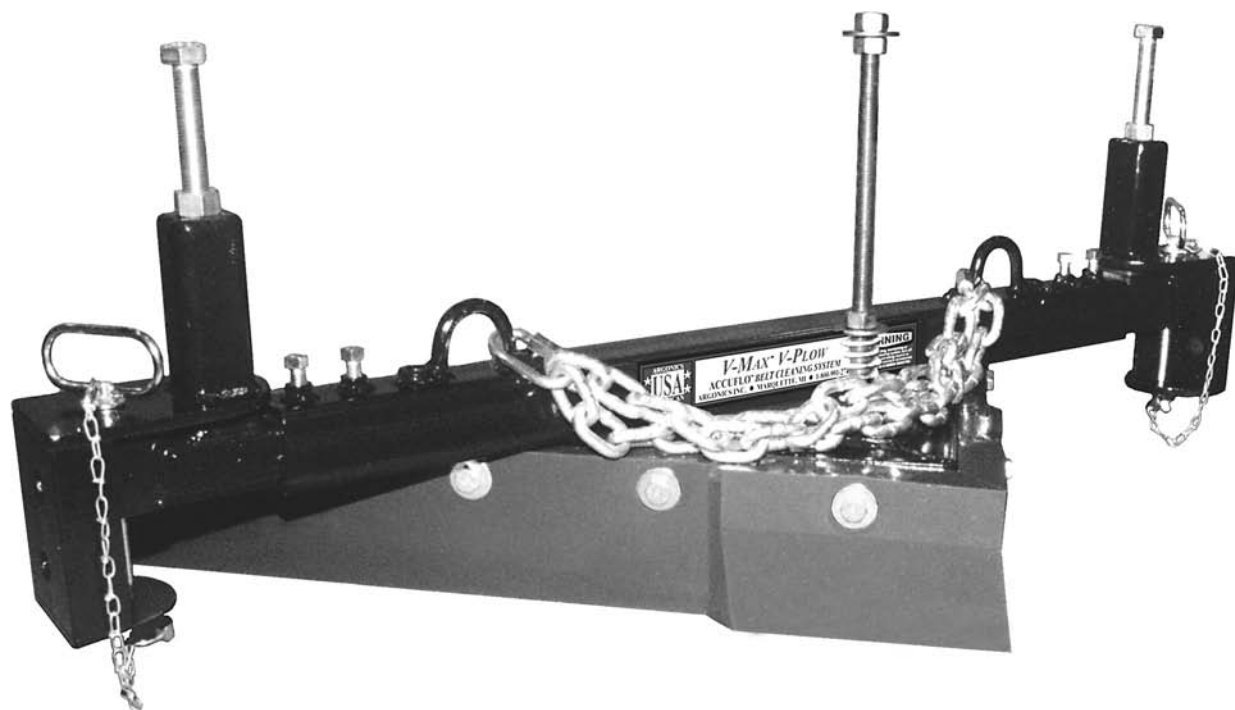


# V-MAX<sup>TM</sup> V-PLOW

## Conveyor Belt Cleaning System



**ARGONICS**  
ENGINEERED POLYURETHANE

## ⚠ WARNING ⚠

Always obey all applicable safety rules.

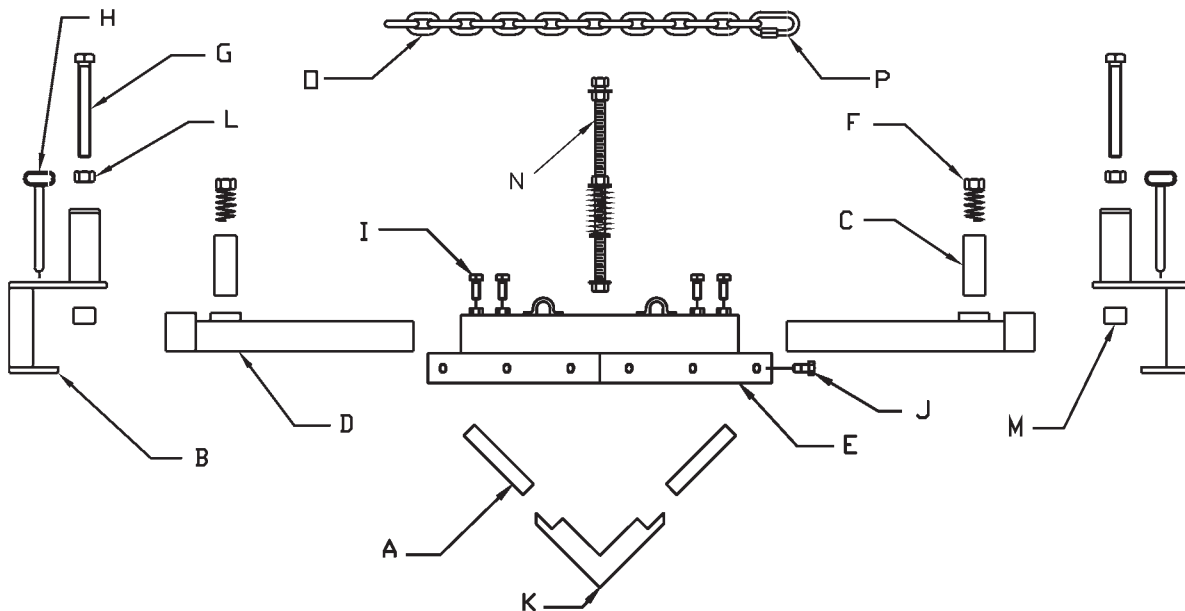
Be sure all power to the conveyor has been disconnected and controls are locked out.

### Installation Tools Required

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>- Tape measure</li> <li>- Angle Gauge</li> <li>- Level &amp; Straight Edge</li> <li>- Scribe or Chalk</li> </ul> | <ul style="list-style-type: none"> <li>- Welder or Drill</li> <li>- ½" End Wrench</li> <li>- 1 ⅜" End Wrench or Crescent Wrench</li> </ul> |
|---|--|

**Bolts, lockwashers and nuts for mounting are not supplied**

### Assembly Breakdown



Letter	Part Number	Qty.	Description
A	CP-DP-15"xx"-G83	2	Urethane Blade, 1" × 5" × Length
B	CP-DP-3545B	2	Mounting Bracket
C	CP-XT-153-G83	2	Spring Sleeve
D	CP-VP-"xx"A	2	Stub End "xx" = 16 with mainframe of 30" - 96" "xx" = 12 with mainframe of 22" - 28" "xx" = 10 with mainframe of 16" - 20"
E	CP-VP-"xx"C	1	Mainframe
F	CP-DP-3125	2	Tension Spring
G	BOLT-0.75x6.0-NCFT	2	Tap Bolt, .75" × 6"
H	CP-AR-5006	2	Hitch Pin
I	CP-AR-5125	4	Set Screw
J		variable	Variable Hardware - Bolt/Washer/Nut
K	CP-VP-N66-G83	1	Nose Cone
L	NUT-008	2	Brass Lock Nut, .75" NC
M	CP-XT-1515	2	Tensioner Nut, Nylon
N*	CP-VP-SPRING	1	Front Spring Assembly (Nose Cone Support)
O	3592T34	2	Safety Chain, .375" x 24" Zinc
P	8947T18	1	Master Quick Link, 3/8"

\* Only supplied on systems 32" and larger.

# INSTALLATION

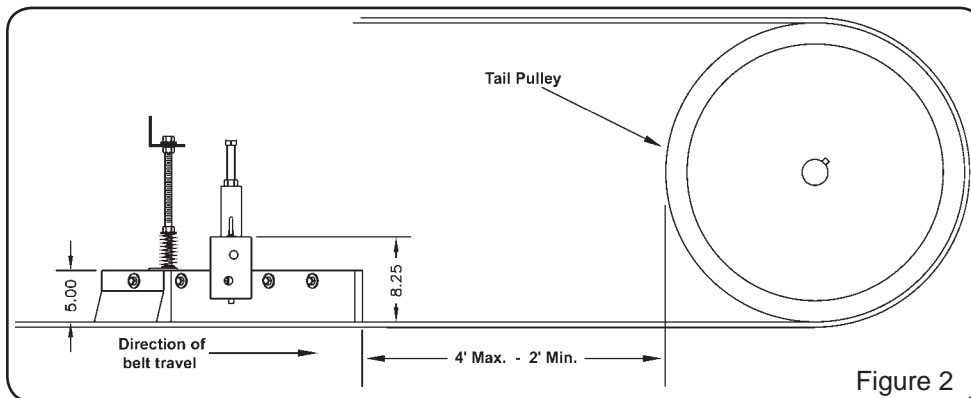
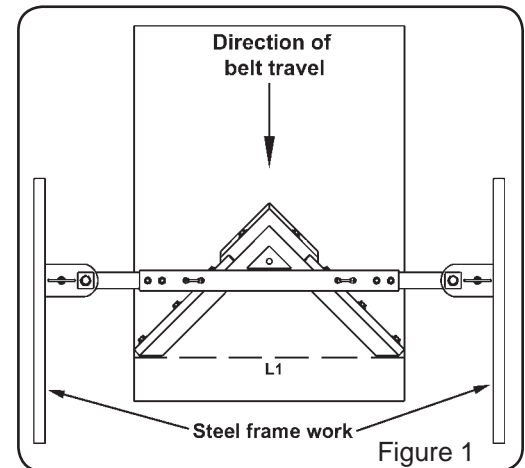
## Step One: Set Up

The V-plow is packaged for shipping with the mounting brackets raised to their extended positions and assembled to the stub ends at each end. You must first fully retract the tension spring and spring sleeve combination into the tensioner housing section of the mounting bracket before installing the V-plow. To do this, loosen the two (2) brass lock nuts (item L in the assembly breakdown) and unscrew the two (2) tensioner bolts (item G in the assembly breakdown) until the mounting brackets (item B in the assembly breakdown) rest flush on the top of each stub end (item D in the assembly breakdown).

## Step Two: Layout

Begin layout by cleaning any debris from the conveyor belt surface where you will be mounting the V-plow. Using a 90-degree layout tool, draw a line across the entire width of the belt perpendicular to the belt length (see L1 in figure 1). You may need to draw a partial line and then finish it with a straight edge. This line should be no further than 4 feet and no closer than 2 feet from the tail pulley in order to properly protect the pulley from tramp materials (see figure 2). If for some reason you can not mount the V-plow within this area, you must then mount it to the closest available flat return idler, with the distance being no more than 1 foot from the idler.

**NOTE:** The further you place the V-plow away from the tail pulley, the more likely your pulley will become susceptible to tramp materials.



## Step Three: Mounting

Loosen the four (4) set screws on the mainframe which allow the stub ends to telescope in and out of the mainframe. Place the complete system on top of the belt surface. Be sure the blade is even with the belt edge or extends beyond the belt edge on both sides. Set the tails of the V-plow's "V" shaped blade even with the L1 line you drew onto the belt in Step Two (see

figure 1). Now extend the stub ends out with the mounting bracket flush on top until they make contact with the chute wall or frame work. Trace the outline of the mounting bracket and holes onto the structure. If no chute wall or frame work is available you will need to construct an appropriate support structure. Remove the two hitch pins from both sides of the V-plow and set the mainframe aside.

**NOTE: For Bolt In Only** - Using the traces that you made for the mounting holes, drill two  $\frac{13}{16}$ " diameter holes to accept  $\frac{3}{4}$ " diameter grade 8 bolts.

Now place the mounting bracket onto the structure, lining it up to the traces you made earlier and then weld or bolt into place. If welding, four stitch welds are sufficient to hold the bracket to the structure. Now place the V-plow back into position on the belt and reinstall the hitch pins, making sure to secure them with their safety snap pins. Retighten the set screws to secure the stub ends to the mainframe.

## Step Four: Safety Devices

Safety chains and nose cone support hardware (items O & N on page 2) have been provided by Argonics for you and your conveyor system's safety. **Note:** *Nose cone support is only supplied on systems 36" and larger.*

**If these items are not installed properly, you will void any and all warranties associated with this V-plow system.**

**To install the nose cone support** (only supplied on systems 36" and larger): Start by loosening the tensioner nut just above the spring located on the front of the V-plow. Back it off by 4" or more (see figure 3). Next, weld a  $3\frac{1}{2}" \times 3\frac{1}{2}" \times \frac{3}{8}"$  thick piece of angle iron (not provided) parallel to the V-plow's mainframe across the chord members of your conveyor, approximately 11" above the belt's surface and directly above the hole in the nose cone support bracket (see figure 4). Now drill a  $\frac{3}{4}"$  diameter hole through the top of the angle iron directly above the hole located in the V-plow's nose cone support bracket. Finally, remove the top nut and washer from the threaded rod and push the rod up through the hole in the angle iron. You will need to adjust both upper nuts on the rod until the lower welded nut is flush with the bottom of the nose cone support bracket.

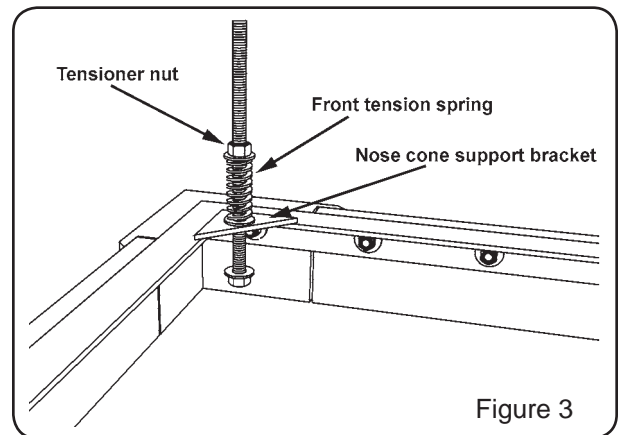


Figure 3

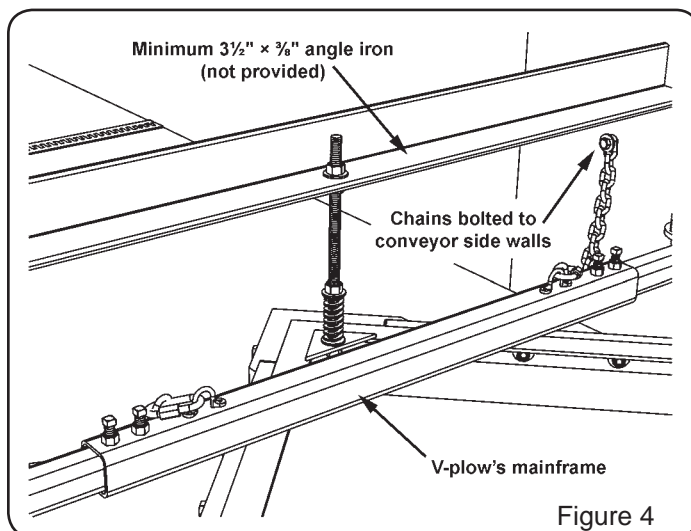


Figure 4

**To install the safety chains:** Weld or bolt the chain ends to the conveyor side walls approximately 6 to 8 inches in front of, and 2 to 4 inches above the V-plow's mainframe (see figure 4). When properly installed, you should have approximately 3" of slack in each chain. **NOTE:** *Under no circumstances should the chains ever be installed as to be touching the belt in any fashion.*

## Step Five: Tensioning

Tighten the two  $\frac{3}{4}"$  tensioner bolts (item G in assembly breakdown) on each mounting bracket to compress the tensioning spring  $1\frac{1}{2}"$ . This will be approximately 15 revolutions to the bolt. Tighten the brass lock nuts (item L in assembly breakdown) to secure the tensioner bolt in this position. Now follow the same procedure to the tensioner nut for the nose cone support. During the life of the blade, you will have to repeat this tensioning process once more.

Carefully check over the entire V-plow system and make sure that the two hitch pins are secured with their safety snap pins.

**Installation is now complete.**