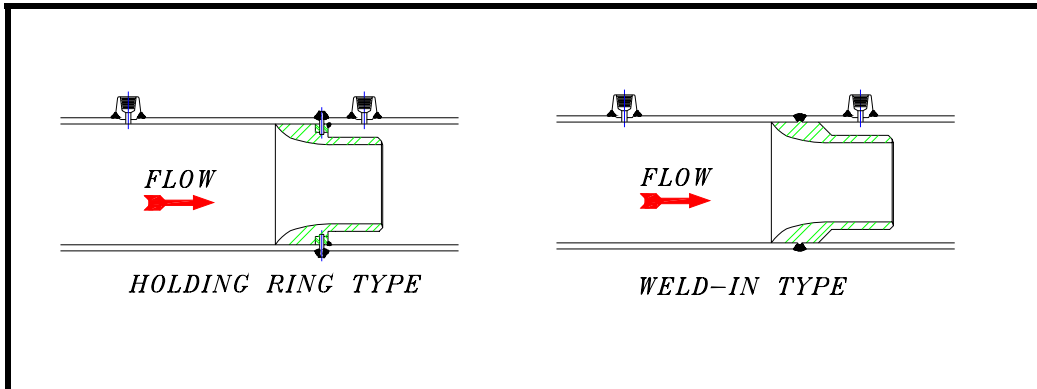


TYPE "P" (PLAIN) FLANGED FLOW NOZZLE

The Crane Type "P" flange flow nozzle is the most common type used for insertion between pipe flanges. This flow nozzle is designed for pipe wall taps whose locations are determined by Beta ratio and pipe I.D. A shoulder behind the nozzle flange centers the nozzle in the pipeline within required tolerances. The Crane Type "P" flow nozzle is designed in accordance with A.S.M.E specifications.

TYPE "T" (TAPPED) FLANGED FLOW NOZZLE

The Crane Type "T" flow nozzle is equipped with a downstream tap in the nozzle flange. This type flow nozzle is basically the same as Type "P" except for the downstream tap location. It is used primarily in small sizes where tap interference may occur such as on or too close to the pipe furnished with a ½" NPT connection unless otherwise specified.



HOLDING RING FLOW NOZZLE

This nozzle configuration is designed for installation in a pipe without flanges. The nozzle is installed with the curved nozzle inlet facing upstream in a section of carefully selected and internally bored pipe. The Crane holding ring flow nozzle eliminates the welding of dissimilar materials because the ring, pins and pipe are of compatible materials. Pipe wall taps are also used with this type nozzle.

The holding ring flow nozzle requires careful consideration for use in sizes below 4" because difficulty may be encountered in welding the thin ring inside a small diameter pipe. For this reason, holding ring type nozzles are not recommended below 4" size. Special designed nozzle flow section assemblies are available for these sizes.

WELD-IN FLOW NOZZLE

This type nozzle has a machined tongue around its greatest diameter designed to fit between beveled ends of both an inlet and outlet pipe section. The pipe sections with the nozzle in place, are firmly clamped and/or tack-welded in alignment before the finish weld is applied. The Crane weld-in flow nozzle is used where flanges are not applicable such as high temperature and pressure applications in power plant installations, feed water, etc. The weld-in nozzle is available with complete flow nozzle flow sections. Pipe wall taps are also used with this type nozzle.

Sizes below 4" may require a special design nozzle flow section assembly.