

The solution for moving or stationary vehicle applications

The straight rail profile is a modular vehicle exhaust extraction system. This concept was developed for the automotive and truck manufacturing industry, but has found a new home in many other automotive workshops, due to its flexible and clean design.



The STP can be mounted with the rail running parallel with the vehicle, which allows you to have full exhaust extraction from entrance door to exit door. This protects your workshop and its occupants from exhaust when operating vehicles. It can also be mounted along service bays for attaching to vehicles that are in stationary workstations.

In both cases, you can build a system that meets your requirements today and can be added on to in the future, when your needs grow. With an STP system you will never leave your investment behind.

Features and Benefits

- Modular design
- Solid one piece aluminium profile
- Compact space design
- Unlimited exhaust profile length
- Automatic release from vehicle
- Power operated hose return
- Teflon impregnated seals



How to select an STP rail for your workshop

The first thing to decide is the mounting length and direction the vehicle will travel or park in your workshop.

Moving vehicle

If your vehicle will drive through your shop, you measure the distance from entrance to exit door and select an STP rail package that is equal to the shop length.

Stationary workstations

If you are looking for an STP rail to service a line of stationary work bays, you measure the line of work bays from one end to the other.

Example: If you have a total of three work bays that are 4 m/13.1 ft wide you will need a rail that is 12 m/39.4 ft long or STP-12.

TECHNICAL DATA

Straight Rail – STP is ordered in pieces:

1. Select length of the STP rail (includes rail, splices, rubber lips, end stops etc.)

Prod. no.	Description
STP-6	Aluminium profile, length: 5.8 m/19.0 ft
STP-9	Aluminium profile, length: 8.8 m/28.9 ft
STP-12	Aluminium profile, length: 11.6 m/38.0 ft
STP-15	Aluminium profile, length: 14.6 m/47.9 ft
STP-18	Aluminium profile, length: 17.4 m/57.1 ft



2. Select internal or external crab

Internal crab

The crab is designed to travel in the STP profile and open the sealing lips at only the point where the exhaust crab is located at the time. After the crab passes, the sealing lips will close behind the crab. This creates air suction only at the point where the exhaust hose is located. Below are the exhaust crabs that fit your system, hose diameter and nozzle pipe.

Internal crab for manual disconnect nozzles

IC-style crab with blancer is designed to work with an open exhaust nozzle (see pages 12-15), which is disconnected manually by the service technician.

Prod. no.	Hose connection
IC-100	Ø 100 mm/4"
IC-125	Ø 125 mm/5"
IC-150	Ø 150 mm/6"



Internal crab for automatic disconnect nozzles (Grabber)

ICCA-style crab with blancer is designed to work with a sealed type exhaust nozzle, which is disconnected automatically by a pneumatic uncoupling valve mounted on the crab assembly.

Prod. no.	Hose connection
ICCA-100	Ø 100 mm/4"
ICCA-125	Ø 125 mm/5"
ICCA-150	Ø 150 mm/6"



External crab

The external crab assembly is a proven product that has been used in many of the world's most prestigious and demanding auto and truck manufacturing plants. The external crab assembly allows for the turns and bends required in following the vehicle along the assembly line or driving lane.

External crab for manual disconnect nozzles

External crab (EC) for mechanical nozzle with vise grip, balancer and suspension belt. Is designed to work with an open exhaust nozzle, see pages 12-15.

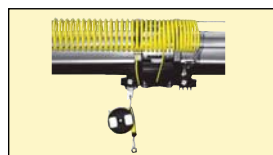
Prod. no.	Hose connection
EC-75	Ø 75 mm/3"
EC-100	Ø 100 mm/4"
EC-125	Ø 125 mm/5"
EC-150	Ø 150 mm/6"



External crab for automatic disconnect nozzles (Grabber)

External crab (ECCA) with constant air supply and balancer for automatic disconnection of Grabber.

Prod. no.	Hose connection
ECCA-100	Ø 100 mm/4"
ECCA-125	Ø 125 mm/5"
ECCA-150	Ø 150 mm/6"



3. Select hose package

Hose package with automatic release

The HPA hose package is designed to work with the ICCA and ECCA crab assembly. The trip valve on the crab will auto-release the Grabber when the moving vehicle passes the trip-plate mounted on the rail upon reaching the exit door. The manual fill and deflation valve mounted to the hose allows the service technician to manually fill or deflate the Grabber.

Prod. no.	Hose diameter	Hose length	Grabber diameter
HPA-100-6-120	100 mm/4"	6 m/19.7 ft	120 mm/4.7"
HPA-100-6-160	100 mm/4"	6 m/19.7 ft	160 mm/6.3"
HPA-125-6-160	125 mm/5"	6 m/19.7 ft	160 mm/6.3"
HPA-150-6-160	150 mm/6"	6 m/19.7 ft	160 mm/6.3"



4. Select suspension – wall and ceiling routing options

Round Rail Top Suspension (RRTS)

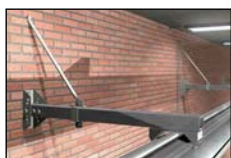
Complete suspension consists of;

Prod. no.	Description
RRTS	Round rail top suspension
SBT-SBK	Side brace kit
SBT-SL	Support leg
SBT-MKV	Mounting kit for vertical mounting
SBT-MKH	Mounting kit for horizontal mounting

Round Rail Side Suspension (RRSS)

Complete suspension consists of;

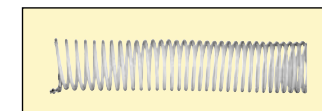
Prod. no.	Description
RRSS	Round rail side suspension
TUB	Support pipe Ø 48 mm/1.9"
	Available in 3 m/9.8 ft or 6 m/19.7 ft
BUC-F	Fixed double construction coupling
BUC-M	Turnable construction coupling
KEC-F	Fixed construction coupling, wall
KEC-M	Turnable construction coupling, wall



5. Select air supply

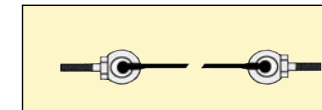
Coiled airline

Prod. no.	Description
CA-15	Coiled airline, L = 15 m/49.2 ft
CA-30	Coiled airline, L = 30 m/98.4 ft



Cable

Prod. no.	Description
W-15	Cable, L = 15 m/49.2 ft
W-30	Cable, L = 30 m/98.4 ft



Magazine airhose

Prod. no.	Description
STR-MZ	Coiled airline magazine



Case Study – CCV, Lyon, France

Customer

CCV (DRIRE Rhône-Alpes)
Centre de Contrôle Véhicules de Lyon Sud
69000 SEREZIN DU RHONE, France



Problem

The local organization for Industry, DRIRE Rhône-Alpes, owns a vehicle control centre called CCV in Serezin near Lyon. This control centre checks about 30.000 trucks every year. It makes complete tests on trucks and cars in four parallel 25 m/82 ft inspection bays. The Regional organization decided to protect the employees from being exposed to toxic diesel fumes.

Solution and how we did it

To completely extract the toxic diesel fumes when the motors are running, PlymoVent installed an STP-system including 24 m/79 ft rail with external crabs, hose packages, Grabber® nozzles and automatic return along each of the four inspection bays. Each hose is



equipped with an inflatable Grabber® nozzle, which ensures 100% toxic fume extraction. After each control the hose and nozzle returns to the beginning of the rail, ready to serve the next vehicle. A new truck is controlled every 25 minutes.

PlymoVent supplied equipment:

4	STP-24	Straight Rail
4	Grabber® nozzle	
4	ECCA-150	External crab
4	FUA-2100	Fan
4	PCU-1000	Control Units
4	WR-1000	Winch
4	PC-500	Pressure Sensor
4	HPA-6-150	Hose package