



RE100, NE100, PX3-F, KR200

There are growing concerns in society regarding exposure to harmful vehicle exhaust pollution - carbon monoxide poisoning, increased blood-lead levels, carcinogenic fumes - the risks are well known.

In response to these disturbing issues, Ozone engineers have developed a range of user friendly products that deliver unmatched performance. At-source capture of vehicle exhaust fumes is the most economical and efficient way of reducing pollution in the workshop.

Ozone Hose Reels are typically mounted above the workplace or vehicle bay. The highly flexible hose winds down to the vehicle and when not in use is reeled back out of harms way. This is practical and safer than having hose lying on the workshop floor. The hose is connected to a vehicle exhaust pipe by a specially designed Nozzle.

Unlike traditional under floor extraction systems, Hose Reels can be easily and economically added to existing workshops. They are suitable for both standard vehicle exhaust pipes and vertical exhaust stacks.

There are three Hose Reel models to choose from: electric, remote control and manual. Each is supplied with optional hose diameters and with various hose lengths.

The world class electric and remote control models have a motorised drum which automatically winds the hose up or down. Fully retractable motorised reels, with their longer hose capacities, are the professional choice for workshops with high roofs or where travelling cranes are used. These latest generation, electronically controlled reels combine authentic performance with safety and reliability.

Designed as an integral part of the Ozone Pollution Technology range, Hose Reel systems can be simply and economically designed using Ozone Pollution Extractors, Fixed or Hinged Beams and Roof Discharge Kits.

Ozone Hose Reels are not limited to just vehicle exhaust extraction. They can be used for other pollutants such as welding fume by attaching either a magnetic or suction nozzle. These systems are the first choice where factory layout or work practices require the extraction system to remain off the floor and be fully retractable.

*Install an Ozone Hose Reel in your workshop and experience the working environment of the future.*

# Hose Reels

Hose Reels

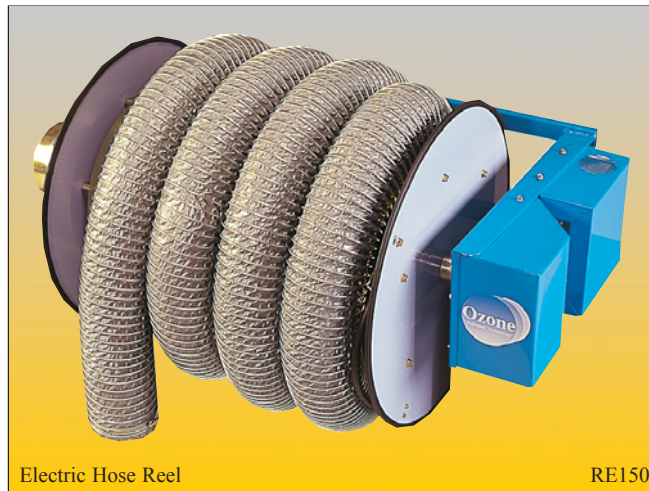
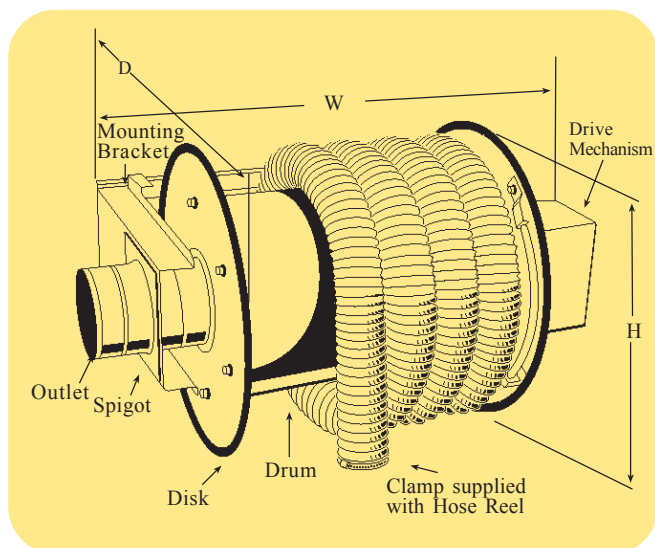
## Electric Hose Reels

Model RE

The Electric Hose Reel has a motorised drum which automatically winds the hose up or down. Unlike conventional reels, the hose can be stopped at any position. Reels come standard with 5 metres of flexible hose, with optional hose extensions for high roof mounts or when one reel must service a number of work areas. They can be used with up to 15 metres of hose.

The Reels have electronically controlled upper and lower stops to restrict the hose travel. Additional mechanical stops provide a safety back-up system.

The Electric Reel comes complete with a wall mounted switch and a long length of electric cable. The switch allows all movement: up, down and reverse.



Electric Hose Reel

RE150

The reel also has a unique "safety reverse" feature. If, during rewind, the reel senses a force or weight on the hose it automatically stops and reverses direction. This reduces damage should a reel be inadvertently rewound when the hose is still connected to a vehicle.

An Ozone Pollution Extractor can be directly connected to the Reel. Alternatively, the Reel can be connected to a central Duct System by the Spigot supplied. The Hose Reel Bracket easily mounts to ceilings, walls or pillars. A Hose Reel mounted on an Ozone Hinged Beam is a good solution when the Reel needs to serve multiple workstations.

Standard hose for vehicle exhaust is of Heavy Duty construction and offers protection from corrosive fumes or gases. It is extremely flexible and lightweight and is easy to manoeuvre into place. For dynamometer or diesel applications Thermal Duty hose is also available. There are three hose diameters: 100 mm, 150 mm and 200 mm. See the Applications section for advice on hose selection.

## Remote Control Hose Reels

Model RR

The Remote Control model combines all the leading features of the Electric Reels with the convenience of remote control.

The pocket sized transmitter has an industrial strength case. Working on radio frequencies, the transmitter does not need line of sight with the receiver mounted on the Reel. The transmitter has an effective range of at least 20 metres.

Each Reel and transmitter is pre-coded to a specific frequency.



The cost saving on electric fittings can make the Remote Control Hose Reel an effective alternative compared with conventional Electric models. The Remote Control Model is the most convenient and user friendly of Hose Reels.

## Exhaust Pipe Nozzles

Model NE

The exhaust pipe Nozzle has a unique spark arrestor to help protect the hose from spark damage. The areas in direct contact with the vehicle exhaust pipe are rubber coated to prevent scratching. The Nozzle attaches to the vehicle via a spring loaded flap and adjustable clamp and is suitable for most vertical and horizontal exhaust pipes. The testing port allows a diagnostic probe to be inserted into the exhaust pipe even with the extraction system connected.



NE100

The robust design is suitable for industrial workshops, yet the good looks make it equally at home in a luxury car workshop.

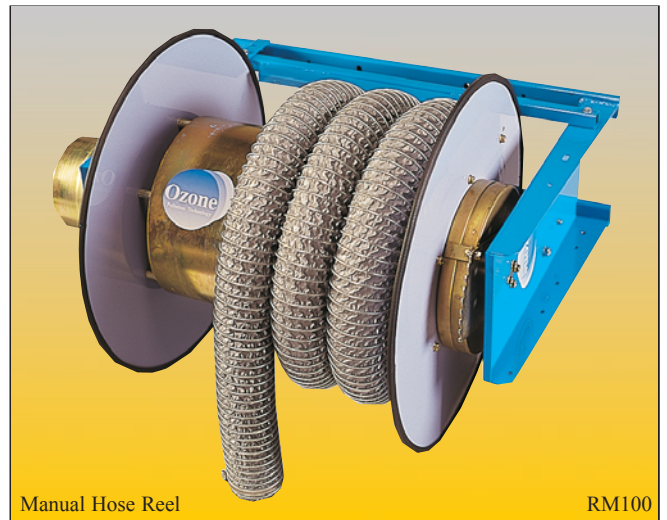


## Manual Hose Reels Model RM

This model is spring loaded and operated manually. Simply pull out the required length of hose and it will lock in position. To release the locking mechanism pull out the hose again and it will be automatically reeled back.

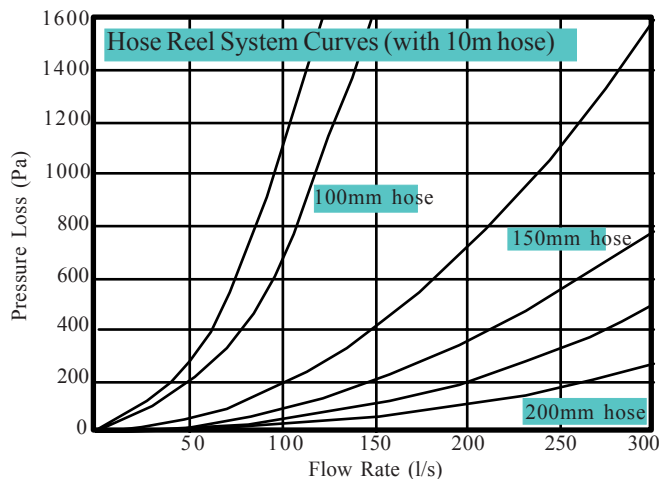
An adjustable limit stop allows the operator to determine how much hose re-winds onto the drum when not in use. The reel comes standard with 5 metres of vehicle exhaust hose, with the option of extending this to 10 metres. Two hose diameters are available to suit various applications.

An Ozone Pollution Extractor can be directly connected to the reel. Alternatively, the reel can be connected to a central duct system via the spigot supplied. The lightweight yet robust design will ensure years of trouble free service.



Hose Reels

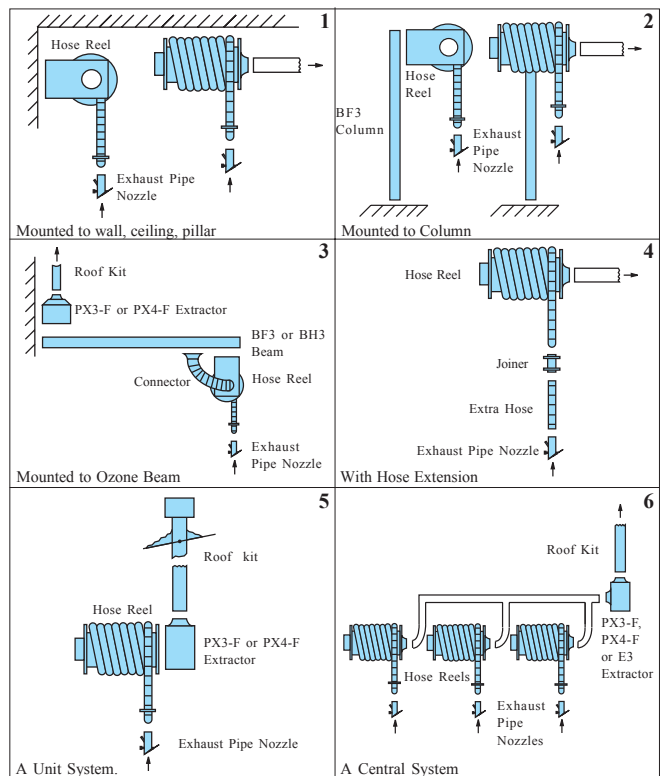
## Applications



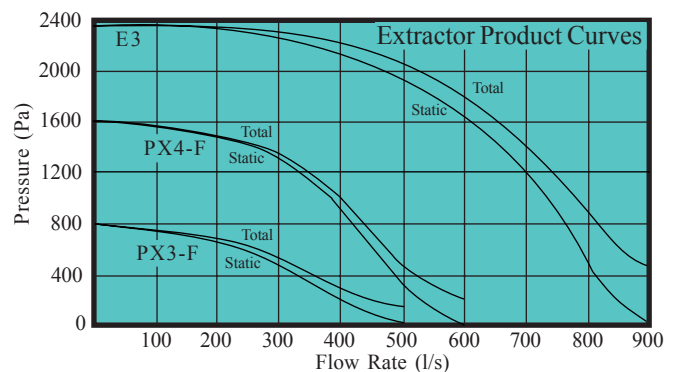
(Bottom dark curve in each range is for straight hanging hose & top light curve in range is for 2 coils around drum. Curves show total system pressure loss for Electric Reel including transition loss at outlet to 200mm Ø spigot. Entry & Exhaust Pipe Nozzle losses are excluded and are typically overcome by positive pressure from tailpipe which protrudes into nozzle. Curves are for Heavy Duty Hose).

Application	Selection Table (Internal Combustion Engines)					
	Idling				Dynamometer (below 50% load, & intermittent use)	
	Petrol/gasoline		Diesel		Petrol/gasoline	
Engine (kW)	Below 150	Above 150	Below 200	200 - 500	Below 150	Above 150
Min. hose dia. (mm)	100	100*	150*	150*	100*	150*
Min. airflow rate per vehicle (l/s)	50	100	200	200	100	200
Typical Extractor for 1 Reel, with 5m hose length	PX3-F	PX4-F	PX3-F	PX3-F	PX4-F	PX3-F
Typical Temperature Undiluted (°C)	up to 320		up to 540		up to 430	
Typical Temperature Diluted (°C)	up to 150		up to 250		up to 250	
Typical hose type if min. hose dia. & min. airflow rate	Heavy Duty		Thermal Duty		Thermal Duty	

\* Increase hose diameter by 50mm (100 to 150, 150 to 200) if pressure loss high due to long hose lengths or usage whilst hose coiled on drum, or if entrained air low due to large tailpipe.



Ozone products are shown in blue. All necessary connections are included with the products so they simply bolt together. The "words" in each box fully describe the set of Ozone products to be ordered for a complete system. See Accessories section for codes.



(Curves show fan static & fan total pressure gains for right angle flow without guards & with 200mm Ø ducted inlet & ducted outlet, BS or AMCA type D test. Other configurations yield higher or lower curves).

**Data Table**

Hose Reel Code →		RE	RR	RM
Hose diameter available (mm)		100, 150, 200	100, 150, 200	100, 150
Method of operation		Electric	Remote control	Manual
Standard Hose length included (Heavy Duty)		5m	5 m	5 m
Maximum Hose length allowable	100mm	15m total	15m total	10m total
	150mm	15m total	15m total	10m total
	200mm	10m total	10m total	-
Drive Mechanism		Motor (2m flex)	Motor (2m flex)	Spring
Control Mechanism		Switch (10m flex, plug)	Remote Control	Manual
Weight		65	65	60
Dimensions	H mm (disk diameter)	710	710	710
	W mm (not including spigot)	1200	1200	905
	D mm (wall to disk edge)	850	850	850
Outlet Spigot diameter (mm)		200	200	200
Electrical phase of Hose Reel		1-phase	1-phase	-

**How To Order Hose Reels**

Choose Hose Reel code from above table

Choose Hose diameter from above table

Leave blank if heavy duty hose, T if thermal duty hose

Note: if ordering for overseas, also specify voltage and frequency.

**Technical and Safety notes**

- Best practice is to connect each Reel to an individual extractor. Reel mounting and clamps must be securely fastened and gases discharged outside.
- Designing a multi-reel system: a) choose flow rate per reel from selection table; b) read pressure loss for 1 reel from graph, allowing for any coils around drum during usage; c) adjust this if not using 10 metre hose (straight heavy duty hose has pressure drop equal to straight galvanised duct multiplied by 1.5 if 200mm, 1.7 if 150mm, 2.5 if 100mm); d) find total flow rate based on reels needed to operate at same time; e) design connecting duct to achieve correct transport velocities; f) calculate total pressure loss = reel loss + duct loss + exit loss from system + contingency; g) plot (total flow rate, total pressure loss) point and select nearest extractor whose total pressure curve exceeds this.
- Do not operate products before reading Instruction Manuals.
- Customers must specify on their order their required hose diameter, hose length and hose type (see selection table).
- Hose Reels can be used with dynamometers, for petrol vehicles (not diesels) below 50% load and for intermittent use.
- Customers should exercise care to extend hose life. The spark arrestor is essential to protect hose from spark damage. Entrained air is essential to protect hose from melting due to hot gases. Total airflow rate must exceed 2 x tailpipe flow rate. Total pipe nozzle cross-sectional area must exceed 2 x tailpipe area. Standard Ozone pipe nozzles may require modification by customers for some applications, eg when used with vertical tailpipes.
- This brochure describes standard products that are not designed for use with pollutants which are explosive, flammable/combustible, highly corrosive, wet, or incendiary; and are not designed for use in areas which are hazardous. Any request for non-standard products or particular capture efficiencies must be clearly stated in writing on the customer's final order and, if accepted, will be restated on Ozone's invoice.
- It is impossible to list all the potential safety hazards associated with pollution control. Ozone is a supplier of standard products, not a consultant or contractor. We rely on the customer and their consultants or contractors to safely select products and design connected systems to suit their pollutant, and to safely install, operate and maintain these products and systems.

**How to Order Accessories**

Choose Accessories from diagrams below

Suppose require Electric Reel for small idling petrol car.

Example 1: Application 5 on previous page: order RE100, PX3-F, KR200 and NE100.

Example 2: Application 4: order RE100, UJ100, NE100 and HH100.

<p>Exhaust Pipe Nozzle</p> <table border="1"> <thead> <tr> <th>Diameter</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>100mm</td> <td>NE100</td> </tr> <tr> <td>150mm</td> <td>NE150</td> </tr> <tr> <td>200mm</td> <td>NE200</td> </tr> </tbody> </table>	Diameter	Code	100mm	NE100	150mm	NE150	200mm	NE200	<p>Includes 2 clamps</p> <table border="1"> <thead> <tr> <th>Diameter</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>100mm</td> <td>UJ100</td> </tr> <tr> <td>150mm</td> <td>UJ150</td> </tr> <tr> <td>200mm</td> <td>UJ200</td> </tr> </tbody> </table>	Diameter	Code	100mm	UJ100	150mm	UJ150	200mm	UJ200
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<p>Roof Kit</p> <p>Includes weather proofing and mounting brackets</p> <p>KR200</p>	<p>Beams</p> <table border="1"> <thead> <tr> <th>Model</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Fixed</td> <td>BF3</td> </tr> <tr> <td>Hinged</td> <td>BH3</td> </tr> </tbody> </table>	Model	Code	Fixed	BF3	Hinged	BH3										
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Type	Diameter	Code															
Magnetic	100	NM100															
Magnetic	150	NM150															
Suction	100	KT100															

**Useful Conversions**

- 1m = 1000mm = 3.38 feet
- 1kg = 1000g = 2.20 pounds
- 1Pa = 0.102mm water = 0.004 inches water
- 1L/s = 3.60m<sup>3</sup>/hr = 2.12cfm
- 1kW = 1000W = 1.34hp

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