

Pod Installation Guide - Simplified for Pilot

This is an installation guide for the Ribbiot Pilot Pods. It is intended to help you determine the best possible mounting location and application method.

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Mounting Location

Orientation and RF considerations

The Ribbiot Pod doesn't need an open view to the sky like the Portal or other GPS trackers, but it does need to be somewhat accessible by your phone to scan the Pod (NFC). It should not be placed in an area that would completely surround the unit with metal, water or other signal blocking materials. The top surface (with the Ribbiot Logo) is where the antennas are located, this surface should be facing towards open space to allow the antennas to work or unit to be scanned.


The Pod is rated for the following operating conditions:

Condition	Rating
Temperature	-40°C to +80°C (-40°F to +175°F)
Water/Dust Ingress	IP67, IP69k (Rain proof. Submersion resistant up to 1m for 30min. OK to wash with same equipment/nozzle as painted equipment)
Impact rating	IK08
Battery Life	~3yrs

 The Pod can be placed in a hidden / inconspicuous area if preferred, but be aware the signal range could be reduced by doing so.

Placement on equipment

See the [example mounting locations](#) document for ideas of similar equipment you may have.

 Do not place the Pod in areas it will conflict with regular equipment use or maintenance
Do not place in an area the Pod could easily be damaged or hit

 Surface prep is critical - see instructions below

Account for regular maintenance, transportation, additional accessories, etc. when selecting an installation location

Ensure the battery can be replaced (enough room for tools)

Ensure the Pod can be scanned by a phone using NFC

- ✓ Place near existing nameplates, identification or serial number plates, or other placards if available.

Look for areas of undisturbed paint or little wear and tear. Other safe areas could be near other controls and/or electrical cables and connections.

Favor placement on the curb side for vehicles or on road equipment

Favor placement near the operator or typical use areas

Mount + Application Method

There are various mounting options for the Pod. To select the best mount for your application you can follow this decision matrix.

Criteria	Mount Performance	
	Pod ONLY + VHB 	Industrial Mount + Epoxy 
Small area for mounting	✓	
Low risk of physical damage	✓	
Area of high risk of physical damage		✓

Method Instructions

VHB

- First determine the correct VHB
 - Pod ONLY - use the circle that is ~1" round
 - Industrial Mount - use the circle that is ~2" round
- Clean the desired mounting surface thoroughly with isopropyl alcohol** or a similar cleaning agent. The surface should be completely free of dirt, oil, rust, mill-scale, etc. Any loose paint, particles or other debris should be completely removed. Grinding may be necessary.
- Next remove the backing cover on one side of the VHB and fix it to the center of the Pod or mount.



a. Mount shown with VHB sticker applied

4. Finally, remove the other VHB backing cover, position the Pod, and **press firmly for 20s** to set the VHB tape.



a.

- i • VHB generally requires 15 psi (~100kPa) to activate - please push firmly / apply ~45lb (~20kg) for 20-30 seconds
- VHB will reach the intended strength after ~24hrs. Care should be taken if the item is used directly after installation.
- The Pod should be installed in the mount prior to placing it on the asset

Epoxy

Ribbiot only endorses using the Toughened Epoxy Structural Adhesives listed below - anything else will fail prematurely.

List of Approved Epoxies		
	Most Recommended	Approved Alternates
3M Brand	DP460NS	DP460, DP420NS, DP420,
Loctite Brand	E-60HP	E-20HP

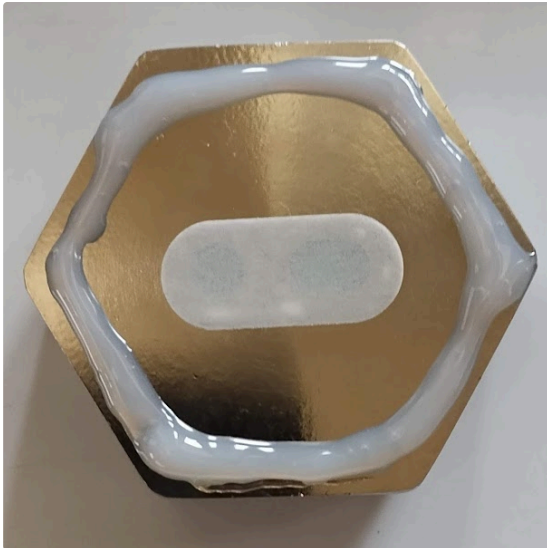
1. Follow the steps above to prep and adhere the small (~0.5"x1") VHB to the mount over the screw holes. This will prevent epoxy from going into the mount and hold the device for you while the epoxy dries.



a. Mount with small VHB installed

2. **Clean the desired mounting surface thoroughly with isopropyl alcohol** or a similar cleaning agent. The surface should be completely free of dirt, oil, rust, mill-scale, etc. Any loose paint, particles or other debris should be completely removed. Grinding may be necessary.
3. Remove the backing cover from the VHB on the mount.
4. Apply approx. 1/8" bead of epoxy around the perimeter of the mount. Take care to avoid getting too close to the VHB to prevent contaminating the VHB.

a.



5. Carefully position the Pod and **press firmly for 20s** to set the VHB tape.
 - a. It is important not to move, slide, shake the assembly when installing because large enough movements can cause the epoxy to smear over the VHB, requiring cleaning and re-starting the process.



6. General Tips:

- a. You may want to prep multiple Pods to install at once to limit the amount of waste.
- b. A longer working time epoxy (i.e. ≥ 60 min work time) is advantageous for limiting waste and ease of install; allowing a single epoxy cartridge and mixing nozzle to last much longer before change out.



- VHB generally requires ~15 psi to activate - please push firmly / apply ~45lb for 20-30 seconds
- The epoxy will take ~1hr to begin hardening and ~24hrs for a full cure. It is very important that the unit is not moved, shaken, or exposed to moisture (rain, washing, etc.) until the epoxy is fully cured (24hrs).

Suggestions

Application Method by Asset Type

Heavily abused items should have Pods mounted with Industrial Case installed with epoxy. This would include items like Spreader Bars, Blocks and Counterweights.

All other items including moderately/heavily abused items where there are protected areas for the Pod to be mounted at, should be installed Pod only with VHB (no Industrial Case). This would include smaller hand-held tools, vehicle cabs, etc.

 [Example Mounting Locations](#)

Surface Prep

Anything that will be epoxied is recommended to first grind off any paint in the installation location.

Adhesives (VHB and Epoxy) will adhere well to most paints, but the adhesion of the paint to the underlying metal will be the weakest link. For the most robust installation, removal of paint prior to installation is required. This is especially required if the asset has been repainted or has any visual signs of issues with the paint (flaking, rusting, etc...)



Paint removed locally (~2.5" diameter) prior to placing the Pod.

IF the paint is in bad condition like the image below, grinding the paint off in the area of installation is required (grind the area locally down to bare metal).



Painted surfaces that look like this must be ground prior to installation (remove all paint, rust, etc. locally where the Pod will be installed).