



# Bolt Together Gun (BTG) Systems

1.562 - 2.500 inch

MAN-BTG1-000 (R00)

## Owen Oil Tools LP

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# Bolt Together Gun (BTG) System

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## 1.0 Pre-Assembly



**Warning: Explosives are destructive by nature! Do not attempt to disassemble or alter explosive products in any manner! Do not crush, hammer, pinch, impact, pull wires or abuse any explosive product!**



**Warning: Be sure to follow safe operating practices as found in API RP-67 in accordance with governmental regulations, company policies and manufacturer's recommendations!**



*Note: Before loading and testing, visually inspect the strip for any defects.*



*Note: The 4 screws that are required to attach the Tube/Flat Strip to the carrier, are not included and must be purchased separately.*

**1.1** Place the gun on a sturdy loading table. Remove the plastic caps from both ends of the carrier, then remove the Tube/Flat Strip.

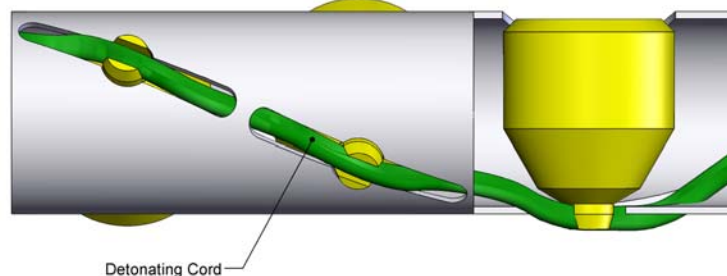
**1.2** Attach a Top/Tandem Sub to the Tube/Flat Strip as per your requirements.

## 2.0 Loading a Tube Strip

The detonating cord on this style, is placed on the inside of the tube strip and spirals around, connecting the charges forming the explosive sequence.



*Note: With the internal wrap style tube strip, the det cord is held in place by the charge and tube strip (no Det Cord Clips are required).*



**2.1** Using Owen Super Cutters, cut a sufficient length of det cord that will completely load your tube strip and that will allow for det cord initiation. One method of doing this, is to wrap the det cord around the tube strip following the charge holes. Take that length and add 3 - 4 ft (0.9 - 1.2m). It is always better to have too much, than not enough.



*Note: To determine the next length of det cord to be cut, measure the first cut length before loading, then measure the scrap length when finished. Subtract the scrap length from the original cut length to determine the length of the next piece of det cord.*



**Warning: Never load a tube strip when the det cord is still attached to the roll! Cut the necessary length of cord, then remove the roll from the loading area!**

**2.2** Insert the det cord through the attached tandem and tube strip, and through the other end. Leave at least 6 in. of det cord sticking out of the tandem end.



*Note: To help run the cord through the tube strip, use a non-sparking Fish Tape or Fish Tape Leader (used by electricians and plumbers). Insert the fish tape through tube strip and attach det cord to its end using electrical tape. Withdraw the fish tape, pulling det cord through tube strip. Be careful not to scrape the outer covering of the cord as the fish tape is retracted.*

**2.3** Using Owen Super Cutters, make a clean, squared-off cut on the tandem end of the det cord.

**2.4** Visually inspect the cut, then install the proper end seal over the end of the det cord and crimp in place by using Owen Super Crimpers.

**2.5** Make sure that there is enough det cord for your operational requirements

**2.6** To load the charges, start at the tandem end of the tube strip and insert a charge through the large hole until the det cord grooves of the charge sticks out through the small hole (you may need to rotate the charge so that the det cord groove aligns with the path of the det cord). Secure in place by using the bend tab on the tube strip. The charge should not be able to move side to side. Continue to load the required charges to complete the tube strip.



*Note: Insert only the number of charges that you need loaded. The tube strip can be fully or partially loaded.*

**2.7** Make a clean and squared-off cut to the det cord sticking out of the open end and then crimp an end seal on the det cord.

**2.8** The fully loaded internal wrap style tube strip is now complete and is ready to be installed in its accompanying carrier. The installation of the tube strip is covered in section 4.0.

## 3.0 Loading a Flat Strip

**3.1** Place a charge into the strip and then install an O-Ring onto the charge groove.



*Caution: **Either use an O-Ring or a Charge Clip, not both!***



*Note: The Owen charges come with O-Rings. Contact your Owen representative if you prefer to use Charge Clips.*

**3.2** Load the charges in either a 0° phase or 180° phase.

### 3.3 Loading for 0° phasing

**3.3.1** Insert the det cord through the tandem end and then lay the det cord down the middle of the strip, leaving at least 6 in. sticking out of both ends.

**3.3.2** Press the det cord into the charge grooves.

**3.3.3** Freshly cut both ends of the det cord and crimp with End Seals.

### 3.4 Loading for 180° phasing

**3.4.1** Insert the det cord through the tandem end and then weave it through the charges (**do not** press into place yet), leaving at least 6 in. sticking out of both ends.

**3.4.2** Go back to the first charge and then press the det cord into the charge groove. Repeat with remaining charges.

**3.4.3** Freshly cut both ends of the det cord and crimp with End Seals.

## 4.0 Loading the Strips into Carriers



***Warning: If any difficulty is encountered while inserting the tube strip, STOP and check for the cause of the difficulty! If necessary, pull the strip back out of the carrier and determine the problem! Never beat or force a loaded strip into a carrier!***

**4.1** Slowly insert the loaded Tube/Flat Strip into the carrier and align the loaded strip with the scallops of the carrier.

**4.2** Now, insert and then tighten the 4 screws to secure the sub to the carrier.

**4.3** The BTG is now ready for shipping or transportation.