PMC CANADA LTD.

Elastomeric Metal System

This system consists of a double zed frame containing panels that when pop riveted or screwed together create one elastomeric membrane of metal. This system can be used on any shape round, square, flat, radial, compound radial, tapering, conical, etc. Double ZZ is produced in flat, radial and angled to facilitate any shape requirement of finished product.

The frame is constructed first then the panels are inserted. All frame pieces are produced in telescoping lengths with one smaller end and one larger end width. Ease insertion by opening the outer Zed fold of the large end and the inner Zed fold of the smaller end of this telescopic Zed Rib to facilitate a 2" weather shed lap. Dog earring the hem of¼" to further ease insertion of these ribs is acceptable. If framing is vertical all lapping metal must be weather shed. All horizontal ribbing is connected the same as the vertical ribbing. All ribbing must be pop riveted together through each opposing flange. In large applications additional attachment, i.e. 16 gauge clips welded to insulation support rings may be required. If attaching ribbing frame to welded clips pop rivet only one flange to one side of clip, i.e. the right side, in order to allow the ZZ rib to move one direction in order to facilitate expansion and contraction of the insulated system.

If jacketing a sphere run the central circumferential ZZ Ribbing or stiffener ring cover with ZZ flange top and bottom first. If a tank head set the circumferential ZZ Ribbing at tangency of the head first, same if a truncated cone body. Then establish equal bisections around the circumference of the vessel per sections per vessel supplied from PMC.
All vertical rib framing can then be terminated into the hem of the horizontal ribbing and the apex/s of head; however, Shell's specification requires that the vertical ribbing above our horizontal ribbing on the upper shell of their Vessels be attached over the upper hem for their weather shed concern. All intersecting joint flanges must be pop riveted to each other.

Panels can be inserted into the frame work by sliding edges of panels until they meet the finished edges of the ribbing. Slide a knife along the seam until the panel edge is under the hemmed edge of ribbing then slide the panel into place. Where ribs run parallel to the panels, these panels can be bowed between the ribs then allowed to flatten and slid into the rib with the aid of a knife and gently slipping into place. Where panels are applied to a tapering frame they must be held flatly against the insulation surface, slid down until the panel edges meet the edges of the frame work, eased into the hem of the ribs with a knife until the panel is inside both ribs, then pushed toward the tapering end until in place.

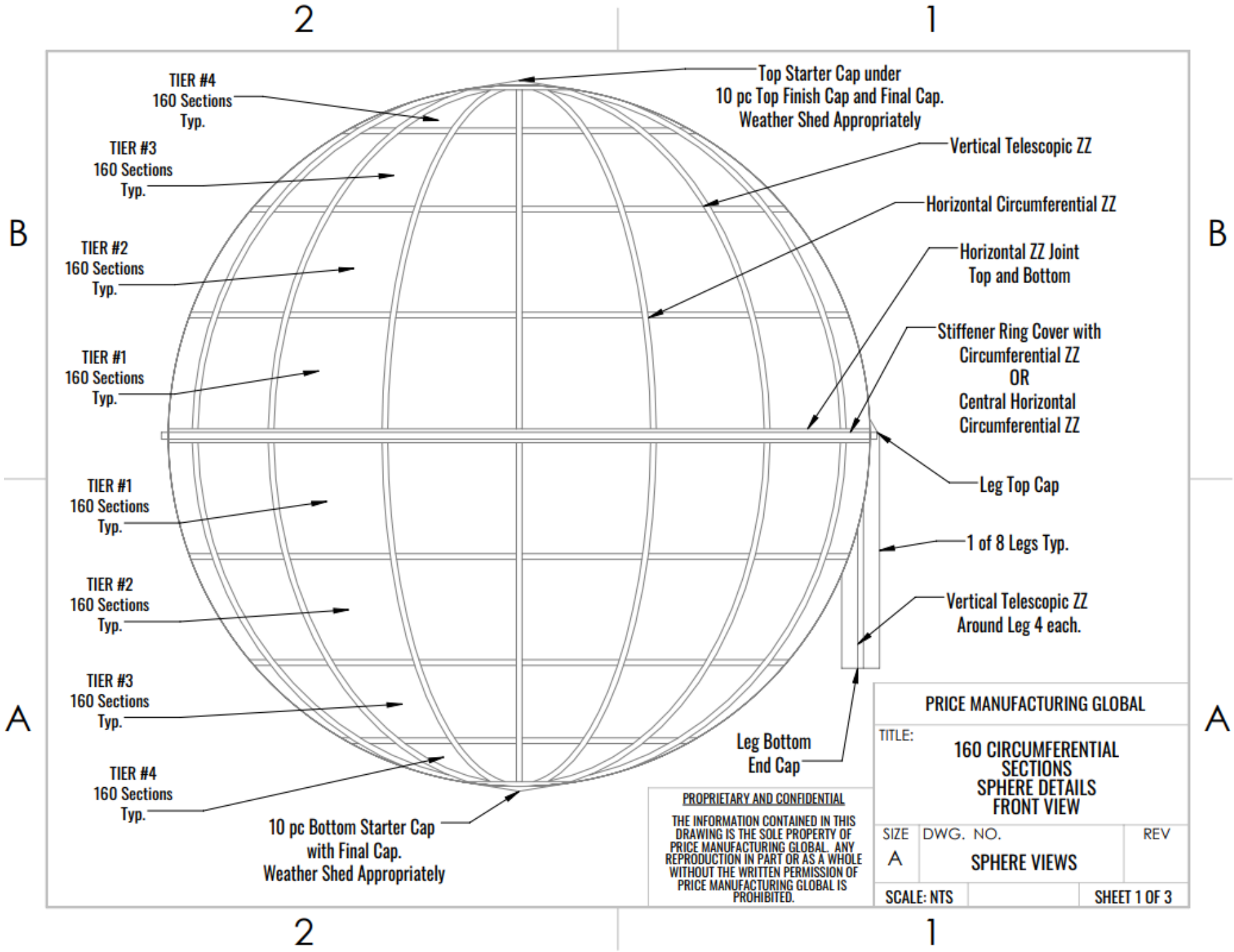
Occasionally, as with square or rectangular surfaces, i.e. ducting, ribbing may have to be assembled in series with panels in order to avoid having to bow metal in two directions at the same time.

Cuts in the panels for cut outs at nozzles or other surface penetrations can be made by splitting the metal and then connecting again by means of ZZ ribbing.

Pop rivets and or screws are acceptable means of securement for attaching the panels to the flange frames. Shell specification is 6" on center up to 50' above ground and 4.5" on center there after above ground and screws must have neoprene gasketed washers. While it is not necessary to caulk this ZZ system for water shed, a good silicon caulking may be used as needed for aesthetics or for any concern areas that may present themselves.

Special care and attention should be taken to:

1. Keep ribbing straight to accept panels.
2. Not bow panels in more than one direction at a time so as to avoid kinks in the finished product.
3. Be careful to weather shed all laps.
4. Follow customer's specification for attachments.
5. Be careful drilling, pop riveting or shooting screws so as not to slip and scar the metal or injure yourself.
6. Keep cuts tight for aesthetics.
7. Metal panels must be secured to the ZZ rib flange with closed end pop rivets.


2
1
B
A
TIER #4
160 Sections
Typ.
TIER #3
160 Sections
Typ.
TIER #2
160 Sections
Typ.
TIER #1
160 Sections
Typ.
TIER #1
160 Sections
Typ.
TIER #2
160 Sections
Typ.
TIER #3
160 Sections
Typ.
TIER #4
160 Sections
Typ.
10 pc Bottom Starter Cap
with Final Cap.
Weather Shed Appropriately
Top Starter Cap under
10 pc Top Finish Cap and Final Cap.
Weather Shed Appropriately
Vertical Telescopic ZZ
Horizontal Circumferential ZZ
Horizontal ZZ Joint
Top and Bottom
Stiffener Ring Cover with
Circumferential ZZ
OR
Central Horizontal
Circumferential ZZ
Leg Top Cap
1 of 8 Legs Typ.
Vertical Telescopic ZZ
Around Leg 4 each.
Leg Bottom
End Cap
PROPRIETARY AND CONFIDENTIAL
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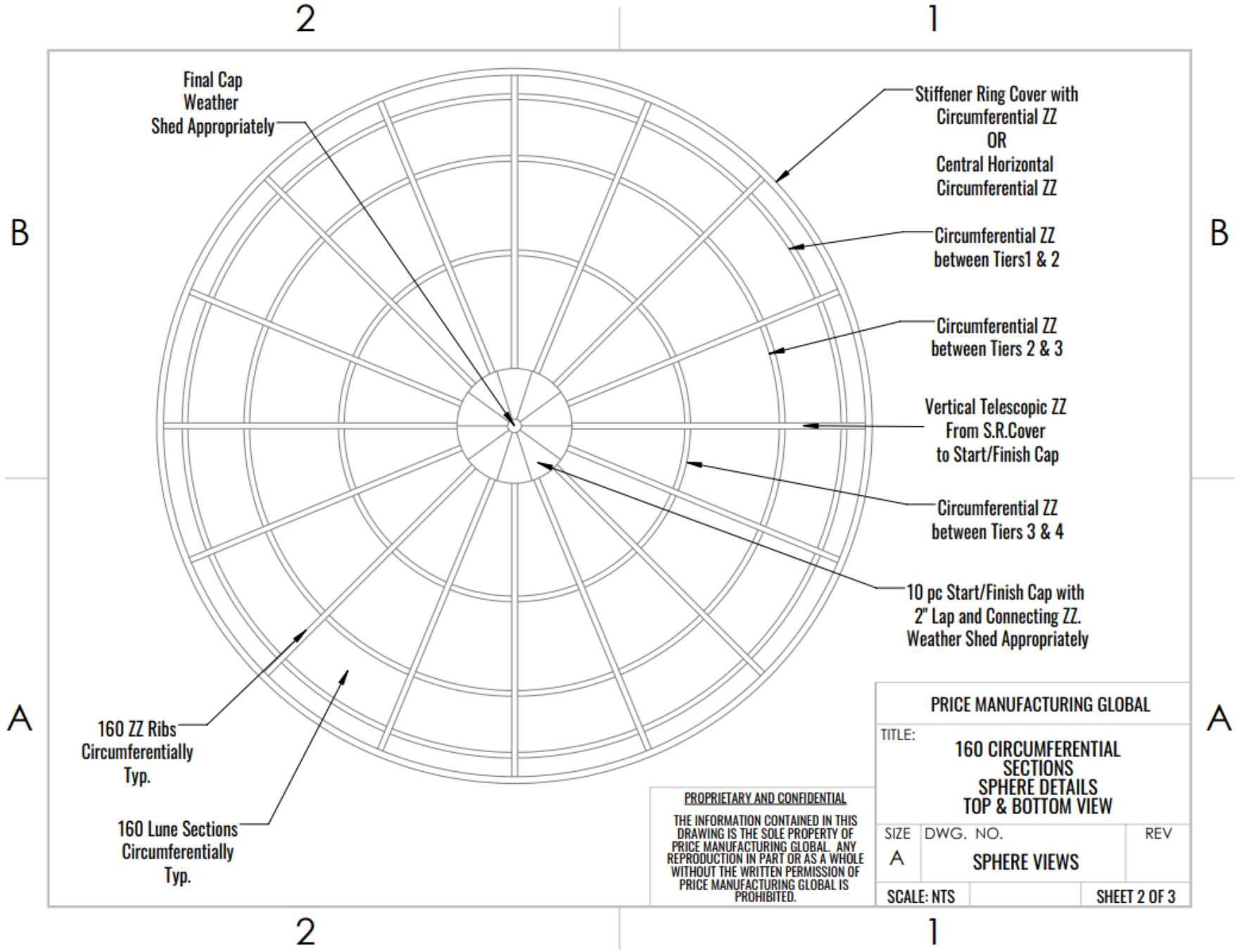
PRICE MANUFACTURING GLOBAL
TITLE:
160 CIRCUMFERENTIAL
SECTIONS
SPHERE DETAILS
FRONT VIEW
SIZE
A
DWG. NO.
SPHERE VIEWS
REV
SCALE: NTS
SHEET 1 OF 3


2
1
B
B
A
A
Final Cap
Weather
Shed Appropriately
Stiffener Ring Cover with
Circumferential ZZ
OR
Central Horizontal
Circumferential ZZ
Circumferential ZZ
between Tiers1 & 2
Circumferential ZZ
between Tiers 2 & 3
Vertical Telescopic ZZ
From S.R.Cover
to Start/Finish Cap
Circumferential ZZ
between Tiers 3 & 4
10 pc Start/Finish Cap with
2" Lap and Connecting ZZ.
Weather Shed Appropriately
160 ZZ Ribs
Circumferentially
Typ.
160 Lune Sections
Circumferentially
Typ.
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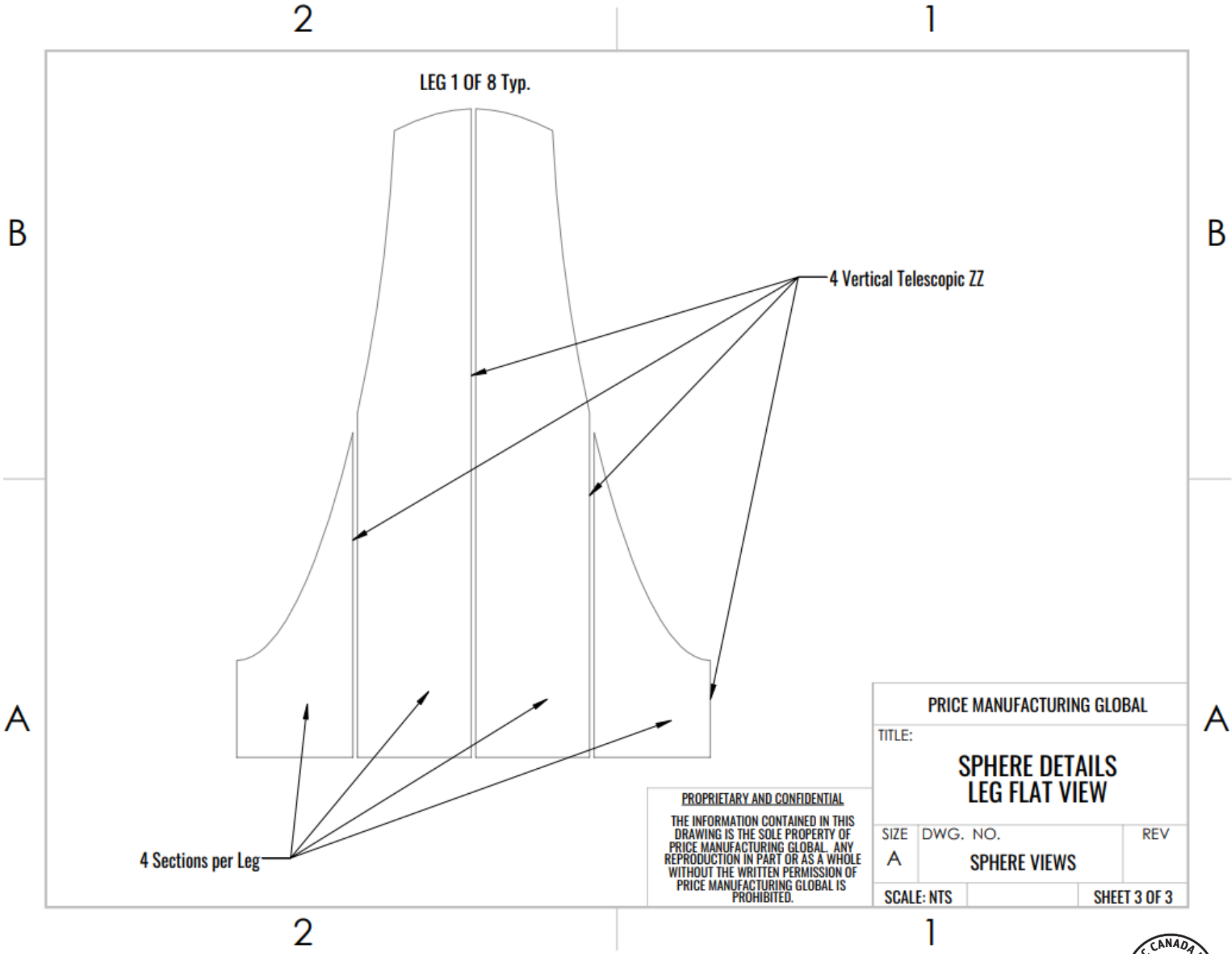
PRICE MANUFACTURING GLOBAL
TITLE:
160 CIRCUMFERENTIAL
SECTIONS
SPHERE DETAILS
TOP & BOTTOM VIEW
SIZE
A
DWG. NO.
SPHERE VIEWS
REV
SCALE: NTS
SHEET 2 OF 3


2
1
B
A
LEG 1 OF 8 Typ.
4 Vertical Telescopic ZZ
4 Sections per Leg
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PRICE MANUFACTURING GLOBAL
TITLE:
SPHERE DETAILS
LEG FLAT VIEW
SIZE
A
DWG. NO.
SPHERE VIEWS
REV
SCALE: NTS
SHEET 3 OF 3