



X-Y Encoding Scanner for Manual Inspection of Composites

The GLIDER X-Y Scanner is a 2-axis encoding scanner for the manual inspection of slightly curved or flat composite surfaces. The scanner is well suited for raster scanning with the following technologies:

- Conventional ultrasonics (UT)
- Phased array ultrasonics (PAUT)
- Eddy current (EC)
- Eddy current array (ECA)

Commonly inspected materials include composites and aluminum, using suction-cup pods; and carbon steel, using optional magnetic pods.



Photo used with the permission of Avior, Produits Intégrés

APPLICATIONS

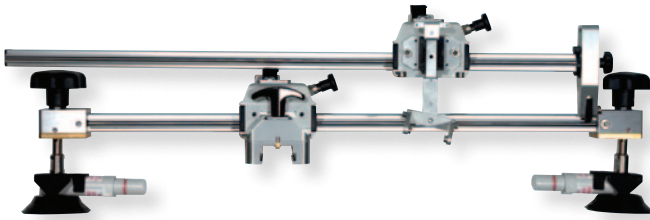
- Inspection of composites
- Inspection of airplane fuselages for delamination and cracking
- Inspection of ferromagnetic plates for corrosion
- Inspection of friction stir welds (FSW) on aluminum

FEATURES

- Well suited for phased array UT, conventional UT, and eddy current inspection techniques using one probe
- Compatible with the OmniScan, the TomoScan FOCUS LT (with optional adapter), and other instruments using the appropriate encoder cable.
- Two axes with waterproof encoders for position-encoded X-Y scans
- Axis positioning with minimal backlash
- Both modules are mounted on bearings for precise and smooth displacement
- Two pivot-equipped mounting pods enable surface following
- Locking devices allow each axis to be locked
- Module displacement can be in increments of 3.27 mm or in free-running mode
- The probe holder is mounted on a bearing-arm system that can be spring loaded if needed.
- Aluminum frame is used for lightweight and rust-free components
- Sliding Y-axis provides greater scan flexibility and improved portability

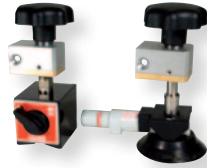
Design Characteristics

The X-axis is attached to two mounting pods. Depending on the material to inspect, one of the following models can be used:



Sliding Y-axis allows greater flexibility and improved portability

- Suction-cup mounting pod (included)
- Magnetic mounting pod (optional)



There are two encoder modules (one on each axis) to measure the probe position. The displacement of these modules can be in 3.27 mm steps, free running, or locked.

The scanner comes in three formats (18 in., 24 in., and 36 in.), depending on the scan coverage needed:

- GLIDER 18×18
- GLIDER 24×24
- GLIDER 36×36

GLIDER Scanner Specifications

Weight: 5 kg to 8 kg, depending on the configuration

Suction-cup pod holding force: 7 kg per cup

Magnetic-pod holding force: 81 kg per base

Encoder resolution: 13 steps/mm (± 0.15 step/mm), 330 steps/in. (± 0.006 steps/in.)

Encoder connection: DE-15 to 2 LEMO 90°

Minimum curvature for partial scans: 50 cm (20 in.), outside diameter

Model	Length (X) mm (in.)	Width (Y) mm (in.)	Height (Z) mm (in.)
GLIDER 18×18	700 (28)	690 (27)	152 (6)
GLIDER 24×24	900 (35)	845 (33)	152 (6)
GLIDER 36×36	1200 (47)	1150 (45)	152 (6)

GLIDER Scanner Kit Includes:

- Two tracks for desired stroke (18 in., 24 in., or 36 in., depending on the model)
- Two displacement-encoding modules
- Two suction-cup mounting pods
- 5 m encoder cable compatible with OmniScan instruments
- Phased array yoke (40 mm)
- TOFD/PE yoke (31.75 mm)
- 90° probe holder mounting bracket
- 180° probe holder mounting bracket
- Probe holder bearing arm with springs
- Irrigation tubing and fitting
- Hard carrying case

Options:

MAGNETIC MOUNTING PODS

Magnetic mounting pods enable use on ferromagnetic surfaces (part number GLIDER-A-01).

TRACKS

18 in., 24 in., or 36 in. tracks are available as options.

Stroke mm (in.)	Part Numbers	
	X- Axis	Y-Axis
457 (18)	GLIDER-A-X18	GLIDER-A-Y18
610 (24)	GLIDER-A-X24	GLIDER-A-Y24
914 (36)	GLIDER-A-X36	GLIDER-A-Y36

TOMOSCAN FOCUS LT ENCODER CABLE ADAPTER

Encoder cable adapter (part number EWUX1430)

PROBES AND WEDGES

Refer to tables on next page.

MANUAL WATER PUMP KIT

Water pump is compatible with scanner umbilical cables. It can also be used with provided tubing. Includes tank, tubing, and Y-splitters (part number OPIX105).

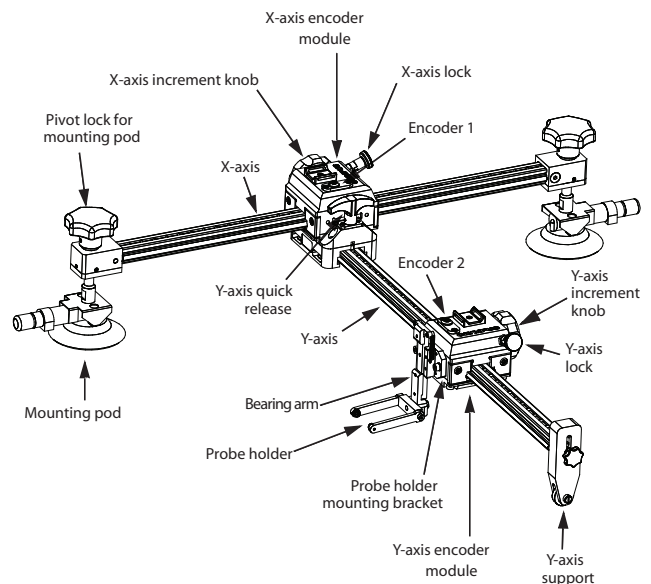
ELECTRIC WATER PUMP KITS

The CFU-03 and CFU-05 are portable electric pump units used to supply couplant to wedges during ultrasonic inspections.



CFU-05

CFU-03



Probe and Wedge Ordering Information

COMPOSITE INSPECTION SOLUTION

PHASED ARRAY PROBES					
Part number	Frequency (MHz)	Number of elements	Pitch (mm)	Elevation (mm)	Wedges
3.5L64-NW1	3.5	64	1	7	SNW1
5L64-NW1	5.0	64	1	7	SNW1
3.5L24-NW2	3.5	24	1	7	SNW2
5L24-NW2	5.0	24	1	7	SNW2

PHASED ARRAY WEDGES					
Part number	Beam type	Refracted angle (°)	Wave type	Probe type	Water pocket (mm)
SNW1-0L-IHC-C	Normal	0	Longitudinal	NW1	N/A
SNW1-0L-WP5	Normal	0	Longitudinal	NW1	0.113
SNW2-0L-WP5	Normal	0	Longitudinal	NW2	0.113

ULTRASONIC PROBES					
Part number	Frequency (MHz)	Element diameter (mm)	Wedges	Connector location	Connector type
C545-SM	3.5	13	SPE3	Straight	Microdot
C541-SM	5.0	13	SPE3	Straight	Microdot

ULTRASONIC WEDGES			
Part number	Refracted angle (°)	Wave type	Water pocket (mm)
SPE3-0L-WP5	0	Longitudinal	0.113
SPE3-0L-IHC-C	0	Longitudinal	N/A

CORROSION INSPECTION SOLUTION

ULTRASONIC PROBE (STEEL)					
Part number	Frequency (MHz)	Tip diameter (mm)	Probe holder (0°)	Connector location	Connector type
D790-SM	5.0	11	ABWX612	Straight	Microdot

EDDY CURRENT ARRAY PROBE (ALUMINUM AIRCRAFT SKIN)						
Part number	Frequency range (kHz)	Probe coverage (mm)	Probe resolution (mm)	Number of elements	Cable length (m)	Connector type
SAB-067-005-032	2.0 to 20	67	2.1	32	3.0	OmniScan

SCRIBE MARK INSPECTION SOLUTION

EDDY CURRENT ARRAY PROBE						
Part number	Frequency range (MHz)	Probe coverage (mm)	Probe resolution (mm)	Number of elements	Cable length (m)	Connector type
SBBR-026-300-032	0.1 to 1	26	0.81	32	2.0	OmniScan

FSW INSPECTION SOLUTION

EDDY CURRENT ARRAY PROBE						
Part number	Frequency range (kHz)	Probe coverage (mm)	Probe resolution (mm)	Number of elements	Cable length (m)	Connector type
SAAR-051-100-032	20 to 300	51	1.6	32	3.0	OmniScan

PHASED ARRAY PROBES				
Part number	Frequency (MHz)	Number of elements	Cable length (m)	Connector type
10L64-FSW	10.0	64	2.5	OmniScan

PHASED ARRAY WEDGES		
Part number	Beam type	Wedge angle (°)
SFSW-N45S-IHC	Normal	22

For a more complete description of probes and wedges, consult www.olympus-ims.com.

ORDERING INFORMATION

Part Number	Description
GLIDER-18x18	GLIDER Scanner with 18 in. x 18 in. X-Y stroke (457 mm x 457 mm)
GLIDER-24x24	GLIDER Scanner with 24 in. x 24 in. X-Y stroke (610 mm x 610 mm)
GLIDER-36x36	GLIDER Scanner with 36 in. x 36 in. X-Y stroke (914 mm x 914 mm)

OLYMPUS[®]

www.olympus-ims.com

info@olympusNDT.com

OLYMPUS NDT INC.

48 Woerd Avenue • Waltham, MA 02453 • USA
Tel.: (1) 781-419-3900 • Fax: (1) 781-419-3980
12569 Gulf Freeway • Houston, TX 77034 • USA
Tel.: (1) 281-922-9300 • Fax: (1) 952-487-8877

OLYMPUS INDUSTRIAL SYSTEMS EUROPA

Stock Road • Southend-on-Sea • Essex • SS2 5QH • UK

OLYMPUS SINGAPORE PTE. LTD.

491B River Valley Road 12-01/04, Valley Point Office Tower, 248373 • Singapore

OLYMPUS AUSTRALIA PTY. LTD.

PO Box 985 • Mount Waverley, VIC 3149 • Australia

Scanner_Glider_EN_200907 • Printed in Canada • Copyright © 2008 by Olympus NDT.

*All specifications are subject to change without notice. All brands are trademarks or registered trademarks of their respective owners.

