1. Attach the antenna (example shown) to the interface brackets (11) using the provided channel runners at the labeled antenna mounting points (see Detail "X"). Top and bottom attachment points on the antenna must be 39.38in (1.0M) apart to achieve tilt values shown in chart below. Locate the middle brackets to ensure that they do not interfere with RF connectors.

2. Assemble the front pipe grips (2), upper scissor brackets (6 & 7) and lower scissor brackets (2) to the interface brackets (11) using 3/8in locking hardware.

3. Assemble rear pipe grips (1) with one 7in bolt (4) to the front pipe grips (2). Raise antenna to pipe. Insert second 7in bolt through front pipe grips (2) and tighten to pipe. Tighten the 7in bolts to 11ft lbs (15Nm). Do NOT overtighten. Excessive torque loading will distort the pipe grip components.

4. Position the antenna in the desired downtilt position (reference tilt chart below). After positioning, find the holes in the top scissor bracket that align and install the M6 locking hardware to both sides. Tighten the 1/4in hardware to 11 ft-lbs (15Nm). Tighten the 3/8in hardware to 15 ft-lbs (20Nm).

5. Make all electrical connections and weatherproof with self-amalgamating tape.

Letter  | Tilt
---|---
A  | 0°
B  | 0.8°
C  | 1.7°
D  | 2.5°
E  | 3.4°
F  | 4.2°
G  | 5.0°
H  | 5.9°
I  | 6.7°
J  | 7.6°
K  | 8.4°
L  | 9.2°
M  | 10.1°

**Letter Tilt Chart**

**Items**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part Number</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>251-445-9-029</td>
<td>Pipe Grip, Rear</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>251-445-9-006</td>
<td>Pipe Grip with Elevation</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>730-308-1-601</td>
<td>3/8 LW HDG</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>665-112-1-012</td>
<td>3/8-16 x 7.0 HHCS HDG</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>684-222-1-623</td>
<td>3/8-16 HEX NUT HDG</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>251-445-9-010</td>
<td>Indexed Scissor Bracket</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>251-445-9-012</td>
<td>Bracket, Long Downtilt</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>660-017-1-002</td>
<td>Washer, 1/4, (385 x 880 x 294) Split Lock Washer</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>660-017-1-004</td>
<td>Nut, 1/4-20, HEX Nut</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>660-017-1-003</td>
<td>Screw, 1/4-20 x .75, HHCS (HEX)</td>
<td>2</td>
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<tr>
<td>11</td>
<td>22191508</td>
<td>Bracket Adaptor</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>665-016-1-002</td>
<td>Screw, 3/8-16 x 1.00, HHCS (HEX), Grade 307A, Hot Dip Galvanized, Fastenal 91854</td>
<td>8</td>
</tr>
</tbody>
</table>

**Material:**

- Stainless Steel
- Hot Dip Galvanized
- Commercial Grade

**Tolerancing:**

- ±0.020
- ±0.010

**Angles:**

- ±1°
- ±2°
- ±3°

**Positioning:**

- Top Mounting Detail

**Brackets:**

- 2-Point Mounting Kit, Scissor