STUCCO FUTURES

Continuous Insulation Over External Z-Girt Furring

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Energy code advancements increasingly necessitate the incorporation of continuous insulation (CI) in framed wall assemblies to meet thermal performance standards. This requirement is particularly significant in steel stud construction, where thermal bridging, or heat and cold transferring directly through the conductive steel studs, can significantly diminish the effective R-value of cavity insulation. Continuous insulation, applied to the exterior (outboard) side of the framing, creates an uninterrupted thermal barrier that minimizes thermal bridging and improves the wall assembly's overall effective R-value.

Contractors increasingly build CI-over-steel-frame assemblies using external Z-Girt furring, or fiberglass girt furring (offered by several manufacturers) as a thermally improved alternative.

Why Vertical Lath Over Horizontal Furring

Orienting the furring horizontally reduces thermal bridging most effectively, but lathing standards require lath to be installed with its long dimension at right angles to the supports, which would normally mean horizontal lath over horizontal furring. Structa Mega Lath resolves this conflict: its engineered wire geometry meets the structural and attachment requirements for vertical installation over horizontal furring, so the assembly can use the better-performing horizontal orientation without compromising code-compliant lath installation. This installation option is described in Structa Wire's IAPMO ER-2017 Evaluation Report.

Z-Girt Furring

ClarkDietrich Z-Girt is available in depths from 1-1/2" to 4" to match common continuous insulation thicknesses, in a standard 12'-2" length. It features a 1-1/2" wide flange with prepunched holes at 4" o.c. for attachment, slotted web holes for moisture weeping, and a toed-in leg that grips rigid insulation. Fiberglass girt furring products, available from several manufacturers, are a thermally improved alternative to steel Z-Girt; their structural design and fastening requirements differ from steel furring, so project-specific manufacturer data should be followed. Z-Girt can be installed in a horizontal or vertical orientation; the type of fastener and spacing will vary based on the application.

Recommended System: Supported Configuration

We recommend the following configuration for wall assemblies incorporating continuous insulation over Z-Girt furring for 3-Coat Stucco (Portland Cement Plaster) 3/4" to 7/8" thick:

Furring orientation	Horizontal to framing
Lath orientation over furring	Mega Lath installed vertical to the furring
Furring depth	1-1/2" to 4", matched to continuous insulation thickness
Furring gauge	Minimum No. 20-ga metal furring when used over CI
Mega Lath span capability	Up to 24" framing centers, minimizing added metal and thermal bridging

This vertical-lath, horizontal-furring configuration is documented in ClarkDietrich's "MegaLath Installed Over Girts" installation guide.

Fastening Requirements for Vertical Installation

- Ensure a minimum of 75% of fasteners are below the cross wire.
- Fasteners should engage the twin track wires, intersections, or between wires, and must hit supports at spacings consistent with ASTM C1063 tables for equivalent 1.95 lb welded wire lath.
- Fasteners must comply with ASTM C1063 or project engineering.

Status: Under Review. Mega Lath installed horizontally over vertical Z-Girt furring, the configuration most frequently requested by contractors, does not yet have a published ClarkDietrich prescribed system. Engineering is reviewing this orientation. Until a system is published, route project-specific requests to Technical Services for individual evaluation.

Attachment

- Furring to framing: screws sized to penetrate framing per code and manufacturer fastener tables; refer to the Z-Girt Design Tables (uniform loads, point loads, and moment capacity) and Section Properties for span and load limits by depth and gauge.
- Lath to furring: pan head or wafer head (7/16 inch head diameter) sheet metal screws. No 10-16; galvanized or zinc coated; self-drilling; length: threads to penetrate the furring flange by 1/2 inch.
- Spacing: vertically along each furring member, at each twin track location, nominal 6 inch O.C.

Assembly Specifications

Continuous Insulation: 1-1/2 inch or 2 inches thick. Minimum compressive strength 25 psi, with high compressive creep and fatigue resistance. Thicker insulation would require longer fasteners.

WRB: Fluid applied or building wrap or asphalt paper.

Sheathing: 1/2 inch plywood or 1/2 inch Dens Glass.

Steel framing: Light gauge metal framing, 16 inch o.c., minimum 20ga (0.030 inch).

Corrosion Resistance

As with all Structa Wire products, Mega Lath is manufactured with a Class 1 hot-dip galvanized coating as per ASTM A 641 for corrosion resistance, with long-term protection provided by complete embedment in the alkaline Portland cement stucco matrix. Proper embedment is especially important with wire lath spanning over this furring, where the additional standoff from the sheathing makes full encasement of the lath in stucco essential to keep the assembly protected.

What do you think?

Let us know at www.clarkdietrich.com/stuccofutures, or on LinkedIn, Instagram, or Facebook #stuccofutures. For technical questions, call 1-800-887-4708.