

STRAIGHT RAIL SYSTEM - (STR™)

RAIL SYSTEMS

The STR system is designed to connect to a Fire/Emergency vehicle tail pipe to capture virtually 100% of exhaust emissions. STR is fully automatic, from the fan activation to the automatic nozzle release from the exiting vehicle. This STR is ideal for drive-through bays in which up to four vehicles are parked in tandem.

STR features a round rail profile and internal crab trolley that runs inside the rail.

APPLICATIONS

The round rail profile in STR provides exceptional airflow volume to support drive through apparatus bays in which two to four vehicles are aligned. The crab travels inside the rail profile, and the crab duct opens the rubber seal lips within the profile.



SPECIFICATIONS

■ Air Volume

STR supports air volumes as high as 1040 cfm (1800 m³/h)

■ Maximum Length

Up to 98 ft (30 m).

■ 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

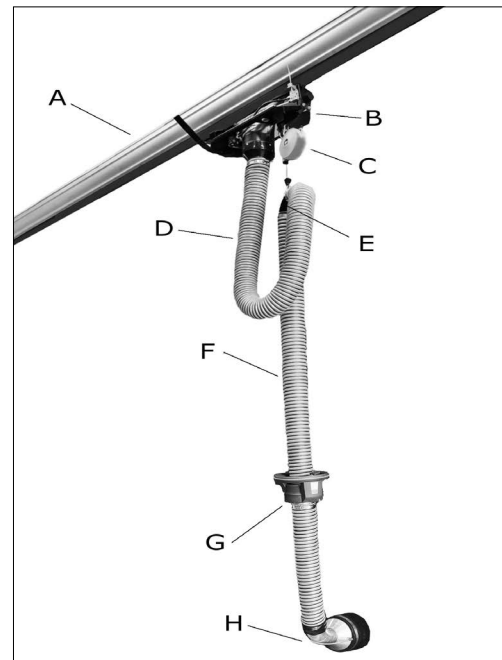
Rail should be mounted 12 to 14 ft (3,7 to 4,2 m) from the floor.

■ Facility and Vehicle Requirements

- Rail length ranges from 19.6 to 98 ft (6 to 30 m)
- Supports both drive through and back in connections
- Accommodates up to four vehicles in tandem
- Supports undercarriage tailpipes
- Nozzle disconnects automatically at exit door
- Speed-absorbing shock system

■ Occupational Health Benefits

- Protects operators and service personnel from harmful exhaust emissions.
- Operator can connect nozzle to the vehicle while standing in an upright position, further limiting exposure to harmful exhaust emissions.



CONSTRUCTION

- A. Aluminum round rail profile that is up to 19 ft (5,8 m) in length, and can be custom cut to fit your application; include a 1.5 in. (40 mm) opening for crab; includes closed end caps and low-friction rubber seal.
- B. Steel crab trolley that travels inside the rail profile.
- C. Non-locking spring recoil balancer
- D. Upper hose
- E. Metal Saddle
- F. Mid Hose
- G. Safety Disconnect Handle and Lower Hose
- H. Pneumatic or Magnetic Grabber® (Tailpipe adapter not shown)

PRESSURE LOSS

The diagrams to the right show the pressure loss at two different airflows, based on hose diameter, hose length and rail length. The pressure loss for each system may vary.

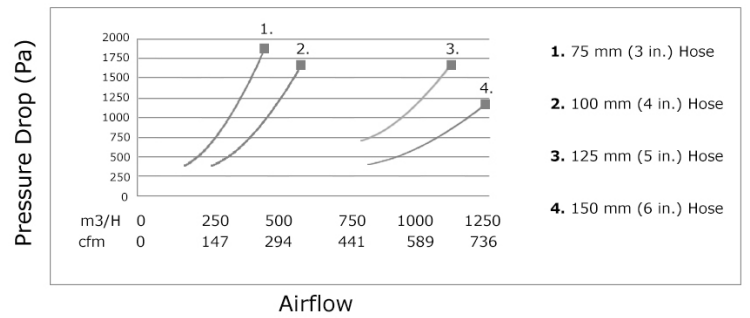
Recommended Airflows:

- Cars: 360 m³/h (210 cfm)
- 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)

Pressure Loss for STR



COMPONENTS

Internal Trolley

The unique internal crab trolley travels inside the STR rail profile, and pulls open the sealing lips as it moves.



Balancer

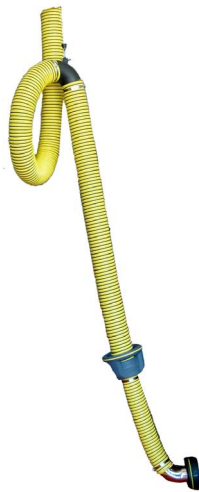
The non-locking spring recoil balancer controls the point at which the Grabber disconnects from the tailpipe. As the hose reaches its maximum length, the balancer locking cable will bottom out, in turn pulling the nozzle from the moving vehicle.



Hose Package

The hose package consists of the following:

- upper hose and metal saddle
- mid-hose
- lower hose with Safety Disconnect Handle and either Magnetic or Pneumatic Grabber[®] nozzle, based on operator preference and station design.



Hose Length:

Lengths are available in 19.7 to 32.8 ft (6 to 10 m)

Hose Diameter:

Diameters range from 4 to 6 in. (100 to 160 mm)

Safety Disconnect Handle:

Provides large grips so that it can be operated even while wearing gloves and can be reached from any angle.

SUSPENSIONS

Mounting Kit & Suspension Bracket:

Adjustable for angled ceilings to adjust the pitch to vertical. The horizontal slide plate allows adjustment away from or closer to the wall.



ACCESSORIES

Tailpipe Reducer & Bracket

The tailpipe reducer easily converts an exhaust tailpipe to a larger size so that the conical tailpipe adapter can be installed. In addition, a tailpipe support bracket ensures a secure connection between the tailpipe and body / chassis.



PC-500 Pressure Sensor:

Pressure sensor for automatic exhaust fan start.



Fans:

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

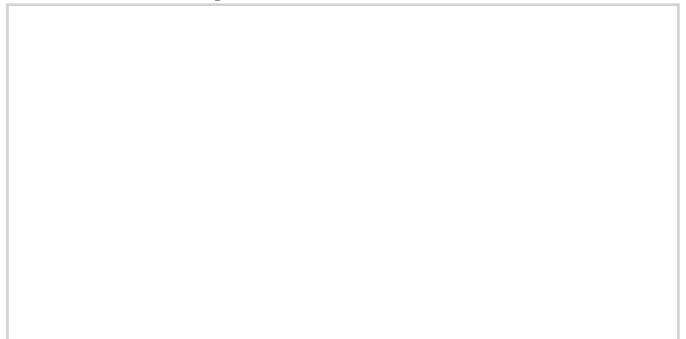


Starter SA-24 or OS-3:

Automatic control unit for exhaust fan, which can be controlled by a manual or automatic pressure sensors.



Authorized Plymovent Distributor:



Product type	STR[™]
Article no.	see remaining specifications
Product category	rail systems
Version	190418/1

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