

KaVo™ NOMAD Pro 2™

Safe and Effective Handheld X-ray Technology*

Commitment to Safety

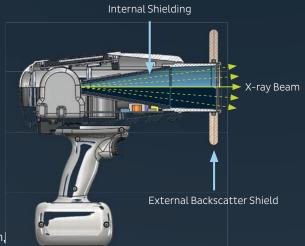
We understand that safety is paramount when clinicians treat their patients. To keep operators safe, the KaVo NOMAD Pro 2 has two highly devised shielding features.

Internal Shielding

Due to its innovative internal shielding, KaVo NOMAD Pro 2 is safe for the operator to use as a handheld device. The X-ray tube and collimator are completely enclosed in a proprietary blend of metals that are designed to block radiation leakage.

Backscatter Shield

Most of the low-dose radiation generated by the KaVo NOMAD Pro 2 will be absorbed by the patient, but in the case of backscatter radiation, the leaded polymer shield at the front of the device provides the operator with a zone of protection.







More than 30 independent studies and evaluations attest to the safety of the NOMAD Handheld X-ray Systems.*

"The results of this comparison of dental staff doses between the NOMAD handheld intraoral X-ray system and conventional wall-mounted intraoral X-ray systems indicate that the staff doses for the handheld systems are significantly less than those for wall-mounted systems. Consequently, there should be no concern about the use of the NOMAD handheld dental intraoral X-ray system."

"The NOMAD is a reliable, versatile, portable X-ray unit that meets radiation safety standards and has multiple applications for forensic, field, and humanitarian dentistry."

"Our data have shown that the NOMAD presents risks that are no greater than with standard dental radiographic units to the patient or operator, and the measured doses are well below recommended levels."²

"This investigation suggests that the NOMAD handheld X-ray unit employed in this study is suitable for use in routine dental radiography provided it is operated according to the recommendations of the manufacturer by properly trained personnel. This conclusion is supported by measurements of the dose received by a simulated operator."

Comparative Data For Whole Body Exposure (Annual) 50mSv Occupational Dose Limit¹ Occupational Dose Limit Requiring Dosimetry 5mSv 3.65mSv Average Natural Background Radiation² 2.19mSv Average Occupational Radiation Exposure for Flight Crews³ 1.00mSv General Public Dose Limit (excluding natural background and medical care)1 0.16-0.37mSv Range of Exposure for Dental Personnel Using Conventional X-rays² 0.30mSv Average Exposure Using NOMAD with D-Speed Film⁴ Average Exposure Using NOMAD with F-Speed Film or Digital Sensor⁴

TECHNICAL SPECIFICATIONS

Battery	21.6 V DC Lithium Ion
Voltage	60kV true DC
Current	2.5 mA
Exposure time range	0.02 - 1.00 s
Focal spot	0.4 mm
Inherent filtration	> 1.5 mm Al equivalent

Source to skin distance	20 cm
X-ray field	60 mm round
Maximum duty cycle	1:60
Total weight	6.0 lbs. (2.7kg)
Approximate dimensions	W 5.5" x L 11" x H 10.5" (W 14 cm x L 28 cm x H 27 cm)



Gray J, Bailey E, Ludlow J. Dental Staff Doses With Handheld Dental Intraoral X-ray Units. Health Physics, 2012; 102(2): 137–142.

²Goren A, Bonveto, M, Biernacki J, Colosi D. Radiation Exposure with the NOMAD Portable X-ray System, Dentomaxillofacial Radiology, 2008; 37: 109–112.

³ United States Air Force, NOMAD™ Portable X-ray Unit (Project 05-40), Dental Evaluation & Consultation Service. Illinois: USAFSAM: 2006.

⁴McGiff T, Danforth R, Herschaft E. Maintaining Radiation Exposures As Low As Reasonably Achievable (ALARA) for Dental Personnel Operating Portable Handheld X-ray Equipment, Health Physics, 2012; 103(2): S179–S185.

^{*}For more studies and information, visit www.kavo.com/en-us/imaging-solutions/kavo-nomad-pro-2-intraoral-x-ray

¹ Standards for Protection Against Radiation, 10 CFR 20 (US Federal Standards), 1994 (see also NCRP Report No. 116).

² NCRP Report No. 160 (National Council on Radiation Protection and Measurements), p 211–212.

^{*}Estimated Cosmic Radiation Doses for Flight Personnel," Feng VJ et al., Space Medicine and Medical Engineering, 15(4) 2002, p 265–269.

 $^{^4}$ Normalized average assumes 7,200 exposures per year, and the average length of exposure for D-speed=0.50 seconds, F-speed=0.25 seconds, digital sensor=0.20 seconds