

VERTICAL STACK RAIL - (VSR)

RAIL SYSTEMS

The VSR system is designed for vehicles that have vertical exhaust pipes, including commercial trucks and fire trucks. The system supports both drive in and back-in facilities, and up to two vehicles in tandem, up to 76 feet (23,5 m) in length.

VSR features a floating suspension that adjusts side-to-side as the vehicle enters the facility, making it easier for the driver line up the exhaust pipe while also capturing hazardous exhaust fumes at the facility entry door.



APPLICATIONS

As the vehicle enters the facility, drivers remain inside the the vehicle; the VSR catcher and the profile align themselves to the exhaust pipe position; the catcher provides 14 in. (356 mm) of lateral movement on each side.



SPECIFICATIONS

■ Air Volume

Air volumes as high as 1400 CFM (2380 m³/h)

■ Length of Service Area

Up to 23,5 m (76 ft); square rail is 6 m (19.6 ft) in length, and rail is cut for each specific order as needed.

■ Energy Efficiency

- Automatic start-stop of energy-efficient fan by pressure sensor.
- For multiple rails and a single fan, automatic motorized dampers turn on/off the system, reducing energy costs.

■ Height Requirements

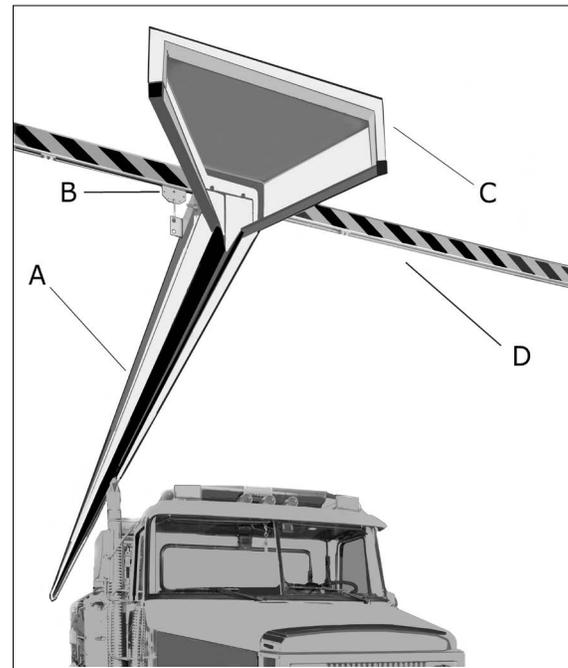
A minimum of 17.5 in. (445 mm) is required from the top of the vehicle's exhaust pipe to the horizontal support brackets.

■ Occupational Health Benefits

- The catcher can be installed as close as 1 ft (305 mm) to the door entry, protecting operators and service personnel from harmful exhaust emissions.
- Rubber seal lips in the rail profile trap harmful exhaust fumes as the vertical exhaust pipe travels through the rail.

■ Facility and Vehicle Requirements

- Supports both drive through and back in connections.
- Rail profile is connected to duct system by a 6.3 in. (160 mm) diameter flexible hose that's installed either on top (drive-through) or end (back-in) of profile.
- Rail length ranges from 19.6 to 120 ft (6 to 36,5 m)



CONSTRUCTION

- Aluminium square rail profile with 3.3 in. (84 mm) opening for vertical exhaust stack; rubber seal lips are inserted into the rail.
- Trolley and suspension bracket with safety hook that provides floating suspension; catcher can move up to 14 in. (356 mm) from side-to-side, making it easier for drivers to maneuver the vertical stack into the rail; a centering spring is provided that returns the rail to its original position after a vehicle returns or exits.
- Aluminium catcher and gate damper that seals the tailpipe entry within the rail profile.
- Horizontal support brackets with Plymovent hazard stripe tape.

PRESSURE LOSS

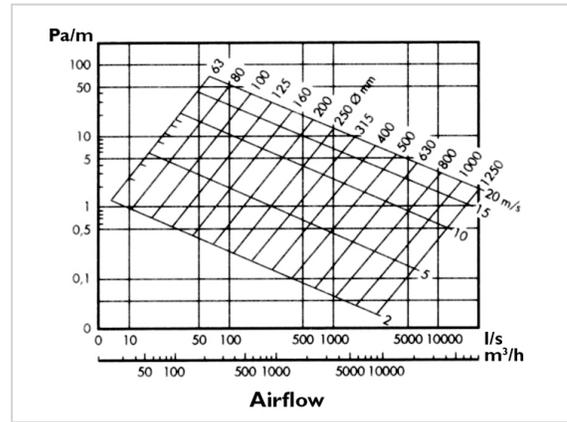
The diagrams to the right show the pressure loss at different airflows. The pressure loss for each system may vary.

Recommended Airflows:

- Cars: 210 cfm (360 m³/h)
- Fire truck up to 10 ltr. engine: 420 cfm (720 m³/h)
- Fire truck up to 16 ltr. engine: 630 cfm (1070 m³/h)
- Fire truck up to 24 ltr. engine: 1060 cfm (1800 m³/h)

Recommended Air Velocity:

In ducting: 2000 - 3000 fpm (10 - 15 m/s)



SUSPENSIONS

Vertical Mounting Kit - MKV:

The suspension plate is adjustable for angled ceilings to adjust the pitch to vertical. Plate is also used to mount the legs to the rail. A single set to mount one support length is provided. Maximum angle: 30°.



Horizontal Mounting Kit - MKH:

The horizontal slide plate will allow adjustment away from or closer to the wall. Comes in sets for mounting one support suspension. Maximum angle: 30°.



Side Brace Kit:

The side brace kit comes in three lengths: 19.7 in. (500 mm), 29.5 in. (750 mm) and 70.9 in. (1800 mm). Each kit includes two braces and a clamp.



Vertical Leg Hanging Material

This is an aluminium profile, extremely strong but light-weight for easy mounting. Sold in packs of 24.



Horizontal Suspension Kit:

An aluminium profile, trolley, trolley stops, suspension brackets, a centering spring, and safety wire.



ACCESSORIES

Vertical Stack Adaptors Adaptors ranging from 4 to 6 in. (100 mm to 150 mm) are available.



PC-500 Pressure Sensors:

Pressure sensor for automatic exhaust fan start. A minimum of two sensors are required per rail. To be used together with control unit, PC-1000.



Fans:

See separate data sheets for F-Series and TEV fans.



Fan Mounting Kit:

Consult Plymovent or your authorized distributor for details.

ASE-12-E Motordriven Damper:

Fully automatic, motorized damper, Ø 6.3 in. (160 mm) with built-in energy saver. Opens/closes in 10 - 15 seconds. Adjustable delay 10 - 180 seconds.

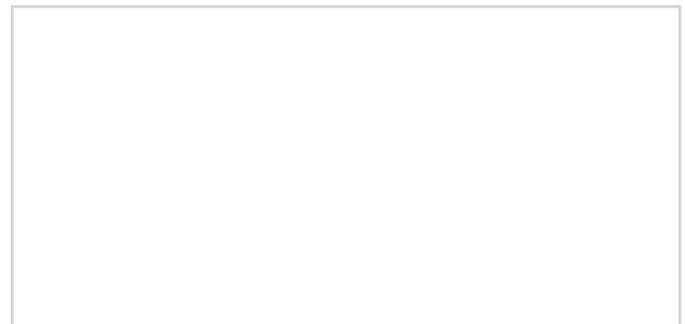


Starter SA-24 or OS-3:

Automatic control unit for exhaust fan. The exhaust fan can be manually controlled or automatically controlled by pressure sensor, PC-500.



Plymovent Authorized Distributor:



Product type	VSR™
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