

Pull-force measurement system

POWER-CHECK MAGAZINE



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symbol explanation:



keep attention -
dangerous!



keep attention -
malfunction!

PRODUCT INFORMATION

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Approvals

CE Conformity

This product meets the requirements in Directive 1999/5/EG. The following standards have been applied:

ETSI EN 300 440-2 V1.4.1
ETSI EN 301 489-1 V1.9.2
ETSI EN 301 489-3 V1.4.1
ETSI EN 300 328 V1.7.1
ETSI EN 301 489-17 V2.2.1
ETSI EN 62311:2008
DIN EN 60950-1 :2014

FCC

FCC Statement

15.21

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC RF Radiation Exposure Statement:

To satisfy FCC RF Exposure requirements for mobile and base station transmission devices, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during operation. To ensure compliance, operation at closer than this distance is not recommended. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC-ID: X7J-A10030501

INDUSTRY CANADA

Notice: Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Notice: This radio transmitter (IC: 8975A-A10030501) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Avis: Sous la réglementation d'Industrie Canada, ce transmetteur radio ne peut fonctionner qu'en utilisant seulement une antenne d'un type et d'un maximum (ou moins) de gain approuvé pour l'émetteur par Industrie Canada. Pour réduire des potentielles interférences radio pour les autres utilisateurs, le type d'antenne et son gain doivent être choisis de sorte que la puissance isotrope rayonnée équivalente (PIRE) ne dépasse pas ce qui est nécessaire pour une communication réussie.

Avis: Cet émetteur radio (IC: 8975A-A10030501) a été approuvé par Industrie Canada pour fonctionner avec les types d'antennes énumérés ci-dessous avec le gain maximal admissible et l'impédance d'antenne requise pour chaque type d'antenne indiqué. Les types d'antennes ne figurant pas dans cette liste, ayant un gain supérieur au gain maximal indiqué pour ce type, sont strictement interdits pour l'utilisation avec cet appareil.

IC-ID : 8975A-A10030501

Conclusion

The data transfer between wireless dataloggers and wireless sensors could be seen as a safe way to exchange data.

This conclusion is valid as long as the wireless datalogger system is secured against any kind of fraud from the inside or outside of the company. This security task has to be fulfilled by the company internal IT department or other related departments.

Conformity with ARIB Directives (Japan)

The device meets the requirements of the ARIB-STD T66 (LOW-Power Data Communication System/Wireless LAN System).



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WEEE Notice

The Directive on Waste Electrical and Electronic Equipment (WEEE), which entered into force as European law on 13th February 2003, resulted in a major change in the treatment of electrical equipment at end-of-life.

To dispose the device, please return to OTT-JAKOB Spanntechnik GmbH. The OTT-JAKOB company will dispose of the device professionally with regard to all laws and conditions (ElektroG § 10.2). The user is NOT allowed to dispose of the POWER-CHECK II himself or to put it into normal dustbins or collection points.

WEEE-Reg.-Nr. DE 93666638

RoHS Compliance

This product is in compliance with Directive 2011/65/EU of the European Parliament and of the Council of 08. June 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) and its amendments.



1 SAFETY NOTES

Always consider the following points:



- Follow the operating instructions
- Avoid impacts and vibrations to the system
- The system may be operated only within the specified technical values and limits.
- Commissioning, adjustments and operation is allowed only by qualified personnel.
- In the cases of improper system adjustment or use, the OTT-JAKOB company will not accept any liability.

1.1 INTENDED USE

The pull-force measurement system has been designed for an industrial environment. The pull-force measurement system **POWER-CHECK** measures the pull-force in power drawbars.

The pull-force measurement system is embedded in the tool holder. The force occurring after the clamping process is logged by the measurement system.

It is possible to use the measuring device in a tool magazine.

The measuring device sends the measuring value to the receiving device.

1.2 BATTERY



The **POWER-CHECK** contains a solid-state, non-replaceable Li/SOCl₂ battery. The battery must be replaced only by the equipment manufacturer. Always consider the following points:

- do not charge
- do not short-circuit
- do not throw in fire
- do not damage
- do not bring it in contact with water
- pay attention to the temperature range
- do not dispose in household waste

UL registration number of the battery: MH-12827

The battery contains 0,65 g lithium. Therefore, the battery is neither subject to the hazardous materials regulations.

2 PRODUCT DESCRIPTION

2.1 FUNCTION

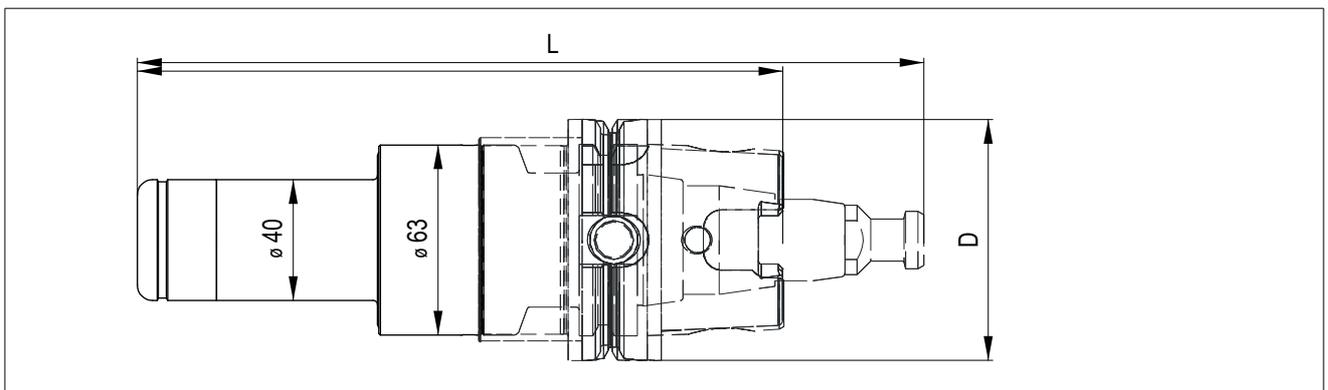
The pull-force measurement system **POWER-CHECK** measures the pull-force in power drawbars.

The pull-force measurement system is embedded in the tool holder. The force occurring after the clamping process is logged by the measurement system.

It is possible to use the measuring device in a tool magazine.

The measuring device sends the measuring value to the receiving device.

2.2 DIMENSIONS



L / D → VARIATIONS #2.5 // 8

2.3 FEATURES

- Pull force measuring mechanism integrated in base unit
- no power connection required
- useable in tool magazines; thereby at all times applicable
- wireless transmission of the measuring values
- automatic activation due to permanent clamping force detection

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2.4 TECHNICAL DATA

Accuracy class	2 % from max.-value of the measuring range
Temperature range	+15 °C to + 35 °C
Force limit:	130 % from max.-value of the measuring range
Break force	200 % from max.-value of the measuring range
Measuring system	Straingage
Battery lifetime	2 years / 30000 measurings
Type of protection	IP67

2.5 VARIATIONS

measuring range min. - max. [kN]	Weight [kg]	interface	order number	dimensions
SK				
3 - 9	2,3	SK30 ISO7388-1-A30	95.103.926.2.2 V01	
2,8 - 8,2	2,3	SK30 ISO7388-1-U30	95.103.926.2.2 V02	
2,8 - 8,2	2,3	SK30 ISO7388-2-J30-45	95.103.926.2.2 V03	
2,8 - 8,2	2,3	SK30 ISO7388-2-J30-30	95.103.926.2.2 V04	
6 - 18	2,5	SK40 ISO7388-1-A40	95.103.926.2.2 V11	

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measuring range min. - max. [kN]	Weight [kg]	interface	order number	dimensions
5,5 – 15,5	2,5	SK40 ISO7388-1-U40	95.103.926.2.2 V12	
5,5 – 15,5	2,5	SK40 ISO7388-2-J40-45	95.103.926.2.2 V13	
5,5 – 15,5	2,5	SK40 ISO7388-2-J40-30	95.103.926.2.2 V14	
12,5 - 37	5,0	SK50 ISO7388-1-A50	95.103.927.2.2 V21	
11,5 - 34	5,0	SK50 ISO7388-1-U50	95.103.927.2.2 V22	
11,5 - 34	5,0	SK50 ISO7388-2-J50-45	95.103.927.2.2 V23	
11,5 - 34	5,0	SK50 ISO7388-2-J50-30	95.103.927.2.2 V24	
HSK				
1,5 – 4,5	0,25	HSK25	95.602.905.1.2	
2,5 – 7,5	0,38	HSK32	95.603.312.1.2	

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measuring range min. - max. [kN]	Weight [kg]	interface	order number	dimensions
3,5 - 10	1,8	HSK40	95.103.926.2.2 V52	
5,5 - 16	2,0	HSK50	95.103.926.2.2 V53	
10 - 27	2,4	HSK63	95.103.927.2.2 V61	
14 - 42	3,1	HSK80	95.103.927.2.2 V62	
25 - 65	4,2	HSK100	95.103.927.2.2 V63	
35 - 105	9,2	HSK125	95.103.954.1.2 V01	
KM				
16 - 45	2,0	KM50	95.103.927.2.2 V81	
25 - 70	2,4	KM63	95.103.927.2.2 V82	
35 - 75	3,0	KM80	95.103.927.2.2 V83	

3 OPERATION



The **POWER-CHECK** is a precision instrument → Please handle with care!

Spindle rotation with the measuring device is not allowed!

Measuring conditions: the following requirements must definitely be fulfilled in order to get accurate measurements

- observe measuring range: → **VARIATIONS #2.5 // 8**
- temperature range: +15 °C to + 35 °C

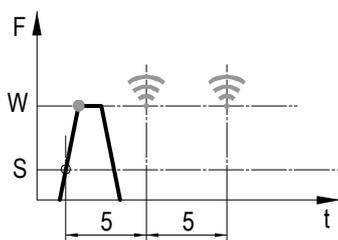
It is possible to use the measuring device in a tool magazine.

As soon as the measuring device is embedded in the tool holder and the threshold value is overstepped, the device switched into the sending mode.

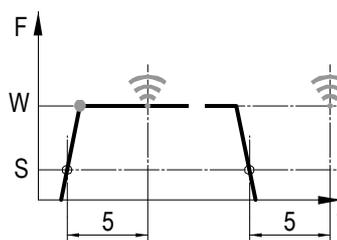
- threshold value: = min.-value of the measuring range → **VARIATIONS #2.5 // 8**

Time sequence: recording and sending

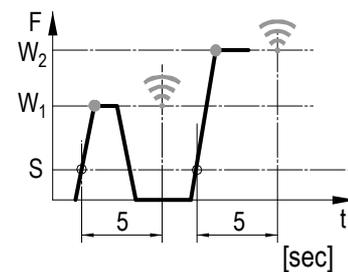
short clamping process



long clamping process



repetitions of short clamping processes



- record the measured value W

- 📶 send the measured value W

S = threshold value

4 MAINTENANCE

4.1 MAINTENANCE

Inspection by OTT-JAKOB

- yearly
- after a fall or a similar incident

4.2 BATTERY

The battery charge can not be controlled. Therefore, an annual maintenance is recommended.

If the battery is empty, the value 3276,7 kN is sent.



The **POWER-CHECK** contains a solid-state, non-replaceable Li/SOCl₂ battery. The battery must be replaced only by the equipment manufacturer. Always consider the following points:

- do not charge
- do not short-circuit
- do not throw in fire
- do not damage
- do not bring it in contact with water
- pay attention to the temperature range
- do not dispose in household waste

UL registration number of the battery: MH-12827

The battery contains 0,65 g lithium. Therefore, the battery is neither subject to the hazardous materials regulations.

4.3 DEACTIVATION

After deactivation, proper battery disposal requires the measuring unit to be shipped to OTT-JAKOB.

5 RECEIVER

(not included in delivery volume)

5.1 POWER-MONITOR

The POWER-MONITOR is used as a receiver and to display the measuring values received from the POWER CHECK. The measuring values can be graphically displayed, logged and exported by the PC software (via a USB interface). *

Designation	Order number
Power-Monitor	95.800.001.1.0

5.2 INTERFACE USB RADIO STICK

The receiver Interface USB-Radio-Stick is equipped with a USB interface. It receives the data that the POWER CHECK sends.

The measuring values can be graphically displayed, logged and exported by the PC software (via a USB interface). *

Designation	Order number
INTERFACE USB RADIO STICK	95.800.005.3.0

*

The following parameters are not relevant for the Power-Check Magazine:

- Sleeve Position Power-Check
- Battery Loading Status Measurement System