

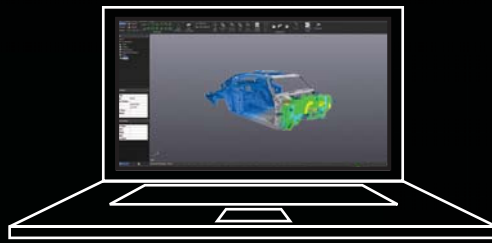
# VXelements™

FULLY INTEGRATED  
3D SOFTWARE PLATFORM

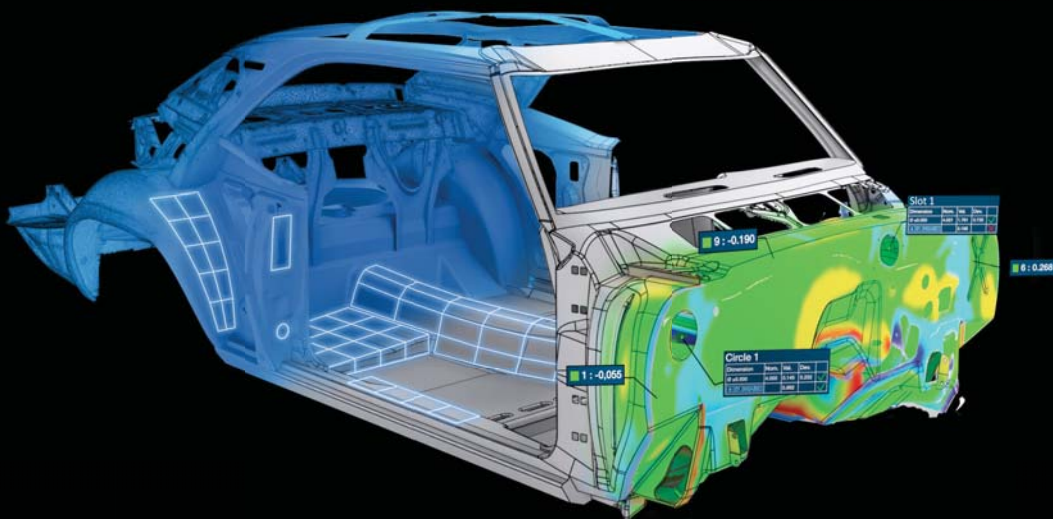
ACQUISITION

REVERSE  
ENGINEERING

INSPECTION



Creaform VXelements™ is a simple, powerful, and fully integrated 3D software platform that works in complete synergy with all our 3D measurement technologies.



**ACQUISITION**

**REVERSE ENGINEERING**

**INSPECTION**



# ACQUISITION

**The following 3D acquisition modules are the core of VXelements and provide real-time visualization. They are included with any of our 3D measurement technologies.**



## **VXscan™**

A pared-down 3D scanning acquisition and optimization algorithms providing high performance while being easy-to-use for all users regardless of their experience levels.



## **VXprobe™**

A user-friendly touch probing module used for acquisition and compatible with all major metrology software.



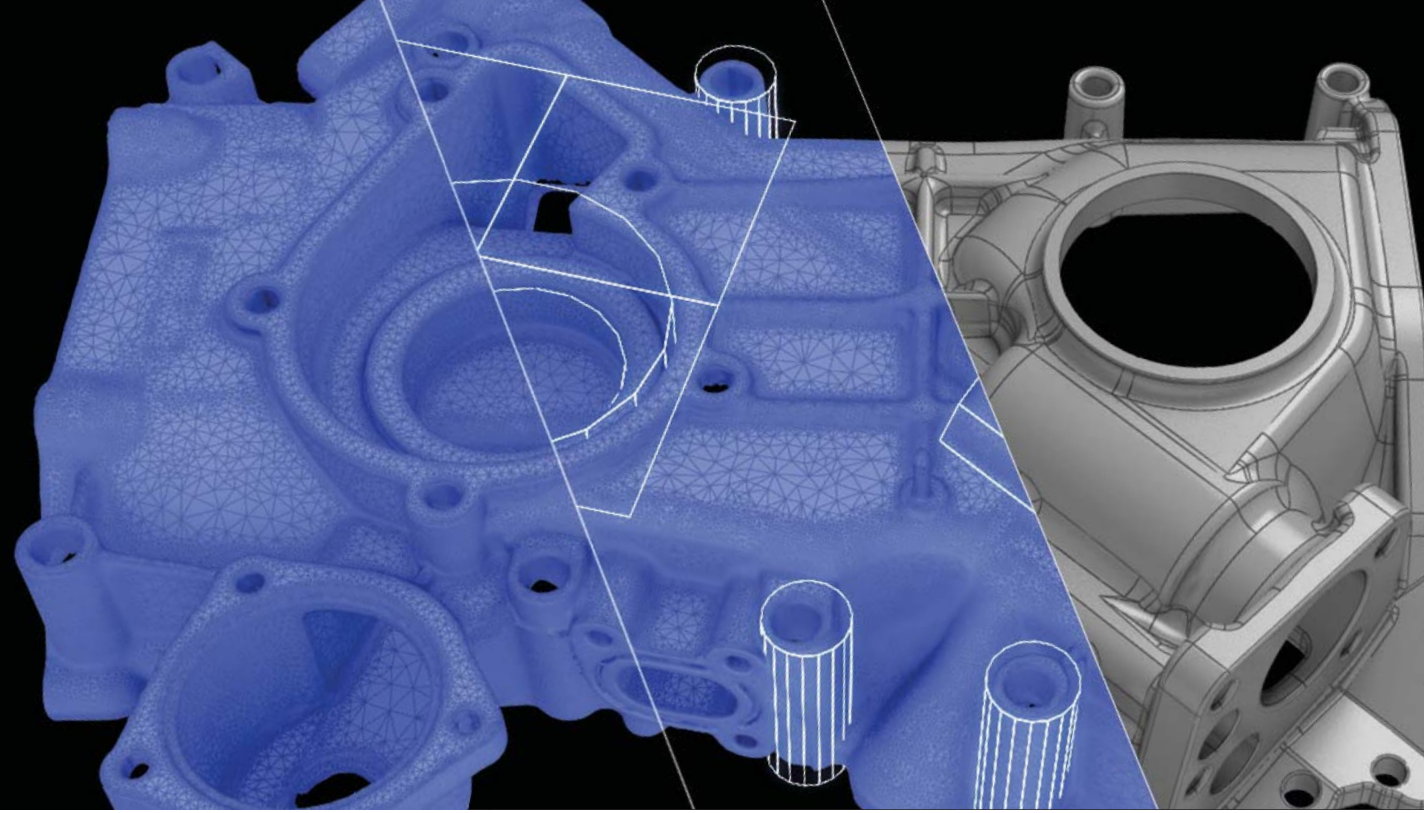
## **VXshot™**

A unique photogrammetry software that makes accuracy accessible to everyone through its unparalleled ease of use and user guidance.

# VXmodel SCAN-TO-CAD SOFTWARE MODULE

VXmodel™ is a post-treatment software that is directly integrated into VXELEMENTS. It provides the tools needed to finalize 3D scan data: the simplest and fastest transfer path from 3D scans to any 3D printing or CAD software. Simple, yet powerful, the software includes only the features necessary to complement your CAD software.

# REVERSE ENGINEERING



## MESH EDITING

VXmodel provides simple, yet efficient tools required to prepare the 3D scan mesh for reverse engineering or 3D printing.

- Clean meshes
- Fill holes
- Merge meshes
- Decimate meshes
- Make meshes watertight

## ALIGNMENT

Scans must be aligned to the coordinate system before exporting, which is a simple but crucial finalization step. The VXmodel alignment tool is highly flexible and straightforward.

- Datum/entity based alignment
- Best fit alignment

## NURBS SURFACE AND GEOMETRICAL ENTITIES

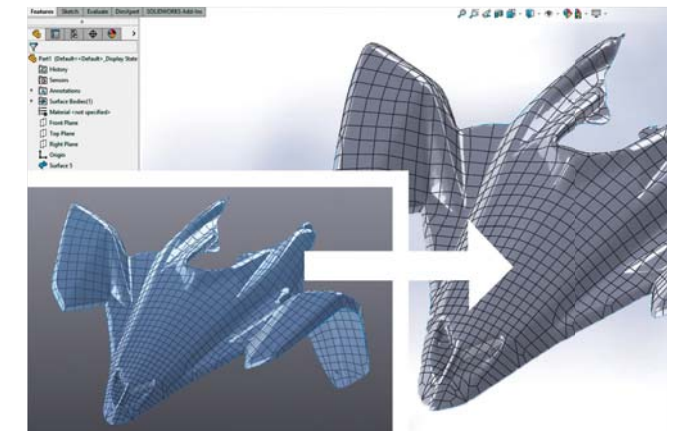
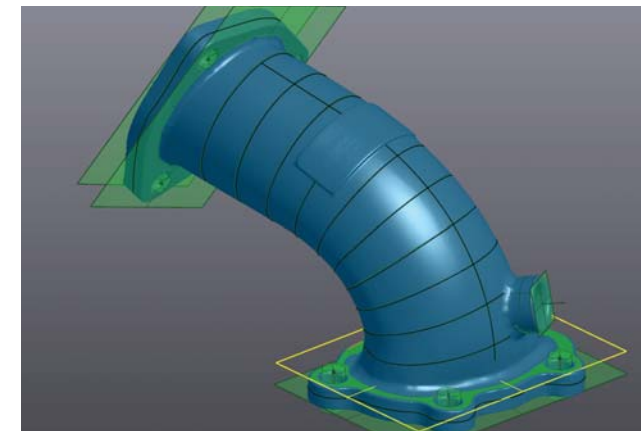
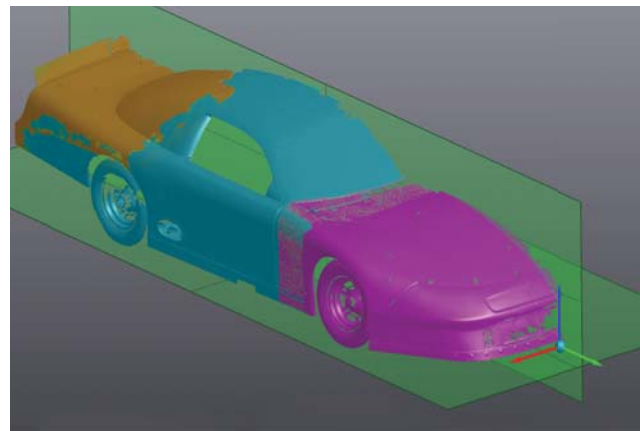
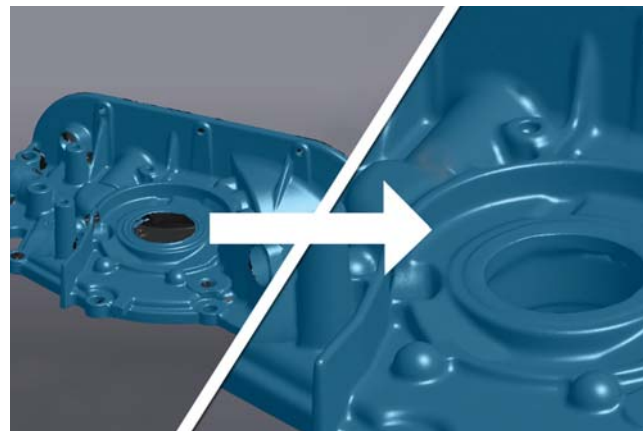
VXmodel enables you to easily generate NURBS surfaces for characterizing freeform regions. Primitive entities can be easily extracted from the mesh to complete the design in a CAD software.

- Autosurface
- 2D/3D entities (from plane to slot by cylinder)
- Curves
- Cross-sections

## TRANSFER-TO-CAD

Export to any CAD platform using standard format (.iges, .step, .dxf)

- Transfer parametric entities to the following software:
  - SOLIDWORKS
  - Autodesk® Inventor®
  - Solid Edge

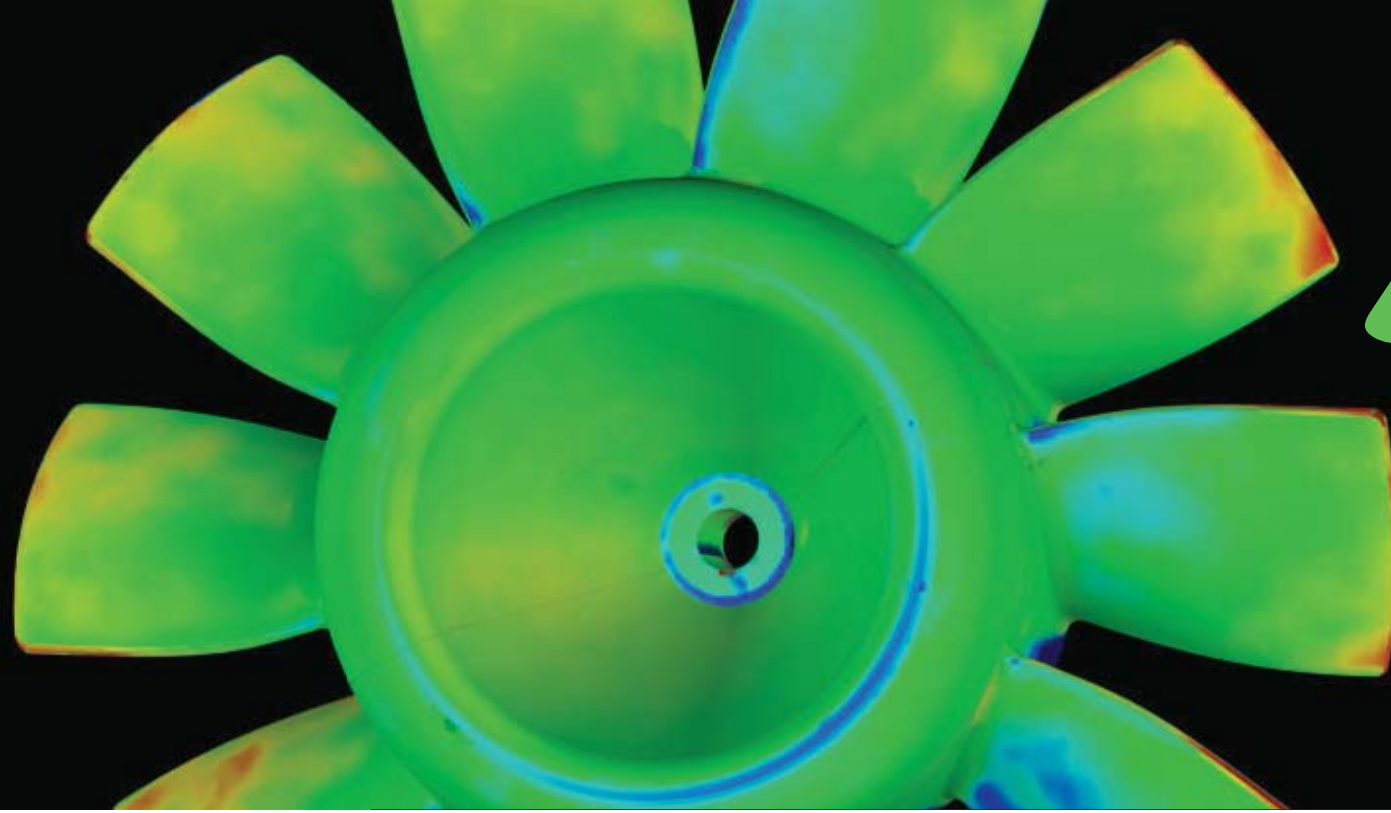


# VXinspect

## DIMENSIONAL INSPECTION SOFTWARE MODULE

VXinspect™ is an intuitive and powerful 3D inspection software designed for first article inspection (FAI) and production quality control. Directly integrated into VXelements, it provides the simplest integration of probing, 3D scanning and photogrammetry measurements into quality control workflows, including in shop-floor environments.

Whether for performing part-to-CAD inspection or to build an entire inspection program, its intuitive interface is the best solution for all inspection workflows, with no compromises made on measurement quality and GD&T requirements.



# INSPECTION

### CAD IMPORT

VXinspect supports CAD import, allowing direct measurement comparisons with CAD models to better understand part manufacturing defects.

- .IGES
- .STEP

### MULTIPLE MEASUREMENT MODE

VXinspect is the first software to seamlessly integrate photogrammetry, single-point touch probe and non-contact measurement (scan) into one unique and intuitive software interface.

- Photogrammetry
- Probing
- 3D scanning
- Mesh import

### ALIGNMENT

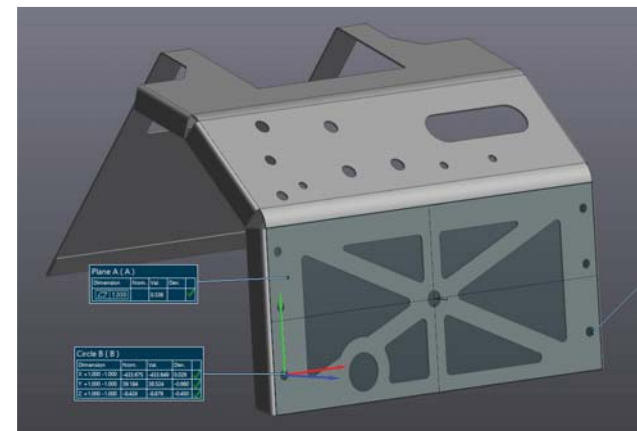
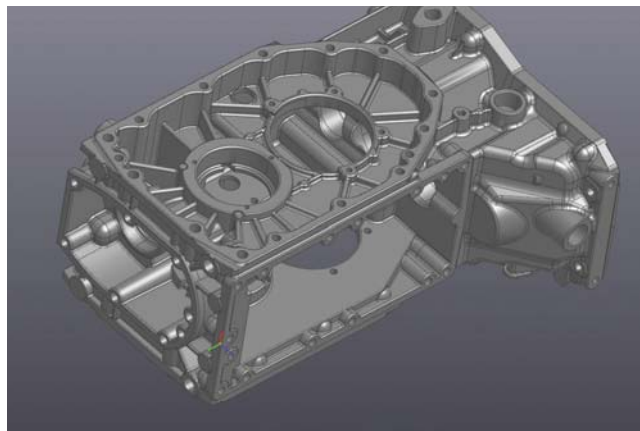
Before starting the dimensional inspection process, the position and orientation of the object in space are of the utmost importance. Aligning the part leads to more accurate results throughout the process, from data acquisition up to the final inspection report.

- Entity selection
- Best fit
- Datum targets

### GD&T

The VXinspect sophisticated algorithms and calculation methods offer an accessible way to apply GD&T practices and principles to the inspection project, even for users without extensive experience in GD&T notions.

- Form and orientation tolerance
- Profile and localization tolerance
- Datum reference frame (DRF) construction using geometric counterparts



# FEATURE COMPARISON



### ACQUISITION MODULES<sup>1</sup>

VXscan  
VXprobe  
VXshot

### APPLICATION MODULES<sup>2</sup>

VXmodel

VXinspect

	ACQUISITION MODULES <sup>1</sup>	APPLICATION MODULES <sup>2</sup>	APPLICATION MODULES <sup>2</sup>
<b>MULTIPLE MEASUREMENT MODE</b>	•		•
<b>MESH EDITING</b>		•	
<b>ALIGNMENT</b>	•	•	•
<b>GEOMETRIC ENTITIES</b>	•	•	•
<b>NURBS SURFACE</b>		•	
<b>TRANSFER-TO-CAD SOFTWARE</b>		•	
<b>CAD IMPORT</b>		•	•
<b>GEOMETRIC DIMENSIONING AND TOLERANCING (GD&amp;T)</b>			•
<b>REPORTING</b>			•

(1) Acquisition modules are included with all Creafom technologies.

(2) Application modules are sold separately.



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