Instruction Manual

Model 550-200

Dry Chemical Fire Extinguisher Powder Handling System

This equipment is designed to fill and empty dry chemical powder from fire extinguishers. The standard unit can hold up to 150 pounds of dry chemical powder. The 550-200 is shipped complete with a Discharge Lid, Control Panel and a set of Discharge Adapters to fit a variety of Extinguishers. Optional Lid Cone PN 550-203 is sold seperatly.

Basic Setup

Carefully unbox the 550-200, the Discharge Lid, the Control Panel and Manifold/Hose assembly. Remove any packaging material from the components and check all components for any damage. Immediately report any damage found with the delivering freight carrier.

Assembly

Locate the mountings holes on one leg of the Support Stand. With a screwdriver, remove the two screws provided, from the mounting holes. Place the two mounting holes in the Control Panel over the holes in the leg of the Support Stand. Secure the Control Panel to the Support Stand with the mounting screws provided.

Next, connect the two hoses from the Filler Manifold with the Main Hopper and Control Panel. The larger hose is to be connected to the bottom port of the Main Hopper. The smaller hose is to be connected to the open port on the side of the large filter (with the Blue Bowl) located on the Control Panel.

Note: Do not over tighten either of these compression fittings.

Confirm the Ball Valve on the Control Panel is closed and then connect 80PSI of ***pre-regulated*** shop air to the 1/4" female pipe thread connection in the side port of the air filter.

Before using the 550-200, inspect the inside of the Main Hopper for any foreign substances.

Note: You may find it easier if you remove the Lid Cone by turning it counterclockwise until it is free.

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Basic Operation

NOTE: The following instructions assume that you have been trained in the proper filling and discharging procedures for portable fire extinguishers. We suggest that you read though all of the remaining instructions before proceeding.

Filling the 550-200 with Powder

Step #1 Secure the Lid Cone to the top of the Main Hopper, if not already done, by turning it clockwise until it is secure.
Note: Make sure not to cross thread.

Step # 2 If your powder is in 50 lb. pails, remove the lid from the pail and quickly flip the pail over onto the lid cone on top of the 550-200. Allow the powder to settle before removing the empty pail. If your powder is in boxes you might find it cleaner to pull the bag of powder from the box, and place it into the lid cone. Carefully cut a slit into the bag and allow the powder to fall into the unit. Allow the powder to settle before removing the bag.

NOTE: *Never mix powder types or allow different types of powder into the same 550-200 system.*

To Empty an Extinguisher

NOTE Instructions assume you have enough room in your system to accommodate the additional powder.

Step #1 Remove the Lid Cone from the Main Hopper and replace with the Discharge Lid.

Step # 2 Check to see that the extinguisher has pressure in it. (if not you will have to pressurize the Extinguisher before proceeding)

Step # 3 Remove the hose or nozzle from the extinguisher and install the proper Discharge Adapter into the extinguisher valve.
NOTE: The Adapter should have a special mating nipple installed into it (supplied) before attaching it to the extinguisher.

Step # 4 Connect the extinguisher to the discharge hose, located at the top of the Main Hopper.

Step #5 Make sure the Ball Valve on the Discharge hose is "Open"

WARNING *Make sure the discharge hose coupler is securley coupled to the discharge adapter nipple before proceeding.*

Step # 6 Slowly, open the extinguisher valve until fully open. Hold the valve fully open until the extinguisher is fully emptied.
Note: It is best to throttle the powder from the Extinguisher.

Step # 7 Close the extinguisher valve and disconnect it from the Discharge Line.

Note: The Ball Valve located on the Discharge Line serves two purposes. #1, It can be closed in the event of a run away extinguisher. An example of this would be you have an extinguisher that cannot be shut down for what ever reason and you want to stop the flow of powder into the system. #2 It can be closed to help keep moisture out of the powder when not in use.

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To Fill an Extinguisher

NOTE *Instructions assume that the extinguisher is empty, devalved, tested, inspected, clean and dry.*

Step # 1 Place the empty extinguisher onto your scale.

Step # 2 Place the Filling Manifold onto the top of the extinguisher.(support the manifold by hand by holding the hoses about 8" back from the manifold so you don't disturb scale reading)

Step # 3 Tare out the scale reading to zero.

Step # 4 Turn "on" the Ball Valve on the Control Panel until the extinguisher has the proper amount of powder in it and then turn "off" the Ball Valve. (Follow instructions on the side of the extinguisher for proper amount of powder required).

Step # 5 Remove the Filling Manifold and install the properly prepared valve back into the extinguisher. (Follow extinguisher manufactures instructions)

Note: If while filling an extinguisher, powder stops transferring, it may be due to the Overflow Bowl is full of powder. Simply shut the system down and unscrew the Filter Bowl and inspect. If the bowl is close to full you should empty it and replace back onto the filter housing.

Note:

After pressurizing the extinguisher and reinstalling the hose or nozzle verify the extinguisher weight before putting it back into service.

Operating & Maintenance Tips

1) When filling the system from pails, do not loosen the powder in the pail before flipping it over onto the lid cone. Once the pail of powder is on the lid cone you can tap the sides of the pail to loosen the powder in the pail.

2) After you discharge an extinguisher leave the adapter in the valve and connect a pressurizing coupling to the adapter for pressurizing the extinguisher. This pressurizing coupling (purchased separately) mates the discharge adapter with an air chuck commonly used to pressurize extinguishers. The pressurizing coupling is made up of one each, #110-015 and #100-430.

3) If you are getting a trace of powder out of the discharge filter upon discharge, you may be emptying the extinguisher to fast or the filter may be torn or getting old. The part number for the replacement filter is #160-023.

4) If powder is packed in the hopper, try loosening it by aerating it through the fluidizing port at the top of the Main Hopper. With low pressure (20-40psi) pre-regulated dry air or N_2, connect an air chuck to the hose from your dry air or N_2 source and press the air chuck onto the schrader type vale on the top of the hopper in short burst.

5) Keep the filter bowl, powder trap, empty at all times for best performance.

6) If traces of powder are found in the exhaust of the 550-200 you may have a loose, torn or worn filter element. Use replacement filter element part # 160-017.

Dry chemical fire extinguisher powder by nature is manufactured to flow in a fashion similar to water. However, when moisture is present the powder will become “caked” and not flow easily. It is imparative that the powder be stored closed in a cool dry area. The most common operational problem with powder handling equipment is that the powder will not transfer because moisture has been present at or near the powder. Hydro-Test introduced the aerating principal to help with this problem (see tip #4 above).

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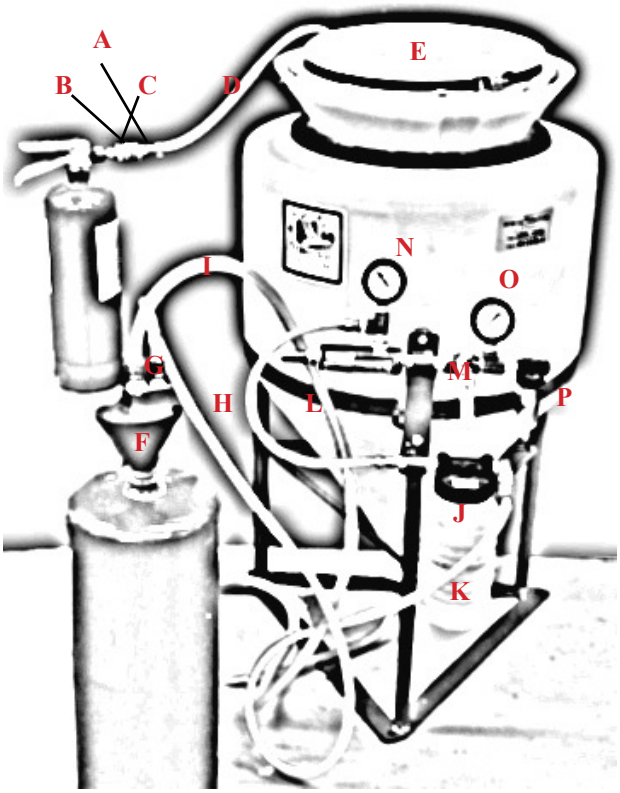
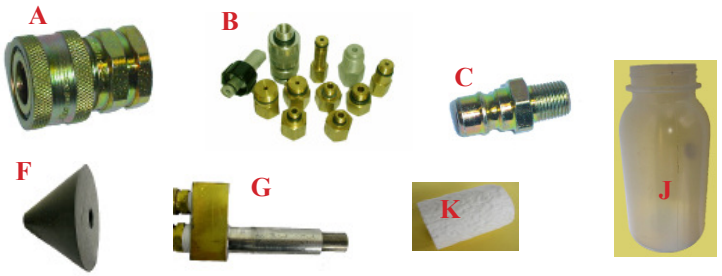
TROUBLESHOOTING

Problem	Cause	Solution
Powder is not transfering and the vacumm gauge is reading in excess of 20" of vacumm	Powder is “caked” in hopper	1) Try aerating the powder (see tip#4 on previous page) 2) Remove all powder from hopper and refill 3) Empty overfill bowl and inspect filter for blockage
Powder is not transfering and the vacumm gauge is reading less then 20" of vacumm	A physical leak is present on the vacumm side of the system	Check the following: 1) Rubber cone for nicks / cuts 2) Hose fittings/ferrules on vacumm hose
Powder is transfering but very slowly	Inlet air pressure is low	Unit requires a minimum of 80 psi. Check inlet pressure gauge for pressure reading
Overfill bowl continually fills with powder	Fire extinguisher is being overfilled	Some extinguishers with a small neck opening require the powder to “settle” before topping off the last pound.

EXPLODED VIEW PARTS BREAKDOWN





Key	Part No.	Description
A	110-015	Quick Disconnect
B	100-402	Discharge Adapter Set
C	110-013	Quick Disconect Nipple
D	200-120	Discharge Hose, 3’Long
E	160-026	Discharge Screen (Cloth)
F	130-003	Rubber Fill Cone
G	210-555	Manifold with Tubes and Rubber Cone
H	150-004	Clear Vacuum Hose with Fittings - 5’
I	150-005	Clear Powder Hose with Fittings - 7’
J	160-016	Overflow Powder Bowl
K	160-017	Filter Assy Inside Powder Bowl
L	160-042	Muffler
M	120-003	Ball Valve
N	140-012	Vacuum Gauge
O	140-011	Inlet Air Pressure gauge
P	160-008	Inlet Air Moisture Trap
Q	220-034	Sleeve for Powder Hose
Q	220-035	Sleeve for Vacumm Hose
R	220-036	Insert for Powder Hose
R	220-037	Insert for Vacumm Hose

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