SERVO-ROBOT

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1 SYSTEM DESCRIPTION

WiKi-SCAN 2.0™ is a unique, compact, and non-contact handheld welding quality management system that accurately inspects weld joint preparations, joint fit-up, and weld bead geometry ensuring the reliability of the welding process.

It provides measurements of many features, including leg size and undercut, as well as measurements of critical parameters such as root and face opening, gap, mismatch and bevel angles. The advanced measurement software allows automatic defect detection with little prior training.

WiKi-SCAN 2.0™ limits redundant inspection operations, unneeded repairs, and over-welding, shortens inspection time and saves costs. Comprehensive and immediate objective digital reporting and wireless communication allow for efficient electronic data management, traceability, and quality control.

2 SYSTEM FEATURES

- Non-contact electronic inspection of joint and weld
- Objective results and improved reliability
- Simple intuitive icon-based interface
- Template based inspection parameters for user friendly operation without programming
- Customizable Go/No-Go settings and easily set tolerances
- Immediate measurement results
- Encoder measurement module for reliable data collection on long welds
- Automatically creates inspection reports
- Ability to transfer inspection results over Wi-Fi or USB
- Robust yet compact design for use in real production environments
- USB charging of the internal battery simplifies usage
- Helpful video tutorials about common functions

3 EXPLODED VIEW OF WIKI-SCAN 2.0™ AND AVAILABLE ACESSORIES

4 APPLICABLE JOINTS AND WELDS

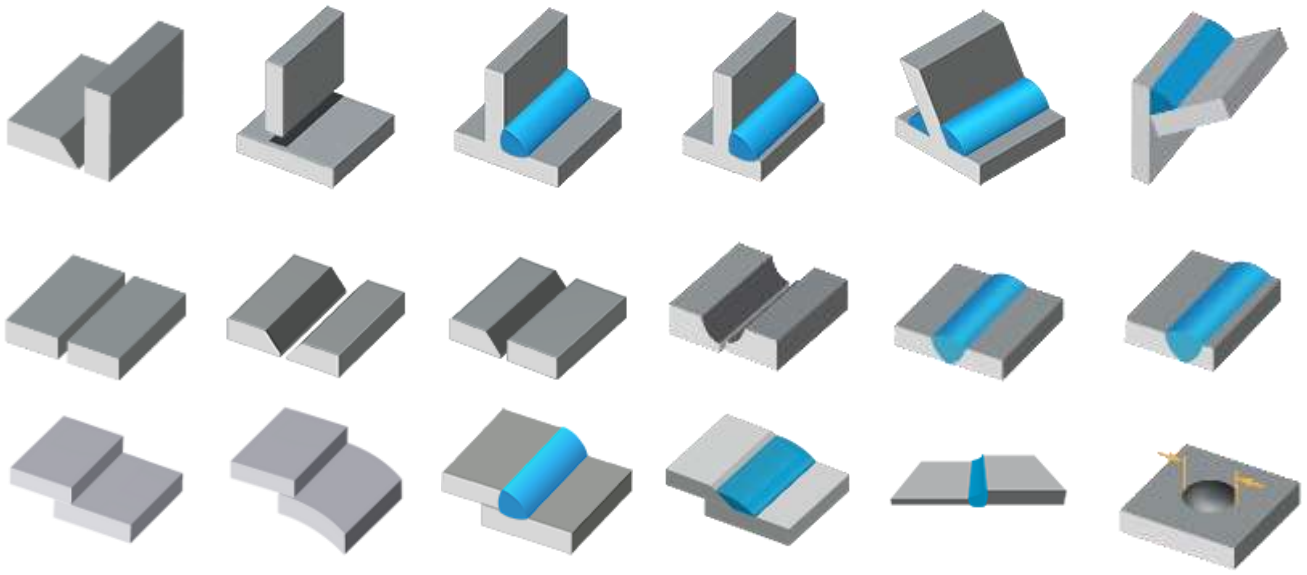
The following table includes the standard joints and welds that can be inspected by the WiKi-SCAN 2.0™. Other joints and weld templates are available.

JOINT INSPECTION			
Joint Type and Range / Features	T-Joint 	Butt Joint (Square, U, V and Bevel Groove) 	Lap Joint 
Joint Included Angle (β)	✓	✓	–
Root Opening/Gap	✓	✓	–
Mismatch/Hi-Lo	–	✓	✓
Groove Angle (θ)	–	✓	–
Bevel Angle (l,r)	–	✓	–

WELD INSPECTION			
Weld Type and Range / Features	Fillet Weld 	Groove Weld 	Lap Weld 
Leg and Size	✓	–	✓
Theoretical Throat	✓	–	✓
Convexity/Underfill	✓	✓	✓
Reinforcement	–	✓	–
Undercut	✓	✓	✓
Toe Angle	✓	✓	✓
Mismatch/Hi-Lo	–	✓	–
Plate Angle	✓	✓	✓
Face Width	–	✓	–

5 ADDITIONAL INCLUDED JOINT AND WELD TEMPLATES

The WiKi-SCAN 2.0™ Handheld Non-Contact Welding Quality Management System comes with various templates of all of the most common joint types and welds. This template based system allows users to easily inspect joints or welds with minimal configuration. The figure below shows the various standard joint templates and weld templates that are available from SERVO-ROBOT.



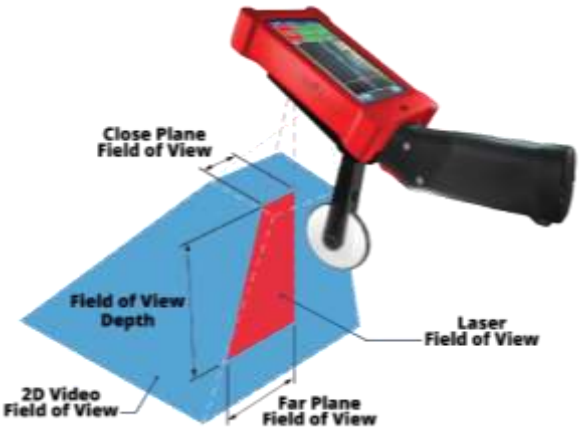
6 SYSTEM COMPONENTS DESCRIPTION

6.1 WiKi-SCAN 2.0™ system selection

6.1.1 WiKi-SCAN 2.0™ Standard Package with Quick Release Single Wheel Support	PN 501-00001-XX

TECHNICAL SPECIFICATIONS:

	WiKi-SCAN 2.0™
Laser class	II M
Field of view depth (mm)	120
Field of view width	
Close plane (mm)	40
Far plane (mm)	84
Dimensions (mm)	294L x 96W x 82H
Dimensions with Wheel	294L x 96W x 188H
Weight (g)	920
Weight with Encoder	1000
Li-ion Battery Life	4 – 7 hrs. depending on use (24 Wh)
Operating Temperature Range	5 – 40 Celsius
Connectivity	USB 2.0 / Wi-Fi (Dual Band 2.4 / 5 GHz 802.11 a/b/g/n)



ACCESSORIES/OPTIONS INCLUDED:

1	2	3	4	5
 Encoder Port Dust Cover	 Spare Battery 24Wh	 Battery Charger and Power Cord	 USB Charging Kit	 USB Data Transfer Adapter
6	7	8	9	
 Verification Block	 2.5mm Allen Wrench	 Carrying Case	 Manuals and Software on USB key	

6.2 Encoder or wheel support options

6.2.1 WiKi-SCAN 2.0™ Encoder Measurement Module incl. defect detection software	PN 301-00023
The Encoder Measurement Module allows users to accurately measure the location of detected defects relative to the start of the weld bead or cumulatively. The position of the defects is automatically recorded for further reference in the WiKi-SCAN 2.0™ database. Additionally, the encoder wheel support assists with maintaining the WiKi-SCAN 2.0™ at the optimal position above the part to be inspected.	

6.2.2 Quick Release Single Wheel Support for WiKi-SCAN 2.0™	PN 301-00057
The Quick Release Single Wheel Support assists with maintaining the WiKi-SCAN 2.0™ at the optimal position above the part to be inspected. This support can easily be removed or installed without the need for any additional tools. The light weight and low profile design makes it perfect for working in confined spaces or where access may be limited.	

6.3 Software Packages

6.3.1 WiKi-SCAN ™ Automatic Defect Detection	PN 508026
With the Automatic Defect Detection option, you will just need to position the WiKi-SCAN over the joint and move along the joint to inspect. Every time a tolerance limit is exceeded, the WiKi-SCAN will vibrate, take a picture and record the value of the feature out of tolerance.	

6.4 WiKi-SCAN 2.0™ Accessories

6.4.1 WiKi-SCAN 2.0™ High Capacity Battery 24Wh	PN 102-03233
Upgraded version of the WiKi-SCAN 2.0™ battery. These new batteries are rated at 24Wh and are backwards compatible with the previous generation of the WiKi-SCAN™. Note: Due to safety regulations, only 3 batteries (total) can be shipped with each WiKi-SCAN 2.0™ system	

6.4.2 WiKi-SCAN™ Battery Charger	PN 102-03447
Battery charging cradle for charging WiKi-SCAN 2.0™ high capacity batteries outside of the WiKi-SCAN 2.0™. This battery charging cradle can also be used with the previous generation WiKi-SCAN™ batteries. Typical charge time is around 3.5hrs per battery.	

6.4.3 WiKi-SCAN™ Power Cord for Battery Charger	PN (see below)
Power cord for the battery charger based on the wall plug outlet type based on region. The following power cords are available: - US Style Power Cord (PN 102-03448) - EU Style Power Cord (PN 102-00092) - CN Style Power Cord (PN 102-00029) - UK Style Power Cord (PN 102-03445)	

6.4.4 WiKi-SCAN 2.0™ USB Charging Kit	PN 307-00004
The WiKi-SCAN 2.0™ USB Charging Kit comes with all the components necessary to charge the high capacity battery inside the WiKi-SCAN 2.0™ without ever taking the battery out of the handle. It comes with a 6ft Type C USB cable and a 10-Watt USB charger. Typical charge time is around 3.5hrs.	

6.4.5 WiKi-SCAN™ Verification Block	PN 98780100
Additional verification block for the WiKi-SCAN 2.0™. The verification block is used for periodic verification of the functionality of the WiKi-SCAN 2.0™ system.	

6.4.6 WiKi-SCAN 2.0™ USB Data Transfer Adapter	PN 102-03286
Additional WiKi-SCAN 2.0™ USB Data Transfer Adapter. This cable is used for transferring inspections and files between the WiKi-SCAN 2.0™ and a USB thumb drive.	

6.4.7 WiKi-SCAN 2.0™ Carrying Case	PN 307-00003
Protective carrying case for the WiKi-SCAN 2.0™ to protect it from bumps or shocks. The case comes with the custom cut foam insert for the WiKi-SCAN 2.0™ and optional accessories.	

6.4.8 Shock Absorbent Protective Cover	PN 201-00078
Protective shock absorbent cover for the WiKi-SCAN 2.0™. Made of high-quality rubber custom formed to the WiKi-SCAN 2.0™ body for increased protection from drops or scrapes.	

6.4.9 WiKi-SCAN 2.0™ Support Wheel and Encoder O-Rings (5 EA per PK)	PN 101-01608
Replacement O-rings for the WiKi-SCAN 2.0™ Encoder Measurement Module and the Quick Release Single Wheel Support. Replacement pack comes with a set of 5 O-rings.	

6.4.10 WiKi-SCAN 2.0™ Handle End Cap	PN 301-00037
Replacement end cap for the WiKi-SCAN 2.0™ handle. This end cap also includes the 2.5mm captive screws for securing the end cap to the WiKi-SCAN 2.0™ handle and the water-resistant gasket.	

6.4.11 Encoder Port Dust Cover	PN 301-00066
Replacement encoder port dust cover for the WiKi-SCAN 2.0™. The Encoder Port Dust Cover protects the WiKi-SCAN 2.0™ from dust and water when the Encoder Measurement Module is not in use. Additionally, it allows for the attachment of the quick release supports without the need for any tools.	

6.4.12 2.5mm Allen Key	PN 105-00034
Replacement 2.5mm Allen key for the WiKi-SCAN 2.0™. This key is used for removal of the Encoder Measurement Module, Encoder Port Dust Cover, and the WiKi-SCAN 2.0™ Handle End Cap.	

6.5 Re-Certification

6.5.1 WiKi-SCAN System Re-Certification	PN WCERT
The WiKi-SCAN system re-certification consists of a complete system verification including a recalibration. The price is per system.	