Touchscreen Treadmills
for Exercise Training

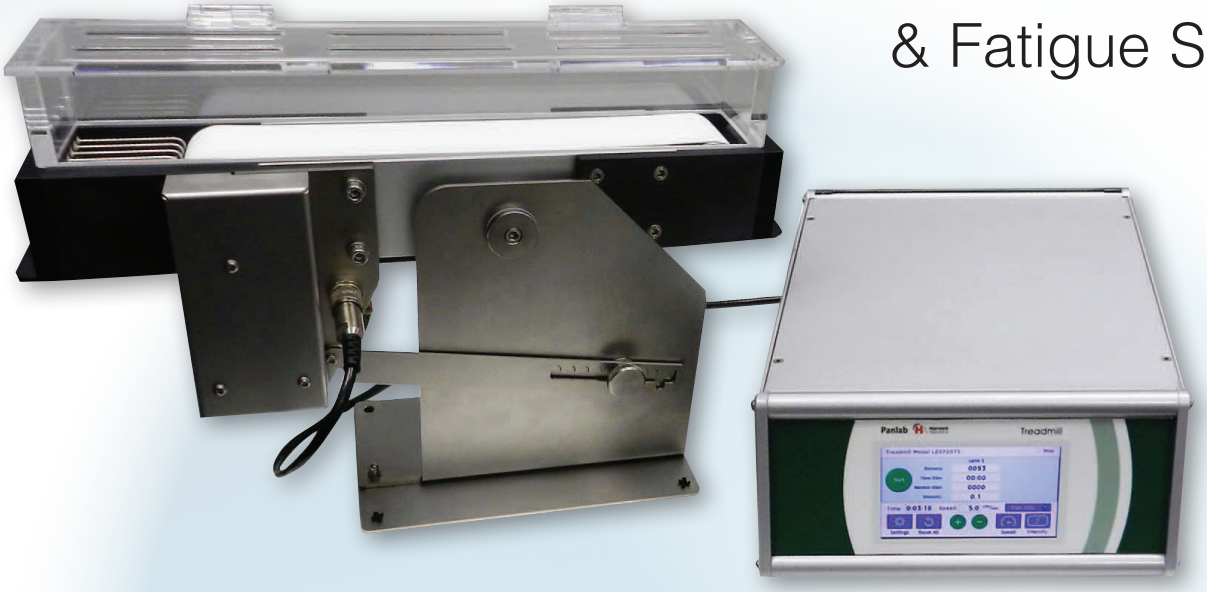
Maximum convenience and user flexibility!

- Touchscreen user interface
- Single- and multiple-animal models
- Variable speed
- Positive/negative slope
- Shock or air puff stimulation

Panlab

a division of **Harvard Bioscience, Inc.**

Touchscreen Treadmills
for Exercise Training & Fatigue Studies



Panlab small animal treadmills are used for forced exercise training and accurate testing of fatigue in rodents. A control unit with touchscreen user interface plus the ability to perform individual lane stimulation (shock or air-puff) add convenience and experimental flexibility in setting up and managing study parameters.

The treadmill includes a shock grid which delivers electrical shock of constant intensity. An air-puff accessory option is interchangeable with shock, enabling the use of one or the other depending on experimental needs. The treadmill lanes have sufficient width for the animal to correct any errors in coordination, allowing an exact measurement of fatigue. Robust design and high-quality materials guarantee high performance under conditions of intensive use.

The control unit's touchscreen allows control of the speed of the belt and the intensity of the stimulus. Parameters measured are recorded and shown on the control unit display, including belt speed and slope, distance covered, accumulated shock time, and shock intensity. The control unit provides current to the shocking grid and allows communication with the PC for data storage through the optional SEDACOM software (USB communication). The SEDACOM software is needed for editing and executing user-defined protocols of speed (acceleration, deceleration, customized, etc.). The sessions can be manually stopped independently in each lane or automatically using specific user-defined parameters.

Key Features

- Control unit with integrated touchscreen graphic user interface
- Adjustable belt speed from 0.4 cm/s to 150 cm/s and belt slope from -25 to +25 degrees
- Models from single to five lanes for mice and rats; single lane for rabbits
- **NEW** Save space and money with our new rat/mice convertible treadmills
- **NEW** lid options for tethered animals
- Single lane treadmill models available for indirect calorimetry (respiratory metabolism studies)
- Constant electrical shock intensity (adjustable from 0 to 2 mA)
- Optional air-puff accessory (interchangeable with shock as motivating stimulus to force exercise)
- Optional SEDACOM software for communication with PC for data storage
- Minimal maintenance and easy cleaning

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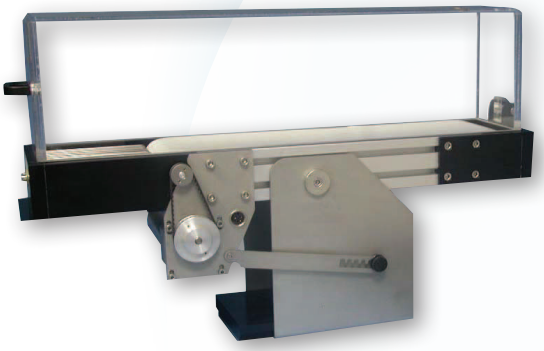
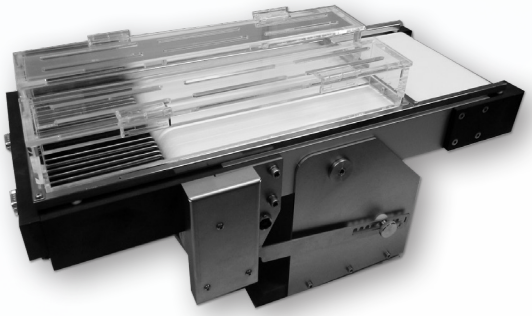
A wide range of models!



76-0897 Airtight Single-Lane for Rat

76-0896 Five-Lane for Mice



76-1183 Two-Lane for Mice

Parameters Measured

- Distance travelled
- Total stimulation duration
- Number of stimulation episodes
- Belt speed
- Trial duration
- Stop condition

Components Included

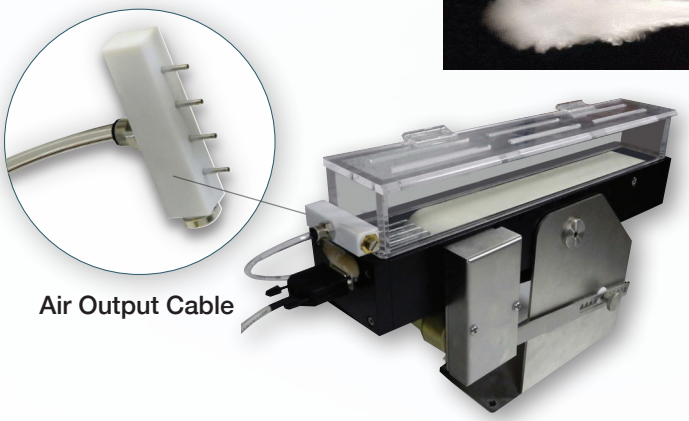
- Treadmill belt
- Lid (except for the 76-0891 model)
- Control unit
- Cables and connectors
- Instruction manual
- Set of spare fuses

Options

- Air-puff stimulation
- SEDACOM software
- OxyletPro for indirect calorimetry studies

Use Air-Puff or Shock Stimulus

The air-puff accessory option uses air instead of shock as an aversive motivating stimulus for a more ethical option to forced exercise (air source not included). The air-puff and shock options are completely interchangeable, enabling the use of one or the other depending on experimental needs.



Air Output Cable

Easily Set Parameters, Visualize and Export Data for Analysis

Optional SEDACOM V2.0 Data Transfer Software provides an easy and convenient way to set study parameters, transfer and visualize data on a computer, and export in a format that simplifies further analysis.

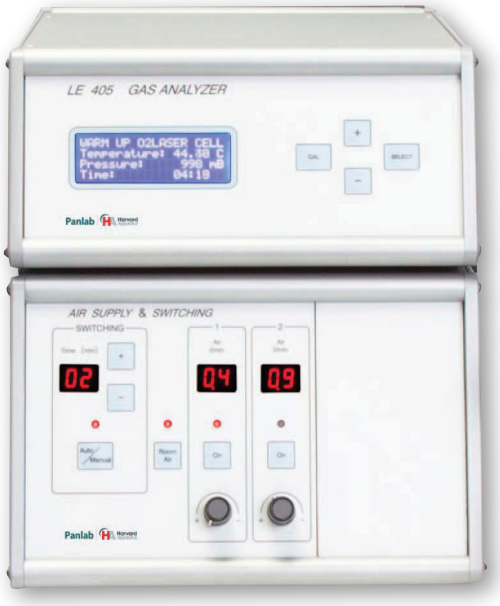
Combine Exercise Studies with Indirect Calorimetry

OxyletPro Treadmill

The OxyletPro system is a modular system enabling forced exercise training on a treadmill combined with indirect calorimetry. Single line treadmill configurations are recommended to integrate respiratory metabolism (O_2 consumption/CO_2 production) with exercise. Modular components include:

- Single lane treadmill configurations optimized for mice and rats, with air-isolated enclosure
- Highly sensitive and stable sensors for O_2 and CO_2
- Laser O_2 sensor for lower influence of air humidity and temperature on the measurement
- Optimized stabilization of the air flow into the chamber for a higher sensitivity of the measurement
- Real-time numerical and graphical visualization of the VO_2 data from the METABOLISM software

The air is previously stabilized through the air reference chamber (LE1334) before being sent to the treadmill chamber through the LE4002FL air flow control unit. The air flow control unit allows a fine regulation of the air flow inside the treadmill. The breathed air coming from the treadmill is finally sent to the LE405 gas analyzer for O_2/CO_2 gas concentration determination.



Gas Analyzer and Air Flow Control Unit

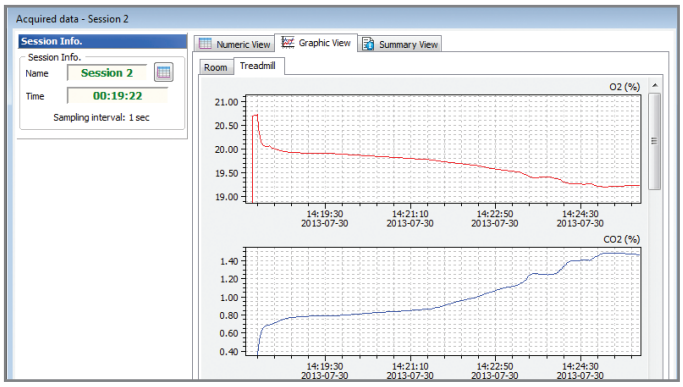
OxyletPro Control Unit Specifications

Model	
LE405 Gas Analyzer O_2 sensor	Laser Diode Absorption technology; Resolution: 0.01%, Accuracy: ± 0.2% (24 h)
LE405 Gas Analyzer CO_2 sensor	Infrared Spectroscopy technology; Resolution: 0.01%; Accuracy <0.3% absolute for reading <5% CO_2; <10% of reading between 5 to 10% CO_2
LE4002FL Air Flow regulator	Air flow: 0.2 to 2.5 l/min

Easy-to-Use METABOLISM Software

Associated METABOLISM software allows the combined evaluation of respiration metabolism and exercise in small laboratory animals.

- Accesses data in digital format directly and simultaneously from the treadmill control unit and the associated gas analyzer.
- Experimental files can be processed to generate reports with directly interpretable integrated data.
- Displayed data table can be saved in Excel format for further analyses.
- The METABOLISM software platform and experimental module for respiratory metabolism are both required for calorimetry analyses.



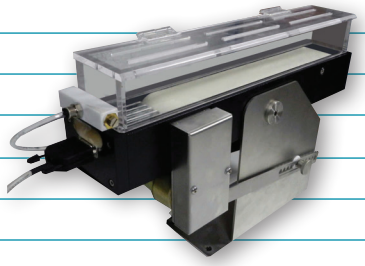
VO_2 and VCO_2 real-time evaluation curves

Treadmill Specifications

Model	Subjects	Speed cm/s (inch/s)	Exercise Area cm (inch)	Control Unit Dimensions cm (inch)	Options
76-1180 LE8700RTS	One (1) Rat (convertible to mouse)	0.4 to 150 (0.16 to 59)	53 x 10 x 15 (21 x 4 x 6)	23 x 29.5 x 11 (9 x 11.6 x 4.3)	76-1187 Mouse Lid 76-1185 Mouse Grid 76-0920 Air Puff
76-1181 LE8700MTS	One (1) Mouse (convertible to rat)	0.4 to 150 (0.16 to 59)	38 x 5 x 5 (15 x 2 x 2)	23 x 29.5 x 11 (9 x 11.6 x 4.3)	76-1186 Rat Lid 76-1184 Rat Grid 76-0921 Air Puff
76-0891 LE8708TS	One (1) Mouse	0.4 to 150 (0.16 to 59)	38 x 5 x 5 (15 x 2 x 2)	23 x 29.5 x 11 (9 x 11.6 x 4.3)	76-0554 Standard Lid 76-0678 OxyletPro Lid 76-0921 Air Puff
76-0897 LE8700CTS	One (1) Rat	0.4 to 150 (0.16 to 59)	53 x 10 x 15 (21 x 4 x 6)	23 x 29.5 x 11 (9 x 11.6 x 4.3)	
76-1182 LE8706RTS	Two (2) Rats (convertible to mice)	0.4 to 150 (0.16 to 59)	2 x (53 x 10 x 15) 2 x (21 x 4 x 6)	23 x 29.5 x 11 (9 x 11.6 x 4.3)	76-1191 Mouse Lids 76-1189 Mouse Grids 76-0923 Air Puff
76-1183 LE8706MTS	Two (2) Mice (convertible to rat)	0.4 to 150 (0.16 to 59)	2 x (38 x 5 x 5) 2 x (15 x 2 x 2)	23 x 29.5 x 11 (9 x 11.6 x 4.3)	76-1190 Rat Lids 76-1188 Rat Grids 76-0924 Air Puff
76-0895 LE8710RTS	Five (5) Rats (convertible to mice)	0.4 to 150 (0.16 to 59)	5 x (53 x 10 x 15) 5 x (21 x 4 x 6)	23 x 29.5 x 11 (9 x 11.6 x 4.3)	76-0313 Mouse Lids 76-0315 Mouse Grids 76-0925 Air Puff
76-0896 LE8710MTS	Five (5) Mice (convertible to rats)	0.4 to 150 (0.16 to 59)	5 x (38 x 5 x 5) 5 x (15 x 2 x 2)	23 x 29.5 x 11 (9 x 11.6 x 4.3)	76-0312 Rat Lids 76-0314 Rat Grids 76-0926 Air Puff
76-0892 LE8715TS	One (1) Rabbit	10 to 80 (4 to 31.5)	73 x 30 x 31 (29 x 11.8 x 12)	23 x 29.5 x 11 (9 x 11.6 x 4.3)	

Treadmills and Options to Meet Your Exact Needs

Order #	Model	Product
Standard Treadmills		
76-1180	LE8700RTS	NEW Single Lane Treadmill for Rat
76-1181	LE8700MTS	NEW Single Lane Treadmill for Mouse
76-0891	LE8708TS	Single Lane Treadmill for Mouse (Lid Ordered Separately)
76-0892	LE8715TS	Single Lane Treadmill for Rabbit
76-1182	LE8706RTS	NEW Double Lane Treadmill for Rat
76-1183	LE8706MTS	NEW Double Lane Treadmill for Mouse
76-0895	LE8710RTS	Five Lane Treadmill for Rat
76-0896	LE8710MTS	Five Lane Treadmill for Mouse
Standard Treadmill Options		
76-1184	LE8750R	NEW Grids for Conversion of the LE8700MTS to Rats Treadmill
76-1185	LE8750M	NEW Grids for Conversion of the LE8700RTS to Mice Treadmill
76-1186	LE8760R	NEW Lids for Conversion of the LE8700MTS to Rats Treadmill
76-1187	LE8760M	NEW Lids for Conversion of the LE8700RTS to Mice Treadmill
76-1188	LE8770R	NEW Grid for Conversion of the LE8706MTS to Rats Treadmill
76-1189	LE8770M	NEW Grid for Conversion of the LE8706RTS to Mice Treadmill
76-1190	LE8780R	NEW Lid for Conversion of the LE8706MTS to Rats Treadmill



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Standard Treadmill Options (Continued)		
76-1191	LE8780M	NEW Lid for Conversion of the LE8706RTS to Mice Treadmill
76-0314	LE8730R	Grid for Conversion of the LE8710MTS to Rats Treadmill
76-0315	LE8730M	Grid for Conversion of the LE8710RTS to Mice Treadmill
76-0312	LE8740R	Lid for Conversion of the LE8710MTS to Rats Treadmill
76-0313	LE8740M	Lid for Conversion of the LE8710RTS to Mice Treadmill
76-0554	LE8708ST	Standard Lane Lid for LE8708TS Single Lane Treadmill, Mouse
-	-	NEW Lids for Tethered Rats/Mice (Contact us for more information).
76-0920	LE8700TSAP	Air-puff Option for Single Lane LE8700RTS Treadmil for Rat
76-0921	LE8708TSAP	Air-puff Option for Single Lane LE8708TS and LE8700MTS Treadmill for Mice
76-0923	LE8706TSAP	Air-puff Option for Double Lane LE8706RTS Treadmill for Rat
76-0924	LE8709TSAP	Air-puff Option for Double Lane LE8706MTS Treadmill for Mice
76-0925	LE8710RTSAP	Air-puff Option for Five Lane LE8710RTS Treadmill for Rat
76-0926	LE8710MTSAP	Air-puff Option for Five Lane LE8710MTS Treadmill for Mice
76-1217	LE8700TSAPC	NEW Single Lane Air-puff Collector for Rat
76-1218	LE8708TSAPC	NEW Single Lane Air-puff Collector for Mice
76-1219	LE8706TSAPC	NEW Double Lane Air-puff Collector for Rat
76-1220	LE8709TSAPC	NEW Double Lane Air-puff Collector for Mice
76-1221	LE8710RTSAPC	NEW Five Lane Air-puff Collector for Rat
76-1222	LE8710MTSAPC	NEW Five Lane Air-puff Collector for Mice
76-0406	SEDACOM V2.0	SEDACOM V2.0 Data Transfer Software (USB connection)
OxyletPro Treadmill Options		
76-0897	LE8700CTS	Single Lane OxyletPro Touchscreen Treadmill for Respiratory Metabolism for Rat
76-0891	LE8708TS	Single Lane Touchscreen Treadmill for Mouse (Lid Ordered Separately)
76-0678	LE8708CO	Airtight OxyletPro Lid for the LE8708TS Single Lane Mouse Treadmill
76-0811	LE4002FL	Air Flow Regulator (for one Treadmill)
76-0810	LE405	O_2/CO_2 Gas Analyser (for one Treadmill)
76-0823	LE1334	Air Reference Chamber
76-0080	METABOLISM V3.0	METABOLISM Software Platform. Needs Metabolism Experimental Module for Calorimetry
76-0145	METAOXY	METABOLISM Software Experimental Module for Calorimetry (Respiratory Metabolism)

Contact us for more information!

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