



CASE STUDY 135

MSBA LONG ISLAND BUS COMPANY

CHALLENGE

When the Metropolitan Suburban Bus Authority (MSBA) Long Island Bus Company in New York, decided to convert their Rockville Centre location bus fleet from conventional diesel fuel to compressed natural gas (CNG), the company was challenged with a number of unique and critical-use exterior door requirements.

Due to the potentially volatile nature of CNG, the facility would be equipped throughout with a gas detection system using sensor technology to detect a gas leak. The doors would be required to interface with this new gas detection system.

“Safety is of paramount concern, both for our employees and the general public,” says John Susino, Manager of Engineering, Operations and Programs.

“The existing sectional overhead doors were slow and prone to breakdowns. Buses fueled with CNG are routinely parked, inspected, and serviced inside the facility. If a bus leaked, we needed reliable doors tied into our new methane gas detection system that would open quickly to prevent a potentially explosive situation.”

Local and national building codes also specified strict explosion-proof regulations for designated areas within the facility using CNG. These explosion-proof zones were dimensioned down from the roof deck and up from the floor to coincide with the rising or pooling of gases. Door components needed to be explosion-proof in the rated areas.

Another critical application requirement was security. Located in an urban environment, and shut down on weekends, the company needed assurance that the large, exterior facility openings would be secure.



EXTERIOR ROLL-UP DOORS FOR EXPLOSION-PROOF REGULATIONS, SECURITY AND ENERGY SAVINGS

Considering 90% of the bus fleet traveled through the facility daily, saving energy was also an important consideration, especially during the winter months.

Based on the successful Garden City location conversion and upgrade, the Long Island Bus Company elected to specify the high-performance Marathon **Hydrarol** doors for the Rockville Centre facility.

SOLUTION

“The ASI (Technologies) **Hydrarol** doors proved to be very reliable in the Garden City application. They really met our speed and operational needs extremely well,” according to Susino. “It was a natural that these same doors would go into the Rockville Centre location.”

Thirteen (13) high-speed Marathon **Hydrarol** (M109) doors, ranging in size from 12' wide x 12' high, up to 24' wide by 16' high, were installed into the confines of the existing exterior openings.

SOLUTION (Cont.)

The hydraulic powered doors, which travel at 42" per second, were incorporated into the integrated emergency systems. In the event of a gas leak, the doors would open quickly and automatically, ensuring the safety of area personnel.

The explosion proof regulations were met by using intrinsically safe door components, and remote mounting the door control panels, motors, and hydraulic pump units outside the rated zones.

Nylon end caps sliding on an aluminum/nylon guide ensures no ferrous metal contact thus preventing metal-to-metal contact that could lead to sparking.

Door operation and subsequent traffic flow, is facilitated using several different technologies for activation. The majority of the doors operate via push-button activation.

However, the company has equipped a number of the doors with induction loop detection (floor loops), and each of the doors have the added feature of photoelectric eyes for all-around safety.

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The overall construction of the door lends itself a high degree of security, promotes energy savings, reduces maintenance and has improved overall employee comfort (especially in the winter!).

According to Susino, "the general consensus among the bus drivers is that the **Hydrarol's** operation and speed is superior to other door products. They constantly comment how fast those doors move. These are very good, reliable doors."



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