

CATALOGUE

**OF THE FIRE RESCUE TECHNIQUE,
FIRE-FIGHTING APPLIANCES AND
INDIVIDUAL PROTECTIVE EQUIPMENT
MANUFACTURED BY THE ENTERPRISES
OF THE REPUBLIC OF BELARUS**



FIRE RESCUE TECHNIQUE



FIRE RESCUE
TECHNIQUE



FIRE-FIGHTING TANK TRUCK TT 5,0-40 (MAZ 5434)

The fire-fighting tank truck is equipped with a double row, 4-doors cabin. The interior finishing of the cab is made of safe materials. It is equipped with individual seats with headrests, seat belts, handrails and everything that provides safety of the crew. The superstructure has an integrated tank made of glass-fiber reinforced plastic (GRP). The roof of the superstructure is covered with a special anti-slip coating.

Full weight, kg	15 800 - 17 700
Base chassis	MAZ 5434
Wheelbase	4x4
Diesel engine	Euro-4
Max power, kW	198.6
Max speed, km/h	85
Fuel tank, l	200
Cabin	2-rowdouble, 6-seater, 4-door
Crew, people	6
Dimensions, mm	7 900 x 2 550 x 3 250 (3 350)
Capacity of water tank, l	4 000 (5 000)
Capacity of foam tank, l	240 (300)
Superstructure material	Contoured carbon steel with corrosion-resistant coating or stainless steel
Fire pump	from 40 to 70 lps centrifugal pump, single or multi-pressure with a 90 m hose reel and a nozzle
Tires	single-tire or double-tire wheel

Producer:

LLC «POZHSNAB»

222514, Internucionala str.,186 g

Tel./fax: +375 177 74-84-90, 74-84-85

website: <https://pozhsnab.com>

FIRE RESCUE TECHNIQUE



FIRE-FIGHTING TANK TRUCK 10,0-40 (11,0-40) (MAZ 6317)

Full weight, kg	27 400 – 28 100
Base chassis	MAZ 6317
Wheelbase	6x6
Diesel engine	Euro-4
Max power, kW	309
Max speed, km/h	82
Fuel tank, l	350
Cabin	2-rowdouble, 4-doors
Crew, people	6
Dimensions, mm	10 000 x 2 550 x 3 500
Capacity of water tank, l	10 000 (11 000)
Capacity of foam tank, l	600 (660)
Superstructure material	Contoured carbon steel with corrosion-resistant coating or aluminum alloy
Fire pump	from 40 to 70 lps centrifugal pump, single or multi-pressure with a 90 m hose reel and a nozzle
Tires	double tire with all-terrain protector single tire with all-terrain protector

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FIRE RESCUE
TECHNIQUE



FIRE-FIGHTING TANK TRUCK TT 12,0-50 (MAZ 6317)

Body superstructure is made of three-layer sandwich panels produced in a vacuum environment. Water tank and foam tank are from glass-fiber reinforced plastic (GRP). TT 12.0-50 (MAZ 6317) is equipped with a standard cab.

Full weight, kg	29 500
Base chassis	MAZ 6317
Wheelbase	6x6
Diesel engine	Euro-4
Max power, kW	309
Max speed, km/h	80
Fuel tank, l	350
Cabin	1-rowdouble, 2-doors
Crew, people	2
Dimensions, mm	9250 x 2550 x 3400
Capacity of water tank, l	12 000
Capacity of foam tank, l	720
Superstructure material	Contoured carbon steel with corrosion-resistant coating or aluminum alloy
Fire pump	from 40 to 70 lps centrifugal pump, single or multi-pressure with a 90 m hose reel and a nozzle
Tires	single-tire wheel

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FIRE RESCUE TECHNIQUE



FIREFIGHTING LADDER AL-32 (MAZ 5340)

The ladder is intended for rescue operations to evacuate people, extinguish fires in multi-story buildings, tank farms, and also perform other auxiliary operations.

Gross weight, kg	17 840
Base chassis	MAZ 5340
Wheelbase	4x2
Max speed, km/h	85
Cabin	1-rowdouble, 2-doors
Crew, people	2
Max power, kW	180
Maximum working height, mm	32
Carrying capacity of a cradle, kg	200
Maximum working load on the top of a not leaned ladder at maximum height, kg	300
Support installation time, s	55
Width of a basic contour, m	5
Superstructure material	profiled carbon steel with anti-corrosion covering or profiled stainless steel
Tires	double tire wheel
Dimensions, mm	11 000 x 2 550 x 3 770

Producer:

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FIRE RESCUE
TECHNIQUE



AERIAL LADDER PLATFORM APK – 30 (MAZ 5340)

The areal ladder platform is used for special operations while fires – lifting up of the crew to the height and rescue victims from upper floors of buildings, for providing communication and lighting, for smoke fighting, opening and demolition of constructions, protection of valuable properties, etc.

Full weight, kg	20 500
Base chassis	MAZ 5340
Wheelbase	4x2
Diesel engine	Euro-4
Max power, kW	198
Max speed, km/h	85
Cabin	Single row, 2-seater, 2-door
Crew, people	2
Dimensions, mm	9 100 x 2 550 x 3 900
Boom length, m /off load	13/17
Loading capacity of the cradle, without the monitor, kg / with the monitor	350/250
Monitor	With manual or remote control with performance not less than 20 lps
Tires	double-tire wheel

Producer:

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FIRE RESCUE
TECHNIQUE



**FIRE-FIGHTING LADDER TRUCK
AL-30(MAZ 5340)**

Full weight, kg	18 000
Base chassis	MAZ-5340B2
Wheelbase	4x2
Diesel engine	Euro-4, Euro-5
Max power, kW	Not less 132
Max speed, km/h	85
Cabin	1-row, 2-doors
Crew, people	2
Dimensions (LxWxH)	10500×2500×3800mm
Capacity of water tank, l	400
Capacity of foam tank, l	20
Superstructure material	made of specialized carbon steel with corrosion resistant coating or specialized stainless steel
Maximum working height, m, at least	30
Maximum working load on unleaned top of the ladder at maximum outreach, kg, at least	180
Maximum outreach from rotate axis of the lift-and-turn device, m, at least	
— with maximum load on top	16
— without any load on top	20

Producer:

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FIRE RESCUE
TECHNIQUE



AERIAL LADDER PLATFORM «APK-25D»

Car lifts are intended for carrying out salvage operations on people evacuation, firefighting in many-storeyed buildings, as well as for other auxiliary operations performance. The car lift effectively performs tasks thanks to the latest equipment:

- Rotary crankshaft telescopic boom made of high-strength steel;
- Ladder made of aluminum alloy along the entire length of the boom with a cradle on the top;
- Electronic control panels with liquid crystal screens on a rotating column and in a cradle;
- Unified computer control system, cradle alignment, stability control;
- A system that allows both manual and accelerated automatic installation of a car lift on supports;
- Stainless steel pipe with two connecting heads for feeding fire extinguishing agents to the height, both with the help of a gun barrel and a comb on which four GPS-600 are located with the possibility of connecting additional hoses in the cradle;
- Removable lighting in the cradle, powered by a generator with a voltage of 220V;
- Bays for the fire and technical equipment placement;
- The cradle is equipped with a stretcher attachment system, a mechanism for lifting hoses to a height, a folding outer platform for rescue, an underfloor irrigation system.

Car lifts come with a detailed operation manual in Russian.

On the basis of Modern Fire Equipment Factory Joint Ltd a training system for operation and maintenance of car lifts is organized. It is possible to design and implement specific customer requirements, including the selection of the base chassis, not only from the options presented.

Maximum height of lifting the cradle (from the support surface to the floor of the cradle),m	24
Carrying capacity of cradle, kg	250
Maximum reach, m, not less than:	
With the maximum workload in the cradle:	10
With no load	14
Carrying capacity when working as a crane, kg, not less than	1000
The angle of the cradle rotation in the horizontal plane relative to the boom, deg.	±30
Combat calculation, person	2
Capacity of the gun barrel in the cradle, l/sec	25
The time for performing maneuvers, s, not more than:	
- installation on outriggers	35
- folding out the outriggers	25
Lifting the cradle from the supporting surface to the maximum working height, s, no more than:	
- without load	65
- with maximum working load in the cradle	75
Lowering the cradle from the maximum working height to the ground, s, no more than	60
Boom rotation 360 ° in each side at maximum working height, s, not more than	80
Power kW, (hp), ecological class, for the chassis:	Diesel
MAZ5337A2	167 (230), Euro-4
Mercedes Benz ATEGO 1326F	188 (256), euro-5
Maximum speed, km / h, for the chassis:	
MAZ 5337A2 / Mercedes Benz ATEGO 1326F	85/90
Overall dimensions in transport position, length x width x height, mm, not more than	
MAZ5337A2	7860 x 2500 x 3790
Mercedes Benz ATEGO 1326F	7770 x 2 500 x 3430
Full weight, kg, no more, for the chassis:	
MA3 5337A2 / Mercedes Benz ATEGO 1326F	16 000/13 000

Producer:

Modern Fire Equipment Factory Joint Ltd

220138, Republic of Belarus, Minsk, Lipkovskaya Str. 18-1, Apt. 13

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FIRE RESCUE TECHNIQUE



AERIAL LADDER PLATFORM «APK-32»

Car lifts are intended for carrying out salvage operations on people evacuation, firefighting in many-storeyed buildings, as well as for other auxiliary operations performance. The car lift effectively performs tasks thanks to the latest equipment:

- Rotary crankshaft telescopic boom made of high-strength steel;
- Ladder made of aluminum alloy along the entire length of the boom with a cradle on the top;
- Electronic control panels with liquid crystal screens on a rotating column and in a cradle;
- Unified computer control system, cradle alignment, stability control;
- A system that allows both manual and accelerated automatic installation of a car lift on supports;
- Stainless steel pipe with two connecting heads for feeding fire extinguishing agents to the height, both with the help of a gun barrel and a comb on which four GPS-600 are located with the possibility of connecting additional hoses in the cradle;
- Removable lighting in the cradle, powered by a generator with a voltage of 220V;
- Bays for the fire and technical equipment placement;
- The cradle is equipped with a stretcher attachment system, a mechanism for lifting hoses to a height, a folding outerplatform for rescue, an underfloor irrigation system.

Car lifts come with a detailed operation manual in Russian.

On the basis of Modern Fire Equipment Factory Joint Ltd a training system for operation and maintenance of car lifts is organized. It is possible to design and implement specific customer requirements, including the selection of the base chassis, not only from the options presented.

Length in transport position, not more than	11 m
Width in transport position, not more than	2,55 m
Height in transport position, not more than	4,0 m
Weight of lift without chassis	12 000±600 kg
Full weight of the load-lifting device	20 500 kg
Maximum carrying capacity of the working cradle	350 kg (3 people + 80 kg)
Intermediate carrying capacity of the working cradle	135 kg (1 person+45 kg), 270 kg (2 people+ 90 kg)
Force acting when you press the hand - one person	200 N
Force acting when you press the hand - two people	400 N
Maximum permissible wind speed	12,5 m/sec
Maximum allowed slope of the ground	6°
Hydraulic pump drive	Power take-off
Drive of working movements	hydraulic
Control	Electrohydraulic, proportional
Maximum working height *	32±0,5 m
Maximum working radius (for 350 kg) **	Not less than 14 ± 0,3 m
Time of installation on outriggers (no more)	50 sec
Lifting time to maximum height without load (no more)	85 sec
Lift time to maximum height with load (no more)	95 sec
Time of descent to the surface of the earth from a maximum height (no more)	80 sec

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POWDER EXTINGUISHING TRUCK AP 5000 (MAZ 6317)

The Powder extinguishing truck AP 5000 is used for fire elimination in chemical plants, gas and oil industries, electric power stations, transport and airports. It is used for delivery of crew, firefighting equipment and firefighting agents, supply of firefighting powder into the fire body through monitors.

Full weight, kg	22 200
Base chassis	MAZ 6317
Wheelbase	6x6
Diesel engine	Euro-3, Euro-5
Max power, kW	243 or 309
Max speed, km/h	85
Fuel tank, l	350
Cabin	Single row with a sleeping place
Crew, people	2
Dimensions, mm	9 550 X 2 550 X 3 700
Weight of fire extinguishing agent, kg	5 000
Quantity of powder tanks, pcs	2
Superstructure material	Contoured carbon steel with corrosion-resistant coating
Tires	single-tire or double-tire wheel with all-terrain protector

Producer:

LLC «POZHSNAB»

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FIRE RESCUE TECHNIQUE



FIRE LADDER TRUCK «AL-52»

Fire ladder truck is on the chassis MAZ-651669-352-001 with the wheel arrangement 8×4. Working part – extension-type 6-section steel ladder with a hydraulic monitor. The truck is equipped with an automatic outrigger alignment system, which is able to level the car independently in 30 seconds.

Crew, people	2
Allowable wind speed, m / s	10
Working height, m	52
Working boom length, m	20
Working level, deg.	-7 ... 76
Lift carrying capacity, kg	200

Producer:

Minsk Automobile Plant: 212030 Mogilev, Krupskoy str. 232

Tel.: +375 222 31-75-64, 24-51-66



AERIAL LADDER PLATFORM «АКП-48» (MAZ 6515)

Bucket lift is on the chassis MAZ-651669-352-001 with the wheel arrangement 8×4. The superstructure is a 5-section structure with a bucket. There is a hydraulic monitor on the bucket. The bucket lift is equipped with an automatic outrigger alignment system, which is able to level the car independently in 30 seconds.

Crew, people	2
Allowable wind speed, m/s	10
Working height, m	47,5
Working boom length, m	18
Working level, deg.	0 ... 86
Turning radius, deg.	360
Carrying capacity, kg	
car	30 000
bucket	350
as a crane	2 000

FIRE RESCUE
TECHNIQUE



Producer:

Minsk Automobile Plant: 212030, Mogilev, Krupskoy str. 232

Tel.: +375 222 31-75-64, 24-51-66

FIRE RESCUE TECHNIQUE



FIRE-FIGHTING TANK TRUCK «TT 5,0-50/4 (MAZ 5309)»

Fire-fighting tank truck 4 x 4 «TT 5,0-50/4 (5309)» is aimed for a fire brigade and fire extinguishing devices delivery to the place of fire. It is used for water transmission (from a tank, open water reservoir (pond), hydrant, fire-plug) and air-mechanical foam transmission.

Full weight, kg	19 500
Base chassis	MAZ 5309
Wheelbase	4x4
Diesel engine	Euro-4
Max power, kW	240
Max speed, km/h	85
Fuel tank, l	300
Cabin	6-seater, 4-door
Crew, people	6
Dimensions, mm	8 000 x 2 550 x 3 500
Capacity of water tank, l	5 000
Capacity of foam tank, l	300
Superstructure material	glass-fiber reinforced plastic (GRP)
Fire pump	from 40 to 70 l/s, centrifugal pump, single or multi-pressure
Tires	single-tire or double-tire wheel



Producer:

*Establishment «Production and Technical Center» of Minsk regional administration department of Ministry for Emergency Situations of Republic of Belarus
220137, Minsk, 9a Nesterova Str., Tel. :+ 375 (17) 242 83 98*



FIRE RESCUE
TECHNIQUE



PUMP-HOSE VEHICLE (PUMP STATION) 133 (MAZ 6317)

The vehicle is designed to supply water through trunk lines to supply water for pumps, tank trucks, water and air-foam monitors in areas where there are no water pipes, and water supply sources, which are removed over long distances from the place of a fire.

Full weight, kg	20 500
Base chassis	MAZ 6317
Wheelbase	6x6
Diesel engine	Euro-3, Euro-5
Max power, kW	243
Max speed, km/h	80
Fuel tank, l	350
Cabin	single, all-metal
Crew, people	2
Dimensions, mm	10 000 x 2 550 x 3 700
Superstructure material	frameless, self-supporting floor, isothermal panels
Pump station, l/s	133
Tires	single-tire or double-tire wheel off-road

Producer:

LLC «POZHSNAB»

222514, Internacionala str.,186 g

Tel./fax: +375 177 74-84-90, 74-84-85

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VEHICLE OF DIVING SERVICE (MAZ 6317)

The vehicle is used for delivery the crew to the place of search and rescue operations, equipped with equipment which provides realization of the following types of work:

- Search and rescue operations during 24 hours on the depth up to 20m at a water temperature from +2 °C to +37 °C on measurable distance from the coast;
- Search and retrieval of drowned objects;
- Rescue of people who are in distress on the ice-cake;
- Inspection of water area, underbody of hydraulic structures;
- Realization of mechanical, fitter's, lifting works under water;
- Refill of pressed air to the place of search and rescue works.

Full weight, kg	23 600
Base chassis	MAZ 6317
Wheelbase	6x6
Diesel engine	Euro-3, Euro-5
Max power, kW	309
Max speed, km/h	85
Fuel tank, l	350
Cabin	2-rowdouble, 6-seater, 4-door
Crew, people	8
Dimensions, mm	9 690 x 2 500 x 3 700
Superstructure material	profile of the carbon steel with corrosion-resistant coating or bonded from isothermal sandwich panels
Tires	double-tire wheel off-road

Producer:

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FIRE RESCUE
TECHNIQUE



ANTI-SMOKE FIRE-FIGHTING TRUCK (MAZ 5302)

The vehicle is designed for delivery the fire-fighting crew and fire-fighting equipment to the place of fire, normalization of air in the premises by removing smoke or discharge of breathable air; filling alight premises with aspirated foam for elimination of fire. Fan system MGV-LB 125/100 °F Independent drive with an additional internal combustion engine with water cooling, power 74 kW Ventilator with guide vanes on the pull-out turntable platform, lifting heightn - 0.6 m. possibility of regulating the vertical and horizontal movement Performance - 201 600 m³/h A device for feeding a high multiplicity of foam and atomized water, staffed with hoses and ccessories. Includes also: portable ventilators (capacity- 300, 00 mx² / xh) with hoses console foam generator with a high multiplicity of belongings generator (power — no less than 5 kW)



Full weight, kg	13 500
Base chassis	ABR 4371
Wheelbase	4x4
Diesel engine	Euro-4
Max power, kW	229
Max speed, km/h	85
Fuel tank, l	300
Cabin	single, 2-door
Crew, people	2
Dimensions, mm	7 920 x 2 550 x 3 700
Superstructure material	profile of the carbon steel with corrosion-resistant coating or bonded from isothermal sandwich panels
Tires	single-tire wheel off-road



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FIRE RESCUE TECHNIQUE



FIRE-FIGHTING TANK TRUCK «TT 5,8-40 (MAZ 5309)»

Fire-fighting tank truck 4 x 4 «TT 5,8-40 (5309)» is aimed for a fire brigade and fire extinguishing devices delivery to the place of fire. It is used for water transmission (from a tank, open water reservoir (pond), hydrant, fire-plug) and air-mechanical foam transmission.

Max speed, km/h	85
Mass with complete load, kg	19 000
Total weight distribution, kg. :	
- front axle	7 500
- back axle	11 500
Power-weight ratio, kW.	11,0
Capacity of water tank, l	5 000
Capacity of foam tank, l	360
Type of cabin	Biserial, four-door, six-seater, with passenger compartment
Seating capacity (with driver seat)	6
Road clearance, mm	300
Fire pump type	Fire, double-staged, axifugal, combined
Productivity of fire pump, l/s	50
Productivity of fire pump, l/s (for double-stage pumps)	4
Max geometric suction head, m	7,5

Producer:

*Establishment «Production and Technical Center» of Minsk regional administration department
of Ministry for Emergency Situations of Republic of Belarus
220137, Minsk, 9a Nesterova Str., Tel. :+ 375 (17) 242 83 98*



QUADRICYCLE

Quadricycle is made for:

- emergency situation site reconnaissance;
- locating and extinguishing ignition of solid substance and materials at the early stage of ignition;
- delivery of firefighting and rescue equipment to the emergency situation site;
- execution of search and rescue works and wrecking;
- medical aiding;
- insurance of economic needs for agricultural sectors;
- patrolling the places of sport and cultural events.

Engine type	four-stroke engine, petrol, capacity 493 cm ³
Engine power / yield	24 / 7 000
Length, mm	2 880
Width, mm	1 430
Height, mm	1 900
Wheel base, mm	1 790
Minimal road clearance, (front suspension), mm	260
Minimal road clearance, (rear suspension), mm	350
Front track / rear track, mm	1 082/1 082
Full speed, kilometer per hour	70
Fuel tank volume, litre	27
Body space, litre	290
Effective load, not less than kg	350

Producer:

Joint Stock Company «Trading Network «Motovelo»
220033, Minsk, pr Partizansky 8, housing 11, room 4
Tel/fax +375(17) 298-30-98

FIRE RESCUE TECHNIQUE



STAFF VEHICLE SV (UAZ)

The staff vehicle is designed to deliver rescuers, fire-fighting equipment, wire and radio means of communications to the emergency location; to create conditions for the operation of the operational headquarters at the emergency location and provide it with operational communication channels.

Base chassis	UAZ-23632
Wheelbase	4x4
Max power, kW (h.p.)	99 (134)
Max speed, km/h	100
Cabin	2-row double, 4-doors
Crew, people	6
Vehicle body type	closed superstructure, metal cargo platform with a tailgate
Full weight, kg	2860
Dimensions, mm	5 125 × 1 905 × 2 300



Producer:

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FIRE RESCUE
TECHNIQUE



SPECIAL CAR «MES» Geely ATLAS

A special car is designed for prompt delivery of executive to the place of fire or emergency, as well as for the implementation of fire prevention.

Base chassis	Geely ATLAS
Wheelbase	4×4
Max power, h.p.	150
Transmission	automatic, six-speed
Fuel type	petrol
Full weight, kg	2025
Dimensions, mm	4 519 × 1 831 × 1 694

Producer:

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FIRE-FIGHTING APPLIANCES

**INDIVIDUAL
PROTECTIVE EQUIPMENT**



FIREFIGHTER UNIFORM

INDIVIDUAL PROTECTIVE EQUIPMENT



Firefighter uniform is designed to protect against high temperature, high-intensity heat fluxes and possible flame emissions during fire extinguishing, intelligence and rescue people.

The material of the top of the firefighter uniform is "Arselon" 100 % (in various colors). Arselon has good ergonomic properties. It is comfortable and competitive in price with known analogues.

A new package of materials with a lightweight thermal insulation layer is used in the firefighter uniform.

Steadiness to a heat flow from fire 5,0 kW/m ² , s	240
Steadiness to a heat flow from fire 40,0 kW/m ² , s	5
Steadiness to a open flame, s, no less	15
Oxygen index of dress material, %	28
Steadiness to contacts with heated hard surface, till 400°C, s	10
Steadiness to temperature of the environment 300°C, s	300

Advantages:

- a shortened jacket and trousers are made as semi-overalls;
- elbows and knees are protected by overlays, the bottom of trousers is protected by a leather inserts;
- “cambrics” (hollow rubber tubes) are placed in the area of the shoulders and back. It facilitates the work of the firefighters with the device in compressed air;
- an “evacuation loop” from the fire-resistant thread Arselon is used for removal the rescuer from under the structures or in case of loss of consciousness during the work;
- the “Life belt” is used for rescue operations at height.
- a distinctive feature of the firefighter uniform is its weight, which is less than 4 kg.

Producer: Republican manufacturing unitary enterprise «Uniform»



*The Developer: The Establishment «Research Institute of Fire Safety and Emergencies» of the Ministry for Emergency Situations of the Republic of Belarus
Address: 220046, Minsk, Soltisa str., 183a. Phone number: +375 17 388-97-00*

INDIVIDUAL PROTECTIVE EQUIPMENT



FIREFIGHTER UNIFORM

Fire fighter`s uniform of 1st safety level is used for protection of body from dangerous and harmful factors of the environment while fire extinguishing and rescue operations. Advantages in comparison with foreign analogues: Heat insulating lining is made from waterproof-breathable material (breathable membrane) that improves conditions of work. Heat insulating lining is made from waterproof-breathable material (breathable membrane) that improves conditions of work.

Steadiness to a heat flow from fire 5,0 kW/m ² , s	240
Steadiness to a heat flow from fire 40,0 kW/m ² , s	5
Steadiness to a open flame, s, no less	15
Oxygen index of dress material, %	28
Steadiness to contacts with heated hard surface, till 400 ⁰ C, s	10
Steadiness to temperature of the environment 300 ⁰ C, s	300

Producer: Republican manufacturing unitary enterprise «Uniform»



*The Developer: The Establishment «Research Institute of Fire Safety and Emergencies» of the Ministry for Emergency Situations of the Republic of Belarus
Address: 220046, Minsk, Soltisa str., 183a. Phone number: +375 17 388-97-00*



INDIVIDUAL PROTECTIVE EQUIPMENT



SPECIAL RESCUE `S PROTECTIVE CLOTHING

The clothing is designed to protect the human body from mechanical influences, heat fluxes, open flames, sparks, non-toxic dust, general industrial pollution during emergency rescue operations and other urgent operations not related to extinguishing a fire, on duty, fighting forest and peat fires, elimination of the consequences of traffic accidents and the release of victims, the people search.

The material of the top of the clothing can be of two types.

The first type (left one) is cotton fabric with a flame retardant treatment that provides hygienic and protective properties.

The second one (center and right) is Arselon 100% (blue (black) and orange).

The inner lining is made from cotton, fleece and black mesh fabric.

The material of the reinforcing linings is split leather, the threads are fire-resistant, the color of which matches the color of the fabric.

Performance characteristics

Fabric porosity, $\text{dm}^3/\text{m}^2 \times \text{s}$, no less	10
Hygroscoy, %, no less	5
Breaking load, N, no less,	
warpwise	853
fillingwise	451
Change in linear dimensions after wet treatments or chemical cleaning, %, no more	
warpwise	3,0
fillingwise	2,5
Open flame resistance, s, no less	15
Resistance to environment temperature of 260 °C, s, no less	300
Heat flow resistance, no less, 5,0 kWt/m^2 , s	240

Producer: Republican manufacturing unitary enterprise «Uniform»



*The Developer: The Establishment «Research Institute of Fire Safety and Emergencies» of the Ministry for Emergency Situations of the Republic of Belarus
Address: 220046, Minsk, Soltisa str., 183a. Phone number: +375 17 388-97-00*

INDIVIDUAL PROTECTIVE EQUIPMENT



COMBINED INDIVIDUAL PROTECTIVE SUIT

The CIPS is intended for protection against dangerous and harmful factors during rescue and other works by employees of emergency services, and also for carrying in production conditions and protection of workers from dangerous and harmful production factors in various industries. The CIPS was developed in three versions: The CIPS-L, The CIPS-T and The CIPS-P.

It protects against:

- water and solutions of non-toxic substances;
- solutions of surface-active substances;
- acid solutions of concentration from 20 to 50%;
- solutions of alkali concentration above 20%;
- petroleum oils and products of heavy fractions;
- liquid toxic substances (ammonia);
- temperature effects of water (from 0 ° to plus 70 °C);
- from radioactive contamination.

Certificate of conformity no. NSOPB.BY.PR 143/2.N. 00037

Producer: Republican Manufacturing Unitary Enterprise «Uniform»



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HEAT-REPELLING CLOTHING «TOK-200»

INDIVIDUAL
PROTECTIVE
EQUIPMENT



Fireproof material with metallized coating of domestic manufacture is made to produce protective clothing for fire fighters, exploited under high temperatures (200 ° C) and sparks, melted metal sprays, sprays of dross, acids, mineral oil and petrochemicals. In contrast to the foreign analogs (prototypes) as the base is used textile material with is produced from silica fibers, noncombustible film coating – polyimide film. Usage of this material top with polymeric coating in manufacture of a heat-reflective protective suit will allow to protect fire fighters while eliminating emergency situations consequences, reduce the hazards of burning and injuries because of high temperatures, heat flows and open flame. Metallized polymeric coating layer functions as vapor sealing and waterproofing with the heat reflection effect not less than 90 %.

Steadiness to a open flame, s	15
Index of weakening of infrared radiation, %	70
Steadiness to temperature 200°C, s	480
Oxygen index of dress material, %	27
Steadiness to contacts with heated hard surface, till 400°C, s	5

Producer: Republican Manufacturing Unitary Enterprise «Uniform»



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INDIVIDUAL PROTECTIVE EQUIPMENT



OVERALLS FOR PROTECTION AGAINST STINGING INSECTS

The overalls for protection against stinging insects TS BY 400031289.221-2014 are designed to perform various works near the accumulation of bees, wasps, hornets and other similar stinging insects, including works on the destruction of stinging insects in places of their mass accumulation.

Depending on the degree of protection against stinging insects the overall is made in two versions:

Version 1 – for protection from bees and wasps.

Version 2 – for protection from bees, wasps, hornets and similar insects.

The overalls for protection against stinging insects in version 2 allow you to safely perform work on the elimination of stinging insects' nests by employees of emergency service. Due to the use of breathable cotton fabric in the overalls, the work in the overalls is quite comfortable.

It was developed in 2014 together with OJSC «SvetlogorskKhimvolokno».

Producer: Sewing production unitary enterprise «Svetlotex»



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INDIVIDUAL
PROTECTIVE
EQUIPMENT



FIREFIGHTER THERMAL UNDERWEAR

Within realization of research work a domestic version of firefighter thermal underwear from 100% fire resistant fiber «Arselon» was developed. It is intended as an additional protective layer which also has property of moisture assignment.

Main characteristics

Resistance to heat flow $5 \text{ kW/m}^2 \text{ s}$, not less than	240
Resistance to open flame, c, not less than	15
Resistance to temperature influence $260 \text{ }^\circ\text{C}$, c, not less than	300

Producer: Republican Manufacturing Unitary Enterprise «Uniform»



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INDIVIDUAL PROTECTIVE EQUIPMENT



FIREFIGHTER HELMET

Firefighters' helmet is used for protection of fireman head from mechanical damages, water, thermal radiation and electrocution while working on fire extinguishing and breakdown elimination. The helmet provides initial characteristics maintenance with ambient temperature from minus 55 °C to plus 60 °C and environment influence with temperature not less than 200 °C within not less than 3 minutes. Helmet frame provides protection from electrocution with voltage of 660 W. Weight – no more than 1,5 kg without additional accessory.

Producer: Republican Manufacturing Unitary Enterprise «Uniform»



FIREFIGHTER HELMET LINER

The firefighter helmet liner of 100% Arselon fire resistant fiber serves as an additional means of personal protection for rescuer's head and face. Compatible with combat clothing and firefighter helmet provides coverage of unprotected places with helmet and GSU (places such as neck, ears and cheeks). When working, thanks to property of a knitted cloth the firefighter helmet liner is mobile (quickly removed and put on). It's put on as a balaclava, through the cutout of the face is easily transferred to the position on the neck, which does not cause difficulties when putting on a panoramic mask and connecting to the compressed air device.

Producer: Republican Manufacturing Unitary Enterprise «Uniform»

INDIVIDUAL PROTECTIVE EQUIPMENT





INDIVIDUAL PROTECTIVE EQUIPMENT



SPECIAL PROTECTIVE FIREFIGHTER SHOES

Special protective firefighter boots are designed to protect the feet of firefighters from:

- heat flow;
- aggressive environment and water;
- adverse climatic influences during fire extinguishing and emergency rescue operations.

A special protective toe cap from composite material is used in the manufacture of these shoes, to avoid injury of toes (in accordance with the international standard EN 12568).

A metal anti-puncture insole is used to protect the feet from punctures. Insoles can be made from anti-puncture woven material based on Kevlar (EN12568) at the request of the customer.

Half pair weight for size 42 is 1200 g.

Firefighter boots have unique waterproof properties - the upper material is waterproof leather. The inner part of the boot is made from a vapor-permeable and waterproof membrane material, which allows you to work in water (at a depth of 15-20 cm) for at least an hour and stay dry.

Special synthetic extra strong non-combustible threads are used for assembling upper blanks.

Non-flammable laces and the zipper allow you to adjust the volume of the boot in the shin area. It ensures quick fixing of the boot on the foot and, if necessary, quick removal.

A distinctive feature of these samples is the injection method of attaching the sole to the upper blank of the boot. As a result, a monolithic connection of the bottom of the boot with the upper occurs.

A sample of lightweight firefighter boots was developed. It is equipped with quick lacing systems to increase the speed of putting on and taking off. The mass of the sample is no more than 1.1 kg, which is its specific advantage over its analogues. The shoes are waterproof for over 1 hour.



Producer: JV «Marko» LTD



INDIVIDUAL PROTECTIVE EQUIPMENT



PERSONAL PROTECTIVE EQUIPMENT OF FIREFIGHTER HANDS (FIREFIGHTER GLOVES)

Personal protective equipment of firefighters and rescuers hands (further – PPEH) is designed to protect of firefighters and rescuers hands from harmful environmental factors, arising in extinguishing fires and conducting the associated priority of rescue operations (high temperatures, thermal radiation, contact with hot surfaces, mechanical stress) and against adverse climatic influences. They are made of heat resistant Arselon fabric.

A palmar part is enhanced by the strap of the split. It was made of heat-resistant fabric called «Leonid». The palmar part is reinforced with a strip of the leather which is called «Spilok».

PPEH provide:

- water tightness not less than 30 s;
- resistance to contact with hard surfaces heated to 400 ° C for at least 10 s;
- resistance to heat flow 5 kW/m² not less than 240 s, 40 kW/m², not less than 5 s;
- resistance to open flame not less than 15 s.

Producer: Republican Manufacturing Unitary Enterprise «Uniform»



FIREFIGHTER GLOVES

Gloves provide the possibility of free movement of the hands, capture and hold objects. The gloves consist of a glove top and an inner layer. The main part of the glove top is made of fabric for working clothes in black color.

Producer: Republican Manufacturing Unitary Enterprise «Uniform»

INDIVIDUAL PROTECTIVE EQUIPMENT



*The Developer: The Establishment «Research Institute of Fire Safety and Emergencies» of the Ministry for Emergency Situations of the Republic of Belarus
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FIRE RESCUE BELT

The fire rescue belt is the main means of insurance when working at height, the self-rescue of the firefighter, and for ax and additional carabines fasten.

The main characteristics of the belt are its reliability, which is achieved by making it from a cut polyamide tape. The fire belt is equipped with a quick-release double-slot buckle.

Complete with a belt is a halyard. Halyard made of polyamide tape with weaving arselon threads.

A pouch is provided for storing the halyard. And there is a loop for quickly removing it from the pouch.

The weight of the belt is 1.37 kg.



Weight	0,72 kg
Breaking force	12 000 H
Belt stiffness (bend angle)	32 deg.
Average service life	no less than 100 rounds

SIZE RANGES (1-4)

Size 0	110 cm
Size 1	125 cm
Size 2	140 cm
Size 3	160 cm
Size 4	180 cm

Producer: OAO «Lenta»



INDIVIDUAL PROTECTIVE EQUIPMENT



THE FIREFIGHTER UNIFIED UNLOADING VEST

In the framework of the concept implementation «Perspective equipment «Rescuer-XXI», the firefighter unified unloading vest was developed. It is used for emergency rescue operations in conditions of damage to vehicles, infrastructure and water rescue. The vest was made from cotton non-combustible materials, includes removable elements of positive buoyancy and pouches for fire-fighting equipment.

Producer: Republican Manufacturing Unitary Enterprise «Uniform»

The complete set of unloading vest:

1. Radio station;
2. Powder extinguisher (volume of 1-2 lit.);
3. Aerosol fire extinguisher spray;
4. Special fire-resistant protective cape stretcher;
5. Filter self-rescuer (2 p.);
6. Water bottle (volume of 1 lit.);
7. Working gloves;
8. LED hand lamp;
9. LED head lamp;
10. Fixation device (belt);
11. Multitool;
12. Polymer cape;
13. Signalling device (whistle);
14. First-aid kit:
 - hypothermal package;
 - tourniquet;
 - sterile bandage (2 p.);
 - non-sterile bandage (2 p.);
 - elastic tubular bandage (3 p.);
 - adhesive plaster bactericidal (5 p.);
 - adhesive plaster (in coil 1 x 25);
 - validol 2 packs of 10 tablets;
 - activated charcoal 2 packs of 10 tablets;
 - iodine;
 - ammonia solutions 10%;
 - nitroglycerin tablets;
 - cotton;
 - medical gloves.



UNIFIED UNLOADING VEST «RESCUER»

The vest is intended for performance by emergency service employees works on the prevention and liquidation of emergency situations during sports and public actions.

*Producer: Republican Manufacturing Unitary Enterprise «Uniform»
Republican unitary enterprise «Svetlogorskoe manufacturing group «Himvolokno»*



*The Developer: The Establishment «Research Institute of Fire Safety and Emergencies» of the Ministry for Emergency Situations of the Republic of Belarus
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INDIVIDUAL PROTECTIVE EQUIPMENT





FIRE DELIVERY HOSE (Ø 51 MM, Ø 66 MM, Ø 77 MM)

The hoses are used for assembling of fire hydrants and portable motor pumps, mobile fire fighting equipment used for water and dilute solution of foam compound in water supplying at a distance under pressure. The hose type - synthetic with one-sided inner covering. The polymer material (polyurethane) is used like a covering. Advantages of fire delivery hoses: ageing resistance; corrosion resistance; low moisture absorption; good freeze resistance; high-wearing feature; elasticity.

Producer: Open Joint-Stock Company «Mogilevkhimvolokno»



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FIRE FIGHTING APPLIANCES



FIRE-FIGHTING FOAMING AGENTS «BARRIER-PLENKOOBRAZUYUSCHIY»

«Barrier-plenkoobrazuyuschiy» is a designated use foaming agent. It is obtained by using of special dedicated equipment of mechanical air foam (used for classes of fires A and B according to GOST 27331).



SYNTHETIC FIREFIGHTING FOAMING AGENTS

The synthetic fire-fighting foaming agents are the general purpose foaming agents. It is obtained by using of special dedicated equipment of mechanical air foam and solutions of wetting agents (used for classes of fires A (solids) and B (liquid substances) according to GOST 27331). Foaming agents are used in Ministry for Emergency Situations of the Republic of Belarus and at the enterprises of the Republic of Belarus.

Producer: Limited liability company «Splendor»

FIRE FIGHTING APPLIANCES



*The Developer: The Establishment «Research Institute of Fire Safety and Emergencies» of the Ministry for Emergency Situations of the Republic of Belarus
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FIRE NOZZLE "VIKING" (MANUAL, UNIVERSAL, COMBINED)



FIRE FIGHTING
APPLIANCES

MODIFICATION «A»

Characteristics	Unit of measurement	Values
Operating pressure	MPa	0,4-0,7
Consumption of extinguishing agent (pressure 0,7±0,05 MPa): the position of the dispenser 1 the position of the dispenser 2 the position of the dispenser 3 the position of the dispenser 4 the position of the dispenser 5 the position of the dispenser 6 (flushing parameters)	l/s (LPM)	1,9 (114) 2,2 (132) 3,2 (192) 4,8 (288) 5,7 (342) ---
Range of compact jet (pressure 0,7±0,05 MPa): the position of the dispenser 1 the position of the dispenser 2 the position of the dispenser 3 the position of the dispenser 4 the position of the dispenser 5 the position of the dispenser 6	m	25,0 30,0 32,0 35,0 38,0 ---
Maximum range of foam supply	m	18,0
Weight	kg	1,8

Producer: Republican Unitary Enterprise «Instrument Engineering Plant «Optron»



*The Developer: The Establishment «Research Institute of Fire Safety and Emergencies» of the Ministry for Emergency Situations of the Republic of Belarus
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HAND MULTIPURPOSE FIRE NOZZLE (FIRE-HOSE NOZZLE) «СПР-50/0,7»

Fire multipurpose hand nozzle (fire-hose nozzle) «СПР-50/0,7» is made for generation, controlling the recirculation and vector (direction) of full or rain water jet, generation of protective water curtain during the fire extinguishing and liquidation of emergency situations.

Fire nozzle design allows:

- to spray pencil and dispersed jets of a fire extinguishing agent and generate water curtain jet with the spray angle of 120 degrees;
- to control fire extinguishing agent flow rate over the range 1,1 to 10,5 liter/sec with the batcher repositioning trace.

Characteristics	Unit of measurement	Values
1. Working pressure	MPa	0,4-0,7
2. Fire extinguishing agent flow rate not less than: batcher position 1 batcher position 2 batcher position 3 batcher position 4 batcher position 5	l/s	1,1 2,0 3,7 5,4 10,5
3. Pencil jet range (regarding extreme drops) not less than: batcher position 1 batcher position 2 batcher position 3 batcher position 4 batcher position 5	m	18,0 20,0 28,0 32,0 37,0
4. Dispersed jet range (regarding extreme drops) not less than: batcher position 1 batcher position 2 batcher position 3 batcher position 4 batcher position 5	m	12,0 14,0 16,0 18,0 20,0
5. Water curtain jet diameter not less than: batcher position 1 batcher position 2 batcher position 3 batcher position 4 batcher position 5	m	3,0 3,5 3,5 3,5 3,5
6. Dispersed jet angle not less than:	degree	40
7. Water curtain jet angle not less than:	degree	120
8. Fire barrel mass (fire-hose barrel) not less than	kilogram	3.5
9. Fire barrel service life period	years	8

Producer: Republican Unitary Enterprise «Instrument Engineering Plant «Optron»





OPERATIVE CUT-IN INTEGRATED DEVICE «YOBV-70»

The device is intended for operative connection of underlying suppressions system of oil and mineral oil in the tanks which have been not equipped by stationary underlying fire systems with use of mobile fire technics. Actual problem is development and use of alternative ways for suppression of fires in tanks. One of such ways is underlying suppression of fire. By results of researches it is established, that underlying fire suppression of oil and mineral oil in the tanks, which have been not equipped by stationary fire system, is possible with use of operative cut-in technology. Time of cut-in technology performance and submission of foam for suppressions does not exceed 30 minutes from the moment of arrival.

Consumption of air, m ³ /min	1,0-1,1
Rated power of a drive, W	1 000
Rated speed of rotation of a mill under loading, rev/min	100
Normal diameter of a mill, mm	70-95
Duration of drilling of an aperture, min, no more	2
Weight, kg	32,6
The settlement size of the pipeline, mm (manufacturing of other sizes is possible)	150, 159, 168

Producer: NPO «Vector»





RESPIRATORY PROTECTIVE EQUIPMENT (COMPRESSED AIR BREATHING APPARATUS)

The breathing apparatus with compressed air is designed to protect the respiratory system and eyes of the firefighter from the harmful effects of a toxic and smoke-filled gas environment during the liquidation emergencies and evacuation the victim from buildings.

Cylinder pressure bar (Mpa): 300 (30)

Nominal time of protective, min: 60 (1 – Cylinder)

Average pressure, bar (MPa): 5–9 (0,5–0,9)

Operating temperature, degrees: -40 – +60

Relative humidity, percent: 90±5

Service life of the apparatus
(not less), years: 10

Excessive pressure in the space
under the mask, (MPa): 3,9

Standard equipment:

Apparatus
Composite cylinder (6.8 l / 300 bar) with valve
Mask 3S-PS MaXX
Bag for carrying and storing the mask

Producer: Modern Fire Equipment Factory Joint Ltd

