



DKD – K-41401

Test report

EC – Angle head screwdriver – homologation

I. Customer

Desoutter GmbH
Mr. Michael Loosen
Edmund-Seng-Str.3-5

D – 63477 Maintal

II. Responsible laboratory

TBB Industrial Tools Services GmbH
DKD - Kalibrierlaboratorium DKD-K-41401
Bayernwerkstr.112
D – 84130 Dingolfing

III. Date of test/ location

December 2011
TBB Industrial Tools Services GmbH
D – 45141 Essen

IV. Testobject

Manufacturer: **Desoutter**
 Model: **EAD 32-900**

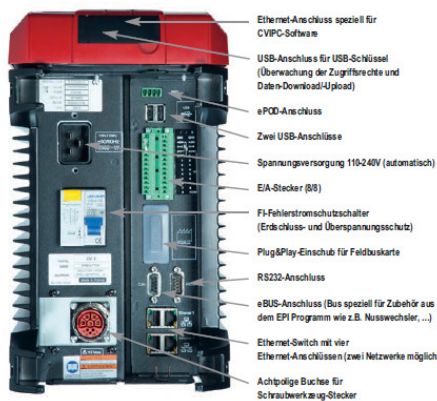
| MODELL | ARTIKELNUMMER | ABTRIEB | DREHMOMENTBEREICH | | | | | | DREHZAHL | LÄNGE | | GEWICHT | |
|-----------|---------------|---------|-------------------|-------|------|-------|-------|-------|----------|-------|------|---------|-----|
| | | | MIN. | DAUER | MAX. | MIN. | DAUER | MAX. | | L | | | |
| | | in. | N.m | N.m | N.m | ft.lb | ft.lb | ft.lb | min-1 | mm | in. | kg | lb. |
| EAD32-900 | 615 165 6070 | Sq. 3/8 | 5 | 30 | 32 | 3.7 | 22 | 24 | 900 | 481 | 19.2 | 1.4 | 3.1 |



V. Test condition

a. Screwdriver control

Manufacturer: **Desoutter GmbH**
Typ: **CVI 3 Vision**
Ser. Nr.: **1201100034**



CVI3 Vision

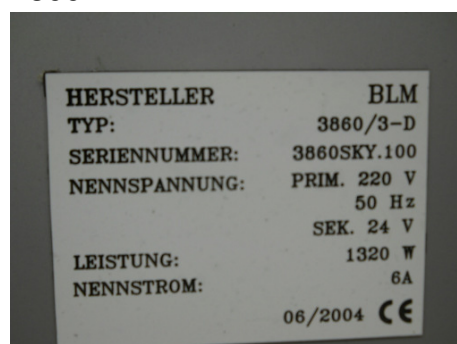


b. Test equipment

Manufacturer: **BLM, Mailand (Italien)**
Typ: **3860 / 3 – D**
Ser.-Nr.: **3860SKY.100**
Joint 3 : **10-50 N·m, dynamisch**
Ser.-Nr.: **188.50.137**

| | |
|-------|---------|
| D6855 | W17110 |
| DKD-K | TBB-ITS |
| 41401 | GmbH |
| 11-03 | 11-03 |

DKD stamp:
Software: **QS – Torque (32 Bit)**
Filterfrequency: **300 Hz**





Test equipment BLM 3890 / 3-D



Mounting

c. Explanation of the test

The screwdrivers were provided for homologation test from the production line of the manufacturer.

After evaluation of a calibration value for each class within 25 joints the measurement series of 100 screws were documented without any changing of the calibration value.

From the VDI/VDE 2647 were chosen to meet the recommended break times between fastening cycles shortened following times:

| | |
|------------|------------|
| 30% hard: | 4 seconds |
| 30% soft: | 4 seconds |
| 80% hard: | 15 seconds |
| 80% soft: | 15 seconds |
| 100% hard: | 30 seconds |
| 100% soft: | 30 seconds |

d. Screwdriver control settings

| | |
|-----------------------------------|-----------------------|
| Range of the screwdriver device : | 5-32 N·m |
| Testing torque / 30% | 13,1 N·m |
| Testing torque / 80% | 26,6 N·m |
| Testing torque / 100% | 32,0 N·m |
| Speed 1 step, | 250 U / Min |
| Speed 2 step, | 50 U / Min |
| Snug torque / 30% | 6,55 N·m |
| Snug torque / 80% | 13,3 N·m |
| Snug torque / 100% | 16,0 N·m |
| Shift torque / 30% | 5,8 N·m |
| Shift torque / 80% | 11,9 N·m |
| Shift torque / 100% | 14,4 N·m |
| Angle joint 40° fit | 6,4 N·m / (19,2 N·m) |
| Angle joint 180° fit | 6,4 N·m / (25,6 N·m) |
| Series | 8x 100 Joint/ results |

e. Temperature

| Test condition | 80%Md at 360° | 80%Md at 30° | 30%Md at 360° | 30%Md at 30° | 100%Md at 360° | 100%Md at 30° |
|-----------------------|---------------|--------------|---------------|--------------|----------------|---------------|
| max. Temperatur Motor | 47° | 40° | 41° | 38° | 49° | 49° |

VI. Comments

The testing process and statistical analysis were performed according to the currently applicable guideline VDI/VDE 2647.

The traceability of all generated static measurements and the traceability of measuring equipment used within calibration certificates are supported by the documentary proof of the legality of those accredited by the DKD laboratory according to DIN 51309 K 41401 guaranteed.

The corresponding proofs are in this report along with all other test results.

Responsible for implementing

Stefan Dragunski

stefan.dragunski@tbb-its.de