



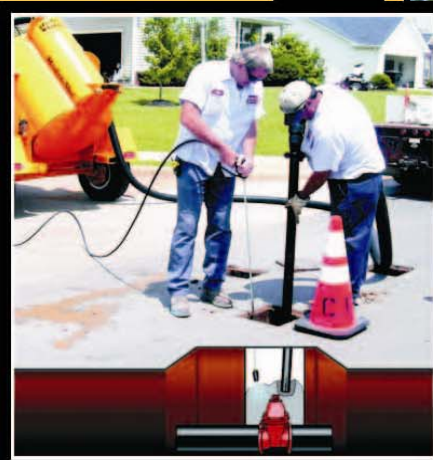
**Patented**

**WWW.INCLINE-VAC.COM**

# **Incline-Vac**

**UTILITY**

# **Excavator**



**Jetter • Hydraulic Tools • Air Tools • Electric Tools  
Welder • Powered Boom • Remote Control**

**CLEAN VALVE  
AND METER BOXES**

**423.413.7823**

# Incline-Vac

UTILITY

## Excavator



Lynn A. Buckner  
423.413.7823

Patented



U.S. Patent # 7,644,523 & 7,604,023 &  
7,503,134 & 6,988,568 & 6,453,584  
Pending App. # 61/277,201 & 12/592,142 &  
12/653,871 & 11/809,957 & 12/584,441  
& 10/810,908 & 10/624,868



**Experience the Incline-Vac ! An efficient, user friendly design with a simple clean appearance; which is a sign that attention to detail and craftsmanship is a major priority.**

**The Incline-Vac design places a high priority on insuring that an operator has easy access to all features, controls and tools. The Incline-Vac has a tool for each job and has a user-friendly place for each tool.**

### For example:

- ✓ **The Incline-Vac has a compact design with its weight concentrated over the axle. The vacuum tank and water tank are both inclined to reduce the surface area of the stored liquids. This feature reduces slosh during travel. In short, the Incline-Vac is compact, safer, more stable and easy to transport to and from a worksite.**
- ✓ **A transporting vehicle or trailer can be smaller because of compactness of the Incline-Vac, which makes access to a work area easier.**
- ✓ **The self cleaning vacuum air filters are mounted on an incline slope and are vibrated to remove dirt.**
- ✓ **The remote controlled, powered access door allows the vacuum tank and the filter housing to simultaneously empty by gravity. With the vacuum container door open the operator has easy access for washing the air filters and vacuum tank.**
- ✓ **The Incline-Vac features a non-clogging vacuum wand specially designed to avoid rock or debris clogging of the vacuum hose. It also features an ultra high velocity suction nozzle.**
- ✓ **The fast digging, custom designed rotary pulse hydro-excavator system makes pot holing and valve box cleaning faster and easier.**



See our **Video** at: [Incline-Vac.com](http://Incline-Vac.com)





# SPECIFICATION SHEET

[incline-vac.com](http://incline-vac.com)

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DATE: \_\_\_\_\_

QUOTE # IN-250

SHEET 3 OF 4

ITEM	SPECIFICATIONS	UNIT PRICE	TOTAL COST
1	<p><b>Model 250 Incline-Vac to include:</b>            38 Hp Kohler air cooled engine with 12 volt electric start            Controls, water fill, and pressure wash hose reel on curb side            230 gal. incline vacuum tank            Remote operated powered rear opening vacuum tank door            500 cfm @ 16" Hg - belt drive - positive displacement - wet / dry - vac / blower            81 sq. ft. of .5 micron vacuum filter with self cleaning design            5' long X 3" non-conductive vacuum wand with anti-clogging design            33' of 3" vacuum hose            200 gal. water storage tank            4.7gpm @ 3,500psi water pump with 12 volt electric clutch            Anti-freeze system            Hose reel with 50ft of 3/8" hose            5' long water wand with a turbo pulse digging nozzle            3' long water wand with wash down nozzle            7,000 GVWR trailer with torsion axle and 12V electric brakes            8 lug 16" wheels with 235/75R16            Aluminum tool box 36"W x 20"D x 17"H            Jack stand            Strobe light &amp; work lights</p>		
1B	<p><b>UPGRADE to: Model 350 Incline-Vac with 300 gallon vacuum tank &amp; 250 gallon water</b></p>		
2	<p><b>Add a 12VDC Clutch to the Vacuum Blower for easy ON-OFF control</b></p>		
3	<p><b>Hydraulic powered Valve Exerciser on a 13' articulated Boom Arm</b>            320 degree travel, 13 ft. Reach, articulated telescoping boom arm            Boom arm is powered up and down            The Exerciser Head has a powered tilt for alignment with a utility valve stem            50 to 500 ft- Lb.of torque &amp; the max torque is pre-settable for the size valve.            5-30 rpm variable speed valve exercising with rotation counter &amp; rotation direction indication            The rotation is counted to an accuracy of 1 tenth of a rotation            Torque wrench head swivel up to 90 degree. Also exercise a fire hydrants without an extra adapter            Telescoping valve key for 4' to 9'            8 gpm @ 2,000 psi auxiliary tool circuit to operate a jack hammer, submersible pump, etc.</p>		
4	<p><b>Upgrade to a 1,000 ft-lb.of torque valve exerciser &amp; a powered telescoping boom arm</b></p>		
5	<p><b>Valve exercising data collection, GPS Locating, RFID &amp; Data logging</b>            The Valve-X™ Electronic data gathering system is a fully automated data gathering and storage system, which only requires the operator to log in with an RFID tag and punch in an identifying number for the valve that is being exercised.            The Valve-X™ Electronic data gathering system uses the RFID tag to identify who the operator is and start the data gathering function. The GPS documents the date, starting time, latitude, longitude, elevation, &amp; valve exercising completion time; sensors log the torque and count the rotations with an accuracy of 1 tenth of a revolution. The GPS accuracy is about 1 meter, which verifies which valve is being exercised. All data is stored on a thumb drive. At the end of each day's work the thumb drive can be used for transferring the valve exercising data to a centralized GIS utility mapping system.</p>		
<p><b>WARRANTY: 1 year on parts</b>  <b>Taxes NOT included</b>  <b>Freight NOT included</b>            I ,(print) _____ agent for _____            terms of this proposal &amp; specifications.            _____            Signature of Agent Date            Sales tax exempt # _____ State _____</p>			





# SPECIFICATION SHEET

[incline-vac.com](http://incline-vac.com) 423-413-7823

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DATE: \_\_\_\_\_

QUOTE # IN Options

SHEET OF

ITEM	SPECIFICATIONS	UNIT PRICE	TOTAL COST
6	<b>Add a Hydraulic Hose Reel with 30 ft. of hydraulic hose and quick connects</b>		
7	<b>Add a 70 lb class Hydraulic Driven Jack hammer</b> with a user friendly jack hammer stand; 1- 1.125 x 14 Chisel; 1- 1.125" x 3" X 15" Long Chisel & 1 1.125" x 5" X 6" x 13" Asphalt Cutter for Breaker		
8	<b>Add a 300gpm submersible water pump</b> with a user friendly mounting stand Hyd. Driven submersible pump, S.S. vortex impeller, Handles 2.5" solids, 300gpm		
9	<b>Add a powered jetter hose reel with 250 ft. Of .5" jetter hose</b>		
10	<b>Add a powered remote control system for the water ON-OFF, vacuum ON-OFF</b> Hydraulics ON-OFF, Boom arm UP-DOWN, IN-OUT		
11	<b>Add a Vacuum hose reel with 100 feet of 3" vacuum hose</b>		
12	<b>Add a fire hydrant tester with diffuser, hoses, psi gauge and De-Chlorinator</b>		
13	<b>ADD a Arrow light board with controller</b>		
14	<b>Add a Boom arm Hydro- Vacuum excavation system</b>		
15	<b>Add an articulated boom arm man hole cover lifting &amp; removal tool</b>		



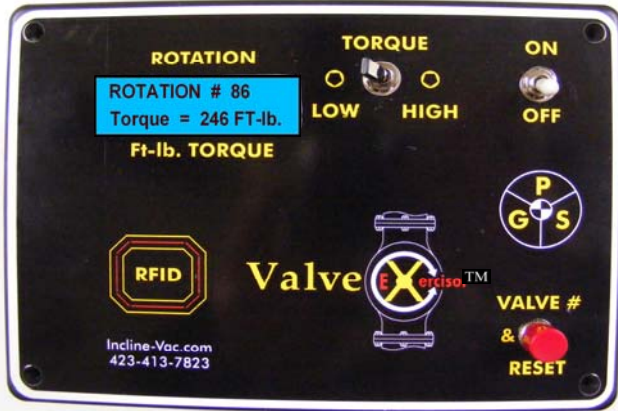
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# Excavator

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**Valve Exerciser-Vac**  
See our **Video** at: [Incline-Vac.com](http://Incline-Vac.com)

### The Incline-Vac with its options can:

- Clean a valve box or meter box by using its hydro-vacuum excavation system;
- Excavate, replace or reset a damaged valve box or meter box;
- Remove asphalt or concrete from above and around a valve box using the hydraulic jack hammer or concrete saw;
- Exercise 4"- 60" utility valves using the hydraulic driven valve exerciser torque wrench;
- A remote controlled, articulated, powered boom with 13 feet of reach is used to position the valve exerciser torque wrench on to the utility valve;
- For those hard to reach places on the other side of the fence or ditch; The hydraulic powered torque wrench can reach and exercise valves up to 40 feet from the Incline-Vac;
- The Valve exerciser will count the number of rotations with an accuracy of 1 tenth of a rotation and measure the torque required for each tenth of a rotation while opening and closing the utility valve;
- The Valve-X™ Electronic data gathering system is a fully automated data gathering and storage system, which only requires the operator to log in with an RFID tag and punch in an identifying number for the valve that is being exercised.
- The Valve-X™ Electronic data gathering system uses the RFID tag to identify who the operator is and start the data gathering function. The GPS documents the date, starting time, latitude, longitude, elevation, & valve exercising completion time; sensors log the torque and count the rotations with an accuracy of 1 tenth of a revolution. The GPS accuracy is about 1 meter, which verifies which valve is being exercised. All data is stored on a thumb drive. At the end of each day's work the thumb drive can be used for transferring the valve exercising data to a centralized GIS utility mapping system.
- Safely Hydro-Vacuum excavate a defective valve for replacement;
- Vacuum excavate to locate a buried utility;
- Safely excavate a utility line to do repairs or make a tie in;
- Use the 300 GPM hydraulic driven submersible pump to remove large volumes of water from a pit or meter box;
- Exercise a fire hydrant and use the onboard fire hydrant diffuser to flush and test fire hydrants and de-chlorinate the water.



## Model 250 Incline-Vac Valve Maintenance Trailer Specifications

<b>Select Vacuum Tank</b>	<b>Model 250 Incline-Vac</b> = A 230 gal. vacuum tank must be <b>positioned at a fixed 45 degree angle (not requiring a tilt to dump mechanism)</b> . The sloped vacuum tank also reduces slosh during highway travel because of the reduced surface area of the liquid, thus improving safety while towing.	YES	NO	Specify
<b>Select Engine</b>	<b>35 HP kohler</b> air cooled gas engine with 12 volt starter	YES	NO	Specify
<b>Select Vacuum</b>	Must be belt driven positive displacement rotary lobe vacuum/blower operating at <b>500 cfm at 16" in of Hg.</b>	YES	NO	Specify
<b>Vacuum Clutch</b>	<b>Must have a 12VDC drive clutch for powering the Vacuum Blower and an on off switch on the curb side control panel.</b>	YES	NO	Specify
<b>Controls</b>	Controls must be on the curb side and include hour meter, water pressure gauge, anti-freeze selector valve, water tank fill, switches for water pump on-off, hydraulics on-off, vac door open-close, work lights on-off. Strobe lite must turn on when engine switch is on.	YES	NO	Specify
<b>Air Filters</b>	<b>81 sq.ft. of .5 micron wet-dry vacuum filtration</b> with a vibrating <b>self cleaning design</b> and access to wash the filters each time the vacuum door is opened.	YES	NO	Specify
<b>Vacuum hose</b>	30 feet of 3" vacuum hose connected to a <b>4" vacuum tank inlet</b> to reduce hose clogging at the vac tank attachment.	YES	NO	Specify
<b>Vacuum Wand</b>	5 ft. long x 3" non-conductive vacuum wand with an <b>anti-clogging ultra high velocity suction end.</b>	YES	NO	Specify
<b>Vacuum Tank</b>	The vacuum tank unloading <b>door</b> must be <b>powered and remote operated</b> ( not requiring an operator to manually unlock or open the access door)	YES	NO	Specify
<b>Vacuum Tank</b>	The vacuum tank access powered door must have a <b>drag bar</b> attached for assisting in the unloading of dirt.	YES	NO	Specify
<b>Vacuum Tank</b>	A <b>.1875" thick UHMW coating</b> must be on the inside bottom of the vacuum tank for protection of the vacuum tank and for ease of removing and cleaning of the vacuum tank.	YES	NO	Specify
<b>Vacuum Tank</b>	A 6" stainless steel ball float system shall be used to insure positive shutoff of the vacuum when the vacuum tank is full.	YES	NO	Specify
<b>Vacuum Tank</b>	two Halogen work lights	YES	NO	Specify
<b>Vacuum Tank</b>	Strobe light	YES	NO	Specify
<b>Select Water Storage</b>	<b>A 200 gal. water tank</b> must be <b>positioned at a fixed 45 degree angle under the vacuum tank</b> , thus concentrating the weight over the trailer axles. The sloped water tank also reduces slosh during highway travel because of the reduced surface area of the liquid, thus improving safety while towing.	YES	NO	Specify
<b>Water Storage</b>	The 200 gal. water tank must have a 3" valved water fill, a 1.5" water fill supply line with a 3" air gap, a 1.5" valved drain and a 3/4" hydrant spigot for hand washing.	YES	NO	Specify
<b>Water Pump</b>	A belt driven, clutch operated, tri-plex water pump operating at <b>4.7 gpm at 3,000 psi</b> and having a low level switch positioned in the water tank which will disengage the clutch under a condition of low water level.	YES	NO	Specify
<b>Water system</b>	A water hose reel with locking mechanism with 50 feet of 3/8" hose	YES	NO	Specify
<b>Water system</b>	5' long water wand with a turbo pulse digging nozzle	YES	NO	Specify
<b>Water system</b>	3' long water wand with a wash down nozzle	YES	NO	Specify
<b>Vacuum Excavator</b>	The Vacuum excavation assembly must have a <b>baked on powder coat paint.</b>	YES	NO	Specify
<b>Select Trailer</b>	<b>7,000 lb. GVWR</b> rated trailer with a single 7,000lb torsion axle, electric brakes, 8 lug 16" wheels with 235/75R16 wheels.	YES	NO	Specify
<b>Wiring and Lighting</b>	All lights and wiring D.O.T. compliant	YES	NO	Specify
<b>Hitch</b>	2 5/16" ball hitch	YES	NO	Specify
<b>Jack Stand</b>	10,000 lb. 15" lift Bulldog dropleg jack	YES	NO	Specify
<b>Tool Box</b>	36"L x 20"D x 18"H diamond plate aluminum tool box	YES	NO	Specify
<b>Trailer Paint</b>	The trailer assembly must have a <b>baked on powder coat paint.</b>	YES	NO	Specify

## VALVE EXERCISING / valve turner

		YES	NO	Specify
<b>Select Valve Exerciser Head</b>	Hydraulic driven valve turner with a rated maximum torque of <b>1,000 ft.lb. of torque</b> and a <b>variable rpm</b> range of 0-30 rpm and a rotation counting accuracy of .1 revolution.			
<b>Valve stem rotation speed</b>	Valve stem rotation speed, direction of rotation and torque must be <b>finger tip adjustable with a single joy stick.</b>	YES	NO	Specify
<b>Preset the maximum allowable torque</b>	The <b>operator must be able to set a maximum allowable torque</b> by simply closing a ball valve, observing the maximum torque value on a display and then adjusting the maximum allowable torque with the turn of a single knob.	YES	NO	Specify
<b>Valve Exerciser Head</b>	The valve turner head must be able to tilt 30 degrees in order to couple to a utility valve stems which is not completely vertical.	YES	NO	Specify
<b>Valve Exerciser Head</b>	The torque wrench head must be able to be rotated up to 90 degrees in order to couple to a fire hydrant cap and to loosen and remove the cap.	YES	NO	Specify
<b>Valve Exerciser Head</b>	The valve exerciser head must be able to be easily disconnected from the boom arm and have at least 30 feet of quick connectable hydraulic hoses in order to use the valve exerciser as a hand held portable exerciser for reaching valves at a distance of up to 40 feet from the valve maintenance trailer	YES	NO	Specify
<b>Valve Exerciser Head</b>	The hydraulics must be quick coupled to the valve exerciser so that the hydraulics may be quickly disconnected from the valve exerciser and then be coupled to other hand held hydraulic tools such as a hydraulic driven submergible water pump.	YES	NO	Specify
<b>Valve Exerciser Head</b>	The valve exerciser hydraulic flow rate and pressure must be compatible with common commercial hydraulic hand tools. ( 8 gpm at 2,000 psi)	YES	NO	Specify
<b>Valve Exerciser Head</b>	A 5' to 9' telescoping valve key must be provider.	YES	NO	Specify
<b>Valve Exerciser Head</b>	The valve exerciser must be fitted with a female fire hydrant receiver so that it may quickly open a fire hydrant or exercise an in ground utility valve without adding or changing adapters.	YES	NO	Specify
<b>Valve Exerciser Head</b>	The valve exerciser must display the rotation count to the nearest tenth of a revolution and display the torque.	YES	NO	Specify
<b>Valve Exerciser Head</b>	The valve exerciser must have a baked on powder cost paint	YES	NO	Specify



## Articulated Boom

<b>Articulated Boom arm</b>	The articulated boom arm must have in excess of <b>320 degrees of horizontal travel.</b>	YES	NO	Specify
<b>Articulated Boom arm</b>	The articulated boom arm must have in excess of <b>60 degrees of vertical travel</b> in order to reach over obstructions and into ditches.	YES	NO	Specify
<b>Articulated Boom arm</b>	The articulated arm must have <b>two elbows</b> in order to reach around obstructions.	YES	NO	Specify
<b>Select manual telescoping Boom arm</b>	The articulated boom must have a <b>telescoping arm</b> for extending its reach and for ease of positioning a valve exerciser over a utility valve.	YES	NO	Specify
<b>Articulated Boom arm</b>	The articulated boom must have a <b>reach of 13 feet.</b>	YES	NO	Specify
<b>Select Powered Articulated Boom arm</b>	The articulated arm for vertical movement must have in combination, an <b>air spring counter balance</b> and a 12 volt <b>powered linear actuator</b> for adjusting the elevation of the valve turner.	YES	NO	Specify
<b>Select Powered telescoping Boom arm</b>	The articulated boom must have a <b>POWERED telescoping arm</b> for extending its reach and for ease of positioning a valve exerciser over a utility valve.	YES	NO	Specify
<b>Articulated Boom arm</b>	The articulated arm, 12 volt powered linear actuator for adjusting the elevation of the valve turner must be capable of being operated by a user friendly switch located on the valve turner handle.	YES	NO	Specify
<b>Articulated Boom arm</b>	The articulated boom assembly must have a baked on powder coat paint, and the elbows must be of the permanently lubricated, oil impregnated brass bushing design.	YES	NO	Specify

## Electronic Data Gathering & Documentation

<b>Electronic Data Documentation</b>	The data documentation electronics must include a digital display rated from -40F to +140F, an RFID reader, a GPS receiver, an automated data gathering program which automatically collects and stores all valve exercising data to a thumb drive, a utility valve identifier number entry and a reset button.	YES	NO	Specify
<b>Electronic Data Documentation</b>	Must provide a operators RFID key ring tag for each operator trained to operate the valve exerciser.	YES	NO	Specify
<b>Electronic Data Documentation</b>	Must provide a supervisor RFID key ring tag for each operator qualified to establish a maximum allowable valve turner torque.	YES	NO	Specify
<b>Electronic Data Documentation</b>	The Data Documentation electronics must include an RFID reader which will only allow a trained operator with his RFID tag to activate the system.	YES	NO	Specify
<b>Electronic Data Documentation</b>	When a valve is ready to be exercised, an operators RFID tag must activate the data documentation electronics which then automatically documents who the operator is and down loads from a built in GPS, the valve exercising date, starting time, latitude, longitude and elevation along with the torque required to rotate the valve and counts the valve rotations with an accuracy of 1 tenth of a rotation.	YES	NO	Specify
<b>Electronic Data Documentation</b>	The data documentation electronics must automatically store all data to a weather tight removable flash drive memory stick which may be used to transfer data to a central utility computer with a GIS program.	YES	NO	Specify
<b>Electronic Data Documentation</b>	The data documentation electronics must display the ft. lb. of torque and the rotation count to the nearest tenth of a rotation.	YES	NO	Specify
<b>Electronic Data Documentation</b>	The data documentation electronics must be Microsoft windows compatible and display the data in both Excell raw data form and in a use friendly graph form.	YES	NO	Specify

## OPTIONS

<b>Hydraulic Hose Reel</b>	A Hydraulic Hose Reel with 30 ft. of hydraulic hose and quick connects	YES	NO	Specify
<b>Jack Hammer</b>	A 70lb. Class hydraulic jack hammer with a user friendly jack hammer stand	YES	NO	Specify
<b>Submersible Water pump</b>	A 300 gpm hydraulic driven submersible water pump with a user friendly mounting stand. The pump shall have a S.S. vortex impeller, handle 2.5" solids and pump 300gpm of water at 30'	YES	NO	Specify
<b>Fire hydrant tester</b>	A fire hydrant flushing and pressure testing system to include 20 feet of 2.5" fire hose, a 2.5" pressure test gauge, and a water pressure dissipater with diffuser.	YES	NO	Specify
<b>Remote Control</b>	A powered remote control system for the <b>water ON-OFF, vacuum ON-OFF, Hydraulics ON-OFF, Boom arm UP-DOWN &amp; IN-OUT</b>	YES	NO	Specify
<b>Man Hole Cover Remover</b>	The boom arm must be powered up and down with an adjustable mount for attaching a man hole lifting system.	YES	NO	Specify
<b>Arrow Bar</b>	A four function arrow bar mounted high on the vacuum air filter but below the work lights and strobe light.	YES	NO	Specify

