



TUBE CLEANING



TUBE EXPANDERS TUBE CUTTER HYDRAULIC & PNEUMATIC TUBE EXPANSION SYSTEM PIPE BEVELING MACHINE

Dh Boiler Xchangers Tools Pvt. Ltd

DBX Tools was established, to give customer an better alternative source for their tube tool requirements. After the initial years of struggle and hard work we had proudly extended our services not only throughout India but also in Middle East and European countries.

Quality

Our quality and inspection department are continuously refining every scope of increasing life of the products. We make sure that customer gets maximum life of the tools. Repeat orders from the customers certify their satisfaction.

Price

Competitors will surely copy our products but matching our price will not be possible. We being the actual manufactures and our policy to deal directly with the end user makes our prices more competitive.

ISO- 9001

All the procedure form procurement to dispatch and after sale services are followed as per the guide lines of ISO -9001 model. DBX Tools Pvt. Ltd. will continue to implement and work within the given guidelines.

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PUNE BRANCH:-

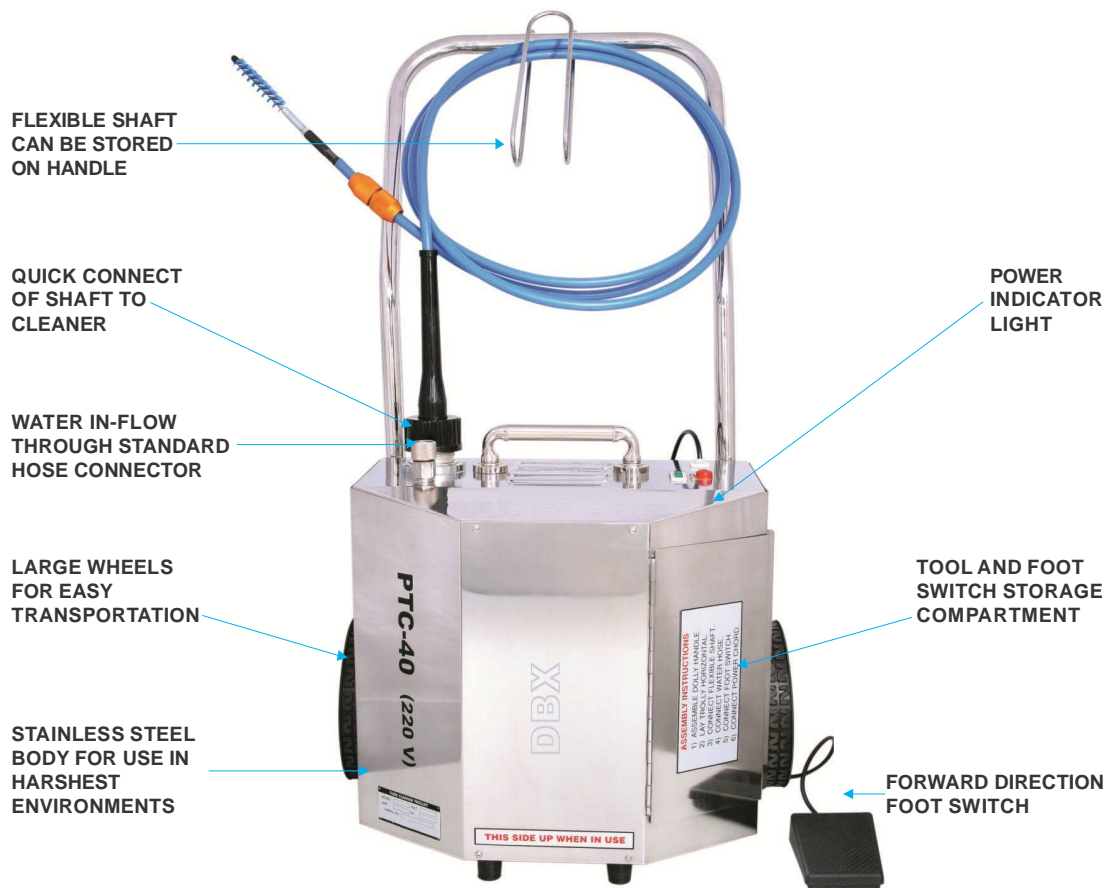
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Features :

- Water flushes through the shaft and helps remove deposits from tube.
- Forward direction foot switch enables operator to concentrate on cleaning operation without worrying about cleaner.
- Flexible shaft can be easily disconnected.
- Stainless steel body for use in the harshest environments.
- Easy interchangeability of various shafts and accessories for maximum versatility.
- Large wheels for easy transportation.
- Water consumption can be regulated as needed.

Electric Tube Cleaners are environment friendly, compact and easily maneuverable units used to clean straight and curved tubes in heat exchangers, condensers, boilers and other tubular apparatus. They work by attaching a cleaning tool (to be determined on type of deposit to be cleaned) to a flexible shaft. The Electric Tube Cleaner provides rotary motion to the flexible shaft which rotates the cleaning tool inside the tube. If needed water passes through the flexible shaft to aid in flushing out of the deposits. All Electric Tube Cleaners are supplied with forward direction foot switch. Dual direction foot switches are available on request.

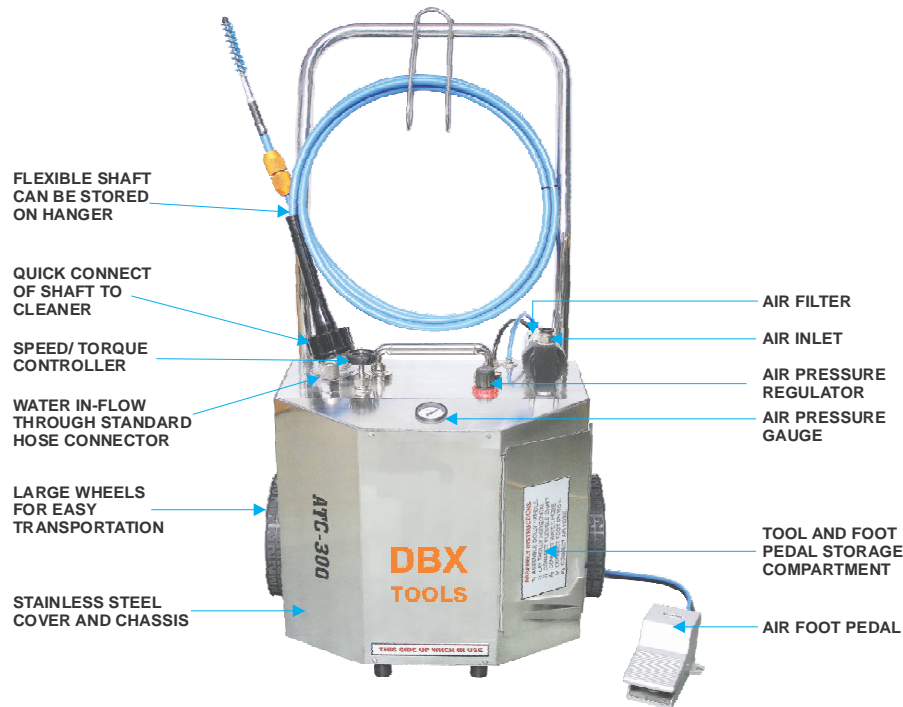
Tube I.D. mm	inch	Tube Cleaner Model No.	Motor Power HP	kW	Motor Speed RPM	Weight		Dimension		
						lbs.	Kg.	High	Wide	Deep
6.4-25.4	1/4-1	PTC-40	1/2	0.40	890	62	28	38"(975mm)	21"(535mm)	18"(457mm)
6.4-25.4	1/4-1	PTC-60	3/4	0.60	890	66	30	38"(975mm)	21"(535mm)	18"(457mm)
25.4 & UP	1 & UP	PTC-75	1	0.75	1780	70	32	38"(975mm)	21"(535mm)	18"(457mm)
25.4 & UP	1 & UP	PTC-150	2	1.50	1780	84	38	40"(1015mm)	22"(560mm)	19"(482mm)

All units available in your choice of : 110v 60Hz, 110v 50Hz - 9 Amps. 220v 60Hz, 220v 50Hz - 4.5 Amps.

Please Specify when ordering.

HEAT EXCHANGER TUBE CLEANERS

PNEUMATIC TUBE CLEANERS



Features :

- Shock Resistant - Excellent for applications where using electric equipment is hazardous.
- Corrosion Resistant - Stainless steel cover and chassis for long life.
- Versatile - Interchangeability of different size flexible shafts and cleaning tools.
- Speed/Torque control - Shaft rotation can be set at optimum speed for each application.
- No Tooling - Quick disconnect of flexible shaft.
- Easy Maneuverability - Large Wheels.
- Time Saving - Simultaneous water flush to remove deposits from tubes.
- Cleanliness - Foot pedal for operator convenience to activate shaft rotation and water flow to reduced water consumption and cleaner working area.



DBX Model ATC-300 Extra Heavy Duty Pneumatic Tube Cleaning Machine includes air filter, regulator, lubricator, adjustable speed/torque control, mobile dolly, tool storage box and air foot pedal.

The ATC-300 uses a cleaning tool mounted to the tip of a flexible shaft, which is available in different lengths and diameters to fit the size of the tube to be cleaned. For wet applications as the shaft rotates inside its watertight nylon casing, the unit feeds water through the casing to the cleaning tool. A foot pedal controls shaft rotation and water flow. While the operator feeds the rotating shaft assembly through the tube, the water flushes out deposits as they are loosened.

Tube I.D.		Tube Cleaner Model No.	Motor Power		Motor Speed RPM	Weight		Dimension		
mm	inch		HP	KW		lbs.	Kg.	High	Wide	Deep
6.4 & UP	1/4 & UP	ATC-300	4	3.00	300-3000	64	29	38"(975mm)	22"(560mm)	16"(406mm)



Features :

- Compact and portable for use in multiple locations.
- Easy connect and disconnect of various shafts and cleaning tools.
- Foot Switch enables operator to concentrate on cleaning operation.
- Water moving through shaft flushes out deposits already dislodged by cleaning tools.

The 'PORTO' is built for users to whom a small size and easy transportation means they can clean more tubes faster. Used to clean 1/4" - 1" I.D. tubes in chillers, condensers, evaporators and heat exchangers. The flexible shaft rotates at 1760 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 flows only when the machine is running. Water consumption can be regulated as needed.

Tube I.D.		Tube Cleaner Model No.	Motor Power		Motor Speed RPM	Weight		High	Dimension	
mm	inch		HP	KW		lbs.	Kg.		Wide	Deep
6.4-25.4	1/4-1	PORTO	1/2	0.40	1760	36	16	10"(254mm)	11"(279mm)	18"(457mm)

All units available in your choice of :

110v 60Hz, 110v 50Hz - 9 Amps. 220v 60Hz, 220v 50Hz - 4.5 Amps.

Please Specify when ordering.

'TCS-PORTO' PORTABLE ELECTRIC TUBE CLEANINGS SYSTEM

MODEL TCS-PORTO CHILLER TUBE CLEANING SYSTEM

Model TCS-PORTO Chiller tube cleaning system is the most common system for cleaning chillers by users to whom size and portability is paramount.

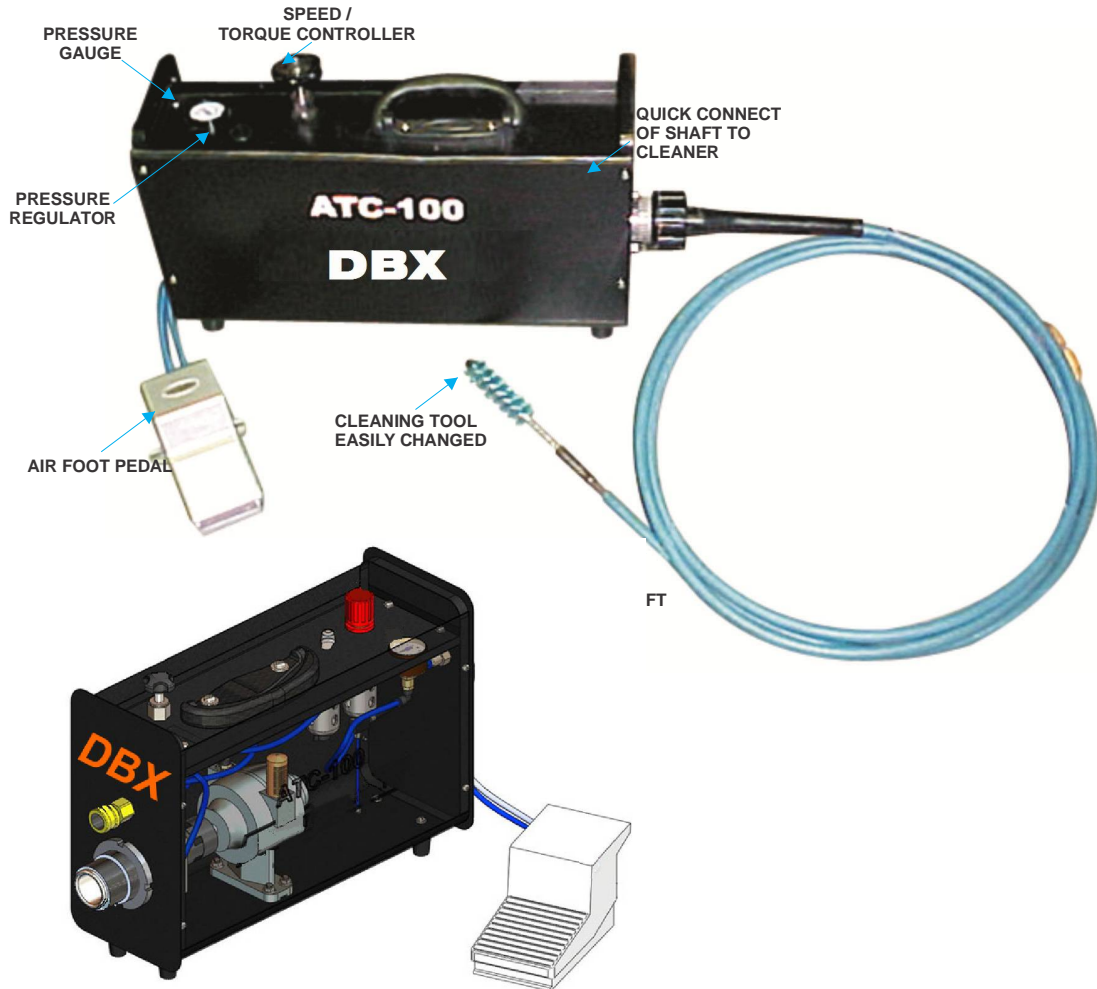
CONTENTS

- 'PORTO' Portable Tube Cleaner - 1no.
- PFS - 500 - 140 Flexible Shafts - 2 nos.
- Nylon Brush (specify size) - 25 nos.



HEAT EXCHANGER TUBE CLEANERS

PORTABLE TUBE CLEANERS - PNEUMATIC



Features :

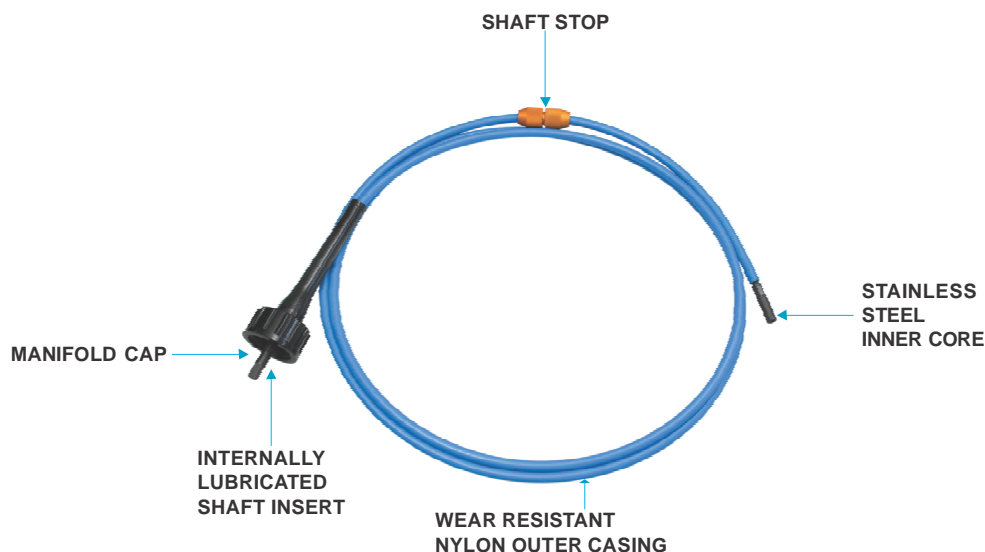
- Shock Resistant - Excellent for applications where use of electric equipment is hazardous.
- Versatile - Interchangeability of different size flexible shafts and cleaning tools.
- Speed/Torque control - Shaft rotation speed can be set at optimum for each application.
- No Tooling - Quick disconnection of flexible shaft.
- Time Saving - Simultaneous water flush to remove deposits from tubes.
- Cleanliness - Foot switch for operator's convenience to activate both shaft rotation and water flow to reduce water consumption and making working area clean.
- Compact - Light weight easy to operate inside drum.
-

Model-ATC-100 Portable Pneumatic Tube Cleaning Machine includes FRL unit, adjustable speed/torque control, and air foot pedal. The ATC-100 uses a cleaning tool mounted on the tip of a flexible shaft, which is available in different lengths and diameters to fit the size of the tube to be cleaned. For wet applications, as the shaft rotates inside its watertight nylon casing, the unit feeds water through the casing to the cleaning tool.

A foot switch controls shaft rotation and water flow. While the operator feeds the rotating shaft assembly through the tube, the waterflow softens the deposits before cleaning and flushes them out during cleaning.

Tube I.D.		Tube Cleaner Model No.	Motor Power		Motor Speed RPM	Air Supply		Weight		Dimension		
mm	inch		HP	KW		Min	Max	lbs.	Kg.	High	Wide	Deep
6.4 & UP	1/4 & UP	ATC-100	1.7	1.1	300-3000	60psi @ 15cfm	100psi @ 70cfm	26	12	10.3/8"(655mm)	6"(152mm)	19"(483mm)

FLEXIBLE SHAFTS

**For PTC-40, PTC-60****FLEXIBLE SHAFTS WITH STAINLESS STEEL INNER CORE**

When ordering flexible shafts and accessories, each item should be ordered for specific tube/pipe size or size range. Shafts have color coded shaft stops for easy identification. Stainless Steel inner cores ensure our shafts have longest life, flexibility and resistance to corrosion. Since the inner core of the shafts are the heart of the system and take most of the strain, stainless steel inner cores cause our shafts to last longer than the competition.

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 mm	inch	Flexible Shaft Model No.	Flexible Shaft Length feet	mtrs	Shaft Core O.D. mm	inch	Shaft Casing O.D. mm	inch	Tool End Thread
6.4-9.5	1/4-3/8	PFS-250-40	13	4.0	3.2	1/8	6.4	1/4	8 - 32 F
		PFS-250-79	26	7.9					
11.1-12.7	7/16-1/2	PFS-375-40	13	4.0	6.4	1/4	9.5	3/8	1/4 - 28 F
		PFS-375-55	18	5.5					
		PFS-375-79	26	7.9					
		PFS-375-110	36	11.0					
		PFS-375-140	46	14.0					
14.3-25.4	9/16-1	PFS-500-40	13	4.0	7.9	5/16	12.7	1/2	1/4 - 28 F
		PFS-500-55	18	5.5					
		PFS-500-79	26	7.9					
		PFS-500-110	36	11.0					
		PFS-500-140	46	14.0					
		PFS-500-184	61	18.4					
		PFS-500-232	76	23.2					

FLEXIBLE SHAFTS FOR INTERNALLY GROOVED TUBES

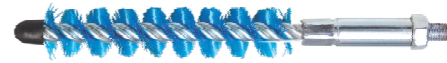
Tube I.D. Range mm	inch	Flexible Shaft Model No.	Flexible Shaft Length feet	mtrs	Shaft Core O.D. mm	inch	Shaft Casing O.D. mm	inch	Tool End Thread
17.5-25.4	11/16-1	PFS-560-40	13	4.0	9.5	3/8	14.3	9/16	1/4 - 28
		PFS-560-55	18	5.5					
		PFS-560-79	26	7.9					
		PFS-560-110	36	11.0					
		PFS-560-140	46	14.0					
		PFS-560-186	61	18.6					
		PFS-560-232	75	23.2					

Note : PFS - 560 shafts can be supplied with Teflon[®] casing for when using dry. To order add suffix "T" to shaft number. Teflon is a trademark of Du Pont Company.

Note: See page 102 for shaft repair equipment.

BRUSHES

NYLON BRUSHES Used for removing soft scales in ferrous (carbon steel, stainless steel) and non-ferrous tubes (copper, brass, plastic, etc.) and for final 'finishing' of tubes.



NYLON BRUSH

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



STAINLESS STEEL BRUSH

BRASS BRUSHES Used for removing soft and light scale deposits in straight, non-ferrous tubes. (Copper, brass, nickel and their alloyed tubes).



BRASS BRUSH

Brushes for Heat Exchangers and Condensers

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

- Brushes should be ordered so that brush O.D. is marginally less than tube I.D., for it to easily enter tube with deposit.

Brushes for Boiler and Sugar Mills

Brush O.D.		Nylon Brush	Brass Brush	Stainless Steel
mm	inch			
31.7	1.1/4	N - 1250	B - 1250	SS - 1250
38.1	1.1/2	N - 1500	B - 1500	SS - 1500
44.5	1.3/4	N - 1750	B - 1750	SS - 1750
51.0	2	N - 2000	B - 2000	SS - 2000
57.1	2.1/4	N - 2250	B - 2250	SS - 2250
63.5	2.1/2	N - 2500	B - 2500	SS - 2500
70.0	2.3/4	N - 2750	B - 2750	SS - 2750
76.2	3	N - 3000	B - 3000	SS - 3000
82.6	3.1/4	N - 3250	B - 3250	SS - 3250
89.0	3.1/2	N - 3500	B - 3500	SS - 3500
95.2	3.3/4	N - 3750	B - 3750	SS - 3750
101.6	4	N - 4000	B - 4000	SS - 4000

CARBON STEEL BRUSHES Recommended for removing soft and light scale deposits in straight, ferrous tubes. Order brush so that brush O.D. is marginally smaller than tube I.D.

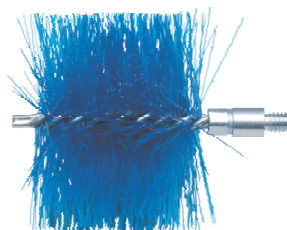
PLASTIC BRUSHES Recommended for removing soft deposits in straight, ferrous and non-ferrous tubes and for final 'finishing' up of cleaning in hoses, tubes and pipes. Order brush so that brush O.D. is marginally smaller than tube I.D.

Brush O.D.		Carbon Steel	Plastic Brush
mm	inch		
127.0	5	CS - 5000	P - 5000
152.4	6	CS - 6000	P - 6000
178.0	7	CS - 7000	P - 7000
203.2	8	CS - 8000	P - 8000
228.6	9	CS - 9000	P - 9000
254.0	10	CS - 10000	P - 10000
279.4	11	CS - 11000	P - 11000
305.0	12	CS - 12000	P - 12000
330.2	13	CS - 13000	P - 13000
355.6	14	CS - 14000	P - 14000

Note : Brushes over 1" O.D. require # TCB-C coupling to connect to PFS-750, PFS-875 and PFS-875-SS



CARBON STEEL BRUSH



PLASTIC BRUSH

DRILL TIP DOUBLE DIAMETER BRUSHES

These brushes are used to clean internally grooved tubes. The drill tip of brushes cleans through hard scale before the brush cleaning action takes over. The large diameter of this brush, cleans into the grooves of the tubes and the small diameter into the lands of the tube's rifling.

Tube I.D.		Drill Tip Nylon Brush	Drill Tip Brass Brush
mm	inch		
15.9	5/8	DTBN- 625	DTBB- 625
25.4	1	DTBN-1000	DTBB-1000
31.7	1.1/4	DTBN-1250	DTBB-1250



DRILL TIP NYLON BRUSH



DRILL TIP BRASS BRUSH

CARBIDE DRILLS for Heavily choked tubes.

Carbide Drills are used for cleaning tubes choked solidly with hard deposits.

Tube I.D.		Carbide Drill
mm	inch	
19.1	3/4	CB-750
22.2	7/8	CB-875
25.4	1	CB-1000



CARBIDE DRILL

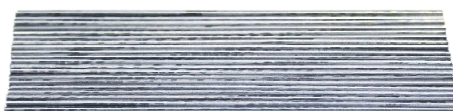
BUFFING TOOLS for Tubes/Pipes 1"-3" (25.4-76.2mm) I.D.



BUFFING TOOL



BUFFING TOOL WITH DRILL TIP



REPLACEMENT BLADES

Buffing tool are used for final polishing or removal of light and soft deposits from ferrous and non-ferrous tubes that have been previously cleaned. Used in straight or very large radius tubes in a clockwise direction only.

PBT-7 Buffing Tools for tubes 1"-3" (25.4-76.2mm) I.D.

PBT-7-T Buffing Tools for tubes 1"-3" (25.4-76.2mm) with drill tip.

PBB-5 Replacement Blades for PBT-7.

CIRCULAR BRUSHES

CIRCULAR BRUSH TOOLS FOR CURVED TUBES

These tools consist of 2 stainless steel circular brushes that are mounted onto a Double Universal Joint for maximum flexibility. These tools are used to clean soft to medium scales. Replacement circular brushes can be ordered when wear starts.



CIRCULAR BRUSH (FOR CURVED TUBES)

Curved Tube I.D.		Circular Brush Tool Model	Brush O.D.		Spare Brush Model (2 needed)	Spare Universal Joint Model
mm	inch		mm	inch		
31.7-35.6	1.1/4-1.7/16	CBTC-1125	25.4	1	CBSB-1125	UCT-1500
38.1-42.9	1.1/2-1.11/16	CBTC-1500	31.7	1.1/4	CBSB-1375	UCT-1500
44.5-49.2	1.3/4-1.15/16	CBTC-1750	38.1	1.1/2	CBSB-1625	UCT-1500
51.0-55.6	2-2.3/16	CBTC-2000	44.5	1.3/4	CBSB-1875	UCT-1250
57.1-61.9	2.1/4-2.7/16	CBTC-2250	51.0	2	CBSB-2125	UCT-1250
63.5-68.3	2.1/2-2.11/16	CBTC-2500	57.1	2.1/4	CBSB-2375	UCT-1250
70.0-74.6	2.3/4-2.15/16	CBTC-2750	63.5	2.1/2	CBSB-2625	UCT-1250
76.2-81.0	3-3.3/16	CBTC-3000	70.0	2.3/4	CBSB-2875	UCT-1250
82.6-90.6	3.1/4-3.9/16	CBTC-3250	76.2	3	CBSB-3125	UCT-1250

Note : For larger sizes, please enquire.

CIRCULAR BRUSH TOOLS FOR STRAIGHT TUBES

These tools consist of 4 stainless steel circular brushes that are mounted on a shaft and connected to a Universal Joint. These tools are used to clean soft to medium scales. Replacement circular brushes can be ordered when wear starts.



CIRCULAR BRUSH
(FOR STRAIGHT TUBES)

Straight Tube I.D.		Circular Brush Tool Model	Brush O.D.		Spare Brush Model (4 needed)	Spare Universal Joint Model
mm	inch		mm	inch		
28.6-33.3	1.1/8-1.5/16	CBTS-1125	25.4	1	CBSB-1125	UCT-1063
35.0-39.7	1.3/8-1.9/16	CBTS-1375	31.7	1.1/4	CBSB-1375	UCT-1063
41.3-47.1	1.5/8-1.13/16	CBTS-1625	38.1	1.1/2	CBSB-1625	UCT-1063
47.6-52.6	1.7/8-2.1/16	CBTS-1875	44.5	1.3/4	CBSB-1875	UCT-1250
54.0-58.7	2.1/8-2.5/16	CBTS-2125	51.0	2	CBSB-2125	UCT-1250
60.3-65.1	2.3/8-2.9/16	CBTS-2375	57.1	2.1/4	CBSB-2375	UCT-1250
66.7-71.6	2.5/8-2.13/16	CBTS-2625	63.5	2.1/2	CBSB-2625	UCT-1250
73.0-77.8	2.7/8-3.1/16	CBTS-2875	70.0	2.3/4	CBSB-2875	UCT-1250
79.4-84.2	3.1/8-3.5/16	CBTS-3125	76.2	3	CBSB-3125	UCT-1250

Note : For larger sizes, please enquire.



CONE CUTTER TOOLS These tools use patented ergocentric cutters to clean hard scale from typically larger tubes that are found in boilers. The ergocentric cutters ensure that the same tooth does not touch the same spot when cleaning and prevents grooves being formed in the tube scale. All cone cutter tools are fitted with universal joints to negotiate bends in curved tubes.

ONE CONE TOOL These consist of 1 Cone fitted onto a Universal Joint and are used when scale build up is not severe.

TWO CONE TOOL These consist of 2 Cones fitted onto a Universal Joint and are used when scale build up is severe.



SPARE CONE

Straight Tube I.D.		Curved Tube I.D.		One Cone Tool Model	Two Cone Tool Model	Cone Diameter		Spare Cone Model	Spare Universal Joint Model
m m	inch	m m	inch			m m	inch		
27.0-33.3	1.1/16-1.5/16	30.2-36.5	1.3/16-1.7/16	OCT-1063	TCT-1063	23.8	15/16	SCT-937	UCT-1063
31.7-36.5	1.1/4-1.7/16	36.5-42.9	1.7/16-1.11/16	OCT-1250	TCT-1250	27.0	1.1/16	SCT-1062	UCT-1250
35.0-39.7	1.3/8-1.9/16	42.9-49.2	1.11/16-1.15/16	OCT-1375	TCT-1375	30.2	1.3/16	SCT-1187	UCT-1250
38.1-46.0	1.1/2-1.13/16	49.2-55.5	1.15/16-2.3/16	OCT-1500	TCT-1500	36.5	1.7/16	SCT-1437	UCT-1250
44.5-58.7	1.3/4-2.1/16	55.5-61.9	2.3/16-2.7/16	OCT-1750	TCT-1750	42.9	1.11/16	SCT-1687	UCT-1250
50.8-60.3	2-2.3/8	---	---	OCT-2000	TCT-2000	49.2	1.15/16	SCT-1937	UCT-1250



ONE CONE TOOL



TWO CONE TOOL



THREE CONE TOOL

THREE CONE TOOL

These consist of 3 Cones fitted onto a base which is fitted with a Universal Joint and are used for cleaning larger (2.5/16" I.D. and up) tubes where scale build up is severe.

Straight Tube I.D.		Curved Tube I.D.		Three Cone Tool Model	Spare Cone Model	Spare Base Model	Spare Universal Joint Model
m m	inch	m m	inch				
58.7-73.0	2.5/16-2.7/8	61.9-79.4	2.7/16-3.1/8	PCT-2313	SCT-937	CTB-2313	UCT-1250
71.4-85.7	2.13/16-3.3/8	77.8-93.7	3.1/16-3.11/16	PCT-2813	SCT-937	CTB-2813	UCT-1250
84.1-96.8	3.5/16-3.13/16	92.1-103.2	3.5/8-4.1/16	PCT-3313	SCT-1062	CTB-2813	UCT-1250

SCRAPER TOOLS

Scraper Tools use scraper blades that 'fly out' when the tool is rotated, coming into contact with scale and scraping it out. These tools can be coupled with brushes for simultaneous 'finishing' of the cleaning operation as with carbide drills to initially drill through tubes that have very hard deposits.

Straight Tube I.D.		Curved Tube I.D.		Scraper Tool Model
m m	inch	m m	inch	
20.6-39.7	13/16-1.9/16	23.8-46.0	15/16-1.13/16	SCR-813
36.5-58.7	1.7/16-2.1/16	42.9-65.1	1.11/16-2.9/16	SCR-1438
42.9-77.8	1.11/16-3.1/16	61.9-77.8	2.7/16-3.1/16	SCR-1687



FLEX HUB ASSEMBLY



REPLACEMENT BLADES



CARBIDE DRILL



UNIVERSAL JOINT

SPARES FOR SCRAPER TOOLS

Model SCR-813-SB Spare Set of 3 Scraping Blades for SCR-813.

Model SCR-1438-SB Spare Set of 3 Scraping Blades for SCR-1438.

Model SCR-1687-SB Spare Set of 3 Scraping Blades for SCR-1687.

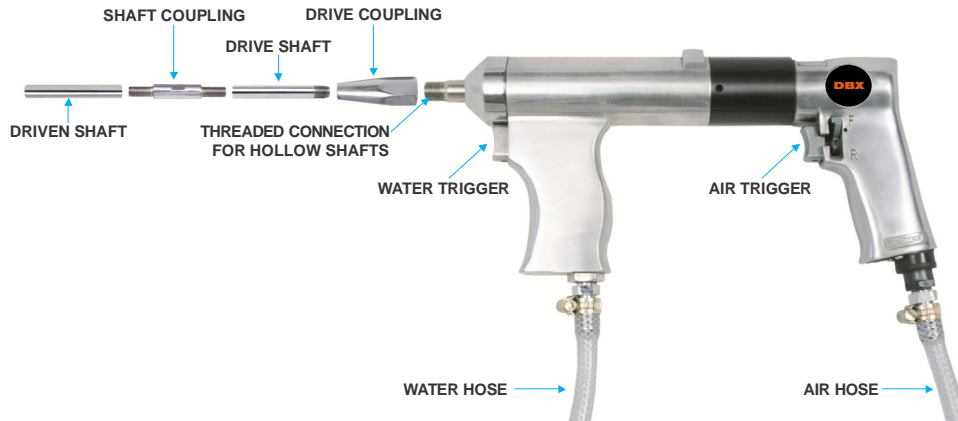
Model CB-750 Carbide Drill for use with SCR-1438 Scraper tool to drill through tubes with very hard deposits.

Model CB-875 Carbide Drill for use with SCR-1687 Scraper tool to drill through tubes with very hard deposits.

Model UCT-1250 Universal Joint for use with scraper tool for use with curved tubes.

STRAIGHT TUBE CLEANER

PORTABLE PNEUMATIC TUBE CLEANERS



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 the tube to be cleaned.

Water flows through the hollow tube and washes out deposits that are dislodged by the cleaning tools attached to the driven shafts. Typical cleaning tools used are carbide drills for severely clogged tubes, brushes for light deposits and buffing tools for final polishing of tubes. The water flow is independently controlled allowing the user to determine how much water is needed in the application.

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

Model **CP-315** is typically used on larger diameter tubes of process vessels, heat exchangers and condensers.

Tube I.D.'s suited for		Model No.	Max Motor Power		Free Speed RPM	Air Supply		Water Supply		Weight	
mm	inch		HP	kW		Min	Max	Min	Max	lbs.	kg.
4.8-25.4	3/16-1	C-10	0.6	0.45	700	60psi@16cfm	90psi@16cfm	30psi	100psi	5.72	2.6
22.2-51.0	7/8-2	CP-315	1	0.746	1000	90psi@20cfm	90psi@40cfm	30psi	100psi	6.60	3.0

Note : The tube cleaners above are supplied with a heavy duty plastic carrying case with separate provision to house upto 8, 4ft. (1.2m) long hollow shafts, 15ft. (4.6m) air hose, 15ft. (4.6m) water hose.



- **Hollow Drive Shaft** - 4ft. (1.2m) long aircraft quality steel shafts to connect to drive.

Model **DS-300 to DS-500**

Model **DS-562 to DS-750**

- **Hollow Driven Shaft** - 4ft. (1.2m) long aircraft quality steel shafts to connect to driven shafts. Order quantities based on length of tube to be cleaned.

Model **DN-300 to DN-500**

Model **DN-562 to DN-750**

- **Drive Coupling** - To Couple hollow drive shaft to drive.

Model **DC-300 to DC-500**

Model **DC-562 to DC-750**

- **Shaft Coupling** - To Couple 2 hollow shafts together.

Model **SC-300 to SC-500**

Model **SC-562 to SC-750**

- **Starter Drill** - To make pilot holes in deposits of completely clogged tubes.

Model **SD-312 to SD-500**

Model **SD-562 to SD-750**



Tube I.D.'s suited for mm	inch	Drive Model No.	Hollow Drive Shaft Model No.	Hollow Driven Shaft Model No.	Drive Coupling Model No.	Shaft Coupling Model No.	Starter Drill Model No.
4.8-6.4	3/16-1/4	C-10	DS-300	DN-300	DC-300	SC-300	-
9.5	3/8		DS-312	DN-312	DC-312	SC-312	SD-312
11.1	7/16		DS-375	DN-375	DC-375	SC-375	SD-375
12.7-14.3	1/2-9/16		DS-437	DN-437	DC-437	SC-437	SD-437
15.9-17.5	5/8-11/16		DS-500	DN-500	DC-500	SC-500	SD-500
19.1-20.6	3/4-13/16		DS-562	DN-562	DC-562	SC-562	SD-562
22.2-25.4	7/8-1	CP-315	DS-625	DN-625	DC-625	SC-625	SD-625
27.0-51.0	1.1/16-2		DS-750	DN-750	DC-750	SC-750	SD-750

CLEANING TOOLS FOR USE WITH PORTABLE PNEUMATIC TUBE CLEANERS

- **Nylon Brushes** - Refer to pages 100, 103 
- **Brass Brushes** - Refer to pages 100, 103 
- **Stainless Brushes** - Refer to pages 100, 103 
- **Buffing Tools** - Refer to pages 101, 105 
- **Carbide Drills** - Refer to pages 101, 105 

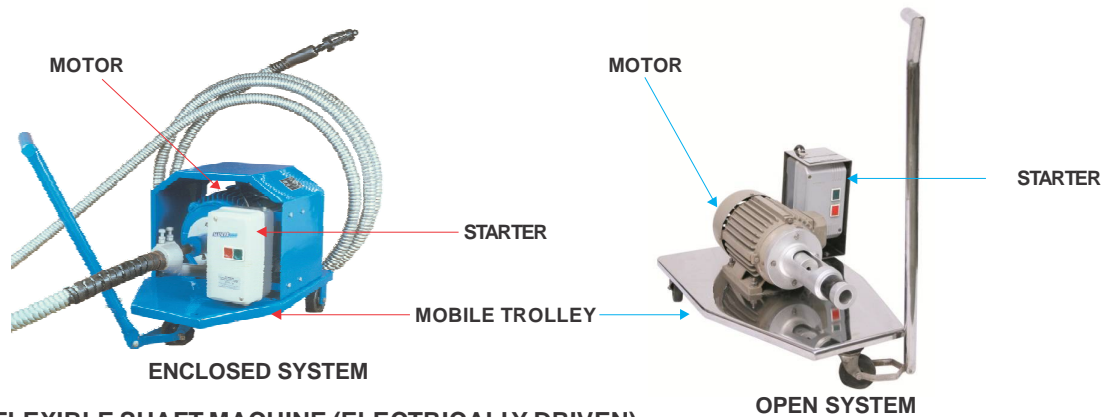
PORTABLE PNEUMATIC TUBE CLEANING KITS



Build your own kit by adding price of Drive (C-10 or CP-315), Hollow Drive Shafts, Hollow Driven Shafts, Shaft Couplings, Drive Coupling based on length of tube to be cleaned and cleaning tools (Brushes, Carbide Drills, Buffing Tools).

We will supply all the above in a handy box at no extra charge ! The box will accomodate a maximum of 1 Drive + 4 Hollow Shafts + 5 Couplings + 18 Cleaning Tools (Brushes, Carbide Drills, Buffing Tools).

HEAVY DUTY TUBE CLEANERS TROLLEY



FLEXIBLE SHAFT MACHINE (ELECTRICALLY DRIVEN)

FLEXIBLE SHAFT MACHINE is a self-contained portable unit, mounted on a 3-wheel trolley, fitted with a carrying handle. It incorporates a directly coupled, totally enclosed squirrel cage, 2800 rpm. continuously rated electric motor. Selecting the H.P. of the motor depends upon length and size of flexible shaft and nature of scaling. It is controlled by a push button starter which is provided with three thermal adjustable overload relays. Each machine is fully wired, carefully tested and is fitted with a 10-foot length of PVC Cable to main supply. Longer cable can be supplied upon request. Please consult us if your electric supply is different from listed below. Motors for alternate supplies are also available.

Model No.	Motor H.P.	Speed (RPM)	Electric Supply
TC-30	3.0	2800	440V 3 PHASE 50 Hz
TC-50	5.0		
TC-75	7.5		



FLEXIBLE SHAFTS (DRIVES)

The Flexible Shaft transmits constant torque / power from the motor unit to the tool head or brush within the tube. **INNER CORE** - is double wound in opposing layers made out of high tensile-spring steel wires and passed through stress relieving process, made to absolute-vibration free performance and continuous duty.

OUTER CASING - is flexible, made out of galvanized steel strip and provided with special steel anti-friction lining for the entire length.

CONNECTIONS - Suitable motor connection at one end and detachable ball bearing hand piece (tool holder) with threaded spindle for tool head or brush at other end.

The size of the flexible shaft is based on internal diameter (I.D.) of the tube. The length of flexible shaft required is the addition of the length of the longest tube plus the distance between the mouth of the tube and the position of the power unit. The power unit should be located so that the flexible shaft be kept as straight as possible.

Inner Core mm (inch)		12 - 13 (1/2")	15 - 16 (5/8")	19 - 20 (3/4")
Outer Casing mm (inch)		25 - 26 (1")	31 - 32 (1.1/4")	34 - 35 (1.3/8")
Length				
mtr.	feet	Model No.	Model No.	Model No.
7.5	25.0	IFS-105-25	IFS-106-25	IFS-107-25
9.0	30.0	IFS-105-30	IFS-106-30	IFS-107-30
10.0	33.0	IFS-105-33	IFS-106-33	IFS-107-33
12.0	40.0	IFS-105-40	IFS-106-40	IFS-107-40
15.0	50.0	IFS-105-50	IFS-106-50	IFS-107-50
18.0	60.0	IFS-105-60	IFS-106-60	IFS-107-60
20.0	65.0	IFS-105-65	IFS-106-65	IFS-107-65
Spare Inner Core Per mtr.		IC-105	IC-106	IC-107
Spare Outer Casing Per mtr.		OC-105	OC-106	OC-107
Spare Hand Piece		HP-105	HP-106	HP-107



"TH" FOR SOOT REMOVAL FROM SMOKE TUBES, GENERAL CLEANING.



"DS" FOR REMOVING LIGHT SCALE AND BURNISHING ALL TYPES OF TUBES.



"WBA" HEAVY DUTY BRUSHES.



"EXP" EXPANDING BRUSH FOR THIN SCALE, SOOT OR SOFT DEPOSITS.



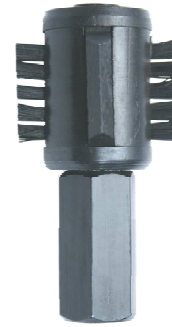
'B' Type Brush
"MB" FOR GENERAL PURPOSE POLISHING AND DEBURRING.



"CB" SPARE BRUSH WHEELS FOR "MB" BRUSHES.



"RS" HEAVY DUTY BRUSHES FOR HEAVY SCALE REMOVAL.



"EXS" EXPANDING SCRAPPERS FOR THIN SCALE, SOOT OR SOFT DEPOSITS.

Size		'TH' Turk Head Brush Model No.	'DS' Double Spiral Brush Model No.	'WBA' Brush Model No.	'EXP' Expanding Brush Model No.	'MB' Multi Purpose Brush Model No.	'CB' Circular Wheel Brush Model No.	'RS' Cup Shape Brush Model No.	'EXS' Expanding Scrapers Model No.
mm	inch								
31.7	1.1/4	TH-10	DS-10	WBA-10	EXP-10	MB-10	CB-10	-	EXS-10
35.0	1.3/8	TH-11	DS-11	WBA-11	EXP-11	MB-11	CB-11	-	EXS-11
38.1	1.1/2	TH-12	DS-12	WBA-12	EXP-12	MB-12	CB-12	-	EXS-12
41.3	1.5/8	TH-13	DS-13	WBA-13	EXP-13	MB-13	CB-13	-	EXS-13
44.5	1.3/4	TH-14	DS-14	WBA-14	EXP-14	MB-14	CB-14	-	EXS-14
47.6	1.7/8	TH-15	DS-15	WBA-15	EXP-15	MB-15	CB-15	-	EXS-15
50.8	2	TH-16	DS-16	WBA-16	EXP-16	MB-16	CB-16	RS-16	EXS-16
54.0	2.1/8	TH-17	DS-17	WBA-17	EXP-17	MB-17	CB-17	RS-17	EXS-17
57.1	2.1/4	TH-18	DS-18	WBA-18	EXP-18	MB-18	CB-18	RS-18	EXS-18
60.3	2.3/8	TH-19	DS-19	WBA-19	EXP-19	MB-19	CB-19	RS-19	EXS-19
63.5	2.1/2	TH-20	DS-20	WBA-20	EXP-20	MB-20	CB-20	RS-20	EXS-20
66.7	2.5/8	TH-21	DS-21	WBA-21	EXP-21	MB-21	CB-21	RS-21	EXS-21
70.0	2.3/4	TH-22	DS-22	WBA-22	EXP-22	MB-22	CB-22	RS-22	EXS-22
73.0	2.7/8	TH-23	DS-23	WBA-23	EXP-23	MB-23	CB-23	RS-23	EXS-23
76.2	3	TH-24	DS-24	WBA-24	EXP-24	MB-24	CB-24	RS-24	EXS-24
79.4	3.1/8	TH-25	DS-25	WBA-25	EXP-25	MB-25	CB-25	RS-25	EXS-25
82.5	3.1/4	TH-26	DS-26	WBA-26	EXP-26	MB-26	CB-26	RS-26	EXS-26
85.7	3.3/8	TH-27	DS-27	WBA-27	EXP-27	MB-27	CB-27	RS-27	EXS-27
88.9	3.1/2	TH-28	DS-28	WBA-28	EXP-28	MB-28	CB-28	RS-28	EXS-28
92.1	3.5/8	TH-29	DS-29	WBA-29	EXP-29	MB-29	CB-29	RS-29	EXS-29
95.2	3.3/4	TH-30	DS-30	WBA-30	EXP-30	MB-30	CB-30	RS-30	EXS-30
98.4	3.7/8	TH-31	DS-31	WBA-31	EXP-31	MB-31	CB-31	RS-31	EXS-31
101.6	4	TH-32	DS-32	WBA-32	EXP-32	MB-32	CB-32	RS-32	EXS-32

SUGAR MILL CUTTER HEADS

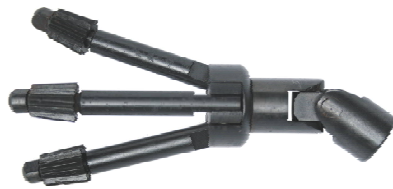
SINGLE LAYER
'H' TOOLTWO LAYER
'H' TOOLTHREE LAYER
'H' TOOLCLOSE 'HZ' TOOL
(HZ-10 TO HZ-11)OPEN 'HZ' TOOL
(HZ-11A TO HZ-16)

'H' TYPE CUTTER HEADS

for Tubes/Pipes 1.1/4"-4" (31.7mm-101.6mm) I.D.

These Cutter Heads are designed for cleaning straight and curved tubes as found in Boilers, Air Heaters, Economizers, etc. Cutter Heads are provided with 3 cutter wheels, one each of straight teeth, teeth cut right hand, teeth cut left hand, for quicker cleaning and prevention of scale grooving.

Model NO.	Tube I.D.		Cutter Wheels Set (3)	Spare Spindle
	mm	inch	Model No.	Model No.
H-10	31.7	1.1/4	HSRL-1	HA-1
H-11	35.0	1.3/8	HSRL-1	HA-1
H-12	38.1	1.1/2	HSRL-1	HA-1
H-13	41.3	1.5/8	HSRL-2	HA-2
H-14	44.5	1.3/4	HSRL-2	HA-2
H-15	47.6	1.7/8	HSRL-2	HA-2
H-16	51.0	2	HSRL-2	HA-2
H-17	54.0	2.1/8	HSRL-2	HA-2
H-18	57.1	2.1/4	HSRL-3	HA-3
H-20	63.5	2.1/2	HSRL-3	HA-3
H-22	70.0	2.3/4	HSRL-4	HA-3
H-24	76.2	3	HSRL-4	HA-3
H-26	82.5	3.1/4	HSRL-5	HA-3
H-28	88.9	3.1/2	HSRL-5	HA-3
H-30	95.2	3.3/4	HSRL-6	HA-4
H-32	101.6	4	HSRL-6	HA-4



'WA' TYPE CUTTER HEADS

for Tubes/Pipes 1.1/2"-4" (38.1mm-101.6mm) I.D.

These Cutter Heads produce excellent results in curved or straight tubes. Pivoted arms of Cutter Heads swing out by centrifugal force so that the cutters contact every part of the tube wall.

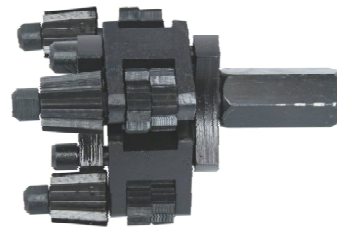
Model NO.	Tube I.D.		Cone Cutter Set (3)	Spare Arms	Universal Joint
	mm	inch	Model No.	Model No.	Model No.
WA-12	38.1	1.1/2	WAL-1	WAA-1	WAUJ-1
WA-14	44.5	1.3/4	WAL-1	WAA-1	WAUJ-1
WA-16	51.0	2	WAL-1	WAA-1	WAUJ-1
WA-18	57.1	2.1/4	WAL-2	WAA-1	WAUJ-2
WA-20	63.5	2.1/2	WAL-2	WAA-1	WAUJ-2
WA-22	70.0	2.3/4	WAL-2	WAA-1	WAUJ-2
WA-24	76.2	3	WAL-3	WAA-2	WAUJ-2
WA-28	88.9	3.1/2	WAL-3	WAA-2	WAUJ-2
WA-32	101.6	4	WAL-4	WAA-2	WAUJ-2

'HZ' TYPE CUTTER HEADS

for Tubes/Pipes 1.1/4"-2" (31.7mm-51.0mm) I.D.

These spring loaded, self expanding Cutter Heads are designed for rapid removal of hard and obstinate scale formation in straight tubes as found in Evaporators, Juice Heaters, etc. It consists of 3 bevel, 4 straight cutter wheels, 4 left cutter wheels and 4 right cutter wheels, fitted on 3 bridge type arms.

Model NO.	Tube I.D.		Cutter Wheels Set (15)	Spare Arms
	mm	inch	Model No.	Model No.
HZ-10	31.7	1.1/4	HZSRL-1	HZA-1
HZ-10A	33.3	1.5/16	HZSRL-1	HZA-1
HZ-11	35.0	1.3/8	HZSRL-1	HZA-1
HZ-11A	36.5	1.7/16	HZSRL-1	HZA-2
HZ-12	38.1	1.1/2	HZSRL-1	HZA-2
HZ-12A	39.7	1.9/16	HZSRL-1	HZA-2
HZ-13	41.3	1.5/8	HZSRL-1	HZA-2
HZ-13A	42.9	1.11/16	HZSRL-1	HZA-2
HZ-14	44.5	1.3/4	HZSRL-2	HZA-3
HZ-14A	46.0	1.13/16	HZSRL-2	HZA-3
HZ-15	47.6	1.7/8	HZSRL-2	HZA-3
HZ-15A	49.2	1.15/16	HZSRL-2	HZA-3
HZ-16	51.0	2	HZSRL-2	HZA-3

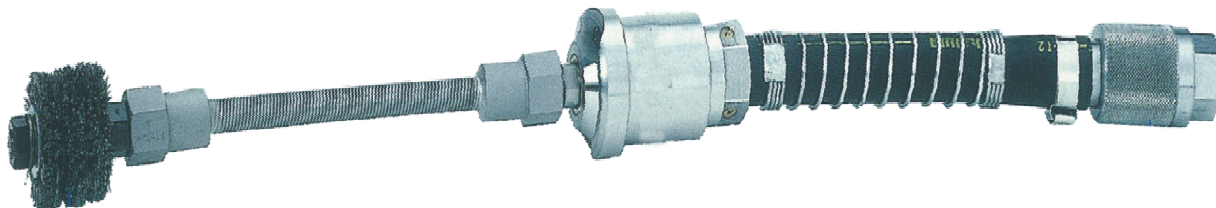


'SA' TYPE CUTTER HEADS

for Tubes/Pipes 2"-4" (51.0mm-101.6mm) I.D.

These Cutter Heads have 3 to 5 freely pivoted arms, activated centrifugally, which swing out to give access to any part of tube wall.

Model NO.	Tube I.D.		Cone & Flat Cutter Set (9)	Arms	Universal Joint
	mm	inch	Model No.	Model No.	Model No.
SA-16	51.0	2	SAFC-1	SAA-1	SAUJ-1
SA-18	57.1	2.1/4	SAFC-2	SAA-2	SAUJ-2
SA-20	63.5	2.1/2	SAFC-2	SAA-2	SAUJ-2
SA-22	70.0	2.3/4	SAFC-3	SAA-2	SAUJ-2
SA-24	76.2	3	SAFC-3	SAA-2	SAUJ-2
SA-28	88.9	3.1/2	SAFC-4	SAA-2	SAUJ-2
SA-32	101.6	4	SAFC-5	SAA-3	SAUJ-2

CLEAN TUBES MEANS SAVING IN FUEL COST**Why to clean tubes :**

To function efficiently every tubes of Boiler, Heat Exchanger, condenser to be cleaned and scale free. All piping accumulates scales over various periods of use. The formation of mud deposit, hard or soft scale in the tubes drastically reduce the flow retards heat transfer and consequently increases fuel consumption and lower efficiency.

We had developed this Air driven Boiler Tube Cleaner by considering problem arise during cleaning period of boiler tubes. This small motor directly coupled with the brush or cutter can be inserted inside the tube ID along with the air supply hose. Small but power full motor has enough torque to clean the hardest deposited in the tubes. Various attachment make it fully versatile to be used in any type of conditions. Available form 19mm tube ID to 140mm Tube ID. Suitable for both straight and curved tubes.

Air Driven Boiler Tube Cleaning system: 7000 series.

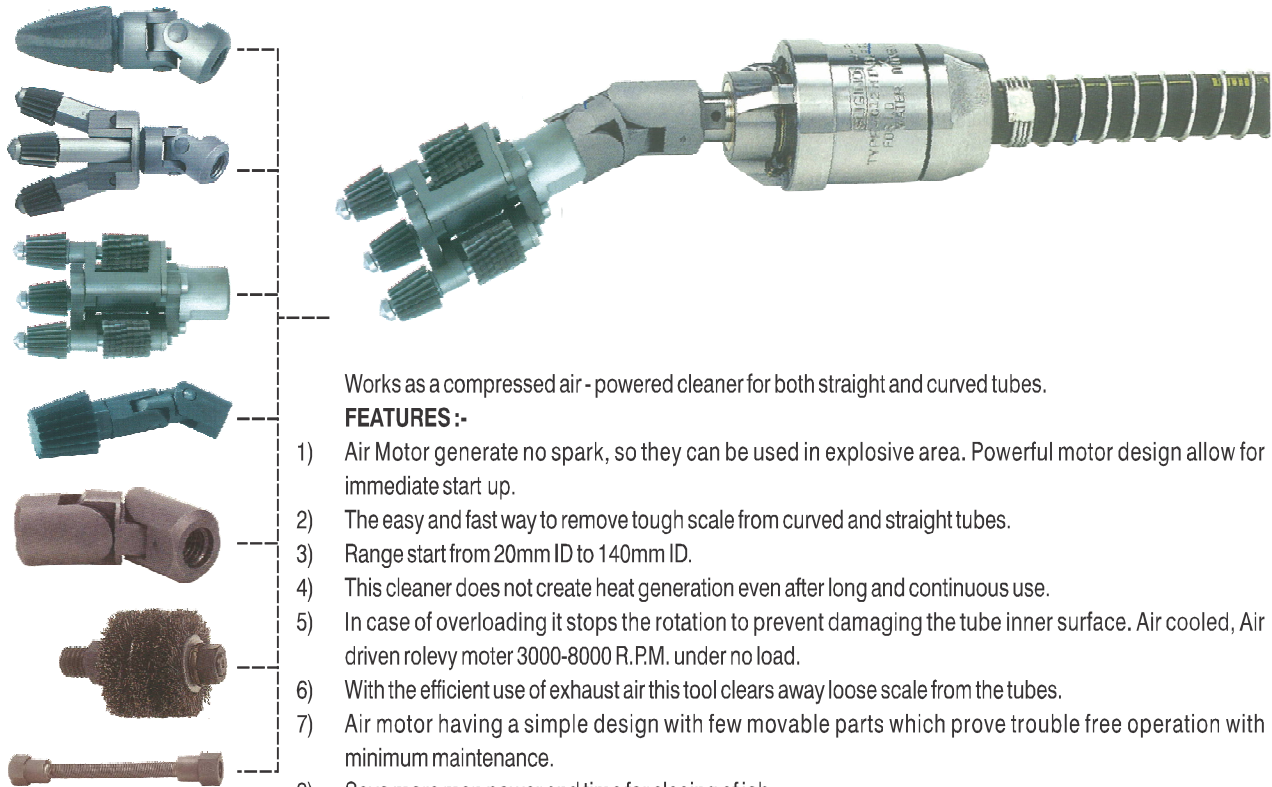
To recommend DBX make tube cleaner. Kindly provide following information.

- 1) Tube OD x Gauge or thickness
- 2) Length of Tubes
- 3) Whether Tubes straight or bend.
- 4) Type of tube material MS, SS, Brass, Copper
- 5) Scale in tubes : Hard, Soft, Gummy, Moderate.
- 6) Type of vessel (Boiler, Heat Exchanger, Condenser, Chillers)

Complete package consist of-

- 1) Air motor with spares set of blades
- 2) Steel wire armoring air hose as per tube length.
- 3) Drill or cutter as per scale condition
- 4) Universal Joint
- 5) 'B' type brushes
- 6) Flexible Holder
- 7) Filter+Regular+Lubricator.

**Air Motor**



Works as a compressed air - powered cleaner for both straight and curved tubes.

FEATURES:-

- 1) Air Motor generate no spark, so they can be used in explosive area. Powerful motor design allow for immediate start up.
- 2) The easy and fast way to remove tough scale from curved and straight tubes.
- 3) Range start from 20mm ID to 140mm ID.
- 4) This cleaner does not create heat generation even after long and continuous use.
- 5) In case of overloading it stops the rotation to prevent damaging the tube inner surface. Air cooled, Air driven rolevy moter 3000-8000 R.P.M. under no load.
- 6) With the efficient use of exhaust air this tool clears away loose scale from the tubes.
- 7) Air motor having a simple design with few movable parts which prove trouble free operation with minimum maintenance.
- 8) Save more man power and time for cleaing of job.
- 9) The motor required no special tool for repair.
- 10) Armored hose design for rigidity and heat resolution.

Tube I.D. (mm)	Cleaner No.	Min Curve radius	Drill Head		Drill Head	Cutter Head Type			Brush Type		Air Consumption CFM	Hose Size (Inch)
			UJ	FH		SU	SF	SE	BF	B		
19	7006	230	6	6	6	6	-	-	-	6	10	1/4
22	7007	250	6	6	7	7	-	-	-	7	12	1/4
25	7008	280	8	8	8	8	-	-	-	8	14	1/4
29	7009	290	8	8	9	9	-	-	-	9	18	3/8
32	7010	300	10	10	10	10	-	-	-	10	20	3/8
35	7011	320	10	10	11	11	-	-	-	11	24	3/8
38	7012	330	12	12	12	12	12	-	12	12	30	1/2
41	7013	330	12	12	12	12	12	-	13	12	30	1/2
45	7014	340	12	12	14	14	14	14	14	14	34	1/2
48	7015	340	12	12	14	14	14	14	15	14	34	1/2
51	7016	360	12	12	16	16	16	16	16	16	40	1/2
54	7017	360	16	16	16	16	16	16	16	16	40	1/2
57	7018	370	16	16	18	18	18	18	18	18	45	1/2
60	7019	370	16	16	18	18	18	18	18	18	45	1/2
64	7020	390	19	19	20	18	20	20	20	20	52	1/2
67	7021	390	19	19	20	-	20	20	20	20	52	1/2
70	7022	420	19	19	22	-	22	22	22	22	62	1/2
73	7023	420	19	19	22	-	22	22	22	22	62	1/2
76	7024	440	19	19	24	-	24	24	24	24	70	3/4
83	7026	470	22	22	24	-	24	24	24	24	70	3/4
89	7028	500	22	22	28	-	28	28	28	28	82	3/4
95	7030	500	25	25	28	-	28	28	28	28	82	3/4
102	7032	500	25	25	32	-	32	32	32	32	95	3/4
114	7036	500	25	25	36	-	36	36	36	36	95	3/4
127	7040	520	28	28	40	-	40	40	40	40	105	3/4
140	7044	520	28	28	44	-	44	44	44	44	105	3/4

Hydraulic Tube Expansion System



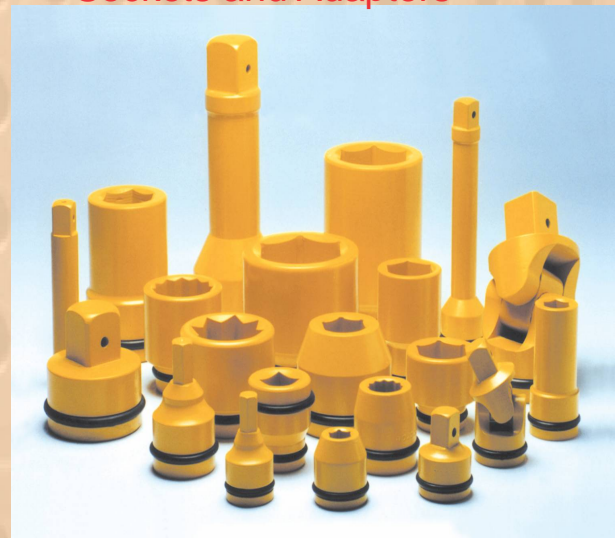
Tube End Facing & Bevelling



Hydraulic Torque Wrenches



Sockets and Adaptors



OUR OTHER PRODUCTS:

BOLTING TOOLS

HYDRAULIC TORQUE WRENCH

PNEUMATIC TORQUE WRENCH

HYDRAULIC POWERPACK

FLANGE SPREADER

BOLT TENSIONER

NUT SPLITTERS

SOCKETS

TUBE TOOLS

AIR-DRIVEN BOILER TUBE CLEANING SYSTEM

HEAT EXCHANGER TUBE CLEANING SYSTEM

SUGAR FACTORY TUBE CLEANING TOOLS

PORTABLE TUBE CLEANERS

CLEANING BRUSHES

FLEXIBLE SHAFTS

CUTTERS

Dh Boiler eXchangers Tools Pvt. Ltd.

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Tel. : 91-022-6671 1682, 2594 8419, 2594 8420 • Fax : 91-022-2594 8419

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