



MITSA INTERNATIONAL

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MITSA INSULATOR WASHING SYSTEM

Are Available For Mounting on Trailer, Articulating or Telescoping Boom

GENERAL SPECIFICATIONS

POWER SOURCE

The power source is a diesel or gasoline powered engine with a 12 volt electrical system; alternator and battery; heavy duty air cleaner; fuel pump; heavy duty radiator; engine housing. Cruise control dial-in speed automatic throttle.



TRAILER CHASSIS (APPLICABLE IF MOUNTED ON TRAILER)

The trailer is typically supplied with a full length rear-to-hitch pintle-eye eight inch (8") steel channel frame assembly with supporting cross members. Four-inch (4") outer side channel; cross members bracing for water tank, engine, and pump frame



assembly. Deck plate floor at control station.

STAINLESS STEEL WATER TANK

The tank is made of either 304 or 316 Stainless Steel (Meets Austenitic Requirements), 8 10 or 12 gauge material with external stainless steel longitudinal support beams. The low profile tank is equipped with internal horizontal and longitudinal baffles. The Access dome is 20 inches (508 mm) in diameter with strainer for use when filling tank from the top. Suction outlet in tank has vortex straightener and shutoff valve.

HOSE REELS – ELECTRIC REWIND

Two or three hose reels are provided with 150 feet (45.75 Meter) length of 1



inch I.D (25 mm) diameter high pressure nonconductive base, manual pay out, electric (12 volt DC) motor rewind system, ball valve shutoff and quick disconnect coupling.

REAR PLATFORM

Structural steel channel platform covered with steel diamond plate, includes full width rear apron and access steps.

HAND HELD WASHING GUNS



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Includes two or three wash guns. Guns are pilot-operated utilizing water pressure and contain only three moving parts. Gun provides positive shutoff (Dead Man Trigger) and easy trigger operation.



The trigger directs water pressure close to opened and close the valve in the gun. Brass nozzle has 1/4 inch (6.4 mm) diameter internal stainless steel orifice with flow straightener. Gun includes 1 inch quick disconnect fitting for easy attachment to hose reel or water outlet at platform of an Aerial Device.



Gun is pilot-operated utilizing water pressure and contains only three moving parts. Gun provides positive shutoff (Dead Man Trigger) and easy trigger operation. The trigger directs water pressure to open and close the valve in the gun. Brass nozzle has 1/4 inch (6.4 mm) diameter internal stainless steel orifice with flow straightener. Gun includes 1 inch (25

mm) diameter, 10 feet (3.0 Meters) length nonconductive hoses with quick disconnect fitting on one end for easy attachment to hose on hose reel or water line at platform of an Aerial Device.

THROTTLE MODE SELECTOR

The Throttle Control System is activated by means of a three-position switch called a Throttle Mode Selector. The positions are “Idle,” “Manual” and “Auto.” The middle position is “Idle.” In this position, the throttle is prevented from advancing. The up position is “Manual.” When the switch is in this position, engine RPM will advance to deliver the pre-selected water pressure and remain at the RPM until the switch is returned to the middle position. The down position is “Auto.” In this position, engine RPM will rise to deliver pre-selected water pressure when the wash gun trigger is pulled or the button is pushed on the joystick control. Releasing the trigger or button returns the engine to “Idle.”

WATER PRESSURE CONTROL SYSTEM

When three-gun operation is required, for sub station with large washing





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diameter the Water Pressure Control System will adjust the engine speed so that each gun receives the pre-selected water pressure. When the one gun is shut off by releasing the trigger, RPM decreases but the pre-selected pressure is maintained at the remaining guns. When both guns are shut off, the Water

Pressure Control System is activated by placing the Throttle Mode Selector Switch in “Auto.” The Water Pressure Control System works with three guns when each are attached to a separate hose reel.

CONSTANT CONDUCTIVITY MONITOR

A Constant Conductivity Monitor continuously measures the electrical conductive quality of the wash water.

In addition to monitoring conductivity changes brought about by impurities, it is also capable of accurately monitoring the effects of temperature changes on the conductive quality of the water (non-temperature compensated). Monitor has a range of 0 to 2,000 micro-siemens.

If the impurities or temperature cause conductivity to drop to unacceptable levels, the monitor automatically activates a warning light and returns the engine and pump to Idle. The operator sets the minimum allowable standard for the voltage to be washed using a selector dial on the face of the Constant Conductivity Monitor. For 500 kV applications, we recommend a maximum conductivity of 400 micro-siemens. **Caution: Water of proper quality must be used.** For more information on selecting proper quality water, a reference source is the *IEEE Guide for Cleaning Insulator: IEEE Std. 957-1987*, published by the Institute of Electrical and Electronic Engineers, Inc., 345 East 47th St., New York, NY 10017, USA.



Front View

PERFORMANCE TESTS

The Final Inspection includes complete performance tests of the insulator washer unit.



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GROUNDING SYSTEM FOR WASHING PACKAGE

Includes storage reel, 12 volt DC electric rewind, and 150 ft. (45.75 Meters) length of AWG # 2 (American Wire gauge) clear jacket copper grounding cable fitted with crimped-on terminal on each end. Reel drum has slot cutout of sufficient size to allow



grounding clamp to slip into reel spool. This clamp has a “T” handle which permits clamping to grounding lug mounted on truck frame. The other end is provided with a grounding clamp for

attachment to grounding rod or other grounding point, such as base of tower. Entire cable must be pulled of reel in order to access both clamps and terminal ends. All cable must be pulled of the reel before clamp is attached to structure or ground rod.

GROUNDING SYSTEM FOR HAND-HELD WASH GUN

The wash guns must be grounded at all times when washing from steel structures or towers. The system consists of a 150 ft (45.75 meters) length of AWG#2 clear jacket copper cable with grounding clamp for GUN and a “T” handle clamp for the structure.



PORTABLE CONDUCTIVITY TESTER



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The package is typically equipped with Portable Conductivity monitor for testing conductivity of the wash water at the source before filling the tank and at tank outlet before operating. The Tester is **non-temperature-compensated** and displays direct meter reading of conductivity. The conductivity tester has a range of 0 to 2,000 micro-siemens. Stores in a high impact plastic case; 9 volts better powered. It should be used in conjunction with Constant Conductivity Monitor. This device also permits the operator to check the calibration of the Constant Conductivity Monitor.



AUTOMATIC LOW WATER SHUTDOWN

Alerts operator with visual and audible warning when approximately a 12 inch (350 mm) level of water remind in the tank providing adequate warning to

complete the washing cycle. If washing operation continue, when



approximately 6-inch (152 mm) level of water remains in the tank, engine will “automatically” return to Idle to help prevent damage to the pump.

PRESSURE GAUGE

A 0 to 1,000 PSI (6,895 kPa) pressure gauge can be supplied which can be mounted in a test “T” on the gun to monitor water pressure at the nozzle. The gauge can be removed after pressure has been verified.

INCREASED FLOW NOZZLE

A 5/16-inch (7.9 mm) diameter nozzle is available for increased distance washing or use in high wind conditions and for extending horizontal or vertical reach.



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PROVISIONS FOR FILLING WATER TANK USING MAIN PUMP

The package is provided with a 1.25 inch (32 mm) high pressure hose from pump to bottom of water tank and hard-plumbed 1.5 inch (38 mm) ball valve plus necessary plumbing which enables operator to draw water from an outside source such as a tanker truck to fill on-board water tank.



MITSA HLIW1250/1600-S SPECIFICATIONS

STANDARD FEATURES

- Base skid is Fabricated of Steel Channel, with Integral Crossmembers
- Diesel Engine, 110 HP @ 2,500 RPM, Four Cylinder
- Stainless Steel Water Tank, 304 Stainless Steel
- Electronic Water Level Sensor is Provided
- Four Lifting Eyes Provided for Removing Tank When Empty
- Four-Stage, High-Pressure Centrifugal Water Pump
- Top or Bottom Fill Available on Water Tank with Strainer
- Hose Reel – Electric Rewind with 150 ft (45.7 m) Length of
- 3/4 in (19 mm) Diameter Hose, Non-Conductive
- Tool Storage Compartment
- Access Steps to Reach Access Dome
- Hand-Held Wash Gun
- Throttle
- Constant Conductivity Monitor Provided in Tank
- Portable Resistivity Tester
- Automatic Low Water Shutdown
- Painted White
- Two (2) Operator's and Two (2) Maintenance/ Parts
- Manuals

OPTIONS

- Second Wash Gun Assembly, Includes Reel, Hand-Held Wash Gun, and Throttle System
- Spare Wash Gun Assembly
- Spare Water Nozzle(s)
- Different flow Nozzle diameters
- Additional Portable Conductivity Tester
- Trailer Grounding System
- Wash Gun Grounding System
- Extra Manuals
- Mild Steel Tank
- Auxiliary Input System
- Auxiliary Output System
- Spare Tire and Wheel
- Different hose lengths

GENERAL SPECIFICATIONS

Tank Capacity		
Model HLIW1250T	1,250 gallons	4,738 litres
Model HLIW1600T	1,600 gallons	6,057 litres
Operating Range with 1/4" (6.4 mm) Nozzle- Each Gun Flow Adjustable to Maximum Each Gun Pressure Adjustable to Maximum	44 GPM	167 LPM
Single Wash Gun Each	800 PSI	5,515 kPa
Two Wash Gun Each	650 PSI	4,481 kPa
Overall Dimensions (H x W x L)	78" H x 88" W x 208" L 198cm x 224 cm x 528 cm	
Weight (without water)		
Model HLIW1250-S:	7425 lbs	3371 kg
Model HLIW1600-S:	7540 lbs	3423 kg



MITSA reserves the right to improve models and changespecifications without notice or obligation.



MITSA HLIW1250/1600-T SPECIFICATIONS

STANDARD FEATURES

- Base Assembly is Fabricated of Steel Channel, Full Rear to Tongue Eye, with Integral Crossmembers
- Single Axle, 20,000 lb (9,072 kg) Capacity, Equipped with
- Full Air Brakes
- Leaf Spring Suspension
- Stiff Leg for Storage; Steel Fenders
- Lighting Meets US FMVSS
- Two (2) 425/65R22.5 Load Range "L" Jumbo Flotation
- Tires; 22.5 by 12.25 Disc Wheels
- Diesel Engine, 110 HP @ 2,500 RPM, Four Cylinder
- 50 GAL (189 L) Fuel Tank
- Stainless Steel Water Tank, 304 Stainless Steel
- Electronic Water Level Sensor is Provided
- Four Lifting Eyes Provided for Removing Tank When Empty
- Four-Stage, High-Pressure Centrifugal Water Pump
- Top or Bottom Fill Available on Water Tank with Strainer
- Hose Reel – Electric Rewind with 150 ft (45.7 m) Length of 3/4 in (19 mm) Diameter Hose, Non-Conductive
- Tool Storage Compartment
- Access Steps to Reach Access Dome
- Hand-Held Wash Gun
- Throttle
- Constant Resistivity Monitor Provided in Tank
- Portable Resistivity Tester
- Automatic Low Water Shutdown
- Painted White
- Two (2) Operator's and Two (2) Maintenance/ Parts Manuals

OPTIONS

- Second Wash Gun Assembly, Includes Reel, Hand-Held Wash Gun, and Throttle System
- Spare Wash Gun Assembly
- Spare Water Nozzle(s)
- Different flow Nozzle diameters
- Additional Portable Resistivity Tester
- Trailer Grounding System
- Wash Gun Grounding System
- Extra Manuals
- Mild Steel Tank
- Auxiliary Input System
- Auxiliary Output System
- Spare Tire and Wheel

GENERAL SPECIFICATIONS

Trailer Chassis – Single Axle Rating	20,000 lb	9,072 kg
Tank Capacity		
Model HLIW1250T	1,250 gallons	4,738 litres
Model HLIW1600T	1,600 gallons	6,057 litres
Operating Range with 1/4" (6.4 mm) Nozzle- Each Gun Flow Adjustable to Maximum Each Gun Pressure Adjustable to Maximum	44 GPM	167 LPM
Single Wash Gun Each	800 PSI	5,515 kPa
Two Wash Gun Each	650 PSI	4,481 kPa
Overall Dimensions (H x W x L)	96" H x 88" W x 208" L 244 cm x 224 cm x 528 cm	
Weight (without water)		
Model HLIW1250T:	7625 lbs	3462 kg
Model HLIW1600T:	7740 lbs	3514 kg



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MITSA HLIW2000C SPECIFICATIONS

STANDARD FEATURES

- Diesel Engine, 110 HP @ 2,500 RPM, Four Cylinder
- 50 GAL (189 L) Fuel Tank
- Stainless Steel Water Tank, 304 Stainless Steel
- Electronic Water Level Sensors (Low water and Auto shutdown)
- Four Lifting Eyes Provided for Removing Tank When Empty
- Four-Stage, High-Pressure Centrifugal Water Pump
- Top or Bottom Fill Available on Water Tank with Strainer
- Throttle
- Two (2) Operator's and Two (2) Maintenance/ Parts Manuals
- Access Steps to Reach Access Dome
- Hand-Held Wash Gun with 1/4" nozzle
- One Hose Reel – Electric Rewind with 150 ft (45.7 m) Length of 1 in (25 mm) Diameter Hose, Non-Conductive
- Tool Storage Compartment
- Constant Conductivity/Resistivity Monitor Provided in Tank
- Portable Conductivity/Resistivity Tester
- Painted White

OPTIONS

- Second Wash Gun Assembly, Includes Reel, Hand-Held Wash Gun, and Throttle System
- Spare Wash Gun Assembly
- Spare Water Nozzle(s)
- Different flow Nozzle diameters
- Additional Portable Conductivity/Resistivity Tester
- Chassis Grounding System
- PTO Pump drive in lieu of diesel engine
- Wash Gun Grounding System
- Extra Manuals
- Mild Steel Tank
- Auxiliary Input System
- Auxiliary Output System
- Spare Tire and Wheel
- Hose Reel – Electric Rewind with 165 ft (50 m) Length of 1 in (25 mm) Diameter Hose, Non-Conductive

GENERAL SPECIFICATIONS

Truck Chassis GVW Rating)	37000 lbs	16,740 kg
Tank Capacity	2000 gallons	7580 litres
Operating Range with 1/4" (6.4 mm) Nozzle- Each Gun Flow Adjustable to Maximum Each Gun Pressure Adjustable to Maximum	44 GPM	167 LPM
Single Wash Gun Each	800 PSI	5,515 kPa
Two Wash Gun Each	650 PSI	4,481 kPa
Approximate Overall Dimensions of wash skid (H x W x L) (Depends on final design)	90" H x 97" W x 250" L 228 cm x 246 cm x 635cm	
Weight (without water)	8100 lbs	3677 kg

