

① **Calibration certificate**

according DIN EN ISO 6789 - 2 : 2017

② **Test object**

③ **Manufacturer :**

HAZET-WERK

④ **Article No. :**

5122-3CT

⑤ **Serial-No. :**

SN18-3016361

⑥ **Torque measuring range :**

40 - 200 Nm

⑦ **Maximum permissible deviation :**

- 4,0 % / + 4,0 %

⑧ **Test direction :**

clockwise

⑨ **Tool installation position :**

horizontally

⑪ **Torque measuring system**

NH 315620

⑫ **Measurement sensor :**

TB2 500 Nm SN201730115

⑬ **Measuring amplifier :**

HBM ML32B SN260829002200

⑭ **Calibration temperature :**

24,4 °C

⑮ **Relative humidity :**

39 %

⑯ **Uncertainty of measurement :**

0,042 %

⑰ **Measurement result**

	1. Wert	2. Wert	3. Wert	4. Wert	5. Wert
40,0 Nm	40,10 Nm	40,10 Nm	40,06 Nm	40,05 Nm	40,03 Nm
120,0 Nm	122,82 Nm	121,58 Nm	121,18 Nm	120,86 Nm	120,66 Nm
200,0 Nm	203,95 Nm	202,05 Nm	201,20 Nm	200,59 Nm	200,22 Nm

⑱ All measured values are within the maximum permissible deviation described under Point 7. The measurement deviation of the torque measuring device is less than a quarter of the maximum permissible relative deviation of the torque screw driving tool.

⑲

Date of initial commissioning

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⑳

Test date : 23.07.2018

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Tester : Liese

㉒ This calibration certificate has been generated automatically and is valid without a signature

## ⑳ Evaluation

### ㉔ Calibration result for the clockwise torque :

㉓ Target value (calibration object)	㉒ Actual value (calibration unit)	㉗ $W$ Calculated relative uncertainty of measurement	㉘ $W'$ Interval of rel. uncertainty of measurement
N m	N m	%	%
40,0 Nm	40,068 Nm	1,297 %	1,967 %
120,0 Nm	121,420 Nm	0,763 %	2,428 %
200,0 Nm	201,602 Nm	0,708 %	1,999 %

㉙ The expanded uncertainty of measurement is indicated according to DIN EN ISO 6789-2:2017, which results from the standard uncertainty of measurement multiplied by the amplification factor  $k=2$ . With a probability of 95%, the value is within the assigned value interval

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Date of initial commissioning

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