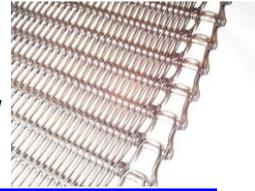




# ASHWORTH ENGINEERING

Committed to on-time delivery of defect-free products and services, fit for use, exactly as promised, every time.



## TECHNICAL BULLETIN

### Omni-Pro™

ASSEMBLY INSTRUCTIONS

#### BEFORE INSTALLING BELT

- ◆ Care should be used in uncrating to prevent damage. If damage occurs, remove the affected sections of belt before proceeding.
- ◆ Tools required to connect belt sections and make the belt endless:  
Vice grips and or clamps  
Tape measure  
TIG welder
- ◆ Tools required to break or separate the belt:  
Hand grinder  
Power Drill  
#50 or #60 Chain Break tool  
3/16" [5 mm] drill bit (*FOR OMNI-PRO 075 and OMNI-PRO 100*)  
7/32" [6.5 mm] drill bit (*FOR OMNI-PRO 120 and OMNI-PRO 150*)

Use proper safety equipment, including face and eye protections, during all grinding or welding operations *as mandated by your company's safety policy. All company lock-out/tag-out and safety rules should be followed while working on or around powered equipment.*

#### INSTALLING DRIVE COMPONENTS

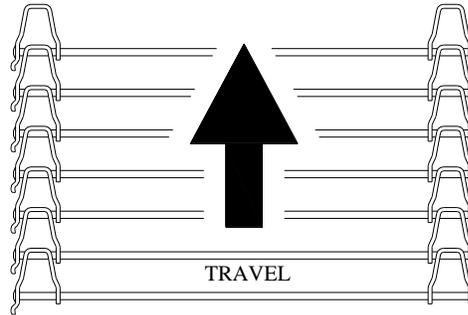
For Omni-Pro belting, locate sprockets both outside link rows. If your belt is wider than 18" [450 mm] Ashworth recommends filler/support rolls be used between the sprockets spaced no more than 12" [300 mm] apart.

#### INSTALLING BELT

There is no top or bottom side to the belt - either side can be up. Exception: For Omni-Pro belts with guard edges or lane dividers.

Direction of Travel - Insure the links lead the connector to which it is welded.

If the belt does not have guard edges or lane dividers and the links along both belt edges are identical, then either edge may be positioned at the inside of turns. However, if an Omni-Pro belt has guard edges or lane dividers install the belt so that the special features are on the top surface of the belting.

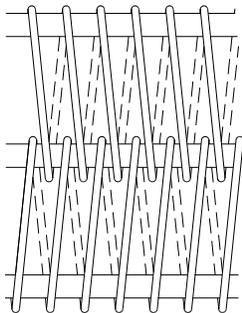


## SPLICING BELT ENDS TOGETHER

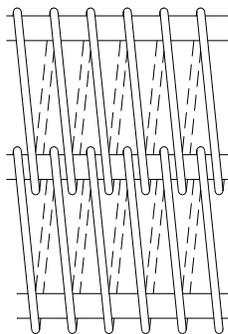
Place the ends of the belt sections together. Nest the trailing end of one belt length with the leading end of the length following.

If a balanced mesh overlay is present, insure that the spirals to be joined are of opposite turnings. If a unilateral mesh overlay is present, the spirals to be joined will be of the same turning. Match the spiral loops across full belt width, avoiding double loops.

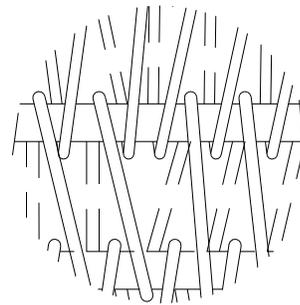
Balanced Weave Mesh Overlay



Unilateral Mesh Overlay



Double Loop



Ashworth supplies the belt in 50 foot rolls.

- To join belt, connect the trailing end of one roll with the leading end of a second roll using a round connector rod.
- The connector rod has two ends each with a chamfer.
- If the belt has mesh overlay, be sure that the rod is inserted through all the spirals, including the pigtails.

- The connector rod should be inserted through the links to make the splice and protrude through the link 3/16" – 1/4" (4-6 mm).
- Position the links so that the overall belt width is the same as that of the factory welded belt.



**THIS IS A CRITICAL STEP IN THE**

**INSTALLATION PROCESS. FAILURE TO CHECK THE WIDTH COULD RESULT WITH A STAGGERED BELT EDGE CREATING A SNAG POINT ON THE BELT.**

- Make sure that the open ends of the links have not been squeezed together or apart. Check this by pushing several links together at the splice to be sure the links collapse (nest) and open without interference.
- **CAUTION:** Take care not to weld two links together.
- With the belt under tension, use a TIG welder to heat and flow the rods ends completely into the link.
- The finished weld should be generally round and approximately 1/16" (1.6 mm) thick/tall and not protrude beyond the edge of the protrusion leg.



**Finished splice joint**

- Repeat on the other side, similarly heat the rod end until it flows into the link.
- Additional filler material can be used if weld puddle is less than 1/16" (1.6 mm) thick/high.

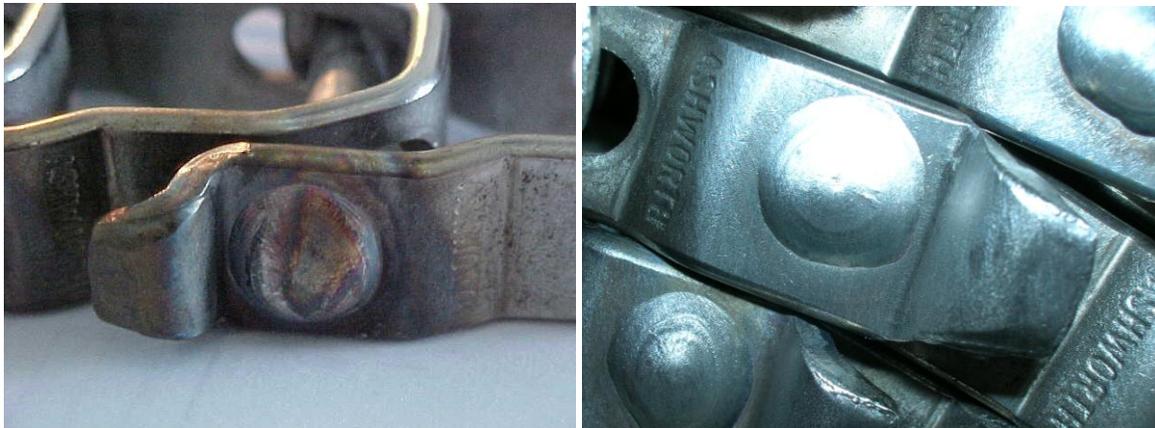
- Should the finished weld protrude beyond the edge of the protrusion leg, grind the weld to prevent contact with plastic wear surfaces or conveyor framework.
- If the rod length has not been checked prior to welding and is too long the rod will exhibit a bow as it travels around a turn when under tension.



*Above are examples of poor welds. The weld on the left has burnt through the link while the weld on the right has not completely filled the hole in the link.*



*Two more examples of bad welds. On the left, the rod has not been melted into the link and sticks beyond the link's protrusion leg. On the right the weld is below the surface of the link and has burned the link material away.*



**An example of a proper splice weld is illustrated on the left. The weld has adequate height and is generally round. The weld can be buffed with a stainless steel wire wheel to remove the discoloration to match factory welds as shown on the right.**

## **REMOVING A SECTION OF BELT**

If possible, separate the belt at an original splice. Always remove the links at the leading end of the section to be removed. Do not cut, remove, or damage the links at the trailing end. If the belt has a mesh overlay, be careful not to cut or damage the spirals.

At the end of the section to be shortened, cut the links welded to the connector to be removed through the leading slots. Cut the connector rods and remove.

The leading end at this separation is ready for re-splicing. The trailing end will need to have a connector. Be careful not to damage the links.

## TO BREAK OR SHORTEN THE BELT

Because of the full 360 degree weld, the weld must be first ground flush with the link using a grinder. To remove the rod:

- *Ashworth suggests firmly clamping the link to a fixed surface to minimize movement of the link and prevent injury.*
- First, grind the weld flush to the link surface.



- Cut the rod with the grinder – move mesh out of the way if the belt has a mesh over lay.



- With a chain breaker, remove the ground rod.



- Clean the hole in the link using the appropriate drill bit.



**Omni-Pro 075 and Omni-Pro100**

- Using a 3/16" [5 mm] diameter drill bit, clean the hole to remove any remaining weld material.

**Omni-Pro 120 and Omni-Pro 150**

- Using a 1/4" [6.3 mm] diameter drill, clean the hole to remove any remaining weld material.
- Repeat on opposite side of the belt.

Re-splice the belt as described under "Splicing Belt Ends Together" (above).

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