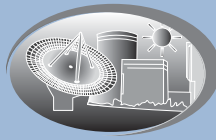
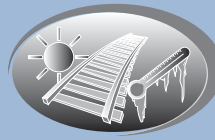




Motive Power Systems



Reserve Power Systems



Special Power Systems



Service

trak[®] basic 50Hz

Chargers for vented lead-acid traction batteries



Similar to the illustration

trak[®] basic

Chargers B-F15 FS for vented lead-acid traction batteries

■ B-F15 FS Chargers ...

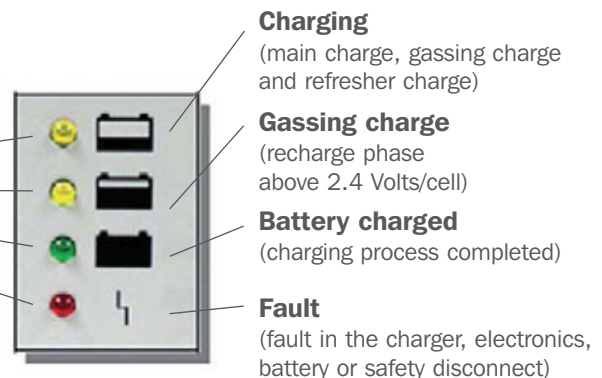
- are automatic chargers that guarantee safe full charging of lead-acid traction batteries
- enable quick and controlled charging of the battery according to the customer requirements
- have firmly defined charge characteristics per ZVEI information leaflet "charger classification for vented lead-acid traction batteries"
- are modularly designed and thus service friendly, increasing the flexibility of the user
- start the charge process with a time delay after battery connection and turning on of the charge process
- are provided with safety interruptions up to 2.4 volts/cell, time-controlled interruptions are also implemented

■ Function description

- The microprocessor controlled charge electronic monitors the charging process fully automatically
- The charge time is automatically adjusted to the depth of discharge from the battery
- Disconnect by du/dt-control (voltage rise)
- During longer rest times, the battery is kept on standby with automatic refresher charges
- In case of a fault, the battery and the charger are protected by superior safety disconnects
- The charge electronics detect slightly sulfated batteries and charge these completely by conditioning charge"



Fig.: Type 48V/40A



trak[®] basic

Benefits

■ Benefits of these chargers:

- Excellent price/performance ratio
- Tested according to the “Quality requirements on chargers for lead-acid traction batteries from HOPPECKE“
- May be used, to a certain extent, for various battery capacities by means of defined disconnect criteria du/dt (may be used in shift operation with up to 8 hrs of charge time)
- ZVEI-compliant with regard to the safety disconnect and charge characteristics
- Lower charge current changes during mains power fluctuations compared to Wa-chargers, since the charge response curve is „steeper“ (compare figure below)
- Optimum gassing current with minimum assignments up to 12.5 A/100 Ah
- Charge switch off criteria is independent of battery age and manufacturer
- Assignments to battery capacity independent of charge times. In the future, the decision of Wa or WoWa is no longer necessary.
- Wall mounting provided for table units T82/83
- Robust industrial design
- Easy to use

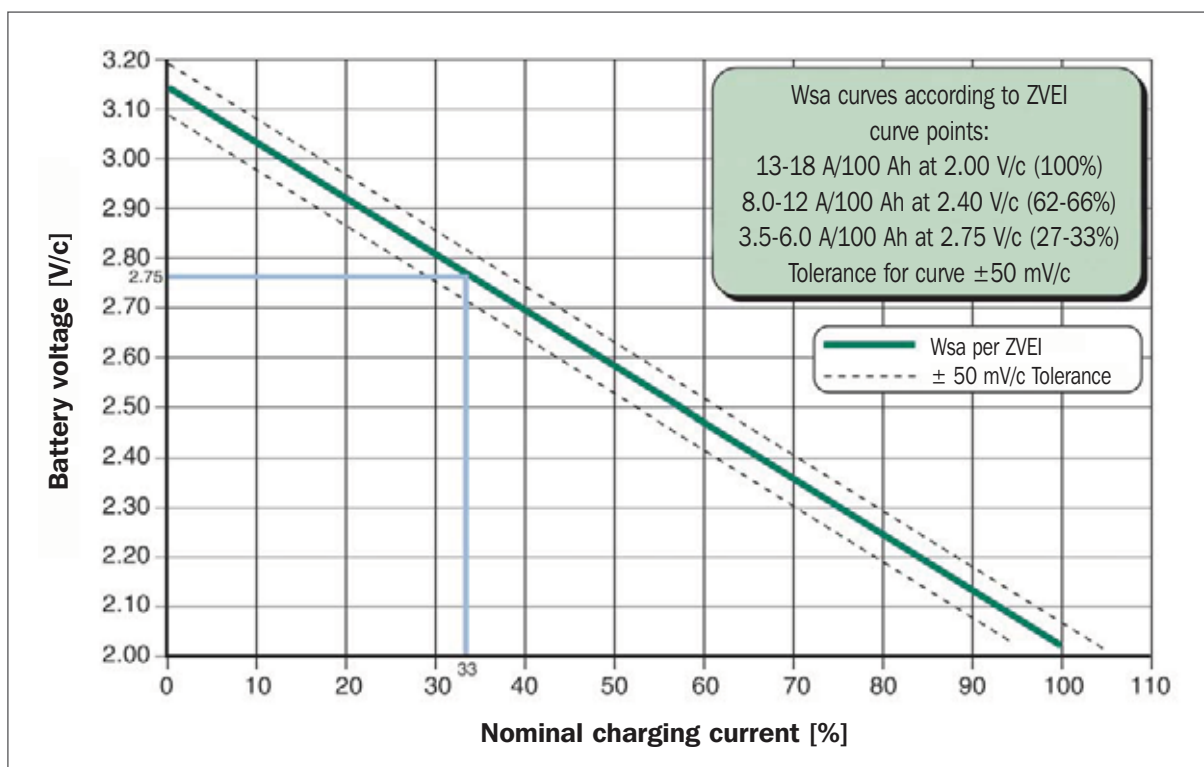


Fig.: Charge characteristics according to ZVEI

trak[®] basic

Recommended models in relation to battery capacity and desired charge time

24 V Battery

Capacity [Ah] \ Charge time	8h	12h
120	24/20	—
160	24/30	24/20
180	24/30	24/20
190	24/30	24/20
200	24/30	24/30
210	24/30	24/30
220	24/30	24/30
225	24/45	24/30
230	24/45	24/30
240	24/45	24/30
250	24/45	24/30
270	24/45	24/30
280	24/55	24/30
300	24/55	24/45
315	24/55	24/45
320	24/55	24/45
330	24/55	24/45
345	24/65	24/45
360	24/65	24/55
375	24/65	24/55
400	24/75	24/55
420	24/75	24/55
440	24/75	24/65
450	24/85	24/65
460	24/85	24/65
465	24/85	24/65
480	24/85	24/65
500	24/95	24/75
525	24/95	24/75
540	24/95	24/75
550	24/95	24/75
560	24/95	24/75
600	24/110	24/85
620	24/110	24/85
625	24/110	24/85
630	24/110	24/85
640	24/125	24/85
660	24/125	24/95
700	24/125	24/95
720	24/125	24/95
735	24/140	24/110
750	24/140	24/110
770	24/140	24/110
775	24/140	24/110
800	24/140	24/110
810	24/140	24/110
840	24/160	24/125
880	24/160	24/125
900	24/160	24/125
920	24/160	24/125
930	24/160	24/140
945	24/185	24/140
960	24/185	24/140
980	24/185	24/140
990	24/185	24/140
1000	24/185	24/140
1050	24/185	24/140
1080	24/200	24/160
1100	24/200	24/160
1120	24/200	24/160
1200	—	24/160
1260	—	24/185
1350	—	24/185
1400	—	24/200

48 V Battery

Capacity [Ah] \ Charge time	8h	12h
120	48/20	—
160	48/20	48/20
180	48/40	48/20
230	48/40	48/40
250	48/40	48/40
270	48/40	48/40
280	48/60	48/40
300	48/60	48/40
315	48/60	48/40
320	48/60	48/40
330	48/60	48/40
360	48/60	48/60
375	48/70	48/60
400	48/70	48/60
420	48/70	48/60
440	48/80	48/60
450	48/80	48/60
465	48/80	48/60
480	48/90	48/70
525	48/90	48/70
540	48/100	48/70
550	48/100	48/80
560	48/100	48/80
575	48/100	48/80
600	48/100	48/80
620	48/115	48/90
625	48/115	48/90
630	48/115	48/90
640	48/115	48/90
660	48/115	48/90
690	48/130	48/100
700	48/130	48/100
720	48/130	48/100
735	48/130	48/100
750	48/130	48/100
770	48/140	48/100
800	48/140	48/115
810	48/140	48/115
840	48/150	48/115
880	48/160	48/130
900	48/160	48/130
945	48/160	48/130
960	48/185	48/130
980	48/185	48/140
990	48/185	48/140
1050	48/185	48/150
1080	48/200	48/150
1100	48/200	48/150
1120	48/200	48/160
1200	—	48/160
1260	—	48/185
1400	—	48/200

80 V Battery

Capacity [Ah] \ Charge time	8h	12h
160	80/20	80/20
230	80/40	80/40
250	80/40	80/40
315	80/55	80/40
320	80/55	80/40
330	80/55	80/40
360	80/70	80/55
375	80/70	80/55
400	80/70	80/55
420	80/70	80/55
440	80/70	80/70
450	80/85	80/70
465	80/85	80/70
480	80/85	80/70
500	80/85	80/70
525	80/100	80/70
540	80/100	80/70
550	80/100	80/70
560	80/100	80/70
575	80/100	80/85
600	80/110	80/85
620	80/110	80/85
625	80/110	80/85
630	80/110	80/85
640	80/110	80/85
660	80/120	80/100
690	80/120	80/100
700	80/120	80/100
720	80/120	80/100
735	80/135	80/100
750	80/135	80/100
770	80/135	80/110
775	80/135	80/110
800	80/150	80/110
810	80/150	80/110
840	80/150	80/120
880	80/165	80/120
900	80/165	80/120
920	80/165	80/120
930	80/165	80/135
945	80/180	80/135
960	80/180	80/135
980	80/180	80/135
990	80/180	80/135
1000	80/180	80/135
1035	80/180	80/150
1050	80/180	80/150
1080	80/200	80/150
1100	80/200	80/150
1120	80/200	80/150
1200	—	80/165
1260	—	80/180
1350	—	80/180
1400	—	80/200

Model Overview - Technical Data – Product Spectrum

Cross sections of charge cable and power cable, Plug and Connected load

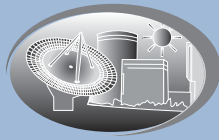
Type B-F15 FS	HOPPECKE Mat.-No.	Charge cable [mm ²]	Power cable [mm ²]	Plug	Output [kVA]	Mains connection			Hous. Type	Weight [kg]
						Volt. [V]	Current [A]	Fuse [A]		
E 230 G24/ 20	3503424020	16	1.5	SCHUKO	0.9	230	3.7	16	T82	18
E 230 G24/ 30	3503424030	16	1.5	SCHUKO	1.3	230	5.5	16	T82	19
E 230 G24/ 45	3503424045	16	1.5	SCHUKO	1.9	230	8.2	16	T82	20
E 230 G24/ 55	3503424055	16	1.5	SCHUKO	2.3	230	10.0	16	T82	21
E 230 G24/ 65	3503424065	25	1.5	SCHUKO	2.7	230	11.8	16	T83	29
E 230 G24/ 75	3503424075	25	1.5	SCHUKO	3.2	230	13.7	16	T83	30
E 230 G24/ 85	3503424085	25	1.5	SCHUKO	3.7	230	15.9	16	T83	32
D 400 G24/ 95	3503424095	35	1.5	CEE 16A	4.0	2x400	9.9	16	S86	34
D 400 G24/110	3503424110	35	1.5	CEE 16A	4.6	2x400	11.5	16	S86	53
D 400 G24/125	3503424125	35	1.5	CEE 16A	5.2	2x400	13.1	16	S86	56
D 400 G24/140	3503424140	35	1.5	CEE 16A	6.0	2x400	15.0	16	S86	65
D 400 G24/160	3503424160	50	1.5	CEE 16A	6.9	3x400	9.9	16	S86	70
D 400 G24/185	3503424185	50	1.5	CEE 16A	7.8	3x400	11.2	16	S86	77
D 400 G24/200	3503424200	70	1.5	CEE 16A	8.6	3x400	12.4	16	S86	100
E 230 G48/ 20	3503448020	16	1.5	SCHUKO	1.7	230	7.5	16	T82	25
E 230 G48/ 40	3503448040	16	1.5	SCHUKO	3.4	230	14.9	16	T83	35
D 400 G48/ 60	3503448060	25	1.5	CEE 16A	5.0	2x400	12.5	16	S86	55
D 400 G48/ 70	3503448070	25	1.5	CEE 16A	5.8	2x400	14.6	16	S86	65
D 400 G48/ 80	3503448080	25	1.5	CEE 16A	6.9	3x400	9.9	16	S86	70
D 400 G48/ 90	3503448090	35	1.5	CEE 16A	7.6	3x400	10.9	16	S86	74
D 400 G48/100	3503448100	35	1.5	CEE 16A	8.6	3x400	12.4	16	S86	80
D 400 G48/115	3503448115	35	1.5	CEE 16A	9.6	3x400	13.9	16	S86	85
D 400 G48/130	3503448130	35	1.5	CEE 16A	10.9	3x400	15.7	20	S86	96
D 400 G48/140	3503448140	35	2.5	CEE 32A	11.7	3x400	16.9	20	S86	100
D 400 G48/150	3503448150	50	2.5	CEE 32A	12.5	3x400	18.1	20	S86	102
D 400 G48/160	3503448160	50	2.5	CEE 32A	13.4	3x400	19.3	20	S86	115
D 400 G48/185	3503448185	50	2.5	CEE 32A	15.9	3x400	22.9	32	S86	125
D 400 G48/200	3503448200	70	2.5	CEE 32A	17.2	3x400	24.8	32	S86	130
E 230 G80/ 20	3503480020	16	1.5	SCHUKO	2.9	230	12.4	16	T83	30
D 400 G80/ 40	3503480040	16	1.5	CEE 16A	5.7	2x400	14.3	16	S86	50
D 400 G80/ 55	3503480055	16	1.5	CEE 16A	7.9	3x400	11.4	16	S86	70
D 400 G80/ 70	3503480070	25	1.5	CEE 16A	9.8	3x400	14.1	16	S86	73
D 400 G80/ 85	3503480085	25	2.5	CEE 32A	11.8	3x400	17.1	20	S86	86
D 400 G80/100	3503480100	35	2.5	CEE 32A	13.9	3x400	20.1	25	S86	101
D 400 G80/110	3503480110	35	2.5	CEE 32A	15.7	3x400	22.7	32	S86	110
D 400 G80/120	3503480120	35	2.5	CEE 32A	16.7	3x400	24.1	32	S86	120
D 400 G80/135	3503480135	35	2.5	CEE 32A	18.8	3x400	27.1	32	S86	130
D 400 G80/150	3503480150	50	4	CEE 32A	20.9	3x400	30.2	32	S87	143
D 400 G80/165	3503480165	50	6	CEE 63A	23.0	3x400	33.2	50	S87	150
D 400 G80/180	3503480180	50	6	CEE 63A	25.1	3x400	36.2	50	S87	170
D 400 G80/200	3503480200	70	6	CEE 63A	28.6	3x400	41.3	50	S87	190

Housing dimensions [mm]

Housing	Width	Depth	Height
T82	400	300	240
T83	500	350	310
S86	540	410	670
S87	600	410	700



Motive Power Systems



Reserve Power Systems



Special Power Systems



Service



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