

EN 14897 and ÖNORM Validation Comparison

Side-by-side criteria for international validation criteria, for expert guidance contact our head office - info@darouv.co.uk

Criteria	EN 14897: 2007	ÖNORM M 5873-1:2001	Notes
Sensor measurement uncertainty is subtracted in % the from flow rate	✗	✓	ÖNORM factors 15-17% tolerance for sensor inaccuracies, EN 14897 does not factor for this
Sensor measurement required for both disinfection and bacterial testing	✗	✓	EN testing only requires a sensor for disinfection testing and has no requirement for bacterial treatment testing. ÖNORM requires a sensor to analyse both disinfection and bacterial treatment, additionally ÖNORM has higher technical requirements for the sensor
Wide angle sensor measurement required	✗	✓	Using ÖNORM compliant, wider (160°) measuring angle sensors allows preparation of both EN and ÖNORM test standards. EN does not specify a minimum measuring angle
Normalization of the flow to 40 mJ/cm ²	✗	✓	To meet exactly 40 mJ/cm ² is not possible during testing - ÖNORM allows extrapolation of the flow rate
Flow is only released if all lamps are functional and prescribed minimum irradiance is reached	✓	✓	ÖNORM also requires display of warning for wiper malfunction (if present), falling below the irradiance warning threshold and falling below the minimum irradiance. Control panel must also display the lamp operating time and on/off cycles
Testing procedure	✓	✓	Each flow rate is correlated to a specific UVT. Testing is conducted with highest flowrate and highest UVT, lowest flow rate and lowest UVT and a minimum of one flowrate / UVT in the central region of the operating range
Minimum test runs	✓	✓✓	Each test point (flow/UVT) is carried out in two different worst-case scenarios. All tests are then repeated (double determination). ÖNORM limits the factor between the lowest and highest test points (between 3 and 5 times depending on required maximum flow rate), so in general ÖNORM applies more rigorous test conditions
Construction and material requirements	✓	✓✓	ÖNORM requirements meet or exceed all criteria of EN 14897 - Section 4.2
Minimum reduction equivalent fluence (REF)	✓	✓✓	Equal requirement: 40 mJ/cm ² minimum. ÖNORM allows for normalisation between 40 mJ/cm ² and 60 mJ/cm ² and factors UV sensor tolerances for calculating the flow table
Operation	✓	✓✓	ÖNORM stipulates more stringent ongoing maintenance of UV systems. This includes the requirement for annual reference measurements and recalibration of the UV sensor. The vendor is responsible for training of the staff for operating and maintaining the UV system and the operator is required to keep a detailed operating log

Key: ✗ Not required ✓ Required ✓✓ Higher requirements