

ERGO-EXPRESS®

Server Rack Tug

Specifications



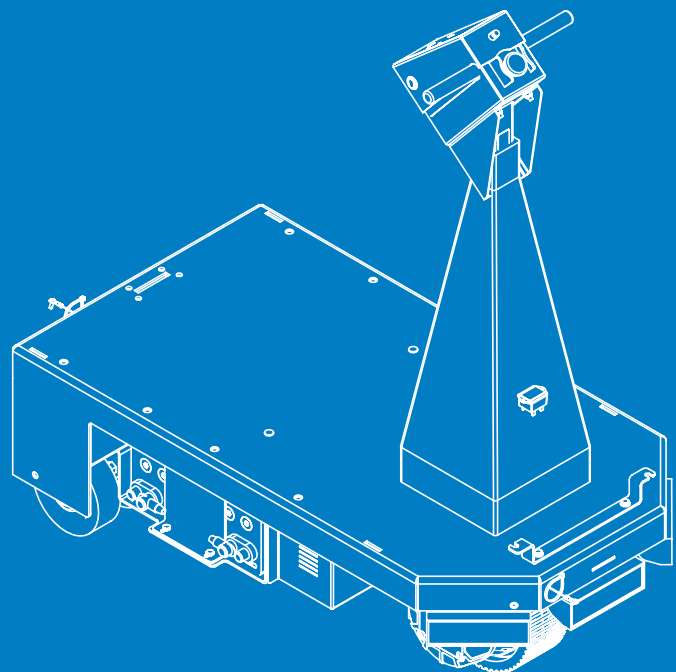
WEBSITE
www.phswest.com

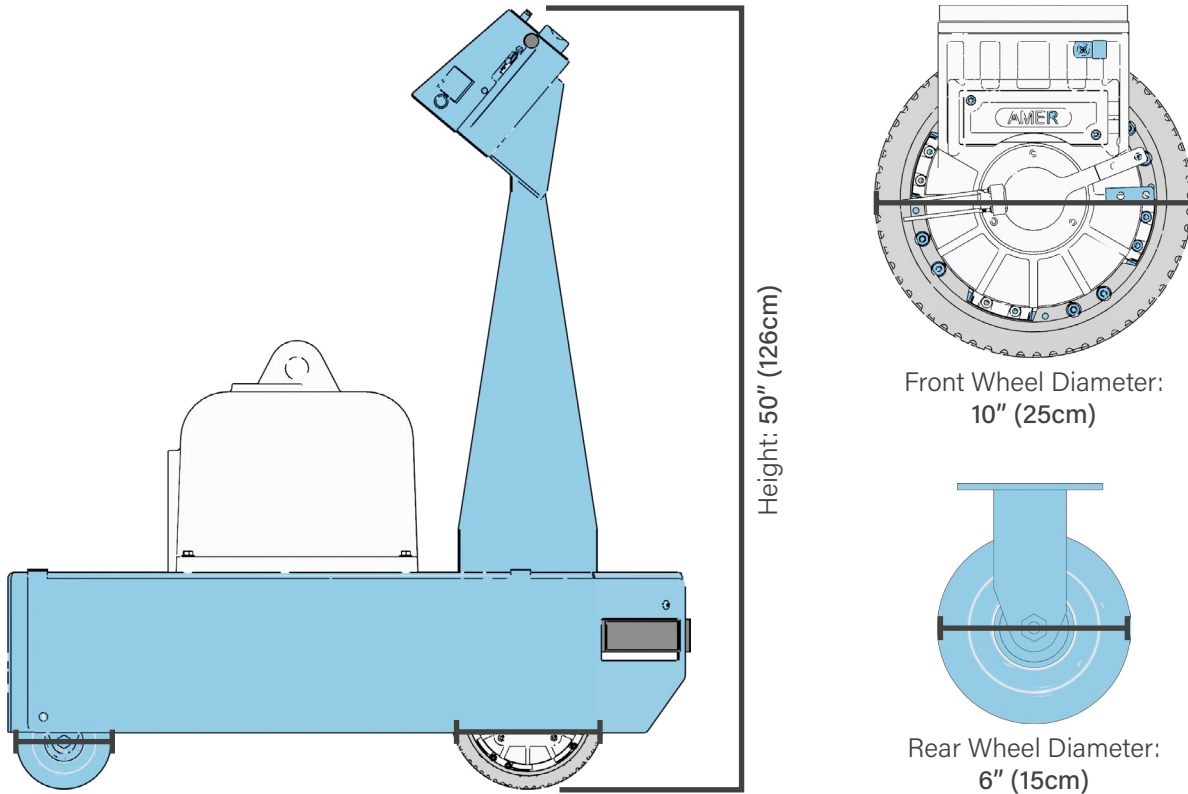
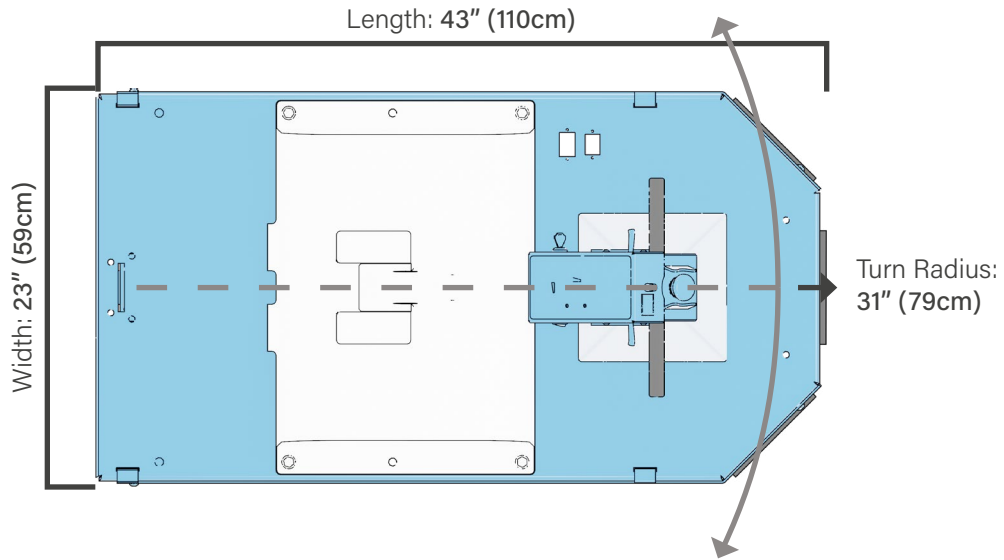


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ADDRESS
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GENERAL

SPECIFICATIONS	IMPERIAL	METRIC
Towing Capacity	5,000 Lb	2,268 kg
Total Unit Weight	1,287 Lb	585 kg
Shipping Weight	1,875 Lb	852 kg
Minimum Aisle Width	24"	61 cm

All specifications subject to change without notice.



BATTERY

BCI GROUP SIZE	MODEL DESCRIPTION	NOMINAL VOLTAGE	LENGTH		WIDTH		CONTAINER HEIGHT		TERMINAL HEIGHT		WEIGHT	
			IN	MM	IN	MM	IN	MM	IN	MM	LB	KG
27	12CRV100	12	13.0	330	6.75	171	8.12	206	9.38	238	58	25.9

COVER AND CONTAINER MATERIAL	CASE TO COVER SEAL METHOD
Polypropylene	Heat Seal

AMPERE HOUR CAPACITY (Ah)					DISCHARGE CAPACITY MINUTES					KWH (kWh)	INT RES.	SHORT CIRCUIT CURRENT
CCA	CA	100 Hr	20 Hr	5 Hr	75A	25A	20A	15A	5A	100Hr	80°F/27°C	AMPERES
600	750	105	98	80	43	170	223	316	1200	1.22	3.45	3370

STATE OF CHARGE PERCENTAGE	100%	75%	50%	25%	0%
Open Circuit Voltage - Cell	2.14	2.09	2.04	1.99	1.94
Open Circuit Voltage - Battery	12.84	12.54	12.24	11.94	11.64

OPERATING TEMPERATURE RANGE	SELF DISCHARGE	TERMINAL AND TORQUE SPECIFICATIONS	BEST PRACTICES
<p>Maximum limit -4°F to 120°F (-20°C to -49°C) with proper temperature compensation controls. Lead acid batteries are temperature sensitive: refer to the temperature versus capacity projection chart to identify available capacity at the application operating temperature.</p> <p>Application note: Maintain a state of charge greater than 60% when operating batteries at temperatures below 32°F (0°C).</p>	<p>Approximately 3% per month at 80°F (27°C).</p> <p>Rate of self discharge will vary depending on storage temperature.</p>	<p>SAE/Automotive Terminal: 50 to 70 in-lb/6 to 8 Nm</p> <p>Stainless Threaded Terminal: 100 to 120 in-lb/11 to 14 Nm</p> <p>Fastener Type: Positive 3/8"-16 S/S Keps Hex Nut/Star Washer</p> <p>Negative 5/16"-18 S/S Keps Hex Nut/Star Washer</p> <p>Battery terminal connections should be secured and tight at all times. Replace torn or damaged cabling or connectors.</p>	<p>Safety is Your Responsibility! Keep sparks, flames and cigarettes away from batteries at all times. Maintain good ventilation when working on or charging batteries.</p> <p>Keep batteries and terminal connections clean, dry and free of dirt and corrosion. Do not tamper with vent structures. Optimize the life of your batteries by limiting duty cycle depth of discharge to 75% or less.</p> <p>Charging service must be performed with equipment configured to support the charging recommendations herein. Opportunity charging service can be performed when batteries are no more than 50% discharged. Batteries must be fully recharged after the termination of duty cycle usage.</p>

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BATTERY
CYCLIC CHARGING

CONSTANT VOLTAGE CHARGING	
Cycle Charge: 14.40-14.64 V	Temperature Correction: ±3 mV/°C
Float Charge: 13.20 V	Recommended Charge Current: 12 Amperes
	Maximum Charge Current: 30 Amperes

* Cyclic applications exceeding 50% depth-of-discharge may require different charger voltage set points.

DEPTH OF DISCHARGE EFFECT ON CYCLE LIFE

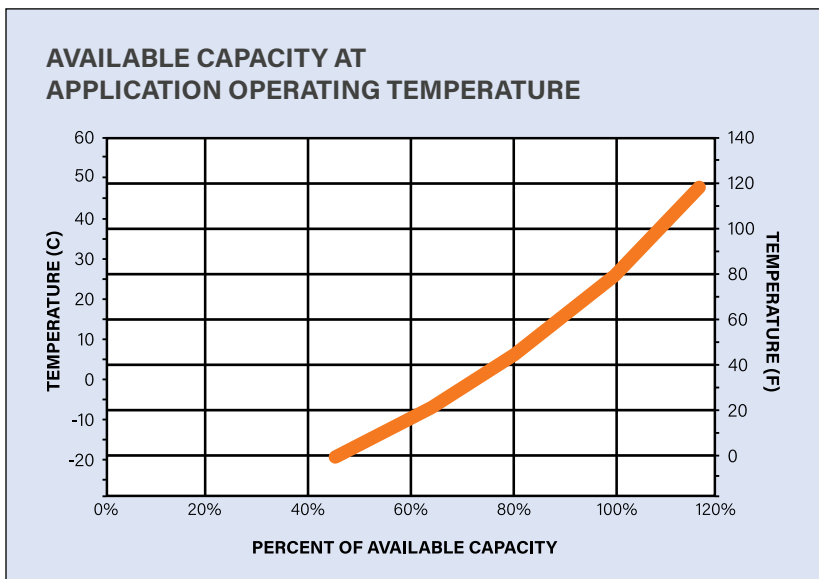
75% DOD CYCLES	END-CYCLE VOLTAGE	50% DOD CYCLES	END-CYCLE VOLTAGE	25% DOD CYCLES	END-CYCLE VOLTAGE
325	11.94	600	12.24	1100	12.54

The battery life references presented above are estimations based upon life cycle testing conducted at the manufacturer's testing center. The data references are nominal and should not be construed as maximum or minimum values for specifications or final design. Data for this product type may vary from that shown herein, no warranties are made based upon the data shown above.

RENEWABLE POWER CHARGING

Proper charging of renewable batteries is essential to optimize the performance and life of the batteries. To ensure dependability and life, batteries should be charged after each discharge period. Regular monitoring of battery voltage condition is recommended to verify system recharging performance. Refer to the following table for additional control setting information.

VOLTAGE SETTING	VPC	SYSTEM VOLTAGE		
		12 VOLTS	24 VOLTS	48 VOLTS
Bulk	2.44	14.64	29.28	58.56
Absorption	2.42	14.52	29.04	58.08
Float	2.20	13.20	26.40	52.80



EFFECT OF AMBIENT TEMPERATURE ON BATTERY LIFE

Typical battery life is based upon a baseline operating temperature of 80°F/27°C. Temperature increases of 15°F/10°C over the baseline will cause the battery's rate of internal chemical reactions to double; something that will reduce battery life due to the accelerated deterioration of internal components.

Please contact PHS West to discuss any minimal requirements for battery life when operating batteries in temperatures greater than 80°F/27°C.

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BATTERY CHARGER

SPECIFICATIONS	UNIT OF MEASURE	MINIMUM	NOMINAL	MAXIMUM
Output Bulk Charge	Volts DC	29.9	30	30.1
Output Float Charge	Volts DC	27.4*	27.6*	27.8*
Bulk Charge Current	Amps		4.3 @ 28 VDC	
Peak Bulk Charge Current	Amps			5.0
Trickle Charge Current	mA		~50†	
Input Voltage	Volts AC	90 (50 Hz)		240 (60 Hz)
AC Input Current	Amps			1.5
Operating Ambient Temperature	°F (°C)	14 (-10)	77 (25)	113 (45)
Dimensions	Inches (mm)		5.6 x 5.2 x 2.2 (142 x 133 x 57)	
Installed Weight	Lb (kg)		2.1 (0.95)	

* Inversely proportional to ambient temperature. Example: Ambient greater than 25°C = Float voltage less than 27.6 volts.

† Dependent on battery self-discharge rate.

CONTROLLER

SPECIFICATIONS	MINIMUM	NOMINAL	MAXIMUM
Input Voltage - 12Vdc	8.5	12	20
Input Voltage - 24Vdc	17	24	36
Input Voltage - 36Vdc	26	36	48
Peak Current Limit Amps*		150/110**	
Continuous Current Limit Amps*		70/40**	
Stand By Current at 24V mAmps		30	
Operating Ambient Temperature °F (°C) (Optional Ambient Temperature)	-40 (-40) -85 (-65)	77 (25) -	113 (45) 221 (105)
Extended Ambient Temperature °F (°C) (available upon request)	-40 (-40)	77 (25)	140 (60)
Enclosure Flammability Rating: ULV94V-0		-	
Physical Size Inches (mm)		3.3 x 5.8 x 1.8 (84 x 147 x 46)	
Weight Lb (kg)		.82 (.37)	

* Current limit parameters are programmable.

** The CS1108S-3 is available in 110A and 150A peak versions.

MOTOR WHEEL

SPECIFICATIONS		
Type: MTRMP	Code: 6962299E	
Watt: 840	km/h: 6	
VDC: 24	A: 35	F.F: 1
Duty: S2 40 min	Ins. Class: F	IP: 44
Title: MTRMP 250 24V 840W 6km/h	Made in Italy	
GEARBOX OIL ISO 150 PAO	Electric Brake 8Nm	
K01-F-ALT-11 V 24 (±6%) 0.71A		

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