

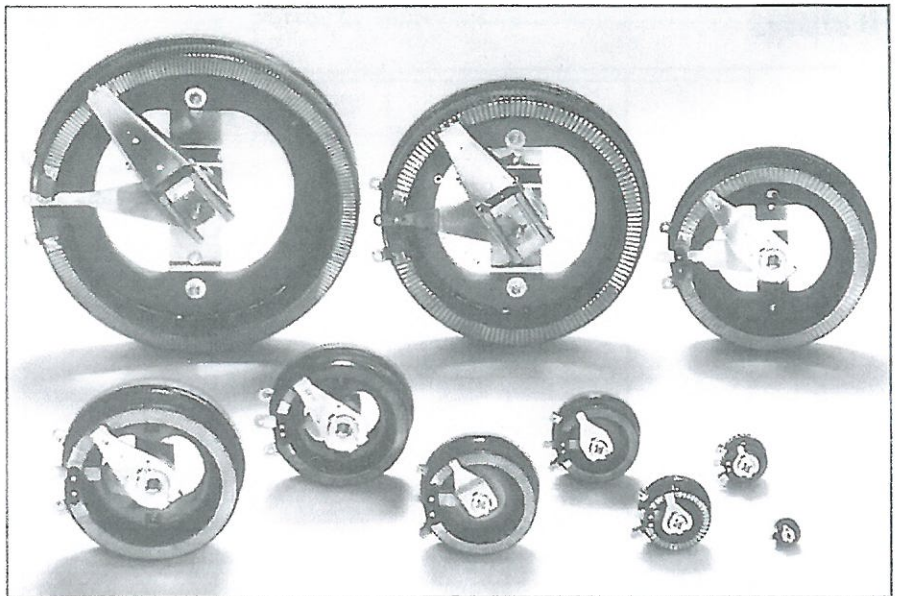
Bercostat Rotary Rheostats

An extensive range of rotary rheostats to suit all industrial and laboratory needs comprising ten basic single frame size models for 12 (L12) to 1000 (L1000) watt operation with ohmic values from 1Ω to $10k\Omega$ (see table).

Options are available for graded windings, series and parallel operation, manual or motor drive, open or enclosed construction and with a selection of knobs, dials and pointers to suit all applications.

Features

- Permanently self-lubricating brush contact.
- Nickel-chromium alloy winding in the high ohmic values. This combination gives non-oxidising contact at all working temperatures, low wear and long life.
- The brush floats on a balanced point, is self-aligning to present maximum area to the winding, and adjusts to the varying gauges of wire on graded windings.
- Winding held firmly to prevent movement and to provide good mechanical protection.



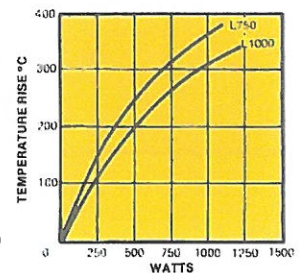
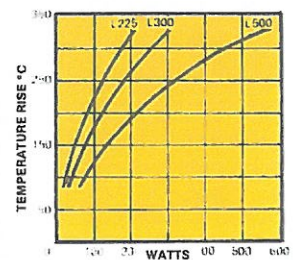
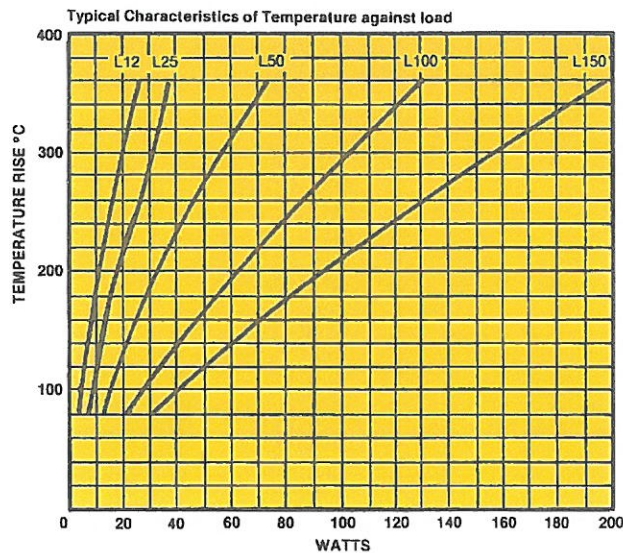
- All ceramic and metal construction.
- Pigtail and non-grooving return contact plate shunt the brush arm.
- Plated, hardened and tempered spring steel brush arm.
- Porcelain brush arm insulating rotor.
- Winding brazed to terminal band.
- Spindle held to very close tolerance on diameter, ensuring smooth rotary action.

Temperature curves

Temperature Rise Against Load

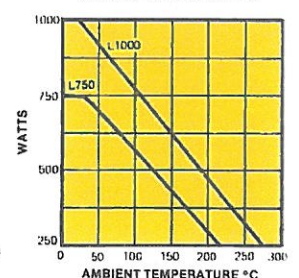
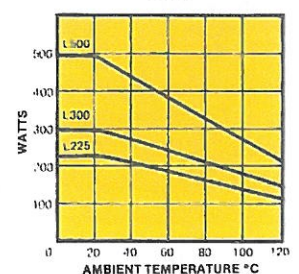
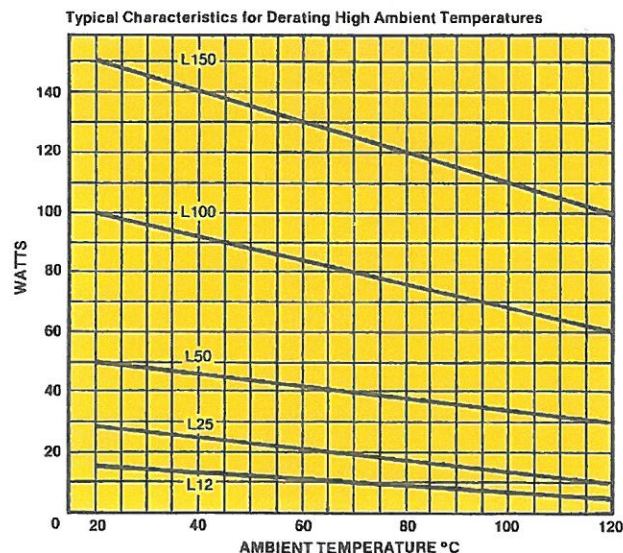
These curves show the temperature rise at the hottest point of 'Bercostats' against total dissipation over the entire former, when mounted with the shaft horizontal in free air, and terminals pointing downward.

In practice, owing to the reduction of current that occurs as the resistance in circuit is increased, the formers rarely have to dissipate the maximum designed power.



Derating for High Ambient Temperatures

These curves show the reduction in loading which must be applied to the standard range of 'Bercostats' operating in higher than normal ambient temperatures. All the ratings given in the tables of ohmic values are applicable in ambient temperatures of 20°C with unrestricted ventilation.



Standard Models

Ratings

Model	L12	L25	L50	L100	L150	L225	L300	L500	L750	L1000
Ohmic Value	CURRENT RATING									
1Ω		5.0A 975511	7.1A 975530	10.0A 975550	12.2A 975570	15.0A 975590				31.6A 975626
2Ω		3.5A 975512	5.0A 975531				12.2A 975600			
3Ω			4.1A 975532	5.7A 975551	7.1A 975571					
5Ω	1.6A 975500	2.2A 975513	3.2A 975533	4.5A 975532	5.5A 975572		7.7A 975601	10.0A 975610	12.2A 975621	14.2A 975627
7.5Ω			2.6A 975534		4.5A 975573		6.3A 975602			
10Ω	1.1A 975501	1.6A 975514	2.2A 975535	3.2A 975553	3.9A 975574	4.7A 975591		7.1A 975611		10.0A 975628
15Ω		1.2A 975515	1.8A 975536	2.6A 975554	3.2A 975575		4.5A 975603			8.2A 975629
25Ω	0.71A 975502	1.0A 975516	1.4A 975537	2.0A 975555	2.4A 975576	3.0A 975592		4.5A 975612		6.3A 975630
50Ω	0.5A 975503	0.71A 975517	1.0A 975538	1.4A 975556	1.7A 975577	2.1A 975593	2.5A 975604	3.2A 975613	3.9A 975622	
75Ω				1.1A 975557	1.4A 975578			2.6A 975614		
100Ω	0.35A 975504	0.5A 975518	0.71A 975539	1.0A 975558			1.7A 975605	2.2A 975615		3.2A 975631
150Ω		0.41A 975519	0.57A 975540	0.82A 975559	1.0A 975579			1.8A 975616	2.2A 975623	
200Ω	0.25A 975505	0.35A 975520	0.5A 975541		0.87A 975580	1.1A 975594	1.2A 975606	1.6A 975617		2.2A 975632
350Ω	0.19A 975506	0.27A 975521	0.38A 975542	0.53A 975560			0.93A 975607	1.2A 975618	1.5A 975624	
500Ω		0.22A 975522	0.32A 975543	0.45A 975561	0.55A 975581	0.67A 975595	0.77A 975608	1.0A 975619	1.2A 975625	1.4A 975633
1kΩ	0.11A 975507	0.16A 975523	0.22A 975544	0.32A 975562	0.39A 975582	0.47A 975596	0.55A 975609	0.71A 975620		1.0A 975634
1.5kΩ	0.09A 975508	0.13A 975524	0.18A 975545	0.26A 975563	0.32A 975583					
2.5kΩ	0.07A 975509	0.1A 975525	0.14A 975546	0.2A 975564	0.24A 975584					
5kΩ		0.07A 975526	0.1A 975547	0.14A 975565	0.17A 975585					
7.5kΩ			0.08A 975548							
10kΩ				0.1A 975566	0.12A 975586					

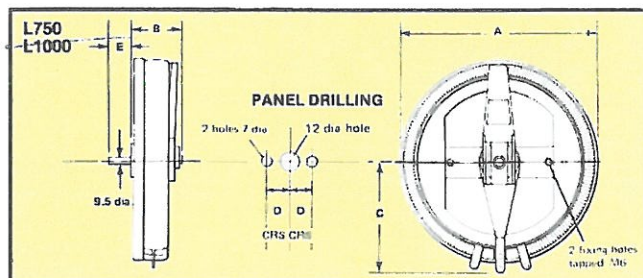
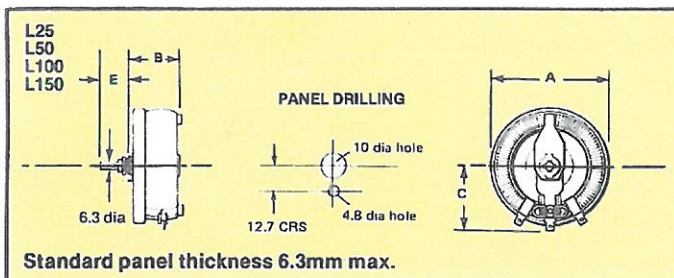
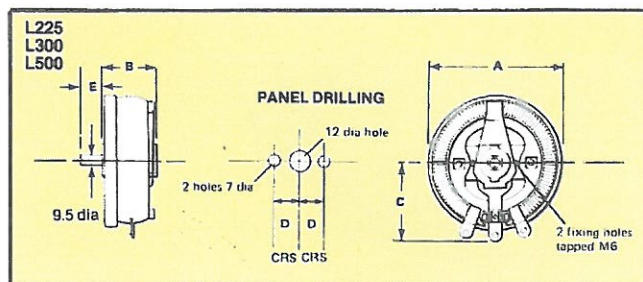
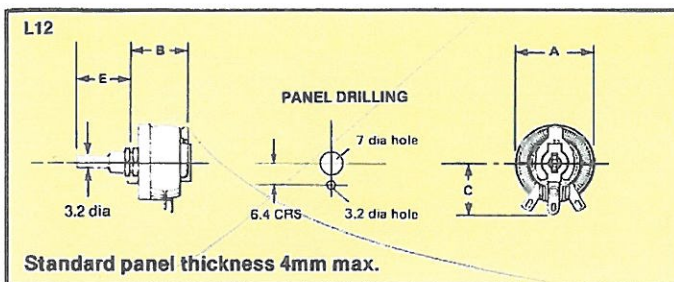
Knobs	902000	902550	902550	902700	902850	903625	903625	903625	904175	904175
0-100% Dial		180072	180072	180063	180064	180094	180094	180098	180110	180110
Plain Dial		180071	180071	180069	180070	180143	180143	180144	180145	180145
Pointer		540014	540014	540015	540016	540024	540024	540024	540030	540030

Single unit Bercostats are supplied without knob, dial and pointer unless otherwise specified.

All ganged Bercostats are supplied with knob as standard.

To Order: Specify model number, ohmic value, current thus:
L25,5 ohms, 2.2A (975513).

Dimensions



Spindles

Dimension E gives the standard spindle length from mounting face.

Special spindle lengths including rear extension, and spindles with flat, screwdriver slot or radial hole, can be supplied to order.

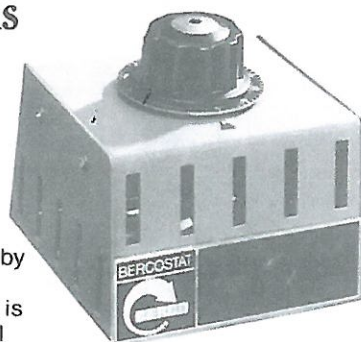
UNIT	L12	L25	L50	L100	L150	L225	L300	L500	L750	L1000
DIMENSIONS mm	A	22	40	59	79	102	127	152	203	305
	B	18	36	36	44	52	54	57	54	86
	C	15	25	39	47	57	76	87	110	165
	D						22	30	38	48
	E	16	25	25	28	28	28	28	32	32

Enclosed Models

'Bercostats' other than model L12 can be supplied in ventilated steel enclosures finished in an attractive textured acrylic enamel and complete with dial and collet fitting knob or handwheel. Cable entry is by rubber grommet.

The universal enclosure is suitable for bench or panel mounting. The 'Bercostat' is fitted to the inside of the top cover for front of panel or bench mounting, and to the inside of the bottom cover for back of panel mounting.

To order, add suffix 'E', e.g. L150-E, followed by ohmic value and rating. Alternatively the enclosure can be ordered as a separate kit.



Laboratory Models

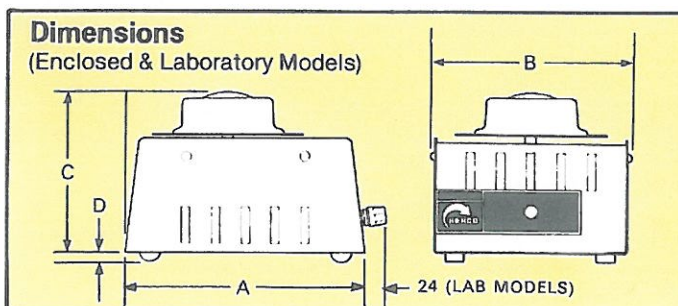
Laboratory series 'Bercostats' are available in all sizes except L12.

These models are complete with dial and collet fitting knob or handwheel, and with the 'Bercostat' connections wired to three insulated terminals having concentric sockets suitable for 4 mm plugs. The enclosures are finished in an attractive textured acrylic enamel and fitted with four plastic mounting feet.

To order, add suffix 'LAB', e.g. L150-LAB, followed by ohmic value and rating.



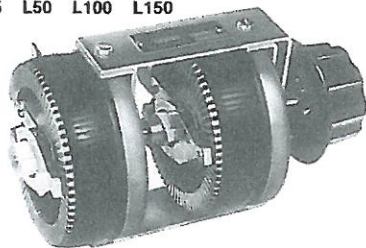
* Models mounted in vertical plane with modified casing



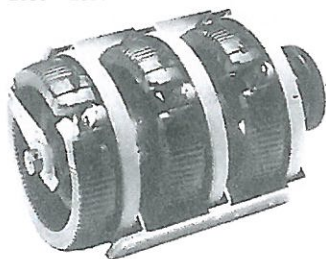
UNIT	L25-50	L100	L150	L225- L300	L500	L750* L1000*
DIMENSIONS mm	A	106	120	140	209	370
	B	102	112	132	171	420
	C	92.4	96.8	96.8	137.7	347
	D	3	3	3	6	13

Ganged Models

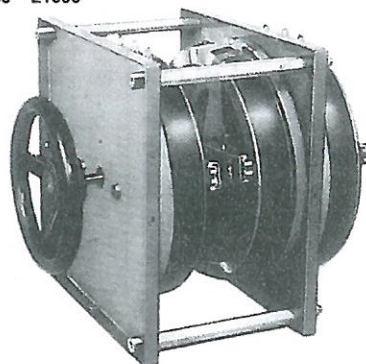
L25 L50 L100 L150



L225 L300 L500



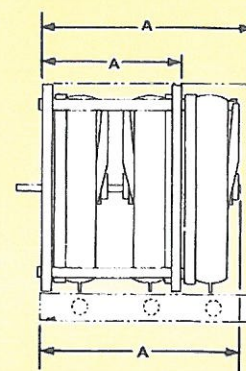
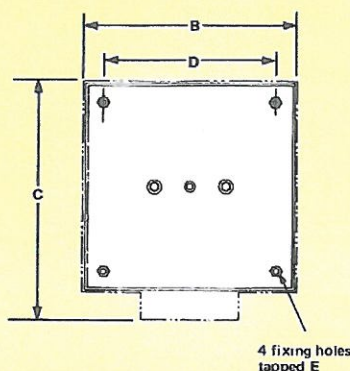
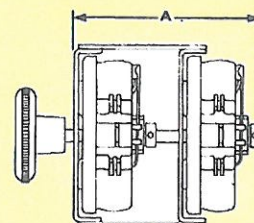
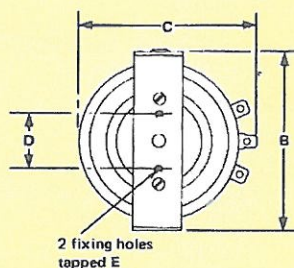
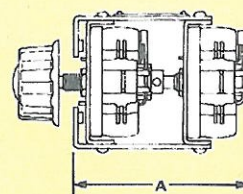
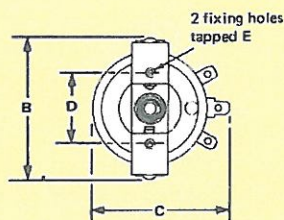
L750 L1000



'Bercostats' other than L12 can be supplied as 2 or 3 ganged assemblies for simultaneous control of 2 or 3 circuits. Ganged assemblies are supplied complete with knob or handwheel depending on model.

How to order

Add suffix G2 or G3 according to number of units in assembly to model code: thus: L100-G2, 100 ohms, 1A; 350 ohms, 0.535A. Always specify individual unit nearest knob end first.



MODEL	A		B	C	D	E	ANGLE OF ROTATION
	2 GANG	3 GANG					
L25	95	149	62	45	38	M6	300°
L50	95	149	75	69	38	M6	300°
L100	114	175	94	88	51	M6	300°
L150	121	184	116	108	51	M6	300°
L225	141	217	146	140	44	M6	315°
L300	144	220	171	165	60	M6	315°
L500	141	217	222	212	76	M6	330°
Open	200	289	289	—	254	M8	330°
L750 Enclosed	210	300	289	327	254	M8	330°
Open	210	289	340	—	304	M8	330°
L1000 Enclosed	210	300	340	378	304	M8	330°

Accessories & Options

Many optional extra accessories and features are available for 'Bercostats' including:—

- Off position at either end of the winding
- 360° rotation
- Heavy duty front stop
- Adjustable stop
- Special tappings
- Spindle lock
- Cam-operated micro switches
- Knobs, dials and pointers

Graded Windings

When a 'Bercostat' is connected in series with a constant impedance load on a constant supply voltage, the current falls as the resistance in circuit is increased. Advantage of this can be taken by winding the 'Bercostat' with progressively smaller gauges of wire as the current falls thus gaining the benefit of minimum size.

All 'Bercostats' with the exception of L12 and L25 can be provided with graded windings of up to a maximum of 4 gauges of wire.

Subject to economic quantities being required, our engineers will be pleased to design graded windings on receipt of the following information:

Supply voltage
Resistance and nature of load
The range of current control required i.e. Max. and Min. values.

Motor Drive

Models L50, L150, L500 and L1000 single units and ganged assemblies are available with motor drive for remote control and automatic applications.