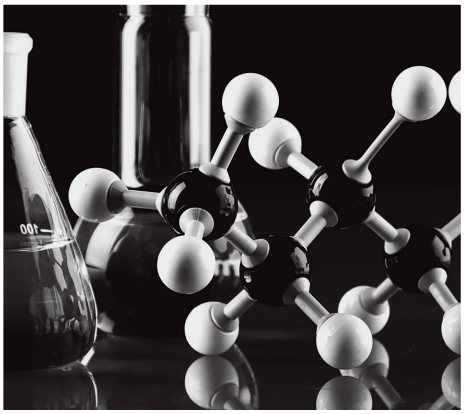
ENGLISH

TAB TRACTION BATTERIES

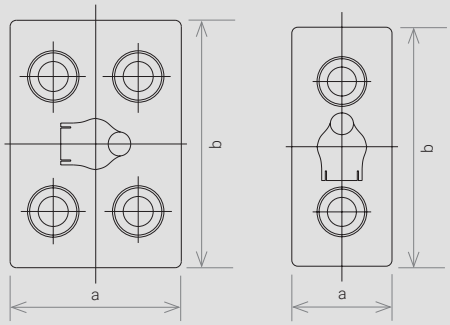


TAB

DIN
BCI
BS
PzV
PzVB
PzRM

WE HAVE EXPERIENCE AND WE HAVE KNOWLEDGE — THEREFORE OUR HIGH QUALITY BATTERIES ARE KNOWN WORLDWIDE.

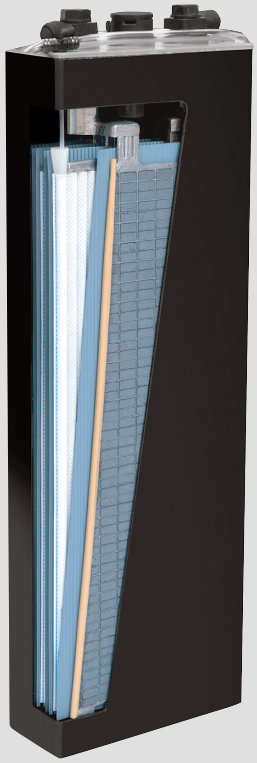
WE ARE PROUD OF OUR DURABLE ENERGY — NOW ALREADY FOR 60 YEARS.

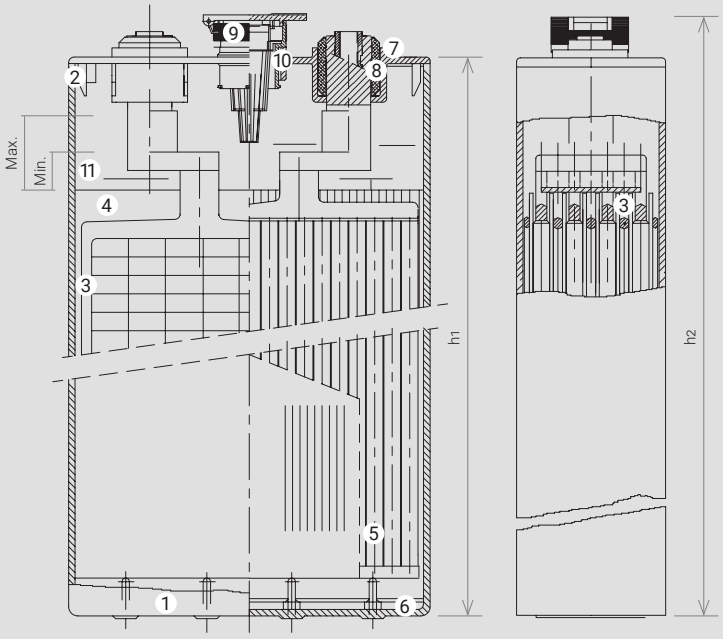


IN ORDER THAT THE BATTERIES WOULD MEET ALL YOUR DEMANDS, WE KINDLY ASK YOU TO ENCLOSE THE FOLLOWING DATA WITH YOUR ORDER:

- battery **voltage**
- **capacity** of the battery at a five-hour discharge rate
- **dimensions** of the battery tray
- **designation and type** of the electric machine
- any **special demands**
- a battery **drawing** (when possible)

IN CASE OF PROBLEMS WITH ORDERING WE WILL BE GLAD TO ADVISE AND ASSIST YOU IN THE SELECTION OF THE SUITABLE TYPE OF BATTERY.





1 Polypropilene container
2 Polypropilene cover
3 Negative grid Plate
4 Microporous separator
5 Positive armoured tube Plate
6 Settling rib
7 Terminal post
8 Rubber sealing
9 Cell plug Ø 35,5
10 Plug sealing Ø 35,5
11 Electrolyte

All measures and weights are within standard production tolerances.
Electrical values are approximate.
Technical modifications are reserved without prior notice.

DIN STANDARD CHARACTERISTIC DATA

Electrolyte density at 30 °C: 1,29 ± 0,01 kg/l. Weight tolerance is ± 5 %.
Cells from 7 to 10 PzS types are available with 2 and 4 poles. For 4 poles, please specify in your order.
10 PzS 1400 L, 10 PzS 1550 L and all 12 PzS cells are available with 4 poles only. Cells available only with 4 poles are signed with *.

50Ah/plate

h1 = 282, h2 = 305 mm | length = b = 198 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzS 100 L	100	47	6,8	5,7
3 PzS 150 L	150	65	9,6	7,7
4 PzS 200 L	200	83	12,4	9,9
5 PzS 250 L	250	101	15,3	12,2
6 PzS 300 L	300	119	18,2	14,5
7 PzS 350 L	350	137	21,1	16,7
8 PzS 400 L	400	155	24,0	19,0
9 PzS 450 L	450	173	26,9	21,3
10 PzS 500 L	500	191	29,8	23,6
12 PzS 600 L *	600	227	35,9	28,4

60Ah/plate

h1 = 340, h2 = 363 mm | length = b = 198 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzS 120 L	120	47	8,5	6,5
3 PzS 180 L	180	65	11,9	9,2
4 PzS 240 L	240	83	15,4	11,9
5 PzS 300 L	300	101	18,9	14,6
6 PzS 360 L	360	119	22,4	17,2
7 PzS 420 L	420	137	25,9	19,9
8 PzS 480 L	480	155	29,4	22,6
9 PzS 540 L	540	173	32,9	25,2
10 PzS 600 L	600	191	36,4	27,9
12 PzS 720 L *	720	227	43,7	33,6

80Ah/plate

h1 = 402, h2 = 425 mm | length = b = 198 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzS 160 L	160	47	10,2	8,1
3 PzS 240 L	240	65	14,5	11,2
4 PzS 320 L	320	83	18,7	14,6
5 PzS 400 L	400	101	22,9	17,9
6 PzS 480 L	480	119	27,1	21,3
7 PzS 560 L	560	137	31,3	24,7
8 PzS 640 L	640	155	35,5	28,0
9 PzS 720 L	720	173	39,7	31,4
10 PzS 800 L	800	191	43,9	34,7
12 PzS 960 L *	960	227	52,6	41,8

90Ah/plate

h1 = 472, h2 = 495 mm | length = b = 198 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzS 180 L	180	47	11,6	9,1
3 PzS 270 L	270	65	16,6	12,8
4 PzS 360 L	360	83	21,4	16,6
5 PzS 450 L	450	101	26,2	20,5
6 PzS 540 L	540	119	31,0	24,4
7 PzS 630 L	630	137	35,8	28,2
8 PzS 720 L	720	155	40,6	32,1
9 PzS 810 L	810	173	45,4	35,9
10 PzS 900 L	900	191	50,2	39,8
12 PzS 1080 L *	1080	227	60,1	47,8

105Ah/plate

h1 = 515, h2 = 538 mm | length = b = 198 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzS 210 L	210	47	13,3	10,3
3 PzS 315 L	315	65	18,3	14,4
4 PzS 420 L	420	83	23,7	18,6
5 PzS 525 L	525	101	29,1	22,9
6 PzS 630 L	630	119	34,5	27,1
7 PzS 735 L	735	137	39,9	31,4
8 PzS 840 L	840	155	45,3	35,6
9 PzS 945 L	945	173	50,7	39,9
10 PzS 1050 L	1050	191	56,4	44,5
12 PzS 1260 L *	1260	227	67,2	53,0

115Ah/plate

h1 = 545, h2 = 568 mm | length = b = 198 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzS 230 L	230	47	14,0	10,8
3 PzS 345 L	345	65	19,8	15,3
4 PzS 460 L	460	83	25,6	19,9
5 PzS 575 L	575	101	31,4	24,8
6 PzS 690 L	690	119	37,2	29,6
7 PzS 805 L	805	137	43,0	34,5
8 PzS 920 L	920	155	48,8	39,3
9 PzS 1035 L	1035	173	54,9	44,5
10 PzS 1150 L	1150	191	60,7	49,3
12 PzS 1380 L *	1380	227	72,3	59,0

125Ah/plate

h1 = 570, h2 = 593 mm | length = b = 198 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzS 250 L	250	47	14,7	11,6
3 PzS 375 L	375	65	20,7	16,2
4 PzS 500 L	500	83	26,9	21,1
5 PzS 625 L	625	101	33,1	26,0
6 PzS 750 L	750	119	39,3	30,9
7 PzS 875 L	875	137	45,5	35,8
8 PzS 1000 L	1000	155	51,7	40,7
9 PzS 1125 L	1125	173	58,2	45,9
10 PzS 1250 L	1250	191	64,4	50,8
12 PzS 1500 L *	1500	227	76,8	60,6

140Ah/plate

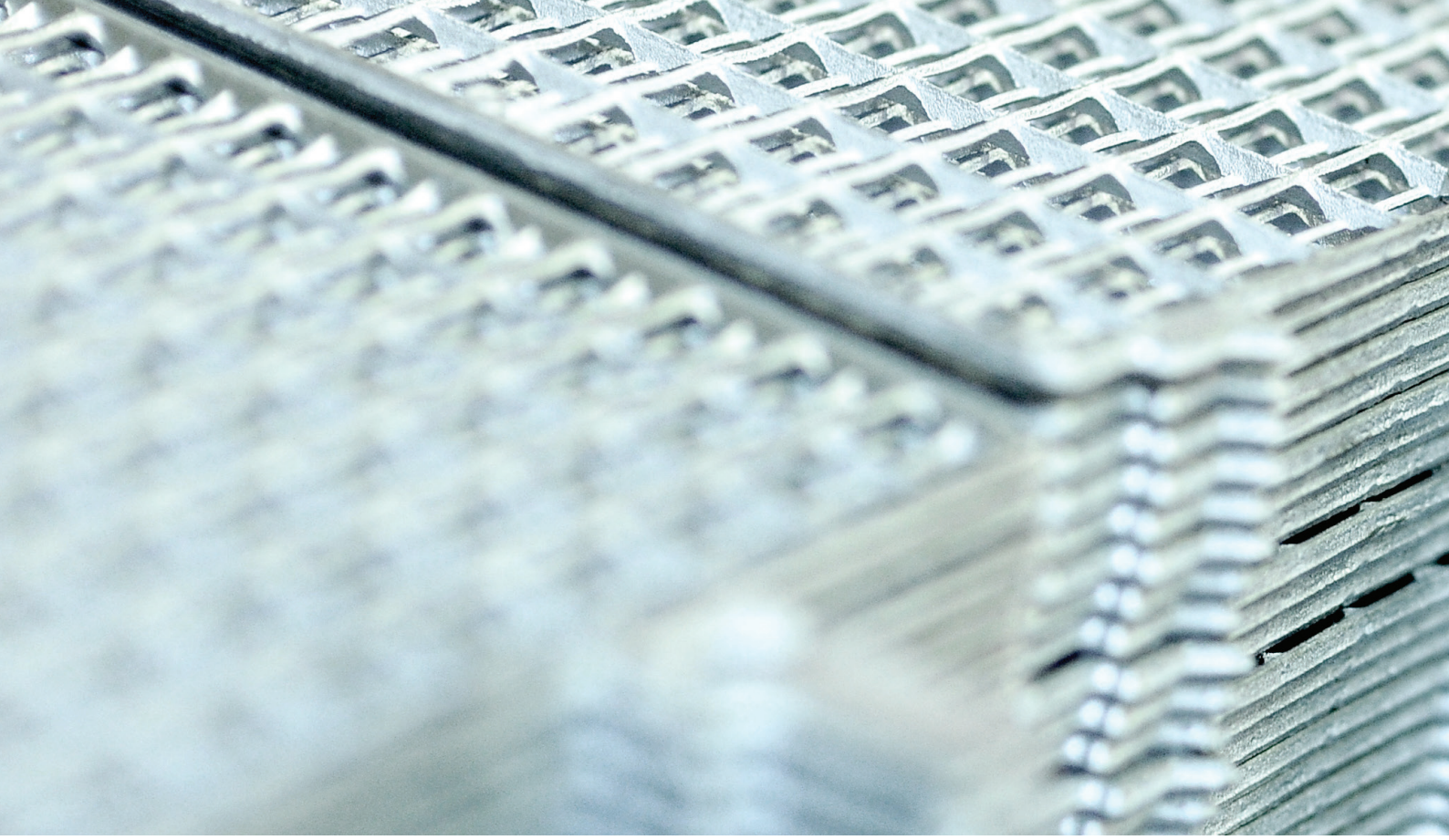
h1 = 686, h2 = 709 mm | length = b = 198 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzS 280 L	280	47	18,3	14,4
3 PzS 420 L	420	65	25,3	19,4
4 PzS 560 L	560	83	32,2	25,1
5 PzS 700 L	700	101	39,5	30,9
6 PzS 840 L	840	119	46,7	36,6
7 PzS 980 L	980	137	54,0	42,3
8 PzS 1120 L	1120	155	61,2	48,0
9 PzS 1260 L	1260	173	68,8	54,1
10 PzS 1400 L *	1400	191	76,0	59,8
12 PzS 1680 L *	1680	227	90,5	71,3

155Ah/plate

h1 = 720, h2 = 743 mm | length = b = 198 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzS 310 L	310	47	18,8	14,9
3 PzS 465 L	465	65	26,1	20,6
4 PzS 620 L	620	83	33,5	26,7
5 PzS 775 L	775	101	41,1	32,9
6 PzS 930 L	930	119	48,9	39,0
7 PzS 1085 L	1085	137	56,7	45,1
8 PzS 1240 L	1240	155	64,5	51,3
9 PzS 1395 L	1395	173	72,8	57,8
10 PzS 1550 L *	1550	191	80,6	64,0
12 PzS 1860 L *	1860	227	96,2	76,2



BCI STANDARD CHARACTERISTIC DATA

Fully charged Specific Gravity 1,29 ± 0,01 kg/l at 30 °C.
Weight tolerance is ± 5 %.
Cells available only with 4 poles are signed with *.

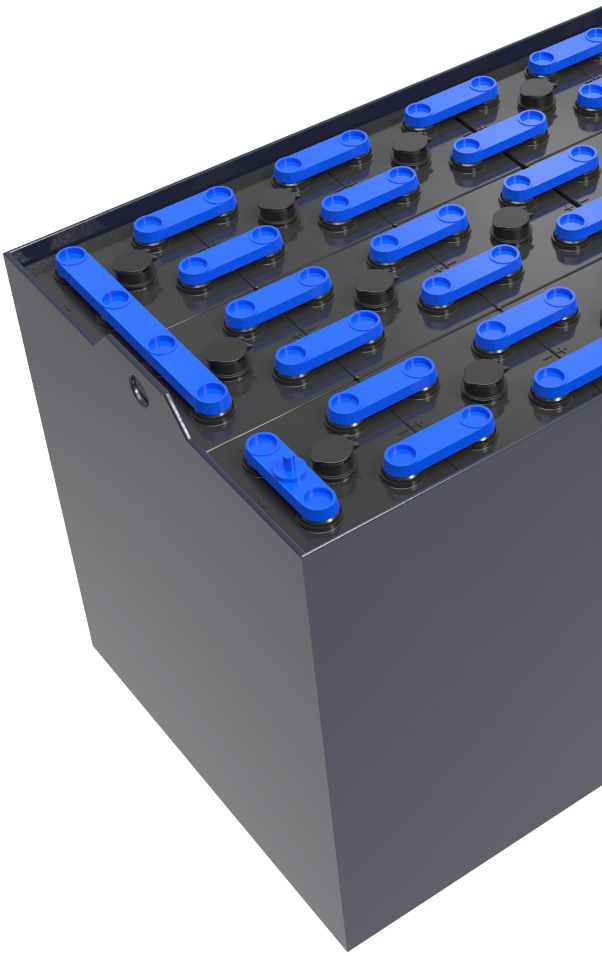
85Ah/plate

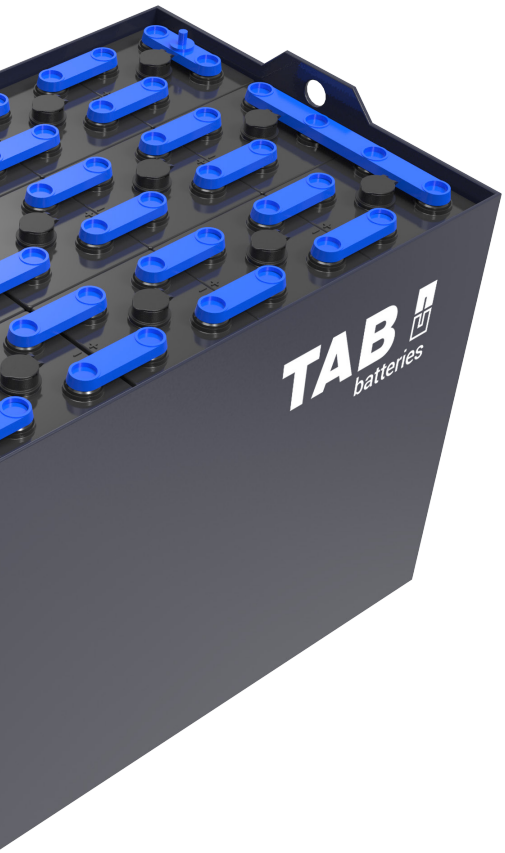
h1 = 20,5˝ / 520 mm, h2 = 21,3˝ / 542 mm | length = 6,2˝ / 158 mm

CELL TYPE	US Type	CAPACITY 6h	Nr. of Plates	WIDTH Inch/mm	WEIGHT with acid
BCI 85-5 (170/170)	5 plt	170	2	2,00/51	10,7/23,6
BCI 85-7 (255/255)	7 plt	255	3	2,75/70	14,9/32,8
BCI 85-9 (340/340)	9 plt	340	4	3,50/89	19,1/42,1
BCI 85-11 (425/510)	11 plt	510	6	4,25/108	25,8/56,9
BCI 85-13 (510/595)	13 plt	595	7	5,00/127	30,0/66,1
BCI 85-15 (595/680)	15 plt	680	8	5,75/146	34,1/75,2
BCI 85-17 (680/765)*	17 plt	765	9	6,50/165	39,1/86,2
BCI 85-19 (765/850)*	19 plt	850	10	7,25/184	43,5/95,9
BCI 85-21 (850/935)*	21 plt	935	11	8,00/203	47,8/105,4
BCI 85-23 (935/1105)*	23 plt	1105	13	8,75/222	54,7/120,6
BCI 85-25 (1020/1190)*	25 plt	1190	14	9,50/241	59,1/130,3
BCI 85-27 (1105/1275)*	27 plt	1275	15	10,25/260	63,5/140,0

Weight: kg /Lbs

Technical modifications are reserved without prior notice.
Number of plates: Number of 85Ah positive tubular plates.





125Ah/plate

h1 = 28,6″ / 726 mm, h2 = 29,5″ / 748 mm | length = 6,2″ / 158 mm

CELL TYPE	US Type	CAPACITY 6h	Nr. of Plates	WIDTH Inch/mm	WEIGHT with acid
BCI 125-5 (250/250)	5 plt	250	2	2,00/51	15,7/34,6
BCI 125-7 (375/375)	7 plt	375	3	2,75/70	21,7/47,8
BCI 125-9 (500/500)	9 plt	500	4	3,50/89	27,9/61,5
BCI 125-11 (625/750)	11 plt	750	6	4,25/108	38,1/84,0
BCI 125-13 (750/875)	13 plt	875	7	5,00/127	44,0/97,0
BCI 125-15 (875/1000)	15 plt	1000	8	5,75/146	50,5/111,4
BCI 125-17 (1000/1125)*	17 plt	1125	9	6,50/165	57,5/126,8
BCI 125-19 (1125/1250)*	19 plt	1250	10	7,25/184	63,7/140,5
BCI 125-21 (1250/1375)*	21 plt	1375	11	8,00/203	69,9/154,1
BCI 125-23 (1375/1625)*	23 plt	1625	13	8,75/222	80,2/176,8
BCI 125-25 (1500/1750)*	25 plt	1750	14	9,50/241	86,4/190,5
BCI 125-27 (1625/1875)*	27 plt	1875	15	10,25/260	92,6/204,4

Weight: kg /Lbs

Technical modifications are reserved without prior notice.
Number of plates: Number of 125Ah positive tubular plates.

BS STANDARD CHARACTERISTIC DATA

Electrolyte density at 30 °C: 1,29 ± 0,01 kg/l. Weight tolerance is ± 5 %.
Cells from 9 to 11 PzB types are available with 4 poles only.
Cells available only with 4 poles are signed with *.

23Ah/plate

h1 = 216, h2 = 240 mm | length = b = 157,5 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzB 46	46	45	3,7	3,0
3 PzB 69	69	61	5,4	4,2
4 PzB 92	92	77	6,9	5,4
5 PzB 115	115	93	8,4	6,6
6 PzB 138	138	109	10,0	7,8
7 PzB 161	161	125	11,6	9,0
8 PzB 184	184	141	13,2	10,2
9 PzB 207 *	207	157	15,3	11,9
10 PzB 230 *	230	173	16,9	13,1
11 PzB 253 *	253	189	18,4	14,3

32Ah/plate

h1 = 260, h2 = 284 mm | length = b = 157,5 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzB 64	64	45	5,1	4,0
3 PzB 96	96	61	7,1	5,6
4 PzB 128	128	77	9,2	7,2
5 PzB 160	160	93	11,3	8,8
6 PzB 192	192	109	13,2	10,3
7 PzB 224	224	125	15,0	11,7
8 PzB 256	256	141	16,8	13,1
9 PzB 288 *	288	157	19,1	14,9
10 PzB 320 *	320	173	20,9	16,3
11 PzB 352 *	352	189	22,7	17,7

42Ah/plate

h1 = 326, h2 = 350 mm | length = b = 157,5 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzB 84	84	45	6,9	5,4
3 PzB 126	126	61	9,4	7,3
4 PzB 168	168	77	11,9	9,3
5 PzB 210	210	93	14,5	11,3
6 PzB 252	252	109	17,3	13,5
7 PzB 294	294	125	20,0	15,6
8 PzB 336	336	141	22,3	17,6
9 PzB 378 *	378	157	25,2	19,9
10 PzB 420 *	420	173	27,6	21,8
11 PzB 462 *	462	189	30,0	23,7

55Ah/plate

h1 = 399, h2 = 423 mm | length = b = 157,5 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzB 110	110	45	7,6	6,1
3 PzB 165	165	61	10,5	8,5
4 PzB 220	220	77	13,5	11,0
5 PzB 275	275	93	16,5	13,5
6 PzB 330	330	109	19,6	15,9
7 PzB 385	385	125	22,6	18,4
8 PzB 440	440	141	25,6	20,8
9 PzB 495 *	495	157	29,1	23,8
10 PzB 550 *	550	173	32,1	26,3
11 PzB 605 *	605	189	35,2	28,7

65Ah/plate

h1 = 453, h2 = 477 mm | length = b = 157,5 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzB 130	130	45	8,2	6,8
3 PzB 195	195	61	12,0	10,1
4 PzB 260	260	77	15,5	13,0
5 PzB 325	325	93	19,0	16,0
6 PzB 390	390	109	22,6	18,9
7 PzB 455	455	125	26,1	21,8
8 PzB 520	520	141	29,6	24,5
9 PzB 585 *	585	157	33,6	27,9
10 PzB 650 *	650	173	37,2	30,6
11 PzB 715 *	715	189	40,7	33,3

75Ah/plate

h1 = 513, h2 = 537 mm | length = b = 157,5 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzB 150	150	45	10,0	7,5
3 PzB 225	225	61	13,9	10,8
4 PzB 300	300	77	17,8	14,1
5 PzB 375	375	93	21,6	17,5
6 PzB 450	450	109	25,6	20,9
7 PzB 525	525	125	29,6	24,1
8 PzB 600	600	141	33,5	27,4
9 PzB 675 *	675	157	38,2	31,1
10 PzB 750 *	750	173	42,3	34,2
11 PzB 825 *	825	189	46,4	37,3

86Ah/plate

h1 = 567, h2 = 591 mm | length = b = 157,5 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzB 172	172	45	10,7	8,3
3 PzB 258	258	61	15,0	11,8
4 PzB 344	344	77	19,3	15,2
5 PzB 430	430	93	23,7	18,6
6 PzB 516	516	109	28,1	22,0
7 PzB 602	602	125	32,6	25,4
8 PzB 688	688	141	37,1	28,8
9 PzB 774 *	774	157	42,3	32,9
10 PzB 860 *	860	173	46,9	36,3
11 PzB 946 *	946	189	51,4	39,7

100Ah/plate

h1 = 608 h2 = 632 mm | length = b = 157,5 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzB 200	200	45	11,8	9,4
3 PzB 300	300	61	16,6	13,5
4 PzB 400	400	77	21,5	17,5
5 PzB 500	500	93	26,4	21,6
6 PzB 600	600	109	31,5	25,6
7 PzB 700	700	125	36,4	29,7
8 PzB 800	800	141	41,4	33,7
9 PzB 900 *	900	157	47,1	38,6
10 PzB 1000 *	1000	173	52,0	42,7
11 PzB 1100 *	1100	189	56,9	46,7

108Ah/plate

h1 = 688, h2 = 712 mm | length = b = 157,5 mm

CELL TYPE	CAPACITY 5h	WIDTH mm	WEIGHT with acid (kg)	WEIGHT dry (kg)
2 PzB 216	216	45	13,5	9,9
3 PzB 324	324	61	18,9	14,3
4 PzB 432	432	77	24,3	18,7
5 PzB 540	540	93	29,7	23,2
6 PzB 648	648	109	35,1	27,6
7 PzB 756	756	125	40,5	32,1
8 PzB 864	864	141	45,9	36,5
9 PzB 972 *	972	157	52,0	41,6
10 PzB 1080 *	1080	173	57,4	46,0
11 PzB 1188 *	1188	189	62,8	50,4

TAB GEL TRACTION

Maintenance free TAB Gel batteries are high sophisticated traction batteries in the family of TAB motive power products.
Sealed TAB Gel batteries are produced in VRLA Gel technology **(Valve Regulated Lead Acid batteries with electrolyte in the form of gel)** according to EN 60254-2 standard.
They can be used in all kind of electrical appliances like **forklift trucks, electric road machines, cleaning machines, etc.**
Due to its high operational safety and high degree of environmental friendliness TAB Gel battery is particularly suitable for applications in pharmaceutical, food, chemical and similar industries.

Main characteristics

- MAINTENANCE FREE
- INCORPORATED VALVES IN EXHAUST TUBES PREVENT CORROSIVE GAS RELEASE
- EXTREMELY LOW SELF-DISCHARGE
- EXTREMELY LOW GASSING DURING OPERATION
- MAINTENANCE ERRORS ARE MINIMIZED
- NO ELECTROLYTE LEAKAGE IN CASE OF CELL DAMAGE
- NO CONTAMINATION OR CORROSION DUE TO LEAKING ELECTROLYTE

PzV STANDARD CHARACTERISTIC DATA

55Ah/plate
h1 = 340, h2 = 350 mm | length = b = 198 mm

CELL TYPE	CAPACITY C5	WIDTH mm	WEIGHT kg
2 PzV 110	110	47	9,3
3 PzV 165	165	65	12,7
4 PzV 220	220	83	16,5
5 PzV 275	275	101	20,1
6 PzV 330	330	119	23,8
7 PzV 385	385	137	27,4

100Ah/plate
h1 = 563, h2 = 573 mm | length = b = 198 mm

CELL TYPE	CAPACITY C5	WIDTH mm	WEIGHT kg
2 PzV 200	200	47	14,7
3 PzV 300	300	65	21,6
4 PzV 400	400	83	27,8
5 PzV 500	500	101	34,3
6 PzV 600	600	119	40,6

70Ah/plate
h1 = 402, h2 = 412 mm | length = b = 198 mm

CELL TYPE	CAPACITY C5	WIDTH mm	WEIGHT kg
2 PzV 140	140	47	10,8
3 PzV 210	210	65	15,5
4 PzV 280	280	83	19,7
5 PzV 350	350	101	24,2
6 PzV 420	420	119	29,1

120Ah/plate
h1 = 720, h2 = 730 mm | length = b = 198 mm

CELL TYPE	CAPACITY C5	WIDTH mm	WEIGHT kg
2 PzV 240	240	47	19,7
3 PzV 360	360	65	27,4
4 PzV 480	480	83	35,3
5 PzV 600	600	101	42,1
6 PzV 720	720	119	50,0

80Ah/plate
h1 = 472, h2 = 482 mm | length = b = 198 mm

CELL TYPE	CAPACITY C5	WIDTH mm	WEIGHT kg
2 PzV 160	160	47	12,7
3 PzV 240	240	65	18,1
4 PzV 320	320	83	23,6
5 PzV 400	400	101	29,0
6 PzV 480	480	119	35,0

PzVB STANDARD

61Ah/plate
h1 = 472, h2 = 486 mm | length = b = 157,5 mm

CELL TYPE	CAPACITY C5	WIDTH mm	WEIGHT kg
2 PzVB 122	122	45	9,7
3 PzVB 183	183	61	13,5
4 PzVB 244	244	77	16,9

71Ah/plate
h1 = 516, h2 = 530 mm | length = b = 157,5 mm

CELL TYPE	CAPACITY C5	WIDTH mm	WEIGHT kg
2 PzVB 142	142	45	10,6
3 PzVB 213	213	61	14,8
4 PzVB 284	284	77	18,5

85Ah/plate
h1 = 611, h2 = 625 mm | length = b = 157,5 mm

CELL TYPE	CAPACITY C5	WIDTH mm	WEIGHT kg
2 PzVB 170	170	45	11,8
3 PzVB 255	255	61	16,1
4 PzVB 340	340	77	20,7

TAB-EX
APPLICATION FIELD

Assembly of ex batteries operating in various applications:

- MINING
- PETROCHEMISTRY
- CHEMISTRY
- PHARMACY
- STORAGE DEPOTS

TAB-EX TRACTION CELLS COMPLYING WITH TRACTION BATTERY STANDARDS EN/IEC 60254-1 AND 60254-2 ARE COMPONENT CERTIFIED FOR ASSEMBLY OF BATTERIES USED IN ZONE AREAS WITH RISKS OF EXPLOSION DUE TO FLAMMABLE GAS OR DUST:

Group I Category M2:
Ex e I Mb

Group II Category 2 and 3:
Zone 1 and 2 (Gas), 21 and 22 (Dust):
Ex e IIC Gb
Ex t IIIC Db IP 64

THE CELLS ARE PRODUCED IN ACCORDANCE WITH THE DIRECTIVE 94/9/EC IN IECEX CERTIFICATION SCHEME AND FULFILL THE APPLICABLE REQUIREMENTS OF DIRECTIVE HARMONIZED STANDARDS EN/IEC 60079-0 AND 60079-7.

CERTIFICATES

Traction batteries:
PzS, PzV, PzB and PzBV

ATEX Certificate:
Sira 10ATEX3255U
SIQ 11 ATEX Q 327-0

IECEx Certificate:
IECEx SIR 11.0157U

TAB-EX cells are available for the following range:

- All DIN and DIN S types except for cells with 12 positive plates
- All BS types except for cells from 9 to 11 positive plates
- All PzVB and PzV gel cells

TAB AQUALESS TRACTION
PzRM BATTERIES

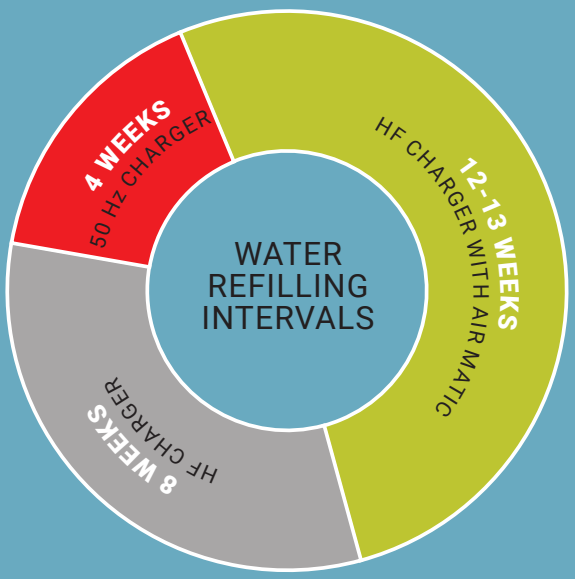
CELL DESIGN

with proven PzS technology using tubular plates in combination with an adjusted charging regime results in extended watering intervals. TAB PzRM cells are manufactured and tested according to EN60254-1 and IEC254-1.

Main advantages

- WATER REFILL INTERVAL IS EFFICIENTLY PROLONGED
- REDUCED WATER CONSUMPTION
- LOW MAINTENANCE AND REDUCED OPERATIONAL COSTS
- REDUCED CHARGING FACTOR
- 50 TO 80% REDUCED GAS RELEASE
- AND VENTILATION REQUIREMENTS
- 20 TO 30% LESS CHARGING TIME
- COST SAVING DUE TO LOWER ENERGY CONSUMPTION FROM 10 TO 20%
- REDUCED OPERATING TEMPERATURES

Water refill interval is efficiently prolonged



TAB Aqualess

TAB AQUALESS	AQUA 1	AQUA 2	AQUA 3
Refilling Interval in weeks	4	8	12-13
Charger	50 Hz	HF	HF + Air Matic
Charging Factor	1.2	1.10–1.11	1.07–1.08
Electrolyte Level indicator	SERIAL	SERIAL	SERIAL
Central Water Filling System	OPTIONAL	OPTIONAL	OPTIONAL
Air Matic	OPTIONAL	OPTIONAL	SERIAL

Condition: water refilling intervals are based on 80% DOD - 1 cycle per day; 5 days per week

TAB AQUALESS
BATTERY SPECIFICATIONS:

- water refilling interval up to 13 weeks (at normal duty applications with 80% DOD C5, 1cycle per day; 5 days per week, Electrolyte T=30°C)
- for these batteries proper chargers must be used
- cells are equipped with Electrolyte Mixing system (using charger with integrated air)
- batteries are assembled with Central Water Filling system
- each battery has an Electrolyte Level Sensor (length according manufacturer specifications). With its red light it gives signal to the user when water refilling is needed

80Ah/plate

h1 = 402, h2 = 425 mm | length = b = 198 mm

CELL TYPE	CAPACITY C5	WIDTH mm	WEIGHT kg
2 PzRM 160	160	47	10,2
3 PzRM 240	240	65	14,5
4 PzRM 320	320	83	18,7
5 PzRM 400	400	101	22,9
6 PzRM 480	480	119	27,1
7 PzRM 560	560	137	31,3
8 PzRM 640	640	155	35,5
9 PzRM 720	720	173	39,7
10 PzRM 800	800	191	43,9
12 PzRM 960 *	960	227	52,6

90Ah/plate

h1 = 472, h2 = 495 mm | length = b = 198 mm

CELL TYPE	CAPACITY C5	WIDTH mm	WEIGHT kg
2 PzRM 180	180	47	11,6
3 PzRM 270	270	65	16,6
4 PzRM 360	360	83	21,4
5 PzRM 450	450	101	26,2
6 PzRM 540	540	119	31,0
7 PzRM 630	630	137	35,8
8 PzRM 720	720	155	40,6
9 PzRM 810	810	173	45,4
10 PzRM 900	900	191	50,2
12 PzRM 1080 *	1080	227	60,1

105Ah/plate

h1 = 515, h2 = 538 mm | length = b = 198 mm

CELL TYPE	CAPACITY C5	WIDTH mm	WEIGHT kg
2 PzRM 210	210	47	13,3
3 PzRM 315	315	65	18,3
4 PzRM 420	420	83	23,7
5 PzRM 525	525	101	29,1
6 PzRM 630	630	119	34,5
7 PzRM 735	735	137	39,9
8 PzRM 840	840	155	45,3
9 PzRM 945	945	173	50,7
10 PzRM 1050	1050	191	56,4
12 PzRM 1260 *	1260	227	67,2

115Ah/plate

h1 = 545, h2 = 568 mm | length = b = 198 mm

CELL TYPE	CAPACITY C5	WIDTH mm	WEIGHT kg
2 PzRM 230	230	47	14,0
3 PzRM 345	345	65	19,5
4 PzRM 460	460	83	25,0
5 PzRM 575	575	101	30,6
6 PzRM 690	690	119	36,2
7 PzRM 805	805	137	41,8
8 PzRM 920	920	155	47,4
9 PzRM 1035	1035	173	53,2
10 PzRM 1150	1150	191	58,9
12 PzRM 1380 *	1380	227	70,1

125Ah/plate

h1 = 570, h2 = 593 mm | length = b = 198 mm

CELL TYPE	CAPACITY C5	WIDTH mm	WEIGHT kg
2 PzRM 250	250	47	14,5
3 PzRM 375	375	65	20,5
4 PzRM 500	500	83	26,5
5 PzRM 625	625	101	32,5
6 PzRM 750	750	119	38,5
7 PzRM 875	875	137	44,5
8 PzRM 1000	1000	155	50,5
9 PzRM 1125	1125	173	56,8
10 PzRM 1250	1250	191	62,8
12 PzRM 1500 *	1500	227	74,8

140Ah/plate

h1 = 686, h2 = 709 mm | length = b = 198 mm

CELL TYPE	CAPACITY C5	WIDTH mm	WEIGHT kg
2 PzRM 280	280	47	18,5
3 PzRM 420	420	65	25,3
4 PzRM 560	560	83	32,2
5 PzRM 700	700	101	39,5
6 PzRM 840	840	119	46,7
7 PzRM 980	980	137	54,0
8 PzRM 1120	1120	155	61,2
9 PzRM 1260	1260	173	68,8
10 PzRM 1400 *	1400	191	76,0
12 PzRM 1680 *	1680	227	90,5

155Ah/plate

h1 = 720, h2 = 743 mm | length = b = 198 mm

CELL TYPE	CAPACITY C5	WIDTH mm	WEIGHT kg
2 PzRM 310	310	47	18,8
3 PzRM 465	465	65	26,1
4 PzRM 620	620	83	33,5
5 PzRM 775	775	101	41,1
6 PzRM 930	930	119	48,9
7 PzRM 1085	1085	137	56,7
8 PzRM 1240	1240	155	64,5
9 PzRM 1395	1395	173	72,8
10 PzRM 1550 *	1550	191	80,6
12 PzRM 1860 *	1860	227	96,2

Electrolyte density at 30 °C: 1,29 ± 0,01 kg/l. Weight tolerance is ± 5 %.
Cells from 7 to 10 PzRM types are available with 2 and 4 poles. For 4 poles, please specify in your order.
10 PzRM 1400, 10 PzRM 1550 and all 12 PzRM cells are available with 4 poles only.
Cells available only with 4 poles are signed with *.

TAB
Aqualess batteries

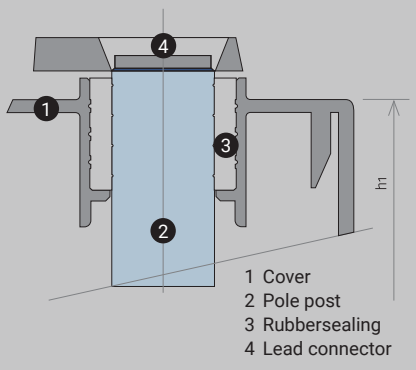
One of the very important production part of your company is internal logistics. We are introducing our traction batteries TAB which have been satisfying the most demanding users for more than half a century. **Batteries are known by their: high capacity, long life-time, resistance to vibrations, short charging times, low consumption of distilled water, simple maintenance.**

Battery application.

Traction batteries TAB of type PzS and PzB are according to EN 60254-1,2 and IEC 254-1,2 and are appropriated for propulsion of different electrical machines (forklifts, mine locomotives, etc.).

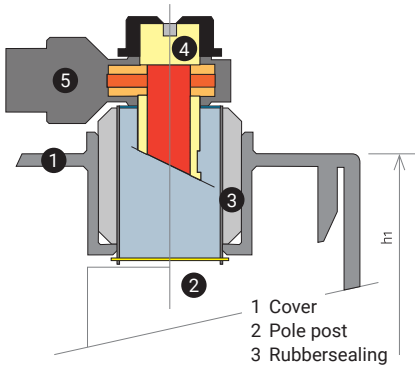
ENERGY IN MOTION

TERMINAL POST
WELDEDVERSION



1 Cover
2 Pole post
3 Rubbersealing
4 Lead connector

TERMINAL POST
BOLTED VERSION



1 Cover
2 Pole post
3 Rubbersealing
4 Bolt
5 Cable connector

BOTH VERSIONS ARE BEING MANUFACTURED:

- **DRY-CHARGED VERSION:**
  a battery / cell has to be filled up with an electrolyte and supplementary charged before use. The Plates are already formed and in special process protected against oxidation. They can be stored up to two years.
- **ELECTROLYTE-CHARGED:**
  a battery / cell can be installed immediately, because it is already filled up with electrolyte and electrically charged as well.

We highly recommend the use of additional systems:

- CENTRAL WATER FILLING SYSTEM (AQUAMATIC): Each cell is equipped with aquamatic plug, combined with tubes and water drums. At the same time enables central water filling for whole the battery. Enables quick and precise service of whole battery under any working conditions.

- ELECTROLYTE MIXING SYSTEM (AIRMATIC) which allows faster charging of battery. Each cell is equipped with special airmixing tube. Tubes are combined together with PVC tubes and connected trough connector to air compressor. Air compressor is already built in charger or can be installed additionally into ordinary charger with charging principle IU; WoWa. Air consumption per hour is 60 litres/cell by operational pressure 0,2 Bars. System is operating all the time during the charging. System allows an electric vehicle to be in operation for 16 hours without changing the battery.

- CAPACITIVE BATTERY ELECTROLYTE LEVEL SENSOR which with clearly visible green light indicates electrolyte at proper specified level. Flashing red light indicates that the electrolyte level is bellow minimum and battery needs to be refilled with demineralised water to avoid permanent damage of the battery.

- BATTERY MONITORING SYSTEM allows you to see real time status of your batteries. Our battery monitoring system is able to provide:
  - full statistical analysis of battery's performance (capacity, load levels, charging and discharging characteristics);
  - breakdown of each machine's performance (when and how it was used, when it was charged, etc.);
  - real time information and alerts via email or phone.




Sales department
T: +386 (0)2 8702 300
F: +386 (0)2 8702 335

Service department
T: +386 (0)2 8700 211
F: +386 (0)2 8700 234

TAB d. d., Polena 6, SI-2392 Mežica, Slovenia
info@tab.si, www.tab.si

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