

# Product Information

## Pull-force measurement system Power-Check

95.100.230.B.E / 2004-01

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symbol explanation:

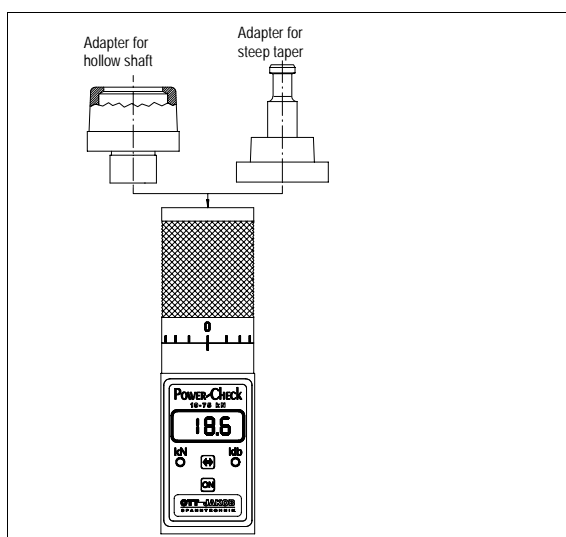


keep attention -  
malfunction

# 1 Product Description

Easy and fast measuring of the pull force of all common clamping systems. Using interchangeable adapters, it is possible to measure the pull force on steep tapers as well as on hollow shaft tapers.

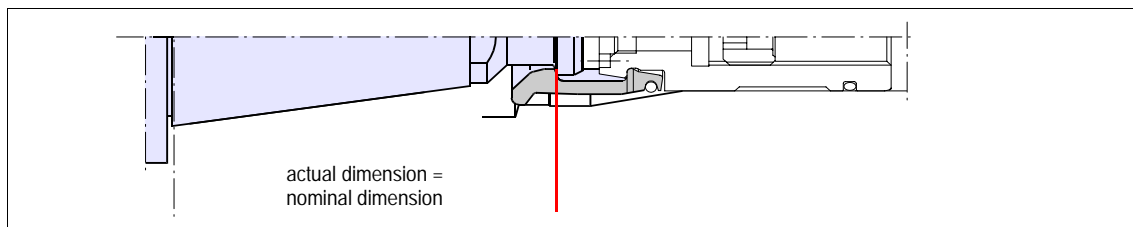
## 1.1 Remarks



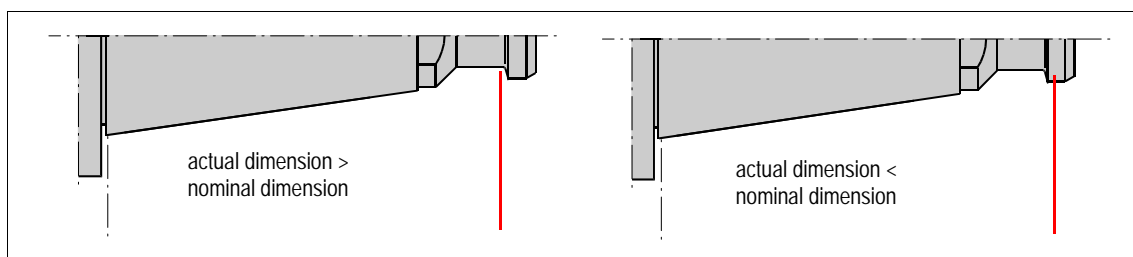
- universal application for all common steep taper and hollow shaft taper standards
- pull force measuring mechanism integrated in base unit
- no power connection required
- auto power off
- display in newton and lbs
- display with maximum value memory

**1.1.1 Force measuring within the tolerancefield of spindle and tool possible**

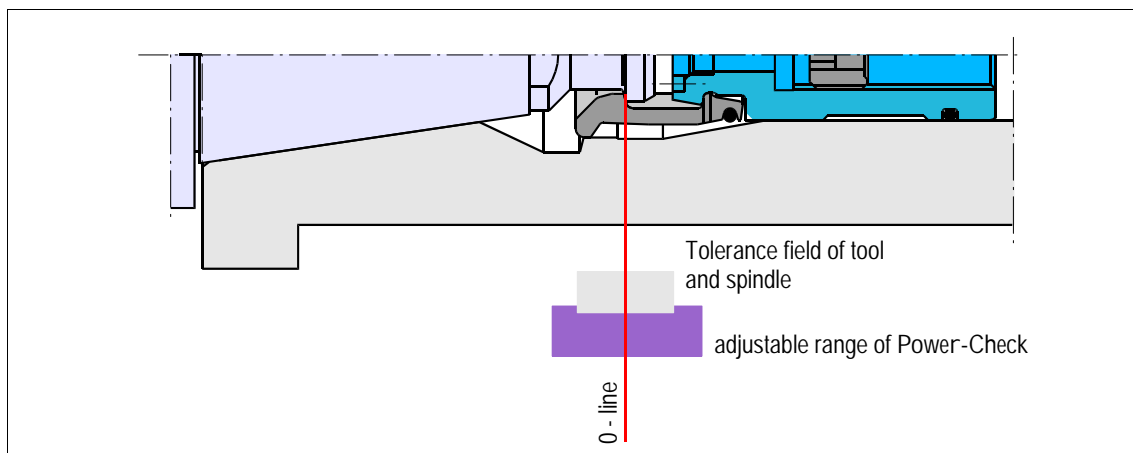
Common powercheck gages measure only the nominal dimensions of the taper.



If the part dimensions deviate, the measured value would be wrong.



The Power-Check offers the possibility to take those tolerances in its consideration.



## 1.2 Technical Data

Measuring range	<b>2 - 15 kN</b> and <b>10 - 75 kN</b>
Measuring system	Straingage
Display	big 3.5 digit LCD.-display
Power source	9 volt battery
Weight	max. 6.6 lbs
Temperature range	14 °F to 122 °F

## 1.3 Order numbers

### 1.3.1 Basic unit

Order number	Measuring range
95.101.712.2.2	2 - 15 kN
95.101.600.2.2	10 - 75 kN

### 1.3.2 Adapter for HSK

Order number	Measuring range
E 25 / F 32	95.600.069.9.2
A 32 / B 40	95.600.070.9.2
A 40 / B 50	95.600.071.9.2
A 50 / B 63	95.600.072.9.2
A 63 / B 80	95.600.073.9.2
A 80 / B 100	95.600.074.9.2
A 100 / B 125	95.600.075.9.2
A 125 / B 160	95.600.076.9.2

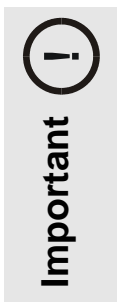
### 1.3.3 Adapter for steep taper

Nominal size	DIN 69871 / 69872 ISO 7388 / 1 / 2 Typ A	ANSI B 5.50-78 ISO 7388 / 1 / 2 Typ B	MAS 403-1982 BT / PT-I (45°)	MAS 403-1982 BT / PT-II (30°)
SK 30	95.101.582.9.2	95.101.583.9.2	95.101.584.9.2	95.101.585.9.2
SK 40	95.101.586.9.2	95.101.587.9.2	95.101.588.9.2	95.101.589.9.2
SK 45	95.101.590.9.2	95.101.591.9.2	95.101.592.9.2	95.101.593.9.2
SK 50	95.101.594.9.2	95.101.595.9.2	95.101.596.9.2	95.101.597.9.2
SK 60	95.101.598.9.2	95.101.599.9.2	95.101.601.9.2	95.101.602.9.2

Other adapters available on request!

## 2 Assembly of adapter

### 2.1 Preparation

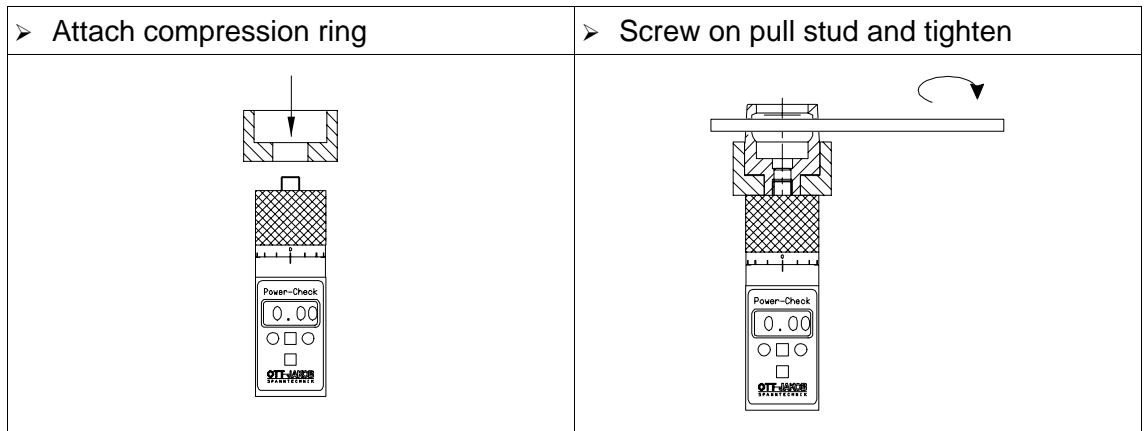


The contact surfaces of the basic unit and the adapter must be clean and undamaged.

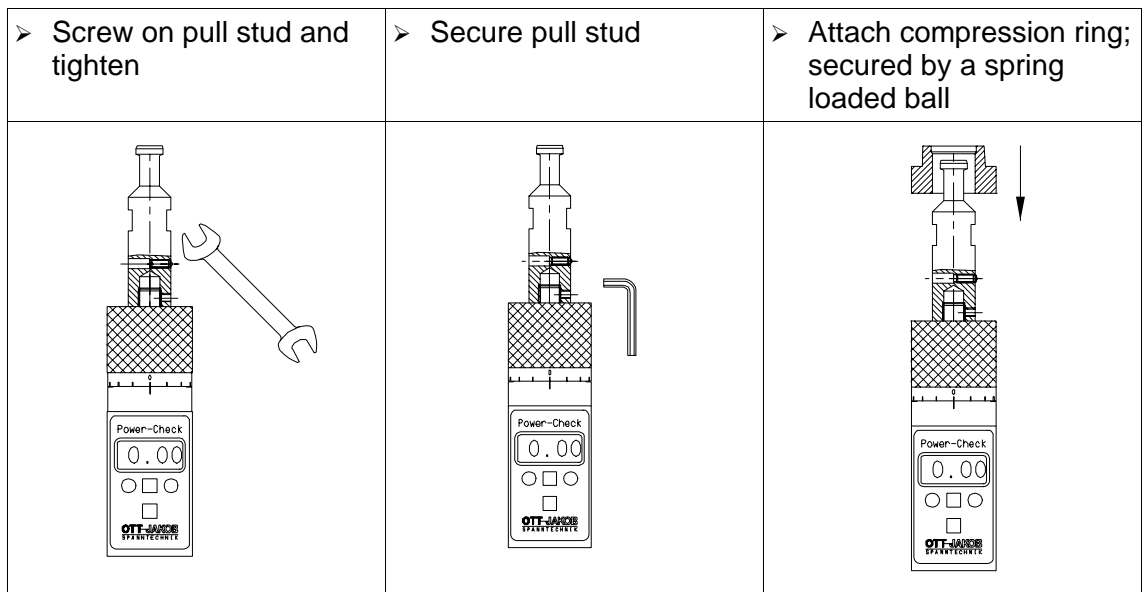
### 2.2 HSK to nominal size A 63/B 80

<p>➤ Screw on pull stud and tighten</p>	<p>➤ Secure pull stud</p>	<p>➤ Attach compression ring; secured by a spring loaded ball</p>

### 2.3 HSK over nominal size A 80/B 100



### 2.4 Steep taper



### 3 Measuring

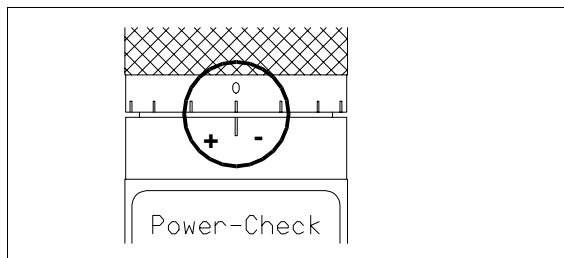
Important !

The Power-Check is a precision instrument → Please handle with care!

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

- Temperature range within 59 °F and 95 °F
- use only within the proper range of the basic unit; either 2-15 kN or 10 to 75 kN
- use suitable adapter, observe the proper steep taper standard!

#### 3.1 Adjustment of the adjustable range



- Screw in knurled sleeve delicately to the shoulder
- Turn back knurled sleeve after it passed the 0-mark the first time

The Power-Check with the adapter now is set to the medium tolerance field of the corresponding tool standard

Turning the knurled sleeve toward "+" makes the adapter longer, turning it toward "-" makes the adapter shorter

The permissible adjusting range is:

for **HSK** according to DIN 69893


- +/- 0.1mm is +/- 1 index on the knurled sleeve

for **steep taper** per ISO 7388 type A and B  
 DIN 2080  
 MAS 403

- +/- 0.3mm is +/- 3 indexing on the knurled sleeve


The knurled thimble must be always engaged!

## 3.2 Measuring procedure

-  Switch on Power-Check

Display: CAL - after few seconds 0.0: Measuring device is ready

If needed:

-  Select measurement unit (kN oder klb); display on LED


- Insert Power-Check into the spindle and clamp - the pull force is displayed

Setting the range of adjustment is only possible when unclamped (→ 3.1 / 8)

Power-Check turns off automatically!

## 4 Maintenance

When malfunction, remove and reinsert battery

- Change battery when  symbol appears on the display (press ON to measure temporarily)
- return to OTT-Jakob when the error **F\_\_** is displayed
- Have OTT-JAKOB inspect the Power-Check once a year

# Inspections

Serial No. ....  
 Serial No. of display .....  
 Serial No. of power sensor .....

## Technical data

measurement range ..... kN  
 accuracy class 1 % of maximal value  
 nominal temperature +15 °C - +35 °C  
 actual temperature ..... °C  
 force limit: 130 % of the maximal value  
 break force > 300 % of the maximal value

## Test protocol

date	inspector	nominal value				
		2-15 kN	5 kN	10 kN	15 kN	
		10-75 kN	25 kN	50 kN	75 kN	
actual value						

