

- Light Weight and Easy-to-carry tool
- All parts made of acid-resistant materials
- Double seals on shaft
- Completely submersible (See Note 3)
- Sixteen foot, 3 wire cord with ground for safety
- Long Life - good for many acid cleanings when properly maintained (See Note 4)
- Built-in thermal overload to protect motor

## Applications

Specially designed for circulating hydrochloric acid or strong sulfamic acid cleaning solutions through scaled water-cooled condensers, heat exchangers, water heater coils, water lines and other water handling equipment. Can also be used for agitating or mixing chemical solutions.

## Capacity in gallons per hour

Lift	1 ft.	2 ft.	4 ft.	6 ft.	8 ft.	10 ft.
Capacity	340	296	262	198	155	104

## Motor Specifications

1/50 H.P.  
120 volt, 60 cycle  
0.55 amps, 42 watts  
Temperature limit 130°F  
16 ft. cord

## Packaging

1 each                    **4603-0**

## Notes

1. Any strong solution will remove old scale and corrosion products. As a result, if the system is old or badly corroded, leaks may occur.

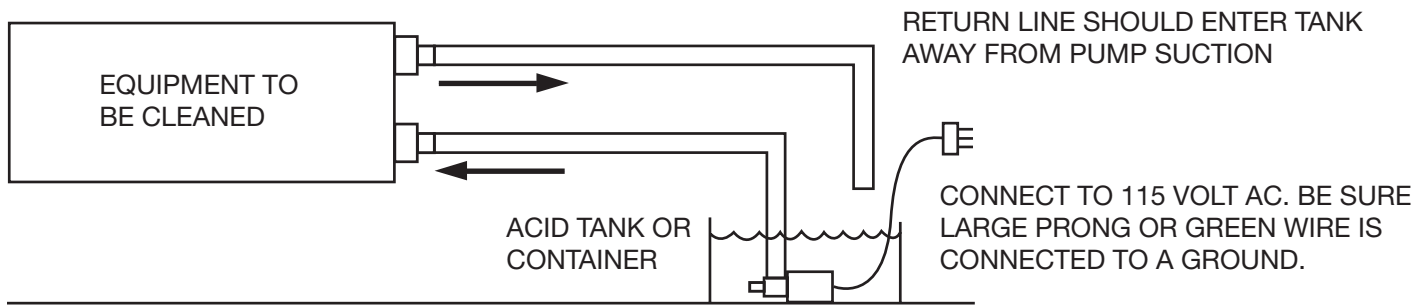
## Scale Removal / Descaling

### No. 31-TX1 Acid Pump



2. Do not pump highly abrasive solutions.
3. Do not run pump dry. The pump **MUST BE COMPLETELY SUBMERGED** when operating to prevent overheating and motor burn-out. During operation the ball valve must be in the open position. Also, to utilize the Nu-Calgon hose kit, attach the included adapter to the pump outlet.
4. This pump is not suitable for continuous operation and must not be left standing in acid solutions when not in use.
5. The upper temperature limit of the No. 31-TX1 Acid Pump is 130°F. Since the acid solution temperature will rise during the cleaning process it is possible that the pump temperature may exceed this limit. To prevent motor burn-out due to overheating a built-in thermal overload switch has been installed to shut off the pump automatically when the temperature limit is reached. Pump operation will not resume until the pump temperature is reduced to below 130°F.
6. Drain pump and flush out with fresh water after each use.

## DIRECTIONS FOR USE



## HOW TO CIRCULATE ACID WITH THE NO. 31-TX1 ACID PUMP

1. Connect No. 31-TX1 Acid Pump to equipment to be cleaned as shown as in the diagram above. The pump discharge tubing should be connected to the bottom of the equipment to eliminate air pockets. A hose kit (No. HK-31) is available as an accessory item for use with the No. 31-TX1 Pump. The kit contains two 1/2 inch MNPT to 1/2 inch tubing adapters, two 10 foot sections of 1/2-inch clear plastic tubing and three hose clamps.
2. Read and understand the acid product's label and Material Safety Data Sheet ("MSDS") for precautionary and first aid information. Prepare the acid solution by using one gallon of Liquid Scale Dissolver or 5 lbs. of Season Start with 5 gallons of water. Prepare in a 10 or 20 gallon plastic container.
3. Place No. 31-TX1 Pump into bottom of the tank and connect pump to 115 volt-AC being sure large prong in plug is connected to a grounded outlet.
4. The acid solution should be circulated for 1/2 to 3 hours depending upon the thickness and type of the scale. The circulating solution should be checked periodically with pH paper to make sure that it remains at the proper acid strength, or follow the color indicator in the Nu-Calgon products.
5. One can usually tell when the equipment is clean by observing the acid solution returning. When the returning solution does not contain any bubbles or foam and is the same color as the solution in the tank, it is a sign the equipment is clean.
6. After the equipment is clean, pump or dump the used acid solution down a drain, thoroughly flush all of the acid from the system and from the No. 31-TX1 Pump with fresh water. If the cleaned equipment is not going to be put in service right away, an acid neutralizer should be used to neutralize all traces of acid and provide protection against corrosion.

