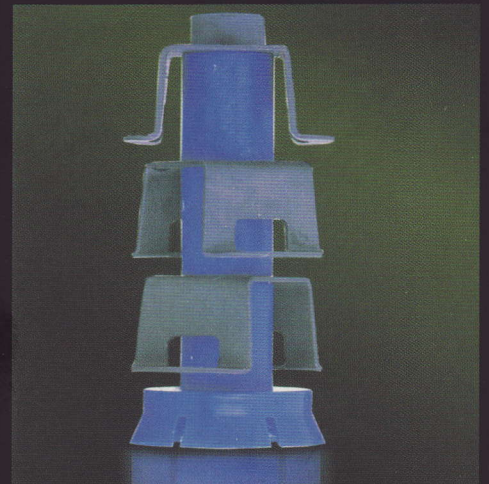
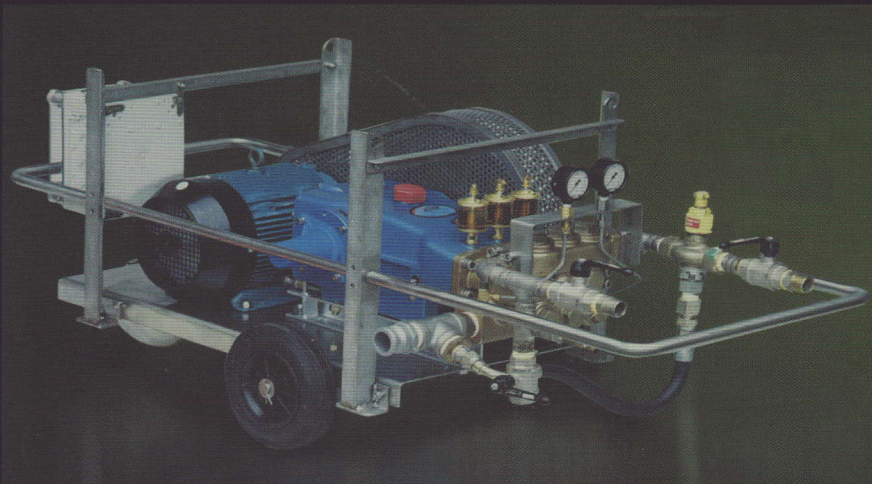


Need your tubes cleaned?



SPECIALISED OVERHAUL SERVICE P/L

Tube & pipe
cleaning systems
for chillers,
condensers,
heat exchangers,
boilers and
more ...



Power Plant Tools, Tube Cleaners and Equipment.

History

Specialised Overhaul Service P/L was incorporated in 1980 by the managing director Graham H. Smith with 30 years experience in Marine Engineering and Steam Plant Maintenance.

Originally S.O.S. business consisted of 95% steam plant maintenance, steam turbine nozzle retrofitting and 5% sales of imported tube cleaning machinery.

We now design, manufacture and supply robust electrical driven and compressed air powered tube cleaning machines, patented water propelled tube "bullets" and the equipment to utilise them.

All our products are manufactured to a superior standard utilising high quality components and materials.

S.O.S. tube cleaning systems are in use throughout Australia and in the United States of America, the U.K., India, Philippines, Singapore, Thailand, Turkey, Saudi Arabia, South Korea and Malaysia.

We have an ongoing research and development program to develop better tube cleaning methods to suit our changing environmental standards and cost saving necessities.

Contact information

For our current price list, users list or a discussion regarding your particular tube or pipe cleaning problem contact:-

Specialised Overhaul Service P/L
15 Randall Court
Collaroy NSW 2097
Australia

Tel: (02) 9981 4010 - Fax: (02) 9982 2240
Intl Tel:+61 2 9981 4010 - Intl Fax: +61 2 9982 2240
Internet: www.sostubecleaners.com
e-mail: sos@bigpond.net.au

Or your local distributor :-



Legal News

If you are on the Internet point your web browser at the following address for the outcome of our recent legal battle with our American Competitors:-

http://www.austlii.edu.au/au/cases/cth/federal_ct/1999/286.html

Tube Cleaners

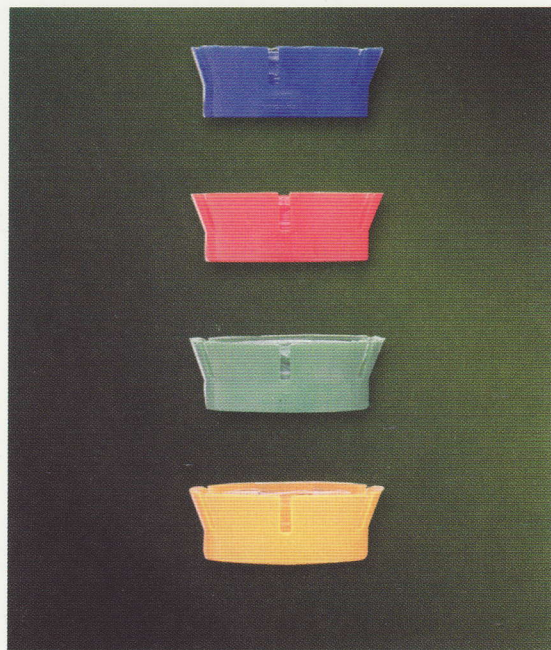
Phosphor Bronze Tube Cleaners (PBTC)

Benefits of the SOS Metal Bladed Tube Cleaner.

- Overlapping blades with well rounded blade arc ends have been designed to suit internal surface of tubes and ensure that full surface of tubes comes in contact with cleaner blades.
- Can be used repetitively. They have been used for condenser cleans more than 15 times and have remained in reasonable condition.
- Plastic parts are colour coded for easy identification

Benefits of the SOS Phosphor Bronze Tube Cleaner.

- Rust free promoting longer life.
- Inexpensive. Cost is low by comparison, considering the material used.
- Robust. They will not break in normal use. They have been shot through a test rig tube over 100 times, hitting a steel plate 10 inches from the exit of the tube without breaking.
- Blades can be rumpled to remove the very sharp die punch edge, but still remain sharp enough to remove corrosion pit scabs and pips, resulting in a smooth surface and extending the life of the tube.
- Can be manufactured for use where tube inlet inserts are fitted and likewise the SOS Tube Cleaner can be manufactured to be more or less aggressive. While tubes are cleaned to maintain plant efficiency, some power plant owners require the tube oxide surface to remain intact.
- Phosphor Bronze spring grade was selected being less than half as hard as spring steel.



Yellow - 16 BWG Green - 18 BWG Red - 20 BWG Blue - 22 BWG

- The SOS PBTC was developed to satisfy the need of power plant owners of aged condensers. They require an efficient type of cleaner that would not damage the tubes, yet, clean better than rubber or plastic cleaners.
- Tests and inspections where by the Phosphor Bronze Tube Cleaner have been calibrated after each pass have shown that the spread of the blades does not alter appreciably and the minimal wear on the blade edge is such that their cleaning action remains effective over the life of the cleaner.



1st pass



2nd pass



3rd pass



4th pass



5th pass

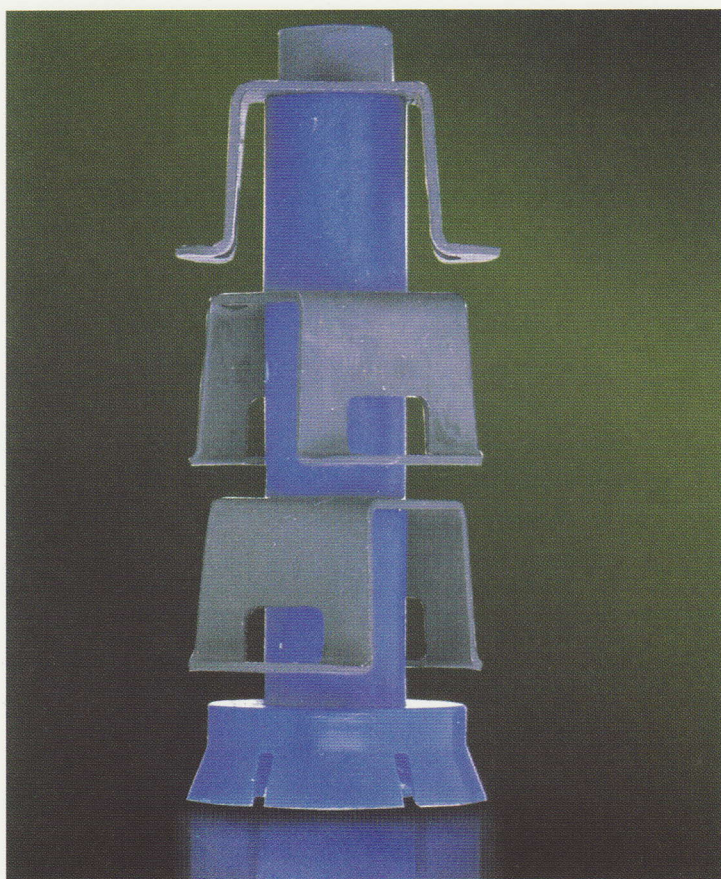


Tube Cleaners

Steel Tube Cleaners (STC) & Plastic Tube Cleaners (PTC)

Steel Bladed Tube Cleaners

- For the removal of harder type deposits in all types of tubes.
- Particularly suitable for Titanium and Carbon Steel tubes
- The steel blades are hardened and tempered by professional heat treaters and then coated with a rust inhibitor. All other parts are non corrosive.

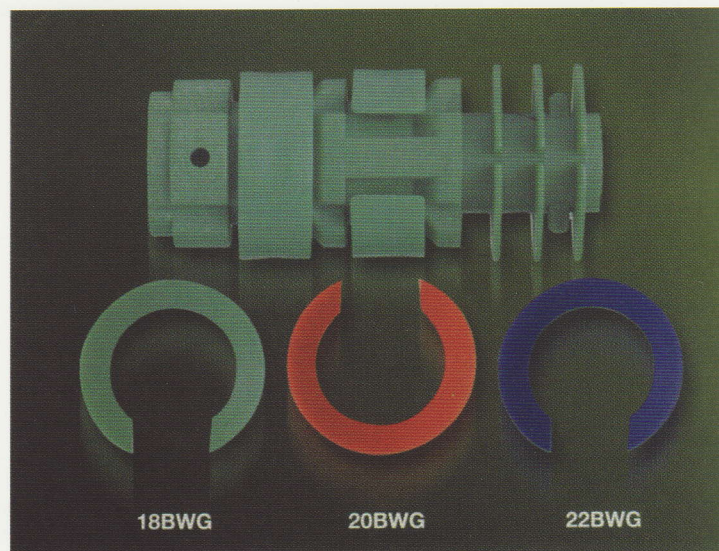


Size Information

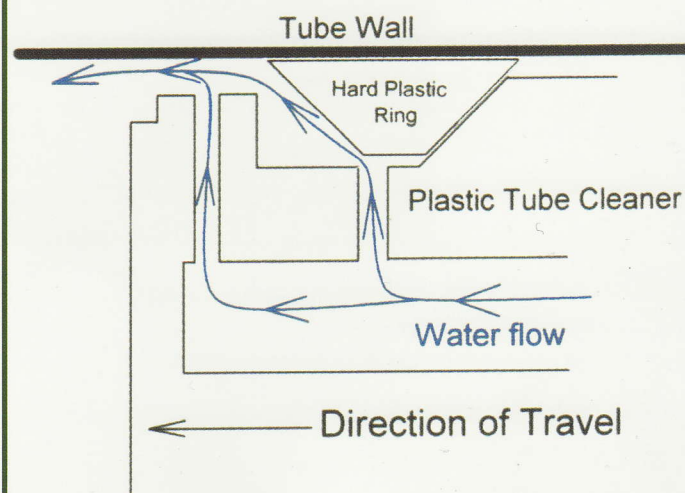
We are constantly upgrading our Tube Cleaner Sizes so if the size you require is not being manufactured for a minium order we can manufacture them for you.

Plastic Tube Cleaner (Patented)

- Complete internal circumference of the inside of the tube is presented to the self adjusting cleaning ring.
- The greater the resistance to forward motion the more outward force there is on the cleaning ring.
- For removal of marine growth, algae and sediment.
- Light for easy cartage.
- Just wash off with clean water and they are ready for storage or use again.
- Cleaning rings can be replaced for even more savings.
- Tail end removes any debris that is left in the tube.

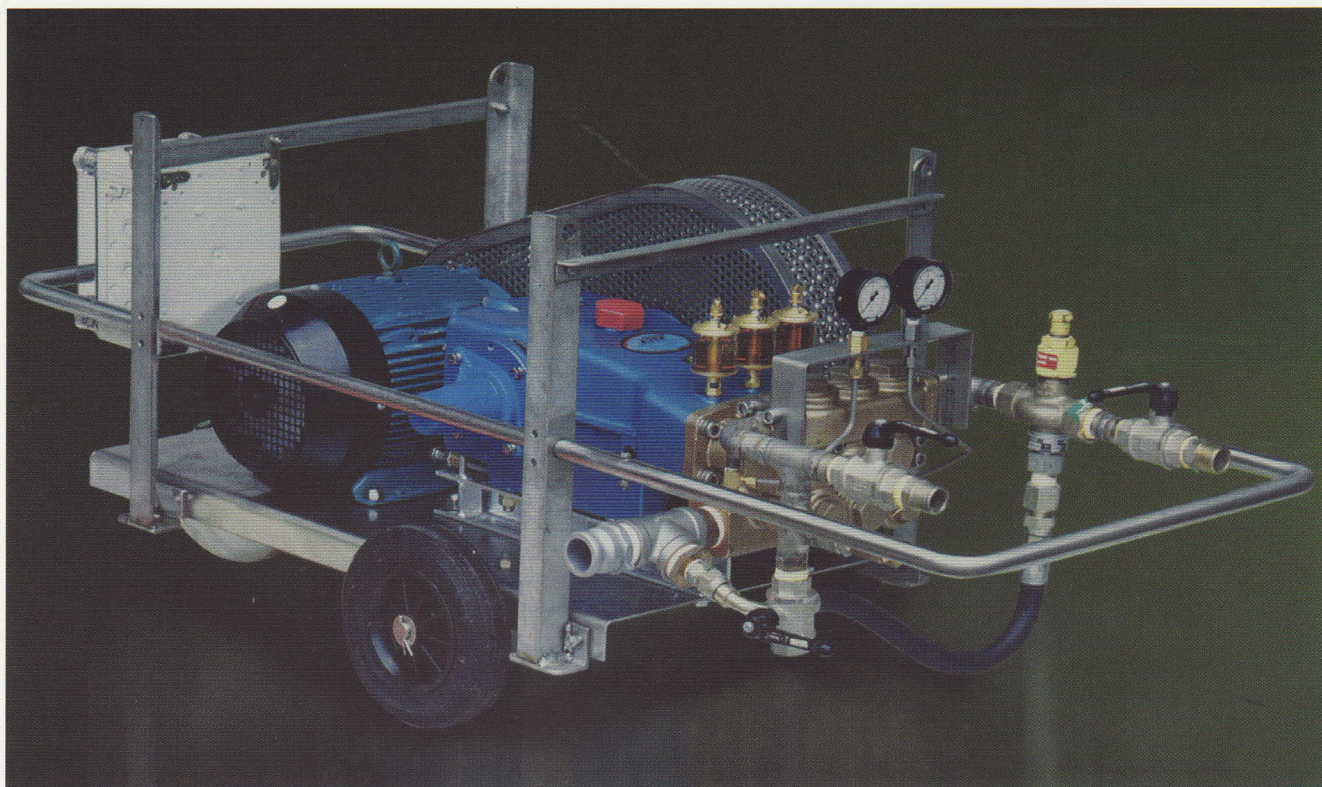


How the PTC Works



Tube Cleaners

Pump System -1



Features

- Incorporates CAT frame 35 pump.
- 10hp Three Phase Electric Motor or Air motor for fire hazard areas
- Inlet and Outlet Oil Filled Pressure Gauges with dampening Needle Valve for Accurate Pressure Readings.
- Pressure regulating Valve for Water Gun Pressure Control.
- Forward / Reverse Starter for correct pump drive rotation.

Materials

- Stainless Steel and Brass Fittings and Valves.
- Stainless Steel Trolley for maintenance free long life.
- Two Puncture Proof Roller Bearing Rubber Wheels & one lockable Swivel Stainless Steel Wheel for Direct Steering.

Specifications

Power Requirement	7.5kW (10hp)
Water Supply Requirement	Flooded to 4.9BAR (70 PSI)
Water Consumption	87 L/M (23 US GPM)
Output Pressure	14-28 BAR (200-400PSI)
Weight	130kg (287lb)
Dimentions	155cm x 70cm x 69cm (61" x 28" x 28")

Tube Cleaners

Water Gun



Description

- Made from High Tensile Cast Aluminum
- Brass nozzles available for tubes $\frac{3}{4}$ ", $\frac{7}{8}$ ", 1", 1-1/8" & 1-1/4" OD
- Brass nozzles are interchangeable. Can be easily removed and different size nozzle fitted.
- Clear polycarbonate Splash Guard. The Tube plate is still visible through the Splash Guard.
- Inlet water connection has a live swivel on hose end which is active under operating water pressure.

Operation & Safety Features

- Pressure gauge indicates when water pressure is in the tube and the pressure drops when the cleaner exits the tube, thus allowing the operator to release the trigger.
- As water shuts off, vacuum breaker immediately opens preventing return of water slug and thus eliminating vacuum kick backs.

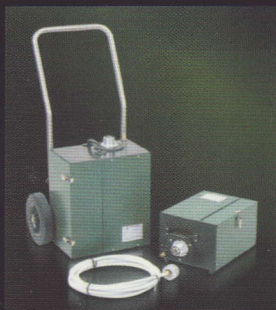
Maintenance

- Delrin Valve Seat and Brass bush for valve stem incorporated for extended gun life & these parts are replaceable.

Tube Sizes

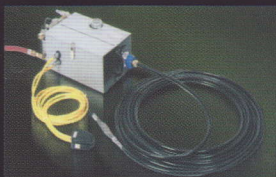
BWG	14	15	16	17	18	19	20	21	22	23	24
Wall Thickness	0.083"	0.072"	0.065"	0.058"	0.049"	0.042"	0.035"	0.032"	0.028"	0.025"	0.022"
Outside	Inside										
O.D. 5/8"	0.459"	0.481"	0.495"	0.509"	0.527"	0.541"	0.555"	0.561"	0.569"	0.575"	0.581"
(mm)	(11.659)	(12.217)	(12.573)	(12.929)	(13.386)	(13.741)	(14.097)	(14.249)	(14.453)	(14.605)	(14.757)
O.D. 3/4"	0.584"	0.606"	0.620"	0.634"	0.652"	0.666"	0.680"	0.686"	0.694"	0.700"	0.706"
(mm)	(14.834)	(15.392)	(15.748)	(16.104)	(16.561)	(16.916)	(17.272)	(17.424)	(17.628)	(17.780)	(17.932)
O.D. 7/8"	0.709"	0.731"	0.745"	0.759"	0.777"	0.791"	0.805"	0.811"	0.819"	0.825"	0.831"
(mm)	(18.009)	(18.567)	(18.923)	(19.279)	(19.736)	(20.091)	(20.447)	(20.599)	(20.803)	(20.955)	(21.107)
O.D. 1"	0.834"	0.856"	0.870"	0.884"	0.902"	0.916"	0.930"	0.936"	0.944"	0.950"	0.956"
(mm)	(21.184)	(21.742)	(22.098)	(22.454)	(22.911)	(23.266)	(23.622)	(23.774)	(23.978)	(24.130)	(24.282)
O.D. 1-1/8"	0.959"	0.981"	0.995"	1.009"	1.027"	1.041"	1.055"	1.061"	1.069"	1.075"	1.081"
(mm)	(24.359)	(24.917)	(25.273)	(25.629)	(26.086)	(26.441)	(26.797)	(26.949)	(27.153)	(27.305)	(27.457)
O.D. 1-1/4"	1.084"	1.106"	1.120"	1.134"	1.152"	1.166"	1.180"	1.186"	1.194"	1.200"	1.206"
(mm)	(27.533)	(28.092)	(28.448)	(28.804)	(29.261)	(29.616)	(29.972)	(30.124)	(30.328)	(30.480)	(30.632)

Notes



Electric Tube Cleaning Machines (ERW-2)

Electrically powered the ERW-2 tube cleaning machines are ideally suited to be used to clean tubes in air conditioning chiller unit condensers, evaporator and small bore heat exchangers.



Air Powered Tube Cleaning Machines (ARW-1)

Using air to supply up to 3 Kilowatts of power the ARW-1 tube cleaning machines can be used for the most difficult tube cleaning job in tubes up to 400mm ID. The ARW-1 has been used to clean condenser, evaporator, heat exchange, and boiler tubes in the pharmaceutical industry, dairy industry, shipping, confectionary manufacture and many more.



Cleaning Brushes

With such a large variety of brushes we can supply the right tool to clean just about any tube.



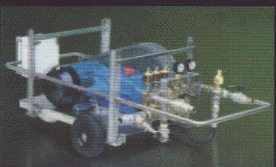
Flexible Shafts

Flexible shafts can be supplied to clean tubes from 6.4mm to 400mm.



Tube Cleaners

Water propelled tube cleaners manufactured from phosphor bronze, steel or plastic are used to remove slime, algae, soft deposits and hard deposits. Our range of tube cleaners allow us to achieve the best results for a specific plants condenser conditions.



Pump System -1 for Tube Cleaners

Use of the Pump System-1 to "shoot" our tube cleaners for reliable job completion on time, every time.



Water Gun for Tube Cleaners

Every "shot" gives the best possible results.



**SPECIALISED
OVERHAUL
SERVICE P/L**

For Additional Information Contact:

Specialised Overhaul Service P/L A.C.N. 001 766 409
15 Randall Court, Collaroy Beach NSW 2097, Australia
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