

## CALIBRATION CERTIFICATE

**Customer** : 0155600  
**Identification number** : 112269008  
**Gauge application** : Incoming inspection  
**Standard of thread** : Metric ISO threads acc. to ISO 965:1998/ISO 1502:1996  
**Type of gauge** : GO/NOT GO thread plug gauge  
**Thread designation** : M 4.5x0.5-6H  
**Pitch** : 0,5000 mm  
**Measuring method** : Three wires method  
**Wire diameter** : 0,2903 mm  
**second wire diameter** : 0,2903 mm  
**Measuring force** : 3,60 N  
**Measurement traceability** : Mahr 828 Nr.22  
**Measurement traceability** : Gauge block set ID 3997 57308 D-K-15190-01-00 2015-06

Gauge nominal values	Go side	Not Go side
Major diameter max.	: 4,5150 mm	4,3885 mm
Major diameter min.	: 4,4970 mm	4,3705 mm
Pitch diameter max.	: 4,1855 mm	4,2840 mm
Pitch diameter min.	: 4,1765 mm	4,2750 mm
Minor diameter max.	: 3,8870 mm	3,8870 mm

### Measuring values Pitch diameter - Go side

Plane	Axial section	PitchØ [mm]	Out of tolerance [µm]
2	0 Degree	4,1818	-

### Measuring values Pitch diameter - Not go side

Plane	Axial section	PitchØ [mm]	Out of tolerance [µm]
2	0 Degree	4,2788	-

Valuation: usable

Operator: JA. Bantle Date: 23.07.2018  
(Stark)

**Uncertainty of measurement:**  $U = 2.5 \mu\text{m} + 10 \cdot 10^{-6} \cdot d$ . The uncertainty stated is the expanded uncertainty of measurement obtained by multiplying the standard uncertainty by the coverage factor  $k = 2$ . They were established according to DAkkS-DKD-3. The value of the measured variable is within the assigned value range with 95 % probability.  
**Ref. temp:**  $(20 \pm 1) ^\circ\text{C}$ . **Inspection requirement:** The inspections procedure was based on recognised German inspection specifications (VDI/VDE/DGQ/2618). The measuring equipment and standards used are compared regularly with reference standards calibrated by a calibration service accredited by the European Cooperation for Accreditation (EA) and therefore traceable to the national standards of the PTB. Hence the inspection certificate complies with the traceability requirements of DIN EN ISO 9001.