USP Rolling Steel Fire Shutters are designed to automatically close in case of fire and stop it from spreading from one area to another for a maximum of 3 hours. Shutters up to 159 sq. ft. in area and up to 13'6" in width or 12'0" in height are manufactured with UL Classified Class A, B, or C labels. Although UL Classified and automatically closing, they can still be used as counter shutters.

Furnish Rolling Shutter, series 750 as manufactured by "USP" complete with curtain, hood, guides, counterbalance and options as specified.

Highlights
- UL Classified, 3, 1 1/2 and 3/4 hour labels
- Smoke protection available
- Automatic closing during fire
- Viscous Governor Technology
- Bent Steel Guides
- Fusible Link
- Oversized shutters up to 20’ wide

Operation
- manual lift
- external motors
- hand crank with or without automatic testing
- tubular motors with or without automatic testing
- FDCL-1000 Automatic Resetting Fire Door Operator

Curtain Model 750 consists of interlocking slats cold roll formed from hot dipped galvanized steel with optional baked on grey polyester enamel coating or 304 stainless steel with a #4 finish flat profile SF1. Each end of alternate slats are to be assembled with galvanized steel end locks to maintain slat alignment and to act as a wearing surface inside the door guides. Slat thickness shall be calculated with U.S. gauging with a minimum of 22 gauge. Steel slats are to be hot dipped galvanized as per A.S.T.M. A653. Each curtain shall receive a bottom bar to maintain slat alignment and posture.

Bottom Bar shall consist of two steel factory painted angles a minimum 1/8” thick. Bottom bar shall be provided with a lift handle and slide bolts.

Spring Counterbalance is to be housed in a steel pipe of the appropriate diameter and wall thickness as to support curtain. Deflection shall be limited to a maximum of .03” per ft. of door width. Springs are to consist of helical torsion type designed to meet a 25% safety load factor. Safety factor allows for safe operation, ease of use, and longer spring life. Springs are to be grease packed and anchored, using a cast iron anchor, to a cold rolled steel inner shaft. Spring tension shall be fully adjustable from outside of end bracket plate. To insure smooth operation end bracket plates shall contain sealed ball bearings to minimize wear of pipe shaft.

End Bracket plates shall consist of factory painted steel plates no less than 1/8” thick. Bracket plates are to house pipe shaft and counterbalance assembly. Shaft is attached to plate by sealed ball bearings fitted onto plate.

Drop Mechanism consists of a viscous speed governor, which controls the door’s rate of descent in emergency mode. The viscous governor is self adjusting and provides a smoother and quieter rate of descent within the NFPA 80 specification of 6” to 24” per second. The automatic drop mechanism may be activated by a fire alarm, smoke or heat detector, or a melting fuse link @ 165º (74ºC)

Guides shall consist of bent steel shapes a minimum of 2-1/2” deep and 1/8” thick. Guides will bolt together and feature a removable door stop. The guide depth shall be of a length adequate to provide for proper slat penetration.

Hoods shall consist of a minimum of #24 gauge hot dipped galvanized steel with a baked on grey or bronze polyester enamel coating. Hoods are designed to protect and house counterbalance assembly. To prevent hood sag, intermediate supports shall be furnished as required.

Locking for manual and crank operated doors to be slide bolts mounted on bottom bar with provisions for padlocks. Gearing within motors to be self locking.

Finish all non-galvanized surfaces shall receive a factory coat of rust inhibiting enamel. Field painting not included in this section.

Installation to be by USP or by an authorized dealer.

Options
- Baked on grey polyester enamel slats • Stainless steel slats • Poly-cote® polyester powder coating, 200 select colors • Tubular bottom bar • Cylinder locks • FDCL-1000 Automatic Resetting Fire Door Operator with Battery Backup • LM90 Fire Control System • Smoke Detector • Sounder • Strobe Light • Voice Warning • Flame Stop Baffle • UL Classified Seals •
**FDC1000 Automatic Resetting Fire Door Motor Systems**

The Fire Door Controller, FDC1000 & FDCL1000, are both integrated fire door operators and control systems. The FDC1000 is designed for fire doors, while the FDCL1000 is designed for smaller fire shutter systems. They are designed to interface with “normally closed” (NC) or “normally open” (NO) dry contact alarm systems to control the operation of a fire door or shutter. Wiring for sensing device to reverse and auxiliary devices to open and close are provided. The Fire Door Controller, FDC1000, is configurable as a standard Commercial Door Operator or a Fire Door controller selectable via a dip switch. In an FDCL1000, the control station is selectable between “Fire Door Mode Type I” and “Fire Door Mode Type II” by means of a dip switch. When “Fire Door Mode Type I” is selected the control station is the standard B2 wiring, momentary contact to open, close and stop. When “Fire Door Mode Type II” is selected the control station is a revised C2 wiring, momentary contact to open & stop and constant pressure to close with no open override. In addition, when “Fire Door Mode Type II” is selected, the door will Gravity Close (governed descent) on alarm. Both units feature fail-safe battery back-up systems which allow the door to function as a fire door when the batteries are charged and close the door before the batteries are completely drained. This system closes the fire door or shutter without releasing spring tension or disengaging the operator, allowing for fire door testing without expensive resetting of the equipment.

**LM-21 Series Fire Door Control Systems**

LiftMaster® release devices control the closure of a rolling fire door or a fire shutter in an emergency situation. Release devices work in conjunction with the fire door or fire shutter to provide an effective fire and smoke control system by preventing spread beyond the area of origin. The device’s basic function is to provide a time-delayed release of fire door or shutter upon receiving a signal from a smoke detector or central alarm station (or other remote switching device) or upon loss of power. Release devices are also an integral part of the fusible link assembly, releasing the door or shutter when the fusible link separates. All models are UL, C-UL and CSFM listed and are compliant with the NFPA 80 requirement for a fail-safe door holder / releasing device.

**Clearance Details**

<table>
<thead>
<tr>
<th>Width</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>to 8’0”</td>
<td>6.0”</td>
<td>8.0”</td>
<td>6.0”</td>
<td>7.5”</td>
<td>2.5”</td>
</tr>
<tr>
<td>8’0” to 13’6”</td>
<td>6.5”</td>
<td>8.5”</td>
<td>6.5”</td>
<td>8.0”</td>
<td>3.0”</td>
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For wider spans consult with the factory.