

TUBE TOOLS

Tube Expander

Tube Installation Tools

Tube Removal Tools

Tube Expansion System

Tube Cleaning Tools

CONDENSER AND HEAT EXCHANGER TUBE EXPANDERS

❖ NAN Series :-

Used for Oil Cooler, Radiator tubes of smaller diameter.



Tube Size (O.D.)	Roller Length	Tube Sheet	
		Min.	Max.
1/4" - 3/8" (18 30) G (14-24) G	(25.4)mm	1/4" (6.35 mm)	1" (25.4 mm)

❖ N900 Series :-

Most popular tool for Oil Cooler, Radiator tubes.



Tube Size (O.D.)	Roller Length	Tube Sheet	
		Min.	Max.
1/4" - 3/8" (18-30) G (14-24) G	3/4" (19.05 mm) 1.1/4" (31.75 mm)	1/4" (6.35 mm) 3/4" (19.05 mm)	3/4" (19.05 mm) 1.1/4" (31.75 mm)

❖ N1300 Series :-

Most popular tool for Oil Cooler, Radiator tubes with thicker tube sheet.



Tube Size (O.D.)	Roller Length	Tube Sheet	
		Min.	Max.
3/8" (15-24) G	3/4" (19.05 mm) 1.1/4" (31.75 mm)	3/4" (19.05 mm) 1.1/4" (31.75 mm)	3" (76.2 mm) 3.1/2" (88.9 mm)

❖ N800 Series :-

Mostly used for Condenser & Heat Exchanger tubes.



Tube Size (O.D.)	Roller Length	Tube Sheet	
		Min.	Max.
1/2" - 1.1/2" (14-20) G (8-20) G	1.1/2" (38.1 mm) 2.1/4" (57.1 mm)	1/2" (12.7 mm) 1.1/4" (31.75 mm)	1.1/2" (38.1 mm) 2.1/4" (57.1 mm)

❖ N1200 Series :-

Most popular tool for Condenser & Heat Exchanger tubes with thicker tube sheets (more than 2.1/4"). It can be supplied in the increments of 2" to cover expansion length till 12.3/4" for any type of heat exchanger application.



Tube Size (O.D.)	Roller Length	Tube Sheet	
		Min.	Max.
1/2" - 1.1/2" (14-20) G (8-20) G	1.1/2" (38.1 mm) 2.1/4" (57.1 mm)	1.1/2" (38.1 mm) 2.1/4" (57.1 mm)	6" (152.4 mm) 6.3/4" (171.4 mm)

❖ N800-5 Series :-

Five roller tube expander are highly recommended for thin wall tubes (18G & above)



Tube Size (O.D.)	Roller Length	Tube Sheet	
		Min.	Max.
5/8" - 1.1/2" (17-22) G (17-24) G	1.1/2" (38.1 mm) 2.1/4" (57.1 mm)	1/2" (12.7 mm) 1.1/4" (31.75 mm)	1.1/2" (38.1 mm) 2.1/4" (57.1 mm)

❖ N1200-5 Series :-

Five roller tube expander mainly used for thin wall tube (18G & above) with thicker tube sheet (more than 2.1/4"). It can also be supplied in the increments of 2" to cover expansion length till 12.3/4" for any type of heat exchanger application.



Tube Size (O.D.)	Roller Length	Tube Sheet	
		Min.	Max.
3/4" - 1.1/2" (14-22) G (17-20) G	1.1/2" (38.1 mm) 2.1/4" (57.1 mm)	1.1/2" (38.1 mm) 2.1/4" (57.1 mm)	6" (152.4 mm) 6.3/4" (171.4 mm)

❖ N8012 Series :-

Mainly used for expanding tubes in Air Heaters, Heat Exchangers with thick tubes and tube sheets. It can be supplied in the increments of 2" (upto 8").



Tube Size (O.D.)	Roller Length	Tube Sheet	
		Min.	Max.
1.3/4" - 2.1/2" (8-14) G (10-18) G	2.1/4" (57.1 mm)	1/2" (12.7 mm)	4" (101.4 mm)

BOILER TUBE EXPANDERS

❖ **NA Series :-**

Economical tool used for PARALLEL tube expansion. Drum/ Header/Short series mandrels available for specific application.



Tube Size (O.D.)	Tube Sheet	
	Min.	Max.
7/8" - 4.1/2" (15-20) G (2-12) G	1/2" (12.7 mm)	2.5/8" (67.95 mm)

❖ **NAF3 Series :-**

Mainly used for PARALLEL with FLARE rolling of tubes. Similar to NA series, it is also available with different types of mandrels.



Tube Size (O.D.)	Tube Sheet	
	Min.	Max.
7/8" - 4.1/2" (15-20) G (2-12) G	1/2" (12.7 mm)	2.5/8" (67.95 mm)

❖ **N114 Series :-**

General tool used for Parallel with Flare rolling of Boiler, Economizer, Air Heater etc tubes.



Tube Size (O.D.)	Tube Sheet	
	Min.	Max.
2" - 4.1/2" (4-13) G (1-12) G	1/2" (12.7 mm)	2.5/8" (67.95 mm)

❖ **NSB Series :-**

Used for expanding the tubes of TOP Plates of Juice Heater, Pans in Sugar Industries.



Tube Size (O.D.)	Tube Sheet	
	Min.	Max.
1.1/2" - 4.1/2" (11-16) G (6-10) G	1.1/4" (31.75 mm)	2" (50.8 mm)

❖ **NCSB Series :-**

Used for expanding the tubes of BOTTOM Plates of Juice Heater, Pans in Sugar Industries.



Tube Size (O.D.)	Tube Sheet	
	Min.	Max.
1.1/2" - 4.1/2" (15-60) G (10-12) G	1/2" (12.7 mm)	2.5/8" (67.95 mm)



BOILER TUBE EXPANDING ACCESSORIES

Mandrel Drives

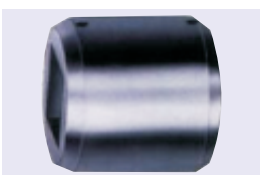
Interchangeable Female Sq.



Accessories
Drive Extension



Extension Coupling



Taper Shank Female Sq.



Universal Joint
Universal Joint



Extension U.J. (MxF)



Taper Shank Male Sq.



Gear Drives



Parallel Gear Train Drive



Right Angle Worm Gear Drive

Reversible Ratchet Wrench



TUBE INSTALLATION TOOLS

Serrating (Grooving) Tools

❖ NNW Series :-

Used for cutting one or more grooves in tube sheet bore. One tool covers range of hole diameter by simply changing Pilot Nose & Cutter. These cutters are resharpenable.



Bore Range		Model
mm	Inch.	
9 – 32	3/8" – 1.1/4"	1 NNW – 2MT
16 – 45	5/8" – 1.3/4"	3 NNW – 3MT
19 – 48	3/4" – 1.7/8"	4 NNW – 4 MT
38 – 102	1.1/2" – 4"	6 NNW – 5 MT

❖ NST Series :-

Each tool suited for cutting one or more grooves for specific tube sheet bore only. Tool Bits are available in required groove configuration.



Bore Range	3/8" – 2.1/2"	9.52 mm – 63.5 mm
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Tube Sheet Hole Reamer

❖ NRM Series :-

Used for accurate and smooth reaming of holes in the tube sheets of Heat-Exchangers, Condensers, etc.



Bore Range	3/8" – 1.1/4"	9.52 mm – 31.75 mm
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Pls. specify Flute length when order.

Tube End Facer

❖ NTEF Series :-

Used to face the projected ends of expanded tubes in Condensers, Heat-Exchangers, Boilers, etc. One tool can be used for different tube thickness of same O.D. by changing Pilot.



Tube O.D.	3/8" – 1.1/4" (16-22) G (11-18) G	9.52 mm - 63.50 mm
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Flaring Tool

❖ NFT Series :-

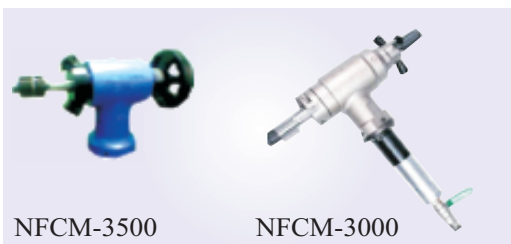
Used to flare the tube ends.



Tube O.D.	1/2" – 1.1/2"
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Tube End Facing/Chamfering Machine

This portable tool is designed for tube end facing & chamfering purpose. Wide range of easily interchangeable Jaws suits different diameters of tube. Different toolbits are used for Facing, Chamfering, & Weld seam machining.



Tube I.D. Range		Weight Kgs.	Model
mm	Inches		
19 - 42	3/4" - 1.5/8"	3.5	NFCM-1625
28 - 76	1" - 3"	7	NFCM-3000
28 - 89	1" - 3.5"	6.2	NFCM-3500

Tube Guide

❖ NTG Series :-

Used to guide the tube while inserting in tube sheet and baffle plates.



Tube O.D.	1/2" – 1.1/4" (16 - 23) G (10 - 20) G
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Tube Sheet Hole Brush

❖ NTSHB Series :-

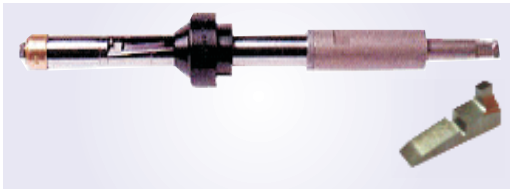
Used to clean the tube sheet hole before tube installation.



Tube O.D.	1/2" – 3"
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TUBE REMOVAL TOOLS

❖ NIPTC Series :-



Tube O.D.	5/8" – 2.1/2"
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Internal Push Type Tube Cutter is used for cutting the ferrous & non-ferrous tubes for Condensers & Heat Exchangers. Standard reach available up to 4" and also available in optional reach of 6", 8", 10" and 12". One tool can be used for different tube thickness of same O.D. by changing pilot. It is used with portable Electric or Pneumatic drill machine.

❖ NR 68 Series :-



Tube I.D.	10 mm – 105 mm
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Mainly used for thick walled Boiler tubes. Operated by Electric, Pneumatic or Hydraulic drive.

❖ NOTC Series :-



Tube O.D.	1/2" – 2.1/2"
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It is designed for cutting the tube manually in one revolution. Specifically used for non-ferrous tubes & thin wall ferrous tubes.

Wall Reducer



Tube O.D.	3/8" – 4"
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Pl. Specify Tube Wall Thickness/BWG

Knock-Out Tool



Tube O.D.	3/8" – 2"
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Pl. Specify Tube Wall Thickness/BWG

Collapsing Tool



Tube O.D.	3/8" – 2"
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Manual Tube Puller



❖ NMTP Series :-

Hand Operated tool used for removing small quantity of tubes.

Tube O.D.	3/8" – 1.3/4"
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Pl. Specify Tube Wall Thickness/BWG

Tube Plug



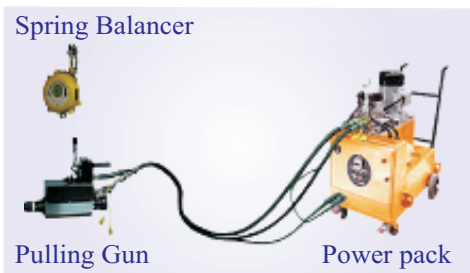
❖ NTPG Series :-

Used for sealing off leaked or damaged tubes. It is available in one or two piece model construction.

Tube O.D.	3/8" – 1.1/2"
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Pl. Specify Tube Wall Thickness/BWG

Hydraulic Tube Pulling System



Pulling Power Pack	NTPP-30	NTPP-50	NTPP-75
Pulling Gun	NHTPG - 15 (3/8"-1" O.D.)	NHTPG - 30 (1"-1.1/2" O.D.)	NHTPG - 45 (1.1/2"-3" O.D.)
Pulling Mandrel	NTPM-7 to NTPM-76 (3/8"-3" O.D.)		
Pulling Collar	NTPC - 15 (3/8"-1" O.D.)	NTPC - 30 (3/8"-1.1/2" O.D.)	NTPC - 45 (1"-3" O.D.)
Gripping Jaw Set	NTPJ - 15 (3/8"-1" O.D.)	NTPJ - 30 (3/8"-1.1/2" O.D.)	NTPJ - 45 (1"-3" O.D.)
Pulling Mandrel Socket	NTPS-1 (3/8"sq.) to NTPS-8 (1.1/2"sq.)		
Impact Wrench	NIMP - 1 (for NTPM-7 to NTPM-37)		NIMP - 2 (for NTPM-19 to NPM-76)
Spring Balancer	NSPB - 30 (for NHTPG - 15)	NSPB - 40 (for NHTPG - 30)	NSPB - 85 (for NHTPG - 45)

TUBE EXPANSION SYSTEMS

Electric Tube Expansion System

Torque Control Unit



Torque required for tube expansion is preset on the Control Panel. The Electric drive unit is governed by this Control Panel. When the Electric Drive reaches the Preset torque, the Control Panel automatically change over the drive's forward motion to reverse and Tube Expander retracts out from the tube. Its user friendly features makes this tool more versatile to expand the different sizes of tube.

Available in 110/230V suitable for NM-0, NM-1, NM-2, NM-3 Drive Unit.

Electric Drive Unit



Supply Voltage	Drive Model	No Load R.P.M.	Expansion Range				Drive Weight (Kgs)
			Steel Tube O.D.		Copper Tube O.D.		
			Inch	mm	Inch	mm	
230	NM - 0	2500	1/4" - 3/8"	6 - 10	1/4" - 1/2"	6 - 12	2.7
	NM - 1	850	3/8" - 5/8"	10 - 16	3/8" - 3/4"	10 - 20	3.6
	NM - 2	450	5/8" - 1"	16 - 25	3/4" - 1.3/4"	19 - 45	6.7
	NM - 3	350	3/4" - 2"	20 - 50	1.1/2" - 2.1/2"	38 - 65	11.2
110	NM - 0L	2500	1/4" - 3/8"	6 - 10	1/4" - 1/2"	6 - 12	2.7
	NM - 1L	850	3/8" - 5/8"	10 - 16	3/8" - 3/4"	10 - 20	3.6
	NM - 2L	450	5/8" - 1"	16 - 25	3/4" - 1.3/4"	19 - 45	6.7
	NM - 3L	250	3/4" - 2.1/2"	20 - 65	1.1/2" - 3"	38 - 76	11.2

Hydraulic Tube Expansion System



Model	NHEP-300	NHEP-500
Oil Tank Capacity (Ltrs)	30	45
Electric Motor	3 hp, Single Phase	5 hp, Three Phase
Max. Working Pressure (bar)	100	100

Tube Expansion Range				Drive		Drive No Load Speed (RPM)	Drive Weight (Kg)	Telescopic Shaft
Steel Tube O.D.		Copper Tube O.D.		Model No.	Sq. Soocket Inch.	NHEP-300/500		
mm	Inch	mm	Inch					
15 - 25	5/8" - 1"	25 - 38	1" - 1.1/2"	NHED - 3	3/8"	620/954	9.6	NTS - 2
19 - 38	3/4" - 1.1/2"	32 - 64	1.1/4" - 2.1/2"	NHED - 4	3/8" & 1/2"	350/480	9.7	NTS - 3
38 - 76	1.1/2" - 3"	50 - 102	2" - 4"	NHED - 5	1/2" & 3/4"	62/84	11.0	NTS - 4
50 - 102	2" - 4"	-	-	NHED - 6	3/4" & 1"	40/62	11.5	NTS - 5

TUBE CLEANING TOOLS

SUGAR INDUSTRY TUBE CLEANING

❖ NTC Series :-



The Electrically driven tube cleaning machine is mounted on a portable trolley. Nature of scaling, length & size of flexible shaft decides motor HP.

Model	Motor (hp)
NTC-30	3.0
NTC-50	5.0
NTC-75	7.5

❖ NIFS Series :-

Model	NIFS-105-X	NIFS-106-X	NIFS-107-X
Inner Core	1/2"	5/8"	3/4"
Outer Casing	1"	1.1/4"	1.3/8"

The torque/power of the motor is transmitted to the brush or tool head by Flexible Shaft. The size of the Flexible Shaft is decided by the tube internal diameter.



X: Length of Flexible Shaft (7.5 mtr. – 20.0 mtr.)

Cutter Head



NHZ Cutter Head
(1.1/4" - 2")



NH Cutter Head
(1.1/4" - 4")



NWA Cutter Head
(1.1/2" - 4")



NSA Cutter Head
(2" - 4")

Brushes



Turk Head
(1.1/4" - 4")



Double Spiral
(1.1/4" - 4")



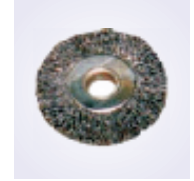
WBA
(1.1/4" - 4")



Multi Purpose
(1.1/4" - 4")



Cup Brush
(2" - 4")

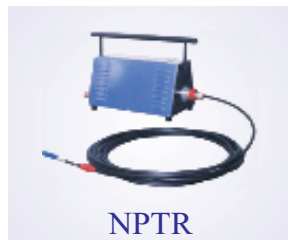


Circular Brush
(1.1/4" - 4")

CONDENSER TUBE CLEANING



NPTC



NPTR

The Electric Tube Cleaner cleans the tube by passing out water through the rotating flexible shaft to remove deposits from the tube. Water consumption can be regulated. It is available in two model. NPTR is compact & portable, useful for multiple location. NPTC covers wide range of tube sizes.

Series	Model	Tube I.D.	Motor (Hp)	Motor RPM	Weight Kg
NPTR	NPTR	1/4" - 1"	1/2	1760	16
NPTC	NPTC - 4	1/4" - 1"	1/2	890	28
	NPTC - 6	1/4" - 1"	3/4	890	30
	NPTC - 7.5	1" - 2"	1	1780	32
	NPTC - 15	1" - 2"	2	1780	38



Brushes
(1/4" - 1" I.D.)



Drills (CB/CT /AT)
(1/4" - 1" I.D.)



One/two Cone Cutters
(1.1/16" - 2.3/8" I.D.)



Flexible Shaft with steel inner core & PVC Outer Casing

Model	Tube I.D.	Inner Core	Outer Casing	Tool End Thread
NFS - 250	1/4" - 3/8"	1/8"	1/4"	1/4"-28
NFS - 375	7/16 - 1/2"	1/4"	3/8"	
NFS - 500	9/16" - 1"	5/16"	1/2"	
NFS - 560	11/16" - 1"	3/8"	9/16"	
NFS - 750	1" - 2"	1/2"	3/4"	

WE ALSO SUPPLY

TUBE TOOLS

Non-Parallel Expander

Combination Beading Expander

Hydraulic Thrust Expander

Dairy Expander

Tube Leak Detector

Tube Joint Testing Kit

Portable Pneumatic Tube Cleaner



TORQUE TOOLS

Impact Sockets

Impact Adaptors

Slugging Wrench

Torque Wrench

Torque Multiplier

Flange Spreader Manual/Hydraulic

Hydraulic Flange Spreader

Nut Splitter

