


Universal Tool

Operator Instructions

Includes - Foreseen Use, Work Stations, Putting Into Service, Operating, Dismantling, Assembly and Safety Rules

Important

Read these instructions carefully before installing, operating, servicing or repairing this tool. Keep these instructions in a safe accessible place.

Manufacturer/Supplier Universal Air Tool Company Limited Unit 8 Lane End Industrial Park High Wycombe Bucks HP14 3BY Tel No (01494) 883300 Fax No (01494) 883237	Product Type Straight Lever Type Drill	RPM 4,500 Cycles Per Min	
	Model No/Nos UT8741A	Serial No (if any)	

Product Nett Weight 2.20 lbs 1.0 Kg	Recommended Use Of Balancer Or Support No	Recommended Hose Bore Size - Minimum 3/8 Ins 10 M/M	Recommended Max. Hose Length 30 Ft 10 M
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Air Pressure Recommended Working 6.3 bar 90 PSI Recommended Minimum n/a bar n/a PSI Maximum 7.0 bar 10.0 PSI		Noise Level Sound Pressure Level 91.9 dB(A) Sound Power Level 104.5 dB(A) Test Method Tested in accordance with Pneurop test code PN8NTC1 and ISO Standard 3744
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Personal Safety Equipment Use - Safety Glasses Yes Use - Safety Gloves Use - Safety Boots Use - Breathing Masks Use - Ear Protectors	Vibration Level Less than 2.5 Metres / Sec² Test Method Tested in accordance with ISO standard 8662/1
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Foreseen Use Of Tool

This drill is designed for the purpose of drilling holes in all types of materials, i.e. metals, wood, stone, plastics etc. using drilling bits designed for this purpose. It may be used with other forms of cutting tools, polishing devices or for sanding using coated abrasive products. Before using any such products first check with the manufacturer their suitability for use with this type of drill. Do not use bonded abrasive products (i.e. grinding wheels) or saw blades or any device which has a permitted safe working speed less than the free speed of the drill.

Do not use this drill for any other purpose than that specified without consulting the manufacturer or the manufacturer's authorised supplier.

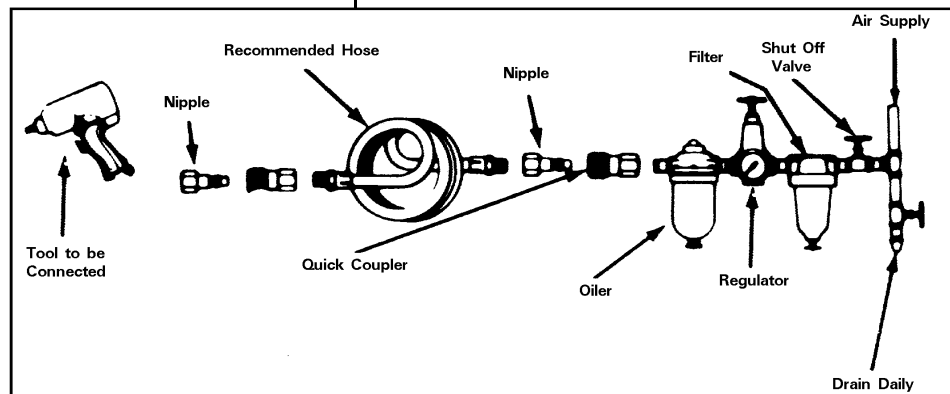
Putting Into Service

Air Supply

Use a clean lubricated air supply that will give a measured air pressure at the tool of 90 p.s.i./6.3 bar when the tool is running with the trigger fully depressed. Use recommended hose size and length. It is recommended that the tool is connected to the air supply as shown in figure 1. Do not connect the tool to the air line system without incorporating an easy to reach and operate air shut off valve. The air supply should be lubricated. It is strongly recommended that an air filter, regulator, lubricator (FRL) is used as shown in Figure 1 as this will supply clean, lubricated air at the correct pressure to the tool. Details of such equipment can be obtained from your supplier. If such equipment is not used then the tool should be lubricated by shutting off the air supply to the tool, depressurising the line by pressing the trigger on the tool. Disconnect the air line and pour

Work Stations

The tool should only be used as a handheld hand operated tool. It is always recommended that the tool is used when standing on the solid floor. It can be used in other positions but before any such use, the operator must be in a secure position having a firm grip and footing and be aware that the drill can develop a torque reaction see section "Operating".



into the intake bushing a teaspoonful (5ml) of a suitable pneumatic motor lubricating oil preferably incorporating a rust inhibitor. Reconnect tool to air supply and run tool slowly for a few seconds to allow air to circulate the oil. If tool is used frequently lubricate on daily basis and if tool starts to slow or lose power.

It is recommended that the air pressure at the tool whilst the tool is running is 90 p.s.i./6.3 bar. The tool can run at lower and higher pressures with the maximum permitted working air pressure of 100 p.s.i./7.0 bar.

Operating

Select suitable drill bit, insert the shank into the drill chuck as far as possible and tighten chuck with key supplied making sure that the shank of the device is securely clamped centrally between the three chuck jaws. Remove chuck key.

When drilling holes of all sizes it is advised to use a pointed punch to mark the centre at which the hole is to be drilled as this will provide a starting point for the drill tip. This procedure will prevent the drill bit from skidding, ensure that the hole is drilled where intended and help to prevent drill breakage when using small drills. When drilling, particularly with small diameter drills, always try to ensure that load applied to the drill is such that the drill bit is always at right angles to the hole being drilled. Do not force the drill but allow it to cut.

When drilling always adopt a firm posture to be able to counteract any sudden movement of the drill due to torque reaction. Such torque reaction can occur when the drill stalls due to a too heavy load being applied or the material being too hard or tough. The torque reaction can occur when the drill breaks through the material being drilled, particularly on sheet metal. Always use eye protection and hand protection is advised, particularly when drilling holes in metals where the material being removed from the hole is in the form of long sharp strips. Do not tie the drill chuck key to the drill as the attaching device i.e. string or chain could become entangled with the rotating chuck and bit etc.

If using an abrasive device, drilling stone or performing any operation where dust is created, it is recommended to use a breathing mask.

Always ensure that the material to be drilled is firmly fixed to prevent its movement.

It is also recommended that when drilling holes of large diameter to first pre drill a hole of smaller diameter as this will reduce effort required to drill the hole and minimise torque reaction.

Dismantling & Assembly Instruction

Disconnect tool from air supply.

Insert the drill chuck key securely into the chuck (37) and strike the chuck key a sharp blow with a hammer in a direction to loosen a right hand threaded joint to remove the chuck and chuck spacer (36). Grip motor housing (7) with housing cover (6) in a vise fitted with soft jaws and unscrew inlet bushing (2) together with screen (1). With a needle pointed tool prise out retaining ring (3), pull out deflector (4) and remove o-ring (5) from it. Drive out roll pin (8) and remove throttle lever assembly (9). Unscrew valve screw (16) with o-rings (14,15) and from the lever side push out air regulator (13), spring (12), o-ring (11), and valve stem (10). Unscrew clamp nut (35) from reducer (29) complete with the internal gear drive assembly. From the front end push out the internal gear assembly complete with internal gear (30). Pull off bearings (34), spindle with pins (33), needle bearing (32) and idler gear (31). Unscrew reducer (29) from motor housing (7). Pull out the motor assembly from the motor housing (7). Take off pinion gear (28) and spacer (27) from rotor (22). Grip front plate (24) by hand and tap the spindle end of rotor (22) with a non metallic (lead or aluminum) hammer so as to drive

the rotor through the front end plate and bearing assembly. Pull off bearing (26) from the front plate (24). Do not remove pins (23, 25, and 19) from the end plates (24, 18) unless replacements are required. Take off cylinder (20) noting its orientation with the rear plate (18) for reassembly and take out 4 off rotor blades from rotor (22). Support the rear plate (18) in a piece of tube with a bore diameter as close as possible to the maximum diameter of the rotor (22) and tap the non-splined end of the rotor to drive it through the rear plate and bearing assembly. With a suitable punch tap out bearing (17) from rear plate (18). Remove the housing cover (6) from motor housing (7) when needed.

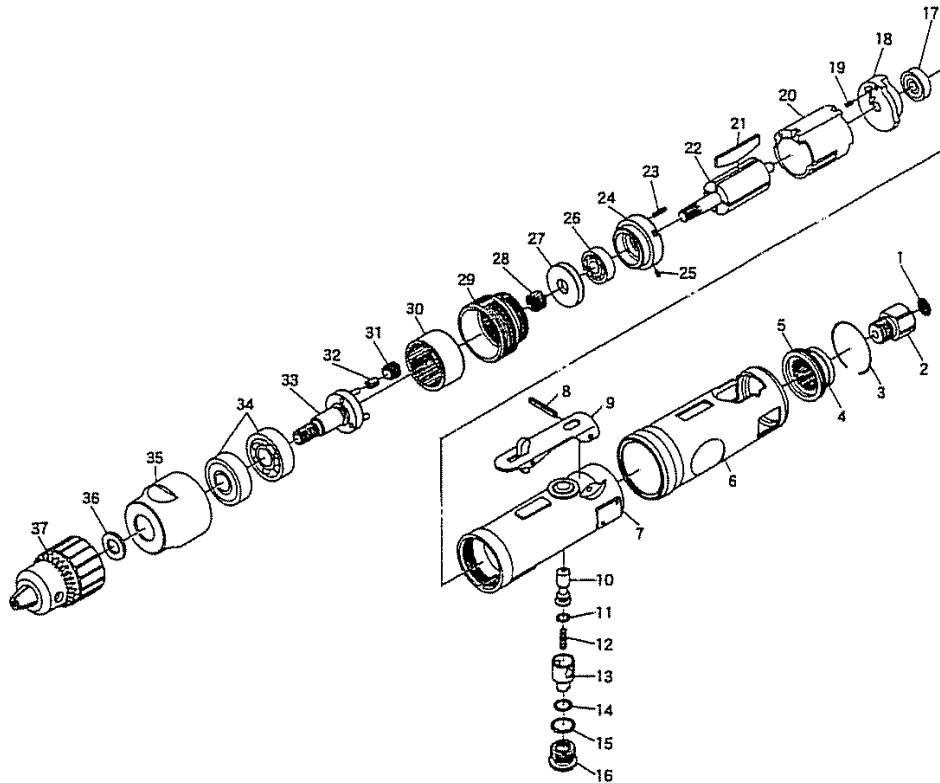
Reassembly

Clean all component parts and examine to wear before reassembling. Use only manufacturer or distributor supplied spare parts. Check in particular for wear and cuts on o-rings and wear on rotor blades. Lightly coat all parts with suitable pneumatic tool lubricating oil preferably one incorporating a rust inhibitor. Pack all bearings and gearbox with a lithium or molybdenum based general purpose reassemble in the reverse order (see note below). For the motor assembly ensure that front and rear plates that abut the cylinder are clean and free from burrs and surface marking. If necessary, lap faces that abut the cylinder on a flat fine grade of abrasive paper. Press bearings into front and rear plates, support the bearing in the rear plate on its inner ring and tap the rotor its splined end with a soft metallic hammer into the bearing until rotor locates against the rear plate. Support the inner face of the end plate as close as possible to the largest diameter of the rotor and tap the non-splined end of the rotor until a clearance of 0.0015" (0.04mm) to 0.0025" (0.065mm) is obtained between the inner face of the rear plate and rotor. This clearance has to be checked when pulling the rotor away from the rear plate and bearing assembly. Spin rotor to ensure that it will rotate freely in the rear plate bearing. Locate the cylinder by the locating pin to the rear plate checking that the ports in the end plate match with those in the cylinder. Insert the four motor blades into the rotor and locate correctly the front plate to the cylinder using the locating pin.

Ensure that the rotor will spin freely in the assembly. This is the best checked by placing the motor assembly in a vee block and squeezing the front and rear plates against the cylinder. When refitting motor assembly to motor housing (7) ensure that pin (25) in the side of front plate (24) locates in the slot in the front of the main bore of motor housing (7).

Safety Rules When Using A Drill

- 1) Read all the instructions before using this tool. All operators must be fully trained in its use and aware of these safety rules. All service and repair must be carried out by trained personnel.
- 2) Always select a suitable cutting, abrasive device suitable for use with this drill.
- 3) Always shut off the air supply to the drill and depress the trigger to exhaust air from the feed hose before fitting, adjusting or removing the device. Remove drill chuck.
- 4) Always adopt a firm footing and/or position and be aware of torque reaction developed by the drill.
- 5) Use only correct spare parts.
- 6) Check hose and fittings regularly for wear. Do not carry the tool by its hose and ensure that the hand is remote from the on/off valve (trigger) when carrying the tool with air supply connected.
- 7) Do not exceed maximum recommended air pressure. Avoid low air pressures as this will allow the drill to stall more easily and develop torque reaction.
- 8) Use safety equipment as recommended.
- 9) The tool is not electrically insulated. Do not use where there is a possibility of coming into contact with live electricity, gas pipes, water pipes, etc. Check the area of operation before performing the operation.



Ref No	Part No	Description
1	1005726	Screen
2	730120	Inlet Bushing
3	729703	Retaining Ring
4	729702	Deflector
5	732247	O Ring
6	901214	Housing Cover
7	901115	Motor Housing
8	729167	Roll Pin
9	900382	Throttle Lever
10	729259	Valve Stem
11	1012370	O-Ring
12	729258	Valve Spring
13	729282	Air Regulator
14	729088	O-Ring
15	729073	O-Ring
16	729262	Valve Screw
17	1010183	Ball Bearing
18	729706	Rear Plate
19	731267	Roll Pin

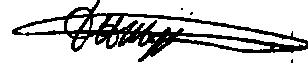
Ref No	Part No	Description
20	729708	Cylinder
21	729709	Rotor Blade (4)
22	901215	Rotor
23	901144	Roll Pin
24	901216	Front Plate
25	900720	Roll Pin
26	729020	Ball Bearing
27	901217	Spacer
28	901218	Pinion Gear
29	901219	Reducer
30	901220	Internal Gear
31	901221	Idler Gear (3)
32	901222	Needle Bearing (3)
33	901223	Spindle inc 3 Pins
34	900030	Ball Bearing (2)
35	901224	Clamp Nut
36	730229	Chuck Spacer
37	H0019	3/8" Drill Chuck

Declaration of Conformity
Universal Air Tool Company Limited
Unit 8, Lane End Industrial Park, High Wycombe, Bucks, HP14 3BY, England
declare under our sole responsibility that the product

Model UT8741A Straight Lever Type Drill, Serial No
to which this declaration relates is in conformity with the following standard(s) or other normative document(s)
EN792 (Draft), EN292 Parts 1 & 2, ISO 8662 Part 1, Pneuop PN8NTC1
following the provisions of **89/392/EEC as amended by 91/368/EEC & 93/44/EEC**

Lane End

D.H.Moppett (Man Director)



Place and date of issue

Name and signature or equivalent marking of authorised person

- 10) Take care against entanglement of moving parts of the tool with clothing, ties, hair, cleaning rags, etc. This will cause the body to be moved towards the work process and can be very dangerous.
- 11) Do not attempt to hold or guide the drill chuck when the tool is running. Keep hands clear of the drilling process.
- 12) Use only compressed air at recommended conditions.
- 13) Do not attempt to fit attachments, i.e. for sawing, hedge cutting, grinding, chain sawing, etc.
- 14) If the tool appears to malfunction remove from use immediately and arrange for service and repair.
- 15) If an additional side handle is fitted to the tool ensure that it is correctly positioned and fixed securely.
- 16) If the drill is used with a balancer or other suspension device ensure that it is fixed securely.

Notes

Accessories

Distributor

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