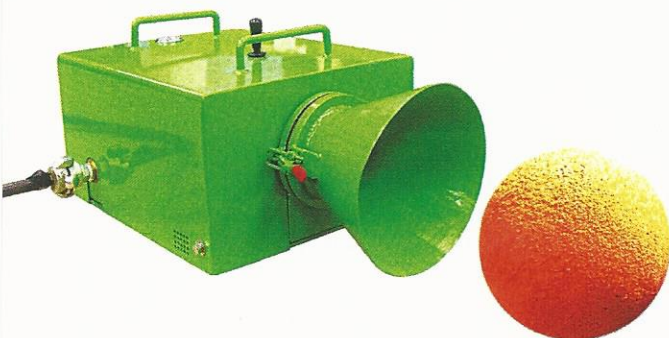


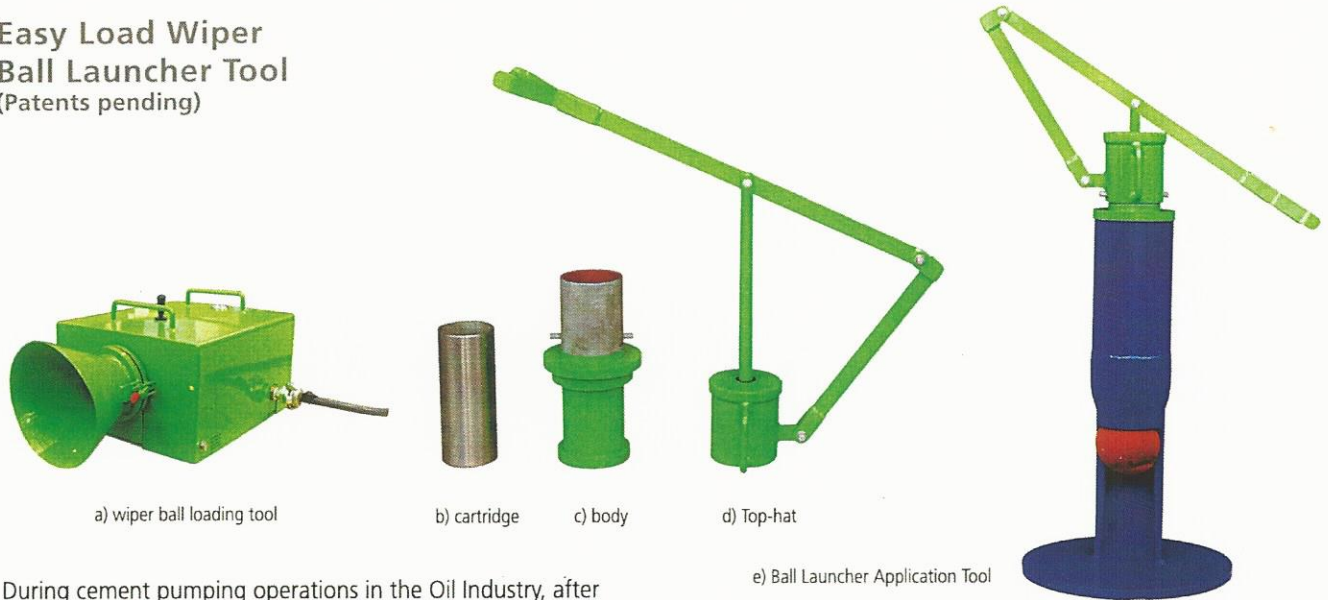
Easy Load Wiper Ball Launcher Tool



- Ball Launcher Application Tools
 - Solid Casing
- Centralizer Specialists
 - Float Equipment
- Air Operated Mud Buckets
- EZ Spin make-up Tools



Easy Load Wiper Ball Launcher Tool (Patents pending)



During cement pumping operations in the Oil Industry, after cement has been pumped down through the drill string, a residual coating of cement could be left within the drill string (inside diameter of approximately 3 – 4 inches) – requiring the drill string to be wiped clean.

A foam ball with a diameter of 7 – 8" is usually used, this is forced into the drill string typically a smaller pipe of approx 4" in diameter (Smaller sizes catered for). This action is currently carried out by the rig personnel forcing the wiper ball into the drill string tool joint by hand. This method causes a potential injury (trapped fingers) to personnel, also the time required to install the wiper ball into the drill pipe can take anything up to 30 minutes or longer during critical operations which has a financial impact to companies concerned.

The EZ- Load Wiper Ball Launcher Tool has been designed primary with safety in mind where the ball can now be installed by one person into a cartridge via the Ball loading Device to aid insertion into the drill string. This method has no restrictions in how many balls are used.

The Launcher body / cartridge sleeve fits into the top of the drill string tool joint. The pre-Loaded cartridge is then inserted into the body. The top hat loading assembly is then placed over the ball launcher body which will assist in preventing any potential area for trapped fingers. With the top hat assembly in place over the launcher this provides extra stability to the plunger when operational.

The plunger section of the tool is then pushed down by rig personnel holding the handle which has been situated in a safe position to prevent trapped fingers when the plunger is fully extended. (This pushes the wiper ball to the end of the launcher body and then into the drill pipe). The handle length has been designed so that one person can operate the tool in a safe manner.

Light weight high strength aluminium has been used to make the tool very easy and safe to handle by the rig personnel and to eliminate contact with oil based mud and other harmful drilling fluids.

The EZ Load Ball Launcher Tool is designed to fit all sizes of drill pipe from 3" up to 5-7/8". Once the ball has been launched by the rig personnel, which takes approx (1-1/2 minute), the whole tool assembly can be removed in a matter of seconds to allow operations to continue. This is a considerable cost saving over the current method.

A video showing the installation method can be viewed at www.rayoiltol.co.uk or is available on request using the e-mail below.

