

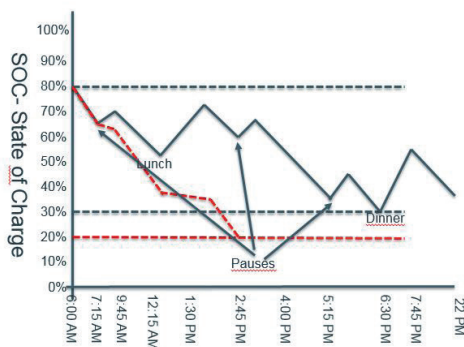


ACCESS

MICROPOWER GROUP

FAST/OPPORTUNITY CHARGING OF MATERIAL
HANDLING/INDUSTRIAL TRACTION BATTERIES

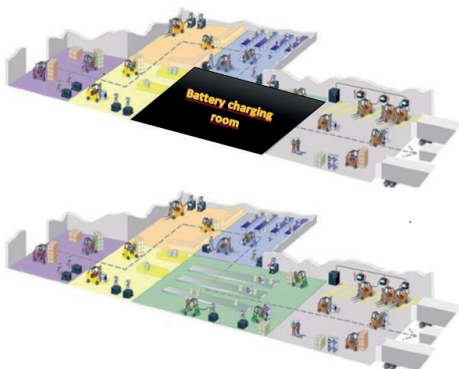
75 MINUTES TO CHARGE YOUR BATTERY



Typical 2-shift operation



Access 400 chargers built up of Access 100 modules, 80 V 400 A, batteries 930 Ah



With the elimination of battery changing rooms, valuable plant area is released for more productive activity

The battery charging procedure can be eliminated with the use of the Micropower's Access chargers. Between 30 and 80% SOC - State of Charge, counted as percent of total battery capacity in Ah – the battery is ready to receive a considerable current, thanks to limited voltage and temperature in this range.

With the elimination of battery changing rooms, valuable plant area is released for more productive activity.

The charging curves are of special design for:

- 2-shift-operation with programmed equalization charging during the "third shift"
- 3-shift-operation with equalization charging programmed once a week, typically Sunday

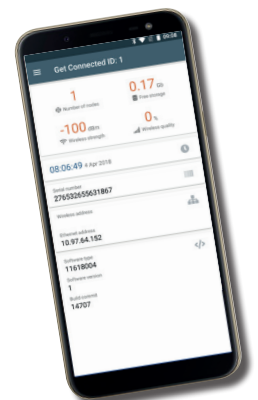
In order to prevent uncontrolled temperature increase in the battery, the use of an Access BMU Battery Monitoring Unit is mandatory for Fast/Opportunity Charge.

The Access BMU continuously senses the temperature in the battery and communicates increased temperature over radio to the Access charger, with the instruction to either reduce or shut the current while cooling down.

Is your operation suitable for Fast/Opportunity Charging? Connect an Access BLU Battery Logging Unit to your vehicle for, say a week. It will map the vehicle's discharge profile and total available charging opportunity time. Measured current integrated over time gives you the total required Ah to be recovered by battery charging.



The GET system is compatible with all Micropower chargers.



BATTERY TO 80%

ACCESS 50

MICROPOWER GROUP



3-phase
24V 80-130A
36V 60-100A
48V 60-80A

ACCESS 100

MICROPOWER GROUP



3-phase
24V 150-200A
36V 130-150A
48V 100-165A
80V 60-100A

ACCESS 200

MICROPOWER GROUP



3-phase
24V 300-400A
36V 300A
48V 200-330A
80V 120-200A

ACCESS 400

MICROPOWER GROUP



Module assemblies
of Access100-units
Example: 80V 400A

For more info about other Micropower's chargers, visit micropower-group.com

GLOBAL ACTOR IN BATTERY CHARGING SOLUTIONS

Micropower Group is an independent producer of battery chargers, lithium ion batteries and systems for industrial use, with head office in Växjö, Sweden. Micropower is a global, leading player on material handling battery charging.



Micropower ED Marketing AB
Idavägen 1
SE-352 46 Växjö, Sweden

Phone: +46 (0)470 727 400
sales@micropower.se
www.micropower-group.se

Powerfinn OY
Joensuunkatu 7D
FIN-24100 Salo, Finland

Phone: +358-(0)2-777 290
Fax: +358-(0)2-777 2918

info@powerfinn.fi
www.powerfinn.fi

Micropower GmbH
Sophie-Charlotten- Straße 92
140 59 Berlin, Germany

Phone: +49 (0)30 894 069 90

info@micropower-group.de
www.micropower-group.com

Micropower Shanghai Ltd
Rm101, Build3
No1501, Jinsui Road,
Pudong New District
Shanghai, China

Phone: +86 (0)21 5093 8660,
+86 (0)21 5093 8670
Fax: +86 (0)21 5093 8680

wayne.qin@micropower.se
www.micropower-group.cn

Ecotec Ltd LLC
150 Marybill Drive
Troy, OH 45373, USA

Phone: +1 917.628.1836
Fax: +1 516.485.0344

tom.tag@ecotecbatchcharger.com
www.ecotecbatchcharger.com