

# Plasti-Fab Design Manual

## Wall Insulation Commercial & Industrial Applications





## Commercial / Industrial Applications

PlastiSpan insulation can be used to provide a well insulated wall system for many types of commercial or industrial buildings. Hard wearing low maintenance interior finishes can be provided using an interior galvanized steel liner panel and pre-painted steel exterior panels. Alternatively, concrete block walls with or without an exterior finish are commonly used for this type of application.

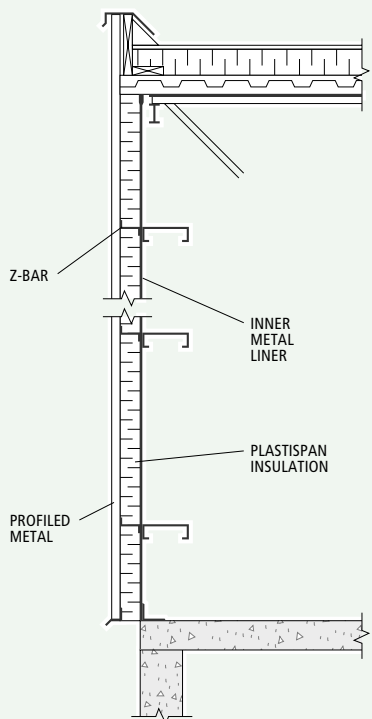
A metal building wall accommodates insulation in the space provided by the Z-bar girt. The web on the Z-bar can be chosen to provide for the required thickness of PlastiSpan insulation. The interior liner sheet must completely cover the PlastiSpan insulation so it is not exposed to the interior of the building. Metal wall contraction can occur in cold weather more easily than other constructions. The use of PlastiSpan insulation provides a rigid strong wall with low air infiltration.

PlastiSpan insulation board can be used to provide the required thermal resistance when attached to the exterior of a concrete block wall. The exterior face can be covered with pre-painted profiled metal, conventional stucco or an exterior

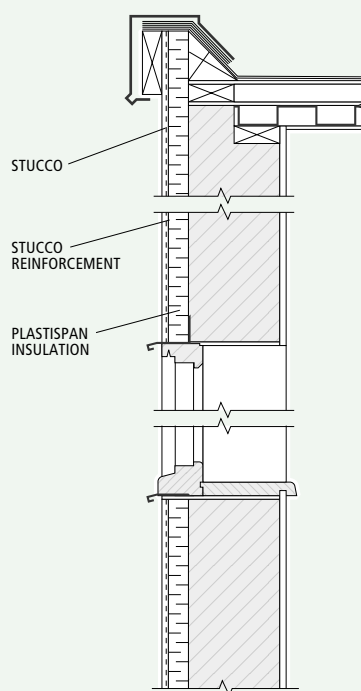
insulated finish system. (See the PlastiSpan brochure "Wall Insulation: Exterior Insulation Finish Systems" for additional information.)

PlastiSpan insulation board can be used with pre-painted profiled metal finish by fastening a light Z-bar girt horizontally or vertically to the block wall and placing PlastiSpan insulation between the girt. If the insulation is the same thickness as the girt the metal will hold the insulation in place. The insulation can also be fastened to the wall using a surface mounted wood nailer fastened through the insulation to the concrete block wall. The profiled metal finish can be mounted on the wood nailer. The standard profiled metal accessories such as drip flashings, corner trim, etc. can be used for the installation.

Stucco can be used as a finish on the PlastiSpan insulation. The Portland cement stucco is applied to a stucco mesh which in turn is fastened to a nailer or T-stud that is flush mounted in the insulation. A sheathing paper may be placed over the insulation if desired.



Section – Metal Building



Section – Stucco Over Concrete Block

## Application

Choose application instructions from the General Application Instructions of the PlastiSpan brochure "Wall Insulation: Selection, Application and Specification".

The following instructions apply specifically to PlastiSpan insulation in commercial/industrial walls.

### Preparation

#### Z-bar Girts

Place Z-bar girts accurately at spacing shown on plans. Use suitable fasteners as required by substrate.

#### Block Fill Insulation

Block walls must be completely sealed with mortar at mortar joints, around electric outlets and at any door and window frames.

### Application

#### PlastiSpan Insulation between Z-bar Girts

The insulation will fit between girts. Walnut sized spots of insulation adhesive may be used to place insulation temporarily until finish is applied.

#### PlastiSpan Insulation with Nailer

Place insulation on wall using adhesive. Place nailer over insulation as shown on plans and fasten through to wall using suitable fastener.

### PlastiSpan Block Fill Insulation

Pour into concrete block in lifts of approximately 1.2 m (4 feet). Rod until insulation does not settle. Pour insulation at windows on other openings before the wall is closed up.

### Finish

#### Prepainted Profile Metal Panel

Erect panels in accordance with manufacturer's instructions using Z-bar girts and panel accessories as required.

#### Stucco

Fasten 16 gauge 2" mesh welded stucco mesh (to T-stud using drive screws) (to nailer using galvanized nails). Stretch mesh to provide a tight firm surface. Follow application instructions from the Portland Cement Association.

#### Exterior Insulation Finish Systems

Follow manufacturer's instructions for the application of the insulation and the finish systems. Choose specification from the Specification section of the PlastiSpan brochure "Wall Insulation: Selection, Application and Specification" with the following additions:

#### Z-bar Girts

Flat flanges minimum 50 mm (2"). Web to be the thickness of the insulation.

## Specification

Choose specification from the Specification section of the PlastiSpan brochure "Wall Insulation: Selection, Application and Specification" with the following additions:

#### Z-bar Girts

Flat flanges minimum 50 mm (2"). Web to be the thickness of the insulation.

### Specifications

Choose specification from Plasti-Fab MasterFormat Specification 07210. Required thermal resistance can be selected based upon material properties provided in the PlastiSpan brochure "Wall Insulation: Selection, Application and Specification."