



PLEASE READ AND FOLLOW ALL WARNINGS



Universal Tool

**UT8891 SERIES
ANGLE AIRCRAFT DRILLS**

Read Operating Instructions

Always become familiar with all the instructions and warnings before operating any power tool.

Always Wear Approved Eye Protection

Impact resistant eye protection should meet or exceed the standards as set forth in the United States ANSI Z87.1, Occupational and Educational Eye and Face Protection. Look for the marking Z87.1 on your eye protection to insure that it is an approved style. For further information, ANSI Z87.1, Occupational and Educational Eye and Face Protection, is available from the American National Standards Institute, Inc., 11 West 42nd Street, New York, NY 10036.

Hearing Protection is Recommended

Hearing protection should be used when the noise level exposure equals or exceeds an 8 hour time-weighted average sound level of 85 dBA. Process noise, reflective surfaces, other tools being operated nearby, all add to the noise level present in your work area. If you are unable to determine your noise level exposure, we recommend the use of hearing protection.

Avoid Prolonged Exposure to Vibration

Tools can vibrate during use. Prolonged exposure to vibration or very repetitive hand and arm movements, can cause injury. Stop using any tool if discomfort, tingling feeling or pain occurs. You should consult your physician before resuming use of the tool.

90 PSIG Maximum

This tool is designed to operate at

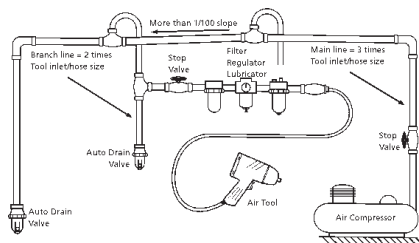
an air pressure of 90 pounds per square inch gauge pressure (90 PSIG) maximum, at the tool. Use of higher air pressure can, and may cause injury. Also, the use of higher air pressure places the internal components under loads and stresses they were not designed for, causing premature failure. The air supply should be clean and dry, preferably lubricated. For best results, drain the moisture from your compressor daily.

WARNING:

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints
- Crystalline silica from bricks, cement and other masonry products
- Arsenic and chromium from chemically treated lumber

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area and work with approved safety equipment such as those dust masks that are specially designed to filter out microscopic particles.



Description

Precision control throttle with bushing. Lubrication free motor. Reliable steel gear case.

Spindle run out 0.002" Noise level 81-83 d(B)A Molded grip with molded UT logo



Safety Instructions

The following instructions are furnished as general guidelines for use of your pneumatic tool. They cannot comprehensively cover all possible or conceivable uses of the subject tool. For additional information on the safe use of air tools, we advise you to obtain a copy of CAGI B186.1-2009 Safety Code for Portable Air Tools, available from the following source: COMPRESSED AIR AND GAS INSTITUTE 1300 Sumner Avenue Cleveland, OH 44115-2851 Ph: 216-241-7333 www.cagi.org OR from Florida Pneumatic Manufacturing Corp. 851 Jupiter Park Lane Jupiter, FL 33458 561-744-9500 www.florida-pneumatic.com The use of the word "shall" in the following instructions, indicates that adherence to the particular requirement is necessary to conform to CAGI B186.1-2009.

Tool Application and Usage

Portable tools shall be used only for the purposes intended in their design and within the capacity for which they were intended and rated. It shall be the tool owner's and/or employer's responsibility to instruct each operator in the safe use of the tool. Tools shall not be used without guards and safety

devices as furnished by the manufacturer. Where an air tool is modified or altered, the modifier shall provide the safeguards to enable it to be safely used in the operations intended and to comply with any applicable provisions as contained in CAGI B186.1-2009.

Tool Installation

Pressure regulators shall be used to limit air pressure to the rated pressure where the supply pressure exceeds the tool's rated pressure. Air hoses and lines shall be relieved of compressed air before being disconnected or disjoined, unless there is automatic valve closing protection at the joint being separated. Synthetic lubricants which can cause deterioration of elastomer seals shall not be used in air systems of air tools.

Tool Maintenance

It shall be the tool owner's and/or employer's responsibility to assure that tools are maintained in a safe operating condition. Tool maintenance and repair shall be performed by authorized, trained, competent personnel. Tools shall be disconnected from their compressed air supply before repairs are attempted. Repairs shall be consistent with the manufacturer's recommended procedures. Tool, hoses and fittings shall be replaced if unsuitable for safe operation. It shall be the tool owner's and/or employer's responsibility to keep required rating markings and warnings on the tool in legible condition.

Universal Tool a Division of Florida Pneumatic Manufacturing Corporation
851 Jupiter Park Lane, Jupiter, Florida 33458
Toll Free 1-800-327-9403

Read these instructions carefully before attempting to install, operate or service this Florida Pneumatic product. Failure to comply with the instructions could result in personal injury and/or property damage! Retain these instructions for future reference.

FPMC

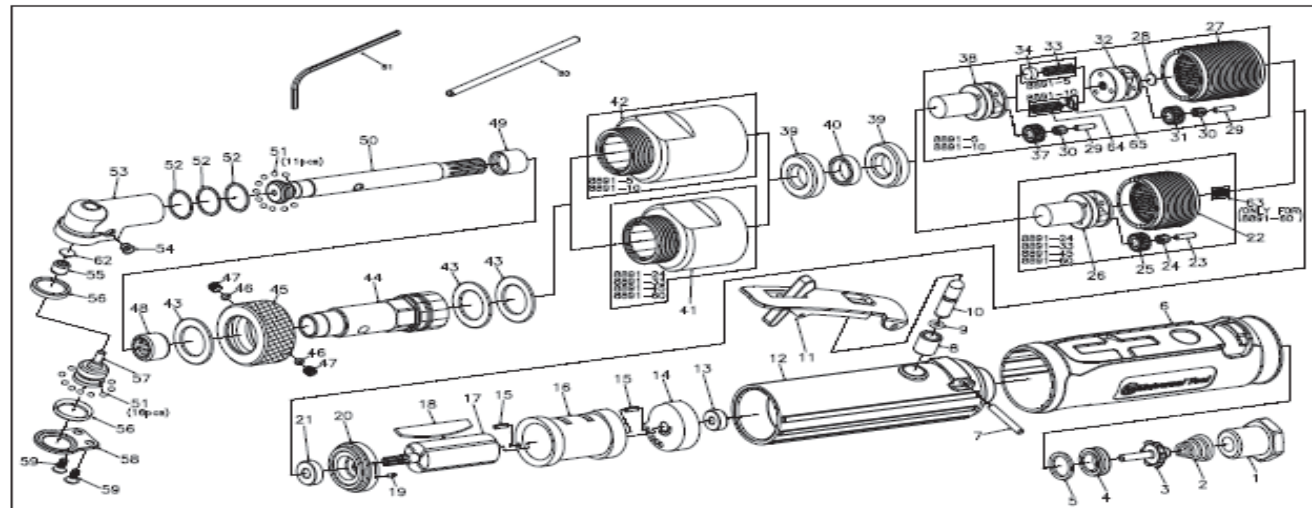


Universal Tool

UT8891 SERIES ANGLE AIRCRAFT DRILLS

1	9872401	AIR INLET	1	65	9CTW25	SNAP RING	1
2	9872402	VALVE SPRING	1	37	9389241	GEAR	3
3	9872422	VALVE STEM	1	38	93892A-10	GEAR CAGE	1
4	9872423	VALVE SEAT	1	42	9889104-L	FRONT HOUSING	1
5	9872403	VALVE WASHER	1		FOR ANGLE DRILL WITH 2400 RPM (UT8891-24)		
6	9872420	CUSHION GRIP W/DEFLECTOR	1	17	9389214-5	ROTOR	1
7	9308003	THROTTLE LEVER PIN	1	22	9889103-S	RING GEAR	1
8	9872430	BUSHING	1	23	9389229	PIN	3
9	90R2512	O-RING	1	24	9389228	NEEDLE BEARING	3
10	9872405	VALVE STEM	1	25	9389227-24	GEAR	3
11	9872402B	THROTTLE LEVER ASSEMBLY	1	26	93892A-24	GEAR CAGE	1
12	9872404	INNER HOUSING	1	41	9889104-S	FRONT HOUSING	1
13	9B694Z	BALL BEARING	1		FOR ANGE DRILL WITH 3300 RPM (UT8891-33)		
14	9889101	REAR END PLATE	1	17	9389214-7	ROTOR	1
15	9589040	SPRING PIN	1	22	9889103-S	RING GEAR	1
16	9872407	CYLINDER	1	23	9389229	PIN	3
18	9389215G	ROTOR BLADE	4	24	9389228	NEEDLE BEARING	3
19	9389218	SPRING PIN	1	25	9389227-10	GEAR	3
20	9889102	FRONT PLATE	1	26	93892A-5	GEAR CAGE	1
21	9B695Z	BALL BEARING	1	41	9889104-S	FRONT HOUSING	1
39	9B6901	BALL BEARING	2		FOR ANGE DRILL WITH 4500 RPM (UT8891-45)		
40	93892A31	STEEL RING	1	17	9389214-9	ROTOR	1
43	9389344	LOCK RING	3	22	9889103-S	RING GEAR	1
44	9389345	ANGLE HOUSING	1	23	9389229	PIN	3
45	9389343	NUT	1	24	9389228	NEEDLE BEARING	3
46	9389361	PLUG LOCKING	2	25	9389227-10	GEAR	3
47	9589036	SCREW	2	26	93892A-45	GEAR CAGE	1
48	9NB66	NEEDLE BEARING	1	41	9889104-S	FRONT HOUSING	1
49	9389340	BEARING RETAINER	1		FOR ANGE DRILL WITH 6000 RPM (UT8891-60)		
50	9389341	GEAR SHAFT	1	17	9389214-7	ROTOR	1
51	9389342	BEARING BALL	27	22	9889103-S	RING GEAR	1
52	9389348	WASHER	3	23	9389229	PIN	3
53	9389349	ANGLE HEAD	1	24	9389228	NEEDLE BEARING	3
54	9638047	GREASE FITTING	1	25	9389241	GEAR	3
62	9389242	WASHER	1	26	93892A-10	GEAR CAGE	1
55	9NBHK0306	NEEDLE BEARING	1	41	9889104-S	FRONT HOUSING	1
56	9389353	BEARING RACE	2	63	9389225-6	SUN GEAR	1
57	9389354	GEAR SET	1				
58	9389355	ANGLE COVER	1				
59	9389356	SCREW	2				
60	9389358	PIN	1				
61	9389360	ALLEN KEY	1				
FOR ANGLE DRILL WITH 500 RPM (UT8891-5)							
17	9389214-7	ROTOR	1				
27	9889103-L	RING GEAR	1				
28	9389242	WASHER	1				
29	9389229	PIN	6				
30	9389228	NEEDLE BEARING	6				
31	9389227	GEAR	3				
32	9389226	GEAR CAGE	1				
33	9389225	SUN GEAR	1				
34	9889105	PLUG	1				
37	9389227	GEAR	3				
38	93892A-5	GEAR CAGE	1				
42	9889104-L	FRONT HOUSING	1				
FOR ANGLE DRILL WITH 1000 RPM (UT8891-10)							
17	9389214-9	ROTOR	1				
27	9889103-L	RING GEAR	1				
28	9389242	WASHER	1				
29	9389229	PIN	6				
30	9389228	NEEDLE BEARING	6				
31	9389227-10	GEAR	3				
32	9389226-1	GEAR CAGE	1				
64	9389225-1	SUN GEAR	1				

Model #	Motor (HP)	Speed (RPM)	Exhaust	Chuck	Weight (lbs)	Length (in)	Noise d(B)A	Inlet (NPT)	Av. Air Cons. (cfm)
UT8891-5	0.45	500	Rear	1/4"x28 tpi	1.87	10.25	81	1/4	4
UT8891-10	0.45	1000	Rear	1/4"x28 tpi	1.87	10.25	81	1/4	4
UT8891-24	0.45	2400	Rear	1/4"x28 tpi	1.66	9.75	83	1/4	4
UT8891-33	0.45	3300	Rear	1/4"x28 tpi	1.66	9.75	83	1/4	4
UT8891-45	0.45	4500	Rear	1/4"x28 tpi	1.66	9.75	83	1/4	4
UT8891-60	0.45	6000	Rear	1/4"x28 tpi	1.66	9.75	83	1/4	4



Limited Warranty

Universal Tool warrants its tools to be free from defects in material and workmanship for one year from the date of purchase. This warranty does not apply to tools which have been abused, misused, modified or repaired by someone other than Universal Tool or its authorized service centers. If a Universal Tool proves defective in material of workmanship within one year after purchase, return it to any authorized service center or to Universal Tool, freight prepaid. Please enclose your name, address and adequate proof of purchase date with a brief description of the defect. Universal Tool will, at its option, repair or replace defective tools, free of charge. Repairs or replacements are warranted as described above for the remainder of the warranty period. Universal Tool's sole liability and your exclusive remedy under this warranty is limited to repair or replacement of the defective tool. There are no other warranties expressed or implied and Universal Tool shall not be liable for incidental, consequential or special damages, or any other damages, costs or expense of repair or replacement as described above.