Accessories
BATTERY DATA LOGGER

BATTERY DATA LOGGER
12-80V - WI-FI

The ZTP-Drone battery datalogger can be programmed initially by WIFI, no interface needed.

Optional:

The datalogger can be programmed by PC with following tools:
- CAN To USB Converter (ZIV/Z-C13105)
- CAN Cable (BAT/49317)

The datalogger can be programmed by WIFI:
- Internet connection of your PC by hardware cable or UMTS
- Datalogger connection by WIFI

▶ BAT/49206 (Universal)

The ZTP-Drone battery datalogger is connected to an industrial battery. All important parameters are measured as the total voltage of the battery, the current, the temperature and the level of the electrolyt.

New : also the voltage in the middle of the battery is measured to detect a defective cell. All these data are stored internally for more than 1 year if needed. The ZTP-Drone battery has several LED's to allow visual warnings as the low level of the electrolyt.

▶ BAT/49294 (Option)

The BAT/49294 is a ZTP-Drone battery datalogger with a canbus-connection to control the ZIVAN charger. The datalogger will take over the control of the charger to allow an optimal charging profile in function of the battery (automatic choice of voltage, current, etc based on type of battery, temperature, SOC% …)

TECHNICAL FEATURES

- Multivoltage 24-96V
- Dimensions 164x46x38 mm
- Input for voltage (+ ; - and middle voltage), current sensor (Hall), temperature sensor and electrolyt level sensor. The sensors are included
- Wifi communication
- Internal memory
- IP68

Supplied complete of:
- current sensor
- thermic sensor
- electrolyte level sensor

When the ZTP-Drone datalogger detects a local Wifi network, the data is send to the ZTP-Cloud application. The ZTP-Drone datalogger doesn't need a continuous Wifi network, it's sufficient to have a local network at the charger room. If there is no local Wifi network or you don't want to use your local network, a local Wifi hotspot with 4G is a good alternative.

The free ZTP-Cloud application converts all data of all your dataloggers to one main screen. This dashboard gives an overall view of the use of the batteries of each department, you can find easily all fault messages (high temperature, wrong charger, defective cells but also opportunity charging …) and shows all detailed information of each battery in simple graphs for fast analysis. You can export all data to an excel datasheet.

In case of remarks the ZTP-Cloud always points out some actions to solve the problem

☰ Actions required

More than 35% of the cycles appear to be incomplete charges.
• Check the charging cycle is correct.
• Check the use of the battery, avoiding opportunity charging.

History

Alarm number	Cycle	Date	State	Alarm detail
17229	17278	Wednesday, February 26, 2020 8:14 PM	●	Warning high voltage
1796	17850	Wednesday, February 26, 2020 8:53 AM	●	Event opportunity charge
17019	17850	Tuesday, February 25, 2020 7:57 PM	●	Warning high voltage
16931	17032	Tuesday, February 25, 2020 8:46 AM	●	Event opportunity charge
16764	16894	Monday, February 24, 2020 8:45 AM	●	Event opportunity charge

Simple graphics/interface

95.14 % SOH
Balanced Balancing
55 Work left
23.4 V Minimum voltage
32.9 V Maximum voltage
0 Ah Daily energy

Warning opportunity charging
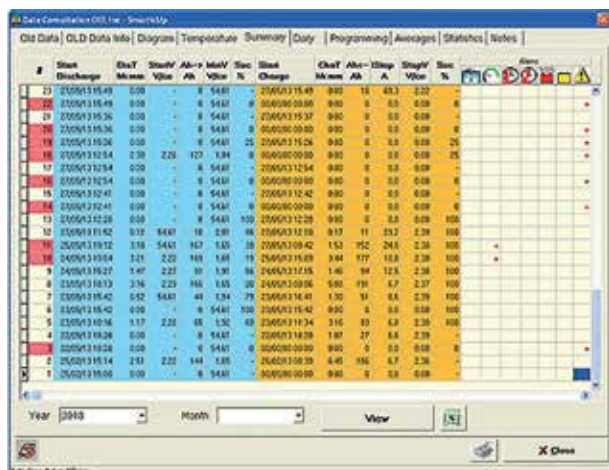
03 Feb   04 Feb   05 Feb

SMART.UP
VERSION 24/36/48/72/80/96 VOLT

SmartUP is a device designed for the monitoring and control of lead batteries.

FEATURES

- Battery Monitoring devices
- Data Memory 400 working cycles
- For batteries 24/36/48/72/80/96V (12V available on request)
- Hall effect sensor
- Discharge time and capacity
- Battery faults and failures occurring during the charging process USB Flash memory for data downloading
- USB Cable for programming
- Possibility to connect with RS 485 & CAN BUS
- IP54 protection
- Working temperature -20° to + 50°

▶ **BAT/37099**

100 ÷ 340 Ah

▶ **BAT/37102**

350 ÷ 740 Ah

▶ **BAT/37100**

750 ÷ 1500 Ah

SUMMARY

Year: [____]   Month: [____]   View

TECHNICAL DATA

Stored working cycles	400
Current and voltage graphic data	11400 samples (47 days setting Samplig Time = 6min)
Stored daily data	Last 30 days

WORKING RANGE

Current size: BAT/37099	Suitable for batteries from 100Ah to 340Ah
Current size: BAT/37102	Suitable for batteries from 350Ah to 740Ah
Current size: BAT/37100	Suitable for batteries from 750Ah to 1500Ah

ELECTRICAL DATA

|	
Power supply min ÷ max	18V ÷ 144V
Avarage absorbed power	< 1.5W
Internal protection	Fuse at the supplì port
Working temperature	-20°C ÷ +50°C

PHYSICAL DATA

Mechanical size	60mm x 60mm x 130mm
Weight	200g
Protection grade	IP 54

The data analisys can be done an intuitive way. You can consult the "Monthly Summary" Tab.

On a table are shown all of the battery working cycles:
1. In blue the discharging phase
2. In orange the charging phase

The anomalies are indicated with red dots:
3. Low electrolyte level
4. Overdischarged Battery
5. Timer 1° phase
6 .Timer 2° phase
7. Overrecharge
8. Low battery efficiency
9. Recharging not completed

SUMMARY

400 working cycles stored (Discharge/Recharge)

- Discharging time and capacity
- Recharging time and capacity
- Detailed working data
- Battery faults during the battery use and recharge
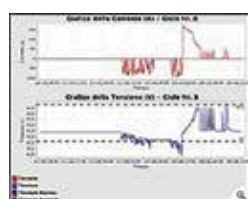
Battery voltage and current diagrams

- Working cycle Data e Time
- Zoom capability

OPTIONAL

▶ **BAT/47499**

USB cable

▶ **BAT/47500**

USB Flash drive

Accessories
BATTERY DATA LOGGER

The eGO! battery life monitor is the latest and most advanced battery life monitor available on the market, turning any lead-acid battery into a smart battery. This data can be used to:

- Improve maintenance procedures.
- Increase run-time and reduce costs.
- Assign accountability for battery abuse.

The wide range of metrics recorded by the eGO! can be used to improve the overall performance of a battery fleet.

Data is key. The eGO! unlocks the potential in your batteries, providing key metrics to help maximise performance.
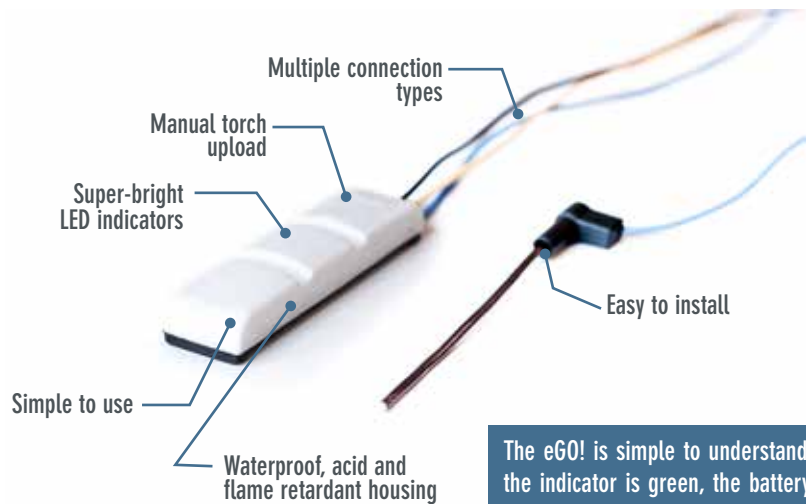
Reference	BAT/50603
Operating voltage	12V
Nominal Current	30 - 100mA
LED Indications	Amber: Over temperature Green: OK Red: Fill now Blue: Comms Operating
SmartDelay	24 hours (Standard) 5 Day (Optional)
SmartSense	Yes
Reverse Polarity protection	Yes
Housing	Translucent Overmold
Over-discharge treshold	80%
Connections	(S) M4 Steel Ring and Screw (Q) FlexiTap
Fuses M4 FlexiTap	1 x board, 2 x In-line 1 x board, 2 x FlexiTap
Warranty	1 Year
Flame retardant	Yes
M4 Connection	EGOC-12SE EGOC-12SG
FlexiTap connection	EGOC-12QE EGOC-12QC
Cable Colours(s)	Black (-), Yellow (+), Blue (P)
Flashing Patterns Flooded VRLA	OK / Fill Soon / Fill Now / Over temperature / Comms On Over temperature / Comms On
Dimensions Length Width Height	100mm 30mm 18mm
Weight Flooded VRLA	0,08kg (80g) 0,1kg (100g)

DATA DONE RIGHT

The data that the eGO! records is automatically captured and uploaded via our CloudLink gateway, giving you a fully integrated and seamless feedback loop. It tracks and records:

- Download data
- eGO! serial number
- Cell voltage at download
- Temperature at download
- Electrolyte status at download

From work, rest, charge, and cool down hours to opportunity and abuse cycles, once uploaded, the complete performance of a battery can be seen online.

Multiple connection types

Manual torch upload

Super-bright LED indicators

Easy to install

Simple to use

Waterproof, acid and flame retardant housing

The eGO! is simple to understand. When the indicator is green, the battery water levels are good, and when it is red, the battery needs water. Three green pulses and one red means fill soon. The orange indicates the battery is above temperature (40℃ - Electrolyte / 37℃ - Gel), and a blue LED indicates communication.

The eGO! has been designed with ease of use in mind and works perfectly with the eGO!Tools app. You can now trigger manual data uploads directly from the app, access a tailored site list, and review key metrics. This synchronisation gives battery room technicians complete flexibility, speeding up productivity, and efficiency.

Avoid unnecessary wear
Maximise charge cycles
Prolong battery lifespan

FOR A MORE EFFICIENT BATTERY-POWERED FLEET

Batteries are integral to your business. But you know how challenging they can be to manage. They're hard to replace. They're expensive. They're difficult to monitor.

Our battery monitoring system integrates seamlessly with GemOne's telematics or works as a standalone solution so you can monitor the health and status of your batteries and boost your fleet efficiency.

LOWER YOUR OPERATIONAL COSTS

Monitoring battery conditions, fillings, improper use, and service intervals allows you to significantly lower the costs of your operations.

BATTERY MONITORING SOLUTION

The batteries that power your industrial fleet drive your business forward. Avoid their unnecessary wear. Maximise their charge cycles. Prolong their lifespan. Our battery monitoring solution unleashes the potential of your battery-powered fleet.

GET REAL TIME INFORMATION

Get reports and warnings on all relevant battery parameters, including voltage, current, temperature, internal resistance, state of charge, and state of health.

INSTALL OUR SOLUTION EASILY

An easy to set up system which allows you to monitor all your batteries on one single platform.

Reference	BAT/50960	BAT/50961
Working voltage	8-95V ± 0.1V	50-150V ± 0.1V
Measuring Current	±300A ±0.5A	±800A ±0.5A
Interlock relay	20A@5V	
Working temperature	-20℃ to 70℃	
Connectivity	Global 4G network	
Level sensor	Bayonet or drill hole	
Bluetooth low energy	4.2/5.0	
RS485	MODBUS	
General input	Support up to 80VDC input	

Accessories
BATTERY CONNECTORS

VOLTAGE COLOR COMBINATIONS

All S-connectors can function until 600V DC. When several electric devices with different voltages are used, it's recommended to choose a color code for every voltage! None of these colors are interchangeable! Only connectors with the same color are interchangeable!

The recommended Voltage/color combinations are:

Yellow: 12V   Blue: 48V
Orange: 18V   Green: 72V
Red: 24V   Black: 80V
Grey: 36V   Brown: 96V

DIMENSIONS OF THE BATTERY CONNECTORS

TYPE	Y	X	H
SB 50	36,5	47,6	15,9
SB 175	55,6	79,4	25,4
SB 350	69,8	108,0	33,3
SBX 175	71,2	92,2	25,0
SBX 350	85,7	125,4	33,3
SBE 160	71,2	92,2	25,4
SBE 320	85,7	125,4	33,3

SB-SERIES

2 pole connector available in 50, 175 & 350A for usage till 600V DC & AC. SB175 is also available in 3 pole.

SBX-SERIES

2 pole connector available in 175 & 350A for usage till 600V DC & AC. The SBX series have extra option to use auxiliary contacts.

SBE-SERIES

The SBE is a further development of the SBX connector. 2 pole connector available in 80, 160 & 320A for usage till 150V DC & AC.

The SBE160 is also available in 3 poles.

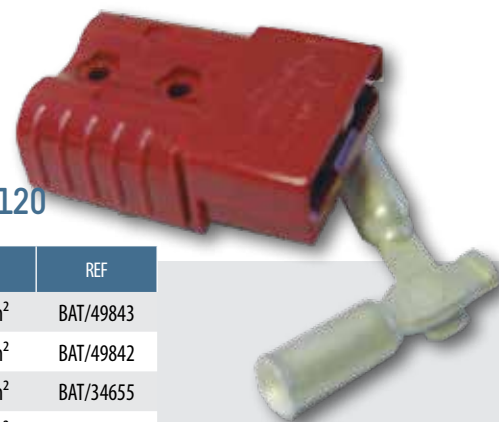The SBE series have extra option to use auxiliary contacts.

BATTERY CONNECTOR: SB120

TYPE	color	V	cable	REF
SB120	RED	24V	16mm²	BAT/49843
SB120	RED	24V	25mm²	BAT/49842
SB120	RED	24V	35mm²	BAT/34655
SB120	GREY	36V	16mm²	BAT/49845
SB120	GREY	36V	25mm²	BAT/34656
SB120	GREY	36V	35mm²	BAT/49844
SB120	BLUE	48V	16mm²	BAT/49847
SB120	BLUE	48V	25mm²	BAT/34657
SB120	BLUE	48V	35mm²	BAT/49846

BATTERY CONNECTOR: SB / S 50

TYPE	color	V	cable	REF
SB / S 50	yellow	12 V	16 mm²	BAT/32713
SB / S 50	red	24 V	6 mm²	BAT/45879
SB / S 50	red	24 V	16 mm²	BAT/15995
SB / S 50	grey	36 V	16 mm²	BAT/15790

BATTERY CONNECTOR: SB/S175

TYPE	color	V	cable	REF
SB / S 175	yellow	12 V	50 mm^2	BAT/15440
	orange	18 V	50 mm^2	BAT/15996
	red	24 V	50 mm^2	BAT/15997
	grey	36 V	50 mm^2	BAT/15998
	blue	48 V	50 mm^2	BAT/15999

BATTERY CONNECTOR: SB/S350

TYPE	color	V	cable	REF
SB / S 350	yellow	12 V	70 mm^2	BAT/16000
	red	24 V	70 mm^2	BAT/16001
	grey	36 V	70 mm^2	BAT/15478
	blue	48 V	70 mm^2	BAT/16002
	green	72 V	70 mm^2	BAT/16003

BATTERY CONNECTOR: SBE 80

TYPE	color	V	cable	REF
SBE 80	red	24 V	16 mm^2	BAT/16144

BATTERY CONNECTOR: SBE / SAE 160 - SBX / SA 176

TYPE	color	V	cable	REF
SBE / SAE 160 SBX / SA 175	yellow	12 V	50 mm^2	BAT/16008
	orange	18 V	50 mm^2	BAT/16009
	red	24 V	50 mm^2	BAT/15442
	grey	36 V	50 mm^2	BAT/15729
	blue	48 V	50 mm^2	BAT/15381
	green	72 V	50 mm^2	BAT/16010
	black	80 V	50 mm^2	BAT/16011

BATTERY CONNECTOR: SBE / SAE 160 - SBX / SA 176

TYPE	color	V	cable	REF
SBE / SAE 160 SBX / SA 175	yellow	12 V	35 mm^2	BAT/16004
	orange	18 V	35 mm^2	BAT/16005
	red	24 V	35 mm^2	BAT/15377
	grey	36 V	35 mm^2	BAT/15396
	blue	48 V	35 mm^2	BAT/15397
	green	72 V	35 mm^2	BAT/16006
	black	80 V	35 mm^2	BAT/16007

BATTERY CONNECTOR: SBX / SA 350

TYPE	color	V	cable	REF
SBX / SA 350	yellow	12 V	70 mm^2	BAT/16012
	red	24 V	70 mm^2	BAT/17487
	grey	36 V	70 mm^2	BAT/16014
	blue	48 V	70 mm^2	BAT/15380
	green	72 V	70 mm^2	BAT/16015
	black	80 V	70 mm^2	BAT/16016

REDUCING BUSHING: TYPE SBE 160

cable	REF
4,83 mm^2	BAT/48625

CONTACT SET (2pc)

TYPE	cable	REF
SB / S 50	16 mm^2	BAT/16508
SB / S 175	50 mm^2	BAT/16510
SBE / SAE 160 - SBX / SA 175	35 mm^2	BAT/16514
SBE / SAE 160 - SBX / SA 175	50 mm^2	BAT/16517
SB / S 350	70 mm^2	BAT/16520
SBX / SA 350	70 mm^2	BAT/16523
SBE / SAE 320	35 mm^2	BAT/16526

AUX. CONTACT KIT (2pc)

TYPE	cable	REF
SBX / SAE SBX / SA 175	1-4 mm^2	BAT/15437

BATTERY CONNECTOR: SBE / SAE 320

TYPE	color	V	cable	REF
SBE / SAE 320	yellow	12 V	70 mm^2	BAT/16017
	orange	18 V	70 mm^2	BAT/16018
	red	24 V	70 mm^2	BAT/16019
	grey	36 V	70 mm^2	BAT/16020
	blue	48 V	70 mm^2	BAT/15441
	green	72 V	70 mm^2	BAT/16021
	black	80 V	70 mm^2	BAT/15819
	brown	96 V	70 mm^2	BAT/16022
	violet	120 V	70 mm^2	BAT/16023

Accessories

BATTERY CONNECTORS

BAT/17399 ▶

BATTERY CONNECTOR 3 POLE
SB 3175

color	V	cable	REF
grey	36 V	50 mm²	BAT/16676
Contact set (3 pcs)		50 mm²	BAT/17747

BATTERY CONNECTOR 3 POLE
SBE 3160

color	V	cable	REF
red	24 V	50 mm²	BAT/17749
blue	48 V	50 mm²	BAT/17751
Contact set (3 pcs)		50 mm²	BAT/17753
Handle black			BAT/17399

AUX. CONTACT KIT: SB / SBE / SBX

TYPE	AWG	cable	REF
SB / SBE / SBX	18 - 12	1 - 4 mm²	BAT/15437
Contact set (2 pcs)			

NYLON HANDLE

TYPE	color	REF
for SB 50	red	BAT/17755

NYLON HANDLE

TYPE	color	REF
for SB / SBX 175 / SBE 160	grey	BAT/15766
	red	BAT/15763
for SB / SBX 350 / SBE 320	grey	BAT/15820
	red	BAT/17330

HANDLE FOR BT

TYPE	color	REF
SBE 160 / SBX 175	black	BAT/17759

HANDLE FOR BT

TYPE	color	REF
SBE 160 / SBX 175	black	BAT/17761
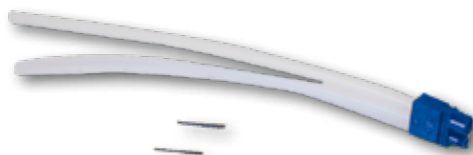
AIR SYSTEM

TYPE	REF
SBE 160 / 320 - SBX 175 / 350	BAT/17557

EURO CONNECTOR

EURO CONNECTOR: V / F FT80

TYPE		cable	REF
FT80	V / F	16 mm²	BAT/16067
	V / F	25 mm²	BAT/16068
Contacts (pcs)		16 mm²	BAT/16556
		25 mm²	BAT/16559
Aux. contact kit (2 pcs)			BAT/16607
Handle for FT80 (red)			BAT/16624

EURO CONNECTOR: M FT80

TYPE		cable	REF
FT80	M	16 mm²	BAT/16065
	M	25 mm²	BAT/16066
Contacts (pcs)		16 mm²	BAT/16550
		25 mm²	BAT/16553
Aux. contact kit (2 pcs)			BAT/16604
Handle for FT80 (red)			BAT/16624

EURO CONNECTOR:
F EURO 80A - DIN 43589

TYPE		cable	REF
80A	V / F	16 mm²	BAT/47232
	V / F	25 mm²	BAT/47233
	V / F	35 mm²	BAT/47234

EURO CONNECTOR:
M EURO 80A - DIN 43589
WITHOUT HANDLE

TYPE		cable	REF
80A	M	16 mm²	BAT/16069
	M	25 mm²	BAT/15452
Contacts (pcs)		16 mm²	BAT/16562
		25 mm²	BAT/16565
Aux. contact kit (2 pcs) + adapter			BAT/16610
Handle for 80A (black)			BAT/15384

EURO CONNECTOR:
F EURO 80A - DIN 43589
WITHOUT HANDLE

TYPE		cable	REF
80A	V / F	16 mm²	BAT/16070
	V / F	25 mm²	BAT/15453
Contacts (pcs)		16 mm²	BAT/16568
		25 mm²	BAT/16571
Aux. contact kit (2 pcs)			BAT/16613
Handle for 80A (black)			BAT/15384

METAL BATTERY HANDLE
EURO 160/320
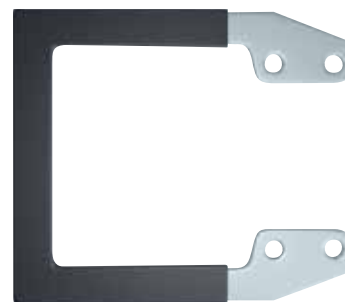
▶ **BAT/47893**

Metal handle

BATTERY CONNECTOR:
F EURO 160A - DIN 43589

TYPE		cable	REF
160A	V / F	25 mm²	BAT/16072
	V / F	35 mm²	BAT/15395
	V / F	50 mm²	BAT/47231

Metal handle BAT/47893

BATTERY CONNECTOR:
M EURO 160 A - DIN 43589
WITHOUT HANDLE

TYPE		cable	REF
160A	M	25 mm²	BAT/15797
	M	35 mm²	BAT/15393
	M	50 mm²	BAT/15394
Contacts (pcs)		25 mm²	BAT/16574
		35 mm²	BAT/16577
		50 mm²	BAT/16580
Aux. contact kit (2 pcs)			BAT/16616
Handle (black)			BAT/15764

Metal handle BAT/47893

BATTERY CONNECTOR:
F EURO 160A - DIN 43589 -
WITHOUT HANDLE

TYPE		cable	REF
160A	V / F	25 mm²	BAT/47953
	V / F	35 mm²	BAT/48150
	V / F	50 mm²	BAT/15389
Contacts (pcs)		25 mm²	BAT/16583
		35 mm²	BAT/16586
		50 mm²	BAT/16589
Aux. contact kit (2 pcs)			BAT/16619
Handle (black)			BAT/15764

Metal handle BAT/47893

Accessories

BATTERY CONNECTORS

BATTERY CONNECTOR:
F EURO 320 A - DIN 43589

TYPE		cable	REF
320A	V / F	50 mm^2	BAT/15793
	V / F	70 mm^2	BAT/15794
	V / F	95 mm^2	BAT/16077
Contacts (pcs)		50 mm^2	BAT/16598
		70 mm^2	BAT/16601
		95 mm^2	BAT/17806
Aux. contact kit (2 pcs) + adapter			BAT/16660
Handle (black)			BAT/15764

Metal handle BAT/47893

BATTERY CONNECTOR:
M EURO 320 A - DIN 43589

TYPE		cable	REF
320A	M	50 mm^2	BAT/16074
	M	70 mm^2	BAT/16075
	M	95 mm^2	BAT/16076
Contacts (pcs)		50 mm^2	BAT/16592
		70 mm^2	BAT/16595
		95 mm^2	BAT/19589
Aux. contact kit (2 pcs) + adapter			BAT/16622
Handle (black)			BAT/15764

Metal handle BAT/47893

EURO CONNECTOR "AIR"
Complete (case + adapter + handle + contacts)

TYPE		V/F	M
80 A	16 mm^2	BAT/17817	BAT/17730
	25 mm^2	BAT/17819	BAT/17732
160 A	25 mm^2	BAT/17739	BAT/15727
	35 mm^2	BAT/15728	BAT/16642
	50 mm^2	BAT/15726	BAT/16645
320 A	50 mm^2	BAT/16101	BAT/16102
	70 mm^2	BAT/16639	BAT/16650
80 A Contact aux. (1pc.)		BAT/17736	
160 A Contact aux. (1pc.)		BAT/17829	
320 A Contact aux. (1pc.)		BAT/17410	
80 A Adapter blue		BAT/17734	BAT/17744
160 A Adapter blue		BAT/16194	BAT/17741
320 A Adapter blue		BAT/17263	BAT/17264

REMA MRC CONNECTORS

Molded REMA Connector

The MRC® Power Solution Series features:

- 75% current overload capability
- Fully compatible and interchangeable with existing cable and connector assemblies according to DIN 43589
- Connector housing and cable insulation material in one molded piece resulting in increased durability and environmental protection
- Acid-resistant housing and cable insulation
- RemaFlex® power cable suitable for applications requiring small bend radius
- Cable insulation and connector housing halogen free
- Operating temperature range: -40 °C to +120 °C
- Definition of new amperage classes:
  – MRC 120 > DIN 80
  – MRC 260 > DIN 160
  – MRC 400 > DIN 320

FEMALE CONNECTOR AND CABLE

Ref.	Amp (A)	Cable size (mm^2)	Lenght (mm)
BAT/50946	80	25	800
BAT/48862	80	25	1200
BAT/50950	160	35	1000
BAT/50951	160	35	1200
BAT/50952	160	35	1800
BAT/50953	160	50	1000
BAT/50954	160	50	1200
BAT/48676	160	50	1500
BAT/50955	160	50	1800
BAT/50956	320	70	1200
BAT/50957	320	95	2000
BAT/50958	320	95	2300

MALE CONNECTOR AND CABLE

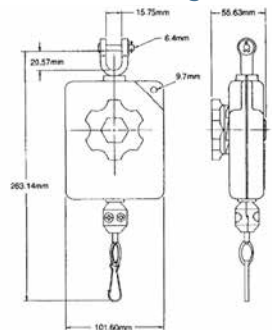| Ref.	Amp (A)	Cable size (mm^2)	Lenght (mm)
BAT/50962	80	16	3000
BAT/48861	80	25	3000
BAT/50963	160	25	3000
BAT/50964	160	35	3000
BAT/50965	320	25	3000

BATTERY CONNECTOR PROTECTION

BAT/18931
Balancer 1-2 Kg
(1,6m)

BAT/18933
Support

BAT/36200
Bolt

BAT/17268
Brace

Standard-duty balancers 0,5 - 1,8 kg

- Long-life heavy-duty spring for lasting performance
- Easy tension adjustment, no tools required
- Full range of motion with 360° swivel hanger
- Quick installation
- Durable nylon cable for long life and reduced maintenance
- Convenient snap-type tool clip for easy tool handling
- Alignment of hanger and tool hook for smooth, efficient use

Ref	Cable travel (m)	Weight (kg)
BAT/50992	2	0,5 - 0,9
BAT/50993	2	0,9 - 1,8

Heavy-duty balancers 0,5 - 6,8 kg
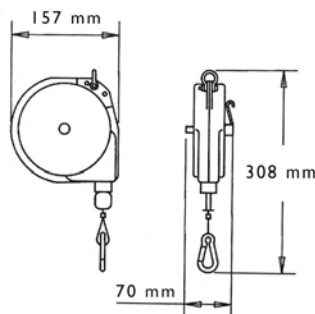
- Easy tension adjustment, no special tools
- Heavy-duty steel construction for long life
- Easy spring replacement
- Long-lasting main spring designed to minimise spring flexing & fatigue
- Tool can be set in desired position with adjustable cable stop
- Durable 2,5 mm diameter stranded steel aircraft cable
- Ratchet lock holds cable in desired position

Ref	Cable travel (m)	Weight (kg)	Ratchet lock
BAT/50994	2,4	0,5 - 2,3	No
BAT/50995	2,4	0,5 - 2,3	Yes
BAT/50996	2,4	1,8 - 4,5	No

Complete

The connector saver offers a simple and inexpensive solution to a problem commonly to all users of electric trucks.

Potential problem:

Inadvertent damage to connectors and cabling results in high repair costs and replacements. Damaged cable is a fire and safety hazard.

Ref	Cable length (mm)	Pull back force (kg)
BAT/51005	1600	1,8
BAT/51006	2000	2,7

Answer:

This is the only solution that retracts the cable safely whilst at the same time ensuring that there is virtually no tension on the battery connection during the charging operation. The complete kit with installation instructions includes: cable balancer – cable clamp – wall bracket and fixings. (several types available).

Accessories
INDUSTRIAL PLUGS

INDUSTRIAL PLUGS 230V

Female

Reference			Amp
BAT/37198	2P + ⏚		16A
BAT/49528	2P + ⏚		32A
BAT/49529	3P + ⏚		16A
BAT/49530	3P + ⏚		32A
BAT/49531	3P + N + ⏚		16A
BAT/49532	3P + N + ⏚		32A

Male

Reference			Amp
BAT/37196	2P + ⏚		16A
BAT/37197	2P + ⏚		32A
BAT/48855	3P + ⏚		16A
BAT/48856	3P + ⏚		32A
BAT/49533	3P + N + ⏚		16A
BAT/49534	3P + N + ⏚		32A

INDUSTRIAL PLUGS 380V
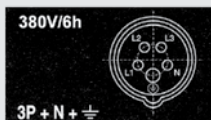
380V/6h 3P + ⏚
▲ **male**

| BAT/35613 | 16A |
| BAT/35614 | 32A |

380V/6h 3P + N + ⏚
▲ **male**

| BAT/35615 | 16A |
| BAT/35390 | 32A |
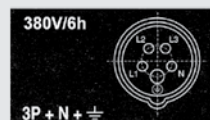
380V/6h 3P + ⏚
▲ **female**

| BAT/35920 | 16A |
| BAT/35922 | 32A |

380V/6h 3P + N + ⏚
▲ **female**

| BAT/35924 | 16A |
| BAT/35926 | 32A |
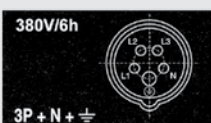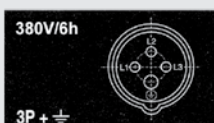
380V/6h 3P + ⏚
▲ **male**

| BAT/35928 | 16A |
| BAT/35930 | 32A |

380V/6h 3P + N + ⏚
▲ **male**

| BAT/35932 | 16A |
| BAT/35934 | 32A |
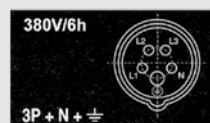
380V/6h 3P + ⏚
▲ **female**

| BAT/35936 | 16A |
| BAT/35938 | 32A |

380V/6h 3P + N + ⏚
▲ **female**

| BAT/35940 | 16A |
| BAT/35942 | 32A |

* IP44 - IEC60309-1 & 2 - EN60309-1 & 2

DIGITAL HYDROMETER

▶ BAT/47703

CHARACTERISTICS

- Measuring range: - Density: 0 g/cm³ to 3 g/cm³
  - Temperature: 0°C to 40°C
  - Viscosity: 0 mPa.s to 1000 mPa.s
- Sample volume: 2 ml
- Dimensions (L x W x H): 140 x 138 x 27 mm
- Data memory: 1024 measured results
- Power supply: two 1,5V alkaline batteries

ACID HYDROMETER

▶ BAT/13883

Acid hydrometer

- Easy operation
- Compact, lightweight design enabling one-hand measurement
- No-hassle measurement of hard-to-reach samples
- Large LCD display with backlight
- Measuring cell with inspection window and backlight
- The communication is done via infra red, if your pc or laptop doesn't have a standard infra red access gate you need to use a USB to Infra red receiver.
- Install the driver on the laptop, connect the infra red stick in the pc an then put the digital hydrometer in front of the USB stick, then select export all data from the hydrometer and the data will be sent automatically to your desktop.

BATTERY CABLES

DOUBLE BATTERY CABLE:
EXTRA FLEXIBLE

REF	Ø mm²	color
BAT/39715	2 x 10	red / black
BAT/18689	2 x 16	red / black
BAT/18691	2 x 25	red / black
BAT/15762	2 x 35	red / black
BAT/18693	2 x 50	red / black

BATTERY CABLE:
DOUBLE ISOLATED AND FLEXIBLE IN RUBBER

Ø mm²	REF - Black	REF - Red
10	BAT/18676	BAT/18682
16	BAT/17682	BAT/17683
25	BAT/18678	BAT/18684
35	BAT/18680	BAT/18686
50	BAT/16416	BAT/16417
70	BAT/16414	BAT/16415

Accessories

WATER INJECTOR SYSTEMS

THE WORLD'S FASTEST BATTERY WATERING SYSTEM!

Low profile reduces risk of damage caused by battery cables (1.10 in. or 2.79 cm).

Snap-fit, rotatable base allows for easy installation; easy to snap into place.

The Water Injector System™ is the world's fastest and most reliable way to add water to industrial batteries. This is eight times faster than filling a battery with a float-based system.

Each Injector has its own precision level-sensing valve enclosed in a protective housing. When the electrolyte level rises to the tip of the Injector, the valve shuts off instantly.

PRODUCT SPECIFICATIONS

Input/Operating Pressure:	25 to 35 psi	Flow Rate:	8 to 10 gpm (30 to 38 lpm) per string
Acceptable Filling Temperature:	2° to 71°C	System Exposure Temperature:	-29° to 71°C
Valve Body Material:	Polypropylene	Tubing Material:	Proprietary flexible PVC
Max. Valve Height above Vent Opening:	2.79 cm	Fitting:	DIN Openings

FEATURES

- **Fast operation:** An average 18-cell industrial truck battery can be filled in 15 seconds or less.
- **Easy installation:** Flexible tubing and the snap-fit base make installation fast and easy.
- **Precise filling:** A precision level-sensing valve shuts off instantly when electrolyte levels rise to the Injector tip.
- **Safe:** Prevents direct contact with electrolyte during battery filling and prevents overfilling.
- **Compact:** Low profile allows Injectors to fit on any industrial battery and minimizes damage from battery cables. Injectors can snap in and out to allow inspection of electrolyte levels and specific gravities.
- **Heat resistant:** System will survive high battery temperatures without failing.
- **No-freeze tubing:** Tubing drains surplus water into cells after filling is complete, so the system can be used in cold storage environments.
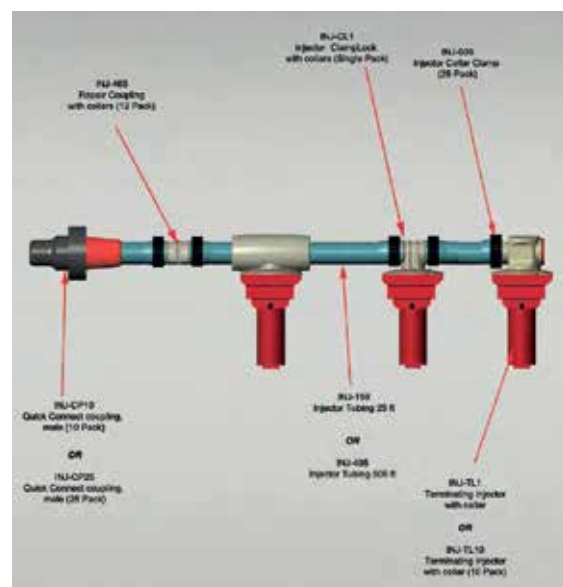
HYDROCART MAX INJECTOR WATER SUPPLY

◄ **BAT/48319**

This sturdy polypropylene tank easily transports water to your batteries. Fill the tank from any available water source.

- Capacity: 75,7 liters
- AC powered
- 110 VAC / 60 Hz
- 6,1 meters of industrila hose
- 7,6 meters of power card

◀ BAT/48099 - BLINKY

- LED blinks green when electrolyte is OK
- LED goes out when water is needed
- Reverse polarity protected
- Translucent overmold super bright LED
- Low-cost solution for electrolyte monitoring

◀ BAT/47707 - SMARTBLINKY CYCLOPS

- Ideal for batteries that don't leave the truck
- LED is mounted in a rugged connector which is located behind the battery connector
- Whenever battery is disconnected from the charger, LED is in the operatives hand so the warning signal can't be missed

◀ BAT/15101 - SMARTBLINKY

- LED blinks green when electrolyte is OK
- LED blinks red when water is needed
- Super bright LED
- Eliminates false indication and maximizes watering intervals to prevent unnecessary watering
- 5-day delay option

DRILL FOR SMARTBLINKY CYCLOPS

▲ BAT/47708

◀ BAT/48171 - SMARTBLINKY PRO

- Intelligent battery monitoring system with light and sound
- SmartBlinky Pro produces an audible alarm that alerts you even when you can't see the battery. The signal informs you if a battery needs watering and the variable frequency even tells you how long the electrolyte level has been low
- Brightest light indication on the market
- Revolutionary ease of installation
- SmartBlinky Pro indication to avoid boil over

SMARTBLINKY TRAY MONITOR
The SmartBlinky Tray Monitor prevents costly damage from spills in the battery tray.

◀ BAT/48173

Let your batteries tell you when there is electrolyte in the tray.
When you clean or water your batteries there's a good chance corrosive electrolyte will end up in the battery tray due to run off from the cleaning process finding its way between the cells or following boil over after a battery is watered at the wrong time.

Easy to use:
With its bright red/blue LED the SmartBlinky TM is simple to use, a heart beat white LED flash means it is on, a red and blue flash means there is electrolyte in the tray.

SMARTBLINKY BATTERY TEMPERATURE MONITOR
The SmartBlinky BTM avoids costly damage to batteries through high temperatures.

◀ BAT/48172

Let your batteries tell you when they are over temperature.
Using a lead acid battery over 40°C damages the battery and reduces its life span.
A good rule to remember is that for every 10 degrees over 40°C the battery cycle life halves; therefore, if the average lifetime temperature of a battery with a 1500 cycle life is 50°C it will only deliver 750 cycles.

Easy to use:
With its bright amber LED the SmartBlinky BTM is easy to use: A solid amber LED means alert and when it flashes it means the battery temperature is critical.

Accessories

BATTERY MANAGEMENT

iBOS®

- Get more performance from your batteries.
- Reduce labor costs.
- Don't use more batteries and chargers than you need.
- Make your batteries last longer.

HOW IT WORKS

The system knows when the chargers finish charging and a simple screen or pick light automatically tells the operator exactly which charger to get their next battery from. It is like a navigation system for your battery room!

Model	Basic	Plus	Pro
Number of Chargers per Controller	50	100	350
Number of Battery Pools	1	9	9
Compatible with All Chargers	•	•	•
Blue "Pick Light" to Indicate Correct Battery	•	•	•
Universal Voltage Sentinel	•	•	•
Daisy Chain Wiring with Cable Included	•	•	•
Built-in Shouter	•	•	•
Built-in Touch Screen		•	•
7 Days On-Site Data		•	•
Built-in Configuration Wizard		•	•
Optional Web-Based Reporting		•	•
Optional 3G Modem for Web Connectivity		•	•
Optional Battery Tracker (Barcode)		•	•
Optional Charger Splitter		•	•
Optional Operations Display		•	•
Built-in UPS			•
Optional Wireless Display			•
Optional Remote Shouter			•
Optional Scrolling Displays			

BENEFITS

- **Simplified and directed battery selection:** This will make sure that all batteries are fully charged and properly cooled down. Operator judgment is eliminated.
- **Faster battery changes:** Save 2 to 5 minutes per change.
- **Fewer battery changes:** 30 minutes longer battery run time resulting in 10 to 20% fewer battery changes.
- **Longer battery life:** 6 months additional life due to longer battery cool down. This leads to fewer battery purchases each year.
- **More accurate battery purchases:** Right-size your battery fleet with information that saves tens of thousands of dollars per year.
    - **Too many batteries:** Wastes capital. This is a very typical situation in most non-managed battery rooms.
    - **Too few batteries:** Decreases productivity.
- **Greater battery room visibility:** Identify non-working equipment and problems in the battery room via management reports.

FEATURES

- **SIMPLE OPERATION**
  A bright, easy to see blue LED tells you which charger to go to for the fully charged and most cooled down battery. The audible alarm quickly alerts users on any mispicks or potential issues.

- **PROTECTED**
  The pick light is in an enclosed container protecting it from dirt and grime and the user interface is toughened to meet any environment.

- **SIMPLE INSTALLATION**
  Installation can be completed with local maintenance staff and standard tools as no certified installation is required and no system configuration is needed.

BENEFITS

- **BALANCED BATTERY SELECTION**
  Simplified and directed battery selection to make sure that all batteries are fully charged and properly cooled down.

- **FASTER & FEWER CHANGES**
  Operators can save an average of 2 to 5 minutes per change. There will also be 10% to 20% fewer battery changes with an average 30 minutes longer battery run time.

- **LONGER BATTERY LIFE**
  You can increase the life of each battery by an average of 6 months due to longer battery cool down times, which equates to fewer battery purchases each year.

iBOS Basic Controller
The iBOS® Basic saves money in your warehouse or facility by eliminating waste and increasing productivity. It the guesswork out of choosing the correct battery, the battery that is fully charged and most cooled down.

iBOS Plus Controller
This controller is capable of managing up to 100 chargers in up to 9 battery pools. This controller is designed for mid-size battery rooms that have single level battery racks.
Configuration upon demand.

iBOS Pro Controller
This controller is designed for larger battery rooms that have multi-level battery racks and utilize a battery changer.
Configuration upon demand.

Accessories

MULTI-VOLTAGE BATTERY DISCHARGE INDICATOR

◀ **BAT/32561 -** WITH HOUR COUNTER 24V - 80V

Programmable multi-voltage battery discharge meter with hour counter.
This battery indicator with hour counter & SMD-technology is based on a powerful microprocessor.
One of the most important characteristics are the two touch buttons and a potentiometer on the back which make it possible to program according to the battery!
At 70% depth of discharge, a flashing LED signals an "energy reserve" alert
At 80% alternately flashing LEDs provide an "empty" status warning
With pump cut-out - Ø 52 mm IP66

BUZZER

◀ **BAT/45913**

Audio alarm when the battery is too deep discharged.
Connectable on BAT/32561 & BAT/38510

▲ **BAT/38510 -** 24V - 80V

With pump cut-out - Ø 52 mm

BATTERY DISCHARGE INDICATOR

◀ **BAT/32146 -** 12V- 24V

52 x 30 mm

LI-ION BATTERY CAPACITY INDICATOR

◀ BAT/48769 - LI-ION BATTERY CAPACITY INDICATOR

Ideal for all M+ and AQ-LITH® traction batteries.
This indicator reads the CANBUS signals from the BMS and displays the SOC, voltage, current, temperature and all warnings.
With potential-free contact for minimum State of Charge (adjustable)

LI-ION BATTERY CAPACITY INDICATOR FOR AQ-LITH® DROP-IN BATTERIES

Picture with 50A shunt

SOC (State of Charge) indicator based on coulomb counting

Max. current(A)	with contact MIN SOC%	With serial TTL communication
50	LIT/04.01.0200	LIT/04.01.0197
100	LIT/04.01.0201	LIT/04.01.0196
350	LIT/04.01.0203	LIT/04.01.0202
500	LIT/04.01.0205	LIT04.01.0204

BATTERY MAINTENANCE

Proper maintenance of the battery allows better performance and longer life.

Regular use of cleaning products provide you an unquestionable economic advantage. For these reasons, we offer a full range of cleaning products.

BIO-DEGRADABLE

▶ BAT/34502

Battery Acid Cleaner & Neutralizer
Acid neutralizer and cleaner in spray. Cleans by acid affected surfaces and neutralizes the acid. The biodegradable "Solution Safe" maintenance products neutralize, clean (on the basis of citrus) and dissolve the corrosion of terminals, cables, plugs and containers. These products change of color when they come in contact with electrolyte (acid). In this way, the mechanic knows if there are acid radicals present. Easy in use: sprinkle and rinse. The waste water is harmless. 946 ml.

▶ BAT/34506 - "Heavy Duty"

Battery Acid Corrosion & Neutralizer
Acid neutralizer in spray: to neutralise bad corrosion by acid. This aggressive neutralizer is especially developed for tenacious corrosion, breaks down all corrosion: extremely efficient! 946 ml.

◀ BAT/15214 : AQ-Cleaner

Battery Neutralisator & Protector with color indicator Prevents battery corrosion. Prevents leakage current. Prolongs the battery life. Colors red when it gets in touch with acid. Colors green by neutralization.
400 ml.

◀ BAT/48108

Anti-corrosion gel
Prevents corrosion at the terminals! Easy to bring on: with little brush attached to the lid. Tin 227 g.

◀ BAT/15152

Tube anti-corrosion fat

Accessories
COMPONENT LIST FOR TRACTION BATTERIES

STANDARD FILLING PLUG

◄ **BAT/16277**

Manual filler cap Ø 35, color black

STANDARD AUTOMATIC FILLING PLUG

◄ **BAT/17368**

automatic standard filler cap = Europush = Push-in

MANUAL FILLING PLUG
WITH REGENERATION FUNCTION

◄ **BAT/31572**

Reconverts the water vapours as much as possible in fluid. Adjustable height. Push-in connection

AUTOMATIC FILLING PLUG (BS)

◄ **BAT/45641**

BAT/45698 ►

PUSH-IN FILLING PLUG (BS)
WITH FLOAT HOUSING

◄ **BAT/48164** with floater 54

BAT/48165 with floater 58

BAT/48166 with floater 62

BAT/48167 with floater 66

BAT/48168 with floater 70

KIT AUTOMATIC FILLING SYSTEM
Automatic filling plug (type Europush 35), floater, hose, connectors, filter, link (M), end cap ...

KIT	VOLTAGE	FLOATER	KIT	VOLTAGE	FLOATER	KIT	VOLTAGE	FLOATER
BAT/44547	12V	34	BAT/20247	36V	34	BAT/20227	72V	24
BAT/42417	12V	39	BAT/20249	36V	39	BAT/20229	72V	29
BAT/20178	24V	14	BAT/20251	36V	49	BAT/20231	72V	34
BAT/20180	24V	20	BAT/20253	36V	59	BAT/20233	72V	39
BAT/20182	24V	24	BAT/20192	48V	14	BAT/20235	72V	49
BAT/20175	24V	29	BAT/20194	48V	20	BAT/20237	72V	59
BAT/20185	24V	34	BAT/20196	48V	24	BAT/20207	80V	14
BAT/20012	24V	39	BAT/20177	48V	29	BAT/20209	80V	20
BAT/45439	24V	44	BAT/20199	48V	34	BAT/20211	80V	24
BAT/20188	24V	49	BAT/20201	48V	39	BAT/20213	80V	29
BAT/20190	24V	59	BAT/41909	48V	44	BAT/20215	80V	34
BAT/20239	36V	14	BAT/20203	48V	49	BAT/20217	80V	39
BAT/20241	36V	20	BAT/20205	48V	59	BAT/20219	80V	49
BAT/20243	36V	24	BAT/20223	72V	14	BAT/20221	80V	59
BAT/20245	36V	29	BAT/20225	72V	20			

BAT/12420
Current indicator
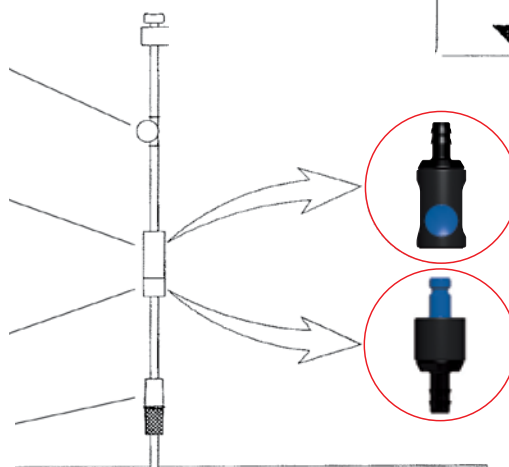
BAT/12419 (20L.)
BAT/15832 (60L.)
Receptacle
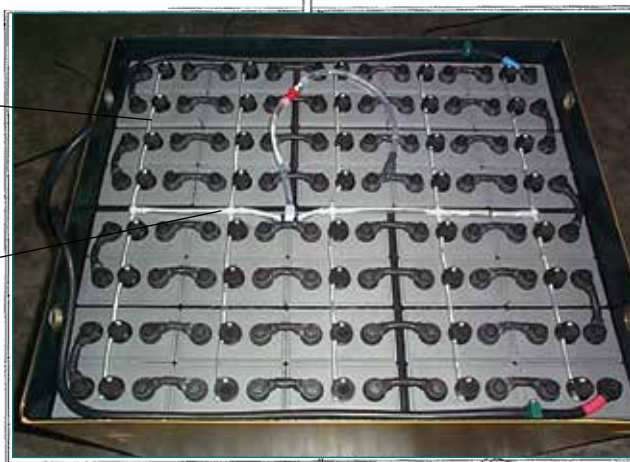
min 2 meter

BAT/15229
Link female

BAT/16298
Link male
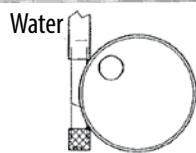
BAT/16290
Filter H$_2$O

Connector

BAT/16287

Hose Ø 6 mm

"L" 6-10
BAT/16293
"L" 10-10
BAT/16297
"T" 6-10-6
BAT/17354
"T" 10-6-10
BAT/16295
"T" 10-10-10
BAT/17356
"x" 6-10-6-10
BAT/16292
"x" 10-10-10-10
BAT/16291

BAT/16286

Hose Ø 10 mm

Water

Gas filter

BAT/17361
End cap

Accessories

COMPONENT LIST FOR TRACTION BATTERIES

SET-UP

1. Determine the right battery filling plug by type and brand of the battery.
2. Determine the length of the float cf T1 and T2.
3. Determine the length of the plastic tubes.
4. Install the tubes for the central water-filling system.

SELECT THE RIGHT BATTERY FILLING PLUG

Bajonet   Euro 35   M27   M30
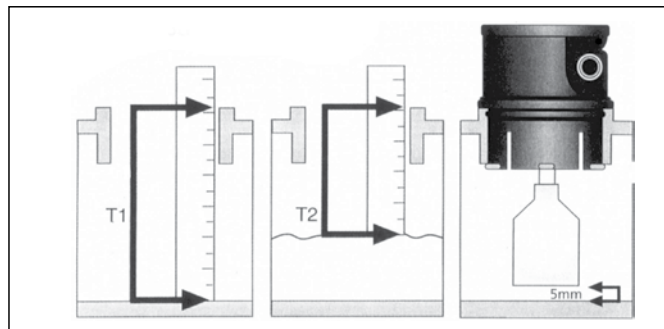
DETERMINATION OF THE FLOAT

T1 Determine the distance between the top of the battery plates to the top of the battery cell opening.

T2 Determine the distance between the battery fluid and the top of the battery cell opening.

T3 Verify after selecting the float the free space, which has to be at least 5 mm.

BAT/ float nr	BAT/17374	BAT/17375	BAT/17376	BAT/17377	BAT/17378	BAT/17379	BAT/17380	BAT/17381
	T1 T2	T1 T2	T1 T2	T1 T2	T1 T2	T1 T2	T1 T2	T1 T2
Europush 35	42/29	47/34	51/39	56/42	61/46	66/50	76/57	86/66
Bayonet connection	27/14	33/20	37/25	42/28	47/32	52/36	62/43	72/42
Screw thread M27/M30	30/17	36/23	40/28	45/31	50/35	55/39	65/46	75/45

FLOATS

Reference	BAT/17374	BAT/17375	BAT/17376	BAT/17377	BAT/17378	BAT/17379	BAT/41910	BAT/17380	BAT/17381
Dimensions	07 / 22 / 14	07 / 22 / 20	07 / 22 / 24	07 / 22 / 29	07 / 22 / 34	07 / 22 / 39	07 / 22 / 44	07 / 22 / 49	07 / 22 / 59

INSTALLATION AUTOMATIC FILLING SYSTEM

1) Place the adapted floats on the filling plugs, which are determined by the cell type.

    The distance from the cell top to the bottom of the float (T) must be at least 5 mm less than the distance from the cell top to the separator (head-space).

2) Place the filling plugs in the cell.

3) Connect the filling plugs with the adjusted materials.
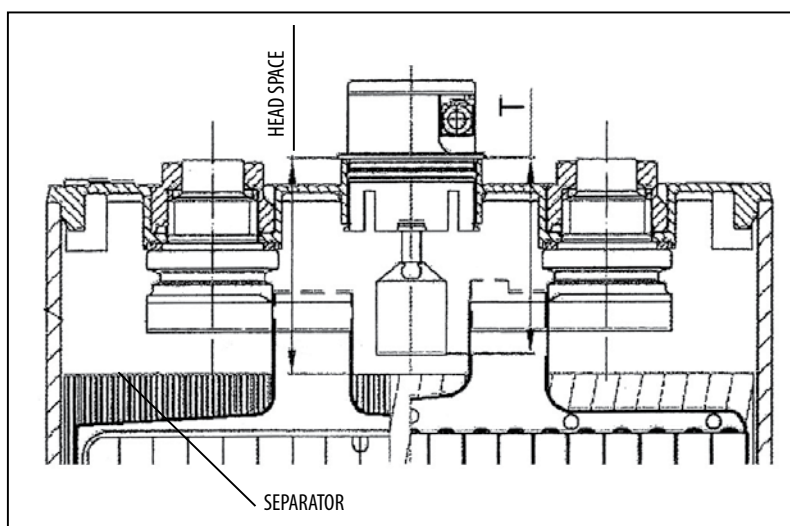
SLIDE RULER

▲ BAT/47527

▲ BAT/12419

20-litre gravity tank with tap
X x Y x H: 353 x 165 x 446

▲ BAT/15145

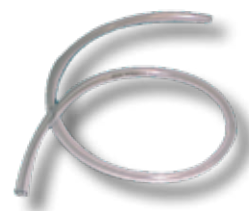**Kit water tank 20L** (Water tank, tube 3 m, indicator, link (F))

▲ BAT/15832

60-litre gravity tank with tap
X x Y x H: 460 x 350 x 500

▲ BAT/15144

Kit water tank 60L (Water tank, tube 3 m, indicator, link (F))

▲ BAT/16286

Water hose
BAT/16287 : Ø 6
BAT/22105 : Ø 8
BAT/16286 : Ø 10
BAT/45391 : Ø 12

AUTOMATIC FILLER CAPS WITH CENTRAL DEGASSING

◄ BAT/48546

Push-in plug central degassing double connector

◄ BAT/20297

Europush - Euro 35
Push-in plug central degassing single connector
End-plug

FEMALE CONNECTOR WATER

type	Connexion A	PA 11	d	AF	l	t	weight
BAT/15227	7 mm	•	24	22	68,3	25	16
BAT/15229	10 mm	•	24	22	73,3	30	17
BAT/15242	13 mm	•	24	22	73,3	30	19

MALE CONNECTOR WATER

type	Connexion A	PA 11	d	AF	l	t	n	weight
BAT/15243	7 mm	•	24	22	66,5	25	20	10
BAT/16298	10 mm	•	24	22	71,5	30	20	10
BAT/15244	13 mm	•	24	22	71,5	30	20	12

FEMALE CONNECTOR AIR

type	Connexion A	PA 11	d	AF	l	t	weight
BAT/47530	7 mm	•	24	22	68,3	25	16
BAT/47531	10 mm	•	24	22	73,3	30	17

MALE CONNECTOR AIR

type	Connexion A	PA 11	d	AF	l	t	n	weight
BAT/47532	7 mm	•	24	22	66,5	25	20	10
BAT/47533	10 mm	•	24	22	71,5	30	20	10

Accessories

COMPONENT LIST FOR TRACTION BATTERIES

▲ **BAT/33823**

Water filter with flow indicator NW6

▲ **BAT/33825**

Water filter with flow indicator NW10

▲ **BAT/12420**

Flow indicator with inner diameter 10mm

▲ **BAT/16290**

Water filter

VALVE FOR ACID CIRCULATION

▲ **BAT/21004**

Valve for acid circulation AT

TUBE FOR ACID CIRCULATION

▲ **BAT/16331**

Tube for acid circulation. H = 640 mm

L-CONNECTOR

▲ **BAT/34418**

L connector for acid circulation AT (without tube)

T-CONNECTOR

▲ **BAT/34419**

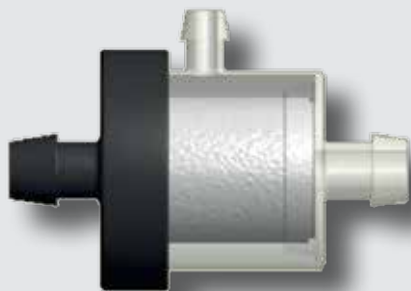T connector for acid circulation AT (without tube)

T-CONNECTOR 90>H655

▲ **BAT/34420**

T connector 90° for acid circulation AT (without tube)

FILTER-EX FOR CENTRAL DEGASSING

▲ **BAT/47526**

FilterEX for central degassing

CHARACTERISTICS

The use of the filterEX on batteries prevents:

- a flash-back of Hydrogen fire
- followed by a chain reaction between the battery cells

REQUIREMENTS

Normally, the filterEX is used in combination with the central degassing bfs plug

(A51210), where all cells are inter-connected through the degassing hoses in addition to the normal water hoses.

FilterEX will protect the battery under any of the following circumstances:

- An ignition from an external source - flame

propagation can be avoided by filterEX - mounted at the end of the degassing hose)

- An ignition source inside one of the battery cells - a propagation of the flame can be prevented by filterEX mounted after each plug

HANDLING

- The piping should be installed in such way that there are not more than 10 bfs plugs connected to one filterEX.
- The filterEX should be replaced after approximately 300 cycles, respectively when the white insert becomes discoloured. Replacement frequency depends on the gas discharge volume per battery cells.

REDUCER

◄ **BAT/17277:** 10/6

"L" CONNECTORS

◄ **BAT/21762:** 6/0

◄ **BAT/19814:** 6/6

◄ **BAT/16293:** 10/6

◄ **BAT/16297:** 10/10

"T" CONNECTORS

◄ **BAT/17356:** 10/10/10

◄ **BAT/16295:** 10/6/10

◄ **BAT/17354:** 6/10/6

◄ **BAT/21764:** 6/6/6

"X" CONNECTORS

◄ **BAT/16291:** 10/10/10/10

◄ **BAT/16292:** 6/10/6/10

◄ **BAT/21766:** 6/6/6/6

WASH LOCKER

◄ **BAT/22107:** Ø 14 mm

◄ **BAT/22109:** Ø 9 mm

END CAP

◄ **BAT/21097**

PROTECTION CAP

◄ **BAT/34730:** Protection cap for male link RC

PLUG LIFTER

▲ **BAT/47535**

SLIDE TOOL

▲ **BAT/47536**

Tool to fix wash locker

ASSEMBLING TOOL

▲ **BAT/47534**

To ease and quicken the assembly of a filler cap.

Accessories

COMPONENT LIST FOR TRACTION BATTERIES

FLEXIBLE INTERCELL CONNECTOR

Screwed cable connections

Reference	Ø mm²	length mm	Reference	Ø mm²	length mm
BAT/16225	25	75	BAT/16248	50	170
BAT/16226	25	85	BAT/16249	50	190
BAT/16227	25	95	BAT/16250	50	210
BAT/16228	25	110	BAT/16251	50	250
BAT/16229	25	130	BAT/16252	50	300
BAT/16233	35	75	BAT/16253	50	350
BAT/12444	35	85	BAT/34768	70	95
BAT/16234	35	95	BAT/45713	70	110
BAT/16235	35	110	BAT/34773	70	130
BAT/16236	35	130	BAT/34776	70	150
BAT/16237	35	150	BAT/34778	70	170
BAT/16238	35	170	BAT/34780	70	190
BAT/16239	35	190	BAT/34782	70	210
BAT/34760	50	75	BAT/47009	95	95
BAT/16244	50	95	BAT/47010	95	130
BAT/16245	50	110	BAT/47011	95	170
BAT/16246	50	130	BAT/34795	95	210
BAT/16247	50	150	BAT/47012	95	250

◄ **BAT/16216**

End cable screwed

Reference	Ø mm²	length mm	Reference	Ø mm²	length mm
BAT/16216	25	1500	BAT/16220	25	2000
BAT/16217	35	1500	BAT/16221	35	2000
BAT/16218	50	1500	BAT/16222	50	2000
BAT/16219	70	1500	BAT/16223	70	2000

◄ **BAT/47481**

End cable with fuse

Reference	Ø mm²	length mm	fuse	Reference	Ø mm²	length mm	fuse
BAT/47481	35	1000	500A	BAT/47477	50	1500	400A
BAT/47482	35	1200	300A	BAT/47475	50	1500	500A
BAT/45672	35	1500	300A	BAT/48090	50	2000	500A
BAT/47483	35	1500	400A	BAT/47478	70	1200	250A
BAT/47476	50	1200	250A	BAT/47479	70	1500	400A

RECOMMENDED DIAMETER MM² CONNECTORS

0 - 250 Ah	25 mm²	250 - 500 Ah	35 mm²	500 - 750 Ah	50 mm²	750 Ah - …	70 mm²

24 VOLT BATTERIES

24 V	1 x 12

24 V	4 x 3

24 V	3 x 4

24 V	2 x 6

36 & 48 VOLT BATTERIES

36 V	3 x 6

36 V	2 x 12

36 V	4 x 6

48 V	5 x 5

48 V	6 x 4

48 V	3 x 8
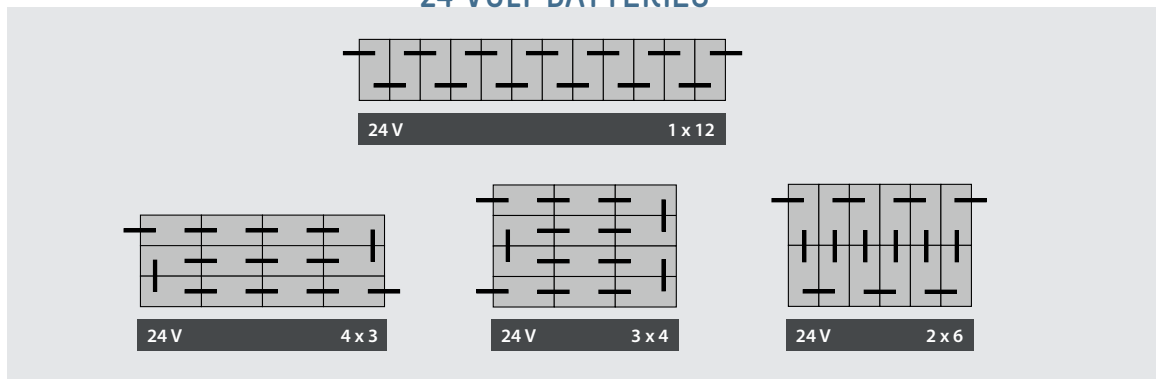
72 & 80 VOLT BATTERIES

72-80 V	5 x 8

72-80 V	4 x 10

72-80 V	6 x 6
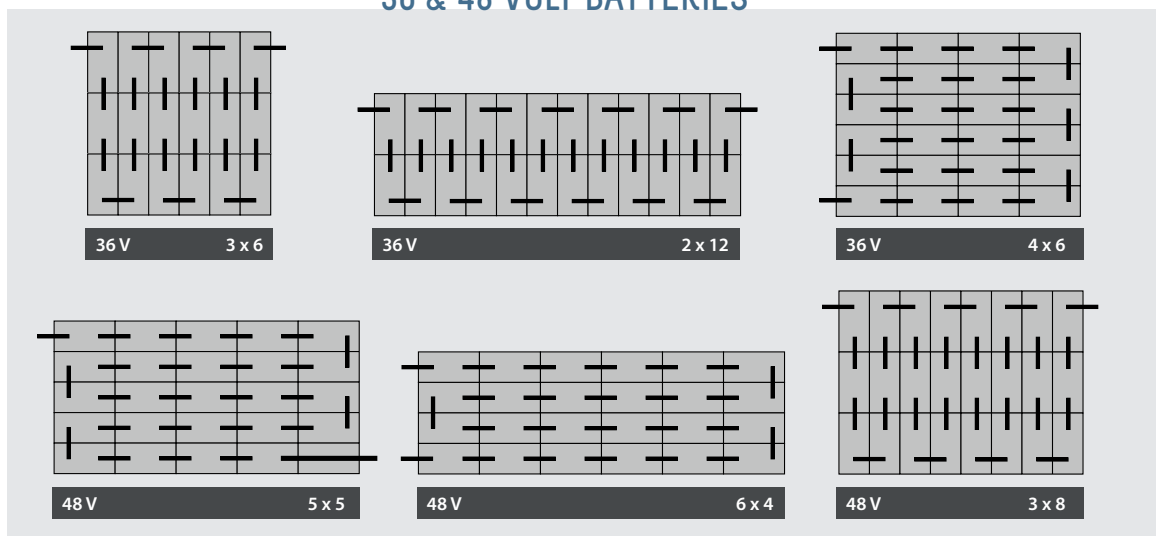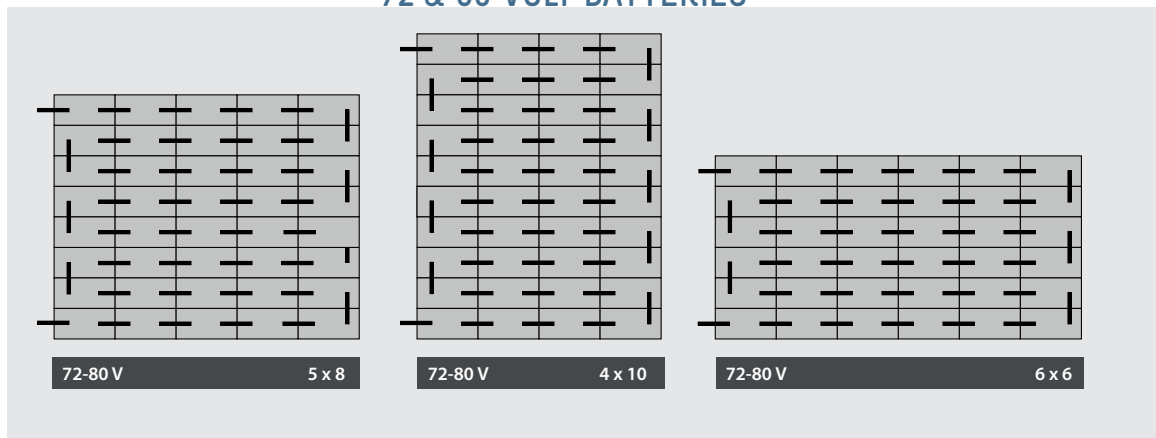
▲ BAT/12446

Black bolt M10x22 for screwed connections

▲ BAT/19799

Bolt M10X23 with aux. Contact

▲ BAT/46046

Black bolt M10x18 for screwed connections

Accessories

COMPONENT LIST FOR TRACTION BATTERIES

▲ **BAT/22161**

Fixation for cable diameter = 35

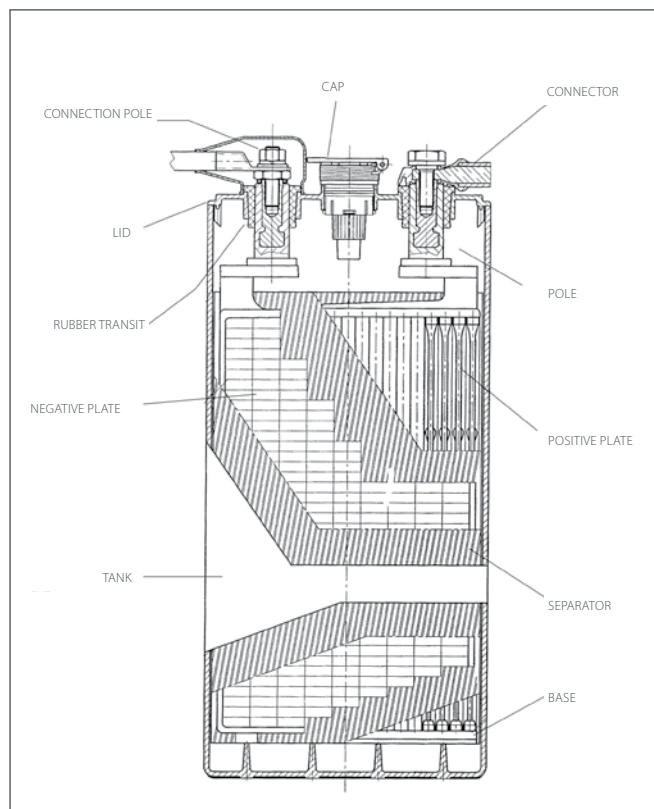▲ **BAT/22163**

Fixation for cable diameter = 50

▲ **BAT/22165**

Fixation for cable diameter = 70
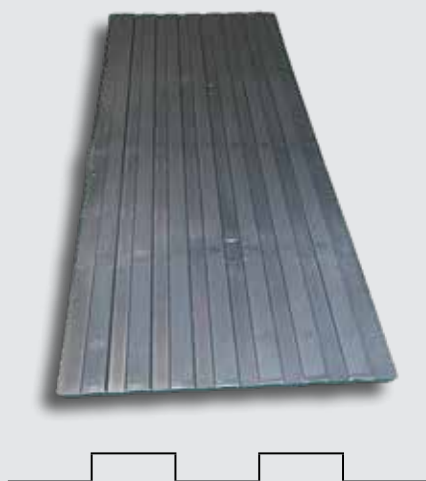
▲ **BAT/22167**

Fixation for cable diameter = 25

CONNECTION POLE

CAP

CONNECTOR

LID

RUBBER TRANSIT

NEGATIVE PLATE

POLE

POSITIVE PLATE

TANK

SEPARATOR

BASE

▲ **BAT/16305**

+ red

▲ **BAT/16306**

- blue

SPACER PLATES

REF	Size
BAT/12470	200 x 400 x 5 mm
BAT/21869	200 x 400 x 15 mm
BAT/21871	200 x 400 x 20 mm
BAT/12471	200 x 450 x 5 mm
BAT/21873	200 x 455 x 15 mm
BAT/21875	200 x 455 x 20 mm
BAT/12474	200 x 560 x 5 mm
BAT/21885	200 x 560 x 15 mm
BAT/21887	200 x 560 x 20 mm
BAT/21889	200 x 690 x 15 mm
BAT/21891	200 x 690 x 20 mm
BAT/21893	200 x 405 x 5 mm
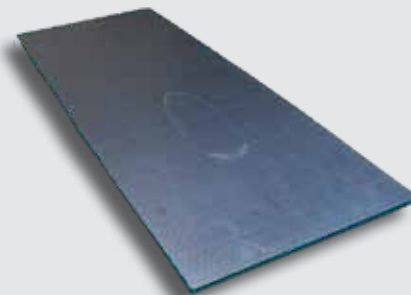
REF	Size
BAT/12466	690 x 2000 x 5 mm
BAT/34871	690 x 2000 x 10 mm

ELEMENT CONTAINER

▼ BAT/21971

Element container grey

REF	Description	Height		REF	Description	Height
BAT/21971	2S55-SH65 PF 20	330 mm		BAT/22203	2S105-SH120 PF 30	565 mm
BAT/21973	3S55-SH65 PF 20	330 mm		BAT/22205	3S105-SH120 PF 30	565 mm
BAT/21975	4S55-SH65 PF 20	330 mm		BAT/22207	4S105-SH120 PF 30	565 mm
BAT/21977	5S55-SH65 PF 20	330 mm		BAT/22209	5S105-SH120 PF 30	565 mm
BAT/21979	6S55-SH65 PF 20	330 mm		BAT/22211	6S105-SH120 PF 30	565 mm
BAT/21981	7S55-SH65 PF 20	330 mm		BAT/22213	7S105-SH120 PF 30	565 mm
BAT/21983	8S55-SH65 PF 20	330 mm		BAT/22215	8S105-SH120 PF 30	565 mm
BAT/21985	9S55-SH65 PF 20	330 mm		BAT/22217	9S105-SH120 PF 30	565 mm
BAT/21987	10S55-SH65 PF 20	330 mm		BAT/22219	10S105-SH120 PF 30	565 mm
BAT/21989	12S55-SH65 PM 20	330 mm		BAT/22221	12S105-SH120 PF 30	565 mm
BAT/21991	2S70-SH80 PF 20	400 mm		BAT/22223	12S105-SH120 PM 30	565 mm
BAT/21993	3S70-SH80 PF 20	400 mm		BAT/21249	2S125-SH150 PM 50	690 mm
BAT/21995	4S70-SH80 PF 20	400 mm		BAT/21250	3S125-SH150 PM 50	690 mm
BAT/21997	5S70-SH80 PF 20	400 mm		BAT/21251	4S125-SH150 PM 50	690 mm
BAT/21999	6S70-SH80 PF 20	400 mm		BAT/21252	5S125-SH150 PM 50	690 mm
BAT/22001	7S70-SH80 PF 20	400 mm		BAT/21253	6S125-SH150 PM 50	690 mm
BAT/22003	8S70-SH80 PF 20	400 mm		BAT/22230	7S125-SH150 PM 50	690 mm
BAT/22005	9S70-SH80 PF 20	400 mm		BAT/22232	8S125-SH150 PM 50	690 mm
BAT/22007	10S70-SH80 PF 20	400 mm		BAT/22234	9S125-SH150 PM 50	690 mm
BAT/22009	12S70-SH80 PF 20	400 mm		BAT/22236	10S125-SH150 PM 50	690 mm
BAT/22011	12S70-SH80 PM 20	400 mm		BAT/22238	12S125-SH150 PM 50	690 mm
BAT/22013	2S80-SH92 PF 30	460 mm		BAT/22240	2S100D-SH115D PM 45	555 mm
BAT/22015	3S80-SH92 PF 30	460 mm		BAT/22242	3S100D-SH115D PM 45	555 mm
BAT/22017	4S80-SH92 PF 30	460 mm		BAT/22244	4S100D-SH115D PM 45	555 mm
BAT/22019	5S80-SH92 PF 30	460 mm		BAT/22246	5S100D-SH115D PM 45	555 mm
BAT/22021	6S80-SH92 PF 30	460 mm		BAT/22248	6S100D-SH115D PM 45	555 mm
BAT/22023	7S80-SH92 PF 30	460 mm		BAT/22250	7S100D-SH115D PM 45	555 mm
BAT/22025	8S80-SH92 PF 30	460 mm		BAT/22252	8S100D-SH115D PM 45	555 mm
BAT/22027	9S80-SH92 PF 30	460 mm		BAT/22254	9S100D-SH115D PM 45	555 mm
BAT/22029	10S80-SH92 PF 30	460 mm		BAT/22256	10S100D-SH115D PM45	555 mm
BAT/22031	12S80-SH92 PM 30	460 mm		BAT/22258	12S100D-SH115D PM45	555 mm
BAT/22033	2S95-SH110 PF 20	510 mm		BAT/22260	2SH50 PF 10	265 mm
BAT/22035	3S95-SH110 PF 20	510 mm		BAT/22263	3SH50 PF 10	265 mm
BAT/22037	4S95-SH110 PF 20	510 mm		BAT/22265	4SH50 PF 10	265 mm
BAT/22169	5S95-SH110 PF 20	510 mm		BAT/22267	5SH50 PF 10	265 mm
BAT/22171	6S95-SH110 PF 20	510 mm		BAT/22269	6SH50 PF 10	265 mm
BAT/22173	7S95-SH110 PF 20	510 mm		BAT/22271	7SH50 PF 10	265 mm
BAT/22175	8S95-SH110 PF 20	510 mm		BAT/22273	8SH50 PF 10	265 mm
BAT/22177	9S95-SH110 PF 20	510 mm		BAT/22275	9SH50 PF 10	265 mm
BAT/22179	10S95-SH110 PF 20	510 mm		BAT/22277	10SH50 PF 10	265 mm
BAT/22181	12S95-SH110 PM 20	510 mm		BAT/22279	12SH50 PM 10	265 mm
BAT/22183	2S100-SH115 PF 20	530 mm		BAT/22281	2SH160 PF 45	715 mm
BAT/22185	3S100-SH115 PF 20	530 mm		BAT/22283	3SH160 PF 45	715 mm
BAT/22187	4S100-SH115 PF 20	530 mm		BAT/22285	4SH160 PF 45	715 mm
BAT/22189	5S100-SH115 PF 20	530 mm		BAT/22287	5SH160 PF 45	715 mm
BAT/22191	6S100-SH115 PF 20	530 mm		BAT/22289	6SH160 PF 45	715 mm
BAT/22193	7S100-SH115 PF 20	530 mm		BAT/22291	7SH160 PF 45	715 mm
BAT/22195	8S100-SH115 PF 20	530 mm		BAT/22293	8SH160 PF 45	715 mm
BAT/22197	9S100-SH115 PF 20	530 mm		BAT/22295	9SH160 PF 45	715 mm
BAT/22199	10S100-SH115 PF 20	530 mm		BAT/22297	10SH160 PF 45	715 mm
BAT/22201	12S100-SH115 PM 20	530 mm		BAT/22299	12SH160 PM 45	715 mm

Accessories

EQUIPMENT

CABLE PINCERS

▲ **BAT/15153**

Cable cutter for cables up to 70mm².
For soft copper cable only.

▲ **BAT/36046**

Isolated torque
wrench

▲ **BAT/47709**

Socket 22 mm 3/8" 6 point

MECHANIC CRIMPING TOOL

To squeeze the cable contacts (for
battery connectors etc).

◀ **BAT/21651**

Mechanical grip pliers,
10 - 70 mm WM, ditto
like here above, but
squeezes 6 sides.

▲ **BAT/18969**

Pressure: 60 kN
Length: 620 mm
Different diametres for following cables:

Cable in mm²

10 mm²	50 mm²
16 mm²	70 mm²
25 mm²	95 mm²
35 mm²	120 mm²

▶ **BAT/15173**

Battery filler

▶ **BAT/15167**

Acid proof funnel

▶ **BAT/18809 - 1 L**

▶ **BAT/19457 - 2 L**

Automatic battery filler (1
litre). Stops automatically
when the desired level is
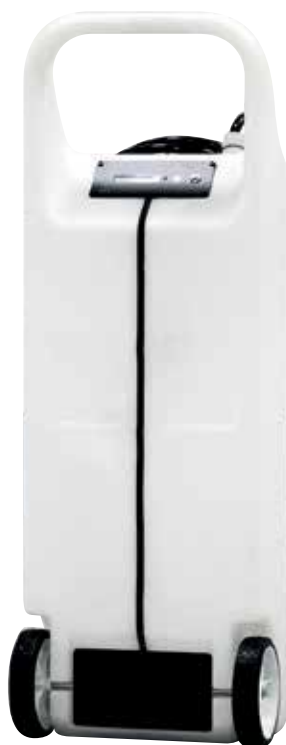reached.

Accessories
FILLING PUMPS & GUNS
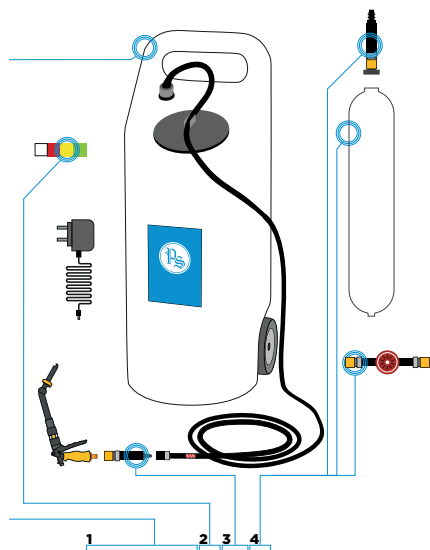
HYDROFILL™ PRO
WATER WHEN YOU NEED IT, WHERE YOU NEED IT

FEATURES

- 60 liter tank
- Tactile LCD display
- Integrated deioniser
- Cartridge & timer
- Battery powered
- Purity sensor
- Discharge indicator
- Low water alert
- Diagnostic information
- Multi-language
- Gun-X + adapter

▶ **BAT/48311**

The HydroPure™ deioniser cartridge fits inside the #HydroFill™ PRO making it the only mobile water cart with an integrated deioniser. You can now make pure water instantly, taking it to the batteries that need it, wherever they are.

SPECIFICATIONS

- Maxumum capacity: 60L
- Height: 1.000 mm
- Width: 350 mm
- Output hose length: 3 m
- Water pressure: 14,5 psi / 1 bar
- Wheel size: 150 mm
- Shipping weight: 8 kg
- Max weight: 72,7 kg
- Controls: single button and 16 x 2 line OLED display

BENEFITS

- Easy to use
- Robust
- Transport water easily
- No assembly required

FILLING PUMP

DRAIN PUMPS

▶ **BAT/34880**

Mobile filling system 60 litres (Battery 12V 6.5Ah + battery charger - water pump (ca. 17L./min, 1,9 bar) - 3 meter tube - 1 linking set for the fast filling system - 1 filling gun with automatic switch off.

▶ **BAT/21534**

water pump

▶ **BAT/34894**

Manual system to drain battery cases.
Acid proof synthetic, content: 6 litres, PVC suction tube 6 mm diam.

◀ **BAT/34890**

Electric pump with 12V battery included to drain superfluous water out of the container.
Pipe to put between the cells:
Ø 6 mm
Water bottle 60 litres
Capacity pump: 2,7L/min.
12V battery + charger included.

135

Accessories

FILLING PUMPS & GUNS

▶ **BAT/15145**

20 litres tank, 3m tube, filter, flow indicator and link.

▶ **BAT/28944**

20 Litres tank, 3m tube, Flow-indicator (BAT/12420), fast connector (BAT/15229) + filling gun (BAT/29133) with fast connector (BAT/16298), makes it possible to fill with automatic filling plugs or with water gun.

▶ **BAT/15144**

60 litres tank, 3m tube, filter, flow indicator and link.

▶ **BAT/17594**

60 Litres tank, 3m tube, Flow-indicator (BAT/12420), fast connector (BAT/15229) + filling gun (BAT/29133) with fast connector (BAT/16298), makes it possible to fill with automatic filling plugs or with water gun.

▶ **BAT/12419**

Water tank 20L with tap
X x Y x H: 353 x 165 x 446 mm

▶ **BAT/15832**

Water tank 60L with tap
X x Y x H: 460 x 350 x 500 mm

▶ **BAT/39588**

Tap for water tank 60L

AUTOMATIC WATERVALVE

▶ **BAT/48449**

Automatic Watervalve (220V)
Works on every charger.
The valve is connected by the charger which gives the "end of charge" signal and opens the valve for an xx adjustable time.

WATER BOX

◀ **BAT/17586**

Water bottle with demine-ralised water - 30L

▶ **BAT/35007**

Water tank 1000L with tap - filled with demineralised water.

▶ **BAT/28837**

Water tank 1000L with tap - empty.

BAT/50212

Connector Ø 10 to fix the accessories

Accessories :

BAT/16286 PVC filling tube Ø 10

BAT/12420 Flow indicator

BAT/15229 link female (to fill the batteries with automatic filling system)

BAT/29133 filling gun – not acid proof (to fill the batteries without automatic filling system)

▶ **BAT/29133**

Solid water filling gun with ergonomic rubber handles - 25 cm

▶ **BAT/49468 - S-Type**

Watering gun for stationary battery applications.

▶ **BAT/49469 - RR-Type**

Watering gun for railroad battery applications.

▶ **BAT/46019 - X-Type**

Battery watering gun. This watering gun is popular for its reliable automatic shutoff and its ability to water batteries.

NOTE: for best results, remove baskets in flip top vent plugs. They are not required with automatic pistols.

Accessories
DEMINERALISATION

WATER DEIONIZER SYSTEM
MAXIMIZE BATTERY PERFORMANCE WITH PURE WATER FROM THE TAP

FEATURES

- Easy to use
- High capacity
- Exclusive battery-operated purity light
- Easy installation
- Pressure system

Hard water in your water supply may be causing poor battery performance. Metallic impurities in water can affect cell voltages and increase self discharge.

▲ **BAT/48176**
Replacemant cartridge

▶ **BAT/48174**
Deionizer single

▶ **BAT/48175**
Deionizer double

	Purity of Incoming Tap Water		Output of a single Deionizer Cartridge
	TDS (PPM)	Conductivity (µS/cm)	Liters
Good	20	30.0	13.627
Good	50	75.0	5.451
Good	75	112.5	3.634
Average	100	150.0	2.725
Average	125	187.5	2.180
Average	150	225.0	1.817
Poor	200	300.0	1.363
Poor	250	375.0	1.090
Poor	300	450.0	908

SPECIFICATIONS

- **Flow rate:** 2,0 lmp (with provided restrictor)
- **Purity Light Power Source (included)** : 2 D-Cell Batteries
- **Life Estimate:** 2 Years
- **Purity Light Setting:** 50 ppm total dissolved solids
- **Dimensions:** Mounting plate: 1115mm x 155mm
  Disposable Cartridge: 690mm x 123mm
- **Hose Dimensions:** 9.5mm x 3m (input)
  9.5mm x 6m (output)

▶ **BAT/15179 :** ± 1.000 L

▶ **BAT/15180 :** ± 2.000 L

▶ **BAT/15181 :** ± 3.000 L

Demineralisation systems movable or for fixing to the wall equipped with warning systems to replace the resins. The replacement of the resins is very simple.

▶ **BAT/49859** = syst. BAT 15175

▶ **BAT/15183** = syst. BAT 15179

Replace unit of the resins.

AQ STEAMER

Cleans your traction batteries in a nature-friendly way: without sewage water!

The most important mark of the steaming technique is the very low water use (ca. 2 litres/hour). That's why it's extremely appropriate to clean traction batteries. A small amount of cleaner can be adjusted to the steam, so it will clean, degrease and neutralize the battery acid.

ADVANTAGES

- Environment-friendly: no polluted sewage water or cleaning cloths
- Battery can stay into the fork-lift truck
- Time-saving: battery cases don't need to be drained
- Money-saving: prolongs the life span of your battery -> prevents leakage currents
- Protected against overpressure, overheating, low water indications etc.

AQ-STEAM
BASIC

◀ BAT/22467

| Technical Data			
Voltage	230 V	Warm up time	10 min.
Wattage	3400 W	Water tank	5 L
Pressure	6,5 Bar	Steam Regulator	yes
Stainless Steel Boiler (content)	1 L	Chemical tank	2 L
Material elements	Stainless steel / Inox	Boiler Warranty	1 year
Number of elements	1	Machine Warranty	1 year
Max. Boiler temp.	160 °C	Machine Weight	24 kg
Retiring temp.	130 °C	Vacuum/Water Piston	now
Water consumption	2 - 2,5 L/hour	Size	60x55x33 cm

Accessories

BATTERY TRANSPORT

BATTERY CHANGING BEAMS

◀ BAT/50999

Lifting beams are specifically designed to remove and replace forklift truck batteries safely and economically without the risk of damage. Supplied complete with 4 swivel hooks. Secured safely to the forks by thumb screws.

Technical specifications:

- Maximum fork section: 150 x 70 mm
- A: min 590 mm - max 1010 mm
- B: min 180 mm - max 900 mm
- Capacity: 2000 kg
- Fully tested and C€ certified
- Weight: 50 kg
- Delivered with 4 hooks
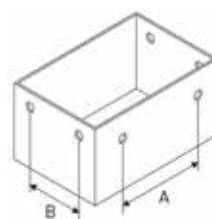
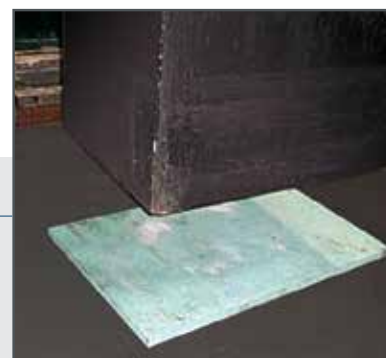## BATTERY MOVER ASSEMBLY

◀ BAT/50926

Complete kit

▲ BAT/50928

Lower chains, with YELLOW hooks

- To remove traction batteries from forklifts
- Capacity: 2000 kg
- Length: 1050 mm

▲ BAT/50927

Upper chains, with RED hook

▶ BAT/28351

Cover mat - soft finish.
120 x 100 x 2 cm

▶ BAT ref. on demand

Rollerbed on cart

▶ BAT ref. on demand

Rollerbed handpallet truck

▶ BAT ref. on demand

THE MODULAR RACK SYSTEM

THE MOST FLEXIBLE BATTERY STORAGE SYSTEM AVAILABLE TODAY

The modular rack system has been designed with flexibility in mind. No matter what changes need to be made to the battery room, before, during or after the installation, this system will be able to be reconfigured quickly and easily to meet the demand.

By allowing this flexibility the modular rack system greatly reduces the cost of restructuring the battery room. Easy to change the configuration on site at a fraction of the cost of a new installation and frees up valuable space.

THE NEW MODULAR RACK SYSTEM

Our modular rack system is the new, modern and flexible way to store batteries whilst they are being charged.

- It holds up to 20% more batteries freeing up valuable warehouse space.
- 100% acid resistant, dent and rust proof components.
- Colour co-ordinated with integrated battery dividers ensuring battery are arranged neatly in their own space.

If your needs change, it can easily change too.
The ability to change quickly and with minimal disruption makes it one of the most cost effective racking system available in the industry today.

WHAT IT'S MADE OF

The modular rack system is an award winning battery racking system. A set of components that can be bolted together on site to match the needs of a customer.

- Heavy duty, acid resistant perimeter frame.
- Acid and rust resistant roller beams powder coated to your colour specifications.
- Low energy, acid resistant polymer wheels.
- Easily adjustable battery stops.
- Single bolt construction.
- Supports up to 1500kg batteries.

All of our components have been rigorously tested to make sure we're using the best and most durable materials.

Not only will this ensure the durability of the modular rack system, when the time comes to reconfigure, it will look as if it's a new installation

Custom branded roller beams

Adjustable battery side stops

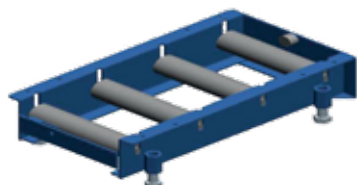Modular perimeter frames

Quick & simple installation

Accessories

BATTERY TRANSPORT

ROLLERBEDS FOR BATTERIES

FIXED ADJUSTABLE TABLE WITH SINGLE COMPARTMENT

Max. dimensions battery box / Overall (mm)		Width					
		300 / 394	400 / 494	500 / 594	600 / 694	700 / 794	800 / 894
Length	865 / 914	TRS 300-4R	TRS 400-4R	TRS 500-4R	TRS 600-4R	TRS 700-4R	TRS 800-4R
	1065 / 1114	TRS 300-5R	TRS 400-5R	TRS 500-5R	TRS 600-5R	TRS 700-5R	TRS 800-5R
	1265 / 1314	TRS 300-6R	TRS 400-6R	TRS 500-6R	TRS 600-6R	TRS 700-6R	TRS 800-6R

### FIXED ADJUSTABLE TABLE WITH DOUBLE COMPARTMENT
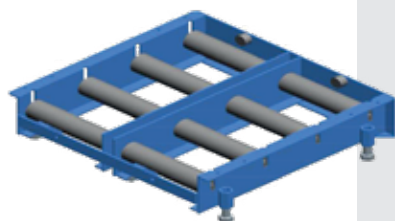
Max. dimensions battery box / Overall (mm)		Width					
		300 / 752	400 / 952	500 / 1152	600 / 1352	700 / 1552	800 / 1752
Length	865 / 914	TRD 300-4R	TRD 400-4R	TRD 500-4R	TRD 600-4R	TRD 700-4R	TRD 800-4R
	1065 / 1114	TRD 300-5R	TRD 400-5R	TRD 500-5R	TRD 600-5R	TRD 700-5R	TRD 800-5R
	1265 / 1314	TRD 300-6R	TRD 400-6R	TRD 500-6R	TRD 600-6R	TRD 700-6R	TRD 800-6R

FIXED ADJUSTABLE TABLE WITH TRIPLE COMPARTMENT
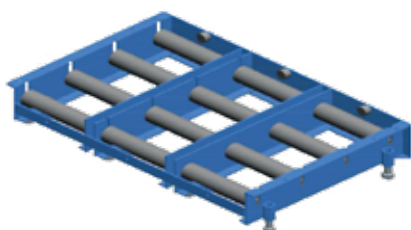
Max. dimensions battery box / Overall (mm)		Width			
		300 / 110	400 / 1410	500 / 1710	600 / 2010
Length	865 / 914	TRT 300-4R	TRT 400-4R	TRT 500-4R	TRT 600-4R
	1065 / 1114	TRT 300-5R	TRT 400-5R	TRT 500-5R	TRT 600-5R
	1265 / 1314	TRT 300-6R	TRT 400-6R	TRT 500-6R	TRT 600-6R

FIXED ADJUSTABLE TABLE WITH QUADRUPLE COMPARTMENT
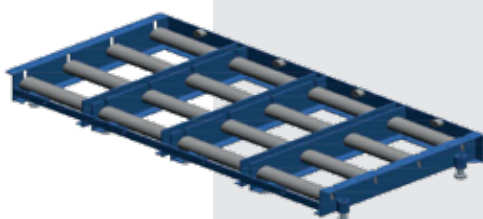
Max. dimensions battery box / Overall (mm)		Width	
		300 / 1468	400 / 1868
Length	865 / 914	TRQ 300-4R	TRQ 400-4R
	1065 / 1114	TRQ 300-5R	TRQ 400-5R
	1265 / 1314	TRQ 300-6R	TRQ 400-6R

▶ **Height of rollerbeds:**

P1 = 111/171 | P2 = 180/241 | P3 = 246/305 | P4 = 320/370
(height: floor/bottom rollers)

THE ACCESSORIES FOR ROLLERBEDS

Charger support table, socket support structure, protective bumper,... can be chosen based on the type of table & width of compartment.

type of table	width of compartment					
TRS	300	400	500	600	700	800
TRD	300	400	500	600	700	800
TRT	300	400	500	600	700	800
TRQ	300	400	500	600	700	800

▶ **Socket support structure**

▶ **Structure for charger on roller table**

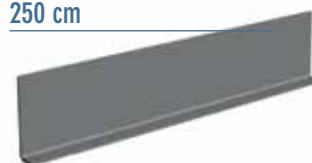▶ **Charger support table**

▶ **Protective bumper 80 x 120 cm**

▶ **Adjustable stopper for back side**

Type B1: length 140

Type B2: length 250

▶ **Protective bumper 80 x 250 cm**

TRANSPORT TABLE FOR PALLET TRUCK

TYPE	Overall dimensions	Interior useful dimensions
TR 1244	1164 x 600 x 640	1069 x 470
TR 1242	1395 x 600 x 640	1300 x 470
TR 1251	1395 x 780 x 640	1300 x 650

Accessories

BATTERY HANDLING

Our innovative range of battery handling equipment will efficiently and safely change and store batteries, making more efficient use of space and reducing wastage through damage. Designed and built to drastically reduce changeover times, increasing truck productivity. From single spare battery racks to our fully automated multi-level system, we offer products to match any application.

BATTERY CHANGER MAGNET TYPE G + MODULAR RACK SYSTEM

BATTERY CHANGER MAGNET TYPE C

BATTERY CHANGER MANUAL CART TYPE D

BATTERY CHANGER CRANE TYPE E

BATTERY CHANGER CRANE TYPE F

BATTERY CHANGER CRANE TYPE G

BATTERY CHANGER CRANE TYPE H

Accessories

SAFETY

▶ **BAT/15212**

First aid box (eye care): eye wash, fluid, compress, scissors, paper tissues, sticking plasters and gauze.

▶ **BAT/15165 : size 10**

Acid proof rubber gloves.

▶ **BAT/17096**

Facial screen with swing-back of anti-condensation glass - 180 x 290 mm - 180g.

▶ **BAT/15201**

Safety shower and eye wash station.

▶ **BAT/15172**

Acid proof rubber apron.

▶ **BAT/15159**

Acid proof safety glasses.


▶ **BAT/15204**

Neutralizer, absorber and fire-extinguisher with color indicator. Neutralizes for example acids. When Neutracid colors yellow, the acid is neutralised. 5Kg.

HYDROGEN GAS DETECTOR

Hydrogen gas detectors (HGD) protect battery charging rooms and other locations where motive and stationary batteries are present by continuously monitoring hydrogen gas levels. The HGD is equipped with LED lights and an 80 dB alarm. AC- or DC-Powered models are available with dual relay. Improving Safety in the Battery Room with Hydrogen Gas Detectors.

The HGD is designed for easy integration into your operation's ventilation system. It is available with a single or dual relay, in AC-or DC-powered models. Relays automatically the venting action of the Hydrogen Exhaust Fan Kit or other peripheral technologies, translating alarms directly into coordinated preventative response.
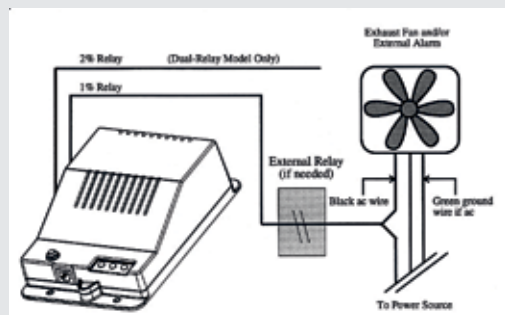
Control box

▶ **BAT/48251**

Detector Hydrogen Exhaust Dual Relay

▶ **BAT/48268**

Detector Hydrogen Exhaust Dual Relay DC

▶ **BAT/48252**

Aditional Remote Display with Buzzer HGD

▶ **BAT/48253**

Cable Modular 25' HGD

|	Relay	Relay rating	Power requirements	Dimensions	Mounting	Operating temperature
BAT/48251	Dual, Dry Contact Relay	10 A	85 V ac to 265 V ac 50/60 Hz	63,5 x 120,7 x 178 mm	4 x 4,8 mm screws	-10°C tot 40°C
BAT/48268			17 V dc to 60 V dc			

◀ **BAT/35779**

Seal - drain closer

It is available in 4 sizes. It closes drains and prevents the running off of spilled fluids. Made of flexible PVC that resists water, oil and most of the chemicals. Easy to clean with water and soap, reusable and so economical.

REF	Dimensions
BAT/35779	46 x 46 cm
BAT/35781	61 x 61 cm
BAT/35783	92 x 92 cm
BAT/35785	107 x 107 cm
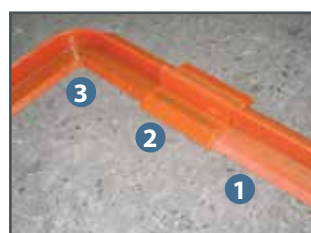
◀ **Retention barrier**

The permanent solution
The permanently fixed liquid barriers prevent that fluids or rainwater make an ice rink of your floor, or that harmful substances fall onto the ground. The barriers can be provided at every opening (gates and doors) to collect possible water. The barrier is made of a perforated, preformed steel plate, which is airtight wrapped with very high chemical durable polyurethane.
The barrier, which can be fixed at a flat and pure base, is furthermore supple, so cars, fork-lift trucks and every other rolling material can drive without problems over it.

Color: orange (± RAL 2010) - signalisation color

REF	Dimensions	Description	Photo
BAT/40507	3000 x 105 x 52 mm	Barrier element	1
BAT/40509	150 x 125 x 55 mm	Connector	2
BAT/40511	370 x 105 x 52 mm	Corner	3

DESCRIPTION	PVC PANEL	sticker
	EMERGENCY SHOWER	
(100 X 100)	BAT/18845	BAT/18849
(200 X 200)	BAT/18847	BAT/17507
	SMOKING BAN	
diam. 90	BAT/17301	BAT/18854
diam. 200	BAT/17302	BAT/17508
	FIRE BAN	
diam. 90	BAT/18857	BAT/18859
diam. 200	BAT/18861	BAT/17508
	ELECTRIC	
diam. 90	BAT/18863	BAT/18865
diam. 200	BAT/18867	BAT/17510
	EXPLOSIVES	
diam.90	BAT/18870	BAT/18872
diam. 200	BAT/18874	BAT/17511
	CAUSTICS	
diam. 90	BAT/18877	BAT/18879
diam. 200	BAT/18881	BAT/17512
* Others on demand		