

# HANDY SCAN 3D

THE PORTABLE 3D SCANNERS  
FOR INDUSTRIAL APPLICATIONS



**Handyscan 3D™** stand out as the most accurate **portable 3D scanners** on the market today.

Because we know that you are serious about your work, we have developed an extensive line of **3D laser scanners** that will work wherever you need them to. They feature the *TRUaccuracy™* technology, that guarantees accuracy no matter the environment, part set-up or user's level of experience. Thousands of units later, our 3D scanners are living up to their reputation of **reliability** and **versatility**.

**Serious work. Serious technology.** Introducing the **Handyscan 3D scanners**.

GENERATES **ACCURATE, REPEATABLE, HIGH RESOLUTION** 3D DATA (0.040-0.050 mm)

**DIRECT MESH OUTPUT**



**REAL-TIME VISUALIZATION** OF THE SCANNED SURFACE

**PORTABLE** DEVICE THAT FITS INTO A CASE THE **SIZE OF A CARRY-ON**

TAKE IT FROM **PLANT TO PLANT** AND USE IT **IN-HOUSE** OR **ON SITE**



**USER-FRIENDLY.** UP AND RUNNING IN  
**LESS THAN 2 MINUTES**

**SHORT LEARNING CURVE.**  
REGARDLESS OF THE USER'S EXPERIENCE  
LEVEL

**HANDHELD** AND LIGHTWEIGHT ( $\pm 1$  KG)

**SELF-POSITIONING DEVICE.**

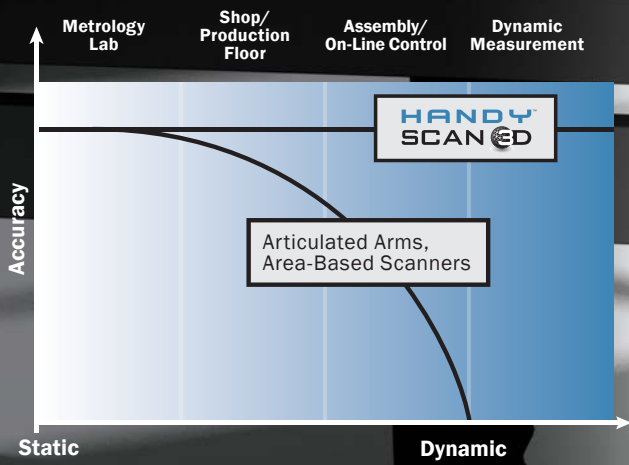
NO CMM, MEASURING ARM, ETC.

**FREEDOM OF MOVEMENT.** FLEXIBLE  
STAND-OFF DISTANCE AND EASY ACCESS TO  
CONFINED AREAS

**VERSATILE.** VIRTUALLY  
LIMITLESS 3D SCANNING -  
NO MATTER THE **PART SIZE,**  
**COMPLEXITY, MATERIAL**  
OR **COLOUR**

**TRUaccuracy™** TECHNOLOGY.

GUARANTEED ACCURACY NO MATTER THE ENVIRONMENT,  
PART SET-UP OR THE USER'S LEVEL OF EXPERIENCE.



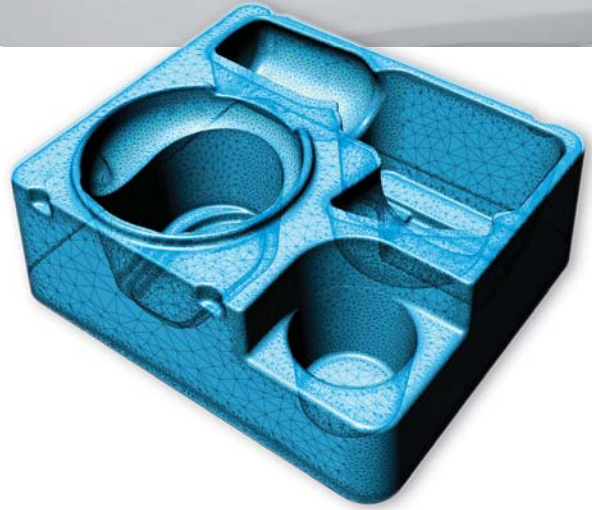
# REVSCAN™

LOOKING FOR THE MOST EFFICIENT WAY TO **REVERSE ENGINEER** AND/OR **DESIGN**?

THE REVscan™ WILL PROVE TO BE A **RELIABLE** TOOL THAT WILL HELP YOU GET THERE.

## REVERSE ENGINEERING / STYLING, DESIGN AND ANALYSIS

- 3D-scan-to-CAD
- Styling and design modifications
- As-built CAD modifications
- Class A surfacing
- Vehicle design & styling
- Aftermarket part design
- Digital models and mock-ups
- Clay model digitizing
- Custom part design
- Packaging design
- Rapid prototyping / 3D printing
- Finite element analysis (FEA)



# EXASCAN™

THE EXAscan™ OFFERS INCREASED ACCURACY AND RESOLUTION. IT IS THE **MOST VERSATILE** 3D SCANNER ON THE MARKET FOR **INSPECTION** AND **DEMANDING REVERSE ENGINEERING**.



## QUALITY CONTROL/INSPECTION

- Non-contact inspection
- Part-to-CAD inspection
- Geometric dimensioning and tolerancing (GD&T)
- First article inspection
- Production compliance inspection
- Supplier quality inspection
- Tool testing and adjustment
- Die and mold inspection
- Casting inspection
- Aircraft component inspection
- Vehicle inspection

## REVERSE ENGINEERING / STYLING, DESIGN AND ANALYSIS

- 3D scan-to-CAD (high standard)
- Class A surfacing
- Die and mold design
- Mechanical design
- Tooling and jig design
- Maintenance, repair and overhaul (MRO)

## MAXSCAN™

THE MAXscan™ IS THE OBVIOUS CHOICE FOR **3D SCANNING OF LARGER PARTS**. IT FEATURES THE Handyscan 3D HIGH-ACCURACY, ENHANCED WITH **PHOTOGRAMMETRY** CAPABILITIES.

### REVERSE ENGINEERING AND INSPECTION

- Aircraft component inspection
- Assisted assembly (aerospace)
- Vehicle design or inspection (automotive, marine/military, heavy industry)
- Large-scale tooling inspection and adjustment
- Maintenance, repair and overhaul (MRO)
- Large castings inspection
- Large moulds/dies design or inspection



## VIUSCAN™

NEED HIGH-RESOLUTION 3D **COLOUR** DATA AND SHAPE? THE VIUScan™ WILL CAPTURE EVERY DETAIL AND DELIVER **HYPERREALISTIC** RESULTS.



### MUSEOLOGY/HERITAGE PRESERVATION

- Preservation, restoration and digital archiving
- 3D scanning for research, analysis and publishing

### MULTIMEDIA / ENTERTAINMENT

- Computer graphics and special effects
- Virtual reality / augmented reality (serious gaming, 3D training systems)

# VXelements™

## VXelements™

The Handyscan 3D scanners come with VXelements, the all-in-one 3D data acquisition software that powers its entire fleet of 3D scanning and measurement technologies. It gathers all the essential elements and tools into a uniform, user-friendly and intuitive working environment.

VXscan is entirely dedicated to the acquisition and optimization of 3D scanning data. It delivers high performance for that specific task, yet it is simple and user-friendly enough to suit any user's experience level.

## VXelements Express™

The UNIsan™, the Handyscan 3D line-up entry-level model, comes with VXelements Express. This simplified, easier to use and learn version of VXelements has been developed to match and maximize the UNIsan's capabilities.

## ACCESSORIES

### Included

#### All

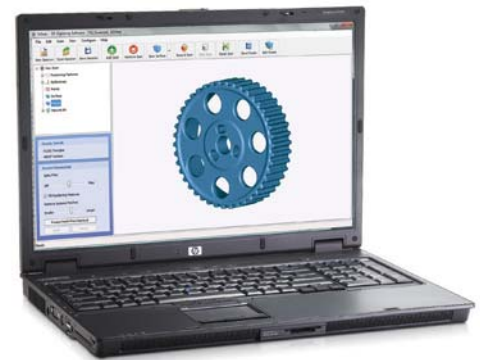
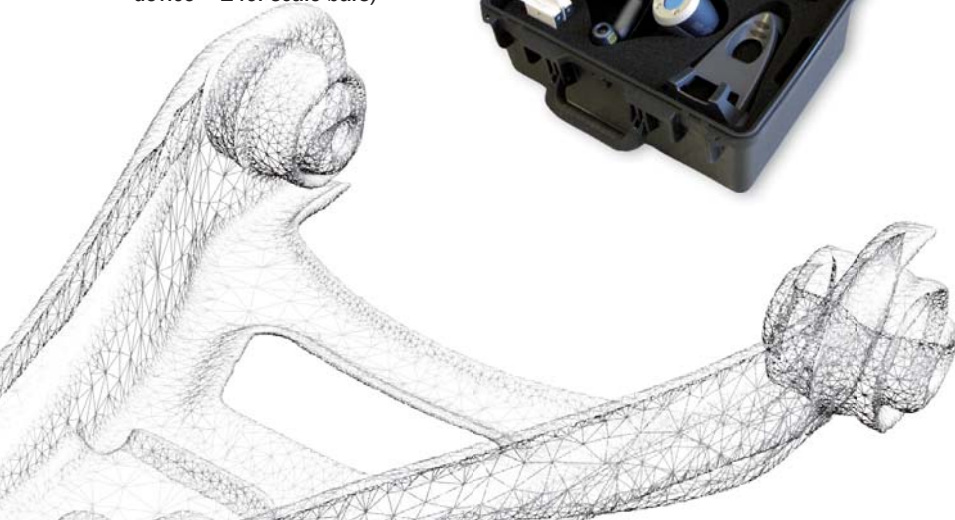
- Carrying case
- Calibration plate
- Ergonomic support
- FireWire cable
- FireWire adapter (ExpressCard 54 mm)
- Power supply
- 5 x 500 positioning targets
- 1-year warranty on parts and labour

#### MAXscan (Photogrammetry):

- Magnetic reference cross (1)
- Scale bars, 1340 mm (2)
- 150 adhesive coded targets (no 2-150)
- 2 carrying cases (1 for scanning device + 1 for scale bars)

### Optional

- Certified laptop computer
- Field Pack (for outdoors, in-the-field scanning)
- Target applicator
- Magnetic, reusable scanning positioning targets



## CREAFORM CUSTOMER SERVICE



When you purchase a Handyscan 3D laser scanner, Creaform backs you up with the CreaCare customer service program. We offer readily available, multilingual technical support on all continents, ensured by knowledgeable, proactive and committed product specialists.

We find it important to help you simplify your work, increase your efficiency and make the most out of your Handyscan 3D scanner. That is why all Creaform technologies come with a free CreaCare maintenance plan and annual calibration for the first year. To keep you on the technological edge, you can also choose to get instant downloading access to every new release of VXelements (and the VXscan module). If you wish, you can ask that a qualified metrologist or applications engineer comes over to your place to help you get started with your 3D scanner, and to train you and/or your staff on your specific applications.

Last but not least, Creaform's client service agents follow-up with each and every client to make sure that they are satisfied with their Handyscan 3D, and that they know exactly who to contact in case of a problem. And if anything should happen, we guarantee quick and reliable servicing.

# Handyscan 3D

## RELATED PRODUCTS

### MaxSHOT 3D™

The MaxSHOT 3D optical coordinate measuring system is a complementary product that adds photogrammetry to the wide range of 3D scanning applications. The system combines the MaxSHOT 3D photogrammetric video camera and the VXshot™ processing software, and stands out from other systems because it is so easy to use. Its user-friendly design allows even those new to photogrammetry to quickly and easily generate a high accuracy positioning model of an object based on a series of photos.

The MaxSHOT 3D system generates positioning models that can be used with all Handyscan 3D scanners to determine their repositioning around the object to be scanned. Doing so, we get highly accurate data, and most especially when measuring larger parts.








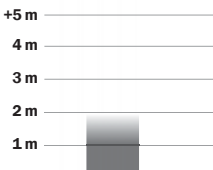
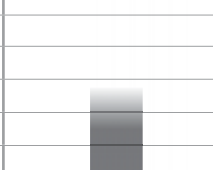
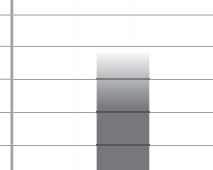
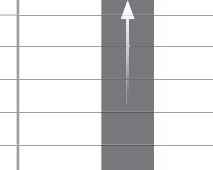
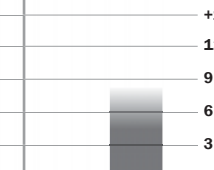
### COMPATIBLE SOFTWARE

Paired up with the following CAD/post-processing software, the Handyscan 3D scanners deliver great performance:

- Geomagic (Studio and Qualify)
- Rapidform (XOS, XOR and XOV)
- InnovMetric Software (PolyWorks)
- Dassault (CATIA V5 and SolidWorks)
- PTC (Pro/ENGINEER)
- Siemens (NX and Solid Edge)
- Autodesk (Inventor, Alias, 3ds Max, Maya, Softimage)

Other software platforms: contact our specialists at [info@creaform3d.com](mailto:info@creaform3d.com).



Handyscan 3D Comparison Matrix		UNISCAN™	REVSCAN™	EXASCAN™	MAXSCAN™	VIUSCAN™
						
KEY DIFFERENTIATORS		ENTRY-LEVEL (\$ AND FUNCTIONALITIES)	AFFORDABLE PRICE (\$), VERY STRAIGHTFORWARD USE	HIGH RESOLUTION AND ACCURACY	HIGH ACCURACY FOR LARGER PARTS	COLOUR
APPLICATIONS	REVERSE ENGINEERING, STYLING AND DESIGN	+	++	++	++	++
	INSPECTION		+	+++	+++	+
	FEA/CFD	+	++	++	++	+
	3D VIRTUAL CONTENTS IN COLOUR					+++
	PROTOTYPING	+	++	++	++	++
INDUSTRIES	AUTOMOTIVE/ TRANSPORT	√	√	√	√	
	MUSEOLOGY/HERITAGE PRESERVATION					√
	ARCHITECTURE					√
	AEROSPACE		√	√	√	
	CONSUMER PRODUCTS	√	√	√	√	√
	MANUFACTURING	√	√	√	√	
	MULTIMEDIA					√
WEIGHT		980 grams (2.1 lbs.)	980 grams (2.1 lbs.)	1.25 kg (2.75 lbs.)	1.27 kg (2.80 lbs.)	1.3 kg (2.85 lbs.)
DIMENSIONS		160 x 260 x 210 mm (6.25 x 10.2 x 8.2 in.)	160 x 260 x 210 mm (6.25 x 10.2 x 8.2 in.)	172 x 260 x 216 mm (6.75 x 10.2 x 8.5 in.)	172 x 260 x 216 mm (6.75 x 10.2 x 8.5 in.)	172 x 260 x 216 mm (6.75 x 10.2 x 8.5 in.)
MEASUREMENT RATE		18,000 measures/s	18,000 measures/s	25,000 measures/s	18,000 measures/s	18,000 measures/s
LASER CLASS		II (eye-safe)	II (eye-safe)	II (eye-safe)	II (eye-safe)	II (eye-safe)
RESOLUTION		0.100 mm (0.004 in.)	0.100 mm (0.004 in.)	0.050 mm (0.002 in.)	0.100 mm (0.004 in.)	0.100 mm (0.004 in.)
ACCURACY		Up to 0.080 mm (0.003 in.)	Up to 0.050 mm (0.002 in.)	Up to 0.040 mm (0.0016 in.)	Up to 0.050 mm (0.002 in.)	Up to 0.050 mm (0.002 in.)
VOLUMETRIC ACCURACY*		0.050 mm + 0.250 mm/m (0.0020 in. + 0.0030 in./ft)	0.020 mm + 0.200 mm/m (0.0008 in. + 0.0024 in./ft)	0.020 mm + 0.100 mm/m (0.0008 in. + 0.0012 in./ft)	0.020 mm + 0.025 mm/m (0.0008 in. + 0.0003 in./ft)	0.020 mm + 0.200 mm/m (0.0008 in. + 0.0024 in./ft)
VOLUMETRIC ACCURACY (WITH MaxSHOT 3D)*		n/a	0.020 mm + 0.025 mm/m (0.0008 in. 0.0003 in./ft)	0.020 mm + 0.025 mm/m (0.0008 in. 0.0003 in./ft)	n/a	0.020 mm + 0.025 mm/m (0.0008 in. 0.0003 in./ft)
STAND-OFF DISTANCE		300 mm (12 in.)	300 mm (12 in.)	300 mm (12 in.)	300 mm (12 in.) (Scan)	300 mm (12 in.)
DEPTH OF FIELD		± 150 mm (± 6 in.)	± 150 mm (± 6 in.)	± 150 mm (± 6 in.)	± 150 mm (± 6 in.) (Scan)	± 150 mm (± 6 in.)
LASER CROSS AREA		210 mm x 210 mm (8.2 in. x 8.2 in.)	210 mm x 210 mm (8.2 in. x 8.2 in.)	210 mm x 210 mm (8.2 in. x 8.2 in.) 60 mm x 60 mm (hi-res) (2.4 in. x 2.4 in.)	210 mm x 210 mm (8.2 in. x 8.2 in.)	210 mm x 210 mm (8.2 in. x 8.2 in.)
TEXTURE RESOLUTION		n/a	n/a	n/a	n/a	50 to 250 DPI
TEXTURE COLORS		n/a	n/a	n/a	n/a	24 bits, SRGB-calibrated
SOFTWARE		VXelements Express	VXelements			
OUTPUT FORMATS		.dae, .fbx, .ma, .obj, .ply, .stl, .txt, .wrl, .x3d, .x3dz, .zpr				
PART SIZE RANGE (RECOMMENDED)						

\*Based on the ISO 10360 standard, volumetric accuracy is defined as a size-dependent value.



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