

Small traction motive power



## EnerSys® NexSys™ Battery and Charger System

*Designed to change the way you work*





# Faster, more flexible recharging puts you in charge

Designed for use with EnerSys® NexSys™ batteries, EnerSys NexSys™ battery chargers slash recharge times and allow for flexible opportunity charging with no risk of battery damage.



## EnerSys® NexSys™ —

### The battery and charger system that will change the way you work

EnerSys® NexSys™ batteries provide exceptional flexibility. Use them whenever you want, and recharge them whenever you can – during breaks, or at the end of the shift. NexSys™ batteries can even be put back into service before they are fully charged.

Combining advanced battery design technology with robust materials and construction, NexSys™ batteries also provide exceptional performance. Maintenance-free and highly resistant to shock and vibration, NexSys™ batteries will literally change the way you work.

#### Small traction applications include:

- Floor care/cleaning machines
- Pallet trucks
- Shuttle personnel carriers
- Industrial utility vehicles
- Automated guided vehicles (AGV)
- And many more...

#### EnerSys® NexSys™ battery chargers optimize cycling performance and reduce recharging times

*NexSys™ Battery	12V Charger	24V Charger	36V Charger
12NXS26	EX1-6-20	EX1-12-20	EX1-18-20
12NXS36	EX1-6-30	EX1-12-30	EX1-18-20
12NXS38	EX1-6-30	EX1-12-30	EX1-18-20
12NXS50	EX1-6-30	EX1-12-30	EX1-18-20
12NXS61	EX1-6-30	EX1-12-30	EX1-18-20
12NXS62	EX1-6-30	EX1-12-30	EX1-18-20
12NXS85	EX1-6-30	EX1-12-30	EL3-18-625YT
12NXS89	EX1-6-30	EX1-12-30	EL3-18-625YT
12NXS137	N/A	EL3-12-875YT	EL3-18-750YT
12NXS166	N/A	EL3-12-875YT	EL3-18-750YT
12NXS186	N/A	EL3-12-875YT	EL3-18-750YT

\*NexSys™ batteries must be charged with an EnerSys approved charger

If you are parallel charging, please contact your EnerSys representative to determine your charger requirements.

- EnerSys NexSys™ On-Board (Single-Phase, 110VAC / UL Approved)
- EnerSys NexSys™ Wall-Mount (Three-Phase, 480VAC / UL Approved)

## Benefits that conventional batteries can't match

Virtually maintenance-free, EnerSys® NexSys™ batteries feature a superior quality microporous glass mat separator with high electrolyte absorption and stability to enhance cyclic capability. Positive and negative plates are low impedance, high corrosion resistant thin plate grids manufactured from pure lead in a unique process.

The result? NexSys™ batteries offer optimized cycling performance and rapid recharging that conventional lead acid batteries – gel or flooded – simply cannot. When used with an EnerSys approved charger, NexSys™ batteries offer a wide range of benefits:

- High energy throughput – up to 300% of C<sub>6</sub> per 24 hours
- Long maintenance-free life cycle – up to 1,200 cycles at 60% DOD
- Extreme shock and vibration resistance
- Eco-friendly performance
- Minimum gassing: ideal for use in shops, public areas and sensitive manufacturing areas
- High recyclability
- Ideal for multi-shift operations
- Optimum machine availability
- Short recharge times – less than 3 hours at 60% DOD (with EnerSys NexSys™ battery charger)
- Suitable for opportunity charging
- Long shelf life (up to 2 years at 77°F)
- Easy installation
- More power in less space – NexSys™ batteries typically occupy 30% less space than the equivalent lead calcium batteries

### Technical Data

NexSys™ Battery	Voltage (V)	Nominal AH Capacity @ the C <sub>6</sub> Rate	Nominal AH Capacity @ the C <sub>20</sub> Rate	Dimensions (in)				Weight (lbs)	Standard Terminals	Terminal Adapter Options	Terminal Layout
				L	W	H	Term H				
12NXS26	12	26	30	9.84	3.82	5.79	5.67	21.1	M6 Female	A	1
12NXS36	12	36	42	9.84	3.82	7.76	7.64	29.0	M6 Female	A	1
12NXS38	12	38	44	7.74	6.50	6.69	6.37	38.2	M6 Female	A	1
12NXS50	12	50	57	8.66	4.76	9.92	9.76	41.1	M6 Female	A	1
12NXS61	12	61	67	11.02	3.82	10.39	9.76	42.0	M8 Female	-	1
12NXS62	12	62	71	12.95	6.54	6.85	6.54	53.2	M6 Female	A	1
12NXS85	12	85	104	15.55	4.13	10.39	9.76	60.0	M8 Female	-	1
12NXS89	12	89	102	12.99	6.79	8.43	8.62	77.4	3/8 -16" Female	A	1
12NXS137	12	137	154	17.90	6.79	9.36	9.36	105.0	M6 Female	B	2
12NXS166	12	166	191	22.09	4.92	11.14	10.35	113.3	M8 Female	B	2
12NXS186	12	186	214	22.09	4.92	12.48	11.69	131.1	M8 Female	B	2



Option A: SAE post



Option B: M6 male front terminal adapter



Terminal layout 1



Terminal layout 2

Flexible connectors must be used for all monoblock connections.

EnerSys approved fasteners must be used.

# Selecting the correct battery, terminals and connection method

## Determine your space restrictions

The first step is to access your battery compartment. The amount and shape of space available may influence which battery model, and how many of them, can be used to fulfill your power needs. In many cases you may have several options to choose from, the difference being the amount of energy a battery provides, and how many batteries can be fitted in your available space. The best choice will depend on which battery or combination of battery best fits your needs.

**Note:** Keep in mind that there must be sufficient space between batteries to allow for minor battery expansion during use. This assures proper airflow to keep battery temperature down in hot environments.

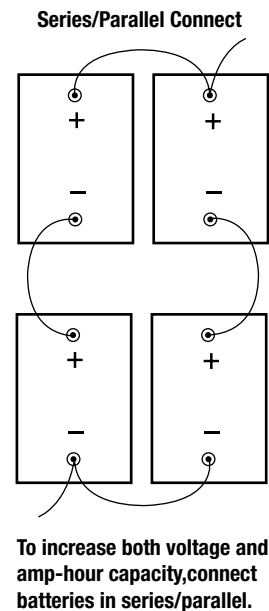
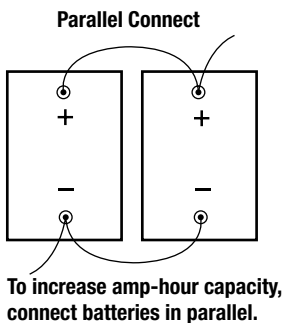
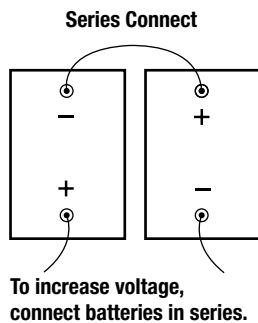
## Determine your power needs

The next step is to determine the total voltage of your current system and whether or not this amount of energy was adequate or if more power is needed. If the battery being replaced provided sufficient power, a replacement battery with similar capacity can be used. If your current battery or batteries did not always meet your needs, a replacement battery with higher capacity (or multiple batteries with collectively more capacity) should be used.

## Determine which battery or combination of batteries is best

Next decide which battery and how many will best meet your power requirements, based on your system's required voltage. For example for a 48-volt system, you could opt for eight 6V batteries, six 8V batteries or four 12V batteries connected in series. The best choice may be influenced by the size of your battery compartment, your performance requirements, and cost considerations.

**Note:** Connecting batteries in a series does not increase the capacity of the batteries; it simply increases the overall voltage to meet your system requirements. If additional capacity is needed, you can connect multiple batteries in parallel as long as your equipment's voltage requirements are met. See diagrams.



## Determine the optimum terminal and connection method

Finally, see which types of terminals are available for the battery you have selected and choose the best for your needs based on the type of cable connections you intend to use. When connecting your batteries, take care to use a proper cable size to avoid overheating your connections.

**Note:** For information regarding correct wire sizes you can refer to the National Electric Code or contact an EnerSys representative.



**EnerSys WORLD HEADQUARTERS**  
2366 Bernville Road  
Reading, PA 19605  
Phone: 1-800-EnerSys  
Fax: 610-372-8613  
www.enersysmp.com

**EnerSys CANADA INC.**  
61 Parr Boulevard Unit 3  
Bolton, Ontario • Canada L7E 4E3  
Phone: 800-363-4877  
Fax: 905-951-4441

**EnerSys DE MEXICO SA DE CV**  
Ave Lopez Mateos #4210  
Colonia Casa Blanca • C.P. 66475  
San Nicolas de los Garza, N.L. Mexico  
Phone: 011-52-818-329-6400  
Fax: 011-52-818-329-6489

[www.enersys.com](http://www.enersys.com)