



Galaxy GRS



Ballistic parachute rescue system



***GALAXY GRS - SIMPLE SOLUTION OF BALISTIC RESCUE
SYSTEM FOR YOUR ULTRALIGHT HELICOPTER !!!***

Super modern efficient „Rescue unit GRS Heli 1“ for MOSQUITO helicopter.



MOSQUITO WITH FLOATS with GRS Galaxy system:

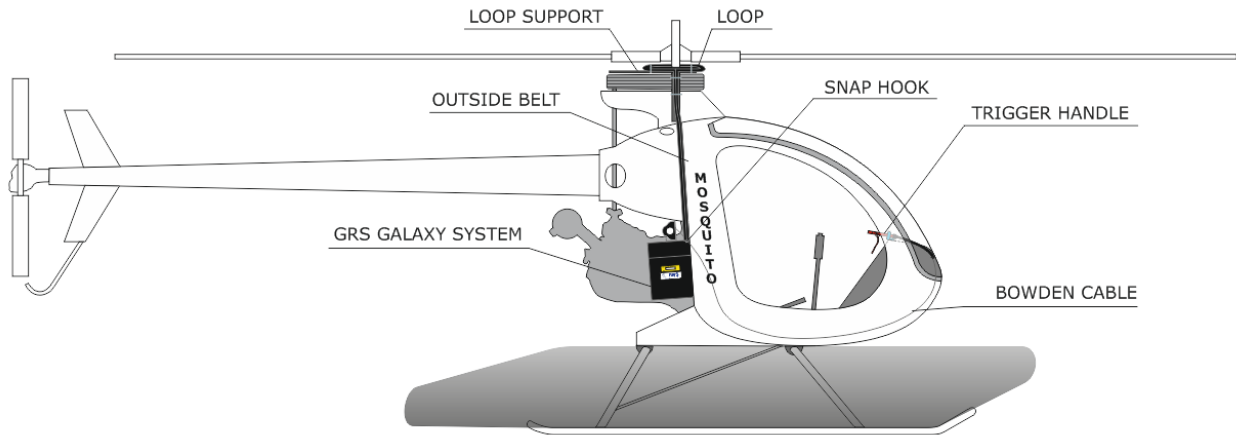


Figure 1

Complete KIT provided by Galaxy GRS s.r.o.:

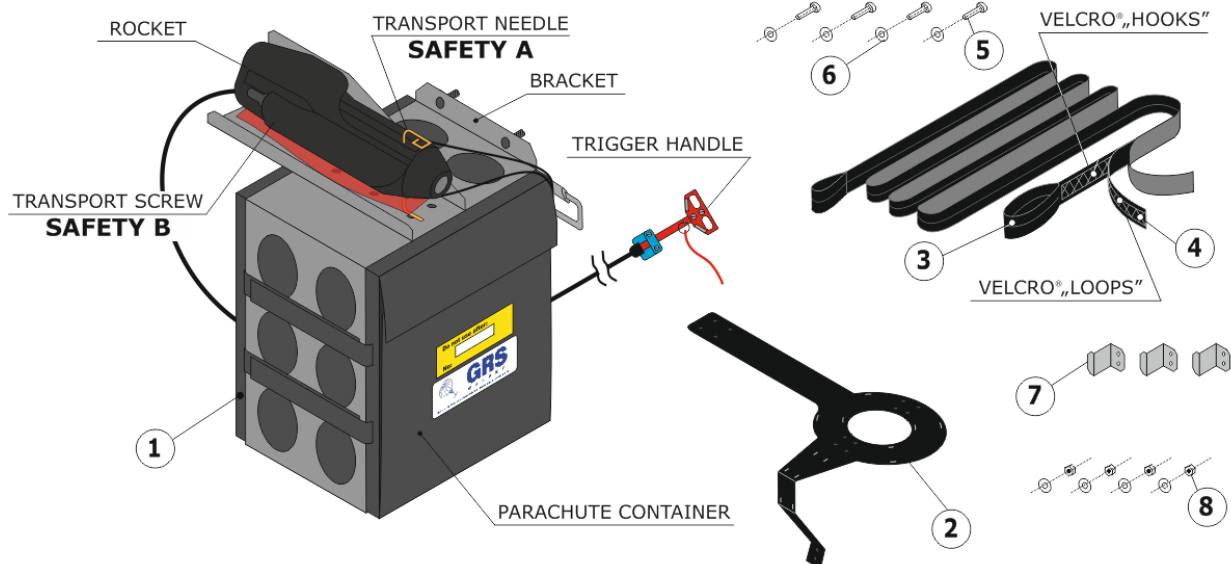


Figure 2

Parts list:

PART No.	Description	Qty
1	GRS system assembly	1
2	Loop support	1
3	Outside belt with Velcro® hooks	1
4	Strap with Velcro® loops to stick to the Mosquito fuselage	1
5	M5 screw	4
6	Washer for M5 screw	8
7	Metal stripes for outside belt securing	3
8	Self-locking nuts for M5 screw	4

INSTALLATION:

- 1) After unpacking you first **unscrew the safety B** from the rear of the rocket cover **but leave the needle - safety A and the red little flag attached until the system is installed!!!** Fasten the rocket by using 4x M5 screw and washers. Use a thread locker Loctite (243 Medium strength) - Figure 3.

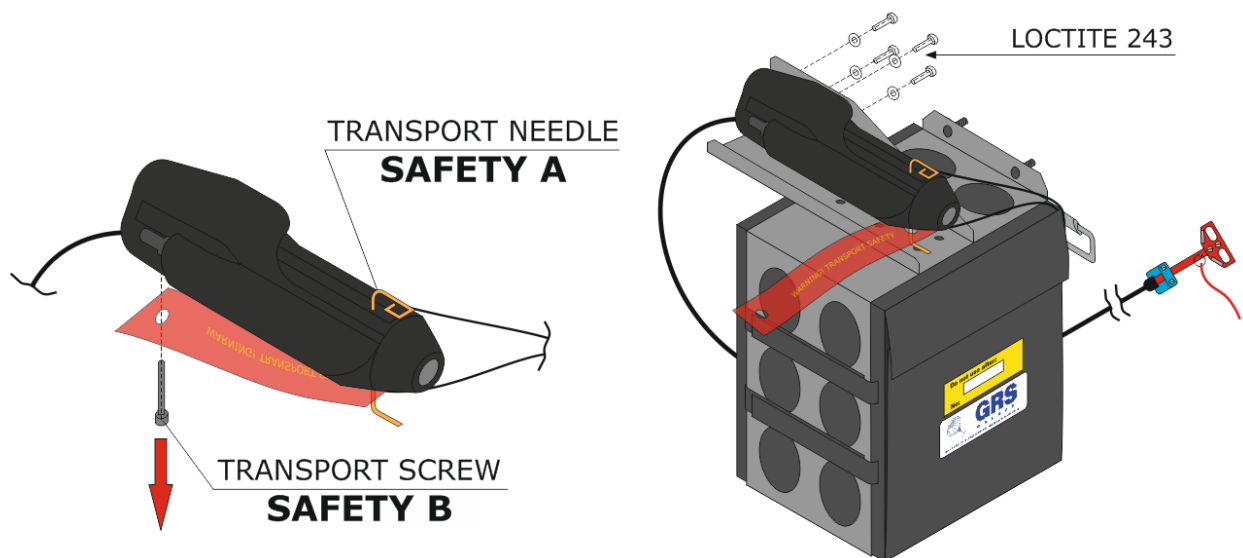


Figure 3

- 2) Attach the **GRS system assembly** to the right rear side of helicopter's firewall. **First place the GRS assembly to correct position.** There must be a **4-5 mm gap** between the engine mounting and GRS unit bracket according to figure 5 and **GRS unit should not overlap the edge of helicopter's fuselage !!!**. After that mark the correct position and drill 4x hole for M5 screw through the fuselage and fasten the GRS unit by self-locking nuts and metal washers.

**MAKE SURE THAT THERE IS NO HINDRANCE IN THE WAY OF GRS
SYSTEM DEPLOYMENT!**

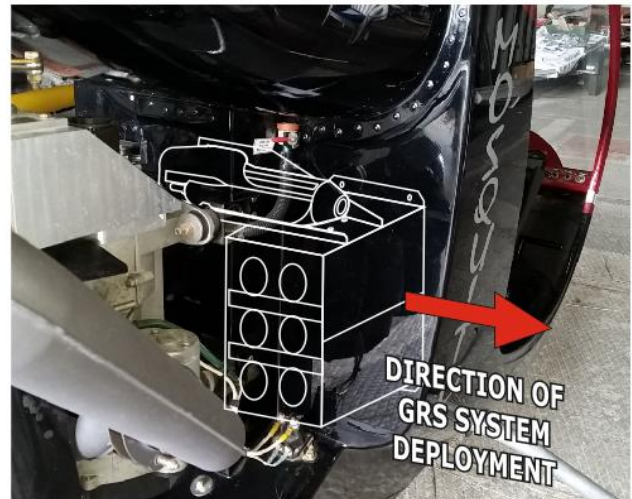
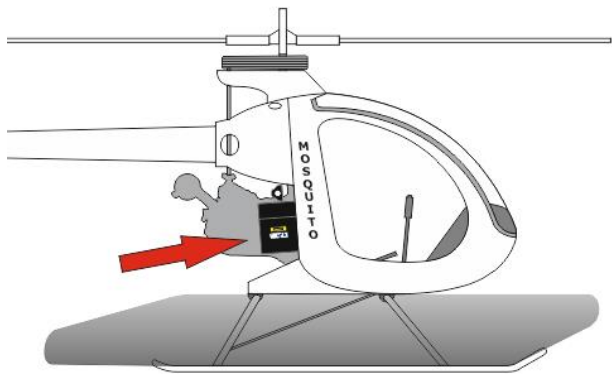


Figure 4

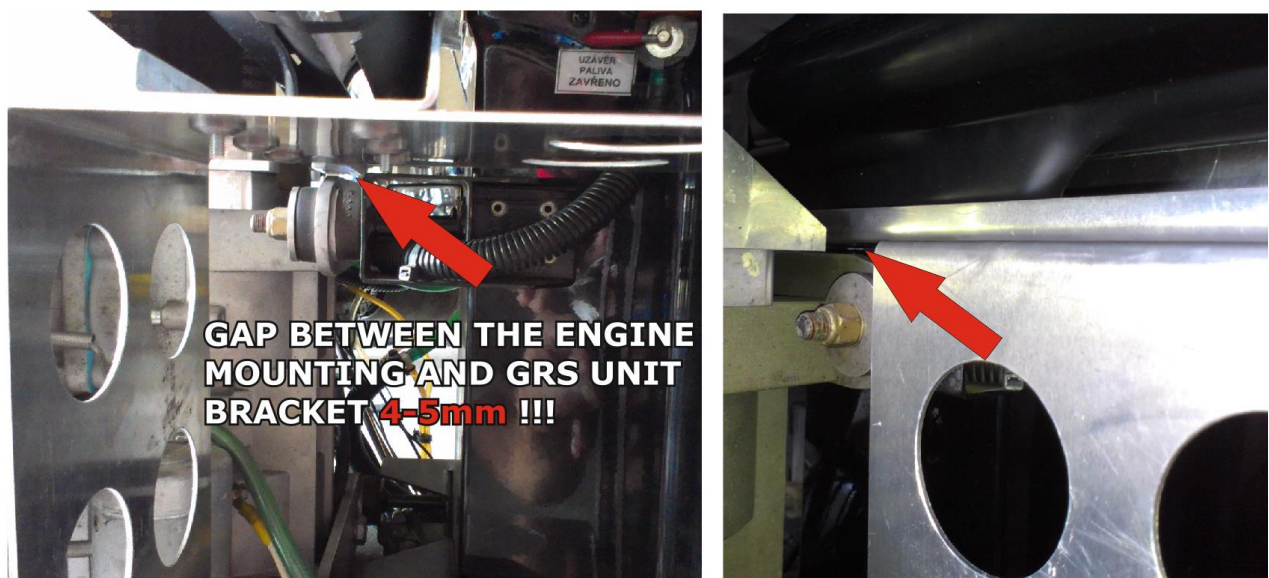


Figure 5

- 3) Disassemble the trigger handle. Instead of safety pin with little flag put a $\varnothing 1,5-2\text{mm}$ safety wire! Drill a $\varnothing 20\text{ mm}$ hole through the left rear side of helicopter's firewall and insert the handle body with bowden through the fuselage inside the cockpit. Assemble the trigger handle and **secure it with the safety pin with little flag again!** Fasten the trigger handle to the left top side of the instrument panel. The example of bowden installation is shown in the figure 6.

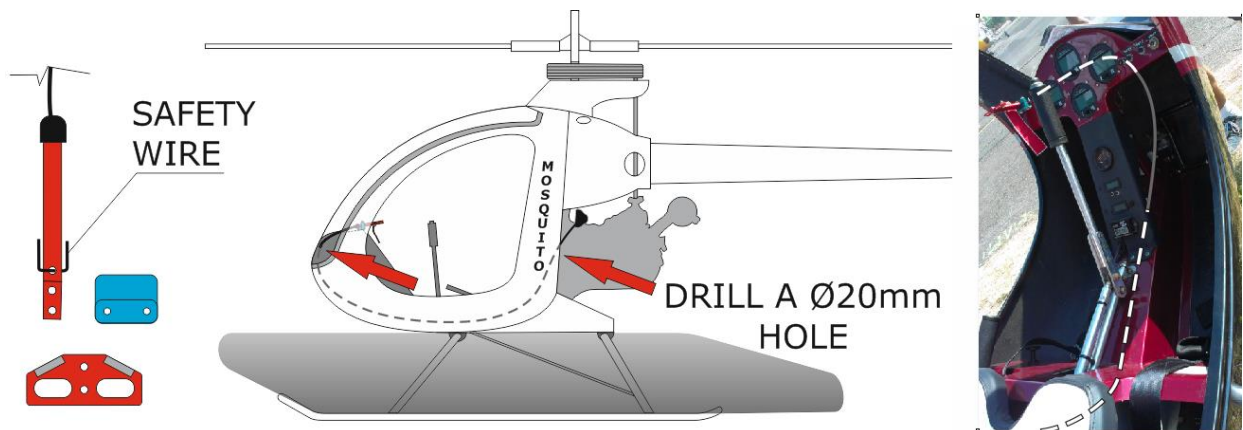


Figure 6

- 4) Assemble and install the loop support by using 4 rear screws, which are already part of helicopter construction. Rivet the down part of the support to the helicopter fuselage by using 2x Ø4mm rivet. Velcro® strap is already on the support.

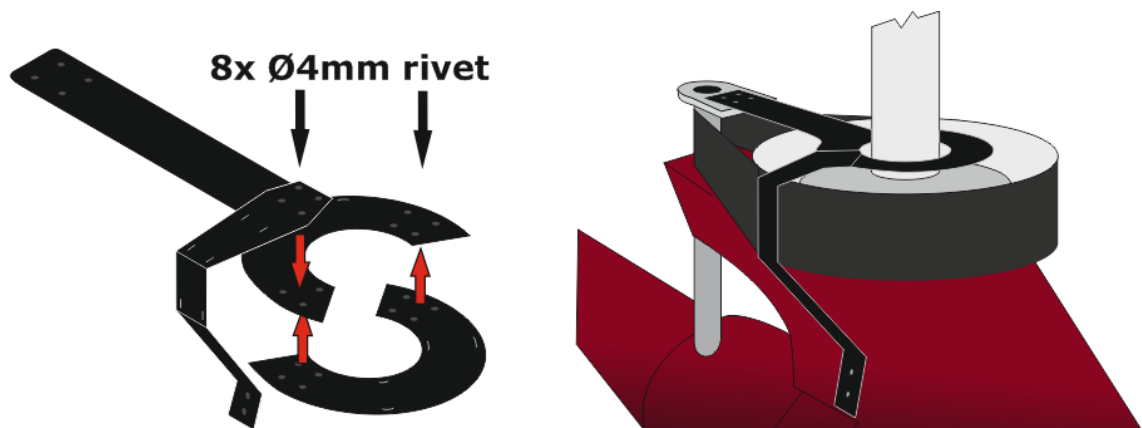


Figure 7

- 5) Stick the Velcro® strap with "loops" on the fuselage of the helicopter along the firewall (Figure 8).

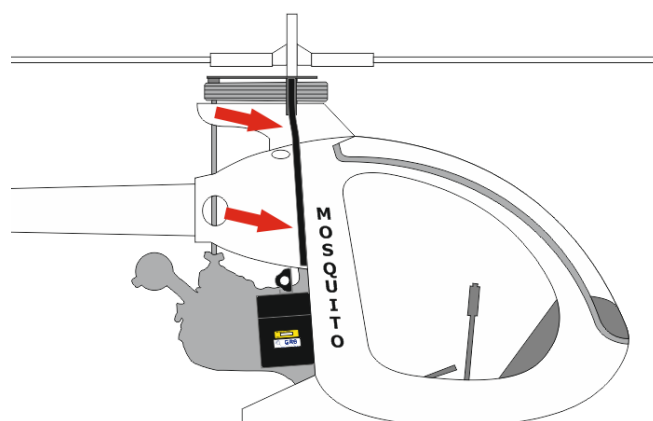


Figure 8

- 6) Make a hang sling loop around the rotor by using the outside belt with Velcro® "hooks" (figure 9). **NOTE:** For this hang sling loop use the end of the belt with bigger loop! **The loop will be a little bit wavy.**



Figure 9

- 7) Secure the hang sling loop to the loop support by using plastic tapes (5mm width – 3 pcs., 3mm width – 6 pcs.). **Change the plastic tapes every 3 years!** Stick the belt with the hang sling loop to the opposite Velcro® strap on the fuselage starting from the hang sling loop going down to the GRS System location according to figure 10. Secure the belt with riveting of 3 metal stripes. **Make sure there is no contact between belt and rotor.**

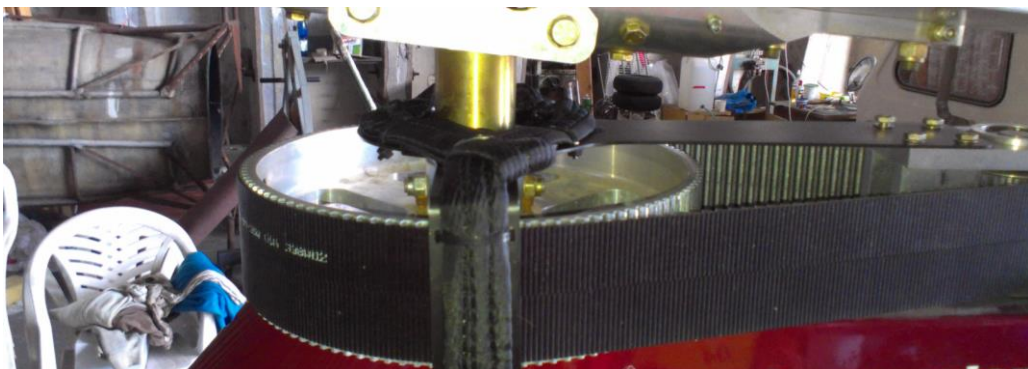
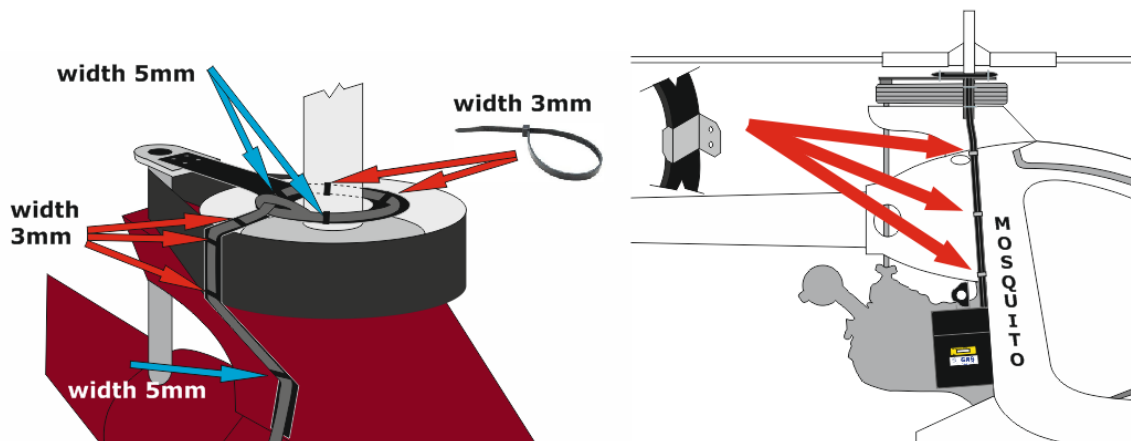


Figure 10

- 8) Connect the outside belt with the belt, which is going from the GRS System assembly by using a snap hook and cover it with a snap hook cover. Secure the cover with 2 plastic tapes (5mm width). Make sure that the **snap hook is connected correctly** (figure 11) and **the belt does not cross the rocket's bridle**.

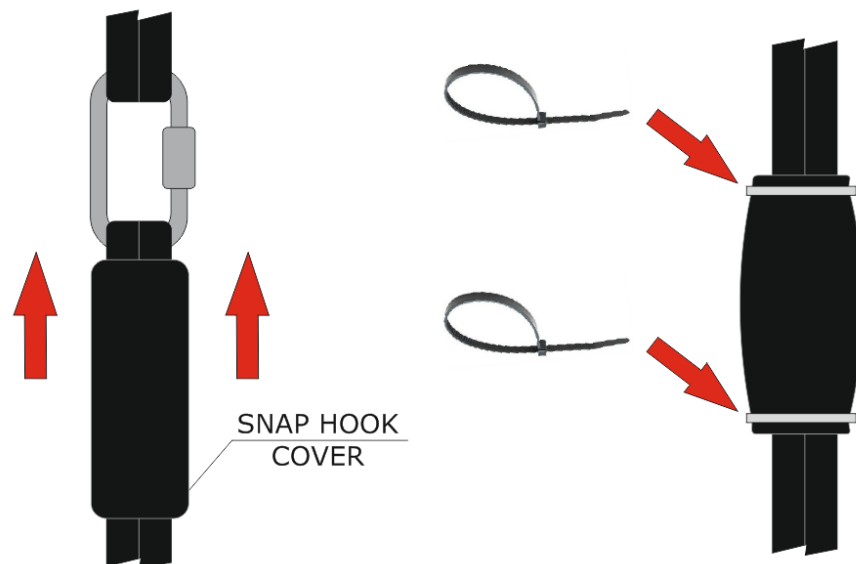


Figure 11

- 9) After the system installation you **snip the needle - safety A**, take it out and remove the flag - the **system is now secured only by the operational pin with the flag on the handle**. It is released by pilot shortly before flight and after the flight applied again so that the handle is secured against possible activation (Figure 12).

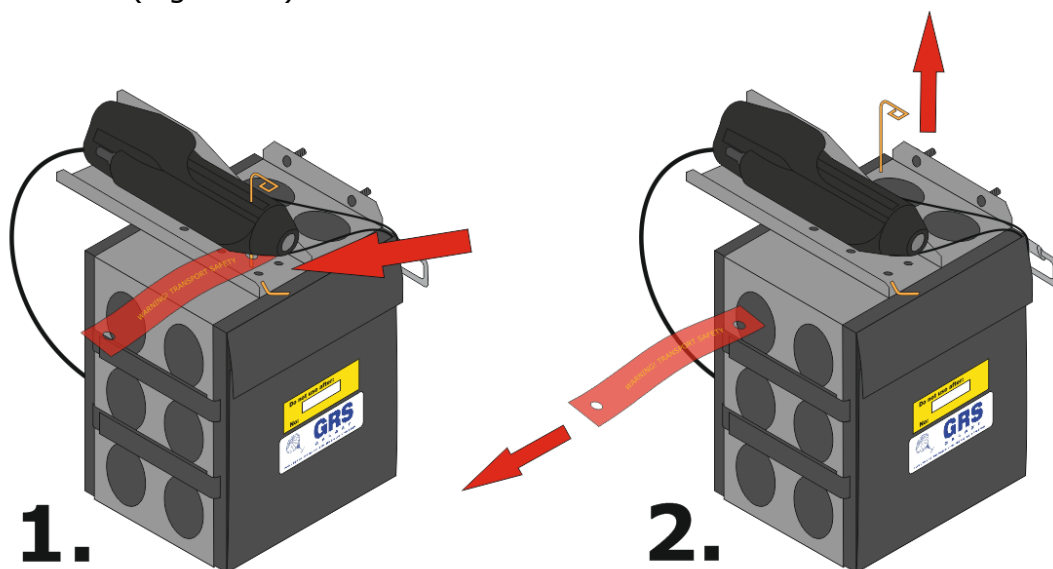


Figure 12

INNER ARRANGEMENT OF THE GRS SYSTEM:

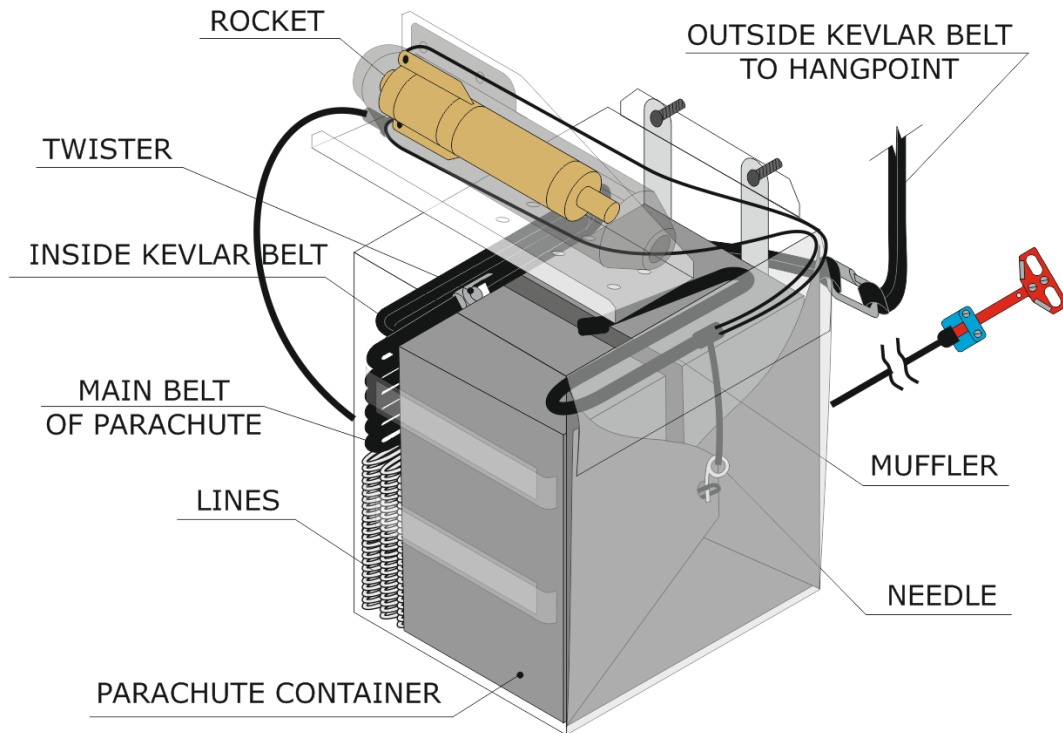
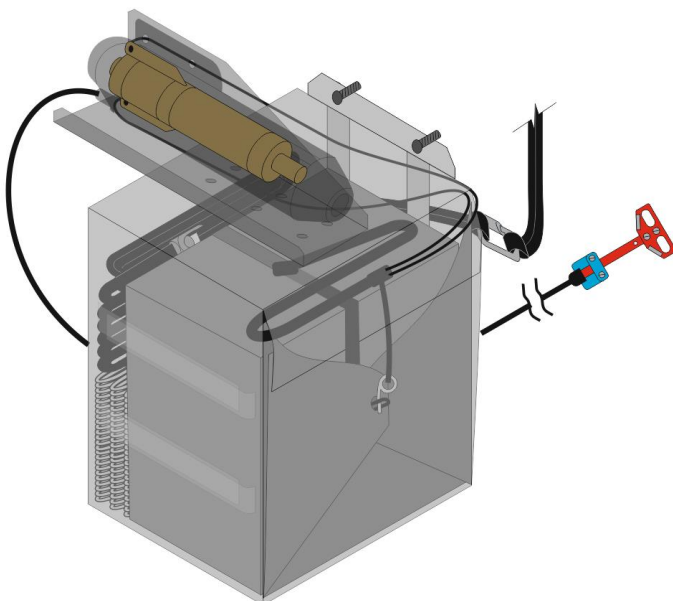
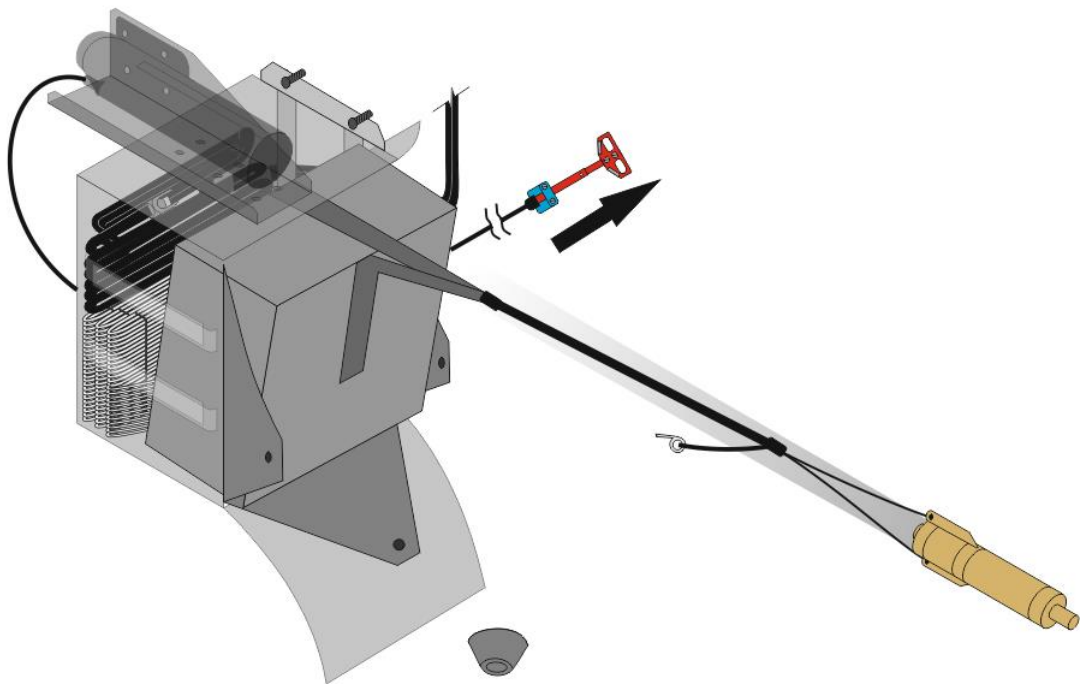


ILLUSTRATION OF OPERATION:

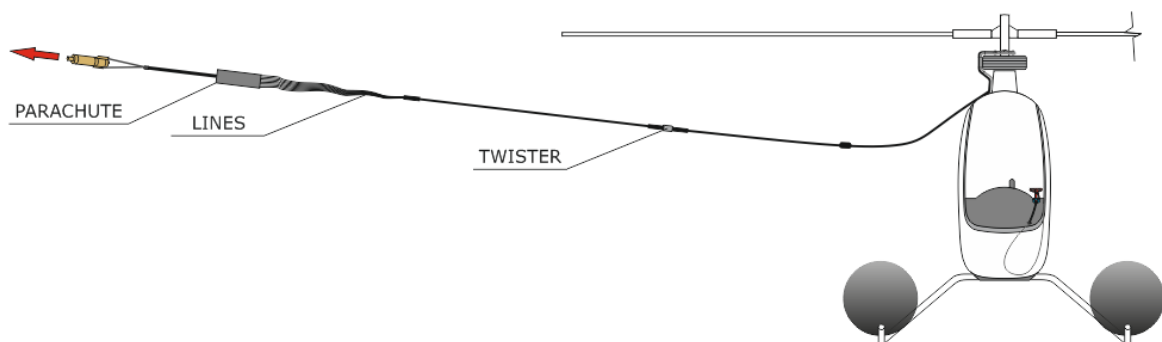
- 1) GRS System before activation



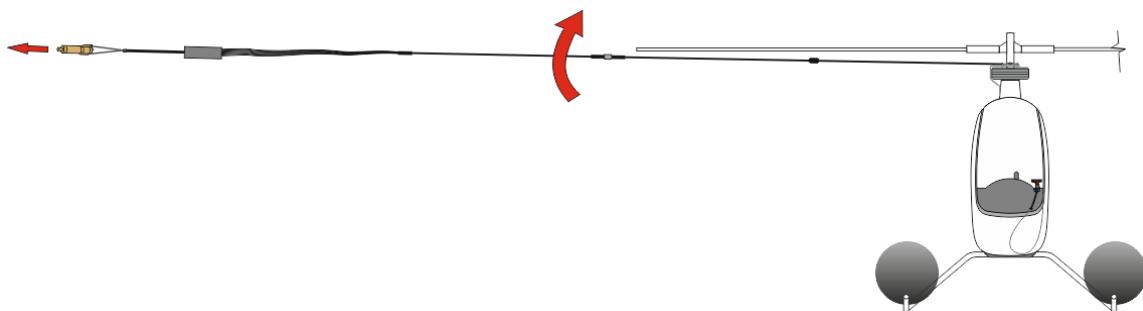
2) GRS System right after activation



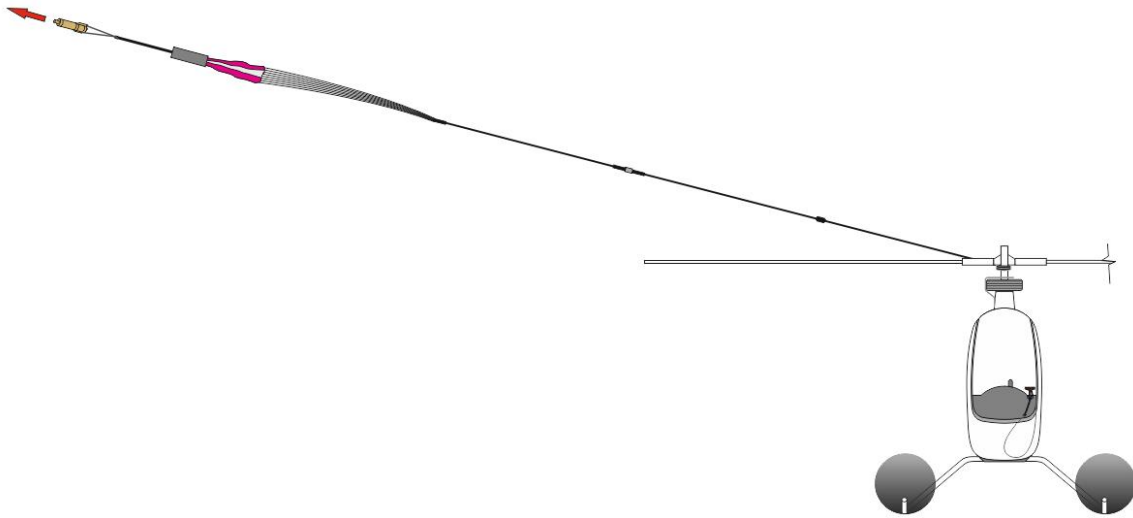
3) GRS System is being stretched



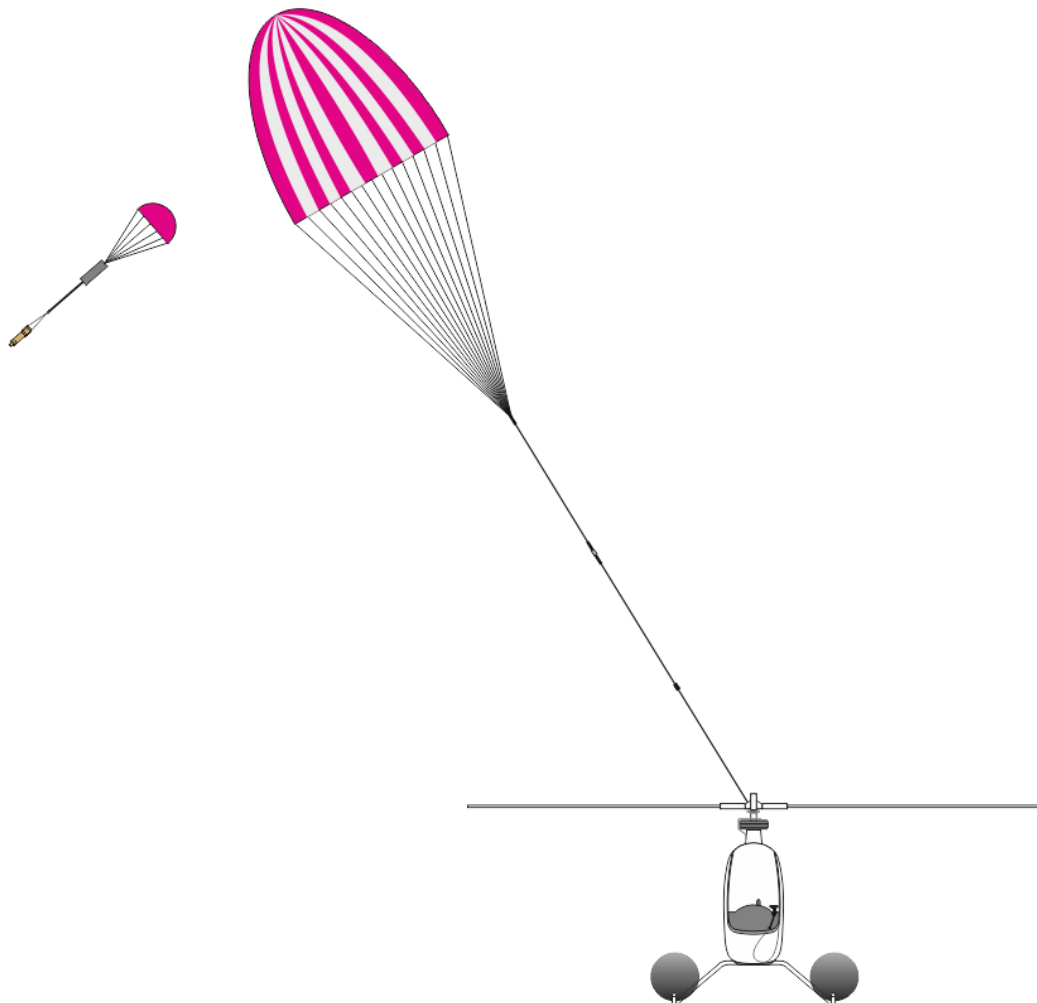
4) Stretched belts are passing through the rotor blades



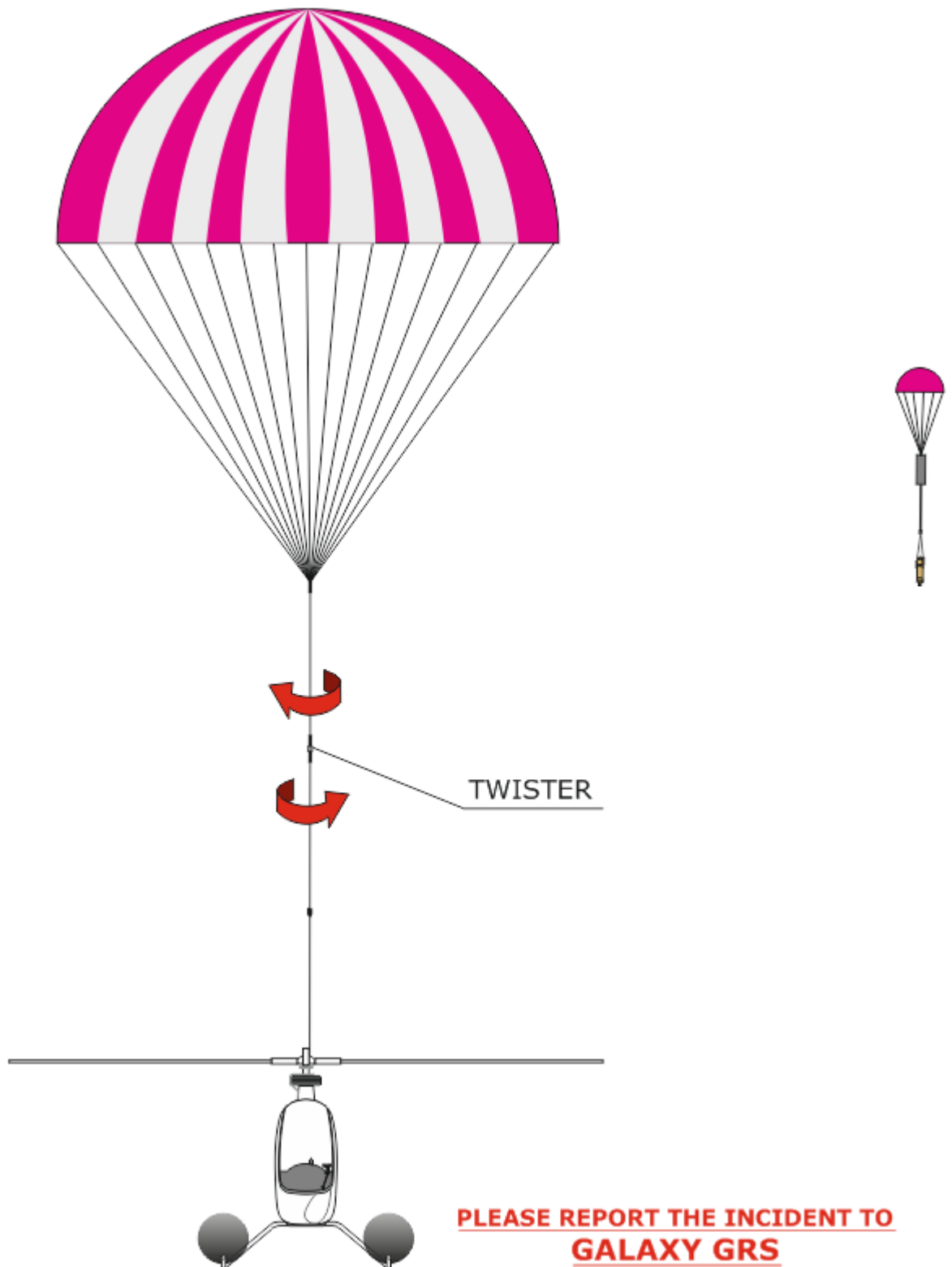
5) Hang sling loop is tightened around the rotor, parachute is opening



6) Rocket is slowly falling down with its own separate parachute



- 7) Deployment process is complete. The twister allows an independent rotation between the parachute and the rotor of the helicopter.



GRS Heli 1

TIME full open: 1,5 – 2,0 sec.

UNIT WEIGHT: 8,5 Kg

Super modern efficient „Rescue unit GRS Heli 1“ for MOSQUITO helicopter fully replaces the autorotation regime, with better sinking by 1-1,5m/sec.

Parameters for Heli 1 :

Flies at speed of 60 Km/h - projected rescue height 40 m above ground.

Projected rescue height in hover at very low forward speeds, already 50-60 m above ground.

GRS System GRS 3/180 Soft 40 m2	Total time from firing a parachute to its full opening 1,5 - 2,0 sec.
GRS Heli 1 6,8 kg	Descending recorded at 1000m ASTM by 190 Kg - 6,3 m/sec.
Accessories 1,7 kg	
WEIGHT TOTAL	8,5 kg

Notes :

- **Helicopter must be equipped with 4-point safety belts !**
- **Make a visual inspection of all parts and connections every 50 flight hours !**
- **Complete assembly can be done by the owner of the helicopter.**
- **Estimated installation time is 4 hours.**