

# TECHNICAL SOURCE GUIDE

## Pipe Clamps

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Pipe has long been used as a support device to create acting levels raised off from the stage floor. Designers, including Ming Cho Lee, have used pipe as a design element because of its visual, thin, line-like quality. The multiple-use characteristics of pipe have also been an unquestionable asset to many stages across the country, enabling pipe to function as a grid system, to create additional storage areas, to develop additional lighting positions, and much more.

To accommodate this range of purposes, many hardware connecting devices have been developed. Although all of these hardware devices work well in the applications for which they are designed, there are many instances where they are used in unsafe situations in theatre. Most of the lightweight hardware such as "Kee Klamps", "instastructure", and Rosco pipe clamps are designed for static-load situations, typically to support lighting equipment, curtains, railings, or shelving units. Even the "Rota Lock", which boasts an 8,000 pound capacity per unit, is exclusively intended for a static-load situation. In engineering terms, human weight constitutes a transverse load, not a static load. The appropriate hardware required to hold the transverse load configuration in a scaffolding clamp.

Scaffolding clamps, or "Chesebroughs", are designed to connect pipe when pipe is being used in place of standard scaffolding units. Designs of scaffolding clamps may differ slightly from one manufacturer to another, but the concept is the same. They usually come in either a rigid right-angle or swivel configuration. The major body of the clamp is usually hot dipped galvanized cast metal with 1/2" bolts attached as couplers. Bolts can be either in a T-bolt or eye-bolt design. Some are designed as a dual purpose unit which enables them to accept 1-5/8" to 2" pipe. If not dual purpose, then only one pipe diameter is allowed. This pipe diameter size is usually stamped on the clamp somewhere to indicate the diameter of pipe that this clamp will accommodate.

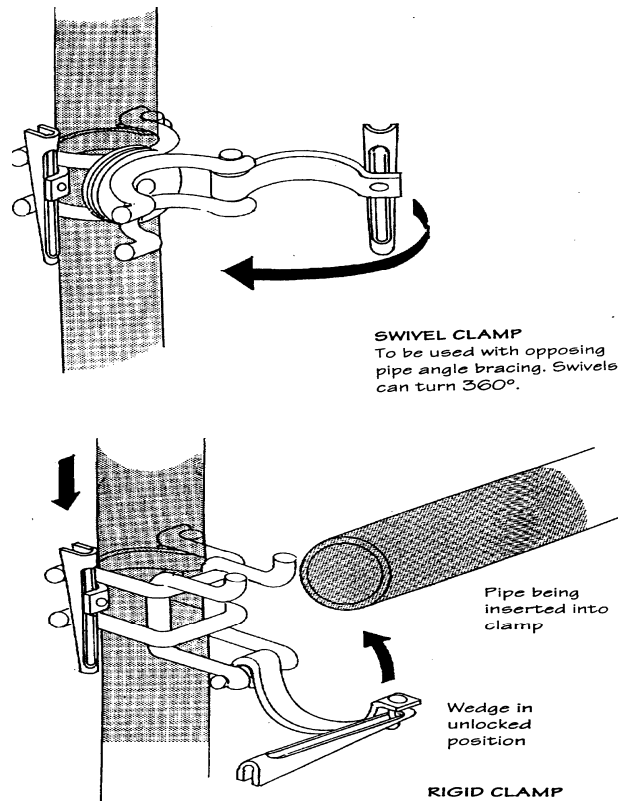
A fairly new design of pipe coupler on the market has been designed by the Van Thiel Scaffolding Company. Its new design possesses all the qualities of the typical scaffolding clamp, with one exception--a wrench is not required to lock it into place. The Van Thiel couplers use a sedge device incorporated into the design which allows for quick locking and unlocking of clamps with a hammer or similar tool. Wedges can be driven in from either direction, which gives a greater advantage in hard -to-reach situations. Because the wedge is incorporated into the design, it cannot be separated from the clamp itself and cannot be lost. Rigid right-angle clamps should be used on all 90-angle connections. Swivel clamps should be used in angle bracing application. It is important to remember that the assembled structure must be free from any extraneous lateral movement unless angle bracing is used in opposing directions.

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The cost of scaffolding clamps can fluctuate from \$20 to \$25. The Van Thiel coupler is comparable in price. It is possible to purchase used couplers at a reduced price from suppliers; however, it is best to check the quality of the clamps before purchasing. Things to look for in a used clamp are mars on the metal castings caused by hammering, for this can cause unseen cracks which reduces the strength of the clamp; heavy build-up of paint or concrete, clogging the bolt and pin area; and stripped nuts, stripped threads or a buildup of rust on threads, making the nuts difficult to turn.

To purchase the standard scaffolding clamp, simply contact a local scaffolding supplier. To find the closest distributor of the Van Thiel couplers, contact the Van Thiel Scaffolding Company at 911 Westfall, Pasadena, TX. 77506; 713-472-7114.

## PIPE CLAMP EXAMPLES



Thank you for taking time to read this "classic" Technical Source Guide! Because it has been published a relatively long time ago, addresses (physical & web) and any phone numbers, might not be current!

### Technical Source Guide #1 – Pipe Clamps

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