



# Cold chain handling

Cargo handling providing permanent temperature conditions

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# About company

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"Sheremetyevo-cargo" is one of the largest air cargo terminals in Russia. The company works for more than 30 years.

"Sheremetyevo-Cargo" is the most high-tech ground handler in the Moscow aviation hub.

**28 000 m<sup>2</sup>**

Main terminal area

**2 700 m<sup>3</sup>**

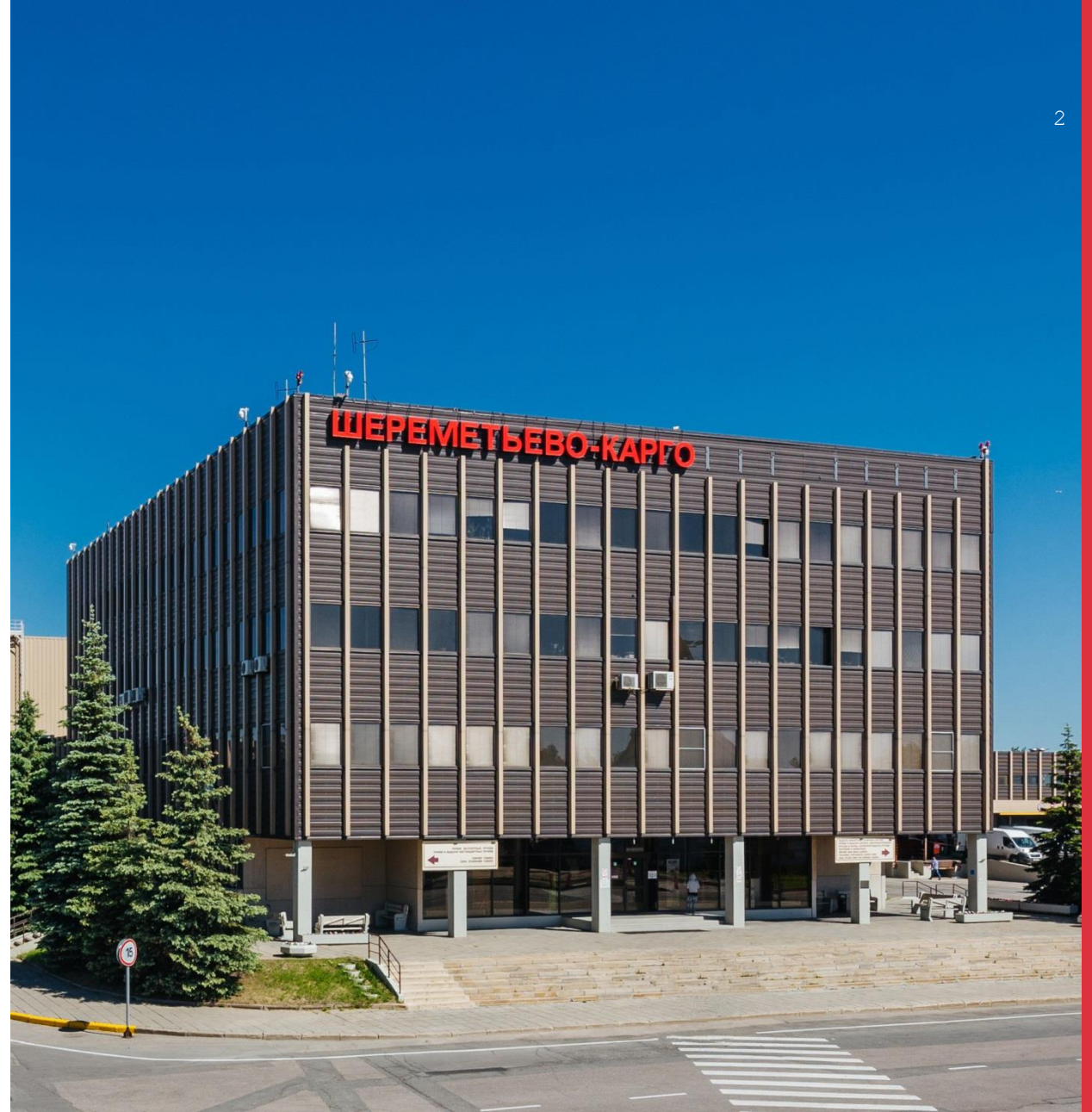
Useful storage volume  
for temperature cargo

**360 000 tons**

Confirmed annual cargo turnover  
capabilities

**800 persons**

Staff members







“Sheremetyevo-Cargo” has an adequate infrastructure for handling of temperature sensitive cargo.

- The terminal is equipped with modern temperature control systems, is able to handle and store cargo providing temperature conditions from -25°C to +25°C. All storage chambers are GDP validated.
- All staff members involved in handling of special cargo take appropriate training.

# Handling guidelines

Our objective – is to ensure necessary temperature conditions since the cargo is collected from a shipper / airline and till it is loaded into an aircraft / delivered to client.



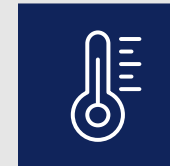
**Planning of  
operations**



**Accurate  
performance,  
automated control**



**Meeting the  
deadlines**



**Permanent  
temperature  
monitoring**

# Transportation from the airside

Import cargo is delivered to the warehouse straight after unloading from the aircraft.

## TIME OF DELIVERY TO THE WAREHOUSE:

**North  
cargo ramp**

30 minutes

**South  
cargo ramp**

15 minutes







For performing transportation from the airside we use special cars equipped with coolers and freezers



**Cars for transferring cargo providing temperature conditions from -25°C to +25°C**

- ❑ cars for BUP pallets(PMC)
- ❑ cars for cargo without ULD (bulk)

# Trucks parameters

Car	Qty.	Height, mm	Width, mm	Length, mm	Volume, m³	Capacity, kg	t° conditions	Able to carry ULD	ULD type / Qty.	Remarks
TRUCK + semi-trailer	2	2450	2450	13430	80	20000	-25°+25°C (cooling or heating)	+	PMC(Q6) x 4 (no juts) + Bulk	Max pallet height Q6 not exceeding 2,53 m
MAZ 3437041- 262	1	2440	2460	6370	44	4000	-20°+20°C (cooling or heating)	+	PMC(Q6) x 2 (no juts) + Bulk	Max pallet height Q6 not exceeding 2,4 m
MAZ MZZ 357	1	2440	2450	6370	44	4000	-20°+20°C (cooling or heating)	+	PMC(Q6) x 2 (no juts) + Bulk	Max pallet height Q6 not exceeding 2,4 m
ISUZU	1	2650	2580	6470	44	5000	-20°+30°C (cooling or heating)	+	PMC(Q6) x 2 (no juts) + Bulk	Max pallet height Q6 not exceeding 2,53 m
ISUZU	4	2080	2460	3670	20	3600	-20°+20°C (cooling or heating)	+	PMC(PLD) x 1 or Q6 x 1 (no juts) + Bulk	Max pallet height Q6 not exceeding 2,06 m
VW Crafter	1	1705	1530	4520	13	2000	-20°+20°C (cooling or heating)	-	BULK	

Note: Loading platform able to lift ULD into truck – 2 units.

# Cargo acceptance

## Initial temperature control

- ❑ We make prior preparation of handling and storage areas to comply with necessary temperature conditions;
- ❑ Upon acceptance of cargo we make initial temperature control using certified measuring devices;
- ❑ Measured data is registered in system;
- ❑ Additionally we can take photos or video of cargo;





# Storage chambers

Chamber type	Qty.	Temperature range	Area, m²	Total volume, m³	Storage on aviation pallet
Temperature chambers for international flights					
GDP validated chambers					
Cool chamber	12	+2°...+8°C	410,77	1 609,12	Her
Warm chamber	2	+16°...+25°C	137,36	710,78	Her
Freezer room	1	-10°...0°C	17,53	51,88	Her
Cool chamber	1	0...+5°C	25,54	75,09	Her
Freezer chamber, wide temperature range	8	-23°...+25° This chamber has GDP validation of 2 temperature control modes: FRO (-23°C...-18°C) and ERT (+2°...+25°C)	195	423,62	Her
Cool chamber	2	+5°...+15°C	20,70	104,74	Her
Total, international flights	26		806,9	2 975,23	
Temperature controlled chambers for domestic flights					
Freezer room, wide temp. range	8	-25°...+25°C	197,06	489,52	Her
Total, domestic flights	8		197,06	489,52	
Total	34		1 003,96	3 464,75	

## Cargo storage

We strictly store different kinds of goods separately:

- Fish
- Meet
- Cheese
- Pharmaceuticals
- Plants
- Human remains



34 separate areas for storage of temperature sensitive cargo



Plus 2 additional chambers for live animals



Copies of check-lists, air waybills and temperature monitoring records can be provided upon your request



Cooling and freezing equipment properly maintained



Storage rooms are always kept clean

# Pharma cargo handling

- ❑ Special handling procedure;
- ❑ Cargo delivered from the airside in trucks equipped with coolers and freezers;
- ❑ Reduced handling time; 2 hours max from ATA till last piece of cargo stored in temperature control chamber;
- ❑ Dedicated storage chambers for Pharma cargo;
- ❑ GDP validated storage chambers: CRT, COOL, FRO;
- ❑ Involved staff trained against IATA CEIV program;



**Strict compliance with IATA  
Temperature Control Regulations**





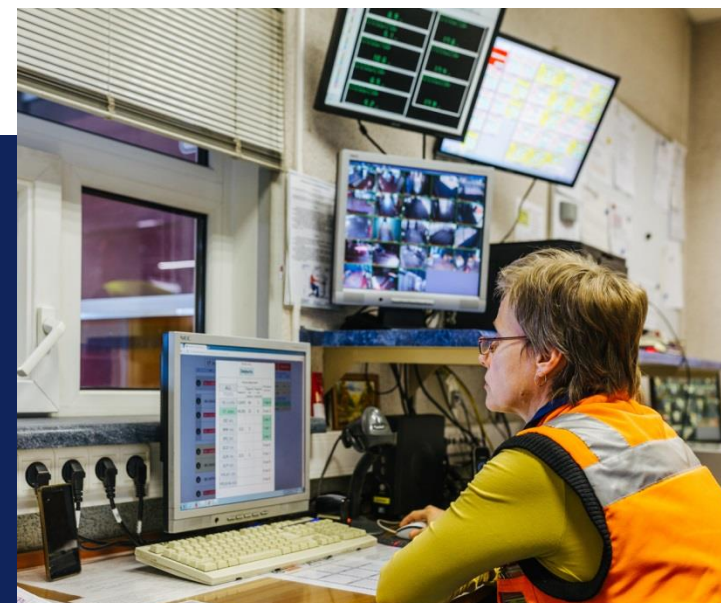
## Control system



Temperature control of all chambers is managed and controlled by system. Temperature and humidity are also shown on thermohygrometer installed in the storage area.



For GDP validated chambers we use additional temperature control sensors.



System operation is controlled by several operators of different departments of "Sheremetyevo-Cargo". Thus a multilevel control of temperature conditions is provided.

# System temperature control

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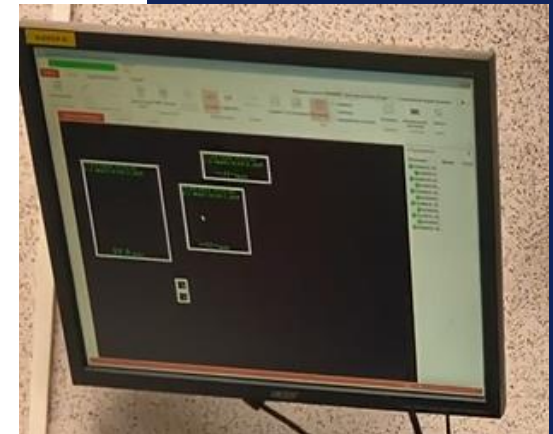
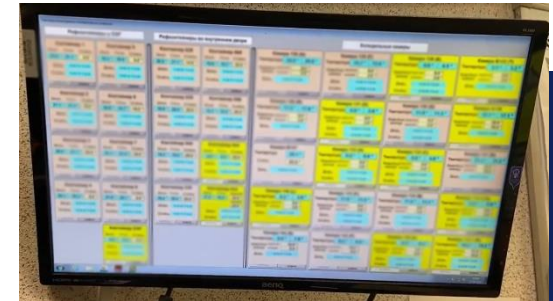
In order to eliminate errors in measuring the temperature in the temperature rooms and its compliance with the stated requirements, Sheremetyevo-Cargo JSC has developed and implemented into operation own system of multi-level control over compliance with the required temperature regime in temperature rooms and thermo tracks.

The control of the first level is carried out by a monitoring system, with the help of which the logic of responding to an emergency situation is configured. In case of equipment failure, long-term presence of doors in temperature rooms in the open state or finding the temperature outside the set temperature range, the system informs about deviations. Next, our employees check the system messages and eliminate the causes that caused the alarms.

The organization of switching on and off, as well as setting the required temperature in the chambers connected to this system, is carried out in automatic remote mode.

To control the second level, a system product is used, which is an alternative source of information about temperature and humidity in the chambers. Temperature regime indicators are monitored by sensors installed in the chambers. Information from the sensors enters the system and is analyzed. In case of non-compliance with the established indicators, the system informs about the detected deviations.

System control ensures compliance with the declared temperature conditions for special categories of goods and ensures their reliable storage.



**Strict compliance with the declared temperature regime**



# Temperature controlled containers

“Sheremetyevo-Cargo” has a great experience of handling active temperature controlled containers.







Every 3 hours we take pictures of the display showing temperature and humidity. These pictures can be provided upon request.

Staff trained against Envirotainer and C-safe programs.





# Equipment

-  Modern coolers and freezers
-  Temperature conditions violation alarm system
-  Possibility to collect samples while necessary temperature conditions are provided
-  Centralized control of temperature in coolers and freezers. Data for all storage chambers is shown on a screen controlled by operator
-  Possibility to handle thermocontainers RAP, RKN
-  Self-contained power supply

# Our advantages



Possibility to deliver cargo to SVO from all over the world on the flights of more than 30 airlines



Attention to client's needs and handling details. We are ready to fulfill any additional requirements



Step-by-step process management



Certified and experienced staff, (average experience - 12 years)



Flexible rates, the cost of services depends on amount of shipped cargo



Risk management. Taking corrective actions

# Tracking cargo ONLINE

All handling events occurring with the cargo after flight arrival and till the moment of delivery are registered in information systems of "Sheremetyevo-Cargo"

**We provide external access to our systems to clients for obtaining the following information:\***

- ☐ Cargo status: date of flight arrival, date of cargo acceptance, cargo damages, date of documents collection, date of cargo collection
- ☐ Scanned air waybills
- ☐ Pictures of damaged pieces

\*in the future it will be possible to get information about storage temperature conditions



# Airlines-partners

# You are always welcome

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Choose us to be ensured about quality of services and safety of your goods.

We can consider your suggestions on further development of our infrastructure.

## Our contacts:

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