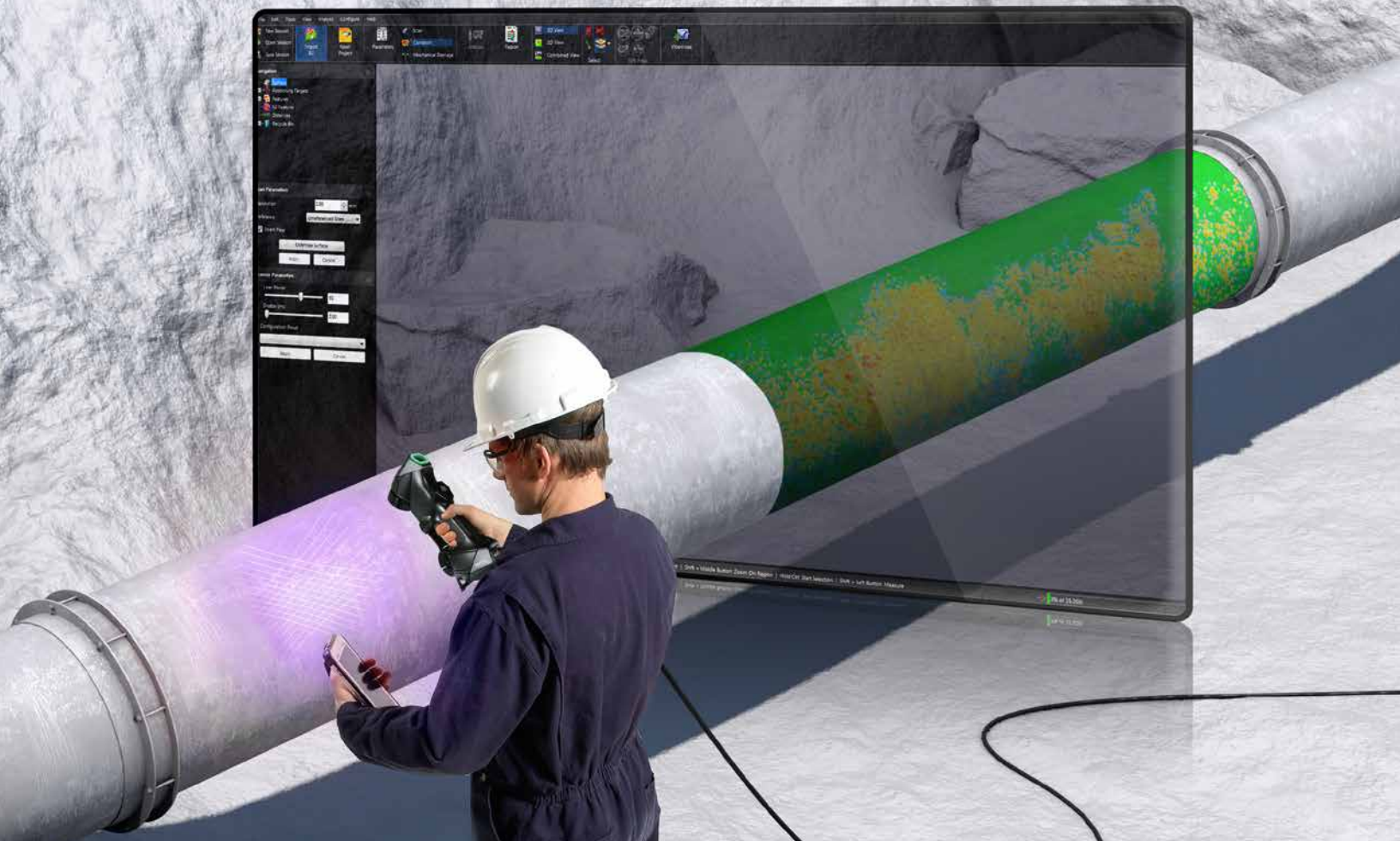


Pipecheck ™

RELIABLE AND EFFICIENT
3D SCANNING SOLUTION
FOR PIPELINE INTEGRITY ASSESSMENT



A hand is holding a black 3D scanner over a large, grey pipe. The scanner is emitting a green laser line onto the pipe's surface. The background is a sandy, outdoor environment. The text is overlaid on a dark, semi-transparent background.

CREAFORM 3D SCANNERS BUNDLE WITH PIPECHECK SOFTWARE PROVEN TECHNOLOGY TO OFFER THE BEST QUALITY OF SERVICE

The choice of technology and the quality of service are key factors that pipeline operators look at when selecting an NDT service company. Not only must the chosen technology perform inspection efficiently, without compromising on accuracy, but also it must document the pipeline condition with reliable diagnostic results and in-depth analyses that everyone will trust.

Creaform has the most trusted 3D scanning technology solution for corrosion, denting (mechanical damage), and wrinkle analysis. With Creaform 3D scanners bundle with Pipecheck software, service companies enable pipeline operators to stick to their planned budget and schedule while, most importantly, ensuring pipeline integrity and public safety.

This unique 3D scanning technology and innovative software solution goes beyond standards and active regulations, offering fast field deployment, user-independent results, versatile geometry analysis, easy reporting, and a complete 3D visualization of internal and external surfaces—raising the quality of service to a level never seen before.

CREAFORM 3D SCANNERS

TWO SOLUTIONS TO BEST FIT YOUR NEEDS

Go!SCAN3D™

THE FASTEST AND EASIEST 3D SCANNING EXPERIENCE

The Go!SCAN 3D offers the fastest and easiest 3D experience to NDT technicians who perform assessment on different types of pipeline damage—bend, radius, wrinkle, ovality, etc. Less targets are required for measuring corrosion, which speeds up setup time and accelerates field deployment. Thanks to the Go!SCAN 3D, time spent in the ditch is shortened, making it an attractive solution to service companies who want to gain a competitive advantage.



HandySCAN3D™

THE TRULY PORTABLE METROLOGY-GRADE 3D SCANNER

As the standard for portable metrology-grade 3D scanners, the HandySCAN 3D delivers accurate and repeatable results across all work conditions, whether under direct sunlight or in harsh environments. Not only can service companies fully trust HandySCAN 3D's reliable data, but they can also count on its speed to take measurements, deliver results, and complete inspection quickly and efficiently.



Creaform's flagship metrology-grade scanner has the unique ability to acquire high-resolution 3D scans that are essential to generate in-depth analyses and irrefutable diagnoses. The HandySCAN 3D is your go-to solution to accurately detect material loss and mechanical damage on large diameter pipes.

ACCESSORIES

3D SCANNER EXTERNAL BATTERY

With 4 hours of autonomy, the 3D scanner lightweight external battery facilitates data acquisition. Ideal for short-term projects, it provides easier-than-ever access to confined spaces when combined with the HandySCAN 3D!



CREAFORM PORTABLE WORKSTATION

Take full advantage of Creaform 3D scanner portability with this accessory package. This all-in-one transport case converts into a convenient portable workstation especially designed to optimize field efficiency with its rugged design and multi-terrain wheels.



PIPECHECK SOLUTION

YOUR BEST ALLY AT ALL STAGES OF YOUR PIPELINE INTEGRITY MANAGEMENT PROGRAM

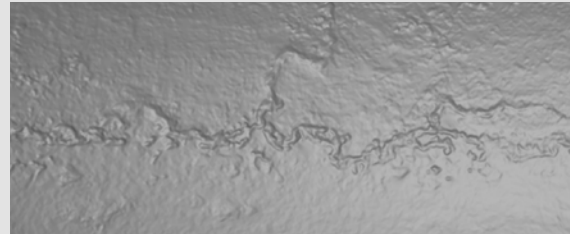
SCAN

ANALYZE

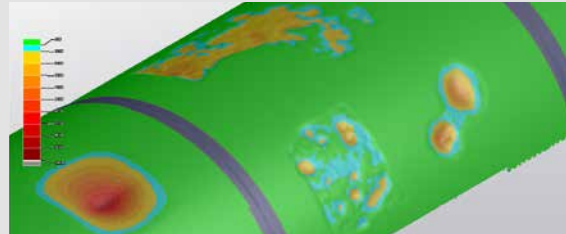
REPORT

CORROSION

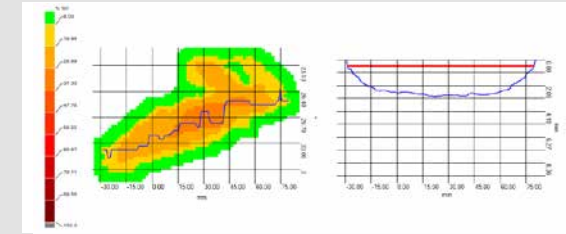
Pipecheck's corrosion software module offers fast surface acquisition and reliable data processing that generates instant, on-site results. Unlike traditional measurement methods, Pipecheck has the capacity to measure both the internal corrosion (thanks to UT or interior 3D scanning if possible) and external corrosion (with 3D scanning) to get a complete 3D visualization of the damages for more detailed, in-depth analyses.



- High-resolution capture of all corroded areas
- Fast surface acquisition to increase efficiency
- Improved scanning performance for small features such as pitting



- Feature detection using real pipe geometry
- Automatically applied interaction rules
- Estimated burst pressure calculations
- Enhanced virtual pit gauge capabilities near welds and obstacles



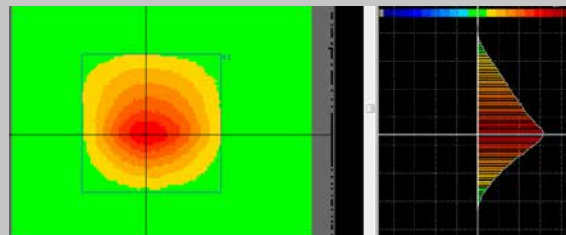
- Excel report including worst-case-profile and predicted failure path
- Export to CSV available for further analysis
- Mesh export available
- Customizable pass/fail criteria
- Snapshot tool for 3D reporting

DENTING (MECHANICAL DAMAGE)

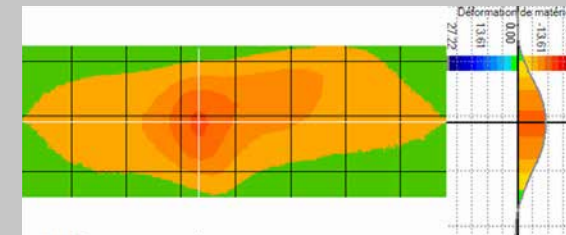
Pipecheck's denting software module offers unrivalled measurement quality and advanced analysis capacity that facilitate the decision-making process when repairs are required. Pipecheck provides key functionalities, such as the automatic detection of the maximum depth, which can be difficult to find with traditional measurement methods.



- High-resolution organized mesh file to enhance analysis capabilities
- Fast measurement in any condition



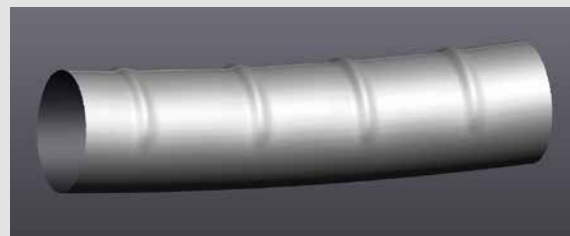
- Automatic maximum depth detection
- Depth measurement using straight edge and pipe caliper
- Strain-based analysis
- Shoulder section available



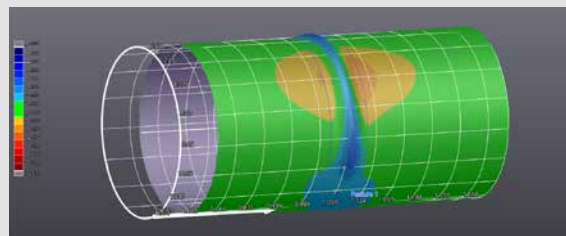
- Cross-section details (axial and circumferential)
- CSV depth grid export
- Mesh export available
- Excel report with ovality measurements (diameter with caliper)

WRINKLE ANALYSIS

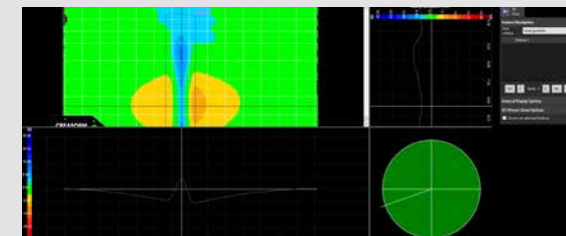
Pipecheck's wrinkle analysis module is programmed to calculate the crest-to-trough depth of the ripple, as well as the wavelength, circumferential extent, and diameter restriction—enhancing the quality of analysis and reporting.



- Fast and user-independent 360° measurements
- Scanning multiple wrinkles simultaneously during a single acquisition



- Crest-to-trough depth of the ripple
- Wavelength
- Circumferential extent
- Diameter restriction



- Excel report with all standard information for wrinkle analysis

ADVANCED FUNCTIONALITIES

CORROSION IN MECHANICAL DAMAGE

Being able to assess material loss depth from a mechanical damage deformation is no longer an unattainable goal. Pipecheck software is the one and only solution on the market to offer unique and sophisticated tools able to extract corrosion depth inside mechanical damage.

ILI CORRELATION TOOL

In-line inspection (ILI) performance levels can be monitored in Pipecheck by correlating pipeline inspection gauge data against pipeline 3D scanning and/or imported UT data. The interface has been optimized to compare the depth, length, and width of features in just one click. However, the more pipeline operators accumulate a significant amount of data, the more the correlation results are accurate. ILI determines with more accuracy, which sites really need to be dug up, reducing the number of excavations necessary for direct assessment and repair.

STRAIGHTENING OPERATION

Conventional methods for depth measurement (pit gauges) cannot be used accurately since pipe curvature often introduces depth values that do not represent material loss or pipe geometry deformations. To solve this issue—and to improve efficiency and confidence in results—Pipecheck features a built-in pipeline straightening tool. This non-destructive evaluation (NDE) tool uses powerful algorithms that extract the pipe centerline and straighten the full segment. The metal loss or mechanical damage can then be assessed with Pipecheck using the virtual pit gauge tool to report depth readings free of any curvatures.

FULL-PIPE JOINT ASSESSMENT

Pipecheck can now assess full pipe joints. It saves time and money by scanning pipes all at once or with multiple HandySCAN 3Ds simultaneously. It enables any NDT service company and pipeline operator to perform pipeline integrity assessments on pipes up to 18 m (60 ft) in length.

TECHNICAL SPECIFICATIONS

Innovating technology that provides accuracy, simplicity, portability as well as real speed to your professional-grade applications.

	HandySCAN BLACK™	HandySCAN BLACK™IElite	Go!SCAN SPARK™
WEIGHT	0.94 kg (2.1 lb)		1.25 kg (2.7 lb)
DIMENSIONS (LxWxH)	79 x 142 x 288 mm (3.1 x 5.6 x 11.3 in)		89 x 114 x 346 mm (3.5 x 4.5 x 13.6 in)
MEASUREMENT RATE	800,000 measurements/s	1,300,000 measurements/s	1,500,000 measurements/s
SCANNING AREA	310 x 350 mm (12.2 x 13.8 in)		390 x 390 mm (15.4 x 15.4 in)
LIGHT SOURCE	7 blue laser crosses	11 blue laser crosses (+1 extra line)	White light (99 stripes)
LASER CLASS	2M (eye-safe)		N/A
MEASUREMENT RESOLUTION	0.025 mm (0.0009 in)		0.100 mm (0.0039 in)
MESH RESOLUTION	0.100 mm (0.0039 in)		0.200 mm (0.0078 in)
ACCURACY ⁽¹⁾	0.035 mm (0.0014 in)	0.025 mm (0.0009 in)	Up to 0.050 mm (0.0020 in)
VOLUMETRIC ACCURACY ⁽²⁾ (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)	0.050 mm + 0.150 mm/m (0.0020 in + 0.0018 in/ft)
VOLUMETRIC ACCURACY WITH MaxSHOT Next™ I Elite ⁽³⁾	0.020 mm + 0.015 mm/m (0.0008 in + 0.00018 in/ft)		0.050 mm + 0.015 mm/m (0.0020 in + 0.00018 in/ft)
STAND-OFF DISTANCE	300 mm (11.8 in)		400 mm (15.7 in)
DEPTH OF FIELD	250 mm (9.8 in)		450 mm (17.7 in)
PART SIZE RANGE (recommended)	0.05–4 m (0.15–13 ft)		0.1–4 m (0.3–13 ft)
SOFTWARE	Pipecheck		

(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.
Go!SCAN SPARK: Typical value for diameter measurement on a calibrated sphere artefact.

(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.
Go!SCAN SPARK: Performance with positioning targets or with an object presenting adequate geometry/color texture for positioning. Performance is assessed with traceable length artefacts using positioning targets.

(3) HandySCAN BLACK and HandySCAN BLACKIElite (ISO 17025 accredited): The volumetric accuracy of the system when using a MaxSHOT 3D cannot be superior to the default accuracy for a given model.
Go!SCAN SPARK: The volumetric accuracy of the system when using a MaxSHOT 3D cannot be superior to the default accuracy.



Creaform Inc. (Head Office)

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

creaform.info@ametek.com | creaform3d.com

Creaform U.S.A. Inc.

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



ULTRA PRECISION TECHNOLOGIES

Authorized Distributor

Pipecheck, VXremote, HandySCAN 3D, HandySCAN BLACK, HandySCAN BLACKIElite, Go!SCAN SPARK, MaxSHOT NextIElite and their respective logos are trademarks of Creaform Inc. © Creaform Inc. 2020. All rights reserved. V1