



45527769

Edition 1

May 2007

# Electric Screwdrivers (Angle)

ES 115V AC Series

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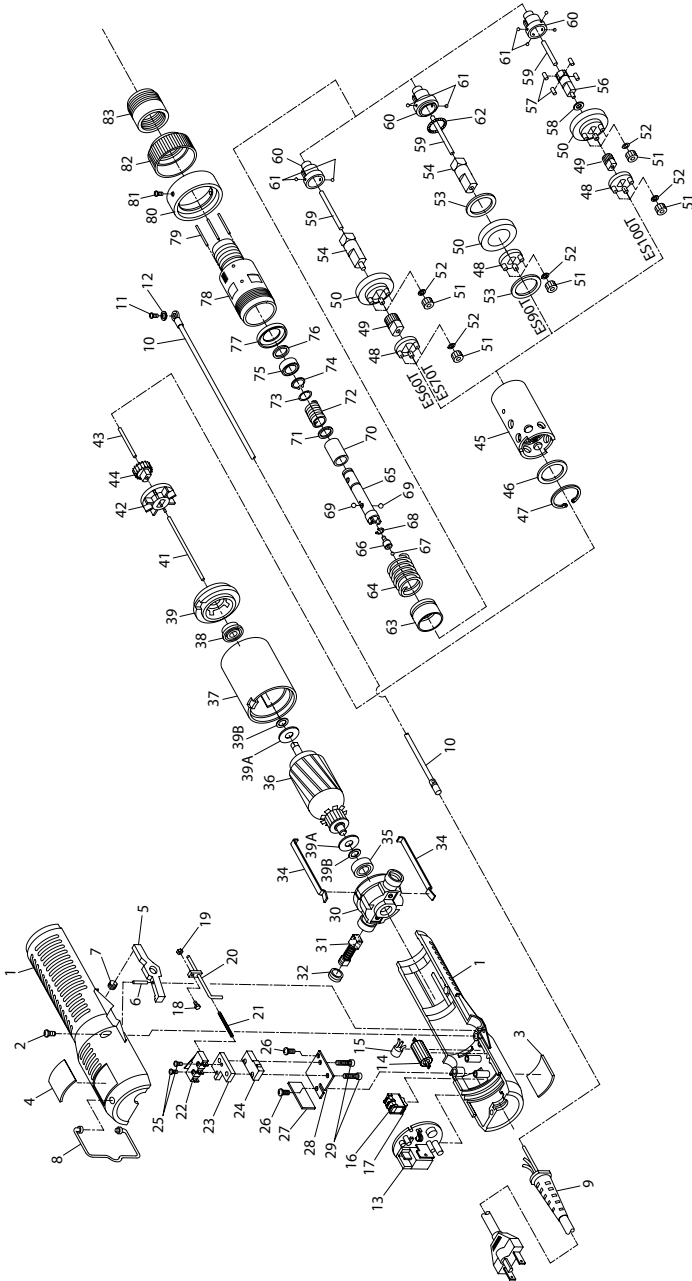
## Parts Information



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 **Ingersoll Rand**

Series ES60T , ES70T, ES90T and ES100T Electric Angle Screwdrivers Exploded Diagram



(Dwg. TPA1317-3)

**Series ES60T , ES70T, ES90T and ES100T Electric Angle Screwdrivers Parts List**

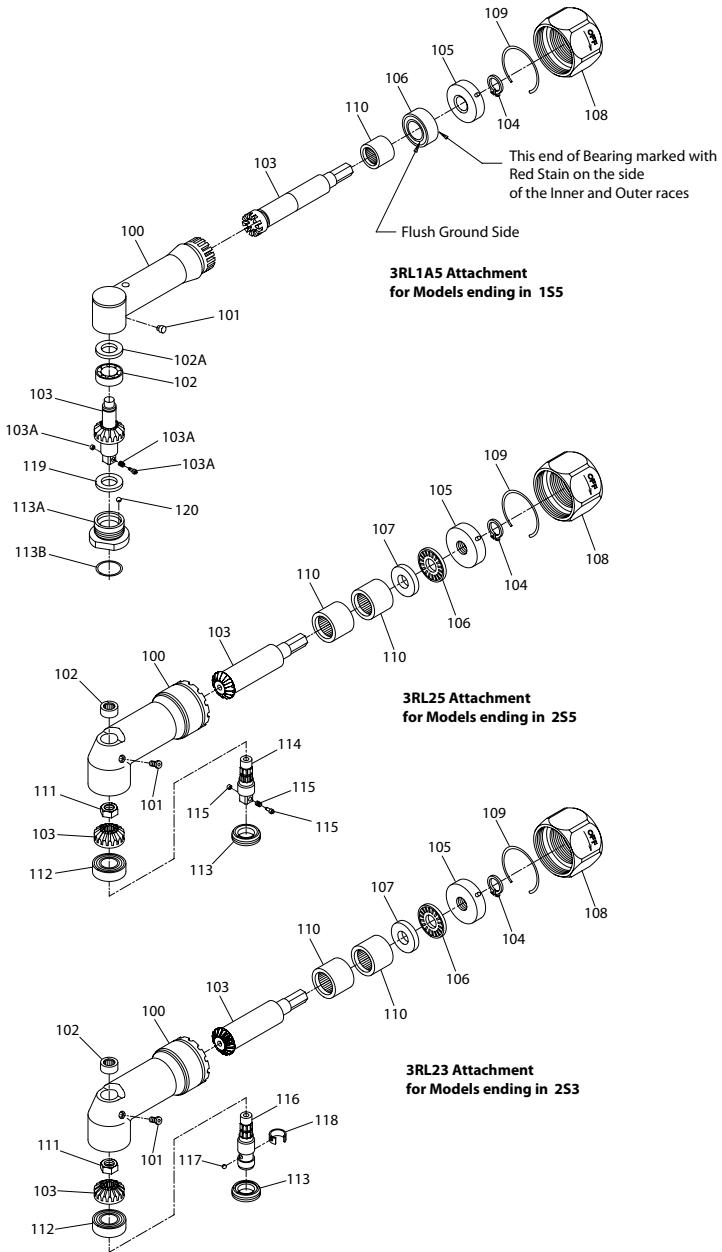
Item	Part Description	Part Number	Item	Part Description	Part Number
	Housing Package	ES60T-ULA40	41	Pilot Rod "F" (2.465" [62.6 mm] long)	ES60T-611
1	Housing (includes right and left side)	--	42	Armature Fan	ES60T-62
+ 2	Housing Screw (3)	--	43	Pilot Rod "G" (.38.5" [9.8 mm] long)	ES60T-609
3	Warning Label	ES60T-99	44	Fan Sun Gear	
4	Nameplate			for model ES60T (16 teeth)	ES60T-610
	for model ES60T	ES60T-301		for model ES70T (13 teeth)	ES70T-610
	for model ES70T	ES70T-301		for model ES90T (11 teeth)	ES90T-610
	for model ES90T	ES90T-301		for model ES100T (11 teeth)	ES100P-610
	for model ES100T	ES100T-301	45	Gear Case Assembly	
	Trigger Assembly	ES60T-A93		for model ES60T (44 teeth)	ES70P-37
5	Trigger	--		for model ES70T (47 teeth)	ES70T-37
6	Trigger Pin	--		for model ES90T (49 teeth)	ES90T-37
7	Trigger Spring	--		for model ES100T (49 teeth)	ES100P-37
8	Suspension Bail	ES60T-365	46	Gear Head Seat	--
9	Cord Assembly	ES60T-UL239	47	Gear Head Seat Retainer	--
	Ground Wire Package	ES80P-ULA154	48	Gear Head Assembly	ES60T-A216
10	Groundwire	--	49	Gear Head Sun Gear	
11	Ground Screw	--		for model ES60T (16 teeth)	ES60T-622
12	Ground Washer	--		for model ES70T (13 teeth)	ES70T-622
13	Control Base Package	ES60T-ULB616		for model ES100T (11 teeth)	ES100P-622
14	Resistor (R10)	ES60T-615	50	Spindle Assembly	
15	Coil (L2)	ES60T-614		for model ES60T, ES70T or ES100T	ES60T-A8
	Reverse Switch Assembly	ES60T-ULA666		for model ES90T	ES90T-A8
16	Reverse Switch	ES60T-ULA666		Spindle Gear Package	
17	Reverse Switch Rocker	--		for model ES60T (14 teeth)	ES60T-A10
	Adjusting Rod Package	ES60T-A617		for model ES70T (17 teeth)	ES70T-A10
18	Adjusting Screw	--		for model ES90T (19 teeth)	ES90T-A10
19	Adjusting Screw Nut	--		for model ES100T (19 teeth)	ES100P-A10
20	Pilot Rod "D"	--	51	Spindle Gear	
21	Pilot Rod Spring	--		for model ES60T (6)	ES60T-116
	Switch Package	ES60T-A613		for model ES70T (6)	ES70T-202
22	Microswitch	--		for model ES90T (3) and for model ES100T (6)	ES90T-002
23	Switch Plate	--	52	Gear Washer (6 for models ES60T, ES70T or ES100T; 3 for model ES90T)	ES60T-733
24	Microswitch	--	53	Spindle Washer (for model ES90T) (2)	ES90T-680
25	Pilot Screw (2)	--	54	Cam	
26	Switch Base Screw (2)	--		for model ES60T or ES70T	ES60T-589
27	Insulating Plate	--		for model ES90T	ES90T-589
28	Switch Base	--		Cam Package (for model ES100T)	ES100P-A589
29	Base Screw (2)	--	56	Cam	--
	Motor Assembly		57	Cam Pin (4)	--
	for model ES60T, ES70T or ES100T	ES60T-ULB53	58	Cam Washer	--
	for model ES90T	ES90T-ULB53	59	Pilot Rod "H" (2.36" [60 mm] long)	ES60T-606
30	Rear End Plate	ES60T-620		Cam Guide Package	
31	Brush Assembly (2)	--		for model ES60T or ES70T	ES60T-A605
33	Brush Cap (2)	ES60T-618		for model ES90T	ES90T-A605
34	Motor Assembly Spring (2)	ES60T-108		for model ES100T	ES100P-P605
35	Rear Armature Bearing	ES60T-22	60	Cam Guide	--
36	Armature Assembly		61	Cam Guide Ball (.156" [4 mm] dia.) (4 for model ES100T; 2 for all other models)	2U-696
	for model ES60T, ES70T or ES100T	ES60T-004	62	Cam Guide Ball (for model ES90T only) (23)	--
	for model ES90T	ES90T-009	63	Taper Ring Assembly	
37	Yoke Assembly			for model ES60T, ES70T or ES90T	ES60T-A604
	for model ES60T, ES70T or ES100T	ES60T-002		for model ES100T	ES100P-A604
	for model ES90T	ES90T-008			
38	Front Armature Bearing	ES60T-24			
39	Front End Plate	ES60T-105			
39A	Insulator (2)	ES80P-681			
39B	Washer (2)	ES80P-683			

Item	Part Description	Part Number	Item	Part Description	Part Number
64	Clutch Spring		77	Spring Plate	ES60T-623
	for model ES60T or ES90T	ES60T-583	78	Clutch Housing Assembly for model ES60T, ES70T or ES90T	ES60T-ULA580
	for model ES70T	ES70T-583			
	for model ES100T	ES100P-583			
Bit Holder Assembly	ES60T-A586			ES100P-ULA580	
65	Bit Holder	--	79	Clutch Adjusting Pin Package (includes [3] clutch adjusting pins)	ES60T-601-3
66	Pilot	ES60T-133			
67	Pilot Ball (.062" [1.6 mm] dia.)	ES60T-705		Coupling Package	ES60T-UL600
68	Pilot Retaining Ring	--	80	Coupling	--
69	Pilot Cam Ball (.156" [4 mm] dia.) (2)	2U-696	+ 81	Coupling Screw (2)	ES60T-711
70	Slide Ring	ES60T-129	82	Spring Adjusting Ring	ES60T-582
71	Slide Ring Washer (.032" [0.8 mm] thick)	ES60T-130	83	Angle Head Coupling	ES60T-AHC
72	Slide Ring Spring	ES60T-305	*	Housing Screw Package (includes [10] Housing Screws, illustration number 2)	ES60T-670-10
73	Washer (.013" [0.3 mm] thick)	ES60T-667	*	Brush Package (includes [10] Brush Assemblies illustration number 31)	ES60T-619-10
74	Stop Ring	ES60T-668	*	Coupling Screw Package (includes [10] Coupling Screws, illustration number 81)	ES60T-671-10
	Holder Bearing Assembly (for model ES60T, ES70T or ES90T only)	ES60T-A603			
75	Holder Bearing	--	*	Microswitch Adjustment Wrench Set	ES60T-MSW
76	Holder Washer (.012" [0.3 mm] thick) (2)	--			

\* Not Illustrated.

+ Can be purchased in quantities of ten. Refer to non-illustrated listing of parts section for an ordering part number.

**Series 3 Angle Attachments for ES60T, ES70T, ES90T, and ES100T Electric Angle Screwdriver Exploded Diagram**



(Dwg. TPA3618)

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**Series 3 Angle Attachments for ES60T, ES70T, ES90T, and ES100T Electric Angle Screwdriver Parts List**

Item	Part Description	Part Number		
		For Models ending in 1S5	For Models ending in 2S3	For Models ending in 2S5
	Angle Attachment	3RL1A5	3RL23	3RL25
100	Angle Housing Assembly	3RL1A-A550	3RL2-A550	3RL2-A550
101	Grease Fitting	D0F9-879	D0F9-879	D0F9-879
102	Spindle Upper Bearing	--	120A4-603	120A4-603
102	Spindle Upper Bearing	7L1A-603	--	--
102A	Shim Packet	7L1A-P448	--	--
103	Matched Gear Set (Bevel Gear and Pinion not sold separately)	3RL1A5-A591	3RL2-A552	3RL2-A552
103A	Socket Retainer Assembly (consists of Plunger, Spring and Washer)	500B-816A	--	--
104	Thrust Bearing Retainer	3RL2-705	3RL2-705	3RL2-705
105	Rear Thrust Bearing Seat	3RL2-682	3RL2-682	3RL2-682
106	Bevel Pinion Thrust Bearing	3RL1A-514	3RL2-105	3RL2-105
107	Front Thrust Bearing Seat	--	3RL2-683	3RL2-683
108	Coupling Nut	3RL2-27	3RL2-27	3RL2-27
109	Coupling Nut Retainer	3RL2-29	3RL2-29	3RL2-29
110	Bevel Pinion Bearing (2 for 3RL23 and 3RL25; 1 for 3RL1A5)	7AH-24	H54U-511B	H54U-511B
111	Bevel Gear Retainer Nut	--	120A4-578	120A4-578
112	Spindle Lower Bearing	--	120A4-593	120A4-593
113	Angle Housing Cap	--	120A4-531	120A4-531
113A	Angle Housing Cap Assembly	3RL1A-A531	--	--
113B	Angle Housing Cap Seal	3RL1A-513	--	--
114	1/4" Square Drive Spindle Assembly	--	--	141A9-607-1/4"
115	Socket Retainer (consists of Plunger, Spring and Washer)	--	--	500B-816A
116	1/4" Hex Bit Holder Spindle Assembly (for standard bits)	--	5L2C3-B586	-
117	Bit Retaining Ball (.125" diameter)	--	AV1-255	--
118	Bit Retaining Spring	-	102A60-241	--
119	Ball Race	3RL1A-532	--	--
120	Steel Ball (1/16" diameter) (20)	3RL1A-512	--	--
*	Housing Cap Wrench	--	141A12-26	141A12-26

\* Not Illustrated.

• Can be purchased in quantities of ten. Refer to non-illustrated listing of parts section for an ordering part number.

## Equipment Available at Extra Cost

Item	Part Description	Part Number	Item	Part Description	Part Number
	Spindle Assembly				
114	1/4" square drive 141A9-A607-114	141A9-A607-114	*	Socket Retaining Plunger (for No.141A12-A607 Spindle)	5020-716
*	3/8" square drive	141A12-A607	*	Socket Retaining Plunger Spring (for No.141A12-A607 Spindle)	401-718
*	1/4" hex recess (for insert bits)	5L2C4-B386	*	Bit Retainer (for No.5L2C4-B386 Spindle)	5L2C4-425
116	1/4" hex recess (for standard bits)	5L2C3-B586	117	Bit Retaining Ball (.125" diameter for 5L2C3-B586 Spindle)	AV1-255
*	3/8-24 Thread Drill Chuck Spindle (requires 7L2A4-531 Angle Housing Cap)	7L2A4-791	118	Bit Retaining Spring (for 5L2C3-B586 Spindle)	102A60-241
115	Socket Retainer (consists of Plunger, Spring and Washer for No. 141A9-A607-114 Spindle)	500B-816A	*	Angle Housing Cap (for use only with the 7L2A4-791 Spindle)	7L2A4-531

## Parts and Maintenance

When the life of the tool has expired, it is recommended that the tool be disassembled, degreased and parts be separated by material so that they can be recycled.

Tool repair and maintenance should only be carried out by an authorized Service Center.

Refer all communications to the nearest **Ingersoll Rand** Office or Distributor.

## Related Documentation

For additional information refer to:

Product Safety Information Manual 16602963.

Product Information Manual 45527678.

Maintenance Information Manual 45527793.

Manuals can be downloaded from [www.irttools.com](http://www.irttools.com).

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