

# MILITARY VEHICLES



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The main battle tanks delivered by REAL TRADE PRAHA are all based on former Soviet tank models that were introduced in the second half of 20th century. Our company has just as long tradition in producing, repairing, renovating and modernizing T-55 and T-72 models as we have provided these services for Czechoslovak armed forces and other Warsaw Pact armies including the Soviet Union ever since after the World War II. Our MBTs can fulfill the tasks required at the battlefield of today. Despite the existence of advanced modern battle tanks, assymetric conflicts are still unfortunately an every day reality in many parts of the world and REAL TRADE PRAHA tanks are an economic solution for peace keeping in these troubled areas.

MAIN RATTLE TANKS 04



### BALLISTIC REINFORCMENT

Crew protection greatly enhanced with minimal negative effects on vehicle mobility.



### REACTIVE ARMOUR

Original Czech-made DYNA explosive armour segments.



### STRONGER ENGINE

New V-84 engine has 45 kW higher output than original V-46-6 model.



### BETTER OPTICS

Upgraded optical and observation systems.



### REMOTELY CONTROLLED AA MG

Original manual operated mount replaced with remote control manipulator.



# T-72 SCARAB

A LEGEND, REINFORCED AND ENHANCED TO WITHSTAND THE MODERN BATTLEFIELD











The T-72 SCARAB is EA's modernized version of well known and still widely used T-72 medium battle tank.

SCARAB is designed for contemporary and assymetric conflicts and also missions against enemy equipped with portable anti-tank weapons such as RPGs or TOWs. Its enhanced crew protection, engine output and observation systems offer wider operational capabilities and longer life cycle.

SCARAB presents a great affordable solution both for government procurement and army maintenance agenda with excellent value for money ratio.

We can also offer other modernization aspects per the customer's preference, including i.e. new engine type, new tracks, modern aiming devices, more areas covered with a reactive armour, meteo sensors, new fire-suppression system and more.





### **PARAMETERS**

weight		43t
dimensions	L	9,530 mm
	W	3,590 mm
	Н	2,190 mm
engine	type	V-84
	output	618 kW
mobility	top speed - on road	60 km/h
	top speed - off road	45 km/h
	cruising range	500 km
	fording depth (instant)	1.2 m
	gradient	30°
	side slope	25°
	vertical obstacle	0.85 m
	trench crossing	2.8 m

12-CYLINDER V 60 DEGREES DIRECT INJECTION MULTIFUEL 4 STROKE WATER COOLED



### SPECIFIC PARAMETERS

armament	main	2A46 / 125 mm	39 rounds
	secondary	PKT / 7.62 mm	2,000 rounds
		NSVT / 12.7 mm	300 rounds

MAIN BATTLE TANKS T-72 SCARAB





### PROVEN ARMAMENT

Widely used, proven and reliable guns.



### STANDARD T-72 PLATFORM

Well available support thanks to standartization as more than 25,000 units were produced.



Swift acceleration and good maneuvering in tough terrain.



### **UPGRADES AVAILABILITY**

Many upgrades available - including reactive armour, night vision or laser warning.



SOLID AND PROVEN BATTLE TANK FOR STANDARD MISSION SUPPORT





3 60<sub>KM/H</sub> 5,000<sub>M</sub> EA







Renowned classic tank with extensive logistic support availability due to its decades long history of production and successful use by over

Apart from the standard armament consisting of a main gun, coaxial anti-infantry machine gun, secondary anti-aircraft gun and smoke grenade launchers the tank can be fitted with a selection of fire control, passive protection, communication and observation systems.

Its economical availability and logistical advantages make a T-72 a very good choice for security and armed conflict mission support.





The 125 mm smoothbore gun 2A46 can fire armour-piercing fin-stabilised discarding sabot (APFSDS), high-explosive anti-tank (HEAT) and high-explosive fragmentation (HEF) projectiles.



PARAMETERS		T-72	T-72 M1
weight		41t	43t
dimensions	L	9,530 mm	9,530 mm
	W	3,460 mm	3,590 mm
	н	2,190 mm	2,190 mm
engine	type	V-46	V-46-6
	output	573 kW	573 kW
mobility	top speed - on road	60 km/h	60 km/h
	top speed - off road	45 km/h	45km/h
	cruising range	460 km	460 km
	fording depth (instant)	1.2 m	1.2 m
	gradient	30°	30°
	side slope	25°	25°
	vertical obstacle	0.85 m	0.85m
	trench crossing	2.8 m	2.8 m

12-CYLINDER V 60 DEGREES DIRECT INJECTION MULTIFUEL 4 STROKE WATER COOLED



### SPECIFIC PARAMETERS

armament	main	2A46 / 125 mm	39 rounds
	secondary	PKT / 7.62 mm	2,000 rounds
		NSVT / 12.7 mm	300 rounds

MAIN BATTLE TANKS T-72/T-72 M1





### ARMAMENT

Main gun, anti aircraft and 2 light machine guns.



### T-55 PLATFORM

Excellent technical support availability and spare parts supply.



### MOBILITY

Good performance in sloped terrain.



### AM2 VERSION UPGRADE

Many upgrades
available - including reactive
armour, night vision or laser
warning.



# T-55

### MAIN BATTLE TANK WITH GREAT ECONOMY OF USE



The T-55 tank with a long production history is still available for specific mission support.

As other earlier generation vehicles in our portfolio it presents a very economical choice for armed forces that need to extend its operability against an enemy with less advanced technological means and weaponry.

Good crew protection, maneuverability, reliable engine and arms of a standard T-55 tank can be improved with a set of enhancements coming with model T-55 AM2 – e.g. laser sights, infrared rangefinder and KLADIVO fire control system.





### **PARAMETERS**

weight		38t
dimensions	L	9,000 mm
	W	3,270 mm
	н	2,350 mm
engine	type	V-55
	output	427kW
mobility	top speed - on road	50 km/h
	top speed - off road	20 km/h
	cruising range	500 km
	fording depth (instant)	1.4 m
	gradient	32°
	side slope	30°
	vertical obstacle	0.8 m
	trench crossing	2.7 m

### V-55 AM2 ENGINE -AVAILABLE UPGRADE

12-CYLINDER
V 60 DEGREES
DIRECT INJECTION
MULTIFUEL
4 STROKE
WATER COOLED



### SPECIFIC PARAMETERS

armament	main	D10-T2SA/SK / 100 mm	45 rounds
	secondary	2× PKT / 7.62 mm	2,000 rounds
	optional	1× DShKM / 12.7 mm	300 rounds

MAIN BATTLE TANKS **T-55** 



REAL TRADE PRAHA offers a range of self-propelled howitzer class artillery guns with 122, 152 and 155 mm calibre available.

Most of our howitzers are mounted on a wheeled original Tatra chassis and therefore are suitable for high speed travel on road as well a swift deployment in rough terrain. This increases the safety of the crew that often needs to carry out the given task and leave the firing post as soon as possible to avoid enemy countermeasures. Our howitzer systems are proved by active duty in a number of defence forces.





### **BALLISTIC PROTECTION**

Cabin according to STANAG 4569 Level I.



### ON-BOARD DIAGNOSTIC

Integrated dignostic system with automatic record of operating units.



### CREW COMFORT

High performance heating, A/C and NBC filtration system.



### **EXTRA POWER**

Auxiliary power unit is available, including a hydraulic pump.





# DANA M2

LATEST AND MOST ADVANCED VARIANT OF THE 152 MM DANA VZ. 77 SELF-PROPELLED GUN HOWITZER









The 152 mm DANA vz. 77 self-propelled gun howitzer has gone through a major modernization presenting the most recent DANA M2 system featuring high speed in taking up and leaving the firing position, greater accuracy and excellent hard terrain crossability.

The DANA M2 howitzer is equipped with a powerful Onboard Control System which contains subsystems of diagnostics, navigation, automatic gun aiming, autonomous calculation of shooting elements and ammunition selection subsystem.

Thanks to the new more resistant cabin and the NBC filtration system the DANA M2 provides the crew with the highest level of comfort and protection. The newly implemented automatic guiding system allows fast and fully-automatic weapon adjustment into fire position.

### **PARAMETERS**

weight		30.2t
dimensions	L	11,456 mm
	W	3,000 mm
	н	3,350 mm
engine	type	Tatra T3 -930-52M, V12
	output	265kW
mobility	top speed - on road	90km/h
	top speed - off road	25 km/h
	cruising range	600 km
	fording depth (instant)	1.4 m
	gradient	30°
	side slope	15°
	vertical obstacle	0.6 m
	trench crossing	2.0 m



### SPECIFIC PARAMETERS

traverse  traverse  ± 45° a full range elevation  ± 220° with elevation  trate of fire – 1st minute  rate of fire – sustained  carried ammunition  12.7 mm NSVT			
traverse  traver	armament	main	152.4 mm howitzer
traverse ±225°  ± 45° a full range elevation  ± 220° with elevation to 10° (except DN1C)  rate of fire – 1st minute 5/min.  rate of fire – sustained 4/min.  carried ammunition 40  secondary weapon 12.7 mm NSVT		firing range	20,000 m (25,500 m w DN1CZ ammunition)
± 45° a full range elevation  ± 220° with elevation to 10° (except DN1C)  rate of fire – 1st minute 5/min.  rate of fire – sustained 4/min.  carried ammunition 40  secondary weapon 12.7 mm NSVT		elevation	-4° / 70°
elevation  ± 220° with elevation  to 10° (except DN1C)  rate of fire – 1st minute 5/min.  rate of fire – sustained 4/min.  carried ammunition 40  secondary weapon 12.7 mm NSVT		traverse	±225°
to 10° (except DN1C)  rate of fire – 1st minute 5/min.  rate of fire – sustained 4/min.  carried ammunition 40  secondary weapon 12.7 mm NSVT			
rate of fire – sustained 4/min.  carried ammunition 40  secondary weapon 12.7 mm NSVT			± 220° with elevation to 10° (except DN1CZ)
carried ammunition 40 secondary weapon 12.7 mm NSVT		rate of fire – 1st minute	5/min.
secondary weapon 12.7 mm NSVT		rate of fire – sustained	4/min.
secondary weapon		carried ammunition	40
		secondary weapon	12.7 mm NSVT anti-aircraft machine g





○ DANA M2 SYSTEM

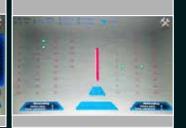
Basic screen



A AA AA



Semi-automatic aiming using dial



Optional ammunition selection subsystem



### **NEW CONTROLS**

Vehicle is equipped with new ergonomically distributed driver's and commander's controls (vehicle controls, C2I systems, FCS, FVS, CTIS etc.).



### AUTOMATIC GUN AIMING

DANA M2 howitzer is equipped with a special A.S.A.P. system (Automatic Setting of Action Position) and with an ammunition control system which greatly enhance the speed of task execution and overall effectivity of the weapon.



### APHU

Auxiliary 24 V source with a hydraulic pump allows emergency control of gun, battery charging and electrical system powering in case of accidental engine stopping.



### IMPROVED UNDERCARRIAGE

Improved engine, new clutch, semi-automatic TATRA NORGREN transmission, new steering with servo, diagnostics and other improvements. Activation and retraction of support pads is 65% faster.





THE ORIGINAL DANA SELF-PROPELLED GUN HOWITZER MODEL 77



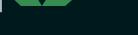












The 152 mm wheeled self-propelled gun howitzer designated "vz. 77 DANA" is a wheeled combat vehicle armed with the 152 mm gun.

The howitzer has been designed to provide fire support, neutralize enemy firing positions and destroy enemy positions by indirect fire. It is ranked amongst the most traditional and well-proven artillery systems due to the extensive in-service history and production that commenced in the 1970's.

The number of howitzers produced is around 800 and thanks to the compatibility with its successors it is still in service as one of the leading active and effective battle-proven military system.



The DANA has a crew of five with the driver position on the left side in front crew cab with the commander to his right each are equipped with a single hatch on the roof that opens forward. There is two small windows at the front of the vehicle which can be covered by shutters. The other three members of the crew are located in the turret with the gunner and loader on the left and ammunition handler on the right. There is one single door on each side of the turret. The DANA is fully protected against firing of small arms and shell splinters.

### SPECIFIC PARAMETERS

**PARAMETERS** 

type

output

top speed - on road

top speed - off road

fording depth (instant)

cruising range

vertical obstacle

trench crossing

gradient side slope

weight

engine

mobility

dimensions

armament	main	152.4 mm howitzer
	firing range	20,000 m (25,500 m with DN1CZ am- munition)
	elevation	-4° / 70°
	traverse	±225°
	rate of fire – 1 <sup>st</sup> minute	5/min
	rate of fire – sustained	5/min (2/min with manual loading)
	carried ammunition	40-60
	secondary weapon	DShK 1938 12.7 mm Heavy Anti-Aircra Machine Gun

# SHKH VZ. 77 DANA

1+4 80 KM/H 20 KM 1-1 EA

















### TATRA CHASSIS

Great negotiation of rough terrain - typical advantage of the unique TATRA concept.





Primary reloading system is fully automatic.



### **GOOD FIREPOWER**

Very long range, outstanding accuracy and firing rate. Large number of additional carried ammo.

29.3t

11.156 mm

3.000 mm

3,500 mm

265 kW

80 km/h

25 km/h

600 km

1.4 m

30°

15°

0.6 m

1.4 m

Tatra 3-930.52, V12

# MULTIPLE LAUNCH ROCKET SYSTEMS



REAL TRADE PRAHA delivers a range of multiple launch rocket systems. Our MLRS vehicles are built on the unique Tatra chassis which allows them to pass through very difficult terrain with certainty and at surprising speed. The launcher platform is derived from the well-known, proven and widely used RM-70 and BM-21 MLRS systems. To allow fast and accurate firing, our MLRS vehicles are equipped with a new aiming system and optionaly with Fire Control System with navigation system and ballistic computer that allows fire elements calculation. According to the calculation aiming system automatically aims and deregulates the launch tubes towards the target. Apart from the new MLRS production, we also specialize in modernization of existing technology to allow our customers continuous use of their current undercarriage and superstructure platforms.

MULTIPLE LAUNCH ROCKET SYSTEMS 18

# MULTIPLE LAUNCH ROCKET SYSTEMS

# FIRE CONTROL SYSTEM AND AIMING SYSTEM FOR ALL EA MLRS

FIRE CONTROL SYSTEM (FCS)

The Fire Control System consists of commander ballistic computer, communication subsystem and navigation system.

We offer two possibilities of the FCS with two different solution of the navigation system:

### 1. LANSYR-LIR Fire Control System with I-GEO navigation system

- Independent of external surroundings with no interference chances.
- Coordinates are continually recalculated according to the movement of the rocket launcher in terrain.
- Accurate values of the superstructure elevation and direction towards true north

### 2. LANSYR-MQR Fire Control System with Q-GEO navigation system

- The dual GPS sensors are linked to the top of the rocket tubes bundle, which secures that the system obtains accurate values of the superstructure direction towards true north.
- · Coordinates of the actual position are continually recalculated in the real time.

### FCS provides following main features:

- Calculation of shooting elements with automatic correction in the commander's tablet.
- Automatic topographic orientation capability.
- Sending data and commands to other vehicles with RF20 radio in P2P mode.
- Possible operation with or without radio communication.
- Creating geodetic objects: posts, targets, areas on the map.
- Slope calculation in course of vehicle according to the elevation data.
- Automatic command system.
- Firing from prepared or unprepared firing positions with topographic preparation.
- Easy preparation of various number of alternative firing posts.
- Displaying positional information on the digital maps.

### MODES OF THE AIMING SYSTEM

- 1. Fully automatic using a ballistic computer with FCS
- 2. Semi-automatic using control panel
- 3. Manual using a joystick and artillery sight RM-70
- 4. Emergency using a handwheel and artillery sight RM-70

### AIMING SYSTEM

- The aiming system allows reliably, quick and accurate aiming into calculated fire direction with all necessary superstructure and chassis subsystems and parts.
- The aiming system is controlled directly through the ballistic computer with automatic deregulation of the aiming or through the control panel and joystick.
- Aiming system consists of new electronic control boxes and panels.
- Non-NATO (360 = 60.00) and NATO (360 = 64.00) aiming circles are available.
- Sensor accuracy is 0.35 mils for elevation and traverse.
- Inclinometer tilt angle is ±5° with accuracy 0.2°.

### MILITARY

JOYSTICK



FIRING DEVICE

CONTRO PANE

BALLISTIC COMPUTER

# FCS MAIN COMPONENTS



Commanders ballistic computer



I-GEO navigation system



Q-GEO navigation system



Military radio

### AIMING SYSTEM COMPONENTS



Control panel of the aiming



Firing device



Loading unit control panel



Joystick



Portable device

### NAVIGATION SYSTEM

### e offer two different solution of the navigation system:

I-GEO navigation system based on Inertial Navigation System and GPS.

- · Designed for heavy artillery solutions.
- No maintenance.
- Sensors: 3 gyro, 3 accelerometer.
- Bearing and elevation accuracy <2 mils.</li>
- Cold start:
  - 4 min for initial alignment,
  - 10 min for fine alignment.

Q-GEO navigation system based on dual GPS sensors with Q-GEO navigation unit.

- Based on dual GPS sensors with Q-GEO navigation unit.
- Electronic assembly with high accuracy, repeatability, and low power consumption.
- No maintenance.
- Bearing accuracy better than 2 mils.





### DIGITAL INTERFACE OF THE ELECTRIC SYSTEM

Digital interface of the main weapon systems enables implementation of the Fire Control System with new aiming system according to calculated shooting elements with the possibility of manual control, voice and data communication with the upper levels of command and the new navigation system.



### **NEW TATRA CHASSIS**

Overall design of whole system increased by unique Tatra chassis T815-7 with its high cruising speed and high crosscountry capability, good maneuverability and excellent chassis properties.



# RM-70 VAMPIRE 4D

MULTIPLE LAUNCH ROCKET SYSTEM DELIVERING EXTENSIVE FIREPOWER FAST AND WITH HIGH PRECISION











The RM-70 VAMPIRE 4D is a forty-tube, multi-launch, self-propelled rocket artillery system with a loading device, which is used to provide converging fire support for troops, firing unitary high-explosive fragmentation rocket projectiles (122-JROF-RM 70) at larger area targets.

The RM-70 VAMPIRE 4D is a hugely upgraded variant of the original Czechoslovak RM-70 GRAD MLRS with a loading device.

The rocket launcher can fire both single rounds and volleys from the cab or using a portable device from a nearby trench. The basic type of the fire is indirect fire. If a combat operation requires direct fire with elevation from 0° to 10°, it can only be done within the range determined by elevation and traverse sensors.

The original T-813 chassis was replaced with the new T815-7 chassis with air axle suspension. Two-door variant is also available.



### NEW CONTROL BOXES

fitted with the latest electronic components



### AREA OF EFFECT

single round: 3,000 m² volley (40 rockets): up to 30,000 m<sup>2</sup>





### ─ LOADING UNIT

The unique RM-70 loading unit allows for an unprecedented rate of fire - 80 rockets in 2 minutes.

### **PARAMETERS**

combat weight		25.7t
dimensions	L	9,550 mm
	W	2,550 mm
	н	2,930 mm
chassis		T 815-7T3RC1 8x8.1
engine	type	Tatra T3C-928.90, V8
	output	300kW
mobility	top speed / off road	85km/h / 30 km/h
	cruising range	700 km
	fording depth (instant)	1.2 m
	gradient	27°
	side slope	18°
	vertical obstacle	0.6 m
	trench crossing	2.1m

### SPECIFIC PARAMETERS

		122 mm JROF rockets /40+40/
armament	main	max. range 20 381 m (GRAD original at 50°) 40 000 m (G-2000 at 52,9°) - optional

### Conversion time is measured in fully automatic mode of aiming supported by Fire Control System and navigation system.

fully combat readiness in combat posit.	< 60s
from combat to travelling position	1,5 min
time of firing a salvo	18s - 22s
time of reloading 40 rockets	from 30 up to 36s
time to prepare 2nd salvo	1,5 - 2,5 min

MULTIPLE LAUNCH ROCKET SYSTEMS RM-70 VAMPIRE 4D





### ARMOURED CABIN

The cabin is armoured type, low profile, prolonged with two doors. The interior can be heated with the use of independent heating or cooled down by means of the dependent or independent air conditioning system.



### **NEW TATRA CHASSIS** T815-VPR 9M

Overall design of whole system increased by unique Tatra chassis T815-VPR 9M with its high cruising speed and high crosscountry capability, good maneuverability and excellent chassis properties.



### CREW COMFORT

Easier and safer vehicle handling by the driver, semi-automatic Norgren gear-shifting system and better comfort of the crew when travelling.



# RM-70 M1

UPGRADED VARIANT OF THE RM-70 GRAD MLRS







The RM-70 M1 is a forty-tube, multi-launch, self-propelled rocket artillery system with a loading device, which is used to provide converging fire support for troops, firing unitary high-explosive fragmentation rocket projectiles (122-JROF-RM 70) at larger area targets.

The RM-70 M1 is a hugely upgraded variant of the original Czechoslovak RM-70 GRAD MLRS with a loading device.

The rocket launcher can fire both single rounds and volleys from the cab or using a portable device from a nearby trench. The basic type of the fire is indirect fire. If a combat operation requires direct fire with elevation from 0° to 10°, it can only be done within the range determined by elevation and traverse sensors.

The original T-813 chassis was replaced with the new T815-VPR 9M chassis with air axle suspension.



### OPTIONAL CABIN VERSIONS \_\_







SOFT CABIN

### NEW CONTROL BOXES

fitted with the latest electronic components



### AREA OF EFFECT

single round: 3,000 m<sup>2</sup> volley (40 rockets): up to 30,000 m<sup>2</sup>



### **PARAMETERS**

combat weight		25.9t
dimensions	L	9,250 mm
	w	2,590 mm
	Н	3,050 mm
chassis		T 815 - VPR9M 29 265 8x8.1R with armoured cab and filtration system
engine	type	Tatra T3-930-50M, V12
	output	264kW
mobility	top speed - on road	85km/h
	top speed - off road	25 km/h
	cruising range	1,000 km
	fording depth	1.2 m
	gradient	27°
	side slope	18°
	vertical obstacle	0.5 m
	trench crossing	2.0 m



### NIGHT VISION CAMERA



### TATRA T 815 CHASS

The TATRA T 815 a proven and reliabl vehicle with good availability of spare parts



### **SPECIFIC PARAMETERS**

nent	n
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122 mm JROF rockets /40+40/ max. range 20.4/40.1km - optional







4×4 WHEELED MLRS MOUNTED ON TATRA CHASSIS FOR HEAVY TERRAIN DEPLOYMENT





Dependent heating, ventilation and air conditioning unit (HVAC), optionally - APU, independent heating, AC unit and NBC filtration system.



**EQUIPMENT** 

### **NEW TATRA CHASSIS**

The vehicle chassis is the newest generation of TATRA military vehicles with exceptional terrain handling.

The BM-21 MT is a mobile platform for the 40-round high explosive fragmentation artillery system providing concentrated fire support to the troops over large target areas covering ranges depending on the type of used shell. It is an upgraded variant of the Russian BM-21 Multiple Rocket Launcher.

The rocket launcher can fire both single rounds and volleys from the cab or via remote control device from a nearby trench.

The principal mode of fire is indirect fire, direct fire can be performed only within the range determined by traverse and elevation sensors.

The original URAL chassis was replaced with the T-815-7 chassis with air axle suspension.



fitted with the latest electronic components



### AREA OF EFFECT

single round: 3,000 m² volley (40 rockets): up to 30,000 m<sup>2</sup>





### **PARAMETERS**

combat weight		16.3t
dimensions	L	7,370 mm
	W	2,550 mm
	н	2,730 mm
chassis		T815-7T3R21 4x4.1R with low cab
engine	type	Tatra T3C-928.81, V8
	output	270kW
mobility	top speed - on road	90km/h
	top speed - off road	30 km/h
	cruising range	1,200 km
	fording depth	1.2 m
	gradient	45°
	side slope	20°
	vertical obstacle	0.6m
	trench crossing	0.9 m

### **SPECIFIC PARAMETERS**

ırmament	main	122mm JROF /40 rockets/ max. range 20.4/40.1km - optional
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MULTIPLE LAUNCH ROCKET SYSTEMS **BM-21 MT** 





### FULFILLING NATO STANAG REQUIREMENTS

The life cycle of the equipment is at the same level as in the original BM-21. All electronic parts has resistance -20°C to +55°C and humidity 95%.



### **DIFFERENCES OLD BM-21** AND NEW BM-21 MU

Old system allowed firing only from prepared combat position. Procedure of preparing that position, reaching it, getting into fire direction and leaving combat position was quite timeconsuming. Goal of a new system is fully automatic mode of aiming and firing, which reduce time needed for assuming combat position and increase fire effectivity and accuracy in the target area.



### **EASY SERVICE**

Secures maintaining of the URAL platform and its logistic



UPGRADED VERSION OF THE URAL CHASSIS MLRS



1+2 UPTO 40KM H URAL EA





The BM-21 MU is a mobile platform for the 40-round high explosive fragmentation artillery system providing concentrated fire support to the troops over large

It is an upgraded variant of the Russian BM-21 Multiple Rocket Launcher.

target areas covering ranges depending on the type of used shell.

The rocket launcher can fire both single rounds and volleys from the cab or via remote control device from a nearby trench.

Modernization preserves tactical and technical features of BM-21 chassis. The principal mode of fire is indirect fire, direct fire can be performed only within the range determined by traverse and elevation sensors.



### COMPLEX LOGISTIC SUPPORT

For our MLRS systems we also offer munition vehicles, battery command vehicles, vehicles for forward observers, battalion command vehicle, fuel trucks, mobile workshops and recovery vehicles.

### NEW CONTROL BOXES

fitted with the latest electronic components



### AREA OF EFFECT

single round: 3,000 m<sup>2</sup> volley (40 rockets): up to 30,000 m<sup>2</sup>





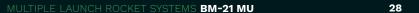
### **PARAMETERS**

combat weight		13.7t
dimensions	L	7,350 mm
	W	2,490 mm/2,690 mm incl. rear-view mirrors
	Н	3,090 mm
undercarriage		URAL-375D, 6x6
engine	type	ZIL 375, V8
	output	134.2 kW
mobility	top speed - on road	75 km/h
	top speed - off road	25 km/h
	cruising range	min. 600km
	fording depth	1.2m incl. fording wave
	gradient	40°
	side slope	18°
	vertical obstacle	0.5 m
	trench crossing	0.6 m

### SPECIFIC PARAMETERS

armament	main	122mm JROF /40 rockets/
ailliailleill	main	max. range 20.4/40.1km - optional





# ARMOURED PERSONNEL CARRIERS AND INFANTRY FIGHTING VEHICLES

Our armoured APCs and IFVs comprise a range of tracked and wheeled vehicles for battle engagement, area control and a variety of tactical and special operations. Our Šternberk facility is renowned for its history and experience in repairs, service, renovation, modernization and production of BMPs, T-55/T-72 MBTs and other numerous armoured, artillery, engineering, military and special logistic vehicles. In the recent years we have successfully started to cooperate in cross-national projects, e.g. the PANDUR APC. We also develop our own solutions for infantry support and mobility and we have lately introduced the MEXCA IFV or PATRIOT APC vehicles. High level of protection, efficient controls and effective reliable weapon systems are at the core of our development engineering.



### PROLONGED VERSION

PATRIOT II offers various upgrades over the original PATRIOT, one of them being the prolonged and wider cabin with higher capacity for crew or special equipment.



# ON-ROAD/OFF-ROAD MOBILITY

TATRA FORCE chassis, clearance adjustment on the go, automatic transmission for exceptional terrain performance...
Yet vehicle is perfectly fit for common road traffic.



### **VERSATILE PLATFORM**

Mission kit can be modified as per customer request.



### SAFETY & ENDURANCE

Fire-extinguishing system for the cabin and engine, anti-mine seats, optional jammers coupled with a long range of 700 km.



# PATRIOT II

MULTI-PURPOSE PLATFORM FEATURING SUPERIOR OFF-ROAD MOBILITY



1+1+6

110

**O**KM/H

I-I

The PATRIOT II is an upgraded modular wheeled combat tactical vehicle that features excellent mobility in difficult terrain thanks to the unique TATRA chassis. It offers wide range of mission kits and armament choices - remote or manually controlled machine guns, or even

a 20 mm cannon with superior firepower, grenade launchers or ATGMs.

The vehicle provides a unified platform for the "PATRIOT family" of defence and civil safety applications, such as reconnaissance, special operations, communications, command and control, chemical, medevac, EOD, PSYOPS, riot control, and of course troops transport or direct combat. Any configuration is possible for the PATRIOT.

CREW COMFORT AND SAFETY

Ballistic and anti-mine protection, A/C, NBC filtration system.







Weapon station ARX 20 application by Nexter Systems

### **PARAMETERS**

	13.5 - 17.5t (per vehicles type of protection and equipment)
L	6,250 mm
W	2,550 mm
Н	2,800 mm
wheelbase	3,650 mm
type A	Cummins ISL / water-cooled
type B	Tatra T3C-928-90 / air-cooled
output A	270 kW
output B	300kW
top speed - on road	110 km/h
top speed - off road	45 km/h
cruising range	700 km
fording depth (instant)	1.2 m
gradient	45°
side slope	33°
vertical obstacle	0.5 m
trench crossing	0.9 m
	W H wheelbase type A type B output A output B top speed - on road top speed - off road cruising range fording depth (instant) gradient side slope vertical obstacle

BALLISTIC PROTECTIO

Level 2 - 4 STANAG 4569



ANTI-MINE PROTECTION
Level 2a/2b - 3a/3b

Level 2a/2b - 3a/3b STANAG 4569

### SPECIFIC PARAMETERS

armament	main	up to 20 mm RCWS
	options available	7.62mm / 12.7mm / 14.5mm manned gun turret
		mortar (pick-up vehicle version)
		AG/SG launchers
		ATGM launchers

ARMOURED PERSONNEL CARRIERS **PATRIOT II** 32





### **VERSATILE PLATFORM**

Mission kit can be modified as per customer request.



### PROTECTION

Crew comfort and safety - ballistic and anti-mine protection, A/C, NBC filtration



### **SAFETY & ENDURANCE**

Fire-extinguishing system for the cabin and engine, anti-mine seats, long range of 500 km.



### **SUITABLE FOR EVERY ENVIRONMENT**

Optional engines - air/water cooled, mission kits and other customization as required.



# **PATRIOT**

MULTI-PURPOSE PLATFORM FEATURING SUPERIOR OFF-ROAD MOBILITY



The armoured tactical vehicle featuring high maneuverability is intended for deployment with Rapid Reaction Forces to carry out reconnaissance and patrol duties, as well as direct combat, especially during asymmetric missions, and further serving as a carrier platform for light motorized units.

The vehicle, as a unified platform of vehicle family for defence and civil safety applications, can be fitted with a wide range of mission kits - recon, communication and information, command and staff, chemical, medevac and other.

Outstanding mobility and obstacle crossing capabilities - high speed in rough terrain conditions. Variable ground clearance thanks to air suspension system.



### ON-ROAD/OFF-ROAD MOBILITY

TATRA FORCE chassis combined with the relatively light superstructure and compact size render PATRIOT a perfect fit for rapid deployment. Very stable even in high speeds and off the well paved roads – on which PATRIOT wouldn't drag behind either.





### SOFT-TOP (CABRIO VEHICLE VERSION)

Special operations varaint is available- an example of the PATRIOT's modularity.

### **PARAMETERS**

weight		12.0 t
dimensions	L	6,100 mm
	W	2,225mm
	н	2,700 mm
	wheelbase	3,500 mm
engine	type A	Cummins ISBe / water-cooled
	type B	Tatra T3C-928 / air-cooled
	output A	210 kW
	output B	230 kW
mobility	top speed - on road	110 km/h
	top speed - off road	45 km/h
	cruising range	500 km
	fording depth (instant)	1.2 m
	gradient	45°
	side slope	33°
	vertical obstacle	0.5 m
	trench crossing	0.9 m

3 - STANAG 4569



2a/2b - STANAG 4569

### SPECIFIC PARAMETERS

armament	main	14,5 mm RCWS (Nexter)
	options available	7.62 mm / 12.7 mm / 14.5 mm manned gun turret
		mortar (pick-up vehicle version)
		AG/SG launchers

34 ARMOURED PERSONNEL CARRIERS PATRIOT



### **OPTIMAL CREW SAFETY** & COMFORT

Air-conditioning, comfortable seats, hydraulic ramp, independent wheel suspension. Optimized 4569 and NBC protection.



### DESIGNED FOR OFF-ROAD

High off-road mobility capabilities, heavy duty chassis, break steering, CTIS and ADM for perfect power delivery and great swimming



### EFFICIENT MOBILITY

Low fuel consumption extends the cruising range for easier long distance deployment.



### **UPGRADES AVAILABILITY**

A range of upgrades for easier maneuverability (e.g. automatic transmission), firepower and protection enhancement.



# **PANDUR II**

MULTI-PURPOSE WHEELED ARMOURED PERSONNEL CARRIER FEATURING SUPERIOR OFF-ROAD MOBILITY

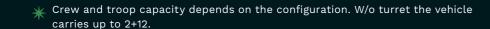






PANDUR vehicle was developed upon the Czech Army request but the platform has already been well-proven in the armies worldwide.

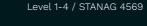
The amphibious wheeled armoured personal carrier with armour and waterproof body is capable of effective water gap, water reservoir or coastal water crossing. PANDUR vehicle has proven itself with superior off-road mobility, maneuverability and high reliability and resistance. In addition to the basic personal carrier function, the vehicle can be modified and fitted with various types of weapon stations up to 105 mm calibre, the mortar or other special equipment.













Level 1-4 - STANAG 4569



### AVAILABLE CONFIGURATIONS

- AMPHIBIOUS INFANTRY CARRIER
- INFANTRY FIGHTING VEHICLE
- MORTAR OR ATGM CARRIER
- COMMUNICATION VEHICLE
- RECONNAISSANCE VEHICLE (RADAR OPTIONAL)
- ENGINEERING VEHICLE
- ARMOURED AMBULANCE
- COMMAND POST



### **PARAMETERS**

weight		18.7 t
dimensions	L	7,384mm
	W	2,670 mm
	Н	3,987 mm
engine	type	Cummins Diesel ISLe T450 HPCR
	output	335.6kW
mobility	top speed - on road	105km/h
	top speed - off road	32 km/h
	cruising range	700 km
	fording depth (instant)	1.5 m / swimming ability (AMPH configuration)
	gradient	35°
	side slope	30°
	vertical obstacle	0.6 m
	trench crossing	2.2 m

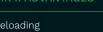


### RCWS SAMSON MK II ADVANTAGES

- under armor reloading
- low silhouette
- wide range of weapons portable
- optional ATGM and SGL effectors
- 360° traverse, -20° to +70° elevation (vehicle restrictions may apply)

### SPECIFIC PARAMETERS

armament (standard)	main	30mm automatic cannon Mk 44 / SPIKE-LR ATGM
other options available	secondary	7.62 mm coaxial MG FN MAF (M240)
		76mm SGL type Wegmann /8 units/





### **EASIER HANDLING**

Automated transmission, decrease of driver's workload, easier vehicle handling.



### **ENLARGED INTERIOR**

Bigger compartment and improved interior arrangement to transport the unit, advanced ergonomics, troops boarding and exit much more effective.



### OPEN ARCHITECTURE

Enabled versatility to installation of weapon systems, passive and active protection, communication systems and other military technology.



### PLATFORM CONSISTENCY

Spare parts and servicing procedures highly consistent with the original BMP-1 and BMP-2 platform, especially chassis and transmission mechanisms and vehicle turning mechanism.



# **MEXCA**

A MODERN, STRONGER AND SAFER BMP YET WELL COMPATIBLE WITH BMP-1 AND BMP-2



65<sub>KM/H</sub>



The armoured tracked infantry fighting vehicle has been designed to transport infantry troops to the battlefield and to provide direct fire support, including engagement against enemy armoured vehicles.

Featuring the increased level of ballistic protection, high and easy maneuverability and possibility to fit wide range of special systems, the vehicle has been pre-determined for deployment at asymmetric missions.

The platform can be fitted with many different types of mission kits - recon, engineering, medical, recovery, workshop, communication and information, command and staff and other.





3 - STANAG 4569





ANTI-MINE PROTECTION





BACK RAMP

Removes the disadvantage of the original solution and allows an easy entry by the troops.



### **PARAMETERS**

weight		18.8t
dimensions	L	6,753 mm
	W	3,047mm
	н	2,760 mm
engine	type	Caterpillar C9.3
	output	300 kW
mobility	top speed - on road	65km/h
	top speed - off road	45km/h
	cruising range	400 km
	fording depth (instant)	1.3 m
	gradient	35°
	side slope	30°
	vertical obstacle	0.7 m
	trench crossing	2.5 m



### THOROUGHLY MODERNIZED INTERIOR

New ballistic seats and more space for the whole crew and new controls for driver, commander and gun operator.

### SPECIFIC PARAMETERS

armament	turrets	TURRA 30 turret
	options available	SAMSON MK II or DVK 30 gun turret
	weapons	stabilized 30mm 2A42 / CZ-30 autocannon
		7.62mm PKT coaxial machine gun





### MANEUVERABILITY

Excellent maneuverability and superior off-road capability, high travel speed.



### VERY EFFECTIVE VEHICLE

Highly reliable, ease of control, simple design.



### PROVEN DESIGN

Timeless concept and the overall arrangement whilst keeping the low-silhouetted vehicle profile.



### **AMPHIBIOUS CAPABILITY**

Vehicle suitable for immediate fording and water obstacle crossing.



### LIFE-CYCLE EFFIENCY

Large spare parts availability.



# BMP-1

A RENOWNED CLASSIC AND BATTLE PROVEN INFANTRY SUPPORT VEHICLE



3+8 | 6-23<sub>MM</sub> | 65<sub>KM/H</sub> | 7<sub>KM/H</sub> ⊗ ≅

The BMP-1 is an amphibious tracked infantry fighting vehicle designed to transport the troops to the battlefield and to provide direct fire support, including engagement against enemy armoured vehicles.

The platform features high maneuverability and excellent off-road capability. With regard to the vehicle armament /73 mm 2A28 Grom gun firing HEAT rounds and launcher for the 9M14 Maljutka ATGM/ it is often classified as the "Tank Destroyer".



### AMPHIBIOUS CAPABILITY

The BMP-1 is amphibious, propelling itself in the water using its tracks, assisted by hydrodynamic fairings on the track upper side covers.

Top swimming speed is 7 km/h.





### **PARAMETERS**

weight		13 t
dimensions	L	6,735 mm
	W	2,940 mm
	Н	1,924 mm
engine	type	UTD-20
	output	220 kW
mobility	top speed - on road	65km/h
	top speed - off road	45km/h
	cruising range	600 km
	fording depth (instant)	swimming ability
	gradient	35°
	side slope	25°
	vertical obstacle	0.7 m
	trench crossing	2.0 m

### SPECIFIC PARAMETERS

armament	main	73 mm semi-automatic gun 2A28
		9M 14M ATGM (Maljutka) / optionally without the launcher
	secondary	7.62 mm PKT coaxial machine gun





6-CYLINDER V 120 DEGREES DIRECT INJECTION 4 STROKE WATER COOLED







### **SPACE FOR TROOPS**

Enabling transport of greater number of troops/crew members.



EASY TO HANDLE

Easily maneuverable.



### **AMPHIBIOUS CAPABILITY**

Vehicle is suitable for immediate fording and water obstacle crossing.



### GOOD MOBILITY

Superior floating capabilities. High road and off-road speed.





RUGGED AND EASY-TO-HANDLE VEHICLE, USED IN 15 COUNTRIES OF EUROPE, AMERICA, ASIA AND AFRICA AS WELL AS FOR UNITED NATIONS MISSIONS









The OT-64 SKOT /"medium wheeled armoured carrier"/ is an amphibious armoured personnel carrier, developed jointly by Czechoslovakia and Poland.

The 8×8 buoyant four-axle platform featuring armoured and watertight hull has been designed to transport the infantry to the battlefield.

The SKOT 2A variant also provides direct fire support /fitted with the armoured movable gun turret from the BTR-60 PB armed with the 14.5 mm KPVT heavy



This armoured personnel carrier has a crew of 2-3 and accommodates up to 18 fully-equipped troops (nonturreted version) - amount depending on the version of the vehicle.



The troop compartment is located at the hull rear. Soldiers dismount via rear doors or roof hatches. Commander and driver dismount via their individual side or roof hatches. There are firing ports provided for the troops.

### **PARAMETERS**

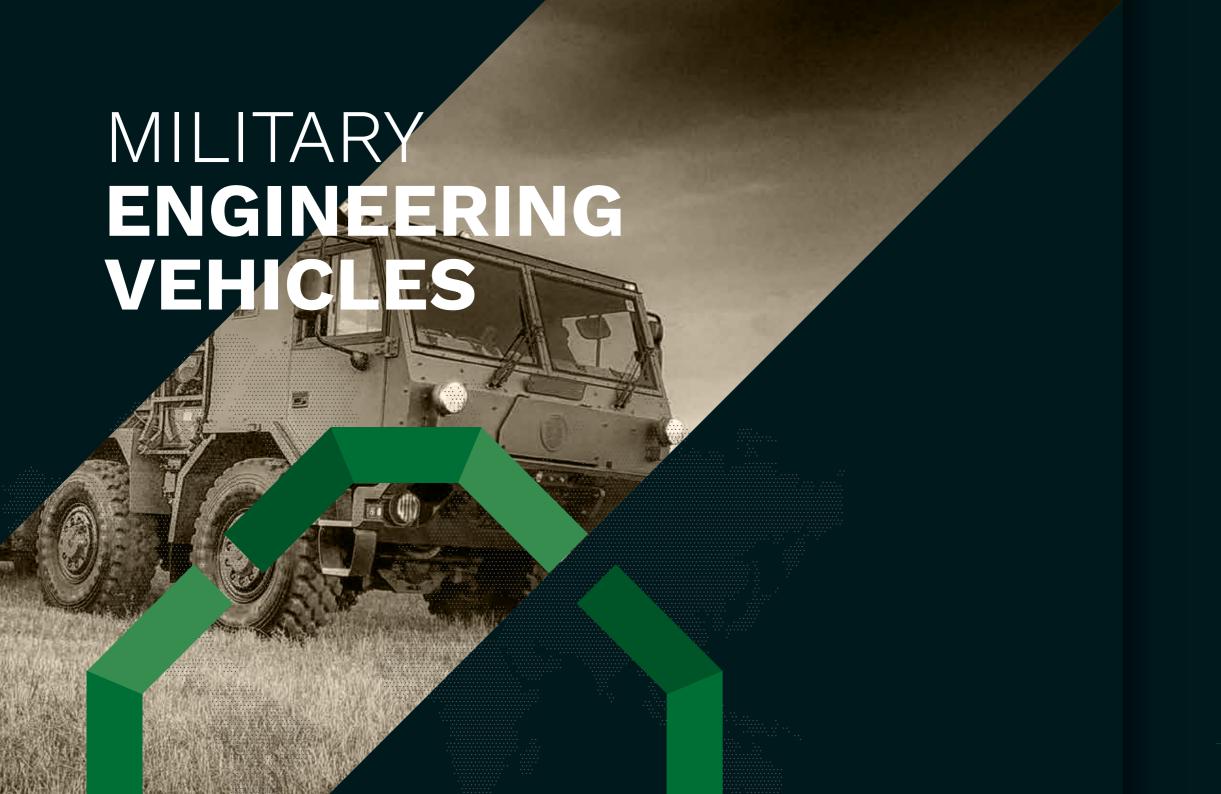
weight		12.2t
dimensions	L	7,440 mm
	W	2,500 mm
	Н	2,060mm / 2,780mm with turret
engine	type	TATRA 928-14
	output	132.5kW
mobility	top speed - on road	95 km/h
	top speed - swimming	9km/h
	cruising range	700 km
	fording depth (instant)	swimming ability
	gradient	35°
	side slope	43°
	vertical obstacle	0.4 m
	trench crossing	2.0 m

### SPECIFIC PARAMETERS

armament	main	14.5 mm KPVT heavy machine gun
	secondary	7.62 mm PKT coaxial machine gun







REAL TRADE PRAHA designs, develops and produces a range of military engineering vehicles for gap crossing, recovery and support missions. Though our primary customer target is the military, our solutions find use in civil engineering, post-conflict recovery and natural disaster relief. For crossing both wet and dry gaps of even over 100 m we offer our own AM-70 EX and AM-50 EX bridge layers. For the purposes of recovery of damaged vehicles, manipulation with debris and other objects or earth moving we have a wide range of tracked and wheeled vehicles available. We have developed the DECON vehicle to address the CBRN threats nations may face all around the world.





### FLEXIBILITY -INTERCONNECTABLE **BRIDGE SECTIONS**

Gradual connection of bridge sections can span a gap up to 106 m wide.



### **BRIDGE SECTIONS** COMPATIBILITY

The new M-70 EX is compatible with former M-50, M-50 EX and M-50 B generations.



### MODERN HEAVY DUTY TATRA T 815-7 CHASSIS

Ultimate terrain crossing and easy maintenance.



### **OPTIONAL CABIN BALLISTIC PROTECTION**

The cab can be optionally protected with an armour up to STANAG 4569 LEVEL II.



# AM-70 EX MOBILE BRIDGE

THE NEW BRIDGE LAYING VEHICLE FEATURING MLC 70 HIGH LOAD CAPACITY BASED ON THE WELL-PROVEN TATRA CHASSIS







The AM-70 EX Bridge Laying Vehicle is a new mobile vehicle-launched bridge designed to provide the necessary maneuverability to military units by fast deployment over dry or wet gaps, featuring above all the MLC 70 class high load-carrying capacity. Thanks to the ability to interconnect individual bridge sections, the AM-70 EX offers an insuperable flexibility and a maximum width of spanned gap.

The AM-70 EX is a successor to the well-known successful AM-50 EX and conceptually also to the formerly produced and proven AM-50 and AM-50 B vehicles still in use with many armed forces worldwide. The new scissor type 4-girder light construction of the M-70 EX bridge is also fully compatible with older bridge generations. Equipped with a full bridge deck and curbs the AM-70 EX bridge may also be applied in civil rescue operations or building industry and forestry.







### **VARIABLE CAB**

Two-door or four-door, standard or armoured - customized.



### ■ DOZER BLADE OPTION

Enables the vehicle to prepare the terrain for bridge deployment.



### POWERFUL HYDRAULIC SYSTEM

High-performance winch, simplified vehicle electrical equipment using the latest switches.

### **SPECIFIC PARAMETERS**

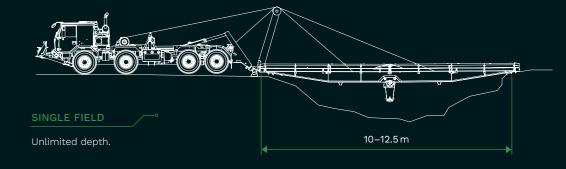
bridge field	load-carrying capacity	MLC 70
	length	13,500 mm
	width	4,300 mm
	travelling width	3,500 mm
detachable trestle	height retracted	2,000 mm
	fully extended	6,000 mm
vehicles per one set	4	

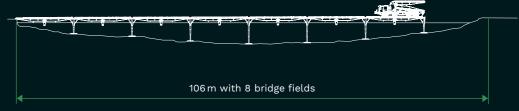


Powerful and reliable eight-cylinder, four-stroke, V-type, TATRA Diesel engine.

### **PARAMETERS**

with standard cabin		33t
dimensions	length (with blade)	12,400 mm
	width	3,650 mm
	height	3,900 mm
engine	type - optional, i.e.	TATRA T3C-928.90
	output	300 kW at 1,800 rpm
mobility	top speed – on road	90km/h
	top speed – off road	40 km/h
	cruising range (w/o jerry cans)	>500 km
	fording depth (with preparation)	1.5 m
	gradability	25°
	static side slope	20°
	vertical obstacle (with blade)	420 mm
	trench crossing	2 m





2 AND MORE FIELDS

6 m depth maximum.

### **NEW PRODUCT**

MILITARY ENGINEERING VEHICLES AM-70 EX



SWIFT DEPLOYMENT

A bridge section can be laid in just a few minutes.



RELIABILITY

Bridge is extremely sturdy and the supports feature unique hydraulic coils.



INTEROPERABILITY

AM-50 EX system can be fitted to previous models with no extra requirements.



**HEAVY DUTY** 

Rigid chassis reduces torsion related superstructure damage.



**EARTH MOVING** 

Optional dozer blade for earth moving.





UNIQUE SOLUTION FOR WIDE GAP CROSSING





3 85<sub>KM/H</sub> 14 = 13.5-106M





The AM-50 EX bridge layer vehicle is designed to overcome concave terrain obstacles, both dry and wet. This way it provides the necessary maneuverability to military units, featuring a MLC 50 class load-carrying

Each vehicle is fitted with a single bridge section of 13.5 m length which is installed in a few minutes, allowing another vehicle to append a new one in order to cross a wider obstacle. Up to 8 sections in total can stretch over up to 106 m wide gaps with its supports reaching into up to 6 meters deep trenches.

Thanks to the durable and efficient chassis the vehicle can operate in rough and difficult terrain conditions and allow safe simultaneous crossing for both military vehicles and infantry.







### SPECIFIC PARAMETERS

bridge field	load-carrying capacity	MLC 50
	length	13,500 mm
	width	4,000 mm
	maximum gradient	10°
	maximum crossfall	5°
detachable trestle	height retracted	2,000 mm
	fully extended	6,000 mm
vehicles per one set	4	

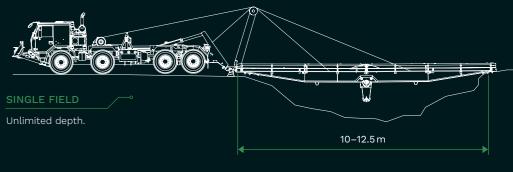
Modern, heavy-duty design. Ultimate terrain crossing and easy maintenance.

### 2 AND MORE FIELDS

6 m depth maximum.

### **PARAMETERS**

weight		26.1t
dimensions	L	11,250 mm
	W	3,415 mm
	н	3,830 mm
engine	type	Tatra T3C-928.90
	output	300kW
mobility	top speed - on road	85km/h
	top speed - off road	40 km/h
	cruising range	500 km
	fording depth (instant)	1.2 m
	gradient	25°
	side slope	20°
	vertical obstacle	0.5 m
	trench crossing	2.0 m









WELL-PROVEN SOLUTION

Extensively used and well-proven system thanks to the direct link to the original AV-15.



### **ECONOMICS** OF OPERATION

Minimum requirements for service, high serviceability and non-demanding maintenance.



### HIGH CROSSABILITY IN HARD TERRAIN

Unmatched solution of the TATRA chassis of the 8x8 military series.



### VARIABILITY

A possibility to adapt the vehicle to the engineering means used by a customer, a possibility to select equipment and additional accessories, an armour cabin or an automated gear-box.





# TREVA-15

contact with a high-voltage line.

TACTICAL RECOVERY AND EVACUATION VEHICLE

2(+4) 80<sub>KM/H</sub> 1-1 EA

The TREVA-15 vehicle has higher capacity for evacuation of semi-hung vehicles and enables transportation

### STANDARD EQUIPMENT





WELDING AND CUTTING



MOBILE WORKSHOP

### **EVACUATION CAPACITY** —

of 4 members of the evacuated vehicle's crew.

GENERATOR



**EQUIPMENT** 



### **SPECIFIC PARAMETERS**

crane capacity	15.0t
max. crane outreach	7.7 mbasic / 11.4 m with extension
crane capacity with the extension	4.0t
winch - traction force	14.7 / 29.4 / 44.1 t depending on a number of pulleys *
rope length	150 m
auxiliary winch	0.6t
rope length	320 m
evacuation capacity	up to 30t (semi-hung evacuated vehicle)
	up to 40t (vehicle evacuated on a towing rod)
towed vehicle weight	65t

### PARAMETERS

W         2,550 mm           H         3,380 mm           motor         type         TATRA T3C-928.90           power         300 kW at 1,800 rpm	weight		31.5 t
H 3,380 mm  type TATRA T3C-928.90  power 300 kW at 1,800 rpm  mobility top speed – on road 80 km/h  top speed – off road 25 km/h  cruising range (w/o jerry cans) 800 km  fording (instant/preparation) 1.2 m / 1.5 m  gradient 30°  side slope 30°  vertical obstacle 0.4 m	dimensions	L	11,600 mm
motor type TATRA T3C-928.90  power 300kW at 1,800rpm  mobility top speed – on road 80km/h  top speed – off road 25km/h  cruising range (w/o jerry cans) 800km  fording (instant/preparation) 1.2 m / 1.5 m  gradient 30°  side slope 30°  vertical obstacle 0.4 m		W	2,550 mm
power 300 kW at 1,800 rpm  top speed – on road 80 km/h  top speed – off road 25 km/h  cruising range (w/o jerry cans) 800 km  fording (instant/preparation) 1.2 m / 1.5 m  gradient 30°  side slope 30°  vertical obstacle 0.4 m		Н	3,380 mm
mobility top speed – on road 80 km/h  top speed – off road 25 km/h  cruising range (w/o jerry cans) 800 km  fording (instant/preparation) 1.2 m / 1.5 m  gradient 30°  side slope 30°  vertical obstacle 0.4 m	motor	type	TATRA T3C-928.90
top speed – off road 25km/h  cruising range (w/o jerry cans) 800km  fording (instant/preparation) 1.2 m / 1.5 m  gradient 30°  side slope 30°  vertical obstacle 0.4 m		power	300kW at 1,800rpm
cruising range (w/o jerry cans) 800 km  fording (instant/preparation) 1.2 m / 1.5 m  gradient 30°  side slope 30°  vertical obstacle 0.4 m	mobility	top speed – on road	80 km/h
fording (instant/preparation)  gradient  30°  side slope  vertical obstacle  0.4 m		top speed – off road	25km/h
gradient 30° side slope 30° vertical obstacle 0.4 m		cruising range (w/o jerry cans)	800 km
side slope 30°  vertical obstacle 0.4 m		fording (instant/preparation)	1.2 m / 1.5 m
vertical obstacle 0.4 m		gradient	30°
		side slope	30°
trench crossing 2 m		vertical obstacle	0.4 m
		trench crossing	2 m

440<sub>KN</sub> 30<sub>TONS</sub> 40<sub>TONS</sub> 65<sub>TONS</sub> 15<sub>TONS</sub>

TREVA-15 (Tactical Recovery and Evacuation Vehicle) is a new recovery vehicle based on the well-known and well-proven AV-15 recovery

armoured personnel carriers and other semi-hung wheeled vehicles with a weight up to 30 t. To ensure it, hanging, tracking and binding

The new vehicle is equipped with an electric power unit with a welding machine and with a possibility of connection of electric tools, which are included in its equipment. The vehicle is also equipped with workshop equipment, a safety overload switch and protection against

vehicle. The vehicle is based on the TATRA FORCE T 815-7 8x8 chassis with a prolonged 4-door cabin designed for the transportation

of the evacuated vehicle crew. The superstructure derives from the well-proven recovery vehicle AV-15 and retains the simplicity

of servicing and operation robustness. Additionally there is an increase of the evacuating capacities for the evacuation of vehicles,

appliances were developed, adapted, among others, to the evacuation of PANDUR II wheeled armoured personnel carriers.

MILITARY ENGINEERING VEHICLES TREVA-15



### FOR ROUGH TERRAIN

Tracked vehicle can recover vehicles in the most demanding terrain conditions.



### STRONG WINCH

Strong winch - up to 75 tons of towing power.



### **ECONOMIC SERVICE**

T-55 chassis is common and its operation and servicing is economic.



### **UNIVERSAL USE**

Suitable for both tactical and civilian environment.



### **EXTRA PROTECTION**

Crew is protected against NBC threats.





SAFE OPERATION IN DEMANDING CONDITIONS









The VT-55 has been designed and produced for recovery and towing of immobile tanks, derailed train cars and crashed vehicles in especially difficult terrain.

It is equipped with a dozer blade, a strong winch, a crane and welding tools. It operates on a T-55 light tank chassis and therefore has excellent manoeuvring capabilities. The tank hull protects the crew against falling objects allowing the VT-55 to safely operate also in the proximity of unstabile structures, walls or debris or, naturally, in combat operations.

### AVAILABLE EQUIPMENT

CRANE

AUXILIARY

WELDING SET





# OPERATIONS

The VT-55A is a necessary component of every tank and mechanized battalion.

### **PARAMETERS**

	35.0 t 7,150 mm
	7.150 mm
	-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
,	3,280 mm
	2,250 mm
rpe	V 55A
utput	427kW
p speed - on road	50 km/h
pp speed - off road	25km/h
ruising range	400 km
ording depth (instant)	1.4 m
adient	32°/17° (while towing a medium MBT)
de slope	30°
ertical obstacle	0.8 m
ench crossing	2.7 m
	tput p speed - on road p speed - off road uising range rding depth (instant) adient de slope rtical obstacle



### SPECIFIC PARAMETERS

crane lift capacity	1.6-2.0t
main winch constant pull	25 / 50 / 75t
main winch rope length	200 m
welding equipment	140-230 A







### **EXCELLENT MOBILITY**

Light 4×4 configuration of the Tatra chassis for easy access to both urban and natural terrain areas.



### **EFFECTIVE PUMPS**

High capacity intake pump and a floating pump for natural water reservoir sourcing or draining flooded spaces.



### OPERATOR PLATFORM

Allows high reach and multiplies the options to use the vehicle.



### PLATFORM VARIABILITY

The option to equip the vehicle with an armoured cabin, another axles or option to customize the superstructure equipment as needed.



DECON DECONTAMINATION VEHICLE

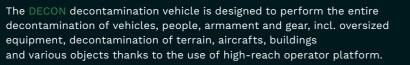
VERSATILE DECONTAMINATION AND DISINFECTION VEHICLE WITH A PRACTICAL HIGH-REACH OPERATOR PLATFORM











This vehicle is able to operate individually and also by the way of establishing decontamination workplaces for team-linked decontamination. It allows manual and automated decontamination thanks to use of a spraying bar on the platform or decontamination frame. It is a highly mobile vehicle on a modern TATRA military chassis with a 4x4 configuration. Optionally the vehicle can be made in a 6x6 configuration which allows higher tank capacity, even higher performance or reach of the platform. In case of customer preference, the vehicle can also be equipped with an armoured

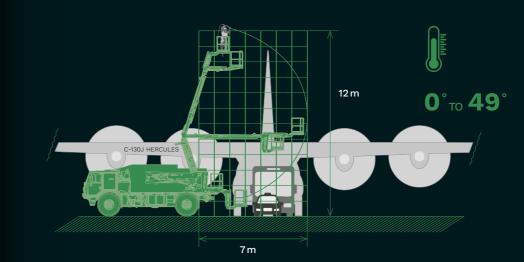






### WIDE DECONTAMINATION OPTIONS —

Decontamination by hand gun, stationary automated or in movement thanks to frontal spray bar - fast decontamination of roads, airports or decontamination areas. Ability to decontaminate people, fight fires and mitigate industrial, ecological or health catastrophies.



### **PARAMETERS**

weight		19t
dimensions	L	7,820mm without the platform
		9,100mm with the platform
	w	2,550 mm
	н	3,150 mm
engine	type	Tatra T3C-928.81, V8
	output	270 kW
mobility	top speed - on road	115km/h (without limiter)
		90 km/h (with limiter)
	top speed - off road	30 km/h
	cruising range	1,000 km
	fording depth	1.2 m (instant) / 1.5 m (with preparation)
	gradient	40°
	side slope	17°
	obstacle	0.5 m
	trench crossing	0.9 m
SDECIEIC DAE	DAMETERS	

overall tank capacity	2,4001
individual tank capacity	2 x 700l + 1 x 1,000l
platform height reach	12 m
platform side reach	7m
platform load capacity	200 kg
pressure unit operation	cold at high pressure
	warm at low pressure
	hot at high pressure
	steam decontamination
	liquid and powderized decontamination mixes
	auxiliary electrical source

MILITARY ENGINEERING VEHICLES DECON

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# ARMOURED CABIN OPTION

The vehicle can be extended with an additional axle and equipped with an armoured cabin or other upgrades per customer needs.



# WIDE SCALE OF ACCESSORIES

The UDS can be used with a basic bucket, but also with special buckets, boulder grapples, breakers, augers and other hydraulic attachments.



### **WORKING RANGE**

The unique construction of the telescopic boom allows (in basic design) a horizontal reach of 14.6 m.



### MICROTRAVEL

The possibility of controlling the chassis from the excavator cab increases the work productivity and UDS operability in the workplace.





MULTI-PURPOSE TELESCOPIC EXCAVATOR

NEWEST GENERATION OF A PROVEN MULTI-FUNCTIONAL WORKER FOR COMBAT ENGINEERS AND CIVILIAN EMERGENCY SERVICES







115<sub>M³/H</sub>

This universal machine is suited for terrain adjustments, digging, ground and demolition works, debris scattering, cleaning of rivers or ice floe disruption or improvised lifting of loads. It is very suitable also for civilian rescue operations.

The vehicle can be prolonged by one axle and equipped with an armoured cabin and further hardening for military use, thus becoming a ZS-214 special combat engineering machine.





### PARAMETERS

weight		25t
dimensions	L	9,450 mm
	W	2,550 mm
	н	3,980 mm
engine	type	diesel engine, variable type
	output	230 - 325kW
mobility	top speed	100 km/h
	cruising range	500 km
	fording depth (inst.)	1,200 mm
	gradient	31°

### **TURNING HEAD**

The possibility of rotating the tool in the full range n x 360 degrees increases the machine variability during excavation works or with additional equipment, e.g. hydraulic hammer, mulcher, nippers etc.



### SPECIFIC PARAMETERS

superstructure engine	power	93 - 104kW
digging speed		115 m³/h
load capacity*	telescope retracted	7,000 kg
	telescope out	2,600kg
hydraulic system		REXROTH
superstructure revolutions		8rpm
tool revolutions		20 rpm
tool tilting range		145° + 2-side turning 360°
horizontal range		

### telescope retracted

oth reach (elevation 0°, -90° / elevation +30°, -60°)		
	telescope retracted	2.9 m / 2.1 m
	telescope out	7m / 5.7m
	with 4.5 m extension	11.2 m / 9.2 m

6.3 m

10.5 m

14.6 m

telescope out

with 4.5 m extension

MILITARY ENGINEERING VEHICLES UDS-214

<sup>\*</sup> load capacity at tilt point of the rapid fastener (without extension attachments)



### HIGH PERFORMANCE

Featuring the unique special developed clarifier, the water treatment unit presents high production capacity of up to 12 m3/h per 20" ISO container.



### FULLY AUTOMATIC OPERATION

The only manual operation is refilling chemicals for water treatment.



### VARIABLE DESIGN

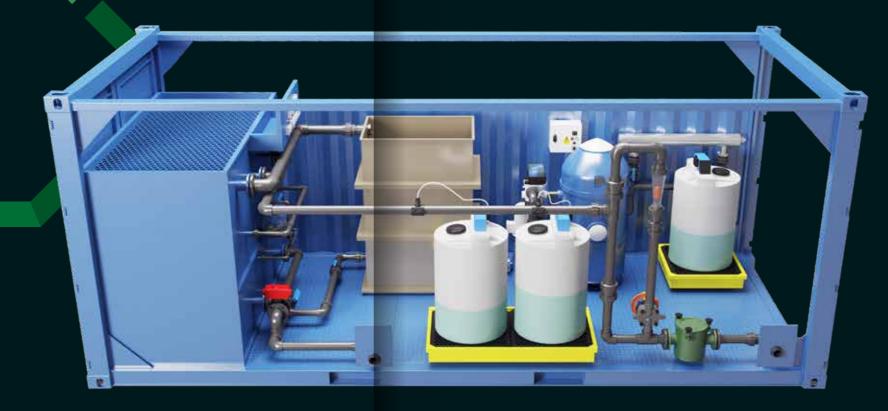
Modular design of the system enables optimization of solutions based on requested level of performance and on the level of water pollution on the input handling a range from light to oil water pollution.



### COST-EFFECTIVENES

This compact solution bears minimum operating and manipulation costs and at the same time reducing the logistic support





# UP TO **12** M<sup>3</sup>/H

**OPERATION** 

**POSEIDON PS4W** 

HIGH-PERFORMANCE VARIABLE SURFACE AND SUBTERRANEAN

WATER TREATMENT CONTAINER UNIT

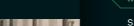
CONTAINERISED WATER TREATMENT UNIT

**AUTOMATIC** CONTAINER OPERATION

POSEIDON PS4W containerised water treatment unit is a highly effective mobile solution for armed forces and life-support system providing potable water supplies based on the very simple automatized production from raw surface or subterranean water.

At the place of use it just requires basic connection – to the raw water source, the treated water distribution system, the waste water drain and to the electric power unit - it may be integrated into the water treatment unit directly.

The water treatment unit is a two-level system, optionally enabling more levels. After filtration, the treated water is disinfected and purified - harmless.



for fast use as needed by the user - immediate easy transportation

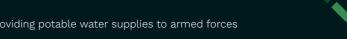
### PRIMARY PURPOSE OF WATER TREATMENT CONTAINER

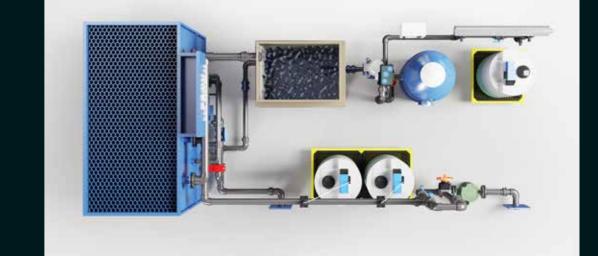
- providing potable water supplies to armed forces
- rescue operations in case of natural disasters
- stationary use, e.g. to provide water supplies to the population, water production for swimming pools, industry, power-plant engineering, agriculture and other



Standard containerized installation provides



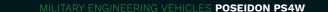




Prior to the water treatment unit use a techno-chemical analysis of the input water needs to be performed.



disposition		20" ISO container, alternative 40" ISO container
dimensions	L	6,058 mm
	w	2,438 mm
	н	2,438 mm
capacity		optional, up to 12 m³/h portable water per 20" container
function		basic is the 2-level water treatment unit, other levels optional
level 1		pre-filters + special developed clarifier
level 2		closed sand filter
waste water		6-8 % of capacity
waste water quality	рН	6-7.5
	HCO <sub>3</sub>	1-3 mmol/l
	CHSK <sub>Mn</sub>	< 20 mg/l
	Colour	20-200 mg/l Pt
	Suspended matter	< 2,000 mg/l





### UNIQUE CONCEPT

Unique Tatra chassis with independent semi-axles and triangle frame protects superstructure from torsion damage and improves crew comfort.



### VARIABILITY

Variable configuration from 4x4 to 16x16 wheel



### RELIABLE CONSTRUCTION

Heavy duty construction with excellent level of parts protection.



### CUSTOMIZABLE

A range of cabins and equipment available for crew safety and comfort



### **UNIVERSAL USAGE**

Proven container carrier for fast deployment of mobile hospitals, workshops, command centers a other special operations.













# T 815-7 PLATFORM

TATRA CHASSIS UTILIZED FOR VARIOUS PURPOSES



The TATRA FORCE chassis – being probably the best solution for wheeled terrain mobility available today - can be utilized for virtually any purpose related to providing tactical support, efficient cargo and personnel transport, post-conflict or disaster relief, firefighting and rescue tasks as well as helping set up special applications using tailor made superstructures, including weapon systems and containers.

> GREAT TRADITION OF INDUSTRIAL PRODUCTION - SINCE 1850!



### TATRA TRUCKS

The Koprivnice automotive maker, known under the TATRA brand, ranks among the oldest car and truck factories in the world. More than 120 years of TATRA's continuous activity has significantly influenced the automotive industry in the Czech Republic and abroad.



CSG comprises many companies that work together in order to bring a complex service to government and private sector. EXCALIBUR ARMY combines the tradition and production capabilities of its own with that of a number or partner CSG companies. Together we can offer you every advantage available - from metallurgy processing to final software implementation.

The whole CSG brand is built on the performance driven Czech and Slovak industry, that has always focused on quality, reliability and effectivity.





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