



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 always 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-100 Controller (#79-422-05)	Ruggedized Win10 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-100 includes a built-in GPS and bright touch screen display. TC-100 is water resistant and meets IP68 and MIL-STD-810G military specifications. Trimble R2 GPS upgrade kit 79-412-02 (Submeter without subscription or down to Centimeter with subscription service) optionally available.	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 27 HP [20.1 KW] gasoline, model CH7405 Command Pro27 (trailer #77-000-26)			
Fuel Tank	Fabricated 10 gallon (38L) aluminum alloy tank utilizing rolled mid section and stamp formed end caps. 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, dual belt drive, 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, dual belt drive, 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 and regulations along with industry best practices that govern trailer construction. Compliant manufacturers have had a third-party expert verify their processes are designed to produce trailers which meet Federal Motor Vehicle Safety Standards and recommended industry practices. It signifies a commitment to safety.	X		

LX Package		Yes	No	Specify
Job Box	Heavy duty, locking, polished diamond plate job box.	X		
Service Lighting	Programmable eight-function arrow board light bar features six lighting sections, dual-mounted swiveling LED work lights, and a control box.	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		