



CHEMICAL INJECTOR SPECIFICATION

Chemical Injection is an important component of a well designed chemical feed system.

Saf-T-Flo has developed an outline of an engineering specification for chemical injection. Please consult with a Saf-T-Flo Application Engineer for assistance in creating a specification for your application.

Important factors, such as chemical solution, concentration, materials of construction, solution flow rates, water main pressure, and maximum pump discharge pressure can have a significant impact on the safety, maintenance, operation, and service life of the chemical feed system.

AutoCAD drawings are also available to support engineering specifications. Please contact Saf-T-Flo to request a drawing for your application.

ENGINEERING SPECIFICATION

1. **Chemical Injector:** Injector configuration shall provide a single feed point into the center of the water main. Materials of construction shall be compatible with chemical solution and be capable of withstanding maximum pump discharge line pressure and water main pressure. Specify 1/3 to 1/2 the diameter insertion length.
 - 1.1 **Water Main Connection:** Shall be Brass Corporation Stop or Stainless Steel Ball Valve. Thread connection shall be male NPT or AWWA (CC) inlet and capable of withstanding maximum water main pressure. Corporation Stop must include an acceptable safety device to prevent accidental release of solution tube while under maximum water main pressure and/or surge conditions.
 - 1.2 **Solution Tube:** Solution tube shall be sized to match pump discharge line or injection flow rate. An acceptable locking device must be included to prevent accidental release of the solution tube from the water main while under pressure. A ball check valve shall be included to prevent backpressure from the main from entering chemical feed system. A stainless steel safety chain shall be included to prevent withdrawal of solution tube past corporation stop. Safety chain length shall be preset by manufacturer for closure of the corp. stop before withdrawal of solution tube.
 - 1.3 **Pump Discharge Line Connection to Injector:** Shall be hard pipe, flexible tubing, or hose. Hard pipe requires disassembly of pump discharge line from the injector before removing solution tube from water main. Flexible tubing or hose allows for removal of injector from main without disassembly of pump discharge line. Piping, flex tubing, or hose must be capable of withstanding maximum pump discharge line pressure.
 - 1.4 **Caution:** Operator shall be able to withdraw or insert solution tube into water main while under pressure and without having to shut down the main.
 - 1.5 **Injector Assembly shall be Saf-T-Flo or approved equal.**