



TSE Systems GmbH - Siemensstr. 21 - 61352 Bad Homburg - Germany

EUR Quotation

Mashad Medical School
 Dept. of Biochemistry & Nutrition
 Abdolreza Norouzy, PhD
 Paradise Daneshgah
 Mashad 91779-48564
 IRAN

Delivery Address:

Tara Teb Company
 Eskan Towers, Tower No.3, T Floor
 Mr. Napoleon Billou
 Mirdamad Boulevard
 Tehran 1969615471
 IRAN

Record No. 2015-137900
Date 08.04.2014
Customer No. D22812
Your request / order
Your VAT-IdNo.
Phone 0098-511-8002-359
Fax 0098-511-8002-380
Way of dispatch Forwarder
Terms of delivery Net ex factory, plus packing and insurance.



DIN EN ISO 9001

PhenoMaster 8 mice:Cal&Drink&Feed& BW&AC& Act& OPW

Dear Dr. Norouzy,

Thank you very much for your inquiry. We will offer without obligation as follows:

Pos.	Qty.	QU	Cat.-No. / Description	Unit Price	Total Price	TC
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Head Office
 TSE Systems GmbH *
 Siemensstr. 21
 61352 Bad Homburg / Germany
Tel. +49(0)-6172-789-0
Fax +49-(0)6172-789-500

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Bad Homburg HRB 4642
 Hans-Peter Engler
 Jens-Uwe Engler
 DE 114 222 856
 info@TSE-Systems.com
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Banks
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Konto 34 18 688 00
S.W.I.F.T.-Code COBADEFF 501
IBAN DE75 5004 0000 0341 8688 00

Postbank Frankfurt am Main
BLZ 500 100 60
Konto 791 90-606
S.W.I.F.T.-Code PBNKDEFF 500
IBAN DE37 5001 0060 0079 1906 06

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Pos.	Qty.	QU	Cat.-No. / Description	Unit Price	Total Price TC
			<p>TSE PhenoMaster Metabolic Extensive monitoring system for physiological & behavioral phenotyping of lab animals. Initial configuration for 4 mice Automated simultaneous measurement of:</p> <ul style="list-style-type: none"> • Metabolic performance by indirect calorimetry including exercise calorimetry <ul style="list-style-type: none"> - HIGH-SPEED Calorimetry - Automated Gas Calibration Module - PULL Principle • Liquid consumption (also for choice experiments) option: automated access control • Food consumption (also for choice experiments) option: automated access control (PAIRED / YOKED feeding) • Animal body weight • Activity (total activity by InfraMot) • Voluntary Running Wheel activity (options: Enabled / Disabled, Automated Workload Control) • Operant behavior tasks (learning & memory) <p>Extendable by automated simultaneous measurement of:</p> <ul style="list-style-type: none"> • Telemetry • Urine & Feces production • Body core temperature and other parameters with third party telemetry systems • Motor skills with alternative special Running Wheel drums • Forced Running Wheel, programmable speed profiles • Treadmill, programmable speed profiles <p>2 years ALL-IN Warranty & Service Package by TSE Systems, extendable, including</p> <ul style="list-style-type: none"> • free of charge software updates & unlimited software licences for analysis • free of charge support, repair or replace; by phone, e-mail, remote or on-site to our choice 		
				amount carried over	0,00

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BENEFITS & UNIQUE FEATURES:

- Most flexible technology of highest quality on the market
- Unique turn-key modular combination systems for rats & mice, for short & long term studies
- Industrial computer system, rack, installation & training included

- Time saving, economic use of standard home cages
 - > shortest habituation times
 - > unbiased, stress-free animal behavior
 - > cages easy and quick to assemble & disassemble
 - > cage lower parts easy to clean (Macrolon) in washing machines
 - > cages inexpensive to replace
- Universal use of measuring units for liquid / food / body weight
 - > supply of liquid and food from the cage top (hanging containers) similar to standard home cages
- Easy access to liquid / food for young or old or obese mice and rats
 - > height adjustable containers according to animal size
- Food containers for pellets / crumbling / pasty / powder food
 - > containers easy to refill & clean
- Versatile combination of up to 8 measuring units per cage
 - > liquid / food choice experiments
- Automated liquid / food access control per time / amount / activity / exercise (e.g. for PAIRED / YOKED feeding)
- Urine / feces / liquid / food / body weight measurement in dedicated metabolic cages

- Infrared light-beam activity monitoring frames in three dimensions X,Y,Z, different sizes and spatial resolution available (ActiMot2)
 - > universal use of one sized frame for rats and mice
 - > Only one frame necessary for home cage activity, Open Field, Light / Dark box, Hole Board, etc.
- Calorimetric parameters / metabolic performance measured by indirect open-circuit calorimetry (CaloSys)
 - > highest accuracy through individual mass flow controller for each cage.
 - > high speed gas drying unit (Peltier principle) included
 - > high-speed or standard configurations available, measuring time per cage approx.: 40 sec (high speed) or 2.5 min (standard).
- Exercise calorimetry by CaloTreadmills or CaloWheels with programmable speed profiles

- Voluntary Running Wheels with automated motor skill test and work load control available (new paradigms)

- Modular operant wall for various operant behavior tasks acc. to Skinner
 - > wheel running as novel reward quality in operant behavioral task
 - > stimulus / response elements, automated doors, light, sound, pellet dispenser,

amount carried over

0,00

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etc.

- Telemetry systems can be integrated
- Open software platform for future extensions, add-on of new features
- 2 years ALL-IN Warranty & Service Package by TSE Systems, extendable, including
 - > free of charge software updates & unlimited software licences for analysis
 - > free of charge support, repair or replace; by phone, e-mail, remote or on-site to our choice

amount carried over 0,00

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1	1,00Piece	258000-PM-008	25.502,00	25.502,00 0
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PhenoMaster Control System for up to 8 Cages, extendable.
 For simultaneous Control, Supervision and Evaluation of:

- CaloSys Indirect Open Circuit Calorimetry System
- Drinking / Feeding / Urine / Feces / Body Weight Monitoring System
- Access Control Device for PAIRED / YOKED feeding or other purposes
- Activity Monitoring System (X, XY, XZ, XYZ or Total Activity)
- Wheel Activity Monitoring System with Access Control (enabled/disabled), Workload Control and Motor Skill Testing
- Integration Platform for third party telemetry systems (e.g. for monitoring of body core temperature)
- Integration of Operant behavioral tasks (learning & memory) with various kinds of rewards
- Etc.

Complete and consisting of:

- Master Software Platform for WINDOWS
- Master Interfacing System
- Master Control System
- Industrial Computer System with Flat Screen & Printer

2 **Indirect Calorimetry**

Multi-Purpose indirect open circuit Calorimetry System CaloSys for measurement of metabolic performance in lab animals (rodents, etc.)

- CaloCage: Home Cage environment (short / long term)
Adaptor Kits for drinking bottles / feeding containers available
- Metabolic Cage (airtight)
Adaptor Kits for drinking bottles / feeding containers available
- CaloCage & Wheel: Home Cage with integrated voluntary Running Wheel
- CaloWheel: Forced Running Wheel with sealed housing, programmable speed profiles
- CaloTreadmill: Treadmill with sealed housing, programmable speed profiles, stimulus option

High-speed or standard configurations available, measuring time per cage approx.: 40 sec (high speed) or 2.5 min (standard).

High-speed gas drying unit (Peltier principle) included in all TSE calorimetry systems. Highest possible calorimetric accuracy through individual mass flow controller for each CaloCage.

Can be combined with other systems of the LabMaster / PhenoMaster research platform.

- WITH High-Speed Gas Sensoring
- WITH Automated Gas Calibration Module
- PULL Principle

extendable to up to 64 cages, consisting of (for connecting to computer or LabMaster / PhenoMaster Control):

amount carried over 25.502,00

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Pos.	Qty. QU	Cat.-No. / Description	Unit Price	Total Price TC
2.1	1,00 Piece	994620-CSP-08	58.902,00	58.902,00 0

CaloSys Professional for 8 cages
Individual automatic flow control in each cage
 Indirect open circuit calorimeter system (VO₂ / VCO₂ / Temperature) for lab animals (mouse up to dog) in the home cage.
 Measurement of oxygen consumption (VO₂), carbon dioxide production (VCO₂) and temperature.
 Recording of:
 • Measuring channel
 • Date & time
 • Flow rate in ml/min or l/min (=output of mass flow controller)
 • O₂ concentration in % (measuring air)
 • CO₂ concentration in % (measuring air)
 • O₂ concentration in % (reference air)
 • CO₂ concentration in % (reference air)
 • dO₂ difference in % (reference air to measuring air)
 • dCO₂ difference in % (measuring air to reference air)
 • Temperature
 Calculation of:
 • VO₂ ml/h*kg or W/kg
 • VCO₂ ml/h*kg or W/kg
 • Respiratory Exchange Ratio RER, VCO₂/VO₂
 • Heat kcal/h*kg or W/kg
 • Grouping of the datas after experiment or parameter
 • Graphical shown
 The time interval can be adjusted. Each measuring channel can be switched on or off individually. All data will be collected via the Windows-Software and are ready for further processing with standard statistic- or graphic-software (Excel, etc.). The maximum experiment time is 2409 hours = 10 days (expandable).
 Complete and consisting of (for connecting to a PC):
 • Air supply pump
 • 8 Mass flow controllers
 technical datas:
 • Operation range 0 to 1 SLPM (for Mice) or 0 to 5 SLPM (for Rats).
 Other ranges also available.
 Please specify required size when ordering.
 (SLPM = standard litre per min)
 • Resolution 0.0005 SLPM / 0.002 SLPM
 • Repeatability ± 0.1%
 • Linearity ± 0.1%
 • Response time < 0.3 sec
 • High speed gas drying unit
 • Air valve multiplexer for 8 measuring channels and 1 reference channel, extendable to up to 64 measuring channels
 • Air sample pump
 • CO₂ measuring unit
 technical datas:
 • Principle of operation infrared twin-jet
 • Operation range 0 to 2 Vol. %

amount carried over 84.404,00

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Pos.	Qty.	QU	Cat.-No. / Description	Unit Price	Total Price	TC
			<ul style="list-style-type: none"> • Temperature range 0 to 45 °C • Resolution 0,001% • Accuracy ± 0,04% • Response time 1 sec • Humidity 0 to 100% non condensing • O2 measuring unit technical datas: <ul style="list-style-type: none"> • Measuring Zirconia cell • Operation range 18 to 22 Vol. % • Temp.-range 0 to +50 °C • Resolution 0,001% • Accuracy ± 0,05% • Repeatability ± 0,05% • Drift less 0,05% in 24 hours • Response time 1 sec • Humidity 10 to 95 % non condensing • Lifetime > 30.000 operation hours • Calibrated • Control-Unit for connecting all components • Special interface unit CaloSys-08 • Software package CaloSys-08 for Windows Extendable: up to 64 place system. Please order separate: animal cages.			
2.2	1,00	Piece	994620-CS-HSP-01 CaloSys High Speed Sensing Extension With gas sensors and air drier unit for shorter sample interval times of approx. 40 seconds per cage. Complete with connection set for calibration gas (tubing connectors, flow reduction valve, t-pieces, hose clips, tubing). Price = difference to Standard Sensing Unit.	28.659,00	28.659,00	0
2.3	1,00	Piece	994620-CS-AC CaloSys AutoCalibration Unit automatic calibration of O2 / CO2 Sensors. Consisting of: <ul style="list-style-type: none"> • AutoCalibration Control Unit • AutoCalibration Software extension Tool for integration into PhenoMaster / LabMaster Software • USB Connection to PC or Notebook / WINDOWS 7 or XP The calibration gas bottles will be connected to the AutoCalibration control unit, which is connected to the PhenoMaster system. The CaloSys Gas Sensing Unit (for standard or high speed gas sensors) will be calibrated automatically per PhenoMaster software. It directs different calibration gases from the calibration gas bottles to the sensor unit in regular, user-defined intervals. A Log-File will save all calibration changes. Advantages: <ul style="list-style-type: none"> • less time consuming and improving work load • calibration will be very easy, no „expert“ training required • reduction of errors caused by manual calibration • traceability and comparability of different calibrations due to log-file • higher accuracy and higher reliability of calibration due to objective, computer controlled procedure • optimization of expensive calibration gas usage 	13.095,00	13.095,00	0
				amount carried over	126.158,00	

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Pos.	Qty. QU	Cat.-No. / Description	Unit Price	Total Price TC
2.4	1,00Piece	994620-FC Flowmeter System for CaloSys for calibration	1.696,00	1.696,00 0
2.5	8,00Piece	994620-CS-KM-4 CaloCage Mouse GREEN LINE, for CaloSys Professional. With <ul style="list-style-type: none"> • special lid with sandwich construction for optimized air circulation, made from macrolone - autoclavable. • lid with 4 openings for up to 4 measuring units. One opening usable for swivel technology. • 4 universal mounting devices with 4 sealing caps, for use with up to 4 measuring units. • air inlet connector and air outlet connector for selectively Push- or Pull-Mode. • welfare warranty • outlet connector for sample air • temperature probe for measurement of inner cage temperature • integrated special hook technology (for use with TSE racks and TSE climate chambers). • cage lower part: standard home cage type II Green Line, dimensions 371 x 189 x 126 mm (LxWxH), autoclavable. 	2.098,00	16.784,00 0
2.6	1,00Piece	994620-KK-O2/CO2-HS Calibration kit f.CaloSys High Speed Sensor System for Calibration of High Speed O2 and CO2 Sensors Consisting of: <ul style="list-style-type: none"> • 1 gas bottle with compressed atmospheric air in breathing air quality Specifications: <ul style="list-style-type: none"> • Breathing air quality according to DIN EN 12021 (very dry, filtered, compressed atmospheric air) • Bottle size 50 litres (geometric), filling pressure 200 bar • 2-stage pressure reduction valve for gases of high purity (>5.0), adjustable working pressure 0 – 5 bar • Butterfly valve • 1 gas bottle with pure nitrogen 5.0 Specifications: <ul style="list-style-type: none"> • Purity 99.999 % nitrogen • Bottle size 20 litres (geometric), filling pressure 150 bar • 2-stage pressure reduction valve for gases of high purity (>5.0), adjustable working pressure 0 – 1 bar • 1 gas bottle with 0.95 % Carbon dioxide in nitrogen Specifications: <ul style="list-style-type: none"> • Accuracy ± 1 % relative • Bottle size 10 litres (geometric), filling pressure 150 bar • 2-stage pressure reduction valve for gases of high purity (>5.0), adjustable working pressure 0 – 1 bar • Installation set including tubings and adapters Please observe general handling rules and procedures for pressurized bottles (positioning, securing, connection, operation).	12.423,00	12.423,00 0
2		Indirect Calorimetry		131.559,00

amount carried over 157.061,00

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3		<p>Drinking & Feeding & Body Weight Monitoring</p> <p>Multi-Purpose Drinking / Feeding / Body Weight / Urine / Feces Measuring System For lab animals (rodents, etc.), for continuous automatic</p> <ul style="list-style-type: none"> • liquid consumption measurement (also for choice experiments) option: automated access control • food consumption measurement (also for choice experiments) option: automated access control (PAIRED / YOKED feeding) • animal body weight measurement <p>Versatile combination of up to 8 measuring units per cage, up to 512 cages per measuring system advanced. Can be combined with other systems of the LabMaster / PhenoMaster research platform. 8 cage system, each cage with 3 measuring units, extendable, consisting of (for connecting to computer or LabMaster / PhenoMaster Control):</p>		
3.1	24,00Piece	<p>259998-ADPT/DR-FE-WE-01</p> <p>DRINKING/FEEDING MONITOR Adaptor Kit DFW</p> <p>Adaptation of 1 sensor to cage.</p> <p>Suitable for:</p> <ul style="list-style-type: none"> • Drinking Sensor • Feeding Sensor • Body Weight Sensor <p>Required: 1 Adaptor Kit per sensor.</p>	244,00	5.856,00 0
3.2	8,00Piece	<p>259998-SEN/FED</p> <p>DRINKING/FEEDING MONITOR Feeding Measuring Unit Advanced</p> <p>Consisting of:</p> <ul style="list-style-type: none"> • Sensor for Feeding Measuring Unit Advanced for quantitative and chronological measurements. This Sensor can be also used for <ul style="list-style-type: none"> • Drinking Measuring Unit (with separate bottle) • Animal Body Weight Measuring Unit (with separate housing for animal body weight measurement) • Basket (please specify size: 50, 100, 200 g) • Data cable (please specify length: 4, 5, 6, 8 or 10 m) 	1.266,00	10.128,00 0
3.3	8,00Piece	<p>259998-SEN/DRI</p> <p>DRINKING/FEEDING MONITOR Drinking Measuring Unit Advanced</p> <p>Consisting of:</p> <ul style="list-style-type: none"> • Sensor for Drinking Measuring Unit Advanced for quantitative and chronological measurements. This Sensor can be also used for <ul style="list-style-type: none"> • Feeding Measuring Unit (with separate feeding basket) • Animal Body Weight Measuring Unit (with separate housing for animal body weight measurement) • Bottle (please specify size: 50, 100, 200 ml) • Data cable (please specify length: 4, 5, 6, 8 or 10 m) 	1.266,00	10.128,00 0
			amount carried over	183.173,00

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Pos.	Qty. QU	Cat.-No. / Description	Unit Price	Total Price TC
3.4	8,00Piece	259998-SEN/BW DRINKING/FEEDING MONITOR Animal Body Weight Measuring Unit Advanced Consisting of: • Sensor for Animal Body Weight Measuring Unit Advanced for quantitative and chronological measurements. This Sensor can be also used for • Drinking Measuring Unit (with separate bottle) • Feeding Measuring Unit (with separate feeding basket) • Housing for animal body weight measurement (please specify: Mouse or Rat) • Data cable (please specify length: 4, 5, 6, 8 or 10 m) Notice: the sensor can be used for Mice or Rats only. Please specify species as well as animal body volume and weight when ordering.	1.266,00	10.128,00 0
3.5	1,00Piece	259998-C-24 DRINKING/FEEDING MONITOR Control Unit 24-Channel, extendable to up to 32 channels. For connection of up to 24 sensors in any composition for quantitative and chronological measurements: • Drinking sensors for measuring liquid consumption • Feeding sensors for measuring food consumption • Animal Body Weight sensors for measuring body weight • Urine sensors for measuring urine production • Feces sensors for measuring feces production Complete and comprising: • Control Unit System • Special Interface System Integrable into LabMaster / PhenoMaster System. Requires: Computer or LabMaster / PhenoMaster Control System as well as 24 Software Licences 259998-S-001. Up to 16 control units with 32 channels each (= 512 channels) can be integrated into 1 system.	8.274,00	8.274,00 0
3.6	24,00Piece	259998-S-001 DRINKING/FEEDING MONITOR Software Licence 1 Channel. For 1 sensor in any composition for quantitative and chronological measurements: • Drinking sensor for measuring liquid consumption • Feeding sensor for measuring food consumption • Animal Body Weight sensor for measuring body weight • Urine sensor for measuring urine production • Feces sensor for measuring feces production Integrable into LabMaster / PhenoMaster System. Required: 1 Software Licence per sensor.	280,00	6.720,00 0
3		Drinking & Feeding & Body Weight Monitoring		51.234,00

amount carried over 208.295,00

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Pos.	Qty.	QU	Cat.-No. / Description	Unit Price	Total Price	TC
4			Activity Monitoring XYZ Multi-Purpose Activity Monitoring System ActiMot2 - Infrared light-beam technology - For lab animals (rodents, etc.), usable for <ul style="list-style-type: none"> • Home Cage activity XY and Z (rearing) • Open Field experiments XY and Z (rearing) • Light / Dark box experiments • Place Preference experiments • Hole Board experiments Possible frame sizes (inside dimensions): 289*245mm, 515*294mm, 530*390mm, 515*515mm. Possible distances between sensors: 15 mm, 30 mm, 45 mm, 60 mm, 90 mm, 120 mm. Can be combined with other systems of the LabMaster / PhenoMaster research platform. <ul style="list-style-type: none"> • 8-stations system ActiMot2 (X,Y,Z), with detailed tracing analysis and rearing extendable to up to 512 measuring stations, consisting of (for connecting to computer or LabMaster / PhenoMaster Control):			
4.1	8,00	Piece	302021-390*245-015-XY ActiMot2 XY-Frame - 390*245mm, 15mm IR spacing. For Standard Home Cage Mouse Type GREEN LINE. Motility Measuring Unit for detecting the horizontal activity (XY-axis). Technical data: <ul style="list-style-type: none"> • Inner frame size: 390 * 245 mm • IR sensors on the X-axis: 25 • IR sensors on the Y-axis: 16 • Distance between IR sensors: 15 mm. 	4.674,00	37.392,00	0
4.2	8,00	Piece	302021-390*245-015-Z ActiMot2 Z-Frame - 390*245mm, 15mm IR spacing. For Standard Home Cage Mouse Type GREEN LINE. Rearing Indicator Extension Unit for 302021-390*245-015-X(Y) for detecting the vertical (rearing or jumping) activity (Z-axis). Technical data: <ul style="list-style-type: none"> • Inner frame size: 390 * 245 mm • IR sensors on the Z-axis: 25 • Distance between IR sensors: 15 mm. Requires: 302021-390*245-015-X(Y) ActiMot2 X(Y)-Frame	2.542,00	20.336,00	0
4.3	8,00	Piece	302021-390*245-TP Template for ActiMot2 Frame 390*245mm. For Standard Home Cage Mouse Type GREEN LINE. For fixation of a cage in the ActiMot2 frame.	92,00	736,00	0
				amount carried over	266.759,00	

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Pos.	Qty. QU	Cat.-No. / Description	Unit Price	Total Price TC
4.4	1,00Piece	302021-C-08 ActiMot2 Control Unit for 8 ActiMot2 Measuring Units, extendable to up to 32 Measuring Units. Complete and comprising: • Control Unit System • Special Interface System Integrable into LabMaster / PhenoMaster System. Requires: Computer or LabMaster / PhenoMaster Control System as well as Software 302021-S-08.	4.830,00	4.830,00 0
4.5	1,00Piece	302021-S-08 ActiMot2 Software Package for 8 ActiMot2 Measuring Units, extendable. Complete and comprising: • Software Package Integrable into LabMaster / PhenoMaster System. Required: Computer or LabMaster / PhenoMaster Control System as well as Control Unit 302021-C-08.	4.059,00	4.059,00 0
4		Activity ActiMot2 XYZ		67.353,00

amount carried over 275.648,00

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Pos.	Qty.	QU	Cat.-No. / Description	Unit Price	Total Price	TC
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5 **Multifunctional Running Wheel System**

Multifunctional Running Wheel Systems

- Voluntary Running Wheels
- Forced Running Wheels (motor driven) for laboratory animals (rodents, etc.).

Voluntary Running Wheels usable for:

- Running Wheel activity in home cages or other environments (short-term or long-term experiments; circadian rhythms)
- Motor Skill Tests (variable distance between rods)
- Time controlled and distance controlled function "Enabled / Disabled" (not when used with counter)
- Automated Workload Control (not when used with counter)
- Operant control in combination with Operant Wall

Forced Running Wheels usable for:

- Forced Wheel Running manual controlled
- Forced Wheel Running computer controlled with programmable speed profiles
- Exercise calorimetry (CaloWheel) manual controlled
- Exercise calorimetry (CaloWheel) computer controlled with programmable speed profiles

Can be combined with other systems of the LabMaster / PhenoMaster research platform.

- 32 Voluntary Running Wheels system,

WITH

- Time controlled and distance controlled function "Enabled / Disabled"
- for "Paired Running" experiments - new paradigm
- also: for "Running for Food" - new paradigm
- also: for "Running as Reward" - new reward quality

extendable to up to 512 Wheels, consisting of (for connecting to stand-alone control, computer or LabMaster / PhenoMaster Control):

5.1	8,00	Piece	303400-RW-V-M-BU	561,00	4.488,00	0
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Basic Unit for Voluntary Running Wheel Mouse without drum.

For built into home cage (please send sample cage when ordering) or as stand-alone version.

For connecting to control-unit/software package or counter.

A special sensor observes the direction of the turns and the rotation with a resolution of 90° (only if connected to control-unit/software-package).

Available drums:

- Drum Standard
- Drum for Motor Skill Tests

amount carried over 280.136,00

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Pos.	Qty. QU	Cat.-No. / Description	Unit Price	Total Price TC
5.2	8,00Piece	303400-RW-V-M-D1-S Drum Standard for Voluntary Running Wheel Mouse. For connecting to basic unit. For measuring spontaneous activity on Mice. The wheel is fixed on one side and can be easily removed for cleaning purposes. Dimensions: • Diameter drum: 115 mm • Width drum: 40 mm • Diameter stainless steel grid rods: 4 mm • Distance between rods: 8.9 mm (center to center) Other dimensions on request. Also available: • Drum for Motor Skill Tests • Wheels for Rats Options: • Enabled / Disabled function • Electronic brake for automated workload control (includes Enabled / Disabled function) • Various stimuli (self stimulation, foot shock)	840,00	6.720,00 0
5.3	8,00Piece	303400-RW-V-EDF Enabled / Disabled Function Extension unit for Voluntary Running Wheels. Requires: control unit & software package Running Wheel. For Running Wheels inside CaloCages:	310,00	2.480,00 0
5.4	8,00Piece	303400-ADPT RUNNING WHEEL cage adapter kit Rebuild for a cage lid. Necessary, if the Running Wheel is supposed to be placed into a cage, but too large.	321,00	2.568,00 0

amount carried over 291.904,00

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Pos.	Qty. QU	Cat.-No. / Description	Unit Price	Total Price TC
5.5	1,00 Piece	303400-C-ACT/08 ACTIVE RUNNING WHEEL Control Unit for 8 Active Running Wheel. Equipped with electronically-controlled motor speed control with feedback for reliable and consistent speeds. Speed is adjustable up to 60rpm (approx. 50m/min (rat wheel) and 22m/min (mouse wheel)). The control unit can be operated in manual or PC controlled mode. In manual mode speed is set with a potentiometer on the front panel individually for each wheel, current speed is shown on the integrated digital display (in rpm, 1 decimal place; 1 display for each wheel). Rotation direction is preset with a toggle switch. In PC controlled mode speed is predefined in the optional Active Running Wheel software package (stand-alone or integrated into the PhenoMaster/LabMaster system) that allows to define individual speed profiles. Complete and comprising: • Control unit with integrated interface system for optional PC control • Connecting cables to wheel Optional: • Software Package "Active Running Wheel" 303400-S-ACT-08 Integrable into the PhenoMaster/LabMaster system.	8.485,00	8.485,00 0
5.6	8,00 Piece	303400-S-001 RUNNING WHEEL Software Licence 1 Channel. For 1 Running Wheel, complete and comprising: • Software Package with all modules, e.g.: • Standard parameters • Motor Skill Testing • Enabled / Disabled Function • Automated Workload Control Integrable into LabMaster / PhenoMaster System. Required: 1 Software Licence per Running Wheel.	289,00	2.312,00 0
5		Multifunctional Running Wheel System		27.053,00

amount carried over 302.701,00

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Pos.	Qty. QU	Cat.-No. / Description	Unit Price	Total Price TC
6		Operant wall Mouse Operant Wall for Rats for PhenoMaster, including • Pellet Dispenser • two Nose Poke Response Modules (Operant Control) • two Stimulus Lamps • Loudspeaker for Automated Testing of Basic Cognitive Functions.		
6.1	8,00Piece	259900-OW-PM Operant Wall for PhenoMaster For built into home cage (please specify cage type). Modular structure for connecting a wide range of function elements, e.g.: • Stimulus elements • House Light • Speaker • Sonalert • Stimulus-Lamps or Stimulus-Lamp-sets • Olfactory Moduls • Response elements • Reaction-Keys • Nose Poke modules • Reinforcer elements • Pellet Dispenser (Pellet / Liquid) • Running Wheel • Air Puff For connecting to control-unit 259900-C-PM-XX & software package 259900-S-PM-XX.	795,00	6.360,00 0
6.2	8,00Piece	259900-PD-20 Pellet Dispenser for Pellets 20 mg (Mouse).	1.391,00	11.128,00 0
6.3	4,00Pack	259901-PEL-45/50T Precision-Pellets 45 mg, dustless BioServ Purified Formula For TSE Pellet Dispenser (45 mg) and other pellet dispensers. Pack = 50.000 Pellets. Quantity discount: • from 2 packs: 10 % • from 4 packs: 15 % • from 8 packs: 18 % • from 10 packs: 23 % • from 20 packs: 33 %	353,00	1.412,00 0
6.4	16,00Piece	259900-RRT-R Retractable (automatic) Response Lever Rat.	526,00	8.416,00 0
6.5	16,00Piece	259900-ST-S Stimulus Lamp Triple-Set (red, green, yellow).	264,00	4.224,00 0

amount carried over 334.241,00

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Pos.	Qty. QU	Cat.-No. / Description	Unit Price	Total Price TC
6.6	8,00Piece	259900-PD/HED-IR/M Head Entry Detector for Pellet Dispenser for Mouse. Type: infra-red beam detector.	85,00	680,00 0
6.6	1,00Piece	259900-C-08 Operant Behavior Control Unit & Software for 8 Skinner Boxes, fully automatic, extendable. Complete and comprising: • control unit (complete with power supply and connectors for 1 audio generator, 1 noise generator and a bus for up to 8 shocker modules) • special interface system OBS-08 • software package OBS-08 for WINDOWS Requires: PC.	29.812,00	29.812,00 0
6.7	1,00Piece	259900-S-PM-08 Software Package for 8 Operant Walls (PhenoMaster) extendable. Complete and comprising: • Software Package Integrable into PhenoMaster System. Required: Computer or PhenoMaster Control System as well as Control Unit 259900-C-PM-08.	5.986,00	5.986,00 0
6		Operant wall Mouse		68.018,00

amount carried over 370.719,00

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Pos.	Qty. QU	Cat.-No. / Description	Unit Price	Total Price TC
7	1,00 Piece	5 Dedicated Rack for PhenoMaster for 8 Cages Type III with up to each 3 weighing sensors and with large Activity Frames ActiMot2 for Home cAges Type III. Made of stainless steel, with integrated special hook technology for most convenient handling of the PhenoMaster instrumented cage lids, for quick access to animals in lower home cage parts, for convenient and low-stress transfer of animals from home cages or from training cages into the measurement system. Additionally for each PhenoMaster System: Dedicated Housing for all Control Units and PC System with door from glass.	2.980,00	2.980,00 0
Alternative / Optional				
8	1,00 Piece	994640-PM-AM-01 Alarm Module PhenoMaster / LabMaster • Control unit for alarm with built-in uninterruptible power supply (UPS) • USB Connection to PC or Notebook / WINDOWS 7 or XP • Software module • Cable set	3.273,00	
9	1,00 Piece	999901-12-04 Installation / Training on-site, including all travel costs.	4.920,00	4.920,00 0

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			Subtotal EUR	378.619,00
less Resales Discount	40,00 % of	373.699,00		-149.479,60
plus Packing				4.009,94 0
plus Customs Clearance				100,00 0
Subtotal				233.249,34
plus VAT with tax code	0 0,00 % of	233.249,34		0,00
			TOTAL EUR	233.249,34

Terms of payment:

Payment: Prepayment or L/C

Different payment terms, if the package „Installation/Training„ is included:

- 90% of invoice due within 14 days of shipment/invoice date.
- 10% of invoice due within 14 days of the signed off installation/training but not later than 90 days from shipment/invoice date.

TSE Systems instrumentation are covered by our 2 years ALL-IN Premium Warranty & Service Package:

- free of charge support, repair or replace; by phone, e-mail, remote or on-site as needed
- free of charge use of our 24/7 support hotline
- free of charge software updates
- unlimited software licenses for analysis for most products (ask for product list)

This ALL-IN Premium Warranty & Service Package can be extended.

All banking charges and fees are to be paid by the purchaser.

Delivery time: On request

Validity of quotation: 90 days

Positions marked with "optional / alternative" are not included in the TOTAL.

If fees and charges for freight, insurance and packing are shown, they do not refer to the positions marked with "optional / alternative".

Please do not hesitate to contact us, if you have further questions.

We are looking forward to hearing from you.

Sincerely yours,
TSE Systems GmbH

Ekaterina Reinelt

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