

# **SPECIFICATIONS FOR 3 - 7½ HORSEPOWER EXPLOSION-PROOF GRINDER PUMP LIFT-OUT RAIL SYSTEMS**

**GENERAL** - Furnish and install a complete grinder pump system consisting of: \_\_\_\_\_ (qty) Myers \_\_\_\_\_ (model number) submersible grinder pumps and SRAX-33WG lift-out rail systems, valves, controls, access cover(s) and all other appurtenances to make a complete system. The lift-out rail systems shall be of non-sparking design and shall be UL listed for Class 1, Group D explosion-proof service.

**COMPONENTS** - Each lift-out rail system shall consist of a ductile iron discharge base, brass faced pump attaching and sealing plate, brass pump guide plate, and cast iron elbow. All exposed nuts, bolts, and fasteners shall be of 300 series stainless steel. No fabricated steel parts shall be used.

**ELBOW** - Discharge elbow shall be 3" x 3". Elbow shall bolt onto base and have standard 125 lb. flanges.

**SEALING** - A sealing plate shall be attached to the pump. A simple downward sliding motion of the pump and guide plate on the guide rails shall cause the unit to be automatically connected and sealed to the base. The open face of the sealing plate shall have dovetailed groove machined into the face to hold a sealing "O" ring. The "O" ring shall provide a leakproof seal at all operating pressures.

**GUIDE RAILS** - Two rail pipes shall be used to guide the pump from the surface to the discharge base connection. The guide rails shall be 1½" Schedule 40 \_\_\_\_\_galvanized or \_\_\_\_\_stainless steel pipe. The weight of the pump shall bear solely on the discharge base and not on the guide rails. Rail systems which require the pump to be supported by legs which might interfere with the flow of solids into the pump suction will not be considered equal. The guide rail shall be firmly attached to the access hatch frame. Systems deeper than 21 feet shall use an intermediate guide for each 21 feet of wetwell depth.

**LIFTING CHAIN** - An adequate length of \_\_\_\_\_galvanized or \_\_\_\_\_stainless steel lifting chain shall be supplied for removing the pump. The chain shall be of sufficient length and shall include an adequate number of lifting rings for easy removal.

**DISCHARGE PIPING** - Schedule 80 PVC discharge piping shall connect to the stationary discharge base lift assembly and terminate at a 2" NPT discharge flange mounted on the basin at the height shown in the plans.

**SHUT OFF VALVE** - A PVC true union ball type shut off valve with Teflon® seats shall be furnished as an integral part of the internal pipe assembly. If the discharge depth is more than 2 feet from the surface an extension handle shall be supplied.

**INLET FITTING** - A one-piece inlet fitting for \_\_\_\_\_" \_\_\_\_\_SCH 40 or \_\_\_\_\_ SDR 35 plastic pipe shall be shipped loose for field installation as required by the installation.

**JUNCTION BOX** - The junction box shall be constructed of aluminum with an "O" ring sealed cover to provide a water tight seal. An adequate number of sealing-type cord grips shall be supplied for incoming pump and level control cords. The cord grips shall be plated steel and shall make an effective seal around the wire jacket. The cord grips shall be threaded directly into tapped mating holes in the junction box body to provide an effective seal.

The junction box shall have a cast-in conduit of adequate size to accommodate the number of wires required for pump and level control operation. A method for sealing the incoming wires shall be supplied so that condensation from the conduit or groundwater will not enter the junction box enclosure. The sealing method shall be offered as a kit containing all necessary material required for an effective in field seal. The interior of the enclosure shall be of adequate size to accommodate the wires and connections for pump and level control operation.

The wires running between the control panel and the junction box shall be color-coded and fastened to the pump and level controls by means of adequately sized and insulated twist lock or crimp connectors.

**LEVEL CONTROLS** - Pump on, off and alarm levels shall be controlled by three (3) mercury tube float switches. Switches shall consist of a mercury tube switch sealed in a corrosion-resistant polypropylene housing with a minimum of 18 gauge, 2-wire, SJOW/A jacketed cable. The cable shall be of sufficient length to reach the junction box with no splices. The level controls shall be suspended from a stainless steel bracket so that adjustment or replacement may be done without the use of any tools. Level controls shall be UL/CSA listed.