

Calibration report of nozzle testing



Certificate no.	CC23-iTS--Dummy
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Calibration date:	15.12.2023 10:56:37
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Information about test object/job:

Customer	iTS GmbH
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Industriestraße 18

D-47589 Uedem

Customer ID:	00001
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Test object:	HP flat spray nozzle 2507
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Manufacturer	Lechler
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No. test object:	L2507-Dummy
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Test object description:	90° - 150mm - 15,6l/min
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Inspection order:	22.04.2024
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rec. Recalibration date: *	22.04.2026
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or 1 Year after first nozzle use

* may deviate from the recommended recalibration date depending on use.

Test location:	D-47589 Uedem
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Commission no.:	CC24-iTS-Dummy
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Auditor:	Roland van Beuningen
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Calibration procedure

Kalibration of the nozzles according to IEC 60529:2013-08 / ISO 20653:2023-08

Testparameter**Water system**

Flow rate setpoint IPX9K	15,60 l / min
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HP Pump flow regulation active (not pressure)	selected
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Pressure setpoint IPX9K	995.775 bar
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Temperature controller	not selected
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Boiler temperature setpoint	20 °C
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Force measurement

Threshold of beam length detection	0,05 N
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Threshold of main beam start/end detection	0,9 N
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Beam force maximum	1,2 N
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Movement

Linear movement	1 mm / s
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Nozzle Distance	150 mm
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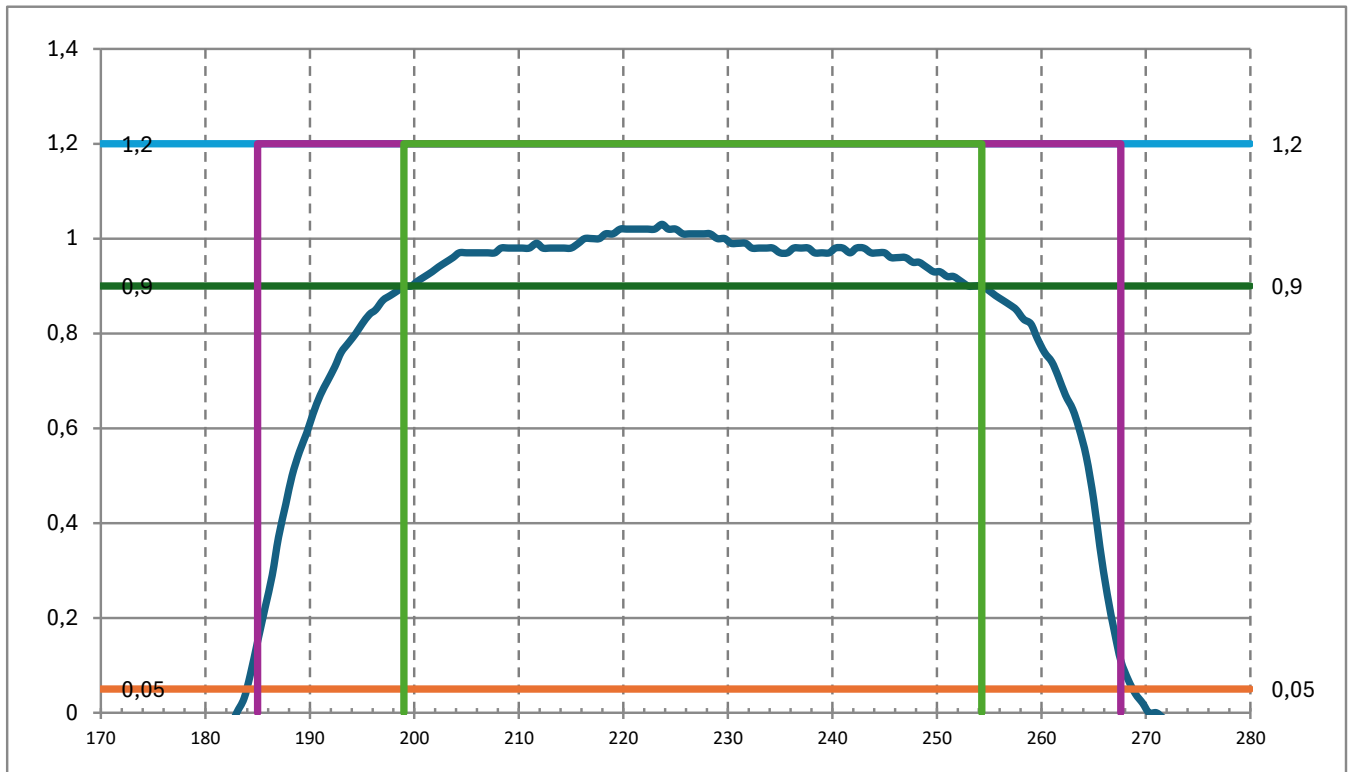
Type of machine:	DWT 500 - 2023 SN: IP23-0003
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Software:	2020 - Ver. 8.7.5600
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Test sequence and values**Force measurement**

X: mm

Y: in N

**Movement**

Position for measured beam start	185,0 mm
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Position for measured beam end	267,6 mm
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Calculated beam length	82,6 mm
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Beam angle	(berechnet)	30,79 °
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Detected position for main beam start	199,0 mm
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Detected position for main beam end	254,3 mm
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Calculated main beam length	55,3 mm
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Main beam angle	(berechnet)	20,89 °
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Force profile within this width

max. force value	1,03 N
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Test sequence and values

Ø flow rate 15,6 l / min

max.flow rate 15,63 l / min

min. flow rate 15,58 l / min

Ø pressure value 97,56 bar

max. pressure value 97,80 bar

min. pressure value 97,40 bar

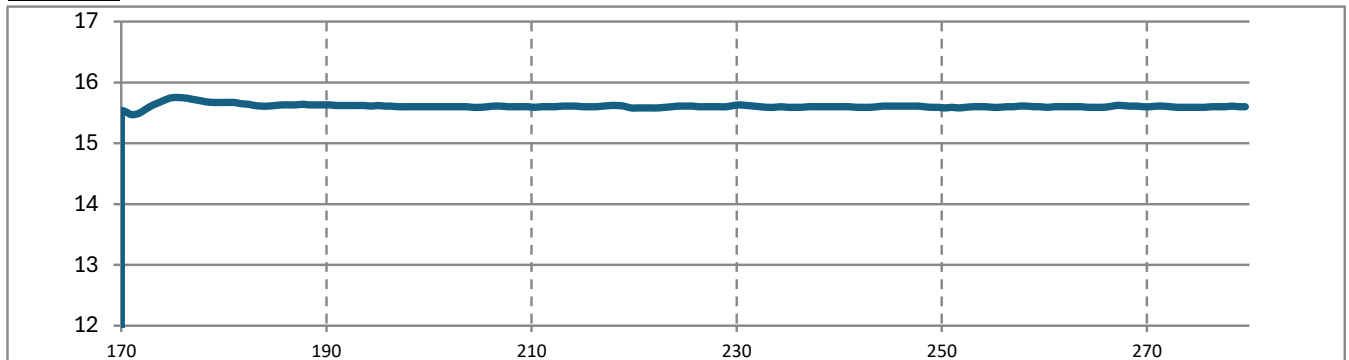
Ø temperature value 17,9 °C

max. temperature value 18,0 °C

min. temperature value 17,8 °C

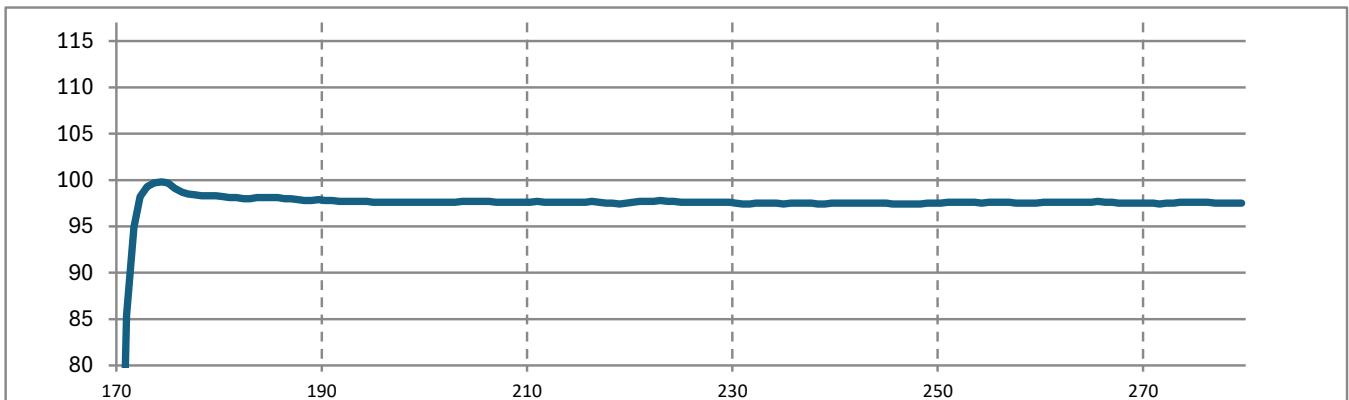
Flowrate

in l/min



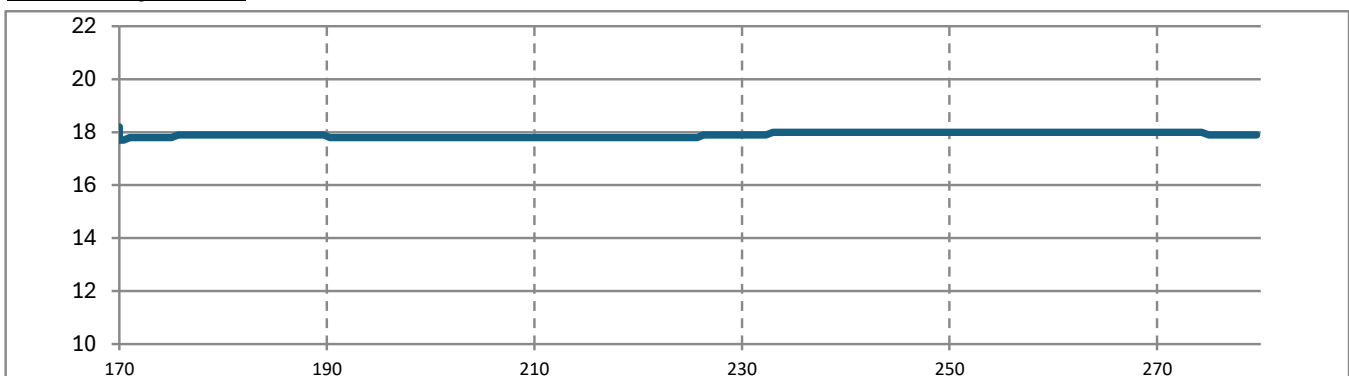
Pressure

in bar



Water temperature

in °C



Certificate no. CC23-iTS--Dummy

Reference devices:

Force measuring device

Burster Präzisionsmesstechnik

Sensor: 8432-5050
Measuring range: 0..5 N
Measuring accuracy: 0,5% v. EW
SerNr.: 527841
Amplifier: 9243
Measuring accuracy: 0,1% v. EW
SerNr.: 545466

Calibration

Certificate no.
8432-5050-528741

9243-ABG-547651

Flow meter

IFM Elektronik

MID SM6120

Measuring range: 0..25 l/min
Measuring accuracy: 1% v. MW + 0,2 v. EW
SerNr.: 1000000682110

Certificate no.
D-K-15070-01-00 V17918
v. 27.11.2023

Pressure gauge

IFM Elektronik

Transmitter PV7001

Measuring range: 0..250 bar
Measuring accuracy: 1% v. MW + 0,2 v. EW
SerNr.: PV7001 - x

Certificate no.
D-K-15070-01-00 D83216
v. 29.11.2023

Temperature measuring device

IFM Elektronik

Transmitter TA2105-25

Measuring range: 0..100 °C
Measuring accuracy: ±0,7K + 0,1% MS
SerNr.: 015555108

Certificate no.
D-K-15070-01-00 T227458
v. 06.12.2023

Ambient conditions

TESTO SE & Co

Hygrometer

Measuring range: 20..26°C & 20..70%rF
SerNr.: 39517611/807

Certificate no.
D-K-15070-01-01 F40996



D-47589 Uedem 28. Jan. 2025

Auditor: Roland van Beuningen