

COUNTERBALANCE OPERATING INSTRUCTIONS

COUNTERBALANCE REF: Raise & Lower Spring (RLS)

WE STRONGLY RECOMMEND THAT THESE INSTRUCTIONS AND THE HEALTH & SAFETY REQUIREMENTS SHEET SUPPLIED WITH THE UNIT ARE READ CAREFULLY BEFORE ATTEMPTING TO OPERATE THIS EQUIPMENT.

IF THERE IS MORE THAN ONE TYPE OF SPRING RAISE & LOWER COLUMN ON SITE, THEN EACH COLUMN SHOULD BE COLOUR CODED TO MATCH THE APPROPRIATE COUNTERBALANCE UNIT.

GENERAL

These units consist of a compression spring complete with integral steel linkage and wheels. The springs are individually colour coded, to ensure that the correct unit is selected for the column to be lowered. They are used on Ø168 cam operated columns only.

There are five spring counterbalance units available, the selection of which depends on column height and headload. The units are as follows:-

RLS0 - Colour coded yellow .	Rating 1128Nm	Weight 16kg	(Safe Working Load at 5m = 11kg)
RLS0X - Colour coded white .	Rating 1500Nm	Weight 16.5kg	(Safe Working Load at 5m = 19kg)
RLS1 - Colour coded red .	Rating 1960Nm	Weight 17.5kg	(Safe Working Load at 5m = 28kg)
RLS2 - Colour coded blue .	Rating 2550Nm	Weight 18kg	(Safe Working Load at 5m = 40kg)
RLS3 - Colour coded green .	Rating 3180Nm	Weight 20kg	(Safe Working Load at 8m = 17kg)

The rating refers to the maximum bending moment about the hinge of the column. For details of the full range of **safe working loads** refer to the manufacturer's column data sheet supplied with the columns. **Note that the safe working load for a counterbalance unit varies with column height.**

PRELIMINARY CHECKS BEFORE USE

- 1 Examine the trolley framework for damage. Check that the wheels are operating and retained in position.
- 2 Ensure the locating hooks are secure, undamaged and the correct profile to fit the column cam end washers.
- 3 Check that the spring has not taken a permanent set by measuring the free length of the spring. This is 508mm with a tolerance of +6mm to -3mm. **Springs with a free length less than 500mm must not be used.**
- 4 Check the condition of the top pressure pad.
- 5 Examine the operating lever for damage. The keyway and the bar should both be clean and free from bruises.
- 6 Check the dimension from centre line of pivot to finished floor level which should ideally be 280mm. **However this dimension must not be less than 220mm to ensure safe operation of the counterbalance unit.**

IF ANY OF THESE CHECKS ARE FAILED THE COUNTERBALANCE MUST NOT BE USED.

LOWERING THE COLUMN

(Refer to the illustrations that follow the text).

- 1 – 3 Attach the counterbalance unit to the column by inserting the operating lever through the counterbalance frame and column.

CAUTIONARY NOTE: ENSURE THE CORRECT MANUAL HANDLING TECHNIQUES ARE USED AT ALL TIMES WHEN LIFTING THE COUNTERBALANCE UNIT.

DO NOT ATTEMPT TO LOWER THE COLUMN IF THE WIND SPEED IS 30KPH (18MPH) OR GREATER.

Current counterbalance units are fitted with locating hooks that support the unit on the cam end washers. This removes the need for the operator to hold the unit when inserting the operating lever. The keyway on the lever must align with the keyway in the cam. **It is vital that that the lever protrudes through the bush on the far side of the counterbalance frame by a minimum of 25mm.** Remove the column locking screw before operating the counterbalance unit.

4 – 5 Rotate the operating lever **180 degrees in an anti clockwise direction** as shown. This will raise the lid and shaft clear of the base section. If this is not achieved rotate the operating lever each way until such clearance is obtained.

OPERATORS SHOULD BE AWARE THAT THE SPRING MAY NOT FULLY BALANCE THE LOWERING LOAD AND THAT THE OPERATIVE MUST BE SUITABLY POSITIONED TO PROVIDE ASSISTANCE BEFORE LOWERING COMMENCES.

6 Pull the column forward onto the counterbalance unit ensuring that as lowering commences the operative is at the greatest distance from the hinge relative to their height, walking backwards as lowering progresses. Doing this will minimise the load that the operator has to provide.

RAISING THE COLUMN

7 Depending on the headload it may be necessary to assist the raising operation by lifting the shaft and walking the column back to the vertical position. It should be noted that during the lowering and raising operation, the cam may run back slightly. Evidence of this will be that the lid section will either interfere with the base when nearly vertical (no clearance), or will not seat properly. Rotation of the operating lever in an anticlockwise direction will permit the lid to locate correctly.

To close and lock the column rotate the operating lever 180 degrees in a clockwise direction, ensuring the arrows on the warning label are aligned with the bottom edge of the lid. **Insert the safety locking screw and tighten.**

Withdraw the operating lever and remove the counterbalance unit. Store the unit in a safe and weatherproof location.

RAISING & LOWERING SEQUENCE



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FOR FURTHER ADVICE CONTACT THE ABACUS TECHNICAL DEPARTMENT