



Specification for Model VMF-90E Volumetric Screw Feeder with Mixing Tank

Manufacturers

- 1) Scaleton Industries LTD, Model VMF-90E

Components

2) General:

- a) The contractor shall furnish and install to manufacturer's recommendations, a complete volumetric screw chemical feeding system and all/or optional accessories as shown in accompanying documentation and/or plans, as well as, specified instructions contained herein.
- b) The electrical contractor shall provide an appropriately sized power service for operation of the volumetric feeder and/or all optional accessories for the specified equipment. The volumetric feeder and all accessories shall operate on a 120 VAC, 60 Hz, single phase supply.
- c) The volumetric feeder and/or optional accessories shall be installed by the contractor according to manufacturer's specified recommendations. The power source for the volumetric feeder and/or optional accessories shall be of appropriate size for safe operation of furnished equipment from the manufacturer. The power supply operational voltage for the feeder and/or optional accessories shall be 120 VAC, 60 Hz, single phase.

3) Volumetric Feeder:

- a) The volumetric screw feeder shall be positioned so that the feed screw operates in a non-sparking non-heat generating horizontal condition
- b) A variable speed SCR surface mountable motor controller, housed in a NEMA 4X enclosure shall operate a TENV DC gear motor.
- c) The TENV DC gear motor shall be directly coupled to a stainless steel feed screw assembly, consisting of a helical overwind auger and an open helix feed screw.
- d) There shall be no belts, pulleys, chains, or external drive mechanisms.
- e) All bearings shall require no additional lubrication.
- f) The motor and screw shall be sized to provide feed rates of 1.02 min. to 10.19 max. cubic feet per hour.
- g) The feed screw and discharge spout shall be 304 stainless steel and shall be of the open helix design with a 1.5 inch outer diameter.
- h) All rotating drive components shall be a minimum of 5/8-inch diameter to insure performance under high torque conditions.
- i) The volumetric feeder shall be constructed of materials that are non-reactive and resistant to chemical corrosion. All components that will primarily have direct and continuous contact with feeding chemicals shall be constructed of carbon steel with a chemical resistant zinc oxide primer and dry powdered epoxy coating or shall be 304 stainless steel.
- j) Structural feeder hopper components shall be a minimum of 12 gauge.
- k) All seals and gaskets shall be of chemical resistant material.
- l) Access to feed screw assembly shall be achieved for regular maintenance via mechanical clamping and clipping apparatus.
- m) A concentric helical overwind auger in direct rotation with the primary feed screw shall prevent feed material build up and/or bridging in the feeder hopper.
- n) The feeder hopper cone shall have a 3.6 cubic foot internal capacity.
- o) The accuracy of feeding shall be +/-1% or better relative to volume feed rate. Actual accuracy depends on onsite operation and feeding material variables and shall only be determined only after field trials have been executed.

Optional Accessories for Model VMF-90E:

- 1) The optional removable lid shall be constructed of 12 gauge carbon steel with a chemical resistant zinc oxide primer and dry powdered epoxy coating or shall be 304 stainless steel
- 2) The optional adapter lid shall be constructed of 12 gauge carbon steel with a chemical resistant zinc oxide primer and dry powdered epoxy coating or shall be 304 stainless steel
- 3) The optional single bag loader shall be constructed of carbon steel with a chemical resistant zinc oxide primer and dry powdered epoxy coating or shall be 304 stainless steel
- 4) The optional programmable controller module stand shall be constructed of carbon steel with a chemical resistant zinc oxide primer and dry powdered epoxy coating

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