Why Compact Ductile Iron Fittings?

Compact Ductile Iron Mechanical Joint Fittings are manufactured from a high strength, impact resistant ductile iron that offers a great margin of safety against service failures and provides vastly increased resistance to breakage caused by rough handling during shipment and installation. Compact fittings are manufactured from ductile iron with a minimum tensile strength of 70,000 psi, minimum yield of 50,000 psi and minimum elongation of 5%. This compares to a minimum tensile strength of 25,000 psi in gray iron fittings.

Compact fittings offer a lighter, more economical fitting capable of withstanding high internal pressures and heavy external loading. Cost effective performance is assured with fittings having a minimum wall thickness equal to class 54 ductile iron pipe in sizes 3” to 12” and class 56 ductile iron pipe in sizes 14” to 24”. All compact ductile iron fittings have a working pressure rating of 350 psi. 3” through 12” mechanical joint ductile iron fittings are produced in strict accordance with all applicable terms and provisions of ANSI/AWWA C-153/A21.53. 14” through 24” are manufacturer’s standards and are produced to the intent of ANSI/AWWA C-153/A21.53.

Compact ductile iron fittings are produced with full flow diameters and are designed for use with modern ductile iron pipe. The resulting benefits are reduced head loss and lower pumping costs.

Fitting Assembly

1. Clean bell and plain end and lubricate gasket with pipe lubricant. The joint area must be free of dirt.

2. Slip gasket into position—assure even seating in the bell.

3. When gland is in position, insert bolts and partially tighten with fingers.

4. Tighten bolts to the normal range of bolt torque [75-90 ft pounds] while maintaining approximately the same distance between the gland and the face of the socket.

A proper joint is accomplished by partially tightening the bottom bolt first then the top bolt, next the bolts at either side, and finally the remaining bolts. Repeat this process until all bolts are within the appropriate range of torque.