For over half a century, Crushproof Tubing Company has set the standard in value and performance for Garage Exhaust Hose. We are constantly reviewing the ever-changing landscape of vehicle exhaust and revising our product offerings to accommodate those changes.

One of the trends we see today is the growth of the tailpipe as a design element; with dual exhaust and twin tailpipes becoming more common than ever. What once was an afterthought is now chrome trimmed and prominently displayed on the back end of new cars. We have designed a new set of adapters and kits for these applications. You can find them on pages 4 and 5 in this brochure.

We will continue to advance the cause of workplace safety by making it affordable to keep carbon monoxide out of garages around the world.

Working near vehicle exhaust fumes exposes you to large amounts of carbon monoxide (CO), an odorless, colorless, poisonous gas. Even mild exposure to CO can cause headaches, dizziness, nausea, and fatigue; while overexposure can cause death. Always use a rubber exhaust hose with proper ventilation when working on vehicles. Actions required to avoid carbon monoxide poisoning include:

- Always using a tailpipe adapter and a quality venting system.
- Providing exhaust hoses for each and every vehicle service bay.
- Replacing damaged hoses immediately.
- Using garage exhaust hoses even when doors and windows are open.
- Check all powered exhaust systems daily.

...BECAUSE OSHA IS WATCHING

What are the symptoms of CO poisoning?
The most common symptoms of CO poisoning are headache, dizziness, weakness, nausea, vomiting, chest pain, and confusion. High levels of CO inhalation can cause loss of consciousness and death. Unless suspected, CO poisoning can be difficult to diagnose because the symptoms mimic other illnesses. People who are sleeping or intoxicated can die from CO poisoning before ever experiencing symptoms.*

How does CO poisoning work? (see graphic)
Red blood cells pick up CO quicker than they pick up oxygen. If there is a lot of CO in the air, the body may replace oxygen in blood with CO. This blocks oxygen from getting into the body, which can damage tissues and result in death.*

*Bottom two paragraphs courtesy of The Centers for Disease Control.
Proper system design is critical to success in safely removing exhaust fumes from your garage, and also prolongs the life of the exhaust hoses and accessories involved. The most common option for Crushproof hoses is the ground-based, out-the-door solution. It works well more almost any rear, low mounted exhaust pipes. Other options are overhead and underfloor systems. Any way you go, there are some key things to remember about the design to ensure proper fume removal and worker safety.

**OUT-THE-DOOR**

The most inexpensive and easiest way to get exhaust fumes out of your garage is to install an out-the-door hose system. It can be used for cars and pick-up trucks with rear-mounted exhaust pipes, even if they are diesel.

There are two key points to remember when considering a system like this: 1. Always allow for an air gap of at least 1/2" around the tailpipe and 2. keep the distance from the door to the vehicle under 25’. These steps will ensure proper air flow and hose performance by cooling the air and minimizing the risk of pooling and backup of the air.

**OVERHEAD**

Use an overhead connector to hook our hoses up to your ventilation system. We offer a telescoping system, straight splice, or elbow connector to meet the demands of most any setup. You can use all our adapters and Y-kits as well.

1. Galvanized ducting
2. Ducting “T” or drop
3. Hose, elbow, & pulley
4. LS634 Telescoping setup
5. Fan
6. Fan exhaust above building

**UNDER-FLOOR**

Under-floor systems use our rubber elbows to connect the hose to the floor port, where a fan sucks the exhaust out of the garage. Any of our 2” to 4” sizes will work for these applications. On the vehicle side, all of our standard adapters and fittings are available, including Y’s and service station kits.

1. Sealable floor plate
2. Crushproof® adapter
3. Crushproof® hose
4. Crushproof® elbow
5. Drainage tile
6. Sump or dry well
7. Vent pipe to fan
FlareLok® Hose

Designed for use with smaller gas vehicles up to SUV’s and pickup trucks. The “FlareLok®” system allows multiple lengths to be connected without the need for a splice connector. FlareLok® hose can be used underground, out-the-door, or in overhead systems. Please review the adapters on Page 4 to ensure a proper fit for your application. All hoses are 11’ long, and will withstand exhaust temps up to 600°F when used with a proper adapter and a fan assisted system.

**FlareLok® Hose**

- **FLT200** 2” I.D. for small cars and motorcycles
- **FLT250** 2.5” I.D. for most cars
- **FLT300** 3” I.D. for gas cars and trucks
- **FLT350** 3.5” I.D. for gas cars and trucks
- **FLT400** 4” I.D. for larger gas cars and trucks

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**2” FLT200**
- **Adapters** F250, RA300
- **Door Port** DF25
- **Y-Connector** RY20
- **Elbows** N/A
- **Splice** SP20
- **Duct Connector** N/A

**2.5” FLT250**
- **Adapters** F250, F300, RA250
- **Door Port** DF25
- **Y-Connector** RY25
- **Elbows** EB25, AEL25
- **Splice** SP25
- **Duct Connector** N/A

**3” FLT300**
- **Adapters** F250, F300, RA300, F475, F575, F675, F675-SC
- **Door Port** ADF30
- **Y-Connector** RY30
- **Elbows** EB30, AEL30
- **Splice** SP30, AC30
- **Duct Connector** OC30

**3.5” FLT350**
- **Adapters** F300, F350, F400, F450, RA250
- **Door Port** ADF40
- **Y-Connector** N/A
- **Elbows** N/A
- **Splice** N/A
- **Duct Connector** N/A

**4” FLT400**
- **Adapters** F350, F400, F450, RA300, F475, F575, F675, F675-SC, DSR600, F800-4
- **Door Port** ADF40
- **Y-Connector** AY40
- **Elbows** AEL40
- **Splice** SP40, AC40
- **Duct Connector** OC40
ACT Hose

Designed for use with larger gas vehicles and diesel trucks. Add wire to resist kinking using the “W11” suffix for 11’ of wire or “W30” suffix for 30” of wire. Always use an overhead exhaust system and proper adapter (see page 4) with your ACT hose to ensure the longest possible hose life and best ventilation. ACT hoses are all 11’ long, except for the ACT40-20, which is 20’ long. Hoses will withstand exhaust temps up to 600°F when used with a proper adapter and a fan assisted system.

Size Options

ACT400 (W30 or W11 optional)
4” I.D. car, truck, and light diesel hose.
ACT40-20
20’ continuous length of 4” I.D. hose.
ACT500 (W30 or W11 optional)
5” I.D. for gas or diesel trucks.
ACT600 (W30 or W11 optional)
6” I.D. for large diesel trucks.
ACT400DYNO
4” I.D. gray rubber (see page 6)
Tailpipe & Stack Adapters

RA250/RA300

Universal adapters fit a wide variety of pipe styles. Bell is 5” and will work with pipes up to 4”.

RA250

- 2.5” FLT250
- 3.5” FLT350

RA300

- 2” FLT200
- 3” FLT300

F475

For oval/twin tailpipes up to 2.5” x 5.5”. It's the smallest of the three oval adapter styles compared to the F575 and F675.

F575

For oval/twin tailpipes up to 3” x 8”. It's the mid-size option between the F475 and F675.

- 3” FLT300
- 4” FLT400

F675

For oval/twin tailpipes up to 2.5” x 10.5”. It was designed for ultra-wide pipes on many car makes/models.

- 3” FLT300
- 4” FLT400

F675-SC

For flush mounted tailpipes, our F675-SC provides the perfect solution! It’s industrial-grade suction cup will stick to any vehicle without damaging the finish and hold the adapter over the tailpipe, creating a capture shroud. Because it does not slide over the pipe, it does need to be used as part of a fan-assisted system.

- 3” FLT300
- 4” FLT400
Adapters are critical to proper exhaust system function and for prolonging hose life. A hook and chain holds the adapter in place during use. At least 1/2" diameter difference between pipe and adapter is required for proper performance. See chart below for proper sizing.

Straight tailpipe adapters come in a range of sizes to fit 2” to 4” hose sizes. The maximum OD of the tailpipe is 1/2” smaller than the ID of the adapter. Our size is listed in the part number. F250 is 2.5” ID, F400 is 4.0” ID, and so on. Hose sizes that each fits are listed below.

<table>
<thead>
<tr>
<th>F250</th>
<th>F300</th>
<th>F350</th>
</tr>
</thead>
<tbody>
<tr>
<td>2”</td>
<td>2.5”</td>
<td>3”</td>
</tr>
<tr>
<td>FLT200</td>
<td>FLT250</td>
<td>FLT300</td>
</tr>
<tr>
<td>2.5”</td>
<td>3”</td>
<td>3.5”</td>
</tr>
<tr>
<td>FLT250</td>
<td>FLT300</td>
<td>FLT350</td>
</tr>
<tr>
<td>3”</td>
<td>3.5”</td>
<td></td>
</tr>
<tr>
<td>FLT300</td>
<td>FLT350</td>
<td></td>
</tr>
<tr>
<td>3”</td>
<td>4”</td>
<td></td>
</tr>
<tr>
<td>FLT300</td>
<td>FLT400</td>
<td>ACT400</td>
</tr>
</tbody>
</table>

The DSR600 and DSR600-6 are 6” ID adapters that will work for pipes up to 5.5” OD. With a 4” hose it can be used on buses and fire trucks with large, rear mounted tailpipes.

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<table>
<thead>
<tr>
<th>DSR600</th>
<th>DSR600-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>4”</td>
<td>5”</td>
</tr>
<tr>
<td>FLT400</td>
<td>ACT500</td>
</tr>
<tr>
<td>ACT600</td>
<td></td>
</tr>
</tbody>
</table>

F800-4 fits 4” hose and stacks up to 7.5” OD. For larger applications it needs to be used with a fan-assisted system.

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<table>
<thead>
<tr>
<th>F800-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>4”</td>
</tr>
<tr>
<td>FLT400</td>
</tr>
<tr>
<td>ACT400</td>
</tr>
</tbody>
</table>

DSR9600 (9”) DSR8600 (8”)
Designed for vertical applications. Will rest on top of the stack. Must have at least 1/2” gap around stack for air flow and be used with a fan.

<table>
<thead>
<tr>
<th>DSR9600 (9”)</th>
<th>DSR8600 (8”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5”</td>
<td>6”</td>
</tr>
<tr>
<td>ACT500</td>
<td>ACT600</td>
</tr>
</tbody>
</table>
Y-CONNECTORS

Allows three pieces of hose to be connected to make a “Y” assembly for use with dual exhaust vehicles. Our hoses thread into the connectors.

<table>
<thead>
<tr>
<th>Rubber</th>
<th>Aluminum</th>
</tr>
</thead>
<tbody>
<tr>
<td>RY20 (2” hose)</td>
<td>AY40 (4” hose)</td>
</tr>
<tr>
<td>RY25 (2.5” hose)</td>
<td></td>
</tr>
<tr>
<td>RY30 (3” hose)</td>
<td></td>
</tr>
</tbody>
</table>

Door ports are installed by putting one piece on each side of the door and then connecting them with included screws. Fits 1” doors out-of-the-box.

<table>
<thead>
<tr>
<th>Rubber</th>
<th>Aluminum</th>
</tr>
</thead>
<tbody>
<tr>
<td>DF25 (2.5” hose)</td>
<td></td>
</tr>
</tbody>
</table>

Rubber Aluminum

DOOR PORTS

OVERHEAD CONNECTORS

Connects Crushproof® hose to overhead ductwork “T”.

<table>
<thead>
<tr>
<th>Rubber</th>
<th>Aluminum</th>
</tr>
</thead>
<tbody>
<tr>
<td>OC30 (3” hose)</td>
<td>OC50-D (w/damper)</td>
</tr>
<tr>
<td>OC40 (4” hose)</td>
<td>AC60-OC (6” hose)</td>
</tr>
<tr>
<td>OC50 (5” hose)</td>
<td></td>
</tr>
</tbody>
</table>

Connects Crushproof® hose to overhead ductwork “T”.

<table>
<thead>
<tr>
<th>Rubber</th>
<th>Aluminum</th>
</tr>
</thead>
<tbody>
<tr>
<td>OC30 (3” hose)</td>
<td>OC50-D (w/damper)</td>
</tr>
<tr>
<td>OC40 (4” hose)</td>
<td>AC60-OC (6” hose)</td>
</tr>
<tr>
<td>OC50 (5” hose)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rubber</th>
<th>Aluminum</th>
</tr>
</thead>
<tbody>
<tr>
<td>EB25 (2.5”)</td>
<td>AEL25 (2.5”)</td>
</tr>
<tr>
<td>EB30 (3”)</td>
<td>AEL30 (3”)</td>
</tr>
<tr>
<td></td>
<td>AEL40 (4”)</td>
</tr>
</tbody>
</table>

ELBOWS

Rubber elbows connect to underfloor systems. Aluminum elbows connect two hoses for overhead pulley systems. Fits hose size shown below in ( )

<table>
<thead>
<tr>
<th>Rubber</th>
<th>Aluminum</th>
</tr>
</thead>
<tbody>
<tr>
<td>EB25 (2.5”)</td>
<td>AEL25 (2.5”)</td>
</tr>
<tr>
<td>EB30 (3”)</td>
<td>AEL30 (3”)</td>
</tr>
<tr>
<td></td>
<td>AEL40 (4”)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rubber</th>
<th>Aluminum</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP25 (2.5” hose)</td>
<td>AC30 (3” hose)</td>
</tr>
<tr>
<td>SP30 (3” hose)</td>
<td>AC40 (4” hose)</td>
</tr>
<tr>
<td>SP40 (4” hose)</td>
<td>AC50 (5” hose)</td>
</tr>
<tr>
<td></td>
<td>AC60-OC (6” hose)</td>
</tr>
</tbody>
</table>

SPLICES

Connect two hoses together. Aluminum has external threads; rubber internal. Rubber splices are crush-proof.

<table>
<thead>
<tr>
<th>Rubber</th>
<th>Aluminum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

www.crushproof-hose.com  866.651.9765
Designed to convert a single exhaust hose into dual kit for servicing many of today’s most popular cars and trucks. These come at a savings versus buying everything separately. Below we show you what Y adapter, short hose section, and pair of tailpipe adapters come in each kit option.

**Y-Assemblies**

Exhaust kit in a box with a savings over buying the parts separately. All kits include (1) six foot and (2) four foot lengths of hose, a Y connector and splice connector, and (2) adapters.

**YA4475D**

OVERSIZED DIESEL TAILPIPE ADAPTER

This oversized adapter is designed to fit over twin tailpipe assemblies that are too large for a traditional adapter. This includes most 2008 or newer Ford® diesels. It is not approved for regeneration cycles.

**Dealer/Service Station Kits**

Exhaust kit in a box with a savings over buying the parts separately. All kits include (1) six foot and (2) four foot lengths of hose, a Y connector and splice connector, and (2) adapters.
**Dyno Hose**

Crushproof® Dyno hose *(ACT400DYNO)* is 4” I.D. x 11’ long and is designed for use with dynamometers and in high performance applications. It will withstand exhaust temperatures of up to 700°F when used with a fan assisted system, it will survive where other hoses cannot. There are two special adapters designed out of the same material; the *F475DYNO* and *F350DYNO*. Both adapters come with a hole in them for sensors or probes to be inserted during dyno testing.

**Telescoping**

The LS643 is a 19 lb out-of-the-box solution for many basic overhead systems. It can service most cars and light trucks and can be fitted with a 3” Y-assembly if needed. We also offer the 31 lb all rubber TE6000 version as well.

**Reel Hose**

Crushproof® Reel Hose is tough and versatile. The standard length is 25’, but custom lengths are available. The first 20’ is a fabric and wire hose and the last 5’ is our solid rubber Crushproof® hose. That means you get the long-lasting durability of rubber with the weight and easy-reeling performance of fabric and wire hose, all in one product! Each size comes with an adapter, as noted in the chart below. The 4” size can be used with a Y-assembly for servicing dual exhaust vehicles.

**PART NUMBER**

<table>
<thead>
<tr>
<th>CPRH400</th>
<th>CPRH500</th>
<th>CPRH600</th>
</tr>
</thead>
</table>

**ACT SIZE**

| 4” X 5’ | 5” X 5’ | 6” X 5’ |

**ADAPTER**

| DSR600 | DSR600 | DSR600-6 |

**LENGTH**

19’11” extended 7’3” retracted

RA300 Universal Adapter will fit all single and most twin tailpipe configurations. Three locking snaps allow unit to be shut off. Will not damage any vehicle and is 100% Crushproof®.
*UniHose®* combines the features of our standard FlareLok® hose and a straight tailpipe adapter into one continuous length. Great for simple applications where the same general size of tailpipe will be used.

*SuperFlex* hose has an accordian-like design that prevents kinking on tight bends and is great for overhead applications. Our standard adapters will not fit this hose well due to the tight convolution spacing.

<table>
<thead>
<tr>
<th>Model</th>
<th>Size</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNH2500</td>
<td>2.5” I.D. x 11’ for most cars</td>
<td></td>
</tr>
<tr>
<td>UNH3000</td>
<td>3” I.D. x 11’ for most cars and gas trucks</td>
<td></td>
</tr>
<tr>
<td>UNH4000</td>
<td>4” I.D. x 11’ for all gas cars and trucks</td>
<td></td>
</tr>
<tr>
<td>40-20SF</td>
<td>4” I.D. x 12’ that extends out to 20’</td>
<td></td>
</tr>
<tr>
<td>50-12SF</td>
<td>5” I.D. x 8’ that extends out to 12’</td>
<td></td>
</tr>
</tbody>
</table>

The Crushproof® CF is a super lightweight, flexible exhaust hose with 1:5 compressibility and a small bend radius. It is resistant to mechanical load, abrasion, and vibration. It can handle exhaust temps up to +570°F when used with proper adapters, so it works well with diesel engines. It is a great choice for reels as well. The chart below shows our size options and basic specifications. HOSE MUST BE USED WITH A FAN.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>O.D.</th>
<th>Bend Radius, in.</th>
<th>Weight (lbs./ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4.68</td>
<td>2.4</td>
<td>0.81</td>
</tr>
<tr>
<td>5</td>
<td>5.68</td>
<td>3</td>
<td>0.9</td>
</tr>
<tr>
<td>6</td>
<td>6.68</td>
<td>3.6</td>
<td>1.044</td>
</tr>
<tr>
<td>7</td>
<td>7.68</td>
<td>4.6</td>
<td>1.17</td>
</tr>
<tr>
<td>8</td>
<td>8.68</td>
<td>5.6</td>
<td>1.305</td>
</tr>
</tbody>
</table>

High-temp applications are demanding, and we have flexible hose options that can handle exhaust temps up to 2000°F with a proper fan system in place. They must be used with a fan-assisted system and will not hold up to floor traffic.
Crushproof offers both rubber and wire reinforced fabric hose options (see p. 3 for details) for removing diesel exhaust. All of our rubber and reinforced fabric tubes will accept our stack adapters, but the connectors and elbows are only for our rubber hoses. Our stack adapters will cover stacks from 5” to 8.5” O.D. All diesel installations should include an overhead ducting system due to the temperature and volume of air that is generated.

**Regeneration:** All diesel engines made after 2008 have a government-mandated regeneration cycle that cleans its exhaust system. This process should never happen when the vehicle is connected to exhaust hose or ducting of any kind. The temperatures produced could damage or destroy that equipment.

**TKO5002 KIT (One each of:)**
- ACT500
- ACT500W11
- DSR600
- AEL50
- OC50

**TKO6002 KIT (One each of:)**
- ACT600
- ACT600W11
- DSR600-6
- AEL60
- AC60-OC

**TKO8600 KIT (One each of:)**
- ACT600
- ACT600W11
- DSR8600
- AEL60
- AC60-OC

**5”: ACT500**

**6”: ACT600**

**5”: ACT500W11**

**6”: ACT600W11**

**6”: DSR600-6**

**9”: DSR9600**

**5”: AEL50**

**6”: AEL60**

**5”: AC50**

**6”: AC60-OC**

**5”: OC50**

**6”: Use AC60-OC**

*Use for duct also*