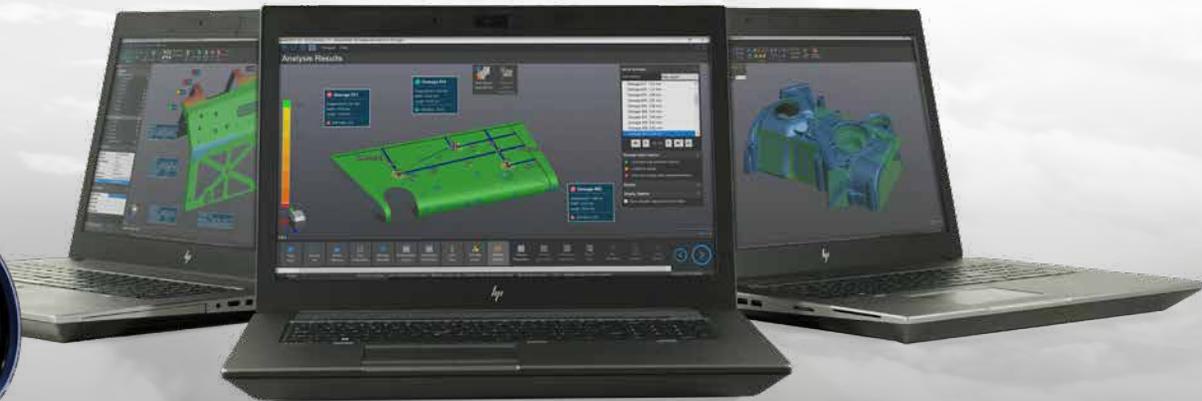


# HandySCAN AEROPACK

3D SCANNING SOLUTION SUITE  
FOR THE AEROSPACE INDUSTRY



# HandySCAN AEROPACK

COMPLETELY INTEGRATED.  
UNMATCHED VERSATILITY.

Stakeholders in the aerospace industry are facing increasing pressure to ensure public safety and aircraft compliance as well as prevent costly fleet groundings.

Creaform's HandySCAN AEROPACK™ is the most versatile 3D scanning solution on the market for aircraft inspections, reverse engineering, maintenance and repair operations.

It features the metrology-grade HandySCAN 3D™ scanner as well as complete software suite to efficiently inspect and characterize defects on a variety of aircraft components, materials and finishes—and in all types of work environments. The solution allows for highly accurate scans of small- to large-size parts to generate CAD models, enabling manufacturers to quickly produce spare parts.

Providing unmatched speed, ease of use, reliability and repeatability, HandySCAN AEROPACK makes inspection and reverse engineering workflows highly efficient, significantly reduces operators' impact on measurement results, and shortens the time to generate final reports or CAD designs. It saves the aerospace industry time and money—all without compromising diagnosis results and safety.

## DISCOVER AN END-TO-END SOLUTION SUITE FOR ALL YOUR APPLICATIONS



### HAILSTORMS

When an aircraft hits a hailstorm, MRO teams need to rely on a solution like HandySCAN AEROPACK that enables them to quickly and accurately measure the impact to speed up repairs—and mitigate the negative ripple effects on future sales. Thanks to its remarkable versatility, operators can use the solution in any conditions, whether inside or outside, without sacrificing accuracy and reliability.



### FLAP AND SPOILER

HandySCAN AEROPACK is the ideal solution for flap and spoiler inspections due to its ultra-fast measurements, contrary to traditional manual methods. It's actually 80 times faster than time-consuming pit gauge techniques. In fact, operators won't waste time searching the deepest points per dent; with the 3D scanner, they can seamlessly scan a part's entire geometry.



### AIRCRAFT INCIDENTS

When an aircraft experiences hard landings or other damaging incidents, MRO teams must use a solution that can help them analyze any type of damage on any type of surface or texture. HandySCAN AEROPACK gives teams the thorough analyses required to inspect any component shape, size or surface finish with confidence.



### REGULARLY SCHEDULED MAINTENANCE

Operators who are responsible to put the aircraft back into service need a tool to validate if a component is within acceptance criteria after rework is completed. Oftentimes, MRO teams don't have access to the CAD models of aircraft components, which means reverse engineering components becomes key.



### QUALITY CONTROL

Anyone working in aerospace requires a robust solution to perform a wide range of quality control inspections on free-form and complex shapes—either in-line during the assembly process or out in the field. HandySCAN AEROPACK delivers the level of performance and comprehensive measuring points to conduct in-depth, three-dimensional verifications.



### REVERSE ENGINEERING

Oftentimes, aerospace manufacturers and MRO technicians struggle finding replacement parts or even the CAD files of their aircraft components. Count on the HandySCAN AEROPACK to generate as-built 3D CAD models from existing physical components.

# HandySCAN AEROPACK: A COMPLETE SOLUTION

## HandySCAN3D™

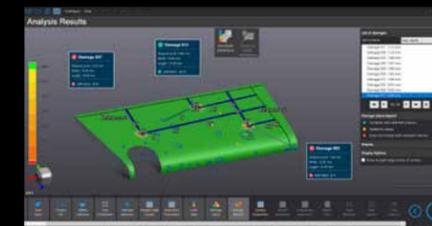
HandySCAN 3D is the industry's leading metrology-grade, portable 3D scanner that has been designed to acquire accurate and repeatable measurements—even in difficult environments, with complex surfaces, and regardless of users' skills.



red dot award 2019  
winner

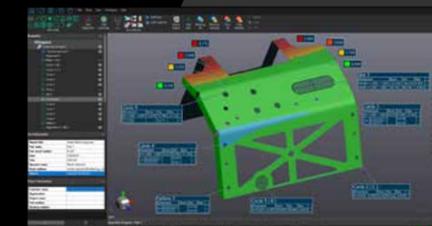


- 1 High-performance optics  
Optimal scan quality
- 2 Extra single line  
Easy capture of hard-to-reach areas
- 3 Blue laser technology  
High resolution capability
- 4 Stand-off distance color indicator  
Maximizes scanning performance
- 5 Multifunction buttons  
Quick access to frequently used software functionalities
- 6 Highly ergonomic and sleek design  
Provides outstanding user experience



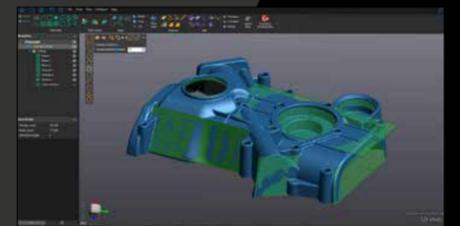
### SmartDENT3D™

SmartDENT 3D™ is Creaform's aircraft surface inspection software developed specifically for critical aerospace applications, such as inspecting aircraft flaps and spoilers, fuselage, etc.



### VXinspect™

VXinspect™ is an intuitive dimensional inspection software module for quality control of aircraft components and features all the essential functionalities required to quickly build inspection reports.



### VXmodel™

VXmodel™ is a post-treatment software that enables finalizing 3D scan data in any CAD solution, providing the fastest and simplest path from 3D scans to computer-aided design.

# TECHNICAL SPECIFICATIONS

Innovating technology that provides TRUaccuracy™, TRUsimplicity™, TRUportability™ as well as real speed to your metrology-grade applications.

	HandySCAN BLACK™	HandySCAN BLACK™IElite
<b>ACCURACY</b> <sup>(1)</sup>	0.035 mm (0.0014 in)	0.025 mm (0.0009 in)
<b>VOLUMETRIC ACCURACY</b> <sup>(2)</sup> (based on part size)	0.020 mm + 0.060 mm/m (0.0008 in + 0.0007 in/ft)	0.020 mm + 0.040 mm/m (0.0008 in + 0.0005 in/ft)
<b>VOLUMETRIC ACCURACY WITH MaxSHOT Next™IElite</b> <sup>(3)</sup>	0.020 mm + 0.015 mm/m (0.0008 in + 0.00018 in/ft)	
<b>MEASUREMENT RESOLUTION</b>	0.025 mm (0.0009 in)	
<b>MESH RESOLUTION</b>	0.100 mm (0.0039 in)	
<b>MEASUREMENT RATE</b>	800,000 measurements/s	1,300,000 measurements/s
<b>LIGHT SOURCE</b>	7 blue laser crosses	11 blue laser crosses (+ 1 extra line)
<b>LASER CLASS</b>	2M (eye safe)	
<b>SCANNING AREA</b>	310 x 350 mm (12.2 x 13.8 in)	
<b>STAND-OFF DISTANCE</b>	300 mm (11.8 in)	
<b>DEPTH OF FIELD</b>	250 mm (9.8 in)	
<b>PART SIZE RANGE</b> (recommended)	0.05–4 m (0.15–13 ft)	
<b>SOFTWARE</b>	SmartDENT 3D, VXelements (VXinspect, VXmodel)	
<b>OUTPUT FORMATS</b>	.dae, .fbx, .ma, .obj, .ply, .stl, .txt, .wrl, .x3d, .x3dz, .zpr, .3mf	
<b>COMPATIBLE SOFTWARE</b> <sup>(4)</sup>	3D Systems (Geomagic® Solutions), InnovMetric Software (PolyWorks), Metrologic Group (Metrolog X4), New River Kinematics (Spatial Analyzer), Verisurf, Dassault Systèmes (CATIA V5, SOLIDWORKS), PTC (Creo), Siemens (NX, Solid Edge), Autodesk (Inventor, PowerINSPECT)	
<b>WEIGHT</b>	0.94 kg (2.1 lb)	
<b>DIMENSIONS</b> (LxWxH)	79 x 142 x 288 mm (3.1 x 5.6 x 11.3 in)	
<b>CONNECTION STANDARD</b>	1 X USB 3.0	
<b>OPERATING TEMPERATURE RANGE</b>	5–40°C (41–104°F)	
<b>OPERATING HUMIDITY RANGE</b> (non-condensing)	10–90%	
<b>CERTIFICATIONS</b>	EC Compliance (Electromagnetic Compatibility Directive, Low Voltage Directive), compatible with rechargeable batteries (when applicable), IP50, WEEE	
<b>PATENTS</b>	CA 2,600,926, CN 200680014069.3, US 7,912,673, CA 2,656,163, EP (FR, UK, DE) 1,877,726, AU 2006222458, US 8,032,327, JP 4,871,352, US 8,140,295, EP (FR, UK, DE) 2,278,271, EP (FR, UK, DE) 2,230,482, IN 266,573, US 7,487,063, CA 2,529,044, EP (FR, UK, DE) 3,102,908, US 15/114,563, CN 201580007340X	

(1) HandySCAN BLACK and HandySCAN BLACKIElite (ISO 17025 accredited): Based on VDI/VDE 2634 part 3 standard. Probing error performance is assessed with diameter measurements on traceable sphere artefacts.

(2) HandySCAN BLACK and HandySCAN BLACKIElite (ISO 17025 accredited): Based on VDI/VDE 2634 part 3 standard. Sphere-spacing error is assessed with traceable length artefacts by measuring these at different locations and orientations within the working volume.

(3) The volumetric accuracy of the system when using a MaxSHOT 3D cannot be superior to the default accuracy for a given model.

(4) Also compatible with all major metrology, CAD, and computer graphic software through mesh and point cloud import.



## Creaform Inc. (Head Office)

4700 rue de la Pascaline  
Lévis QC G6W 0L9  
Canada  
T.: 1 418 833 4446 | F.: 1 418 833 9588

[craform.info@ametek.com](mailto:craform.info@ametek.com) | [craform3d.com](http://craform3d.com)

## Creaform U.S.A. Inc.

2031 Main Street  
Irvine CA 92614  
USA  
T.: 1 855 939 4446 | F.: 1 418 833 9588



ULTRA PRECISION TECHNOLOGIES

Authorized Distributor

HandySCAN 3D, HandySCAN BLACK, HandySCAN BLACKIElite, MaxSHOT 3D, MaxSHOT NextIElite, SmartDENT 3D, VXelements, VXinspect, VXmodel and their respective logo are trademarks of Creaform Inc. © Creaform Inc. 2019. All rights reserved. V1