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# MIDATRON

## HE Li-Ion



# INCOMPARABLE INDUSTRIAL EXPERIENCE

With an In-depth  
knowledge on battery  
technology, we can provide  
fully customized solutions.

In almost three decades of experience in the production of batteries for industrial applications, we have countless solutions in several fields, discovering new ways to improve the performance of our batteries and maximize efficiency in every situation.

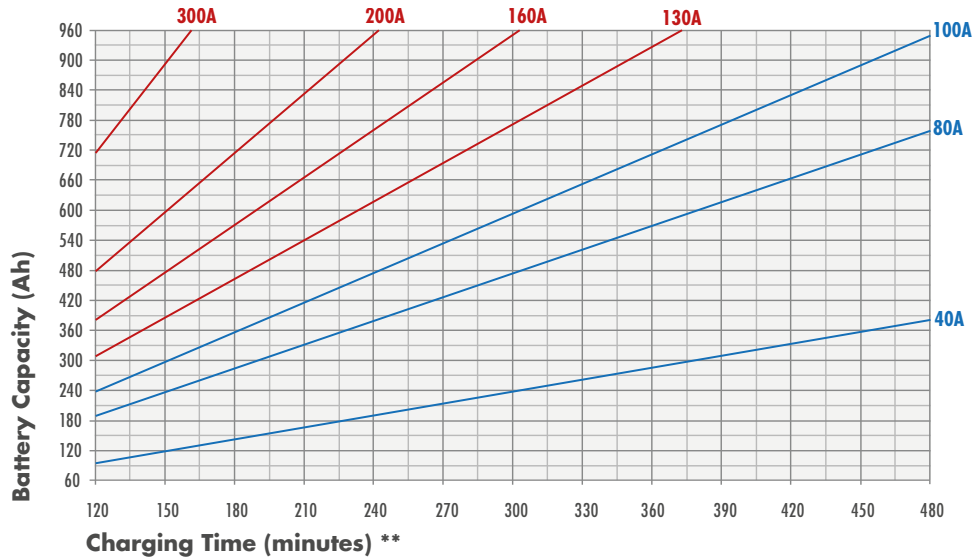
Our in-depth knowledge on battery technology allows us to select the best solution for each application, a key point for producing excellent lithium battery systems.



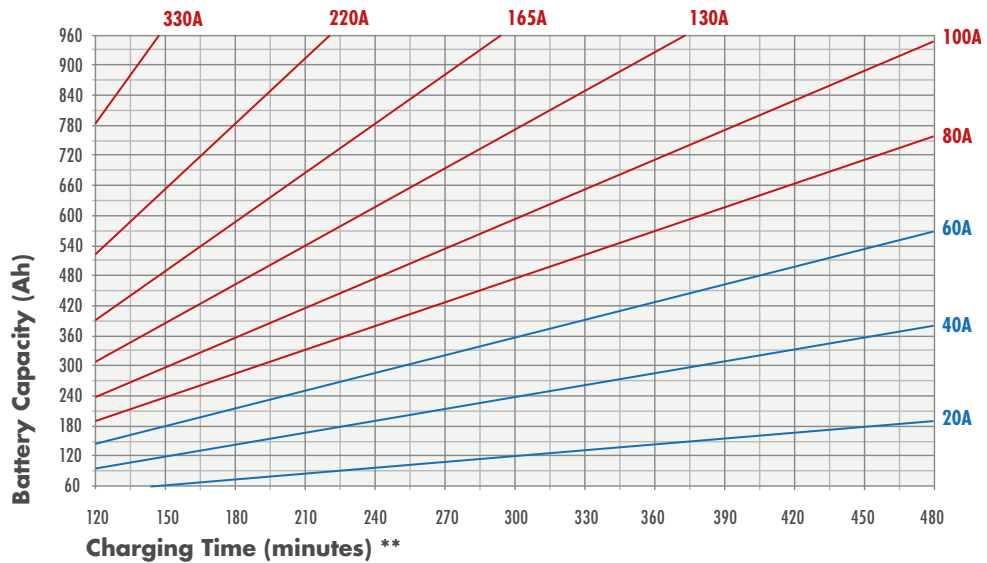
# HOW TO SIZE THE CHARGER | COME DIMENSIONARE IL CARICABATTERIA

<b>1</b>	Define the battery Nominal Voltage (V) and Capacity (Ah)	Definire Tensione (V) e Capacità (Ah) Nominale della batteria
<b>2</b>	Define the required Charging Time	Definire il Tempo di Ricarica richiesto
<b>3</b>	Define the required Mains (Single-Phase   Three-Phase)	Definire il collegamento rete d'alimentazione (Monofase   Trifase)
<b>4</b>	Check the graphs "CHARGING CHARACTERISTICS" to determine the CHARGER OUTPUT $I_{max}$ (A)	Vedere i grafici "CHARGING CHARACTERISTICS" per determinare il CHARGER OUTPUT $I_{max}$ (A)
<b>5</b>	Select the correct Charger Model among the available range	Selezionare il modello corretto di Caricabatteria nella gamma dei modelli disponibili

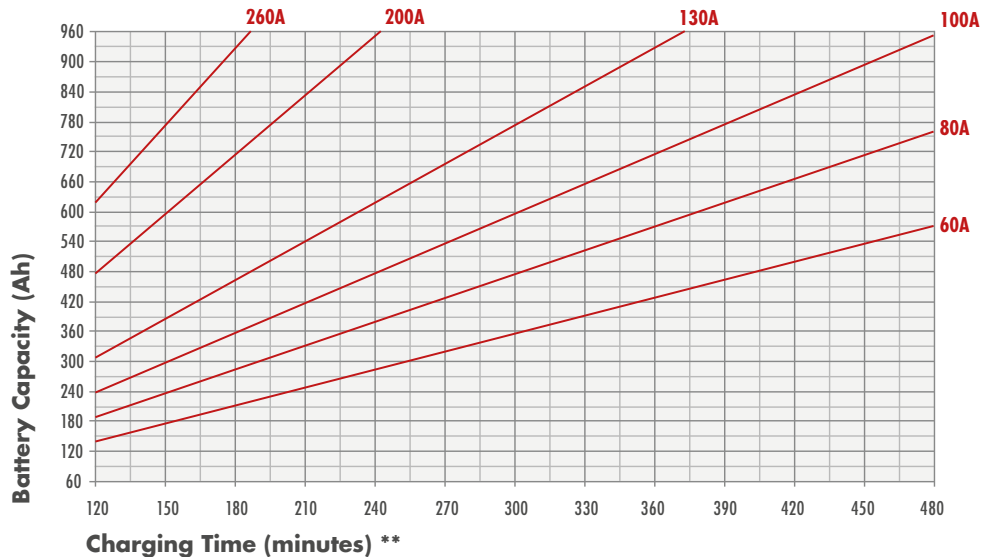
CHARGING CHARACTERISTICS\*  
24V (LFP 25,6V)



CHARGING CHARACTERISTICS\*  
48V (LFP 51,2V)



CHARGING CHARACTERISTICS\*  
80V (LFP 76,8V)



Charger Output  $I_{max}$  SINGLE PHASE | THREE PHASE

(\*) Operating Temperature +10°C to +45°C  
(\*\*) Without balancing

# MIDATRON HE Li-Ion



A27 - A28



A16



A17 - A18 - A19 - A22 - A26

**DNV-GL BMWT CLASS 1**  
Certified best efficiency

<b>Tecnology</b> Tecnologia	High Frequency Switching / Commutazione Alta Frequenza
<b>Single-Phase Power Supply</b> Alimentazione Monofase	Yes
<b>Three-Phase Power Supply</b> Alimentazione Trifase	Yes
<b>Installation</b> Installazione	Shelf-Wall / Ripiano-Parete
<b>BMS Communication</b> Comunicazione BMS	CAN BUS
<b>Charging Profile</b> Profilo di Ricarica	BMS Controlled IU
<b>Automatic Battery Detection</b> Rilevamento Automatico Batteria	Yes
<b>User Interface</b> Interfaccia Utente	Leds - Display
<b>Avg. Rated Efficiency / Power Factor</b> Valori Medi Efficienza / Fattore di Potenza	$\eta$ 93% / Pf 0.95
<b>Output Current Protection System</b> Sistema di Protezione Corrente d'Uscita	Yes

<b>Reverse Polarity Protection System</b> Sistema di Protezione Inversione Polarità	Yes
<b>Real Time Clock Calendar</b> Funzione Calendario	Yes
<b>Data Recording &amp; Downloading</b> Registrazione e Scarico Dati	Yes
<b>Antiarc Kit</b> Kit Antiarco	Yes
<b>Stand for Floor Installation</b> Supporto per Installazione a Terra	Optional
<b>Cooling</b> Raffreddamento	Fan / Ventole
<b>Protection</b> Protezione	IP20
<b>Operating Altitude</b> Altitudine di Funzionamento	2000 m.a.s.l.
<b>Operating Temperature</b> Range Termico di Funzionamento	-5°C ÷ +40°C
<b>CSA-UL Configuration (USA)</b> CSA-UL Configurazione (USA)	Optional

## SINGLE-PHASE 50-60HZ POWER SUPPLY | ALIMENTAZIONE MONOFASE 50-60HZ

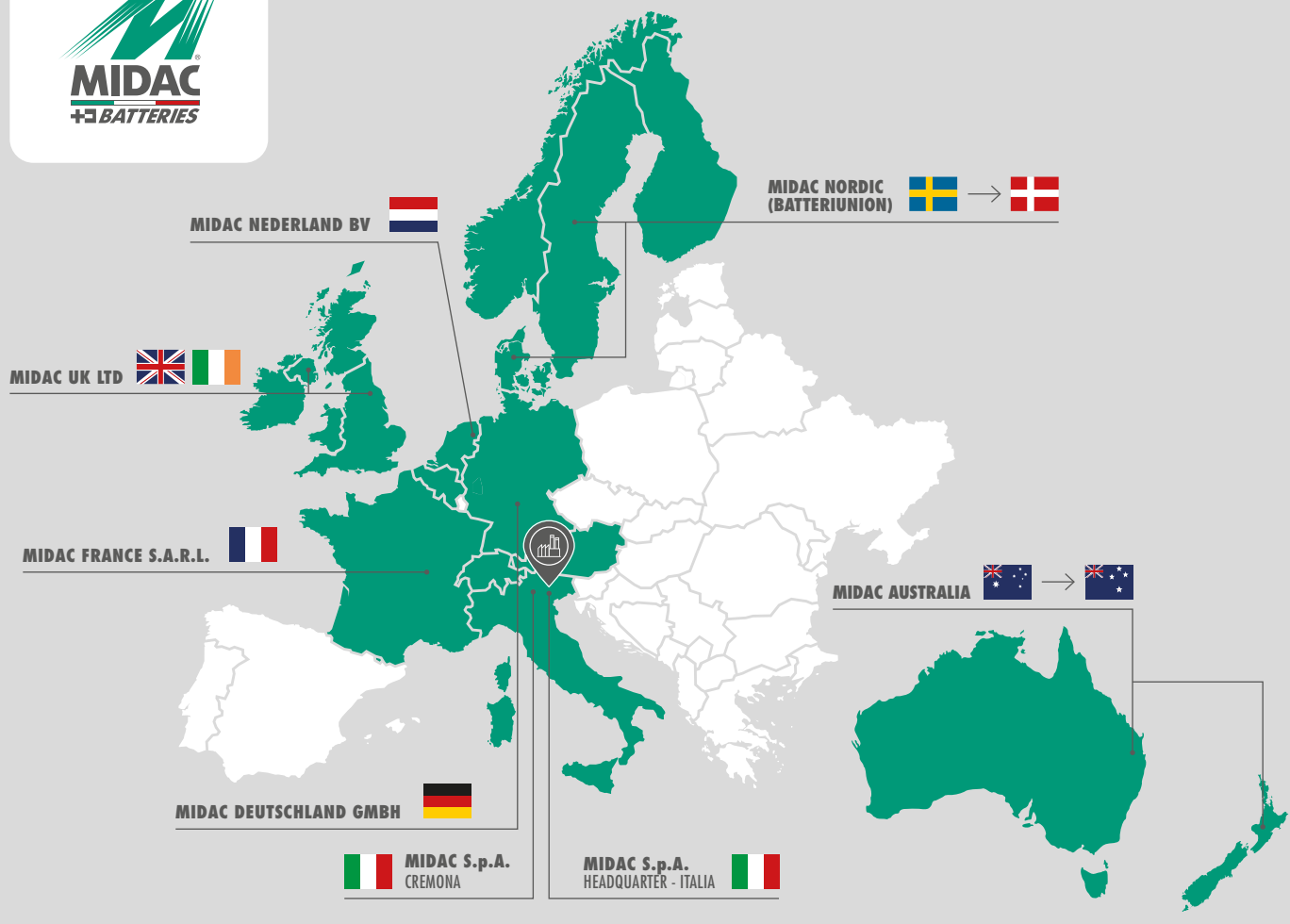
Type / Tipo	Output Uscita		Battery (charging time 2 to 3 hrs) Batteria (tempo di carica 2-3 ore)	Mains Rete	Phase Current P <sub>max</sub>	Housing dimensions Dimensioni armadio				Installation (Wall-Shelf-Floor) Installazione (Parete-Ripiano-Terra)	Weight Peso
						L (front)	W (side)	H	TYPE		
	V	A				Ah MAX (80%DoD)	±10% Vac	±10% A			
HE-LI 12-40M	12	40	100	230	2,8	255	84	417	A27, 3AC44	Wall - Parete	6
HE-LI 12-80M	12	80	200	230	5,0	255	84	456	A28, 3AAC45	Wall - Parete	7,9
HE-LI 12-100M	12	100	250	230	6,9	255	84	456	A28, 3AC46	Wall - Parete	8,5
HE-LI 24-40M	24	40	100	230	5,6	255	84	417	A27, 3AC44	Wall - Parete	6
HE-LI 24-80M	24	80	200	230	10,0	255	84	456	A28, 3AAC45	Wall - Parete	7,9
HE-LI 24-100M	24	100	250	230	13,8	255	84	456	A28, 3AC46	Wall - Parete	8,5
HE-LI 36-22M	36	22	55	230	4,6	255	84	417	A27, 3AC44	Wall - Parete	6
HE-LI 36-50M	36	50	125	230	10,0	255	84	456	A28, 3AAC45	Wall - Parete	7,3
HE-LI 36-60M	36	60	150	230	12,4	255	84	456	A28, 3AC46	Wall - Parete	7,3
HE-LI 48-20M	48	20	50	230	5,5	255	84	417	A27, 3AC44	Wall - Parete	6
HE-LI 48-40M	48	40	100	230	10,0	255	84	456	A28, 3AAC45	Wall - Parete	7,3
HE-LI 48-60M	48	60	150	230	15,0	255	84	456	A28, 3AC46	Wall - Parete	7,3

## THREE-PHASE 50-60HZ POWER SUPPLY | ALIMENTAZIONE TRIFASE 50-60HZ

Type / Tipo	Output Uscita		Battery (charging time 2 to 3 hrs) Batteria (tempo di carica 2-3 ore)	Mains Rete	Phase Current P <sub>max</sub>	Housing dimensions Dimensioni armadio				Installation (Wall-Shelf-Floor) Installazione (Parete-Ripiano-Terra)	Weight Peso
						L (front)	W (side)	H	TYPE		
	V	A				Ah MAX (80%DoD)	±10% Vac	±10% A			
HE-LI 12-130T	12	130	325	400	3,2	266	152	387	A16, 1AA60	Wall - Parete	10,6
HE-LI 12-200T	12	200	500	400	4,9	256	243	529	A18, 1AA77	Wall - Parete	23,2
HE-LI 12-400T	12	400	1000	400	9,7	256	459	659	A22, 1AA85	Wall - Parete	42
HE-LI 24-80T	24	80	200	400	3,9	266	152	387	A16, 1AA60	Wall-Parete	9,1
HE-LI 24-130T	24	130	325	400	6,3	266	152	387	A16, 1AA60	Wall - Parete	10,6
HE-LI 24-160T	24	160	400	400	7,7	256	243	529	A18, 1AA77	Wall-Parete	21,7
HE-LI 24-200T	24	200	500	400	9,8	256	243	529	A18, 1AA77	Wall - Parete	23,2
HE-LI 24-300T	24	300	750	400	14,6	270	258	571	A19, 1AA79	Wall - Parete	25,7
HE-LI 24-400T	24	400	1000	400	19,3	256	459	659	A22, 1AA85	Wall - Parete	42
HE-LI 36-105T	36	105	263	400	7,6	266	152	387	A16, 1AA60	Wall - Parete	9,7
HE-LI 36-130T	36	130	325	400	9,2	266	152	387	A16, 1AA60	Wall - Parete	9,8
HE-LI 36-150T	36	150	375	400	10,9	256	243	417	A17, 1AA75	Wall - Parete	18,4
HE-LI 36-200T	36	200	500	400	13,6	256	243	529	A18, 1AA77	Wall - Parete	23,6
HE-LI 36-300T	36	300	750	400	21,7	270	258	571	A19, 1AA79	Wall - Parete	25,7
HE-LI 48-80T	48	80	200	400	7,6	266	152	387	A16, 1AA60	Wall - Parete	9,1
HE-LI 48-100T	48	100	250	400	9,3	266	152	387	A16, 1AA60	Wall - Parete	8,9
HE-LI 48-130T	48	130	325	400	12,1	266	152	387	A16, 1AA60	Wall - Parete	9,8
HE-LI 48-165T	48	165	413	400	15,7	256	243	417	A17, 1AA75	Wall - Parete	18,4
HE-LI 48-220T	48	220	550	400	20,9	270	258	571	A19, 1AA79	Wall - Parete	25,7
HE-LI 48-330T	48	330	825	400	31,1	256	459	659	A22, 1AA85	Wall - Parete	45,2
HE-LI 48-440T (M/S)	48	440	1100	400	2x 20,9	2x 270	2x 258	2x 571	2x A19, 1AA79	Wall-Parete	2x 25,7
HE-LI 80-60T	80	60	150	400	9,3	266	152	387	A16, 1AA60	Wall - Parete	7,8
HE-LI 80-80T	80	80	200	400	12,4	266	152	387	A16, 1AA60	Wall - Parete	8,3
HE-LI 80-100T	80	100	250	400	15,6	256	243	417	A17, 1AA75	Wall - Parete	18,4
HE-LI 80-130T	80	130	325	400	20,1	258	270	571	A19, 1AA79	Wall - Parete	23,2
HE-LI 80-200T	80	200	500	400	31,2	256	459	659	A22, 1AA85	Wall - Parete	44,4
HE-LI 80-260T	80	260	650	400	40,1	270	494	701	A26, 1AA86	Wall - Parete	47
HE-LI 80-400T (M/S)	80	400	1000	400	2x 31,2	2x 256	2x 459	2x 659	2x A22, 1AA85	Wall - Parete	2x 44,4
HE-LI 80-520T (M/S)	80	520	1300	400	2x 40,1	2x 270	2x 494	2x 701	2x A26, 1AA86	Wall - Parete	2x 47
HE-LI 96-90T	96	90	255	400	16,7	270	258	571	A19, 1AA79	Wall - Parete	22,1
HE-LI 96-180T	96	180	450	400	33,4	270	494	701	A26, 1AA86	Wall - Parete	46
HE-LI 96-360T (M/S)	96	360	900	400	2x 33,4	2x 270	2x 494	2x 701	2x A26, 1AA86	Wall - Parete	2x 46
HE-LI 120-90T	120	90	255	400	20,8	270	258	571	A19, 1AA79	Wall - Parete	22,1
HE-LI 120-180T	120	180	450	400	41,6	270	494	701	A26, 1AA86	Wall - Parete	46
HE-LI 120-360T (M/S)	120	360	900	400	2x 41,6	2x 270	2x 494	2x 701	2x A26, 1AA86	Wall - Parete	2x 46







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**MIDAC PRODUZIONE VERDE**

Midac utilizza energia rinnovabile. Dal proprio impianto fotovoltaico viene prodotta energia per la produzione di batterie e accumulatori, evitando l'emissione di 400 tonnellate di CO<sub>2</sub> ogni anno.

**MIDAC FABRICATION ÉCOLOGIQUE**

Midac utilise des énergies renouvelables. Son installation photovoltaïque génère de l'énergie pour la production de batteries et d'accumulateurs, ce qui permet d'éviter l'émission de 400 tonnes de CO<sub>2</sub> chaque année.

**MIDAC GREEN PRODUCTION**

Midac uses energy from renewable sources. The company's photovoltaic plant generates energy for the production of batteries and accumulators, avoiding the emission of 400 tons of CO<sub>2</sub> each year.

**MIDAC GRÜNE ENERGIE**

Midac verwendet grüne Produktion, welche von der eigenen Solaranlage geliefert wird, um ihre Batterien und Akkumulatoren herzustellen. So sind wir in der Lage 400 Tonnen an CO<sub>2</sub> einzusparen.

**MIDAC PRODUCCIÓN DE ENERGÍA VERDE**

Midac utiliza energía renovable. Cuenta con un sistema fotovoltaico propio que produce energía para la fabricación de baterías y acumuladores permitiendo evitar la emisión de 400 toneladas de CO<sub>2</sub> al año.

**MIDAC GRÖN PRODUKTION**

Midac använder förnybar energi. Från den egna solcellsanläggningen produceras energi för tillverkningen av batterier och ackumulatörer, vilket innebär att 400 ton CO<sub>2</sub>-utsläpp kan undvikas varje år.

