

ISO 18397:2025-07 (E)

Dentistry - Powered scalers

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Classification of scaler handpieces	3
5	Requirements and performance	3
5.1	General	3
5.2	Materials	3
5.3	Drop test	4
5.4	Noise level	4
5.5	Surfaces	4
5.6	Electrical power supply	4
5.7	Energy for light source	4
5.8	Air supply	4
5.9	Supply of cooling liquid	4
5.10	Air and water pressure	4
5.11	Temperature	5
5.11.1	Temperature rise of housing	5
5.11.2	Temperature, excessive	5
5.12	Vibrations	5
5.13	Resistance to reprocessing	5
5.14	Leakage and/or ingress of water	5
5.15	Electromagnetic compatibility	5
5.16	Operating controls	5
5.17	Usability	6
5.18	Connection	6
5.18.1	General	6
5.18.2	Connections for air-powered scaler handpieces	6
5.18.3	Connector for electrical-powered scaler handpieces	6
5.19	Scaler tip performance	6
5.19.1	Scaler tip connection	6
5.19.2	Extraction force	6
5.19.3	Holding torque	6
5.19.4	Insertion force	7
5.19.5	Tightening torque	7
5.19.6	Stall effort	7
5.19.7	Output power of powered scaler	7
5.19.8	Breakage resistance	7
5.20	Frequency	7
5.21	Amplitude	7
6	Sampling	7
7	Measurement and test method	8
7.1	General test conditions	8
7.2	Visual inspection	8
7.3	Electrical power supply	8
7.4	Air supply	8
7.4.1	Apparatus	8

7.4.2	Procedure	8
7.5	Supply of cooling liquid	8
7.5.1	Apparatus	8
7.5.2	Procedure	8
7.6	Air and water pressure	8
7.6.1	Apparatus	8
7.6.2	Procedure	8
7.7	Measuring device for dimensions	9
7.8	Scaler tips	9
7.8.1	Extraction force	9
7.8.2	Holding torque	9
7.8.3	Insertion force	9
7.8.4	Tightening torque	9
7.8.5	Stall effort	10
7.8.6	Output power of powered scaler	10
7.8.7	Breakage resistance	12
7.9	Frequency	12
7.9.1	Apparatus	12
7.9.2	Procedure	12
7.10	Amplitude	13
7.10.1	Apparatus	13
7.10.2	Procedure	13
7.11	Noise level	14
7.11.1	Apparatus	14
7.11.2	Test conditions	14
7.11.3	Procedure	14
7.12	Rise of housing temperature	14
7.13	Excessive temperature	14
7.14	Resistance to reprocessing	14
8	Instructions for use, maintenance and service	14
9	Technical description	15
10	Marking	16
10.1	General	16
10.2	Scaler handpieces	16
10.3	Scaler tips	16
11	Labelling	17
12	Packaging	17
Annex A (informative)	Calculation example for output power	18