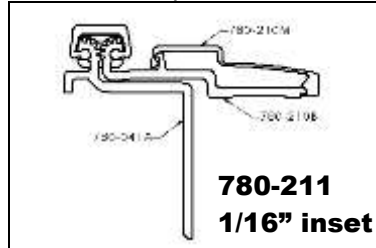


## ROTON Hinge U.L. Fire-Rated Studs – 780-211

These instructions outline how to install the optional stainless steel studs (4) for ROTON Hinge model 780-211. All four studs must be used in order to comply with U.L. requirements for composite wood fire doors rated up to 90 minutes and metal fire doors rated up to 3 hours.



### A. Materials Needed

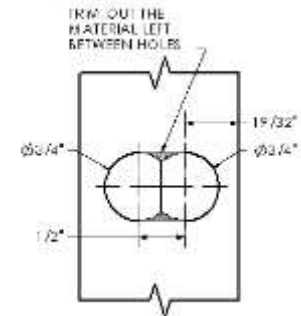
1. Stainless steel studs (4).
2. Drill, 3/4" diameter bit, #16 (.177") bit, 12-24 thread tap.
3. #10 spanner screwdriver.

### B. Installation

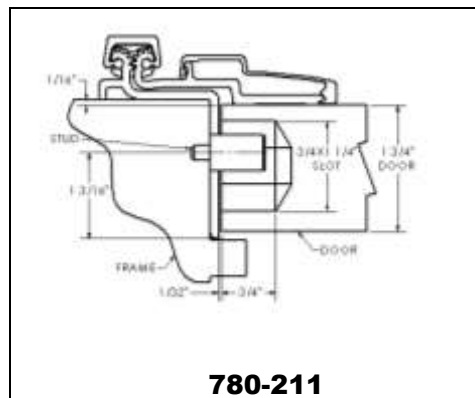
1. Install the hinge in accordance with the standard installation instructions furnished with the hinge.
2. On the frame leaf, drill and tap 12-24 in the center of the four (4) pre-drilled 3/4" holes.
3. The door has to have 4 horizontal slots (3/4 x 1-1/4") along the edge of the door. For the vertical slot location see the chart below. The first measurement is from the top of the hinge to the centerline of hole #1. The second, third and fourth holes are measured from centerline to centerline.

Hinge Length	79"	83"	85"	95"	119"
Hole #1	13-9/16"	13-9/16"	13-9/16"	13-9/16"	13-9/16"
Hole #2	15-1/8"	15-1/8"	15-1/8"	21-1/4"	25-3/8"
Hole #3	21-5/8"	25-5/8"	27-5/8"	25-3/8"	41-1/8"
Hole #4	15-1/8"	15-1/8"	15-1/8"	21-1/4"	25-3/8"

The horizontal location is 19/32" from the face of the door. The 3/4" diameter hole needs to be 3/4" deep. Then drill another hole 1/2" horizontally from that hole to create a 1-1/4" slot. Trim out the material left between each horizontal holes (see illustration) to create the slot.



4. Insert a stud into each of the four #12-24 threaded holes on the frame and tighten securely using a #10 spanner screwdriver.
5. Close the door slowly to assure that the studs are properly aligned. Any minor interference can be corrected using a rat-tail file.



**780-211**