

The first step to design an effective vehicle exhaust system is to select the correct style of tail pipe nozzle.

There are two styles of tailpipe nozzles. The charts\* below will assist you in selecting the correct air volume and hose diameter for your application.

The first is a sealed fit tailpipe adapter (Grabber®) which makes a 100% air tight seal around your tailpipe. This style of nozzle requires less air volume and prevents exhaust emissions from escaping the nozzle when the engine is in high idle or test conditions.

<b>Sealed Fit Tailpipe Adapter</b>			
<b>Vehicle Type</b>	<b>Engine Power</b>	<b>Airflow rate</b>	<b>Hose size</b>
MC/ATV	< 75 kW / < 100 hp	340 m <sup>3</sup> /h / 200 CFM	75 mm / 3"
LDGV	< 100 kW / < 130 hp	510 m <sup>3</sup> /h / 300 CFM	75 mm / 3"
LDGT	< 130 kW / < 175 hp	765 m <sup>3</sup> /h / 450 CFM	100 mm / 4"
HDGV	< 185 kW / < 250 hp	850 m <sup>3</sup> /h / 500 CFM	100 mm / 4"
LDDV	< 240 kW / < 325 hp	850 m <sup>3</sup> /h / 500 CFM	100 mm / 4"
LDDT	< 300 kW / < 400 hp	850 m <sup>3</sup> /h / 500 CFM	100 mm / 4"
HDDT	< 375 kW / < 500 hp	1275 m <sup>3</sup> /h / 750 CFM	125 mm / 5"
ORV	< 450 kW / < 600 hp	1700 m <sup>3</sup> /h / 1000 CFM	150 mm / 6"

The second style is an open fit, non-sealing tailpipe adapter (Rubber Exhaust Nozzle, Vertical Stacker or Metal Exhaust Nozzle). This nozzle is more economical but requires higher air volumes and does not seal to the tailpipe. For this reason, it should not be used if the application calls for the engine to accelerate to high rpm's for engine testing.

<b>Open Fit Non-Sealing Tailpipe Adapter</b>			
<b>Vehicle Type</b>	<b>Engine Power</b>	<b>Airflow rate</b>	<b>Hose size</b>
MC/ATV	< 75 kW / < 100 hp	510 m <sup>3</sup> /h / 300 CFM	75 mm / 3"
LDGV	< 100 kW / < 130 hp	765 m <sup>3</sup> /h / 450 CFM	100 mm / 4"
LDGT	< 130 kW / < 175 hp	900 m <sup>3</sup> /h / 600 CFM	125 mm / 5"
HDGV	< 185 kW / < 250 hp	1275 m <sup>3</sup> /h / 750 CFM	125 mm / 5"
LDDV	< 240 kW / < 325 hp	1275 m <sup>3</sup> /h / 750 CFM	125 mm / 5"
LDDT	< 300 kW / < 400 hp	1275 m <sup>3</sup> /h / 750 CFM	125 mm / 5"
HDDT	< 375 kW / < 500 hp	1910 m <sup>3</sup> /h / 1125 CFM	150 mm / 6"
ORV	< 450 kW / < 600 hp	2500 m <sup>3</sup> /h / 1500 CFM	200 mm / 8"

MC: Motorcycles  
ATV: All terrain vehicles  
LDGV: Light-duty gasoline-fueled vehicles  
LDGT: Light-duty gasoline-fueled trucks  
HDGV: Heavy-duty gasoline-fueled vehicles

LDDV: Light-duty Diesel vehicles  
LDDT: Light-duty Diesel trucks  
HDDT: Heavy-duty Diesel trucks  
ORV: Off-road Vehicles

\* Charts are taken from the Ventilation Guide for Automotive Industry.