



**ERV-750**

Extended Reach Mounted Valve Exerciser

General		Yes	No	Specify
<b>Capacity</b>	Operates all valves 4" (100mm) and larger	X		
<b>Speed</b>	5-30 RPM (30 RPM at maximum recommended flow)	X		
<b>Torque</b>	750 ft/lbs [1016 Nm ] fully isolated within equipment's design	X		
<b>Supply Requirements</b>	8 GPM @ 2,000 PSI (4-8 GPM variable recommended)	X		
<b>Finish</b>	White, two part powdercoat on carbon steel components	X		
Dexterity		Yes	No	Specify
<b>Range</b>	Complete head coverage within reach over 270 degrees of motion	X		
<b>Reach</b>	13' of total reach from the pedestal mount to the center of the machine head.	X		
<b>Alignment</b>	Swivel output allows up to 30 degrees of valve stem misalignment.	X		
<b>Valve Key</b>	Telescoping valve key operates standard AWWA 2" nuts to a depth of 6'. Rated for 800 ft/lbs of torque, the modular design can increase reach by adding 4' extension attachments.			Optional
Operation		Yes	No	Specify
<b>Valve Machine Intelligent Automation (VITALS)</b>  <b>Patent: #5,937,373</b>	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		
<b>TC-110 Controller (#79-106-XX)</b>	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.			Optional
<b>Operator Safety</b>	No operator support or interaction required during valve exercise, all reaction torque and feedback is absorbed through machine only. This combined with automated control allow the operator to start the exercise then get out of any environmental conditions which might pose a hazard. When combined with optional wireless control tether (#79-419-00), allows operator to monitor and control the exerciser up to 25' away for increased safety.	X		
<b>Bluetooth Tether</b>	Wireless control of your valve exercising machine(s) via a secure Bluetooth connection. Up to 25' range to control the exerciser.			Optional
<b>Data Management</b>	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		
Mechanical		Yes	No	Specify
<b>Machine Positioning</b> <b>Patents: #9,038,667 #8,025,078</b>	Dual pivoting arms; the first attached to a vehicle, the second attached to the other end of the first provides quick and easy positioning similar to that of a human arm. The combined range of the two arms is ~10' from the mounting point, the second arm is telescoping which provides an additional 3' of reach, for a total of 13' of reach.	X		
<b>Arm Position Locks</b> <b>Patents: #9,523,443 #9,188,240</b>	Dual hydraulic disc brakes per arm (4 total) to secure arms in any orientation (no locking pins) within range when positioning and in operation. Safety scripts in the programming verify hydraulic brake pressure and automatically stop operation if pressure is compromised. A simple "push to disengage" thumb switch allows easy two hand arm position and lock control.	X		
<b>Materials of Construction</b>	Pivot arms - A500 steel structural square tube, 2.5" x .120 wall (11 GA) Extension arm - A500 steel structural square tube, 2" x .120 wall (11 GA) Spindles, Torque Head & Pedestal: Carbon Steel Brake Disks: 304 Stainless Steel	X		
<b>Torque Measurement</b>	Hydraulic sensors on both sides of the motor measure differential pressure for the most accurate control of torque output (single sensor units guess at actual torque output because they do not know system back pressure).	X		
<b>Drive</b>	Single hydraulic drive motor with offset chain drive reduction allowing for pass through of drive key to keep operating head at a consistent and convenient working height.	X		
Power Supply		Yes	No	Specify
<b>Gas Engine (79-405-00)</b>	Stand alone HTMA Class II Hydraulic Power Supply Skid unit with electric start 16 Hp (12 kW) Briggs & Stratton Vanguard V-Twin Engine with 10 gallon reservoir, heat exchanger and auxiliary tool circuit. Supplies hydraulic and 12v power to either TM-7 or ERV-750 valve operators.			Optional