

Instruction Manual



Metal Band Saw

FMNO: G4012/1 METAL SAW Model Number: A872 METAL SAW

SAFETY SIGNS



ATTENTION! Ignoring the safety signs and warnings applied on the machine as well as ignoring the security and operating instructions can cause serious injuries and even lead to death.



READ THE MANUAL! Read the user and maintenance manual carefully and get familiar with the controls n order to use the machine correctly and to avoid injuries and machine defects.



Wear protective equipment



Wear protective clothing!





Stop and pull out the power plug before any break and engine maintenance!



Only trained staff!



Operation with jewelry forbidden!



Injury by cuts possible!

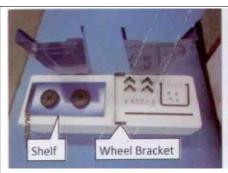


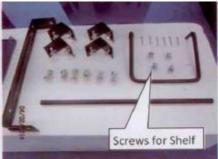
Protect from moisture!



Ensure that there are no other persons inside the danger zone (minimum distance 2m).

ASSEMBLY







- These are the components used in the assembly of the Stand.
- Using these screws, washers and nuts, fit the Shelf to the Legs.







- Lay a Leg on the floor and fix one end of the Shelf as shown. (Note: The Shelf will fit only one way—"tray" facing up). Do not fully tighten these screws yet.
- Fix the other Leg to the Shelf, again do not fully tighten these screws.





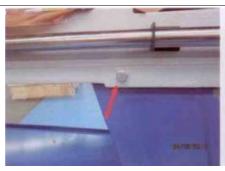


- Fit the Corner Brackets inside a leg as shown. This is the end the Handle will be fixed to. Finger tighten these 2 bolts first, then fully tighten.
- Fit the Corner Brackets and Wheel Bracket to the other Leg. Finger tighten these 4 bolts first, then fully tighten.





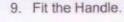
7. Turn the Saw Stand up the right way, preferably on a non slip surface. Lift the Saw on top of the Stand with 2 people ensuring the top of the Stand fits inside the Saw Base. Make sure the motor is at the end with the Wheel Bracket. Have the other person steady the Saw until all bolts are tightened as it is unstable until completed.



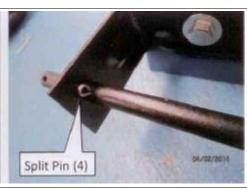




8. Bolt the Saw Base to the Legs as shown. Finger tighten all bolts first (6) then fully tighten. Your assistant should still be steadying the machine. You can now level the Shelf and tighten the screws. Double check all bolts and screws are tight. The machine should now be stable.







 Pin the Handle inside the Stand.
 Open up the ends of the Pin to stop it from falling out (see photo of Wheel (13)). Fit Shaft and pin both ends as shown above.







12. Fit the Wheels with this face against the Wheel Bracket.

 Fit Wheels in place and open the Split Pins as shown.

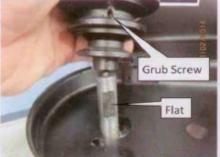






14. Using these 2 screws and 1 bolt, fit the Belt Guard as shown.

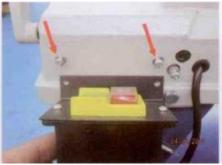


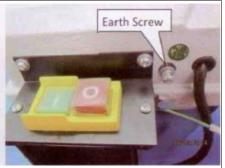




- Fit the Motor Pulley, making sure the key is in place. Tighten the grub screw.
- 16. Fit the driven pulley, making sure the grub screw lines up with the flat on the shaft. Make sure both pulleys are the same distance from the Belt Guard or the top faces of both Pulleys are level. Tighten the grub screw.







17. Fit the Drive Belt.

18. IT IS STRONGLY ADVISED THAT ELECTRICAL WORK BE UNDERTAKEN BY A FULLY LICENSED ELECTRICIAN. Fit the Switch Box using the screws shown above.







19. Screw the 2 Earth wires to the Saw Body as shown above. The correct assembly sequence is; <u>Split Washer against head of Screw, Flat Washer, 2 Earth wires and lastly the Star Washer against the Saw Body.</u>
AN ELECTRICIAN WILL THEN BE ABLE TO TEST THE MACHINE IS EARTHED CORRECTLY.
Plug the machine in and test the Stop Plate hits the Off Button just enough to switch off the machine without putting too much pressure on the switch. Adjust as necessary.

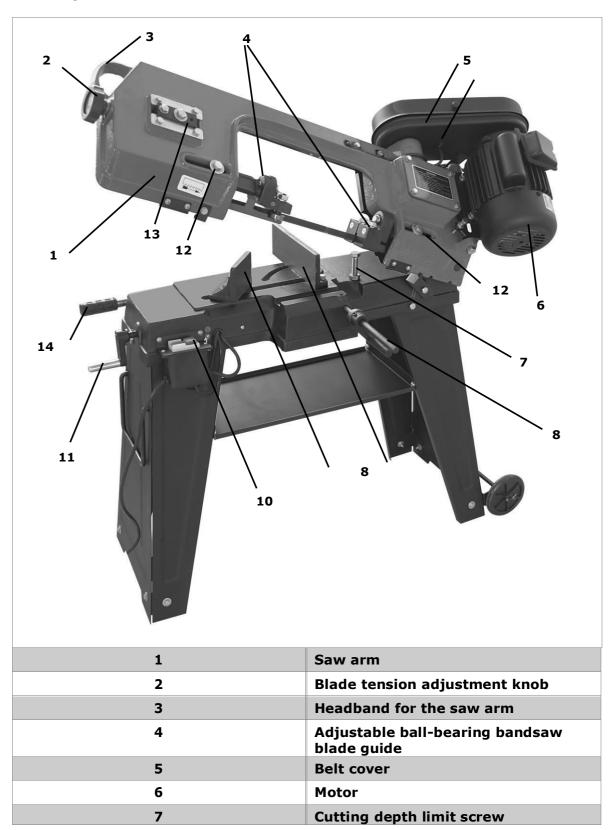
20. Install stop

- Slide the guide bar in the socket and tighten the set screw.
- Install the adapter over the leadership of round steel



TECHNICALS

Components and Controls



8	Holding jaw angle adjustment
9	Jaw angle adjustable
10	ON-OFF switch
11	Charging handle for clamping jaw
12	Fixing screw bandsaw blade guide
13	Setting caster / camber
14	Setting the feed suspension

Technical data

Mains connection	V	230 or 400
Engine performance	W	550W
Feed	m/min	20-29-50
Bandsaw blade	mm	1638x0,6x12,5
max. Ø round profile at 90°	mm	110
max. Ø round profile at 45°	mm	75
max. HxW hexagonal tube at 45°	mm	110x140
max. HxW hexagonal tube at 45°	mm	110x75
Dimensions L x W x H	mm	970x395x945
Weight	kg	56

3 PREFACE

Dear Customer!

This manual contains Information and important instructions for the installation and correct use of the metal band saw.

This manual is part of the machine and shall not be stored separately from the machine. Save it for later reference and if you let other persons use the machine, add this instruction manual to the machine.

Please read and obey the security instructions!



Before first use read this manual carefully. It eases the correct use of the machine and prevents misunderstanding and damages of machine and the user's health.

Due to constant advancements in product design construction pictures and content may diverse slightly. However, if you discover any errors, inform us please.

Technical specifications are subject to changes!

Please check the product contents immediately after receipt for any eventual transport damage or missing parts.

Claims from transport damage or missing parts must be placed immediately after initial machine receipt and unpacking before putting the machine into operation.

Please understand that later claims cannot be accepted anymore.

4 SAFETY

Intended use

The machine only in technically perfect condition in accordance with, safety and danger, use it! Interference, which could affect safety, must be rectified immediately!

It is generally prohibited to modify safety equipment of the machine or to make ineffective! The metal band saw is designed exclusively for cutting metals and plastics.

For a different or additional use and resulting property damage or injury, Dirty Pro Tools takes no responsibility or warranty.

Working conditions

The machine is designed for the work under the following conditions:

humidity max. 70%

temperature $+5^{\circ}\text{C}$ to $+40^{\circ}\text{C}$ $+41^{\circ}\text{F}$ to $+104^{\circ}\text{F}$

The machine is not intended for outdoor use.

The machine is not intended for use in potentially hazardous conditions.

Prohibited use

- The operation of the machine under conditions outside the limits specified in these instructions is not permitted.
- The operation of the machine without the proposed protective devices is prohibited.
- dismantling or disable the protective devices is prohibited.
- It is not permitted the operation of the machine with materials that are not expressly stated in this manual.
- Inadmissible is the machining of materials with dimensions outside the limits specified in this manual.
- The operation of the machine in a manner or for purposes that do not comply with the instructions of this manual is 100% prohibited.
- Use for cooling of magnesium Never oils or emulsions (water-oil mixtures)!

General Safety

To avoid malfunctions, damage and physical injury MUST be observed:

- Safety must be observed and regularly inspected for completeness!
- Warning signs and / or labels on the machine which have been removed must be replaced immediately!



A DANGER

Unauthorized modifications and tampering with the machine immediately invalidate all warranty and damage claims.



Work area and keep soil around the machine clean and free of oil, grease and residues of material!

Operation of the machine only when sufficient light, at dusk, you should no longer work.

With fatigue, lack of concentration or under the influence of drugs, alcohol or drugs is prohibited to work with the machine!





When working on the machine suitable protective equipment such as safety glasses, hearing protection, and protective clothing must be worn!



Never leave the machine running unattended! Before leaving the working area switch the machine off and wait until the machine stops.

Always disconnect the machine prior to any actions performed at the machine.



Avoid unintentional starting

Do not use the machine with damaged switch



The machine may only be operated by qualified personnel enrolled.

Third people, especially children, and people are not trained to think of the work environment away!



When working with the machine, do not wear loose jewelry, wide or protruding from the body of clothing, ties, long hair out, etc.

Loose objects can get caught in rotating parts of the machine and cause serious injury!



DON'T TOUCH THE SAW BLADE! Take care of the rotating saw blade during operation.



NO WETNESS! Operation and storage at rain or wet weather is forbidden.



NO CHILDREN! During operation children must have a distance to the metal band saw.



ONLY WORK ALONE! Operation by 2 or more persons is forbidden.



ELECTRICITY! The machine from the power source must be disconnected before servicing.



A DANGER

Check and follow the instructions! Non-compliance may result in serious injury or death! Dirty Pro Tools machines can not be held liable for accidents if the safety instructions are not followed!

Even if they meet all the safety rules and if used properly, the following residual risks are noted:

- Risk of injury to hands / fingers through the band saw blade during operation.
- Risk of injury / danger of cuts by untrimmed edges.
- Risk of injury from contact with live components.
- Risk of injury due to breakage or being thrown out of the saw blade or portions thereof, va with overloading and incorrect direction of the saw blade.
- hearing loss, unless arrangements have been made by the user for hearing protection.
- Risk of injury due to kickback which the cuttings, ejecting the cut material or parts.
- Risk of injury to the eye by flying debris, even with goggles.

These risks can be minimized if all safety regulations are applied, the machine is properly maintained and serviced the machine as intended and is operated by properly trained personnel. Despite all safety devices and remains their healthy common sense and your corresponding technical suitability / training to operate a machine is the most important safety factor!

5 ASSEMBLY

Preparatory activities

Scope of delivery

After receipt of the delivery, if all parts are in order. Report any damage or missing items immediately to your dealer or the shipping company. Visible damage must also be recorded without delay in accordance with the provisions of the warranty on the delivery, otherwise the goods shall be accepted as properly.

Workplace

Choose a suitable place for the machine. Observe the safety requirements of Chapter **12** and the dimensions of the machine from Chapter **4.2**.

The selected location must ensure as well as the possibility for connection to an extraction system a suitable connection to the electrical grid.

Make sure that the floor can support the weight of the machine. The machine must be leveled on all bases simultaneously.

You must also secure around a distance of at least **0.8** m around the machine. Before and behind the machine must be provided the necessary distance for the supply of long workpieces.

Transport / unloading the machine

Lifting it out of the package for mounting and positioning on the workstation: at least 2 people!

You can move machine after installation by the transport wheels.

Preparation of the surface

Eliminate the preservative, which is applied for corrosion protection of the parts without painting. This can be done with the usual solvents. Here no nitro solvent or similar means, and in no case use water.

NOTE

The use of paint thinners, gasoline, corrosive chemicals or abrasive cleaners will result in damage to the surface!

Therefore:

When cleaning, use only mild detergent

Electrical connection

Only a qualified electrician is authorized for the electrical connection, including the installation of the supply part. This must be cut off before the electrical connection. Only when the main power supply is cut off, each contact can be closed. The cowl box is attached to the back of the machine body. There is also a junction box on the side, which you have to connect only to the marking.

Earthing connection





When working on an ungrounded machine:

Serious injury due to electric shock in the event of a malfunction possible!

Therefore:



Machine must be grounded and be connected to a grounded outlet

- + The electrical connection of the machine is ready for operation on a grounded electrical outlet!
- + The plug must be connected only to a properly fitted and grounded electrical outlet!
- + The supplied plug must not be changed. If the plug does not fit or is defective, only a qualified electrical engineer may modify or replace these plugs!
- + The grounding conductor is green-yellow!
- + In the event of repair or replacement of the grounding conductor must not be connected to an under voltage can!
- + Check with a qualified electrician or service that the grounding instructions are understood and the machine is grounded!
- + A damaged cable must be replaced immediately!

6 OPERATION

4.1 Adjustment before initial startup

Check the screws

Check before commissioning all screw connections and pull it if necessary.

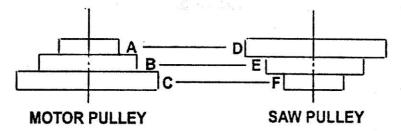




Perform all the conversion work in isolation from the mains!

Select the saw blade speed

The saw blade is driven via a belt drive. Adjust the saw blade speed at the material to be cut.



Select the feed according to the following table.

Material	speed	Belt	position	
Material	(m/min)	Motor pulley	Saw pulley	Saw band
Stainless Steel Stainless Steel ® Tool steel Alloy steel Bearing bronze	20	А	D	Bi-Metal
Structural steel iron mild steel Thomas steel	29	В	E	Bi-Metal
Brass Aluminium Similar materials	50	С	F	HSS

Knob screw or tapping screw

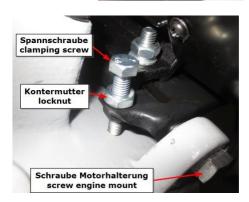
Unscrew the screw on the lid and the lid up.

- Loosen the two screws on the motor mount.
- The belt is now positioned to the corresponding position of the table (also in the lid visible).
- Tighten the two screws on the motor bracket and close the cover and screw.



Adjustment of belt tension

- The two screws on the motor bracket are loosened slightly.
- Loosen the lock nut and adjust the belt with the tension screw to about 2-5mm game.
- Tighten the locknut.
- Tighten the screws on both sides of the engine mount.



THE TEETH OF THE SAW BLADE SHOULD THE OVERLAPPING MATERIAL TO ALSO BE ADAPTED:

- 1. The thinner / narrow the workpiece, the higher the toothing.
- 2. Basic rule: it should at all times at least 3 teeth own material

Adjustment of the miter angle

Loosen the fastening of the holding jaw (8) Set the holding jaw to the desired angle.

Clamping the workpiece

Create the workpiece at the holding jaw and tighten it with the clamp (9). The clamping jaw can be adjusted according to the crank (11).

Setting the saw band tension

Check the blade tension: Never use a thumb in the middle of the saw band light pressure - it should be about 1mm -.

If the saw blade is not tightened correctly, you must readjust the tension with the adjustment knob (2).

Setting the feed

Suspension with the handle of the feed (14) can be tightened by turning to the right, the spring and the feed can be reduced. Turning to the left of the feed is increased.

Adjusting the vertical bandsaw blade guide for clippings

Slightly loosen the left bandsaw blade guide with the screw for fixation.







The tolerance by lowering the bandsaw blade guide leveling on bearing roll on the bandsaw blade to zero.



Slightly loosen the nuts on either side guide rollers with a wrench **SW17**.



With a wrench **SW 12** is with the help of the eccentric bearing roller according to externally or internally displaced.

Repeat on both sides of the process until no play between the bearing rollers.

The bandsaw blade should be centered on the upper bearing role.

CAUTION: The two lower side rollers do not clamp!

After both bearing rollers are adjusted free of play, the two nuts tighten up the leadership roles.

Example of a perfect adjustment of the bandsaw blade guide:



The bandsaw blade has too much play and is therefore still between the lateral bearing rollers.



The saw blade is completely vertical without any play between the lateral bearing rollers.

CAUTION:

Before tightening the bandsaw blade guide examine whether the saw band is below set perfectly vertical and readjust the bandsaw blade guide according vertically.

The bandsaw blade guide with the screw for fixing tighten.



NOTE: Check the 90 ° bandsaw blade guide with an angle gauge or with a rectangular workpiece.

Repeat this process on the right if the saw band saw blade guiding is not performed exactly vertical.

NOTE: The bandsaw blade guide slide (left / right) as close as possible to the workpiece.

By loosening the fixing nuts (12), the blade guides can be moved.



CAUTION: Bevel cuts are resulting from not exactly vertical set saw blade guides and too much play between the lateral bearing rollers!

Operating

Before you use:

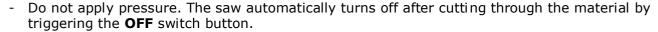
Before you start the saw, make sure:

- That all machine components are in perfect condition
- That you have entered the correct blade speed for the material and use the right blade
- That the workpiece at the correct angle is properly clamped
- That the workpiece rests safely. For longer workpieces these be supported by a base (eg dolly)
- That the saw blade is set correctly (belt tension and vertical)
- That the saw arm is pivoted up and the workpiece is not affected
- That no more tools on the machine bed are

Switch ON / OFF

The machine can be switched on via the green **ON** button switching on and off with the red **OFF** switch button.

- Turn on the machine with the green **ON** switch knob
- Allow the engine to start up fully so that the saw blade at full running speed.
- Run the saw arm to the bracket (3) to the workpiece.
- Let the saw arm by its own weight work through the material.

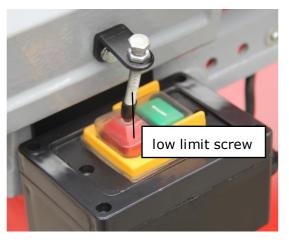




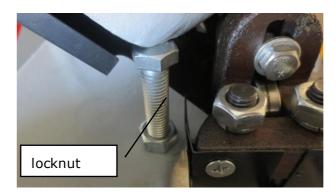
NOTE

Allow the engine to start full before starting to Be Cut.

Upon reaching the lowest max. Depth of cut (cutting depth without limitation) the machine switches to the **OFF** switch button automatically. If this is not the case, adjust according to the limit.



The automatic switch off can readjust by the low limit screw to be adjusted.



Band saw operate vertical

Raise the arm band saw in the 90 $^{\circ}$ position and clamp it on the base console with the fixing bracket.





Remove the protective cover.



The work table with the two screws attach on the bandsaw blade guide.

Loosen the fixing screw at the bandsaw blade guide.

Insert the support bracket by the fixing screw

Screw on the table top with the countersunk screw up and the washer and nut below.

Work table for vertical sections

The top bandsaw blade guide by unscrewing the fixing nut (12) and screw into the threaded hole 2. be pushed deeper.

As a result, the bandsaw blade is made even better.

support bracket

fixing screw

7 MAINTENANCE AND CARE

A ATTENTION



Don't clean or do maintenance on the machine while it is still connected to the power supply:

Damages to machine and injuries might occur due to unintended switching on of the machine!



Therefore: Switch the machine off and disconnect it from the power supply before any maintenance works or cleaning is carried out

The machine requires little maintenance and contains little parts that must undergo the operator of a service.

Faults or defects that may affect the safety of the machine must be rectified immediately.

Repair work may be carried out by qualified personnel!

The complete and utter cleaning guarantees a long lifetime of the machine and is a safety requirement.

After each shift the machine and all its parts must be thoroughly cleaned by the dust and swarf sucked through the suction and all waste is disposed of by compressed air jet.

Check regularly that the warning and safety of the machine present and properly legible condition.

Check before operation the soundness of the safety devices.

When storing this machine must not be stored in a humid place and needs to be protected from the influence of weather conditions.

Before first use, and subsequently (if required before a brush to clean chips and dust) with a thin layer of oil or grease grease every 100 working hours all moving joints.

- + The elimination of defects does your dealer
- + Repair work may only be performed by qualified personnel!

Changing the saw blade

- Bring the metal belt in the vertical position and open the bandsaw blade cover.
- Loosen the saw blade with the adjustment knob (2).
- Saw blade guards above (red) and at bottom remove.
- Now pull down the old blade. DANGER! Injury! Wear work gloves.
- The new bandsaw first insert the blade guides.
 WARNING: Respect the right direction of the teeth. (see image left front of the saw arm)
 Then put on the wheels.
- Set the saw blade with the adjustment knob (2) tension (1 mm test). After making a short test run and retighten if necessary.
- Saw blade guards above (red) and bottom screw on.
- Screw the saw band cover back.

Setting tape / camber

The impeller is factory aligned to the drive wheel. Should, however (especially after exchange) of the saw blade is not straight or run from the impeller, an adjustment may be necessary. The tape / camber can be adjusted.

- The clamping screw slightly loose.
- With the grub screw the tape can be adjusted.
- Tighten the clamping screw.

clamping screw

grub screw

Lubrication

Ball bearings do not require lubrication.

Lubricate the threaded rod of the jaw as needed

Cover all unpainted surfaces regularly with a thin layer of light-Maschi machine oil.

The transmission runs in an oil bath and requires about 1 time per year for an oil change:

Bring to the saw arm in horizontal position.

Remove the four screws (part. No. 75 in exploded view) of the gear cover (93) and remove the cover.

Place a drain pan under the transmission housing.

Lift the saw arm out so that the oil flows.

Clean the gear case of coarser waste oil residues, fill a new TRANSMISSION OIL, install the cover properly.

Dispose of the used oil ecologically.

Cleaning

NOTE

The use of solvents, harsh chemicals or abrasive cleaners leads to damage to the machine!

Therfore: When cleaning water and mild detergent if necessary use.

Bare surfaces of the machine against corrosion impregnate (with anti-rust WD40)

Disposal

Do not dispose the metal band saw in residual waste. Contact your local authorities for information regarding the available disposal options.

8 TROUBLESHOOTING

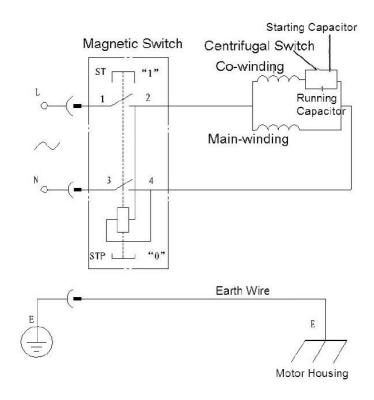


Disconnect the machine from the power supply prior to any checks performed at the machine itself!

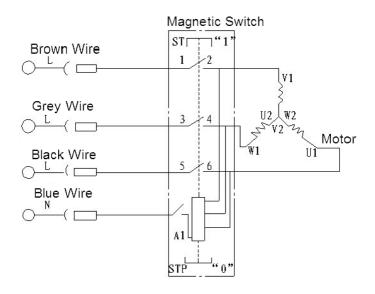
Trouble	Possible cause	Solution
Machine does not start	machine is not connectedfuse or contactor brokendamaged cable	 all el. Check the connectors Switch fuse, activate protection Replace cable
Bandsaw is not on speed	 Extension cord too long Motor not suitable for existing voltage weak power grid 	 Exchange on optional extension cable see switch box cover for correct wiring Contact the electrician
The machine vibrates strongly	Standing on uneven groundMotor mounting is looseBelt tension spring is worn or broken	reconstituteTighten the mounting screwsReplace the spring
bad cuts	Feed too fastBandsaw blade is loose	Select a lower feedTighten the saw blade

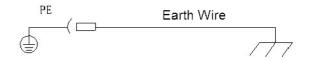
9 ELECTRICAL CIRCUITS

17.1 230V



17.2 400V





10 SPARE PARTS

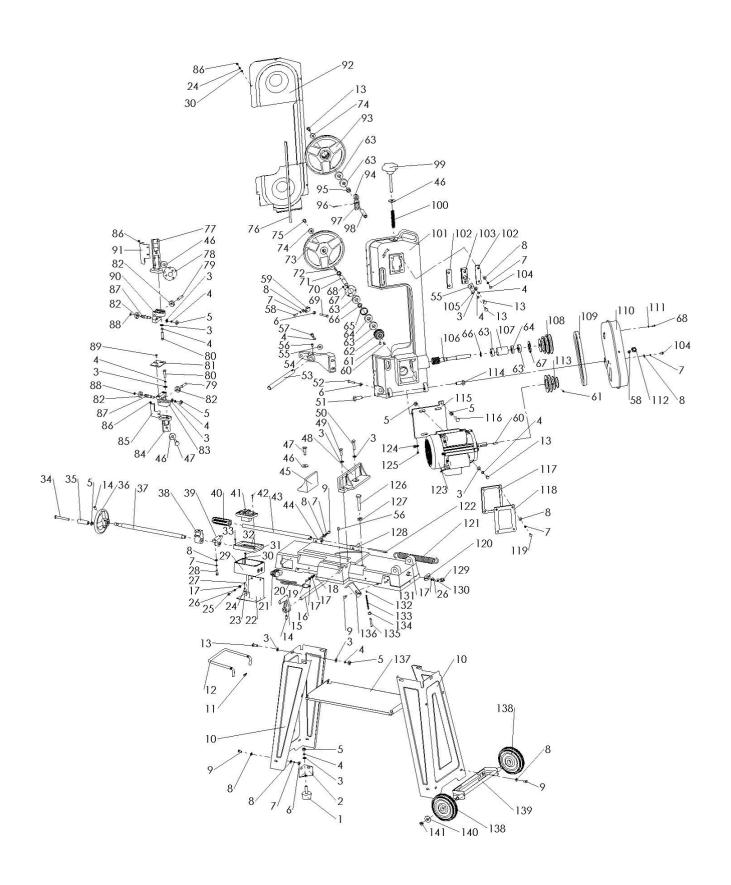
Spare parts order

IMPORTANT

The installation of other than original spare parts voids the warranty!

So you always have to use original spare parts

Make always a note of the type, spare part number and a definition of the machine. That there are no mistakes, we recommend to make a copy of the spare part list where you can mark with a pen the spare parts which you order.



Spare part list

No.	Part Name	Qty	No.	Part Name	Qty
1	Rubber pad	2	40	Rubber sleeve	1
2	Steel Bracket	4	41	Magnetic switch	1
3	Flat washer	18	42	Screw	2
4	Elastic washer	15	43	Adjusting bar	1
5	Nut	16	44	Fixing plate (A)	1
6	Nut	10	45	Rear clamping plate	1
7	Elastic washer	15	46	Big flat washer	3
8	Flat washer	16	47	Bolt	2
9	Bolt	9	48	Front clamping plate	1
10	Support leg	2	49	Bolt	1
11	Ear ring	2	50	Bolt	1
12	Carrying handle	1	51	Bolt	1
13	Bolt	7	52	Bolt	1
14	Screw	2	53	Turning shaft	1
15	Position block	1	54	Connecting block	1
16	Sliding bar	1	55	Big flat washer	2
17	Flat washer	9	56	Screw	2
18	Locking nut	2	57	Screw	2
19	Bolt	2	58	Screw	1
20	Cable and plug	1	59	Switch pressing bracket	1
21	Strain relief	2	60	Flat pin	1
22	Switch box support bracket	1	61	Screw	1
23	Teeth washer	2	62	Gear wheel	1
24	Elastic washer	7	63	Ball bearing	4
25	Screw	2	64	Oil seal	3
26	Elastic washer	4	65	Gear wheel tube	1
27	Screw	2	66	Retaining ring	1
28	Bolt	2	67	Cover plate	1
29	Switch box	1	68	Screw	6
30	Flat washer	9	69	Bolt	1
31	Screw	4	70	Wheel shaft	1
32	Switch box cover	1	71	Position tube	1
33	Screw	4	72	Flat pin	1
34	Screw	1	73	Drive wheel	1
35	Wheel bar	1	74	Retaining ring	2
36	Turning wheel	1	75	Bolt	1
37	Thread bar	1	76	Blade	1
38	Thread bar nut	1	77	Upper blade guide	1
39	Position holder	1	78	Locking knob	1

79	Pin	1	122	Hook	1
80	Bolt	1	123	Motor	1
81	Blade position plate	1	124	Cable fixing plate	3
82	Ball bearing	6	125	Screw	2
83	Lower blade protection block	1	126	Bolt	1
84	Lower blade guide	1	127	Nut	1
85	Lower blade protection plate	1	128	Fixing plate (B)	1
86	Screw	3	129	Strain relief	1
87	Eccentric shaft	4	130	Screw	2
88	Ear ring	4	131	Machine bed	1
89	Screw	3	132	Chain ring (A)	1
90	Upper blade protection block	1	133	Chain	1
91	Upper blade protection plate	1	134	Chain ring (B)	1
92	Rear cover	1	135	Position pin	1
93	Driven wheel	1	136	Position plate	1
94	Elevating block	1	137	Support plate	1
95	Position tube	1	138	Transportation wheel	2
96	Elastic pin	1	139	Wheel bracket	1
97	Adjusting block	1	140	Flat washer	2
98	Driven wheel shaft	1	141	Locking nut	2
99	Tension knob	1			
100	Tension spring	1			
101	Machine body	1			
102	Pressing plate	2			
103	Sliding block	1			
104	Bolt	4			
105	Screw	1			
106	Worm	1			
107	Gear wheel bush	1			
108	Spindle wheel	1			
109	V-belt	1			
110	Pulley cover	1			
111	Big flat washer	1			
112	Knob	1			
113	Motor pulley	1			
114	Bolt	1			
115	Motor base plate	1			
116	Bolt	4			
117	Sealing pad	1			
118	Gear box cover	1			
119	Bolt	4			
120	Clamping plate	1			
121	Spring	1			

DECLARATION OF CONFORMITY

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97-105 MONK STREET DERBY UK DE22 3QE

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following directive(s):

EC-DIRECTIVES

2006/42/EG

2006/95/EG

APPLICABLE STANDARDS

EN 13898:2003/A1:2009

EN 30204-1:2006/A1:2009

DIRTY PRO TOOLS MODEL NO. A872 METAL BANDSAW

FMNO: G4012/1 METAL BANDSAW

Signed

DIRECTOR - RUGBIR JOHAL

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