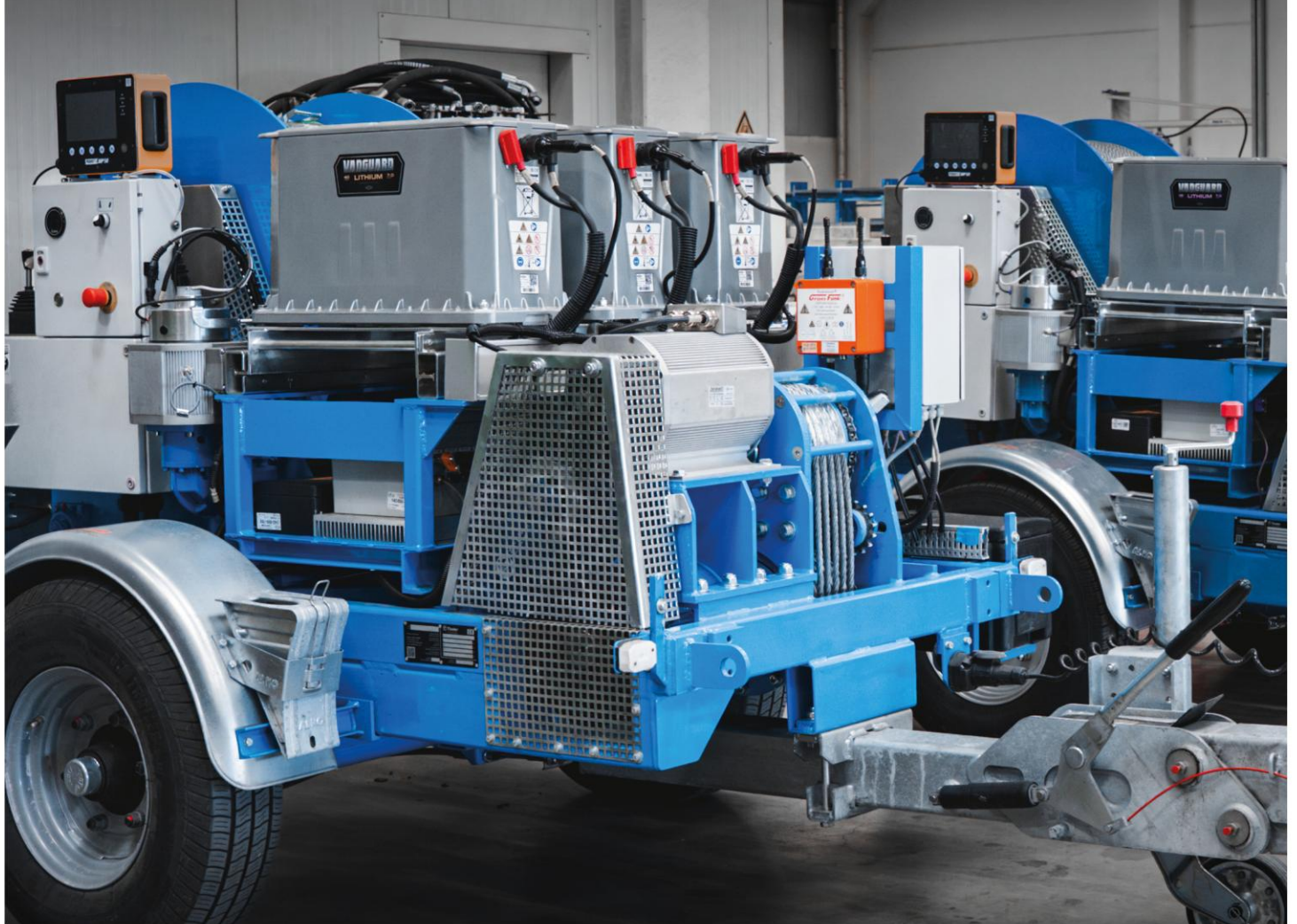




PLUMETTAZ GROUP

TECHNICAL SUMMARY

KE-SP 3050 E



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1. FOREWORD

The KE-SP 3050 E is a state-of-the-art **electric winch** with **dual capstans**, capable of pulling loads of **5 tonnes** (5000 daN) with outstanding operating time. This revolutionary machine combines **performance, safety** and **ease of use**, making it an indispensable tool for all **underground cable installation** work.

It contributes to **reducing CO2 emissions** and ensures **quiet operation**, minimising disruption for nearby residents and ensuring the **comfort and safety of workers**.

Equipped with the latest developments from **Jakob Thaler**, the KE-SP 3050 E features a modern control panel with touch screen and a remote radio control for safe operation of the winch. Connected to the **Remote Monitoring** digital service, it is possible to monitor the winch remotely and provide **rapid diagnostics** if necessary. This helps ensure that work is completed professionally and documented reliably.

Discover the exceptional technical features that make the **Jakob Thaler** electric winch the best in its class.



2. HIGHLIGHTS

2.1 QUIET AND ENVIRONMENTALLY FRIENDLY

Thanks to its electric battery operation, this winch is quiet and can be used in urban areas, day or night, without disturbing residents. The very low noise level also allows workers to communicate easily on site and reduces their fatigue, which helps improve overall safety.

Its 100% electric operation also reduces CO2 emissions, thus contributing to environmental protection. In addition, with no CO2 emissions, it is possible to work in confined spaces such as tunnels, car parks and underground/train stations.

2.2 PERFORMANCE AND OPERATING TIME

With a pulling force of 5 tonnes, it can work continuously throughout an entire working day thanks to its three 7 kWh batteries, for a total energy of 21 kWh, at a speed of 10 m/min at its maximum pulling force. If necessary, it can even be recharged on site, whilst in use, using a simple 100-240 VAC socket.

It operates smoothly in a wide temperature range, from -20°C to +60°C, and its batteries are guaranteed for 5 years.

2.3 EASE OF USE AND CONNECTIVITY

Thanks to its modern visual interface and touch screen, it is very easy to operate. Every action performed by the operator is recorded and displayed in real time on the robust supervision screen. The installation can therefore be recorded in a report provided to the customer, which guarantees that the cable laying work has been carried out professionally and to a high standard without damaging the cable.

The Tiger wireless control unit also allows the operator to control the winch remotely, allowing the user to keep an eye on the entire site whilst monitoring the pulling force in real time, thus ensuring total operational safety.

The Remote Monitoring digital service also allows the installation process to be monitored on site and remotely over the internet, to ensure that operations run smoothly, even long after installation. This service, which is free of charge throughout the machine's lifetime, also allows for rapid diagnosis of the machine if necessary, enabling decisions to be made based on reliable, real-time data.

2.4 DIMENSIONS AND TRANSPORT

Its weight and dimensions are identical to those of a conventional winch, making it easy to transport with a standard car. There is no need for a van or truck. What's more, its single-axle chassis makes it easy for one person to manoeuvre it into position on site.

Furthermore, the winch no longer includes a hydraulic system, which simplifies its design.

3. TECHNICAL SPECIFICATION

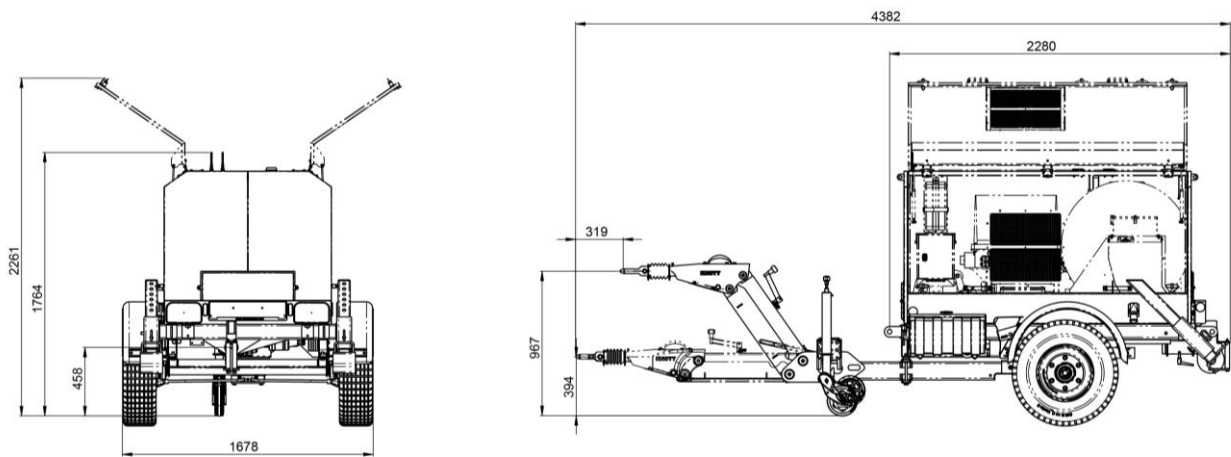
MODEL	KE-SP 3050 E
Pulling force	5000 daN
Rope Ø	12 mm
Max. Rope length	1000 m
Rope speed (under full load)	0-10 m/min
Rope payout speed	60 m/min
Battery capacity	3×7 kWh (21 kWh)
Charger	3000 W (0-80 % in 8 h @230 VAC)
Tension	48 VDC

APPROVED WIRE ROPES			
Ø	Weight	Minimum breaking load	Maximum wire rope length
Ø 12 mm	60 kg / 100 m	12 800 daN	1000 m (3444 ft)



TRAILER

Weight of the capstan winch without wire rope	2350 kg (5180.86 lb) 1750 kg (3858.09 lb)
Maximum authorised weight	2500 kg (5511.56 lb)
Maximum speed	80 km/h (49.71 mph)
Distance between wheels	1678 mm (66.06 in)
Tyre size	215 R 40
Tyre pressure	4.5 bar (65.27psi)
Lighting supply voltage	12 VDC



BATTERIES

High-performance lithium battery including battery management system with integrated protection against overcharging, short circuit, deep discharge, polarity reversal, overheating and submersion

Cells	Lithium-Ion, 14S
Rated voltage	48 VDC
Nominal capacity	3x 7 kWh (21 kWh)
Max discharge current	134 A
Frequencies	50/60 Hz
Charging time (3 batteries)	6h (80%) — 8h (100%)
Operating ambient temperature	[-20 °C;+60 °C] +/-1.5 °C
Charging ambient temperature	[-10 °C;+45 °C] +/-1.5 °C
Storage ambient temperature / Ideal	[-25 °C;+60 °C] / [+5 °C;+25 °C]
Weight	49.9 kg (110.01 lb) / unit (x3 batteries)
Ingress Protection	IP67
Cycle charge lifetime	2000 cycles

BATTERY DISCHARGE WHEN PULLING AT 10 m/min

Constant pulling force	Total distance	Total time
2000 daN	12 km	20 h
3000 daN	6.4 km	5 h
5000 daN	1.9 km	3 h

BATTERY CHARGER

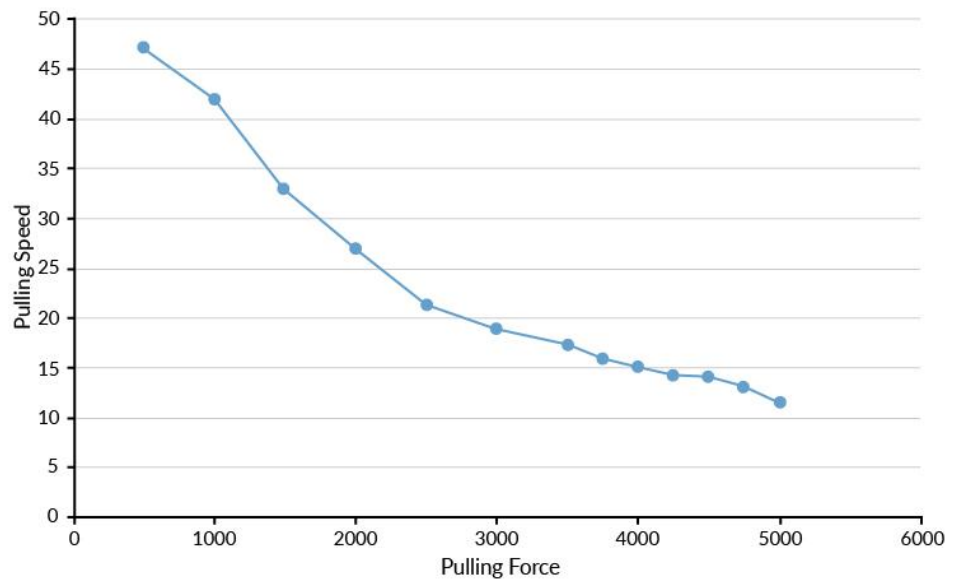
Description	All models
Nominal output power	Up to 3000 W
Output voltage range	From 24 VDC up to 96 VDC
Max output current	Up to 80 A (24 & 36 VDC output voltage)
AC Input voltage range	95-265 VAC
Nominal AC Input range	50/60 Hz
Max AC Input current	16 A

4.TEST RESULTS & CHARTS

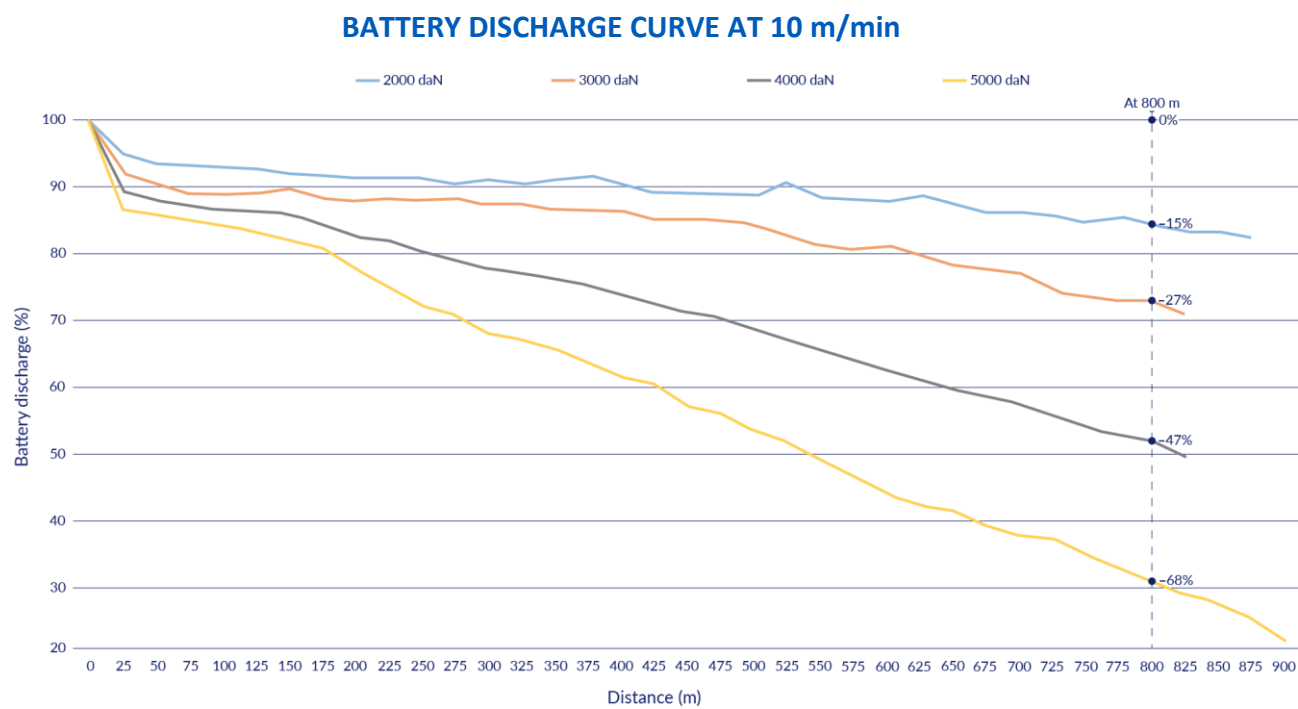
4.1 OPERATIONAL PERFORMANCE, FUNCTIONAL TEST

SPEED VS FORCE

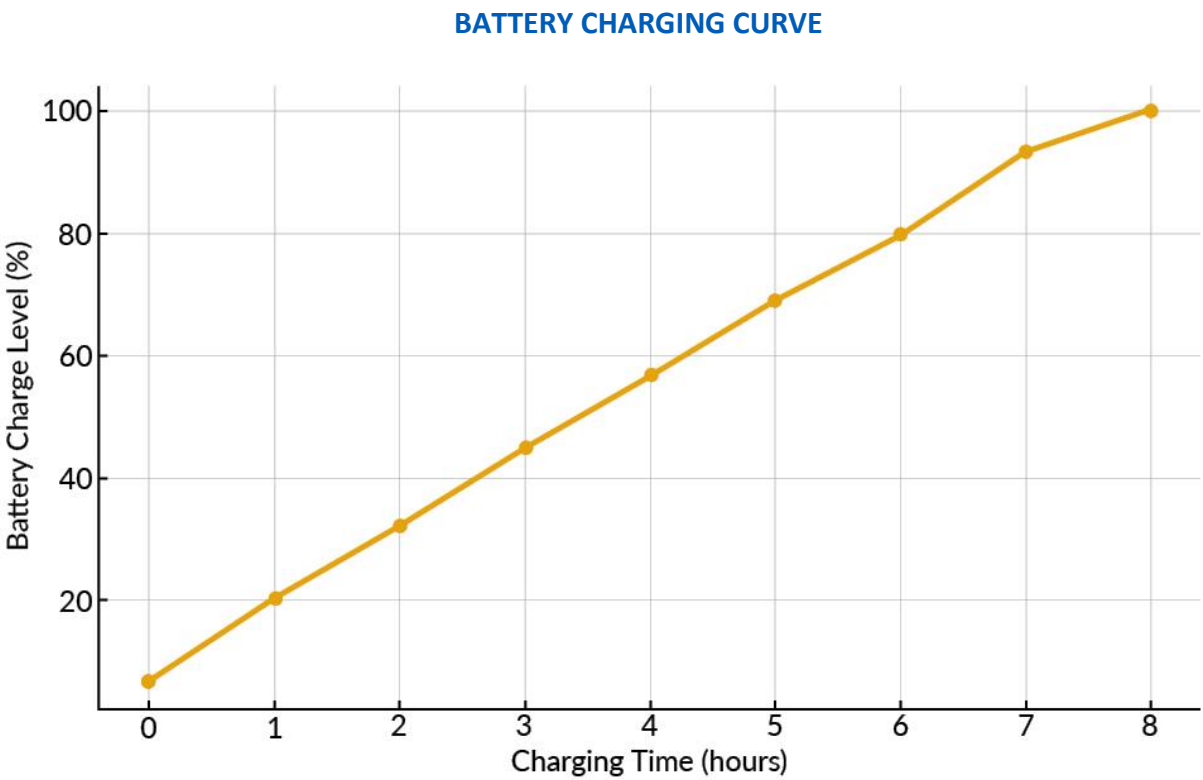
Force (daN)	Max Speed (m/min)
500	47.30
1000	42
1500	33.10
2000	27.00
2500	21.30
3000	19.10
3500	17.40
3750	16.03
4000	15.13
4250	14.26
4500	14.20
4750	13.23
5000	11.56



4.2 BATTERY OPERATING TIME: DISCHARGE CURVE



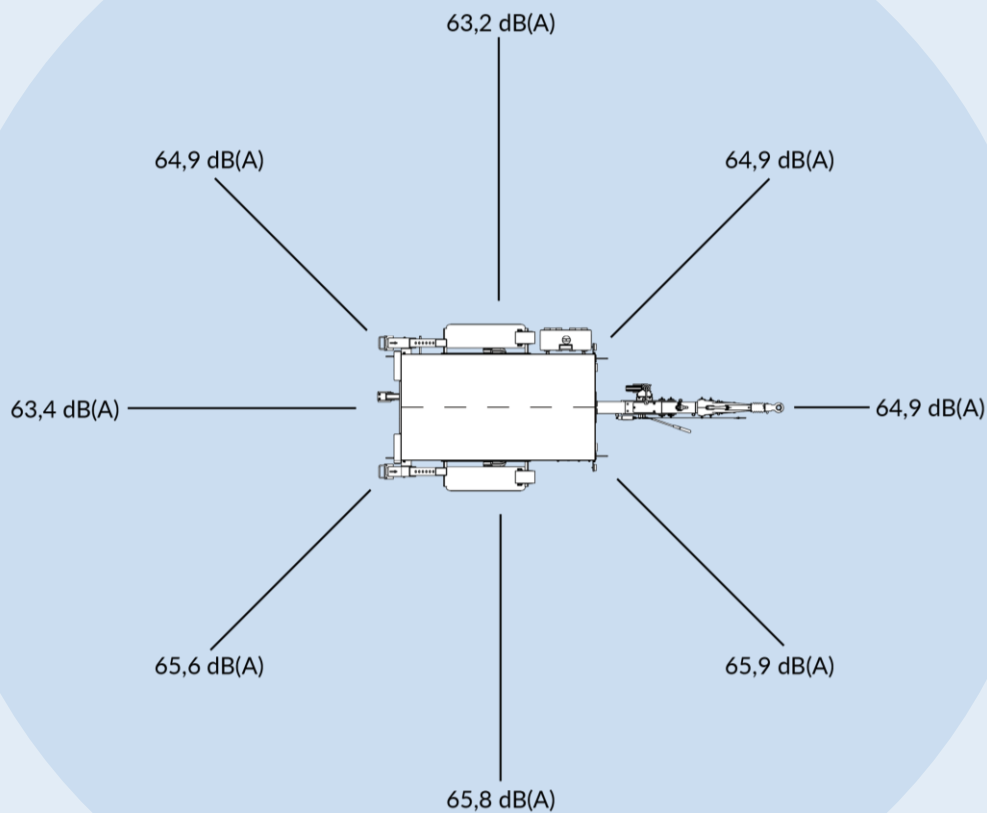
4.3 BATTERY OPERATING TIME: CHARGING CURVE



Charging time	Measured Result
Full charge time	8 h
Charging Time 80% Level	6 h



4.4 OPERATOR'S NOISE EXPOSURE, NOISE LEVEL MEASUREMENT



Applicable Standards

- Directive 2006/42/EC - new machinery directive
- ISO 11200:2014 Acoustics - Noise emitted by machinery and equipment - Guidelines for the use of basic standards for the determination of emission sound pressure levels at a workstation and at other specified positions
- ISO 11202:2010 Acoustics - Noise emitted by machinery and equipment - Determination of emission sound pressure levels at a workstation and at other specified positions applying approximate environmental corrections
- ISO 3746:2010 Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Survey method using an enveloping measurement surface over a reflecting plane
- EN ISO 4871:2010 Acoustics - Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)





100% electric

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