VOP CZ

UGV TAROS

TACTICAL ROBOTIC SYSTEM

TAROS PLATFORM

THE TAROS PLATFORM IS DESIGNED TO PROVIDE SUPPORT AND REDUCE THE RISK TO DEPLOYED SOLDIERS IN A WIDE RANGE OF MISSIONS, INCLUDING HIGH-RISK SITUATIONS. IT BELONGS TO THE CATEGORY OF LARGE TO EXTREMELY LARGE UNMANNED GROUND VEHICLES (UGVS) WEIGHING UP TO 6,000 KG.

THE TAROS (TACTICAL ROBOTIC SYSTEM) PLATFORM IS A RESEARCH AND DEVELOPMENT PROJECT BY THE STATE-OWNED ENTERPRISE VOP CZ, WHICH HAS BEEN UNDERWAY SINCE 2012. IT IS CURRENTLY IN ITS 5TH GENERATION.

TAROS IS AN UNMANNED, REMOTE-CONTROLLED SYSTEM CAPABLE OF MOVING IN DIFFICULT TERRAIN, EQUIPPED WITH SENSOR SYSTEMS ENABLING PARTIALLY AUTONOMOUS MOVEMENT ALONG A PLANNED ROUTE.

THE TAROS SYSTEM CAN BE EXPANDED WITH ANY SUPERSTRUCTURE, SUCH AS WEAPON AND RECONNAISSANCE SYSTEMS, EQUIPMENT CARRIERS, ACCESSORIES OR PERSONNEL.

THIS SYSTEM CAN ALSO BE EQUIPPED WITH COMMUNICATION SYSTEMS, JAMMING SYSTEMS, RADARS, POWER GENERATORS, ETC.

THE TAROS SYSTEM IS BASED ON A MULTI-PURPOSE WHEELED CHASSIS, WHICH CAN BE COST-EFFECTIVELY AND EASILY ADAPTED TO THE REQUIRED SPECIFICATIONS.

TAROS PLATFORM

TECHNICAL SPECIFICATIONS:

ECO-FRIENDLY VEHICLE WITH ELECTRIC DRIVE AND A RANGE OF UP TO 60 KM

REMOTE-CONTROLLED STEERING

MANUAL CONTROL VIA REMOTE CONTROL

USES OF FUNCTIONS AUTOMATICDRIVING (PARTIAL AUTONOMY)

CAPABILITY TO OPERATE IN CHALLENGING TERRAIN

3 PLATFORMS IN SERVICE WITH THE CZECH ARMY

CAPABILITY TO CARRY A SUPERSTRUCTURE WEIGHING UP TO 1000 KG

USES

MILITARY SECTOR:

INTELLIGENCE, SURVEILLANCE AND RECONNAISSANCE

SEARCH AND RESCUE

COMBAT SUPPORT

TRANSPORT – INCREASING OPERATIONAL SPEED

EXPLOSIVE ORDNANCE DISPOSAL

IN THE MILITARY SECTOR, IT IS ANTICIPATED THAT UNMANNED GROUND VEHICLES (UGVS) WILL BE DEPLOYED IN AREAS THAT ARE DANGEROUS FOR MILITARY PERSONNEL. UNMANNED GROUND VEHICLES CAN BE EQUIPPED WITH WEAPONS SUCH AS LARGE-CALIBRE MACHINE GUNS, GRENADE LAUNCHERS, ANTI-TANK GUIDED MISSILES OR AUTOMATIC MORTARS. INSTEAD OF WEAPONS, UGVS CAN ALSO BE FITTED WITH VARIOUS RECONNAISSANCE SENSORS, COMMUNICATION SYSTEMS, ENGINEERING EQUIPMENT (MANIPULATOR, WINCH, PLOUGH) OR SMALL RECONNAISSANCE DRONES.

USES

CIVIL SECTOR:

FIRE BRIGADE – RESPONDING TO FIRE-RELATED INCIDENTS AND PREVENTING ACCIDENTS AND INJURIES

EMERGENCY MEDICAL SERVICES – PREVENTION OF EXPOSURE TO HAZARDOUS SUBSTANCES, CBRN

POLICE – PHYSICAL SECURITY, BUILDING SECURITY

OIL AND GAS INDUSTRY – SAFETY MEASURES

AGRICULTURE – IMPROVING PRODUCTIVITY INAGRICULTURAL WORK

IN THE CIVIL SECTOR, IT IS ANTICIPATED THAT UGVS WILL BE USED BY EMERGENCY SERVICES SUCH AS THE FIRE BRIGADE, AMBULANCE SERVICES, THE POLICE, ETC.

UGVS CAN PROVIDE SUPPORT FOR A RANGE OF TASKS, INCLUDING: ASSISTING PEOPLE WITH DISABILITIES, TRANSPORT, SURVEILLANCE AND DETECTION, SECURITY, RECONNAISSANCE AND INSPECTION IN TUNNELS, BUILDINGS, ETC.

ADVANTAGES

THE UNMANNED AERIAL VEHICLE TAROS CAN BE USED TO MONITOR THE SURROUNDINGS OF CRITICAL INFRASTRUCTURE BUILDINGS (AND OTHER IMPORTANT BUILDINGS) AND ALSO TO PROTECT THESE BUILDINGS USING LETHAL OR NON-LETHAL WEAPON SYSTEMS.

HIGH VERSATILITY ENABLING A WIDE RANGE OF APPLICATIONS

AUTONOMOUS FUNCTIONS

USE IN CONTAMINATED OR OTHERWISE HIGHRISK AREAS

REDUCED RISK OF LOSS OF LIFE IN ADVANTAGES

SYSTEM FEATURES:

OPTION TO EQUIP THE MACHINE WITH WEAPONS, SENSORS AND ROBOTIC SYSTEMS

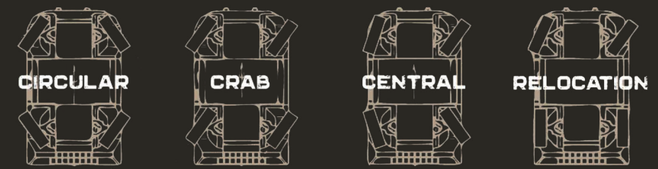
AUTONOMOUS MOVEMENT BASED ON GPS COORDINATES

AUTONOMOUS MOVEMENT ALONG A ROUTE COMPRISING COORDINATES (WAYPOINT NAVIGATION)

AUTONOMOUS MOVEMENT USING A CAMERA SYSTEM

ECONOMICAL AND QUIET OPERATION

LONG BATTERY LIFE (OPTION OF CONTINUOUS CHARGING FROM THE INTERNAL COMBUSTION ENGINE) CAN BE INTEGRATED INTO EXISTING SECURITY SYSTEMS



ADVANTAGES

CONTROLS:

MANUAL REMOTE CONTROL

FROM THE OPERATOR'S STATION EMERGENCY MODE

EMERGENCY STOP

OPERATOR'S WORKSTATION ON THE VEHICLE

CONNECTION OF ADDITIONAL COMPONENTS (PC, CHARGERS, OPTIONAL PLATFORM)

HIGHLY ENERGY-EFFICIENT OPERATION (UP TO 50% MORE EFFICIENT)

CAPABILITY OF MOVING AT HIGHER SPEEDS

SIMPLER AND CHEAPER CONSTRUCTION

LOWER WEIGHT

FEWER COMPONENTS, REDUCED RISK OF FAILURE

LOWER OPERATING COSTS

EXCELLENT MANOEUVRABILITY, INCLUDING SIDE (SIDEWALK FUNCTION)

EASY AND QUICK WHEEL CHANGE (IF ABSOLUTELY NECESSARY)

FAILURE OF A SINGLE WHEEL HAS MINIMAL IMPACT WHEN TURNING, IT DOES NOT DAMAGE THE TERRAIN

THE VEHICLE MOVES SMOOTHLY AND IS STABLE, WHICH SIGNIFICANTLY CONTRIBUTES TO IMAGE STABILISATION DURING REMOTE CONTROL

- **COLLISION AVOIDANCE SYSTEM:** DETECTION OF IMMINENT COLLISIONS IN THE VEHICLE'S DIRECTION OF TRAVEL AND ITS SURROUNDINGS. THE VEHICLE IS EQUIPPED WITH FOUR TYPES OF ANTI-COLLISION SYSTEMS, WHICH CAN BE SELECTED DEPENDING ON THE CURRENT SITUATION.
- **FOLLOW ME:** FOLLOW ME MODE ALLOWS THE OPERATOR TO SET THE TAROS SYSTEM TO TRACK GUIDANCE POINTS LOCATED WITHIN A DEFINED DETECTION ZONE IN FRONT OF THE VEHICLE.
- **STATIC PATROL:** THIS MODE ENABLES AUTONOMOUS MONITORING OF THE VEHICLE'S SURROUNDINGS WHEN THE VEHICLE IS IN STATIC MODE.
- **DYNAMIC PATROL:** THIS MODE ENABLES AUTONOMOUS MONITORING OF THE VEHICLE'S SURROUNDINGS WHEN THE VEHICLE IS IN DYNAMIC MODE.
- **PATROL FUNCTION:** THE PATROL FUNCTION ENABLES THE TAROS VEHICLE TO MOVE BETWEEN TWO POINTS ALONG A ROUTE, BACK AND FORTH. IF THE ROUTE IS A CLOSED LOOP, THIS LOOP CAN BE REPEATED CONTINUOUSLY.
- **RETURN TO STARTING POSITION:** RETURN TO STARTING POSITION MODE ALLOWS THE TAROS VEHICLE TO AUTOMATICALLY RETURN TO ITS STARTING POSITION.
- **AUTOMATIC RETURN TO HOME POSITION:** THE AUTOMATIC RETURN TO HOME POSITION MODE ENABLES THE TAROS VEHICLE TO AUTOMATICALLY RETURN ALONG ITS PREVIOUS TRAJECTORY IF CONNECTION TO THE OPERATOR'S COMPUTER IS LOST.

TAROS V4 4X4

UGV WEAPON SYSTEM

ADVANTAGES:

WADING CAPABILITY
CRUISING RANGE
VERSATILITY – ANY SUPERSTRUCTURE
48V VOLTAGE
RETRACTABLE GENERATOR /HYBRID/ 4X
ELECTRIC MOTOR
4X HYDRAULIC TOWING POINTS
4 STEERING OPTIONS

TECHNICAL SPECIFICATION:

LENGTH / WIDTH / HEIGHT	2830 / 1780 / 1250 MM
OPERATING WEIGHT	1500 KG
PAYLOAD	1000 KG
TOTAL WEIGHT	2500 KG
MAX. SPEED - PAVED ROAD / DIRT ROAD	25 KM/H
MAX. SPEED - DIFFICULT TERRAIN, AUTONOMOUS DRIVING	1–5 KM/H
TRANSVERSE SLOPE ACCESSIBILITY	MAX. 30° / WITHOU AGREGATE
STEP HEIGHT	250 MM
FLOAT	YES
APPROACH ANGLE FRONT / REAR	> 60° / 60°
BATTERY CAPACITY	360 AH
RANGE USING TAKB	50 KM
RANGE GENERATOR (HYBRID)	MAX. 450 KM

TAROS V4 6X6

UGV TRANSPORT SYSTEM

ADVANTAGES:

WADING CAPABILITY
RANGE WATER
RESISTANCE
VERSATILITY – ANY SUPERSTRUCTURE
48V VOLTAGE
4X ELECTRIC MOTORS
4X HYDRAULIC LIFTING POINTS
4 STEERING OPTIONS

TECHNICAL SPECIFICATION:

LENGTH / WIDTH / HEIGHT	2900 / 1770 / 1050 MM
OPERATING WEIGHT	1500 KG
PAYLOAD	1000 KG
TOTAL WEIGHT	2500 KG
MAX. SPEED - ROAD / TRACK	25 KM/H
MAX. SPEED - DIFFICULT TERRAIN, AUTONOMOUS DRIVING	1–5 KM/H
TRANSVERSE SLOPE ACCESSIBILITY	MAX. 30°
FLOAT	YES
APPROACH ANGLE FRONT / REAR	> 55° / 55°
BATTERY CAPACITY	400AH
RANGE USING TAKB	50 KM

TAROS PYRO

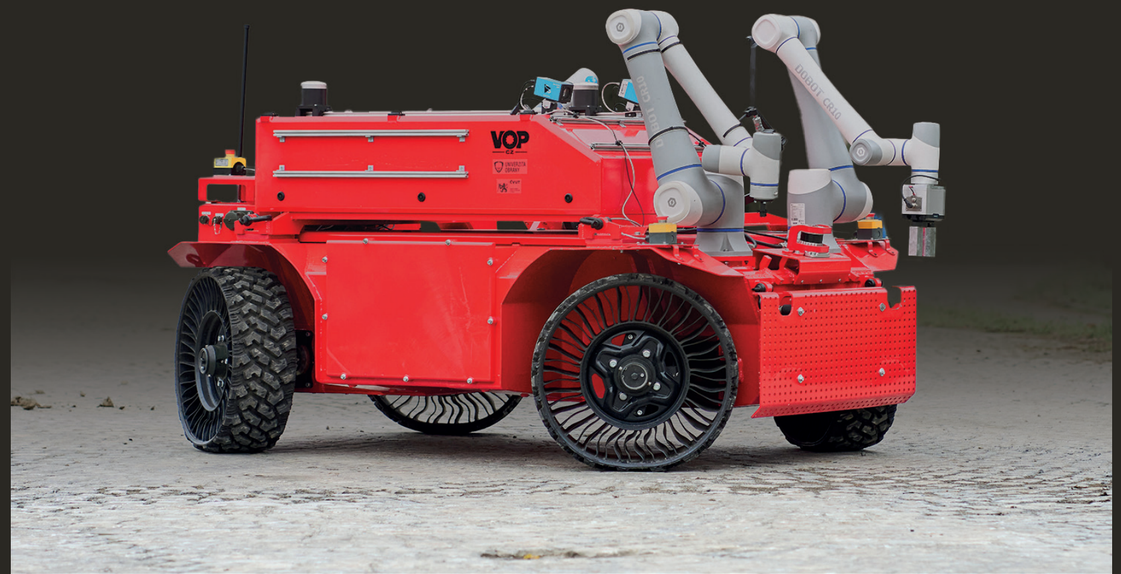
UGV PYROTECHNICAL SYSTEM

ADVANTAGES:

WADING CAPABILITY
RANGE WATER
RESISTANCE
VERSATILITY – ANY SUPERSTRUCTURE 48V
VOLTAGE
LOWER PLATFORM HEIGHT
4X ELECTRIC MOTOR
4 STEERING OPTIONS

TECHNICAL SPECIFICATIONS:

LENGTH / WIDTH / HEIGHT	2380 / 2002 / 1160 MM
OPERATING WEIGHT	900 KG
PAYLOAD	300 KG
TOTAL WEIGHT	1200 KG
MAX. SPEED - ROAD	25 KM/H
MAX. SPEED - DIFFICULT TERRAIN, AUTONOMOUS DRIVING	1–5 KM/H
TRANSVERSE SLOPE ACCESSIBILITY	MAX. 30°
FLOAT	NO
APPROACH ANGLE FRONT / REAR	> 55° / 55°
BATTERY CAPACITY	400AH
RANGE USING TAKB	50 KM



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