



## REFRIGERATED DISPLAY CASE

### SVITYAZ Q



## OPERATIONS MANUAL

LIMITED LIABILITY COMPANY  
SNAIGE GROUP

## **Thank you for purchasing GOLFSTREAM refrigeration equipment**

We hope you will continue choosing our products in the future. We in turn will try to meet your expectations and take into consideration all your wishes and comments on the operation of this product.


SNAIGE GROUP is continuously working on improvement of products, so we reserve the right to modify the appearance, construction elements and equipment of our products.

Detailed illustrations might not fully match your actual product and are only given to get an overall picture.

We reserve the right to revise or change the contents of this document at any time without a prior notice. Reproduction, transfer or disclosure of this document or any of its parts without prior written consent is forbidden.

This Operations Manual is designed to make you familiar with design, installation and operation rules of the product.

Installation, startup and maintenance may only be performed by service centers of Suppliers or Sellers of **GOLFSTREAM** retail and refrigeration equipment or other enterprises authorized to perform maintenance of the equipment by the manufacturer.

 ***ATTENTION! PLEASE READ THIS OPERATIONS MANUAL BEFORE INSTALLATION AND BEGINNING OF OPERATION OF THE PRODUCT. ITS COMMERCIAL PAYBACK AND SAFETY DEPEND ON COMPLIANCE WITH THE REQUIREMENTS OF THIS DOCUMENT.***


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## INTRODUCTION

This Operations Manual (hereinafter – the Manual or OM) including nameplate data, covers Svityaz Q series of wall-adjacent high-temperature refrigeration display cases (cabinets) (hereinafter – the equipment, cabinet or product). The purpose of data presented below is to provide information and instruction to the consumer, information for maintenance staff regarding:

- *technical characteristics;*
- *certifications and manufacturer's guarantees;*
- *transportation and storage;*
- *installation, startup, operation (including maintenance and repair), disposal of the display case mentioned above.*

 ***ATTENTION! THE MANUFACTURER SHALL NOT BE HELD RESPONSIBLE FOR DAMAGES CAUSED BY IMPROPER, INCORRECT USE OF THE EQUIPMENT NOT DIRECTLY SPECIFIED IN THIS MANUAL.***

## SAFETY MEASURES

1. Operation and maintenance of the display case shall follow the Regulations for Operation of Consumer Electrical Installations and requirements of Labor Safety Standards.

2. Operation and installation of the display case shall only be performed by persons who have received training, instructions and examination of knowledge of safety regulations, know its design and have studied this Operations Manual.

3. Commissioning of the product should be carried out by qualified staff authorized to perform this type of works.

4. Repair of the display case can only be performed by persons with at least 3rd electrical safety qualification level who know its design.

5. The display case housing must be reliably grounded.

6. The consumer should provide fire extinguishing equipment and first aid kits with the required medicines and first aid measures during commissioning, repair and use of the display case as designed.

7. Should there be any sign of unstable operation, immediately turn the display case off and contact a maintenance specialist.

 **Attention!**

● **List of service organizations offering commissioning and maintenance of the display case is available from the product seller.**

● **Actual commissioning of the display case shall be supported with a Commissioning Statement.**

***It is strictly forbidden to:***


- ***Connect the display case to a power outlet without grounding;***
- ***Operate the display case with opened screen of the unit chamber;***
- ***Remove frost deposits from evaporator mechanically;***
- ***Wash the product with a water jet.***
- ***Should there be any sign of unstable operation, immediately turn the refrigerating unit off and contact a maintenance specialist.***

 **Attention! Preparation of the display case for operation, commissioning and maintenance should only be done by representatives of service organizations.**

## GENERAL INFORMATION ABOUT THE PRODUCT

High-temperature cabinet with built-in refrigeration system with an evaporator and mechanical air circulation is designed for demonstration, sale and short-term storage of previously chilled food products at + 1°C to +10°C with environment temperature of +12°C to +25°C and relative air humidity not exceeding 60%.

High-temperature cabinet has a bottom exhibition surface and five suspended shelves with adjustable height. Operation of the refrigerating unit is controlled by a controller. The unit works in cyclic mode. Time of work and breaks depends on the ambient temperature and amount of displayed products, presence of frost deposits on the evaporator.

 ***Attention! Installation, startup, maintenance and repair of products shall only be performed by specialized repair and installation companies (service centers).***

Product Commissioning Statement must be prepared based on the results of startup works. Copies of the Statement shall be provided to the dealer and manufacturer for warranty registration by the dealer's service center within 5 days. Otherwise, the dealer and manufacturer shall not bear responsibility for the warranty obligations.

Illustrations and the manual do not reflect insignificant structural modifications of products made by the manufacturer.

Products can be transported by any type of transport, except for air, only in packed condition according to the Shipping Rules applicable to the chosen type of transport. During automotive transport the vehicle speed should not exceed 60 km/h. Loading, transportation, unloading should be performed carefully without impacts and bumps. Box should be positioned according to the marking on it. Tilting of the box is forbidden.


Please send your feedback for improvement of operational properties and design of the product to the following address:

**E-Mail:** [info@snaigegroup.ru](mailto:info@snaigegroup.ru)

## TECHNICAL CHARACTERISTICS

The main technical characteristics are presented in table:

Characteristics	Svityaz Q 100	Svityaz Q 120	Svityaz Q 150	Svityaz Q 180
Length (with side panels), mm	1002(1082)	1202(1282)	1502(1582)	1802(1882)
Width, mm	850			
Height, mm	2090			
Display depth on suspended shelves, mm	505			
Exhibition area, m <sup>2</sup>	3.1	3.72	4.65	5.58
Useful volume, m <sup>3</sup>	0.76	0.91	1.13	1.36
Display depth on the bottom exhibition shelf, mm	600			
Maximum load per shelf, kg/m <sup>2</sup>	160			
Useful volume temperature	+1 °C to +10°C			
Daily electrical energy consumption, kWh, max.	20.88	24.9	29.3	33.5
Nominal power, W	1350	1615	1900	2180
Current consumption, A	3.7	4.4	6.9	7.9
Illumination, W	15	15	20	20
Control device	Electronic controller			
Defrosting	Natural			
Current type	AC, single phase			
Frequency, Hz	50			
Nominal voltage, V	230			
Protection category	IP 20			
Noise level	below 65 dB			
Refrigerant	R 452A			
Overall dimensions with packaging, mm				
-length	1250	1450	1750	2050
-depth	1050	1050	1050	1050
-height	2225	2225	2225	2225
Net weight, kg	190	210	275	300
Gross weight, kg	280	310	395	440

 **Attention!** The manufacturer reserves the right to make technical changes that improve operation of the product without warning.

## SCOPE OF DELIVERY

The delivery set of products is presented in table:


Name	Svityaz Q 100	Svityaz Q 120	Svityaz Q 150	Svityaz Q 180
Assembled display case	1	1	1	1
Suspended shelf	5	5	10	10
Suspended shelf bracket	10	10	20	20
Manual	1	1	1	1
Packing list	1	1	1	1
Exhibition shelf	2	2	3	3

## NAMEPLATE WITH TECHNICAL DATA AND SERIAL NUMBER

Serial number, model of the equipment and type of refrigerant are specified on a nameplate located in the upper part of refrigerated display case volume.

**"Snaige-Group" LLC**

143604, Russia, Moscow region, Volokolamsk, Yamskaya str., 14B, +7 496 362 86 42

<b>REFRIGERATED DISPLAY CASE Svityaz Q 120 VS</b>			
code	<b>F007451</b>	<b>IP 20</b>	year <b>2020</b> month <b>6</b>
Spec	<b>28.25.13-001-45015714-2019</b>		Serial No. <b>200637010</b>
Supply	<b>230V 50Hz</b>	Consumed power during defrosting	<b>271</b>
Nominal current (A)	<b>8.6</b>	Heating systems power (W)	
Temperature	<b>+1...+10</b>	Illumination lamps power (W)	<b>12</b>
Refrigerant	<b>R452A, 1.34 kg</b>		Weight, kg <b>271</b>
<b>EAC</b>			Climatic class <b>3</b>
			Made in Russia

The nameplate specifies:

- name of the manufacturer or its trademark;
- product model;
- number of this specification;
- factory number;
- date of production
- climatic class\*
- product weight
- name and total weight of refrigerant
- temperature conditions of chilled object
- maximum power rating of lamps, W;
- nominal voltage and current frequency
- maximum consumed power during cooling
- identification of protection category according to GOST 14254.
- Customs Union conformity mark

\* – Environmental climatic classes as per UNI EN ISO 23953-2

Climatic Class	Dry bulb temp.	Relative Humidity	Dew point
1	16°C	80%	12°C
2	22°C	65%	15°C
<b>3</b>	<b>25°C</b>	<b>60%</b>	<b>17°C</b>
4	30°C	55%	20°C
5	40°C	40%	24°C
6	27°C	70%	21°C

## UNPACKING, ASSEMBLY AND PREPARATION OF PRODUCT FOR OPERATION

1. Carefully remove packing materials from the product, taking precautions to avoid mechanical damages of the product surface panels.



• ***Should you find any mechanical damages, contact a service organization representative and, if needed, prepare a corresponding statement.***

2. Remove components and documentation from the inside space. Read the data sheet. Check for completeness and absence of damages.

3. The product should be moved inside the premises on a pallet or by the enclosure.

• ***Do not pull the product by side elements to prevent tearing them from the enclosure!***

• ***Do not move the product by a forklift without a pallet to prevent damages to refrigeration and electrical systems!***

4. Unscrew the fastening bolts and remove the product from wooden pallet. Screw the supports into their designated places.

• ***Do not tilt the product by more than 15° to prevent movement of oil from the compressor chamber to suction stub pipes, which can result in breakdown of the product.***

Get the product into stable horizontal position by adjusting the supports; this ensures noiseless operation of the product and proper condensate collection.

• ***Do not install the product near heating appliances – closer than 2 m, in direct sunlight, in the path of draughts caused by opening of doors, windows or climate control systems, in rooms with high humidity! Otherwise the operating parameters will be lower, the product may break down, and warranty obligations in this case will not apply.***

5. Assembly of the product:


1. Remove packaging from suspended shelves, brackets, supports and self-tapping screws.

2. Install supports on back wall of the cabinet using self-tapping screws.

3. Install brackets into slots in racks on the same height.

4. Install the shelves on installed brackets.

If the product was stored or transported at temperatures below +12°C, it has to be kept at a temperature above +12°C for at least 12 hours before connecting to the power network.

 ***Attention! Do not plug unheated device into power network. This can lead to jamming of the compressor or breakdown of the product.***

## **CONNECTING THE PRODUCT TO POWER SUPPLY NETWORK. SAFETY MEASURES**

Electrical equipment of the product complies with the safety norms stipulated in standards GOST 23833, GOST R IEC 60335-2-24. Refrigerating unit electric circuit includes protection from lengthy overloads.

Display case should be connected to power supply network in accordance with the current Electrical Installation Regulations and Safety Norms.

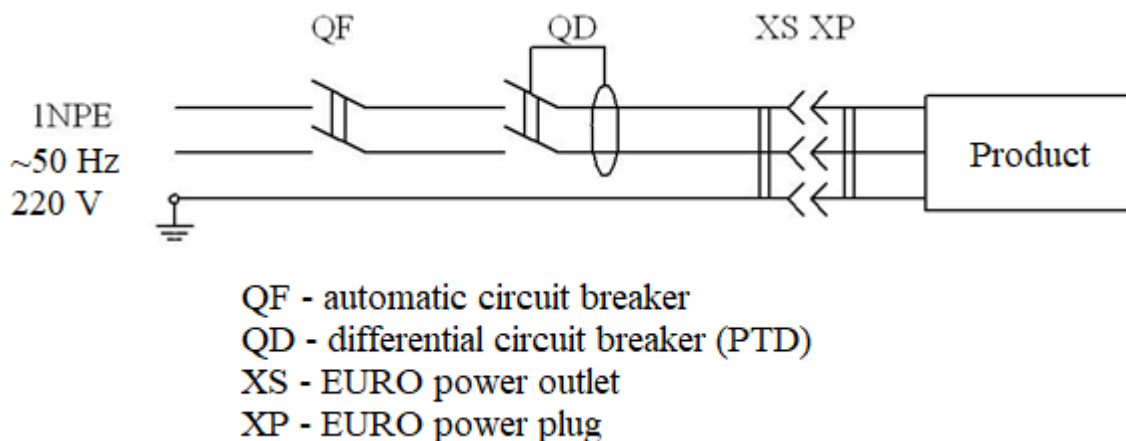
Network supply voltage should be within minus 15% to plus 10% range of the nominal with permitted current frequency fluctuations according to GOST 32144.

**⚠ Attention! If network supply voltage fluctuations in your region exceed the specified limits, it is recommended to connect the product through a voltage monitor. Otherwise the product may break down, and warranty obligations in this case will not apply.**

The product is equipped with a power cord with ground wire and a power plug with ground contact; network protection wire is connected to it through the grounding contact of the power outlet.

The product may only be connected to a power outlet with a ground contact connected to the network grounding circuit.

The product must be grounded, the ground has to be connected to a ground clamp in the machine compartment (see wiring diagram). The ground circuit has to be checked regularly.





**⚠ Attention! Ratings of protective devices should be selected according to the tabular data for the corresponding product**

**⚠ Attention! Connection of the display case to power supply network should only be done by qualified specialists. Connection to the power supply network should be done in accordance with the current safety norms.**

**⚠ Attention! Operation of the equipment with missing or faulty grounding, without automatic circuit breaker, with removed or faulty automation devices, as well as with damaged insulation of electric wires, with removed or open machine compartment**

*panels, with glass enclosure with sharp edges and damages is forbidden. Otherwise the product may break down, and warranty obligations in this case will not apply.*

 **Attention!** *The product has to be connected to power supply network through EMP automatic breaker and a differential breaker (PTD).*

 **Attention!** *Installation of PTD (protective tripping device) is mandatory in combination with circuit breaker with thermal or electromagnetic releases. Such system for protection from short circuit and leak currents, composed of PTD and circuit breaker, must be designed for the total current consumed by the equipment being protected.*

**Main requirements for the protection system:**

- PTD must be protected from network overloads (thermal protection through use of a breaker);
- circuit breaker must have sufficient resistance to short-circuit current relative to PTD;
- protection system must have selectivity in an emergency situation.

The individual type of PTD should be selected according to the current consumption depending on the number of protected equipment and differential current based on the specific type of discriminating protective system.

The display case should be connected to the power supply network with a separate supply cable through a separate thermal-magnetic circuit breaker for 10 A trip current in the power distribution board, which performs the functions of a safety device and main breaker of the display case. After all the equipment is connected, the power supply system has to be checked for peak (maximum) load. To do this make sure that all the electrical equipment turns back on after interruption of power supply and does not trip circuit breakers. Otherwise the power supply system has to be modified to differentiate startup of equipment.

Connecting several devices to one circuit breaker with nominal trip current is not allowed.

Cross section of power supply cables should be at least 1.5 mm<sup>2</sup>

Use three-core cable. Use of five-core cables is not allowed. Also, do not use extension cords and plug sockets to connect several consumers.

 **Attention!** *Installation, startup, maintenance and repair of products shall only be performed by specialized repair and installation companies (service centers).*

## **OPERATIONS AND MAINTENANCE MANUAL**

1. Service life of the product and safety of its operation depends on observance of the operation rules and requirements of this data sheet.
2. The product meets its operational characteristics when operates in premises where temperature and relative humidity do not exceed, respectively: +25°C and 60% RH, and

the installation location follows the rules listed above. Otherwise the operational characteristics will be lower, which can result in spoilage of food products. The product may break down, and warranty obligations in this case will not apply.

3. After connection of the product to power network pursuant to the rules presented above you can start it up from the control panel.

The control panel is shown in Figure 2.

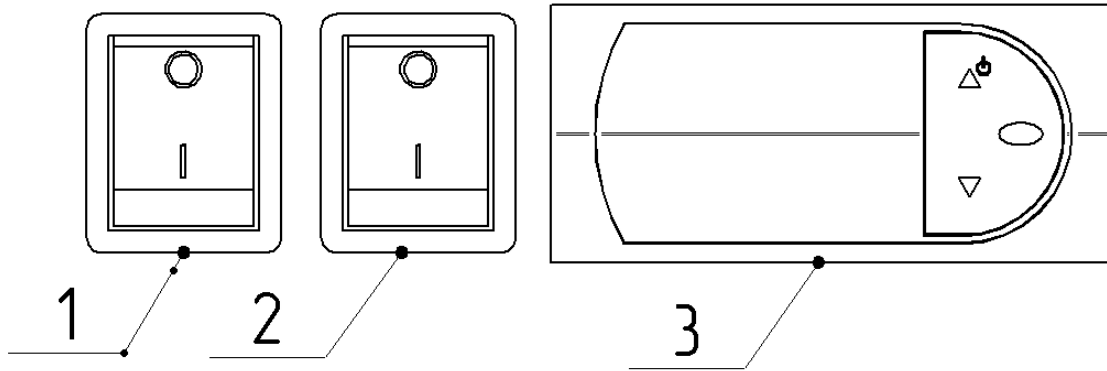


Figure 2. Control panel with controller

1. Light switch;
2. OFF button;
3. Controller device

**! Attention!** *The controller is used for automatic maintenance of preset temperature in the refrigerated volume and control of the evaporator defrosting process. The factory settings provide for the optimal product operation mode. Readjustment of the controller must only be done by service organization workers.*


4. Before loading the refrigerated volume of the device with food products connect the device to power network and wait for the temperature of refrigerated volume to reach the required value.

**! Attention!** *Load the device with chilled products, placing them on shelves evenly and not exceeding the maximum permitted load.*

**! Attention!** *Do not close the air intake openings with products.*

**! Attention!** *Distance between products and back hinged panels should be at least 2 cm.*

**! Attention!** *Failure to meet these requirements leads to disruption of air circulation, deterioration of the operational characteristics of the product, which can result in increasing temperature of food products and faster development of frost on evaporator, breakdown of the equipment.*

 **Attention! Do not store inside the product explosive substances and such objects as aerosol cans with flammable mixtures.**

5. The product compressor works in cycles, turning off when the preset temperature is reached, and turning on when it increases by 2-3°C. During this process air temperature in some points of the refrigerated volume can increase for a short time and differ from the controller readings, which is not considered a defect.

6. During the product operation the compressor periodically stops to defrost the evaporator. During defrosting temperature in the refrigerated volume can go up, which is not a defect.

7. Fogging of glass enclosure of the product can occur when air humidity exceeds 60% or when the ambient temperature exceeds 25°C, and is not considered a defect.


8. A person appointed by the company director is responsible for maintenance, its arrangement and timely repairs.

9. Operation of the product is only allowed for persons who have received safety instructions and know the product handling rules.

10. Workers of the company where the product is installed can perform the following works that do not require tools and dismantlement:

a) monitoring of temperature in the refrigerated volume;

b) monitoring of condition of the product, its proper loading, condensate drain system;


 **Attention! In products not equipped with condensate evaporator or not connected to fixed sewer for condensate removal, defrost water flowing down from the evaporator during defrost is collected in special containers located in the service compartment. Periodically check the level in container and pour water out as needed. If the product is connected to sewer the stub pipes have to be equipped with water seal.**

c) visual inspection of the motor compartment including check of tightness of pipelines - traces of oil on connections indicate halon leak;

d) visual inspection of evaporator (air cooler) for presence of excessive frost deposits;

e) inner surfaces and dismantled parts of equipment have to be washed with soft detergent than rinsed with clean warm water and wiped dry with a soft rag **at least once a week**, after which the equipment has to be left overnight for ventilation.

f) condenser has to be cleaned with a bristle brush or vacuum cleaner **at least once a month, and in summer - once every two weeks.**

 **Attention! Only perform cleaning (washing) of unloaded and disconnected from power supply network product (power cord plug has to be removed from the outlet of fixed wiring network).**

 **Attention!** *If the product is equipped with doors, they have to be opened for ventilation.*

**Attention!** *In case of any signs of faulty operation of the product or any traces of halon leak immediately disconnect the product from the power supply network and call representative of a specialized service organization (dealer's service center).*

## REPLACING THE LED LAMPS


The lighting inside the cabinet is obtained by LED lamps that allow:

- to reduce lighting consumption
- to reduce rated power
- duration of the lights for more than 6 years
- instant power on

LEDs replacement

1. remove electric power supply to the cabinet
2. turn bulb D by about 90° (until it clicks) and pull it out from the bulb-holder
3. replace the bulb with an identical one
4. restore electrical power supply

## MAINTENANCE

 **Attention!** *Keeping the product in proper operating shape requires monthly maintenance by a service organization. A person appointed by the company director is responsible for preparation and organization of maintenance and timely repair of the product.*

**Maintenance must include the following mandatory works:**

- a) visual inspection of completeness and technical condition of the product;
- b) check of presence and status of grounding system, its components and connections, check of transient resistance between the ground clamp of the display case and accessible metal parts of the display case, which should not exceed 0.1 Ohm;
- c) lighting system operation check;
- d) check of automatic defrost of evaporator and condensate drain;
- e) cleaning of refrigerating unit condenser from dust and dirt;
- f) check of tightness of refrigeration system;
- g) check of leak currents, which should not exceed 3.5 mA.

During the works described in paragraphs a), b), e), f), g) the product has to be disconnected from the power supply network (by pulling power cord plug from power outlet).

In case of damages to power cord or malfunction of lighting fixtures they have to be replaced by a service company specialist.



***Attention! Every maintenance has to be recorded in OM.***

Maintenance work includes maintenance during use, routine maintenance and current repair of equipment.

Maintenance during use includes the works related to cleaning of the product.

Routine maintenance and current repair of the product can be performed by persons holding a document confirming their right to perform repairs - retail and process equipment installation and repair specialists.

Maintenance information should be recorded in an accounting document.

Routine maintenance and current repair are performed according to the following repair cycle:

5 MT - CR...- 5 MT

where MT – maintenance

CR – current repair

MT is performed once a month

CR is performed once every six months.


List of preventive maintenance works required during servicing of refrigeration equipment with connection to external refrigerating unit:

- insulation resistance measurement;
- visual inspection of technical condition of equipment;
- visual inspection of automation assemblies for absence of external damages and reliability of fixation;
- cleaning of defrost water drain system;
- check of tightness of refrigeration system;
- technical inspection of electrical equipment, checking of tightness of contact of electrical devices and reliability of connection of ground wires to the grounding bolt;
- check and adjustment of control devices;

- check and adjustment of operating parameters of refrigerated display case in accordance with the data sheet specifications.

List of preventive maintenance works required during servicing of refrigeration equipment:

- visual inspection of technical condition of equipment;
- visual inspection of automation assemblies for absence of external damages and reliability of fixation;
- cleaning of defrost water drain system;
- cleaning of refrigeration unit components from pollution and condenser from dust;
- cleaning of electrical equipment;
- check of tightness of refrigeration system;

 ***Attention! Disruption of tightness of the system with refrigerant circulating in it (for any reason) can result in refrigerant leak and getting into eyes and on skin. Fast evaporation of liquid refrigerant can cause cold burn.***

- technical inspection of electrical equipment, checking of tightness of contact of electrical devices and reliability of connection of ground wires to the grounding bolt;
- check and adjustment of control devices;
- check and adjustment of operating parameters of refrigerated display case in accordance with the data sheet specifications.

List of maintenance works required during current repair of refrigeration equipment with connection to external refrigerating unit:

- performance of works required by maintenance;
- check of tightness of electrical contact connections;
- check of resistance between ground clamps and metal parts of the equipment that may end up being energized in case of insulation break.


Based on inspection results:


- elimination of freon leak and replenishment of freon in the system;
- replacement of automation devices and refrigeration fittings (thermovalve, solenoid valve, etc.).

 ***Attention! Do not use any refrigerant other than specified in the OM.***



 **Attention!** *Alterations of the display case electrical circuit are not allowed and will result in cancellation of warranty obligations.*

 **Attention!** *The product has to be disconnected from power supply network during maintenance, fault correction and sanitary treatment operations.*

 **Attention!** *Correction of faults should be performed only by a specialized organization (dealer's service center).*

Utilization of thermal insulation material - polyurethane foam, after expiration of the service life and writing off by burning is not allowed. For proper disposal equipment has to be buried at minimum two meter depth at a special dump site.

## **TRANSPORTATION**

Packaged product can be transported by all types of transport, except for air, pursuant to the cargo haulage rules in effect for such type of transport.

## **STORAGE**

Before being put for storage the product has to be cleaned, washed and dried.

During storage the product has to be deenergized, covered from dust and direct sunlight.

Temperature in a room where the product is stored should not be below -35°C or above +40°C, relative humidity – not exceeding 70%. Vibration of the floor or rack where the product is stored is not allowed.

## **WARRANTY OBLIGATIONS**

The factory guarantees proper operation of the equipment subject to compliance with the operation and installation requirements, and if installation was done by a subcontractor organization authorized by the manufacturing plant.

A mandatory condition for an event to be considered a warranty event is strict observance of the operating conditions by the Owner, as specified in the Operations Manual and other documents delivered to the user together with the product.

Elimination of identified defects and replacement of faulty components of the product during the warranty operation period must be done by service organizations.

The warranty is valid subject to maintenance of the product. Warranty obligations do not include maintenance during the warranty period. Maintenance is a charged service provided by a service organization.

During startup works the buyer must conclude an agreement with a service organization for maintenance of the product.

**Warranty obligations are valid if the buyer has the following documents:**

- Manuals for the product;
- Product Commissioning Statement;
- Agreement with a service organization for maintenance works.

The statements have to get signed by the Buyer, service organization representative and certified with the corresponding seals.

Please thoroughly read the Operating Instructions before using the product.

**Warranty shall not be provided in the following cases:**

- violation of the operating conditions, as specified in the Operating Instructions and other documents delivered to the user together with the product;
- if the product has signs of attempts to open, repair equipment by the user, if warranty seals are broken (if used);
- if malfunction is caused by unauthorized alteration of the product design or construction, not permitted by the manufacturer;
- if malfunction is caused by nonconformity of supply network parameters to the standards;
- if the product has mechanical damages;
- if damages are caused by operation of the product in conditions exceeding the specified IP rating;
- if damages are caused by penetration of dirt or moisture between the contacts of outlets on the control panel, power supply unit and high-frequency cable - for products with any IP rating;
- in case of identification of damages caused by high or low temperatures that exceed the range specified in the product documentation, corrosion, oxidation, penetration of foreign objects, substances, liquids, animals, insects inside the product, the protection from which is not guaranteed by the manufacturer;
- if the product serial number is destroyed or illegible;
- if the defect is caused force majeure circumstances, accidents, natural disasters, intentional or careless actions of the user or third parties;
- if configuration of the product does not match factory supply.
- if the Owner performs repair or replacement of assemblies, components, materials on its own or with engagement of persons who were not authorized by the manufacturer;

- local corrosion damages due to natural aging or in places of paint chips, as well as abrasive impact on coating from small rocks, sand, etc.;

- broken, cracked or scratched decorative parts, their discoloration, if it was not caused by a defect in materials or factory workmanship.

- operation of the product does not match the requirements specified in this Manual;

- parts and components have damages resulting from non-observance of transportation, handling, storage, startup, operation rules;

- damages caused by incorrect connection, operation in abnormal conditions or in conditions not specified by the manufacturer;

- damages are caused by excessive fluctuations in the power supply network;

- damages are caused by a fire, lightning strike, flooding or other natural disasters;

- there are alterations to the construction or configuration of the product, or repair was performed by an unauthorized person;

- the product has mechanical damages, traces of damages caused by chemical substances;

- the product was operated with violation of the requirements specified in this Manual;

- warranty does not cover parts made of glass and light sources, consumable materials.


- if the product was delivered to the buyer by transport that does not belong to the manufacturer, the manufacturer will not accept claims related to quality, completeness and mechanical damages.

- manufacturer does not guarantee compatibility of the purchased product with the Buyer's equipment.


- manufacturer is not obliged to accept back properly functioning product if it did not suit the Buyer for any reason.


- if specialists from the manufacturing plant or specialized organization authorized to perform warranty repairs establish facts that point at the Buyer's fault in breakdown of the product, the Buyer shall pay all costs that the organizations mentioned above have incurred in dispatching their specialists. The obligation to prove guilt in this case lies on the Buyer.

- should any of the paragraphs listed above be violated, the manufacturer shall be entitled to terminate the warranty immediately without additional notification.

 **Attention! This warranty does not limit the consumers' rights granted by the current law. After expiration of the warranty period the manufacturer shall not bear responsibility for the sold product.**


If you have any problems with operation of the product we recommend to get preliminary technical consultation from the service center specialists by phone \_\_\_\_\_ or by e-mail \_\_\_\_\_.

 **Attention! Any intervention in the construction of the product during the warranty period is only allowed for service center specialists or certified contractors. Intervention by other service organizations requires written permission (authorization) from the manufacturing plant. Otherwise validity of the warranty will be terminated.**

 **Attention! IN CASE OF FAILURE TO FOLLOW THIS INSTRUCTION IN THE PART RELATED TO CONNECTION AND OPERATION OF THE PRODUCT THE MANUFACTURER RESERVES THE RIGHT TO REFUSE THE WARRANTY OBLIGATIONS!**

## **DISPOSAL**

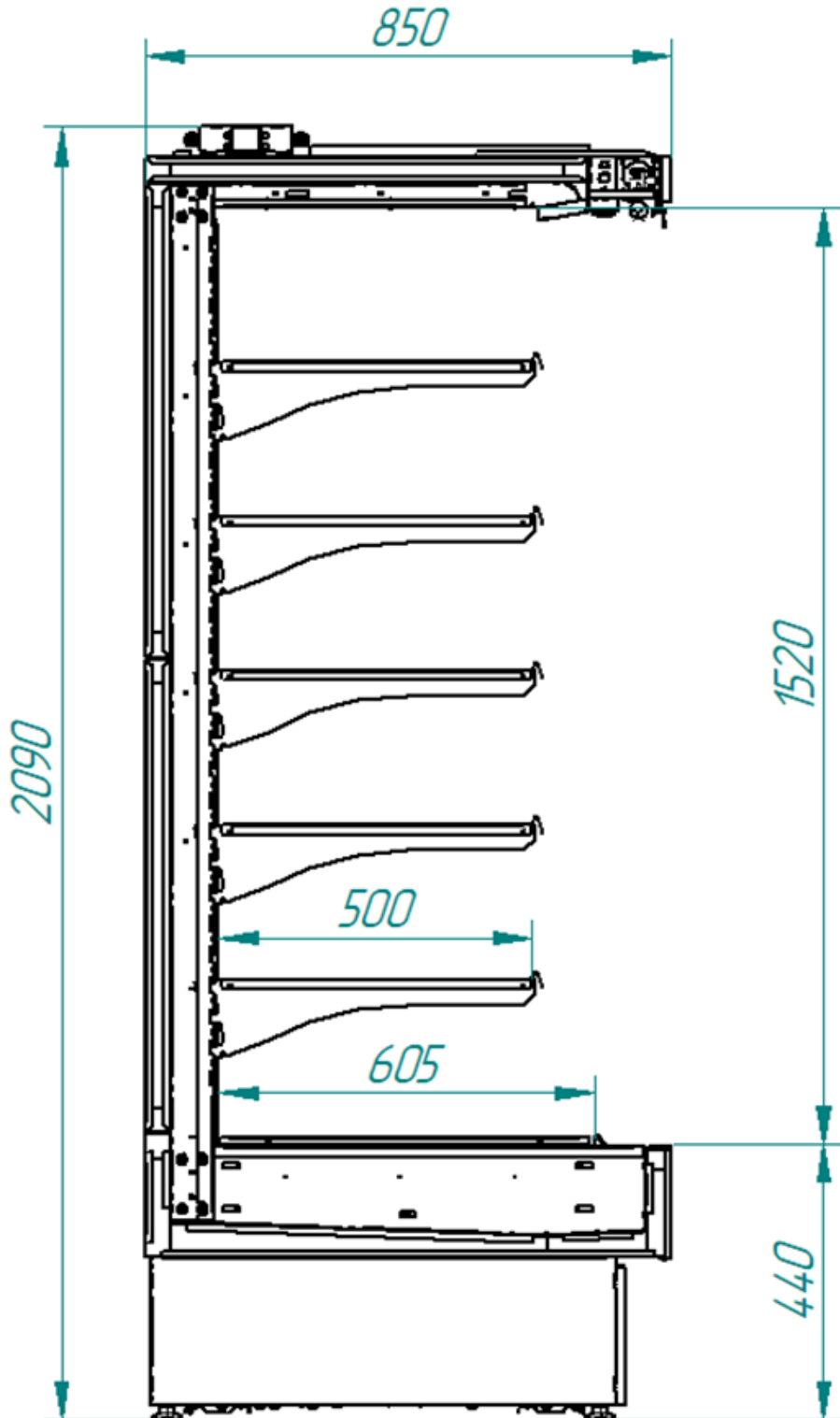
Materials used for packaging of refrigeration equipment can be completely processed and reused if taken to a recycling station.

 **Attention! Do not allow children play with packing materials, since there is a hazard of suffocating if trapped inside the cardboard box or packing film.**

Refrigeration equipment requiring disposal should be taken to non-operating condition by cutting off the power cord, and then disposed of in accordance with the current national laws.

Refrigerant contained in the refrigeration system must be disposed of by a specialist. Need to pay attention and make sure that refrigeration system tubes are not damaged before disposal.

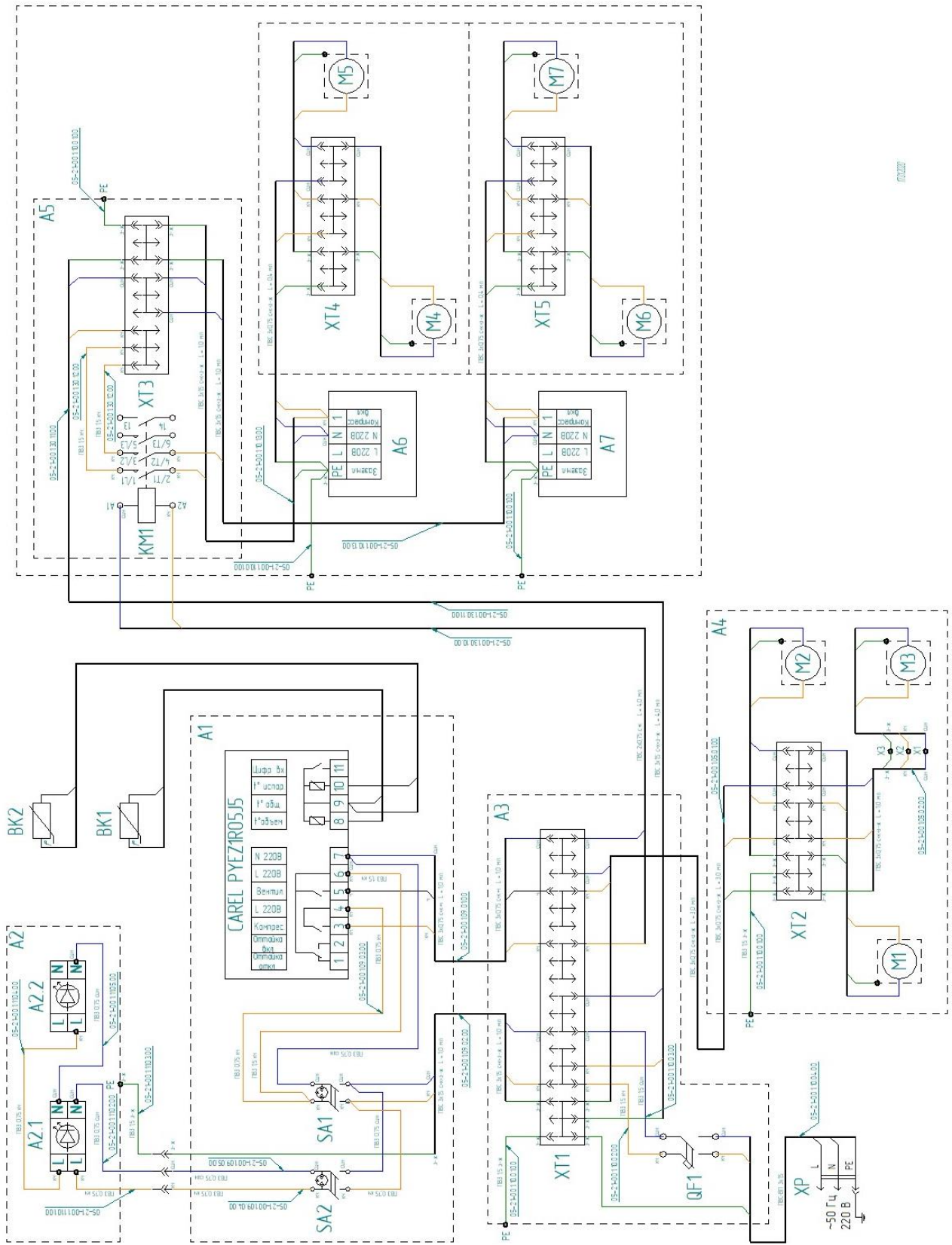
**PRODUCT DRAWING**



## ELECTRIC DIAGRAM

Design	Length	Lighting lamp	Circuit breaker	Fan panel motor	Condenser motor
Svityaz Q 100	1000	A2.1	BA47-29 2P 10A C	M1+M2	M4+M5
Svityaz Q 120	1200	A2.1	BA47-29 2P 16A C	M1+M2	M4+M5
Svityaz Q 150	1500	A2.1+A2.2	BA47-29 2P 16A C	M1+M2+M3	M4+M5+M6+M7
Svityaz Q 180	1800	A2.1+A2.2	BA47-29 2P 16A C	M1+M2+M3	M4+M5+M6+M7

Pos. Description	Name	Q-ty	Remarks
A1	Control unit	1	
SA1	Power switch	1	green
SA2	Light switch	1	yellow
BK1	Inside temperature sensor	1	
BK2	Evaporator temperature sensor	1	
A2	Lighting panel		
A2.1, A2.2	Inside illumination lamps	Table 2	
A3	Connection unit	1	
XT1	Transformer terminal block OK 508 F/F	6	
QF1	Two-pole automatic circuit breaker BA47-29 2P	Table 2	
XP	Power cord with a plug	1	
A4	Fan panel	1	
M1, M2, M3	Fan panel motors	Table 2	
XT2	Transformer terminal block OK 508 F/F	3	
X1, X2, X3	Insulated connection sleeves in PVC enclosure	3	For versions 1500, 1800
A5	Connection unit KKA	1	
XT3	Transformer terminal block OK 508 F/F	3	
KM1	Contactora 9A	1	
A6	Compressor	1	
XT4	Transformer terminal block OK 508 F/F	3	
A7	Compressor	1	
XT5	Transformer terminal block OK 508 F/F	3	



## ACCEPTANCE CERTIFICATE

Product, factory No. \_\_\_\_\_, corresponds to the technical specification and is declared fit for operation, packaged by the manufacturer according to the technical documentation.

Electrical wiring of the product is designed for 230 V.

Date of production \_\_\_\_\_

Refrigeration compressor \_\_\_\_\_ No. \_\_\_\_\_,

Packer No. \_\_\_\_\_

Responsible for acceptance \_\_\_\_\_ /  
(signature/name)

LS



## PRODUCT COMMISSIONING STATEMENT

This Statement is prepared by the product owner

\_\_\_\_\_  
(organization name and address)

\_\_\_\_\_  
(position, full name of organization's representative)

and representative of service organization

\_\_\_\_\_  
(organization name and address)

\_\_\_\_\_  
(position, full name of organization's representative)

\_\_\_\_\_  
(identification document No., by whom and when issued)

(affix personal stamp here)

certifies that the product

\_\_\_\_\_  
(name of product)

factory No. \_\_\_\_\_, with refrigeration compressor  
\_\_\_\_\_ No. \_\_\_\_\_, purchased on  
" \_\_\_ " \_\_\_\_\_ 20\_\_ from \_\_\_\_\_,  
(organization name)

city \_\_\_\_\_, telephone \_\_\_\_\_,

was put into operation and accepted for maintenance in accordance with agreement No.  
\_\_\_\_\_ dd. " \_\_\_ " \_\_\_\_\_ 20\_\_ between the product owner and  
organization \_\_\_\_\_

Statement prepared and signed

Product owner

Representative of organization  
putting the product  
into operation

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
(signature)

" \_\_\_ " \_\_\_\_\_ 20\_\_

LS

LS

## MAINTENANCE RECORDS

Date	Type of maintenance	Position, last name and signature	