



# Seesaw Pole Operation

## 1.0 Introduction

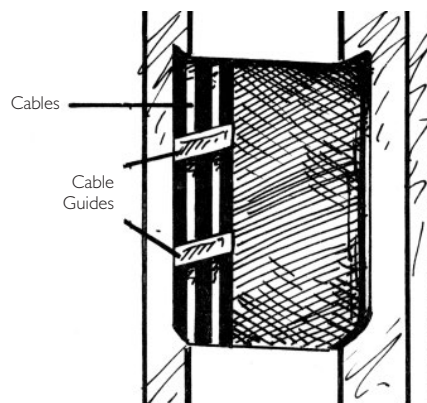
- 1.1 The INGAL EPS mid hinged Seesaw range of Street Lighting and Floodlighting columns provides the user with a simple, safe and effective method to maintain luminaires at ground level. It is most suitable where height and location factors present constraints for luminaire maintenance work to be carried out effectively.
- 1.2 As the column is accurately balanced, it is ideal for single-handed maintenance work and requires only a length of rope and an allen key for operation (refer Note after clause 3.1).

## 2.0 Assembly of Seesaw Columns

- 2.1 If the column is unassembled, assemble sections in accordance with 8.6.02 Pole Assembly and Installation for Floodlight Poles as applicable to the overall length of the Seesaw. Incorrect assembly of columns could cause serious damage to the public and private property. It is the installer's responsibility to ensure the sections are fitted together correctly. Note: After joining, slip joints above the hinge are to be secured with tek screws (refer to 8.6.02 Pole Assembly and Installation for Floodlight Poles). For advice, contact your local INGAL EPS office.
- 2.2 After assembly of the column and whilst the column is on the ground, attach all fittings to the top of the column; headframe, crossarms, luminaires, lighting arrestors...etc.  
*Note: Headframes and crossarms should be attached to the chain link at the top of the column, via the chain and "D" shackle provided, as a safety precaution should the headframe or crossarm work loose.*
- 2.3 Columns are supplied with a balance weight to counteract the weight of the top fittings, so prior to standing the column **all fittings must be attached** for the Seesaw system to function effectively.  
*Note: 1. Some Seesaw columns do not require a balance weight, as the weight of the apron only is sufficient to counter balance the top weight.  
2. Attachments (eg. luminaires, crossarms, banners etc.) **must not** be changed/modified from the original specification at time of order unless consultation has been provided by INGAL EPS. Failure to consult INGAL EPS prior to changes may result in damage to property or serious injury and will void INGAL EPS' liability.*
- 2.4 Ensure that there is sufficient slackness in the electrical cables running up the inside of the column to allow for lowering of the column and that the cables do not foul the balance weight. Cable guides are included adjacent to the balance weight recess (refer to figure 1).

**NOTE:** 25m, 27m and 30m columns have stiffening plates at the hinge position. It is important that electrical cables run at the centre of the column between the two stiffening plates and that there is a minimum of 1 metre slack in the cable length.

Figure 1.





- 2.5 For erection of the column refer to 8.6.02 Pole Assembly and Installation for Floodlight Poles.

Note: The orientation of the column on the foundation should take into account the direction of raising and lowering the column to ensure easy access.

### 3.0 Raising and Lowering (refer to illustrations in figure 2)

**IMPORTANT NOTE:** The two bolts with washers marked "DANGER DO NOT REMOVE" are there to secure the balance weight and should not be removed without prior consultation with INGAL EPS.

- 3.1 Fasten adequate length of 12mm double braided rope to the rope hook at the base of the apron section.

**NOTE:** 25m, 27m and 30m columns require 2 lengths of rope and 2 men acting in **UNISON** to raise/lower. Each rope length is to be a minimum of 1.7 times the column height.

- 3.2 Hold onto the rope or alternatively tie the rope off to a solid object and then remove the allen keyed apron-securing bolt.  
3.3 Use the rope to first pull the apron away from the stub section and then allow the top section to gently swing downwards taking care to avoid jerking of the apron, which may be detrimental to the luminaires and the column.

**WARNING:** To prevent rope burns, always ensure suitable rope handling gloves are used (high grip, high flexibility mountaineering type). The use of 12mm double braided rope is recommended.

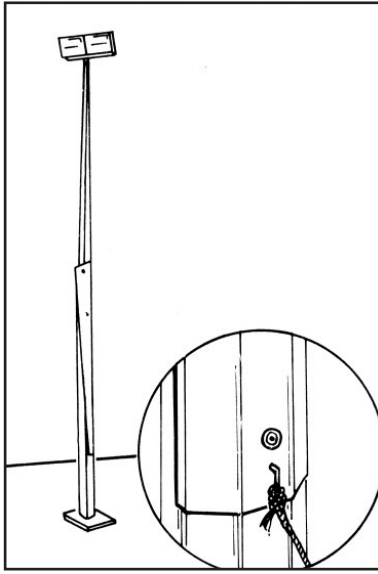
**NOTE:** It is important to ensure that the direction of pull on the rope is directly in line with the direction of raising and lowering of the column to ensure that no twisting is applied to the apron section.

- 3.4 Standing of the lowered column is the reverse procedure as described above.  
3.5 Securely re-install the allen keyed apron securing bolt and remove the rope from the apron.

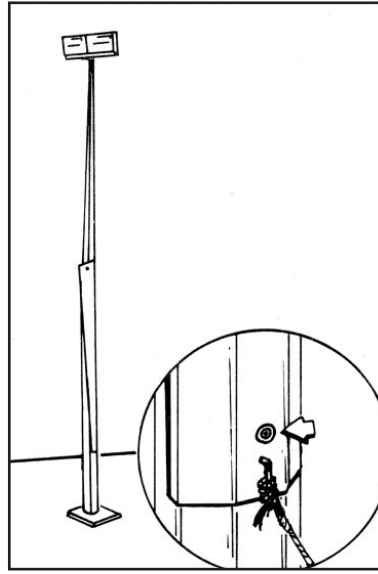
### 4.0 Related Technical Instructions

- For 25m Seesaw column (HPM25F) refer also to 8.6.04 Pole Assembly for 25m Seesaw Pole HPM25F.
- For 27m Seesaw column (HPM27F) refer also to 8.6.05 Pole Assembly for 27m Seesaw Pole HPM27F.
- For 30m Seesaw column (HPM30F) refer also to 8.6.06 Pole Assembly for 30m Seesaw Pole HPM30F.

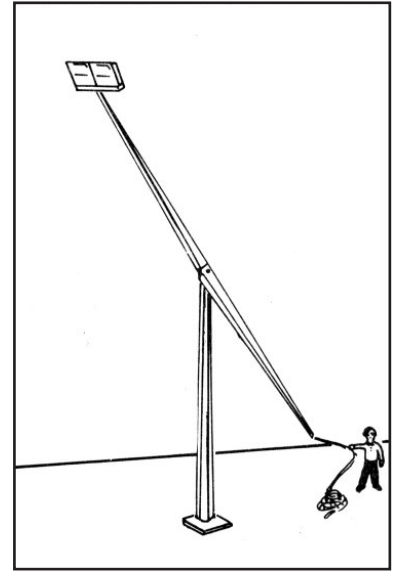
Figure 2. Raising and Lowering of Seesaw Columns



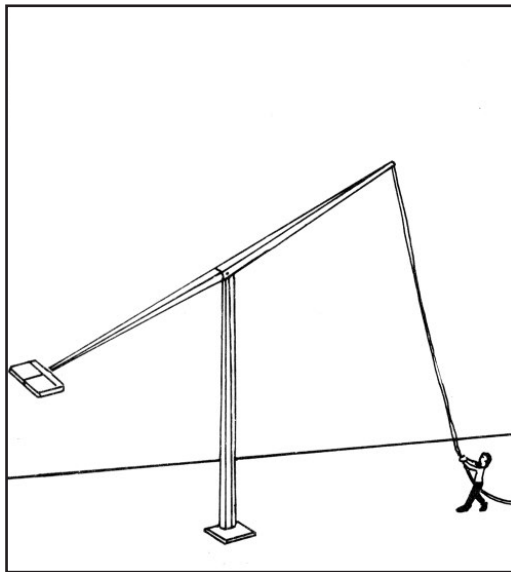
1. Fasten length of 12mm rope to the rope hook and secure.



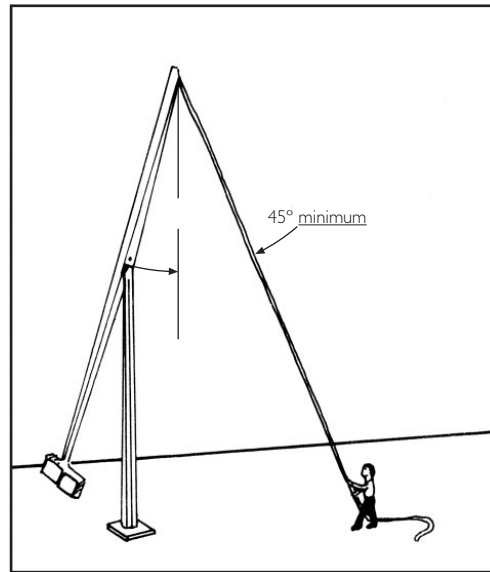
2. Remove allen keyed apron securing bolt.



3. Pull apron away from stub section allowing the top section to gently swing downwards.



4. Complete operation, avoiding jerks, which may be detrimental to the luminaires as well as to the column.



5. Raising of the lowered column is the reverse procedure, as described. Securely re-install the allen keyed apron securing bolt on completion of raising operation.