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
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HP14 3BY

Tel No **(01494) 883300** Fax No **(01494) 883237**

Product Type	RPM
5/8" Reversible Straight Drill	**1,000** Cycles Per Min

Model No/Nos	Serial No (if any)
HP17RD	

Product Nett Weight		Recommended Use Of Balancer Or Support
10.14	lbs	**No**
4.6	Kg	

Recommended Hose Bore Size - Minimum				Recommended Max. Hose Length			
3/8	Ins	**10**	M/M	**30**	Ft	**10**	M

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 90.0 dB(A)**

Test Method **Tested in accordance with Pneurop test code PN8NTC1 and ISO Standard 3744**

Personal Safety Equipment

Use - Safety Glasses	**Yes**
Use - Safety Gloves	**Yes**
Use - Safety Boots	
Use - Breathing Masks	
Use - Ear Protectors	**Yes**

Vibration Level **12.0** Metres / Sec^2

Test Method **Tested in accordance with ISO standard 8662/1**

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.

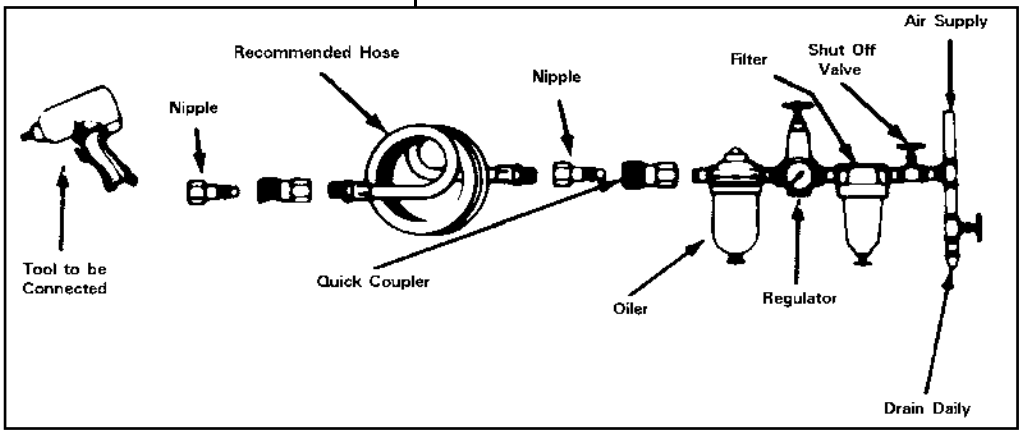
Work Stations

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".

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 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 Instructions

Disconnect the tool from the air supply,

To remove the chuck (53) use a fork chisel, place the fork between the body of the drill and the chuck and give the fork a tap with a hammer the chuck will then slide off (JT3 taper chuck).

Use a spanner to undo 8 bolts (37) and 8 screws (19) then you can divide the tool into three parts.

From the front cap (49) take out 4 pins (9) and 4 gears (24) pull out the driving rod (48) and bearing (23).

Remove the rotor (33) from the handle (51) by tapping the spline end of the rotor (33) take off the rear plate (35) and remove the bearing (21) then take out the 6 rotor blades (1).

To remove the cylinder (36) you must heat the handle (51) this will then allow you to remove the front plate (34) oil seal (20) and bearing (22) To remove the speed switch (39) first remove pins (12) (13) remove the switch lever (26) first remove 2 pins (14).

Remove 4 screws (18) and washers (45) and take off the air inlet (29) this will then allow you to take out the valve rod assembly parts (5) (16) (6) (2) (28) .

Reassembly

Clean all parts and examine for wear and cracks, etc. and replace as necessary. Look in particular for wear and cuts on O-rings, wear on rotor blades, gears and wear on bearing (21) (22) and (23). Make sure that the faces of the end plates (34) and (34) and the cylinder (36) are flat and free from burrs.

Lap on a flat fine grade of abrasive paper if necessary. Use only manufacturer or authorized distributor supplied spare parts. Lightly coat all parts with suitable pneumatic tool lubrication oil and reassemble in the reverse order.

On completing assembly, ensure that all parts are locked tight and the spindle rotates and the lever throttle. Connect tool to suitable air supply and operate tool slowly for a few seconds and reset for operation required. Refer to section on Operation Instructions.

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.

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.

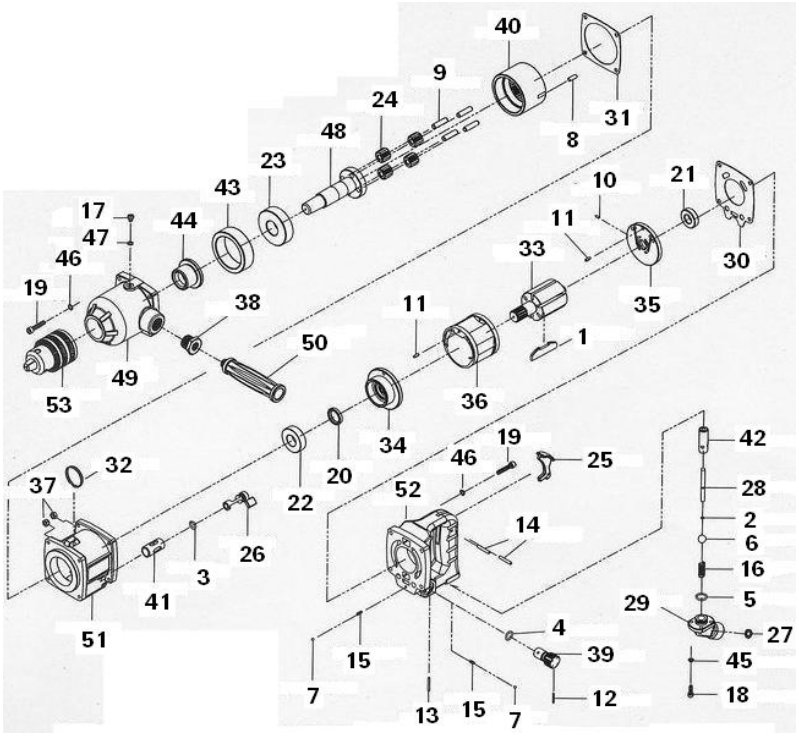
14) If the tool appears to malfunction remove from use immediately and arrange for service and repair.

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.

Universal Tool

HP17RD 5/8" Reversible Straight Drill



Ref No	Part No	Description
1	01-105-02	Rotor Blade (6)
2	02-200-01	O-Ring
3	02-200-10	O-Ring
4	02-201-05	O-Ring
5	02-201-09	O-Ring
6	03-301-01	Plastic Ball
7	03-700-04	Steel Ball (2)
8	04-701-09	Pin
9	04-702-09	Pin (4)
10	05-700-01	Pin
11	05-701-03	Pin (2)
12	05-702-01	Pin
13	05-702-04	Pin
14	05-702-05	Pin (2)
15	06-701-21	Spring (2)
16	06-702-15	Pring
17	13-701-11	Screw
18	13-702-02	Screw (4)
19	13-703-03	Screw (8)
20	14-702-05	Oil Seal
21	15-703-02	Ball Bearing
22	15-704-03	Ball Bearing
23	15-706-02	Ball Bearing
24	16-702-02	Gear (4)
25	17-705-01	Switch Lever
26	18-705-01	Reverse Valve
27	22-701-01	Filter

Ref No	Part No	Description
28	24-706-02	Valve Rod
29	25-704-03	Air Inlet
30	30-308-03	Packing
31	30-308-04	Packing
32	31-703-01	Hook
33	35-710-05	Rotor
34	36-607-02	Front Plate
35	37-607-02	Rear Plate
36	38-507-01	Cylinder
37	39-701-01	Bolt (8)
38	39-702-01	Bolt
39	45-704-02	Speed Switch
40	48-707-01	Gear Ring
41	51-403-08	Bushing
42	51-404-03	Bushing
43	51-607-01	Bushing
44	51-702-13	Bushing
45	52-700-04	Washer (4)
46	52-701-04	Washer (8)
47	52-701-14	Washer
48	74-711-03	Driving Rod
49	75-610-02	Front Cap
50	78-311-01	Handle
51	78-608-02	Handle
52	79-612-01	Handle
53	H0122	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 HP17RD 5/8" Reversible Straight Drill, Serial No

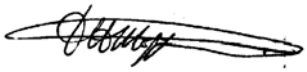
to which this declaration relates is in conformity with the following standard(s) or other normative document(s)

EN792 (Draft), EN292 Parts 1 & 2, ISO 8662 Part 1, Pneurop PN8NTC1

following the provisions of **89/392/EEC as amended by 91/368/EEC & 93/44/EEC**

Lane End — Place and date of issue

D.H.Moppett (Man Director) — Name and signature or equivalent marking of authorised person



Accessories

Notes

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