



## ***APPLICATION NOTE***

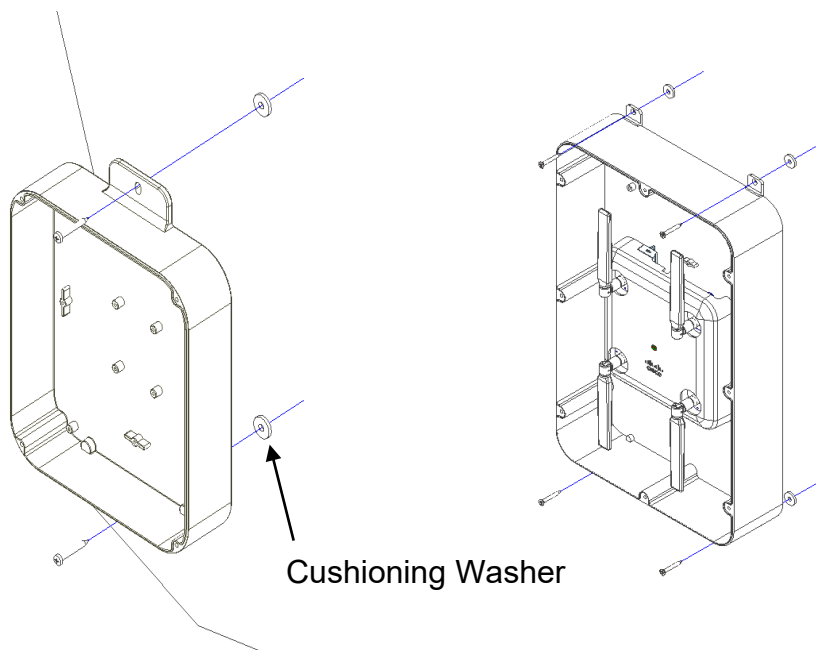
# ***Installation Tips for Oberon Skybar™ Outdoor Wi-Fi Access Point Enclosures***

## Introduction

Oberon's Model 1020, 1021, and 1022 wireless access point NEMA 4 enclosures are designed with a unique "Skybar™" cover which discriminates these products aesthetically from standard industrial NEMA 4 boxes. These products are designed to be as small and unobtrusive as possible so that they can be located precisely where they are needed. Sometimes this is beneath seating in stadiums and auditoriums. Other times, it may be in architecturally sensitive outdoor venues. The Skybar™ cover imparts strength and a little extra room for larger wireless access points. In order to maintain the compact size and shape, these products are designed with a precision engineered gasket. In order to maintain the NEMA 4 (water resistant) rating, some extra precautions should be observed when installing the 1020 or 1021.

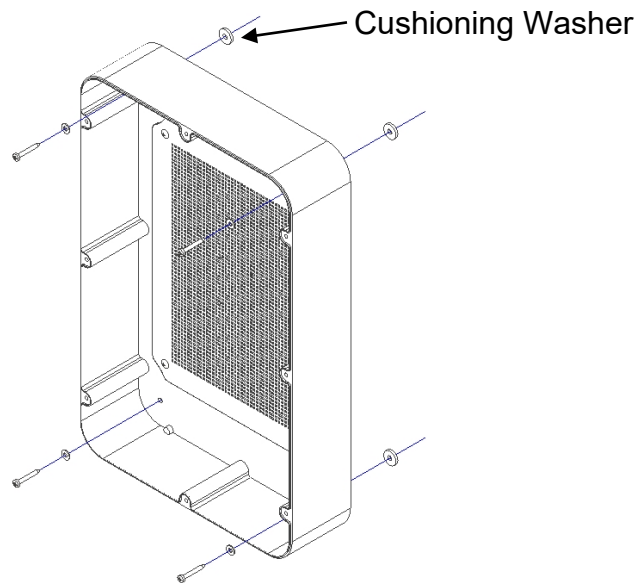
## Installation on Uneven Surfaces

When mounting Oberon's Models 1020, 1021 or 1022, select a surface that is as smooth and level as possible. Oberon includes four cushioning washers with each product which can be used to lift the enclosure about 1/8" above uneven mounting surfaces and irregularities. This can help to keep the enclosure from flexing during installation, which can prevent the enclosure from sealing properly. Place the cushioning washers between the mounting tabs or feet and the wall when installing as shown in the figure. When fastening to a wall, use wall anchors suited for the wall material or construction, and tighten to the same torque on all sides.



*Oberon Model 1020-00, 1021, and 1022 enclosures use cushioning washers when wall mounting*

If the wall is smooth and flat, the enclosures may be mounted flush on the surface by fastening through the back side of the base. The cushioning washers also double as sealing washers for this installation. Four holes must be drilled through the back of the enclosure to fasten the unit with appropriate anchors and the cushioning washers. If the surface is not smooth, the enclosure may flex during installation. This will prevent the cover from sealing properly.



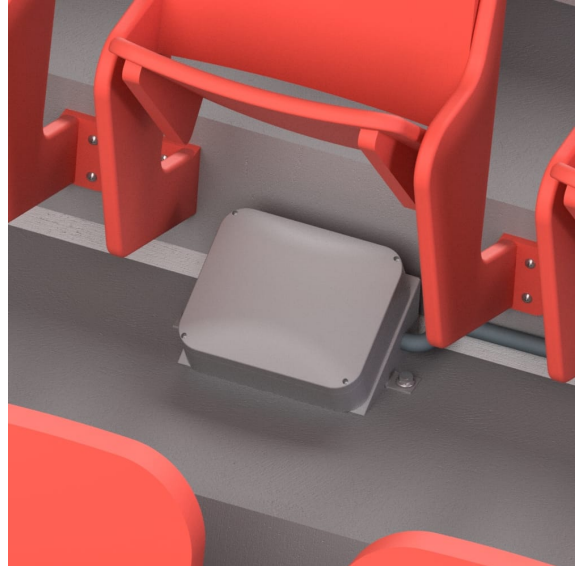
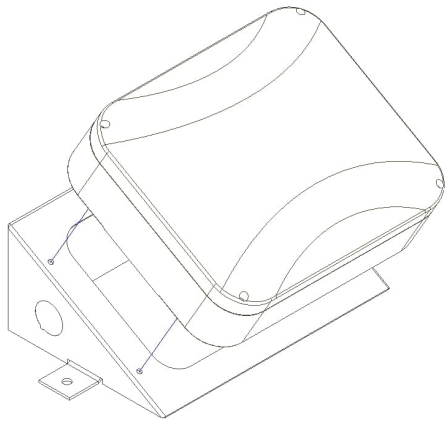
*Oberon Model 1021-00 enclosure with inside mounting hardware, exterior cushioning washer*

### **Model 1020-00-USM30**

Mounting the Oberon 1020 beneath seating in auditoriums and public venues can be facilitated by the Oberon model 1020-USM30. This model includes a standard 1020 Skybar NEMA 4 plastic AP enclosure with a sturdy aluminum mounting bracket. The aluminum mount provides a very flat mounting surface, helping to preserve the NEMA 4 rating, and angles the access point up 30° from horizontal for better wireless coverage. Conduit and connectors can be terminated within the aluminum mounting bracket.

### **Model 1020-00-RAB and 1020-00-RAB-PMK**

The Oberon 1020 enclosures can also be ordered with a right-angle wall bracket (-RAB) and a Pole Mount Kit (PMK). The right-angle wall bracket positions the access point in the desired horizontal orientation when mounted on walls, and acts as a sun shield to reduce solar loading on the enclosure. The pole mount kit allows the right-angle bracket to be mounted on a variety of light pole diameters.



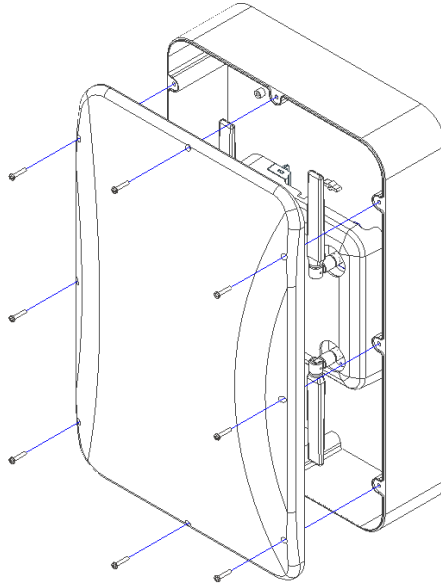
*Oberon Model 1020-00-USM30 -enclosure with 30° mounting bracket for under seat applications.*



*Oberon Model 1020-00-RAB (left) – right angle wall mount bracket, and 1020-00-RAB-PMK- (right) right angle bracket with pole mount kit*

## Proper Lid Tightening

Oberon's Models 1020, 1021, and 1022 have precision engineered gaskets that are effective at maintaining NEMA 4 water ingress prevention if installed properly. Installers must use the provided M4 x 0.7 x 20mm captive cover screws. If they are misplaced or not included, contact Oberon for replacements. Using improper screws will prevent the lid from tightening down on the gasket, thus causing sealing issues. Fasten the screws evenly around the enclosure to 8 in-lbs to seal the cover properly. If the enclosure is warped or flexing, the gasket will not align properly with the base and can cause leaking. Also, if the gasket sealing edge is crushed, the water tightness of the enclosure may be compromised. Both enclosures include a set of both Phillips and Torx screws for tamper resistance.



*Oberon Model 1021-00 enclosure with screw on cover*

## Cable Egress and NEMA 4

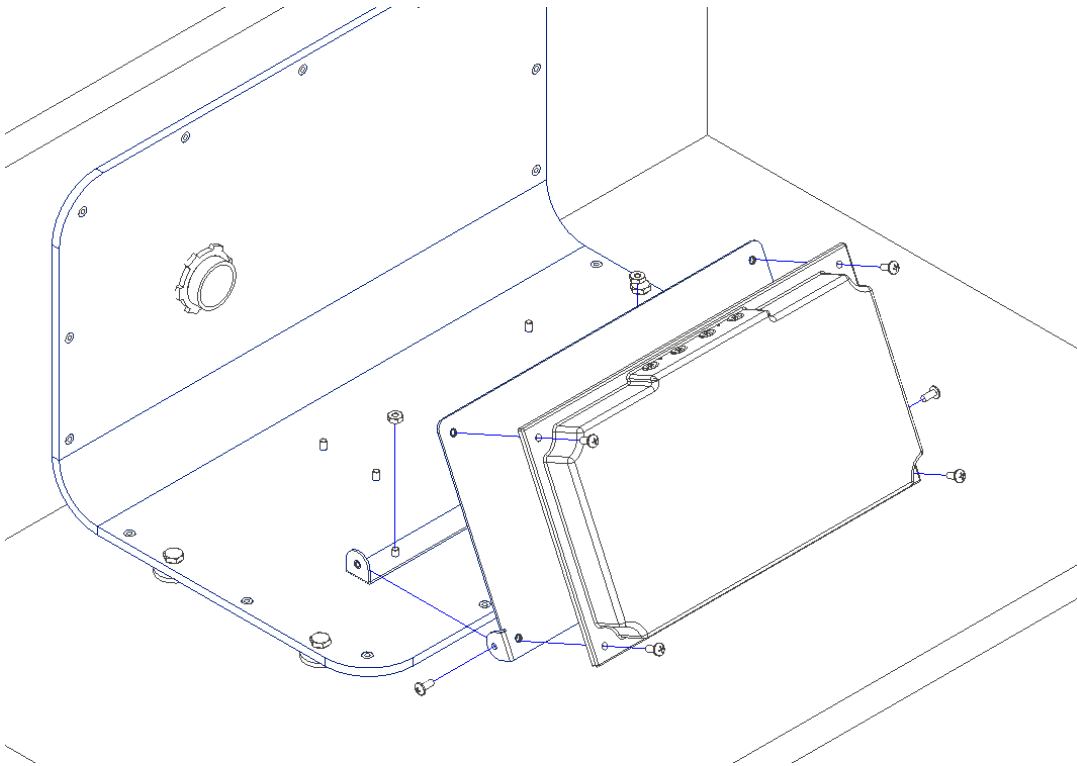
The Models 1020, 1021, and 1022 are easily drill for cable pass through and installing accessories. The most important step during installation is to ensure connectors are properly sealed to maintain the NEMA 4 rating. Water tight conduit such as Anamet Sealtite® coupled with a cable gland or other sealing connector may be used to prevent fluid from entering the enclosure.

A pressure equalizing vent such as a GORE® Vent may help reduce condensation. The GORE® Vent allows air pressure equalization between inside and outside the enclosure, but reduces the passage of water vapor from outside to inside.

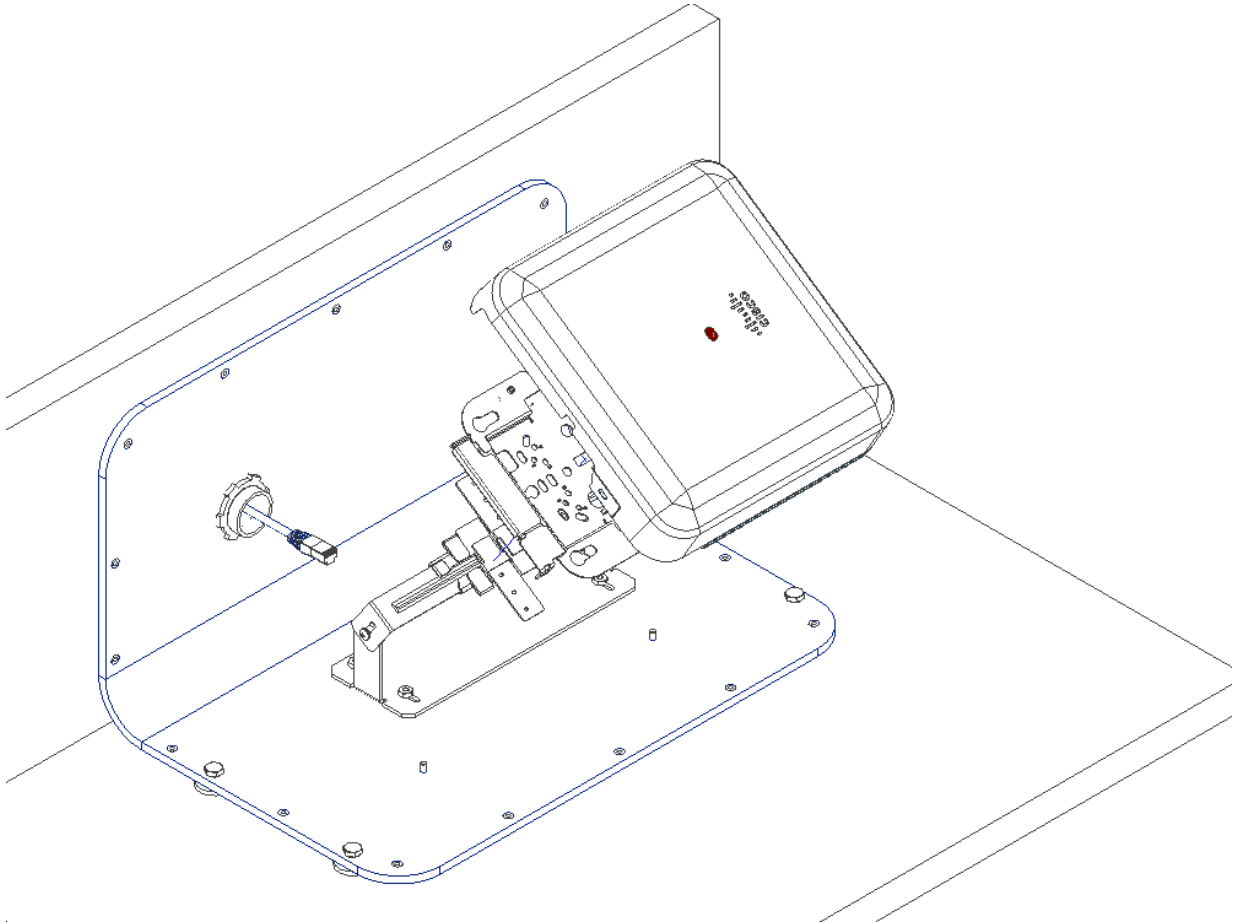
## Model 3010 Installation

Oberon's Model 3010 incorporates a sturdy Aluminum back panel that fastens down to a surface. The 3010 enclosure has a rugged, UV protected, plastic cover with a gasket, to protect the contents. The 3010 is a NEMA3R type enclosure, meaning it will protect the contents from falling rain, snow, ice and abuse, but it is not actually watertight. The 3010 is designed such that any water that leaks into the enclosure will be at a level below the equipment within the enclosure, and will subsequently drain out.

It is imperative that openings made in the 3010 for cable entry are properly sealed so that an excessive amount of water is not allowed to enter the enclosure. In many cases it will be desirable to customize the 3010, depending on type of cable and ingress location, with pre-cut openings in either the aluminum back panel or the plastic cover. Please contact your Oberon customer service representative regarding customized 3010 cable openings.

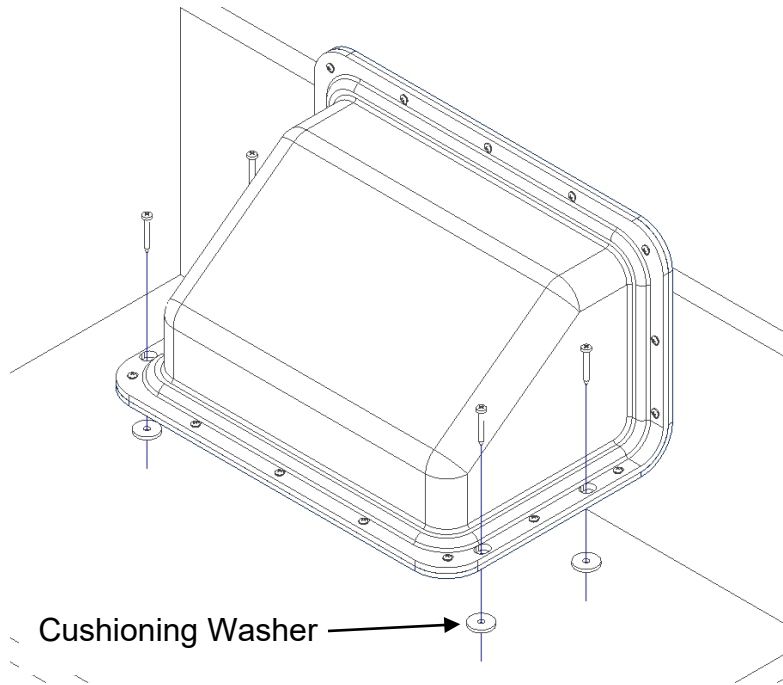


*Oberon Model 3010 with cover off. Antenna in enclosure is protected from falling rain, snow, ice, and abuse, and is mounted on articulating bracket. Cable egress location is shown for reference only, cable egress must be properly sealed*



*Oberon Model 3010 with cover off. AP in enclosure is protected from falling rain, snow, ice, and abuse. Cable egress location is shown for reference only, cable egress must be properly sealed.*

Just as with the other models, choose a surface that is smooth and level for installation. Four cushioning washers are provided with each product to lift the back panel about 1/8" above the potentially uneven or irregular surface. Fastening the back panel without the cushioning washers on an uneven surface may cause bending and flexing. If the panel is bent, the cover holes will no longer align properly to the panel hardware, and the gasket will not seal flat along the plane surface. When fastening to a surface, use wall anchors suited for the wall material or construction, and tighten to the same torque on all sides.



*Oberon Model 3010 enclosure with screw on cover. Use cushioning washers on irregular surfaces*