COMMSCOPE®

Instruction Sheet

095372-000 Revision W, May 2016

Mounting Kits For Narrow Panel Antennas

DB390 and DB390-3 Pipe Mounts
DB5098, DB5098E and DB5098-3 Downtilt Mounts
DB390-5098E, DB390-5098E-3 Consolidated Kits

GENERAL INFORMATION

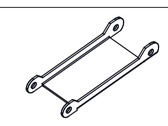
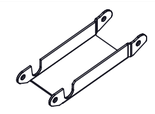
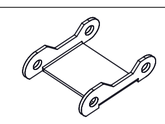
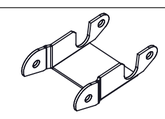
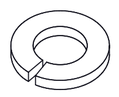
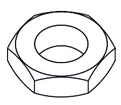
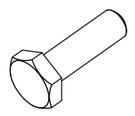
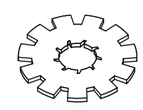
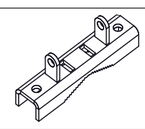
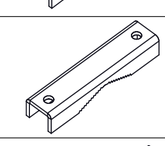
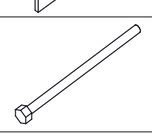
- DB390 has 2 clamp assemblies. Each clamp assembly has 2 mounting brackets (uses DB5098 and DB5098E for downtilt mount).
- DB390-3 has 3 clamp assemblies. Each clamp assembly has 3 mounting brackets (uses DB5098-3 for downtilt mount).
- Fits round members 60 to 115 mm OD or angle members up to 63.5 mm on a side.

*Note: Minimum pipe diameter recommended is 60 mm. These mounts can be used on pipe diameters measuring down to 33 mm; however, this is only recommended for building mounts or applications with no significant side wind load.

PRE-INSTALLATION INSTRUCTIONS

- Examine antenna and hardware to ensure that all parts are enclosed and that there is no physical damage.
- Check to ensure that the antenna feed connector mates with the jumper cable.
- Verify that the frequency range shown on the label on the back of the antenna matches the frequency range of the station equipment.
- Position the antenna with its “up” arrow label pointing upward before installation. This orientation allows the drain holes to be on the bottom of the antenna.

PARTS LIST

ITEM	DESCRIPTION	DB390	DB390-3	DB5098	DB5098E	DB5098-3	DB390-5098E	DB390-5098E-3	
1	INNER BRACKET LINK (LONG)	-	-	-	1	1	1	1	
2	OUTER BRACKET LINK (LONG)	-	-	-	1	1	1	1	
3	INNER BRACKET LINK (SHORT)	-	-	1	-	1	-	1	
4	OUTER BRACKET LINK (SHORT)	-	-	1	-	1	-	1	
5	WSHR,LK,SPLT, M10,STL, GALV	8	12	4	4	8	12	20	
6	NUT,HEX,M10,STL,GALV	12	18	4	4	8	16	26	
7	SCR,HCS,HEX,M10X35,STL,GALV	4	6	4	4	8	8	14	
8	WSHR,LCK,EX-INT TOOTH, M10,STL,GALV	-	-	2	2	4	2	4	
9	PIPE BRACKET WITH TABS	2	3	-	-	-	2	3	
10	PIPE BRACKET WITHOUT TABS	2	3	-	-	-	2	3	
11	SCR,HCS,HEX,M10X180,STL,GALV	4	6	-	-	-	4	6	

SAFETY NOTICE

The installation, maintenance, or removal of an antenna requires qualified, experienced personnel. CommScope installation instructions are written for such installation personnel. Antenna systems should be inspected once a year by qualified personnel to verify proper installation, maintenance, and condition of equipment.

CommScope disclaims any liability or responsibility for the results of improper or unsafe installation practices.

It is recommended that transmit power be turned off when the field installation is performed. Follow all applicable safety precautions as shown on this page.

(continued on page 2)

Do not install near power lines. Power lines, telephone lines, and guy wires look the same. Assume any wire or line can electrocute you.

Do not install on a wet or windy day or when lightning or thunder is in the area.Do not use metal ladder.

Wear shoes with rubber soles and heels. Wear protective clothing including a long-sleeved shirt and rubber gloves.

Visit our website at www.commscope.com or contact your local CommScope representative or BusinessPartner for more information.

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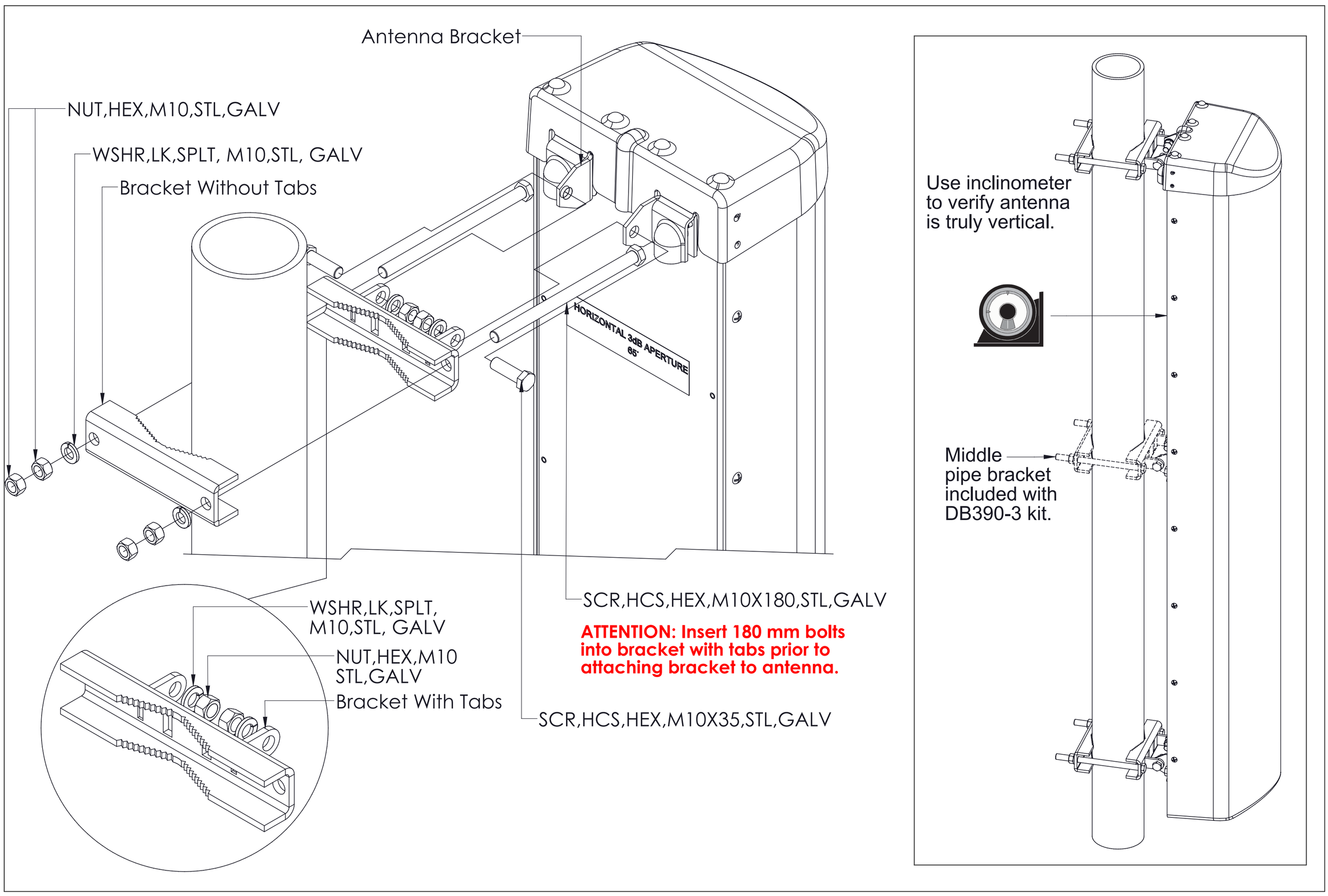


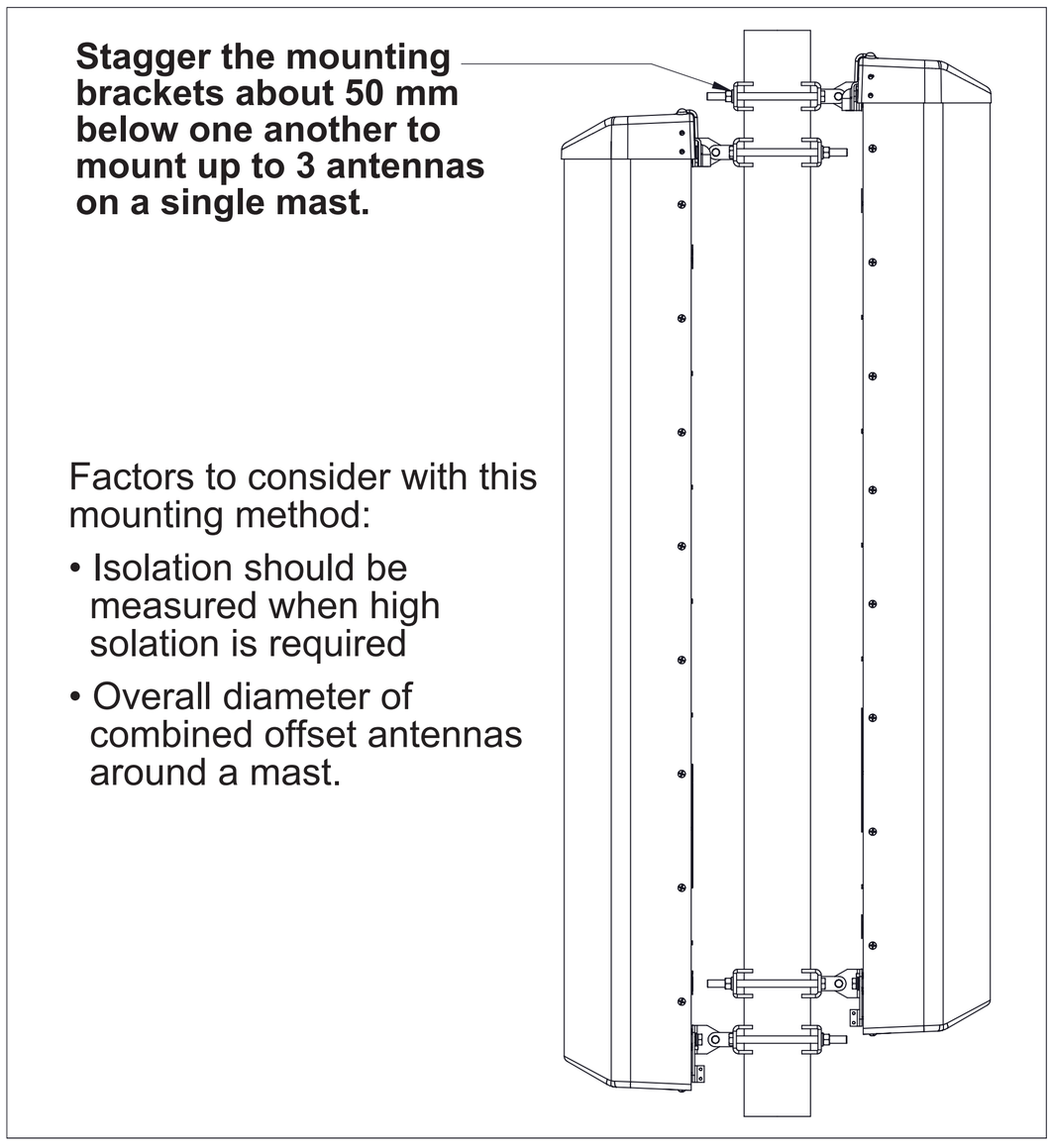
Attaching Antenna to a Mast Using DB390/DB390-3 Pipe Mount.

(continued on page 3)

HOISTING ANTENNA UP A TOWER

- Pre-assemble as much of the mounting hardware as possible before lifting the antenna up to the top of the tower.
- Attach a rope to the top mounting bracket on the back of the antenna. Keep the antenna vertical when hoisting the antenna. For safety, an additional rope can be attached to the bottom antenna mounting bracket and used as a guide by someone else on the ground.
- Bring the antenna into position on the tower and secure it using the hardware provided (See “Attaching Antenna to a Mast Using DB380/DB380-3 Pipe Mount” illustration.

To avoid twisting the antenna,ensure that all the mounting clamps are aligned with each other. Securely tighten all hardware.



Mounting Multiple Antennas Using DB390/DB390-3.

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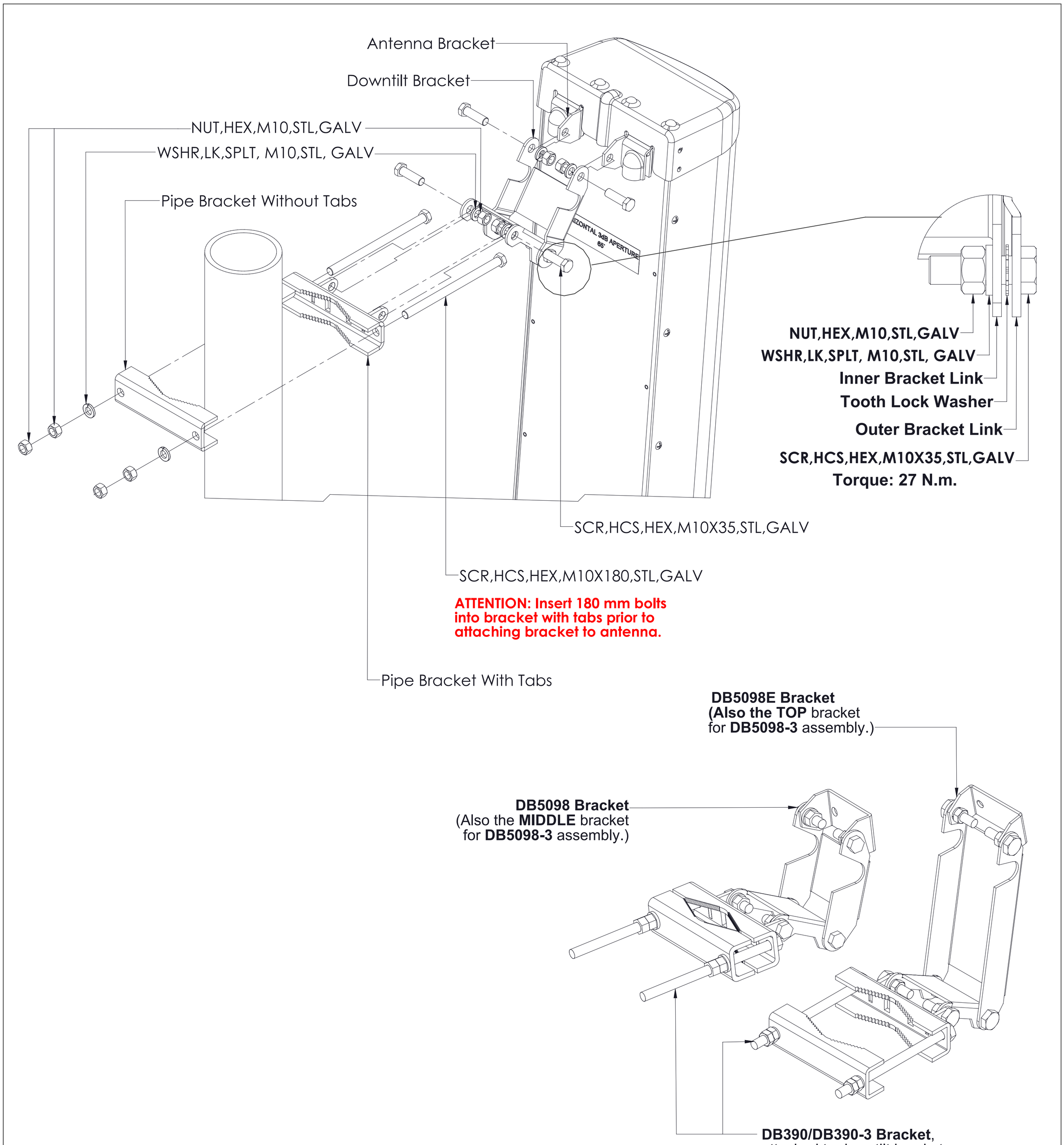

Attaching Antenna to a Mast Using DB5098/DB5098E/DB5098-3 Downtilt Mount and DB390/DB390-3 Pipe Mount, or DB390-5098E/DB390-5098E-3 Consolidated Kits.

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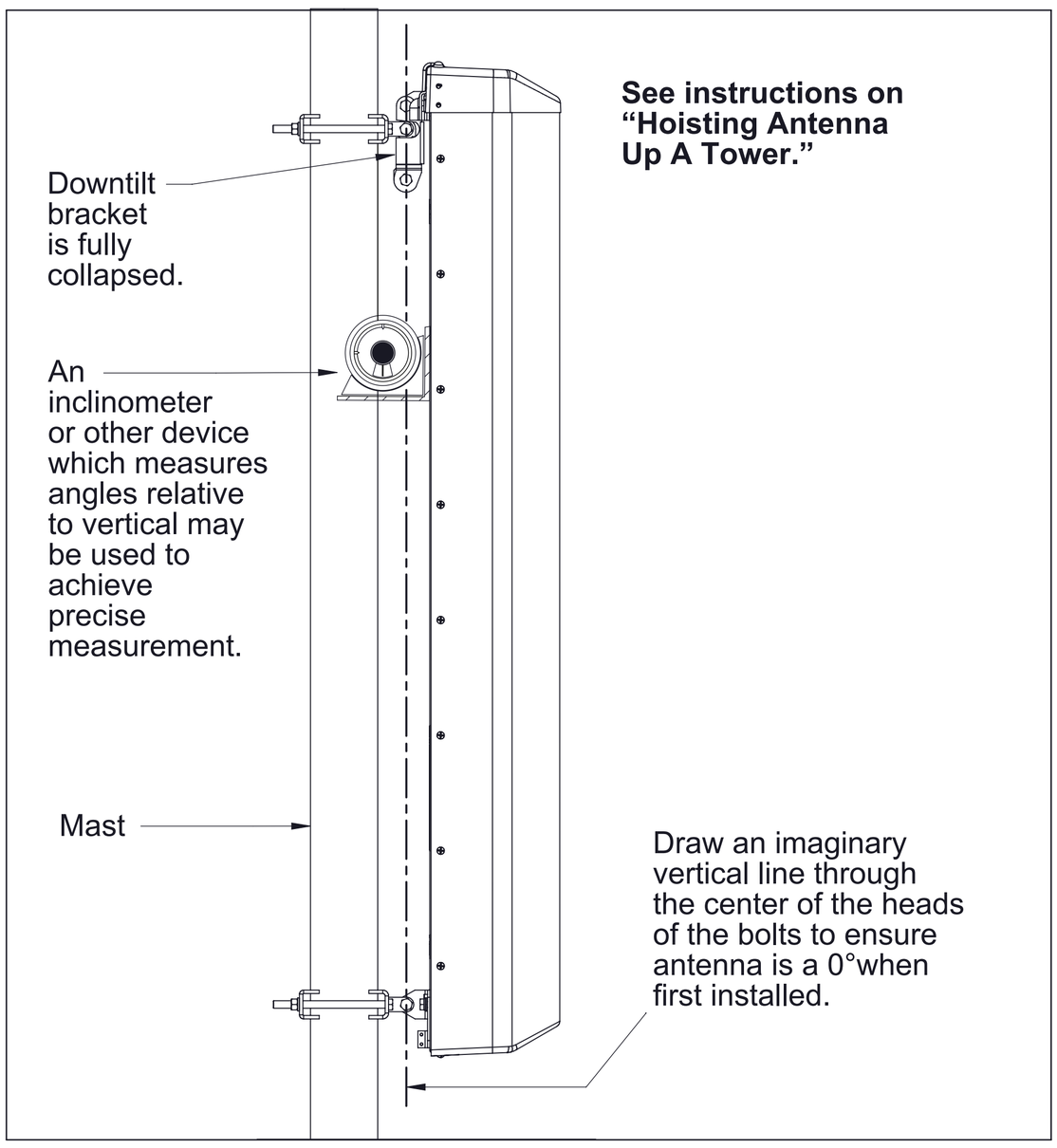


Ensuring Antenna is Fully Collapsed at 0°.

POST INSTALLATION INSTRUCTIONS

- Connect the station transmission line (not supplied) to the antenna. Make the connection snug, but do not apply heavy force with pliers.
- Carefully weatherproof all connections, covering all cracks and the outer jacket of the transmission line. Failure to waterproof the connection could result in improper operation of the antenna.
- Secure the transmission line to the tower in the best position to avoid physical damage to the cable.
- After the antenna and transmission line have been installed, a careful visual check should be made to ensure that:
  - All mechanical connections have been made and the antenna is mounted with sufficient physical clearance.
  - The "up" arrow is pointing upward and the drain holes in the end cap are oriented downward.
  - All connections have been carefully wrapped to prevent moisture problems.
  - The antenna is in the desired mechanical tilt position.

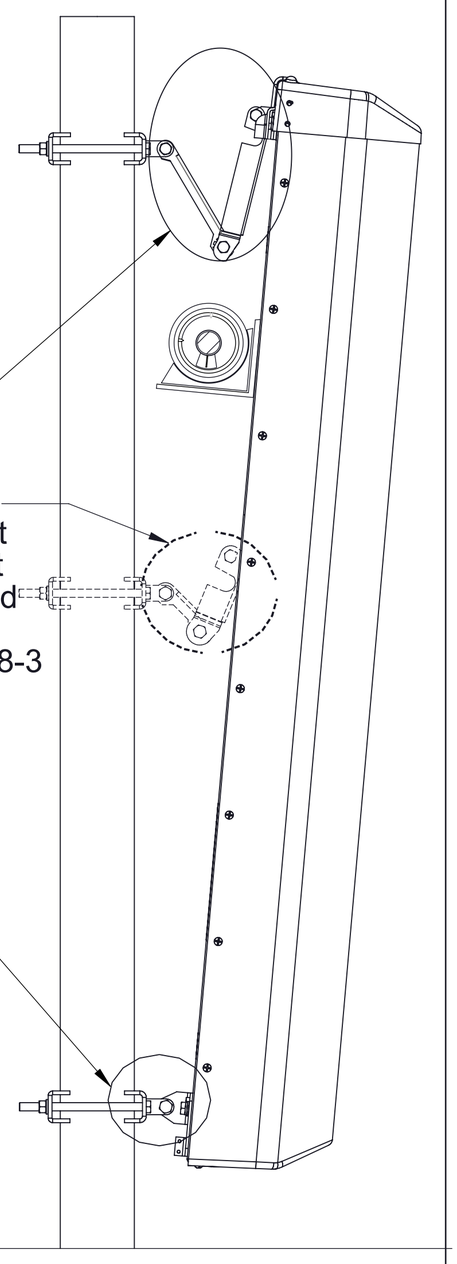
Example for Standard Downtilt Mounting

Notes:

- Maximum achievable downtilt angle will vary, depending on overall length of the antenna.
- Account for any degree of tower lean when measuring downtilt angle.
- Use an inclinometer or other device which measures angles relative to vertical for achieving precise downtilt measurements.

1. Loosen bolts to extend downtilt bracket.
2. Extend the downtilt bracket until the desired downtilt angle is achieved.
3. Carefully tighten bolts after downtilt angle is set. Do not overtighten.

   Torque:
   M10 = 27 N.m.



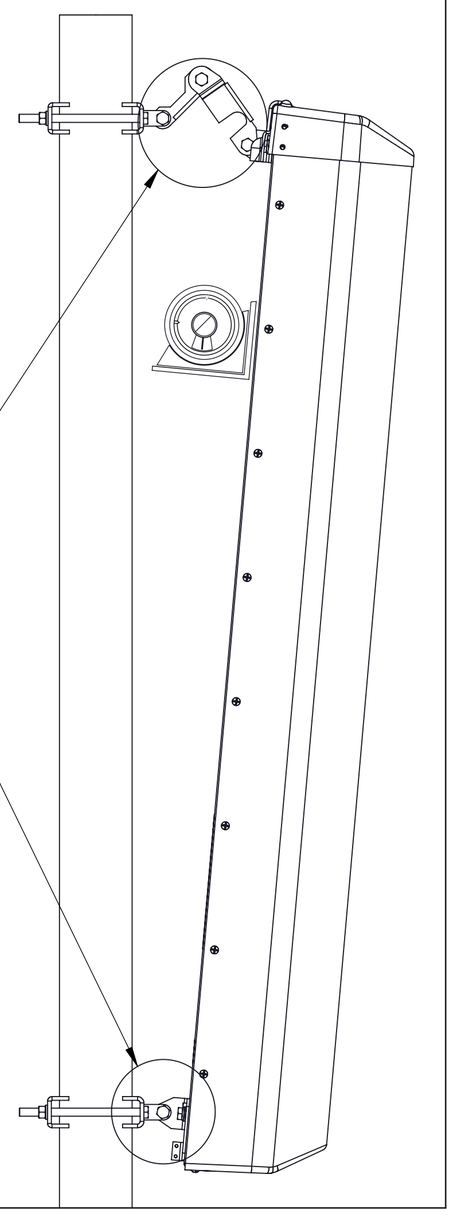
Example for Inverted Downtilt Mounting

In cases where the downtilt links may not fit between the top and bottom antenna mounts, the downtilt brackets can be inverted as shown here.

The same considerations noted above for standard downtilt mounting apply for inverted mounting.

1. Loosen bolts to extend downtilt bracket.
2. Extend the downtilt bracket until the desired downtilt angle is achieved.
3. Carefully tighten bolts after downtilt angle is set. Do not overtighten.

   Torque:
   M10 = 27 N.m.



Adjusting the Downtilt Angle.

说明书

095372-000　修订版 W，2016年05月

平板宽天线安装架

DB390 和 DB390-3 抱杆安装架
DB5098 和 DB5098E 下倾安装架
DB390-5098E 和 DB390-5098E-3 组合安装架

一般信息

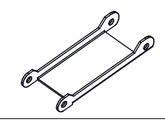
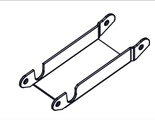
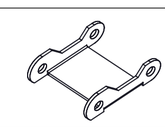
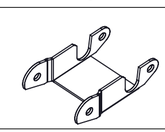
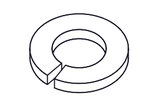
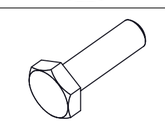
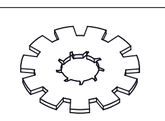
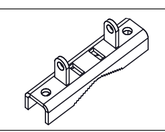
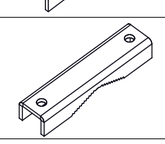
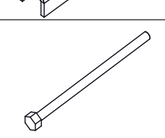
- DB390配备了2套安装架，用来固定带有两个安装架的天线（下倾安装架使用DB5098 和 DB5098E）。
- DB390-3配备3套安装架,用来固定带有三个安装架的天线（下倾安装架使用DB5098-3）。
- 在一侧安装径为60至115毫米的圆形构件或规格达63.5毫米有棱角构件。

*注:推荐安装管柱的最小直径为60mm。这些安装件可在直径小至33mm的管柱上进行安装；但仅推荐在建筑上安装或在没有大的侧向风荷载的场合应用。

安装前说明

- 检查天线和硬件，确保所有零件齐备且没有物理损坏。
- 确保天线馈电接头与跳接电缆匹配。
- 检查天线背部标签上显示的频率范围是否与基站设备的频率范围匹配。
- 安装之前，将天线的“向上”箭头标签指向上方。这样放置可以使排水孔位于天线底部。

零件清单

序号	描述	DB390	DB390-3	DB5098	DB5098E	DB5098-3	DB390-5098E	DB390-5098E-3	
1	内部支架连接(长)	-	-	-	1	1	1	1	
2	外部支架连接(长)	-	-	-	1	1	1	1	
3	内部支架连接(短)	-	-	1	-	1	-	1	
4	外部支架连接(短)	-	-	1	-	1	-	1	
5	M10 弹簧垫圈	8	12	4	4	8	12	20	
6	M10 六角头螺母	12	18	4	4	8	16	26	
7	M10 六角头螺栓	4	6	4	4	8	8	14	
8	齿轮锁紧垫圈	-	-	2	2	4	2	4	
9	凸耳式安装架	2	3	-	-	-	2	3	
10	无凸耳式安装架	2	3	-	-	-	2	3	
11	M10 六角头螺栓	4	6	-	-	-	4	6	

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安全注意

天线的安装、维护或拆卸都需要由经验丰富的合格技术人员进行操作。康普（CommScope）安装说明是专为这些安装人员编写的。天线系统应由合格人员每年检查一次，以确定设备的安装、维护和状况良好。

对于因不当或不安全安装导致的任何后果，康普概不负责。

现场安装应关闭传输功率，遵循所有安全警示操作说明。

请勿安装在电源线附件。电源线、电话线和拉线外观相同，任何导线度可能致人触电身亡。

请勿在有雨、有风或者所在区域有闪电或雷声时安装，请勿使用金属梯子。

请穿上有橡胶鞋底和橡胶跟的鞋子。请穿有长袖衬衫和橡胶手套的防护服。

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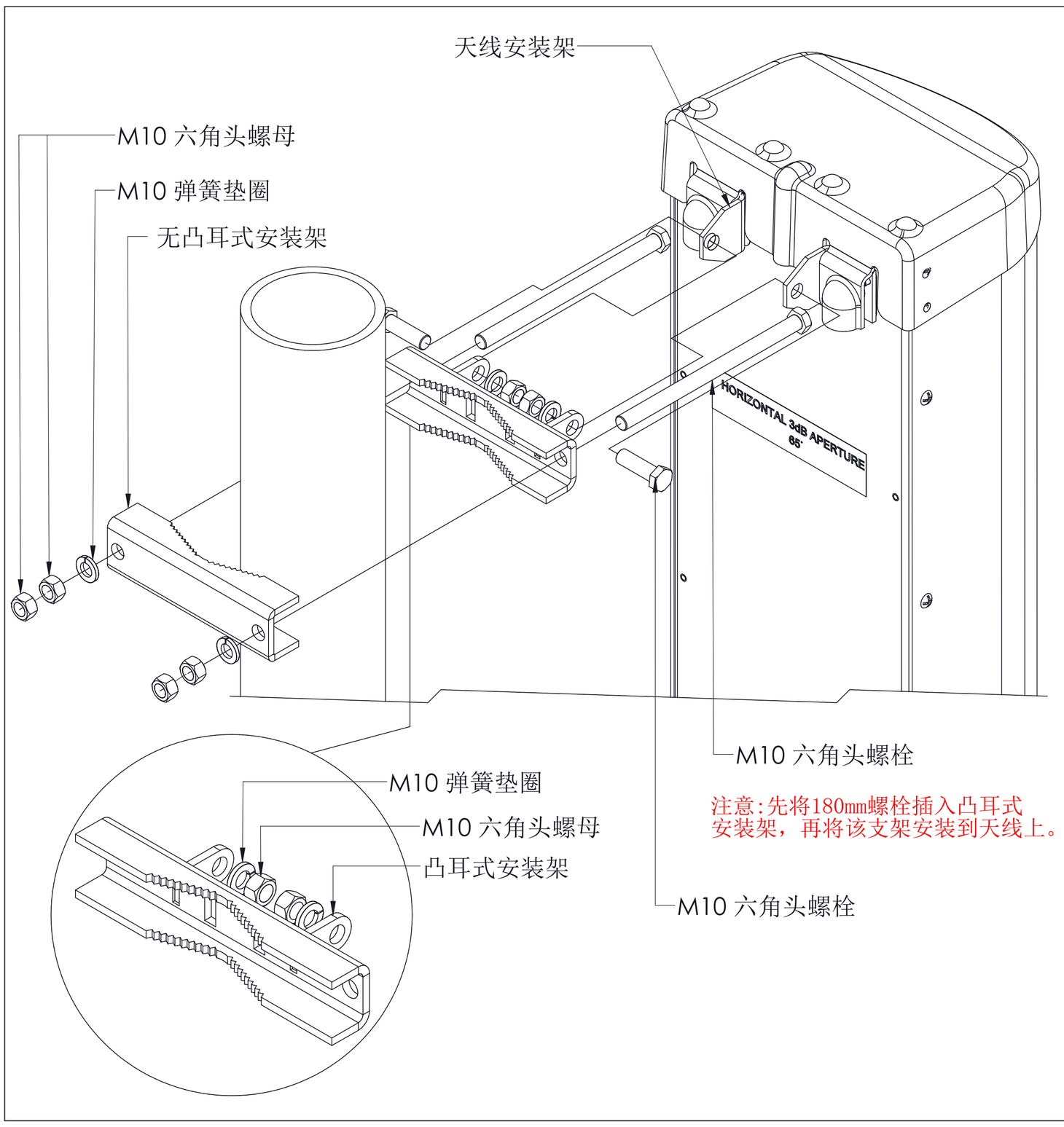
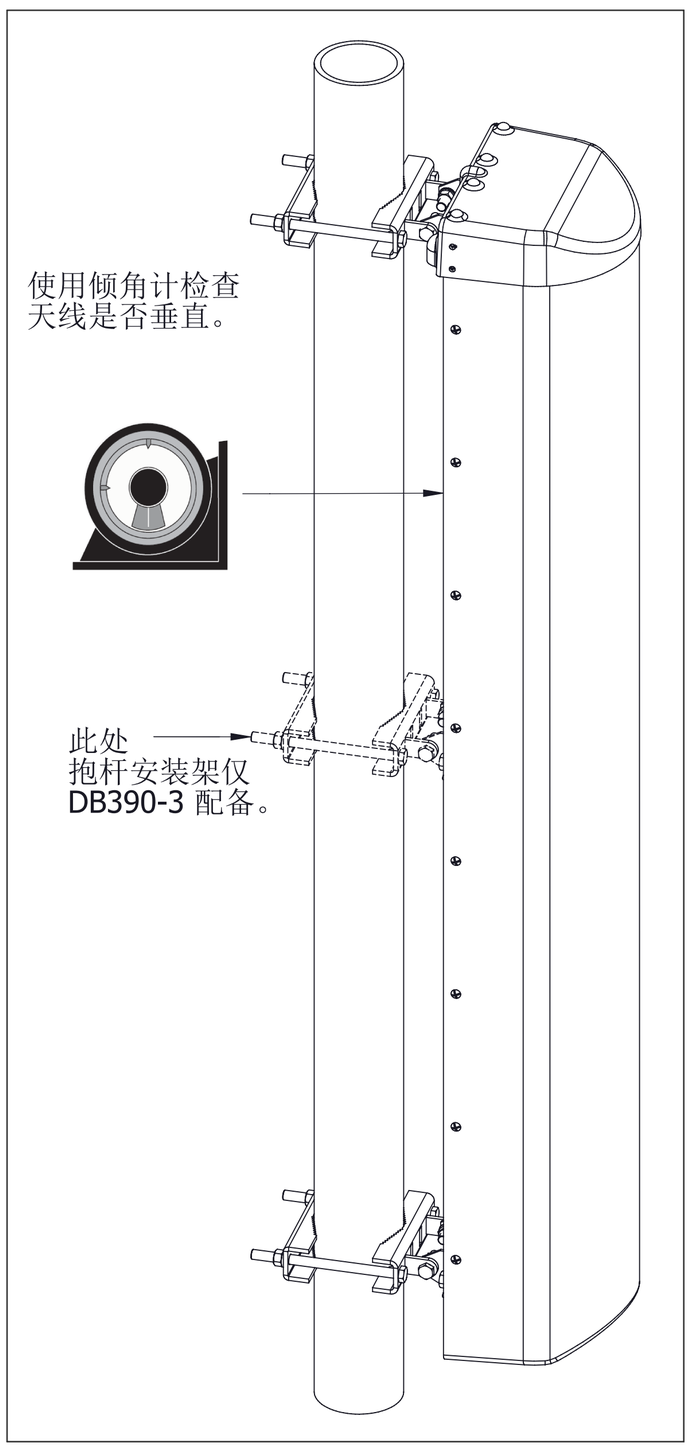




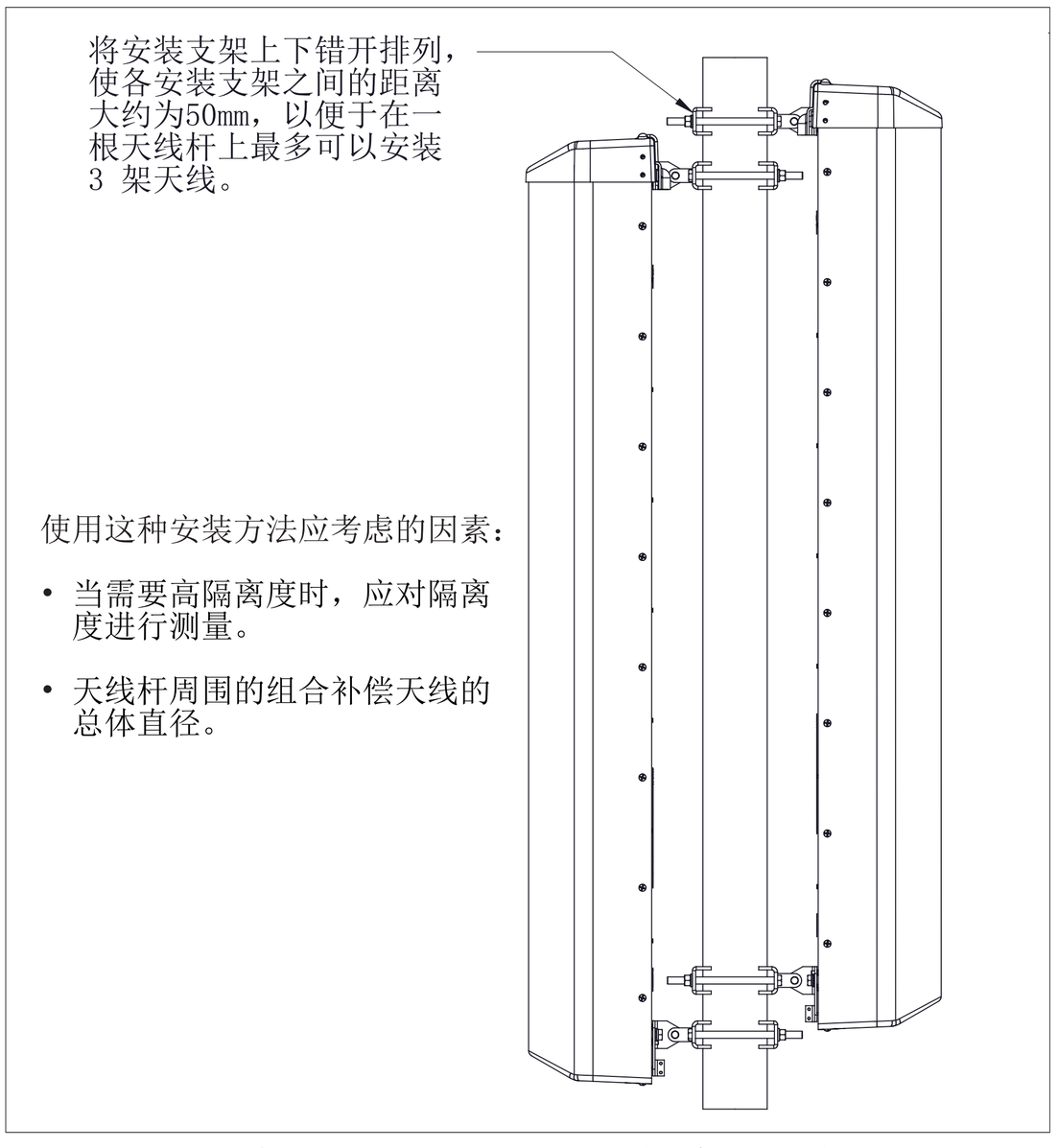
用DB390/390-3 抱杆安装架将天线安装到抱杆上。

（接第3页）

将天线吊装到塔顶

- 在将天线吊装到塔顶之前，尽可能多地预组装安装硬件。
- 将一根缆绳连接在天线背面的顶部安装支架上。吊装天线时，应保持天线垂直。为安全起见，可将另外一根缆绳连部天线安装支架上，用作其他地面人员的向接在底导。
- 将天线安装在塔顶的正确位置，并使用随附的硬件固定（请参见插图“用 DB390/DB390-3 抱杆安装架将天线安装到上抱杆”）。

  为避免天线扭曲，请确保所有安装架位于一条直线上。拧紧所有紧固件。



使用DB390/DB390-3安装多根天线。

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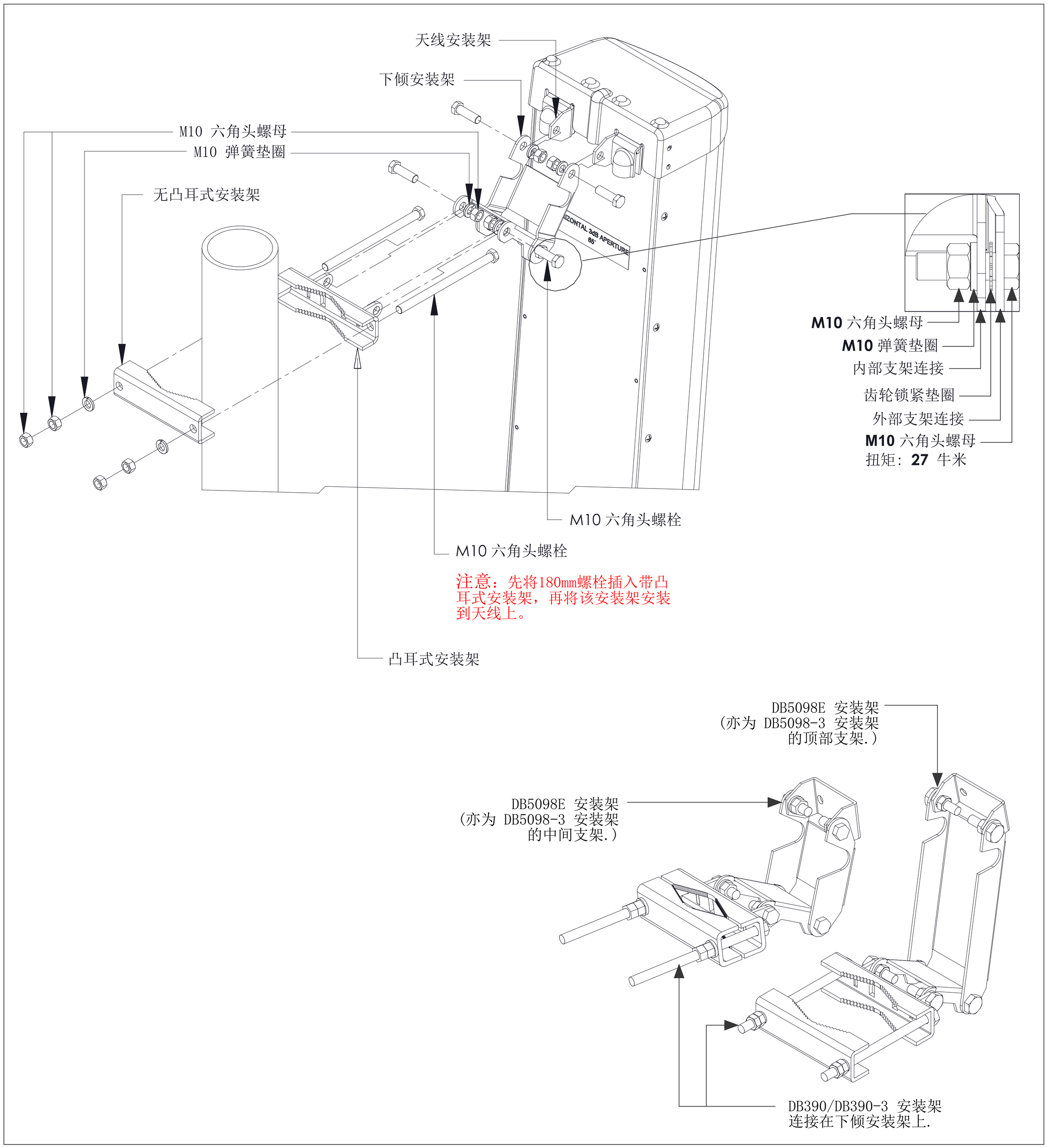

用DB5098/DB5098E/DB5098E-3 下倾安装架和DB390/DB390-3 抱杆安装架将天线安装到抱杆上，或DB390-5098E/DB390-5098E-3 组合安装架。

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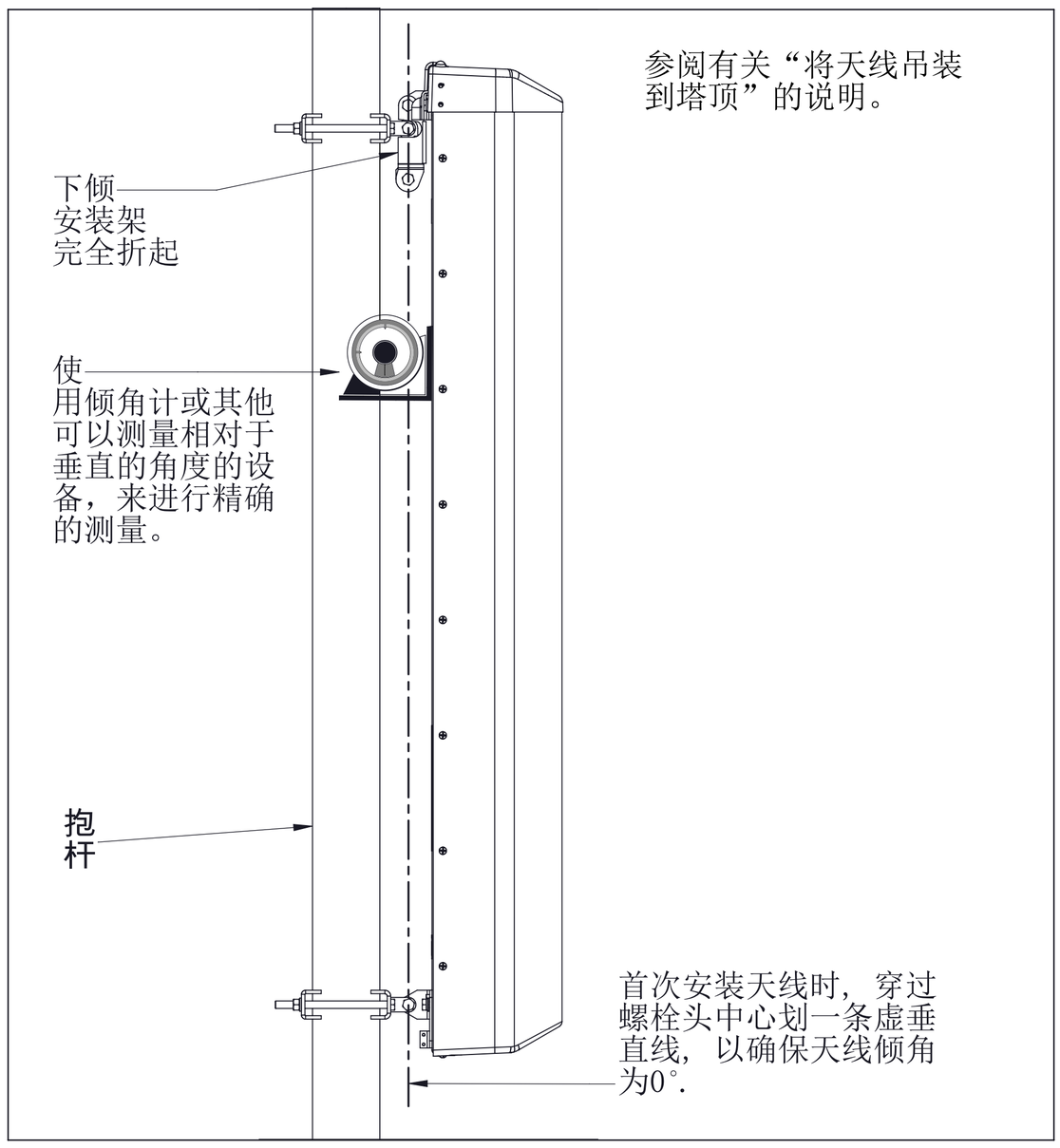


确保天线在 0˚完全折起。

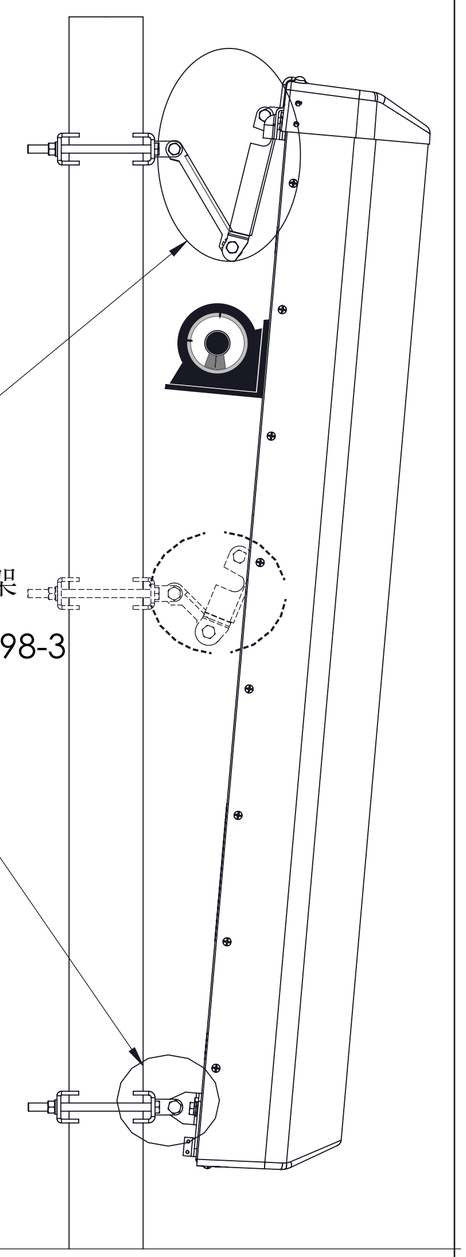
安装后说明

- 将基站传输线路（不提供）与天线连接。调整连接，使其稳固，但在使用手钳时不要用力过猛。
- 谨慎检查所有连接是否防风防雨，包括传输线路的所有裂缝和外包皮。如未对线路连接进行防水处理，则可能导致天线工作不正常。
- 将传输线路固定到塔上的最佳位置，以免对电缆造成物理性损坏。
- 安装好天线和传输线路之后，应进行仔细的目视检查，以确保：
  - — 所有机械连接均已完成，且天线在安装时留有足够的物理间隙。
  - — “向上”箭头指向上方，且节流阀端盖中的排水孔朝向下方。
  - — 所有连接均经过妥善包裹以防止受潮。
  - — 天线处在所需的机械倾斜位置。

标准下倾安装架安装实例

备注：

- 根据天线的总体长度，可达到的最大下倾角度将会有所差别。
- 测量下倾角时，请说明塔身的倾斜角度。
- 使用倾角计或其他可以测量相对于垂直的角度的设备，来进行精确的下倾角度测量。



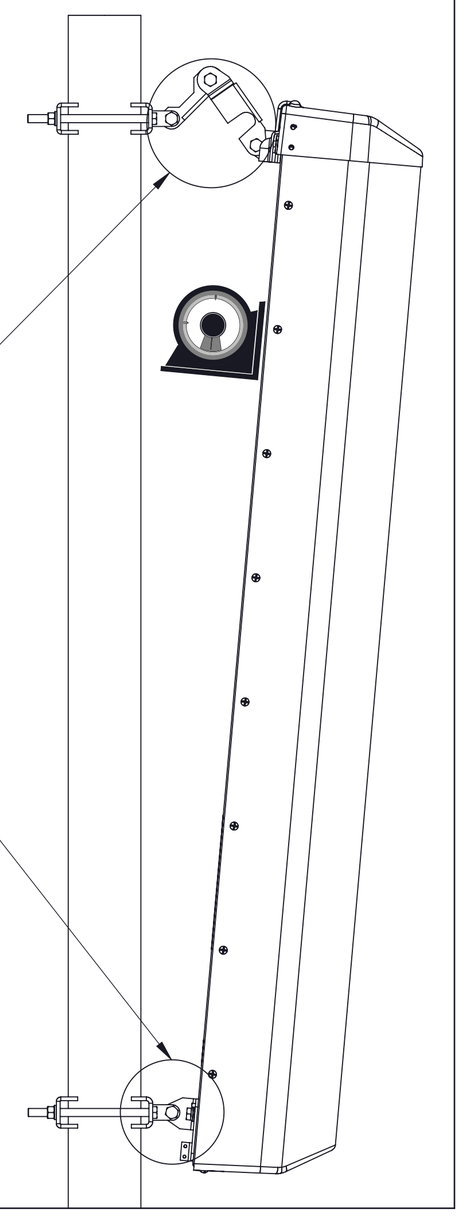
1. 松开螺栓，
   展开下倾安装架。
2. 展开下倾安装架，
   直到达所需要下倾角度。
3. 在设定好下倾角度后，小心
   地拧紧螺栓。请勿拧得过紧。

   扭矩：
   M10 = 27 N.m.

方法倒装上倾安装架安装实例

下倾角度链路不能安装在天线上下支架之间，可采用倒装下倾安装架的安装方法，如下所示。

上述标准下倾安装架安装的备注内容同样适用于倒装情况。



1. 松开螺栓，
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   M10 = 27 N.m.

调节下倾角度