

# TAB TRACTION BATTERIES

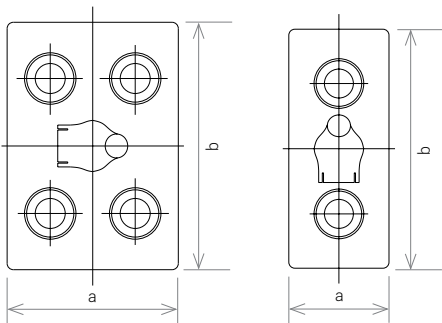


# TAB

BS

**TAB was established in 1965** as a subsidiary of Lead Mine Mežica Holding in a region where different lead activities are more than 350 years old. Nowadays, TAB is producing a wide range of industrial and starter batteries.

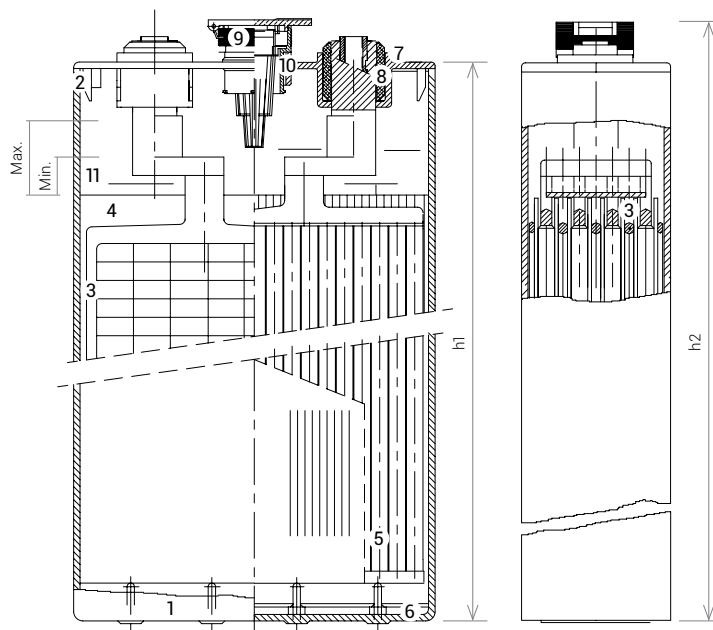
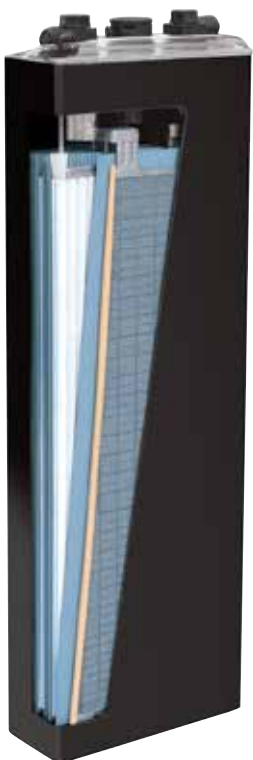
**WE HAVE EXPERIENCE AND WE HAVE KNOWLEDGE – THEREFORE OUR HIGH QUALITY BATTERIES ARE KNOWN WORLDWIDE. WE ARE PROUD OF OUR DURABLE ENERGY – NOW ALREADY MORE THAN 50 YEARS.**



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

**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)



- 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 Electrolite

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

# BS STANDARD CHARACTERISTIC DATA

Electrolyte density by 30 °C: 1,29 ± 0,01 kg/l. Weight tolerance is ± 5 %.

Cells from 9-11 PzB types are available with 4 poles only.

All 12 EPzS and 10 Pg/555 and 10 Pg/590 cells are available with 4 poles only.

## 23Ah/plate

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

| CELL TYPE    | TAB DESIGNATION | CAPACITY 5h | WIDTH mm | WEIGHT with acid | WEIGHT dry (kg) |
|--------------|-----------------|-------------|----------|------------------|-----------------|
| 2 PzB 46     | 2 Pgi 135       | 46          | 45       | 3,7              | 3,0             |
| 3 PzB 69     | 3 Pgi 135       | 69          | 61       | 5,4              | 4,2             |
| 4 PzB 92     | 4 Pgi 135       | 92          | 77       | 6,9              | 5,4             |
| 5 PzB 115    | 5 Pgi 135       | 115         | 93       | 8,4              | 6,6             |
| 6 PzB 138    | 6 Pgi 135       | 138         | 109      | 10,0             | 7,8             |
| 7 PzB 161    | 7 Pgi 135       | 161         | 125      | 11,6             | 9,0             |
| 8 PzB 184    | 8 Pgi 135       | 184         | 141      | 13,2             | 10,2            |
| 9 PzB 207 *  | 9 Pgi 135       | 207         | 157      | 15,3             | 11,9            |
| 10 PzB 230 * | 10 Pgi 135      | 230         | 173      | 16,9             | 13,1            |
| 11 PzB 253 * | 11 Pgi 135      | 253         | 189      | 18,4             | 14,3            |

## 32Ah/plate

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

| CELL TYPE    | TAB DESIGNATION | CAPACITY 5h | WIDTH mm | WEIGHT with acid | WEIGHT dry (kg) |
|--------------|-----------------|-------------|----------|------------------|-----------------|
| 2 PzB 64     | 2 Pgi 190       | 64          | 45       | 5,1              | 4,0             |
| 3 PzB 96     | 3 Pgi 190       | 96          | 61       | 7,1              | 5,6             |
| 4 PzB 128    | 4 Pgi 190       | 128         | 77       | 9,2              | 7,2             |
| 5 PzB 160    | 5 Pgi 190       | 160         | 93       | 11,3             | 8,8             |
| 6 PzB 192    | 6 Pgi 190       | 192         | 109      | 13,2             | 10,3            |
| 7 PzB 224    | 7 Pgi 190       | 224         | 125      | 15,0             | 11,7            |
| 8 PzB 256    | 8 Pgi 190       | 256         | 141      | 16,8             | 13,1            |
| 9 PzB 288 *  | 9 Pgi 190       | 288         | 157      | 19,1             | 14,9            |
| 10 PzB 320 * | 10 Pgi 190      | 320         | 173      | 20,9             | 16,3            |
| 11 PzB 352 * | 11 Pgi 190      | 352         | 189      | 22,7             | 17,7            |

## 42Ah/plate

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

| CELL TYPE    | TAB DESIGNATION | CAPACITY 5h | WIDTH mm | WEIGHT with acid | WEIGHT dry (kg) |
|--------------|-----------------|-------------|----------|------------------|-----------------|
| 2 PzB 84     | 2 Pgi 250       | 84          | 45       | 6,9              | 5,4             |
| 3 PzB 126    | 3 Pgi 250       | 126         | 61       | 9,4              | 7,3             |
| 4 PzB 168    | 4 Pgi 250       | 168         | 77       | 11,9             | 9,3             |
| 5 PzB 210    | 5 Pgi 250       | 210         | 93       | 14,5             | 11,3            |
| 6 PzB 252    | 6 Pgi 250       | 252         | 109      | 17,3             | 13,5            |
| 7 PzB 294    | 7 Pgi 250       | 294         | 125      | 20,0             | 15,6            |
| 8 PzB 336    | 8 Pgi 250       | 336         | 141      | 22,3             | 17,6            |
| 9 PzB 378 *  | 9 Pgi 250       | 378         | 157      | 25,2             | 19,9            |
| 10 PzB 420 * | 10 Pgi 250      | 420         | 173      | 27,6             | 21,8            |
| 11 PzB 462 * | 11 Pgi 250      | 462         | 189      | 30,0             | 23,7            |

## 55Ah/plate

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

| CELL TYPE  | TAB DESIGNATION | CAPACITY 5h | WIDTH mm | WEIGHT with acid | WEIGHT dry (kg) |
|------------|-----------------|-------------|----------|------------------|-----------------|
| 2 PzB 110  | 2 Pgi 310       | 110         | 45       | 7,6              | 6,1             |
| 3 PzB 165  | 3 Pgi 310       | 165         | 61       | 10,5             | 8,5             |
| 4 PzB 220  | 4 Pgi 310       | 220         | 77       | 13,5             | 11,0            |
| 5 PzB 275  | 5 Pgi 310       | 275         | 93       | 16,5             | 13,5            |
| 6 PzB 330  | 6 Pgi 310       | 330         | 109      | 19,6             | 15,9            |
| 7 PzB 385  | 7 Pgi 310       | 385         | 125      | 22,6             | 18,4            |
| 8 PzB 440  | 8 Pgi 310       | 440         | 141      | 25,6             | 20,8            |
| 9 PzB 495  | 9 Pgi 310       | 495         | 157      | 29,1             | 23,8            |
| 10 PzB 550 | 10 Pgi 310      | 550         | 173      | 32,1             | 26,3            |
| 11 PzB 605 | 11 Pgi 310      | 605         | 189      | 35,2             | 28,7            |

## 65Ah/plate

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

| CELL TYPE    | TAB DESIGNATION | CAPACITY 5h | WIDTH mm | WEIGHT with acid | WEIGHT dry (kg) |
|--------------|-----------------|-------------|----------|------------------|-----------------|
| 2 PzB 130    | 2 Pgi 360       | 130         | 45       | 8,2              | 6,8             |
| 3 PzB 195    | 3 Pgi 360       | 195         | 61       | 12,0             | 10,1            |
| 4 PzB 260    | 4 Pgi 360       | 260         | 77       | 15,5             | 13,0            |
| 5 PzB 325    | 5 Pgi 360       | 325         | 93       | 19,0             | 16,0            |
| 6 PzB 390    | 6 Pgi 360       | 390         | 109      | 22,6             | 18,9            |
| 7 PzB 455    | 7 Pgi 360       | 455         | 125      | 26,1             | 21,8            |
| 8 PzB 520    | 8 Pgi 360       | 520         | 141      | 29,6             | 24,5            |
| 9 PzB 585 *  | 9 Pgi 360       | 585         | 157      | 33,6             | 27,9            |
| 10 PzB 650 * | 10 Pgi 360      | 650         | 173      | 37,2             | 30,6            |
| 11 PzB 715 * | 11 Pgi 360      | 715         | 189      | 40,7             | 33,3            |

## 75Ah/plate

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

| CELL TYPE    | TAB DESIGNATION | CAPACITY 5h | WIDTH mm | WEIGHT with acid | WEIGHT dry (kg) |
|--------------|-----------------|-------------|----------|------------------|-----------------|
| 2 PzB 150    | 2 Pgi 413       | 150         | 45       | 10,0             | 7,5             |
| 3 PzB 225    | 3 Pgi 413       | 225         | 61       | 13,9             | 10,8            |
| 4 PzB 300    | 4 Pgi 413       | 300         | 77       | 17,8             | 14,1            |
| 5 PzB 375    | 5 Pgi 413       | 375         | 93       | 21,6             | 17,5            |
| 6 PzB 450    | 6 Pgi 413       | 450         | 109      | 25,6             | 20,9            |
| 7 PzB 525    | 7 Pgi 413       | 525         | 125      | 29,6             | 24,1            |
| 8 PzB 600    | 8 Pgi 413       | 600         | 141      | 33,5             | 27,4            |
| 9 PzB 675 *  | 9 Pgi 413       | 675         | 157      | 38,2             | 31,1            |
| 10 PzB 750 * | 10 Pgi 413      | 750         | 173      | 42,3             | 34,2            |
| 11 PzB 825 * | 11 Pgi 413      | 825         | 189      | 46,4             | 37,3            |

## 86Ah/plate

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

| CELL TYPE  | TAB DESIGNATION | CAPACITY 5h | WIDTH mm | WEIGHT with acid | WEIGHT dry (kg) |
|------------|-----------------|-------------|----------|------------------|-----------------|
| 2 PzB 172  | 2 Pgi 450       | 172         | 45       | 10,7             | 8,3             |
| 3 PzB 258  | 3 Pgi 450       | 258         | 61       | 15,0             | 11,8            |
| 4 PzB 344  | 4 Pgi 450       | 344         | 77       | 19,3             | 15,2            |
| 5 PzB 430  | 5 Pgi 450       | 430         | 93       | 23,7             | 18,6            |
| 6 PzB 516  | 6 Pgi 450       | 516         | 109      | 28,1             | 22,0            |
| 7 PzB 602  | 7 Pgi 450       | 602         | 125      | 32,6             | 25,4            |
| 8 PzB 688  | 8 Pgi 450       | 688         | 141      | 37,1             | 28,8            |
| 9 PzB 774  | 9 Pgi 450       | 774         | 157      | 42,3             | 32,9            |
| 10 PzB 860 | 10 Pgi 450      | 860         | 173      | 46,9             | 36,3            |
| 11 PzB 946 | 11 Pgi 450      | 946         | 189      | 51,4             | 39,7            |

## 100Ah/plate

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

| CELL TYPE   | TAB DESIGNATION | CAPACITY 5h | WIDTH mm | WEIGHT with acid | WEIGHT dry (kg) |
|-------------|-----------------|-------------|----------|------------------|-----------------|
| 2 PzB 200   | 2 Pgi 492       | 200         | 45       | 11,8             | 9,4             |
| 3 PzB 300   | 3 Pgi 492       | 300         | 61       | 16,6             | 13,5            |
| 4 PzB 400   | 4 Pgi 492       | 400         | 77       | 21,5             | 17,5            |
| 5 PzB 500   | 5 Pgi 492       | 500         | 93       | 26,4             | 21,6            |
| 6 PzB 600   | 6 Pgi 492       | 600         | 109      | 31,5             | 25,6            |
| 7 PzB 700   | 7 Pgi 492       | 700         | 125      | 36,4             | 29,7            |
| 8 PzB 800   | 8 Pgi 492       | 800         | 141      | 41,4             | 33,7            |
| 9 PzB 900   | 9 Pgi 492       | 900         | 157      | 47,1             | 38,6            |
| 10 PzB 1000 | 10 Pgi 492      | 1000        | 173      | 52,0             | 42,7            |
| 11 PzB 1100 | 11 Pgi 492      | 1100        | 189      | 56,9             | 46,7            |

## 108Ah/plate

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

| CELL TYPE   | TAB DESIGNATION | CAPACITY 5h | WIDTH mm | WEIGHT with acid | WEIGHT dry (kg) |
|-------------|-----------------|-------------|----------|------------------|-----------------|
| 2 PzB 216   | 2 Pgi 530       | 216         | 45       | 13,5             | 9,9             |
| 3 PzB 324   | 3 Pgi 530       | 324         | 61       | 18,9             | 14,3            |
| 4 PzB 432   | 4 Pgi 530       | 432         | 77       | 24,3             | 18,7            |
| 5 PzB 540   | 5 Pgi 530       | 540         | 93       | 29,7             | 23,2            |
| 6 PzB 648   | 6 Pgi 530       | 648         | 109      | 35,1             | 27,6            |
| 7 PzB 756   | 7 Pgi 530       | 756         | 125      | 40,5             | 32,1            |
| 8 PzB 864   | 8 Pgi 530       | 864         | 141      | 45,9             | 36,5            |
| 9 PzB 972   | 9 Pgi 530       | 972         | 157      | 52,0             | 41,6            |
| 10 PzB 1080 | 10 Pgi 530      | 1080        | 173      | 57,4             | 46,0            |
| 11 PzB 1188 | 11 Pgi 530      | 1188        | 189      | 62,8             | 50,4            |



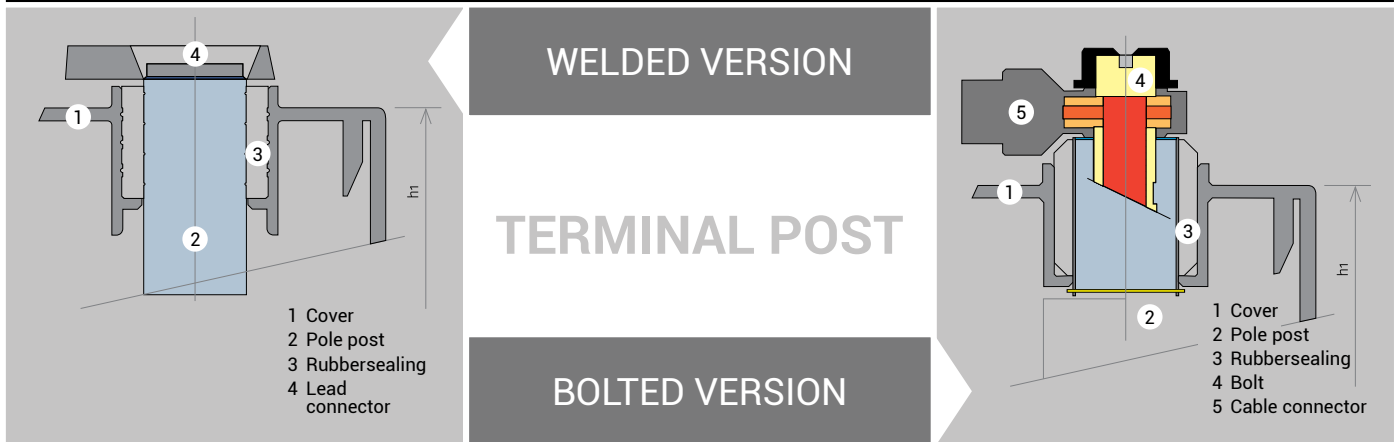
**Battery application.** Traction batteries TAB of type PzS and PzB are appropriated for propulsion of different electrical machines (forklifts, mine locomotives, etc.).

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.**

We assemble individual cells (2V) into batteries with different voltages, capacities and dimensions which suite to all types of electrical machines. Wide production program covers the range of DIN (PzS) and BS (PzB) cells according to EN60254 – 1,2 and IEC 254 – 1,2.

## WE PRODUCE BATTERIES / CELLS IN WELDED AND BOLTED VERSION



### BOTH VERSIONS ARE BEING MANUFACTURED:

- + **DRY-CHARGED VERSION:** a battery / cell have 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** which enables a quick and precise service of the whole battery under any working conditions.
- + **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.
- + **ELECTROLYTE MIXING SYSTEM** which allows faster charging of battery. Yet, the battery with a 100 % daily charge (maximum charging current is  $2,5 \times I_5$ ) can not be damaged during this time