

Q ELEPHANT

L7 e-power

UMWELT
TECHNIK

FFG



elephant e-power

Full Power. Zero Emissions.

Real Practical Knowledge

Practical Knowledge from 2,5 Years of Roadshow

Speaker: Lisa Sönnichsen, FFG Umwelttechnik GmbH & Co. KG, Head of Sales



**Innovation for
over 30 years**



**Group
FFG**



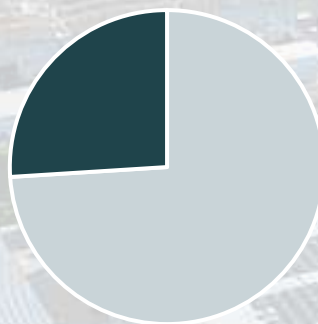
**Around 95
employees**



**100
deliveries**



**Europe-wide
distribution**



**export/
Germany**



**Weight classes
3.5 - 40 tonnes**



**Service partner
network**

Europe-wide distribution

Nomi-Tek AS

Norway

C-TV Technology A/S

Denmark & Sweden

Kanalreiniger.EU

Benelux

PANATEC, S.L.

Spain & Portugal

SIA IKF "Politehnika"

Baltic states

ARTEM & POJAZDY

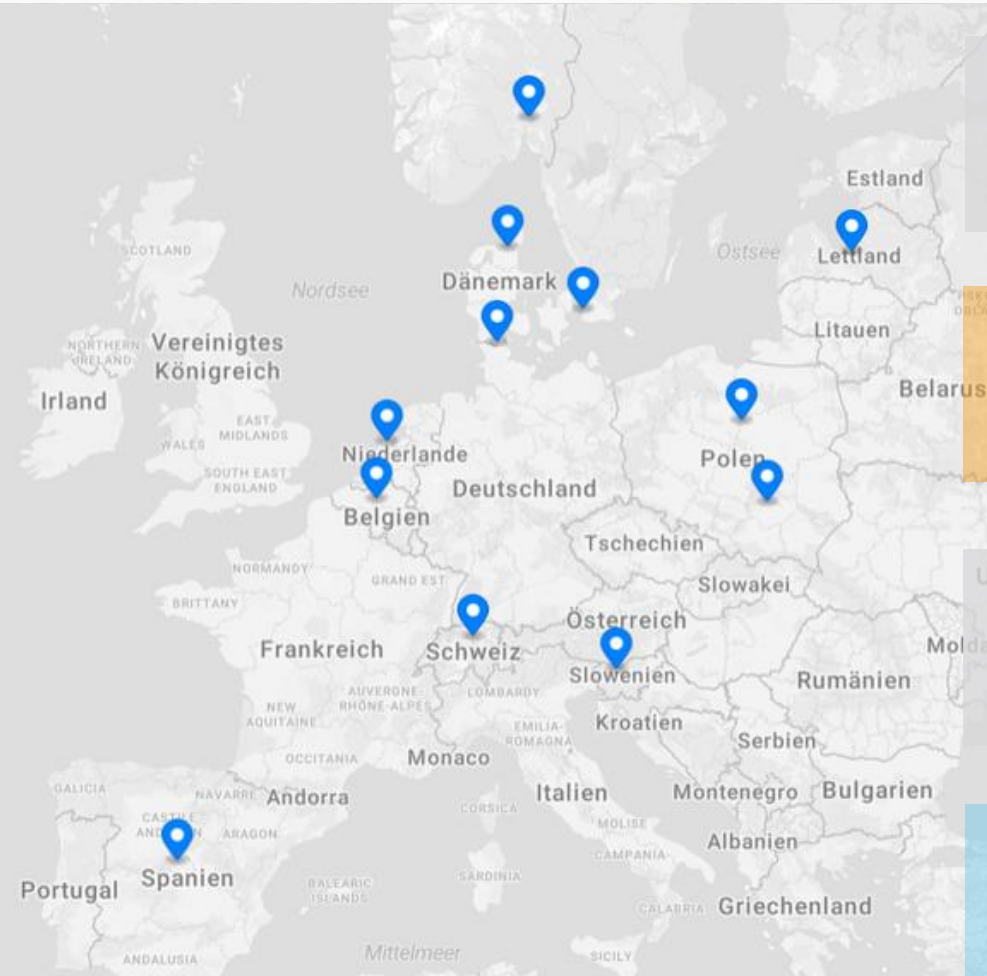
Poland

PAL inženiring d.o.o.

Slovenia

Rimtec

Switzerland



The right solution for every suitable solution

UMWELT
TECHNIK

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ELEPHANT S-LINE



**A series
full of variety**

ELEPHANT E-LINE



**Variability thanks to
standard modular
design**

ELEPHANT C-LINE



**Your vehicle
customised to your
wishes**

Focus on the user

UMWELT
TECHNIK

FFG

Acceptance for personal
rescue on request.
Test weight 1050kg!

Patented
multifunctional boom XL
telescopic up to 6.20m

Process-controlled,
automated **piston
movement** at the touch of
a button

**Low-noise
water ring pump**

Fully automatic
water recycling
system in 4 stages

elephant connect creates an intelligent linking
and processing of vehicle information

Self-explanatory
elephant comfort pro
control unit



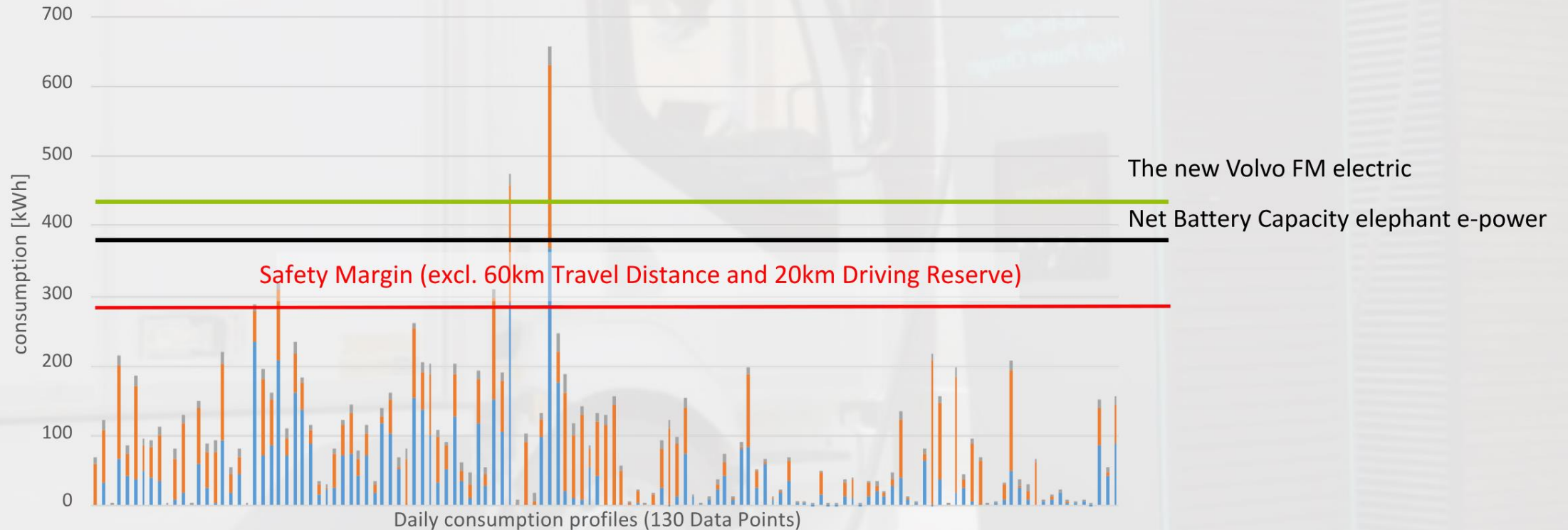
1 Battery Capacity in Practical Use – Can it ● handle daily operations?

Real-World Consumption

Analysis of data from *elephant connect*

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TECHNIK

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The NEW Chassis

Sales launch CW 25

UMWELT
TECHNIK

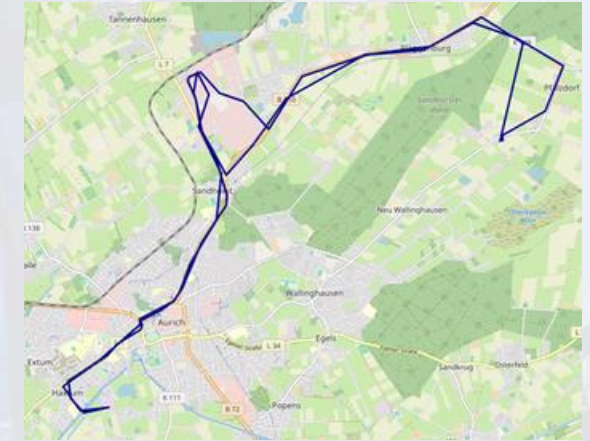
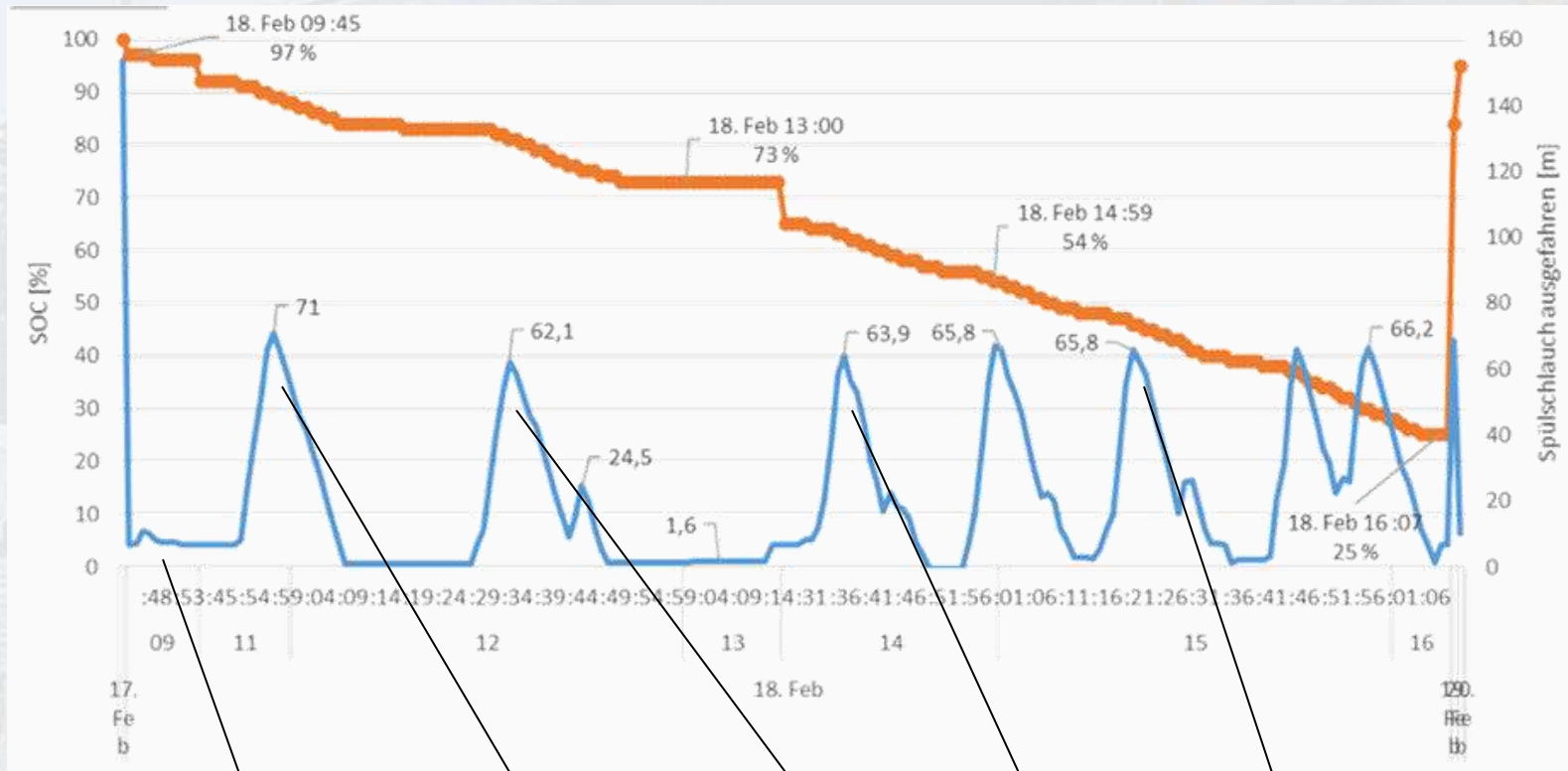
FFG

Area	FM Electric up to approx. MY 2024/25	FM Electric new generation from 2026
AC charging	up to ~43 kW AC (depot charging possible)	DC charging possible
DC charging (CCS)	up to ~250 kW (earlier) / later up to 350 kW	up to 350 kW continues as standard
MCS (Megawatt Charging)	not available	Platform prepared / introduced in new generations within the group
Range	up to ~300 km (early configurations)	up to ~470 km (now 432 kWh usable)
Power output	up to ~490 kW	up to ~540 kW
PTO – basic principle	mechanical + electromechanical PTO + ePTO possible	Focus on gearbox/HV-integrated PTO (clutch-independent)
Electromechanical PTO (separate)	available depending on application	Discontinued! Previously our vacuum pump connection!
ePTO / electric PTO	available, but supplementary	central component with multiple configurations (up to 90 kW future for V-pump and hydraulics)

Aurich at sub-zero temperatures

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Site: Aurich

Outside Temperature max.

1.4°C

4.5 h sewer work

11:42 – 16:08

253 kWh energy demand

67 % of battery capacity

flushing distance:

867 m DN 800 (100-135 bar)



Pfalzdorfer Str. 6, Pfalzdorf



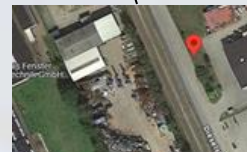
Dieselstraße, Aurich



Dieselstraße, Aurich



Dieselstraße, Aurich



Dieselstraße, Aurich

Shift work in Osnabrück

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Site: Osnabrück

Shift work – 3-Shift Operation

Moorlandstraße	DN 200 STZ 16m
	DN 200 STZ 10m
	DN 200 STZ 19m
Frickestr.	DN 200 STZU 56m
	DN 200 STZU 50m
Am Sonnehügel	DN 200 STZV 30m
	DN 200 STZV 42m
	DN 200 PE 12m

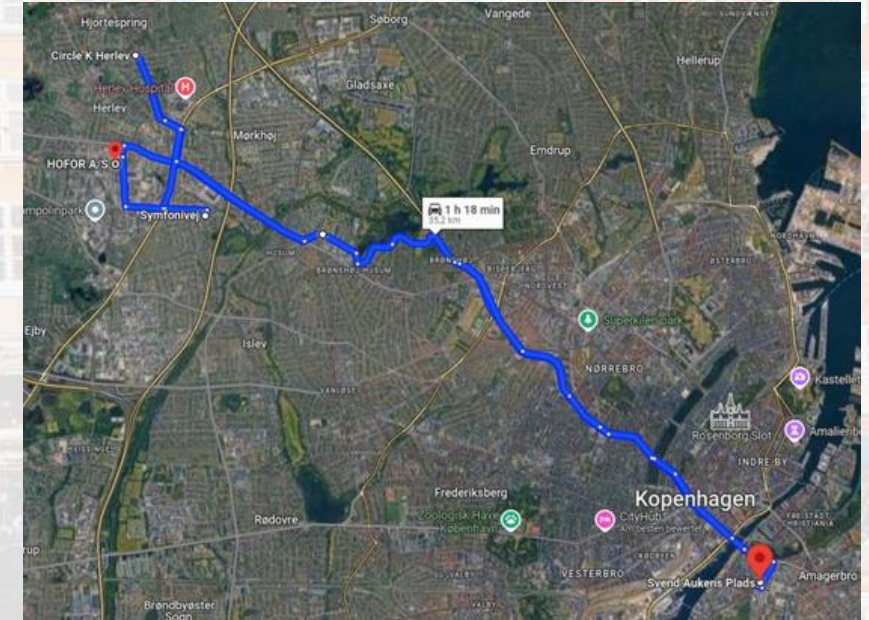
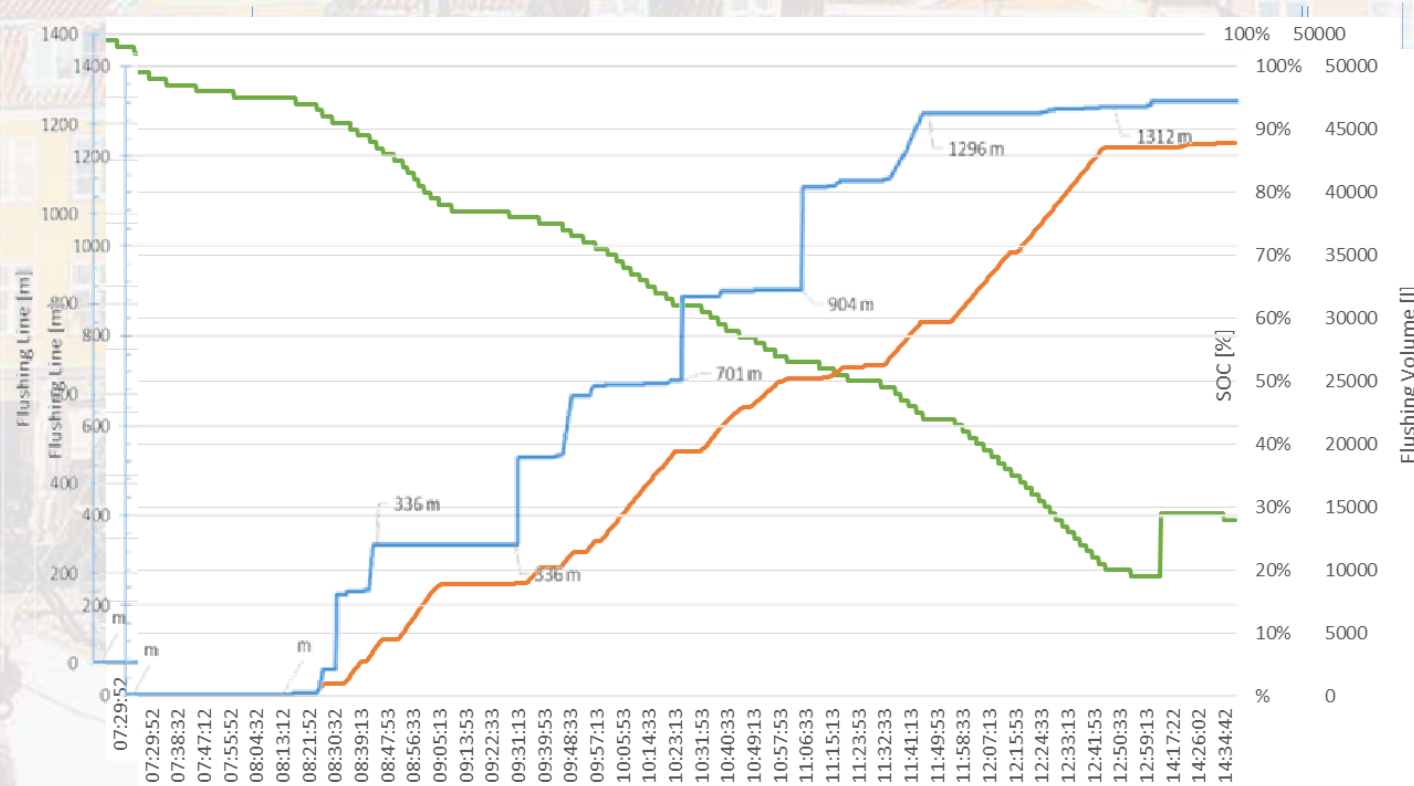
Copenhagen

Flushing Distance [m] vs. State of Charge [SOC]

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1. Svend Aukens Plads



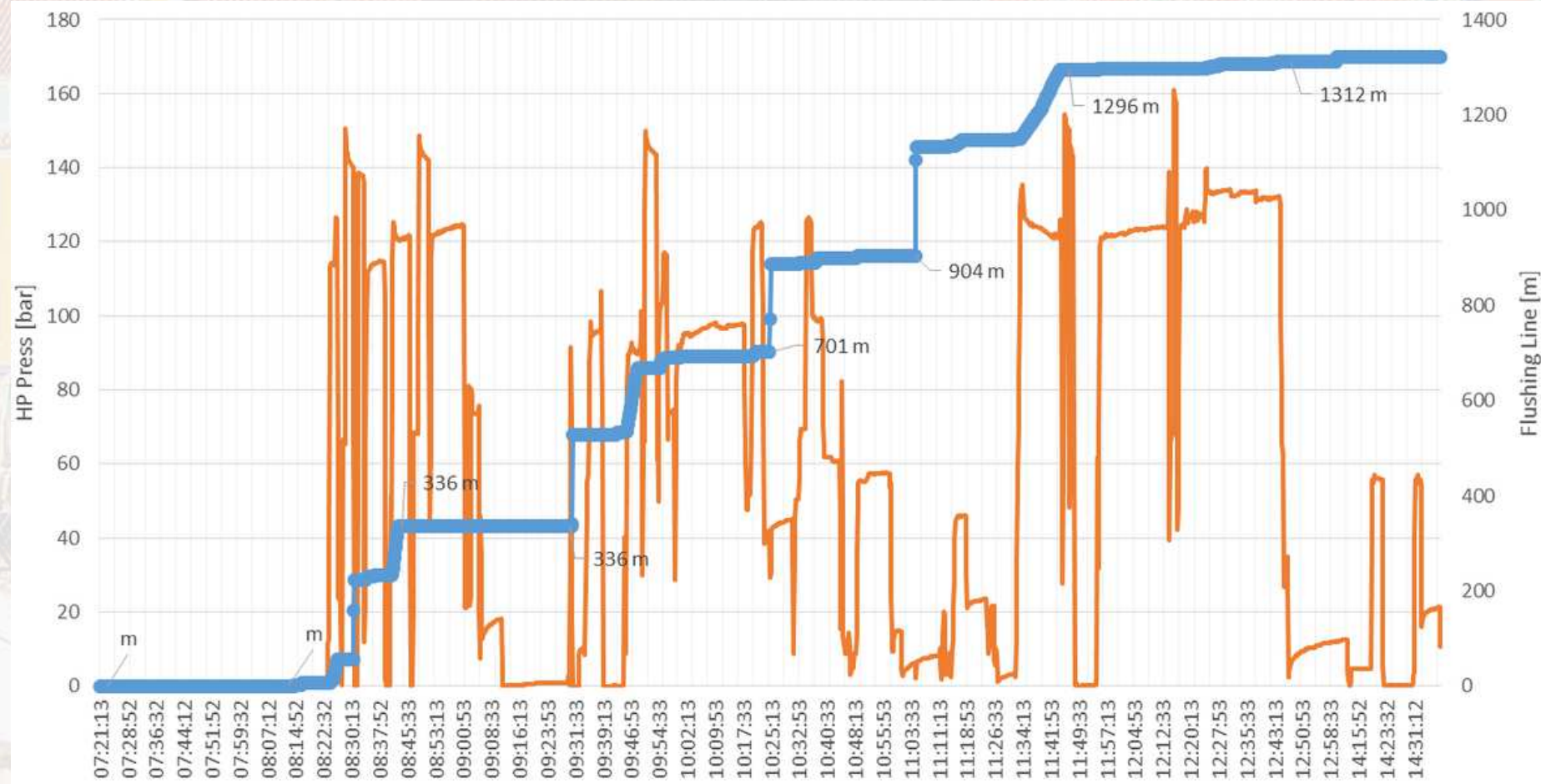
- 5h Sewer Work
- 284 kWh Energy Demand
- - 75% Battery Capacity
- 1312 m DN300 (Sand)

Copenhagen 03.09.2024

HP Pressure & Flushing Distance

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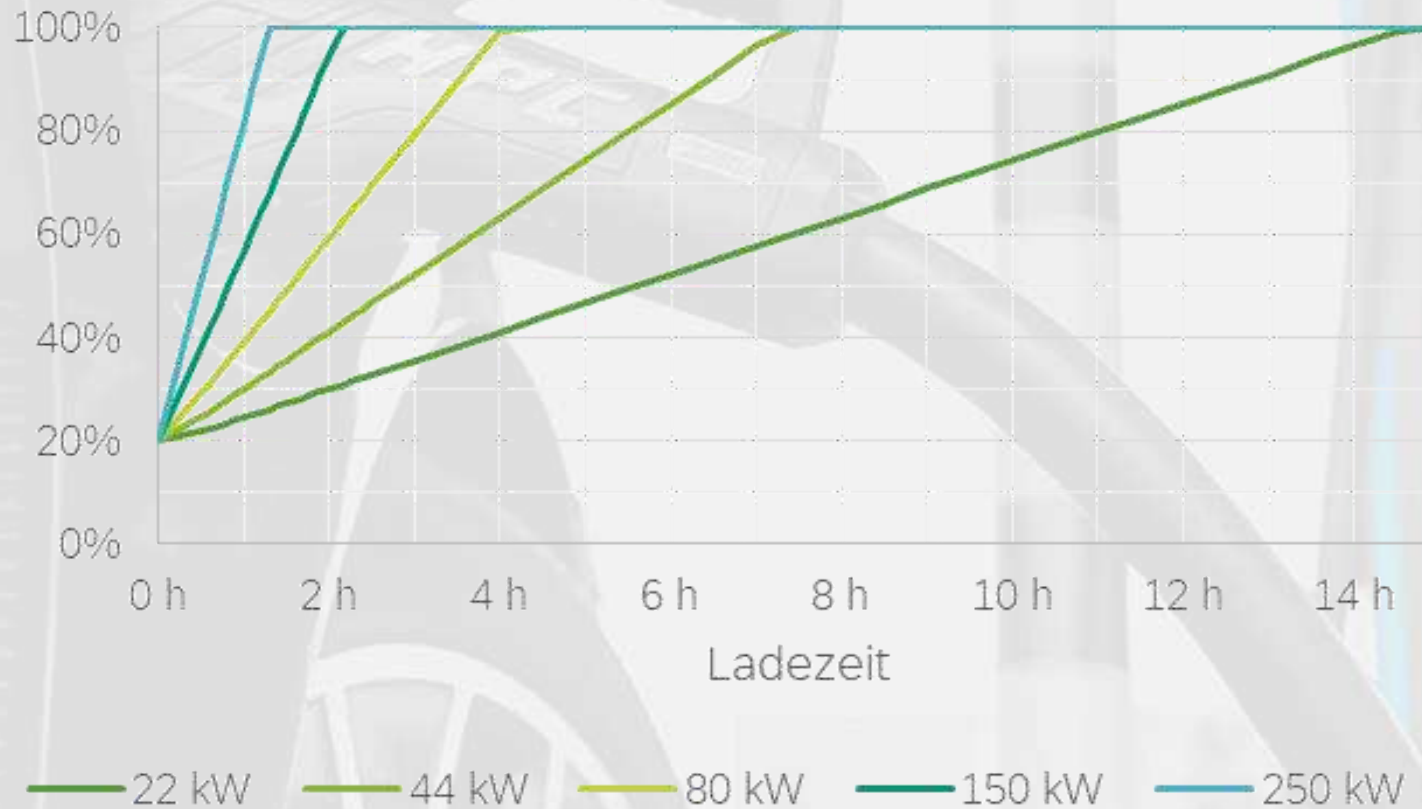


2. Charging Infrastructure – How do I integrate charging into daily work?

Charging time – Starting at 1 Hour

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Up to 6 battery packs can be integrated per vehicle

- 540 kWh

CCS2 Connector

- Charging power up to 250 kW
→ **NEW** up to 350kW

3. TCO – Is an electric suction and jetting vehicle economical?



Our solution for You

e-power calculator

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Evaluate usage profiles:

- *elephant connect telemetry data*
- *Consumption data of existing diesel vehicles*

We Answer Your Questions

- What tasks can I perform with the elephant e-power?
- Is the battery capacity sufficient – do I need to charge in between?
- What charging power do I need for my application?

Fahrzeug: _____ **Datum:** _____

einfache Berechnung - Kraftstoffverbrauch (ggf. mit Fahrstrecke)

	vor der Arbeit	nach der Arbeit	Gesamt
Info: Arbeitszeit am Kanal			
Kraftstoffverbrauch			
Kilometerstand	km		

Bei der vereinfachten Berechnung ermitteln wir über den **Kraftstoffverbrauch** den benötigten Energiegehalt unter Einbezug der Wirkungsgrade. Unter Einbezug der **Fahrstrecke** kann die Berechnung etwas präziser erfolgen.

Für eine präzisere Ermittlung für den genauen Arbeitseinsatz wird eine genauere Datenerhebung benötigt. Über die Leistungsdaten der Pumpen kann die Leistung genauer bewertet werden. Bei einem elephant kann ein einfacheres Format benutzt werden, da hier Übersetzung und Pumpentypen bekannt sind.

erweiterte Berechnung - Arbeitsprofil (alle Fahrzeuge)

Kilometerstand	vor der Arbeit	nach der Arbeit	Gesamt
Betriebstunden V-Pumpe	10 km	50 km	40 km
Betriebstunden HD-Pumpe	567 h	569 h	2 h
	268 h	270 h	2 h

Spülen

Druck (Bar)	Liter/Minute	Saugen	Kanal- Ø
120	300	1200	600
80	240	1100	

Beispiel



Full Power. Zero Emissions.

UMWELT
TECHNIK

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Proven Design
No conversion needed – FFG
Umwelttechnik as a reliable
partner



Quiet in Operation
Less noise for residents and
employees



Cost-Effectiveness
Cost-neutral setup, low operating
costs



Available Immediately
Not a prototype



Sustainable Image
Environmentally friendly &
compliant with regulations



Experience It Live
Roadshow & Test drive
possible

4 ● Focus on Ease of Use – Does operation differ from the diesel vehicle?



Focus on the User

UMWELT
TECHNIK

FFG

Optional certification for
personal rescue.
Test weight 1.050kg!

Patented **Multi-Function
Boom XL** telescopic up to
6.20m

Process-Controlled,
Automated **Piston**
movement at the push
of a button

**Low-Noise water ring
pump**

Fully Automatic
**Water treatment
system in 4 Stages**

*elephant connect creates intelligent linking
and processing of vehicle information*

Self-Explanatory
elephant comfort pro
control system



5. Interested in a real life presentation or test – **Who can I contact?**

Your Contacts in Norway

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<https://nomi-tek.no/>

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Oscar Halvorsen
Jean-Robert Søvde

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oscar@nomi-tek.no
jean.robert@nomi-tek.no



Thank You!

Speaker: Lisa Sönnichsen, Head of Sales

