



# 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 <b>Universal Air Tool Company Limited</b> <b>Unit 8</b> <b>Lane End Industrial Park</b> <b>High Wycombe</b> <b>Bucks</b> <b>HP14 3BY</b> Tel No <b>(01494) 883300</b> Fax No <b>(01494) 883237</b>	Product Type <b>Angle Disc Grinder</b> <b>10mm Dia Threaded Shaft</b>	RPM <b>12,000</b> Cycles Per Min	
	Model No/Nos <b>UT8750 - 4" Disc (100mm)</b> <b>UT8750A - 4½" Disc (115mm)</b> <b>UT8750B - 5" Disc (125mm)</b>	Serial No	

Product Nett Weight <b>3.87</b> lbs <b>1.76</b> Kg	Recommended Use Of Balancer Or Support  <b>No</b>	Recommended Hose Bore Size - Minimum <b>3/8</b> Ins <b>10</b> M/M	Recommended Max. Hose Length <b>30</b> Ft <b>10</b> M
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Air Pressure Recommended Working <b>6.3</b> bar <b>90</b> PSI Recommended Minimum <b>n/a</b> bar <b>n/a</b> PSI Maximum <b>7.0</b> bar <b>100</b> PSI		Noise Level <b>Sound Pressure Level 82.9 dB(A)</b>  Test Method <b>Tested in accordance with Pneurop test code PN8NTC1 and ISO Standard 3744</b>
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Personal Safety Equipment Use - Safety Glasses <b>Yes</b> Use - Safety Gloves <b>Yes</b> Use - Safety Boots Use - Breathing Masks <b>Yes</b> Use - Ear Protectors <b>Yes</b>	Vibration Level <b>5.1 Metres / Sec<sup>2</sup></b>  Test Method <b>Tested in accordance with ISO standards 8662/1 &amp; 8662/4</b>
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## Foreseen Use of Tool

This right angle grinder is designed to be used with reinforced resin bonded depressed centre grinding wheels that have a permitted rotational speed in excess of 12,000 RPM. See parts lists for details of available wheel sizes.

The tool is designed to be used for light grinding and dressing of welds, etc. but not for cutting off. The grinder must never be used if a wheel guard (disc cover) item (3) is not fitted.

## Work Stations

The tool should only be used as a hand held hand operated tool. It is always recommended that the tool is used when standing on a 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 of the safety rules to be obeyed when using the sander.

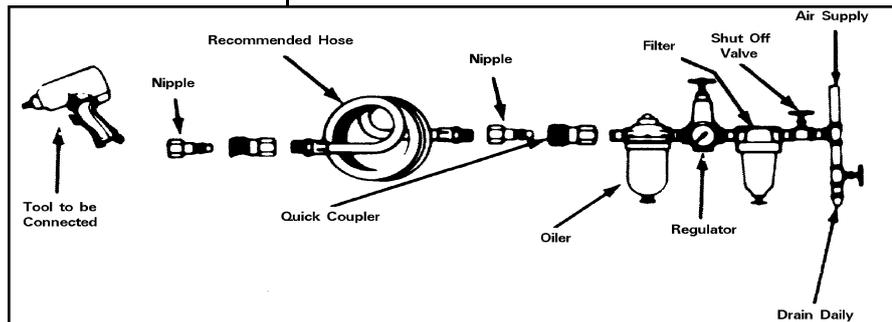
connect the tool to the air line system without incorporating an easy to reach and operate air shut off valve. The air supply should be lubricated. It is strongly recommended that an air filter, regulator, lubricator (FRL) is used as shown in Figure 1 as this will supply clean, lubricated air at the 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 bar.

## 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/lever 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



## Operating

With the grinder correctly connected to the air supply, check the speed of the grinder with an inlet pressure of 100 psi/7.0 bar measured at the tool inlet. Check with a calibrated tachometer. Check that the guard is in position and securely fixed. Check that the grinding wheel is of correct dimensions, is not cracked or chipped and has a permitted speed rating higher than the maximum permissible running speed of the grinder which is 12,000 RPM. Check that item 5 disc receiver is the correct type as parts list and is screwed tightly to the shaft and locates the bore of the grinding wheel on the spigot of the disc receiver and screw on disc nut item (4) using the spanners provided. Do not over tighten as this could crack the wheel. It should be tight enough to prevent wheel spin off when the air supply is shut off.

When first starting the grinder with a new or changed wheel fitted, the grinder should first be started in a protected area, i.e. such as under a heavy bench well away from other persons and run for, say, one minute. This will provide protection if the wheel should break because some fault was not detected.

Always use eye protection and wear protective gloves if there are sharp edges in the working area. The tool and the grinding process can create a noise level such that ear protectors should be worn.

If the grinding process creates a dust then use a suitable breathing mask.

Check that the material being worked will not cause harmful dust or fumes. If this is so then special breathing apparatus may be required. Seek advice before starting work.

If the grinder vibrates when first fitting the wheel or during use, remove from service immediately and arrange for the fault to be corrected before continuing to use.

Do not apply excessive pressure as this will reduce the cutting efficiency. Apply light loads and allow the wheel to cut.

Handle the grinder with care. If the grinder is dropped, carefully examine the wheel for damage and replace if necessary. Start the machine as if for the first time of fitting a wheel, i.e. under a bench. Make sure the object to be ground is in a firm fixed position.

## Dismantling & Assembly Instructions

Disconnect tool from air supply.

Grip gear shaft (11) with spanner (41) and insert spanner (40) into the holes in disc nut (4), unscrew disc nut (4) and take off grinding disc (34) and disc receiver (5), remove 4 off screws (37) and take off disc cover (3), retainer (7) and gasket (8). Pull out the drive shaft assembly from body (1). Unscrew grip (6) from body (1) and remove 2 off screws (16) and take off exhaust cover (48). Remove spacer (14).

Support bearing (14) and tap the non threaded end of the gear shaft (11) to drive it through the bearing (14). Take off retaining ring (13) from gear shaft (11) and support bearing (9) on the threaded shaft side and press the non threaded end of gear shaft (11) through the assembly to separate gear shaft (11), key (12), bearing (9), bevel gear (10) and wave washer (43).

By holding body (1) in a vice fitted with soft jaws the control head assembly may be removed from body (1) by unscrewing lock ring (50). It is then possible to pull out the motor and governor assembly from the body (1). Pull off pinion assembly from motor assembly and press apart pinion (15) and bearing (18). Grip the front plate (20) by hand and with a non metallic or soft metal (lead or aluminium) hammer tap the splined end of rotor (24) to drive the rotor and the remainder of the motor and governor assembly through the front plate and bearing assembly. Take off the cylinder (23) noting its orientation for reassembly and take out 4 off rotor blades (25) from rotor (24). Spring pin (22) may be pulled out of cylinder (23) if a replacement is required.

Grip rotor (24) in a vice with soft jaws and unscrew the governor assembly from the rotor - left hand thread. Support the rear end plate (26) in a piece of tube with a bore as close as possible to the maximum diameter of the rotor and very carefully so as not to damage the thread, tap the rotor through the rear end plate (26) and bearing assembly. With a suitable punch tap out bearing (17) from rear end plate (26) and bearing (17) from front plate (20).

To dismantle the governor assembly first unscrew adjust screw (42) assembly. Take off spring (28). Drive out 2 off spring pins (47) and take out 8 off pendulums (45) from governor (44). When removing the pendulums take special note of the orientation to the governor (45) to ensure they are fitted the same way on reassembly. This is important.

Grip valve housing (56) in a vice and remove O-ring (39) from lock ring (50). Drive out pin (58) and take off safety throttle lever (60). Do not dismantle the throttle lever (60). Unscrew bushing (57). Unscrew valve nut (52) and remove with O-ring (53), spring (54), valve (59) and O-ring (55).

Unscrew coupling nut (51) - left hand thread - from valve housing (56) and unscrew lock ring (50) from coupling nut (51), and unscrew lock ring (50) from coupling nut (51).

## Reassembly

Clean all parts and examine for wear. Use only distributor or manufacturer supplied spare parts. Particularly examine O-rings, bearings and gears. Coat all parts in a pneumatic tool lubricating oil, one preferably containing a rust inhibitor. Grease bearings and gears with a molybdenum or lithium based general purpose grease. Reassemble in the reverse order. See Note below.

For the motor make sure that the end plates that abut the cylinder are free from burrs and sharp edges and if necessary lap on a flat fine grade of abrasive paper. Press bearing (17) into rear case (26) and support the inner race of bearing (17) and press the non splined end of rotor (24) into the assembly. Tap the rotor relative to the rear case and bearing assembly until a clearance of approx. 0.0025" (0.065mm) is achieved between the rotor and the rear case. Ensure the rotor spins freely before assembling the rest of the motor assembly.

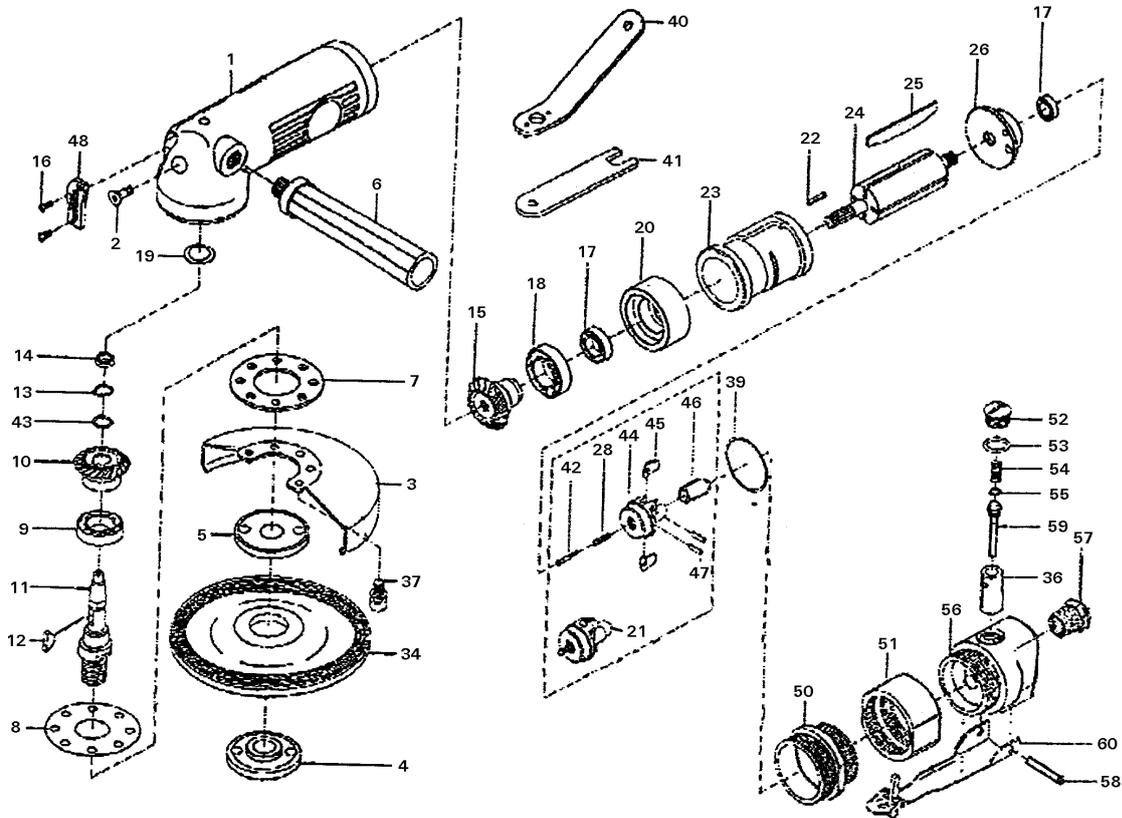
This machine has a speed controller or governor, parts (21), (28), (42), (44), (45) and (46). The correct setting of this speed controller is critical to the safety of the tool and should only be carried out by a trained competent person. The speed is set by assembling the speed controller, measuring the output spindle gear shaft (11) speed with a calibrated tachometer. Adjustment to the spindle speed can be made by rotating adjust screw (42). The speed of the grinder running free with an air inlet pressure of 100 psi (7 bar) measured at inlet bushing (57) must not exceed 12,000 RPM.

## Safety Rules For A Grinder

- 1) Read all the instructions before using this tool. All operators must be fully trained in its use and aware of these safety rules.
- 2) Do not exceed the maximum working air pressure.
- 3) Use personal safety equipment.
- 4) Use only compressed air at the recommended conditions.
- 5) If the tool appears to malfunction remove from use immediately and arrange for service and repair.
- 6) If the tool is used with a balancer or other support device ensure that it is fixed securely.
- 7) Always keep hands away from the working attachment fitted to the tool.
- 8) The tool is not electrically insulated. Never use the tool if there is any chance of it coming into contact with live electricity.
- 9) Always when using the tool adopt a firm footing and/or position and grip the tool firmly to be able to counteract any forces or reaction forces that may be generated whilst using the tool.
- 10) Use only correct spare parts. Do not improvise or make temporary repairs.
  - 11) Do not lock, tape, wire, etc. the on/off valve in the run position. The trigger/lever etc. must always be free to return to the 'off' position when it is released.
  - 12) Always shut off the air supply to the tool, and depress the trigger/lever etc. to exhaust air from the feed hose before fitting, adjusting or removing the working attachment.
  - 13) Check hose and fittings regularly for wear. Replace if necessary. Do not carry the tool by its hose and ensure the hand is remote from the on/off control when carrying the tool with the air supply connected.
  - 14) Take care against entanglement of moving parts of the tool with clothing, ties, hair, cleaning rags, etc. This will cause the body to be drawn towards the tool and can be very dangerous.
  - 15) It is expected that users will adopt safe working practices and observe all relevant legal requirements when installing, using or maintaining the tool.
  - 16) Do not install the tool unless an easily accessible and easily operable on/off valve is incorporated in the air supply.
  - 17) Take care that the tool exhaust air does not cause a problem or blows on another person.
  - 18) Never lay a tool down unless the working attachment has stopped

# **Universal Tool**

UT8750                    4" Disc (100mm) Angle Disc Grinder  
 UT8750A                4½" Disc (115mm) Angle Disc Grinder  
 UT8750B                5" Disc (125mm) Angle Disc Grinder



Ref No	Part No	Description
1	250001A	Body
2	250002	Screw
3	250003	Disc Cover (4" Disc)
	HA39	Disc Cover (4½" Disc)
	HA40	Disc Cover (5" Disc)
4	250004	Disc Nut (4" Disc)
	250004-22	Disc Nut (4½" Disc)
	250004-22	Disc Nut (5" Disc)
5	250004	Disc Receiver (4" Disc)
	250005-22	Disc Receiver (4½" Disc)
	250005-22	Disc Receiver (5" Disc)
6	250006	Grip
7	250007	Retainer
8	250008	Gasket
9	250009	Ball Bearing
10	250010	Bevel Gear
11	250011	Gear Shaft
12	250012	Key
13	250013	Retaining Ring
14	250014	Ball Bearing
15	250015	Pinion Gear
16	250016	Screw (2)
17	250017	Ball Bearing (2)
18	250018	Ball Bearing
19	250020	Spacer
20	250021	Front Plate
21	832H01	Governor Assembly
22	250024	Sprint Pin

Ref No	Part No	Description
23	250025	Cylinder
24	250026	Rotor
25	250027	Rotor Blade (4)
26	250028	Rear Plate
28	250030	Spring
34	H0060	Disc Wheel
36	250061A	Valve Bushing
37	250039	Cap Screw (4)
39	250041	O-Ring
40	250042	Disc Spanner
41	250043	Stop Spanner
42	250044	Adjust Screw
43	250045	Wave Washer
44	250046	Governor
45	250047	Pendulum (8)
46	250048	Plunger
47	250049	Spring Pin (2)
48	250050	Exhaust Cover
50	250052	Lock Ring
51	250053	Coupling Ring
52	250054	Valve Screw
53	250055	O-Ring
54	250056	Valve Spring
55	250057	O-Ring
56	250058	Valve Housing
57	250059	Hose Adaptor
58	250060	Spring Pin
59	250061	Valve Pin
60	250062	Complete Lever Assembly

**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

**Models UT8750, UT8750A, UT8750B Angle Disc Grinder, Serial Number**

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 Parts 1 & 4, Pneurop PN8NTC1**

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

**Lane End**

**D.H.Moppett (Man. Director)**



Place and date of issue

Name and signature or equivalent marking of authorised person

moving.

19) A grinding wheel should only be fitted by a competent person trained to do so. The wheel must be of the correct size and speed rating.

20) Check the speed of the grinder at least once per week, if it is in regular use, with an accurate tachometer.

21) The tool must only be used with the grinding wheels as set out in section "Foreseen Use of the Tool" and shown on parts list. Never fit any other device.

22) Carry out the instructions as set out in "Putting into Service".

23) Many countries have local or national rules re the use and fitting of grinding wheels. Make sure such rules are observed.

24) Use a barrier to prevent sparks causing a hazard to the operator, any other person or anything within the vicinity of the sparks.

25) If a wheel guard becomes damaged or has withstood a wheel breakage, the guard must be changed.

26) Do not use chipped or cracked grinding wheels.

27) Always wear impact resistant eye protection.

28) Use only the disc plates, Items (4) and (5) provided with the grinder for locating and clamping the wheel. Never use substitutes. Use the paper blotter fixed to the wheel as this ensures even tightness when the wheel is secured.

29) Tighten the wheel plates sufficiently to prevent wheel spin off when the grinder is turned off. Do not tighten excessively as this may crack the wheel.

30) The noise from the tool or the process noise of the grinding operation may be such that hearing protection should be worn.

31) Avoid inhaling dust from the grinding process. Wearing of a breathing mask is recommended. Grinding certain materials may mean that special breathing precautions are necessary. Seek advice before using the tool.

32) Always ensure that the workpiece is firmly supported so that it cannot move during the grinding process.

33) If the grinder is dropped do not use unless the wheel is first checked for damage by a competent person.

34) When not in use the grinder should be stored in a safe place where it will not be damaged. If a tool has not been used for a period of time check the tool as for the first time of using.

35) Be aware that if the grinding process causes high vibration, special precautions should be taken.

36) The operator should be aware that the grinding wheel will continue to rotate after the power supply has been shut off. This could cause a hazard.

37) Always store grinding wheels in accordance with the manufacturer's instructions.

38) Check frequently that the spindle thread has not become damaged or worn.

39) Always ensure that the grinding wheel has a higher permissible running speed to the speed of the grinder.

### Accessories

### Notes

### Distributor

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