

### FEATURES

- Covers standard pipes from 0.84 in. to 4.5 in. OD (21 mm to 114 mm).
- Operates within 12 mm (0.5 in.) clearance (on all standard pipes) permitting inspections in limited access areas
- Can hold two phased array probes for complete weld coverage in one pass
- Can be configured to make one-sided inspections for pipe-to-component evaluations
- Design provides stable and constant pressure around the full circumference of the pipe.
- Urethane wheels provide smooth radial movement and limited axial drift
- Encoder resolution of 32 steps/mm
- Compact, lightweight, and portable
- Wedges and probes can be quickly and easily changed.
- Distance between probes can be adjusted from 0 mm to 55 mm
- Can be manipulated from one side of a pipe.
- Spring-loaded scanner can be used on ferromagnetic and nonferromagnetic pipes.
- Waterproof, rust-free, and CE compliant

## Weld Inspection of Small-Diameter Pipes

The COBRA manual scanner is able to inspect standard pipes as small as 0.84 in. OD to 4.5 in. OD. This scanner uses the OmniScan® MX flaw detector with the 16:128 module, and the MXU software to inspect circumferential welds on small-diameter pipes.

With its very slim design, this manual scanner inspects pipes in limited access areas where minimal clearance is required. Adjacent obstructions such as piping, supports, and structures can be as close as 12 mm (0.5 in.). This spring-loaded scanner is designed to hold onto carbon steel and stainless steel pipes of different diameters. The COBRA scanner is characterized by its smooth-rolling encoded movement enabling precise data acquisition. The scanner can hold two phased array probes for a complete inspection of the weld in one pass. For pipe-to-component inspections, the scanner can be quickly configured to make one-sided inspections with only one probe.

This Olympus solution uses low-profile phased array probes with optimized elevation focusing, which improves the detection of small defects in thin-wall pipes. Specially

designed low-profile wedges that fit each pipe diameter covered by the scanner, are also offered to complete the solution. The COBRA scanner ensures stable, constant, and strong pressure thus providing good UT signals and precise encoding around the full circumference of the pipe. This complete solution package is small and lightweight for easy transport. The scanner is also waterproof, rust-free, and CE compliant.

The COBRA scanner on a 0.84 in. pipe with two PA probes and an OmniScan MX 16:128 displaying two PA groups with sectorial scans, A-scans, and C-scans.



## CONFIGURATION

The typical configuration for the application uses: the COBRA scanner, two A15 low-profile phased array probes with SA15 wedges, the Y probe adaptor, and the OmniScan MX PA 16:128 with the multigroup option.

## ORDERING INFORMATION

Part Number	Item number	Description	Scanner Package
			PN: COBRA-K-4.5
COBRA	U8750053	Small pipe scanner kit with encoder to cover 0.84 in. to 4.5 in. OD standard pipes; packaged in hard carrying case	✓
COBRA-A-SA15	U8721205	2 flat wedges plus 10 pairs of curved wedges to cover 0.84 in. to 4.5 in. OD pipes	✓
7.5CCEV35-A15-P-2.5-OM	U8330826	Low-profile phased array probe	✓ (x2)
COBRA-SP-BASIC	U8775166	Basic spare parts kit	
OMNI-A-ADP05	U8767016	Y-adaptor (splitter) with OmniScan connectors to support 2 phased array probes	
WTR-SPRAYER-4L	U8775153	4 L manual water pump with irrigation tubes and fittings	
WTR-SPRAYER-8L	U8775001	8 L manual water pump with irrigation tubes and fittings	
OMNI-P-PA16128	U8100029	OmniScan MX 16:128 with MXU software	
OMNI-SO-MGROUP	U8143007	Multigroup option for MXU software	

## PHASED ARRAY PROBE

Part Number	Freq. (MHz)	Number of Elements	Pitch (mm)	Elevation (mm)	Corresponding Wedge	Cable Length (m)	Connector Type	Elevation Curvature Radius (mm)
7.5CCEV35-A15-P-2.5-OM	7.5	16	0.5	10	SA15	2.5	OmniScan	35

## PHASED ARRAY WEDGES

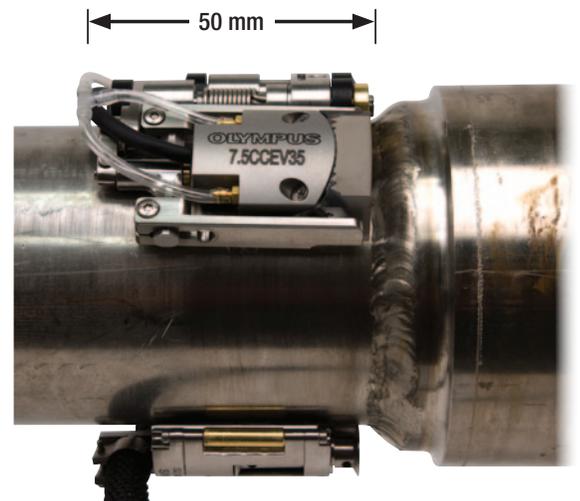
The wedge part number for this application is **SA15-N60S-IH-AODXXXX**. This part number comprises the A15 probe type, normal probe mounting, 60 degree refracted angle, shear wave, irrigation, and scanner mounting holes. The outside diameter curvature (XXXX) is defined by referring to the different values for standard pipe outside diameters found in the table below (AOD).

## STANDARD WEDGE AOD VALUES AND PIPE OD

AOD (in.)	Minimum OD (in.)	Maximum OD (in.)
0.84	0.800	0.840
1.05	0.840	1.050
1.315	1.050	1.315
1.66	1.315	1.660
1.9	1.660	1.900
2.375	1.900	2.375
2.875	2.375	2.875
3.5	2.875	3.500
4	3.500	4.000
4.5	4.000	4.500



The solution uses low-profile phased array probes with optimized elevation focusing, which improves the detection of small defects in thin-wall pipes.



The COBRA scanner can also be configured for pipe-to-component weld inspections.

OLYMPUS NDT INC. is ISO 9001 certified.

**OLYMPUS**

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