L-3 ESSCO’s solid laminate radomes are rigid, self-supporting, shell-type structures. Unlike sandwich radomes that use a multi-layer construction, these radomes are constructed with solid fiberglass walls and can provide a cost-effective option in smaller sizes.

CONSTRUCTION AND MATERIALS

For radomes up to 10 ft. (3.05m) in diameter, single piece radomes are available. To minimize shipping problems with diameters 10 ft. and above, multiple panel designs can be used. As with all other L-3 ESSCO radomes, preimpregnated fiberglass materials are used to help carefully control resin content and thickness. To keep costs low on multi-panel designs, L-3 ESSCO solid laminate radomes panels are not randomly oriented. Instead, they are generally arranged in neat vertical and horizontal rows. This architecture minimizes costs but allows for greater boresight and sidelobe degradation than our other rigid radomes with a randomized panel design. The panels are easy to assemble from inside the radome, using our captivated T-nut design.

APPLICATIONS

• Can be used effectively for many communication and weather radar antennas operating below 3 GHz
• Often suitable for commercial SATCOM, EMI test facilities and low-frequency tracking applications
• Designs are also available for higher frequency applications, but are usually used for smaller radomes
• For radomes up to 12 ft. (3.66m) in diameter, wind speeds of 150 mph or higher can be withstood
• For radomes above 12 ft., lower wind speeds are appropriate as the costs and electromagnetic performance start to suffer with thicker radome walls
SOLID LAMINATE RADOMES

ELECTROMAGNETIC PERFORMANCE

L-3 ESSCO’s solid laminate radomes perform well at frequencies below 3 GHz or at higher frequencies when the wall thickness can be tuned for narrow bandwidths. The chart below provides typical electromagnetic performance data.

STANDARD SIZES

Please contact us for detailed size information.

![Chart showing electromagnetic performance data](image)

18-ft. (5.5m) diameter solid laminate radome, shipboard application.

5-ft. (1.5m) diameter shipboard radome application.

Small one-piece solid laminate radomes for high-frequency applications.