



Placing MaxCell® In Occupied Conduit

We have determined that it is poor practice to pull a cable directly on existing plant due to the associated risk of damaging the existing cable sheath and ultimately the viability of the network. Over the past 5 years, the MaxCell Group has developed construction practices for installing MaxCell in occupied conduits.

1. First, it is preferred that the conduit be less than 30% occupied by volume, or less than 50% full if you were to draw a line horizontally across the halfway point of the conduit opening.
 - a. A 2" conduit can hold up to three .70"mm cables
 - b. A 4" conduit can hold up to nine .80"mm cables

The condition of the occupied conduit should be determined. It is unlikely that MaxCell will be effective in very poor duct structures.

2. A **MaxCell Rodder head** (or paddle) is the most effective tool for overriding existing cable plant. The size of MaxCell Rodder head required is dependent upon the conduit diameter.

The MaxCell Group can help you select the right size head for your duct structure. The head selected is matched to the inside diameter of the conduit.

3. The MaxCell Rodder head is attached to the threaded end of a fiberglass or steel rod. The head is fed into the duct **ON TOP** of the existing cables. If the head is not on top of the cables to start, there is the likelihood that the cables can get tangled. The head actually pushes the cables to the bottom half of the structure, and allows the rodder to proceed without entangling with the existing cables.

Which is the right rod for any given application? The rod selection is usually governed by several factors including:

- the size of ducting it is to be pushed through
- the distance the rod is to be pushed
- the number and tightness of bends in the ducting

A smaller rod in a large duct will make more frequent contact with the conduit; the same rod in smaller duct will make less frequent contact and therefore less friction so it can be pushed further.

A large rod in small ducting is a good situation, but reduced flexibility of the rod may cause increased friction in the tighter bends.



Productivity Redefined



4. After the rodder is successfully placed, there are two options:
 - a. The MaxCell pack can be pulled back over the cables with the rodder. The fiberglass rodder is less likely to cause damage to the existing cable sheath than an abrasive pull tape or rope.
 - b. A rope can be pulled into the conduit by attaching to the installed rodder with the MaxCell placed at a later time. If this method is chosen, we recommend that Max-Glide (a jacketed polyester rope) be used, which is made out of the same material as the cable sheath and is less likely to cause sheath damage to the existing cable. We also suggest lubricating the Max-Glide with a silicone cable lubricant to further reduce friction between the rope and cable.
5. When placing the MaxCell with rodder or rope, use the standard MaxCell installation procedure for attaching to the MaxCell – and always use a swivel to prevent twisting.

Depending on the application, overriding existing cables can present its challenges, but it can save valuable construction dollars. Some factors that may limit overriding include:

- Conduit size
- Conduit fill
- Distance of run

Paddle Width 1-3/4”:

PBC3/8200, Clevis, Pull Back, 3/8-16 Female Threaded, for two-inch duct

Paddle Width 2-7/8”:

PBC3/8300, Clevis, Pull Back, 3/8-16 Female Threaded, for three-inch duct

Paddle Width 3-7/8”:

PBC3/8400, Clevis, Pull Back, 3/8-16 Female Threaded, for four-inch duct

**Discuss your application by calling the MaxCell Group.
We'll help you select the best option for your particular situation.**



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