




CHARGER SPECIFICATION

FILON FUTUR Characteristics

Charging voltages: 24V, 36V, 48V or 80V
 Max. rated output: 3,3 kW
 Mains voltages: 207-253V 50/60Hz – also 100-120V and 100-253V optional
 Protection category: IP 21 higher protection categories up to IP 54 on request
 Protection class: I

	Cabinet	Width	Height	Depth
	HF 450	430	260	115
	HF 455	430	393	157
	HF 460	295	491	133

FILON FUTUR Options

- NEW Filon Futur Expert** Allows individual programming of the charging parameters such as charge voltage, battery type, capacity, charge current and charge time in stationary and mobile version
- NEW ID chip** Battery identification and assignment with ID chip. The charger will be set automatically.
- NEW Cool Down Indication** Indication of the cooling phase when charging is completed
- ConVision and NEW ConVision Plus** The compact programming and analysis package for mobile services, consisting of service module and software or IEB Service App
- IEB Futur charging characteristic** The patented IEB charging process with ionic electrolyte circulation and dynamic charging curve, intelligently adapted to age, state of charge and battery type
- I-Light** The efficient battery monitoring system for charging stations to indicate the coolest battery after completion of the charging process
- Battery Management System (BMS)** The central IEB monitoring system, ideally suited for battery loading stations
- Slimline HF 460** Slim design in HF 460
- On-Board** Customizable version (including immobilizer)
- Temperature compensation** Temperature-controlled charging, e. g. for cold store applications
- Blue backlight graphic display** Comprehensive indication of the charging settings and charging process as well as warnings and error messages; optionally available as remote display
- EUW** Electrolyte circulation to reduce the charge time by up to 2.5 h
- Signal lights** External machine lamp to view the signaling of the state of charge over a long distance

CHARGER SELECTION TABLE

Output Voltage	Charger Type	Nominal Current [A]	Charging Curve/Charging Time/Battery Capacity K_{ch} [Ah]						Current [A]	Cabinet	Weight [kg]	Type No.
			IUIa	IUIa	IUIa	IUIa	IUIa (IUV)	IUIa (PzV)				
24 V	E 230 G 24 / 40 B25-FP	40	200 - 250	250 - 320	320 - 400	400 - 500	222 - 333	267 - 333	5,8	HF 450	10	75140
	E 230 G 24 / 45 B25-FP	45	225 - 281	282 - 360	360 - 450	450 - 562	250 - 375	300 - 375	6,5	HF 450	10	75145
	E 230 G 24 / 50 B25-FP	50	250 - 312	313 - 400	400 - 500	500 - 625	278 - 417	333 - 417	7,2	HF 450	10	75150
	E 230 G 24 / 60 B25-FP	60	300 - 375	375 - 480	480 - 600	600 - 750	333 - 500	400 - 500	8,7	HF 450	10	75160
	E 230 G 24 / 65 B25-FP	65	325 - 406	407 - 520	520 - 650	650 - 812	352 - 543	434 - 542	9,4	HF 450	10	75165
	E 230 G 24 / 70 B25-FP	70	350 - 437	438 - 560	560 - 700	700 - 875	369 - 558	467 - 593	10,1	HF 450	10	75170
	E 230 G 24 / 75 B25-FP	75	375 - 468	469 - 600	600 - 750	750 - 937	386 - 625	500 - 625	10,9	HF 450	10	75175
	E 230 G 24 / 80 B25-FP	80	400 - 500	500 - 640	640 - 800	800 - 1000	444 - 667	533 - 667	11,6	HF 450	10	75180
	E 230 G 24 / 90 B25-FP	90	450 - 562	563 - 720	720 - 900	900 - 1125	500 - 750	600 - 750	13	HF 450	10	75190
	E 230 G 24 / 100 B25-FP	100	500 - 625	625 - 800	800 - 1000	1000-1250	566 - 833	667 - 833	14,5	HF 450	10	75200
	E 230 G 24 / 110 B25-FP	110	550 - 687	688 - 880	880 - 1100	1100-1375	611 - 916	733 - 916	13,4	HF 450	10	75210
	E 230 G 24 / 120 B25-FP	120	600 - 750	750 - 960	960 - 1200	1200-1500	667 - 1000	800 - 1000	14,6	HF 450	10	75220
36 V	E 230 G 36 / 30 B25-FP	30	150 - 187	188 - 240	240 - 300	300 - 375	167 - 250	200 - 250	6,4	HF 450	10	75330
	E 230 G 36 / 35 B25-FP	35	175 - 218	219 - 280	280 - 350	350 - 437	194 - 292	233 - 292	7,5	HF 450	10	75335
	E 230 G 36 / 40 B25-FP	40	200 - 250	250 - 320	320 - 400	400 - 500	222 - 333	267 - 333	8,6	HF 450	10	75340
	E 230 G 36 / 45 B25-FP	45	225 - 281	282 - 360	360 - 450	450 - 562	250 - 375	300 - 375	9,7	HF 450	10	75345
	E 230 G 36 / 50 B25-FP	50	250 - 312	313 - 400	400 - 500	500 - 625	278 - 417	333 - 417	10,7	HF 450	10	75350
	E 230 G 36 / 60 B25-FP	60	300 - 375	375 - 480	480 - 600	600 - 750	333 - 500	400 - 500	12,9	HF 450	10	75360
48 V	E 230 G 48 / 35 B25-FP	35	175 - 218	219 - 280	280 - 350	350 - 437	194 - 292	233 - 292	9,9	HF 450	10	75535
	E 230 G 48 / 40 B25-FP	40	200 - 250	250 - 320	320 - 400	400 - 500	222 - 333	267 - 333	11,4	HF 450	10	75540
	E 230 G 48 / 45 B25-FP	45	225 - 281	282 - 360	360 - 450	450 - 562	250 - 375	300 - 375	12,8	HF 450	10	75545
	E 230 G 48 / 50 B25-FP	50	250 - 312	313 - 400	400 - 500	500 - 625	278 - 417	333 - 417	14,2	HF 450	10	75550
	E 230 G 48 / 55 B25-FP	55	275 - 343	344 - 440	440 - 550	550 - 687	306 - 459	367 - 458	13,1	HF 450	10	75555
	E 230 G 48 / 60 B25-FP	60	300 - 375	375 - 480	480 - 600	600 - 750	333 - 500	400 - 500	14,3	HF 450	10	75560
80 V	E 230 G 80 / 10 B25-FP	10	50 - 62	63 - 80	80 - 100	100 - 125	56 - 83	67 - 83	4,7	HF 450	10	75810
	E 230 G 80 / 12 B25-FP	12	60 - 75	75 - 96	96 - 120	120 - 150	67 - 100	80 - 100	5,6	HF 450	10	75812
	E 230 G 80 / 15 B25-FP	15	75 - 93	94 - 120	120 - 150	150 - 187	83 - 125	100 - 125	7	HF 450	10	75815
	E 230 G 80 / 20 B25-FP	20	100 - 125	125 - 160	160 - 200	200 - 250	111 - 167	133 - 167	9,4	HF 450	10	75820
	E 230 G 80 / 25 B25-FP	25	125 - 156	157 - 200	200 - 250	250 - 312	139 - 208	167 - 208	11,7	HF 450	10	75825
	E 230 G 80 / 30 B25-FP	30	150 - 187	188 - 240	240 - 300	300 - 375	167 - 250	200 - 250	14,1	HF 450	10	75830
E 230 G 80 / 35 B25-FP	35	175 - 218	219 - 280	280 - 350	350 - 437	194 - 292	233 - 292	13,7	HF 450	10	75835	
E 230 G 80 / 40 B25-FP	40	200 - 250	250 - 320	320 - 400	400 - 500	222 - 333	267 - 333	15,7	HF 450	10	75840	

¹PzS, PzB, GfS, CSM, etc. ²pulse/ionic mixing