



# AUTODOME Bubble Replacement (VG4, VG5, or 7000 Series)

VGA-BUBBLE | VGA-BUBHD



**BOSCH**



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# 1 AUTODOME Bubble Replacement

This guide provides instructions for replacing a bubble on an AUTODOME camera (of VG4 Series, VG5 Series, or 7000 Series) with in-ceiling or pendant housing. The guide also includes important information about handling and cleaning the bubble. Replacement bubbles are made of either Polycarbonate or Acrylic. Rugged polycarbonate bubbles provide high impact resistance, and are comparable to glass or acrylic, although their surface is much softer. High-resolution acrylic bubbles offer enhanced image clarity for high-resolution images but are low-impact.

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## Warning!



High-resolution acrylic bubbles are not permitted to be used with a VG4 Pressurized Environmental Housing. If not avoided, this application could result in bodily injury and damage to the camera.



## Warning!

Polycarbonate bubbles are not recommended for use in HD AUTODOMES, due to optical quality degradation.

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## 1.1 Unpacking

This equipment should be unpacked and handled with care. If an item appears to have been damaged in shipment, notify the shipper immediately.

Verify that all the parts listed in the Parts List below are included. If any items are missing, notify your Bosch Security Systems Sales or Customer Service Representative.

The original packing carton is the safest container in which to transport the unit and must be used if returning the unit for service. Save it for possible future use.

## 1.2 Parts List

The following table lists the available bubbles:

	<b>Part Numbers</b>	<b>Notes</b>
<b>In-ceiling Bubbles</b>		
Clear high-resolution acrylic	VGA-BUBBLE-CCLA	Includes small rings (Bubble comes assembled with a white ring; if you want a black ring, you must swap the ring.) Fits any small in-ceiling can for the following models: VG4, VG5-1xx, VG5-6xx, 7000 Series.
Tinted high-resolution acrylic	VGA-BUBBLE-CTIA	
Clear rugged polycarbonate	VGA-BUBBLE-CCLR	Bubble only; you must reuse the rings that came with the unit.
Tinted rugged polycarbonate	VGA-BUBBLE-CTIR	Bubble only; you must reuse the rings that came with the unit.
Clear high-resolution acrylic	VGA-BUBLRG-CCLA	Includes large rings for large in-ceiling can Only usable for AUTODOME 700 models (VG5-7xx-)
Tinted high-resolution acrylic	VGA-BUBLRG-CTIA	
Clear HD high-resolution acrylic	VGA-BUBHD-CCLA	Includes small rings Inner ring is part of the bubble, cannot be separated from it. (Bubble comes assembled with a white ring; if you want a black ring, you must swap the ring.)

	<b>Part Numbers</b>	<b>Notes</b>
Tinted HD high-resolution acrylic	VGA-BUBHD-CTIA	Fits any small in-ceiling can for the following models: VG4, VG5-1xx, VG5-6xx, 7000 Series.
<b>Pendant Bubbles</b>		
Clear high-resolution acrylic	VGA-BUBBLE-PCLA	Bubble only
Tinted high-resolution acrylic	VGA-BUBBLE-PTIA	Bubble only
Clear rugged polycarbonate	VGA-BUBBLE-PCLR	Bubble only
Tinted rugged polycarbonate	VGA-BUBBLE-PTIR	Bubble only

### 1.3 Tools Required

- Phillips screwdriver - P1 or smaller (in-ceiling)
- Small, straight-blade screwdriver - 2 mm (pendant)

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## 2 Bubble Handling and Cleaning

Rugged polycarbonate or high-resolution acrylic replacement bubbles require special care when handling and cleaning to avoid scratches.

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### Warning!



High-resolution acrylic bubbles are not permitted to be used with a Pressurized Environmental Housing. If not avoided, this application could result in bodily injury and damage to the camera.

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### 2.1 Handling

The bubble is packaged with a protective plastic sheet. It is recommended that the bubble remain stored this way until it is ready to install. Limit handling the bubble, as any scratches can quickly affect visibility.

### 2.2 Cleaning

If cleaning the bubble is required, use the following procedures and comply with all the warnings listed below.

#### 2.2.1 Cleaning the Bubble Interior

The extremely soft interior surface should not be cleaned by rubbing or dusting with a cloth. Use clean dry compressed air, preferably from a spray can, to remove any dust from the interior surface.

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### Warning!



Do not use alcohol-based solutions to clean the bubble. This will cause the polycarbonate to cloud and over time cause stress aging, which makes the bubble brittle.

## 2.2.2 Cleaning the Bubble Exterior

The exterior of the bubble is hard coated for extra protection. If cleaning becomes necessary, only use cleaning solutions and cloths suitable for cleaning safety glass lenses. Dry the bubble thoroughly with a dry nonabrasive cloth to prevent water spots. Never scrub the bubble with any abrasive material or cleaners.

### **Do:**

- Do use the Bosch recommended NOVUS No. 1 Plastic Clean & Shine (or equivalent), according to manufacturer's instructions.

### **Do Not:**

- Do Not use abrasive or highly alkaline cleaners on the bubble.
- Do Not scrape the bubble with razor blades or other sharp instruments.
- Do Not use Benzene, Gasoline, Acetone, or Carbon Tetrachloride on the bubble.
- Do Not clean bubbles in the hot sun or on very hot days.



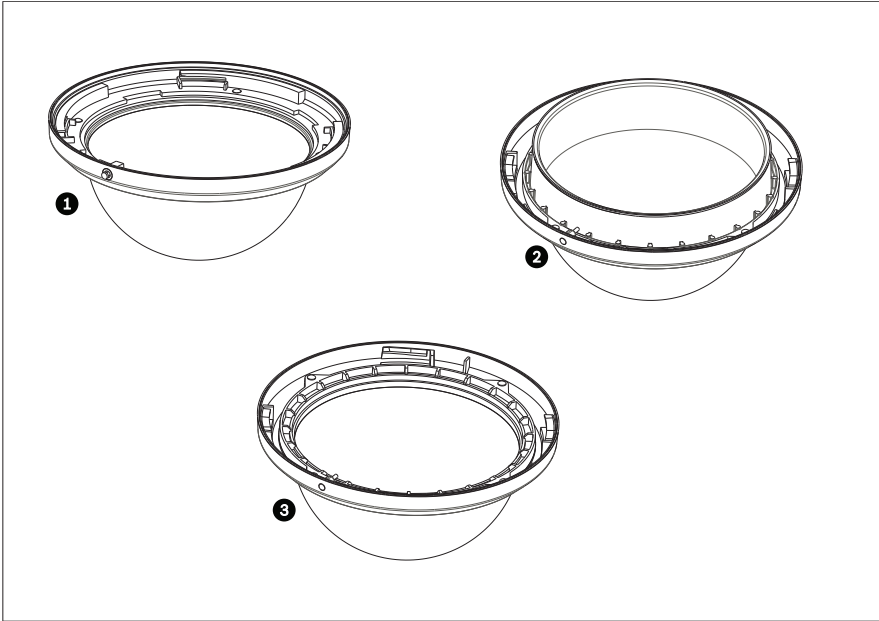
### 3 Replacing an AUTODOME Bubble

The following table identifies the bubbles that are compatible with models of AUTODOME *in-ceiling* cameras.

<b>Customer's Camera Model [In-Ceiling]</b>	<b>Desired Type of Bubble</b>	<b>Bubble Part Number</b>	<b>Trim Ring</b>
<p>A model with part number "VG4-", "VG5-1xx", or "VG5-6xx" (with previous versions of polycarbonate bubble rings)</p>	<p>Clear high-resolution acrylic</p>	<p>VGA-BUBBLE-CCLA</p>	<p>1. Includes small rings (Bubble comes assembled with white ring; if you want black ring, you must swap the ring.) Fits any small in-ceiling can.</p>
	<p>Tinted high-resolution acrylic</p>	<p>VGA-BUBBLE-CTIA</p>	
	<p>Clear rugged polycarbonate</p>	<p>VGA-BUBBLE-CCLR</p>	<p>2. Bubble only; if you have a tinted bubble but want to use a clear one, you must reuse the ring that came with the tinted bubble.</p>

	Tinted rugged polycarbonate	VGA-BUBBLE-CTIR	3. Bubble only; if you have a clear bubble but want to use a tinted one, you must reuse the ring that came with the clear bubble.
	Clear HD high-resolution acrylic	VGA-BUBHD-CCLA	4. Includes small rings
	Tinted HD high-resolution acrylic	VGA-BUBHD-CTIA	Inner ring is part of the bubble, cannot be separated from it.
A model with part number “VG5-7xx-“ (with previous versions of polycarbonate bubble rings (large))	Clear rugged polycarbonate	VGA-BUBBLE-CCLR	2. (See above.)
	Tinted rugged polycarbonate	VGA-BUBBLE-CTIR	3. (See above.)
	Clear high-resolution acrylic	VGA-BUBLRG-CCLA	5. Includes large rings Only required for AUTODOME 700 models

	Tinted high-resolution acrylic	VGA-BUBLRG-CTIA	(VG5-7xx-). Fits large in-ceiling can.
AUTODOME IP 7000 Series camera (with latest versions of polycarbonate bubble rings)	Clear high-resolution acrylic <i>(Included with PAL camera models.)</i>	VGA-BUBBLE-CCLA	1. (See above.)
	Tinted high-resolution acrylic <i>(Included with NTSC camera models.)</i>	VGA-BUBBLE-CTIA	
	Clear rugged polycarbonate	VGA-BUBBLE-CCLR	2. (See above.)
	Tinted rugged polycarbonate	VGA-BUBBLE-CTIR	3. (See above.)
	Clear HD high-resolution acrylic	VGA-BUBHD-CCLA	4. (See above.)
	Tinted HD high-resolution acrylic	VGA-BUBHD-CTIA	
AUTODOME HD 7000 Series camera (with acrylic rings) Only HD high-resolution in-ceiling bubble recommended.	Clear HD high-resolution acrylic	VGA-BUBHD-CCLA	
	Tinted HD high-resolution acrylic <i>(Included with camera)</i>	VGA-BUBHD-CTIA	



1	Previous version of bubble with polycarbonate rings
2	HD bubble
3	New version of bubble with polycarbonate rings

The following table identifies the bubbles that are compatible with models of AUTODOME *pendant* cameras.

Customer's Camera Model [Pendant]	Desired Type of Bubble	Bubble Part Number
Any pendant bubble fits any pendant model camera	Clear high-resolution acrylic	VGA-BUBBLE-PCLA
	Tinted high-resolution acrylic	VGA-BUBBLE-PTIA

	Clear rugged polycarbonate	VGA-BUBBLE-PCLR
	Tinted rugged polycarbonate	VGA-BUBBLE-PTIR

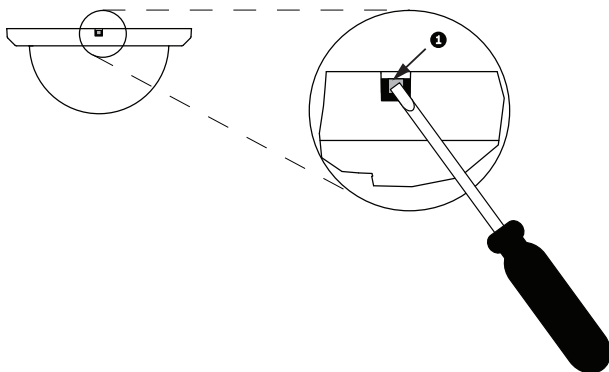
### 3.1 Replacing an In-ceiling Rugged Polycarbonate Bubble



**Notice!**

The following instructions are for bubbles VGA-BUBBLE-CCLR and VGA-BUBBLE-CTIR (on AUTODOME models VG4, VG5-1xx, and VG5-6xx).

1. Loosen the lock screw (item 1, below) in the trim ring using a P1 or smaller Phillips screwdriver until the bubble can rotate freely.



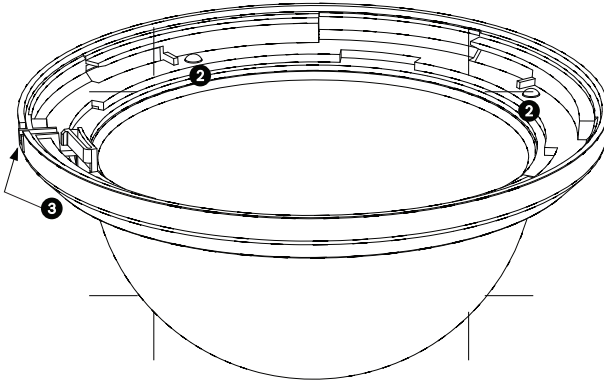
2. Then rotate the bubble counterclockwise approximately 1/4 turn until it releases from the in-ceiling housing.



**Notice!**

For VGA-BUBBLE-CCLR and VGA-BUBBLE-CTIR, you must reuse the rings that came with the bubble that you are replacing. Continue with steps 3 through 8.

3. Turn the bubble and trim ring assembly over so that you see the inside of the assembly.
4. Remove the four Phillips screws (item 2 below), using a P1 Phillips screwdriver, that connect the bubble to the trim ring and set aside for later use.



5. Remove the inner trim ring and remove the old bubble from the trim ring.
6. Insert the replacement bubble into the outer trim ring and align the tabs on the bubble with the slots on the outer trim ring.
7. Place the inner trim ring over the bubble and align the lock screw slot on the inner ring with the lock screw slot on the outer trim ring (item 3, above).
8. Secure the inner ring to the outer ring using the four screws removed earlier.
9. Clean the bubble according to the instructions in *Cleaning*, page 7.
10. Place the replacement bubble and trim ring assembly onto the in-ceiling housing, and rotate it clockwise approximately 1/4 turn until it stops. Then tighten the lock-screw.

## 3.2 Replacing an In-ceiling Acrylic Bubble

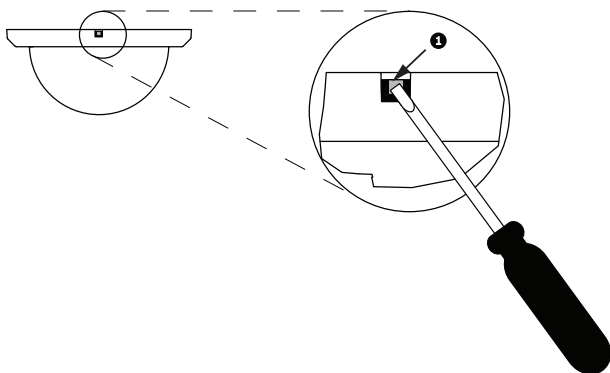
### Notice!



The following instructions are for bubbles VGA-BUBBLE-CCLA and VGA-BUBBLE-CTIA.

These bubbles come assembled with a white trim ring. An optional black trim ring is supplied. To replace the white trim ring, follow steps 3 – 6. Otherwise, skip from step 2 to step 7.

1. Loosen the lock screw (item 1, below) in the trim ring using a P1 or smaller Phillips screwdriver until the bubble can rotate freely.



2. Then rotate the bubble counterclockwise approximately 1/4 turn until it releases from the in-ceiling housing.

### Notice!



The following four (4) steps are for replacing the trim ring. These steps are optional. If you are not replacing the trim ring, skip to step 7.

3. Remove the five (5) Phillips head screws from the inner ring.
4. Remove the white trim ring.
5. Place the black trim ring over the inner ring.
6. Replace and tighten the five (5) screws.

7. Clean the bubble according to the instructions in *Cleaning*, page 7.
8. Place the replacement bubble onto the in-ceiling housing, and rotate it clockwise approximately 1/4 turn until it stops. Then tighten the lock-screw.

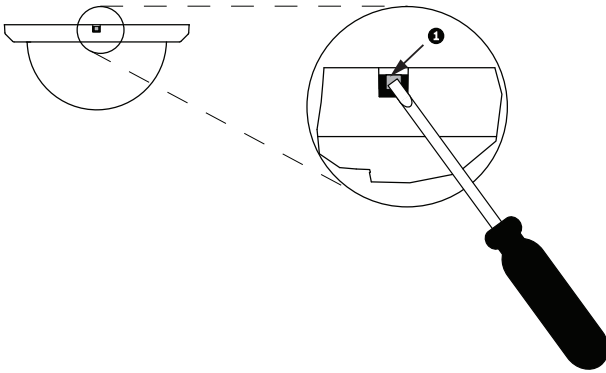
### 3.3 Replacing an In-ceiling HD Acrylic Bubble



#### Notice!

The following instructions are for bubbles VGA-BUBHD-CCLA and VGA-BUBHD-CTIA.

1. Loosen the lockscrew (item 1, below) in the trim ring using a P1 or smaller Phillips screwdriver until the bubble can rotate freely.



2. Then rotate the bubble counterclockwise approximately 1/4 turn until it releases from the in-ceiling housing.
3. Clean the bubble according to the instructions in *Cleaning*, page 7.
4. Place the replacement bubble onto the in-ceiling housing, and rotate it clockwise approximately 1/4 turn until it stops. Then tighten the lock-screw.



### Warning!

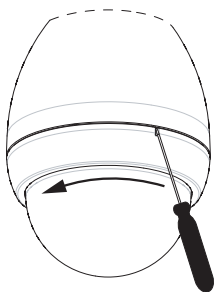
Trim ring can become deformed



If the trim ring is not turned completely, the screw slot on the trim ring will not be aligned with the screw slot in the housing. You cannot see the screw slot in the housing when you are turning the screw in the slot in the trim ring. You can turn the screw in the slot in the trim ring, but miss the screw slot on the housing. Forcing the screw into the trim ring (without the screw going into the screw slot in the housing) can deform the ring.

## 3.4 Replacing a Pendant Bubble

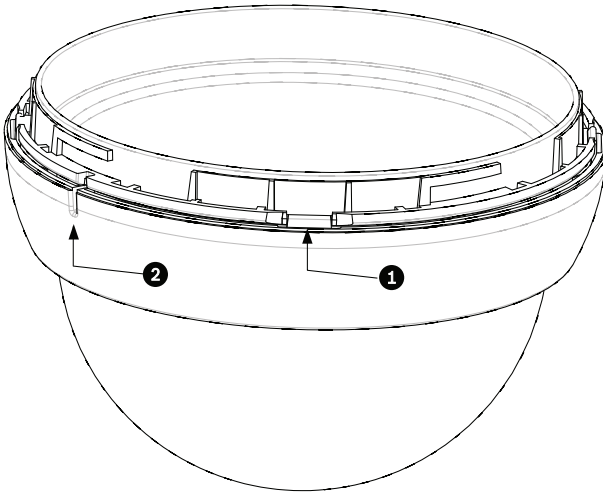
1. Using both hands, apply a firm counterclockwise (looking up at the dome) rotational force on the pendant bubble assembly to set the bubble latch.
2. Insert a small (2 mm) straight blade screw driver into the release opening in the bubble trim ring to release the lock, and then remove the screwdriver.



**Figure 3.1: Pendant Bubble Release Opening**

3. Firmly rotate the bubble counterclockwise approximately 20 degrees until the bubble assembly releases from the pendant housing.
4. Locate the four tabs (item 1, below) inside the trim ring that attach the trim ring to the bubble.
5. Gently push each tab out and down (away from the bubble) to disengage the tabs.

6. Remove the bubble from the trim ring.



7. Insert the replacement bubble inside the trim ring and align the release tab (item 2, above) on the trim ring with the release slot on the bubble.
8. Clean the bubble according to the instructions in *Cleaning*, page 7.
9. Insert the replacement bubble and trim ring assembly into the pendant housing, and rotate it clockwise until it locks. The latch mechanism makes a click when it locks.



**Bosch Security Systems, Inc.**

850 Greenfield Road

Lancaster, PA, 17601

USA

**[www.boschsecurity.com](http://www.boschsecurity.com)**

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