

Airetool®

Product Catalog



Condenser & Boiler Expanders

Rolling Controls

Pipe & Tube Cleaners

Installation & Removal Tools



Equipment Group International



The Airetool® family of tube service tools is one of the most diverse in the heat transfer industry with a broad selection of tube expanders, tube rolling controls, tube cleaners, and re-tubing tools to cover various applications.

Airetool®

Tools that perform

Improving production rates and decreasing cost are critical to the success of today's manufacturer or contractor. The Airetool line of tools are designed and manufactured to perform consistently time after time. When it comes to performance and reliability, there is no doubt as to why manufacturers and contractors around the world have come to rely on the Airetool brand of products.

Tools of the highest quality

When we say our tools are built well, we really mean it. Equipment Group International has brought back the exacting quality that Airetool brand is known for. While manufacturing in the USA to the highest standard.

Tools that work with the operator

It is simple... give an operator a tool that is comfortable to use and the operator will work better. Airetool tool balancing systems do just that, coupled with extending expander or associated tooling life.



Tube Removal Tools

Tube Drifts & Collapsing Tools



Tube Drifts and Collapsing Tools

For the quick removal of tube stubs from tube sheets.

- For 1/2" - 1" (12.7 - 25.4mm) OD tubes.
- Select 01 or 06 style shanks.
- 15 style jumbo shanks stocked and available by request.
- Standard length is 6". Longer length available upon request.

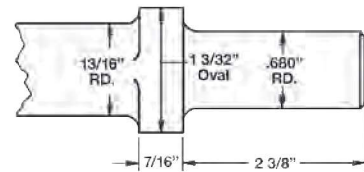
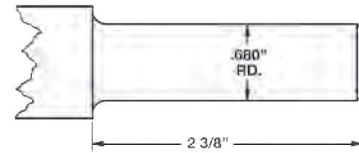


Tube Drifts

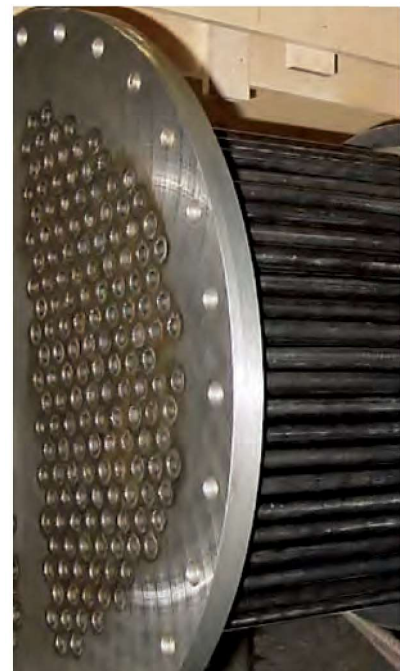
Tube O.D.		Gauge	Description / Order Number	
in.	mm		-01 Shank	-06 Shank
1/2	12.7	12	TD 500 12 01 (2952840)	TD 500 12 06 (2952890)
1/2	12.7	14	TD 500 14 01 (2953200)	TD 500 14 06 (2953250)
1/2	12.7	16	TD 500 16 01 (2953560)	TD 500 16 06 (2953610)
1/2	12.7	18	TD 500 18 01 (2953920)	TD 500 18 06 (2953970)
1/2	12.7	20	TD 500 20 01 (2972633)	TD 500 20 06 (2979763)
5/8	15.8	10	TD 625 10 01 (2954280)	TD 625 10 06 (2954330)
5/8	15.8	12	TD 625 12 01 (2954640)	TD 625 12 06 (2954690)
5/8	15.8	13	TD 625 13 01 (2954820)	TD 625 13 06 (2954870)
5/8	15.8	14	TD 625 14 01 (2955000)	TD 625 14 06 (2955050)
5/8	15.8	15	TD 625 15 01 (2955180)	TD 625 15 06 (2955230)
5/8	15.8	16	TD 625 16 01 (2955360)	TD 625 16 06 (2955410)
5/8	15.8	17	TD 625 17 01 (2955540)	TD 625 17 06 (2955590)
5/8	15.8	18	TD 625 18 01 (2955720)	TD 625 18 06 (2955770)
5/8	15.8	19	TD 625 19 01 (2972630)	TD 625 19 06 (2979765)
5/8	15.8	20	TD 625 20 01 (2972631)	TD 625 20 06 (2978637)
3/4	19.1	10	TD 750 10 01 (2956080)	TD 750 10 06 (2956130)
3/4	19.1	12	TD 750 12 01 (2956440)	TD 750 12 06 (2956490)
3/4	19.1	13	TD 750 13 01 (2956620)	TD 750 13 06 (2956670)
3/4	19.1	14	TD 750 14 01 (2956800)	TD 750 14 06 (2956850)
3/4	19.1	15	TD 750 15 01 (2956980)	TD 750 15 06 (2957030)
3/4	19.1	16	TD 750 16 01 (2957160)	TD 750 16 06 (2957210)
3/4	19.1	17	TD 750 17 01 (2957340)	TD 750 17 06 (2957390)
3/4	19.1	18	TD 750 18 01 (2957520)	TD 750 18 06 (2957570)
3/4	19.1	19	TD 750 19 01 (2972617)	TD 750 19 06 (2979767)
3/4	19.1	20	TD 750 20 01 (2972618)	TD 750 20 06 (2979768)
7/8	22.2	14	TD 875 14 01 (2958600)	TD 875 14 06 (2958650)
7/8	22.2	15	TD 875 15 01 (2958780)	TD 875 15 06 (2958830)
7/8	22.2	16	TD 875 16 01 (2958960)	TD 875 16 06 (2959010)
7/8	22.2	18	TD 875 18 01 (2959320)	TD 875 18 06 (2959370)
7/8	22.2	20	TD 875 20 01 (2972620)	TD 875 20 06 (2979771)
1	25.4	10	TD 1000 10 01 (2959680)	TD 1000 10 06 (2959730)
1	25.4	12	TD 1000 12 01 (2960040)	TD 1000 12 06 (2960090)
1	25.4	13	TD 1000 13 01 (2960220)	TD 1000 13 06 (2960270)
1	25.4	14	TD 1000 14 01 (2960400)	TD 1000 14 06 (2960450)
1	25.4	15	TD 1000 15 01 (2960580)	TD 1000 15 06 (2960630)
1	25.4	16	TD 1000 16 01 (2960760)	TD 1000 16 06 (2960810)
1	25.4	17	TD 1000 17 01 (2960940)	TD 1000 17 06 (2960990)
1	25.4	18	TD 1000 18 01 (2961120)	TD 1000 18 06 (2961170)
1	25.4	19	TD 1000 19 01 (2972622)	TD 1000 19 06 (2979773)
1	25.4	20	TD 1000 20 01 (2972623)	TD 1000 20 06 (2979774)

Collapsing Tools

Tube O.D.		Gauge	Description / Order Number	
in.	mm		-01 Shank	-06 Shank
3/8	9.5	16-22	CT-375-01 (2950000)	CT-375-06 (2980055)
1/2	12.7	16-22	CT-500-01 (2950030)	CT-500-06 (2950080)
5/8	15.8	16-22	CT-625-01 (2950210)	CT-625-06 (2950260)
3/4	19.1	16-22	CT-750-01 (2950390)	CT-750-06 (2950440)
7/8	22.2	16-22	CT-875-01 (2950570)	CT-875-06 (2950620)
1	25.4	16-22	CT-1000-01 (2950750)	CT-1000-06 (2950800)



Type No. 06



Tube Removal Tools

Chipping Hammers & Rivet Busters

Chipping Hammers and Rivet Busters



Beading Chisel

K2LR-RET/K2LH-RET Chipping Hammer

Smallest line of chippers featuring standard .580 hex or .680 round shank bushing. *Parts interchangeable with Ingersoll-Rand K2L models. Please specify 0.580 hex or 0.680 round shank.*

- 1190-1.655 Retainer
- 1194-2 Retainer Spring

Blows Per Minute	3600
Stroke	1-3/4"
Bore	7/8"
Length	12"
Weight	8 lbs.
Air Inlet Thread	1/4"
Avg. Air Consumption	12 cfm



CH SERIES Heavy-Duty Chipping Hammers

Four bolt design eliminates handle breakage. Includes chisel retainer and chisel retainer spring. Aluminum handle model available. *Most parts interchangeable with Sullair CH series chipping hammers. Please specify 0.580 hex or 0.680 round shank.*

- 1190-SUL1 Retainer
- 1194-2 Retainer Spring

Specs	CH2R/ CH2H	CH3R/ CH3H	CH4R/ CH4H
Blows Per Min.	2300	2100	1700
Stroke	3"	3-3/4"	4-1/4"
Bore	1-1/8"	1-1/8"	1-1/8"
Shank Dia.	0.580H/ 0.680R	0.580H/ 0.680R	0.580H/ 0.680R
Length	14-5/8"	16-1/2"	17-1/2"
Weight	17.2 lbs.	18.7 lbs.	19.4 lbs.
Air Inlet	1/2"	1/2"	1/2"
Avg. Air. Cons.	31 cfm	35 cfm	39 cfm



CH-ITD SERIES Inside Trigger Chipping Hammers

Inside trigger design for greater comfort and control. Features include plate valve, vibration spacers, rotating exhaust and replaceable inlet bushings. 4-Bolt design reduces handle breakage. *Please specify 0.580 hex or 0.680 round shank.*

- 1190-SUL1 Retainer
- 1194-2 Retainer Spring

Specs	CH2R-ITD/ CH2H-ITD	CH3R -ITD/ CH3H -ITD	CH4R -ITD/ CH4H -ITD
Blows Per Min.	2300	2100	1700
Stroke	3"	3-3/4"	4-1/4"
Bore	1-1/8"	1-1/8"	1-1/8"
Shank Dia.	0.580H/ 0.680R	0.580H/ 0.680R	0.580H/ 0.680R
Length	14"	15-1/4"	16-1/2"
Weight	17 lbs.	18.5 lbs.	19.5 lbs.
Air Inlet	1/2"	1/2"	1/2"
Avg. Air. Cons.	31 cfm	35 cfm	39 cfm



EGE 133-NEP EGE 1133-NEP Rivet Buster

Powerful long stroke hammer has the ability to perform all extra heavy-duty demolition applications. Ideal for cutting large rivets, bolts and underground tanks. *Equipped to accept 2000 series jumbo chisels. Model 1133- NEP features a non-ejectable piston.*

Specs	CH2H	CH3H
Capacity	7/8" Rivets	1"
Bore	1-3/16"	1-3/16"
Piston Stroke	8"	11"
Blows Per Minute	960	850
Length	22"	25"
Weight	30 lbs.	34 lbs.
Shank Diameter	1.5"	1.5"
Air Inlet Thread	3/8"	3/8"



EGE 4181-8-USA-NEP EGE 4181-USA-NEP Rivet Buster

Ideal for cutting large rivets, concrete demolition, and heavy-duty chipping work in maintenance and construction. Features a Boyer spool valve to deliver smooth power in any operating position. Equipped to accept 2000 series jumbo chisels.

Specs	4181-8-USA-NEP	4181-USA-NEP
Capacity	7/8" Rivets	1" Rivets
Bore	1-3/16"	1-3/16"
Piston Stroke	8"	11"
Blows Per Minute	1080	720
Length	23"	26"
Weight	31.25 lbs.	34.5 lbs.
Shank Diameter	1.5"	1.5"
Air Inlet Thread	3/8"	3/8"



Tube Wall Reducing Tools (TWRT)

Tube Wall Reducing Tools are used on heavy gauge tubes in order to reduce the tube wall thickness prior to removing them with a tube drift tool. Available with Morse taper shank.

- Thins tube wall for easier removal with tube drift.

Minimum order quantity 3 pieces.

Tube O.D.		Tube Gauge	Model	Order Number	Morse Taper*	Tube Sheet Thickness**	
in.	mm					in.	mm
3/8	9.5	16	TWRT-375-16	2980132	#1	2.88	73.03
3/8	9.5	17	TWRT-375-17	2992775	#1	2.88	73.03
3/8	9.5	18	TWRT-375-18	2974712	#1	2.88	73.03
3/8	9.5	20	TWRT-375-20	2978341	#1	2.88	73.03
3/8	9.5	21	TWRT-375-21	2976259	#1	2.88	73.03
3/8	9.5	22	TWRT-375-22	2989963	#1	2.88	73.03
1/2	12.7	17	TWRT-500-17	2677209	#2	2.88	73.03
1/2	12.7	18	TWRT-500-18	2677210	#2	2.88	73.03
1/2	12.7	19	TWRT-500-19	2998102	#2	2.88	73.03
1/2	12.7	20	TWRT-500-20	2982800	#2	2.88	73.03
1/2	12.7	21	TWRT-500-21	2998103	#2	2.88	73.03
1/2	12.7	22	TWRT-500-22	2998104	#2	2.88	73.03
5/8	15.8	12	TWRT-625-12	2677216	#2	3.38	85.73
5/8	15.8	13	TWRT-625-13	2677217	#2	3.38	85.73
5/8	15.8	14	TWRT-625-14	2677218	#2	3.38	85.73
5/8	15.8	15	TWRT-625-15	2677219	#2	3.38	85.73
5/8	15.8	16	TWRT-625-16	2677220	#2	3.38	85.73
5/8	15.8	17	TWRT-625-17	2677221	#2	3.38	85.73
5/8	15.8	18	TWRT-625-18	2677222	#2	3.38	85.73
5/8	15.8	19	TWRT-625-19	2972480	#2	3.38	85.73
5/8	15.8	20	TWRT-625-20	2972479	#2	3.38	85.73
5/8	15.8	21	TWRT-625-21	2984261	#2	3.38	85.73
5/8	15.8	22	TWRT-625-22	2993158	#2	3.38	85.73
3/4	19.1	10	TWRT-750-10	2677226	#2	4.38	111.13
3/4	19.1	11	TWRT-750-11	2677227	#2	4.38	111.13
3/4	19.1	12	TWRT-750-12	2677228	#2	4.38	111.13
3/4	19.1	13	TWRT-750-13	2677229	#2	4.38	111.13
3/4	19.1	14	TWRT-750-14	2677230	#2	4.38	111.13
3/4	19.1	15	TWRT-750-15	2677231	#2	4.38	111.13
3/4	19.1	16	TWRT-750-16	2677232	#2	4.38	111.13
3/4	19.1	17	TWRT-750-17	2677233	#2	4.38	111.13

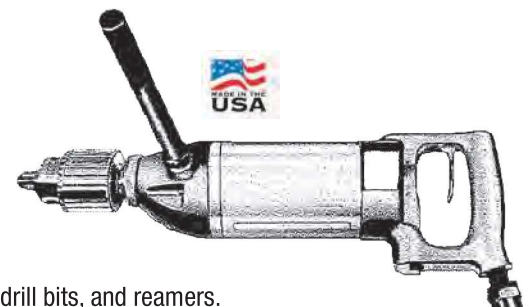
* Other shanks styles available on request

**Longer reach available on request

600-D Air Drill

Powerful Heavy Duty air drill recommended for use with Airetool serrating tools, push-type tube cutters, and tube wall reducing tools.

- 4.5 Horsepower D-Handle drill provides plenty of power.
- Governed motor for consistent cutting speeds.
- Reversible support handle for added leverage.
- Optional Morse taper adapter makes it universal with tube wall reducing tools, drill bits, and reamers.



Model	Order Number	Horsepower	Speed	Drill Capacity		Reamer Capacity		Length		Weight		Spindle Thread	Side-to-Center		Air Inlet		Hose Size	
		Hp.	rpm	in.	mm	in.	mm	in.	mm	lbs.	kg	in.	in.	mm	in.	mm	in.	mm
600 D 100	8405289	4.5	100	3/4	19.0	5/8	15.8	18.0	457.0	16.0	7.3	5/8 - 16	1.5	38.1	1/2	12.7	1/2	12.7
600 D 200	6024900	4.5	200	3/4	19.0	5/8	15.8	18.0	457.0	16.0	7.3	5/8 - 16	1.5	38.1	1/2	12.7	1/2	12.7
600 D 265	6025000	4.5	265	3/4	19.0	5/8	15.8	18.0	457.0	16.0	7.3	5/8 - 16	1.5	38.1	1/2	12.7	1/2	12.7
600 D 335	6025100	4.5	335	5/8	15.8	5/8	15.8	18.0	457.0	16.0	7.3	5/8 - 16	1.5	38.1	1/2	12.7	1/2	12.7
600 D 625	6025200	4.5	625	1/2	12.7	7/16	11.1	18.0	457.0	16.0	7.3	5/8 - 16	1.5	38.1	1/2	12.7	1/2	12.7

Stock numbers for Drills with Jacobs Chuck
Chucks and Morse Taper adapter part numbers

Tube Removal Tools



Airetool PIC Internal Tube Cutters

The "PIC" internal tube cutters are an economical solution to low volume tube cutting of various tube materials. Optimum tube cutting performance and tooling life are obtained when the Airetool CF Series cutter feed assist is used to match the cutting speed to the tube material.

Available for tube sizes:

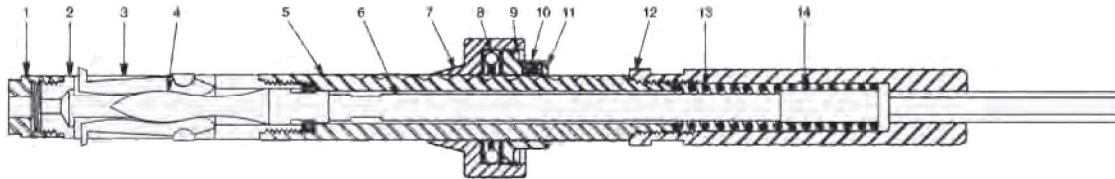
5/8" - 1-1/4" OD (15.8 - 31.8mm)

- Two-piece construction allows for quick and easy tool bit replacement.
- Cutter bits are now available with TiN coating, increasing the cutter bit life.
- Airetool PIC tube cutters are sold with a complete set of pilots and two spare tool bit sets.
- Larger sizes and longer reaches available upon request.



Tube O.D.		PIC Tube Cutter Reach*			Pilots (incl.)
(in.)	mm	Standard	"A"	"C"	(gauge)
1/2	12.70	PIC 500 (5519733)	PIC 500 A	PIC 500 C	18 - 20
5/8	15.88	PIC 625 (5515553)	PIC 625 A (5515557)	PIC 625 C (5515559)	16 - 20
3/4	19.05	PIC 750 (5515560)	PIC 750 A (5515540)	PIC 750 C (5515514)	14 - 20
7/8	22.22	PIC 875 (5515562)	PIC 875 A (5515564PT)	PIC 875 C (5515566PT)	15 - 20
1	25.4	PIC 1000 (5515567)	PIC 1000 A (5515568)	PIC 1000 C (5515554)	12 - 20
1-1/8	28.57	PIC 1125 (5515820)	PIC 1125 A	PIC 1125 C	14, 16, 18
1-1/4	31.75	PIC 1250 (5518134PT)	PIC 1250 A	PIC 1250 C	14, 16, 18

* Standard Reach = 1-11/16 to 4-7/16" (43 to 110mm)
 *A" Reach = 4-11/16 to 7-7/16" (119 to 189mm)
 *C" Reach = 8-3/16 to 10-15/16" (208 to 278mm)



Item Number	Description	5/8" (16mm) 16-20GA	3/4" (19mm) 14-20GA	7/8" (22mm) 16-20GA	1" (25mm) 12-20GA
		Part No. (Order No.)	Part No. (Order No.)	Part No. (Order No.)	Part No. (Order No.)
	Complete PIC Cutter*	PIC-625 (5515553)	PIC-750 (5515560)	PIC-875 (5515562)	PIC-1000 (5515567)
1	Pilot	TTC-6 (2675000)	TTC-6-14 (2668900)	TTC-56-15 (2676400)	TTC-36-12 (2672500)
1	Pilot	TTC-46-18 (2675100)	TTC-6-15 (2669000)	TTC-56-16 (2990534)	TTC-36-13 (2672600)
1	Pilot	TTC-46-19 (2675200)	TTC-6-16 (2669100)	TTC-56-17 (2990535)	TTC-36-14 (2672700)
1	Pilot	TTC-46-20 (2675300)	TTC-6-17 (2669200)	TTC-56-18 (2676500)	TTC-36-15 (2672800)
1	Pilot	TTC-46-22 (2974902)	TTC-6-18 (2669300)	TTC-56-19 (2676600)	TTC-36-16 (2672900)
1	Pilot	TTC-46-23 (2976001)	TTC-6-19 (2669400)	TTC-56-20 (2676700)	TTC-36-17 (2673000)
1	Pilot	TTC-46-24 (2976002)	TTC-6-20 (2669500)		TTC-36-18 (2673100)
1	Pilot				TTC-36-19 (2673200)
1	Pilot				TTC-36-20 (2673300)
2	Body Tip	IC-41 (2979725)	IC-1 (2979306)	IC-51 (2979726)	IC-31 (2979419)
3	Tool Bit* (Non-ferrous)	TTC-43 (5338869)	TTC-3 (5338865)	TTC-53 (5338871)	TTC-33 (5338867)
3	Tool Bit* (Ferrous)	TTC-43-S (5338870)	TTC-3-S (5338866)	TTC-53-S (5338872)	TTC-33-S (5338868)
3	Tool Bit* (Stainless)	TTC-43-SS (5518303)	TTC-3-SS (5517614)	TTC-53-S (5517757)	TTC-33-SS (5516337)
4	Mandrel Tip	IC-44-T (2979724)	IC-4-T (2979308)	IC-34-T (2979409)	IC-34-T (2979409)
5	Body Extension	IC-41X (2979688)	IC-1X (2979672)	IC-51X (2979692)	IC-31X (2979680)
6	Mandrel Extension	IC-4X (2979676)	IC-4X (2979676)	IC-34X (2979684)	IC-34X (2979684)
7	Thrust Body	TTC-47 (2675400)	TTC-7 (2669600)	TTC-57 (2676800)	TTC-37 (2673300)
8	Bearing	TTC-9 (2670000)	TTC-9 (2670000)	TTC-39 (2673800)	TTC-39 (2673800)
9	Thrust Spring	TTC-10 (2670100)	TTC-10 (2670100)	TTC-40 (2673900)	TTC-40 (2673900)
10	Set Screw	10-32X1/4 (8000800)	10-32X1/4 (8000800)	10-32X1/4 (8000800)	10-32X1/4 (8000800)
11	Thrust Nut	TTC-48 (2675700)	TTC-8 (2669900)	TTC-58 (2677100)	TTC-38 (2673700)
12	Spring Housing	PIC-21 (2979752)	PIC-21 (2979752)	PIC-21 (2979752)	PIC-21 (2979752)
13	Spring	PTC-5 (2574180)	PTC-5 (2574180)	PTC-5 (2574180)	PTC-5 (2574180)
14	Driver	PIC-4 (2979751)	PIC-4 (2979751)	PIC-4 (2979751)	PIC-4 (2979751)

*Standard length listed

Air Driven Tube Cutter (TIC)

Complete tube cutting system for various tube materials. Five models available in speeds from 100 to 625 rpm for various steel and non-ferrous tube applications.

- Powerful, 4.5 Horsepower motor with D-handle.
- Governed motor for consistent cutting speeds.
- Positive lever-operated feed of cutter bit.
- One mandrel drive adapter works with all sizes of cutters (TTC-30, ordering number 2671400).



RPM	Tube Material	Cutter Complete			
		5/8" O.D.	3/4" O.D.	7/8" O.D.	1" O.D.
Pneumatic Models					
625	Non-ferrous	TIC-625-625 (5515586)	TIC625-750 (5515590)	TIC-625-875 (5515594)	TIC-625-1000 (5515598)
335	Non-ferrous/Ferrous	TIC-350-625 (5515602)	TIC-350-750 (5515606)	TIC-350-875 (5515610)	TIC-350-1000 (5515614)
265	Ferrous-Stainless	TIC-265-625 (5515618)	TIC-265-750 (5515622)	TIC-265-875 (5515626)	TIC-265-1000 (5515630)
200	Ferrous-Stainless	TIC-200-625 (5518909)	TIC-200-750 (5518459)	TIC-200-875 (5522345)	TIC-200-1000 (5519460)
100	Stainless & Titanium	TIC-100-625 (5519526)	TIC-100-750 (5517806)	TIC-100-875 (5522125)	TIC-100-1000 (5518512)
40	Titanium & Inconel	TIC-40-625 (5521860)	TIC-40-750 (5518184)	TIC-40-875	TIC-40-1000

Cutter Bodies Complete for TIC Models

Several design improvements have been incorporated for maintenance and increased service life.

- Shorter and stronger cutter body improves durability and increases bit life.
- Cutter body is threaded into body extension for easier bit replacement.
- Standard mandrel driver fits all sizes of Airetool tube cutters
- Adjustable reach "IC" cutter bodies:
 - Standard reach 1-11/16" to 4-7/16" (42 - 112mm) shown above.
 - "A" reach = 4-11/16" to 7-7/16" (112 - 188mm).
 - "C" reach = 8-3/16" to 10-15/16" (207 - 277mm).
- Larger sizes and longer lengths available upon request.

Description	Tube O.D.			
	5/8" O.D.	3/4" O.D.	7/8" O.D.	1" O.D.
Tube Cutter body Sub-assemblies for TIC & EIC models				
Cutter Body Complete	IC-625 (5515574)	IC-750 (5515577)	IC-875 (5515581)	IC-1000 (5515571)
Tool Bit* (Non-ferrous)	TTC-43 (5338869)	TTC-3 (5338865)	TTC-53 (5338871)	TTC-33 (5338867)
Tool Bit* (Ferrous)	TTC-43-S (5338870)	TTC-3-S (5338866)	TTC-53-S (5338872)	TTC-33-S (5338868)
Tool Bit* (Stainless)	TTC-43-SS (5518303)	TTC-3-SS (5517614)	TTC-53-SS (5517757)	TTC-33-SS (5516337)

* Tool Bit part numbers above consist of 2 bits each.

Tube Cutter Bodies consists of all parts necessary to convert models TIC & EIC to different tube size.

Specify desired reach:

Standard Reach 4-7/16" (112.7mm) shown

"A" Reach 7-7/16" (188.9mm)

"C" Reach 10-15/16" (277.8mm)



Tube Removal Tools

RCM One Revolution Tube Cutters

For cutting tubes beyond the tube sheet in heat exchangers, condensers, and boilers. RCM series tube cutters are also an excellent tool for puncturing defective tubes prior to tube plugging. This reduces the risk of pressure buildup in plugged tubes.



- Designed for hand use by employing a ratchet or hand wrench for manual operation.
- Available in standard reaches of 6" (152mm) and 10" (254mm).
- Longer reaches are available in 10" increments upon request.

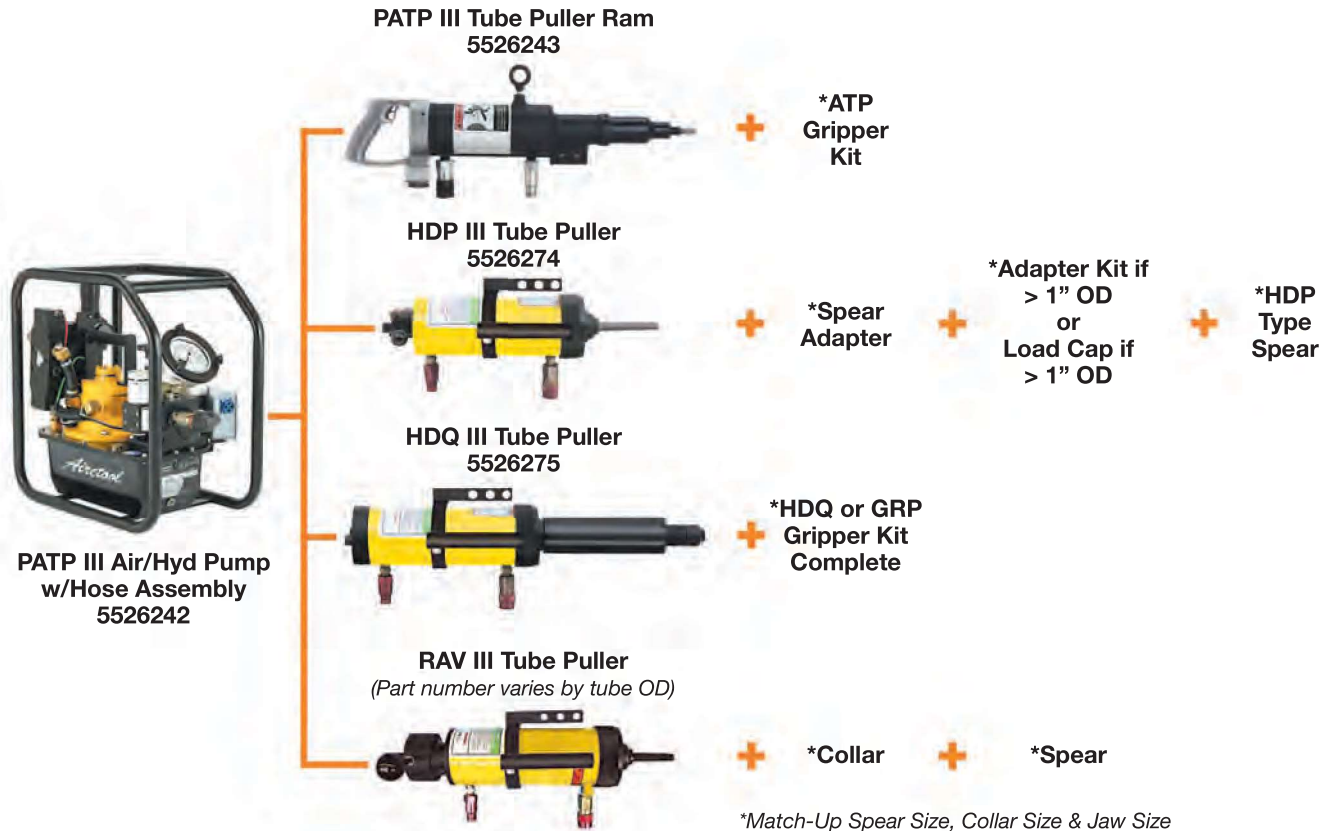
Tube O.D.		BWG	Tube I.D.	Tool Reach		Cutting Bit
in.	mm			6" (152.4mm)	10" (254.0mm)	
1/2	12.70	18-19	.400"-420" 10.2-10.7mm	RCM-105 (5522994)	RCM-105-10 (5523116)	RC-500-2 (2993368)
1/2	12.70	20	.430"-450" 11.0-11.3mm	RCM-110 (5522929)	RCM-110-10	RC-500-2 (2993368)
5/8	15.88	14	.450"-470" 11.4-11.9mm	RCM-115 (5522995)	RCM-115-10 (5523118)	RC-625-2 (2993372)
5/8	15.88	15-16	.472"-510" 12-12.9mm	RCM-120 (5522930)	RCM-120-10 (5523119)	RC-625-2 (2993372)
5/8	15.88	17-18	.500"-531" 12.7-13.5mm	RCM-130 (5522931)	RCM-130-10 (5523120)	RC-625-2 (2993372)
5/8	15.88	19-20	.531"-560" 13.5-14.2mm	RCM-135 (5522996)	RCM-135-10 (5523121)	RC-625-2 (2993372)
5/8	15.88	22	.550"-580" 14.0-14.7mm	RCM-140 (5522932)	RCM-140-10 (5524952)	RC-625-2 (2993372)
3/4	19.05	12-13	.530"-560" 13.5-14.2mm	RCM-135-3/4 (5523115)	RCM-135-3/4-10 (5526397)	RC-750-2A (2995865)
3/4	19.05	14-15	.580"-610" 14.7-15.5mm	RCM-150 (5522933)	RCM-150-10 (5523123)	RC-750-2 (2993374)
3/4	19.05	16	.600"-630" 15.2-16.0mm	RCM-155 (5522997)	RCM-155-10 (5523124)	RC-750-2 (2993374)
3/4	19.05	17-18	.625"-650" 15.9-16.5mm	RCM-160 (5522934)	RCM-160-10 (5523125)	RC-750-2 (2993374)
3/4	19.05	19-20	.660"-690" 16.7-17.5mm	RCM-170 (5522935)	RCM-170-10 (5523126PT)	RC-750-2 (2993374)
7/8	22.22	14-15	.700"-730" 17.8-18.5mm	RCM-180 (5522936)	RCM-180-10 (5523127)	RC-875-2 (2993384)
7/8	22.22	16-17	.740"-770" 18.8-19.5mm	RCM-190 (5522937)	RCM-190-10 (5523128)	RC-875-2 (2993384)
7/8	22.22	18	.760"-790" 19.3-20.0mm	RCM-195 (5522998)	RCM-195-10 (5524478)	RC-875-2 (2993384)
7/8	22.22	19-20	.780"-810" 19.8-20.6mm	RCM-200 (5522938)	RCM-200-10 (5523241PT)	RC-875-2 (2993384)
1	25.40	12	.760"-790" 19.3-20.0mm	RCM-195 (5522998)	RCM-195-10 (5524478)	RC-875-2 (2993384)
1	25.40	14	.820"-850" 20.8-21.6mm	RCM-210 (5522939)	RCM-210-10 (5523131)	RC-1000-2 (2993394)
1	25.40	15	.840"-870" 21.3-22.1mm	RCM-215 (5522999)	RCM-215-10 (5523132)	RC-1000-2 (2993394)
1	25.40	16-17	.860"-890" 21.8-22.6mm	RCM-220 (5522940)	RCM-220-10 (5523133)	RC-1000-2 (2993394)

Tube O.D.		BWG	Tube I.D.	Tool Reach		Cutting Bit
in.	mm			6" (152.4mm)	10" (254.0mm)	
1	25.40	18-19	.890"-910" 22.6-23.1mm	RCM-230 (5522941)	RCM-230-10 (5523134)	RC-1000-2 (2993394)
1	25.40	22	.940"-970" 23.9-24.6mm	RCM-240 (5522942)	RCM-240-10 (5525584)	RC-1000-2 (2993394)
1-1/4	31.75	12	1.020"-1.050" 25.9-26.7mm	RCM-260 (5523000)	RCM-260-10 (5523136)	RC-1250-2 (2993404)
1-1/4	31.75	13-14	1.050"-1.080" 26.7-27.4mm	RCM-270 (5523001)	RCM-270-10 (5523137)	RC-1250-2 (2993404)
1-1/4	31.75	15-16	1.100"-1.130" 27.9-28.7mm	RCM-280 (5523002)	RCM-280-10 (5523138)	RC-1250-2 (2993404)
1-1/4	31.75	17-19	1.130"-1.160" 28.7-29.6mm	RCM-290 (5523003)	RCM-290-10 (5523139)	RC-1250-2 (2993404)
1-3/8	34.93	13-14	1.180"-1.210" 30-30.7mm	RCM-300 (5523709)	RCM-300-10 (5525838)	RC-1500-2 (2993417)
1-1/2	38.10	12-13	1.280"-1.310" 32.5-33.3mm	RCM-330 (5523004)	RCM-330-10 (5523140)	RC-1500-2 (2993417)
1-1/2	38.10	14-15	1.330"-1.360" 33.8-34.5mm	RCM-340 -	RCM-340-10 (5523005)	RC-1500-2 (2993417)
1-1/2	38.10	16-17	1.360"-1.390" 34.5-35.3mm	RCM-350 (5523006)	RCM-350-10 (5523142)	RC-1500-2 (2993417)
1-1/2	38.10	18-19	1.390"-1.420" 35.3-36.1mm	RCM-360 (5523007)	RCM-360-10 (5523143)	RC-2000-2 (2993427)
2	50.80	12-13	1.770"-1.810" 45.0-46.0mm	RC-2012 (5521677)	RC-2012-10	RC-2000-2 (2993427)
2	50.80	14-15	1.820"-1.860" 46.2-47.2mm	RC-2014 (5521678PT)	RC-2014-10	RC-2000-2 (2993427)
2	50.80	16-17	1.860"-1.900" 46.2-48.2mm	RC-2016 (5521679)	RC-2016-10	RC-2000-2 (2993427)
2	50.80	18-19	1.890"-1.930" 48.0-49.0mm	RC-2018 (5521680)	RC-2018-10	RC-2000-2 (2993427)
2-1/2	63.50	12-13	2.270"-2.310" 57.6mm-58.6	RC-2512 (5521681)	RC-2512-10	RC-2000-2 (2993427)
2-1/2	63.50	14-15	2.320"-2.360" 58.9-60.0mm	RC-2514 (5521682)	RC-2514-10	RC-2000-2 (2993427)
2-1/2	63.50	16-17	2.360"-2.400" 60.0-61.0mm	RC-2516 (5521683)	RC-2516-10	RC-2000-2 (2993427)
2-1/2	63.50	18-19	2.390"-2.430" 60.7-61.7mm	RC-2518 (5521684)	RC-2518-10	RC-2000-2 (2993427)

Tube Pulling Systems & Pumps

Tube Pulling Systems consist of:

1. Pump Assembly - air/hydraulic or electric/hydraulic (includes hose assembly).
2. Ram Assembly - gripper or spear type.
3. Grippers or Spears - Gripper kit / adapter kit with spear / collar with spear (depends on ram selected).



Tube Pulling Pumps & Accessories

The ATP III & PATP III Pumps are engineered to deliver superior performance and durability. They work in combination with a variety of different tube pulling RAMs.

- Pumps come mounted in a roll cage with casters and large wheels for protection and increased mobility.
- Control cables and hydraulic hoses are bundled together for greater safety.
- Hydraulic hoses have quick connect fittings for easy attachment to the pump and tube pulling ram.



Description	Ordering Number
ATP III Electric/Hydraulic Pump with Hoses, Cord and Pendant	5526244
PATP III Air/Hydraulic Pump with Hose Assembly and Pendant	5526242

ATP III Tube Pullers

Electric Driven

ATP III Tube Pullers

Electric/Hydraulic Semi-automatic Tube Pullers For Light & Medium Duty Applications.

- The Airetool Model ATP III Tube Pulling Ram develops 13-3/4 tons of pulling power.
- Easily remove tubes up to 1" O.D. from tube sheets up to 1-1/2" thickness*.
- Grippers bite uniformly into the tube I.D. as the piston retracts, pulling the tube from the sheet.
- Provides a full 4-3/4" total pulling length through a double 2-3/8" pull.
- Electric switch in the handle of the ram enables the hydraulic pump to operate the ram cylinder.
- Puller reverses instantly at the end of the pulling cycle or when the trigger is released.

* Puller capacity of the ATP Ram will vary with tube wall thickness, tube sheet thickness and tube material.



PUMP SHOWN WITHOUT WHEEL ASSEMBLY ATTACHED



ATP-III TUBE PULLING RAM



ATP-9000B HCA HOSE/CORD ASSEMBLY

The following components are required for most common tube pulling applications.

Ordering Number	Description
5526244	ATP III Electric/Hydraulic Pump with Hoses, Cord, and Pendant
5526295	ATP III Tube Puller Ram Assembly
5525470PT	ATP 9000B HCA Hose/Cord Assembly
5522513	ATP 9064A 15 Cord Assembly
See page 62	Gripper Kit (tube size specific)



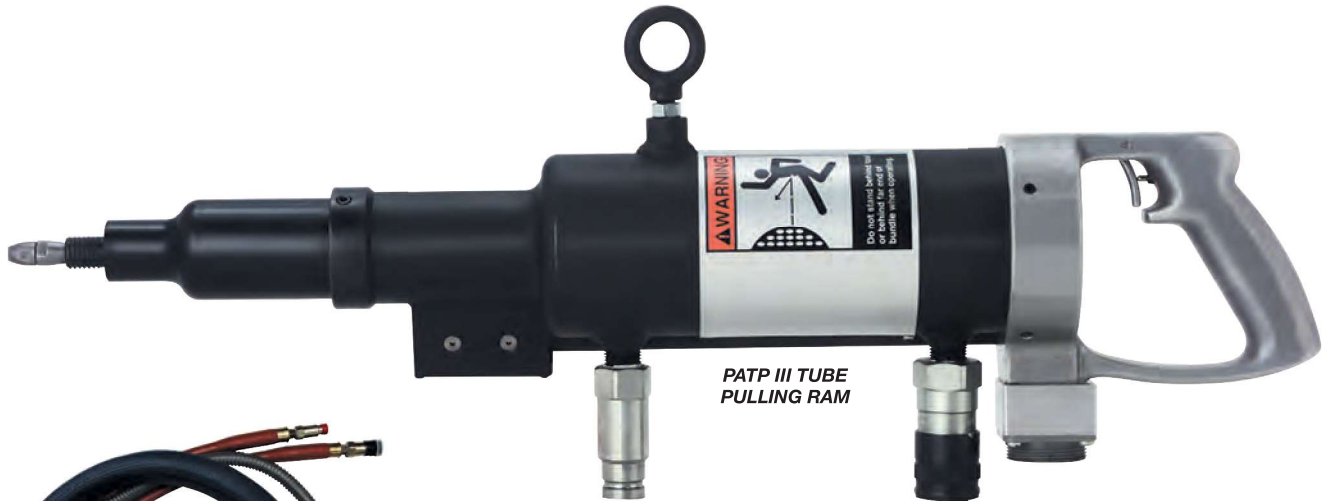
PUMP SHOWN WITH WHEEL ASSEMBLY ATTACHED

PATP III Tube Pullers

Air/Hydraulic Semi-automatic Tube Pullers For Light & Medium Duty Applications.

- The Airetool Model PATP III Tube Pulling Ram develops 13-3/4 tons of pulling power.
- Easily remove tubes up to 1" O.D. from tube sheets up to 1-1/2" thickness*.
- Grippers bite uniformly into the tube I.D. as the piston retracts, pulling the tube from the sheet.
- Provides a full 4-3/4" total pulling length through a double 2-3/8" pull.
- Electric switch in the handle of the ram enables the hydraulic pump to operate the ram cylinder.
- Puller reverses instantly at the end of the pulling cycle or when the trigger is released.

* Puller capacity of the PATP Ram will vary with tube wall thickness, tube sheet thickness and tube material.



PATP III TUBE PULLING RAM



PATP-9000B HCA HOSE/CORD ASSEMBLY



OPTIONAL PENDANT ASSEMBLY

The following components are required for most common tube pulling applications.

Ordering Number	Description
5526242	PATP III Air/Hydraulic Pump with hose assembly and Pendant
5526243	PATP III Tube Puller Ram Assembly
5524903PT	PATP HT Hose/Tube Assembly
See page 62	Gripper Kit (tube size specific)

Optional pendant for use with HDP III, HDQ III, RAV III and PATP Pumps.

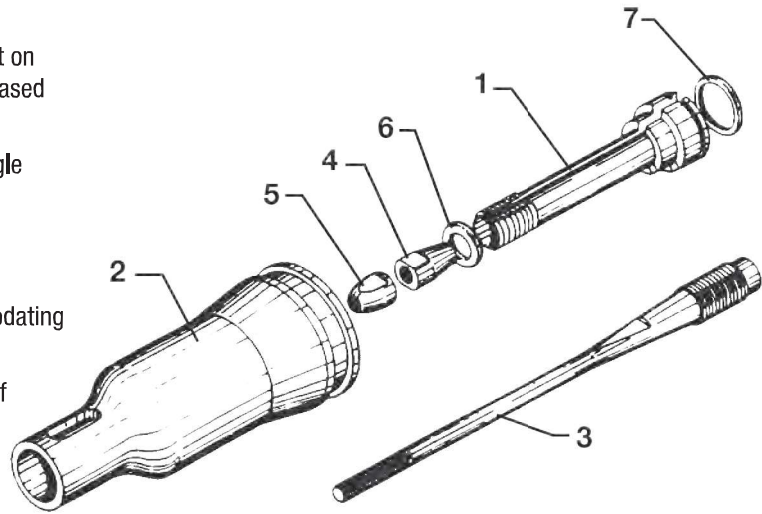
Ordering Number	Description
5524904	PATP HDP Pendant Assembly

ATP III Gripper Kit

ATP III & PATP III Gripper Kit Components

Features of the ATP III Tube Pulling System include:

- Free-floating gripper design results in uniform contact on the tube ID for better pulling characteristics and increased durability.
- Grippers are segmented, allowing replacement of single gripper segment in the event of tooth breakage.
- Grippers bite uniformly into the tube I.D. as the piston retracts, pulling the tube from the sheet.
- Grippers are available from 5/8" through 1" accommodating a wide range of tube gages.
- Optional 18" extension kit provides a useful method of removing hard-to-reach tubes.



Tube Size (O.D.)		Tube Gauge	Part Number	Gripper Kit* Order Number	1 Gripper Complete** Order Number	2 Nose Bushing	3 Draw Rod	4 Expansion Nut	5 Lock Nut	6 Front O-ring	7 Rear O-ring
in.	mm										
0.625	15.9	16-18	ATP-9022-568	5520782	5520793	ATP -9042-5/8 (2991245)	ATP -9034-5/8 (2991237)	ATP -9035-5/8 (2991238)	ATP -9036-5/8 (2991239)	200-9 (3105400)	RTV-65 (3094500)
0.625	15.9	20-22	ATP-9022-522	5520783	5520794						
0.750	19.1	14-15	ATP-9022-34	5520784	5520795						
0.750	19.1	16-18	ATP-9022-368	5520785	5520796	ATP -9014-3/4 (2991218)	ATP -9015-3/4 (2991224)	ATP -9016-3/4 (2991226)	ATP -9017-3/4 (2991227)		
0.750	19.1	20-22	ATP-9022-322	5520786	5520797						
0.875	22.2	12-14	ATP-9022-724	5520787	5520798						
0.875	22.2	16-18	ATP-9022-768	5520788	5520799	ATP -9027-7/8 (2991232)				2-113 (3010453)	900-83 (3220900)
0.875	22.2	20-22	ATP-9022-722	5520789	5520800		ATP -9037-7/8-1 (2991240)	ATP -9038-7/8-1 (2991241)	ATP -9039-7/8-1 (2991242)		
1.000	25.4	12-14	ATP-9022-124	5520790	5520801						
1.000	25.4	16-18	ATP-9022-168	5520791	5520802	ATP -9041-1 (2991244)					
1.000	25.4	20-22	ATP-9022-122	5520792	5520803						

* Gripper Kit consists of 3 gripper segments, one nose bushing, one draw rod, one expansion nut, one lock nut, and both O-Rings.

** Gripper Complete consists of 3 Gripper Segments and both O-Rings.



For Tube Sizes 1/2" thru 1" the following accessories are required:

- HDP 99 3055 3 Spear Adapter (2900051).
- Tube Pulling Spear - refer to the chart below for size selection.
- Optional load cap may be required if surrounding tubes are protruding and are closely spaced.

For Tube Sizes 1-1/8" thru 2-1/2" the following accessories are required:

- HDP 99 3055 3 Spear Adapter (2900051).
- HDP 99 Adapter Kit - refer to the chart below for size selection.
- Tube Pulling Spear - refer to the chart below for size selection.
- 5526274 HDP III Ram Kit includes: 5526273 Ram, 5526280 Adapter Lock Assembly & 2900007 HDP 99 LC 1 Load Cap.

HDP III Tube Pulling Spears

Tube Size			Order Number	Small Diameter End		Large Diameter End		Overall Length	Flat Size
in.	mm	Gauge		in.	mm	in.	mm		
1/2	12.7	20	2983511	0.427	10.8mm	0.499	12.7mm	8-3/4" 222mm	7/8" HEX 22.2mm
5/8	15.8	12-13	2968758	0.402	10.2mm	0.61	15.5mm		
5/8	15.8	14-15	2968759	0.454	11.5mm	0.662	16.8mm		
5/8	15.8	16-17	2968760	0.489	12.4mm	0.625	15.9mm		
5/8	15.8	18-19	2968761	0.521	13.2mm	0.625	15.9mm		
5/8	15.8	20	2979942	0.545	13.8mm	0.62	15.7mm		
3/4	19.0	10	2968759	0.454	11.5mm	0.662	16.8mm		
3/4	19.0	11-13	2968762	0.505	12.8mm	0.713	18.1mm		
3/4	19.0	14-15	2968764	0.597	15.2mm	0.75	19.1mm		
3/4	19.0	16-17	2968765	0.614	15.6mm	0.75	19.1mm		
3/4	19.0	18-19	2968766	0.646	16.4mm	0.75	19.1mm		
3/4	19.0	20	2979941	0.67	17.0mm	0.745	18.9mm		
7/8	22.2	14-15	2968769	0.699	17.8mm	0.875	22.2mm		
7/8	22.2	16-17	2968768	0.74	18.8mm	0.948	24.1mm		
7/8	22.2	17-18	2968770	0.755	19.2mm	0.963	24.5mm		
7/8	22.2	20	2983512	0.8	20.3mm	0.874	22.2mm		
1	25.4	9-10	2968769	0.699	17.8mm	0.875	22.2mm		
1	25.4	11	2968770	0.755	19.2mm	0.963	24.5mm		
1	25.4	12-13	2968771	0.777	19.7mm	0.985	25.0mm		
1	25.4	14-15	2968772	0.829	21.1mm	1	25.4mm		
1	25.4	16-17	2968773	0.869	22.1mm	1	25.4mm		
1	25.4	18-20	2968774	0.896	22.8mm	1	25.4mm		
1-1/4	31.7	7-8	2968775	0.856	21.7mm	1.114	28.3mm		
1-1/4	31.7	10-11	2968776	0.977	24.8mm	1.206	30.6mm		
1-1/4	31.7	12-13	2968778	1.027	26.1mm	1.256	31.9mm		
1-1/4	31.7	14-15	2968780	1.079	27.4mm	1.308	33.2mm		
1-1/4	31.7	16-18	2968781	1.115	28.3mm	1.344	34.1mm		
1-1/2	38.1	10-11	2968782	1.227	31.2mm	1.456	37.0mm		
1-1/2	38.1	12-13	2968784	1.277	32.4mm	1.5	38.1mm		
1-1/2	38.1	14	2968786	1.329	33.8mm	1.5	38.1mm		



HDP III Ram & Accessories

Model Number	Description	Order Number
	HDP III Tube Pulling Ram	5526273
	HDP III ALA Adapter Lock Assembly	5526280
	HDP 99 3055 3 Adapter	2900051
	HDP 99 3055 5 Adapter Extension	2900011
	HDP 99 3055 3 MF Adapter Extension	2900633
	HDP 99 LC 1 Load Cap	2900007
	HDP 99 LC 5/8 Load Cap	2900008
	HDP 99 LC 3/4 Load Cap	2900009
	HDP 99 LC 7/8 Load Cap	2900010
	HDP 99 3055-2 Single Pull Adapter	2900049
	3055 4 Horseshoe Lock	2968858

HDP III Adapter Kits

Tube O.D.		Adapter Kit*		Extension Chair	
in.	mm	Model Number	Order Number	Model Number	Order Number
1-1/8 - 1-1/2	28.5 - 38.1	HDP 99 3055 AK 1 1/2	5525287	HDP 99 3055 7 1 1/2 QC	2900001
1-3/4	44.4	HDP 99 3055 AK 1 3/4	5525288	HDP 99 3055 7 1 3/4 QC	2900002PT
2	50.8	HDP 99 3055 AK 2	5525289	HDP 99 3055 7 2 QC	2900003
2-1/2	63.5	HDP 99 3055 AK 2 1/2	5525290	HDP 99 3055 7 2 1/2 QC	2900004PT

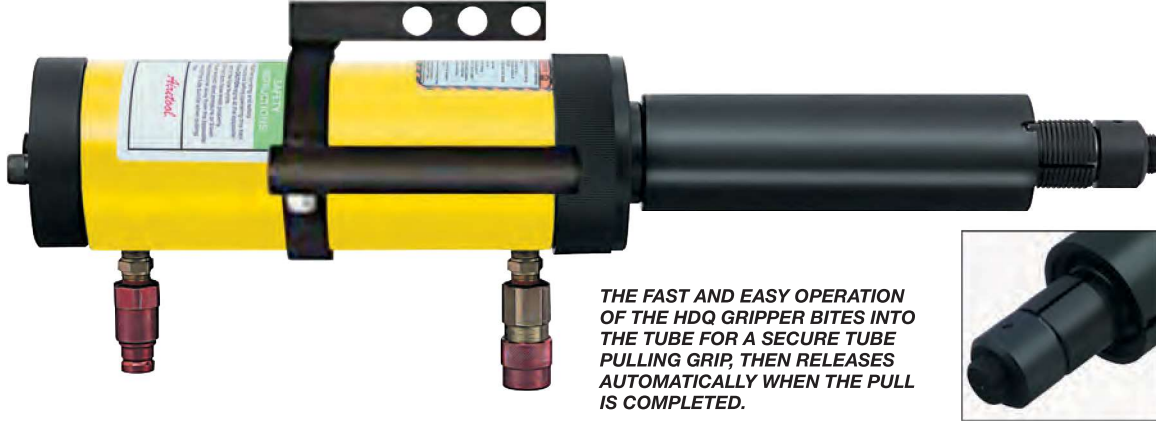
*Kits include: HDP 99 3055 5 Adapter Extension (2900011) and extension chair listed in chart above.



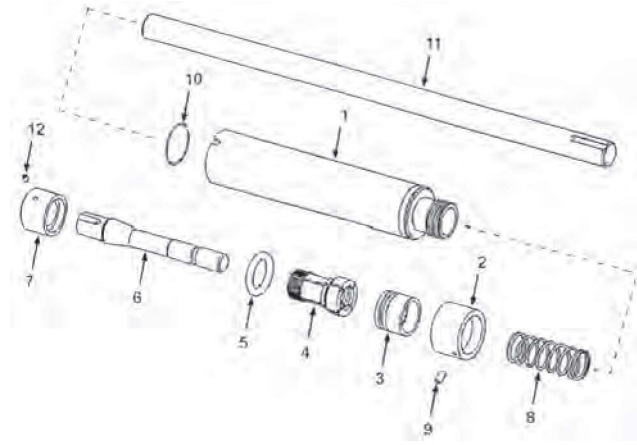
HDQ III Tube Pullers

HDQ-III Tube Pullers

HDQ III Gripper-type tube puller is designed for pulling 1-1/4" thru 1 - 3/4" O.D. tubes in heat exchangers and fire tube boilers using HDQ Gripper Kits (shown below). This gripper-type tube puller makes tube pulling faster and easier. See selection charts below for ordering gripper kits and components for the tube sizes being pulled.



THE FAST AND EASY OPERATION OF THE HDQ GRIPPER BITES INTO THE TUBE FOR A SECURE TUBE PULLING GRIP, THEN RELEASES AUTOMATICALLY WHEN THE PULL IS COMPLETED.



HDQ III Ram & Accessories

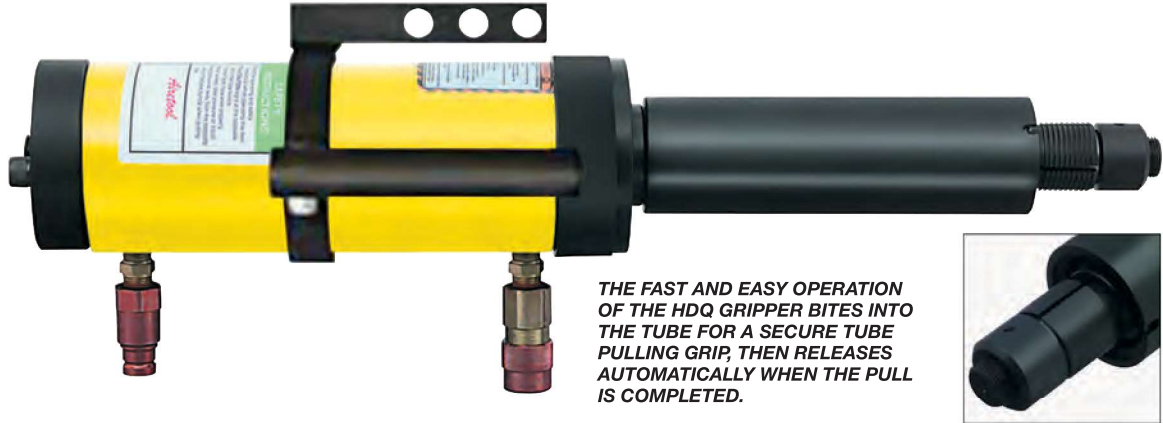
Model Number	Order Number
HDQ III Tube Puller*	5526275PT
HTP III RAM	5526273
HDQ III Adapter Plate	2902631

* Includes RAM and Adapter Plate

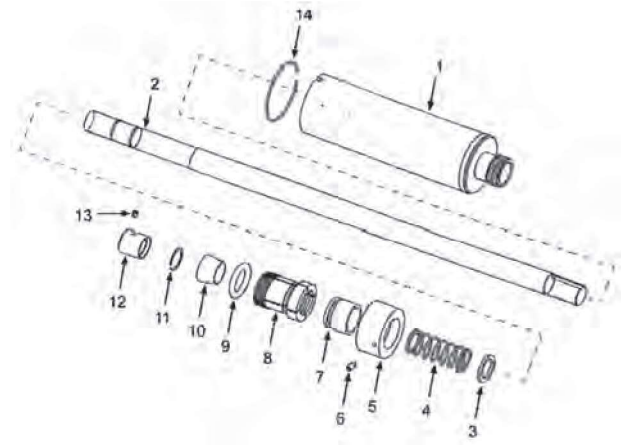
Tube O.D.	Tube Wall BWG	Gripper Kit Complete*	Item Name	HDQ 99 Chair	Position Sleeve	Sleeve Adapter	Gripper	O-Ring	Mandrel	Stop Nut	Spring	Position Sleeve Set Screw	Retainer Ring	Drawbar	Stop Nut Set Screw
				Item Number	1	2	3	4	5	6	7	8	9	10	11
1-1/4	31.7	8-10 HDQ 99 125 8/10 (5525293)	Description	HDQ 99 7 125F QC Chair	HDQ 125 PS	HDQ 125 SA	HDQ 125 1		HDQ 125 M	HDQ 125 1SN	HDQ 31 8	10-32 x 3/16	HDQ 125	HDQ 99 5	10-32 x 3/16
			Order Number	2999993	2985180	2985186	2985168	3094100	2985196	2985191	2985203	8009800	2985357	2900012	8009800
			Quantity	1	1	1	6	1	1	1	1	1	1	1	1
	11-14	HDQ 99 125 11/14 (5525294PT)	Description	HDQ 99 7 125F QC Chair	HDQ 125 PS	HDQ 125 SA	HDQ 125 2	RT V 60	HDQ 125 M	HDQ 125 2SN	HDQ 31 8	10-32 x 3/16	HDQ 125	HDQ 99 5	10-32 x 3/16
			Order Number	2999993	2985180	2985186	2985169	3094100	2985196	2985192	2985203	8009800	2985357	2900012	8009800
			Quantity	1	1	1	6	1	1	1	1	1	1	1	1
	15-18	HDQ 99 125 15/18 (5525295)	Description	HDQ 99 7 125F QC Chair	HDQ 125 PS	HDQ 125 SA	HDQ 125 3	RT V 60	HDQ 125 M	HDQ 125 3SN	HDQ 31 8	10-32 x 3/16	HDQ 125	HDQ 99 5	10-32 x 3/16
			Order Number	2999993	2985180	2985186	2988629	3094100	2985196	2988630	2985203	8009800	2985357	2900012	8009800
			Quantity	1	1	1	6	1	1	1	1	1	1	1	1
1-1/2	38.1	8-12 HDQ 99 150 8/12 (5525296PT)	Description	HDQ 99 7 150F QC Chair	HDQ 150 PS	HDQ 150 SA	HDQ 150 1	2 213	HDQ 150 M	HDQ 150 1SN	HDQ 31 8	10-32 x 3/16	HDQ 150	HDQ 99 5	10-32 x 3/16
			Order Number	2999994	2985181	2985187	2985170	8010303	2985197	2985193	2985203	8009800	2985668	2900012	8009800
			Quantity	1	1	1	4	1	1	1	1	1	1	1	1
	13-18	HDQ 99 150 13/18 (5525297)	Description	HDQ 99 7 150F QC Chair	HDQ 150 PS	HDQ 150 SA	HDQ 150 2	2 213	HDQ 150 M	HDQ 150 2SN	HDQ 31 8	10-32 x 3/16	HDQ 150	HDQ 99 5	10-32 x 3/16
			Order Number	2999994	2985181	2985187	2985171	8010303	2985197	2985194	2985203	8009800	2985668	2900012	8009800
			Quantity	1	1	1	4	1	1	1	1	1	1	1	1
1-3/4	44.4	12-18 HDQ 99 175 8/12 (5525298)	Description	HDQ 99 7 175F QC Chair	HDQ 175 PS	HDQ 175 SA	HDQ 175 1	700-30	HDQ 150 M	HDQ 175 1SN	HDQ 31 8	10-32 x 3/16	1 3/8	HDQ 99 5	1/4-20 x 1/4
			Order Number	2999995	2985182	2985189	2985172	3203900	2985197	2985195	2985203	8009800	2349000	2900012	8006600
			Quantity	1	1	1	4	1	1	1	1	1	1	1	1
	13-18	HDQ 99 175 13/18 (5525299)	Description	HDQ 99 7 175F QC Chair	HDQ 175 PS	HDQ 175 SA	HDQ 175 2	2 216	HDQ 150 M	HDQ 175 1SN	HDQ 31 8	10-32 x 3/16	1 3/8	HDQ 99 5	1/4-20 x 1/4
			Order Number	2999995	2985182	2985189	2985173	8010304	2985197	2985195	2985203	8009800	2349000	2900012	8006600
			Quantity	1	1	1	4	1	1	1	1	1	1	1	1

HDQ-III Tube Pullers

HDQ III Gripper-type tube puller is designed for pulling 2" thru 2-1/2" O.D. tubes in heat exchangers and fire tube boilers using GRP Gripper Kits. This gripper-type tube puller makes tube pulling faster and easier. See selection charts below for ordering gripper kits and components for the tube sizes being pulled.



THE FAST AND EASY OPERATION OF THE HDQ GRIPPER BITES INTO THE TUBE FOR A SECURE TUBE PULLING GRIP, THEN RELEASES AUTOMATICALLY WHEN THE PULL IS COMPLETED.



HDQ III Ram & Accessories

Model Number	Order Number
HDQ III Tube Puller*	5526275PT
HTP III RAM	5526273
HDQ III Adapter Plate	2902631

* Includes RAM and Adapter Plate

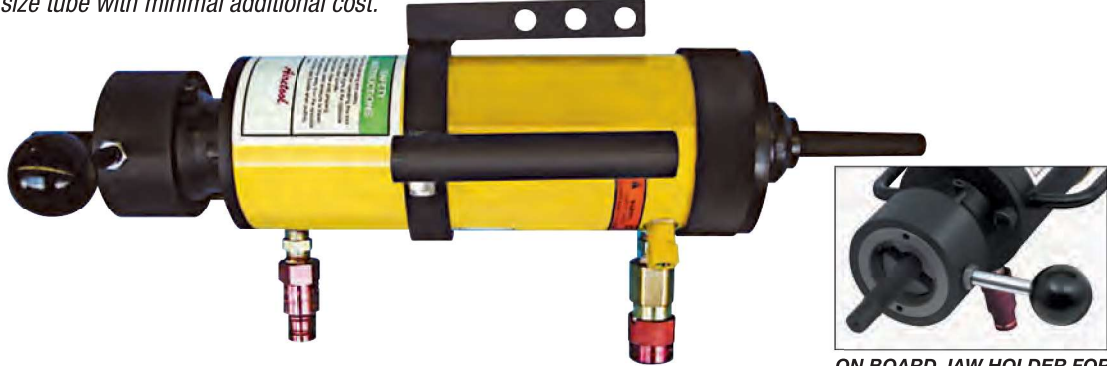
Tube O.D.	Tube Wall	Gripper Kit Complete*	Item Name	HDQ 99 Chair	Drawbar	Stop Plate	Spring	Position Sleeve	Socket Set Screw	Sleeve Adapter	Gripper	O-Ring	Cam	Retainer Ring	Stop Nut	Socket Set Screw	Retainer Spring	
in.	mm	BWG	Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
2	50.8	8-12	GRP 99 200 8/12 (5525300PT)	Description	HDQ 99 7 200F QC Chair	GRP 99 4	GRP 200 STP	GRP 200 SPR	HDQ 200 PS	10-32 x 1/2	GRP 200 SA	GRP 200 1	2 218	GRP 200 CAM	5160 98	GRP 200 SN	1/4-20 X 5/16	1 5/8
			Order Number	2999996	2900052	2987488	2986930	2985183	8010346	2986932	2987091	8010363	2988791	8010362	2986933	8010335	2350300	
			Quantity	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1
		13-18	GRP 99 200 13/18 (5525301)	Description	HDQ 99 7 200F QC Chair	GRP 99 4	GRP 200 STP	GRP 200 SPR	HDQ 200 PS	10-32 x 1/2	GRP 200 SA	GRP 200 2	2 221	GRP 200 CAM	5160 98	GRP 200 SN	1/4-20 X 5/16	1 5/8
			Order Number	2999996	2900052	2987488	2986930	2985183	8010346	2986932	2987090	8010408	2988791	8010362	2986933	8010335	2350300	
			Quantity	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1
2-1/4	57.1	8-12	GRP 99 225 8/12 (5525302)	Description	HDQ 99 7 225F QC Chair	GRP 99 4	GRP 200 STP	GRP 200 SPR	HDQ 225 PS	10-32 x 1/2	GRP 200 SA	GRP 225 1	2 222	GRP 225 CAM	5160 98	GRP 225 SN	1/4-20 X 5/16	1 5/8
			Order Number	2999997	2900052	2987488	2986930	2985184	8010346	2986932	2987092	8010409	2986929	8010362	2986934	8010335	2350300	
			Quantity	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1
		13-18	GRP 99 225 13/18 (5525303)	Description	HDQ 99 7 225F QC Chair	GRP 99 4	GRP 200 STP	GRP 200 SPR	HDQ 225 PS	10-32 x 1/2	GRP 200 SA	GRP 225 2	500 23	GRP 225 CAM	5160 98	GRP 225 SN	1/4-20 X 5/16	2
			Order Number	2999997	2900052	2987488	2986930	2985184	8010346	2986932	2987094	3165700	2982929	8010362	2986934	8010335	2005500	
			Quantity	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1
2-1/2	63.5	8-12	GRP 99 250 8/12 (5525304PT)	Description	HDQ 99 7 250F QC Chair	GRP 99 4	GRP 200 STP	GRP 200 SPR	HDQ 250 PS	10-32 x 1/2	GRP 200 SA	GRP 250 1	2 224	GRP 225 CAM	5160 98	GRP 225 SN	1/4-20 X 5/16	1 5/8
			Order Number	2999998PT	2900052	2987488	2986930	2985185	8010346	2986932	2987095	8010192	2986929	8010362	2986934	8010335	2350300	
			Quantity	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1
		13-18	GRP 99 250 13/18 (5525305)	Description	HDQ 99 7 250F QC Chair	GRP 99 4	GRP 200 STP	GRP 200 SPR	HDQ 250 PS	10-32 x 1/2	GRP 200 SA	GRP 250 2	2 226	GRP 225 CAM	5160 98	GRP 225 SN	1/4-20 X 5/16	2
			Order Number	2999998PT	2900052	2987488	2986930	2985185	8010346	2986932	2987093	2983713	2986929	8010362	2986934	8010335	2005500	
			Quantity	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1

RAV III Tube Pullers

RAV III Tube Pullers

- RAV III Semi-Continuous Tube Pulling Ram allows continuous pulling of tubes up to 1" O.D. (25.4mm).
- Tubes over 1" O.D. have a maximum pulling length of 7" (177mm).

To order: Select the desired RAV III Tube Puller Kit, Spear, and Collar. The universal design of this system allows the user to easily change to a different size tube with minimal additional cost.



ON BOARD JAW HOLDER FOR SEMI-CONTINUOUS PULLING.

RAV SPEARS

Description	Order Number	Tube I.D.		Jaw Size		Square Size	
		in.	mm	in.	mm	in.	mm
RAV 99 406 5/8	2900189	.215 - .255	5.5 - 6.5	5/8	15.8	1/2	12.7
RAV 99 407 5/8	2900190	.255 - .295	6.5 - 7.5	5/8	15.8	1/2	12.7
RAV 99 408 5/8	2900191	.295 - .335	7.5 - 8.5	5/8	15.8	1/2	12.7
RAV 99 409 5/8	2900192	.335 - .375	8.5 - 9.5	5/8	15.8	1/2	12.7
RAV 99 410 5/8	2900193	.375 - .415	9.5 - 10.5	5/8	15.8	1/2	12.7
RAV 99 411 5/8	2900194	.415 - .455	10.5 - 11.5	5/8	15.8	1/2	12.7
RAV 99 412 5/8	2900195	.455 - .495	11.5 - 12.5	5/8	15.8	1/2	12.7
RAV 99 413 5/8	2900196	.495 - .535	12.5 - 13.5	5/8	15.8	1/2	12.7
RAV 99 414 5/8	2900197	.535 - .570	13.5 - 14.5	5/8	15.8	1/2	12.7
RAV 99 413 3/4	2900198	.495 - .535	12.5 - 13.5	3/4	19.0	5/8	15.8
RAV 99 414 3/4	2900199	.535 - .570	13.5 - 14.5	3/4	19.0	5/8	15.8
RAV 99 415 3/4	2900200	.570 - .615	14.5 - 15.5	3/4	19.0	5/8	15.8
RAV 99 416 3/4	2900201	.615 - .650	15.5 - 16.5	3/4	19.0	5/8	15.8
RAV 99 417 3/4	2900202	.650 - .695	16.5 - 17.5	3/4	19.0	5/8	15.8
RAV 99 418 3/4	2900203	.695 - .730	17.5 - 18.5	3/4	19.0	5/8	15.8
RAV 99 415 7/8	2900204	.570 - .615	14.5 - 15.5	7/8	22.2	3/4	19.0
RAV 99 416 7/8	2900205	.615 - .650	15.5 - 16.5	7/8	22.2	3/4	19.0
RAV 99 417 7/8	2900206	.650 - .695	16.5 - 17.5	7/8	22.2	3/4	19.0
RAV 99 418 7/8	2900207	.695 - .730	17.5 - 18.5	7/8	22.2	3/4	19.0
RAV 99 419 7/8	2900208	.730 - .770	18.5 - 19.5	7/8	22.2	3/4	19.0
RAV 99 420 7/8	2900209	.770 - .815	19.5 - 20.5	7/8	22.2	3/4	19.0
RAV 99 421 7/8	2900210	.815 - .850	20.5 - 21.5	7/8	22.2	3/4	19.0
RAV 99 419 1	2900211	.730 - .770	18.5 - 19.5	1	25.4	3/4	19.0
RAV 99 420 1	2900212	.770 - .815	19.5 - 20.5	1	25.4	3/4	19.0
RAV 99 421 1	2900213	.815 - .850	20.5 - 21.5	1	25.4	3/4	19.0
RAV 99 422 1	2900214	.850 - .885	21.5 - 22.5	1	25.4	3/4	19.0
RAV 99 423 1	2900215	.885 - .925	22.5 - 23.5	1	25.4	3/4	19.0
RAV 99 424 1	2900216	.925 - .965	23.5 - 24.5	1	25.4	3/4	19.0
RAV 99 425 1	2900217	.965 - 1.005	24.5 - 25.5	1	25.4	3/4	19.0
RAV 99 426 1	2900218	1.005 - 1.045	25.5 - 26.5	1	25.4	3/4	19.0
RAV 99 427 1	2900219	1.045 - 1.085	26.5 - 27.5	1	25.4	3/4	19.0
RAV 99 428 1	2900220	1.085 - 1.125	27.5 - 28.5	1	25.4	3/4	19.0
RAV 99 429 1	2900221	1.125 - 1.160	28.5 - 29.5	1	25.4	3/4	19.0
RAV 99 430 1	2900222	1.160 - 1.200	29.5 - 30.5	1	25.4	3/4	19.0
RAV 99 431 1	2900223	1.200 - 1.240	30.5 - 31.5	1	25.4	3/4	19.0
RAV 99 432 1	2900224	1.240 - 1.280	31.5 - 32.5	1	25.4	3/4	19.0
RAV 99 433 1	2900225	1.280 - 1.320	32.5 - 33.5	1	25.4	3/4	19.0
RAV 99 434 1	2900226	1.320 - 1.360	33.5 - 34.5	1	25.4	3/4	19.0
RAV 99 435 1	2900227	1.360 - 1.400	34.5 - 35.5	1	25.4	3/4	19.0
RAV 99 436 1	2900228	1.400 - 1.440	35.5 - 36.5	1	25.4	3/4	19.0
RAV 99 437 1	2900229	1.440 - 1.475	36.5 - 37.5	1	25.4	3/4	19.0
RAV 99 438 1	2900230	1.475 - 1.515	37.5 - 38.5	1	25.4	3/4	19.0

RAV III Ram

Model Number	Order Number
HTP III Ram	5526273

Universal Spears

Description	Model Number	Order Number
RAV Spear, 5/8" I.D., 13-24 BWG	RAV 5/8 13-24	7025691PT
RAV Spear, 3/4" I.D., 12-18 BWG	RAV 3/4 12-18	7025689
RAV Spear, 1" I.D., 9-18 BWG	RAV 1 9-18	7025690
RAV Spear, 1-1/8" I.D., 12-18 BWG	RAV 1 1/8 12-18	7025692

RAV III Ram Kits & Components

Model Number	Tube O.D.			
	5/8" (15.8mm)	3/4" (19.0mm)	7/8" (22.2mm)	1" (25.4mm)
RAV III Tube Puller Kits* w/ Jaw Holders & Jaws	5526276	5526277	5526278	5526279
RAV III Jaw Holders & Jaws	5526282	5526283		5526286
RAV III Jaw Set (includes 4 springs)	7025595	7025552		7025553

*RAV III Tube Puller Kits include: RAV III Ram, Jaw Holder Assembly and one set of Jaws



RAV COLLARS

Tube O.D.		Model Number	Order Number	Collar I.D.		Collar O.D.	
in.	mm			in.	mm	in.	mm
1/2	12.7	RAV 99 316	2900176	0.630	16.0	0.865	22.0
5/8	15.8	RAV 99 319	2900177	0.750	19.0	0.985	25.0
3/4	19.0	RAV 99 323	2900178	0.905	23.0	1.14	29.0
7/8	22.2	RAV 99 326	2900179	1.025	26.0	1.26	32.0
1	25.4	RAV 99 326	2900179	1.025	26.0	1.26	32.0
1-1/8	28.5	RAV 99 332	2900181	1.260	32.0	1.495	38.0
1-1/4	31.7	RAV 99 335	2900182	1.375	35.0	1.61	41.0
1-3/8	34.9	RAV 99 339	2900183	1.530	39.0	1.77	45.0
1-1/2	38.1	RAV 99 345	2900184	1.770	45.0	2.005	51.0
1-3/4	44.4	RAV 99 351	2900185	2.005	51.0	2.24	57.0
2	50.8	RAV 99 358	2900186	2.280	58.0	2.515	64.0

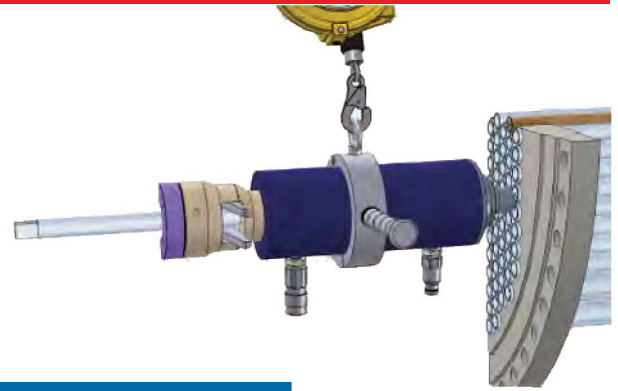
Super Jenny Semi-Continuous system

- Super Jenny Semi-Continuous Tube Pulling Ram allows continuous pulling of tubes up to 1-1/4" O.D. (31.75 mm).
- Tubes over 1-1/4" O.D. have a maximum pulling length of 7" (177mm).

To order: Select the desired RAV III Tube Puller Kit, Spear, and Collar The universal design of this system allows the user to easily change to a different size tube with minimal additional cost

Our "Super Jenny" series of hydraulic semi-automatic Tube pullers, allow the user to continuously pull tubes through heat exchangers and condensers without the use of hammers or winches etc. The key to our system is the O.D. gripping jaw that will pull the tube as the operator actuates the ram. To release the jaw, the operator simply inserts the jaw release tool and the tube becomes free to be pulled off by hand, or the ram is returned against the tube sheet to take another stroke. All of our pulling heads work in conjunction with our specially designed high flow electric or pneumatic power packs (see page 9 for details). The three different pulling rams allow for the right tool for the job. Pulling capacities range from 10-60 tons making tube removal of 3/8" – 2" O.D. through the ram a snap. Stubs up to 4" O.D. can be removed using our chair style tooling. Our smallest ram, the "Mini-Jenny", has been specifically designed for chiller and condenser work.

Weighing in at just 18 lbs. (6 kg), this 10-ton capacity ram can pull up to 1" O.D. tubes. With a 3" stroke, this unit is exceptionally quick, and is ideal for tight access applications. Our 30-ton "Super-Jenny" is the workhorse. Available with either a 3" or 6" stroke, this tool is capable of pulling 5/8" – 1-1/4" tubes continuously. It can even pull up to 3" stubs in specific applications. Our 60-ton "Mega-Jenny" has been designed to pull tubes in the toughest applications. As standard, the unit can thru-pull 1-1/2" – 2" tubes. A special adapter is offered as well which will allow the operator to pull smaller diameter tubes with up to 60 tons of pulling force. For example, a tube extraction of 1-1/4" x 10 BWG with a 7" tube sheet was noted to pull at 52 tons of pulling force.



"MINI-JENNY" SPECIFICATIONS (10 ton ram)		
	Imperial	Metric
TUBE OD RANGE (for standard tooling)	5/8" - 1"	12.7mm - 25.4 mm
PULLING FORCE	10 Tons	
OVERALL LENGTH (w/ nose piece)	15"	380 mm
DIAMETER	3-1/4"	83 mm
WEIGHT	18 lbs.	8 kg
STROKE	3"	76 mm
REQUIRED OIL TYPE	ISO 32 Grade	

"SUPER JENNY" SPECIFICATIONS (30 ton ram)		
	Imperial	Metric
TUBE OD RANGE (for standard tooling)	5/8" - 1-1/4"	12.7mm - 31.75 mm
PULLING FORCE	30 Tons	
OVERALL LENGTH (w/ nose piece)	17"	430 mm
DIAMETER	5-1/2"	140 mm
WEIGHT	40 lbs	18 kg
STROKE	6"	152 mm
REQUIRED OIL TYPE	ISO 32 Grade	

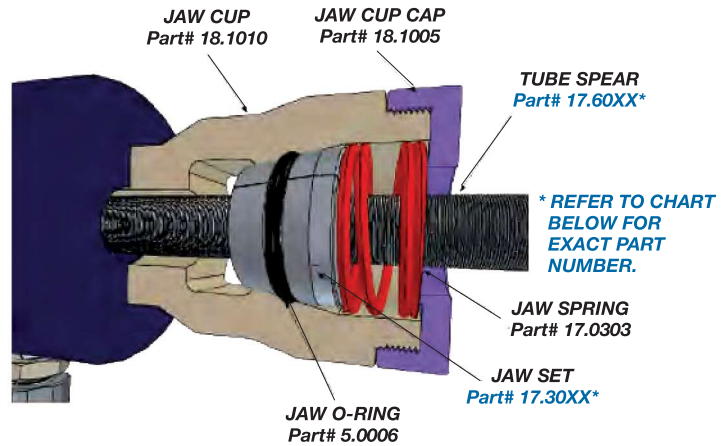
"MEGA-JENNY" SPECIFICATIONS (60 ton ram)		
	Imperial	Metric
TUBE OD RANGE (for standard tooling)	5/8" - 2"	12.7mm - 50.8 mm
PULLING FORCE	60 Tons	
OVERALL LENGTH (w/ nose piece)	17"	430 mm
DIAMETER	7 1/2"	191 mm
WEIGHT	75 lbs	34 kg
STROKE	6"	152 mm
REQUIRED OIL TYPE	ISO 32 Grade	

PUMP SPECIFICATIONS							
PART#	POWER TYPE	HP	MAX PRESSURE		POWER REQUIREMENTS	WEIGHT	
			PSI	Bar		Lbs	Kg
G5773R	Pneumatic	3HP	10,000	700	50 CFM @ 90 PSI	52	23.6
G5173R	Electric	1.5HP	10,000	700	115V/18 amp Single Phase	81	36.7



Super Jenny Consumables

“SUPER JENNY” Tooling is selected based on two variables the tube outside diameter and the tube wall thickness (or Tube ID).



“Super Jenny” Tooling & Consumables Chart			Minimum Spear Diameter		Maximum Spear Diameter		Male Square Size	Nose Collar	Jaw Sets w/ O-Ring
Tube Diameter	Wall Thickness	Spear Part #	INCH	MM	INCH	MM			
1/2" O.D. (12.7 mm)	10-12 bwg	17.6000	0.217	5.5	0.319	8.1	1/2"	17.0500	17.3022
	13-16 bwg	17.6001	0.299	7.6	0.402	10.2			
	18-24 bwg	17.6002	0.398	10.1	0.457	11.6			
5/8" O.D. (51.9 mm)	10-12 bwg	17.6010	0.335	8.5	0.433	11	1/2"	17.6025	17.3032
	13-16 bwg	17.6011	0.433	11	0.535	13.6			
	18-24 bwg	17.6012	0.514	13.05	0.616	15.7			
3/4" O.D. (19.05 mm)	10-12 bwg	17.6020	0.480	12.2	0.583	14.8	5/8"	17.0750	17.3042
	13-16 bwg	17.6021	0.555	14.1	0.657	16.7			
	18-24 bwg	17.6012	0.640	16.25	0.740	18.8			
	13-21 bwg	17.6029	0.555	14.1	0.730	18.5			
7/8" O.D. (22.2 mm)	10-12 bwg	17.6030	0.604	15.35	0.709	18.0	5/8"	17.0875	17.6047
	13-16 bwg	17.6031	0.683	17.35	0.787	20.0			
	18-24 bwg	17.6012	0.768	19.5	0.870	22.1			
1" O.D. (25.4 mm)	10-12 bwg	17.6040	0.728	18.5	0.831	21.1	3/4"	17.1000	17.3052
	13-16 bwg	17.6041	0.807	20.5	0.909	23.1			
	18-24 bwg	17.6042	0.890	22.6	0.992	25.2			
	13-21	17.6043	0.807	20.5	0.972	24.7			
1-1/8" O.D. (28.58 mm)	10-12 bwg	17.6050	0.858	21.8	0.961	24.4	3/4"	17.1125	17.3062
	13-16 bwg	17.6051	0.937	23.8	1.039	26.4			
	18-24 bwg	17.6052	1.016	25.8	1.118	28.4			
1-1/4" O.D. (31.75 mm)	10-12 bwg	17.6060	0.980	24.9	1.083	27.5	1"	17.1250	17.3062
	13-16 bwg	17.6061	1.059	26.9	1.161	29.5			
	18-24 bwg	17.6062	1.140	28.95	1.244	31.6			
1-1/2" O.D. (38.1 mm)	10-12 bwg	17.6070	1.232	31.3	1.335	33.9	1"	17.3212	17.3211
	13-16 bwg	17.6071	1.311	33.3	1.413	35.9			
	18-24 bwg	17.6072	1.390	35.3	1.492	37.9			
1-3/4" O.D. (44.45 mm)	10-12 bwg	17.6080	1.484	37.7	1.587	40.3	1"	17.3217	17.3216
	13-16 bwg	17.6081	1.563	39.7	1.665	42.3			
	18-24 bwg	17.6082	1.642	41.7	1.744	44.3			
2" O.D. (50.8 mm)	10-12 bwg	17.6090	1.736	44.1	1.839	46.7	1"	17.3222	17.3221
	13-16 bwg	17.6091	1.815	46.1	1.917	48.7			
	18-24 bwg	17.6092	1.894	48.341	1.996	50.7			

JSP Manual Tube Pullers

Manual tube puller provides economical method for tube removal.

- For tube removal applications ranging from 1/4" to 1-1/2" O.D.
- No external power requirement makes it ideal for field service applications.
- Manual operation with a hand wrench make the JSP easy to use.
- All components have clearly marked sizes for a quick matching of tool to job.
- Components are heat-treated high strength steel for greater durability.



Tube Size							JSP Tube Puller Complete		Spare Spears	
O.D.		Gauge	Wall Thickness		I.D.		Model Number	Order Number	Model Number	Order Number
In.	mm		In.	mm	In.	mm				
1/4	6.35	18	0.049	1.24	0.152	3.86	JSP 250 18	5520136	JSP 1/4 18	2989364
3/8	9.52	16	0.065	1.65	0.245	6.22	JSP 375 16	5520914	JSP 3/8 16	2991563
3/8	9.52	18	0.049	1.24	0.277	7.04	JSP 375 18	5520030	JSP 3/8 18	2989016
3/8	9.52	20	0.035	0.88	0.305	7.75	JSP 375 20	5519932	JSP 3/8 20	2988750
1/2	12.70	14	0.083	2.11	0.334	8.48	JSP 500 14	5519689	JSP 1/2 14	2987297
1/2	12.70	16	0.065	1.65	0.370	9.40	JSP 500 16	5519690	JSP 1/2 16	2986892
1/2	12.70	18	0.049	1.24	0.402	10.21	JSP 500 18	5519070	JSP 1/2 18	2986893
1/2	12.70	20	0.035	0.88	0.430	10.92	JSP 500 20	5519691PT	JSP 1/2 20	2987298
5/8	15.88	14	0.083	2.11	0.459	11.66	JSP 625 14	5519692	JSP 5/8 14	2986894
5/8	15.88	16	0.065	1.65	0.495	12.57	JSP 625 16	5519693	JSP 5/8 16	2986895
5/8	15.88	18	0.049	1.24	0.527	13.39	JSP 625 18	5518868	JSP 5/8 18	2986771
5/8	15.88	20	0.035	0.88	0.555	14.10	JSP 625 20	5519694	JSP 5/8 20	2987182
3/4	19.05	14	0.083	2.11	0.585	14.86	JSP 750 14	5519695	JSP 3/4 14	2986896
3/4	19.05	16	0.065	1.65	0.620	15.75	JSP 750 16	5519696	JSP 3/4 16	2986897
3/4	19.05	18	0.049	1.24	0.652	16.56	JSP 750 18	5518804	JSP 3/4 18	2986364
3/4	19.05	20	0.035	0.88	0.680	17.27	JSP 750 20	5519697	JSP 3/4 20	2986769
7/8	22.22	14	0.083	2.11	0.709	18.01	JSP 875 14	5519698	JSP 7/8 14	2986898
7/8	22.22	16	0.065	1.65	0.745	18.92	JSP 875 16	5519699	JSP 7/8 16	2986899
7/8	22.22	18	0.049	1.24	0.777	19.74	JSP 875 18	5519071	JSP 7/8 18	2986900
7/8	22.22	20	0.035	0.88	0.805	20.45	JSP 875 20	5518700	JSP 7/8 20	2987534
1	25.40	14	0.083	2.11	0.834	21.18	JSP 1000 14	5519701	JSP 1 14	2986901
1	25.40	16	0.065	1.65	0.870	22.10	JSP 1000 16	5519702	JSP 1 16	2986902
1	25.40	18	0.049	1.24	0.902	22.91	JSP 1000 18	5519072	JSP 1 18	2986903
1	25.40	20	0.035	0.88	0.930	23.62	JSP 1000 20	5519703	JSP 1 20	2987209
1	25.40	22-24	0.028-0.022	0.71-0.55	0.944-0.956	23.98-24.30	JSP 1000 22 24	5519926	JSP 1 22 24	2988730
1-1/2	38.10	14	0.083	2.11	1.334	33.88	JSP 1500 14	5526266PT	JSP 1 1/2 14	2989292

Additional sizes are available. Contact technical service for details.