

Certa-Lok™ Drop Pipe Application and Installation Guidelines

Certa-Lok Drop Pipe for submersible pumps is engineered and manufactured to provide long and reliable service in most well applications. For best results, the following guidelines must be observed when installing Certa-Lok Drop Pipe.

The CertainTeed design Worksheet must be (www.certainteed.com) consulted to determine the appropriate size pipe for the proposed application. Select size carefully to accommodate the maximum anticipated flow rate, and always account for worst-case transient conditions (e.g., surge pressures, increased pressure at start-up, etc.). The discharge pressure used must account for the effect of any upstream piping, including changes of elevation. Maximum flow velocity of 10 fps is recommended to control transient surge pressures; lower velocities are preferred. Handle pipe and couplings with normal care at all times, being particularly careful not to strike the pipe with any objects, especially in colder weather. When unloading the truck, lower pipe slowly to the ground.

Important: Do not use PVC Drop Pipe if there is the potential for pump-generated heat, which can occur if the system is allowed to operate continuously under zero flow/pump shut-off head conditions. Heat can greatly reduce the strength of thermoplastic materials. A safety cable or rope must be used on all installations due to this potential problem.

All Certa-Lok Drop Pipe application guidelines are given with the assumption that a check-valve is used at or within 20 feet of the pump and at higher elevations, as required, to control water hammer.

If surge pressures are not totally predictable due to potential variations in system operation, a properly sized pressure relief valve must be installed at the well-head. Use the Design Worksheet to verify that maximum system pressures, which develop when the relief valve actuates, do not exceed published pressure ratings.

Note: As CertainTeed cannot predict the degree of pump motion that may be experienced in a particular application due to factors such as mechanical unbalance, a centralizer or torque



arrestor located directly above the pump should be considered, especially on deeper wells, to prevent the Drop Pipe from whipping and vibrating. Use and spacing of additional centralizers above the pump should be determined based on the particular installation conditions. The Certa-Lok system incorporates coupling set-screws, which are tightened to provide resistance against torque imposed on the system by the pump motor during start-up. Set-screws should be tightened after the joint has been assembled and slack removed; manually filling the Drop Pipe with water before starting the pump will increase hanging weight, helping to remove slack from the joint and air from the system. Tighten with an allen wrench until set-screws are just touching the pipe; then torque each screw one-half to one full turn or until snug.

Caution: Excessive tightening of the set-screws will cause high local stresses, and may result in a joint that leaks under pressure. If a stainless steel adapter is used, a small indentation, or countersink, is recommended to provide a recess for the set-screws. This can be accomplished with a conventional power drill, after using the Certa-Lok coupling to mark the set-screw hole locations.

“Soft-start” controls are recommended to minimize imposed torque, especially on the higher HP motors (50 HP and above).