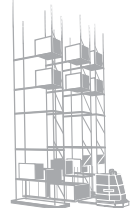
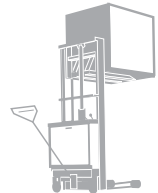


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**Technical data**  
**Smart chargers**  
**Hawker**  
**Lifepius**  
**Powertech**

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**EnerSys**

Power/Full Solutions





## Lifepius 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 <sub>5</sub> min	Hawker perfect plus					Hawker wf200 plus			Hawker evolution
Standard							8 h	10 h	12 h	12 h (80% DOD C <sub>5</sub> )
With Ionic system		7 h	8 h	10 h	12 h	14 h				8 h (60% DOD C <sub>5</sub> )
With pneumatic circulation		6 h	7 h	9 h	11 h	13 h				

24 Volt		Capacity in Ah/C <sub>5</sub> to be recharged within ... hours.									
TC3 LifePlus 2004-1	24/36/48V	180	400	550	660	740	840	395	470	565	480
TC3 LifePlus 2006-1	24/36/48V	250	550	750	900	1000	1150	515	610	735	620
TC3 LifePlus 2008-1	24/36/48V	250	700	950	1140	1270	1450	700	835	1000	850
TC3 LifePlus 2010-1	24/36/48V	250	850	1200	1400	1620	1800	935	1110	1335	1100
36 Volt		Capacity in Ah/C <sub>5</sub> to be recharged within ... hours.									
TC3 LifePlus 2004-1	24/36/48V	180	350	480	580	670	730	375	445	535	450
TC3 LifePlus 2006-1	24/36/48V	250	550	750	900	1000	1150	515	610	735	620
TC3 LifePlus 2008-1	24/36/48V	250	700	950	1140	1270	1450	700	835	1000	850
TC3 LifePlus 2010-1	24/36/48V	250	850	1200	1400	1620	1800	935	1110	1335	1100
48 Volt		Capacity in Ah/C <sub>5</sub> to be recharged within ... hours.									
TC3 LifePlus 2004-1	24/36/48V	180	330	450	540	630	690	325	390	465	400
TC3 LifePlus 2004-2	48/72V	120	240	330	390	460	510	235	280	330	280
TC3 LifePlus 2004-3	48/80V	120	240	330	390	460	510	235	280	330	280
TC3 LifePlus 2006-1	24/36/48V	250	480	660	790	890	1000	490	585	700	600
TC3 LifePlus 2006-2	48/72V	180	330	450	540	630	690	325	390	465	400
TC3 LifePlus 2006-3	48/80V	180	330	450	540	630	690	325	390	465	400
TC3 LifePlus 2008-1	24/36/48V	250	670	930	1100	1240	1400	655	780	935	800
TC3 LifePlus 2008-2	48/72V	250	480	660	790	890	1000	490	585	700	600
TC3 LifePlus 2008-3	48/80V	250	480	660	790	890	1000	490	585	700	600
TC3 LifePlus 2010-1	24/36/48V	250	840	1150	1350	1550	1750	795	945	1335	970
TC3 LifePlus 2010-2	48/72V	250	600	820	990	1160	1270	605	720	865	700
TC3 LifePlus 2010-3	48/80V	250	600	820	990	1160	1270	605	720	865	700
72 Volt		Capacity in Ah/C <sub>5</sub> to be recharged within ... hours.									
TC3 LifePlus 2004-2	48/72V	120	240	330	390	460	510	235	280	330	280
TC3 LifePlus 2006-2	48/72V	180	300	420	500	560	640	305	360	435	370
TC3 LifePlus 2008-2	48/72V	250	430	600	680	760	900	420	500	600	510
TC3 LifePlus 2010-2	48/72V	250	580	800	960	1120	1220	585	695	835	680
80 Volt		Capacity in Ah/C <sub>5</sub> to be recharged within ... hours.									
TC3 LifePlus 2004-3	48/80V	120	220	300	350	400	450	210	250	300	240
TC3 LifePlus 2006-3	48/80V	180	280	390	470	530	590	280	330	400	340
TC3 LifePlus 2008-3	48/80V	250	400	550	660	740	840	395	470	565	480
TC3 LifePlus 2010-3	48/80V	250	580	800	960	1120	1220	585	695	835	680
96 Volt		Capacity in Ah/C <sub>5</sub> to be recharged within ... hours.									
TC3 LifePlus 2010-4	96V	250	430	600	680	760	900	420	500	600	510

## Technical parameters and profiles, options

### Lifepius Range

#### Technical parameters

	Unit	2004 3-phase	2006 3-phase	2008 3-phase	2010 3-phase
Power supply	V	400 ±10%	400 ±10%	400 ±10%	400 ±10%
Frequency	Hz	50/60	50/60	50/60	50/60
Current consumption	A	7	10	13	17
Power supply cable	mm <sup>2</sup>	3 x 2.5	3 x 2.5	3 x 4	3 x 4
Power supply fuse (Protistor)	A	20	20	30	30
Battery cable	mm <sup>2</sup>	16	25	50	50
Battery cable length.	m	1 to 10	1 to 10	1 to 10	1 to 10
IP protection level		IP20	IP20	IP20	IP20
T°. of use	°C	0 to +40	0 to +40	0 to +40	0 to +40
Weight	kg	30	30	30	55
Dimensions					
Height	mm	750	750	750	940
Length	mm	410	410	410	410
Depth	mm	317	317	317	317
Fixing centers					
Height	mm	540	540	540	540
Width (Wall fixing)	mm	394	394	394	394
Front panel		LCD	LCD	LCD	LCD

#### Profiles and options ● series ▲ optional □ not available

	2004 3-phase	2006 3-phase	2008 3-phase	2010 3-phase
Hawker Premier system	▲	▲	▲	▲
Other low maintenance package	▲	▲	▲	▲
Hawker perfect plus + ionic mixing	●	●	●	●
Hawker perfect plus + air mixing*	●	●	●	●
Hawker wf200 plus*	●	●	●	●
Hawker evolution	●	●	●	●
Hawker powerbloc dry (AGM)	□	□	□	□
Topping up system	▲	▲	▲	▲
Remote display (green/red)	▲	▲	▲	▲
Serial link for charging room management	▲	▲	▲	▲
* Pump for air mixing	▲	▲	▲	▲

## Powertech 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 <sub>5</sub> min	Hawker Premier		Hawker perfect plus					Hawker wf200 plus			Hawker evolution	Hawker ev (AGM)	
Standard		8 h	12h						8 h	10 h	12 h	12 h (80% DOD C <sub>5</sub> )	10 h	12 h
With Ionic system				7 h	8 h	10 h	12 h	14 h				8 h (60% DOD C <sub>5</sub> )		
With pneumatic circulation				6 h	7 h	9 h	11 h	13 h						

#### 24 Volt

Capacity in Ah/C<sub>5</sub> to be recharged within ... hours.

TC1 PWT 24V 35A	100			170	250	300	350	380				200	220	270
TC1 PWT 24V 40A	150	280	390	190	280	330	390	430	185	220	265	230		
TC1 PWT 24V 50A	150	330	460	240	330	390	460	510	235	280	330	280		
TC1 PWT 24V 60A	180	390	530	280	390	470	530	590	280	330	400	340		
TC1 PWT 24V 70A	180	450	630	330	450	540	630	690	325	390	465	400		
TC1 PWT 24V 100A	250	620	850	450	620	740	850	950	465	555	665	570		
TC3 PWT 24V 70A	180	450	630	330	450	540	630	690	325	390	465	400		
TC3 PWT 24V 120A	250	800	1120	580	800	960	1120	1220	560	665	800	680		
TC3 PWT 24V 140A	250	930	1240	670	930	1100	1240	1400	655	780	935	800		
TC3 PWT 24V 200A	250	1200	1620	850	1200	1400	1620	1800	935	1110	1335	1100		
TC3 PWT 24V 240A	250	1400	1900	960	1400	1650	1900	2100	1120	1335	1600	1370		

#### 36 Volt

Capacity in Ah/C<sub>5</sub> to be recharged within ... hours.

TC1 PWT 36V 30A	100			140	210	250	300	330				170	190	230
TC1 PWT 36V 40A	150	280	390	190	280	330	390	430	185	220	265	230		
TC1 PWT 36V 50A	150	330	460	240	330	390	460	510	235	280	330	280		

#### 48 Volt

Capacity in Ah/C<sub>5</sub> to be recharged within ... hours.

TC1 PWT 48V 30A	100			140	210	250	300	330				170	190	230
TC1 PWT 48V 40A	150	280	390	190	280	330	390	430	185	220	265	230		
TC1 PWT 48V 50A	150	330	460	240	330	390	460	510	235	280	330	280		
TC3 PWT 48V 60A	180	390	530	280	390	470	530	590	280	330	400	340		
TC3 PWT 48V 75A	180	500	700	360	500	600	700	750	350	420	500	430		
TC3 PWT 48V 100A	250	620	850	450	620	740	850	950	465	555	665	570		
TC3 PWT 48V 115A	250	780	1040	570	780	930	1040	1200	535	640	765	660		
TC3 PWT 48V 140A	250	930	1240	670	930	1100	1240	1400	655	780	935	800		
TC3 PWT 48V 170A	250	1150	1550	840	1150	1350	1550	1750	795	945	1135	970		
TC3 PWT 48V 200A	250	1200	1620	850	1200	1400	1620	1800	935	1110	1335	1100		
TC3 PWT 48V 240A	250	1400	1900	960	1400	1650	1900	2100	1120	1335	1600	1370		

#### 80 Volt

Capacity in Ah/C<sub>5</sub> to be recharged within ... hours.

TC3 PWT 80V 40A	150	280	390	190	280	330	390	430	185	220	265	230		
TC3 PWT 80V 65A	180	420	580	300	420	500	580	650	305	360	435	370		
TC3 PWT 80V 85A	200	550	740	400	550	660	740	840	395	470	565	480		
TC3 PWT 80V 105A	250	660	890	480	660	790	890	1000	490	585	700	600		
TC3 PWT 80V 120A	250	800	1120	580	800	960	1120	1220	560	665	800	680		
TC3 PWT 80V 160A	250	1060	1450	760	1060	1300	1450	1600	750	890	1065	910		
TC3 PWT 80V 210A	250	1260	1700	890	1260	1470	1700	1890	980	1160	1400	1150		

# Technical parameters and profiles, options

## Powertech Range

### Technical parameters

	Unit	24V 35A 1-phase	24V 40A 1-phase	24V 50A 1-phase	24V 60A 1-phase	24V 70A 1-phase	24V 100A 1-phase	24V 120A 3-phase	24V 140A 3-phase	24V 200A 3-phase	24V 240A 3-phase
Power supply	V	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
Current consumption	A	5.5	6	7.5	9	10.5	14.5	6	7	10	12
Power supply cable	mm <sup>2</sup>	3 x 0.75	3 x 1.5	3 x 1.5	3 x 1.5	3 x 1.5	3 x 2.5	4 x 2.5	4 x 2.5	4 x 4	4 x 4
Power supply fuse (Protistor)	A	6.3	20	20	20	20	30	20	20	20	30
Battery cable	mm <sup>2</sup>	6	10	10	16	16	25	25	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	1 to 10	1 to 10
IP protection level		IP21	IP21	IP21	IP21	IP21	IP21	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
Weight	kg	5	8	8	10	10	13	22	22	55	55
Dimensions											
Height	mm	246	377	377	377	377	411	600	600	940	940
Length	mm	256	281	281	281	281	317	410	410	410	410
Depth (out of cable)	mm	104	186	186	186	186	206	317	317	317	317
Fixing centers											
Height	mm	203	280	280	280	280	355	390	390	540	540
Width (Wall fixing)	mm	245	268	268	268	268	304	394	394	394	394
Front panel		LCD	LCD	LCD	LCD	LCD	LCD	LCD	LCD	LCD	LCD

### Profiles and options ● series ▲ optional □ not available

	24V 35A 1-phase	24V 40A 1-phase	24V 50A 1-phase	24V 60A 1-phase	24V 70A 1-phase	24V 100A 1-phase	24V 120A 3-phase	24V 140A 3-phase	24V 200A 3-phase	24V 240A 3-phase
Hawker Premier system	□	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>
Other low maintenance package	□	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>
Hawker perfect plus + ionic mixing	●	●	●	●	●	●	●	●	●	●
Hawker perfect plus + air mixing*	□	●	●	●	●	●	●	●	●	●
Hawker wf200 plus*	□	●	●	●	●	●	●	●	●	●
Hawker evolution	●	●	●	●	●	●	●	●	●	●
Hawker powerbloc dry (AGM)	●	□	□	□	□	□	□	□	□	□
Topping up system	□	▲	▲	▲	▲	▲	▲	▲	▲	▲
Remote display (green/red)	□	▲	▲	▲	▲	▲	▲	▲	▲	▲
Serial link for charging room management	□	▲	▲	▲	▲	▲	▲	▲	▲	▲
*Pump for air mixing	□	▲	▲	▲	▲	▲	▲	▲	▲	▲

<sup>1)</sup> cables and harness included

## Technical parameters

	Unit	36V 30A 1-phase	36V 40A 1-phase	36V 50A 1-phase	48V 30A 1-phase	48V 40A 1-phase	48V 50A 1-phase	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	230 ±10%	230 ±10%	230 ±10%	230 ±10%	230 ±10%	230 ±10%	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	50/60	50/60	50/60	50/60	50/60	50/60
Current consumption	A	6.5	9	11.5	10	13	16.5	6	7	9	10	13	17	20	24
Power supply cable	mm <sup>2</sup>	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	4 x 2.5	4 x 2.5	4 x 4	4 x 4	4 x 6	4 x 6
Power supply fuse (Protistor)	A	10	20	20	20	30	30	20	20	20	20	30	30	30	30
Battery cable	mm <sup>2</sup>	6	10	10	10	25	25	25	25	25	25	50	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	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10
IP protection level		IP21	IP21	IP21	IP21	IP21	IP21	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	6	8	8	10	16	16	22	22	22	22	30	55	55	55
Dimensions															
Height	mm	246	377	377	377	411	411	600	600	600	600	750	940	940	940
Length	mm	256	281	281	281	317	317	410	410	410	410	410	410	410	410
Depth	mm	104	186	186	186	206	206	317	317	317	317	317	317	317	317
Fixing centers															
Height	mm	203	280	280	280	355	355	390	390	390	390	540	540	540	540
Width (Wall fixing)	mm	245	268	268	268	304	304	394	394	394	394	394	394	394	394
Front panel		LCD	LCD	LCD	LCD	LCD	LCD	LCD	LCD	LCD	LCD	LCD	LCD	LCD	LCD

## Profiles and options ● series ▲ optional □ not available

	36V 30A 1-phase	36V 40A 1-phase	36V 50A 1-phase	48V 30A 1-phase	48V 40A 1-phase	48V 50A 1-phase	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
Hawker Premier system	□	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>
Other low maintenance package	□	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>
Hawker perfect plus + ionic mixing	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Hawker perfect plus + air mixing*	□	●	●	●	●	●	●	●	●	●	●	●	●	●
Hawker wf200 plus*	□	●	●	●	●	●	●	●	●	●	●	●	●	●
Hawker evolution	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Hawker powerbloc dry (AGM)	●	□	□	●	□	□	□	□	□	□	□	□	□	□
Topping up system	□	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Remote display (green/red)	□	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Serial link for charging room management	□	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
* Pump for air mixing	□	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲

<sup>1)</sup> cables and harness included

## Technical parameters

	Unit	80V 40A 3-phase	80V 65A 3-phase	80V 85A 3-phase	80V105A 3-phase	80V 120A 3-phase	80V 160A 3-phase	80V 210A 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
Current consumption	A	6.5	10	13	17	19	26	34
Power supply cable	mm <sup>2</sup>	4 x 2.5	4 x 2.5	4 x 4	4 x 4	4 x 4	4 x 6	4 x 6
Power supply fuse (Protistor)	A	20	20	30	30	30	40	2 x 30
Battery cable	mm <sup>2</sup>	25	25	50	50	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
IP protection level		IP20	IP20	IP20	IP20	IP20	IP20	IP21
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	22	22	30	55	55	55	140
Dimensions								
Height	mm	600	600	750	940	940	940	990
Length	mm	410	410	410	410	410	410	410
Depth	mm	317	317	317	317	317	317	605 (cabinet)
Fixing centers								
Height	mm	390	390	540	540	540	540	
Width (Wall fixing)	mm	394	394	394	394	394	394	
Front panel		LCD	LCD	LCD	LCD	LCD	LCD	LCD

## Profiles and options ● series ▲ optional □ not available

	80V 40A 3-phase	80V 65A 3-phase	80V 85A 3-phase	80V105A 3-phase	80V 120A 3-phase	80V 160A 3-phase	80V 210A 3-phase
Hawker Premier system	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>
Other low maintenance package	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>	● <sup>1)</sup>
Hawker perfect plus + ionic mixing	●	●	●	●	●	●	●
Hawker perfect plus + air mixing*	●	●	●	●	●	●	●
Hawker wf200 plus*	●	●	●	●	●	●	●
Hawker evolution	●	●	●	●	●	●	●
Hawker powerbloc dry (AGM)	□	□	□	□	□	□	□
Topping up system	▲	▲	▲	▲	▲	▲	▲
Remote display (green/red)	▲	▲	▲	▲	▲	▲	□
Serial link for charging room management	▲	▲	▲	▲	▲	▲	▲
*Pump for air mixing	▲	▲	▲	▲	▲	▲	▲

<sup>1)</sup> cables and harness included



Wherever in Europe you do business, Hawker 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.

Hawker 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. Hawker evolution batteries and Hawker HF chargers, Lifeplus and Powertech have set new standards in maintenance free solutions. 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.

Hawker's integrated sales and service network across Europe 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. As part of EnerSys the world's largest industrial battery manufacturer, we are dedicated to being the best.



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