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AC-ROV Roller

The **AC-ROV** was the first and is still the only ROV to have an inherent “STICK-ON” capability, proven to be of huge benefit for parking at a target and for fast surface skimming inspection work.

To further enhance the **AC-ROV's** ability to inspect large surfaces quickly, AC-CESS now offer a roller kit that quickly converts the **AC-ROV** into a four wheeled vehicle that can roll over and alternate between surfaces in different planes.

- **Reduces Inspection Time and Cost**
- **Robust, Serviceable and Fully Integrated Solution**
- **Quick and simple ‘no modification’ retrofit**

Cleverly engineered, the roller kit is effectively neutral in water, so there is no need to adjust vehicle ballast or buoyancy. The individual rollers slide out on their axles for track width adjustment to vary the **AC-ROV** standoff, or to improve tracking stability.

Control and adjustment of the “stick-on” force is easy. Simply use the **AC-ROV** “flight freeze” function to set the suction force developed by the thrusters as the vehicle approaches a surface. If conditions change, push the flight freeze button again to simply set the suction to any new level that is seen to be more efficient. Pressing another button quickly switches the **AC-ROV** into the free flight mode.

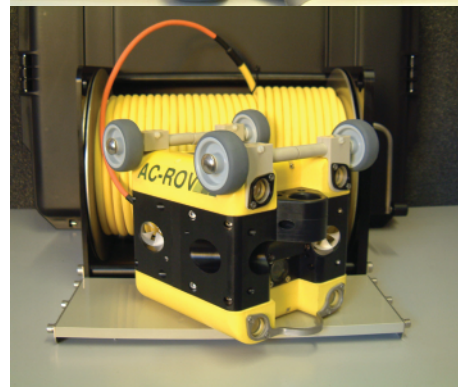
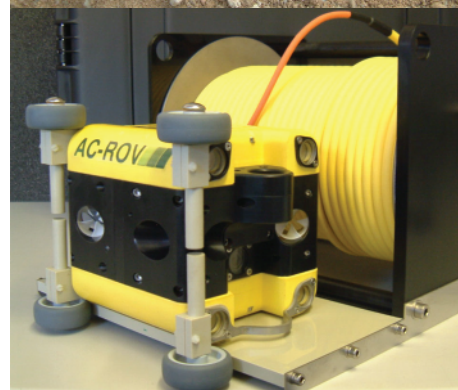
- **Rollers mount to side, top or underside of AC-ROV**
- **Does not affect the AC-ROV ballast or trim**
- **Does not affect free flight of the AC-ROV**

The parking or skimming surface can be almost anything from absolutely flat through to rough natural rock, steel with weld runs and even curved surfaces. The unique centre-less **AC-ROV** thrusters are foul proof, so soft marine or weed growth is not a problem for parking, although it may inhibit skimming. The inherent stick and skim ability of the **AC-ROV** is applicable to surfaces overhead, underneath or side on to the vehicle, and to a lesser extent surfaces in front of or behind it. The roller option simply enhances the skimming ability and reduces wear and tear on the vehicle body.

The fitting time for the roller option is less than 5 minutes and, no specialist training is required. The outcome retains the clean, robust and snag free shape of the **AC-ROV** and does not affect its market leading free flying mobility.

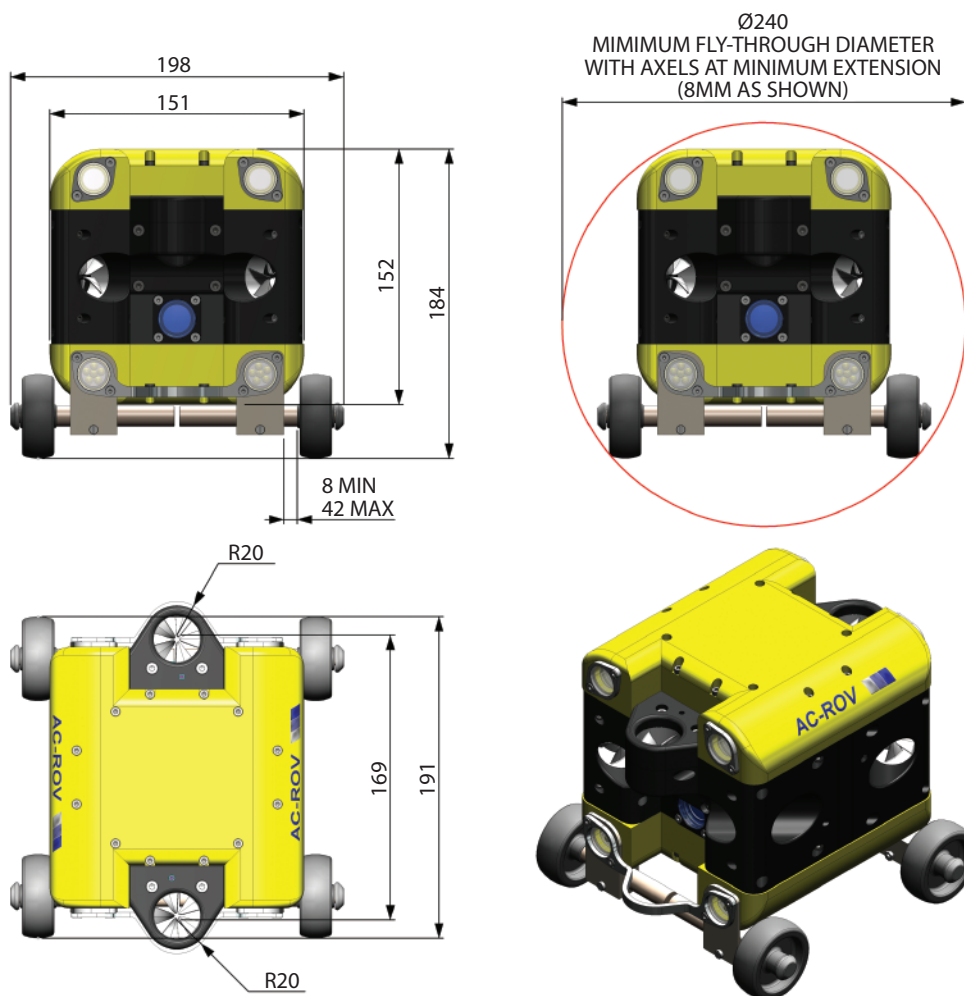
All the capabilities of the standard **AC-ROV** are retained. The wide angle camera gives good inspection cover of any surface skimmed on the rollers, but if a different perspective of a target is required, then it is a simple operation to lift off and re-attach, or park up via a different side of the **AC-ROV**. The ability to alternate between free flight, roller and parking modes whilst in the water makes the **AC-ROV ROLLER** a hugely versatile inspection tool in open and confined spaces. This is all achievable with the standard and completely intuitive 3D hand control and fight assist functions that existing **AC-ROV** pilots are familiar with.

- **Ideal for Hull, Internal Pipe & Tank Inspection**
- **Easily alternates between free flight, rolling and parking modes**
- **Utilises existing and familiar controls**





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The individual rollers attach via the **AC-ROV** light ports, of which there are 8 in total.

The above detail shows the roller units attached to the base of the **AC-ROV** using the 4 lower light ports.

Use the top 4 light ports for fixing the rollers to the top of the **AC-ROV**.

If the wheels are to be mounted to the side of the **AC-ROV** then select the light ports on that side and use 2 from the top and 2 from the bottom.

The narrow track width (198mm over the axles) will be suitable for most applications but it can be increased to 266mm. This will improve lateral stability and overall resilience. It may be a benefit for traversing rougher surfaces and for straddling sediment build up along the bottom of pipes.

The amount of suction developed is proportional to the thrust and stand-off distance between the relevant **AC-ROV** face and the work surface. Changing the track width will alter the **AC-ROV** stand-off relative to a curved surface and the amount of suction for a given level of thrust.

The amount of suction required for a given situation is seldom critical and is enabled with the "flight freeze" function when the **AC-ROV** is against chosen surface. When parking the **AC-ROV** using a plain or roller face, the amount of suction need only be that required to stabilise the **AC-ROV** in the prevailing conditions. If the vehicle moves, then simply increase the suction with the 3D hand control and push the "flight freeze" button again to hold the new settings.

When skimming, the amount of suction is best kept to a minimum as it is the remaining thrust capability that provides the propulsion to move the vehicle along. If the **AC-ROV** comes away from the surface, it will want to re-attach itself as it comes back towards the surface.