

CRUSHPROOF EXHAUST TUBING

***“Superior Designs
For Superior
Performance For
50 Years!”***



 **CRUSHPROOF TUBING COMPANY**

CRUSHPROOF CONTINUES TO LEAD THE INDUSTRY FOR 50 YEARS!



During the past 50 years Crushproof Tubing Company has been leading the exhaust hose industry and has set the standard to which all other manufacturers aim. Through innovative

design and on-going development, the Crushproof Tubing Co. has fashioned the most complete line of service products related to the ventilation of garage exhaust fumes.

We Lead The Way Because...

Specially formulated rubber compound

Crushproof has been designed to withstand up to 600 degree fahrenheit tailpipe exhaust temperatures, while maintaining maximum flexibility and durability.

Crushproof's INNOVATIVE COMPOUNDING has kept pace with the emergence of high heat-producing catalytic converters and emission control devices.

Exclusive Patented Manufacturing Processes.

Crushproof hoses are spirally convoluted and non-reinforced. The spiral (helical) convolutions permit:

1. Use of threaded adapters which can be tightly screwed onto or into the tubing; and
2. the mating of one size hose to the next larger or smaller size hose... or even to the same size hose through the use of FLARELOCK tubing.

For Your Health And Safety, Please Take Time To Use A Quality Exhaust Hose System To Vent Vehicle Exhaust Fumes.

Carbon Monoxide can be deadly!

Working near vehicle exhaust fumes exposes you to poisonous carbon monoxide (CO) gas, which is present in large amounts in vehicle exhaust fumes. Overexposure to this odorless and colorless gas can cause death. Even when CO is diluted by fresh air, breathing CO can eventually cause death!

Always use a high performance rubber exhaust hose with proper ventilation, when working on vehicles. Some actions required to avoid carbon monoxide poisoning include always attaching a tailpipe adapter to the vehicle tailpipe and checking that the other end of the hose is properly attached to a quality venting system.

Other safety guidelines to follow include...

- Provide exhaust hoses for each and every vehicle service bay.
- Replace damaged hoses immediately. Replacements should be kept in stock for such needs.
- Instruct all service personnel (including newly hired employees) to use exhaust hoses correctly.
- Instruct all service personnel that exhaust hoses must be used, even in warm weather, when open garage doors provide cross-ventilation.
- Check all powered exhaust systems daily.

Because OSHA Is Always Watching!

With today's tight regulations and work rules, it is important to keep on top of fast changing exhaust contaminant regulations. This is where we can help keep you apprised of permissible limits and present laws.

Just ask us...

We can help make you aware of current regulations.

Crushproof

Leading The Way For...

50
Years!



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WHY CRUSHPROOF PRODUCTS ARE BETTER...

THE CRUSHPROOF ADVANTAGE VS. THE COMPETITION!

Crushproof... It's engineered to save you money.

With other exhaust hoses, damage to the end of a hose could mean you have to replace the entire hose. But, the exclusive, patented

design of the Crushproof hose allows you to splice, connect and re-connect as needed!

Engineering innovation that saves you time and money!



**Crushproof's
Flarelock Design**



Competitor's Hose

Competition can't get it together!

90% of all damage to hose occurs in the first foot, so when the competition's hose is damaged, you cannot connect their adapters or hoses together.

PREMIUM CRUSHPROOF PRODUCTS

Telescoping Overhead System

Lightweight system incorporates our 'long lasting' 600°F hose and components and is fully extendible to a 17' length. Hoses can be shortened for low ceilings. Unit is easy to install and comes shipped completely assembled. Unit weighs only 30 lbs. and locking snaps allow unit to be shut off.

TE6000 Telescoping System



**Telescoping
Overhead
System**

High Quality Reel Hose

Can be used on most overhead reels and will withstand 600°F tailpipe exhaust temperature.

PNW400 4" x 25'

PNW500 5" x 25'

PNW600 6" x 25'

Must be used with exhaust fan pulling sufficient CFM.

Dynamometer Hose

Our Crushproof dynamometer hose is made of a blend of rubber formulated to withstand the high temperature of a dynamometer when used with a fan assisted system.

Heavy wall thickness increases durability.

Designed to be used in IM240 and VMAS emission testing.



F350 DYNO

F475 DYNO

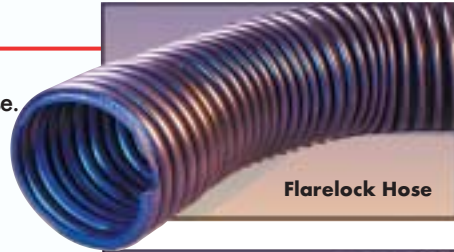
ACT 400 DYNO

QUALITY HOSE PRODUCTS

Flarelock Hose

Made exclusively for cars and small trucks. A flared end on each length permits connection to two or more lengths of the same size hose.

FLT250 2.5" x 11 ft. Compact Car
FLT300 3" x 11 ft. Passenger Car
FLT350 3.5" x 11 ft. Small Truck, Van
FLT400 4" x 11 ft. Gasoline Truck

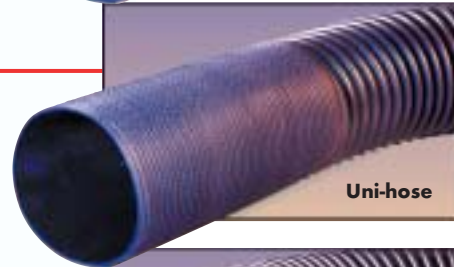


Flarelock Hose

Uni-hose

Hose and tailpipe adapter joined into one continuous piece.

UNH2500 2.5" x 11 ft. Compact Car
UNH3000 3" x 11 ft. Passenger Car
UNH4000	... 4" x 11 ft. Gasoline Truck

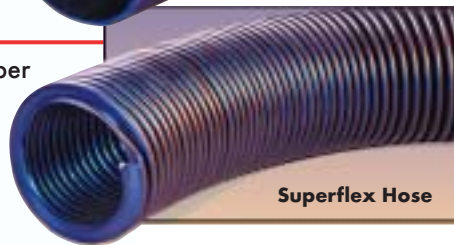


Uni-hose

Superflex Hose

Accordion-like design allows for extra stretch. Compressed rubber hose prevents kinking at a 180 degree bend over diesel stack.

40-20SF 4" x 20 ft. Gasoline Truck
50-12SF 5" x 12 ft. Diesel Truck



Superflex Hose

Act Hose

Designed specifically for use with diesel and gasoline trucks. Hoses are perfect for overhead exhaust system usage.

ACT400 4" x 11 ft. Gasoline Truck
ACT40-20 4" x 20 ft. Gasoline Truck
ACT500 5" x 11 ft. Diesel Truck
ACT600 6" x 11 ft. Diesel Truck



Act Hose

Act Hose Wire Reinforced

Designed specifically for use with diesel and gasoline trucks. Wire insert in hose prevents kinking.

ACT400W11	.. 4" x 11 ft. (inserted w/11' wire)
ACT500W11	.. 5" x 11 ft. (inserted w/11' wire)
ACT600W11	.. 6" x 11 ft. (inserted w/11' wire)

*Also available with 30" wire (use W30 suffix)



Act Hose Wire Reinforced

Stainless Steel Hose

For Dynamometers, lightweight and flexible, designed to withstand 1650°F.

SS4000 4" x 10 ft.	(longer lengths available)
SS5000 5" x 10 ft.	(longer lengths available)

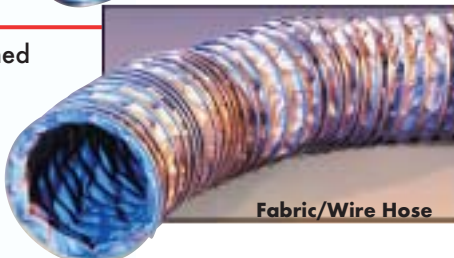


Stainless Steel Hose

Fabric/Wire Hose

Lightweight hoses for use with overhead exhaust systems designed to withstand 600°F.

401 4" x 25 ft. Gasoline Truck
501 5" x 25 ft. Diesel Truck



Fabric/Wire Hose

Crushproof

Leading The Way For...

50 Years!

"Superior Designs For Superior Performance!"

PREMIUM ACCESSORIES



Crushproof offers a complete line of accessory items. Accumulated customer input, our own technology, and extensive testing have created

the best products available. These accessory items will not only facilitate the ventilation of exhaust fumes, but will prolong the life of the hose.



Tailpipe Adapters

Designed for easy adapting to all sorts of vehicle tailpipes.

	Adapter Description	Tailpipe Style	Tailpipe Size	Hose (I.D.)
TPA3000	Split Adapter	Separated	Up To 3"	3"
F250	Straight w/ Hook & Chain	Single	Up To 2"	2" 2 1/2" 3"
F300	Straight w/ Hook & Chain	Single	Up To 2 1/2"	2 1/2" 3" 3 1/2"
F350	Straight w/ Hook & Chain	Single	Up To 3"	3" 3 1/2" 4"
F400	Straight w/ Hook & Chain	Single	Up To 3 1/2"	3 1/2" 4"
DSR600	Stack Adapter	Diesel Stack	Up To 5 1/2"	4" 5"
DSR600-6	Stack Adapter	Diesel Stack	Up To 5 1/2"	6"
UNA1000	Plug In UniHose	All	All	3"
F475	Oval Adapter (3" x 6" oval)	Twin Up To 2"	Oval 2 1/2" x 5 1/2"	3" 4"
F575	Oval Adapter (3 1/2" x 8 1/2" oval)	Twin Up To 3"	Oval 3" x 8"	3" 4"
RA250	Bell w/ Snaps	All	All	2 1/2" 3 1/2"
RA300	Bell w/ Snaps	All	All	2" 3"

Door Ports

Allows hose to be vented through the door.

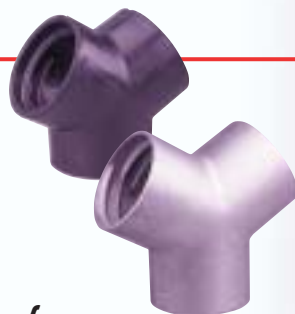
- DF25 (2 1/2") Rubber
- ADF30 (3") Aluminum
- ADF40 (4") Aluminum



Y-Connectors

Allows for three hoses to be joined together.

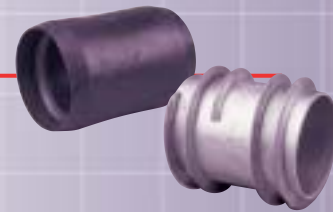
- RY25 (2 1/2") Rubber
- RY30 (3") Rubber
- AY40 (4") Aluminum



Splice Connectors

Allows two hoses to be joined together.

- | | |
|---------------|-----------------|
| Rubber | Aluminum |
| SP25 (2 1/2") | AC30 (3") |
| SP30 (3") | AC40 (4") |
| SP40 (4") | AC50 (5") |
| | AC60-OC (6") |



Elbows

Aluminum elbow connects two hoses for overhead pulley system.

- | | |
|---------------|-----------------------|
| Rubber | Aluminum |
| EB25 (2 1/2") | AEL25 (2 1/2") |
| EB30 (3") | AEL30 (3") |
| | AEL40 (4") AEL50 (5") |



Overhead Duct Connectors

- OC30 (3")
- OC40 (4")
- OC50 (5")
- OC50D (5") w/ Damper
- AC60-OC (6")



Please Contact Crushproof
For Additional Information at...

800-654-6858

Crushproof Accessories

FACTORY PACKAGED KITS

COMPLETE COVERAGE... AT A SAVINGS OF 5%

Our factory packaged kits offer convenience along with big savings. Our kits contain the

appropriate components for both, overhead or underfloor exhaust ventilation systems!

Car Dealership Kit

(Overhead)	(Underfloor)
CK03001	CKU3002
3" x 22' Hose	3" x 11' Hose
1 - F300	1 - F300
1 - AEL30	1 - EB30
1 - OC30	



Gasoline Truck Kit

(Overhead)	(Underfloor)
TKO4001	TKU4002
4" x 22' Hose	4" x 11' Hose
1 - F400	1 - F400
1 - OC40	
1 - AEL40	

Diesel Truck Kit

(Overhead)
TKO5002
5" x 22' Hose w/ Wire
1 - DSR600
1 - AEL50
1 - OC50

Service Station Kits (Dual Exhaust)

DSS25 (2 1/2")	DSS30 (3")
2 - 4' x 2 1/2" Hose	2 - 4' x 3" Hose
1 - 6' x 2 1/2" Hose	1 - 6' x 3" Hose
1 - RY25 • 2 - F250	1 - RY30 • 2 - F300
1 - SP25*	1 - SP30*

(Single Exhaust)

Note: For single exhaust, remove the "Y" and connect two lengths of hose with Splice Connector (*).
Door ports not included, may be ordered separately.

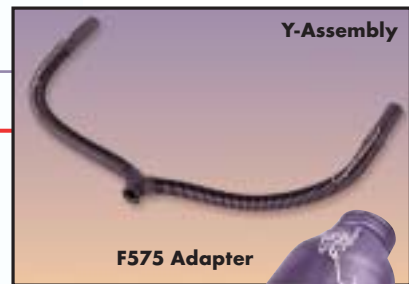


QUALITY ASSEMBLIES

Y-Assemblies

Designed for converting single hose into dual exhaust system vehicle purposes.

	Hose	Y-Connector	Tailpipe Adapter
YA250 (2 1/2")	2 - 4' x 2 1/2" Hose	1 - RY25	2 - F250
YA300 (3")	2 - 4' x 3" Hose	1 - RY30	2 - F300
YA400 (4")	2 - 4' x 4" Hose	1 - AY40	2 - F350
YA575 (3")	2 - 4' x 3" Hose	1 - RY30	2 - F575



Y-Assembly

F575 Adapter

Crushproof Reel Hose Kit

Designed for use on hose reels and overhead exhaust systems. This lightweight reel hose incorporates 5' of our crushable rubber tubing to prolong hose life. Comes in 25' lengths and includes tailpipe adapter.

CPRH400 (4' x 25' Hose with Adapter)
CPRH500 (5' x 25' Hose with Adapter)
CPRH600 (6' x 25' Hose with Adapter)



Reel Hose

ORDER GUIDE

Passenger Automobiles

Designed for easy adapting to all sorts of automotive tailpipes.

	Size of Duct Downspout/Inlet	Hose Required	Tailpipe Adapters	Inlet Connectors	Overhead 90° Elbow
Overhead	3" OD	22' - FLT300 (3")	1 - F300	1 - OC30	1 - AEL30
	4" OD	22' - FLT400 (4")	1 - F350	1 - OC40	1 - AEL40
Underfloor	At Least 3" ID	11' - FLT250 (3")	1 - F250	1 - EB25	
	At Least 4" ID	11' - FLT300 (2 1/2")	1 - F300	1 - EB30	
	At Least 5" ID	11' - FLT400 (4")	1 - F350	NA	

Gasoline Trucks

Designed for easy adapting to all sorts of gasoline driven truck tailpipes.

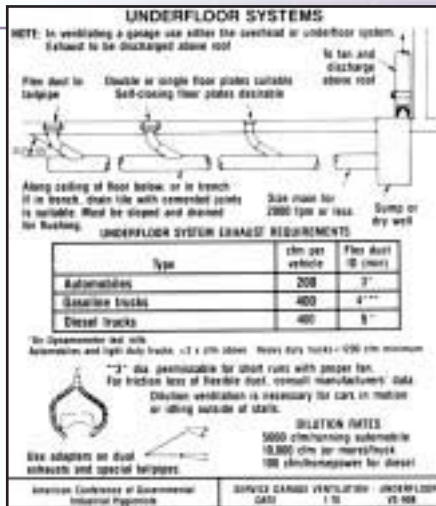
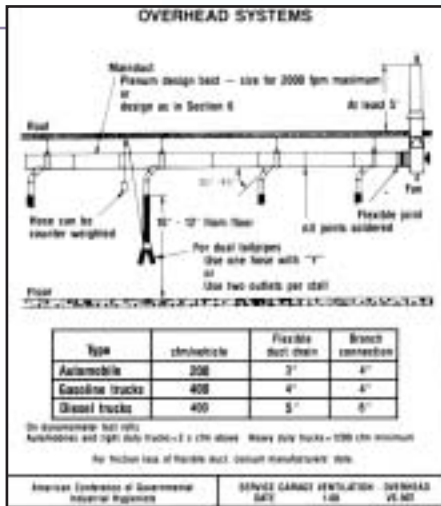
	Size of Duct Downspout/Inlet	Hose Required	Tailpipe Adapters	Overhead Duct Connectors	Overhead 90° Elbow
Overhead	4" OD	22' - FLT400 (4")	1 - F400	1 - OC40	1 - AEL40
Overhead	5" OD	22' - ACT500W11	1 - DSR600	1 - OC50	1 - AEL50
Underfloor	At Least 5" ID (Floor Opening)	11' - FLT400 (4")	1 - F400	NA	NA

Diesel Trucks

Designed for easy adapting to all sorts of diesel driven truck tailpipes.

	Size of Duct Downspout/Inlet	Hose Required	Tailpipe Adapters	Overhead Duct Connectors	Overhead 90° Elbow
Overhead	4" OD	22' - ACT400W11	1 - DSR600	1 - OC40	1 - AEL40
Overhead	5" OD	22' - ACT500W11	1 - DSR600	1 - OC50	1 - AEL50
Overhead	6" OD	22' - ACT600W11	1 - DSR600-6	1 - AC60-OC	1 - AC60-OC (Splice Connector)

VENTILATION SYSTEM DATA • SYSTEM SPECS



FRICION LOSS

This data will prove helpful to ventilation engineers for sizing fans and ducting.

Hose ID (nominal)	CFM	Friction Loss Per Foot
3"	100	.344"
3 1/2"	150	.48"
4"	200	.38"
5"	300	.19"
5"	350	.38"
6"	400	.095"
6"	400	.150"
6"	600	.17"
6"	600	.38"

Suggestions To Prolong Hose Life

With Catalytic Converter-Equipped Vehicles, Particular Attention Should Be Paid To The Following

- Select the proper size of hose.** OSHA recommendations call for a minimum of 3" I.D. hose for car dealerships and 4" I.D. hose for truck dealerships. The larger the hose, the greater the flow capability - and heat tolerance - of the system. (See "Friction Loss Data") This is important because, when the exhaust fumes attain the extreme temperature characteristics of today's vehicles, these fumes have to be evacuated through a circuit which offers the least friction loss or static pressure (resistance).
- Use The Proper Tailpipe Adapter.** It is **NOT** advisable to put the hose directly over the tailpipe. This will significantly decrease the service life of the hose. Select tailpipe adapters which have an opening at least 1 1/2 times the O.D. of the tailpipe to allow for the influx of cooler, room temperature air: F250 = 2 1/2" I.D. / F300 = 3" I.D. / F350 = 3 1/2" I.D. / F475 (oval shaped for oval and VW-type twin pipes) = 2 1/2" x 6".
- Avoid kinking in hose.** Kinking creates increased heat concentration due to reduced flow capability. In order to avoid kinking... (a) do not tie a pulley rope directly to the hose. Use Crushproof's Aluminum 90° Elbows with pulley systems; and (b) use Crushproof's wire-inserts where hose takes sharp bends (e.g., over diesel stacks).
- Check Exhaust Systems.** In car or truck dealerships which have overhead or underfloor exhaust systems, the entire system (blower, primary and intermediate duct work should be checked periodically to ensure that the system conforms to OSHA ventilation specifications. Of particular concern in underfloor systems will be the prevention of clogging of the ductwork (with rags, water, or other foreign material). The system will be expected to maintain an environmental reading of less than 35 parts per million of carbon monoxide or other noxious emittants.

CRUSHPROOF EXHAUST TUBING SETS THE WORLD STANDARD.

With constant engineering and process improvements, Crushproof Exhaust Tubing remains the very finest quality products in the world at any price!



*Please Contact Your Local
Crushproof Tubing Distributor
To Enable Us To Help You With
Your Specific Needs.*

Crushproof
Leading The Way For...
50
Years!

CRUSHPROOF TUBING COMPANY

Pacific Air Consultants, Inc. - P.O. Box 426 - 33100 NE Ivy Avenue - La Center, WA 98629 - Ph: 800.252.3993 or 360.263.9770 - FX: 360.263.9772 - Web: www.pacair.net - Email: sales@pacair.net

Crushproof products are widely
distributed throughout the European
Community and the world.

