

## COLUMN ASSEMBLY AND INSTALLATION

### COLUMN TYPE: RAISE & LOWER HYDRAULIC Ø168 BASE - ROOT MOUNTED

**WE STRONGLY RECOMMEND THAT THESE INSTRUCTIONS ARE READ CAREFULLY BEFORE ATTEMPTING TO INSTALL AND OPERATE THIS EQUIPMENT.**

**REFERENCE SHOULD ALSO BE MADE TO THE RLH168 COUNTERBALANCE OPERATING INSTRUCTIONS WHICH ARE SUPPLIED WITH THE UNIT.**

**SPRING COUNTERBALANCE UNITS MUST NOT BE USED TO LOWER THESE COLUMNS WHICH CAN BE IDENTIFIED BY THEIR EXTERNAL REINFORCING AND LARGER SHAFT DIAMETER.**

### GENERAL

These columns have a wide variety of uses including amenity, railway and road lighting applications up to 8m in height, either post top or with a projection bracket.

Assembly on site is kept to a minimum. The foundation hole should be excavated to the size and depth stated in the manufactures data sheet, appropriate to the ground conditions on site.

Columns are constructed from lengths of steel tube, to EN10210 grade S275 or S355, welded together to form the required mounting height. The column is finished galvanised as standard with small fasteners from stainless steel.

### INSTALLATION

**NOTE: IT IS NOT POSSIBLE TO ATTACH THE RLH168 COUNTERBALANCE UNIT TO A COLUMN WHICH HAS BEEN INSTALLED WITH ITS SHAFT IN THE LOWERED POSITION. WE WOULD STRONGLY ADVISE THAT SUCH COLUMNS ARE INSTALLED IN THE SAME MANNER AS A CONVENTIONAL COLUMN.**

i) Before commencement of installation examine the items and ensure that there are no missing or damaged parts. The following items of equipment will be required (not Abacus supply). Timber supports and packers, a mobile crane for erection, typically 1.0 tonne and a lump hammer and adjustable spanners.

ii) Assemble the bracket to the top shaft section and secure with the screws provided. It should be noted that the power supply cable can be installed during assembly or, if preferred after assembly is completed, but prior to fixing the bracket.

iii) While the column is on the ground, and referring to the counterbalance operating instructions, ensure that the column is in its locked position and that the locking device is in place.

iv) Using a crane lift the column and place the root section in the previously prepared foundation hole. Ensure that the direction of lowering is as required and that the column will clear any obstructions. Appropriate allowance should be made if future resurfacing is envisaged. **It should be noted that the minimum distance from ground level to the pivot centre line for counterbalance operation is as follows:-**

**CAM TYPE = 280mm**

Roughly 'plumb up' the base section and back fill the hole either with concrete or excavated material to just below the cable entry slot. All back filling using excavated material should be placed in 150mm thick layers and must be well compacted.

**INSTALLATION**

v) Chock the column using wooden wedges in the space between column and foundation sidewall. By adjusting these wedges accurately 'plumb up' the column using the shaft as the reference plane not the base section.

vi) Back fill the remaining hole with either concrete or excavated material and ram well in, removing wedges as encountered.

vii) A duct, equal in size to the cable entry slot, should be formed through the back fill material using a suitable pre formed lining tube to allow for the insertion of electric cables.

viii) Leave the column for a minimum of four days for any concrete to harden. The column can then be commissioned.

The diagram, titled "ROOT MOUNTED COLUMN INSTALLATION", illustrates the four-step process of installing a column into a foundation.   
Step A shows a column resting on a wooden chock, with a cable attached to its top.   
Step B shows a person lifting the column into a square hole in the ground.   
Step C shows the column in place, with a level being used to ensure it is vertical. A label "Level of concrete" points to the base of the column.   
Step D shows the column in place, with a label "Cable Duct" pointing to a slot in the column. A hand is shown using a tool to work on the base of the column.

**FOR FURTHER ADVICE CONTACT THE ABACUS TECHNICAL DEPARTMENT**

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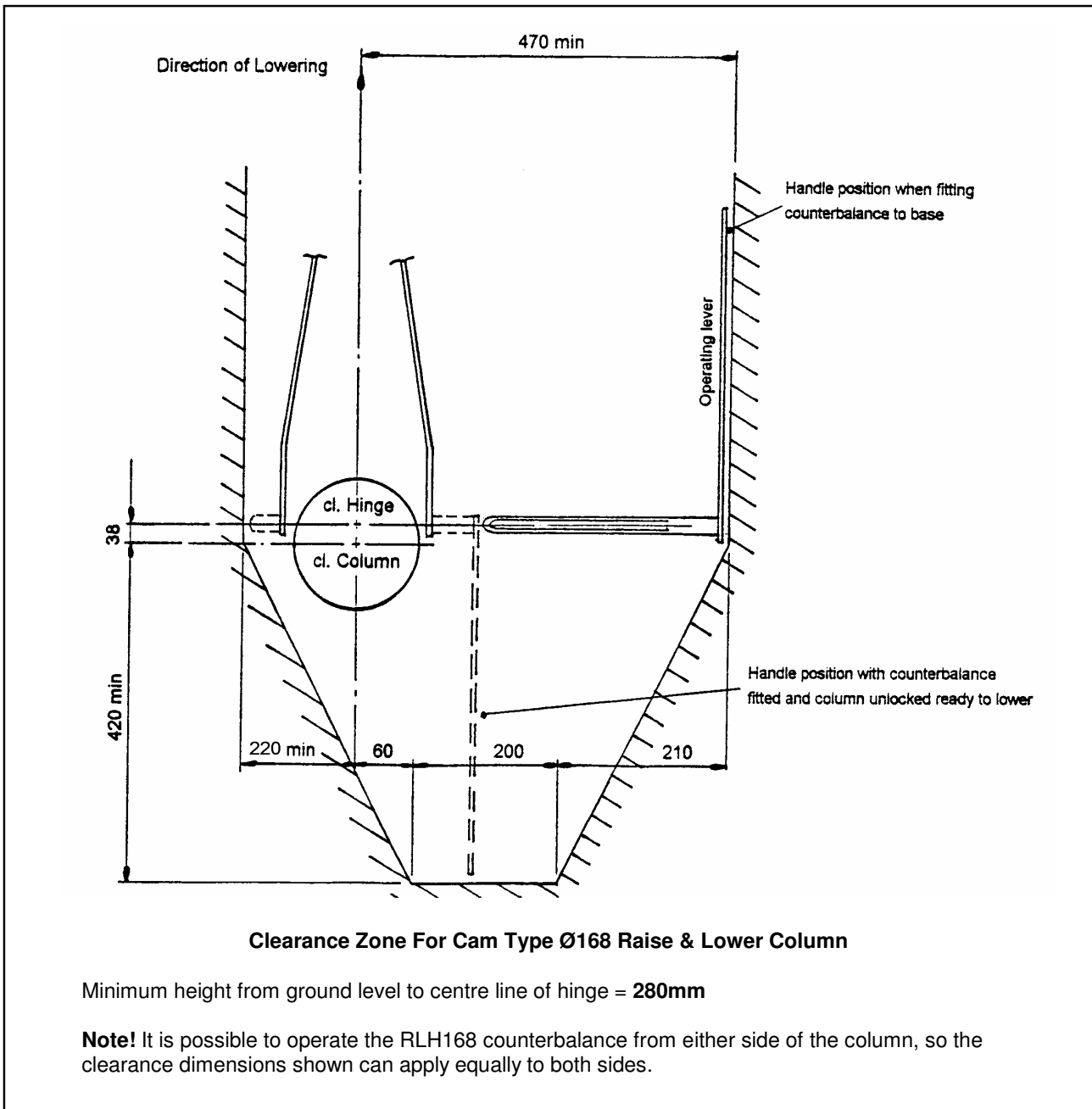
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### COLUMN REF: RAISE & LOWER - Ø168RLS & Ø168RLH (CAM TYPE)

**WE STRONGLY RECOMMEND THAT THIS CLEARANCE ZONE INFORMATION IS READ IN CONJUNCTION WITH THE INSTRUCTIONS FOR COLUMN ASSEMBLY, INSTALLATION AND COUNTERBALANCE OPERATION.**

### GENERAL

It is essential that the area around the base is kept clear of obstructions at all times to allow for the safe operation of mast and counterbalance. The illustration below gives details of the minimum clearance zone that is required around the column.



## COLUMN ROUTINE MAINTENANCE

### COLUMN TYPE: RAISE & LOWER HYDRAULIC Ø168 BASE

**WE STRONGLY RECOMMEND THAT THESE INSTRUCTIONS ARE READ CAREFULLY BEFORE ATTEMPTING ANY MAINTENANCE ON THIS EQUIPMENT.**

These columns are of galvanised steel construction with tubular base and shafts and require minimal maintenance. The following checks should however be made at the intervals stated.

#### EVERY TIME THE COLUMN IS LOWERED

1. Check that all the hinge components are present and undamaged before lowering the column.
2. Check that the flexible conduit is not damaged.
3. Examine the operating lever for damage.

#### EVERY 12 MONTHS

1. Check that all hinge components are present and undamaged.
2. Check that the column locking screw is present and fitted correctly. Lightly grease the threads.
3. If the column is flange mounted check that the foundation bolts have not worked loose. The torque settings are as follows:- **M20 = 50Nm**
4. Check the warning label is attached to the base.
5. Check that the minimum distance from pivot centre to ground level of **280mm** has not become obstructed, making counterbalance operation difficult.

#### MAJOR MAINTENANCE AT 15 YEARS

1. Conduct a detailed examination of all critical areas on the mast.
2. Repair and replace components as necessary.
3. Carry out non destructive test on foundation bolts if applicable.

#### AS REQUIRED

1. Paint the shafts and base. Aesthetically the galvanised finish will typically last 5 - 7 years before painting is required. In polluted or saline environments this may be shorter and in a mild climate considerable longer.

**Lubrication of the cam unit is not recommended.**

