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**PRODUCT GUIDE FOR
HRA – AUTOMATIC/ SPRING
RETRACTING HOSE REEL**

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INTRODUCTION

1. Prior to installation inspect all the components received for shipping damage. If damage occurred immediately contact your Ventaire representative for assistance.
2. Read **ALL** the instructions before proceeding with any installation, operation, or maintenance.

INSTALLATION

CAUTION: Reel is under tension. Do not disengage the reel-latching mechanism unless you have a firm grasp on the reel.

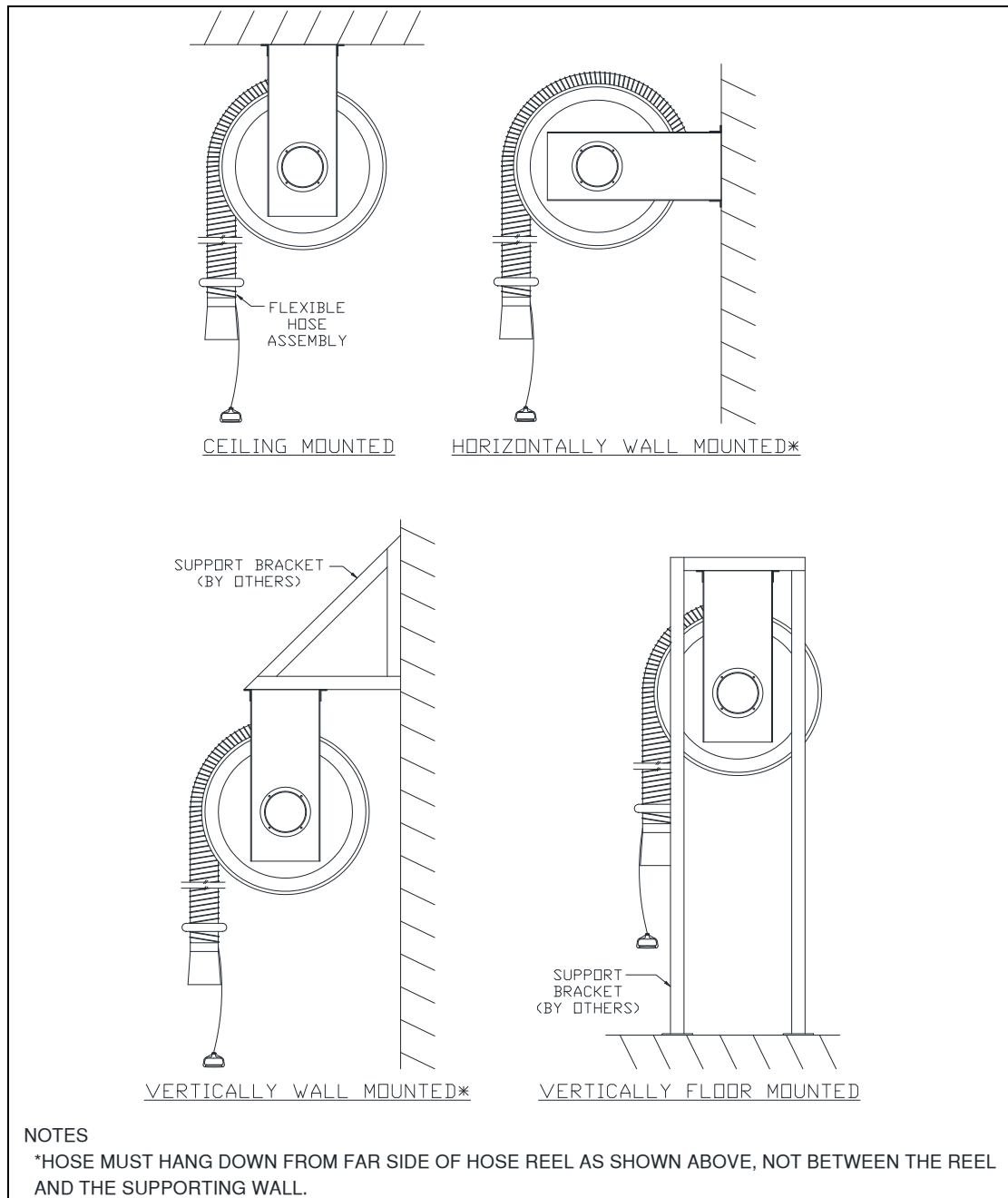


FIG1 – OPTIONAL MOUNTING CONFIGURATIONS

- Several mounting options are possible (See FIG 1 for details). Regardless of which orientation, the axis of the hose reel drum must be parallel to floor. Ceiling or floor mounted configuration is mandatory for hose reels with direct mounted exhaust fans. Contact factory for wall mounted reels with integral exhaust fan.

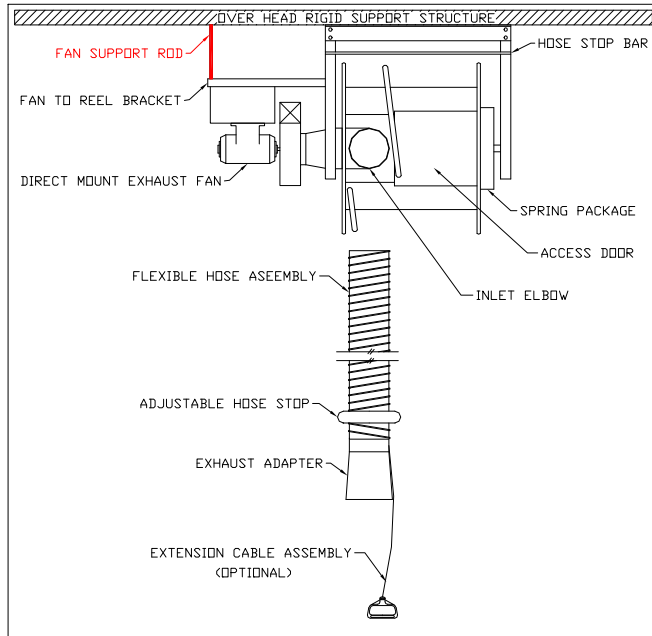


FIG2A - REEL WITH INTEGRAL EXHAUST FAN

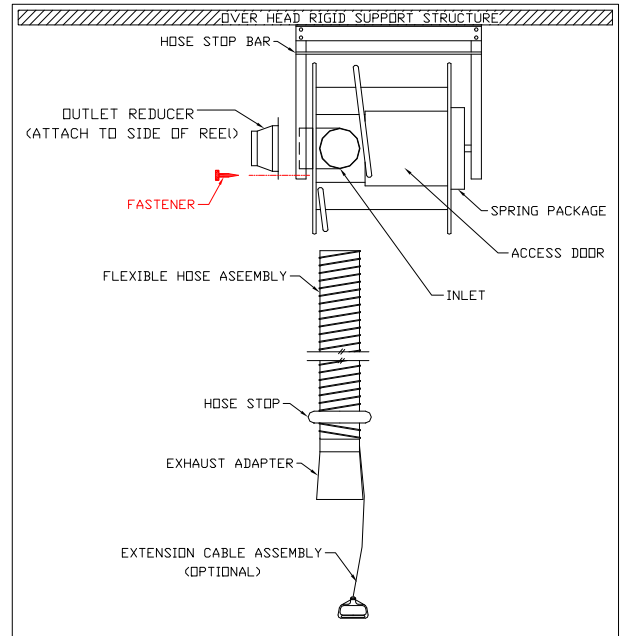


FIG2B - REEL DUCTED TO REMOTE EXHAUST FAN

- Raise the hose reel & fan (if applicable) with a lifting mechanism (forklift, crane, etc.) and mount to a rigid structure at desired location. Ensure the hose reel system will not interfere with any other equipment while in use. Use 1/2" bolts/rods through the holes in the corners of the hose reel base.
- Ensure rectangular support brackets are perpendicular to top L-brackets. A reel that is out of square will not rotate properly.
- For hose reel with direct mounted fan, an additional support is required to support the fan. Run a 1/2" bolt/rod (not provided) down from overhead structure to the hole at the end of the rectangular steel fan bracket. Secure with locking fasteners. Reference FIG2A.
- For hose reel ducted to remote fan, fasten the provided outlet reducer to the reel through the flange/tabs. Reference FIG2B.

CAUTION: Do not drill through the axle pipe when mounting reducer flange. This will restrict the hose movement and may cause permanent damage to the hose reel.

- Connect rigid duct to the outlet reducer or to the outlet of the direct mounted fan using industry standard methods.

Flexible hose assembly

- See steps 8-10 for hose assembly. Typical configuration shown in FIG3.

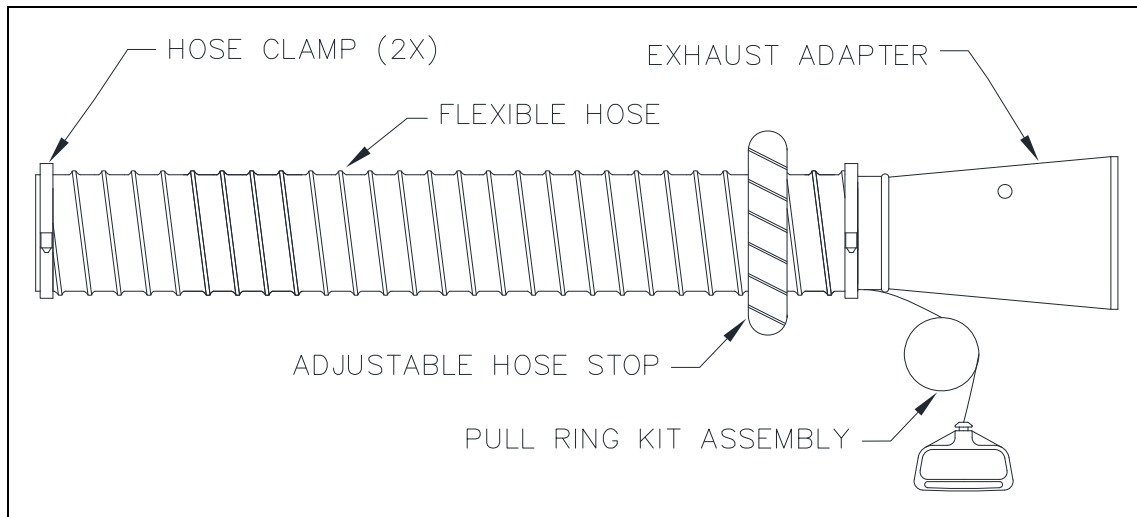


FIG3 – FLEXIBLE HOSE ASSEMBLY

8. Fasten the exhaust adapter to one end of the flexible hose using the provided hose clamp. It is highly recommended to drill and rivet through the hose clamp and exhaust adapter to ensure a rigid connection is established. This should be done only after the hose reel tension has been precisely adjusted.
9. For a hose assembly requiring pull kit assembly, securely attach the cable to the exhaust adapter or steel fitting (where applicable).
10. Each hose assembly is provided with a hose stop ring to control the retraction of the flexible hose and prevent reel from over-rotating. The hose stop ring should be mounted at a predetermined point where the hose will not obstruct the work area, while allowing for easy access to hose when needed. Once the desired hose stop ring location is determined, tighten the provided hose clamp until the stop is secure. **NOTE: Make sure not to over tighten hose stop ring, this may cause damage to flexible hose.**

To reset spring tension

CAUTION: Reel is under tension. Do not disengage the reel-latching mechanism unless you have a firm grasp on the reel.

11. Reset the tension on the hose reel by allowing the reel to slowly unwind. This is done by grasping the drum firmly and rotating the drum slowly until the locking mechanism unlocks. Then slowly let the reel rotate until the reel no longer spins on its own. To ensure all tension has been fully released, manually rotate the drum in the same direction until you hear the internal springs slip (they will make clunking noises).
12. The required hose reel spring tension varies with each application and various hose assemblies. The ideal tension will be determined once the hose assembly is attached to the reel. Prior to attaching hose, it is recommended to preset spring tension with five full drum rotations. This is performed by rotating the drum in the direction which winds the internal springs, then engaging the latching mechanism on the reel.

13. Fasten the flexible hose assembly to the hose reel inlet elbow using the provided hose clamp. To ensure a rigid connection is established, drill and rivet the connections through the hose clamps and inlet elbow.
14. Rotate the hose reel drum until the latch unlocks. With a firm grasp on the drum, allow the reel to slowly rotate in the opposite direction. The hose should retract slowly and smoothly onto reel. It is important to adjust the spring tension now.
15. Adjusting the tension is performed by adding or removing wraps of hose from the drum while the drum is locked into place. **NOTE: When adding wraps of hose, make sure not to exceed the required lifting capacity. Excessive spring tension may damage the winding mechanism and/or flexible hose.**
 - a. To increase tension, pull the hose down at least 10' and let the hose retract slightly until the lock engages. With the reel locked into place, loop the 10' of hose around the drum. You will need to remove the adjustable hose stop and may also need to remove the exhaust adapter. Repeat this procedure until reel retracts hose slowly to desired height. See FIG4 for adjustment illustration.

WARNING: Do not over the tighten reel. This may permanently damage the spring in the winding mechanism. Ideally, the reel should be adjusted to wind up only as far as the desired height needed to reach the hose stop.

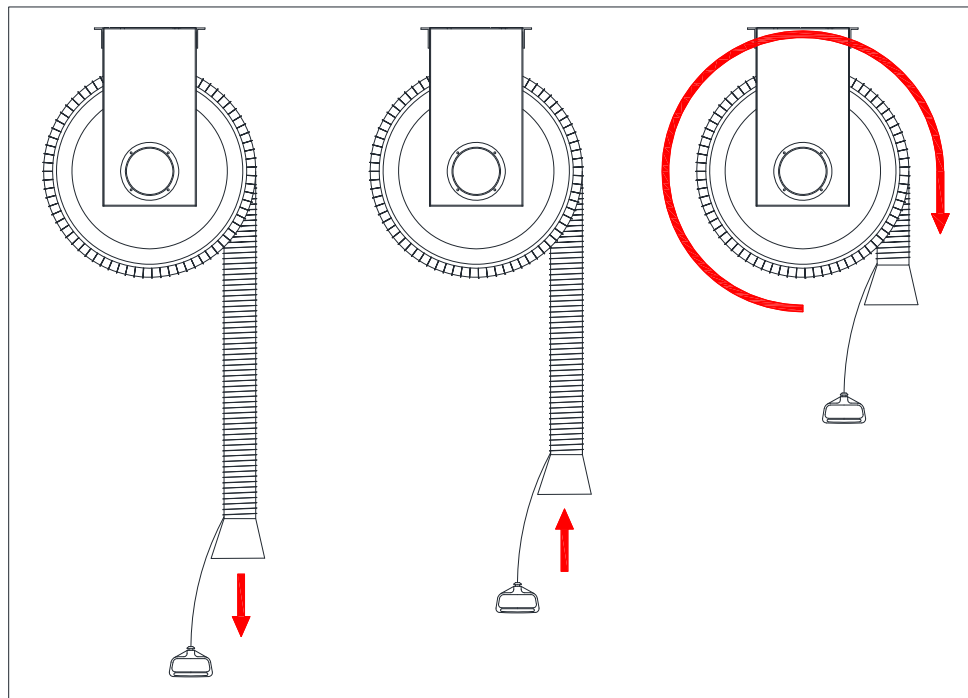


FIG4 – TENSION ADJUSTMENT PROCEDURE (INCREASE)

- b. To decrease tension, rotate the drum so all the hose is on the drum and lock into place. With the reel locked into place, take a loop of hose off of the drum so the removed hose hangs vertically. You will need to remove the adjustable hose stop and may also need to remove the exhaust adapter. Repeat this procedure until reel retracts hose slowly to desired height. See FIG5 for adjustment illustration.

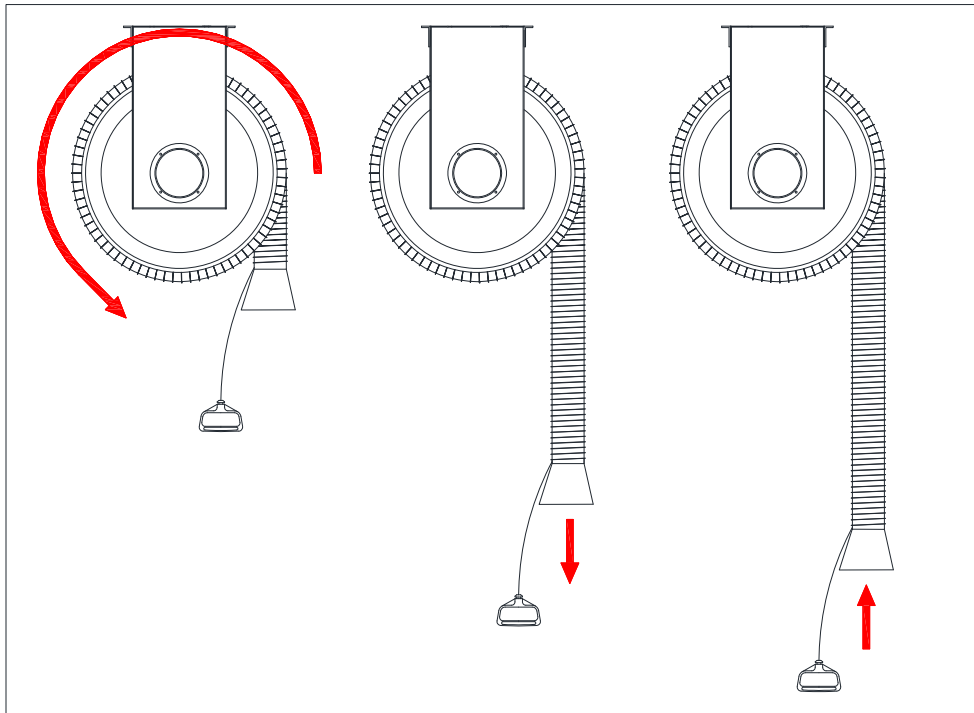


FIG5 – TENSION ADJUSTMENT PROCEDURE (DECREASE)

16. Once the spring tension has been adjusted, replace hose assembly components to the original locations (if removal was required). It is highly recommended to rivet the exhaust adapter to the flexible hose to ensure a rigid connection is established.

ELECTRICAL CONNECTIONS (For Optional Direct Mount Fan):

17. Before connecting the motor to the electric power supply, check the electrical characteristics as indicated on motor nameplate to ensure proper motor voltage and power supply voltage.

CAUTION: A ground wire must be run from the blower motor housing to a suitable electrical ground such as a properly grounded metallic raceway or a ground wire system.

18. It is recommended for every motor connection, an overload device be installed between the current supply and motor, protecting the motor from under-voltage conditions and motor overloads.
19. Follow the wiring schematic located on the fan motor for specific wiring instructions.
20. After electrical connections are completed, apply just enough power to start the unit to ensure proper wheel rotation. If needed, rewire until the correct rotation has been achieved.
21. Apply full electrical power. With the air system in full operation and all ducts attached, measure the current input to the motor and compare with the nameplate rating to determine if the motor is operating under safe load conditions.

OPERATION

Complete operation of the automatic hose reel can be accomplished in eight simple steps.

Preparation of ventilation system prior to attaching to vehicle exhaust pipe:

1. Open any applicable air shut-off devices and turn on the exhaust fan.
2. Grasp the extension cable or the flexible hose firmly near the adapter.

CAUTION: Do not release hose assembly until the latching mechanism is engaged.

3. Extend the hose in a controlled manner to the desired location. Allow for a few feet of slack in the hose. Make sure the locking mechanism is engaged before releasing hose.
4. Connect the adapter to the vehicle's exhaust pipe.

After service on the vehicle is completed:

CAUTION: Reel is under tension. Do not disengage the reel-latching mechanism unless you have a firm grasp on the hose assembly.

5. Disconnect the hose adapter from the vehicle's exhaust pipe.
6. Close the air shut-off devices (if applicable) and turn off the exhaust fan if fan is not venting any other systems.
7. Tug lightly on the flexible hose until the latch mechanism releases.

WARNING: Do not let go of hose assembly until all hose is coiled onto reel drum. Failure to do so may result in damage to system or personnel.

8. In a controlled manner, slowly allow hose to retract onto reel until drum rotation is complete.

MAINTENANCE

1. Routinely check the flexible hose for wear to ensure proper airflow. If wear is apparent contact your Ventaire representative for replacement.
2. Periodically check all of the connections between the hose, hose reel, and rigid duct for leakage. Tighten if necessary.
3. Ensure the hose stop ring located on the hose assembly remains in its original location. Overtime the hose stop ring can shift down the flexible hose. Failure to do so can allow the hose reel to over-rotate.
4. For the exhaust fan use the instructions provided by the manufacturer.
5. If the reel locks and ceases to unwind or rewind, discontinue use immediately and contact representative. Do not pull or jerk on hose, this will damage reel and/or hose.
6. Lubricate grease fitting on spring pack arbor annually.
7. For problems not covered in these situations please contact your representative.

TROUBLESHOOTING

Symptom	Possible Cause	Action
Hose reel will not allow hose assembly to extend.	Improper reel adjustment or installation	Discontinue use and reference installation instruction section of product guide. If procedure in product guide does not fix the issue, contact Ventaire
	Locking mechanism issue	Discontinue use and contact Ventaire
	A fastener on reel outlet has prevented rotation of reel	Remove fastener and verify that drum rotates freely and reel has not been permanently damaged. If permanent damage occurred, contact Ventaire
Hose reel will not retract hose assembly.	Improper reel adjustment or installation	Discontinue use and reference installation instruction section of product guide. If procedure in product guide does not fix the issue, contact Ventaire
	Locking latch mechanism issue	Discontinue use and contact Ventaire
	Drive spring issue	Discontinue use and contact Ventaire
	A fastener on reel outlet has prevented rotation of reel	Remove fastener and verify that drum rotates freely and reel has not been permanently damaged. If permanent damage occurred, contact Ventaire



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12-MONTH WARRANTY

VENTAIRE warrants their products, to the original purchaser, to be free from defects in material and workmanship under normal use and service (except for those cases which buyer supplied materials are used) for a period of 12 months from the original date of shipment. During the warranty period, **VENTAIRE**, will at its option, repair, replace, or issue credit for any components that are deemed defective by **VENTAIRE**.

Buyer's failure to pay the full amount due within (60) days of invoice shall release seller from any and all liability or obligation to any warranty.

Before returning equipment for repair or replacement, a **Return Authorization Number** must be obtained from **VENTAIRE** (952-894-6637). The **Return Authorization Number** must be written on the outside of all shipping cartons. Items returned without a **Return Authorization Number** will be refused. Items returned should be in original condition in which it was received and must be accompanied with a written explanation of the reason(s) for their return.

This warranty does **not** cover damage caused by accident, misuse, misapplication, or unauthorized service modification.