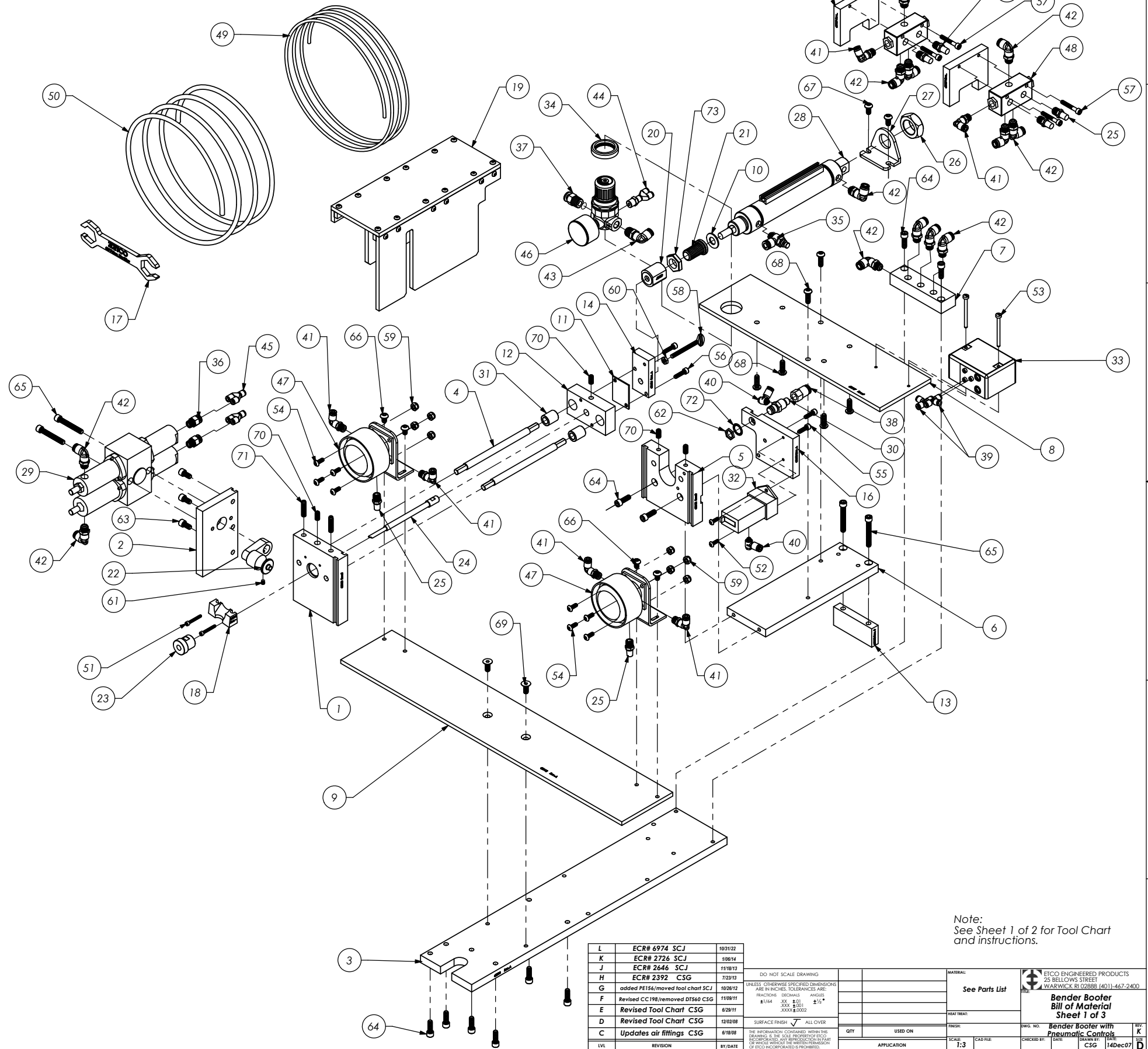


ITEM NO.	Part_Code	PART NUMBER	DESCRIPTION	QTY.	ITEM NO.	Part_Code	PART NUMBER	DESCRIPTION	QTY.
1	-	62108	Front Guide Plate	1	70		1.4-28_.50ss	1/4-28 x 1/2" Socket Set Screw	4
2	-	62109	Rotary Cylinder Support	1	71		1.4-28_1.00ss	1/4-28 x 1" Socket Set Screw	2
3	-	62110	Base Plate	1	72		1.2isw	1/2" Internal Star Washer	1
4	-	62111	Guide Rod	2	73	62155	5.8-18hn	5/8-18 Hex Nut Stainless Steel	1
5	-	62112	Rear Guide Plate	1					
6	-	62113	Cylinder Mounting Plate	1					
7	-	62116	Manifold	1					
8	-	62117	Control Mounting Plate	1					
9	-	62118	Palm Button Mounting Bracket	1					
10	-	62119	Washer	1					
11	-	62120	Stop block	1					
12	-	62122	Booter Rod Holder	1					
13	-	62123	Riser Block	1					
14	-	62124	Spacer	1					
15	-	62129	Pilot Valve Mounting Block	2					
16	-	62130	Air Switch Mount Block	1					
17	64106	64106 Wrench	Wrench	1					
18	See Tool Chart	Boot Block	(Generic)	1					
19	68554	68554 Assy	Booter Bender Guard Assy	1					
20	AP 70795	68567	Rod Adjustment Sleeve	1					
21	AP 70796	68568	Jam Nut	1					
22	See Tool Chart	3 Piece Rotary Roller	(Generic)	1					
23	See Tool Chart	Rod Bushing	(Generic)	1					
24	See Tool Chart	Booter Rod	(Generic)	1					
25	62168	Allied P-18	1/8-NPT Exhaust Muffler	6					
26	62160	D-2545	Hex Nut	1					
27	62161	D-8316	Cylinder Mounting Bracket	1					
28	62158	MRS-124-DXPZ	Air Cylinder	1					
29	62159	PT-074180-A1	Rotary Cylinder	1					
30	62162	Humphrey 3P	Humphrey 3P Air Valve	1					
31	62156	McMaster Carr #6391K188	Sleeve Bearing	2					
32	62143	McMaster Carr #8684T35	Counter	1					
33	62157	Norgren D0039A	Anti-Tie Down Control	1					
34	62323	Norgren 2962-89	Panel Nut	1					
35	76268	Pisco JSC250-N1AU	Speed Controller	1					
36	73222	Pisco PC250-N1U	1/4" x 1/8" NPT Straight	3					
37	64115	Pisco PC250-N2U	Ø1/4" x 1/4-NPT Straight Connector, Black	1					
38	62167	Pisco PCF250-N1U	Straight Connector	1					
39	63953	Pisco PE156	Ø5/32" Tee Fitting, Green	2					
40	75691	Pisco PH156-U10U	5/32" x 10-32 Banjo Fitting	2					
41	73803	Pisco PL156-N1U	Ø5/32" x 1/8-NPT Elbow Fitting	6					
42	72352	Pisco PL250-N1U	Ø1/4" x 1/8-NPT Elbow Fitting, White	14					
43	76192	Pisco PL250-N2U	1/4" x 1/4" NPT Elbow Fitting	1					
44	62147	Pisco PX156-N1U	Ø5/32" Y-Fitting, White	1					
45	62704	Pisco PY250	Ø1/4" Y-Fitting, White	2					
46	62163	R07_USA	Regulator/Gauge	1					
47	62164	125PLG	Palm Button Ass'y.	2					
48	62165	18SP-4	Pilot Valve	2					
49	62171	5_32 inch Polyurethane Air Line Tubing	5/32" Air Line Tubing	1					
50	62172	1_4 inch Polyurethane Air Line Tubing	1/4" Air Line Tubing	1					
51		6-32_1.00sh	#6-32 x 1" Socket Hd Cap Screw	2					
52		8-32_.50bh	#8-32 x 1/2" Socket Hd Cap Screw	2					
53		8-32_2sfh	8-32 x 2" Slotted Fillister Hd Screw	2					
54	76501	10-32_.50bh	#10-32 x 1/2" Button Hd Cap Screw	8					
55	70293	10-32_.63sh	#10-32 x 5/8" Socket Hd Cap Screw	2					
56	63532	10-32_.75sh	#10-32 x 3/4" Socket Hd Cap Screw	2					
57	77396	10-32_1.25sh	#10-32 x 1 1/4" Socket Hd Cap Screw	4					
58		10-32_2.00ts	#10-32 x 2" Thumb Screw	1					
59		10-32 sn	#10-32 Stop Nut	8					
60	63167	10-32 hn	#10-32 Hex Nut	1					
61		10-32_.12ssf	#10-32 x 1/8" Socket Hd Set Screw	1					
62		15.32_32 hex nut	Hex Nut	1					
63	78328	1.4-20_.50sh	1/4-20 x 1/2" Socket Hd Cap Screw	3					
64	70030	1.4-20_.75sh	1/4-20 x 3/4" Socket Hd Cap Screw	10					
65		1.4-20_1.93 sh	1/4-20 x 1 15/16" Socket Hd Cap Screw	4					
66	63942	1.4-20_.38bh	1/4-20 x 3/8" Button Hd Cap Screw	4					
67	63632	1.4-20_.50bh	1/4-20 x 1/2" Button Hd Cap Screw	2					
68	63943	1.4-20_.75bh	1/4-20 x 3/4" Button Hd Cap Screw	6					
69		1.4-20_.63fh	1/4-20 x 5/8" Flat Hd Cap Screw	2					

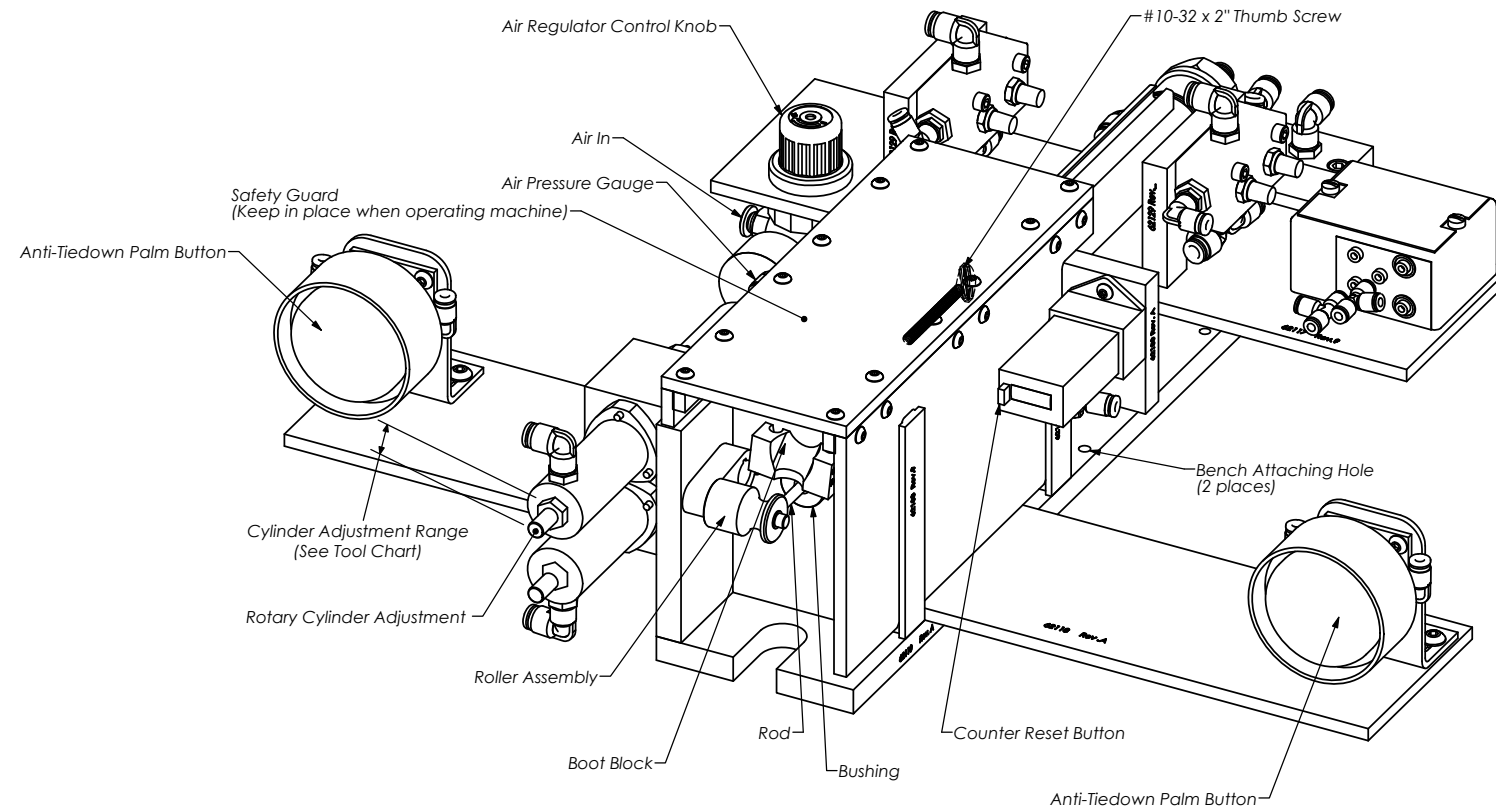


**Bender Booter with Pneumatic Controls
79209**

Note:
See Sheet 1 of 2 for Tool Chart
and instructions.

L	ECR# 6974 SCJ	10/31/22	DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS DECIMALS ANGLES .1/164 .001 .001 .01° XXX .001 .01° XXXX .0002	MATERIAL:	ETICO ENGINEERED PRODUCTS 25 BELLOWS STREET WARWICK, RI 02886 (401) 467-2400 See Parts List Bender Booter Bill of Material Sheet 1 of 3 Bender booter with Pneumatic Controls DRAWN BY: CSG CHECKED BY: CSG DATE: 14Dec07 REV: K DATE: D
K	ECR# 2726 SCJ	10/6/14		QTY:	
J	ECR# 2646 SCJ	10/10/13		USED ON:	
H	ECR# 2392 CSG	7/23/13		FINISH:	
G	added PE156/moved tool chart SCJ	10/26/12		SCALE:	
F	Revised CC198/moved D1560 CSG	11/09/11		CAD FILE:	
E	Revised Tool Chart CSG	6/29/11		DATE:	
D	Revised Tool Chart CSG	12/02/08		BY:	
C	Updates air fittings CSG	6/18/08		DATE:	
B				APPLICATION:	

**Bender Booter with Pneumatic Controls
79209**



Note:
See Sheet 1 of 3 for exploded view and Parts List for Bender Booter.

ETCO Incorporated Bender Booter Set-Up and Operating Instructions

Step 1) Secure Bender Booter to bench using pre-drilled holes in base plate. The front 2" of the machine must overhang the workbench as noted in the machine drawing

Step 2) Connect Bender Booter to compressed air supply at the regulator. (Air supply should be filtered and capable of maintaining a constant 50-60 PSI.) Adjust regulator between 50-60 PSI.

Step 3) (Test) Depress both anti-tiedown palm buttons simultaneously a few times. Rod cylinder will retract to set location and rotary cylinder will rotate counterclockwise.

Step 4) Place lubricated and pre-heated boot onto the booter rod. Insert terminated wire/terminal onto booter rod and secure into position with pin.

Step 5) Depress both anti-tie down palm buttons simultaneously. Keep both buttons depressed throughout the cycle. The booter rod will pull the wire terminal assembly through the boot and the roller assembly will bend the terminal.

Step 6) Release the anti-tie down palm buttons and remove the finished assembly.

Step 7) Inspect finished assembly and adjust rotary cylinder for more or less bend. Note: Bend adjustment is made on the top cylinder of the dual cylinder rotary actuator. To adjust, loosen locking nut and turn adjusting screw to desired length. (Measurement is taken from the tip of the adjusting screw to the flat end of the cylinder as shown in the schematic.) To decrease the bend, turn adjusting screw clockwise. To increase the bend, turn adjusting screw counterclockwise. Be sure to tighten lock nut once desired results have been achieved.

Step 8) Repeat steps 4-7 until desired results are achieved.

Step 9) If a Booter Rod is needed for a new operation, the Thumb Screw will need to be adjusted accordingly for proper activation of the Rotary Roller.

Step 10) Bender Booter is now ready for production.

Tool Chart

Terminal	Boot	Cylinder Adjustment Range (Inches) (Reference Only)	Item #	Rod Part Code	Item #	Roller Part Code	Item #	Bushing Part Code	Item #	Boot Block Part Code
CC198	AB9	.540	23	63344	21	68557	22	68589	17	63345
DT7B	CB2	.500-.620	23	68562	21	68557	22	68589	17	62268
DT200B	AB16	.350-.450	23	62564	21	68584	22	68589	17	62268
DT200LB	AB16	.450-.680	23	68720	21	68584	22	68589	17	62268
DT200LB	AB16	.450-.550	23	68720	21	68584	22	68589	17	62268
DT200LB	CB2	.400	23	68720	21	68583	22	68589	17	62268
DT207B			23	68720	21	68583	22	68589	17	62268
DT207LB	CB3	.400	23	68720	21	68583	22	68589	17	62268
DT250B	AB16	.350-.450	23	62300	21	68584	22	68589	17	62268
DT250B	AB20	.400	23	62300	21	68584	22	68589	17	62268
DT257B			23	68586	21	68584	22	68589	17	62268
DT500			23	68688	21	68584	22	68689	17	N/A
DT515	CB8	.200	23	68717	21	68584	22	68689	17	62253
DT515	CB8	.200	23	62254	21	68584	22	68689	17	62253
DT515	Lexington S1800		23	68717	21	68584	22	68689	17	63692
DT589	CB8	.200	23	68688	21	68584	22	68689	17	N/A
DT1000	AB16	.450-.550	23	68740	21	68557	22	68689	17	62268
DT1000	CB66	.400	23	68740	21	68584	22	68689	17	62268
DT1000	Lexington S1755		23	63693	21	68583	22	68689	17	N/A
SP19	AB15	.400	23	68615	21	68614	22	68589	17	N/A
SP19B			23	68615	21	68614	22	68589	17	N/A
SP20	AB7(L)	.380-.400(L)	23	63344(L)	21	68557(L)	22	68589	17	63345(L)
SP19	AB15	.030	23	63984	21	68614	22	63985	17	N/A

L	ECR# 6974 SCJ	10/11/22								
K	ECR# 2726 SCJ	10/04/22								
J	ECR# 2646 SCJ	11/16/21								
H	ECR# 2392 CSG	7/28/21	DO NOT SCALE DRAWING							
G	added PE156/moved tool chart SCJ	10/28/21								
F	Revised CC198/removed DT540 CSG	11/08/21	ALL DIMENSIONS SPECIFIED UNLESS NOTED OTHERWISE. TOLERANCES ARE: FRACTIONS DECIMALS ANGLES							
E	Revised Tool Chart CSG	6/28/21	1/164 XX .010 .015*							
D	Revised Tool Chart CSG	12/02/20	SURFACE FINISH: ✓ ALL OVER							
C	Updates air fittings CSG	6/18/20	THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE. ANY REPRODUCTION OF THIS DOCUMENT IS UNLAWFUL WITHOUT THE WRITTEN PERMISSION OF ETCO ENGINEERED PRODUCTS.							
REV	REVISION	BY/DATE	APPROVAL	USED ON	QTY	SCALE	CAD FILE	CHECKED BY	DATE	DESIGNED BY
						1:3				

See Parts List on Sheet 1 of 2

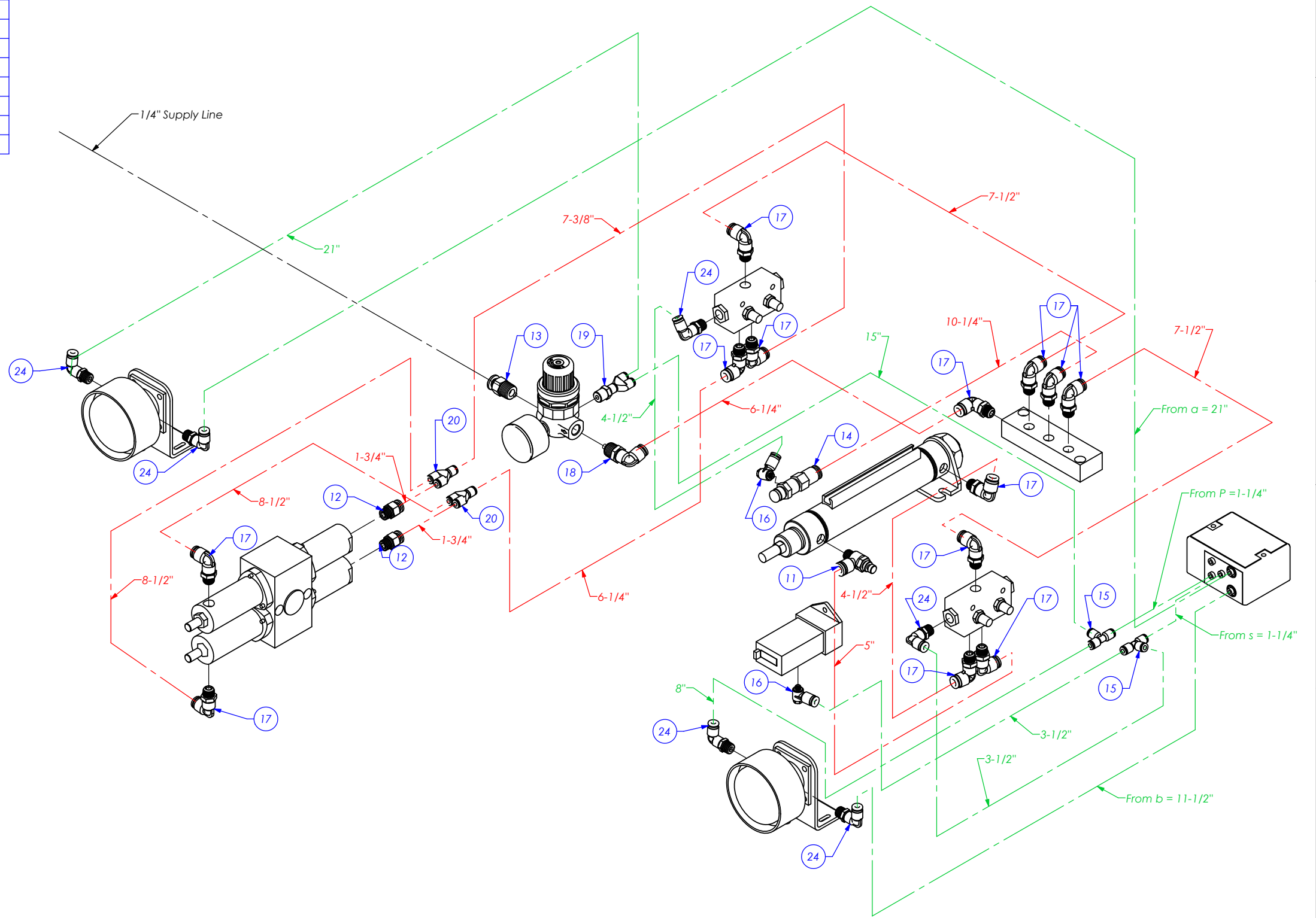
Bender Booter Set-up Instructions Sheet 2 of 3

ETCO ENGINEERED PRODUCTS
25 BELLOWS STREET
WARWICK, RI 02886 (401) 467-2400

DATE: 10/31/2022

**Bender Booter with Pneumatic Controls
79209**

ITEM NO.	PART NUMBER	DESCRIPTION	Bender Booter Air Line schematic QTY.
11	Pisco JSC250-N1AU	Speed Controller	1
12	Pisco PC250-N1U	1/4" x 1/8" NPT Straight	2
13	Pisco PC250-N2U	Ø1/4" x 1/4" NPT Straight Connector, Black	1
14	Pisco PCF250-N1U	Straight Connector	1
15	Pisco PE156	Ø5/32" Tee Fitting, Green	2
16	Pisco PH156-U10U	5/32" x 10-32 Banjo Fitting	2
17	Pisco PL250-N1U	Ø1/4" x 1/8" NPT Elbow Fitting	13
18	Pisco PL250-N2U	1/4" x 1/4" NPT Elbow Fitting	1
19	Pisco PX156-N1U	Ø5/32" Y-Fitting, White	1
20	Pisco PY250	Ø1/4" Y-Fitting, White	2
24	Pisco PL156-N1U	Ø5/32" x 1/8" NPT Elbow Fitting	6



Note:

- 1.) Red Lines = 62172: 1/4" Air Line Tubing.
- 2.) Green Lines = 62171: 5/32" Air Line Tubing.

REV	DESCRIPTION	DATE
L	ECR# 6974 SCJ	10/3/22
K	ECR# 2726 SCJ	1/6/14
J	ECR# 2646 SCJ	11/18/13
H	ECR# 2392 CSG	7/23/13
G	added PE156/moved tool chart SCJ	10/26/12
F	Revised CC198/removed DT540 CSG	11/09/11
E	Revised Tool Chart CSG	6/29/11
D	Revised Tool Chart CSG	12/02/08
C	Updates air fittings CSG	6/18/08

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
FRACTIONS DECIMALS ANGLES
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QTY USED ON APPLICATION
SCALE 1:3 CAD FILE

DATE CHECKED BY DATE DRAWN BY DATE
CSG

ETCO ENGINEERED PRODUCTS
25 BELLOWS STREET
WARWICK, RI 02888 (401)-467-2400
Bender Booter Air Line Schematic Sheet 3 of 3
Bender Booter with Pneumatic Controls
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