

METRO AIROW INSTALLATION GUIDELINES



Please read this first:

It is the customer's responsibility to determine to his/her own satisfaction that the light poles (or other poles) are able to withstand the increased wind load generated by the installation of one or more banners of a particular size on that pole using top and bottom arm brackets.

We recommend that you contact the pole manufacturer or a structural engineer to assist in making this determination. For older poles, we suggest visual inspections to determine the current structural integrity of the base connection as well as other portions of the pole, including the luminaire and its components.

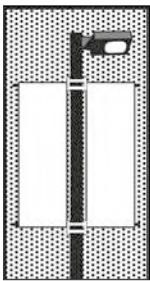
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General Installation Guidelines

- Read these instructions carefully to understand the patented "canting system", how to "rock" the arms in place and how the fiberglass arms keep the banners tight.
- Always verify that any high or wide vehicles will not come in contact with the installed brackets and banners. Make sure the bottom arm is high enough or orientated away from the road side.
- "Fluted" poles sometimes do not allow an installation to "face" a particular direction due to the location of the flutes. We have found that slight angles away from perpendicular, for example, are not objectionable. Contact our sales team for further assistance.
- These instructions specifically explain banding the bracket to the poles. If bolts are used, continue to refer to these instructions for placement and proper use of the "canting feature."

Maintenance Guidelines

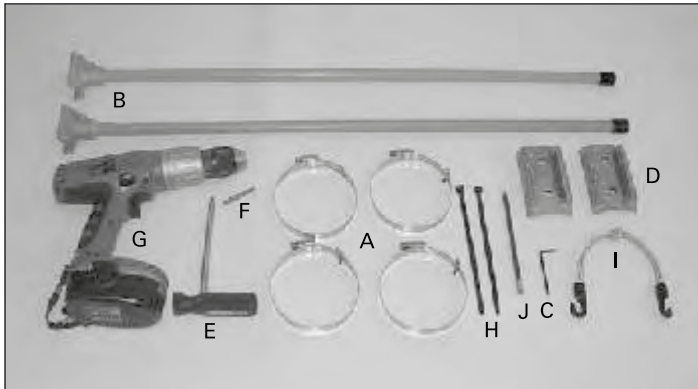
- Your brackets will give you years of trouble-free service when installed and maintained properly.
- It is recommended that a new installation be visually inspected approximately 30 days after initial installation to insure that banner brackets are tight and trim, and every 60 days thereafter. Also, the same inspection should take place after unusually heavy windstorms as abnormal gusts and flying debris can affect the quality of an installation.
- Brackets that are properly installed with Tamtorque geared banding clips or have been double banded with 19mm stainless steel banding should not loosen. If this does occur, verify that the banding operation was performed correctly and the installation is tight in accordance with these instructions.
- Banners that "whip" and "flutter" around with brackets installed top and bottom are not installed properly. This will cause undue wear and tear on the banners and may cause the banners eventually to release from one of the brackets, which can heavily damage the banners. Avoid this problem with inspections as suggested above. Repair loosened banners immediately.
- Banners with puckers or stress lines along the fabric are too tight. Loosen and adjust upper and lower arms until the banner is taut but smooth'.



Please read all the way through before beginning installation:

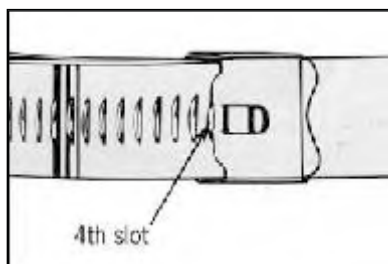
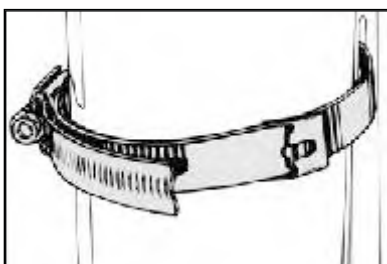
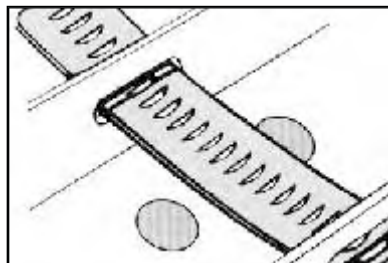
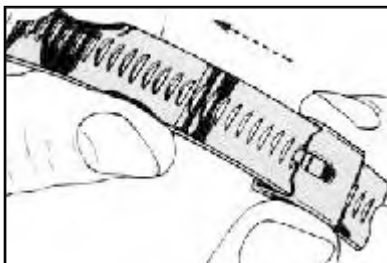
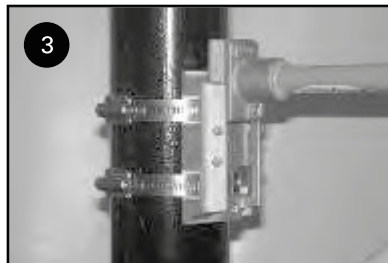
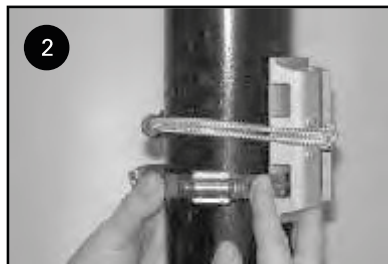
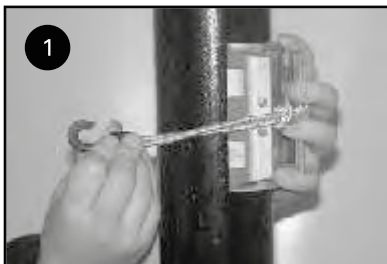
Start with the top banner bracket by mounting top main casting(s) first and complete all procedures, including mounting the banner(s), before mounting lower casting(s) and lower part of banner(s). Use a common sense approach to the height you install the banner but as a

general rule do not install the bottom arm at a height less than 3m. Be wary of the passing of wide/high vehicles when choosing the orientation of the banners – if the column is very close to the kerb you may wish to point the banners towards the pavement.



What you will require for installation:

- | | |
|---|--|
| A) Tamtorque geared banding clips (x 4) | F) Tamtorque drill attachment (advised) |
| B) Banner arm and arm casting (x2) with plastic end caps | G) Cordless drill/driver (advised) |
| C) Allen key | H) Nylon zip ties (x 2) |
| D) Main bracket casting (x 2) with 4 set screws and 1 hitch pin per bracket | I) Shock cord with hooks (or any type of gripper tape) |
| E) Tamtorque T bar tool | J) Pencil |
| | K) Hand snips (not shown) |



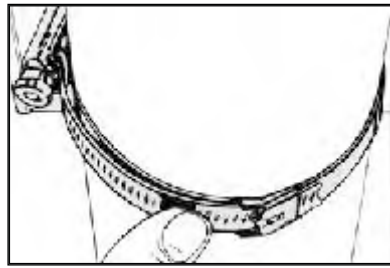
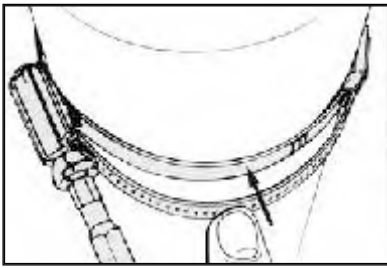
1) Install the top bracket casting and banner arm first. Using shock cord with hooks (or gripper tape), temporarily hold casting in place against the lamp column at the desired height. Note: the "top" designation on the main castings is to be up at all times for castings at both top and bottom of the banner. this is not a reference as to which bracket goes at the top or at the bottom but merely to the orientation, as all brackets are the same).

2) Feed the Tamtorque geared bands through both the top part and the bottom part of the main casting. 2.1) Take up the slack with cordless drill and finally tighten by hand with Tamtorque T-Bar driver. Tidy any excess banding that has passed through the gearing under the stainless steel buckle.

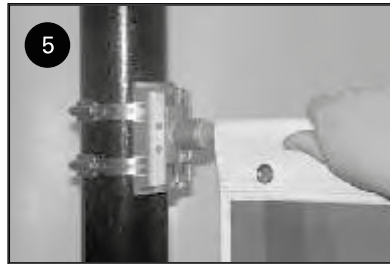
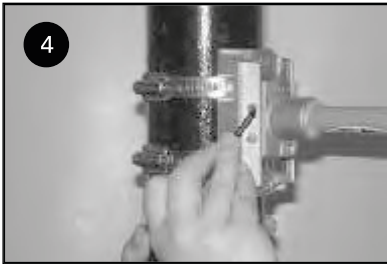
3) Remove "hitch pin" from main casting and slide fibreglass arm assembly into the main casting. Very important note: the banner arms are "canted" so you must be sure the top arm is looking upwards, and the bottom arm when installed must look downwards. This is what gives the banner its tension as the two arms flex and straighten 90 degrees from the column when the banner is finally installed. Replace the "hitch pin".

4) Loosely tighten arm in place using the allen key on the four stainless steel set screws within the main casting. Tighten each set screw a little at a time in a rotating fashion. Do not securely tighten yet as you may have to make an adjustment once the bottom arm and banner have been installed. Note: Positioning the arm in the middle of the top main casting will allow for further adjustment should you need to take up any slack in the banner at the end of the installation.

5) Slide banner (top hem) on arm so it is very close to main pole casting. Each top arm will have a pronounced upward cant at this time. Eyeletted side of banner is closest to the column.



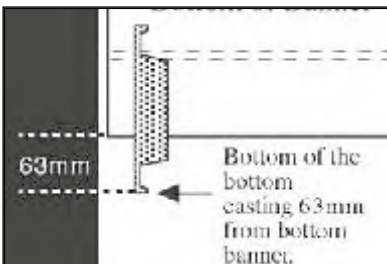
6) Secure the banner with nylon cable ties through eyelet on banner and through small hole in arm casting. Do not over-tighten as this may cause banner to wrinkle, snip excess cable off with snips. This holds banner onto brackets acting as a safety measure.



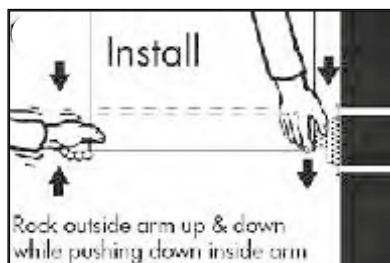
7) Now you are ready to mount lower main casting. Pull banner down to mark column for location of bottom casting - Mount bottom main casting so that lowest edge of casting is approximately 60mm lower than the bottom edge of the banner. Repeat steps 1-7 to attach bottom main casting to column. Note: Bottom main casting must be mounted with "top" designation up as in step 1.



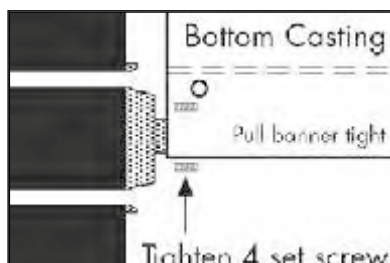
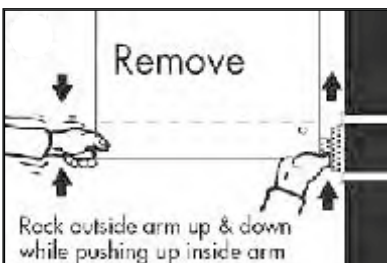
8) Slide banner onto bottom arm before inserting arm assembly into the bottom main casting. Important: see illustration on this page to understand how to slide arm casting into pole casting. When inserted correctly, bottom arm will display a downward "cant" until banner is tightened between each arm. Once the banner arms are tightened the flexible arms 'lose' their cant and will protrude at 90 degrees from the column, this is called "binding up" and will produce a taut banner. See note in step 9 and illustrations at left for proper method.



9) VERY IMPORTANT: It is not necessary to use force (hammers, etc) to slide lower arm casting into main casting. No special tools are required. Each bottom arm can be easily "rocked" into position - see "install" left. "Rock" the arm assembly in the main casting slot by pushing down on the end of the fiberglass arm and at the same time pressing the metal sleeve (at the base of the arm) downward. Do this until banner is tight. The arm will remain in position for you to tighten the four set screws. Excessive force (hammering, etc.) will damage the castings and void the warranty.



10) Secure the banner with nylon cable ties through eyelet on banner and through small hole in arm casting.



11) Go back to the top of the banner and tighten the 4 set screws in the main casting. At this point observe the appearance and feel of the banner, it should be taut but not over-tight, both the inside and outside edge of the banner should be under the same tension, if they are not then minute adjustments can be made to rectify by adjusting the way you tighten the set screws to slightly alter the cant of the arms. For larger adjustments to tension then slacken all set screws in top and bottom main castings and move the arms further apart. Retighten when correct tension is achieved.

