Honda of Canada Mfg.
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Absolent - ODR-2000
Fire Protection Manual

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Formally: Industrial Air Quality, Inc.

1) System Description
    a. The fire protection system on the Absolent ODR-2000 consists of two main sub-systems. The manual fire damper and the fire suppression Firetrace system.
2) Manual Fire Damper
    a. The manual fire damper is inserted in the duct at the inlet to the ODR-2000.
    b. It is an eight inch diameter damper that has two spring loaded damper halves that are held open by a 165°F (74°C) link.
    c. When the heat (fire) reaches 160° F (74°C) the link melts and the damper closes stopping air flow to the unit.
    d. When the damper is tripped it must be removed, the link replaced and the damper reset in the open position.
3) Fire Trace System
    a. System Capacity Design
        i. The area below the first filter is approximately 12 cubic feet. The system is equipped with a 10lb CO_2 bottle that can flood up to 140 cubic feet. This extra volume of CO_2 will ensure that the CO_2 concentration will be maintained during the fan slow down.
    b. System Components
        i. 10lb CO2 Assembly
            1. CO2 is stored in DOT/TC aluminum cylinders as a liquefied compressed gas, under its own pressure; 838psig @ 70°F (5,778 KPa @ 21°C). The cylinder/valve assemblies are FM Approved. Each cylinder is equipped with a brass valve and a quarter turn ball valve that interfaces with the Firetrace detector tubing. The ball valve must be kept closed at all times when the cylinder is not in service. In addition, the CO2 Cylinder valves are equipped with a pressure relief (rupture disc) device in compliance with DOT/TC requirements.
        ii. Cylinder Mounting Bracket
            1. A wall mounted painted steel bracket is used to mount the 5, 10, and 20lb cylinder/valve assemblies in a vertical (upright) position. Each bracket is equipped with an interlocking steel strap that is secured with a metallic pin.
        iii. Firetrace Flexible Detector/Actuation Tubing
            1. The Firetrace tubing is used as a combination linear heat detector and unit activation device to cause actuation of the CO2 agent cylinder. The tubing is installed throughout the hazard volume, with one end connected to the CO2 cylinder valve. The tubing is pressurized with nitrogen to 195 psig while maintaining the ball valve in the "OFF" position. An optional pressure gauge or pressure switch can be connected to the other end of the detector tube to monitor tubing pressure and/or signal unit actuation etc. The detector tubing is heat sensitive and in a fire situation is designed to rupture at any point along the tube. The rupture of the tube releases the nitrogen pressure causing the CO2 cylinder valve to actuate, resulting in complete discharge of the CO2 agent through the nozzles.

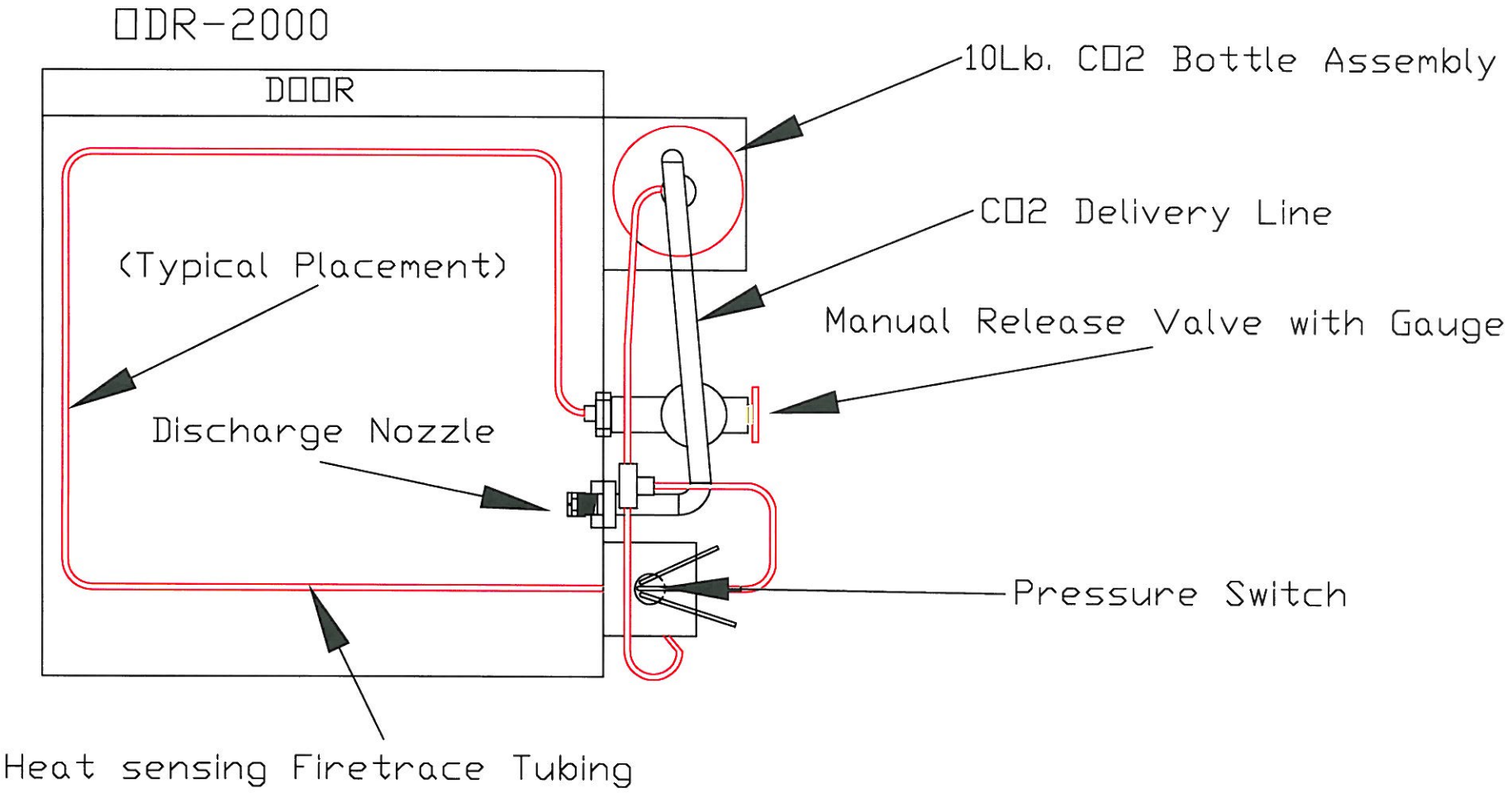
iv. Discharge Nozzle
    1. A total flood discharge nozzle is used to distribute CO2 agent uniformly throughout the hazard area. One size nozzle is available for use with all IHP models.

v. Pressure Switch
    1. A pressure switch is available as an optional item. This switch can be connected at the end of the line of the Firetrace detector tubing to monitor unit pressure, unit actuation and or to energize or de-energize electrically operated equipment. IAQ recommends that all units use a pressure switch coupled with some device to alert personnel in the event of discharge.
    2. The pressure switch has two sets of contacts, one Normally Open (Blue Lead) and one Normally Closed (Black Lead). This configuration is with the switch under pressure. The Brown Lead on the switch is the common.
    3. The normally closed switch can be used is the fan circuit to shut the fan down if activated (contact opens). The normally open contact can be used the interface with the plant fire detection system. It will provide an alarm contact upon activation (contact closes).

vi. Manual Release with pressure gauge
    1. The manual release valve is used to activate the system if the Detector/Actuation Tubing fails to function.
    2. The manual release assemble is equipped with a pressure gauge that monitors the pressure in the detector/actuation tubing.
    3. The gauge can be removed and the filling/pressurization filling adapter can be install at that point to pressurize that tubing. After pressurization the adapter is removed and the gauge reinstalled.

vii. Supplied Components
    1. 10lb. CO_2 Assembly – PN: 951004
    2. FireTrace Tubing – PN: 204025
    3. Manual Release – PN: 600066
    4. HP 90 Slip-On – PN: 200159
    5. Straight Line Adapter – PN: 200179
    6. CO2 Agent – PN: 700002
    7. Pressure Switch – PN: 400001
    8. Pressure Gauge – PN:400027
    9. Tube Mounting Clips – 200171
    10. Magnet Mounts – PN:200181
    11. Plastic Grommets – PN:200151
    12. CO2 Nozzle – PN:500024
    13. 2 Ft. Discharge Hose – PN: 201802
    14. HP Line "T" Branch Connector – PN: 200157
    15. Mics. 600lb ½ black iron pipe fittings

□DR-2000 Firetrace System
Plan View



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Drawing: □DR-2000 Fire Trace	
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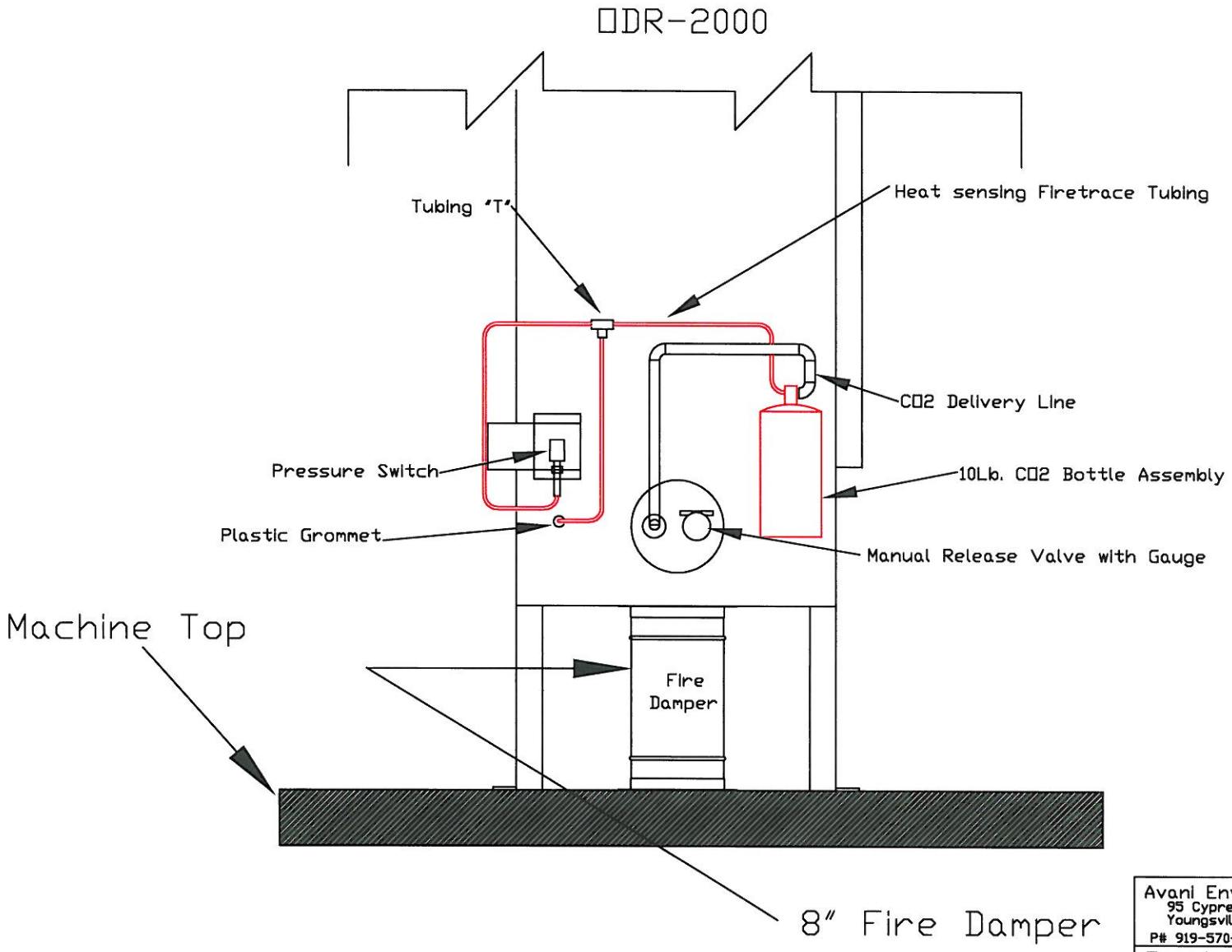
□DR-2000 Firetrace System
Elevation View



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