

The Challenge



Retracted System: 205' retracted down to 41' long - R4.5 insulation

Prestressed Systems Inc. (PSI) is a full-service architectural and structural precast operation based in Windsor, Ontario. Since 2008, the Ministry of Transportation of Ontario (MTO) implemented a new standard for prestressed precast concrete curing that demanded certain requirements to be met. Some of the most difficult measures to meet included:

- Placing a vapor barrier immediately following (within 14ft) the pouring and finishing of the concrete.
- Using an enclosure that allows the free circulation of air and humidity around the forms.
- Ensuring the temperature of the forms is not greater than 86°F prior to pouring.
- Ensuring that a temperature differential of more than 14°F does not exist anywhere within the enclosure.
- Upon removal from the forms, the product needs to be moved to a secondary curing area to moist cure for an additional 4-7 days (depending on the ambient temperature).

PSI was confronted with the challenge of not only applying a tight enclosure around the forms but they needed a method of enclosing their forms that would reliably meet stringent temperature control requirements. A simple tear in a tarp could throw off the temperature enough to render the product unacceptable.

The Solution

Prestressed Systems Inc (PSI) called upon Chamtech to provide a solution – the Rollcov-R™ retractable curing enclosure. The nature of the insulated vapor-proof shell, its moisture retention properties and the supporting lightweight rolling structure provided a solution that would allow PSI to meet the MTO requirements.

Project Results

- The Rollcov-R system helped provide PSI with full compliance to MTO regulations.
- Labour costs were reduced for both covering and uncovering of products, and downtime due to inclement weather was eliminated.
- Quality control improved, resulting in much more consistent, higher quality finished products.

"The quality of the covered system, the support from Chamtech Systems staff, and the ease of use these systems provide have made them a tremendous asset to our operations."

*- Loris Collavino, P.Eng., CEO
Prestressed Systems Inc.*



Extended System: R4.5 Insulation
205'(l) x 15'7"(w) x 3'4"(h)



Form temp. inside Rollcov-R: 79°F/26°C
Form temp. outside Rollcov-R: 120°F/49°C



Protect forms & employees from the elements when preparing for the pour.



Second-stage curing enclosure allowing additional moist curing per MTO regulations.

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