

**Grand LX VMT**

Valve Maintenance Trailer System

| Valve Exercising Equipment | | Yes | No | Specify |
|---|--|-----|----|---------|
| ERV-750 Patents: #9,523,443 #9,188,240 #9,038,667 #8,025,078 | An articulating arm, automated valve operator, utilizing proprietary intelligent automation (VITALS) to control torque, direction, and turns. Dual arms (one telescoping) provide 13' [3.9 m] reach over 270 degrees of freedom while automatic hydraulic disk brakes safely secure equipment in any position during operations up to 750 ft/lbs [1016 Nm] of torque. Constructed of 3" [76 mm] square steel tube. Powder coated for long life. A lightweight, telescoping valve key is also provided. | X | | |
| TM-7 HD Plus Patent: #5,381,996 | Heavy duty, slide-style, trailer-mounted valve exerciser, operated through proprietary Intelligent Automation software (VITALS) or fail-safe manual local interface (Plus) to control torque, direction, and turns. Driver side mounting for line of sight, valve key swivel mount allows up to 15 degrees of valve stem misalignment with 27" [685 mm] head extension reach while safely securing exerciser capable of 2,500 ft/lbs [3390 Nm] torque. An 8' [2.4 m] long valve key with a 2" [50 mm] universal socket is also provided. | X | | |
| Valve Machine Intelligent Automation (VITALS) Patent: #5,937,373 | Wachs valve exercisers utilize proprietary "no assumption" automation technology to safely and effectively turn valves using AWWA recommended procedures. This technology protects the operators by keeping their "hands off" the machine while exercising the valve and protects the valve by not assuming size, direction, or current position. Torque is applied until the device senses resistance, causing the programming and sensors to automatically stop the rotation and reverse in half-turn increments to flush calcification from the valve gate. This patented automation process exercises valves at the minimum torque required to turn, then automatically lowers the preset threshold once rotation begins so the impact at end of valve travel is soft as possible. | X | | |
| TC-110 Controller (#79-423-05) | Ruggedized Windows 11 Pro Tablet Controller to operate and collect data for either arm (ERV-750) or slide (TM-6 upgraded & TM-7) style valve exercisers. The TC-110 includes a built-in GPS and bright touch screen display. TC-110 is water resistant and meets IP68 and MIL-STD-810H military specifications. Includes TC-110 tablet controller with battery, stylus and tether, hand strap, AC 120V wall charger, 12V vehicle charger and dedicated control cable assembly. | X | | |
| Data Management | Fully compatible with the VITALS database, infraMap with VITALS, Unity with VITALS, or Sedaru with VITALS GIS software packages enabling full data logging and synchronization between the handheld and your ArcGIS database. Allows importing/exporting of existing data labels and categories with user-defined fields. | X | | |

| Power Pack | | Yes | No | Specify |
|-------------------------|---|-----|----|---------------|
| Engine | Kubota 1.1L, I-3 4-stroke, liquid cooled, IDI diesel engine EPA Tier 4F & EU Stage IIIA emission compliant (trailer #77-000-28) | | | Select Engine |
| | Kohler (Rehlko) 27 HP [20.1 KW] gasoline, model CH7405 Command Pro 27 (trailer #77-000-26) | | | |
| Fuel Tank | Heavy duty 10 gallon (38L) fuel tank, complies with all Federal Motor Carrier Safety Administration requirements for non-side mounted fuel tanks. | X | | |
| Battery | 12V, 550 CCA, Size 24 deep cycle battery fully enclosed and mechanically secured. | X | | |
| Controls | Digital tachometer, engine hour meter, volt meter, vacuum gauge, spoils dump switch, spoils door switch, water/vacuum selector switch, arrow board control and service light switch. | X | | |
| Vacuum Pump | Clutch operated, belt driven, positive displacement rotary lobe (Roots Type) blower. Vacuum performance of 500 CFM [14 CMM] @ 11 inches of Hg [37.2 kPa] produces conveying velocity rating of 10,185 FPM [3,104 MPM] through 3" [76 mm] hose. | X | | |
| Water Pump | Clutch operated, belt driven, 2.5 GPM [9.4 lpm] @ 3,000 PSI [206 BAR] pump. | X | | |
| Hydraulic System | HTMA class II direct-coupled pump rated at 8 GPM [30 LPM] @ 2,000 PSI [138 BAR] continuous duty. 10 gallon [37 L] hydraulic reservoir with thermostatic controlled fan cooled heat exchanger (factory set at 120F/49C). Hydraulic circuits controlled via solenoid operated control valve with pressure neutral, return to tank default position or if over temp is signaled (185F/85C). All electrical terminations are Deutsch IP67 waterproof connectors; hydraulics are leak-tight JIC or O-ring face. Reservoir cleaning, filler neck, and filter are all easily accessed through the front panel. Instrumentation includes an oil level gauge, temperature gauge, pressure gauge, and selector switch for the hydraulic circuit with status lights. | X | | |

| Spoils - Aft Discharge (pump specifications in the Power Pack section) | | | Yes | No | Specify |
|---|--|--|-----|----|---------|
| Debris Holding Tank | 250 gallon [946 L] holding capacity. Top-hinged, full-opening dump door with twin hydraulic remote operation door latches, sure seal square gasket, vacuum break valve, 6" [152 mm] mechanical ball shut-off, and 3" [76 mm] dump valve. | | X | | |
| Filtration | Staged filtration consisting of a heavy material drop out debris tank and a self-contained multi-stage filter canister with a 10 micron polyester reusable cartridge. All filters washable and reusable. | | X | | |
| Dumping | Twin cylinder, electric over hydraulic dump system, powered by Monarch HPU. The slide and tip system moves the tank out before tilting to clear the trailer for dumping, then lifts to 55 degrees to drop debris. | | X | | |
| Dump Chute | 10 gauge, rolled Stainless Steel | | X | | |
| Hose and Wands | 3" x 20' [76 mm x 6 m] suction hose with 2.5" [63 mm], 1.25" [31 mm] and .875" [22 mm] x 8' [2.4 m] long steel suction wands. | | X | | |

| Pressure Washer (pump specifications in the Power Pack section) | | | Yes | No | Specify |
|--|--|--|-----|----|---------|
| Water Holding Tank | 95 gallon [360 L] clean water holding tank with 8" [203 mm] fill neck. | | X | | |
| Winterization | Low point drain for held water & recirculation system allows operation in sub-zero temperatures. A separate (3) gallon [11 L] antifreeze tank with two position selector valve allows pump to source antifreeze and prime entire system. | | X | | |
| Hose and Wands | 50' [15.2 m] hose on spring rewind hose reel uses quick disconnects to change between the (2) included wands; one with a zero degree nozzle for digging and 45 degree, fan wash down "shorty" wand. | | X | | |

| Trailer | | | Yes | No | Specify |
|--------------------------|--|--|-----|----|---------|
| Frame | 8,000 lbs [3629 Kg] GVWR trailer with single sure lube axle, independent torsion wheel suspension and 12" (305mm) electric brakes. All structural 6" (152mm) boxed steel construction (no tubing) with diamond plate structural fenders, 2,500 lb jack. Tongue weight is 850 lbs [386 Kg] dry. | | X | | |
| Lighting | DOT approved grounded LED lighting with environmentally sealed corrosion resistant connectors. | | X | | |
| Finish | Entire trailer is solvent washed and phosphoric etched. All seams are caulked then a two-part urethane paint (color white/black) is applied. Components are finished in Oxford White two part urethane paint. | | X | | |
| Pintle Hitch | Pintle with Safety Chains | | X | | |
| Safety Compliance | Member of the National Association of Trailer Manufacturers (NATM) and verified compliant with NATM Guidelines. Guidelines are a compilation of federal safety standards, regulations and industry best practices that govern trailer construction. Compliant manufacturers have third-party expert verification the trailer meets Federal Motor Vehicle Safety Standards. | | X | | |

| LX Package | | | Yes | No | Specify |
|----------------------------|---|--|-----|----|---------|
| Job Box | Heavy duty, locking, polished diamond plate job box. | | X | | |
| Service Lighting | Programmable arrow board light bar features six lighting sections, dual-mounted swiveling LED work lights, multi-position switch. | | X | | |
| Bluetooth Tether | Wireless control of your valve exercising machine(s) via a secure Bluetooth connection. Up to 25' range to control the exerciser. | | X | | |
| Hydraulic Hose Reel | 50' [15.2 m] spring rewind hose reel with quick disconnects for auxiliary hydraulic power. | | X | | |