ANLEGGS gruppen as

ABM Asfalt & Betong Maskiner en del av ANLEGGS gruppen

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Battery Electric Paver

Environment Day - Oslo 3rd November 2026

Ammann ABG - Philipp Bramer

Agenda

- Technology Comparison
  - Why battery electric?
- Design of our Paver eABG 4820
  - Choose the right class
  - High voltage system
- Operating an Electric Asphalt Paver
  - Advantages of the electric machine
  - Jobsite experience
  - Battery consumption and charging
  - Job site examples
- Conclusion



Technology Comparison

Technology Comparison – Why battery electric?

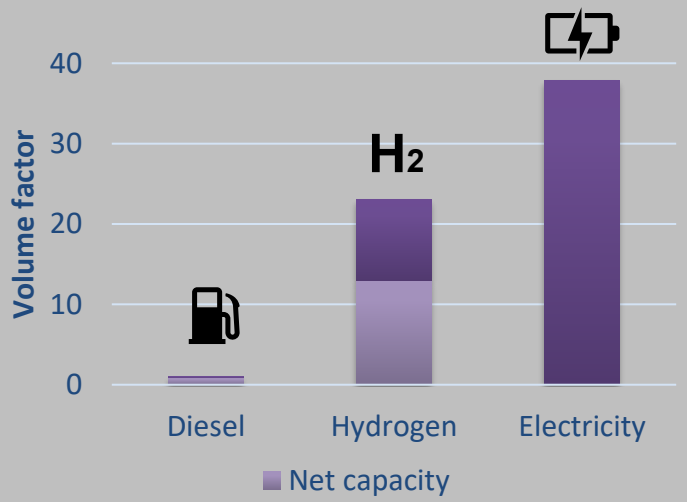
Availability of the technology

- **Relevant machine components are available in different versions and in series production**
  - **Electric motors**
  - **HV batteries**
  - **Peripherals (cooling, control, monitoring)**

Availability of the energy

- **Electricity is „everywhere“**
- **Available in various ways: mobile, at home or on the go**
- **Electricity is comparable cost efficient**

Challenge in utilizing the available space: Comparison of space envelope for energy storage

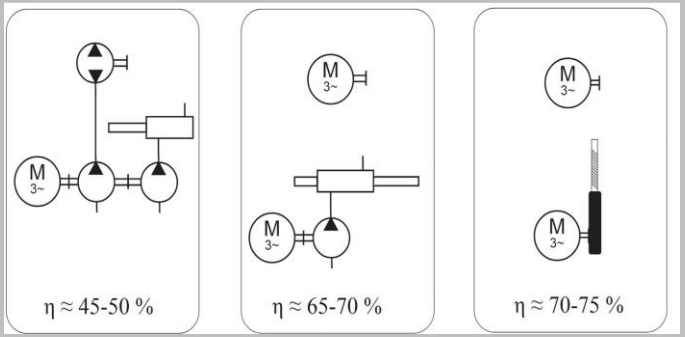


In addition more components are needed dependend on the technology: engine, fuel cell, …

From a single electric motor replacing the diesel engine to a fully electric machine

- **Electric motors are more efficient when used directly**
- **Hydraulics is an established technology: reliable, robust, and cost-effective**

Efficiency comparison of different concepts



Source: book „Angewandter Straßenbau“ M. Kappel



Design of our Paver eABG 4820

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Choose the right class

CITY CLASS | MULTI CLASS | HIGHWAY CLASS

ABG 2820



Emissionsstufe	Stage V
Grundbreite	1.5 m
Maximale Einbaubreite	4.5 m
Einbauleistung	330 t/h

Siehe Details

ABG 4820



Emissionsstufe	Stage V
Grundbreite	2.5 m
Maximale Einbaubreite	6.5 m
Einbauleistung	500 t/h

Siehe Details

eABG 4820



Emissionsstufe	e-Drive
Grundbreite	2.5 m
Maximale Einbaubreite	6.5 m
Einbauleistung	500 t/h

Siehe Details

ABG 6820



Emissionsstufe	Stage V
Grundbreite	2.5 m
Maximale Einbaubreite	10 m
Einbauleistung	700 t/h

Siehe Details

ABG 7820



Emissionsstufe	Stage V
Grundbreite	2.5 m
Maximale Einbaubreite	11 m
Einbauleistung	900 t/h

Siehe Details

ABG 8820



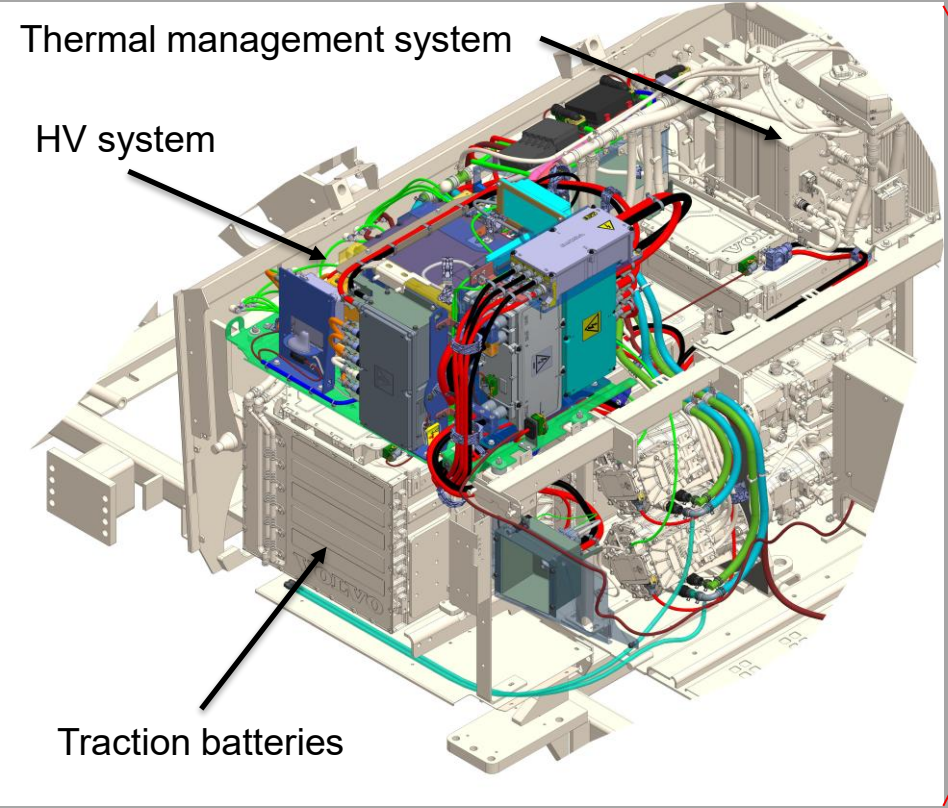
Emissionsstufe	Stage V
Grundbreite	2.5 m
Maximale Einbaubreite	13 m
Einbauleistung	1100 t/h

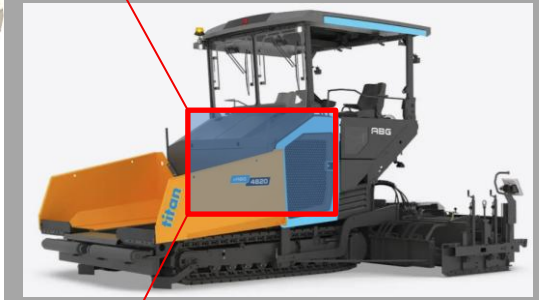
Siehe Details

Basic width
1,5m

Basic width
2,5m

High Voltage System





components: HV system
MONITORING UNIT
CONTROL UNIT
CHARGING SWITCH UNIT
CLIMATE CONTROL UNIT
DC/DC - 600V to 24V
ON-BOARD CHARGER
EMV FILTER
JUNCTION BOX - 2HCC+5LCC
JUNCTION BOX - 7HCC+0LC
JUNCTION BOX - LH 3BP
ELECTRIC MOTORS
INVERTERS - EMD
ANTENNA;GNSS
CONTROL UNIT;TELEMATICS

components: thermal management system
HEATER;ECH600V
PUMP UNIT;COOLANT PUMP ELECTRICAL
TEMP;SENSOR, EMOB
ACTIVE CLIMATE UNIT - ACU

Operating an Electric Asphalt Paver



Advantages of the Electric Machine

Environmental friendly

no direct CO_2 or Nox emissions
Most relevant: urban job sites, tunnel contruction



Better working conditions

Quiet → 10dB less noisy
Lower vibrations
Idle means „silence“

Lower operating costs

Efficient powertrain with less wear
Electricity vs Diesel

Quote of an operator after a shift with our electric paver:
“I have no headaches, and I’m not dealing with that constant noise in my ears anymore.”

Jobsite Experience

Experience based on

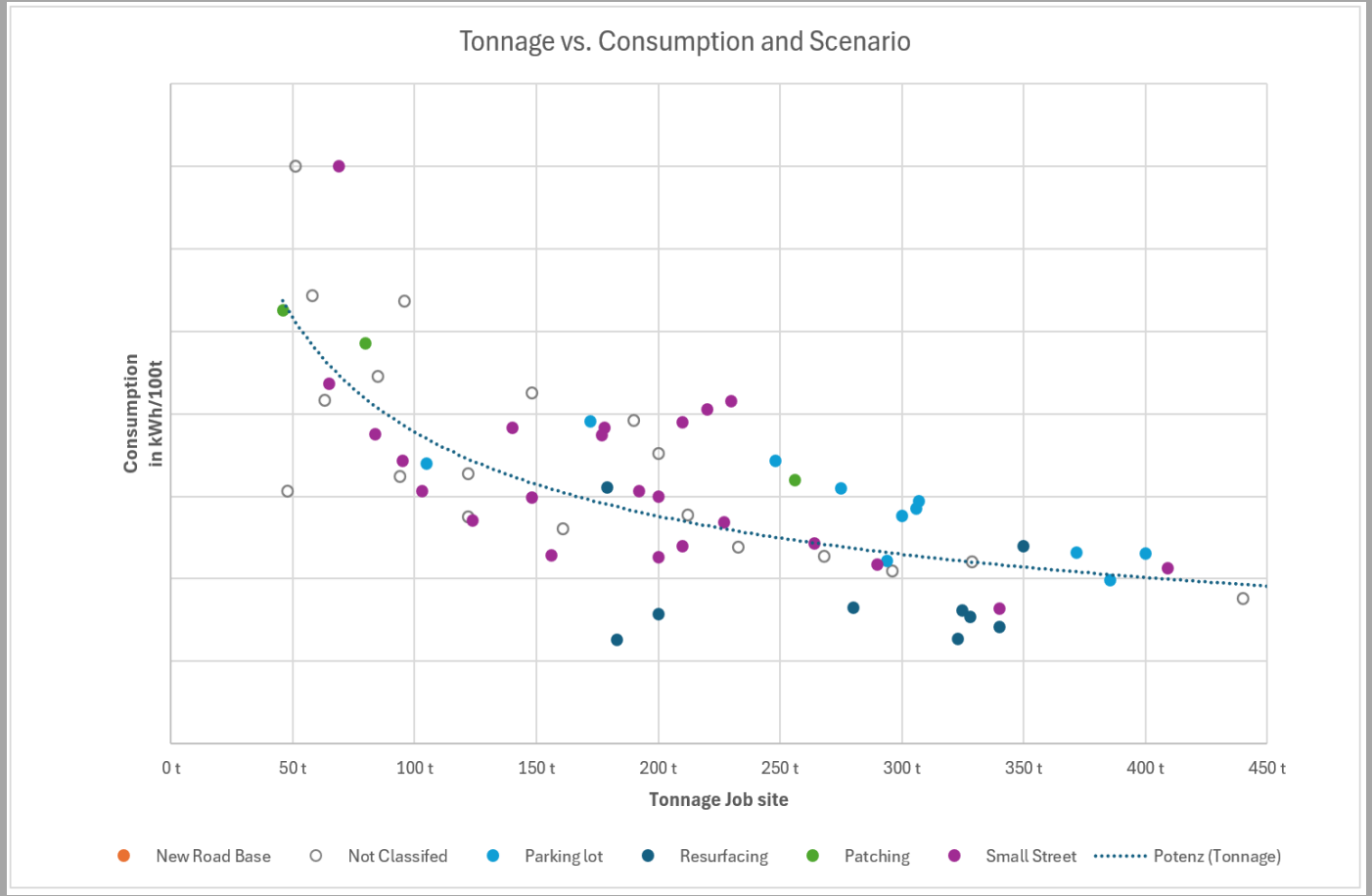
Over 100 jobsites in Europe in 7 different countries with several of our customers

How to compare and measure the consumption?

In kWh/100t

Insight

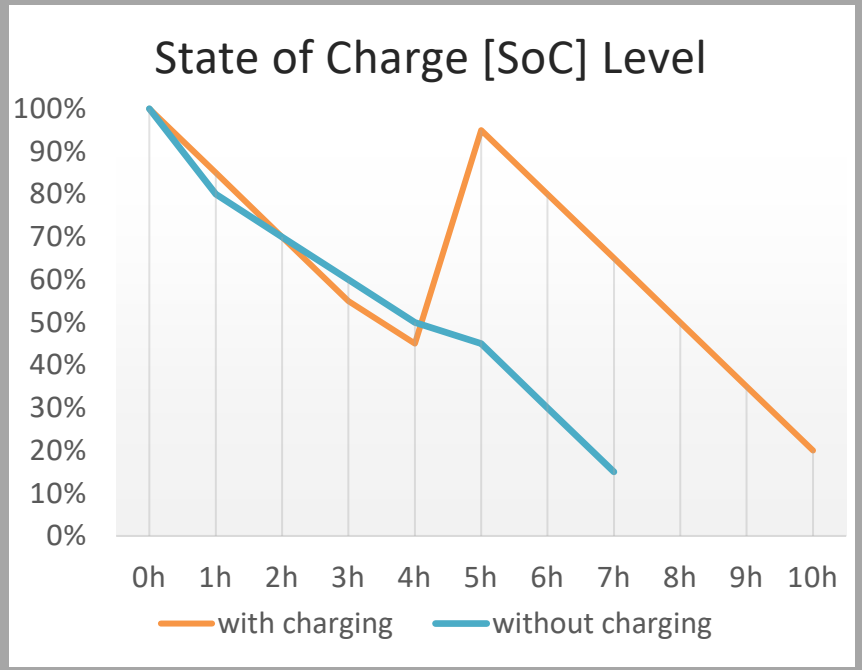
The machine quickly gain acceptance
However, it still has to prove itself over the day



Battery Consumption and Charging

Depending on the construction site and operating conditions, the operating range of an electric machine can vary significantly. As a result, it may be necessary to recharge the machine during a shift.

Main parameters:
asphalt temperature, tonnage, work flow



How to charge an empty battery depends on jobsite and availability

For small and mid jobsites the battery shall last over the day

Charging can be done over night (day), at jobsite, at yard …

AC charging with 22kW



If there is the need to recharge during operation

Here we have to fast charge

DC charging with >100kW



Job Site Examples

New country road

Ambient temp.:	0 °C
Paving width:	4,5 m
Layer thickness:	10 cm
	6,5 cm
Tonnage:	1257 t
Shift duration:	10 h
Consumption:	160 %



Privat driveway

Ambient temp.:	13 °C
Paving width:	~ 4 m
Layer thickness:	15 cm
	5 cm
Tonnage:	250 t
Shift duration:	7,5 h
Consumption:	81 %



Parking lot

Ambient temp.:	18 °C
Paving width:	4 m
Layer thickness:	10 cm
	6,5 cm
Tonnage:	300 t
Shift duration:	8 h
Consumption:	82 %



Industry lot (at night)

Ambient temp.:	12 °C
Paving width:	3,05 m
Layer thickness:	15 cm
Tonnage:	325 t (cold)
Shift duration:	4,5 h
Consumption:	44 %



Conclusion



Conclusion

„E-mobility is a permanent pillar“

- **Battery electric asphalt pavers and construction machines are available**
  at Ammann ABG, …*and all others*

- **The Technology is proven in use and enables emission-free jobsites**

- **A key challenge remains economic viability**
  The low-cost electricity, compared to diesel, only offsets the higher upfront purchase cost over a longer period of time. However, the machine provides access to emission-free construction sites and has a positive impact on the company's image.

And anyone who is interested and would like to give it a try is welcome to contact us.

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Thank you!

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