

# Fire Station Door Performance -- Executive Summary

## A Comparison of Four Fold Doors manufactured by Electric Power Door (EPD) With Other Conventional Doors

*An Independent Study by a California Fire Department*

### Profile of EPD

EPD engineers its doors for high cycle applications. Users include DCFD, LA County FD, Minneapolis FD (20 stations), Glendale FD (AZ), Federal Reserve Depositories, Coronado PD, Twin Towers Jail, Metro-Rail, the US military, and mining operations in Chile (39 doors), Argentina (26 doors), and Alaska (30 doors). Other fire departments considering their use include: Chicago, Virginia Beach, and Ft. Lauderdale.

### EPD History

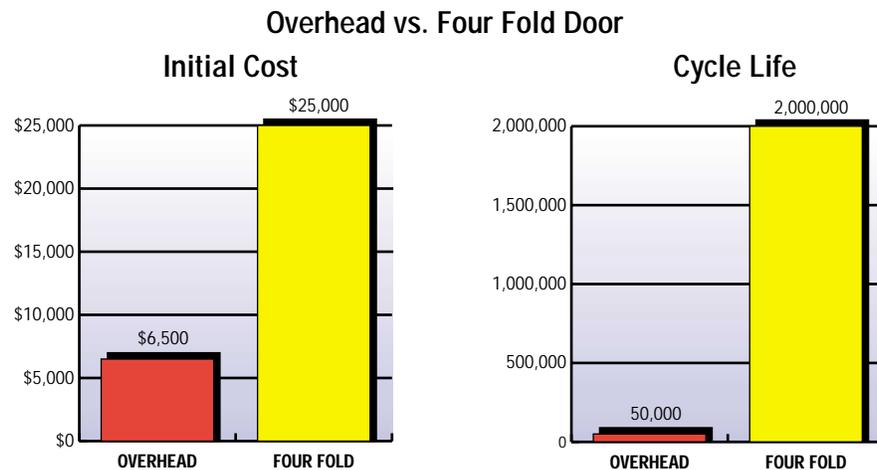
The company was founded in Chicago in 1923 and has been in Minnesota since the 1930s. Its workforce of 45 boasts a variety of engineering degrees and patents, as well as an impressive average tenure of 15 years with EPD.

### Recommended FD Specification

A 14' X 14' hydraulically operated four fold door powered by a 460 V, 3-phase current. Each panel would have 18" W X 48" H glazing, 1/4-inch thick, Standard UV-rating, located 4 feet from the bottom of the panel.

### Specification Rationale

A hydraulic operator requires less limit-switches and possesses a 2 million-cycle rating. All components may be reached with a six-foot ladder vs. electric operator components located above the 14-foot opening. 3-phase current is ideal, if available, since it imposes the least wear on any electrical motor it supplies.



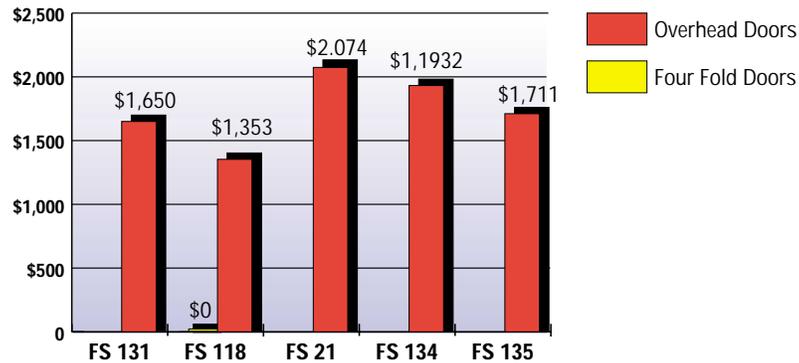
### Current FS Location With EPD Doors

The current FS used in the comparison has six electrically operated four fold doors. The two captains emphatically state these doors are superior to sectional overheads. Reasons include: 7-second opening, safety of the door always being in sight because of its horizontal opening and closing, silence of operation, and ease of manual operation during loss of power. **Note:** *One accidental door closure on a truck resulted in NO damage to the steel framed and sheeted door.*

## Current FS Location Door Costs

In FY 98 / 99, one roll-up door (utility area) and one sectional overhead door for emergency vehicles generated \$1,353 in repairs and required electrical work from a C&M electrician. Meanwhile, the six four fold doors were trouble-free (*see bar chart*).

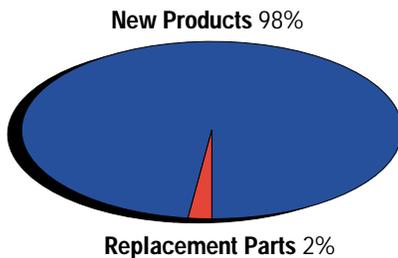
Apparatus Door Repair Costs FY 98 / 99:  
Overhead vs. Four Fold



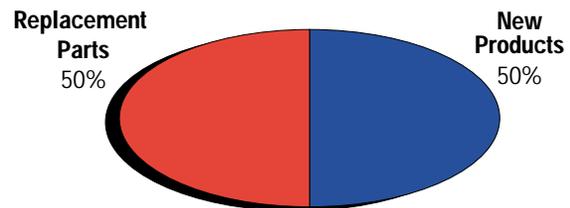
## Conclusion

Four fold doors are engineered for high cycle applications i.e. fire service, bank depositories, and correctional facilities. Finally, one can deduce product quality by examining a door manufacturer's source of revenues (*see pie charts below*).

Source of Four Fold Door Revenues



Source of Sectional Overhead Door Revenues



## FS Staff Contact With EPD

FS Staff has interfaced with EPD's headquarters and factory personnel to ensure our Department's transition from sectional overhead doors to four fold doors is effective.

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