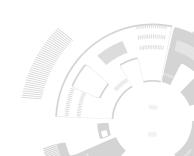


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RM Rail is an integrated full-cycle manufacturer of freight rolling stock for railways, equipment for the oil and gas and petrochemical industries, vertical steel tanks, modular buildings, containers and tank containers, as well as large-sized, medium-sized and small-sized cast products.





>100 rail car models

Including Russia's first hopper with a body made of aluminum alloys



>8 000 company's employees

Staff development programs and work conditions make RM Rail one of the most appealing employers



Our priority is an individual approach to each customer

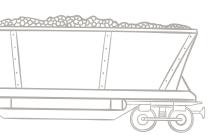


55000

tons of cast products annually

Own v-process casting complex





12 000 rail cars per year

Transportation of various cargo in any climatic conditions



The company's production assets are located in the Republics of Mordovia and Khakassia



1 FREIGHT CARS

RM Rail produces over 100 models of certified rail cars - these are technological, reliable and "smart" rail cars, many of which are unique in Russia and the CIS. Enhanced load capacity, extended service life, a broader range of transported cargo, and their intricate combination provide added value for the customer.



TANK CAR for petroleum products transportation







82

Types of transported goods

The lightweight design of the platform provides a significant reduction in the tank rail car unladen weight, increasing the load capacity by 3 t and the useful capacity by 12.5 m³ compared to competitive equivalents

The reinforcing rings made it possible to use a material of smaller thickness and lighten up the tank vessel structure

The intermediate gate of the drain device is made in the form of a valve, which reduces much the wear of the sealing gasket

The drain device has three degrees of protection.

Increased load capacity

The original design features enable to extend the warranty service period.

oad capacity, t	69.0
Jnladen weight, t, min/max	23.2/25.0
Tank vessel cubic capacity, m3	85.5
Axial load, tf	23.5
Sauge as per GOST 9238	1-T
ength between truck centers, mm	7,800
ength over pulling faces of couplers, mm	12,020
leight above rail top, mm	4,820
Tank vessel inner diameter, mm	3,200
Service life, years	32



tank cars for transporting light and dark oil products

TANK CAR for transporting petrochemical goods

15-1210-03







Types of transported goods

Transportation of benzene, xylene (ortho-, meta-, para-), toluene, paraxylene, industrial alcohols, ethylbenzene, MTBE, ethers, linear alkylbenzene, solvent, fractions of aromatic hydrocarbons, etc. is possible. Design features allow to transport the widest possible range of products, which significantly reduces the empty mileage of the car.

Load capacity, t	66.0
Unladen weight, t,	28.0
Tank vessel cubic capacity, m3	73.0
Axial load, tf	23.5
Tank vessel inner diameter, mm	3,000
Gauge as per GOST 9238	02-VM
Length between truck centers, mm	7,800
Length over pulling faces of couplers, mm	12,020
Height above rail top, mm	4,615
Service life, years	24
Basic material, steel	09G2S-14

The use of a steam-heating jacket in the design allows the transportation of viscous oil products.

TANK CAR for transporting chemical cargo with an axle load of 25 tf

15-1286



The lightweight design of the platform provides a significant reduction in the tare weight of the rail car, increasing the load capacity by 3 tons and the useful capacity by 12.5 m³ compared to competitive equivalents

Load capacity, t	73.0
Unladen weight, t, min/max	26.0/27.0
Tank vessel cubic capacity, m3	88.1
Axial load, tf	25.0
Gauge as per GOST 9238	1-T
Length between truck centers, mm	7,800
Length over pulling faces of couplers, mm	12,020
Height above rail top, mm	4,900
Tank vessel inner diameter, mm	3,200
Service life, years	32

TANK CAR for the transportation of molten sulfur

15-1256, 15-1269, 15-1269-01

ENHANCED





CHARACTERISTICS



A stainless steel protective collar under the loading hatch prevents sulphur from getting under the heat insulating jacket, thus preventing its corrosive wear. Free access for steam supply under the heat insulating jacket in case of sulfur ignition. Improved thermal insulation allows to keep cargo in heated (liquid) state for 6-10 days at ambient air temperature up to minus 40°C.

15- model	1,256	1,269	1,269-01
Load capacity, t	65.0	72.5	72.5
Rail car unladen weight, t	29.0	27.5	27.5
Tank vessel cubic capacity, m ³	38.4	44.0	44.0
Axial load, tf	23.5	25.0	25.0
Tank vessel inner diameter, mm	2,200	2,400	2,400
Gauge as per GOST 9238	02-VM	1-T	1-T
Length between coupling faces, mm	12,020	12,020	12,020
Tank rail car bogie center distance, mm	7,800	7,800	7,800
Availability of an electric heater	Yes	Yes	Yes
Availability of thermal insulation	Yes	Yes	Yes
Time of cargo preservation in liquid state, days	6	10	10

TANK CAR for transportation of liquid coal-tar asphalt with an axial load of 25 tf

15-1257, 15-1257-01





Seamless tank insulation is designed to avoid thermal losses during bulk load preheating and transportation.

Electric main connection is now possible on both sides, a solution that simplifies the connection/disconnection of steam lances and discharge metal hoses.

69,5. Increased load capacity

15- model	1,257	1,257-01
Load capacity, t	69.5	69.5
Unladen weight, t, min/max	29.5/30.5	28.2
Tank vessel cubic capacity, m ³	63.1	56.8
Axial load, tf	25.0	25.0
Gauge as per GOST 9238	1-T	1-T
Length between truck centers, mm	7,800	7,800
Length over pulling faces of couplers, mm	12,020	12,020
Preheating system type	Tubular electric	Tubular electric

Preheating system type	Tubular electric air heaters	Tubular electric air heaters
Service life, years	24	32



TANK CAR for transportion of methanol

The tank car load capacity is fully utilized regardless of the temperature of the loaded cargo.

66,5 Increased load capacity

among analogues with an axle load of 23.5 tf



The filling valve is protected by a casing, which has a locking and sealing device to prevent unauthorized access.

Optimal ratio of load capacity to tank vessel volume for 1-T gauge.

Volume has been increased

an

Unladen weight, t 27.5 Tank vessel cubic capacity, m³ 87.1 Axial load, tf 23.5 Gauge as per GOST 9238 1-T Length between truck centers, mm 7,800 Tank vessel length, mm 11,400 Tank vessel diameter, mm 3,200		
Tank vessel cubic capacity, m³ 87.1 Axial load, tf 23.5 Gauge as per GOST 9238 1-T Length between truck centers, mm 7,800 Tank vessel length, mm 11,400 Tank vessel diameter, mm 3,200	Load capacity, t	66.5
Axial load, tf 23.5 Gauge as per GOST 9238 1-T Length between truck centers, mm 7,800 Tank vessel length, mm 11,400 Tank vessel diameter, mm 3,200	Unladen weight, t	27.5
Gauge as per GOST 9238 1-T Length between truck centers, mm 7,800 Tank vessel length, mm 11,400 Tank vessel diameter, mm 3,200	Tank vessel cubic capacity, m³	87.1
Length between truck centers, mm 7,800 Tank vessel length, mm 11,400 Tank vessel diameter, mm 3,200	Axial load, tf	23.5
Tank vessel length, mm 11,400 Tank vessel diameter, mm 3,200	Gauge as per GOST 9238	1-T
Tank vessel diameter, mm 3,200	Length between truck centers, mm	7,800
· · · · · · · · · · · · · · · · · · ·	Tank vessel length, mm	11,400
Service life, years 32	Tank vessel diameter, mm	3,200
	Service life, years	32

-	
mong analogues vith an axle load of 23.5 tf	



TANK CAR for transportation of liquid nitrogen fertilizers



Increased 67,5 Increased load capacity

Optimal combination of load capacity and tank vessel volume. The structure is fitted with a steam heating jacket.

Load capacity, t	67.5
Unladen weight, t, min/max	25.7/26.5
Tank vessel cubic capacity, m³	53.5
Axial load, tf	23.5
Tank vessel diameter, mm	2,600
Gauge as per GOST 9238	02-VM
Length between truck centers, mm	7,800
Length over pulling faces of couplers, mm	12,020
Height above rail top, mm	4200
Service life, years	24
Basic material	09G2S-14

TANK CAR for transportation of concentrated nitric acid with an axial load of 25 tf

15-1232-05



78,6 Load capadincreased

Load capacity

40 years service life

Extended

The tank vessel is made of aluminum alloy. Corrosion resistance

Load capacity, t	78.6
Unladen weight, t	21.4/20.4
Tank vessel cubic capacity, m³	61.8/51.9
Axial load, tf	25.0
Tank vessel diameter, mm	2,800
Gauge as per GOST 9238	02-VM
Length between truck centers, mm	7,800 ± 5
Length over pulling faces of couplers, mm	12,020
Height above rail top, mm	4,633
Availability of a safety valve	Available
Existence of a protective diaphragm	Available
Inclination towards the sump	Available
Service life, years	40

TANK CAR for transportation of liquefied hydrocarbon gases

15-1288. 15-1288-01





Design pressure: 15-1,288 2.16 MPa 15-1,288-01 1.85 MPa The design features of the car provide the customer with high warranty periods.



Enforced safety arc elements provide reliable protection of the fixture compartment in an emergency while arc bolting to the tank shell reduces working hours in the event of repair or replacement of affected components.

15-1,288 model allows to transport propylene.

Transportation of liquefied hydrocarbon gases with a density up to $0.71 \, t/m^3$.

The design provides an option of using bulk liquid handling facilities either produced in-house or purchased from benchmark companies.

15- model	1,288	1,288-01
Load capacity, t	56.0	56.0
Unladen weight, t, t / tah	36.0/38.0	36.0/38.0
Tank vessel cubic capacity, m³	87.1	87.1
Design pressure, MPa	2.16	1.85
Axial load, tf	23.5	23.5
Gauge as per GOST 9238	1-T	1-T
Length between truck centers, mm	7,800	7,800
Length over pulling faces of couplers, mm	12,020	12,020
Height above rail top, mm	5,250	5,250
Tank vessel inner diameter, mm	3,200	3,200
Service life, years	40	40

TANK CAR for transportation of ammonia

and liquefied hydrocarbon gases

Tank cars for transporting chemical, special loads,

15-1288-02





Volume has been increased

The tank vessel is made of highstrength steel.

The car fully meets the infrastructure requirements of shippers/consignees at maximum tank vessel capacity. Reinforced protective shields on the car frame significantly reduce the risks of tank vessel damage in emergency situations.

Load capacity, t	56.0
Unladen weight, t, min/max	36.0/38.0
Tank vessel volume, m³: full	87.1
Axial load, tf	23.5
Gauge as per GOST 9238	1-T
Length between truck centers, mm	7,800
Length over pulling faces of couplers, mm	12,020
Height from rail head level, max, mm	5,250
Tank vessel inner diameter, mm	3,200
Service life, years	40



TANK CAR for transporting phenol 15-1225, 15-1225-01



The stainless steel version of the car tank vessel increases the service life from 18 to 27 years. Installation of protective screens.

Equipped with a steam heating jacket.

15- model	1,225	1,225-01
Load capacity, t	63.0	63.0
Unladen weight, t, min/max	27.2/28.8	27.3/28.9
Tank vessel cubic capacity, m ³	63.0	63.0
Axial load, tf	23.5	23.5
Tank vessel inner diameter, mm	2,800	2,800
Gauge as per GOST 9238	02-VM	02-VM
Length between truck centers, mm	7,800	7,800
Length over pulling faces of couplers, mm	12,020	12,020
Height above rail top, mm	4,566	4,566
Service life, years	18	27
Basic material	09G2S-14 with an internal coating	12Kh18N10T

TANK CAR for transporting hydrochloric acid

15-1230



With the possibility of gumming.

Optimal load capacity for each type of cargo. Transportation of hydrofluoric (hydrofluoric) and silicofluoric acids is permitted.

Load capacity, t	66.8
Unladen weight, t, min/max	25.7/28.5
Tank vessel cubic capacity, m³	62.0
Axial load, tf	23.5
Tank vessel diameter, mm	2,800
Gauge as per GOST 9238	02-VM
ength between truck centers, mm	7,800
ength over pulling faces of couplers, mm	12,020
leight above rail top, mm	4,556
Service life, years	18
Basic material, steel	09G2S-14

TANK CAR for the transportation of weak nitric acid

15-1232



It is possible to use a 23.5 tf bogie with the same tank vessel volume and list of transported cargo.

Transporting the widest possible range of cargo reduces empty mileage.

Transportation of caustic soda, acetone, nitrogen solutions, acetic acid with a concentration of more than 80% by weight is permitted.

Load capacity, t	68.0
Unladen weight, t, min/max	24.8/25.6
Tank vessel cubic capacity, m³	54.0
Axial load, tf	23.5
Tank vessel diameter, mm	2,600
Gauge as per GOST 9238	02-VM
Length between truck centers, mm	7,800
Length over pulling faces of couplers, mm	12,020
Height above rail top, mm	4,556
Service life, years	27
Basic material, steel	08X18H10T

TANK CAR for transportation of vegetable oils

15-1219-1P



69₊

Increased load capacity

The tank vessel is made of low-alloy steel with food-grade rubber seals to preserve the quality of oils.

Design features allow to transport the widest possible range of cargo, which significantly reduces the empty mileage of the car.

Load capacity, t	69.0
Unladen weight, t, min/max	23.2/25.0
Tank vessel cubic capacity, m³	85.5/83.79
Axial load, tf	23.5
Gauge as per GOST 9238	1-T
Length between truck centers, mm	7,800
Length over pulling faces of couplers, mm	12,020
Tank vessel diameter, mm	3,200
Service life, years	30

TANK CAR for transportation of vegetable oils

15-1210-1P





15

Types of transported goods



The tank vessel is made of carbon steel with food-grade rubber seals to preserve the quality of oils.

Steam heating jacket.

Load capacity, t	66.0
Unladen weight, t, min/max	26.7/28.0
Tank vessel cubic capacity, m ³	72.4
Axial load, tf	23.5
Gauge as per GOST 9238	02-VM
Length between truck centers, mm	7,800
Length over pulling faces of couplers, mm	12,020
Tank vessel diameter, mm	3,000
Service life, years	30

TANK CAR for transporting molasses

15-1233



Loading - through the hatch when hatch cover opened. Unloading occurs by gravity when the discharge device and hatch cover are open.



The tank vessel is made from stainless steel.

Multi-purpose draining device with two degrees of protection.

Transportation of molasses, vegetable oils, syrups is possible.

67.5
25.5/26.5
53.5
23.5
02-VM
7,800
12,020
120
2,600
30



HOPPER CAR for transporting mineral fertilizers with an axle load of 25 tf

19-1299, 19-1299-01





40 years Extended service life

Extended

19-1299-01 model is designed to utilize an innovative bogie with a 25 tf load capacity.

Corrosion resistance All-welded aluminum alloy body.

Solid loading opening on the roof. Transportation cost for 1 ton of bulk cargo is reduced by 10%.

Load capacity, t	79.0
Unladen weight, t	20.0/21.0
Body capacity, m ₃	111.0
Axial load, tf	25
Gauge as per GOST 9238	1-T
Length between truck centers, mm	10,300 ± 10
Length over pulling faces of couplers, mm	14,520 ± 20
Height above rail top, mm	4,910 ± 20
Car width, mm	3,250 ± 15
Number of loading hatches, pcs	1
Number of unloading hatches, pcs	6
Nominal dimensions of opening in the light of the loading hatch, mm	500 × 8,700
Nominal dimensions of opening in the clear unloading hatch, mm	430 × 1,300
Service life, years	40



HOPPER CAR for bulk cargo transportation

19-1273, 19-1273-01, 19-1273-02, 19-1274, 19-1274-01



19-1273,19-1273-01,19-1273-02 models with an axial load of 25 tf.



19-1273,19-1274,19-1273-02 models are designed for bulk transportation of granulated coarse-grained crystalline non-caking corrosive-active mineral fertilizers and other loose powdery raw materials.

They feature an internal protective body coating which is resistant to aggressive environments.

List of transported cargo: 78 items.

19-1,273-01;19-1,274-01 models are intended for bulk transportation of grain and other foodgrade powdery and granulated materials.

The cars have an internal protective coating of the body, permissible to contact with food.

Minimum unladen weight and maximum carrying capacity among equivalent rail cars with a steel body.

List of transported cargo: 81 items.

19- model	1,273	1,273-01	1,273-02	1,274	1,274-01
Load capacity, t	77.0	77.0	77.0	71.0	71.0
Unladen weight, t, tt/tach	22.0/23.0	22.0/23.0	22.0/23.0	22.0/23.0	22.0/23.0
Body capacity, m³	107.0	107.0	107.0	107.0	107.0
Axial load, tf	25.0	25.0	25.0	23.5	23.5
Car length over pulling faces of couplers, mm	14,220 ± 20	14,220 ± 20	14,220 ± 20	14,220 ± 20	14,220 ± 20
Length between truck centers, mm	10,000 ± 10	10,000 ± 10	10,000 ± 10	10,000 ± 10	10,000 ± 10
Height from the rail level, mm	4,920 ± 20	4,920 ± 20	4,920 ± 20	4,920 ± 20	4,920 ± 20
Width, mm	3,250 ± 15	3,250 ± 15	3,250 ± 15	3,250 ± 15	3,250 ± 15
Number of hatches: - loading hatches	4	4	4	4	4
- unloading hatches	6	6	6	6	6
Drive of the unloading gates		Lever-s	crew mechanism with	attachable covers	
Gauge as per GOST 9238	1-T	1-T	1-T	1-T	1-T
Bogie model	18-194-1	18-194-1	18-9,891	18-9,801	18-9,801
Service life, years	26	30	32	26	30

HOPPER CAR for transportation of cement and other bulk cargo

19-1272, 19-1272-01





Multi-purpose body.

19-1,272 model has the maximum body volume in the range of rail cars with an axial load of 23.5 tf.

19- model	1,272	1,272-01
Load capacity, t	74.0	79.5
Rail car unladen weight, t	20.0	20.5
Body capacity, m³	72.0	72.0
Axial load, tf	23.5	25.0
Length between coupling faces, mm	12,020 ± 20	12,020 ± 20
Length between truck centers, mm	7,800 ± 8	7,800 ± 8
Height above rail top, mm	4,420 ± 20	4,420 ± 20
Number of loading hatches, pcs	4	4
Number of unloading hatches, pcs	4	4
Type of unloading devices	Lever-screw type	
Nominal dimensions of opening in the light of the loading hatch, mm	Ø 659	Ø 659
Nominal dimensions of opening in the clear unloading hatch, mm	430 × 1,000	430 × 1,000
Bogie model	18-9,801	18-9,891
Service life, years	32	32

HOPPER CAR for transportation of hot sinter, pellets and other bulk cargo

19-1241



45...

Increased cubic capacity

The ridge and frame armor plates have been reinforced for protection against burn-through. Optimum balance between volume and load capacity.

Pneumatic drive of the unloading mechanism.

Load capacity, t	69.0
Unladen weight, t, min/max	24.0/25.0
Body capacity, m ₃	45.0
Axial load, tf	23.5
Gauge as per GOST 9238	1-VM
Length between truck centers, mm	7,200
Length over pulling faces of couplers, mm	12,000
Height above rail top, mm	3,670
Number of unloading hatches, pcs	2
Service life, years	15

HOPPER CAR for transportation of carbon black with protection against atmospheric precipitation



150_{m³}

Increased cubic capacity

67.

Increased load capacity



Load capacity, t	67.0
Unladen weight, t, t / tah	25.5/27.0
Body capacity, m3	150.0
Axial load, tf	23.5
Gauge as per GOST 9238	1-T
Length over pulling faces of couplers, mm	17,500 ± 20
Height above rail top, mm	4,870 ± 20
Car width, mm	3,110 ± 15
Number of loading hatches (including manholes), pcs	12(2)
Number of unloading hatches, pcs	8
Nominal clear dimension of the loading hatch opening, mm	Ø301
Nominal clear dimension of the unloading hatch opening, mm	Ø596
Nominal clear dimension of the discharge hopper opening, mm	Ø470
Service life, years	32

HOPPER RAILCAR for grain transport

19-1298



122_{m³}

Increased cubic capacity

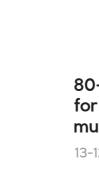


Use of the innovative bogie of 18-9891 model.

Solid roof loading opening with open lids.

oad capacity, t	76.2
Jnladen weight, t	23.8
Body capacity, m3	122.0
xial load, tf	25.0
Car length, mm	
over coupler pulling faces	14,220
between underframe headstocks	13,000
ength between truck centers, mm	10,000
leight above rail top, mm	4,940
Width, mm	3290

Number of hatches, pcs	
- loading hatches	1
- unloading hatches	6
Clear width of the loading opening, mm	500
Clear dimensions of the unloading hatch opening, mm	430 × 1,300
Type of unloading devices	Lever- screw
Four-wheel bogie model	18-9,891
Design speed, km/h	120
Service life, years	32





13-1294





Loading diagrams



2 1AAA, 1AA, 1A, 1AX containers



4 1CC, 1C, 1CX containers



11AAA, 1AA, 1A, 1AX container + 2 ICC, IC, ICX containers



2 IBBB, IBB, IB, IBX containers



3 1CC, 1C, 1CX containers



11AAA, 1AA, 1A, 1AX container



1 1CC, 1C, 1CX + container 1 1AAA, 1AA, 1A, 1AX container



1 1CC, 1C, 1CX + container 1 1BBB, 1BB, 1B, 1BX container



11CC, 1C, 1CX container

Ribless frame design. Ability to transport general purpose, isothermal, specialized containers, as well as tank containers for liquids, gases and bulk goods under pressure.

Load capacity, t	75.0
Unladen weight, t, min/max	24/25
Length between coupling faces, mm	25,220 ± 20
Gauge as per GOST 9238	1-T
Undercarriage, bogie as per GOST 9246	18-9,891
Axial load, tf	25.0
Height from the axis of the automatic couplings to the level of rail heads, mm	1,040-1,080
Maximum height, mm	1,584
Flat car base, mm	19,000
Width max, mm	2,912
Fixed fitting stops, pcs	4
Folding (or retractable) fitting stops, pcs	
- double	6
- single	8
Service life, years	32





13-1284, 13-1284-01





4 1CC, 1C, 1CX containers



2 1AAA, 1AA, 1A, 1AX containers



1 1AAA, 1AA, 1A, 1AX + container 1 1BBB, 1BB, 1B, 1BX container



1 1AAA, 1AA, 1A, 1AX container + 2 1CC, 1C, 1CX containers



3 1CC, 1C, 1CX containers



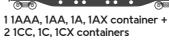
2 1BBB, 1BB, 1B, 1BX containers



1 1AAA, 1AA, 1A, 1AX + container 1 1CC, 1C, 1CX container



Service life, years



2 1CC, 1C, 1CX containers





2 1BBB, 1BB, 1B, 1BX containers

23,3 т 11CC, 1C, 1CX container

32

11AAA, 1AA, 1A, 1AX container

		13- model	1,284	1,284-01
		Load capacity, t	69.8	69.0
		Unladen weight, t	24.2	25.0
		Gauge as per GOST 9238	1-T	1-T
	Ribless frame design.	Axial load, tf	23.5	23.5
	The model is	Length between coupling faces, mm	25,220	25,220
	characterized by	Length between truck centers	19,000	19,000
	a competitive payload	Fixed fitting stops, pcs	4	4
	capacity.	Folding fitting stops, pcs		
	This rail car may be	- double	10	6
	•	- single	-	8
used for general network transportation	Transported containers	Multi-tonnage containers- tank cars and TC of 1AAA, 1AA, 1A, 1AX, 1BBB, 1BB, 1B, 1BX, 1CC, 1C, 1CX sizes	Multi-tonnage tank containers and TC of IEEE, IEE, 1AAA, 1AA, 1A, 1AX, 1BB IBB, 1B, 1BX, 1CC, 1C, 1CX siz	
		Overhaul life to roundhouse servicing:		
		- after construction, thousand km (years)	210 (no mo	ore than 3)
		- after roundhouse maintenance, thousand km (years)	160 (no mo	ore than 3)
		- after overhaul, thousand km (vears)	210 (no mo	ore than 3)

32



FLAT CAR for transportation of containers, timber and pipes

13-1289





Transportation of pipes of different diameters, containers is possible.

Multi-purpose use (no gussets at base of the stack).



Load capacity, t	70.0
Unladen weight, t, min/max	23.0/23.66
nternal volume, m³	126.0
Floor area, m²	37.0
Axial load, tf	23.5
Sauge as per GOST 9238	1-T
ength over pulling faces of couplers, mm	14,620
Car height (mm)	4,700
Car width, mm	3,220
Service life, years	32

FLAT CAR: multi-purpose

13-1258





Folding end and side boards. Equipped with small-sized retractable fitting stops. May be used for general network transportation.

FLAT CAR for transportation of large- capacity containers

13-1258-02.13-1258-03



Transported cargo: any type of multi-tonnage containers as per GOST 18477-79 with a total loading length of 40-ft. Series 1 multi-tonnage containers as per GOST R 51876-2008. GOST R 53350-2009, tank containers as per GOST 31314.3-2006 (ISO 1496-3:1995).

Installation and transportation of cargo weighing up to 45 t on a length of 3 m in the middle, or up to 62 t on a length of 4.3 m in the middle, as well as two containers of size 1C, 1CC with a gross weight of up to 36 t, tank containers for dangerous goods.

Load capacity, t

Unladen weight, t, min/max	21.0/22.0	
Floor area, m²	38.0	
Gauge as per GOST 9238	0-VM	
Axial load, tf	23.5	
Design speed, km/h	120	
Height of coupler centreline above rail, mm	1,0401,08	30
Floor covering	Wooden a	and metal
Height of loading surface above rail head, mm	1,360	
Length between coupling faces, mm	14,620 ± 2	5
Flat car base, mm	9,720	
Maximum width (with side boards open), mm	3,150	
Number of container support pedestals, pcs.	16	
13- model	1,258-02	1,258-03
Load capacity, t	72.0	72.0
Unladen weight, t, min/max	21.0/22.0	20.7/22.0
Floor area, m ³	40.0	-
Cargo weight on the platform when distributed over a length of 3 m in the platform's center, t, not exceeding	45.0	-
Cargo weight on the platform when distributed over a length of 4.3 m on the side beams, t	62.0	-
Axial load, tf	23.5	23.5
Design speed, km/h	120	120
Height of the coupling axis from the rail top level, mm	1,0401,080	1,0401,080
Height of loading surface above rail head, mm	1,360	-
Height from the rail top level to the stop's support surface	-	1,339
Length between coupling faces, mm	14,620 ± 25	-
Flat car base, mm	9,720	9,720
Maximum width, mm	3,150	3,150
Number of container fastening stops, pcs	16	16
Overhaul life to roundhouse		
maintenance: - after construction, thousand km (years)	210 (not more than 3)	500 (not more than 5)
- after roundhouse maintenance, thousand km (years)	160 (not more than 3)	300 (not more than 3)
- after overhaul, thousand km (years)	210 (not more than 3)	500 (not more than 5)
Service life, years	32	32



40-foot FLAT CAR for transportation of multi-tonnage containers

13-1258-01





Loading diagrams



1 container





1 container 1A, 1AA, 1AAA

up to 36 t

Maximum gross weight

Maximum gross weight up to 36 t Each has a maximum gross

of type 1E, 1EE, 1EEE

2 1C, 1CC, 1CX containers

weight up to 36 t

Maximum gross weight

1 container

up to 36 t

1C, 1CC



4 1D, 1DD, 1DX containers

Total gross weight not more than 72 tons



container 1 container 1D, 1DD, 1DX Total gross weight up to 60 tons

1 1B, 1BB, 1BBB +

Transportation of tank containers with dangerous goods with a gross weight up to 36 t is possible. Folding fitting stops.

Load capacity, t	72.0
Unladen weight, t	21.0
Gauge as per GOST 9238	O-VM
Axial load, tf	23.5
Length between coupling faces, mm	14,620
Fitting stops, pcs	
- folding	12
- fixed	4
Class of absorbing device OST 32.175	Т3
Transported containers	1AAA, 1AA, 1A, 1AX, 1BBB, 1BB, 1B, 1BX, 1CC, 1C, 1CX, TO, YU, YUX, 1EEE, 1EE, 1E
Service life, years	32

GONDOLA

12-1293



Designed for transportation of non-corrosive bulk non-dusty, bulk, stacked and piece cargo that do not require protection from atmospheric precipitation.

Reinforced end wall and top strapping provide additional rigidity to the body during loading and unloading operations.

Load capacity, t	69.5
Unladen weight, t, min/max	23.5/24.5
Body capacity, m³: total	86.0
Axial load, tf	23.5
Number of hatches, pcs.	14
Gauge as per GOST 9238	1-VM
Internal body dimensions, mm	
Clear length	12,768
Clear width by upper framing	2,928
Height	2,300
Service life, years	22

BOX CAR

11-1268





The increased floor area of 52.8m² allows to accommodate 42 "European" pallets, 34 "industrial" or 28 "Asian" pallets.

The door opening has been enlarged to: 4050x2830 mm.

The roof is equipped with four loading hatches and gangways, the side walls are equipped with ventilation hatches that can be used as loading hatches.



Load capacity, t	68.0
Unladen weight, t, min/max	25 .0/26 .0
Body capacity, m ³	174.0
Axial load, tf	23.5
Gauge as per GOST 9238	1-T
Floor area, m ²	52 .8
Car length over pulling faces of couplers, mm	19,500
Length between truck centres, mm	14,200
Height above rail top, mm	4,830
Width, mm	3,280
Number of loading gates, pcs. On the roof (as per customer's request) or on the side wall	4 4
Internal length of the body in mm	18,270
Internal width of the body in mm	2,890
Height of the body at the top strapping in mm	2,970
Internal height of the body in mm	3,450
Doorway dimensions (mm)	4,050 × 2,830
Service life, years	32

DUMP CAR meant for transportation of loose and lump cargo with a bulk density up to 1.7 t/m³

32-9792





Pneumatic discharge system. The increased height of the end sides allows forming a surcharge of the cargo of increased dimensions and transporting the cargo without loss during transportation.

oad capacity, t	66.4
Jnladen weight, t, min/max	26.5/27.6
ody capacity, m³	45.0
xial load, tf	23.5
nternal body dimensions, mm	
Clear length	10,590
lear width by upper framing	2,820
leight	3,530
Gauge as per GOST 9238	1-T
rack gauge, mm	1,520
Service life, years	22

DUMP CAR

33-1297



125.

Increased carrying capacity

56_{M³}

Increased cubic capacity Three-axle bogies of 18-1245 model are designed for a maximum axle load of 30 tf.

Load capacity, t	125.0
Unladen weight, t, min/max	53.0/55.0
Body capacity, m ³	56.0
Axial load, tf	30
Car length over pulling faces of couplers, mm	15,036 ± 20
ength between truck centers, mm	9,340 ± 8
nclination angle, deg.	45
lumber of tipping cylinders, pcs	6
Jnloading type	Double-sided
Gauge as per GOST 9238	1-T
Track gauge, mm	1,520
Service life, years	15

THERMOS CAR

16-1239

Transportation of perishable cargo in autonomous mode while maintaining the necessary temperature.





164 M³ Increased cubic capacity

56,6 M² Increased floor area

Load capacity, t	64.0
Unladen weight, t, min/max	34.0/36.0
Body capacity, m³	164
Axial load, tf	25.0
Gauge as per GOST 9238	1-T
Length between truck centers, mm	16,540 ± 10
Length over pulling faces of couplers, mm	22,160 ± 20
Height above rail top, mm	4,710 ± 20
Floor area, m²	56.6
Body inner dimensions: Length, mm - width, mm - vertical cladding level height, mm - maximum height, mm	20,600 2,750 2,580 3,030
Number of pallets (1,200x800), pcs	51
Doorway dimensions, mm	2,700 × 2,300
Heat transfer coefficient of the body, W/m² °C	0.2
Calculated duration for transporting perishable goods in a car, days	10
Service life, years	25

SELF-CONTAINED REFRIGERATED CAR

16-1247





60 Increased load capacity

47,0 M² Increased floor area

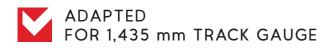
Load capacity, t	60.0
Unladen weight, t, min/max	38.5/40.0
Body capacity, m ³	132
Axial load, tf	25.0
Gauge as per GOST 9238	1-T
Length between truck centers, mm	16,540 ± 10
Length over pulling faces of couplers, mm	20,760 ± 20
Height above rail top, mm	4,720 ± 20
Floor area, m ²	47.0
Internal body dimensions, mm	17,765 × 2,650 × 2,810
Number of loading doors, pcs	2
Doorway dimensions, mm	2,700 × 2,300
Heat transfer coefficient of the body, W/m²°C	0.2
Calculated duration for transporting perishable goods in a car, days	20
Service life, years	25



68.0

TANK CAR for petroleum products transportation

15-1210-A





The internal heating system allows for the transported product to be heated with steam.

Transported cargo: viscous oil products with a specific weight up to 1.13 t/m³.

Load capacity, t	68.5
Unladen weight, t	25.5
Tank vessel cubic capacity, m³	65.3
Axial load, tf	23.5
Track gauge, mm	1,435
Length between truck centers, mm	8,580
Length over pulling faces of couplers, mm	12,800
Height above rail top, mm	1,0401,080
Tank vessel diameter, mm	2,800
Service life, years	32

TANK CAR for transporting cement

15-1267





The tank vessel interior comprises a system of slopes, channels, and compressed air supply pipes. The tank vessel central part is fitted with an unloading unit, allowing the contents to be unloaded on either side of the tank car or on both sides simultaneously.

Pneumatic unloading system.

An unloading control panel is mounted on the tank car vessel, complete with a compressed air inlet, a distribution manifold, and a shut-off valve system.

The tank car is unloaded using compressed air at a pressure of 2 kgf/cm².

Load capacity, t	60.0
Unladen weight, t, max	26.0
Tank vessel cubic capacity, m³	52.0
Static axle load, kN (tf)	210.75 (21.5)
Track gauge, mm	1,435
Length between truck centers, mm	7,120
Length over pulling faces of couplers, mm	12,020
Height above rail top, mm	4,460
Tank vessel diameter, mm	2,800
Service life, years	30

FLAT CAR for transportation of multi-tonnage containers

13-1261





' '	
Unladen weight, t	22.0
Design speed (km/h)	120
Axial load, tf	22.5
Fitting stops, pcs	
- folding	12
- fixed	4
Transported containers:	1S, 1SS, 1SX, 1A,
il ansported containers.	1AA, 1AAA, 1AH.
Track gauge, mm	1,435
Distance over coupler pulling faces, mm	19,340
Height from rail head level to platform, mm	1,230
External car width, mm	3,135
Length between truck centers, mm	14,000

Load capacity, t

Folding fitting stops.

FLAT CAR for transportion of general cargo

13-1266





Metallic floor decking. Folding end and side boards. Clamps for cargo securing at side and frontal beams.

Load capacity, t	63.0
Unladen weight, t	21.0
Body capacity, m ³	38.0
Axial load, tf	21.0
Car length over pulling faces of couplers, mm	14,620
Length between truck centers, mm	9,720
Height above rail top, mm	1,300
Floor area with side boards lowered, m ²	38.5
Number of side boards, pcs	8
Height of side boards	500
Number of end boards	2
Height of end boards, mm	400
Track gauge, mm	1,435
Service life, years	30

BOX CAR

11-1262





Interior lining of side, end walls and doors made of moisture resistant plywood.

Load capacity, t	64.0
Unladen weight, t	26.0
Body capacity, m ³	117.0
Maximum design axle load, kN (tf)	218.27 (22.5)
Car length over pulling faces of couplers, mm	15,100
Length between truck centers, mm	10,200
Height above rail top, mm	4,420
Track gauge, mm	1,435
Size of door opening in light, mm	4,000 × 2,690
Internal body dimensions, mm	13,860 × 2,755 × 2,920
Floor area, m²	38.2
Service life, years	30

DUMP CAR

32-1263





The pneumatic system facilitates unloading on either side of the railway track and reverts the carriage to its transport position.

Load capacity, t	63.0
Unladen weight, t	27.6
Body capacity, m ³	38.0
Maximum design axle load, kN (tf)	223.6 (22.65)
Car length over pulling faces of couplers, mm	13,020
Length between truck centers, mm	7,800
Height above rail top, mm	3,500
Track gauge, mm	1,435
Service life, years	30



FLAT CAR designed for Sggns(s) 80' large tonnage containers

13-1284-05





Developed in accordance with WAG TSI and NOI TS, based on the Russian analog.
Universal lightweight Y25 cargo bogie.

Prepared for conversion to an automatic coupler.

34 hinged fitting stops and 4 fixed stops - for securing any type of container in any optimal configuration.

Load capacity, t	68.0
Unladen weight, t	22.0
Axial load, tf	22.5
Length between truck centers, mm	19,300
Length over pulling faces of couplers, mm	24,700

HOPPER CAR for sugar transportation

19-1260





Ideal balance between load capacity and cubic capacity The sliding hatches allow for metered unloading of the load.

Specialized hopper type car with smooth interior surfaces.

Load capacity, t	60.0
Unladen weight, t	23.0
Body capacity, m ³	71.0
Static axle load, kN (tf)	196.2 (21)
Track gauge, mm	1,435
Length between coupling faces, mm	14,000
Length between truck centers, mm	9,100
Service life, years	30

BALLAST CAR

19-1243





Machine-powered batch dumping combined with ballast boxing/shingling.

Designed to transport full range of ballast loads (no rainfall protection required) with a grain size of 5 to 70 mm.

Load capacity, t	64.5
Unladen weight, t	23.0
Body capacity, m ³	44.5
Axial load, tf	22.5
Length between truck centers, mm	7,200
Length over pulling faces of couplers, mm	12,100
Width, mm	3,206
Service life, years	26

Export models of FREIGHT CARS

HOPPER CAR for bauxite transportation

19-1249





The car is designed and manufactured according to AAR (The Association of American Railroads) standards.

High-capacity car (101 tons) with an axle load of 32 tf on bogies manufactured by Wabtec.

Load capacity, t	71.0
Unladen weight, t, min/max	22.0/23.0
Body capacity, m ³	51
Axial load, tf	25.5
Gauge as per GOST 9238	1-VM



CONTAINERS

We offer the widest line of containers in Russia, having climatic version U, location category 1, operating temperature range from minus 500C to plus 70°C according to GOST 15150.

Our products meet the requirements of international standards and requirements.



Multi-purpose container meant for transportation of unitized cargo.

1AA multi-purpose enclosed container with a plywood floor and a gross weight of 30,480 kg

Maximum gross weight, kg	30,480
Empty container weight, kg	3,890
Internal volume, m³	67.2
nternal dimensions	
Length, mm	5,892
Width, mm	2,340
Height, mm	2,388
Doorway dimensions	
Width, mm	2,318
Height, mm	2,280



For transportation of unitized cargo.

Has a swivel beam and a removable tarpaulin.

1AA multi-purpose open top container with a plywood floor and a gross weight of 30,480 kg

Maximum gross weight, kg	30,480
Empty container weight, kg	3,890
Internal volume, m³	67.2
Internal dimensions	
Length, mm	5,892
Width, mm	2,340
Height, mm	2,388
Doorway dimensions	
Width, mm	2,318
Height, mm	2,280



Multi-purpose container meant for transportation of unitized increased volume cargo.

1AAA multi-purpose multi-tonnage container with a metal floor, with a gross weight of 30,480 kg

Maximum gross weight, kg	30,480
Empty container weight, kg	4,710
nternal volume, m³	75.8
Internal dimensions	
Length, mm	12,027
Width, mm	2,349
Height, mm	2,692
Doorway dimensions	
Width, mm	2,318
Height, mm	2,572



Multi-purpose container meant for transportation of unitized cargo.

Has a reinforced frame and a metal floor decking.

1AAA multi-purpose multitonnage container with a plywood floor, with a gross weight of 30,480 kg

Maximum gross weight, kg	30,480
Empty container weight, kg	4,710
Internal volume, m³	75.8
Internal dimensions	
Length, mm	12,027
Width, mm	2,349
Height, mm	2,692
Doorway dimensions	
Width, mm	2,318
Height, mm	2,572

Special-purpose container with a metal floor, swivel beam, and removable roof for transporting bulk and unitized goods.

1CX special-purpose container with a removable roof, with a gross weight of 30,480 kg

Maximum gross weight, kg	30,480
Empty container weight, kg	2,640
Internal volume, m³	13
Internal dimensions	
Length, mm	5,892
Width, mm	2,331
Height, mm	1,011
Doorway dimensions	
Width, mm	2,318
Height, mm	867



Container for transportation of various cargo by rail, water and road transport.

1CX Container with an open top, a swivel beam, and a tarpaulin, with a gross weight of 24,000 kg

aximum gross weight, kg	24,000
mpty container weight, kg	2,250
ternal volume, m³	14.4
ternal dimensions	
Length, mm	5,900
Width, mm	2,350
Height, mm	1,070
oorway dimensions	
Width, mm	2,318
Height, mm	966
oof opening dimensions	
Width, mm	2,202
Height, mm	5,630



Container for transportation of various cargo by rail, water and road transport.

1CX container with a removable roof and a metal floor, with a gross weight of 24,000 kg

Maximum gross weight, kg	24,000
Empty container weight, kg	2,500
Internal volume, m³	17.5
Internal dimensions	
Length, mm	5,950
Width, mm	2,336
Height, mm	1,060
Doorway dimensions	
Width, mm	2,188
Height, mm	5,378



Container for transportation of various cargo by rail, water and road transport.

1CX container with an open top, a swivel beam, and a (864 mm high) tarpaulin, with a gross weight of 24,000 kg

Maximum gross weight, kg	24,000
Empty container weight, kg	1,990
Internal volume, m³	9.1
Internal dimensions	
Length, mm	5,966
Width, mm	2,350
Height, mm	654
Roof opening dimensions	
Width, mm	2,202
Height, mm	5,843



Special-purpose container for transportation of unitized and bulk cargo

1CC designed for transportation of bulk cargo, with a plywood floor and a gross weight of 30,480 kg

Maximum gross weight, kg	30,480
Empty container weight, kg	2,640
Internal volume, m³	31.8
Internal dimensions	
Length, mm	5,892
Width, mm	2,340
Height, mm	2,306
Doorway dimensions	
Width, mm	2,318
Height, mm	2,282
Loading hatch dimensions	
Width, mm	506
Height, mm	506
Unloading hatch dimensions	
Width, mm	1,954
Height, mm	600



Container for transportation of loose, free-flowing and bulk cargo, as well as cargo in soft containers of Big Bag type, unitized cargo and europallet cargo.

1CCC PW designed for europallets, with a metal floor and a gross weight of 36,000 kg

Maximum gross weight, kg	36,000	
Empty container weight, kg	3,500	
Internal volume, m3	37.4	
Internal dimensions		
Length, mm	5,830	
Width, mm	2,410	
Height, mm	2,674	
Unloading opening dimensions		
Width, mm	2,226	
Height, mm	800	
Loading hatch dimensions		
Width, mm	500	
Height, mm	1,000	
Doorway dimensions		
Width, mm	2,340	
Height, mm	2,570	



The container is designed for transportation and storage of coiled steel and various piece cargo in appropriate containers or packaging.

1CC with an open top and a removable rigid roof for transportation of coiled steel with a gross weight of 36,000 kg

laximum gross weight, kg	36,000
mpty container weight, kg	3,950
ternal volume, m³	32.3
nternal dimensions	
Length, mm	5,892
Width, mm	2,340
Height, mm	2,340
oorway dimensions	
Width, mm	2,318
Height, mm	2,264
Roof opening dimensions	
Width, mm	5,478
Height, mm	2,228



The container is intended for transporting piece cargo, primarily without packaging, using various modes of transport.

1CCC PW special-purpose container meant for transportation of bulk and unitized cargo with a gross weight of 30,480 kg

Maximum gross weight, kg	30,480
Empty container weight, kg	2,970
Internal volume, m³	37.4
Internal dimensions	
Length, mm	5,830
Width, mm	2,410
Height, mm	2,665
Doorway dimensions	
Width, mm	2,340
Height, mm	2,567
Unloading opening dimensions	
Width, mm	2,226
Height, mm	600
Loading hatch diameter, mm	550



A container with three round loading hatches, a rigid roof, and an unloading hatch in the front end wall for transporting bulk and unitized cargo.

1CCC for general cargo with a gross weight of 36000 kg

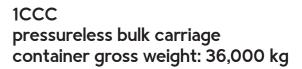
Maximum gross weight, kg	36,000
Empty container weight, kg	3465
Internal volume, m ³	37.0
Internal dimensions	
Length, mm	5,843
Width, mm	2346
Height, mm	2634
Unloading opening dimensions	
Width, mm	2210
Height, mm	1100
Loading hatch diameter, mm	610
Doorway dimensions	
Width, mm	2,318
Height, mm	2573



Container with two rectangular loading hatches and a rigid roof, with an unloading hatch in the front end wall for transportation of bulk and unitized cargo.

1SSS for general cargo with a gross weight of 36000 kg

Maximum gross weight, kg	36,000
Empty container weight, kg	3470
Internal volume, m³	37.0
Internal dimensions	
Length, mm	5,843
Width, mm	2346
Height, mm	2634
Unloading opening dimensions	
Width, mm	2138
Height, mm	1,000
Loading hatch dimensions	
Width, mm	1400
Height, mm	800
Doorway dimensions	
Width, mm	2,318
Height, mm	2573





The container is designed for transportation of bulk goods that do not require protection from atmospheric precipitation, shipping package is not needed. The main cargo transported is coal of different granulometric (fractional) composition.

Operating temperature limit range, °C	minus 50 plus 70
Height, mm	2148
Width, mm	5767
Roof opening dimensions	
Height, mm	2573
Width, mm	2,318
Doorway dimensions	
Height, mm	2704
Width, mm	2346
Length, mm	5893
nternal dimensions	
nternal volume, m³	37.0
Empty container weight, kg	3185
Maximum gross weight, kg	36,000





The open-top container design allows to reduce significantly the time needed for loading/unloading tasks.

1CC Multipurpose Open Top container with a metal floor and a gross weight of 36000 kg

Maximum gross weight, kg	36,000
Empty container weight, kg	2850
Internal volume, m³	32.8
Internal dimensions	
Length, mm	5,892
Width, mm	2346
Height, mm	2374
Doorway dimensions	
Width, mm	2,318
Height, mm	2258
vRoof opening dimensions	
Length, mm	5784
Width, mm	2236



Multipurpose container for transportation of unitized cargo. With a rotary beam and a removable tarpaulin

1CC multi-purpose open top container with a plywood floor and a gross weight of 30,480 kg

Maximum gross weight, kg	30,480
Empty container weight, kg	2560
Internal volume, m³	32.3
Internal dimensions	
Length, mm	5,892
Width, mm	2,340
Height, mm	2342
Doorway dimensions	
Width, mm	2,318
Height, mm	2,263



The container is intended for transporting piece cargo, primarily without packaging, using various modes of transport.

1CC multi-purpose with a removable roof and a metal floor, with a gross weight of 36,000 kg

Maximum gross weight, kg	36,000
Empty container weight, kg	3350
nternal volume, m³	32.5
Floor decking thickness, mm	5
nternal dimensions	
Length, mm	5893
Width, mm	2346
Height, mm	2355
Doorway dimensions	
Width, mm	2,318
Height, mm	2273
Roof opening dimensions	
Width, mm	2,228
Height, mm	5562



Multipurpose container for transporting unitized cargo.

1CC multi-purpose enclosed container with a plywood floor and a gross weight of 30,480 kg

Maximum gross weight, kg	30,480
Empty container weight, kg	2,300
Internal volume, m³	33
Internal dimensions	
Length, mm	5,892
Width, mm	2,340
Height, mm	2386
Doorway dimensions	
Width, mm	2,318
Height, mm	2272



Multipurpose container for transporting unitized cargo.

1D multi-purpose Gross weight: 10,160 kg

Maximum gross weight, kg	10160
Empty container weight, kg	1200
nternal volume, m³ 3	14.9
nternal dimensions	
Length, mm	2831
Width, mm	2347
Height, mm	2240
oorway dimensions	
Width, mm	2,318
Height, mm	2,135



Special-purpose container for transportation and storage of explosive materials.

1D (SK-3VM) Gross weight: 10,160 kg

Maximum gross weight, kg	10160
Empty container weight, kg	1220
nternal volume, m³ ³	14.5
ternal dimensions	
Length, mm	2766
Width, mm	2,340
Height, mm	2,235
Ooorway dimensions	
Width, mm	2,228
Height, mm	2134



Special-purpose container for transportation of copper-nickel ingots of Bessemer matte.

1D (CK-3-30D) Special-purpose container with a gross weight of 30480 kg

Maximum gross weight, kg	30,480
Empty container weight, kg	2545
nternal volume, m³ ³	14.4
Internal dimensions	
Length, mm	2814
Width, mm	2308
Height, mm	2221



Multipurpose container for transporting unitized cargo.

1DD enclosed special-purpose container with a plywood floor and a gross weight of 12000 kg

Maximum gross weight, kg	12,000
Empty container weight, kg	1310
nternal volume, m³ ³	15.8
nternal dimensions	
Length, mm	2825
Width, mm	2,340
Height, mm	2390
Doorway dimensions	
Width, mm	2,318
Height, mm	2,282



Special-purpose container for transportation of unitized and bulk cargo.

1DD special-purpose enclosed container for bulk cargo with a gross weight of 24000 kg

Maximum gross weight, kg	24,000
Empty container weight, kg	2120
Internal volume, m3	14.96
Internal dimensions	
Length, mm	2771
Width, mm	2,350
Height, mm	2298
Doorway dimensions	
Width, mm	2,318
Height, mm	2,282
Loading hatch dimensions	
Width, mm	606
Height, mm	606
Unloading hatch dimensions	
Width, mm	1,954
Height, mm	600



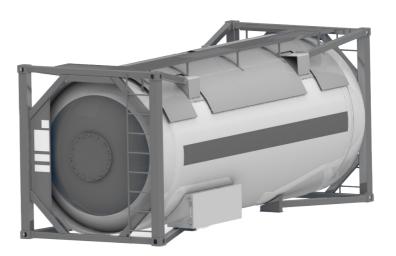
Special-purpose container meant for transportation of unitized cargo.

Special-purpose enclosed container gross weight: 7,000 kg

Maximum gross weight, kg	7000
Empty container weight, kg	925
Internal volume, m³	9.1
Internal dimensions	
Length, mm	2,282
Width, mm	1902
Height, mm	2097
Doorway dimensions	
Length, mm	1880
Width, mm	1977

GKTs 25.18 for storage and transportation of LPG by rail, water and truck





Transportation of underfilled cargo.

Loading and unloading at any gas filling station by top or bottom draining/filling.

Wide range of transported goods, including liquefied oil and hydrocarbon gases.

The use of high-strength steel allowed to reduce the container weight and to increase its load capacity.

Maximum gross weight, kg	24,000
Maximum tare weight, t	6750
Maximum load capacity, kg, max	17250
Inner diameter, mm	2390
Total capacity, m ³	25
Туре	1CC
Maximum permissible operating pressure, MPa	1.8
Permissible weight of upper containers during stacking, kg	192,000
Nominal wall thickness of the cylindrical part of the tank, mm	12
Material	10G2FB TU14-105-729-2003
Operating temperature range, °C	From -40 to +55
Service life, years	20

TANK CONTAINER for transportation of liquid pitch

RTS 20, RTS 20-1



Туре	UN T14
Size according to ISO	1CCC
Unladen weight, kg	8900
Load capacity, t	25.65
Volume, m³	20.0
Permissible weight of upper containers during stacking, kg	213,360
Maximum gross mass, t	34.55
Service life, years	20

TANK CONTAINER for transportation of liquefied natural gas (LNG) in two versions



Reduced daily product losses. Extended service life.

Tank vessel made of stainless alloy Volume: 43.5 m³

Tank vessel made of aluminum alloy Volume: 42.7 m3 Operating temperature range: -40 to +50 °C Use of materials with low thermal conductivity as support elements.

Version	NKTS-LPG43.5	AKC-LPG42.7
Container type	UN T75	UN T75
Size according to ISO	1AA	1AA
Maximum gross weight, kg	30,480	30,480
Unladen weight, t	13.3	12.3
Weight of transported cargo, kg	15,700	15,400
Volume, m3	43.5	42.7
Operating pressure, MPa	0.8	0.8
Maximum allowable vessel wall temperature, OC during testing	- 196	- 196
during operation	- 161	- 161
Control retention time, days	61	61
Insulation type	Screen- vacuum	Screen- vacuum
Service life, years	30	30

KTsKhN 21 UN T-14 type for transportation of liquid dangerous goods

It is possible to manufacture a tank container with a steam-heating jacket



The model is corrosion resistant: made of stainless steel.

The unfilled volume of the tank depends on the cargo and should be at least 2.5% of the total capacity at 500C.

The possibility of transportation of more than

670 cargo items, including flammable liquids, oxidizers, corrosive, poisonous and other hazardous substances.

Tank container design version	KTsKhN 21-00.000.000		
	- 00	-01	-02
Maximum gross weight, kg		36,000	
Maximum tare weight, t	4,135	4,415	5,210
Maximum load capacity, kg, max	31,865	31,585	30,790
Tank vessel inner diameter, mm		2,200	
Tank vessel total capacity, m3		21	
Maximum permissible operating pressure, MPa		0.4	
Permissible weight of upper containers during stacking, kg		192,000	
Nominal wall thickness of the cylindrical part of the tank vessel, mm	5	6	5
Tank vessel material		08X18H10	Т
Operating temperature range, °C	Minu	ıs 50 to plu	ıs 50



KTsKhN 26 UN T-11 and UN T-14 types for transportation of liquid dangerous goods

It is possible to manufacture a tank container with a steam-heating jacket



	K	KTsKhN 26-00.00.000		
Tank container design version	- 00	-01	-02	
Maximum gross weight, kg	36,000	36,000	36,000	
Tare weight of container without breakwaters, kg, max	4,100	4,100	4,100	
Tare weight of container with breakwaters, kg, max	4,365	4,365	4,365	
Maximum load capacity without breakwaters, kg, max	31,900	31,900	31,900	
Maximum load capacity with breakwaters, kg, max	31,635	31,635	31,635	
Filling/Draining	Top Top/Bottom		p/Bottom	
Total capacity, m³		26		
Overall dimensions: length x width x height, mm	6,058 ₋₆ × 2,438 ₋₅ × 2,591 ₋₅			
Maximum permissible operating pressure, MPa	0.4			
Test pressure, MPa	0.6			
Nominal wall thickness of the cylindrical part of the tank, mm	5	5	5	
Nominal thickness of the bottom wall, mm	6	6	6	
Tank vessel material	08X18H10T		09G2S-14**	
Operating temperature range, °C	Minus 50 to plus 50			
Steam heating	Available***			
Heat insulation	Available***			

^{* -} breakwaters are installed upon customer's request

^{** -} gumming of the tank vessel is made upon customer's request
*** - steam heating and heat insulation are installed upon customer's request



1AAA isothermal with machine cooling and heating of AMV-060 model





The container is designed for transportation and storage of food, medicines and plants that require a certain temperature and humidity regime for a long time.

Maximum gross weight, kg	36,000
Empty container weight, kg	5,190 ± 2%
Load capacity, kg	30,810
Internal volume, m³	66.7
Internal dimensions	
Length, mm	1,588
Width, mm	2,290
Height, mm	2,553
Doorway dimensions	
Width, mm	2,290
Height, mm	2,566
Connection dimensions, mm	
Width, mm	2,259
Height, mm	11,985



EQUIPMENT
FOR PROCESSING
AND STORAGE
OF PETROCHEMICAL
AND OTHER
PRODUCTS

Many years of production experience combined with multi-stage quality control ensure the demand for our products in the construction of the country's largest industrial facilities.

The maximum volume of the produced equipment is 250 m³ at operating temperature up to minus70°C and design pressure up to 16 MPa.



Settling tanks

Settling tanks ranging from 50 to 200 m³ are designed for the initial removal of formation water from oil.

Design overpressure is 1.6 MPa (kgf/cm²).

Maximum permissible operating temperature of the wall is 100 °C.

Minimum permissible operating temperature of the apparatus wall is 60 °C.

Settling tanks are typically made in ON version. In case of other technological parameters they can be executed according to individual projects in BUON, BON, BDg, BDv versions.



Electric dehydrators

The apparatuses are designed to carry out deep dehydration and desalting of oil. Capacity is from 8 to 200 m³.

Design overpressure is up to 2.2 (22) MPa (kgf/cm²).

Maximum permissible operating temperature of the wall is 180 °C.

Minimum permissible operating temperature of the wall is minus 60 °C.

Electric dehydrators are manufactured according to individual projects for specific oil composition.



Bulk-capacity apparatuses

- . Types of bulk-capacity appratuses:
- VAE, VKE, VKK, VKP, VPP.
 Capacity is up to 200 m³.
 Operating overpressure is up to 6.3 (63) MPa (kgf/cm²).
- GEE, GKK, GPP
 Capacity is up to 250 m³. Operating overpressure is up to 16 (160) MPa (kgf/cm²).

Bulk-capacity apparatuses for gas and liquid media

Horizontal apparatuses for liquid media with nominal volumes from 4 to 250 m³ with a nominal pressure of 0.8; 1.0; 1.6; 2.5 MPa, and a diameter ranging from 1,200 to 3,400 mm.

Vertical apparatuses for liquid media with nominal volumes from 2 to 140 m³ with a nominal pressure of 0.8; 1.0; 1.6; 2.5 MPa, and a diameter ranging from 1,000 to 3,400 mm.

Vertical apparatuses for gaseous media with nominal volumes from 2 to 25 m³ with a nominal pressure of 1.0; 1.6; 2.5 MPa (10; 16; 25 kgf/cm³), and a diameter ranging from 1,000 to 2,400 mm.



Gas separators

Mesh gas separators are designed for final purification of natural and associated oil gas from liquids (such as condensate, hydrate formation inhibitor, water) in field gas treatment facilities for transport, underground storage, and at gas and oil refineries.

The design of the gas separators is individually tailored to the specific performance.



Containers

Drums (containers) for storage and transportation of liquid chlorine, refrigerants, liquid and gaseous sulfur dioxide.



Oil and gas separators / oil and gas separators with water discharge

Oil and gas separators with water discharge are part of

oil field gathering and treatment units.

Designed for oil degassing and primary purification of associated gas.

It is possible to produce both standard models such as NGS, NGSV, NGS-P, NGSV-P, and separators designed for individual conditions such as NGSVM, NGSVM-A, TFS, TFS-G, TFSK, SNG, etc.



Electric dehydrators

The apparatuses are designed to carry out deep dehydration and desalting of oil. Capacity is from 8 to 200 m³. Design overpressure is up to 2.2 (22) MPa (kgf/cm²).

Maximum permissible operating temperature of the wall is 180 °C.

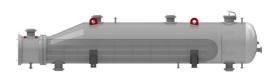
Minimum permissible operating temperature of the wall is minus 60 °C.

Electric dehydrators are manufactured according to individual projects for specific oil composition.



Receivers

Helium receivers used for storage of gaseous helium in the cryogenic supply system, helium receivers for storage of gaseous helium with the volume of 76 m³, oxygen receivers with the volume of 20.63 m³ for accumulation and storage of gaseous oxygen, nitrogen and other dry non-aggressive, not corrosive to metals, not harmful, explosion and fire safe gases in the system of centralized gas supply of enterprises and various facilities.



Heat exchange equipment / evaporator plants

Heat exchangers are designed for technological processes in chemical, oil, petrochemical, gas and other industries (except nuclear).

Evaporators with natural circulation and a remote heating chamber, evaporators of BB 50, BB 75 types, evaporators with natural circulation and a remote heating chamber, evaporators with forced circulation and a remote heating chamber, tubular evaporators with natural circulation with a coaxial heating chamber and salt separation, tubular evaporators with a climbing film.





Apparatuses with a mechanical stirrer

Apparatuses with a mechanical stirrer of APU type are designed for various technological processes in liquid media.



Liquid strainers for pipelines

Liquid strainers for pipelines with nominal pressures of 1.6 and 4 MPa are designed to protect pumping and other equipment used in process units of refining, petrochemical, oil and gas industries.

Underground tanks

Tanks are designed for draining light and dark petroleum products, petroleum and oil, condensate.

Evaporation equipment

Evaporators with natural and forced circulation, with remote and coaxial heating chambers, with a salt separator.

Tubular film evaporators with a climbing film. Heat exchange surface area is up to 630m²

Fire extinguishing pressure vessels

They are designed for receiving, storing and discharging by compressed air aqueous solution of foaming agent (or water) in automatic fire extinguishing installations.

Horizontal steel tanks (HST)

Horizontal cylindrical steel tanks for oil products storage with a capacity of 10, 25, 50, 75 and 100 m³, suitable for underground installation in both dry and wet soils

Horizontal steel tanks (HST-N)

Horizontal cylindrical steel tanks for storage of oil products with a capacity of 10, 25, 50, 75 and 100 m³ for aboveground installation.

Horizontal steel tanks (HST-N1)

Horizontal cylindrical steel tanks for storage of oil products with a capacity of 5 and 5 m³ for aboveground installation.



Vertical steel welded cylindrical tanks are tank structures, which are primarily designed for storage of products in liquid aggregate state at pressures close to atmospheric, with volumes from 100 to 50000 m³.

The shape and type of each specific tank are determined depending on the mode of operation, liquid properties and construction area.

The basic structure is a thin sheet cylindrical shell supported on a flat or low slope bottom. To protect the product from environmental impact and to reduce losses of the stored product, tanks are equipped with roofs of different design versions: conical shells, conical frame roofs (in the panel version - with roll-up flooring), spherical frame roofs (in the panel version - with polystyrene flooring), floating roofs (RVSPK).

To reduce losses of easily vaporizable products such as light petroleum products or alcohols, tanks can be equipped with pontoons, gas recovery systems, gas-equalizing systems.

VST are a popular product for oil and gas companies, they are also used for storing components of chemical industry, technical and drinking water, food products such as vegetable oils, molasses, etc.





Successful experience of working with main consumers of oil and chemical equipment.

Highly skilled personnel. Work in accordance with standards (GOST, API).

Multi-stage integrated quality control.

Huge manufacturing base.

Convenient transport links and own branch lines.

PETROCHEMICAL AND OTHER PRODUCTS PROCESSING AND STORAGE EQUIPMENT petrochemical and gas equipment



Isothermal tanks

The design and construction of isothermal tanks is a new trend in tank construction. They are used for storage of liquid ammonia and LPG (propane, butane, isobutane, ethylene, propylene, wide fraction of light hydrocarbon gases) at a constant low temperature ensuring excessive pressure of saturated vapors in a range of 0.004 - 0.008 MPa.



Gas holders

Gas holders are an essential part of a selfcontained gas supply system for both industrial facilities and private buildings. They are designed for storing various gases and are available in variable and constant volumes.



Vertical steel tanks with a fixed roof

The tanks store petroleum, mazut, diesel fuel, kerosene, bitumen, tar, oil (including food oil), water and other products in a liquid state. They can be used to store more volatile and flammable products. In such cases, the tank is equipped with a gas piping or a light fractions capture unit.



RVSP with stationary roof and pontoon

These tanks are used to store petroleum, gasoline, kerosene, jet fuel.

The pontoon is a rigid gas-tight floating disk-shaped coating placed on the product surface inside the cylindrical tank so that at least 90% of its area is covered.

The annular gap between the pontoon and the tank wall is sealed with a special sealing gate.

The pontoon is used to reduce the product evaporation rate and saturation of the gas-air space of the vertical tank with stored product vapors.



RVSZS with a protective wall ('cup in cup')

The vertical tank design is used at production sites where there is no possibility of embankment the tank farm.

Also, cylindrical tanks with a protective wall are built in special environmental areas, for example, near water bodies and residential settlements to ensure the safety of the environment and the population.

The protective wall is necessary to prevent spillage of the product when the working tank is depressurized.



RVSPk with a floating roof

The design of the tank assumes the use of a roof located on the surface of the stored product with full contact.

The buoyancy of the roof is achieved through the use of sealed compartments or ducts.

In the empty tank, the roof is located on special supports mounted on the bottom. Preventing the rotation of the tank floating roof is achieved by using guide pipes. The advantages of such a roof are to reduce product loss from evaporation.





VST accessories

- . Manholes (in the wall and roof).
- Sockets for connecting external piping and instrumentation.
- Valves or vent pipes to provide VST daily respirations.
- Grounding fasteners.
- . Equipment for product heating and heat loss reduction.
- . Fire extinguishing, irrigation and lightning protection systems.
- Internal distribution and overflow devices.
- Equipment for sediment mixing, collection and safe disposal of produced water.
- Ladders and platforms providing access to VST accessories.



4 RAILWAY COMPONENTS

The company produces more than 600 types of large, medium and small castings for the railway, automotive and oil and gas industries weighing from 1 to 5,000 kg from various types of carbon and alloy steels and cast iron.

Vacuum-film molding technology achieves minimum reject rates.

RAILCAR BOGIE with an axle load of 23.5 tf and a design speed of 120 km/h 18-9801





Increased fatigue safety factor of large railcar castings.

Maximum design statistical load from the wheel pair on rails, kN (tf)	230.5 (23.5)
Bogie weight, kg	4,900
Design speed, km/h	120
Bogie wheelbase, mm	1,850
Distance between the longitudinal axes of side bearings, mm	1,524
Gauge as per GOST 9238	02-VM

RAILCAR BOGIE with an increased axle load of 25 tf and a design speed of 120 km/h 18-9891





Possibility of installing 4 side bearings on the bolster for use as a middle bogie in an articulated car. Innovative bogie with 25 tf axle load with large railcar casting designed for 27 tf axle load.

Maximum design static wheelset load on rails, kN, (tf)	245 (25)
Bogie weight, kg	5,000
Design speed, km/h	120
Bogie wheelbase, mm	1,850
Distance between the longitudinal axes of side bearings for a 4-axle car, mm	1,524
Designated mileage from construction to overhaul, between overhaul and roundhouse servicing, thous. km (years) $$	500 (6)
Designated mileage between roundhouse servicings, thous. km (years)	350 (4)
Designated mileage before overhaul, thous. km (years)	2000 (16)
Gauge as per GOST 9238	02-VM

RAILCAR BOGIE with an axle load of 23.5 tf and a design speed of 120 km/h

18-1277



Increased overhaul mileage.

Maximum design static wheelset load on rails, kN, (tf)	230.5 (23.5)
Bogie weight when assembled, kg	4,900
Design speed, km/h	120
Bogie wheelbase, mm	1,850
Distance between the longitudinal axes of side bearings, mm	1,524
Designated mileage from construction to overhaul, between overhaul and roundhouse servicing, thous. km (years)	500 (5)
Designated mileage between roundhouse servicings, thous. km (years)	300 (3)
Designated mileage before overhaul, years	16
Gauge as per GOST 9238	02-VM

THREE-AXLE BOGIE for industrial tracks

18-1245



Maximum design static wheelset load on rails, kN, (tf)	230.5 (23.5)
Bogie weight when assembled, kg	11,000
Design speed, km/h	120
Bogie wheelbase, mm	3,400
Distance between the longitudinal axes of side bearings, mm	1,210
Design speed of the car, km/h - in empty state - in laden state	70 60
Gauge as per GOST 9238	02-VM

LARGE CAR CASTINGS Developments of in-house engineering center

Automated vacuum-film technology mold making lines maximize accuracy while maintaining high productivity.

Technological characteristics of rods manufacturing allow to minimize the penetration of sand mixtures into the finished product.



Side frame

9801-07.20.00.006

Weight is 460 kg.

Increased fatigue resistance reserve factor.

High quality of casting and reliable design of the side frame are confirmed by experimental tests and certificates of the Register of Certification on the Federal Railway Transport.

Interchangeable with side frames for bogies of type 2 according to GOST 9246 with side bearings of clearance type, which are repaired in accordance with

RD 052 TsV 32-2009.



Bolster

9801-07.10.00.002, 9801-07.10.00.002-01

Weight is 546 kg.

Has a reinforced structure.

Impact strength value (KCV-60)=25.1 J/cm2 (compared to the standard 16.7 J/cm2).

Increased fatigue resistance reserve factor.



Side frame of the freight car bogie with an axial load of 25 tf

9891.01.00.001

Weight is $450 \pm 36 \text{ kg}$.



Freight car bogie bolster with an axial load of 25 tf

9891.02.00.001

Weight is 580 ± 46.4 kg.

MEDIUM RAILCAR CASTINGS Developments of in-house engineering center



UP1K-1 front stop as per GOST R 34710-2021

1167.00.004

For the frame of a gondola car.



UZ1K rear stop as per GOST R 34710-2021

1167.00.003

For the frame of a gondola car.



UPZK-1 front stop complies with GOST R 34710-2021

1167.00.005

It is used in special purpose models: car carriers, fitting platforms, dump cars, combination cars.



UPZ-2 front stop

1167.00.014



Top pivot plate

1167.00.013

For the frame of a gondola car



Axle-box body 9801-07.40.00.400



Stop UZOK-1 GOST R 34710-2021

1167.00.002

For the frame of a tank car.



Adapter 9801-07.40.00.502



Adapter

9891.00.00.001

MEDIUM RAILCAR CASTINGS

Developments of in-house engineering center



SA-3 automatic coupler 0040 .01 .000 SB (version 01)



Coupler yoke

1167.00.001

The design is improved by reinforcing the body with upper and lower brackets to prevent it from slipping and falling onto sleepers in the event of an emergency.

Improved ability to distribute forces exerted during operation. In this way bending stresses are reduced and fracture resistance is increased.

SMALL RAILCAR CASTINGS

Developments of in-house engineering center



Side bearing 1293.01.02.506



Right stop

1293.01.02.231

Side bearing

PKSPP GOST 34387-2018 9891 .04 .00 .000



Left stop 1293.01.02.222

SMALL RAILCAR CASTINGS

Developments of in-house engineering center



Support plate

1167.00.07



Dead lever bracket 9801-07.10.00.003



Right bracket

1293.01.06.205



Fixing bracket

1220.03.00.025 1220.03.00.026



Left stop

1293.01.06.206



Wedge 9891.00.00.002



Plug

1200 .01 .04 .009 L Tank parts.

AUTOMOTIVE CASTINGS

The range of automotive castings includes over 300 product types.

The production capacity allows to produce up to 30 thousand tons of automotive castings per year.



Drum 130-3502070-01



Hub 887A-3103015-52

ADDITIONAL CASTING PRODUCTS



Corner fittings for freight containers:

- . Upper left.
- . Upper right.
- . Lower left.
- . Lower right.

Material complies with TU 24.16.045-00.

Can be used in any climatic conditions, including the Far North at temperatures from minus 50°C to plus 70°C (223 to 343 K).



CSP wheel

For pumps.

More than 50 items of accessories for centrifugal sectional pumps (CSP).

Products from a reliable supplier of CSP components.

The product range can be increased at the customer's request.

VALVES



Angle valve
GG877.00.000
For LPG and ammonia.

Inlet safety valve

Valve analogs 890.00.00.000sb,1443.07.000. For oil and gasoline tanks. Drain valve 1230.01.06.000 For methanol.

Inlet safety valve

G424.01.05.00 For sulfuric acid and oleum Pn25 Dn1.5 signal valve

KS000 For LPG and ammonia.

Safety valve

GG890.00.000 For LPG and ammonia Safety valve

1230.01.05.000 For methanol.

BRAKE EQUIPMENT

Air tank

R7-78, R7-135

It is used in the brake system of rail cars as a spare tank. Manufactured in accordance with the requirements of GOST R 52400-2005.

Model	R7-78	R7-135
Capacity, I	78	135
Operating pressure, MPa	0.7	0.7
Specified service life, years	20	20
Guaranteed service life, years	40	40

RAILWAY SPARE PARTS



Wheel pair with axle boxes 9891.07.40.00.000



Wheel pair without axle boxes 9891.07.40.01.000



Axle RV2SH-OS-V-2-GOST 33200-2014 9891.07.00.0022



Wheel pair with axle boxes 9801.07.40.00.000



Wheel pair without axle boxes 9801.07.40.01.000



Axle RUISH-OS-V-2 GOST 33200-2014 9801.07.40.01.001

RAILWAY SPARE PARTS



32-9792 dump car longitudinal side

Dump car body element.



13-1258 platform cross side

For restraining and securing loads on platforms.



Cover

GG 696 .10 .100SB Tank car hatch.



13-1258 platform longitudinal side

For restraining and securing loads on platforms.



32-9792 dump car longitudinal side

31.03.01.04.000A SB For tank car drain device .

32-9792 dump car longitudinal side

1293 .01 .06 .200

For unloading bulk goods, the body element of a gondola car



ROUNDHOUSE SERVICING AND OVERHAUL REPAIR

The company's production capacities allow to repair rail cars in two regions where the business operates - Mordovia and Khakassia.

Each of the sites is capable of repairing 14 rail cars simultaneously . Roundhouse servicing duration is up to 5 days, complete overhauling duration is up to 7 days.

The advantage is convenient logistics: location in major railway centers - Ruzaevka and Abakan.



Roundhouse servicing

- . 4-axle gondola cars with a load of 25 tf;
- . 4-axle hopper cars for transportion of mineral fertilizers, including those with a 25 tf load;
- . 4-axle hopper cars for transportation of grains.

Roundhouse servicing and complete overhauling

- . 4-axle hopper cars for transportation of cement;
- . 4-axle general-purpose gondolas;
- . 4-axle general-purpose box cars;
- . 4-axle tank cars for transportation of chemical cargo;
- . 4-axle tank cars for transportation of gasoline and light petroleum products;
- . 4-axle general-purpose flat cars;
- . 4-axle tank cars with steam heating jacket for transportation of viscous petroleum products;
- . 4-axle flat cars for transportation of heavy containers;





Intermediate and routine repair of RU1 and RU1Sh, RV2Sh wheelsets.

TR-1, TR-2 current uncoupling repairs.

Complete overhauling of R1Sh RV2Sh wheelsets with replacement of components ("old axle, new wheels").

Manufacture and supply of valves for the vessels of tank cars

for light petroleum products:

. GG731 .13 .00 .000 valve (equivalent to valves 890 .00 .00 .00 .000.00 .000 .000)

for viscous petroleum products:

. GG731.14.00.000 valve

for oleum and sulfuric acid:

- . G424 .01 .05 .000 valve
- . G424 .01 .05 .000-1 valve
- . G424 .01 .05 .000-2 valve

for acetaldehydes:

. 1215 .01 .02 .700 safety valve

for hydrochloric acid:

- . 1230 .01 .05 .000 safety valve
- . 1230 .01 .06 .000 inlet valve

for phenol vapors and petroleum products:

. 1225 .01 .05 .000 suction relief valve

for acetic acid:

. 1235 .01 .05 .000 suction relief valve

for urea-formaldehyde concentrate vapors, air:

- . 1216 .01 .04 .000-01 suction relief valve
- . 1267 .04 .03 .000 check valve
- . 1267 .05 .08 .000 suction relief valve
- . 1264 .01 .01 .500 level control valve
- . 1264 .01 .01 .800 sampling valve

angle valves for ammonia and nitrogen:

. Pn25 Dn32 1201 .03 .00 .000

pressure gage holder with valve:

- . 1288 .01 .02 .500
- . 1288 .01 .02 .400
- . 1264 .01 .01 .400





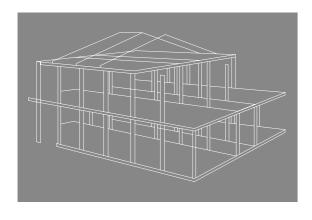
6 MODULAR BUILDINGS

Modular buildings are the optimal solution for quick organization of rotational and exploration camps, construction sites in almost any climatic conditions.

High factory readiness of block modules allows to assemble them 10 times faster, while the cost is 30-60% cheaper than the construction of permanent buildings with the same set of functions.

CONSTRUCTION TECHNIQUES

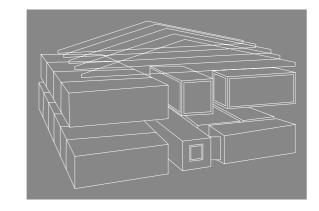
Frame-and-panel



- Factory ready sandwich panel enclosing structures.
- . Partially prefabricated with labeled elements for installation.
- . Reduced material intensity.
- . Energy-efficient installation methods.
- . Resistance to wind and snow loads .
- Possibility to construct buildings up to 3 floors high.

Block-modular

- . Volumetric assembly modules.
- . High degree of prefabrication.
- . Industrial manufacturing quality.
- . Possibility of year-round installation.
- . Buildings are disassembled and can be easily relocated.
- . Structural engineering.
- . Implementation time is starting from 2 days.
- . Possibility to construct buildings up to 3 floors high.







Full-cycle design bureau



In-house production



Complete set (furniture, sanitary and household appliances, electrical and ventilation

equipment)



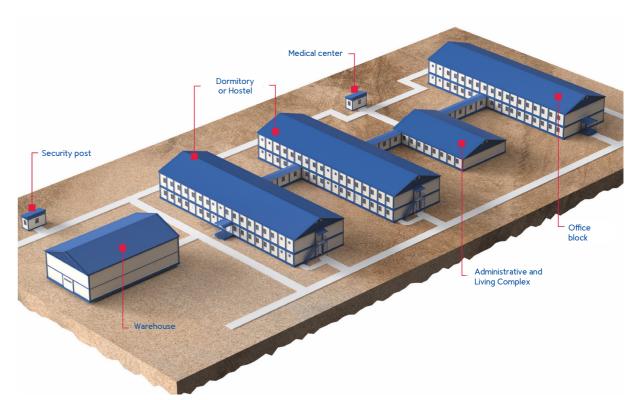
Deliveries throughout Russia and CIS

Modular buildings are the optimal solution for quick organization of temporary housing complexes (THC), rotational camps, construction sites.

Modern construction technologies ensure the quality and speed of the project implementation.

Wide opportunities for organizing A&LQ and bath and laundry complexes, dormitories, cafeterias, firefighting equipment containerized modules, medical stations, etc. Carrying out a full range of works on erection buildings and equipping them with utility systems and industrial equipment.

A single logistics center allows for efficient combination of module delivery by road, sea and rail. All of this significantly reduces costs for the customer. Shipment is made both in transpacks and fully assembled.





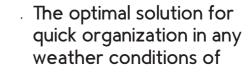
Rotational camp

Planning and design according to the customer's wishes.

The use of aluminum in the structure increases the service life in aggressive conditions, reduces the weight of the modular building by 10%, reduces transportation and installation costs. Climatic version from minus 50°C to plus 50°C.







- . Residential districts.
- . Hotels and glamping facilities.
- . Rotational and exploration camps.
- . Construction camps.
- . Engineering and specialized modules.







- . We perform a full range of FEED and erection of buildings on a turnkey basis,
- including the procedure of obtaining a positive conclusion of the State Expert Review of the project documentation.





Scope of annual output is up to 50,000m³ of total area of modular buildings.

We provide general contractor and technical customer services.



Earthquake resistance is up to 9 points





Permanent modular buildings in the PREMIUM and COMFORT segments

- . Residential.
- . Dormitories.
- . A&LQ.
- . Hotels.
- . Schools.







Modular buildings in the ECONOM budget segment, including buildings being part of a temporary housing complex (THC)

- . Dormitories.
- . A&LQ.
- . Bath and laundry complexes.
- . Cafeterias.
- . Firefighting equipment containerized modules.
- . Medical stations.



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