



PROTECH TOOLS

Expanders



About Us

Protech Tools was founded in 2023 by a group of experts with 4 years of excellent work experience in the same field. After the initial years of struggle, through hard work, foresight, and persistence, the company has evolved from 2 persons to a dynamic workforce of over 10 individuals. They operate a single manufacturing unit and have established 5 sales and service offices in major cities of India. Currently, Protech Tools is focusing on the global market, aiming to deliver the same products with the best quality, competitive prices, and efficient delivery.

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Get Now



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CONDENSER TUBE EXPANDERS

AN SERIES



Features :

USE : To expand tubes in Air Heaters, Boilers, and Refinery still tubes, Can be used to expand thick tube sheets (upto 8")

FOR TUBES INTERNAL DIAMETER FROM (3.8MM) .152" TO (8.4MM) .331

TUBE EXPANDER FITTED WITH ROLLER LENGTH	FOR THE TUBE ADJUSTABLE RANGE	
	MINIMUM A	MAXIMUM B
(25.4MM) 1"	(6.35MM) 1/4"	(25.4MM) 1"

900 SERIES



Features :

USE : Oil Coolers, radiators and other apparatus with small diameter tubes. This tool has been the work for several years for use on small dia tube.

FOR TUBES INTERNAL DIAMETER FROM (3.8MM) .152" TO (8.4MM) .331

TUBE EXPANDER FITTED WITH ROLLER LENGTH	FOR THE TUBE ADJUSTABLE RANGE	
	MINIMUM A	MAXIMUM B
(19.5MM) 3/4"	(6.35MM) 1/4"	(19.05MM) 3/4"
(31.75MM) 1.1/4"	(19.05MM) 3/4"	(31.75MM) 1.1/4"

1300 SERIES



Features :

USE : Oil Coolers, radiators and other apparatus with small diameter tubes and thick tube sheets.

FOR TUBES INTERNAL DIAMETER FROM (5.8MM) .231" TO (8.4MM) .331

TUBE EXPANDER FITTED WITH ROLLER LENGTH	FOR THE TUBE ADJUSTABLE RANGE	
	MINIMUM A	MAXIMUM B
(19.5MM) 3/4"	(19.05MM)	(76.20MM) 3"
(31.75MM) 1.1/4"	(31.75MM) 1.1/4"	(88.90MM) 3.1/2"

800 SERIES



Features :

USE : Most Popular tool worldwide for use on heat exchanger and condensers with tubes 1/2" - 1.1/2"

FOR TUBES INTERNAL DIAMETER FROM (8.4MM) .334" TO (36.3MM) 1.43"

TUBE EXPANDER FITTED WITH ROLLER LENGTH	FOR THE TUBE ADJUSTABLE RANGE	
	MINIMUM A	MAXIMUM B
(19.5MM) 3/4"	(19.05MM)	(76.20MM) 3"
(31.75MM) 1.1/4"	(31.75MM) 1.1/4"	(88.90MM) 3.1/2"

800-5 SERIES



Features :

USE : Highly recommended for use on thin walled tubes (19 thru 22 gage walls) of Stainless Steel, Titanium, Incoloy etc. Advantages : Gives a more concentric and even expansion when expanding thin walled tubes vs a conventional 3 roll expander and reduces tube spring back effect,

FOR TUBES INTERNAL DIAMETER FROM (12.9MM) .509" TO (36.7MM) 1.44"

TUBE EXPANDER FITTED WITH ROLLER LENGTH	FOR THE TUBE ADJUSTABLE RANGE	
	MINIMUM A	MAXIMUM B
(38.1MM) 1.1/2"	(12.7MM) 1/2"	(38.1MM) 1.1/2"
(57.1MM) 2.1/4"	(31.75MM) 1.1/4"	(57.1MM) 2.1/4"

1200 SERIES LONG REACH



Features :

USE : Most popular tool worldwide for heat exchangers and condensers. Longer reach expanders are available Please let us know reach needed.

FOR TUBES INTERNAL DIAMETER FROM (8.4MM) .334" TO (36.3MM) 1.43"

TUBE EXPANDER FITTED WITH ROLLER LENGTH		FOR THE TUBE ADJUSTABLE RANGE	
		MINIMUM A	MAXIMUM B
(38.1MM) 1.1/2"	STD. REACH	(38.1MM) 1.1/2"	(152.4MM) 6"
	'A' REACH	(38.1MM) 1.1/2"	(203.2MM) 8"
	'B' REACH	(38.1MM) 1.1/2"	(253.8MM) 10"
	'C' REACH	(38.1MM) 1.1/2"	(304.6MM) 12"
(57.1MM) 2.1/4"	STD. REACH	(57.1MM) 2.1/4"	(171.4MM) 6.3/4"
	'A' REACH	(57.1MM) 2.1/4"	(222.1MM) 8.3/4"
	'B' REACH	(57.1MM) 2.1/4"	(272.8MM) 10.3/4"
	'C' REACH	(57.1MM) 2.1/4"	(323.6MM) 12.3/4"

CONDENSER TUBE EXPANDERS

1200-5 SERIES FIVE ROLLS FOR THIN TUBE



Features :

USE : Highly recommended for use on thin tubes (19 thru 22gauge walls) of stainless steel, titanium, incoloy and other in thick tube sheets.
Advantages: Gives a more concentric even expansion when expanding thin walled tubes vs. a conventional 3 roll expander and reduces tube spring back effect.

FOR TUBES INTERNAL DIAMETER FROM (14.8MM) .584" TO (36.3MM) 1.43"

TUBE EXPANDER FITTED WITH ROLLER LENGTH		FOR THE TUBE ADJUSTABLE RANGE	
		MINIMUM A	MAXIMUM B
(38.1MM) 1.1/2"	STD. REACH	(38.1MM) 1.1/2"	(152.4MM) 6"
	'A' REACH	(38.1MM) 1.1/2"	(203.2MM) 8"
	'B' REACH	(38.1MM) 1.1/2"	(253.8MM) 10"
(57.1MM) 2.1/4"	'C' REACH	(38.1MM) 1.1/2"	(304.6MM) 12"
	STD. REACH	(57.1MM) 2.1/4"	(171.4MM) 6.3/4"
	'A' REACH	(57.1MM) 2.1/4"	(222.1MM) 8.3/4"
	'B' REACH	(57.1MM) 2.1/4"	(272.8MM) 10.3/4"
	'C' REACH	(57.1MM) 2.1/4"	(323.6MM) 12.3/4"

8012 SERIES



Features :

USE : To expand tubes in Air Heaters, Boilers, and Refinery still tubes, Can be used to expand thick tube sheets (upto 8")

FOR TUBES INTERNAL DIAMETER FROM (36.1MM) 1.420" TO (123.7MM) 4.870"

TUBE EXPANDER FITTED WITH ROLLER LENGTH		FOR THE TUBE ADJUSTABLE RANGE	
		MINIMUM A	MAXIMUM B
(57.1MM) 2.1/4"	STD. REACH	(12.7MM) 1/2"	(101.4MM) 4"
	6' REACH	(12.7MM) 1/2"	(152.4MM) 6"
	8" REACH	(12.7MM) 1/2"	(203.2MM) 8"

SPECIAL TUBE EXPANDERS

STEP ROLLING EXPANDER (BAFFLE PLATE EXPANDERS)



SPECIFICATION:

Ideally suited for faster tube rolling in tube sheets that are 10"(25mm) and thicker without removing the tube expander from the tube. Tube expander cage has grooves spaced 1" apart and is fitted with a spring loaded, quick spacing thrust collar that permits fast step rolling in 1" increments throughout the full thickness of the tube sheet. These expanders can be made for use in up to 236" (6000mm) reaches.

DIESEL ENGINE EXPANDER



SR EXPANDER



SPECIFICATION:

A special series of tube expanders designed for rolling the injection sleeves in the head of the diesel engines. these tube expanders are made to order for each application, and a detailed drawing of the injector sleeve and the engine head must accompany the order to ensure proper tube expander design.

SR Expanders are rapic taper on the material of the tube expander allows full expansion of the tube with minimum travel of the mandrel. The Mandrel is retained at the rear of the tube expander to shorten the length of the tube expander and allow the tube expander to be used near sharp tube bends.

HYDRAULIC THRUST TUBE EXPANDERS

FOR USE WITH VMH HYDRAULIC EXPANSION SYSTEM FOR HEAT EXCHANGERS.



Features :

- This system uses high speed steel tube expanders to expand very thick wall and exotic harder tubes, where conventional expanders would fail.
- Axis of the roll slot in tool is parallel to the cage axis.
- Internal cylindricality of the expanded tube.
- Reduction of tube stretching.
- Better quality of tube to be sheet contact.
- Reduction in tube internal stress.
- Hydraulic thrust tube expanders are interchangeable and can be good with "Vemon" Hydraulic Tube Expansion Systems.

TOOLS FOR USE WITH VMH HYDRAULIC EXPANSION SYSTEM.



"S" Series

FOR TUBE SIZES	1/2" - 2" O.D.
ROLLER LENGTH	1.1/2" - 2.1/2" O.D.
FOR TUBE SHEETS	1.1/4" - 5.1/2" O.D.



"A" Series

FOR TUBE SIZES	1/2" - 1.1/4" O.D.
ROLLER LENGTH	2.5/16 - 3.1/2" O.D.
FOR TUBE SHEETS	2.3/16" - 3.3/8" O.D.

BOILER TUBE EXPANDERS

114 SERIES



Features :

- Overlapping rolls prevent ridging of tube.
- Can be converted for parallel expansion use - enquire with us.
- Self retained rolls in cage.
- Compact design for use through small hand holes, headers etc.
- Use - General purpose expander for expanding and flaring boiler tubes, water wall, downcomer, economizer, riser and air heater tubes.

Tube O.D. Inch	2" to 4.1/2"
Minimum I.D Tool Enter	36.7mm (1.444") to 101.6mm (4.000")
Maximum Expansion of Tools	43.1mm (1.696") to 113.5mm (4.468")

A SERIES



Features :

- Best 'Value for Money' tool in the world when parallel rolling tubes.
- Sturdy construction with rolls self contained in cage.
- Time tested, durable design.
- Use - Economical tool used for applications where tubes are to be expanded without flaring.

Tube O.D. Inch	7/8" to 4.1/2"
Minimum I.D Tool Enter	18.1mm (0.712") to 104.4mm (4.110")
Maximum Expansion of Tools	20.4mm (0.803") to 113.2mm (4.456")

AF3 SERIES



Features :

- Best 'Value For Money' tool in the world when flaring of tube ends is needed.
- Sturdy construction with rolls self contained in cage.
- Time tested, durable design.
- Overlapping flare rolls prevent ridging of tube.
- Use - Economical tool used for applications where small number of tubes are to be expanded with flaring.

Tube O.D. Inch	7/8" to 4.1/2"
Minimum I.D Tool Enter	18.1mm (0.712") to 104.4mm (4.110")
Maximum Expansion of Tools	20.4mm (0.803") to 113.2mm (4.456")

AB SERIES WITH BEARING



Features :

- Similar to 'A' Series expanders
- Bearing reduces frictional build up for smoother expanding cycles.
- Bearing increases useful life of tool.
- Use - High productivity tool used where flaring of tubes is not needed.

Tube O.D. Inch	7/8" to 4.1/2"
Minimum I.D Tool Enter	18.1mm (0.712") to 104.4mm (4.110")
Maximum Expansion of Tools	20.4mm (0.803") to 113.2mm (4.456")

ABF3 SERIES WITH BEARING



Features :

- Similar to 'AF3' Series expanders.
- Bearing reduces frictional buildup for smoother expanding cycles.
- Bearing increases useful life of tool.
- Use : High productivity tool used where flaring of tubes is needed.

Tube O.D. Inch	7/8" to 4.1/2"
Minimum I.D Tool Enter	18.1mm (0.712") to 104.4mm (4.110")
Maximum Expansion of Tools	20.4mm (0.803") to 113.2mm (4.456")

P-1000 SERIES



Features :

- Overlapping rolls prevent ridging of tube.
- Use - Ideal for use in limited access space like water boxes, small diameter drums.

Tube O.D. Inch	1" to 4.1/2"
Minimum I.D Tool Enter	19.7mm (0.775") to 100.7mm (3.964")
Maximum Expansion of Tools	23.4mm (0.921") to 111.0mm (4.407")

BOILER TUBE EXPANDERS & ACCESSORIES

P-3000 SERIES WITH COLLAR



Features :

- Expander can be accurately positioned in the boiler tube in relation to the drum, for consistent expansions.
- Use - For boiler tube sheets and drums thicker than 2.3/4"(70mm). Normally used in conjunction with P-1000 Series.

Tube O.D. Inch	1.1/4" to 4.1/2"
Minimum I.D. Tool Enter	27.8mm (1.084") to 100.7mm (3.964")
Maximum Expansion of Tools	33.0mm (1.299") to 111.0mm (4.407")

COMBINATION BEADING EXPANDERS



Features :

- Tools Required
 - 1) COMBINATION BEADING EXPANDER
 - 2) TUBE EXPANDER DRIVE
- Operating Steps
 - 1) EXPAND AND BEAD (SINGLE OPERATION)
- Operator Fatigue
 - 1) REDUCED SIGNIFICANTLY
 - 2) NO AIR HAMMER FOR BEADING AND ROLLING

Tube O.D. Inch	2 to 3
Tube Thickness	10 bwg (0.134") to 12 bwg (0.109")
Expansion Range	43.2 (1.700") to 75.0mm (2.900")

V SERIES NON PARALLEL EXPANSION



Features :

USE : 'V' type Expander is used for repair and erection of boilers having thin tube sheets.

It is approximately twice as fast during use than other conventional expanders.

Use : Header Mandrel when expander is to be used through a watering

Tube O.D. Inch	1 to 3
Tube Thickness	10 bwg (0.134") to 13 bwg (0.095")
Expansion Range	17.3mm (0.681") to 76.6mm (3.015")

SB SERIES FOR SUGAR MILL



Features :

- '5 Roll' design is used primarily for rolling thin walled tubes used in sugar mill juice heaters, pans.
- '5 Rolls' give you a more concentric, uniform expansion vs. a '3 roll' expander in thin tubes and reduces tube 'spring back' effect.
- Use - For top plate tube expansion in pans, juice heaters in sugar mills.

Tube O.D. Inch	1.1/2 to 4.1/2
Minimum I.D. Tool Enter	31.0mm (1.220") to 104.3mm (4.106")
Maximum Expansion of Tools	33.2mm (1.307") to 113.1mm (4.452")

LONG REACH CSB SERIES



Features :

- '5 Roll' design is used primarily for rolling thin walled tubes used in sugar mill juice heaters, pans.
- '5 Rolls' give you a more concentric, uniform expansion vs. a '3 roll' expander in thin tubes and reduces tube 'spring back' effect.
- Use - For bottom plate tube expansion in pans, juice heaters in sugar mills.

Tube O.D. Inch	1.3/4 to 4
Minimum I.D. Tool Enter	39.8mm (1.566") to 90.5mm (3.563")
Maximum Expansion of Tools	45.3mm (1.783") to 102.4mm (4.031")

MANDREL DRIVES & ACCESSORIES

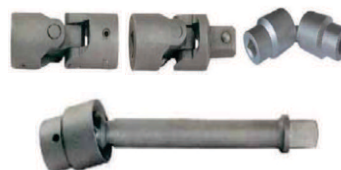
TAPPER SHANK



REVERSIBLE RACHET



UNIVERSAL JOINTS



GEAR DRIVES

