INTEGRITY PRODUCTS

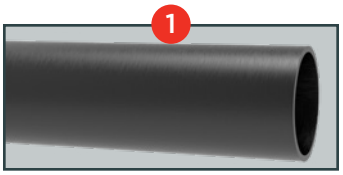
IVS PVC

Insulation Ventilation System

Always wear appropriate PPE (personal protective equipment) which conforms to applicable work safe standards.

TOOLS REQUIRED

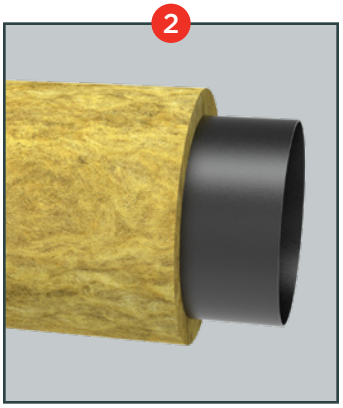
- TIN SNIPS
- SILICONE SEALANT
- WIRE/ BANDING
- SCREWS



STEP 1

For Newer Installation Only

Ensure the pipe surface is clean, dry, and free of any damage, hazardous or sharp objects.



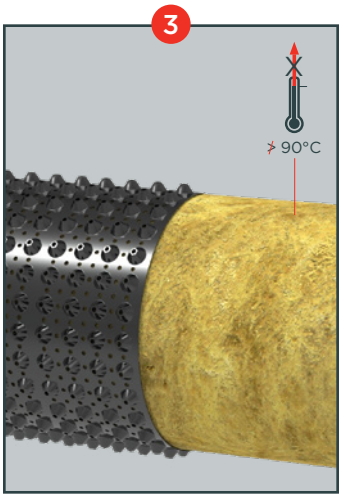
STEP 2

For Existing System

Label the existing jacketing for future traceability. Remove the metal jacketing via removal of bands, lap sealants and screws (if any) exposing the insulation. Secure the removed jacketing with proper identification.

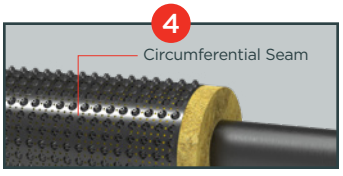
For Newer Installation

Wrap the insulation over the pipe. No need for oversizing the insulation.



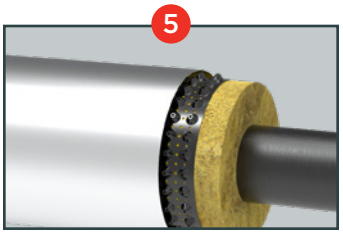
STEP 3

Visually inspect the external surface of insulation for the evidence of any mechanical damage. Ensure the surface temperature on the exterior of insulation doesn't exceed 90°C (194°F). Install the perforated dimple sheets by wrapping around the insulation by either maintaining butt seam or overlap at longitudinal seam (please note the orientation of seam is not critical to this installation). Secure the dimple sheets around the insulation via wire or banding.



STEP 4

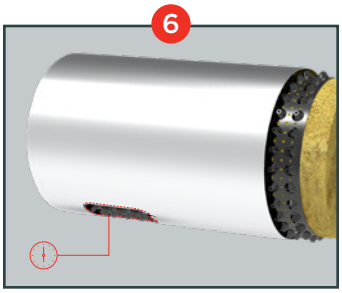
Install the adjacent dimple wrap in the same manner following step 3 without overlapping the circumferential seams.



STEP 5

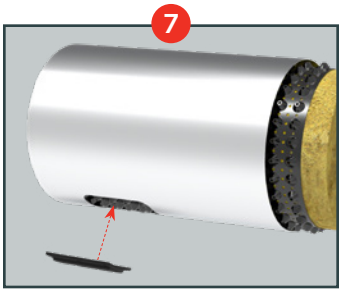
Reinstall the metal jacketing and secure in place by banding and screwing (see note 1).

Note 1: Re-use the existing jacketing only if it has enough length to wrap around the increased circumference.



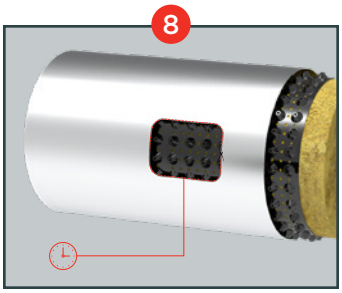
STEP 6

Mark at intended location alongside 6 o'clock position of pipe. Cut the jacket using Tin Snips exposing the outer periphery of dimple wrap. Install the drain without cutting or removing corrugated wrap as well as insulation.



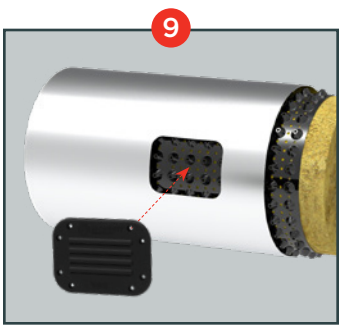
STEP 7

Apply the silicone sealant on the backside of drain and place over the spot where jacketing was removed. Secure the drain in place via installation of screws. Install the next drain following same steps (recommended offset between adjacent drains: 6 mtr.).



STEP 8

Mark at intended location alongside 3 o'clock position of pipe. Cut the jacket using Tin Snips exposing the outer periphery of dimple wrap. Install the vent without cutting or removing dimple wrap as well as insulation.



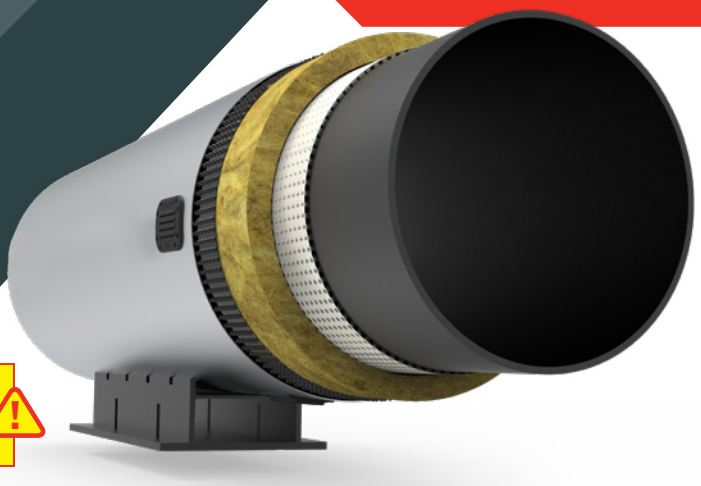
STEP 9

Apply the silicone sealant on the backside of vent and place the vent over the spot where jacketing was removed. Secure the vent in place via installation of screws. Install the next vent at 9'oclock position following same steps (recommended offset between adjacent vents: 6 mtr.).

INTEGRITY PRODUCTS

IVS Insulation Ventilation System

WITH PTFE SPACER WRAP



Always wear appropriate PPE (personal protective equipment) which conforms to applicable work safe standards.

TOOLS REQUIRED

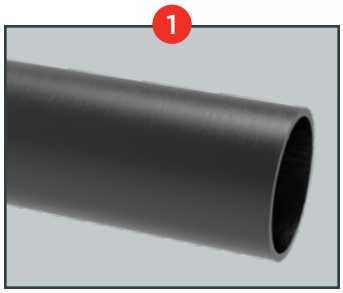
RETRACTABLE KNIFE
Cut the PTFE spacer wrap using retractable knife

ADHESIVE TAPE
To secure the PTFE use Integrity Products high temperature resistance glass cloth tape.

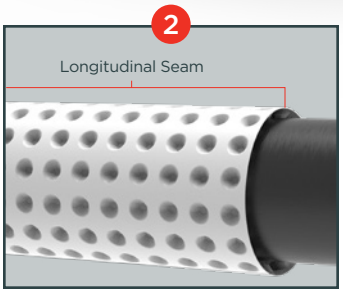
TIN SNIPS
Cut metal jacketing using tin snips.

SILICONE SEALANT
Apply silicone sealant for drain.

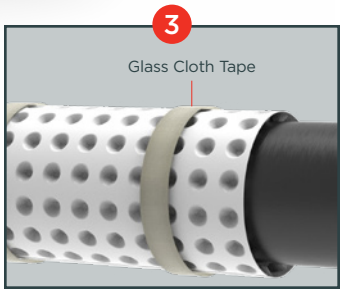
SCREWS



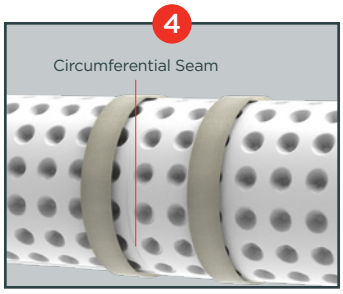
STEP 1
Ensure the pipe surface is clean, dry, and free of any damage, hazardous or sharp objects.



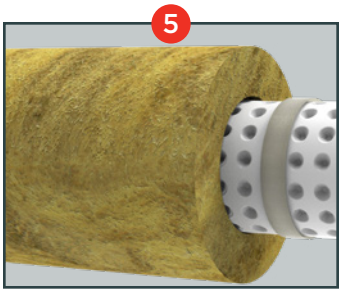
STEP 2
Wrap the PTFE sheet around the pipe and overlap the dimples at the longitudinal seam. Cut the PTFE spacer wrap using retractable knife to match the circumference and needed overlap. User may decide not to overlap at longitudinal seam to allow for low point drainage.
Recommended overlap: 2 dimples at minimum.



STEP 3
Secure the PTFE on the pipe using Integrity Products high temperature resistance glass cloth tape.



STEP 4
Install the adjacent wrap in the same manner as described in steps 1–3 by allowing the overlap of dimples at circumferential seams.
Recommended overlap: 2 dimples at minimum.



STEP 5
Wrap the insulation over the PTFE wrap. Ensure to oversize the insulation by ½" to accommodate the standoff created by PTFE dimple wrap.

cont'd on reverse side »

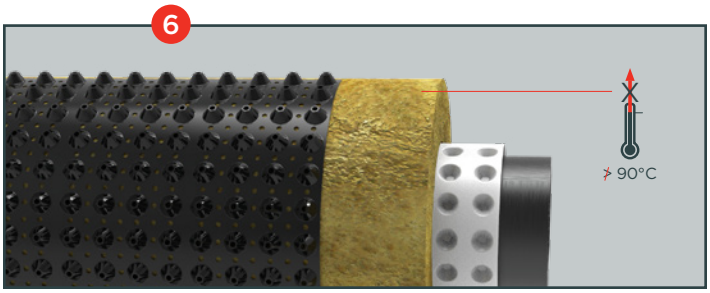
IVS WITH PTFE SPACER WRAP

TOOLS REQUIRED:

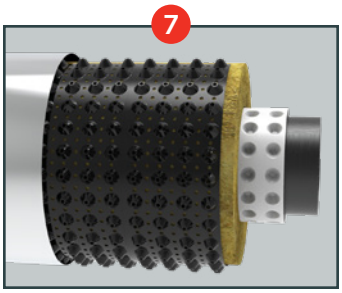
- ADHESIVE TAPE
- TIN SNIPS
- RETRACTABLE KNIFE
- SILICONE SEALANT
- SCREWS

Always wear appropriate PPE (personal protective equipment) which conforms to applicable work safe standards.

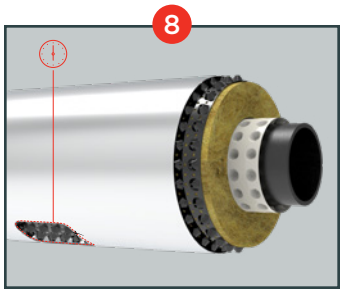
cont'd from reverse side »



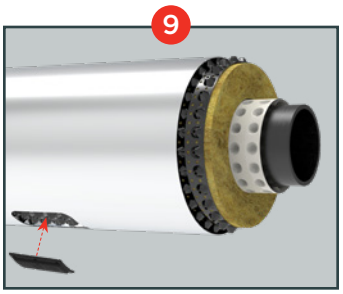
STEP 6
Ensure the surface temperature on the exterior of insulation doesn't exceed 90°C (194°F). Wrap the perforated dimple sheet around the circumference and secure in place via wire or banding. Ensure that PVC dimpled liner is not in direct contact with clamps, shoes, protrusions, or any metal surface(s) that exceeds 90°C (194°F). No need for overlap on circumferential/longitudinal seams.



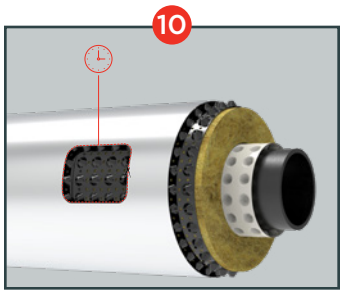
STEP 7
Install the jacketing over the perforated dimpled liner and secure the jacketing in place via banding and screws. Make sure to oversize the jacketing by at least 1" to accommodate the standoffs created by perforated dimpled liner and PTFE spacer wrap.



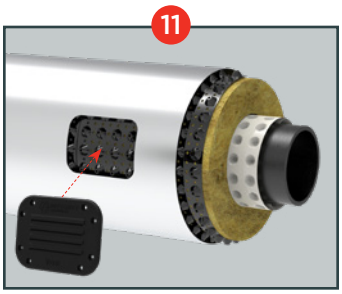
STEP 8
Mark at intended location alongside 6 o'clock position of pipe. Cut the jacketing using Tin Snips exposing the outer periphery of dimple wrap. Install the drain without cutting or removing dimple wrap as well as insulation.



STEP 9
Apply silicone sealant on the backside of drain and place over spot where jacketing was removed. Secure the drain in place via installation of screws. Install the next drain following the same steps.
Recommended offset between adjacent drains: 6 metres.



STEP 10
Mark at intended location alongside 3 o'clock position of pipe. Cut the jacket using Tin Snips exposing the outer periphery of dimple wrap. Install the vent without cutting or removing dimple wrap as well as insulation.



STEP 11
Apply the silicone sealant on the backside of vent and place the vent over the spot where jacketing was removed. Secure the vent in place via installation of screws. Install the next vent at 9 o'clock position following the same steps.
Recommended offset between adjacent vents: 6 metres.

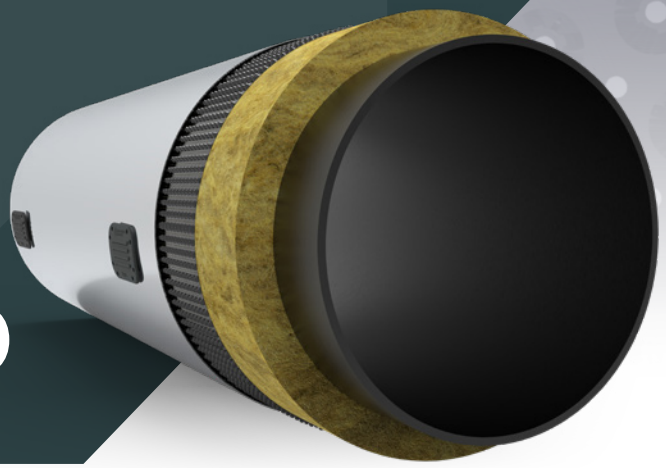
INTEGRITY PRODUCTS

TECHNICAL DATA SHEET

Perforated Dimple Wrap

Patented

PVC



PRODUCT DESCRIPTION

Integrity Products' Perforated Dimple Wrap is designed to create a consistent 6mm air gap between the insulation and the metal cladding. Used in conjunction with our vents and drains, this 3-part system creates the Integrity Products' Insulation Ventilation System. This high-quality Polyvinyl Chloride (PVC) material is design for flexibility and strength which can help protect the insulation and the outer cladding from mechanical damage. Its unique perforations and raised dimples allow any moisture or vapour trapped in the insulation to pass into the gap that has been created, drain to the 6 o'clock position and exit the system through the drains.

PRODUCT APPLICATION

To extend the service life of the insulation and piping equipment, Integrity Products' Perforated Dimpled Wrap is installed dimpled side out and fully encompasses the exterior of the insulation. It can be installed on all insulation types, on all pipe sizes and in hot and cold applications. Once installed the outer finish cladding is installed over the Perforated Dimple Wrap as normal keeping in mind that the Perforated Dimple Wrap has added a total of 12mm to the outer diameter of the insulation. The product can be utilised on new insulation systems in order to prevent moisture build up and also retro fit on damaged/soaked insulation in order to assist with drying.

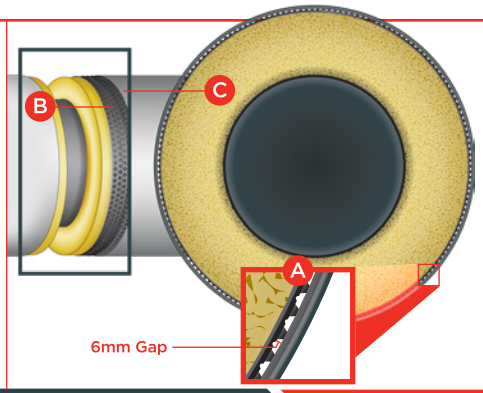
MATERIAL SPECIFICATIONS

MATERIAL(S)	ELONGATION	UV RESISTANCE
Polyvinyl Chloride (PVC)	2 ~ 40%	Excellent
COLOR	**SHRINKAGE**	**WORKING TEMP.**
Black	1.25%	-40°F to 194°F (-40°C to 90°C)
DENSITY	**FLAME RESISTANCE**	**MELTING POINT**
1.4 g/cm^3	Excellent	414°F (212°C)
TENSILE STRENGTH		
35 ~ 56 MPa		

INSTALLATION

The Integrity Products' Perforated Dimple Wrap comes in PVC rolls of 3 ft × 50 ft. This product is placed over the insulation (dimple side out) and secured into place with wire, banding, or tape. The metal cladding is placed over the Perforated Dimple Wrap and installed as normal.

NOTE: Metal cladding should be oversized by a total of 12mm to the outer diameter of the insulation to accommodate the Perforated Dimple Wrap.



A place perforated dimple wrap dimple side out

B hold perforated dimple wrap in place with wire, banding or tape

C apply metal cladding and install as normal

INTEGRITY PRODUCTS

Heat Exchanger

PTFE & IVS

TOOLS REQUIRED

RETRACTABLE KNIFE

ADHESIVE TAPE*

TIN SNIPS

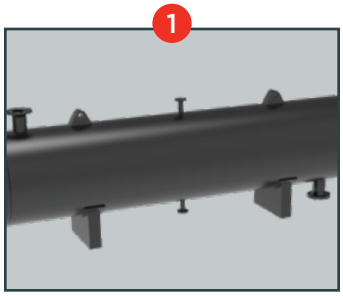
SILICONE SEALANT

SCREWS

BANDING

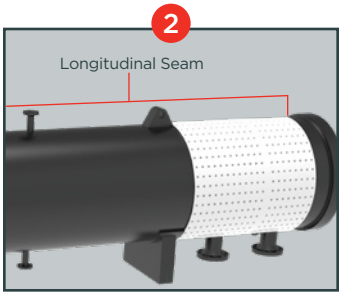
* We recommend Integrity Products high temperature resistance glass cloth tape.

Always wear appropriate PPE (personal protective equipment) which conforms to applicable work safe standards.



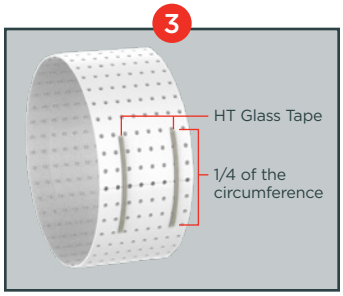
STEP 1

Ensure the pipe surface is clean, dry, and free of any damage, hazardous or sharp objects.



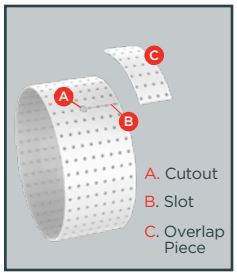
STEP 2

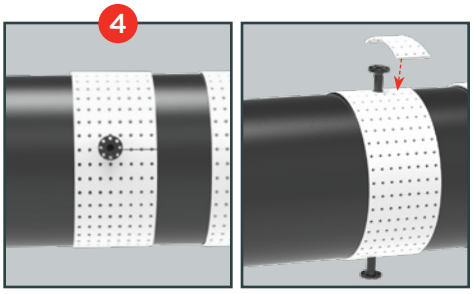
Wrap the PTFE sheet around the tank/vessel and overlap the dimples at the longitudinal seam. Cut the PTFE spacer wrap using a retractable knife to match the circumference and overlap required. Users may decide not to overlap at the longitudinal seam to allow for low-point drainage. *Recommended overlap: 2 dimples at minimum. Always ensure the dimples are facing toward the tank/vessel.*



STEP 3

Secure into place using HT Glass Tape and ensure the tape encompasses 1/4 of the total circumference of the vessel.

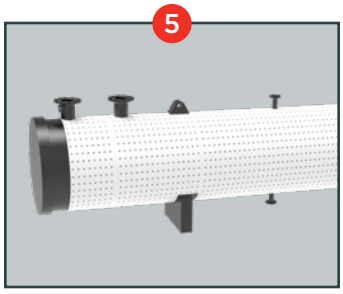




STEP 4

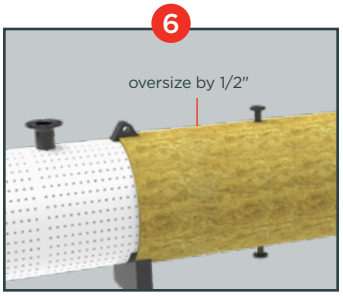
USE THIS METHOD WHEN MAKING CUTOUTS AT THE 12 O'CLOCK POSITION: Make cutout as required then cut a slot to the outer edge of the PTFE wrap. Line up the slot with the cutout and pull it into place.

Measure and cut a small piece of PTFE, allowing a 3 dimples overlap on each side to apply over the narrow slot. Secure into place with HT Glass Tape.

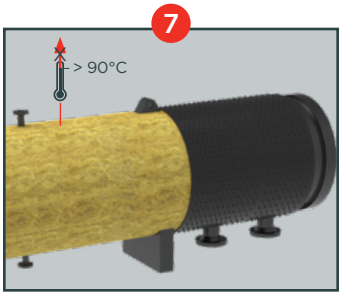


STEP 5

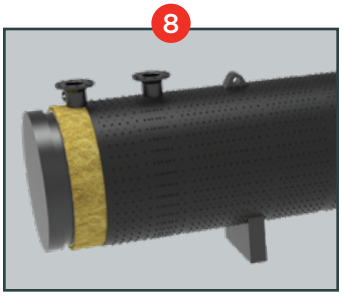
Install the adjacent wrap by allowing dimples to overlap at circumferential seams. *Recommended overlap: 2 dimples at minimum.*



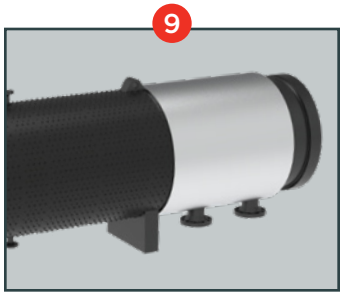
STEP 6
Install the insulation over the PTFE wrap. Ensure to oversize the insulation by 1/2" to accommodate the standoff created by PTFE dimple wrap.



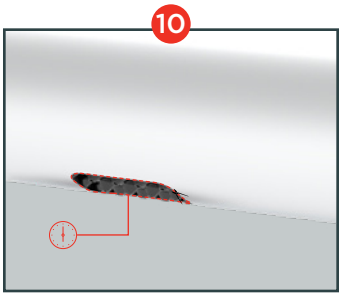
STEP 7
Ensure the surface temperature on the exterior of insulation doesn't exceed 90°C (194°F). Install the perforated dimple sheets dimple side out wrapping around the insulation by either maintaining butt seam or overlap at longitudinal seam (please note the orientation of seam is not critical to this installation). Secure the dimple sheets around the insulation via wire or banding.



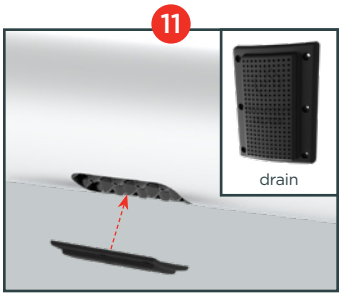
STEP 8
Install the adjacent dimple wrap in the same manner following step 7 **without** overlapping the circumferential seams.



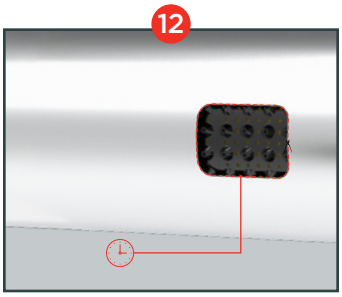
STEP 9
Install the metal jacketing and secure in place (see note 1).
Note 1: Re-use the existing jacketing only if it has enough length to wrap around the increased circumference.



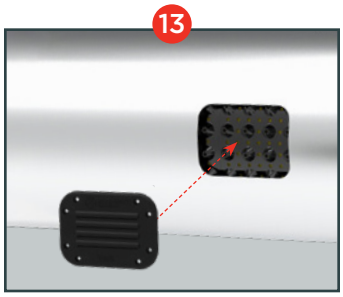
STEP 10
Mark at the intended location at the 6 o'clock position of the tank/vessel. Cut the jacketing using Tin Snips to expose the Dimple Wrap.



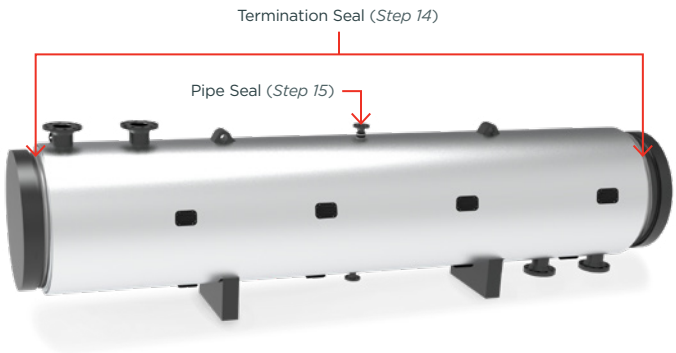
STEP 11
Apply the silicone sealant on the backside of drain and place over the spot where jacketing was removed. Secure the drain in place via screws. Install the next drain following same steps (recommended offset between adjacent drains: 6 mtr.).



STEP 12
Mark at intended location at **3 o'clock position** of tank/vessel using template. Cut the jacket using Tin Snips exposing the dimple wrap. Install the vent without cutting or removing dimple wrap or insulation.



STEP 13
Apply the silicone sealant on the backside of vent and place the vent over the cut out where jacketing was removed. Secure the vent in place via screws. Install the next vent at 9'oclock position following same steps (recommended offset between adjacent vents: 6 mtr.).



STEP 14
Install Integrity Products' Termination Seal on each end of the tank/vessel. For Termination Seal install, refer to the Termination Seal installation instructions.

STEP 15
Install Integrity Products' Pipe Seal on pipe protrusions. For Pipe Seal install, refer to the Pipe Seal installation instructions.

INTEGRITY PRODUCTS

Vertical Pressure Vessel

PTFE

TOOLS REQUIRED

RETRACTABLE KNIFE

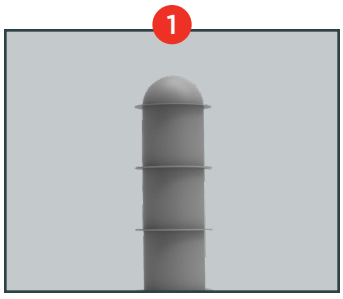
ADHESIVE TAPE*

SCREWS

BANDING

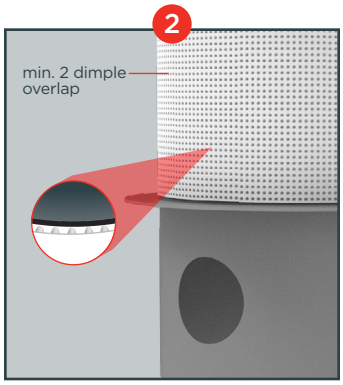
* We recommend Integrity Products high temperature resistance glass cloth tape.

Always wear appropriate PPE (personal protective equipment) which conforms to applicable work safe standards.



STEP 1

Ensure that the vessel surface is clean, dry, and free of any damage, hazardous, or sharp objects.

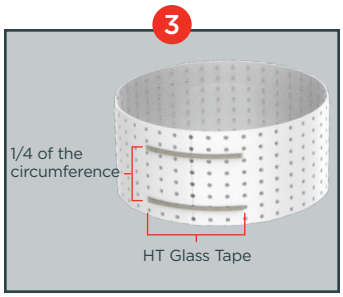


STEP 2

Begin by wrapping the support ring or the base of the tank at the chime with the PTFE spacer wrap, ensuring full coverage around the circumference and overlapping the dimples at the vertical seam.

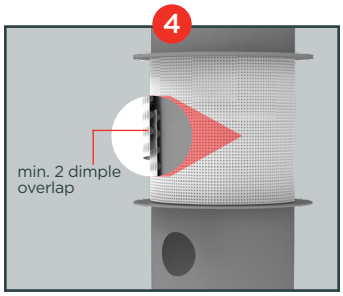
Use a retractable knife to trim the PTFE spacer wrap precisely to the required circumference, ensuring alignment with the necessary overlap.

Always confirm that the dimples face towards the equipment surface. It is recommended to maintain a minimum overlap of at least 2 dimples.



STEP 3

Secure the PTFE spacer wrap in place using HT Glass Tape, ensuring the tape covers ¼ of the total circumference of the application.

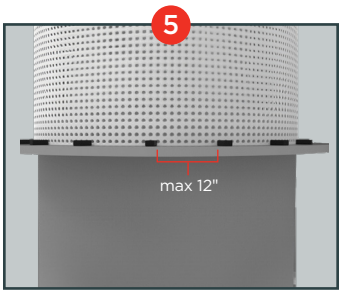


STEP 4

Install the subsequent layer in a course-like manner, overlapping the initial layer by at least 2 dimples on the horizontal overlap.

Secure it in place with 2" HT glass tape around the entire circumference of the overlap.

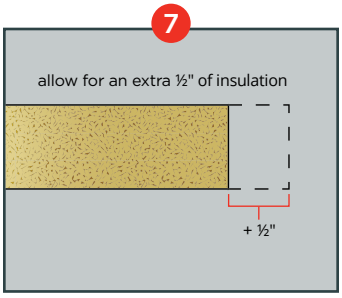
Continue vertically repeating this installation process.



STEP 5
Install tank chime spacers evenly spaced along the upper side of the Insulation Support Ring (ISR) or at the chime, maintaining a gap no greater than 12" between each tank chime spacer.

STEP 6
Secure the base channel* to the top of the tank chime spacer using the specified fasteners.

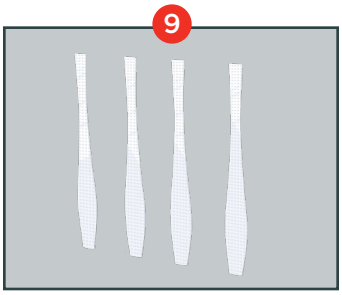
**perforated aluminum channel is recommended.*



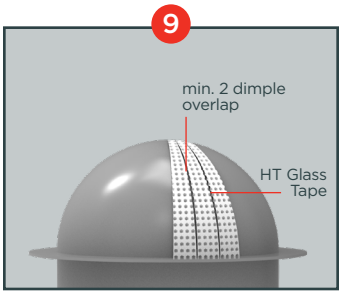
STEP 7
Measure and cut insulation material ensuring it is oversized by ½" to accommodate the standoff created by the PTFE spacer wrap.

Install the insulation over the PTFE spacer wrap following standard practice.

STEP 8
Install the cladding/jacketing following standard practice.



STEP 9
Fabricate sufficient PTFE panels (gores) to fit the geometry of the vessel head. In each gore fabrication an allowance of an overlap of 2 dimples along its radial edge.



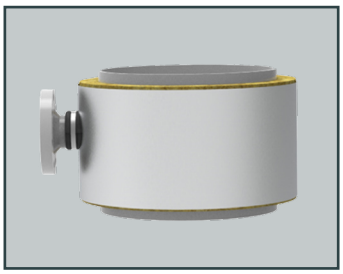
Secure the first PTFE gore to the vessel using HT Glass Tape. Place the next PTFE gore against the first one with the necessary 2 dimple overlap along its radial length. Secure the PTFE gore to the prior one and vessel using HT Glass Tape.

Continue in this manner until the installation is complete ensuring there are no gaps between the segments or joints.

RECOMMENDATIONS:
For sealing vessel nozzles, cladding penetrations, branch connections, and insulation terminations install Integrity Products' Pipe Seal on pipe protrusions. For Pipe Seal install, refer to the Pipe Seal installation instructions.

Scan for PTFE Wrap and IVS System Install Video

Scan for Pipe Seal Install Video



SAMPLE PIPE SEAL ON VERTICAL PRESSURE VESSEL