



# Anniversary



**SAVE man**



**SAVE time**



**SAVE cost**



**SAVE energy**

## **ELECTRIC TUBE CLEANER**

- **We are good advisor**
- **All parts stock in Thailand**

**-Lightweight**

**-Easy to use**

**-Easy to move**



**FOR Water Tube Boiler/Chiller/Condenser/Heat Exchanger**



**M&D ADVANCE TECHNOLOGY .CO.,LTD**

121/36-39 Soi Ruammitpattana Section 3 Tahrang Bangkhen bangkok 10220 Thailand

Tel:(662) 9984300-3 Fax:(662) 9635586 E-mail : mandd@mandd.info

**www.mandd.info www.thaitubecleaner.com**



# ELECTRIC TUBE CLEANER

## Model PTC-P For Chiller



- > Compact and durable for use in multiple locations.
- > Interchange different flexible shafts and cleaning tools.
- > Quick disconnect of flexible shafts - no tools required.
- > Foot switch operation to operate shaft rotation and water flow convenience, reduced water consumption and clean working area.

The PTC-P is build for technicians on the move. Used clean  $\frac{5}{16}$ " – 1" I.D. tube in chillers, evaporators, heat exchangers. The flexible shaft rotates at 1450 rpm as water feeds through the nylon casing to the cleaning tool. As the tool removes the deposits, the water flow flushes them out. A solenoid valve ensures that water flow only when the machine is running .

Tube I.D.		Tube Cleaner Model No.	Motor HP	Power kW	Motor speed RPM	Weight		High	Dimension Wide	Deep
Inch.	mm.					lbs.	Kg.			
5/16"-1"	7.9-25.4	PTC-P	1/2	0.40	1450	32	18	12"(304mm.)	18"(477mm.)	12"(304mm.)

\*\*All units available in your choice of: 115v 60 HZ, 115v 50HZ – 9 Amps. 220v. 50Hz – 4.5 Amps. Please Specify when ordering

## Model PTC-4X For Boiler Water Tube/Chiller/Heat Exchanger

Electric tube Cleaners are Compact self contained , roll anywhere units that can be used in confined areas. Operation through a foot switch ensures the need for one operator. The brushes or other cleaning tools are rotated through the tube at the tip of a Flexible Shaft. Flexible Shafts ensure use in bent tubes. All models are supplied with mobile dolly, tool storage box, single direction foot switch. Optional 2 direction foot switch

- > Corrosion resistant steel cover and chassis for longer life.
- > Easy interchangeability of various shaft and accessories for maximum versatility.
- > Flexible shaft can be easily disconnected without need for any tools.
- > Large wheels for easy maneuverability.
- > Water flushes through the shaft as it rotates to remove deposits from tubes to save time
- > Foot switch operation makes it convenient for operator
- > Reduced water consumption for cleaner working area.



Tube I.D.		Tube Cleaner Model No.	Motor HP	Power kW	Motor speed RPM	Weight		High	Dimension Wide	Deep
Inch.	mm.					lbs.	Kg.			
5/16"-UP	6.4-UP	PTC-4X	3	2.20	2900	75	34	37"(940mm.)	20"(508mm.)	17"(432 mm.)

All units available in your choice  
220v. 50Hz-4.5Amps.  
380v. 50Hz-4.5Amps



## FLEXIBLE SHAFT WITH STAINLESS STEEL INNER CORE

When ordering Flexible Shaft and Accessories, each item should be ordered for specific tube / pipe size range. Shafts have color coded durable aluminium caps for easy identification. Stainless Steel inner Cores ensure our shafts have longest life, flexibility and resistance to corrosion.  
To order Flexible Shaft(s), determine tube I.D.(s) and length of the longest tube(s).  
Order Flexible Shaft(s) to correspond with tube I.D.(s) and lengths. Please ask us for special or longer lengths.



Tube I.D. Range		Flexible Shaft Model No.	Flexible Shaft feet	Length mtrs	Shaft Core O.D.		Shaft Casing O.D.		Tool End Thread
Inch.	mm.				inch.	mm.	inch.	mm.	
5/16 - 3/8	7.9 - 9.5	PFS701-25	25	7.5	1/8	3.2	1/4	6.4	8 -32 F
7/16 - 1/2	11.1 -12.7	PFS702-25	25	7.5	1/4	6.4	3/8	9.5	1/4 - 28 F
		PFS702-33	33	10					
		PFS702-45	45	15					
9/16 - 1	14.3 - 25.4	PFS703-25	25	7.5	5/16	7.9	1/2	12.7	1/4 - 28 F
		PFS703-33	33	10					
		PFS703-45	45	15					



## FOR TUBE 1"(25.4mm.) I.D. and UP

Tube I.D. Range		Flexible Shaft Model No.	Flexible Shaft feet	Length mtrs	Shaft Core O.D.		Shaft Casing O.D.		Tool End Thread
Inch.	mm.				inch.	mm.	inch.	mm.	
7/8 - UP	22.2 - UP	PFS720-25	25	7.5	1/2	12.7	3/4	19.1	1/2 - 12 F
		PFS720-33	35	10					
		PFS720-50	50	15					
		PFS720-65	65	20					
1.1/8 - UP	28.5 - UP	PFS1625-25	25	7.5	5/8	16	1	25.4	1/2 - 12 F
		PFS1625-33	35	10					
		PFS1625-50	50	15					
		PFS1625-65	65	20					



## STAINLESS STEEL BRUSHES



Used for removing soft and light scale deposits in straight ferrous tubes( carbon steel , stainless steel etc ).

## BRASS BRUSHES



Used for removing soft and light scale deposits in straight non-ferrous tubes.

## NYLON BRUSHES



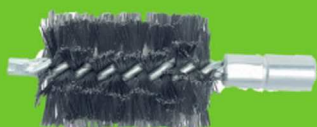
Used for removing soft deposits in straight non ferrous tubes (copper , brass , plastic , etc ).

Brush O.D.		Nylon Brush	Stainless Steel	Brass Brush	threading	Coupling
Inch.	mm.					
1/4	6.4	N-250	SS-250	B-250	8-32F	P-1(8-32M x 8-32M)
5/16	7.9	N-312	SS-312	B-312	8-32F	P-1(8-32M x 8-32M)
3/8	9.5	N-375	SS-375	B-375	12-24F	P-2(8-32M x 12-24M)
7/16	11.1	N-437	SS-437	B-437	1/4-28M	-
1/2	12.7	N-500	SS-500	B-500	1/4-28M	-
9/16	14.3	N-562	SS-562	B-562	1/4-28M	-
5/8	15.9	N-625	SS-625	B-625	1/4-28M	-
11/16	17.5	N-687	SS-687	B-687	1/4-28M	-
3/4	19.1	N-750	SS-750	B-750	1/4-28M	-
13/16	20.6	N-812	SS-812	B-812	1/4-28M	-
7/8	22.2	N-875	SS-875	B-875	1/4-28M	-
15/16	23.8	N-937	SS-937	B-937	1/4-28M	-
1	25.4	N-1000	SS-1000	B-1000	1/4-28M	-

\*Brush should be equal to or 1/16" (1.6 mm.) smaller than tube I.D.  
\*9/16"-1" (14.3-25.4 mm.) brushes can be for both clockwise and counterclockwise rotation.



## DOUBLE SPIRAL BRUSH For Condenser/Heat Exchanger/Sugar Factory



Size		"DS" Double Spiral Brush
inch	mm.	Model
1.1/4"	31.7	DS-10
1.3/8"	35.0	DS-11
1.1/2"	38.1	DS-12
1.5/8"	41.3	DS-13
1.3/4"	44.5	DS-14
1.7/8"	47.6	DS-15
2"	50.8	DS-16
2.1/8"	54.0	DS-17
2.1/4"	57.1	DS-18
2.3/8"	60.3	DS-19
2.1/2"	63.5	DS-20
2.5/8"	66.7	DS-21
2.3/4"	70.0	DS-22
2.7/8"	73.0	DS-23
3"	76.2	DS-24
3.1/2"	79.4	DS-28
4	82.5	DS-32

## CURVED TUBE WHEEL BRUSH

Recommended for removing soft and light scale deposits in curved tubes. Each assembly consists of a single stainless steel wire wheel brush attached to each end of a universal joint. Brushes should be 1/4" – 3/8" (6.4 – 9.5 mm.) smaller than tube I.D. Replacement element are available shown in the table below.



Curved Tube I.D.		Wheel Brush Assembly	Actual Brush O.D.		Replacement Brushes	Replacement Universal Joint	Replacement Retainer Bolt
Inch.	mm.		Inch.	mm.			
1.1/4 - 1.3/8	31.7 - 35.0	WBC-100*	1	25.4	WBR-100	CUJ-001	CWB-001
1.1/2 - 1.5/8	38.1 - 41.3	WBC-125*	1.1/4	31.7	WBR-125	CUJ-001	CWB-001
1.3/4 - 1.7/8	44.5 - 47.6	WBC-150*	1.1/2	38.1	WBR-150	CUJ-001	CWB-001
2 - 2.1/8	51.0 - 54.0	WBC-175	1.3/4	44.5	WBR-175	CUJ-002	CWB-002
2.1/4 - 2.3/8	57.1 - 60.3	WBC-200	2	51.0	WBR-200	CUJ-002	CWB-002
2.1/2 - 2.5/8	63.5 - 66.7	WBC-225	2.1/4	57.1	WBR-225	CUJ-002	CWB-002
2.3/4 - 2.7/8	70.0 - 73.0	WBC-250	2.1/2	63.5	WBR-250	CUJ-002	CWB-002
3 - 3.1/8	76.2 - 79.4	WBC-275	2.3/4	70.0	WBR-275	CUJ-002	CWB-002
3.1/4 - 3.1/2	82.6 - 89.0	WBC-300	3	76.2	WBR-300	CUJ-002	CWB-002

## BUFFING TOOLS

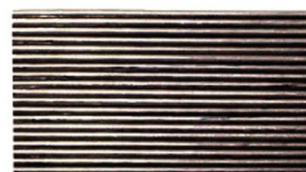
For Tube / Pipes 5/16" - 3" (7.9 – 76.2mm.) I.D.

Stainless steel Wire Buffing Tools are used for light to medium scale deposits or for finishing tubes previously "roughed out" with other cleaning tools. They can be used in both ferrous and non-ferrous tube. Buffing tool normally used in straight tubes but will go through very large radius bends.

Tube I.D.		Buffing Tool With Drill tip	Replacement Blades
Inch.	mm.		
5/16 – 3/8	7.9 - 9.5	PTC-203DT	PTC-207
3/8 – 1/2	9.5 – 12.7	PTC-204DT	PTC-207
1/2 – 9/16	12.7 – 14.3	PTC-205DT	PTC-208B
5/8 – 1	15.9 – 25.4	PTC-206DT	PTC-208B
1 - 3	25.4 – 76.2	PTC-223DT	PTC-224



Buffing Tool With Drill tip



Replacement Blades



Carbide Drill

## "HZ" TYPE CUTTER HEADS

Tube I.D.		"HZ" Cutter Heads
inch	mm.	
1.1/4"	31.7	HZ-10
1.3/8"	35.0	HZ-11
1.1/2"	38.1	HZ-12
1.5/8"	41.3	HZ-13
1.3/4"	44.5	HZ-14
1.7/8"	47.6	HZ-15
2"	50.8	HZ-16



HZ Type

These spring loaded, self expanding Cutter Heads are designed for repaid removal of hard scale in straight tube

## CARBIDE DRILLS

Tube I.D.		Carbide Drill
Inch.	mm.	
1/4"	6.4	CB-025
3/8"	9.5	CB-037
7/16"	11.1	CB-043
1/2"	12.7	CB-050
9/16"	14.3	CB-056
5/8"	15.9	CB-062
11/16"	17.5	CB-068

\*\*Carbide drill are used for cleaning straight tubes plugged solidly with scale or deposit  
**Note:** All drills run 10% oversize {e.g. CB-062 drill is 0.6875"(17.5mm.)O.D.}



# TOOL HEAD FOR WATER TUBE BOILER

## CONE CUTTER ASSEMBLIES

**Cone Cutter Assemblies** are used for removing scale from curved and straight. Assemblies are slightly smaller than tube I.D. Scale is cut starting at the smaller tapered end and finished at the larger end. The rotation of the tool ensures a thorough cleaning. In water tube boiler, cone cutters are the most effective for all conditions. To order refer to the tables below.



Replacement Cone

## SINGLE AND DOUBLE CONE CUTTER ASSEMBLIES

Assemblies consisting of one or two cone elements are used for cleaning straight tube 1.1/8" – 2.5/16" (28.6 – 58.7 mm.) I.D. and curved tubes 1.1/4" – 2.3/8" (31.7 – 60.3 mm.) I.D.

Straight Tube I.D.		Curved Tube I.D.		Complete Single Cone Assembly	Complete Double Cone Assembly	Cone Max.		Replacement Cone Only	Universal Joint	Single Cone Bolt	Double Cone Bolt
Inch.	mm.	Inch.	mm.			inch.	mm.				
1.1/8 – 1.1/4	28.6 – 31.7	1.1/4 – 1.3/8	31.7 – 35.0	PSCA-100	PDCA-100	1	25.4	RCO-100	CUJ-001	CRB-001	DCB-001
1.5/16 – 1.3/8	33.3 – 35.0	1.1/2 – 1.5/8	38.1 – 41.3	PSCA-112	PDCA-112	1.1/8	28.6	RCO-112	CUJ-002	SCB-002	DCB-002
1.7/16 – 1.1/2	36.5 – 38.1	1.3/4 – 1.7/8	44.5 – 47.6	PSCA-125	PDCA-125	1.1/4	31.7	RCO-125	CUJ-002	SCB-002	DCB-002
1.9/16 – 1.3/4	39.7 – 44.5	2 – 2.1/8	51.0 – 54.0	PSCA-150	PDCA-150	1.1/2	38.1	RCO-150	CUJ-002	SCB-002	DCB-002
1.13/16 – 2	46.0 – 51.0	2.1/4 – 2.3/8	57.0 – 60.3	PSCA-175	PDCA-175	1.3/4	44.5	RCO-175	CUJ-002	SCB-002	DCB-002
2.1/16 – 2.5/16	52.4 – 58.7			PSCA-200	PDCA-200	2	51.0	RCO-200	CUJ-002	SCB-002	DCB-002



Single Cone Assembly



Double Cone Assembly

## DISC CONE ASSEMBLIES

Assemblies consisting of three cones are used for cleaning straight tubes 2.3/8" – 3.3/4" (60.3 – 95.2 ) I.D. and curved tubes 2.1/2" – 4" (63.5 – 101.6 mm.) I.D.

Straight Tube I.D.		Curved Tube I.D.		Complete Disc Cone Assembly	Replacement Cone Only (three req.)	Disc Only (less cones)	Universal Joint	Cone Retainer Bolt (three req.)
Inch.	mm.	Inch.	mm.					
2.3/8 – 2.13/16	60.3 – 71.4	2.1/2 – 3.1/16	63.5 – 77.8	PDC-101	RCO-100	PCD-101	CUJ-002	CRB-001
2.7/8 – 3.5/16	73.0 – 84.1	3.1/8 – 3.5/8	79.4 – 92.1	PDC-102	RCO-100	PCD-102	CUJ-002	CRB-001
3.3/8 – 3.3/4	85.7 – 95.2	3.11/16 – 4	93.7 – 101.6	PDC-103	RCO-112	PCD-102	CUJ-002	CRB-002



Disc Cone Assembly

## DRILL CONE ASSEMBLIES

for Plugged Tubes/Pipes 1"=1.7/8"(25.4-47.6mm.)I.D. Drill/Cone Assemblies are recommended for cleaning straight tubes plugged solidly with deposits. Order assembly to correspond to tube I.D. All drills run 10% oversize.



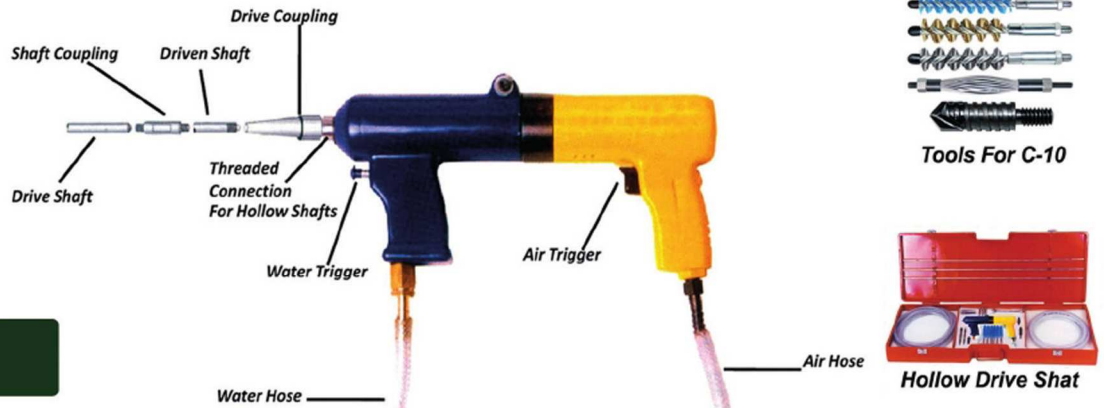
Drill/Cone Assembly

Tube I.D.		Drill cone Assembly
Inch.	mm.	
1	25.4	DC-100
1.1/8	28.6	DC-112
1.1/4 – 1.3/8	31.7 – 35.0	DC-125
1.1/2 – 1.5/8	38.1 – 41.3	DC-150
1.3/4 – 1.7/8	44.5 – 47.6	DC-175

# PORTABLE PNEUMATIC TUBE CLEANERS



## Model: C-10



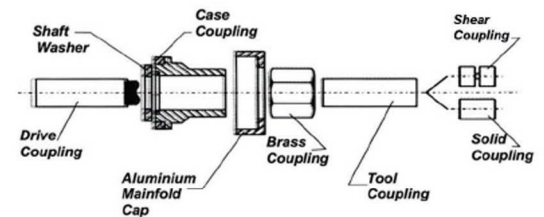
**Operation:** The portable pneumatic tube cleaners use hollow shafting of different diameters as per tube I.D. to be cleaned which can be coupled together to form lengths as per the length of tube to be cleaned. Water flows through the hollow tube and flushes out deposits that are loosened out by the cleaning tools attached to hollow shafts. The rotation of the air motor and the water flow are controlled independently for a cleaner working area. Typical cleaning tools used are carbide drills for severely clogged tubes, brushes for light deposits and buffing tools for final polishing of tubes.

**Model: C-10** is typically used on oil coolers, small heat exchanger and condensers.

## FLEXIBLE SHAFTS REPAIR /MAINTENANCE

### REPAIR COUPLINGS

Flexible shafts are precision made and capable of taking considerable stress. However, like all precision made products, Flexible shafts require care in use and maintenance. If a Flexible shafts breaks through normal wear, it will usually break at drive end. If a break should occur close to either end, the shaft may be repaired by cutting back the casing, grinding off any frayed portion of the Flexible shaft, and crimping on a new coupling. A crimping tool (see below) is available.



## CRIMPING TOOL FOR FLEXIBLE SHAFT REPAIR.

### CRIMPING TOOL FOR FLEXIBLE SHAFT REPAIR

The Crimping Tool provides the user with a quick, convenient method for performing repairs of flexible shafts in the field; it will permanently attach repair couplings, extending the usable life of The flexible shaft while reducing down-time when a repair is needed.

PTC-CT5 Crimping Tool with punch

PTC-CTP Replacement Punch



## SHAFT LUBRICATOR.

Lubricates the flexible shafting to protect the shafting's steel Core. Easy to operate Fill the lubricator with water soluble lubricant. Simply connect a lubricated air line to the lubricator's 1/4" NPT port, connect the shaft to the adapter, and turn on lubricated air supply. Flushes residue water and lubricates at the same time, extending your flexible shaft time. PSL-705 Flexible shaft lubricator with quick disconnect PSL-LU1 Lubricant for flexible shaft lubricator, 16 ounces (0.5 liters)

Flexible Shaft Lubricator

## FLEXIBLE SHAFT REPAIR KITS.

Flexible shaft repair kits include 4 drive end repair couplings, 4 tool end repair couplings, 1 crimping tool with punch, 1 flexible shaft lubricator with quick disconnect, 2 bottles [16 OUNCE (0.5 LITER) each] of lubricant for flexible shaft lubricator.



## Distributor: