

HBA GRYF®

**EOD/IEDD
mobile robot**



HBA GRYF® is a robot used for reconnaissance of terrain and hard to reach places. The manipulator with 5 degrees of freedom allows to lift loads weighing up to 15 kg. Robot's wheels can easily be removed, which reduces the dimensions of the robot and thus facilitates missions in tight spaces.

Owing to the applied drives, the robot smoothly overcomes uneven terrain and obstacles up to an angle of 45°. The robot is characterised by excellent manoeuvrability. Low weight makes it easy to transport and carry the robot, and its modular design allows for quick and easy change of additional equipment.

PIAP GRYF® mobile robot is designed to work with a variety of accessories, which include: disrupters (e.g., RE 70M3 Plus - Chemring, Proparms Recoiless 12.5 mm and 20 mm), shotgun (e.g., Benelli), X-ray (e.g., Vision-X MK-5), explosives trace detector (e.g., M0-2M), active winder with fibre optic cable, main for remote detonation of explosives.

Mobile robot HBA GRYF °

Dimensions (L x W x H):	
in stowed position:	69x59x45 cm
without wheels:	67x46x44 cm
Weight (without accessories) of the robot with manipulator,	
main camera and battery:	38 kg
Radio transmission range:	up to 800 m
Operating time (mission-dependent,	
possibility of quick battery replacement):	approx. 2 hours
Speed (two ranges):	
operating mode:	up to 0.9 km/h
normal mode:	up to 3.6 km/h
Protection class:	IP 65
Battery:	LiFePo4; 33 V
Battery capacity:	5 Ah
Approximate charging time:	
(batteries identical for robot's mobile base and control panel, possibility of quick replacement)	
Drive system:	2 h
Drive system:	track-wheel with articulated front flippers

Mobility:	
Overcoming vertical obstacles:	up to 30 cm
Climbing stairs:	up to 30°
Climbing slopes:	up to 45°
Acceptable lateral tilt:	up to 35°
Clearance:	
with wheels	7 cm
without wheels	6 cm

Manipulator:	
Maximum lift capacity close-in at the front:	15 kg
fully extended at the front:	5 kg
Maximum reach	
vertical:	
from the lower edge of the tracks:	2.2 m
leaning on front flippers:	2.35 m
horizontal:	
from the edge of the tracks:	1.5 m
from the rotation axis:	1.9 m
Number of degrees of freedom (remote-controlled):	5
+ clamp of gripper, in addition to a manually adjustable telescopic arm	
Clamp opening:	20 cm

Cameras:	
4 pcs.	
<ul style="list-style-type: none"> ▪ Main: moving PTZ camera, colour, 22x optical zoom, with IR LED illuminators or white LED light, with variable focal length Motion range of the camera: 350° on the vertical axis, 150° on the horizontal axis ▪ Gripper: colour, with IR LED illuminators or white LED light, with integrated heater ▪ Front: drive, colour, with IR LED illuminators or white LED light, with integrated heater ▪ Rear: drive, colour, with IR LED illuminators or white LED light, with integrated heater 	

Additionally, the mobile base is equipped with:	
a waterproof microphone	2 pcs.
a waterproof speaker	1 pc.

Connectors:	
For accessories, manipulator, fibre optic, diagnostics	

Control Panel

Dimensions (L x W x H):	
during operation:	52x50x50 cm
when closed:	52x36x18 cm
Weight of control panel:	12 kg
Operating time:	4 - 5 h
Battery:	identical with mobile base batteries, equal parameters
LCD screen:	colour 15"

Connectors:	
Audio/Video In/Out, fibre optic, headphone, microphone, diagnostics	

Standard equipment

- External mobile base and control panel battery charger
- Diagnostics device

Optional equipment

- Handle for recoilless disrupter with a camera and laser pointers (RE 70M3 Plus – Chemring, Proparms Recoilless 12.5 mm and 20 mm *)
- Handle for shotgun with a camera and collimator sight (Benelli M4 Super 90 *)
- Handles for X-ray (Vision-X MK5 *)
- Handle for explosives trace detector (M0-2M *)
- Handle for chemical contamination sensor (AP2C*)
- Interchangeable jaws (shaped)
- Passive fibre optic winder up to 300 m
- Active fibre optic winder up to 300 m
- Main for remote detonation of explosives
- Set of external antennas
- Negotiation kit (requires fibre optic control)
- Digital audio/video recorder
- Remote control - small control panel
- Spare battery for the control panel and mobile base
- AC power adapter for control panel 110 V - 230 V
- Relay station (requires the installation of fibre optic cable or passive fibre optic winder)
- Device for breaking windows
- Transport basket

* other on request

We declare willingness to modify the robot and optional equipment according to the user's needs.

