

# TUBE REMOVAL TOOLS

## TUBE DRIFT

For removing tube stubs from the tube sheets.



Available for tubes from  
 1/2" to 1 1/2" O.D.  
 (12.7 mm to 38.1 mm) O.D.

Description	Model no. Prefix	Model size					Tube Gauge	Shank
		1/2"	5/8"	3/4"	7/8"	1"		
Tube drift	TTD	500	625	750	875	1000	Specify Gauge	No.01

*Standard shank is no. 01, other shank types on request*

*Larger sizes on request*

## TUBE WALL REDUCING TOOL

For reducing the tube wall in condensers and heat exchangers to facilitate collapsing.



Available for tube  
 1/2" to 1 1/2" O.D.  
 (12.7 mm to 38.1 mm) O.D.

Description	Model no. Prefix	Model size					Tube Gauge	Shank
		1/2"	5/8"	3/4"	7/8"	1"		
Tube wall reducing tool	TRT	500	625	750	875	1000	Specify Gauge	MT-2 or MT-3

*Larger sizes on request*

## COLLAPSING TOOL

Designed for collapsing the tube in the tube sheet after the tube wall is reduced with the tube wall reducing tool.



Suitable for tubes  
 from 1/2" to 1 1/2" O.D.  
 (12.7 mm to 38.1 mm) O.D.

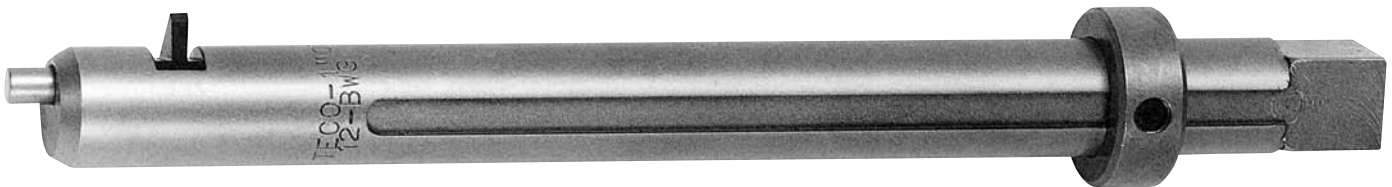
Description	Model no. Prefix	Model size					Shank
		1/2"	5/8"	3/4"	7/8"	1"	
Collapsing tool	TCT	500	625	750	875	1000	No.01

*Standard shank is no. 01, other shank types on request*

*Larger sizes on request*

# TUBE REMOVAL TOOLS

## ONE REVOLUTION TUBE CUTTER NEW MODEL



Suitable for cutting steel and non-ferrous tubes in condensers, heat exchangers and boilers.

Adjustable for tube sheet thickness from 2" to 6" (50.8 mm to 152.4 mm).

Available for tubes from 1/2" to 2 1/2" (12.7 to 63.3 mm) O.D..

The TECO one revolution tube cutter is designed for hand operation using a ratchet or hand wrench of proper size to fit the drive shank of the tool. The cutter bit operates

on an eccentric principle. With the cutter bit in the closed position insert the cutter into the tube to be cut. Apply wrench and turn in a clockwise direction. The tool bit will move out and pierce the tube wall. Continued turning and cut the tube off in one revolution. The cutter is then turned counterclockwise slightly to close in the bit allowing the cutter to be removed from the tube.

The TECO one revolution tube cutter can also be used to puncture the tube before plugging. This ensures that pressure cannot build up in the tube and cause the plug to become loose or blow out.

Tube O.D.	10 Gauge	11 Gauge	12 Gauge	13 Gauge	14 Gauge	15 Gauge	16 and 17 Gauge	18 and 19 Gauge	Cutter Bit
1/2" (12.70 mm)								TCOR- 500-18	CB- 625-7-12N
5/8" (15.88 mm)	TCOR- 625-10	TCOR- 625-11	TCOR- 625-12						CB- 625-7-12N
5/8" (15.88 mm)				TCOR- 625-13	TCOR- 625-14	TCOR- 625-15			CB- 625-13-15N
5/8" (15.88 mm)							TCOR- 625-16	TCOR- 625-18	CB- 750-7-11N
3/4" (19.05 mm)	TCOR- 750-10	TCOR- 750-11							CB- 750-7-11N
3/4" (19.05 mm)			TCOR- 750-12	TCOR- 750-13	TCOR- 750-14	TCOR- 750-15	TCOR- 750-16	TCOR- 750-18	CB- 750-12-19N
7/8" (22.22 mm)	TCOR- 875-10	TCOR- 875-11	TCOR- 875-12	TCOR- 875-13	TCOR- 875-14	TCOR- 875-15	TCOR- 875-16	TCOR- 875-18	CB-1000-7-11N
1" (25.40 mm)	TCOR-1000-10	TCOR-1000-11							CB-1000-7-11N
1" (25.40 mm)			TCOR-1000-12	TCOR-1000-13	TCOR-1000-14	TCOR-1000-15	TCOR-1000-16	TCOR-1000-18	CB-1000-12-19N
1 1/4" (31.75 mm)	TCOR-1250-10	TCOR-1250-11	TCOR-1250-12	TCOR-1250-13	TCOR-1250-14	TCOR-1250-15	TCOR-1250-16	TCOR-1250-18	CB-1000-12-19N
1 1/2" (38.10 mm)	TCOR-1500-10	TCOR-1500-11	TCOR-1500-12	TCOR-1500-13	TCOR-1500-14	TCOR-1500-15	TCOR-1500-16	TCOR-1500-18	CB-1500-10-19N
1 3/4" (44.45 mm)	TCOR-1750-10	TCOR-1750-11	TCOR-1750-12	TCOR-1750-13	TCOR-1750-14	TCOR-1750-15	TCOR-1750-16	TCOR-1750-18	CB-1500-10-19N
2" (50.80 mm)	TCOR-2000-10	TCOR-2000-11	TCOR-2000-12	TCOR-2000-13	TCOR-2000-14	TCOR-2000-15	TCOR-2000-16	TCOR-2000-18	CB-1500-10-19N
2 1/4" (57.15 mm)	TCOR-2250-10	TCOR-2250-11	TCOR-2250-12	TCOR-2250-13	TCOR-2250-14	TCOR-2250-15	TCOR-2250-16	TCOR-2250-18	CB-2250-10-19N
2 1/2" (63.50 mm)	TCOR-2500-10	TCOR-2500-11	TCOR-2500-12	TCOR-2500-13	TCOR-2500-14	TCOR-2500-15	TCOR-2500-16	TCOR-2500-18	CB-2250-10-19N

*Other sizes and/or special reaches on request.*

## TWO PIECE TUBE PLUGS

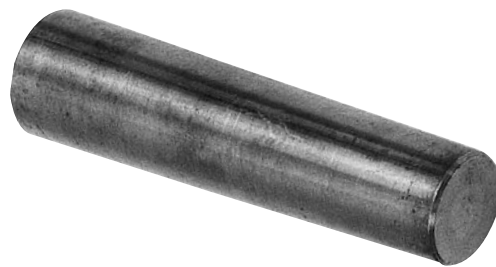


For sealing off leaky condenser and heat exchanger tubes without damaging tube sheets. Tapered pin is driven into ring, which is tapered on the inside and is parallel to tube on the outside. This gives even expansion to the ring and a long contact to the seal.

Available in a variety of metals.  
Specify Tube O.D. and Gauge.

*Note: Puncture the tube to ensure that pressure cannot build up in the tube and cause the plugs to loosen or blowout.*

## TAPERED TUBE PLUGS



Ideal for sealing leaky tubes in condensers or heat exchangers.  
Just drive a plug into each end of leaky tube.

Available in a variety of metals.  
Specify Tube O.D. and Gauge.



## TUBE PLUGS

### INTRODUCTION

TECO produces a range of "TECO PLUG" tube plugs, which are used in heat exchangers to maintain a safe and leak-tight seal under the most severe conditions. The TECO Plugs are used in leaking tubes or as a preventive seal. The TECO plugs are characterized by the simple, quick and especially safe installation, and also the extreme durable character of this system.

### ORDERING INFORMATION

When ordering the TECO plugs, please provide the following information:

1. Tube OD and wall thickness and/or measured tube ID.
2. Thickness of tube sheet, diameter and pitch of the tubes.
3. Tube and tube sheet material.
4. Maximum pressure and temperature.
5. Type of tube-to-tube sheet joint (rolled and/or welded etc).
6. Is there a water head/divider plate, and if yes, also all the dimensions.
7. Condition of tubes and age of heat exchanger.

### TECO PLUG®

### INSTALLATION EQUIPMENT

The installation equipment hydraulically installs TECO plugs in seconds. The package is compact and easy to use.

#### The total package includes:

- Specially designed TECO hydraulic ram.
- Air activated hydraulic pump.
- High pressure hose (3m).
- Pressure gauge.
- Storage box.

### STANDARD MATERIALS

#### The plugs are available in the following materials:

Carbon Steel – C  
 Brass – B  
 Stainless steel 316L – S  
 Monel – M

For alternative materials, such as Titanium you can contact TECO.

Always ensure that you use a compatible plug for each type of tube to prevent thermal and/or chemical reactions occurring.

**Replace the letter X by the code of the requested material (as mentioned above)**

TECO Plug kit	Tube ID. (mm)	Complete pull rod & plug Positioner diameter	Complete pull rod extension
IPK – 100 – X	10.0 – 10.5	IPST – 100 –110 Diameter 10 mm	IPSTV-100-125-300
IPK – 105 – X	10.5 – 11.0		
IPK – 110 – X	11.0 – 11.5		
IPK – 115 – X	11.5 – 12.0	IPST – 115 –125 Diameter 11.5 mm	IPSTV-100-125-300
IPK – 120 – X	12.0 – 12.5		
IPK – 125 – X	12.5 – 13.0		
IPK – 130 – X	13.0 – 13.5	IPST – 130-145 Diameter 13 mm	IPSTV-130-165-300
IPK – 135 – X	13.5 – 14.0		
IPK – 140 – X	14.0 – 14.5		
IPK – 145 – X	14.5 – 15.0	IPST – 150-165 Diameter 15 mm	IPSTV-130-165-300
IPK – 150 – X	15.0 – 15.5		
IPK – 155 – X	15.5 – 16.0		
IPK – 160 – X	16.0 – 16.5	IPST – 170-190 Diameter 17 mm	IPSTV-170-300-300
IPK – 165 – X	16.5 – 17.0		
IPK – 170 – X	17.0 – 17.5		
IPK – 175 – X	17.5 – 18.0	IPST – 195-215 Diameter 19.5 mm	IPSTV-170-300-300
IPK – 180 – X	18.0 – 18.5		
IPK – 185 – X	18.5 – 19.0		
IPK – 190 – X	19.0 – 19.5	IPST – 220-240 Diameter 22 mm	IPSTV-170-300-300
IPK – 195 – X	19.5 – 20.0		
IPK – 200 – X	20.0 – 20.5		
IPK – 205 – X	20.5 – 21.0	IPST – 245-265 Diameter 24.5 mm	IPSTV-170-300-300
IPK – 210 – X	21.0 – 21.5		
IPK – 215 – X	21.5 – 22.0		
IPK – 220 – X	22.0 – 22.5	IPST – 270-290 Diameter 27 mm	IPSTV-170-300-300
IPK – 225 – X	22.5 – 23.0		
IPK – 230 – X	23.0 – 23.5		
IPK – 235 – X	23.5 – 24.0		
IPK – 240 – X	24.0 – 24.5		
IPK – 245 – X	24.5 – 25.0		
IPK – 250 – X	25.0 – 25.5		
IPK – 255 – X	25.5 – 26.0		
IPK – 260 – X	26.0 – 26.5		
IPK – 265 – X	26.5 – 27.0		
IPK – 270 – X	27.0 – 27.5		
IPK – 275 – X	27.5 – 28.0		
IPK – 280 – X	28.0 – 28.5		
IPK – 285 – X	28.5 – 29.0		
IPK – 290 – X	29.0 – 29.5		

A kit consists of : 10 pcs. plugs, 1 pcs. tube cleaning brush and 1 pcs. caliper



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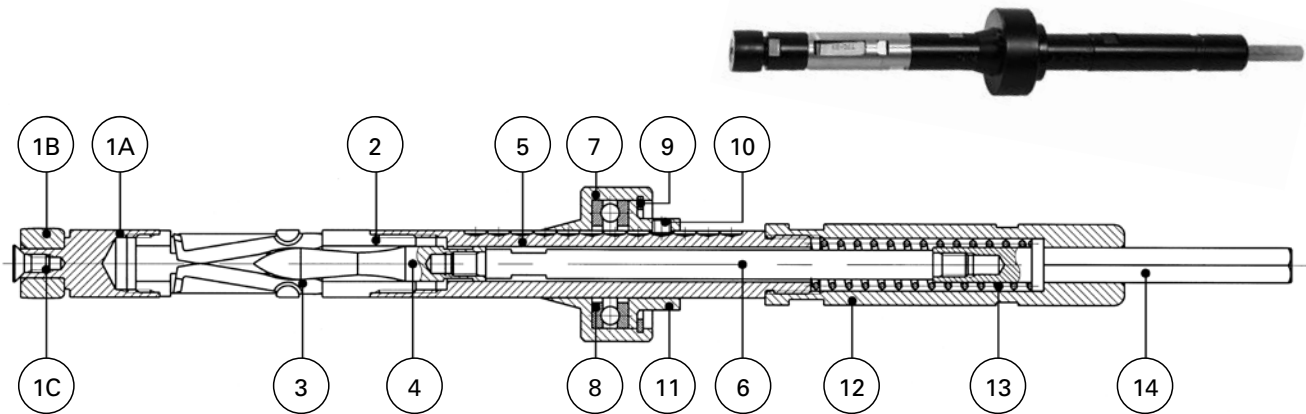
## TECO PTC INTERNAL TUBE CUTTERS

Are available for tube sizes 5/8" – 1 1/8" OD (16 – 28 mm). Other sizes and/or special body tip for larger walls are optional. Standard adjustable reach of 4 7/16" (110 mm) with optional longer reaches available.

"A" Reach = 7 7/16" (188 mm),  
"C" Reach = 10 15/16" (277 mm).

Two piece body and mandrel construction allow for quick and easy tool bit replacement. Optimum tube cutting performance and tooling life are obtained when employed by the TECO Cutter Feed Assist. Cutter Bits are now standard with Tin coating, increasing the cutter bit life. TECO PTC tube cutters are sold with a complete set of pilots.

**Not shown: *Trimming attachment***, to be used in conjunction with the push type cutter, to cut the tube protrusion in front of the tube sheet.



## PART LIST TUBE CUTTER TYPE PTC

		5/8" OD (16mm) 16-21 GA.	3/4"OD (19 mm) 14-22 GA.	7/8"OD (22 mm) 16-22 GA.	1"OD (25 mm) 12-22 GA.	1 1/8"OD (28 mm) 12-22 GA.
NO.	Part Name	Part No.	Part No.	Part No.	Part No.	Part No.
	<b>Complete PTC Cutter</b>	<b>PTC-625 17000625</b>	<b>PTC-750 17000750</b>	<b>PTC-875 17000875</b>	<b>PTC-1000 17001000</b>	<b>PTC-1125 17001125</b>
1.A	Pilot Body	17100625	17100750	17100875	17101000	17101125
1.B	Pilot	11490616	11490714	11490816	11491012	11491112
		11490617	11490715	11490817	11491013	11491113
		11490618	11490716	11490818	11491014	11491114
		11490619	11490717	11490819	11491015	11491115
		11490620	11490718	11490820	11491016	11491116
		11490621	11490719	11490822	11491017	11491117
			11490720		11491018	11491118
			11490721		11491019	11491119
					11491020	11491120
					11491022	11491122
2	Body Tip	17200625	17200750	17200875	17201000	17201125
3*	Tool Bit set	PTC-43-10°	PTC-3-10°	PTC-53-10°	PTC-33-10°	PTC-33-10°
3*	Tool Bit set	PTC-43-15°	PTC-3-15°	PTC-53-15°	PTC-33-15°	PTC-33-15°
4	Mandrel Tip	17400625	17400750	17400875	17400875	17401125
5	Body Extension	17500625	17500750	17500875	17501000	17501125
6	Mandrel Extension	17600625	17600625	17600875	17600875	17600875
7	Thrust Body	17700625	17700750	17700875	17701000	17701125
8	Bearing	1201102	1201102	1201104	1201104	1201105
9	Thrust Spring	J-28-V.	J-28-V	J-35 V	J-35-V	J-42-V
10	Set Screw	M5x5	M5x5	M5x5	M5x5	M5x5
11	Thrust Nut	17110625	17110750	17110875	17111000	17111125
12	Spring Housing	17120625	17120625	17120625	17120625	17120625
13	Spring	PTC-625-13	PTC-625-13	PTC-625-13	PTC-625-13	PTC-625-13
14	Driver	17140625	17140625	17140625	17140625	17140625
15	Trim Thrust Body	17150625	17150750	17150875	17151000	17151125
16	Trim Collar	17160625	17160750	17160875	17161000	17161125
17	Trim Attachment	17170625	17170750	17170875	17171000	17171125

\* Choice of cutter bits depends on tube material and wall thickness of the tube. Lifetime of the cutter bits can be increased by using a proper cutting lubricant.

## AIR-DRIVEN CUTTER FEED ASSIST



Model number	Free speed	Governed speed	Weight	Air inlet
CF-150-500	600 rpm	150 – 550 rpm	4.8 kg.	1/4" NPT
CF-400-1200	1250 rpm	400 – 1200 rpm	4.8 kg.	1/4" NPT

*Minimum hose size : 1/4" ( 6 mm )*

Increase your productivity with the TECO air-driven Cutter Feed Assist. The Cutter Feed Assist is designed to aid the TECO PTC Push Type Tube Cutters for OD tube sizes of 5/8" through 1" (15.9 - 25.4 mm). Powered by an air-driven variable speed drill.

### FEATURES

- Constant pressure on tube cutting surface increases tool bit life, more time cutting tubes, less time changing bits.
- Independent cutter bit feed trigger for operator safety.
- Positive feed stop controls tube cutting depth.
- Easy operation reduces operator fatigue, increasing productivity.
- RPM speed control dial on powerful Drills accommodate various tube sizes and materials for optimum tube cutting speed, increasing your productivity.
- Saving you valuable time and money.
- Simple tube cutter size change over for easy set up.
- Compact design allows the Cutter Feed Assist easier access to confined areas.

## RECOMMENDED CUTTING SPEEDS FOR TUBE CUTTER, TUBE-END FACERS AND WELD REMOVAL TOOLS

Tube Material	Tube O.D.									
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	2"
Aluminium (153 mtr / min)	7500 Rpm	5000 Rpm	3800 Rpm	3000 Rpm	2500 Rpm	2200 Rpm	1900 Rpm	1500 Rpm	1275 Rpm	950 Rpm
Brass (92 mtr / min)	4600 Rpm	3050 Rpm	2300 Rpm	1825 Rpm	1525 Rpm	1300 Rpm	1150 Rpm	925 Rpm	750 Rpm	575 Rpm
Copper (76 mtr / min)	3825 Rpm	2550 Rpm	1900 Rpm	1525 Rpm	1275 Rpm	1100 Rpm	950 Rpm	750 Rpm	625 Rpm	500 Rpm
Carbon steel (43 mtr / min)	2150 Rpm	1425 Rpm	1075 Rpm	850 Rpm	700 Rpm	625 Rpm	525 Rpm	425 Rpm	350 Rpm	275 Rpm
Stainless steel (29 mtr / min)	1000 Rpm	660 Rpm	500 Rpm	400 Rpm	330 Rpm	285 Rpm	250 Rpm	200 Rpm	165 Rpm	125 Rpm
Titanium (9.5 mtr / min)	450 Rpm	300 Rpm	230 Rpm	185 Rpm	155 Rpm	130 Rpm	115 Rpm	95 Rpm	75 Rpm	60 Rpm
Inconel (6 mtr / min)	305 Rpm	205 Rpm	155 Rpm	125 Rpm	100 Rpm	90 Rpm	75 Rpm	60 Rpm	50 Rpm	40 Rpm

The recommended cutting speeds above are based on published speeds and feeds. A slower speed may be necessary depending on tube material analysis and hardness. Proper lubricant must be used.

# TUBE REMOVAL TOOLS

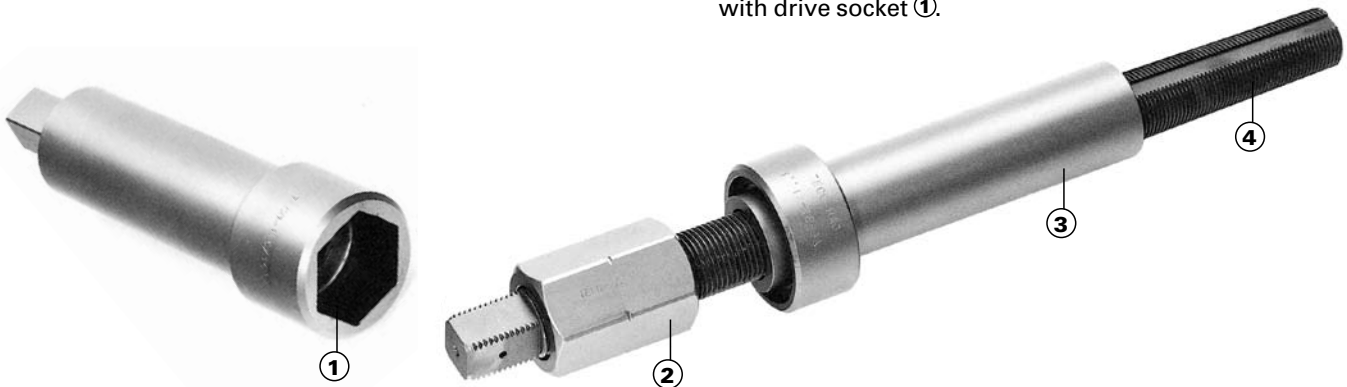
## MANUAL TUBE PULLER

This newly designed tool is used for extracting tubes from the tube sheet holes without damaging the tube sheet holes.

Available for tubes from 1/2" to 1 1/2" (12.7 mm to 38.1 mm) O.D.

## FEATURES

- Easy to use.
- No external power necessary.
- Can be used with an impact wrench in combination with drive socket ①.



Tube Size O.D. and GA	Model no.	Spear ④ no.	Diameter small end	Diameter large end	Square on spear	Collar ③ no.	Nut ② Hex 1 5/16"	Socket ① Hex 1 5/16" Square 5/8"
1/2"-14-20	MTP-1/2"-14-20	MTPS-1	.315" 8 mm	.472" 12 mm	5/8"	MPC-1/2"	MPN	MPS
5/8"-11-14	MTP-5/8"-11-14	MTPS-2	.354" 9 mm	.512" 13 mm	5/8"	MPC-5/8"	MPN	MPS
5/8"-14-20	MTP-5/8"-14-20	MTPS-3	.453" 11.5 mm	.610" 15.5 mm	5/8"	MPC-5/8"	MPN	MPS
3/4"-10-13	MTP-3/4"-10-13	MTPS-3	.453" 11.5 mm	.610" 15.5 mm	5/8"	MPC-3/4"	MPN	MPS
3/4"-14-20	MTP-3/4"-14-20	MTPS-4	.571" 14.5 mm	.728" 18.5 mm	5/8"	MPC-3/4"	MPN	MPS
7/8"-14-19	MTP-7/8"-14-19	MTPS-5	.689" 17.5 mm	.846" 21.5 mm	5/8"	MPC-7/8"	MPN	MPS
1"-9-13	MTP-1"-9-13	MTPS-5	.689" 17.5 mm	.846" 21.5 mm	5/8"	MPC-1"	MPN	MPS
1"-14-20	MTP-1"-14-20	MTPS-6	.823" 20.9 mm	.980" 24.9 mm	5/8"	MPC-1"	MPN	MPS
1"-17-24	MTP-1"-17-24	MTPS-7	.866" 22 mm	1.024" 26 mm	5/8"	MPC-1"	MPN	MPS
1 1/8"-11-15	MTP-1 1/8"-11-15	MTPS-7	.866" 22 mm	1.024" 26 mm	5/8"	MPC-1 1/8"	MPN	MPS
1 1/8"-15-23	MTP-1 1/8"-15-23	MTPS-8	.965" 24.5 mm	1.122" 28.5 mm	5/8"	MPC-1 1/8"	MPN	MPS
1 1/4"-10-13	MTP-1 1/4"-10-13	MTPS-8	.965" 24.5 mm	1.122" 28.5 mm	5/8"	MPC-1 1/4"	MPN	MPS
1 1/4"-14-19	MTP-1 1/4"-14-19	MTPS-9	1.063" 27 mm	1.220" 31 mm	5/8"	MPC-1 1/4"	MPN	MPS
1 1/2"-12-17	MTP-1 1/2"-12-17	MTPS-10	1.268" 32.2 mm	1.425" 36.2 mm	5/8"	MPC-1 1/2"	MPN	MPS

# TECO TUBE PULLING SYSTEMS

## UNIVERSAL HYDRAULIC PUMPS



### Model no.: **TZE-5420-SPR**

- Electro Hydraulic Pump:  
2.2 kW 220 Volt - 3 Ph -50/60 Hz.  
2.2 kW 400 Volt - 3 Ph -50/60 Hz.
- Two-Stage pump flow capacity:  
11.27 Ltr./min. at 0-50 bar.  
1.64 Ltr./min. at 50-700 bar.
- Oil tank capacity: 20 litre.
- Electric Solenoid 4/3-way valve: 24 Volt A.C.
- Remote control: Hand, Foot switch is optional.
- Frame size: L 75 cm x W 64 cm x H 78 cm,  
L 30" x W 26" x H 31",  
provided with ball bearing type swivel wheels  
and brakes.
- Glycerine filled pressure gauge scale 0-700 bar.
- Complete with set of hydraulic hoses, 6 metres  
(20 feet) long, with High-Flow quick couplings.
- Weight complete: 85 kg.

*Other models and power supplies are available on request.*

### Model no.: **TZA-4420-SPR**

- Air-Driven Hydraulic Pump 2.2 kW Air-motor.
- Air consumption: 2400 Ltr./min.
- Air pressure: 6 bar (84 Psi).
- Two-Stage pump flow capacity:  
11.1 Ltr./min. at 0-50 bar.  
1.31 Ltr./min. at 50-700 bar.
- Oil tank capacity: 20 litre.
- Pneumatic operated 4/3-way valve.
- Remote control: Foot switch.
- Frame size: L 75 cm x W 64 cm x H 78 cm,  
L 30" x W 26" x H 31",  
provided with ball bearing type swivel wheels  
and brakes.
- Glycerine filled pressure gauge scale 0-700 bar.
- Complete with set of hydraulic hoses, 6 metres  
(20 feet) long, with High-Flow quick couplings.
- Weight complete: 70 kg.

# TECO TUBE PULLING SYSTEMS

## HYDRAULIC RAM FOR GRIPPER TYPE TUBE PULLER



Model no. : **RD-96-155-SP-7**

Lightweight Hydraulic Double Acting Ram.

Capacity : 7 ton pulling power at 700 bar.  
 Stroke : 155 mm (6")  
 Cylinder O.D. : 65 mm (2 1/2")  
 Length : 600 mm (23 1/2")  
 Weight : 9 kg (20 lbs)

Model no. : **BRD-166-155-SP-11**

Lightweight Hydraulic Double Acting Ram.

Capacity : 11 ton pulling power at 700 bar.  
 Stroke : 155 mm (6")  
 Cylinder O.D. : 80 mm (3 1/8")  
 Length : 630 mm (25")  
 Weight : 13 kg (28 lbs)



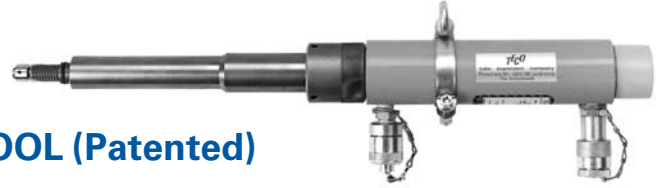
COLLAR TUBING ⑤	
Tube Size	Model No
5/8" O.D.	CTTP-625
3/4" O.D.	CTTP-750
7/8" O.D.	CTTP-875
1" O.D.	CTTP-1000
1 1/8" O.D.	CTTP-1125
1 1/4" O.D.	CTTP-1250

COLLAR HOUSING ⑥	
Ram Model no.	Model No
RD-96-155-SP-7	CHTP-96
BRD-166-155-SP-11	CHTP-166

ADAPTER GRIPPER ⑦	
Ram Model no.	Model No
RD-96 & BRD-166	ACTP-7/16"-20
RD-96 & BRD-166	ACTP-1/2"-20
RD-96 & BRD-166	ACTP-5/8"-20



# HYDRAULIC OPERATED GRIPPER TYPE TUBE PULLER FOR CONDENSER TUBES

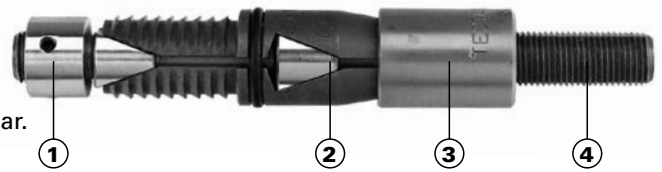


## VERY FAST - EASY TO USE - LIGHT TOOL (Patented)

When re-tubing condenser and other similar types of unit containing non-ferrous tubes this specially developed Hydraulic Gripper Tube Puller removes tubes or tube stubs without damaging the tube sheet holes. This unit can pull up to 4 to 6 tubes per minute. The hydraulic ram has a single cycle stroke of 6 inch and a pulling power of 7 or 11 tons. The hydraulic pump operates at a pressure of 700 Bar and has High-Flow quick couplings.

## THE HYDRAULIC GRIPPER TUBE PULLER CONSISTS OF

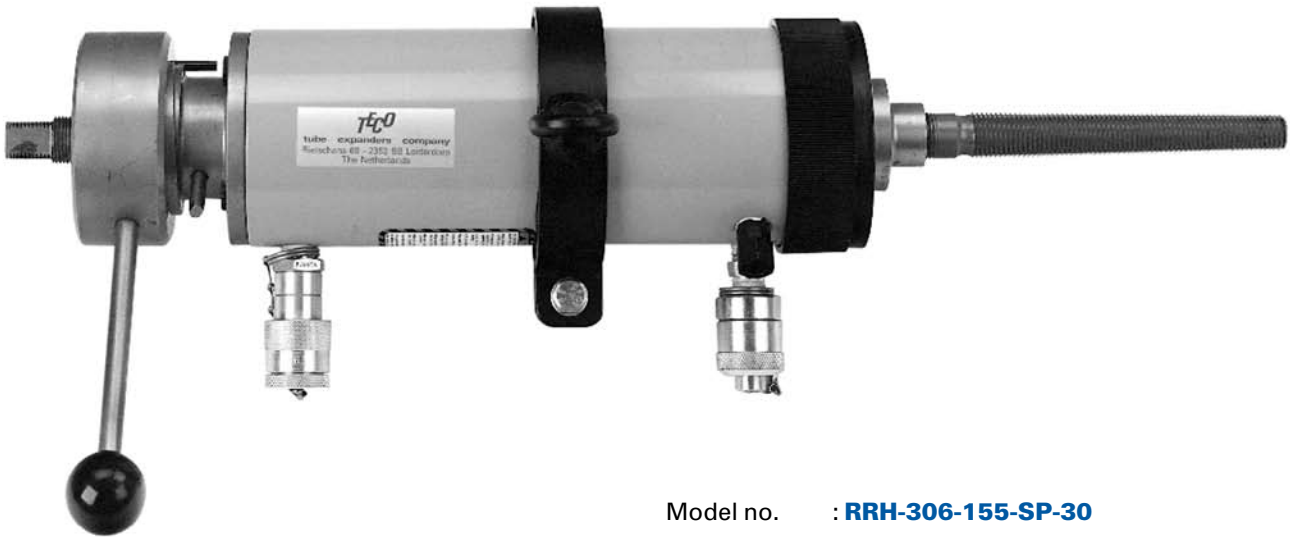
- Gripper tube puller unit (Patented) containing:
  1. Stop nut.
  2. Replaceable Gripper shells.
  3. Bushing.
  4. Puller mandrel.
- Hydraulic Ram either: 7 or 11 tons pulling power with collar.
- Hydraulic Pump (electric or pneumatic) see page 45.
- Hand or Foot-switch, pump will only run when switch is operated.
- Connection hose with High-Flow quick couplings.



Tube Size	Model No.	Grippers set ②	Puller Mandrel ④	Stop-Nut ①	Bushing ③
5/8" O.D.-15 Gauge 16 mm O.D. to 12.22 mm I.D.	CTP – 12 mm	GCTP – 12 mm	MCTP – 12 mm	SCTP-11/32"-24	BCTP-7/16"-20
5/8" O.D.-16-17 Gauge 16 mm O.D. to 12.57-12.92 mm I.D.	CTP – 12.5 mm	GCTP – 12.5 mm	MCTP – 12.5 mm	SCTP-11/32"-24	BCTP-7/16"-20
5/8" O.D.-18-19 Gauge 16 mm O.D. to 13.38-13.74 mm I.D.	CTP – 13 mm	GCTP – 13 mm	MCTP – 13 mm	SCTP-3/8"-24	BCTP-7/16"-20
5/8" O.D.-20-22 Gauge 16 mm O.D. to 14.10-14.45 mm I.D.	CTP – 14 mm	GCTP – 14 mm	MCTP – 14 mm	SCTP-3/8"-24	BCTP-7/16"-20
3/4" O.D.-15-16 Gauge 19.05 mm O.D. to 15.39-15.75 mm I.D.	CTP – 15 mm	GCTP – 15 mm	MCTP – 15 mm	SCTP-7/16"-20	BCTP-7/16"-20
3/4" O.D.-17-19 Gauge 19.05 mm O.D. to 16.10-16.90 mm I.D.	CTP – 16 mm	GCTP – 16 mm	MCTP – 16 mm	SCTP-7/16"-20	BCTP-7/16"-20
3/4" O.D.-20-22 Gauge 19.05 mm O.D. to 17.27-17.63 mm I.D.	CTP – 17 mm	GCTP – 17 mm	MCTP – 17 mm	SCTP-7/16"-20	BCTP-7/16"-20
7/8" O.D.-14-16 Gauge 22.20 mm O.D. to 18.00-18.92 mm I.D.	CTP – 18 mm	GCTP – 18 mm	MCTP – 18 mm	SCTP-7/16"-20	BCTP-7/16"-20
7/8" O.D.-17-18 Gauge 22.20 mm O.D. to 19.28-19.74 mm I.D.	CTP – 19 mm	GCTP – 19 mm	MCTP – 19 mm	SCTP-1/2"-20	BCTP-1/2"-20
7/8" O.D.-19-22 Gauge 22.20 mm O.D. to 20.10-20.80 mm I.D.	CTP – 20 mm	GCTP – 20 mm	MCTP – 20 mm	SCTP-1/2"-20	BCTP-1/2"-20
1" O.D.-14-15 Gauge 25.40 mm O.D. to 21.18-21.74 mm I.D.	CTP – 21 mm	GCTP – 21 mm	MCTP – 21 mm	SCTP-1/2"-20	BCTP-1/2"-20
1" O.D.-16-18 Gauge 25.40 mm O.D. to 22.10-22.91 mm I.D.	CTP – 22 mm	GCTP – 22 mm	MCTP – 22 mm	SCTP-1/2"-20	BCTP-1/2"-20
1" O.D.-19-22 Gauge 25.40 mm O.D. to 23.30-23.97 mm I.D.	CTP – 23 mm	GCTP – 23 mm	MCTP – 23 mm	SCTP-1/2"-20	BCTP-1/2"-20
1 1/8" O.D.-14-15 Gauge 28.50 mm O.D. to 24.35-24.91 mm I.D.	CTP – 24 mm	GCTP – 24 mm	MCTP – 24 mm	SCTP-1/2"-20	BCTP-1/2"-20
1 1/8" O.D.-16-17 Gauge 28.50 mm O.D. to 25.20-25.63 mm I.D.	CTP – 25 mm	GCTP – 25 mm	MCTP – 25 mm	SCTP-1/2"-20	BCTP-1/2"-20
1 1/8" O.D.-18-19 Gauge 28.50 mm O.D. to 26.09-26.44 mm I.D.	CTP – 26 mm	GCTP – 26 mm	MCTP – 26 mm	SCTP-5/8"-18	BCTP-5/8"-18
1 1/4" O.D.-14 Gauge 31.75 mm O.D. to 27.53 mm I.D.	CTP – 27 mm	GCTP – 27 mm	MCTP – 27 mm	SCTP-5/8"-18	BCTP-5/8"-18
1 1/4" O.D.-15-17 Gauge 31.75 mm O.D. to 28.09-28.80 mm I.D.	CTP – 28 mm	GCTP – 28 mm	MCTP – 28 mm	SCTP-5/8"-18	BCTP-5/8"-18
1 1/4" O.D.-18-20 Gauge 31.75 mm O.D. to 29.26-29.97 mm I.D.	CTP – 29 mm	GCTP – 29 mm	MCTP – 29 mm	SCTP-5/8"-18	BCTP-5/8"-18
1 1/4" O.D.-21-22 Gauge 31.75 mm O.D. to 30.12-30.33 mm I.D.	CTP – 30 mm	GCTP – 30 mm	MCTP – 30 mm	SCTP-5/8"-18	BCTP-5/8"-18
1 3/8" O.D.-15 - 16 Gauge 34.93 mm O.D. to 31.27-31.63 mm I.D.	CTP – 31 mm	GCTP – 31 mm	MCTP – 31 mm	SCTP-5/8"-18	BCTP-5/8"-18
1 3/8" O.D.-17 - 19 Gauge 34.93 mm O.D. to 32.0 - 32.8 mm I.D.	CTP – 32 mm	GCTP – 32 mm	MCTP – 32 mm	SCTP-5/8"-18	BCTP-5/8"-18
1 3/8" O.D.-20 - 22 Gauge 34.93 mm O.D. to 33.15-33.51 mm I.D.	CTP – 33 mm	GCTP – 33 mm	MCTP – 33 mm	SCTP-5/8"-18	BCTP-5/8"-18
1 1/2" O.D.-15 - 16 Gauge 38.1 mm O.D. to 34.44-34.80 mm I.D.	CTP – 34 mm	GCTP – 34 mm	MCTP – 34 mm	SCTP-5/8"-18	BCTP-5/8"-18
1 1/2" O.D.-17 - 19 Gauge 38.1 mm O.D. to 35.15-35.97 mm I.D.	CTP – 35 mm	GCTP – 35 mm	MCTP – 35 mm	SCTP-5/8"-18	BCTP-5/8"-18

## TECO TUBE PULLING SYSTEMS

### HYDRAULIC RAM FOR SPEAR TYPE TUBE PULLER



Model no. : **RRH-306-155-SP-30**

Lightweight Hydraulic Double Acting Ram.

Capacity : 30 ton pulling power at 700 bar.  
Stroke : 155 mm (6")  
Cylinder O.D. : 120 mm (4 3/8")  
Length : 440 mm (17 3/8")  
Weight : 25 kg (55 lbs)

#### ADAPTER



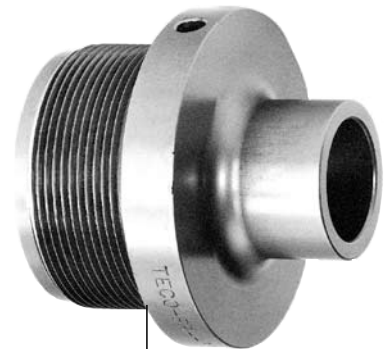
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#### JAW



3

#### COLLAR



4

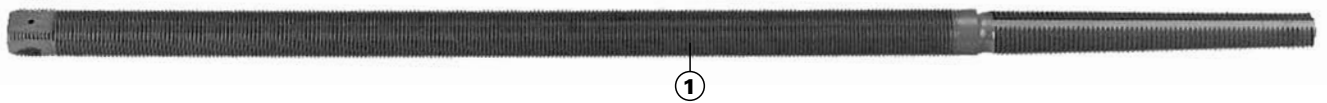
# HYDRAULIC OPERATED SPEAR TYPE TUBE PULLER FOR HEAT EXCHANGER AND BOILER TUBES

The hydraulic spear model tube puller is used to remove tubes from heat exchangers before re-tubing without damaging the tube sheet holes.

The spear is screwed into the relevant tube by means of an impact wrench or slow running nutrunner motor.

The hydraulic cylinder with collar and quick action chuck is placed over the puller mandrel. The jaws are then closed around the thread on the puller mandrel by manual operation.

The tube is now ready to be removed by actuating the hydraulic ram.



## SPEAR TYPE TUBE PULLER

Tube Size O.D. and GA	Model ① Spear no.	Collar ④ no.	Diameter small end	Diameter large end	Square	Thread on rear end of spear	Jaw ③ no.	Adapter ②
1/2"-12-15BWG	HTP-1	HPC-1/2"	.276" 7 mm	.407" 10.3 mm	5/8"	M19x2	M19x2	3/4" x 5/8" or 1" x 5/8"
1/2"-15-22BWG & 5/8"-10-13BWG	HTP-2	HPC-1/2"	.354" 9 mm	.485" 12.3 mm	5/8"	M19x2	M19x2	
5/8"-13-18BWG & 3/4"-9-12BWG	HTP-3	HPC-5/8"	.453" 11.5 mm	.584" 14.8 mm	5/8"	M19x2	M19x2	
5/8"-18-24BWG & 3/4"-12-15BWG	HTP-4	HPC-5/8"	.531" 13.5 mm	.663" 16.8 mm	5/8"	M19x2	M19x2	
3/4"-15-19 BWG, 7/8"-11-13BWG & 1"-7-8BWG	HTP-5	HPC-3/4"	.571" 15.5 mm	.741" 18.8 mm	5/8"	M19x2	M19x2	
7/8"-13-17BWG & 1"-8-11BWG	HTP-6	HPC-7/8"	.689" 17.5 mm	.820" 20.8 mm	3/4"	M25x2	M25x2	3/4" x 3/4" or 1" x 3/4"
1"-11-14BWG & 1 1/8"-7-9BWG	HTP-7	HPC-1"	.748" 19 mm	.879" 22.3 mm	3/4"	M25x2	M25x2	
1"-14-20BWG & 1 1/8"-9-12BWG	HTP-8	HPC-1"	.846" 21.5 mm	.978" 24.8 mm	3/4"	M25x2	M25x2	
1 1/8"-12-15 BWG	HTP-9	HPC-1 1/8"	.905" 23 mm	1.037" 26.3 mm	3/4"	M25x2	M25x2	
1 1/8"-15-24 BWG & 1 1/4"-8-10BWG	HTP-10	HPC-1 1/8"	1.004" 25.5 mm	1.135" 28.8 mm	3/4"	M25x2	M25x2	1" x 3/4"
1 1/4"-14-18 BWG	HTP-11	HPC-1 1/4"	1.083" 27.5 mm	1.214" 30.8 mm	3/4"	M25x2	M25x2	
1 1/4"-18-24 BWG & 1 1/2"-8-10 BWG	HTP-12	HPC-1 1/4"	1.161" 29.5 mm	1.293" 32.8 mm	1"	M30x2	M30x2	
1 1/2"-10-13 BWG	HTP-13	HPC-1 1/2"	1.240" 31.5 mm	1.371" 34.8 mm	1"	M30x2	M30x2	1" x 1" or 1 1/2" x 1"
1 1/2"-13-17 BWG	HTP-14	HPC-1 1/2"	1.319" 33.5 mm	1.450" 36.8 mm	1"	M30x2	M30x2	

## TUBE REMOVAL TOOLS

### SPINNER

TECO has developed an automatic tube spinner capable of running at high speed, tubes out of a heat exchanger, even if the tubes are corroded and dirty. The electric-hydraulic power unit (pneumatic also available) drives two hydraulic motors for extracting tubes up to 1 1/2" outside diameter.

### FEATURES

- Fully self contained hydraulic system with adjustable speed flow control.
- Suspended via a spring balancer for weightless operation.
- Reacts against the tube sheet or the rear of a pulling cylinder.
- Used in conjunction with your existing puller.
- Use simultaneously during pulling operations for maximum productivity.
- Requires only 150 mm tube protrusion to capture the tube.
- Uses Interchangeable pulling collars and roller sets.

#### Power unit:

Electric motor 400 volt, 3 phase, 7.5 kw (10 Hp) or Pneumatic motor with air consumption 3500 Ltr./min. at 6 bar Weight : 230 kg.

#### Complete supplied with :

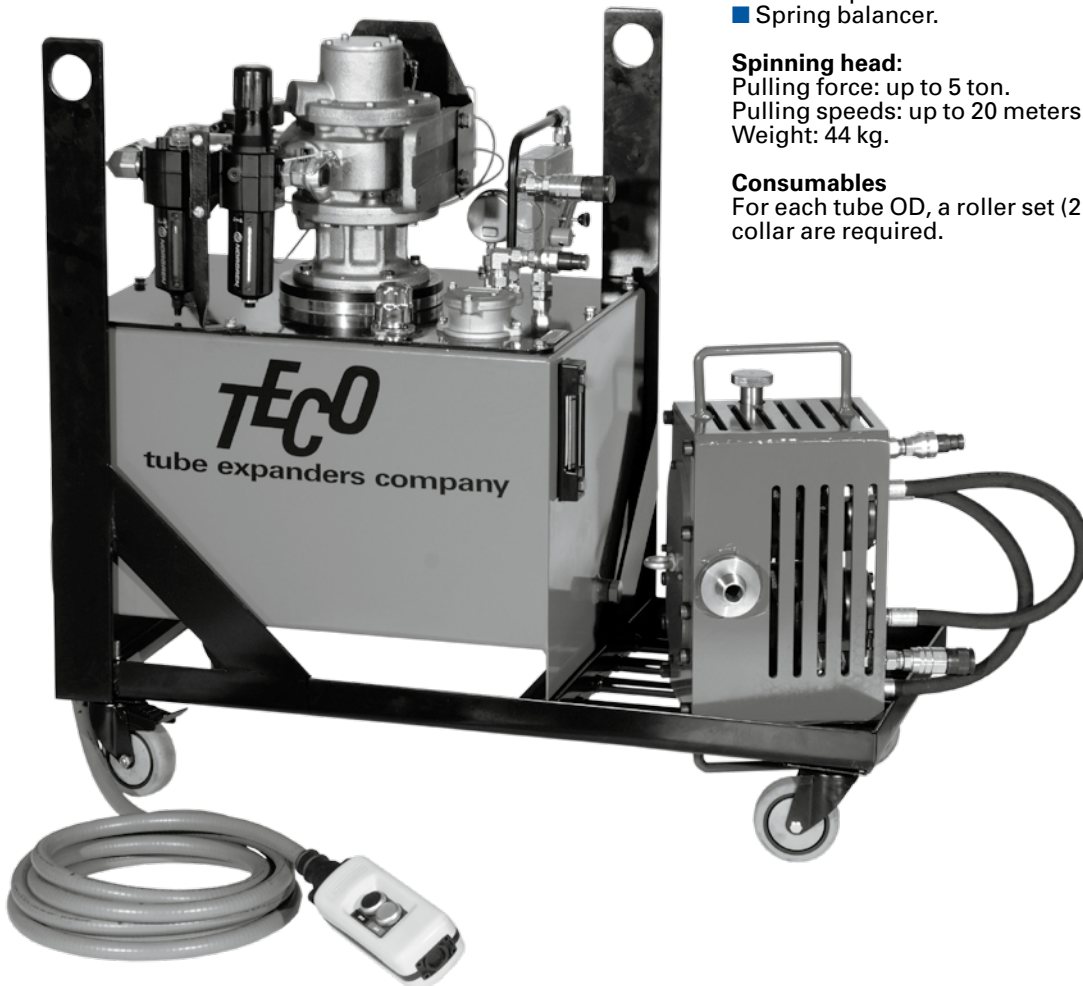
- Hydraulic hose set complete with flat faced couplings, 6 m in length.
- Remote pendant control with 6 m of cable.
- Spring balancer.

#### Spinning head:

Pulling force: up to 5 ton.  
Pulling speeds: up to 20 meters per minute.  
Weight: 44 kg.

#### Consumables

For each tube OD, a roller set (2 per set) and a pulling collar are required.



## TECO HYDRAULIC PIPE VICE

The air driven foot operated hydraulic pipe vice is used to remove the tube puller spear from the tube after the tube extraction process.



Model no. : **THPV-10-65**

Complete with power pack, hose, and replaceable jaws.

Tube size capacity : 10 - 65 mm O.D.  
3/8" - 2 1/2" O.D.

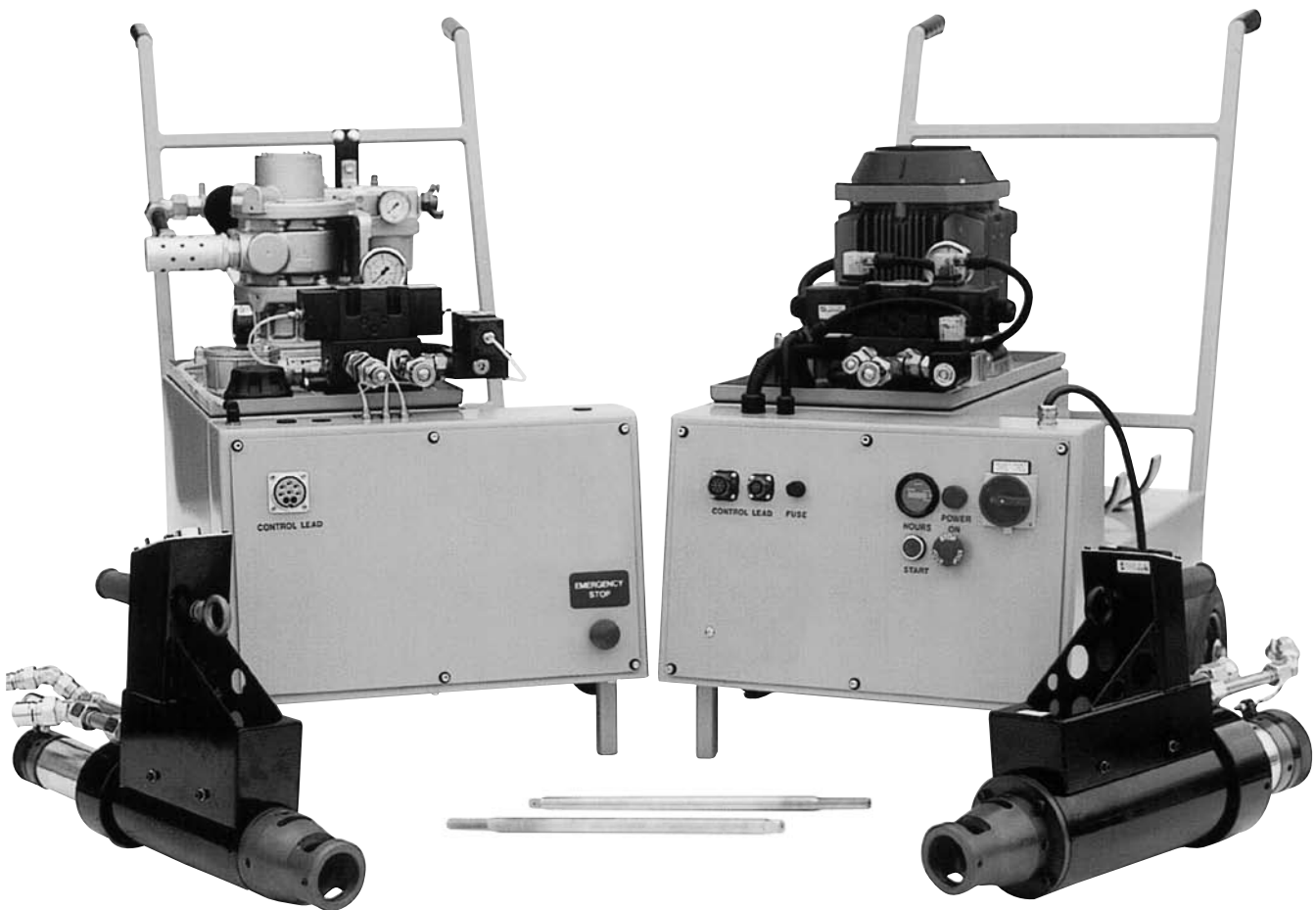
Clamping power : 10 Ton

Air consumption : 340 Ltr./min.  
12 cfm

Air pressure range: 2.7 - 8.3 bar  
39 - 125 psi

## AUTOMATIC & CONTINUOUS TUBE PULLING

TECO has introduced the most efficient range of continuous tube pullers. This semi or fully automatic TUBE PULLER will run tubes out of heat exchangers and condensers without the need to cut the tube prior to pulling.



### FEATURES

- Continuous pull capacity up to 3" O.D.
- Easy to set up and use.
- High power and high speed automatic cycling.
- Proven mandrel and pulling jaw system.
- Electric or pneumatic versions available.
- 'Slow-start' to minimise the risk of tube breakage.
- Standard electric, hydraulic and pneumatic components.
- 24 volt operator controls for added safety.
- Interchangeable pulling guns.

*Complete catalogue available on request.*

#### 15 Ton Gun

For light duty, high speed work on tubes of diameter 3/8" to 1" O.D. e.g. condenser work.  
Free pulling speed : 4.5 m/min. (15 ft/min.)

#### 30 Ton Gun

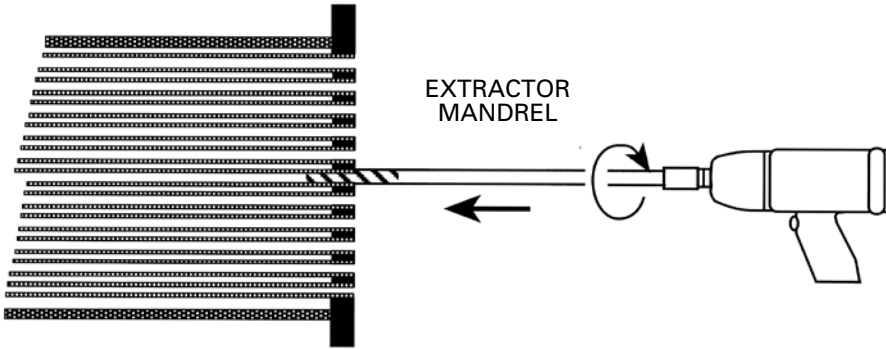
For all tube sizes from 3/8" to 1 1/2" O.D. continuously through the gun and to 3" O.D. stub pulling.  
Free pulling speed : 3 m/min. (10 ft/min.)

#### 45 Ton Gun

For all tube sizes up to 3" O.D. continuously through the gun and stub pulling applications on boilers and steam drums.

# AUTOMATIC & CONTINUOUS TUBE PULLING

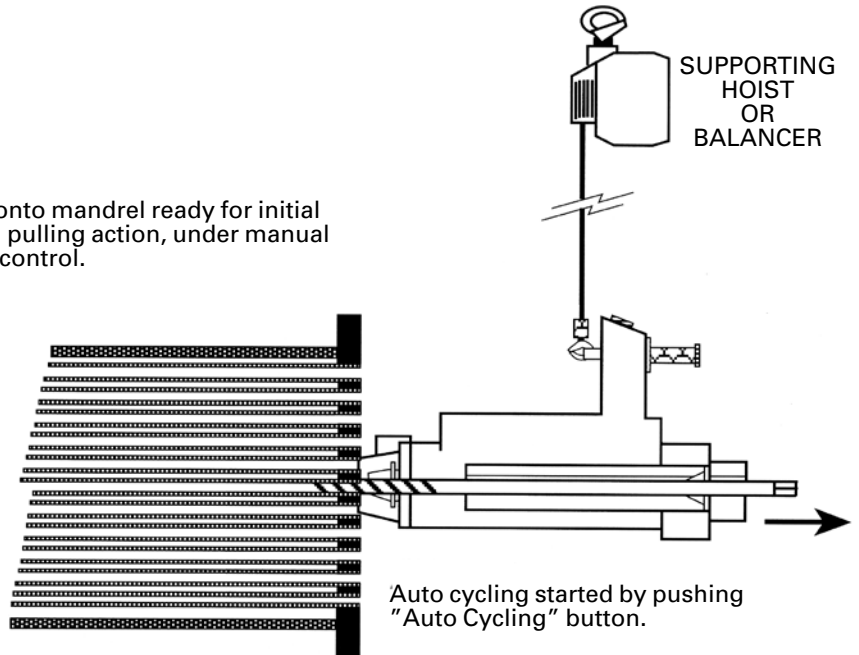
Secure Extractor Mandrel using impact wrench



## AS SIMPLE AS A B C

- No need for tube cutting, thinning or collapsing.
- Pulls both front and back expansion in one simple action.

Gun loaded onto mandrel ready for initial "Slow Start" pulling action, under manual push button control.



Gun Auto Cycling, continue until tube is free enough to pull by hand or until tube is fully extracted.

