

Technical data
Smart chargers
Fiamm Motive Power
Premium HF flex
Premium HF com



Premium HF flex 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	Fiamm Motive Power (FMP) energy plus					FMP energy dry
Standard								12 h (80% DOD C ₅)
With Ionic system			7 h	8 h	10 h	12 h	14 h	8 h (60% DOD C ₅)
With pneumatic circulation			6 h	7 h	9 h	11 h	13 h	

24 Volt		Capacity in Ah/C ₅ to be recharged within ... hours.						
TC3 Premium HF flex 2004-1	24/36/48V	180	400	550	660	740	840	480
TC3 Premium HF flex 2006-1	24/36/48V	250	550	750	900	1000	1150	620
TC3 Premium HF flex 2008-1	24/36/48V	250	700	950	1140	1270	1450	850
TC3 Premium HF flex 2010-1	24/36/48V	250	850	1200	1400	1620	1800	1100
36 Volt		Capacity in Ah/C ₅ to be recharged within ... hours.						
TC3 Premium HF flex 2004-1	24/36/48V	180	350	480	580	670	730	450
TC3 Premium HF flex 2006-1	24/36/48V	250	550	750	900	1000	1150	620
TC3 Premium HF flex 2008-1	24/36/48V	250	700	950	1140	1270	1450	850
TC3 Premium HF flex 2010-1	24/36/48V	250	850	1200	1400	1620	1800	1100
48 Volt		Capacity in Ah/C ₅ to be recharged within ... hours.						
TC3 Premium HF flex 2004-1	24/36/48V	180	330	450	540	630	690	400
TC3 Premium HF flex 2004-2	48/72V	120	240	330	390	460	510	280
TC3 Premium HF flex 2004-3	48/80V	120	240	330	390	460	510	280
TC3 Premium HF flex 2006-1	24/36/48V	250	480	660	790	890	1000	600
TC3 Premium HF flex 2006-2	48/72V	180	330	450	540	630	690	400
TC3 Premium HF flex 2006-3	48/80V	180	330	450	540	630	690	400
TC3 Premium HF flex 2008-1	24/36/48V	250	670	930	1100	1240	1400	800
TC3 Premium HF flex 2008-2	48/72V	250	480	660	790	890	1000	600
TC3 Premium HF flex 2008-3	48/80V	250	480	660	790	890	1000	600
TC3 Premium HF flex 2010-1	24/36/48V	250	840	1150	1350	1550	1750	970
TC3 Premium HF flex 2010-2	48/72V	250	600	820	990	1160	1270	700
TC3 Premium HF flex 2010-3	48/80V	250	600	820	990	1160	1270	700
72 Volt		Capacity in Ah/C ₅ to be recharged within ... hours.						
TC3 Premium HF flex 2004-2	48/72V	120	240	330	390	460	510	280
TC3 Premium HF flex 2006-2	48/72V	180	300	420	500	560	640	370
TC3 Premium HF flex 2008-2	48/72V	250	430	600	680	760	900	510
TC3 Premium HF flex 2010-2	48/72V	250	580	800	960	1120	1220	680
80 Volt		Capacity in Ah/C ₅ to be recharged within ... hours.						
TC3 Premium HF flex 2004-3	48/80V	120	220	300	350	400	450	240
TC3 Premium HF flex 2006-3	48/80V	180	280	390	470	530	590	340
TC3 Premium HF flex 2008-3	48/80V	250	400	550	660	740	840	480
TC3 Premium HF flex 2010-3	48/80V	250	580	800	960	1120	1220	680
96 Volt		Capacity in Ah/C ₅ to be recharged within ... hours.						
TC3 Premium HF flex 2010-4	96V	250	430	600	680	760	900	510

Technical parameters and profiles, options

Premium HF flex 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 ²	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 ²	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	mm	394	394	394	394
(Wall fixing)					
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
FMP energy				
Low Maintenance 70 (LM 70)	▲	▲	▲	▲
FMP energy				
Low Maintenance 200(LM 200)	▲	▲	▲	▲
FMP energy plus				
+ ionic mixing	●	●	●	●
FMP energy plus				
+ air mixing*	●	●	●	●
FMP energy dry	●	●	●	●
powerbloc dry (AGM)	□	□	□	□
FMP Aqualevel	▲	▲	▲	▲
Remote display (green/red)	▲	▲	▲	▲
Serial link for charging				
management	▲	▲	▲	▲
* Pump for air mixing	▲	▲	▲	▲

Premium HF com 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	FMP LM 70		FMP LM 200	FMP energy plus					FMP energy dry	powerbloc dry (AGM)	
Standard		8 h	12h	8h						12 h (80% DOD C ₅)	10 h	12 h
With Ionic system					7 h	8 h	10 h	12 h	14 h	8 h (60% DOD C ₅)		
With pneumatic circulation					6 h	7 h	9 h	11 h	13 h			

24 Volt

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

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

36 Volt

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

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

48 Volt

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

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

80 Volt

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

TC3 Premium HF com 80V 40A	150	280	390	185	190	280	330	390	430	230		
TC3 Premium HF com 80V 65A	180	420	580	305	300	420	500	580	650	370		
TC3 Premium HF com 80V 85A	200	550	740	395	400	550	660	740	840	480		
TC3 Premium HF com 80V 105A	250	660	890	490	480	660	790	890	1000	600		
TC3 Premium HF com 80V 120A	250	800	1120	560	580	800	960	1120	1220	680		
TC3 Premium HF com 80V 160A	250	1060	1450	750	760	1060	1300	1450	1600	910		
TC3 Premium HF com 80V 210A	250	1260	1700	980	890	1260	1470	1700	1890	1150		

Technical parameters and profiles, options

Premium HF com 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	mm²	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	mm²	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
FMP energy Low Maintenance 70 (LM 70)	□	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾
FMP energy Low Maintenance 200 (LM 200)	□	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾
FMP energy plus + ionic mixing	●	●	●	●	●	●	●	●	●	●
FMP energy plus + air mixing*	□	●	●	●	●	●	●	●	●	●
FMP energy dry	●	●	●	●	●	●	●	●	●	●
powerbloc dry (AGM)	●	□	□	□	□	□	□	□	□	□
FMP Aqualevel	□	▲	▲	▲	▲	▲	▲	▲	▲	▲
Remote display (green/red)	□	▲	▲	▲	▲	▲	▲	▲	▲	▲
Serial link for charging management	□	▲	▲	▲	▲	▲	▲	▲	▲	▲
*Pump for air mixing	□	▲	▲	▲	▲	▲	▲	▲	▲	▲

¹⁾ 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	mm²	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	mm²	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	20	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	mm	245	268	268	268	304	304	394	394	394	394	394	394	394	394
(Wall fixing)															
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
FMP energy Low Maintenance 70 (LM 70)	□	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾
FMP energy Low Maintenance 200 (LM 200)	□	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾
FMP energy plus + ionic mixing	●	●	●	●	●	●	●	●	●	●	●	●	●	●
FMP energy plus + air mixing*	□	●	●	●	●	●	●	●	●	●	●	●	●	●
FMP energy dry	●	●	●	●	●	●	●	●	●	●	●	●	●	●
powerbloc dry (AGM)	●	□	□	●	□	□	□	□	□	□	□	□	□	□
FMP Aqualevel	□	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Remote display (green/red)	□	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Serial link for charging management	□	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
*Pump for air mixing	□	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲

¹⁾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 ²	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 ²	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	< 9
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
FMP energy Low Maintenance 70 (LM 70)	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾
FMP energy Low Maintenance 200 (LM 200)	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾
FMP energy plus + ionic mixing	●	●	●	●	●	●	●
FMP energy plus + air mixing*	●	●	●	●	●	●	●
FMP energy dry	●	●	●	●	●	●	●
powerbloc dry (AGM)	□	□	□	□	□	□	□
FMP Aquallevel	▲	▲	▲	▲	▲	▲	▲
Remote display (green/red)	▲	▲	▲	▲	▲	▲	□
Serial link for charging management	▲	▲	▲	▲	▲	▲	▲
*Pump for air mixing	▲	▲	▲	▲	▲	▲	▲

¹⁾ cables and harness included

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