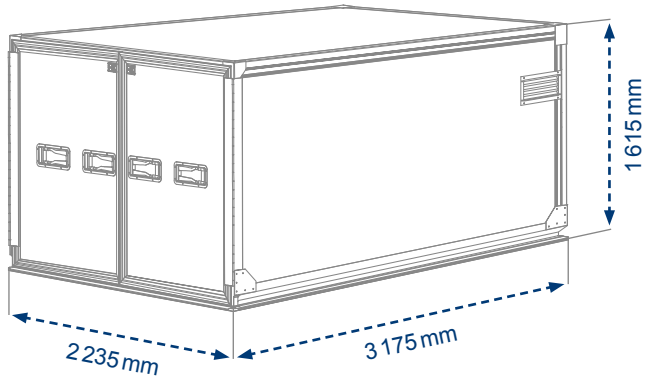
free delivery

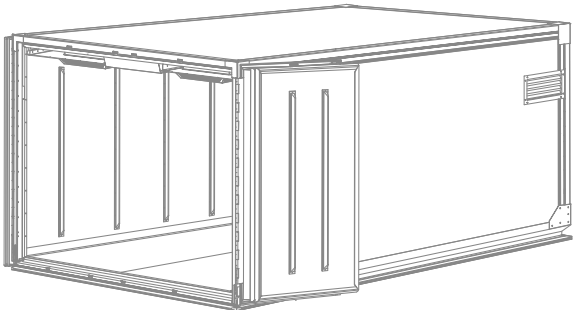
Opticooler®

DIMENSIONS

RAP [LD9]

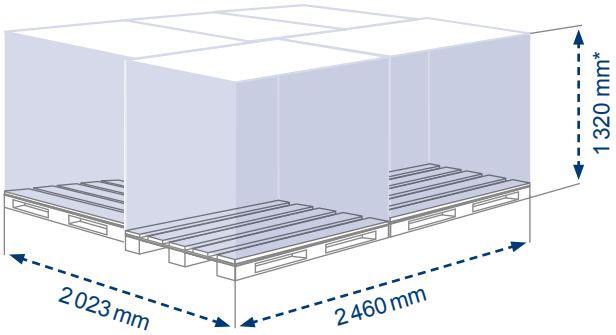
EXTERNAL DIMENSIONS



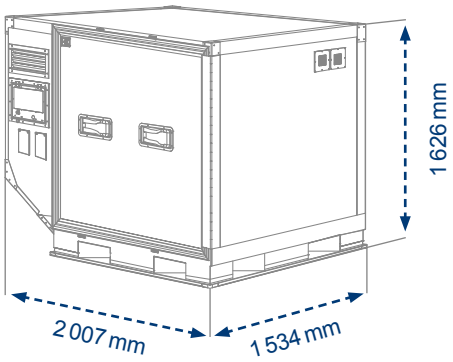


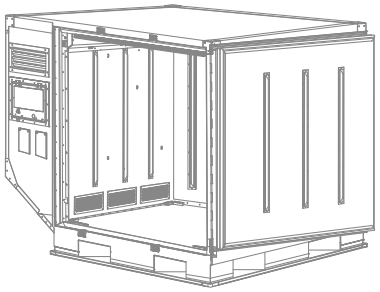
MAX INTERNAL LOADING DIMENSIONS

5 EUR pallets / 4 CP1 pallets

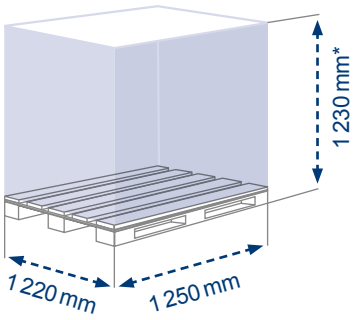


RKN [LD3]





1 EUR pallet / 1 CP1 pallet



*Max. loading height including pallet

Opticooler®

TECHNICAL DATA SHEET

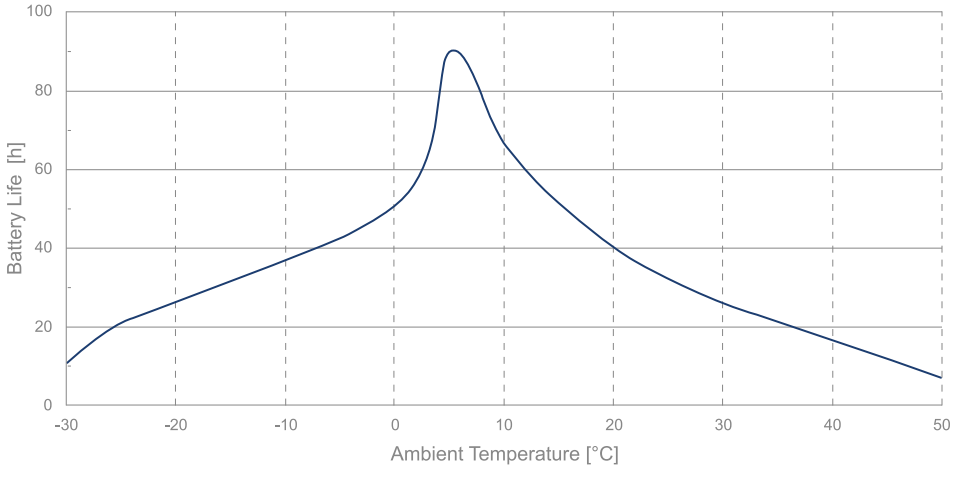
TECHNICAL DATA*	RAP [LD9]	RKN [LD3]
Max. internal loading dimensions (L x W x H)	2 460 x 2 023 x 1 320 mm / 96.8 x 79.6 x 52 in	1 250 x 1 220 x 1 230 mm / 49.2 x 48 x 48.4 in
External dimensions (L x W x H)	3 175 x 2 235 x 1 615 mm / 125 x 88 x 63.6 in	2 007 x 1 534 x 1 626 mm / 79 x 60.4 x 64 in
Loading constellation	5 EUR pallets / 4 CP1 pallets ** EUR: 800 x 1 200 mm / CP1: 1 000 x 1 200 mm	1 EUR pallet / 1 CP1 pallet EUR: 800 x 1 200 mm / CP1: 1 000 x 1 200 mm
Loading Volume, effective	6,57 m³ / 232 ft³	1,88 m³ / 66.39 ft³
Tare weight	1 140 kg / 1 100 kg (+/- 20 kg) 2 513 lb / 2 425 lb (+/- 44 lb)	670 kg / 650 kg / 630 kg (+/- 15 kg) 1 477 lb / 1 433 lb / 1 389 lb (+/- 33 lb)
Max. gross weight	6 033 kg / 13 300 lb	1 588 kg / 3 500 lb
Max. payload	4 893 kg / 10 787 lb	918 kg / 2 023 lb
Forkliftable	up to 2 000 kg actual gross weight	max. gross weight spec. forkliftable base
Running on battery only (example, approx.)	Ambient 20 °C, Set 5 °C: 40 hrs Ambient 15 °C, Set 20 °C: 120 hrs	Ambient 20 °C, Set 5 °C: 30 hrs Ambient 15 °C, Set 20 °C: 70 hrs
Set temperature range	+2 to +30 °C / +35.6 to +86 °F	
Ambient temperature range	-30 to +50 °C / -22 to +122 °F	
Power supply	mains power 110 - 230 V / AC / 50 - 60 Hz	
Battery charging time 50-100 % Battery charging time 0-100 %	approx. 2,5 hrs 4 hrs	

TEMPERATURE SETTING

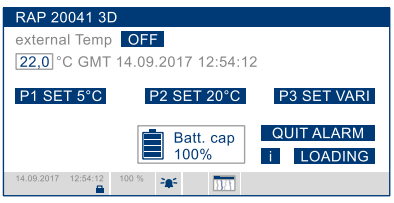
The Opticooler gives the customer the choice of selecting between 2 presets, 5 °C and 20 °C.

P1: Set Point **5°C**	+2 to +8 °C	+35.6 to +46.4 °F
P2: Set Point **20°C**	+15 to +25 °C	+59 to +77 °F
P3: freely selectable between +2 and +30 °C	t +/- 3 °C	+/- 37.4 °F

BATTERY PERFORMANCE RAP [SET 5 °C]



CONTROL PANEL



CABLE BIN

* Subject to technical changes ** Max. 2 standard US pallets (48 x 40 in) can be transported