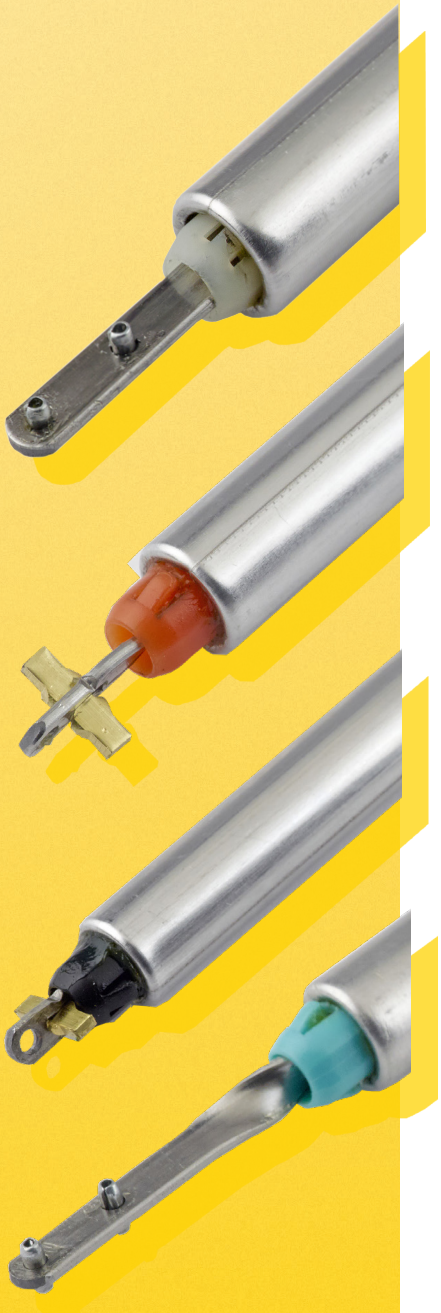
CALDWELL | Yale

Spiral
Spring Balance Range

The Caldwell range of wind-up balances for sash windows allow window fabricators to provide exactly what is required for mechanical assistance, longevity & economy.

Spiral balances are single sprung and have been designed to allow vertical sash windows to slide easily up & down and hold stationary, as required.



The Caldwell comprehensive Spiral range of spring balances includes, Spirex, Spiralift and Alumatilt, Alumatilt Heavy Duty.

Spirex balances for sashes weighing from 1kg to 13.5kg and in length 8 inches to 60 inches.

Spiralift balances for sashes weighing 14kg to 18kg and in length 9 inches to 60 inches

Alumatilt for sashes weighing from 1kg to 13.5kg and in length 8inches – 48 inches

Alumatilt Heavy Duty for sashes weighing from 14kg to 18kg and in length 8inches to 48inches

- 16mm Outer Tube available in either Aluminium mill finish white PVC or Brown PVC in a wide range of colours
- Suitable for Aluminium, PVCu, Timber and windows

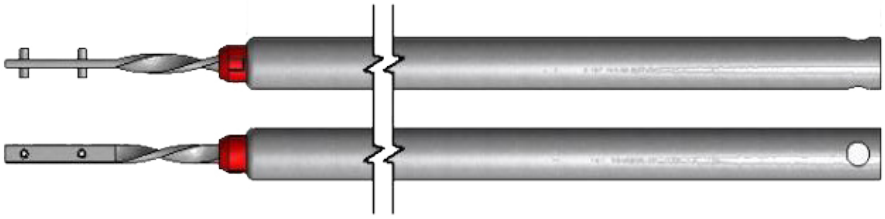
10 YEAR MECHANICAL GUARANTEE

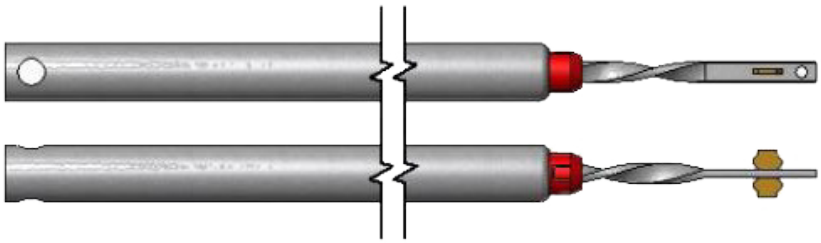
Balance ordering requirements

Balance Type	Tilt Option	Tube colour options	Sash Weight	Balance lengths 1” increments
Wind- Up	Tilt-In	Aluminium Mill Finish White Sleeved Tube Brown Sleeved Tube	Alumatilt: 1Kg - 13.5Kg	8” - 48”
			Alumatilt Heavy Duty: 14Kg - 18Kg	8” - 48”
	Non-Tilt		Spirex: 1Kg - 13.5Kg	8” - 60”
			Spiralift: 14Kg - 18Kg	9” - 60”

Tilt-in Option

Alumatilt and Alumatilt Heavy Duty





Non-Tilt Option

Spirex and Spiralift

1) All Wind-Up balances are supplied at Ø14.0 mm tubes

2) Colour sleeves will increase the balance diameter by Ø2.0 mm

Maintenance	Caldwell Spring balances are designed to require only minimal maintenance. Balances are best protected by being operated at least once a month. Should balances not be operated for long periods, particularly lower sash balances, then apply a light coat of high-quality water-resistant multi-purpose greases to the extended helix rod routinely to ensure optimum balance performance. Tubes can be cleaned with a damp cloth.

Sprial Spring Balance Range tensioning turns chart

Balance length (inches) ↓	Sash Weight (kg) →														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
8	1	1	2	2	3	2	3	2	2.5	3.5	4	4.5	5.5	6	Blue Coupling
9	1	1	2	2.5	3.5	2.5	3.5	2.5	3	4	4.5	5	6	6	
10	1	1	2	3	4	3	4	3	3.5	4.5	5	5.5	6	6.5	
11	1	1	2	3	4	3	4	3	3.5	4.5	5	6	6.5	7	
12	NA	1.5	2.5	3.5	4.5	3.5	4.5	3	4	4.5	5	6	6.5	7	
13	NA	1.5	2.5	4	5	4	5	3.5	4.5	5	5.5	6	6.5	7	
14	NA	1.5	2.5	4	5	4	5	3.5	4.5	5	5.5	6	6.5	7	
15	NA	2	3	4.5	5.5	4.5	5	3.5	4.5	5	5.5	6	6.5	7	
16	NA	2	3	4.5	5.5	4.5	5	3.5	4.5	5	5.5	6	6.5	7	
17	NA	2	3.5	5	6	4	5.5	4	5	5.5	6	6.5	7	7.5	
18	NA	2.5	4	5	6	4	5.5	4.5	5.5	5.5	6	6.5	7.5	8	
19	NA	3	4.5	5.5	6.5	4.5	5.5	5	5.5	6	6.5	7	8	8.5	
20	NA	3	5	6	7	5	6	5	6	6.5	7	7	9.5	10	
21	NA	3	5	6.5	7.5	5.5	6	5.5	7	8	8.5	9.5	10	10	
22	NA	3	5.5	6.5	7.5	5.5	6.5	6	7	8.5	9.5	11	11	11.5	
23	NA	2.5	3.5	4.5	5.5	6.5	5	6.5	7.5	9	10	6.5	7.5	8	
24	NA	2.5	3.5	4.5	5.5	6.5	5	6.5	7.5	9	10	6.5	7.5	8	
25	NA	2.5	3.5	4.5	5.5	7	5.5	7	8	9	11	7	8	8.5	
26	NA	2.5	3.5	5	6	7	5.5	7	8	9	11	7	8	8.5	
27	NA	2.5	3.5	5	6	7	6	7.5	8.5	9.5	11	7.5	8	9	
28	NA	3	4	5	6	7.5	6	7.5	8.5	9.5	11	7.5	8.5	9	
29	NA	3	4	5.5	6.5	7.5	6.5	8	8.5	9.5	11	8	9	9.5	
30	NA	3	4	6	7	8	6.5	8	9	9.5	12	8	9	9.5	
31	NA	3	4	6.5	7.5	8.5	7	8.5	9	10	12	8.5	9.5	10	
32	NA	3	4	6.5	7.5	8.5	7	8.5	9	10	12	8.5	9.5	10	
33	NA	2	3	3.5	4.5	5.5	6	8	9	8	8.5	9	10	10.5	Red Coupling
34	NA	2	3	4	5	6	7	8.5	9.5	8	8.5	9	10	11	
35	NA	2	3.5	4.5	6	7	8	9	11	8	8.5	9	11	11.5	
36	NA	NA	3.5	4.5	6	7	8	9	11	8	8.5	9	11	11.5	
37	NA	NA	NA	5	6.5	7.5	8.5	9.5	11	8.5	9	9.5	11	12	
38	NA	NA	NA	5	6.5	8	9	9.5	11	8.5	9	10	12	12.5	
39	NA	NA	NA	5	7	8.5	8	10	11	9	9.5	11	12	13	
40	NA	NA	NA	5	7	8.5	9.5	10	12	9	9.5	12	12	13	
41	NA	NA	NA	5.5	7	8.5	9.5	11	12	9	10	12	12	13.5	
42	NA	NA	NA	5.5	7	9	9.5	11	12	9.5	11	12	13	13.5	
43	NA	NA	NA	5.5	7.5	9	9.5	11	12	9.5	11	12	13	14	
44	NA	NA	NA	6	7.5	9	10	11	12	9.5	11	12	13	14	
45	NA	NA	NA	6	8	9.5	10	11	12	10	11	12	13	14	
46	NA	NA	NA	6	8	9.5	10	11	13	10	11	13	13	14.5	
47	NA	NA	NA	6.5	8.5	9.5	11	12	13	11	12	13	14	14.5	
48	NA	NA	NA	7	9	10	11	12	13	11	12	13	14	14.5	
49	NA	NA	NA	7	7	8	9	8	9	10	11	12	14	15	
50	NA	NA	NA	7	7	8	9	8	9	10	11	13	15	15	
51	NA	NA	NA	8	9	9	11	8	9	10	13	14	16	16	
52	NA	NA	NA	NA	NA	14	17	19	24	15	17	19	22	23	
53	NA	NA	NA	NA	NA	14	17	20	25	15	18	20	23	19	
54	NA	NA	NA	NA	NA	14	17	21	25	16	18	20	23	24.5	
55	NA	NA	NA	NA	NA	15	18	21	26	16	18	21	23	25	
56	NA	NA	NA	NA	NA	15	18	22	26	16	19	21	24	25.5	
57	NA	NA	NA	NA	NA	15	19	22	27	16	19	21	24	26	
58	NA	NA	NA	NA	NA	16	19	23	27	17	20	22	25	21	
59	NA	NA	NA	NA	NA	16	19	23	28	17	20	22	25	27	
60	NA	NA	NA	NA	NA	16	20	23	28	17	20	23	26	27	
	White Coupling									Red Coupling					

Balance length (inches) ↓	Sash Weight (kg) →					
	14	15	16	17	18	
9	1	1	1.5	2	2	Black Coupling
10	1.5	1.5	2	2.5	3	
11	1.5	2	2.5	3	3.5	
12	1.5	2	2.5	3	3.5	
13	2	2.5	3	3.5	4	
14	2	2.5	3	3.5	4	
15	2.5	3	3.5	4	4.5	
16	2.5	3	3.5	4	4.5	
17	2.5	3	3.5	4	5	
18	2.5	3	4	4.5	5.5	
19	3	3	4	5	6	
20	3.5	3.5	4.5	5.5	6.5	
21	4	4.5	5	6	7	
22	4.5	5	5.5	6.5	7.5	
23	5	5.5	6	7	8	
24	5.5	6	6.5	7	8	
25	5.5	6	6.5	7.5	8.5	
26	6	7	7	8	9	
27	6	7.5	8	8.5	9	
28	6.5	7.5	8.5	9	9.5	
29	7	8	9	9.5	10	
30	7.5	8.5	9.5	10	11	
31	8	9	10	11	11	
32	8	9	11	12	12	
33	8.5	9.5	11	12	12	
34	8.5	10	11	12	13	
35	9	10	11	12.5	13	
36	9	11	12	13	14	
37	9.5	11	12	13	14	
38	9.5	12	13	13	15	
39	10	12	13	14	15	
40	10	12	13	14	15	
41	11	12	13	14	15	
42	11	13	13	14	16	
43	11	13	14	15	16	
44	12	14	14	15	16	
45	13	14	14	15	16	
46	13	15	15	16	17	
47	14	15	15	16	17	
48	14	15	16	16	17	
49	9.5	11	11	12	13	
50	9.5	11	11	12	13	
51	9.5	11	11	12	13	
52	9.5	11	11	12	13	
53	9.5	11	11	12	13	
54	9.5	11	11	12	13	
55	10	11	12	13	14	
56	10	11	12	13	14	
57	10	12	12	13	14	
58	10	11	12	13	14	
59	10	11	12	13	14	
60	14	14	14	14	14	
	Black Coupling					

Applying tension

When using the tensioning tool extend the balance by pulling on the lower pin downwards as shown before applying the correct number of turns. Install the upper pin into the Pivot Shoe or Sash Bracket before releasing the tension and removing the tensioning tool.

To remove the tension and remove the balance from the Pivot Shoe or Sash Bracket reverse the process shown above and apply clockwise turns when viewed from below.

Care should be taken when adding and/ or removing tension.

Important note: Additional Turns should be applied Clockwise when view from below

Tilt-in Sash

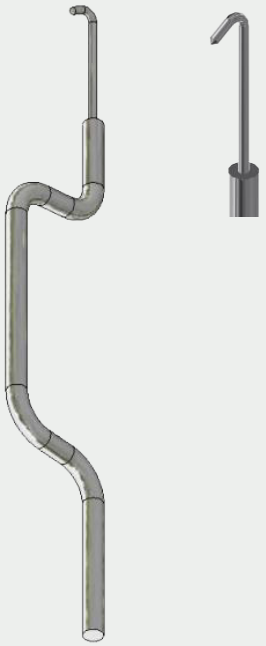
Tensioning Tool

Code: ATW-TEN

Non-Tilt Sash

Tensioning Tool

Code: BB-TEN



Coloured Coupling

Spiral balances are colour coded, with White, Blue, Red & Black couplings, depending on weight/length combinations.

Outer Tube Colour Range

Aluminium Mill Finish

Brown PVCu Sleeve

White PVCu Sleeve

Material Specification

Reinforced Nylon	CS70 Steel
Music Wire	PVC (unplasticized)
Aluminium 6063	ST 304
	Steel
	Acetal

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www.yaledws.co.uk

Yale DWS

School Street, Willenhall, West Midlands

WV13 3PW, UK

T: 01902 366800 F: 01902 369041