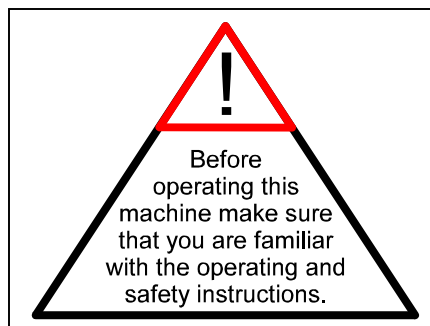


**MODEL 5 6003 0011
Pneumatic Band Saw**

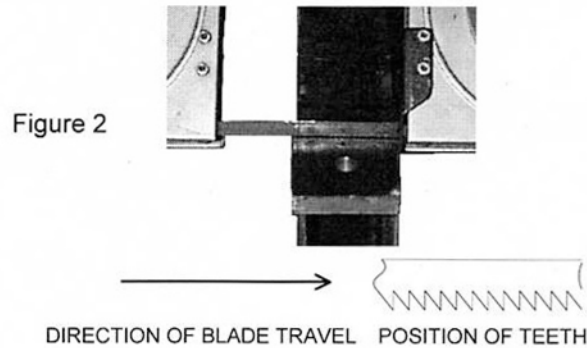


OPERATING MANUAL



OPERATING INSTRUCTIONS

Pneumatic Band Saw Type 5 6003 0011



- Which blade to use.
In general, select a blade which will allow at least two teeth to be engaged in the material thickness. The thinner or the harder the material, the finer the blade teeth.
Ask your dealer for the right selection of band saw blades.
- Use of lubricants.
"Lub Wax" is recommended when cutting aluminium, brass and thick materials. Cast iron should be cut dry.
With the saw running, apply the wax momentarily to both sides of the blade. Reapply wax intermittently as needed.

WARNING :

Exercise extreme care to prevent hand from contacting the blade.

After prolonged cutting, the wax will cling to the pulleys of your Band Saw. This does not affect the operation of the machine. All that is necessary, is to disconnect the machine from the air hose and wipe the wax from the pulleys.

Technical Data :

Housing	Aluminium	Aluminium
Cutting Capacity Diameter max.	120 mm	4 3/4"
Cutting Capacity Rectangular max.	107 mm x 120 mm	4 1/4" x 4 3/4"
Blade Size	1140 x 13 x 0,65 mm	447 / 8 x 1 / 2 x 0,02 mm
Overall Length	540 mm	21 1/4"
Height	245 mm	9 5/8"
Width	220 mm	8 5/8"
Weight	6,2 kg	13,7 lb
Air Connection	R 1/4" female	R 1/4" female
ID of Air Hose (minimum)	7 mm	1/4"
Standart Air Pressure	6 bar	85 psi
Air Consumption	0,55 m ³ /min	20 cfm
Motor Output	0,5 kW	0,7 hp
Motot Output at 7 bar / 100psi	0,55 kW	0,75 hp
Noise Level (Free Speed)	92 dB(A)	92 dB(A)
Free Surface Speed at 7 bar / 100 psi	67 m/min.	220 fpm
Free Surface Speed at 6 bar / 85 psi	61 m/min.	200 fpm
Free Surface Speed at 5 bar / 70 psi	47 m/min.	155 fpm
Free Surface Speed at 4 bar / 55 psi	41 m/min.	135 fpm

I PREPARE YOUR TOOL

1. Air Supply

Compressor must be able to supply the saw with 20 cfm clean and dry air at 85 psi.
Install dirt and water separators, if necessary.
Minimum air hose diameter is 1/4"
Blow air hose clear and connect it to the cleaned air inlet.
(Check screen)

2. Lubricator

Install service units or line oiler !

Check and if necessary with resin- and acid-free SAE 5 W to SAE 10 W oil.
In winter or when using very moist air, use antifreeze lubricant,
such as "KILFROST", "BP Energol AX 10", or "Kompranol N 74".

3. Remember safety instructions and cutting hints.

II SAFETY INSTRUCTIONS

Become familiar with the following safety instructions, before using the CS Unitec Band Saw.

Notice - safety of yourself and people around you, depends on using care and judgement while operating this tool. Know how to use the tool and make sure that all unnecessary personnel are clear of the work area before using it. Read all operating instructions and maintenance instructions before operating the CS Unitec Band Saw.

1. Plan ahead - lay the work out before starting, and always work in a steady manner. Fatigue leads to carelessness and accidents. Never operate your tool while you are under the influence of medication, alcohol, or other drugs.
2. Keep your work area clean and uncluttered.
Keep children away from your saw and work area.
3. Wear proper clothing. Clothing which is too tight or too loose is not suitable; it can restrict your movements or be caught up by the saw blade.
4. Protect your head and hair, eyes and ears, hands and feet.
 - Wear a hard hat, ear protectors and safety glasses
 - Wear non-slip gloves to protect your hands
 - Wear safety boots to protect your feet
5. Always disconnect air hose before working on the saw.
6. Grab the band saw with both hands during use ! Keep hands away from cutting area. Make sure your feet are firmly planted and your body is well-balanced.
7. Work in a cleared area
 - No obstructions. Be certain the object cut does not contain electrical wires, gases, water, etc. which could cause personal injury or property damage.
 - No unnecessary people.
 - Solid footing.
 - Use clamps or make sure the material to be cut is firmly held to prevent movement.
8. Slurry is very slick. Remove or control to prevent yourself, or others, slipping while cutting.
9. Never carry the band saw with the motor running !
Do not carry the tool with finger on or nearby valve lever.
10. Be alert for pieces which might fall down caused by operation or after being cut off. (Solid steel of 4" dia. and 12" length weights about 40 lbs!)
11. Avoid sparks in hazardous environment - created by your saw blade - Flush the material to be cut and the cutting part of your saw blade with sufficient water.

III CUTTING HINTS

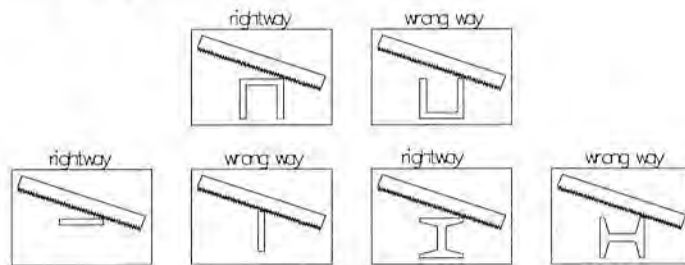
- Plan the cut.
 - Know the material to be cut. If necessary, slow down surface speed of the saw blade by reducing the air pressure.
 - Verify material to be cut is firmly held to prevent movement.
 - Hold the saw with the work stop contacting the work
- To start the air motor press valve lever with your fingers. Lower saw onto work. Allow weight of saw to control cutting pressure. Additional pressure will slow down speed of the blade.
Hold saw straight in the the cut. Any twisting or cocking of the blade results in shorter blade life.

CAUTION : Stay clear of end pieces that may fall after being cut off.

At completion of cut **DO NOT** allow saw to fall against work.

HOLD SAW SECURELY.

The proper cutting position for various shapes :



- When finishing a cut, back off on feed force to prevent stalling the blade.
- To stop the air motor release the valve lever.
- Blade must be in motion before re-entering a cut.
Blade must not be in contact with a surface when starting the saw.
- To disconnect air hose shut main air hose valve. Open air valve to decompress hose before disconnecting it.
- To change saw blades.
CAUTION : Disconnect air hose.
- To remove blade.
Turn adjustment handle (A), clockwise to release tension on the saw blade guide.

Figure 1



- Before installing a blade, clean chips and wax, which may have accumulated on blade guides and pulley tires.
- To install blade.
Install blade in blade guides and then position on pulleys. **Make sure teeth point into the right direction.** See Figure 2. Turn adjustment handle counter-clockwise as far as it will go. This reinstates tension of saw blade.
Start and stop saw two or three times to seat blade on pulleys.

IV TROUBLESHOOTING

Problem: Motor runs properly but cut is not sufficient.

Probable Cause

- Blade is not sharp. Replace blade
- Teeth point to the wrong direction. Remove blade, change teeth direction, and install it again.
- Blade is not tightened. Tighten blade.
- Blade type (material, TPI) is wrong for cutting the wished material. Exchange blade.
- Cutting speed (caused by air flow pressure) is wrong. Increase or slow down air flow pressure.
- Blade guide bearing or pulleys were not maintained sufficiently after cutting in wet surrounding. Replace damaged parts.

Problem: Vibration

Probable Cause:

- Fix TPI instead of variable. Exchange blade

Problem: Motor does not start

Probable Cause:

- Low air supply. Check compressor and air hose valves as well as air inlet screen pollution.
- Iced exhaust. Wait until ice-free, use anti-freeze lubricant.
- Vanes sticky. Give petroleum into air inlet and blow motor clear. Repeat if necessary. Regard Maintenance Instructions.

V MAINTENANCE

1. Saw Maintenance

Only proper maintenance can ensure constant performance, reduction in wear and thus, a decrease in operating costs and an increase in service life.

Service life and performance of the band saw are determined by

- a) **Degree of air purity**
- b) **Lubrication**
- c) **Maintenance**

To a) Blow the air hose clear before connecting it to the saw. Install dirt and water separators upstream of the saw, if it is not possible to prevent the formation of rust and water condensation in the air distribution lines.

To b) Regularly check and clean the air inlet screen. Replace wear parts - in particular the motor vanes - when necessary.

Vaness are considered worn if their width is less than 9/32"/7.2 mm

Keep Tool Clean

Periodically blow out all air passages with compressed air. Remove wax and chip buildup from pulley tires and blade guides. All plastic parts should be cleaned with soft damp cloth. Never use solvents to clean plastic parts. They could possibly dissolve or otherwise damage the material.

CAUTION: Wear safety glasses while using compressed air.

After use, clean the saw. Rinse it with light oil or provide alternate corrosion protection after having worked in wet surroundings.

VI DISASSEMBLY AND ASSEMBLY

for Exchange of Wear Parts and Repair

Refer to the exploded drawing and to the spare parts list when disassembling and assembling. Remove motor after undoing screws (Item 41). To separate handle undo screw (Item 149). Observe sealing (Item 148).

Motor

Detach motor cover (Item 116) after undoing screws (Item 118). Remove Belleville spring (Item 115), cap (Item 114), and cover (Item 133) from motor housing (Item 101). Touch motor housing softly to a wooden surface to pull out inner motor parts. Pull off end plate (Item 110) with bearing (Item 111) and spacer (Item 112) from rotor (Item 108). Remove cylinder bushing (Item 106) and vanes (Item 109). Pull off end plate (Item 102) with bearing (Item 103) and spacer (Item 105). Undo screws (Item 123) and remove motor cover (Item 120) with sealing ring (Item 121), O-ring (Item 122), and sound absorber (Item 119) from motor housing (Item 101). Inspect all parts for wear and damage. Replace any worn or damaged parts. Vanes (Item 109) should be exchanged.

Handle

Untighten screw plug (Item 146) and pull out spring (Item 145), ball (Item 144), sealing (Item 151) and pin (Item 143). Unscrew nipple (Item 150) from handle (Item 140). Hit out notched pin (Item 142) and remove pusher (Item 141).

Band Saw Head

Undo screws (Item 57) and detach pulley (Item 17) with pulley tire (Item 13). Pick out loose inner parts as bearing (Item 15), chain (Item 53), sprocket (Item 54). Furthermore lift off intermediate plate (Item 66) and remove bearing (Item 60), gear and sprocket assembly (Item 61), intermediate gear (Item 65), etc. Remove screws (Item 10) and yoke (Item 12), spring (Item 48), and plate (Item 36). Drive off pin (Item 80) and pull out tension shaft (Item 11A) and tension lever (Item 11). To separate knob set (Item 9) remove screws (Item 10). Undo screws (Items 27 and 49) to remove stop (Item 19) and blade guide holder (Item 23).

Use only original CS Unitec spare parts for all repairs.

Assembly

Assembly is performed essentially the same as disassembly, but in reverse order. Make sure motor clearance is correct: When the bearing is tight, the longitudinal clearance between rotor and end plate should be approx. 0,04mm. Correct by grinding spacer rings (Items 105 and 112). Make sure you don't forget sealing (Item 148). Add sufficient grease to gears. Control function of gears by moving pulley (Item 17) before connecting motor.