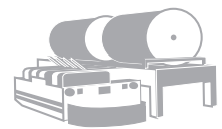
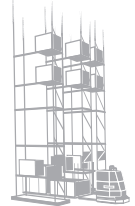
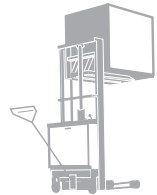




Technical data
Smart chargers
Hawker
Lifetech[®]



Power/Full Solutions

Lifetech® chargers

Matching table of capacity and recharge time

Recharge time in hours for a 80 % discharged battery, discharged battery at a electrolyte temperature of 30°C

For battery range:	C _{5 min}	Hawker Perfect Plus / Hawker Water Less®				Hawker Evolution	Powerbloc dry	
						12h@80%DOD 8h@60%DOD	10 h	12 h
Perfect Plus (PzS) ionic		7 h*	8 h*	10 h*	12 h*			
Water Less (PzM) 8 weeks		6 h*	7 h*	9 h*	11 h*			
Perfect Plus with Airmix		5.5 h*	6.5 h*	7.5 h*	9.5 h*			
Water Less with Airmix		5 h*	6 h*	7 h*	9 h*			

24 Volt

Capacity in Ah/C₅ to be recharged within ... hours.

TC1 LT 24 V 20 A	100	100	140	160	180	110	120	140
TC1 LT 24 V 25 A	100	120	180	210	250	140	170	200
TC1 LT 24 V 30 A	100	140	210	250	300	170	190	230
TC1 LT 24 V 35 A	100	170	250	300	350	200	220	270
TC1 LT 24 V 40 A	150	190	280	330	390	230	250	300
TC1 LT 24 V 50 A	150	240	330	390	460	280		
TC1 LT 24 V 60 A	180	280	390	470	530	340		
TC1 LT 24 V 70 A	180	330	450	540	630	400		
TC1 LT 24 V 80 A	200	380	520	620	720	450		
TC1 LT 24 V 100 A	250	450	620	740	850	570		

TC3 LT 24 V 70 A	180	330	450	540	630	400		
TC3 LT 24 V 120 A	250	580	800	960	1120	680		
TC3 LT 24 V 140 A	250	670	930	1100	1240	800		
TC3 LT 24 V 200 A	250	850	1200	1400	1620	1100		

36 Volt

Capacity in Ah/C₅ to be recharged within ... hours.

TC1 LT 36 V 30 A	100	140	210	250	300	170	190	230
TC1 LT 36 V 40 A	150	190	280	330	390	230		
TC1 LT 36 V 50 A	150	240	330	390	460	280		
TC1 LT 36 V 60 A	180	280	390	470	530	340		
TC1 LT 36 V 70 A	180	330	450	540	630	400		
TC1 LT 36 V 80 A	200	380	520	620	720	450		

TC3 LT 36 V 100 A	250	450	620	740	850	570		
TC3 LT 36 V 115 A	250	570	780	930	1040	660		

48 Volt

Capacity in Ah/C₅ to be recharged within ... hours.

TC1 LT 48 V 50 A	150	240	330	390	460	280		
TC1 LT 48 V 70 A	180	330	450	540	630	400		
TC1 LT 48 V 100 A	250	450	620	740	850	570		

TC3 LT 48 V 60 A	180	280	390	470	530	340		
TC3 LT 48 V 75 A	180	360	500	600	700	430		
TC3 LT 48 V 100 A	250	450	620	740	850	570		
TC3 LT 48 V 115 A	250	570	780	930	1040	660		
TC3 LT 48 V 140 A	250	670	930	1100	1240	800		
TC3 LT 48 V 170 A	250	840	1150	1350	1550	970		
TC3 LT 48 V 200 A	250	850	1200	1400	1620	1100		
TC3 LT 48 V 240 A	250	960	1400	1650	1900	1370		

72 Volt

Capacity in Ah/C₅ to be recharged within ... hours.

TC3 LT 72 V 105 A	250	480	660	790	890	60		
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80 Volt

Capacity in Ah/C₅ to be recharged within ... hours.

TC3 LT 80 V 40 A	150	190	280	330	390	230		
TC3 LT 80 V 65 A	180	300	420	500	580	370		
TC3 LT 80 V 85 A	200	400	550	660	740	480		
TC3 LT 80 V 105 A	250	480	660	790	890	600		
TC3 LT 80 V 120 A	250	580	800	960	1120	680		
TC3 LT 80 V 160 A	250	760	1060	1300	1450	910		

* Charging times on new batteries. Aging of the battery could cause an increase in charging time.

Profiles, options and technical parameters

Lifetech® Range

Technical parameters

	Unit	24V 20A 1-phase	24V 25A 1-phase	24V 30A 1-phase	24V 35A 1-phase	24V 40A 1-phase	24V 50A 1-phase	24V 60A 1-phase	24V 70A 1-phase	24V 80A 1-phase	24V 100A 1-phase	24V 70A 3-phase	24V 120A 3-phase	24V 140A 3-phase	24V 200A 3-phase
Power supply	V	230 ±10%	230 ±10%	230 ±10%	230 ±10%	230 ±10%	230 ±10%	230 ±10%	230 ±10%	230 ±10%	230 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%
Frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Nominal Current consumption	A	4.8	6	7.2	8.4	9.5	7.5	9	10.5	12	14.5	3.4	5.8	6.8	9.7
Power supply cable	mm ²	3 x 1.5	3 x 1.5	3 x 1.5	3 x 1.5	3 x 1.5	3 x 1.5	3 x 1.5	3 x 1.5	3 x 1.5	3 x 1.5	4 x 2.5	4 x 2.5	4 x 2.5	4 x 2.5
Power supply fuse (Protistor)	A	16	16	16	16	16	20	20	20	30	30	20	20	20	20
Battery cable	mm ²	6	6	6	6	6	10	16	16	16	25	25	25	35	50
Battery cable length.	m	3	3	3	3	3	3	3	3	3	3	1 to 10	1 to 10	1 to 10	1 to 10
IP protection level		IP21	IP21	IP21	IP21	IP21	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20
T°. of use	°C	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40
Weight	kg	4	4	4	4	4	10	10	10	12	12	18	18	18	55
Front Panel Model		1	1	1	1	1	2	2	2	2	2	2	2	2	4
Dimensions															
Height	mm	285	285	285	285	285	501	501	501	501	501	581	581	581	940
Length	mm	161	161	161	161	161	288	288	288	288	288	389	389	389	410
Depth	mm	101	101	101	101	101	146	146	146	146	146	180	180	180	317
Fixing centers															
Height	mm	273	273	273	273	273	470	470	470	470	470	548	548	548	540
Width (Wall fixing)	mm						120	120	120	120	120	220	220	220	394
Front panel		LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LCD

Technical parameters

	Unit	36V 30A 1-phase	36V 40A 1-phase	36V 50A 1-phase	36V 60A 1-phase	36V 70A 1-phase	36V 80A 1-phase	36V 100A 3-phase	36V 115A 3-phase
Power supply	V	230±10%	230±10%	230±10%	230±10%	230±10%	230±10%	400 ±10%	400 ±10%
Frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Nominal Current consumption	A	9.5	8.8	11	13.2	15.4	17.6	7.3	8.4
Power supply cable	mm ²	3 x 1.5	3 x 1.5	3 x 1.5	3 x 1.5	3 x 2.5	3 x 2.5	4 x 2.5	4 x 2.5
Power supply fuse (Protistor)	A	16	20	20	30	30	30	20	20
Battery cable	mm ²	6	10	10	16	16	16	25	25
Battery cable length.	m	3	3	3	3	3	3	1 to 10	1 to 10
IP protection level		IP21	IP20	IP20	IP20	IP20	IP20	IP20	IP20
T°. of use	°C	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40
Weight	kg	4	10	10	12	12	12	18	18
Front Panel Model		1	2	2	2	2	2	2	2
Dimensions									
Height	mm	285	501	501	501	501	501	581	581
Length	mm	161	288	288	288	288	288	389	389
Depth (out of cable)	mm	101	146	146	146	146	146	180	180
Fixing centers									
Height	mm	273	470	470	470	470	470	548	548
Width (Wall fixing)	mm		120	120	120	120	120	220	220
Front panel		LED	LED	LED	LED	LED	LED	LED	LED

Technical parameters

	Unit	48V 50A 1-phase	48V 70A 1-phase	48V 100A 1-phase
Power supply	V	230 ±10%	230 ±10%	230 ±10%
Frequency	Hz	50/60	50/60	50/60
Nominal Current consumption	A	14.5	21	30
Power supply cable	mm ²	3 x 1.5	3 x 4	3 x 6
Power supply fuse (Protistor)	A	30	30	50
Battery cable	mm ²	10	25	25
Battery cable length.	m	3	1 to 10	1 to 10
IP protection level		IP20	IP20	IP20
T°. of use	°C	0 to +40	0 to +40	0 to +40
Weight	kg	12	22	55
Front Panel Model		2	4	4
Dimensions				
Height	mm	501	600	940
Length	mm	288	410	410
Depth (out of cable)	mm	146	317	317
Fixing centers				
Height	mm	470	390	540
Width (Wall fixing)	mm	120	394	394
Front panel		LED	LCD	LCD

Technical parameters

	Unit	48V 60A 3-phase	48V 75A 3-phase	48V 100A 3-phase	48V 115A 3-phase	48V 140A 3-phase	48V 170A 3-phase	48V 200A 3-phase	48V 240A 3-phase
Power supply	V	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%
Frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Nominal Current consumption	A	5.8	7.3	9.7	11	13.6	16.5	19.4	23.3
Power supply cable	mm ²	4 x 2.5	4 x 2.5	4 x 2.5	4 x 2.5	4 x 2.5	4 x 4	4 x 6	4 x 6
Power supply fuse (Protistor)	A	20	20	20	20	20	30	30	40
Battery cable	mm ²	16	16	25	25	35	50	50	50
Battery cable length.	m	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10
IP protection level		IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20
T°. of use	°C	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40
Weight	kg	18	18	18	18	18	55	35	55
Front Panel Model		2	2	2	2	2	E	4	4
Dimensions									
Height	mm	581	581	581	581	581	730	940	940
Length	mm	389	389	389	389	389	493	410	410
Depth	mm	180	180	180	180	180	213	317	317
Fixing centers									
Height	mm	548	548	548	548	548	350	540	540
Width (Wall fixing)	mm	220	220	220	220	220	470	394	394
Front panel		LED	LED	LED	LED	LED	LED	LCD	LCD

Technical parameters

	Unit	72V 105A 3-phase	80V 40A 3-phase	80V 65A 3-phase	80V 85A 3-phase	80V 105A 3-phase	80V 120A 3-phase	80V 160A 3-phase
Power supply	V	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%
Frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Nominal Current consumption	A	15.3	6.5	10.5	13.7	17	19.4	26
Power supply cable	mm ²	4 x 4	4 x 2.5	4 x 2.5	4 x 2.5	4 x 4	4 x 4	4 x 6
Power supply fuse (Protistor)	A	30	20	20	20	30	30	40
Battery cable	mm ²	50	10	16	16	35	35	50
Battery cable length.	m	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10
IP protection level		IP20	IP20	IP20	IP20	IP20	IP20	IP20
T°. of use	°C	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40
Weight	kg	55	18	18	18	35	35	55
Front Panel Model		4	2	2	2	E	E	4
Dimensions								
Height	mm	940	581	581	581	730	730	940
Length	mm	410	389	389	389	493	493	410
Depth	mm	317	180	180	180	213	213	317
Fixing centers								
Height	mm	540	548	548	548	350	350	540
Width (Wall fixing)	mm	394	220	220	220	470	470	394
Front panel		LCD	LED	LED	LED	LED	LED	LCD

Profiles and options ● series ▲ optional □ not available


	24V 20A	24V 50A	24V 70A	36V 100A
	24V 25A	24V 60A	24V 120A	36V 115A
	24V 30A	24V 70A	24V 140A	
	24V 35A	24V 80A	24V 200A	
	24V 40A	24V 100A		
	36V 30A	36V 40A		
		36V 50A		
		36V 60A		
		36V 70A		
		36V 80A		
	1-phase	1-phase	3-phase	3-phase

Hawker® Perfect Plus + ionic mixing	●	●	●	●
Hawker Perfect Plus + electrolyte circulation*	□	▲	▲	▲
Hawker Water Less®	●	●	●	●
Hawker Water Less® + electrolyte circulation*	□	▲	▲	▲
Hawker Water Less® 20	□	□	□	□
Hawker Evolution	●	●	●	●
Hawker powerbloc dry (AGM)	●	□	□	□
Topping up system	□	▲	▲	▲
Remote display (green/red)	□	▲	▲	▲
Serial link for charger memory download	□	▲	▲	▲
*Pump for electrolyte circulation	□	▲	▲	▲

Profiles and options ● series ▲ optional □ not available

	48V 50A 48V 70A 48V 100A 1-phase	48V 60A 48V 75A 48V 100A 48V 115A 48V 140A 48V 170A 48V 200A 48V 240A 3-phase	72V 105A 3-phase	80V 40A 80V 65A 80V 105A 80V 120A 80V 160A 3-phase
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Hawker® Perfect Plus + ionic mixing	●	●	●	●
Hawker Perfect Plus + electrolyte circulation*	▲	▲	▲	▲
Hawker Water Less®	●	●	●	●
Hawker Water Less® + electrolyte circulation*	▲	▲	▲	▲
Hawker Water Less® 20	□	□	□	□
Hawker Evolution	●	●	●	●
Hawker powerbloc dry (AGM)	□	□	□	□
Topping up system	▲	▲	▲	▲
Remote display (green/red)	▲	▲	▲	▲
Serial link for charger memory download	▲	▲	▲	▲
*Pump for electrolyte circulation	▲	▲	▲	▲



Wherever you do business, EnerSys® can support you with motive power energy. The Hawker® branded battery range, matched chargers and systems provide trouble free performance under the most demanding service conditions. Our strategically located manufacturing plants are efficient and responsive with a culture of continuous improvement and added value for our business partners.

EnerSys has an enviable position in technology leadership and with significant investment in research and development we intend to stay at the leading edge in product innovation. The recently developed energy solutions: Water Less® 20 and Hawker XFC™ batteries, Lifetech® and LifeSpeed IQ™ HF chargers, have defined new benefits for our customers: faster recharge, more machine availability, lower operating and investment costs, reduced carbon footprint. Our team of development engineers is driven by the desire to build the best energy solutions and works closely with our customers and suppliers to identify development opportunities. Our bias for rapid innovation means we get new products to market fast.

EnerSys's integrated sales and service network is dedicated to providing our customers with the best solutions and after-sales support for their business. Whether you require 1 battery or a complete fleet of batteries, chargers, a battery handling system and a state of the art fleet management system, you can count on us. EnerSys is the world's largest industrial battery manufacturer and we are dedicated to being the best.



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