AUTODOME Bubble Replacement and Maintenance (VG5 or 7000 Series)

VGA-BUBBLE │ VGA-BUBHD

BOSCH

en   Installation Manual

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1   AUTODOME Bubble Replacement and Maintenance

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. The IK10-rated bubble is made of nylon. 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.
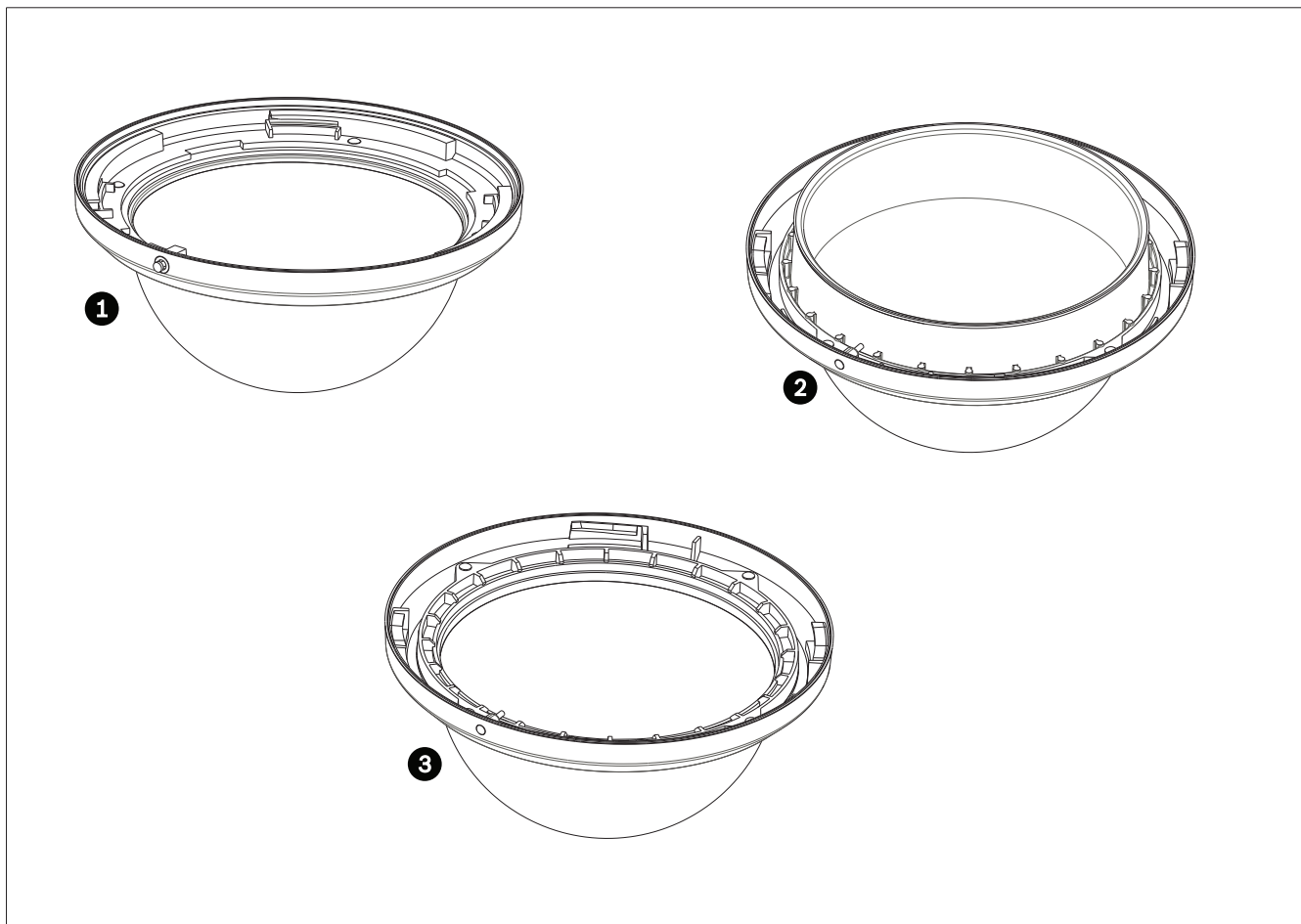
	Warning! High-resolution acrylic bubbles are not permitted to be used with a VG4 Pressurized Environmental Housing. If not avoided, this application could result in bodily injury and damage to the camera.

	Notice! Polycarbonate bubbles are not recommended for use in HD AUTODOME cameras because of degradation of optical quality.

1	Bubble with polycarbonate rings for legacy cameras
2	HD high-resolution acrylic bubble
3	Bubble with polycarbonate rings for current cameras, and the IK10-rated nylon bubble

1.1   Unpacking

– This equipment should be unpacked and handled with care. Check the exterior of the packaging for visible damage. 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.

– Do not use this product if any component appears to be damaged. Please contact Bosch Security Systems in the event of damaged goods.

– 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 – Bubbles for In-ceiling Cameras

Legacy AUTODOME cameras

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

If you have one of these legacy camera models with a part number that begins with:		"VG4-", "VG5-1xx", "VG5-6xx" *	"VG5-7xx-" **
The "x" indicates that the in-ceiling bubble is available for the camera model:			
Description	**Bubble Part Number**		
Clear high-resolution acrylic	VGA-BUBBLE-CCLA	x	
Tinted high-resolution acrylic	VGA-BUBBLE-CTIA	x	
Clear rugged polycarbonate	VGA-BUBBLE-CCLR	x	x
Tinted rugged polycarbonate	VGA-BUBBLE-CTIR	x	x
Clear HD high-resolution acrylic	VGA-BUBHD-CCLA	x	
Tinted HD high-resolution acrylic	VGA-BUBHD-CTIA	x	
Clear high-resolution acrylic, large	VGA-BUBLRG-CCLA		x
Tinted high-resolution acrylic, large	VGA-BUBLRG-CTIA		x

* (with previous versions of polycarbonate bubble rings)

** (with previous versions of **large** polycarbonate bubble rings

Current AUTODOME cameras

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

If you have one of the current camera models in this series:		AUTODOME IP 7000*	AUTODOME HD 7000**
The "x" indicates that the in-ceiling bubble is available for the camera model:			
Description	**Bubble Part Number**		
Clear high-resolution acrylic	VGA-BUBBLE-CCLA	x[1]	
Tinted high-resolution acrylic	VGA-BUBBLE-CTIA	x[2]	
Clear rugged polycarbonate	VGA-BUBBLE-CCLR	x	
Tinted rugged polycarbonate	VGA-BUBBLE-CTIR	x	
Clear HD high-resolution acrylic	VGA-BUBHD-CCLA	x	x
Tinted HD high-resolution acrylic	VGA-BUBHD-CTIA	x	x[3]

* with latest versions of polycarbonate bubble rings

** with acrylic rings

[1] *(Included with PAL camera models.)*

[2] *(Included with NTSC camera models.)*

[3] *(Included with camera.)*

Trim Rings

The following table describes the trim rings for each bubble.

Description	Bubble Part Number	Trim Ring Information
Clear high-resolution acrylic	VGA-BUBBLE-CCLA	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.
Tinted high-resolution acrylic	VGA-BUBBLE-CTIA	
Clear rugged polycarbonate	VGA-BUBBLE-CCLR	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.
Tinted rugged polycarbonate	VGA-BUBBLE-CTIR	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 high-resolution acrylic	VGA-BUBLRG-CCLA	Includes large rings. Only required for AUTODOME 700 models (VG5-7xx-). Fits large in-ceiling can.
Tinted high-resolution acrylic	VGA-BUBLRG-CTIA	
Clear HD high-resolution acrylic	VGA-BUBHD-CCLA	Includes small rings. The inner ring is part of the bubble and cannot be separated from it.
Tinted HD high-resolution acrylic	VGA-BUBHD-CTIA	

1.3 Parts List - Bubbles for Pendant Cameras

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

If you have any pendant model camera, all pendant bubbles fit.	
Description	**Bubble Part Number**
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
Clear rugged IK10-rated nylon	VGA-BUBBLE-IK10

1.4 Tools Required

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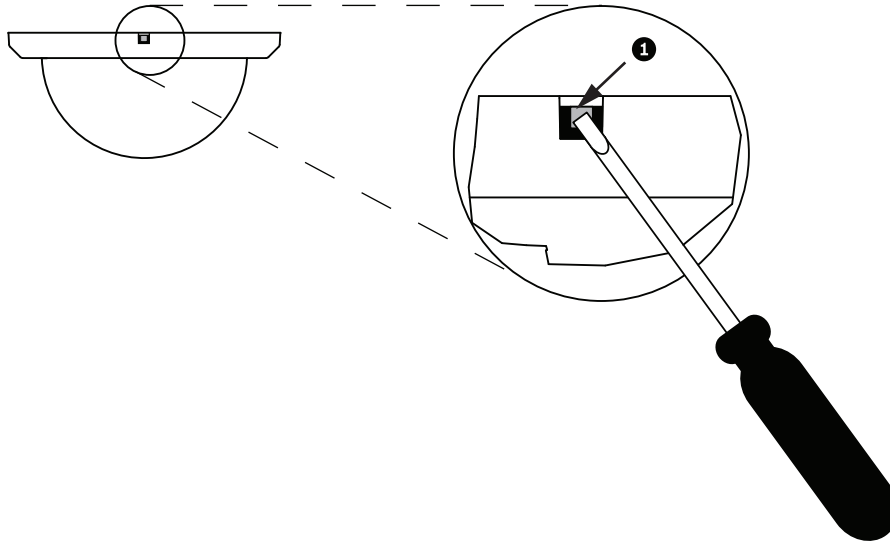– Small, straight-blade screwdriver - 2 mm (pendant)

2 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.
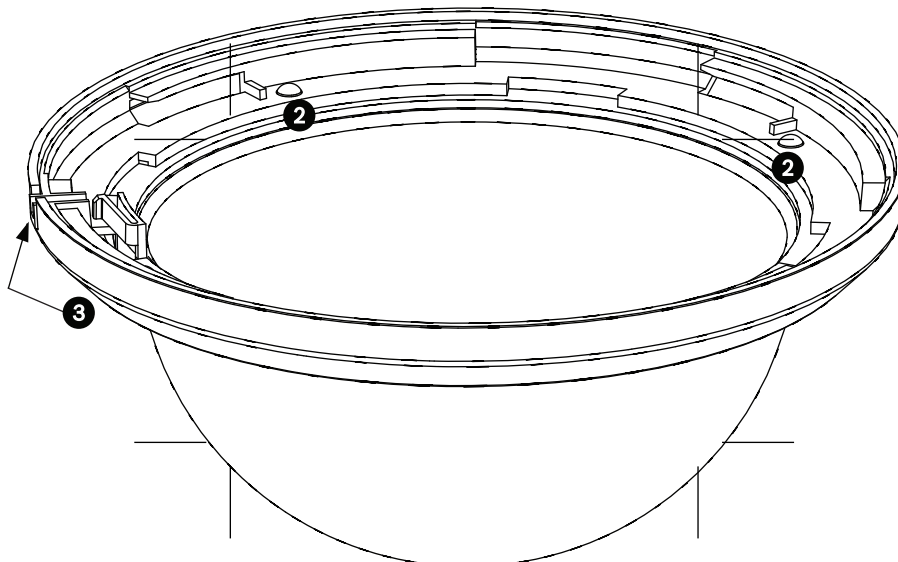

2. Rotate the bubble counterclockwise approximately 1/4 turn until it releases from the in-ceiling housing.

> **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 over the bubble and trim ring assembly 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 the section "Maintenance."

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 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.

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.

1. Remove the five (5) Phillips head screws from the inner ring.
2. Remove the white trim ring.
3. Place the black trim ring over the inner ring.
4. Replace and tighten the five (5) screws.
5. Clean the bubble according to the instructions in the section "Maintenance."
6. 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.

4   Replacing an In-ceiling HD Acrylic Bubble

Notice!

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

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. Clean the bubble according to the instructions in the section "Maintenance."
3. Place the replacement bubble onto the in-ceiling housing, and rotate it clockwise
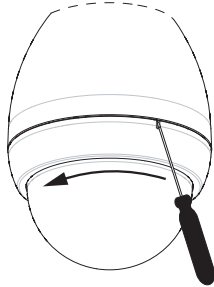approximately 1/4 turn until it stops. Then tighten the lock-screw.

Notice!

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
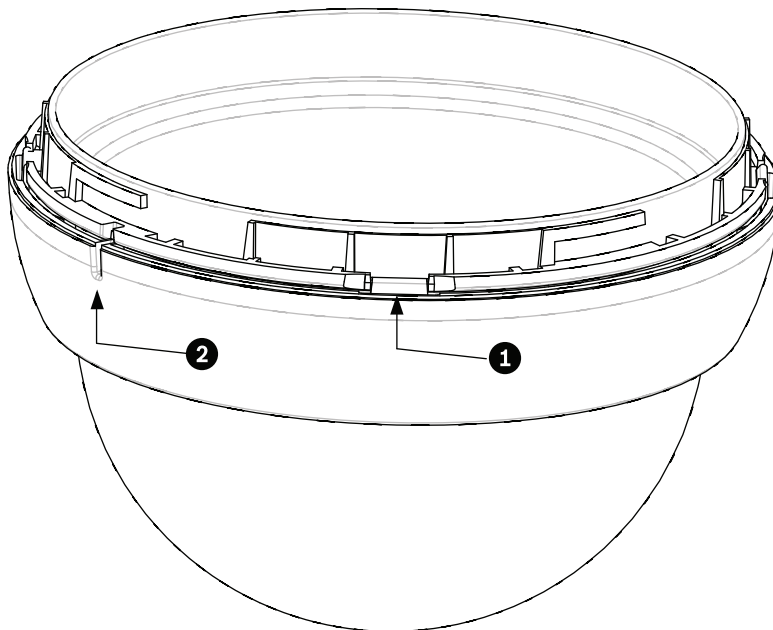screw going into the screw slot in the housing) can deform the ring.

5   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 5.1: 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 the section "Maintenance."

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 locks.

6   Maintenance

The bubble is made of Acrylic or Polycarbonate, depending on the application. Polycarbonate bubbles provide high impact resistance, and its optical clarity is comparable to glass or acrylic, although its surface is much softer. All bubbles require special care when handling and cleaning to avoid scratches.

> **Notice!**
>
> To avoid excessive moisture saturation inside the housing, limit the amount of time that the bubble is disconnected from the housing. Bosch recommends that the bubble be removed from the housing for no more than five (5) minutes.

Bubble Handling

The bubble may be 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.

Bubble Cleaning

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

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.

> **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.

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.

Bosch recommends cleaning the exterior of the bubble with NOVUS "No. 1" Plastic Clean & Shine (or equivalent), according to manufacturer's instructions. Refer to www.novuspolish.com to order or to find a local distributor.

Cautions

– Do Not clean bubbles in the hot sun or on very hot days.
– 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.

Remove an SD card

1. Follow the steps in one of these sections (depending on the type of camera mount): Remove bubble from an in-ceiling housing or Remove bubble from a pendant housing.
2. Press down the end of the SD card until it ejects partially from the connector.
3. Pull out the SD card and put it in a safe location.
4. Follow the steps in one of these sections (depending on the type of camera mount): Replace the bubble in an in-ceiling housing or Replace the bubble in a pendant housing.