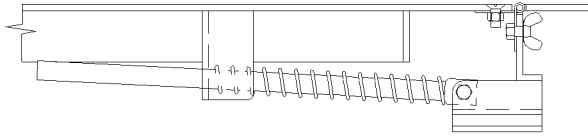
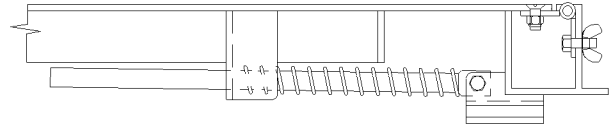


## SPRING MECHANISMS

U.S.F. Fabrication's spring mechanisms are computer designed to meet your lift requirements. We use stainless steel as standard material for long trouble free operation. Our standard open spring design allows for quick continual inspection and easy maintenance of the door's springs.



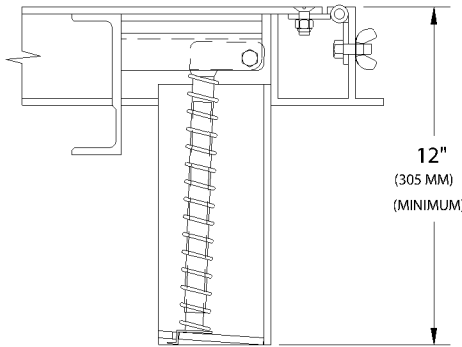
ANGLE FRAME



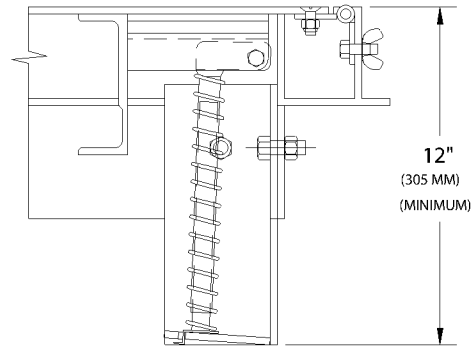
TROUGH FRAME

### OPEN HORIZONTAL SPRINGS

The horizontal arrangement is the standard design for pedestrian hatches and heavy duty single door hatches. They eliminate the casting problems caused by the spring assembly hanging below the slab.



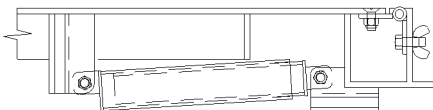
STANDARD



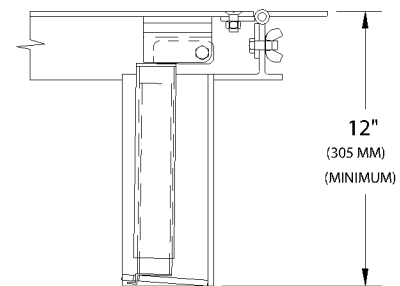
BOLT-ON

### OPEN VERTICAL SPRINGS

The vertical arrangement of springs is standard for heavy duty double door hatches, and can be used on our other hatch designs. Vertical springs can be either welded or bolted to the door's frame. Bolt-on vertical springs can be removed to facilitate casting the door into concrete where the springs' housings extend below the top-slab. The springs are bolted back in place after the concrete has cured. (Bolt-on springs have proven to be both a labor and material cost saver to precasters.)



ENCLOSED HORIZONTAL SPRINGS



ENCLOSED VERTICAL SPRINGS

### ENCLOSED SPRINGS

We can supply stainless steel enclosures on horizontal and vertical springs if you wish to enclose the springs.