



NYC Department of Buildings  
280 Broadway, New York, NY 10007  
Patricia Lancaster, FAIA, Commissioner  
(212) 566-5000, TTY: (212) 566-4769

## Report of Materials and Equipment Acceptance Division

Pursuant to Administrative Code Section 27-131, the following equipment or material has been found acceptable for use subject to the terms and conditions contained herein.

### MEA 325-01-E Vol. 2 (Correction)

**Note: This publication reflects correction to Terms & Condition - #19 per Fire Department letter dated November 30, 2005, F.P. Index No. 0505042B.**

**Manufacturer:** Union SPA, Via Labriola 4/D, Bologna, Italy 40010.

**Trade Name(s):** Union Dry-cleaning Products USA, 10 Southwoods Pkwy, Ste. 100, Hapeville, GA 30354 USA.

**Product:** Dry cleaning machine using Class IIIA cleaning solvent (flashpoint at or above 140°F and below 200°F).

**Pertinent Code Section(s):** 27-425; 24-426(c).

**Prescribed Test(s):**

- 1) Commercial Dry Cleaning Machine (UL 664, 4<sup>th</sup> Edition)
- 2) Commercial Laundry and Dry Cleaning Operations (ANSI Z8.1, 1996 Ed.)
- 3) Standard for Dry Cleaning Plants (NFPA 32, 2000 Edition)
- 4) General Requirements – Canadian Electrical Code, Part II, (CAN/CSA C22.2 No. 0-M91).

**Laboratory:** Intertek Testing Services.

**Test Report(s):** ITS multiple listing report no. 10240031, dated October 2, 2002.

**Description** – The dry cleaning machines are dry-to-dry, front door loaded, closed, belt driven baskets assemblies. They contain heat pump, wash extraction pump and fan motors, solvent recovery systems, disk type filter assembly and control panel. These machines operate on supply voltages of 220/240 VAC, 3 phase, 60 Hz. The solvent used in the cleaning process is a Class IIIA solvent. The machines have a refrigeration unit used for the drying and cooling down cycles. There is no venting of Class IIIA solvent vapor to the outside.

The dry cleaning machines differ in load size, solvent recovery, maximum solvent amount in system, and number of tanks as follows:

Model No.	Load Size	Solvent Recovery Capacity (gal/hr)	Max Solvent Amount in System	No. of Tanks
HL-840	40	50	146	3
HL-850/860	50/60	68	172	3
HL-880/890	80/90	95	240	3

Union	HL-840	HL-850	HL-860	HL-880	HL-890
Realstar	KM-343	KM-403	KM-503	KM-703	KM-803
Firbimatic	L-2118	L-2120	L-2125	L-2132	L-2140
Sovrana (Victory)	HA-40	HA-50	HA-60	HA-80	HA-90

The still, recovery section, condenser, wash wheel, water separator, disk filter are made from stainless steel. Front cover is made from galvanized cold rolled steel.

The operation of the dry cleaning machines is as follows:

Garments are placed in the wash wheel and the machine is started. Solvent is pumped from the integral base tank in to the wash wheel. When pre-determined liquid level is reached, solvent is circulated from the wash wheel through the filtering system for purification purposes. At the end of the pre-determined cleaning cycle, the solvent is drained back to the integral base tank or the dirt tank (still). The liquid from the garment is then extracted at 1 minute at speeds of up to 300 to 540 RPM depending upon the model.

In the same way that it is possible to have bath programs.

After last bath, the machine starts spinning up to 300 to 540 RPM. After the spinning cycle, the drying cycle starts under control of the LEL system with nitrogen safety blanketing. The LEL system controls the heating temperature measuring both the inlet and outlet temperatures during the complete drying and cooling process

The machines will also include a sealed based tank (designed to 3RCNY §21-17 specifications) with no glass and only openings through the top. No plastic lines carrying solvent will be used only copper tubing.

A 10" diameter rupture disc is used, manufactured by Continental Disc Corporation. The drying fan motor will be an explosion proof design with an aluminum impeller. An automatic sprinkler will be installed above the machine

Pursuant to "Promulgation of the Rules relating to Material and Equipment Application Procedures" dated November 5, 1992, the Bureau of Fire Prevention has no objections Letter dated June 20, 2002, F.P. Index 0110086D and November 30, 2005, F.P. Index No. 0505042B.

**Terms & Conditions** - That the above dry cleaning machines using Class IIIA hydrocarbon solvent with flashpoint at or above 140°F and below 200°F be accepted on the following conditions:

- 1) The dry cleaning machines shall comply with all applicable requirements of UL 664 Standard for Commercial Dry Cleaning Machines.
- 2) The dry cleaning machines shall comply with all applicable requirements of UL 1604 Standard for Electrical Equipment for Use in Class I and II, Division II, and Class III Hazardous (Classified) Locations.
- 3) The dry cleaning machines shall comply with all applicable requirements of NFPA 496 Standard for Purged and Pressurized Electrical Equipment.
- 4) Testing Laboratory's listing requirements and limitations shall be complied with. Additionally, manufacturer's installation, maintenance procedures, and limitations shall be complied with.
- 5) Exxon DF-2000, with a flashpoint of 147 degrees F and GE Siloxane-based solvent SB32, with a flashpoint of 170 degrees F, are the only solvents approved to be used with these dry cleaning machines.
- 6) The combustible solvent is stored in three (3) tanks with a total capacity of less than 275 gallons. Tanks to be designed to the requirements of 3RCNY §21-17, "Installation of Storage Tanks and Piping for Liquids Having Flashpoints of 100 Degrees Fahrenheit or Higher Tag, Open cup" and shall not be provided with a level viewing glass.
- 7) Solvent tank containment design and capacity shall comply with 3RCNY §21-17.
- 8) Piping shall comply with 3RCNY §21-17. All lines (piping, tubing, hose) carrying solvent (liquid or vapor) shall be of steel construction. No nonmetallic hose shall be used.
- 9) A 10-inch diameter rupture disc shall be provided on top of the dry cleaning drum.
- 10) Solvent tank vent piping shall comply with 3RCNY §21-17.
- 11) Fan motor shall be explosion-proof. Fan blades shall be constructed of non-ferrous metal.
- 12) The dry cleaning machine shall be installed in an area protected by an automatic sprinkler system conforming to the requirements of the New York City Building Code. At a minimum, two (2) sprinkler heads shall be provided. The use of a domestic connection to provide water for the sprinkler system shall be subject to the approval of the Department of buildings and shall comply with the requirements of §27-962(e) of the New York City Building Code. Additionally, if two (2) or more machines are installed, sprinkler protection as required by §27-954(q) of the New York City Building Code shall be provided.

- 13) Dry cleaning machines shall be installed in compliance with Subchapter 7, Article 6 of the New York City Building Code and Article III, Chapter 2, §32-15A and 32-35D of the Zoning Resolution. One or more of such machines having an aggregate dry load capacity in excess of 60 pounds may be located only where permitted by the Zoning Resolution. Additionally, the installation shall comply with all applicable New York City codes, rules, regulations, and testing requirements.
- 14) The installation of this dry cleaning machine located in buildings with other occupancies shall be separated vertically and horizontally from such occupancies by partitions having a fire resistance rating of not less than one (1) hour.
- 15) A permit shall be obtained from the Fire Department for the use of a combustible liquid (solvent) in a dry cleaning establishment.
- 16) Dry cleaning machines shall be operated under supervision in compliance with 3RCNY §20-11, Storage and Use of Combustible Liquids in Dry Cleaning Establishments (effective June 1, 2000). Additionally, all other requirements specified in 3RCNY §20-11 shall be complied with.
- 17) Inspection and testing of the dry cleaning machines shall comply with 3RCNY §20-11.
- 18) All filling of dry cleaning machines with combustible liquid (Exxon DF-2000 solvent or GE Siloxane-based solvent SB32), and all emptying of combustible liquid from the dry cleaning machines, shall be performed under the personal supervision of a person holding a Fire Department Certificate of Fitness for the Supervision, Storage and Use of Flammable and Combustible Liquids.
- 19) The extinguishing system shall be interlocked with the dry cleaning machine's ventilation system and housing. In case of fire, the air outlet and inlet fans and the housing shall be shut down before the fire extinguishing system will operate.

Firetrace Model ILP-600 cylinder shall be installed only in the upright position.

ILP-600 – FIRETRACE Pre-Engineered, Automatic Indirect, Fire Detection and Extinguishing Systems, utilizing 6 lbs. of FM-200 Clean Extinguishing Agent.

The use of this ILP-600 extinguishing system in the dry cleaning machines shall be in accordance with the requirements stipulated in the MEA Resolution 276-02-E, specifically the following:

- a. Installation and use shall comply with the applicable New York City codes, rules, regulations, etc., and in particular with 3RCNY §15-08 "Clean Agent Extinguishing Systems" except as modified by conditions of this letter and RS 17-3 requirements.
- b. Installation shall be limited to normally unoccupied rooms or enclosed cabinet protection.
- c. System shall be provided with manual actuation that can be actuated from a location outside the protected area.
- d. HVAC openings of protected rooms shall be provided with automatic dampers that are activated to close upon tubing actuates discharge of agent.

- e. Positioning of the actuation tubing within the protected space shall be in accordance with the design manual requirements.
  - f. The four sides, top and bottom of the protected enclosure shall have un-enclosable openings that do not exceed two (2) square feet. This requirement shall be certified by the design engineer for each particular installation.
  - g. The enclosure integrity that requirements of 3RCNY §15-08 (m) shall not be required for these type system installation provided the two (2) square feet un-enclosable openings is complied with.
  - h. Installations shall have audible and visual alarms outside of all enclosure doors and inside of protected rooms.
  - i. Plans of the installation shall indicate how the quantity of agent and the enclosure dimensions comply with the pre-engineered limitations.
  - j. Underwriters Laboratory Inc.'s requirements and limitations shall be complied with.
  - k. Manufacturer's installation, maintenance procedures and limitations shall be complied with.
20. The dry cleaning machine model numbers referenced are the only models that have been reviewed with this application.

All shipments and deliveries of such equipment shall be provided with a metal tag suitably placed, certifying that the equipment shipped or delivered is equivalent to that tested and accepted for use, as provided for in Section 27-131 of the Building Code.

Final Acceptance April 3, 2006  
Examined By Donald [Signature]