



Woodworking machinery at its best!

**4HP CYCLONE DUST EXTRACTOR
OWNERS MANUAL
MODEL: C400RA**



CE

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GENERAL SAFETY RULES



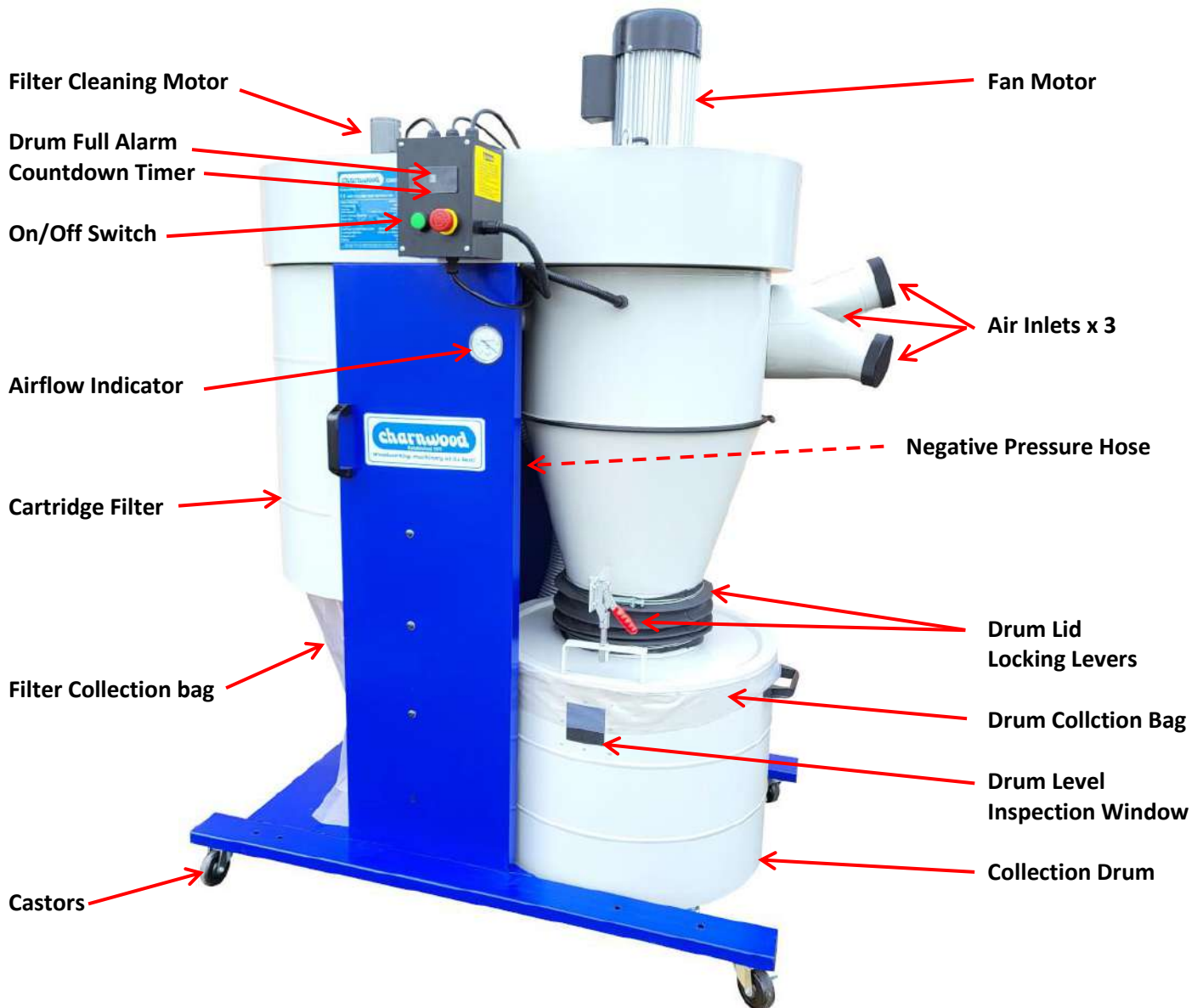
WARNING: Do not attempt to operate the machine until you have read thoroughly and understood completely all instructions, rules, etc. contained in this manual. Failure to comply may result in accidents involving fire, electric shock, or serious personal injury. Keep this owner's manual and review frequently for continuous safe operation.

1. Know your machine. For your own safety, read the owner's manual carefully. Learn its application and limitations, as well as specific potential hazards pertinent to this machine.
2. Make sure all tools are properly earthed.
3. Keep guards in place and in working order. If a guard must be removed for maintenance or cleaning, make sure it is properly replaced before using the machine again.
4. Remove adjusting keys and spanners. Form a habit of checking to see that the keys and adjusting spanners are removed from the machine before switched it on.
5. Keep your work area clean. Cluttered areas and workbenches increase the chance of an accident.
6. Do not use in dangerous environments. Do not use power tools in damp or wet locations, or expose them to rain. Keep work areas well illuminated.
7. Keep children away. All visitors should be kept a safe distance
8. from the work area.
9. Make workshop childproof. Use padlocks, master switches and remove starter keys.
10. Do not force the machine. It will do the job better and be safer at the rate for which it is designed.
11. Use the right tools. Do not force the machine or attachments to do a job for which they are not designed. Contact the manufacturer or distributor if there is any question about the machine's suitability for a particular task.
12. Wear proper apparel. Avoid loose clothing, gloves, ties, rings, bracelets, and jewellery which could get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
13. Always use safety glasses. Normal spectacles only have impact resistant lenses. They are not safety glasses.
14. Do not over-reach. Keep proper footing and balance at all times.
15. Maintain the machine in good condition. Keep the machine clean for best and safest performance. Follow instructions for lubrication and changing accessories.
16. Disconnect the machine from power source before servicing and when changing the blade.
17. Never leave the machine running unattended. Turn the power off. Do not leave the machine until it comes to a complete stop.
18. Do not use any power tools while under the effects of drugs, alcohol or medication.
19. Always wear a face or dust mask if operation creates a lot of dust and/or chips. Always operate the tool in a well ventilated area and provide for proper dust removal. Use a suitable dust extractor.



Risk of Injury: Never Reach Into A moving Part
Always Wear Eye Protection
Always Wear A Dust Mask
Always Wear Ear Protection

Overview Of C400RA Cyclone Dust Extractor



C400RA Specification

Motor Power	3000w (4hp) / 240v / 50hz
Recommended Breaker Size	16amp Type C
Fan Diameter	402mm
Inlet Diameter	1 x 200mm or 3 x 100mm
Airflow	2850m3/h
Cartridge Filter Size (Diameter x Height)	370mm X 705mm
Filtration	99% @ 1 micron
Filter Collection Bag (Lay Flat Size: W x H)	600mm x 900mm
Collection Drum Size (Diameter x Height)	600mm x 460mm
Collection Drum Capacity	138 Litres
Drum Collection Bag (Lay Flat Size: W x H)	965mm x 1195mm
Sound Level	78 dB(A)
Weight (Net / Gross)	126kg / 166kg
Manufacturer's Warranty	1 year
Rating	Trade

Rating Description

Trade: Suitable for daily use by professional woodworkers.

Continuously rated, high power, and heavy-duty construction. Typically used by several different operators in a small or medium-sized business. Will be used up to the machines maximum limit with some long work periods. Expected maximum use of 1000 hours annually.

Please Note: **Using a product in excess of its rating will void the manufacturers free warranty.**

Unpacking

The cyclone is shipped in a wooden crate. It is fully assembled inside.

Do not dispose of packaging until the machine has been fully tested.

In the unlikely event that the product needs to be returned, it will need to be re-packed in the original packaging.

Unpacking



Open the Crate

Requires 2 people: Prise open the wooden crate.



Remove From The Base

Remove the 4 transport blocks inserted into the ends of the frame.

Carefully remove the extractor from the wooden base.

If a forklift is available there are eye bolts provided at the top of the fan housing for lifting.



Assembly



Control panel

Attach the control panel to the side of the fan housing using 3 screws.



Grab Handles

Attach the grab handle to the side of the body using 2 Hex head screws.

Repeat for the other side.



Drum Handle

Attach the collection drum handle to the front of the drum using 2 bolts and 2 nuts.



Plastic Plugs

Push 4 plastic plugs into the ends of the base frame



3 Way Splitter

You can use the extractor by connecting a 200mm diameter hose directly to the main inlet.

Alternatively, fit the 3 way splitter over the main inlet to convert it to 3 x 100mm inlets.

The splitter pushes onto the main inlet and is secured with a screw.

Fit the Blanking Caps if required

Setting Up



For Optimum Performance

Keep the hose length as short as possible. The ridges inside flexible hose create resistance and slow the airflow.

Maximum recommended hose length @ 100mm diameter is 10m.

Keep the hose as straight as possible. A gradual change in direction is more efficient, for example a 45 degree turn is better than a sharp 90 degree turn.

Using The Cyclone



Starting the Cyclone

When connected to a power supply, the control panel will display 'L' to show the extractor is Live and ready to use.

Press the green 'Start' button and wait around 15 seconds to allow the airflow to build up before producing any dust.

Press the red 'Off' button to stop the cyclone. The cyclone should be left running for 30seconds after the last dust has been produced to clear the hoses.

After pressing the red button, twist in a clockwise direction to release it, before the extractor can be started again.



Emptying The Collection Drum

There is a window provided in the collection drum. When the dust level reaches the window, it needs to be emptied.

The C400RA is fitted with a laser sensor to automatically detect the level of dust in the drum. When the level reaches a preset point, the letter 'F' for Full, will be displayed on the control panel.

In addition to the visual warning there is also an alarm. The alarm will continue to sound even after the extractor has been stopped, until the drum has been emptied.



With the machine at rest, Raise the drum lid using the 2 toggle clamps. Roll the drum forward to gain access to the collection bag.

Close the plastic bag up and lift it out of the drum. If you are emptying the bag into a larger bin, it can be re-used or fit a new bag.

When fitting a new bag fold the top 50mm down around the rim of the collection drum.



Emptying The Filter Collection Bag

Some fine dust particle will be collected in the cartridge filter collection bag. Since the bag is transparent it can be monitored easily and should be emptied when it is 50% full.

Undo the quick release bag strap and remove it.

Empty or replace the collection bag.

When refitting the strap, ensure it sits in the recess around the rubber cuff.



Remote control

The remote control handset can be used to start and stop the extractor.

Press 'ON' to start the motor.
Press 'OFF' to stop the motor.

It is fitted with a 23A, 12V battery

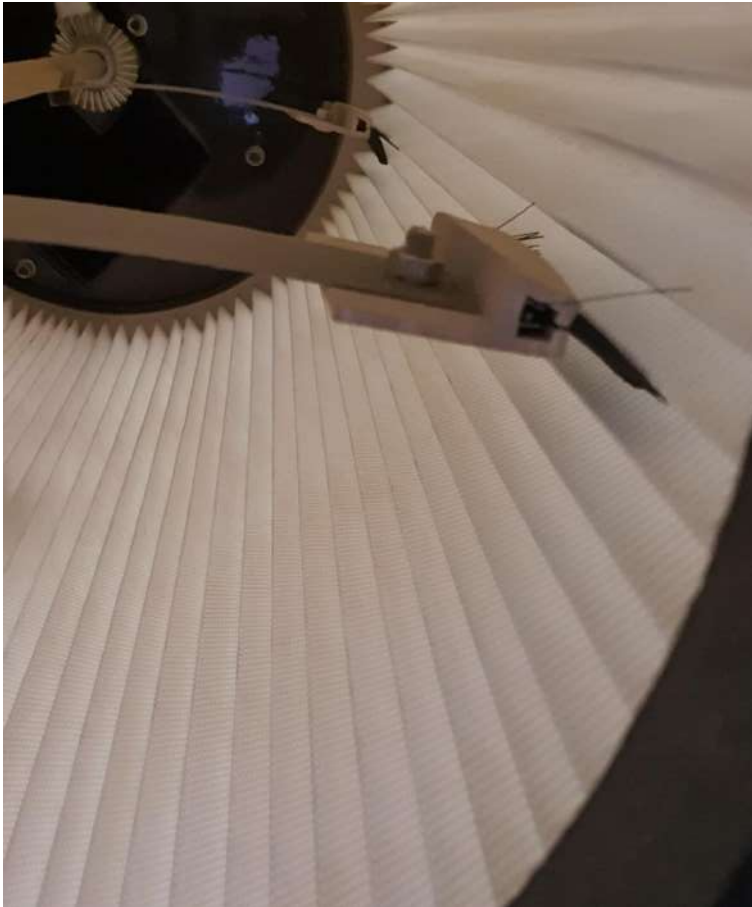
Countdown Timer

When running in normal mode the red LED will display 'L'

Press 'TIMER' button on the remote handset to cycle the timer mode between 2, 4, 6, & 8 hour countdown.

The next press returns the cyclone to normal mode 'L'

Maintenance



Filter Cleaning

To ensure the filter stays unclogged without any deterioration in performance the filter includes an internal cleaning device. Periodically when the machine is running and every time it is turned off the auto clean cycle will run.

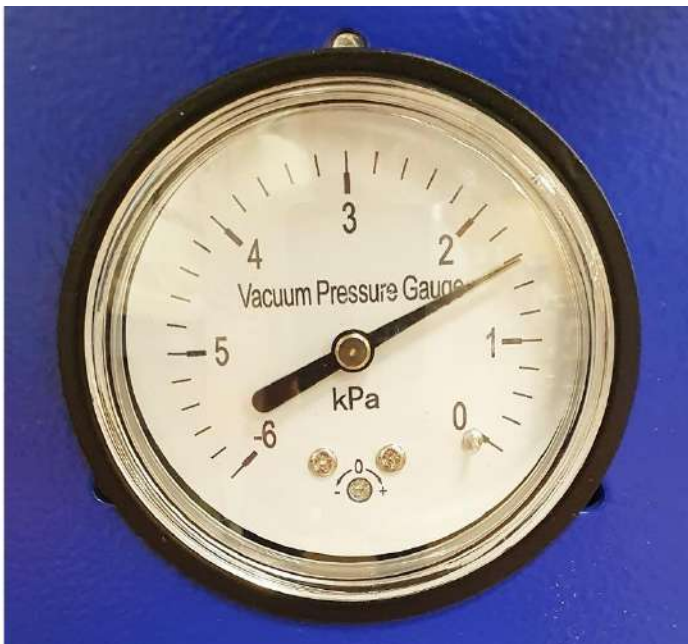
The paddles will run in one direction, stop, then run in the other direction.

This should ensure a long life, but eventually the filter may become clogged.

The cyclone is fitted with a pressure gauge to constantly display the internal pressure. The actual reading level will vary depending on what hoses are connected and in the case of a branch system, which hose line are in use.

An unexpected increase in pressure is a sign that the filter is clogged.

The filter can be deep cleaned by using an airline and forcing air through the filter from the outside, dislodging dust particles which collect inside the filter.



Pressure Gauge

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Troubleshooting

Problem	Cause	Remedy
Machine does not start, Control panel not lit	Power supply not connected	Check connection is live
	Blown fuse in plug	Replace fuse
	MCB tripped	Reset breaker on fuseboard
	Fault in Control box	Replace control box
Machine does not start, control panel is lit	Start capacitor failed	Replace start capacitor
	Motor failed	Replace motor
Machine does not start using remote handset	Out of range	Move closer to the cyclone
	Dead battery	Replace battery (23A, 12V)
	Fault in handset	Replace handset
Machine cuts out when running	Motor overheated	Wait 20 minutes
Deteriorating performance	Ducting blocked	Check and clear blockages
	Collection bags are full	Empty both collection bags
	Filter is clogged	Clean filter
Poor general performance	Hose length is too long	Keep hoses as short as possible
	Hose diameter is too small	Keep diameter at 100mm wherever possible. Use minimum lengths of smaller diameter hoses.
	Too many ports are open	Try closing ports to concentrate the airflow where it is needed
	Not enough ports are open	The cyclone can be starved of air. Try opening unused ports to help increase airflow.



Please dispose of packaging for the product in a responsible manner. It is suitable for recycling. Help to protect the environment, take the packaging to the local amenity tip and place into the appropriate recycling bin.



Do not dispose of electric tools together with household waste material!
In observance of European Directive 2002/96/EC on waste electrical and electronic equipment (EEE) and its implementation in accordance with national law, electric tools that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

Your local refuse amenity will have a separate collection area for EEE goods

Declaration of Conformity for CE Marking

Charnwood Declare that Cyclone Dust Extractor, Model C400RA

Conforms with the following Directives: Machinery Directive 2006/42/EC
EMC Directive 2014/30/EU

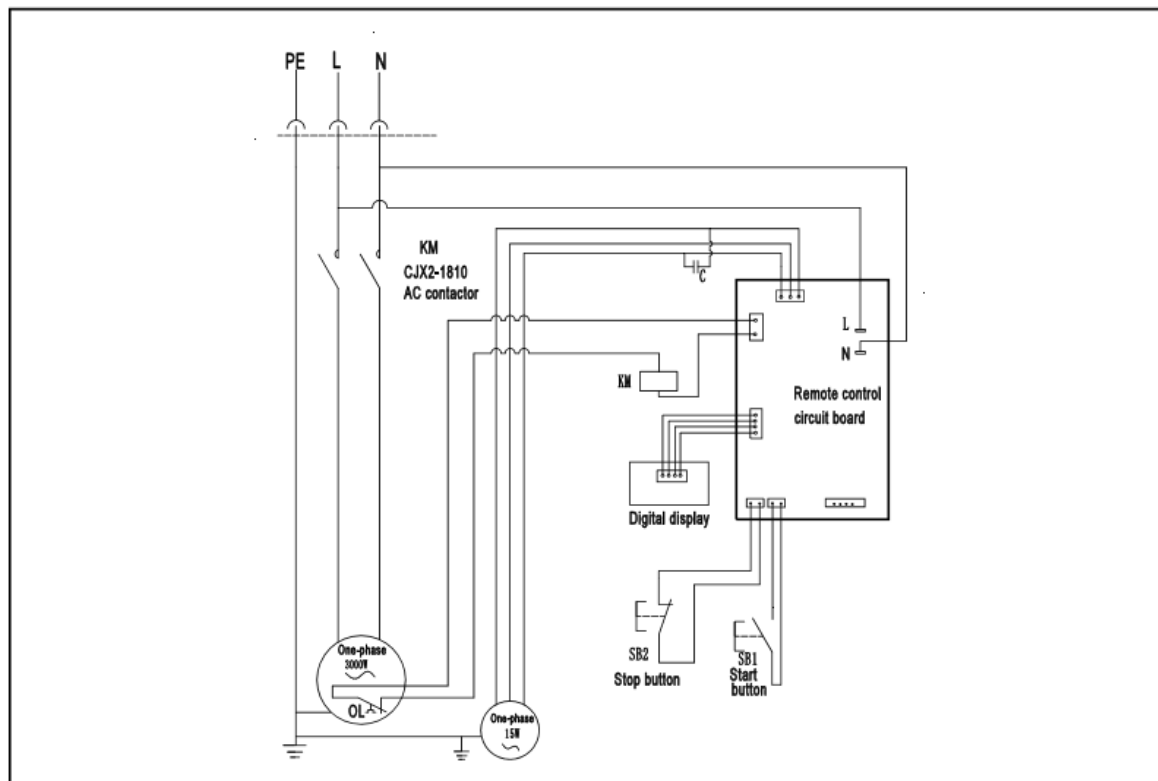
And further conforms to the machinery example for which the EC type examination Certificate No. AM 50478796 and AE 50398634 have been issued by TUV Rheinland LGA Products GmbH, Tillystrasse 2, 90431 Nurnberg, Germany.

I hereby declare that equipment named above has been tested and found to comply with the relevant sections of the above referenced specifications. The machinery complies with all essential requirements of the directive.

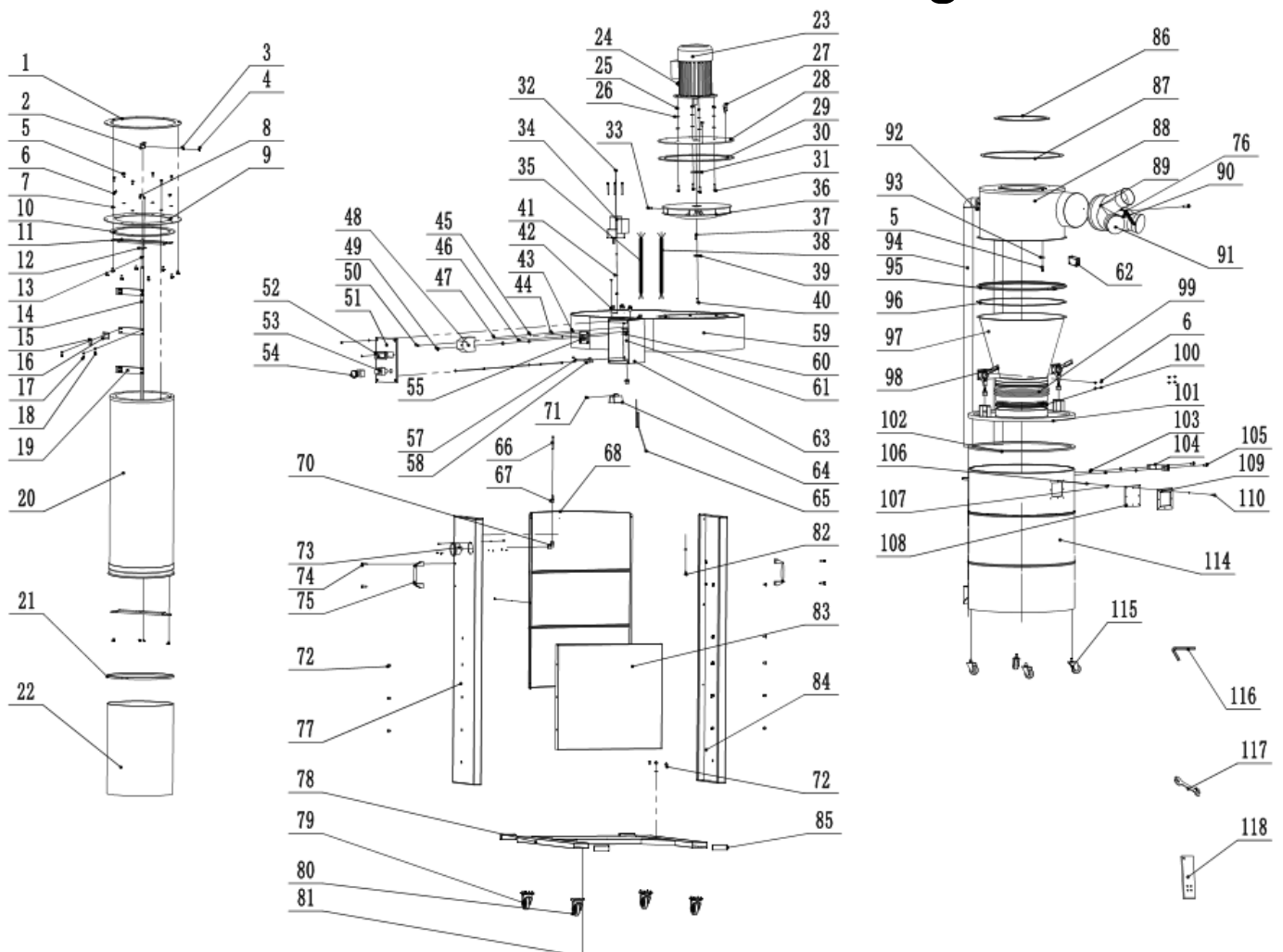
Signed:  Dated: 01/06/2024 Location: Leicestershire

Richard Cook, Director

C400RA Wiring Diagram



C400RA Parts Drawing



C400RA Parts List

Part No.	Description	Part No.	Description
01	Upper rubber pad	50	Phillips head screw M3 x 18
02	Rod kit	51	Switch cover
03	Phillips head screw M5 x 12	52	Digital display
04	Hex nut M5	53	Start switch
05	Hex bolt M8 x 16	54	Emergency stop switch
06	Phillips head screw M5 x 8	55	PCB 1
07	Flat Washer 8	56	PCB 2
08	Cap screw M5 x 6	57	Phillips head screw M2 x 12
09	Cartridge plate connector	58	Capacitor 50uf, 450VAC
10	Lower rubber pad	59	Fan Housing
11	Cartridge fixing plate	60	Guide
12	Fixing plate	61	Connecting Board
13	Sleeve	62	Thermal relay
14	Spindle	63	Switch box
15	Fixing plate	64	Axle Sleeve Assembly
16	Paddle	65	Wire
17	Hex bolt M5 x 8	66	Plastic hose 6 x 700
18	Flat washer 5	67	Union joint
19	Paddle arm	68	Semicylinder
20	Cartridge filter 370mm x 860mm	69	
21	Bag clamp	70	Elbow
22	Filter bag 600mm x 900mm	71	Button head screw M5 x 16
23	Fan Motor 3000w, 240v	72	Button head screw M8 x 12
24	Bushing M20 x 1.5	73	Pressure Gauge
25	Hex Nut M8	74	Cap screw M8 x 20
26	Lock washer 8	75	Handle
27	Bolt M8	76	Link
28	Motor plate	77	Right stand board
29	Motor plate packing	78	Base board
30	Motor pad	79	Swivel castor 75mm
31	Hex bolt	80	Braked swivel castor 75mm
32	Cap screw M5 x 6	81	Cap Screw M6 x 12
33	Button head screw M8 x 16	82	Button head screw M8 x 16
34	Paddle Motor 15w	83	Lower Support Board
35	Connecting wire	84	Left stand board
36	Fan	85	Leg pad
37	Key C8 x 7 x 25	86	Small pad for housing
38	Connecting wire	87	Big pad for housing
39	Retaining ring	88	Housing
40	Cap screw M6 x 20 (LH thread)	89	3 way splitter
41	Lock washer 5	90	Chain
42	Wire Clip	91	Blanking cap
43	Star Washer 4	92	Hose Clamp 50mm
44	Lock washer 4	93	Flat Washer 8
45	Flat Washer 4	94	Hose 50mm diameter x 1.8m
46	Phillips head screw M4 x 8	95	V type clamp
47	Phillips head screw M4 x 10	96	Sealing gasket
48	AC Contactor	97	Cyclone barrel
49	Phillips head screw M8 x 10	98	Toggle clamp

C400RA Parts List

Part No.	Description	Part No.	Description
99	Hose 300mm diameter x 160mm	108	Plastic board
100	Hose clamp 300mm	109	Rubber pad
101	Drum lid	110	Tap screw m3 x 10
102	Sealing gasket for drum lid	113	Drum Collection Bag 960 x 1200mm
103	M8 Nut	114	Collecting Drum
104	Handle	115	Castor 50mm
105	Tap screw M8 x 20	116	Hex wrench
106	Nut M3	117	Spanner 11 / 13mm
107	Flat washer 3	118	Remote Handset



Updated July 2024

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