

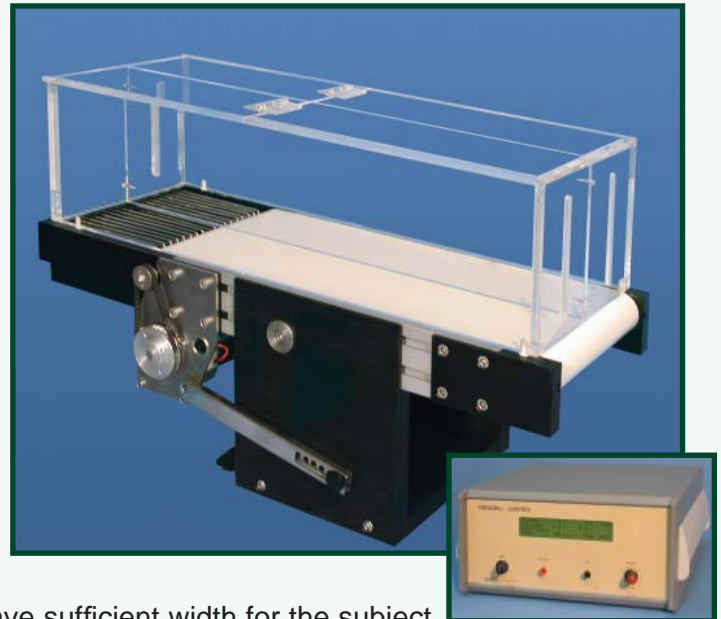
TREADMILLS FOR ANIMALS

Letica TREADMILLS are apparatus consisting of a rolling belt, whose speed and slope can be adjusted, making possible an accurate study of fatigue, effort or the quantified production of tiredness in investigation animals.

They are apparatus which work autonomously (models are available from one to five lines-animals), but with the possibility of sending the data to a PC via the SEDACOM software included or the speed of the belt also being controlled by the TREAD 01 software, even in incremental stretches. Some models can be used for the study of the respiratory metabolism under conditions of forced effort (option CO).

An electrified grille situated at the end of the belt forces the animal to continue circling on it. The staying time and the number of staying sessions of the animal on the grille is registered independently for each line.

The lines (corridors of activity for the animal) have sufficient width for the subject to correct its errors in coordination, thereby allowing an exact measurement of the fatigue without deficiencies in motor coordination.



MODEL	SUBJECTS	BELT	EXERCISE AREA	DIMENSIONS	OPTION
LE 8700	single rat	41 x 10	53 x 10 x 15	58 x 17 x 36	CO (rats)
LE 8706	two rats	44 x 20	53 x 9,8 x 15	58 x 27 x 37	
LE 8708	single mouse	30 x 5	38 x 5 x 4,5	40 x 12 x 26	CO
LE 8709	two mice	2x (30 x 5)	2x (38 x 5 x 5)	42 x 11 x 20	CO
LE 8710	five rats or mice*	40 x 51	53 x 10 x 15	58 x 58 x 37	
LE 8715	single rabbit	60 x 29	78 x 29 x 30	78 x 36 x 57	CO
Control Unit	(included with all models)			37 x 33 x 17	

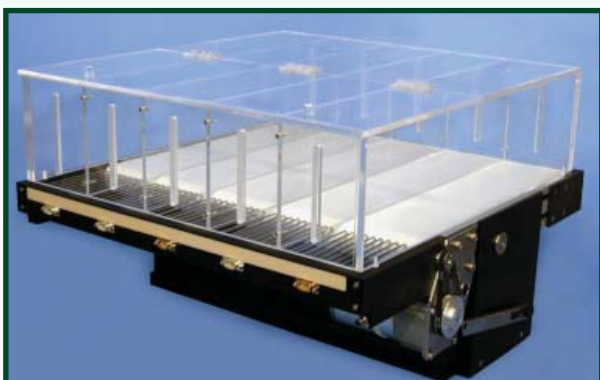
* Changing the top

Measures in cm

The TREADMILLS are formed by the Unity of rolling belt and the control Unit.

ROLLING BELT

Constructed with materials specially selected to guarantee the best performance under conditions of intensive use and the minimum operations of maintenance, as well as simplicity in keeping it clean, a very important factor bearing in mind the conditions of the test.



- Duralumin profiles
- Rolling belt with two coats: the upper one of polyurethane and the lower of polyester
- Motor of very high performance, guaranteeing more than 5,000 hours' operation
- ZZ type coated steel bearings
- Collection tray for the excretions
- Silent operation, even at high regimes

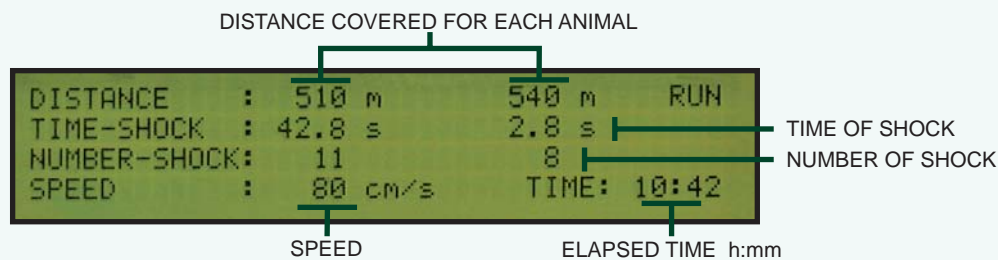
ELECTRONIC UNIT

This controls the speed of the belt, shows the measured data in its display, provides current for the belt grille and allows communication with the PC, via the RS 232 output.

The shock supplied by the grille is of constant intensity, that is, the current which circulates through the animal (and therefore its effect) only depends on the value of the mA chosen and not on the conditions of the subject (quantity of body mass in contact with the bars, perspiration, etc.)



CHARACTERISTICS



- SPEED: continuously adjustable up to 150 cm/sec.
- SLOPE: adjustable from 0 to 25°
- SHOCK: selectable from 0 to 2 mA
- RUN: distance in metres by each animal
- COMMUNICATION: RS 232 output with SEDACOM software (included)
- POWER: 110 – 220 V 50 – 60 Hz

SOFTWARE

SEDACOM

Software which is supplied free with the apparatus. The data collected by the Control Unit of the treadmill is shown in ASCII format.

Step	S.Trk	D.Pm	Dur.	Shock	D.Total	D.Act.	Dist.	Time	Shock	Lane 1	Lane 2	Lane 3
1	9	0:30,0	Yes	210,00								
2	34	44 0:30,0	Yes	1170,00								
3	51	28 0:30,0	No	1185,00								
4	67	16 0:30,0	No	1245,00								
5	15	127 0:30,0	No	2130,00								
6	47	138 0:30,0	No	2775,00								
7	118	52 0:30,0	Yes	2550,00								
8	128	109 0:30,0	No	3055,00								
9	28	59 0:30,0	No	1215,00								
10	41	125 0:30,0	No	2490,00								
11	75	26 0:30,0	Yes	1515,00								
12	46	117 0:30,0	Yes	2445,00								
13	75	134 0:30,0	Yes	3950,00								
14	7	25 0:30,0	No	440,00								
15	78	8 0:30,0	Yes	1250,00								
16	5	118 0:30,0	Yes	1860,00								
Total	5	118 0:00,0	Yes	40615,00								

Other data shown are:

- Total linear run of the belt
- Total distance run by each animal
- Distance run at each moment

TREAD 01

Software which allows, up to 10 Treadmills to be controlled (up to 50 animals), even with different protocols. It has a time resolution of 0.1 seconds and the protocols are configured in Steps, each of which is temporally defined with start, end, and duration, and with the speed at which the Treadmill(s) must operate.

Step	Initial Speed	Final Speed	Length	Shock	Comments
1	5	9	0:30,0	Yes	Step 1 comment
2	34	44	0:30,0	Yes	Step 2 comment
3	51	28	0:30,0	No	Step 3 comment
4	67	16	0:30,0	No	Step 4 comment
5	15	127	0:30,0	No	Step 5 comment
6	47	138	0:30,0	No	Step 6 comment
7	118	52	0:30,0	Yes	Step 7 comment
8	128	109	0:30,0	No	Step 8 comment

- SHOCK time accumulated by each animal
- Number of periods on the grille

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