

FACTS ABOUT "PAUL" STRAND PUSHERS

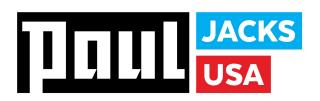
Regarding the different pushers: there are several ways of pushing strand as follows:

- Pushing into the wire cage inside the form this will work up to 250-300 ft (250 ft for ½" strand and 300 ft for 0.6" strand), depending on the friction and how the strand is guided inside the cage. After 300 ft the strand starts winding itself because of its own weight, the friction between the strand and the rebar of the cage, is too high. While the pusher is still pushing, the strand is not "rigid" enough to keep going forward, it will "bend / buckle". This is a problem of the rigidity of the strand, not the power of the pusher.
- To push from 270-500 ft., an intermediate pusher is needed (RP2i).
- For a faster and easier pushing operation, the bulkheads of the form, should be sloted and introduced to the form after the stressing operation is finished. Some people worry about having sloted bulkheads because they use self-compacting concrete and the gravel is very small, so the concrete may slip through the gaps between strands in the bulkhead. The solution for this problem is to use magnetic strips horizontally between the layers of strands and between the bottom of the form and the first layer of strands.
- The strand pusher should be as close of the abutment as possible. Long empty spaces between the machine and the abutment can cause lower rigidity in the strand.
- The first bulkhead should be as close to the abutment as possible. Long empty spaces between the first bulkhead and the abutment can cause lower rigidity in the strand and may cause bending or buckling of the strand between them.
- The strand pusher should be fixed to the abutment by means of the special "arm" that is attached to one of the two vertical poles in the machine. See attached picture.

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- The machine has two speeds forward and two speeds backwards. Slow speed is 1 ft/sec, and is used to drive the strand trough abutments and bulkheads. The fast speed is 4 ft./sec., and it should only be used inside the cage of rebar. The fast speed backwards, should never be used.
- Pushing into wire cages outside the form some customers avoid "the length of the bed" problem and also are saving time by pushing the strands in each wire cage outside the form. They are lifting the cages into the mould including the strands. They are using couplers between bulkheads leaving enough distance between them for the elongation of the strand. Please watch videos 1 and 2 in our website www.pauljacksusa.com.
- Pushing into channels usually is done to prepare a bunch of strands which
 will be pulled into the bed later. Here usually the speed is faster (12 ft/sec).
 this is used for hollowcore beds and flat-beds for architectural and
 structural panels. The strand pusher is stationary (RP6), fully automatic and
 it's programable for the strand length needed and also the number of
 strands to be pushed. Please watch videos 3 and 4 in our website
 www.pauljacksusa.com
- Pushing a single strand into a flat-bed, with no rebar or cage on it, will require a guide for the strand to avoid it to go sideways. One of the solutions is to make a temporary "U" shape channel of bended steel (1/8" thick, for example) with high walls, approx. 12" high and 4" at the bottom in 20' sections, fixed temporarily to the bed with magnets. One magnet every 20' will be more than enough. The number of this channels depend on the length of the bed. This is just a suggestion to solve the problem. There are many more solutions that customers have created and applied in their flat-beds to push a single wire into it.





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