

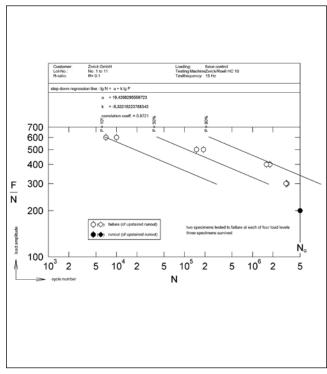
ZwickMaterials Testing

Product Information

Test device for dental implants



Swivelling test device for dental implants



S-N curve according to ISO 14801

Range of application

Fatigue test on dental implants and their prefabricated implant structures. This test enables a comparison of dental implants of different constructions or sizes.

The ability to adjust the implant axis to the test axis from an angle of 0° to 50° and the rapid setting of 30° enables dental implant systems with and without angled connectors to be investigated with this test device.

The loading device meets the requirements specified in ISO 14801:2007 and enables an oscillating pressure threshold load while maintaining the required degree of freedom. The implant, which is embedded in a pot, is fixed in the test device with the aid of a clamping device.

The tests can optionally be performed under physiological (invivo) conditions by using the Zwick thermoregulation bath.

For practical statistical evaluations of fatigue tests in the finite life range ("High Cycle Fatigue") and in the transitional range to fatigue strength ("Long Life Fatigue"), Zwick offers the technical-scientific program SAFD (Statistical Analysis of Fatigue Data).

Advantages

- Complete fulfillment of standard "ISO 14801-07 Dynamic fatigue testing for endosseous dental implants", for simplest operation.
- The tests can be implemented under "physiological" environmental conditions (e.g. temperature conditioned cooking salt solution) with the use of the Zwick temperature conditioning vessel.
- Head and foot flange assembly for simple and durable installation, taking into consideration the necessary degrees of freedom for the test.



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Method

Fatigue test to ISO 14801-07

Determination of a Wöhler line with a minimum of eleven dental implants

• Number of cycles: 5 million or 2 million

• Test frequency: up to 15 Hz or 2 Hz

• Signal form: Sine



Dental implant which is embedded in a pot

Technical data

Test device for dental implants	Max test load	Order no.
Test device for dental implants	1 kN	• 047119
to DIN EN ISO 14801:2007		(BPS-GR0001.90.01)
Embedding pot with internal diameter of 9 mm; height 20 mm		
Test device for dental implants, immersible	1 kN	• 055403
to DIN EN ISO 14801:2007		(BPL-GR1000.80.09)
Embedding pot with internal diameter of 9 mm; height 20 mm		
Bath for test device		• 055404
Internal diameter of 230 mm; height 180 mm		(BX075000-133)
Thermoregulating device 20 - 80°C		• 043467
for bath		(BX075000-128)

Statistical evaluation of the fatigue tests	Order no.
SAFD evaluation program	• 924311
	(BRA751008051.00)