

VERSIWELD® TPO RIB PROFILE



Safety

Worker safety is a necessity when working on steep slopes, which will be the majority of the Rib installations. Fall protection systems may be required to reduce the potential for slips and falls. Consult with local bodies of government to ensure compliance with most recent safety guidelines. Proper footwear will also aid in reducing the chance of slips and falls on high slope roofs.

Installation: Method 1

1. The Rib Profiles should be positioned parallel to the laps of the installed roofing membrane. Once the rib spacing has been determined, chalk lines on the membrane to indicate each rib location and to serve as a guide to keep them straight. *Note: Test chalk to ensure that snapped lines or the color used does not permanently stain the membrane and can be washed off before using on the roof membrane (red chalk will permanently stain the membrane).*



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2. Position the edge of the rib flange on the chalk line. Using a hinge type motion, keep the flange edge on the chalk line and roll the rib so a hand welder can be inserted. Tack-weld only the centermost portion of the rib every 6" being careful not to weld the flange to the membrane. The initial heat setting on the hand gun should be at #8. *(Do not use excessive heat for this step to avoid compromising the watertight integrity of the membrane).*



3. Connecting multiple ribs is achieved by using the supplied connector pins. Insert a pin half way into the end of one profile. Connect the adjoining rib by inserting the exposed end of the pin into the alignment hole.



4. Once the entire run of rib profiles has been tack welded at least every 6" on center, position the automatic walk welder so it straddles the rib. Set the welding temperature to 1004°F (540°C) and the speed to 12.5 feet (3.8 meters) per minute as a starting point. Welders may vary slightly, so trial welds should be completed prior to welding the ribs to the membrane.



5. Manually engage the drive system of the welder using the control buttons located on top of the machine as soon as the nozzle is inserted under the rib flange. As heat is applied to the underside of the rib flange, pressure must be applied to the topside of the flange using a 2-inch silicone roller. Once the complete run of the flange is welded to the membrane, the welder must be turned 180 degrees and positioned to weld the opposite flange.
6. An alternative method to weld the rib profile in place is to entirely weld each rib to the membrane using a hand held heat gun.

Installation: Method 2

The following installation method uses the Hapco Standing Seam Profile Wheel Kit (part number 107081C2) in conjunction with a Leister Varimat welder. Hapco's kit also fits the BAK Laron and Leister V2 welders.

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1. Once the rib spacing has been determined, the first run of Rib Profile is welded to the membrane using a pan as a straight edge. The pan is typically fabricated from TPO Coated Metal or 24-gauge sheet metal and serves as a straight edge and spacer during the rib welding process. The width of the pan may be calculated by subtracting the width of the welder body from the distance required between ribs. Multiple pans will be required when using this installation method.
2. Welding the first set of ribs will first require application of a chalk line to provide a reference point for the edge of the metal pan. *Note: Test chalk to confirm it can be removed from the surface of the membrane after the welding process is complete (red chalk will permanently stain the surface of the membrane).*
3. Position ribs in proximity to where they will be welded. Connect multiple individual ribs using the supplied connector pins. Insert a pin halfway into the alignment hole located at the end of one profile. Connect the adjoining rib by inserting the exposed end of the pin into the alignment hole. If the connector pins are properly inserted, a tight connection will be achieved between the ribs, and welder movement over the connection area should not be affected.

Helpful Tip: To reduce separation of connected Rib pieces during the Method 2 welding process, use a hand welder to heat the end of one of the Ribs after inserting the connector pin. Then, push the two ends together to create a tack weld that will hold the pieces together.



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4. With the first row of ribs properly positioned parallel to the field seams, align one edge of the metal pan along the chalk line. Holding the pan in place, position the side of the welder body against the opposite edge of the pan so it may serve as a guide.
5. Set the welding temperature to 1004°F (540°C) and the speed to 12.5 feet (3.8 meters) per minute as a starting point. Welders may vary slightly, so trial welds should be completed prior to welding the ribs to the membrane.
6. Engage the nozzle so it is centered under the rib and manually start the welder using the controls located on top of the machine. Continue welding the rib, making sure the nozzle remains centered. *Note: The nozzle is not locked-in at this position and may stray if left unattended.*
7. As the entire run of rib is welded, a second pan is required for a continuous welding process. An additional field mechanic is required to move the pans as the welding process continues.
8. Once the first run of ribs is welded in place, push one edge of the pan against the welded ribs.
9. Position the welder against the edge of the pan, and use it to keep the rib to be welded parallel to the previously welded rib.
10. Continue with this process as the ribs are welded over the remainder of the roof area.

