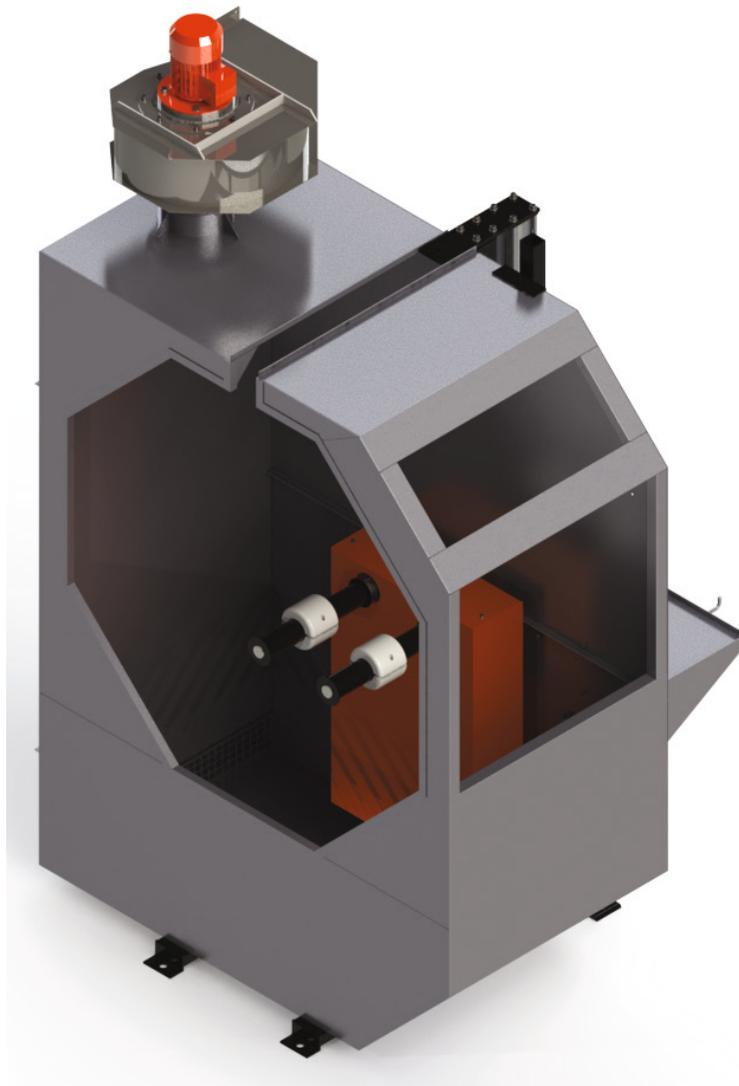




Cement Booth CB 1



Instruction Manual

The company reserves the right to change equipment specifications and models without notice. Pictures are representative and may not be part of the standard equipment.

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Foreword

The Cement Booth is a compact machine developed for applying BVC on Tyres. It Consists of various Components steel cabin, Tyre lifting system, Pneumatic rotary system, Internal Lighting System & Gas Tunnel for Exhaust System.

Optional: Activated Carbon Filter or External Discharge Tubing and Graco Pump. Can be connected in line with monorail system for easy handling of Tyres.

The machine is designed and manufactured for accurate and trouble free performance and can be operated by persons with little training. This instruction manual details installation, commissioning, operation and preventive maintenance procedures.

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01 Description

The Cement Cabin consists of the following major components.

Cement Booth Cabin

The Cement booth Cabin is a fabricated Sheet Metal structure which houses all the main components such as Base support assembly, Linear Slider tube assembly, Pneumatic and Electrical controls.

Base Support Assembly

The Base Support assembly is mounted at the Rear bottom face of Cement Booth Cabin. This houses the Vertical post with linear Slider tube assembly and its Supportive Components.

Linear Slider tube assembly

The Tyre drive unit consists of Drive Shaft Rollers mounted on linear Slider Tube which is powered by Pneumatic operated motor. Where motor Converts Pneumatic energy into rotary motion, Which Facilitates to Drive Roller to rotate in Clockwise Direction.

Pneumatic and Electrical Controls

It Consists of Pneumatic Drives which is powered by air & manually Controlled using foot operated Valves with the help of that we can lift & rotate Tyre as per Requirement. Electrical Controls are used to ON & OFF Light.

02 Specifications

Model	CB 1
Catalogue Number	MA21 1
Tyre Range	6.50 - 14 to 12.00 - 24.5
Tyre Lifting	Pneumatic
Loading capacity (kg)	160
Air Pressure Requirement (kg/cm ²)	8
Dimensions (L x W x H) (mm)	1560 x 1270 x 2670

03 Assembly and Commissioning Tools

Accessories

Standard	Pneumatic motor Gas tunnel and exhaust system
Optional	Activated Carbon Filter External Discharge Tubing Graco Pump Monorail system for Tyre handling

Tools

Spanners	Double end 10 -11
	Double end 12 -13
	Double end 16 -17
	Double end 24 -27
	Double end 20 -22
	Double end 32 -36
Allen key	Allen key 3mm
	Allen key 4mm
	Allen key 5mm
	Allen key 6mm
	Allen key 7mm
	Allen key 8mm
Screw driver	Screw driver star end Screw driver minus end
Cir-clip plier	A Type Circlip Plier

Materials

In coming cables up to machine
Pneumatic line up to machine
Lubricating oil SAE - 40 (for FRL Air line unit) : 250 ml

04 Installation and Commissioning

Pneumatic Installation

- Installation of Air hose to the filter regulator of the equipment. After installation open the air by rotating the regulator filter valve leaving it with a setting of 8 kg/cm² visibly on the regulator filter manometer.
- Installation of the Graco Pump regulator filter, two air hose and attach them to the spigots of the regulator filters. After installation open the ball valve, turn the valves of the regulator filters, leaving them with a setting of 10 bar” Glue Cabin “and 8 bar in the Graco Pump, visibly in the pressure gauge of the regulating filters.
- Activate the pneumatic valves to test the elevation and the flank opening.
- Do not use the regulator filter for other purposes other than for the proper use of the equipment.

Electrical Installation

- Check the control panel if the main switch is turned to “OFF” and the internal components (circuit breakers and motor circuit breaker) are “OFF”.
- Verify that the three-phase voltage “V” of the mains supply is the same voltage as the one attached to the control panel door.
- Follow the electrical installation diagram, then activate the circuit-breakers and the general switch, turn it to the “ON” indication, a white led light on the control panel door will illuminate, indicating that the equipment is energized.
- Apply tests by pressing the green “ON”, red “OFF” buttons (Turning and stopping the counting motor), emergency button (General shutdown of the equipment) and the lamp ON / OFF switch.
- If the tests applied were satisfactory, the equipment is ready for use.
- Do not apply other forms of installation; this may cause damage to the electrical components, burnout of the countersink motor and loss of warranty.

05 Pre-Operation Checks

- The floor must be levelled, if the equipment is installed in monorail systems, it should be placed below the mono rail junction.
- Proper seating of Monorail vs cement both cabins for smooth movement of Tyre hooks.
- All the nuts mentioned in the parts list are to be tightened properly.
- Check air motor rotation and should have no abnormal noise.
- Safety grounding of main supply voltage.
- Air leaks in pneumatic lines.

06 Operation

How to remove the Tyre from Monorail

- Open the air line and the valve (s) of the regulator filter (s).
- With the Tyre on the J hook, position it close to the machine's rotating rollers.
- Turn the pneumatic valve on again by raising the roller lift assembly to the centre of the Tyre by inserting it by moving the J hook, after raising the rollers to the point where the Tyre can get rid of the Tyre hook. Remove the Tyre hook from the Tyre and actuate the pneumatic valve to lower the lift assembly to the desired position to perform the job.

How to put the Tyre on monorail

- Turn the pneumatic valve up by raising the roller set to the point where it moves past the J hook, insert the J hook, and lower the roller set to the point where the Tyre fits into the J hook free of the rollers and after releasing the lift assembly, lower it or insert another Tyre.

07 Do's and Don'ts

Do's

- Use the machine only for BVC application purposes.
- Use your pneumatic lever valve lift system to lift and place the Tyre on the hook.
- Use the pneumatic pedal valve roller drive system.
- Use the airflow adjustment to increase or decrease the rotation of the rollers.
- Use the tool holder side box to support the tools needed for Tyre repair or the glue application gun.

Don'ts

- Do not use the machine if the main air line is leaking or the system is faulty.
- Do not use the machine if there are breaks in the welds or in the structure.
- Do not use the machine if it fails the electrical system (push buttons and control panel).
- Do not use the machine if it has malfunctions in the pneumatic actuators (Valves).
- Do not use the machine if there are breaks or other damage to the guide and cars with sliding shoes.

08 Troubleshooting - Pneumatic

Symptoms / Problems	Possible Causes	Remedies
Pneumatic system does not work.	Air is not reaching the equipment.	<ul style="list-style-type: none"> • Check that the machine is properly connected. • Check that the compressed air inlet is open • Check that the regulator is correct.
Pneumatic system is in order, the air reaches the system, but the cylinders do not work.	Mechanical locking of hoses.	<ul style="list-style-type: none"> • Check that there are no hose bent or bent to prevent air from entering or leaving the pneumatic cylinder. • Check whether the flow regulators are open or require adjustment.
Pneumatic system, hoses, and flow regulators are in operation, but the cylinders are unable to actuate the equipment or lock at some point.	Mechanical locking of equipment.	<ul style="list-style-type: none"> • Check for dust accumulation in the sliding bushings or if the shafts are damaged, preventing the bushings from sliding freely. • Unscrew the cylinder axle nut for the system to run freely on the guides. • If any upper or lower locking is identified, unscrew the bolts, position the assembly on top, and tighten the bolts. • Repeat the same operation for the bottom, leaving the system working free.
Whole system is running, but the Tyre does not stand still.	Pneumatic system leakage.	<ul style="list-style-type: none"> • Check for leaks in hoses, fittings, valves, and cylinder.
Whole system is working, not leaks in the cylinders, but the Tyre does not remain open.	Leaking valve on lever or pedal.	<ul style="list-style-type: none"> • Check that there is no leaking valve on the lever or pneumatic pedal. • If internal leakage of the valve is checked, call an authorized service technician for repair or replacement.

09 Troubleshooting - Electrical

Symptoms / Problems	Possible Causes	Remedies
Circuit does not work	Energy is not reaching the device	<ul style="list-style-type: none"> • Check that the machine is properly connected. • Check that the main switch is on. • Check that the power supply (v) is correct. • Check that all circuit breakers are connected.
Electric circuit is in order, 24v power arrives at the controls, but does not operate.	Locking or burning in 1NO or 1NA contacts	<ul style="list-style-type: none"> • Remove the coupling from the button and check that it is locked or damaged. Both cases carry out the replacement of the same.
Circuit is in order, the 24v power does not reach the control buttons.	Copper wire rupture or poorly coupled to the fastening terminal.	<ul style="list-style-type: none"> • Carry out a check with an appliance to identify the broken wire or to re-tighten the fixing terminals.
Circuit breaker is disarming.	Short circuit or amperage setting not correct.	<ul style="list-style-type: none"> • Perform instrument check and then raise the motor circuit breaker amperage rating as specified on the electric motor rating plate.

Symptoms / Problems	Possible Causes	Remedies
Circuit is in order, but the buttons do not fire.	The contactor is not assembled or wires poorly coupled to the clamping terminal.	<ul style="list-style-type: none"> Carry out a check with a device to identify if the electric current is vcc, if not, replace the part or add a rectifying bridge and tighten the fastening terminal.
The electrical power does not reach the internal components of the control panel.	Damaged control or main switch	<ul style="list-style-type: none"> Carry out a check with the device to identify if the outputs of both parts are properly distributing the energy (v).
Circuit is in order, but the lamp does not light up.	Locking or burning of 1NA contact, phase failure or 220v power supply, non-arming contactor and lamp burning	<ul style="list-style-type: none"> Check with the instrument to determine if the energy at the output of the contactor is 220v, check for phase loss (N), check the contactor according to the above information, remove the coupling according to the above information, tighten the clamping terminal or replace the part.

10 Preventive Maintenance

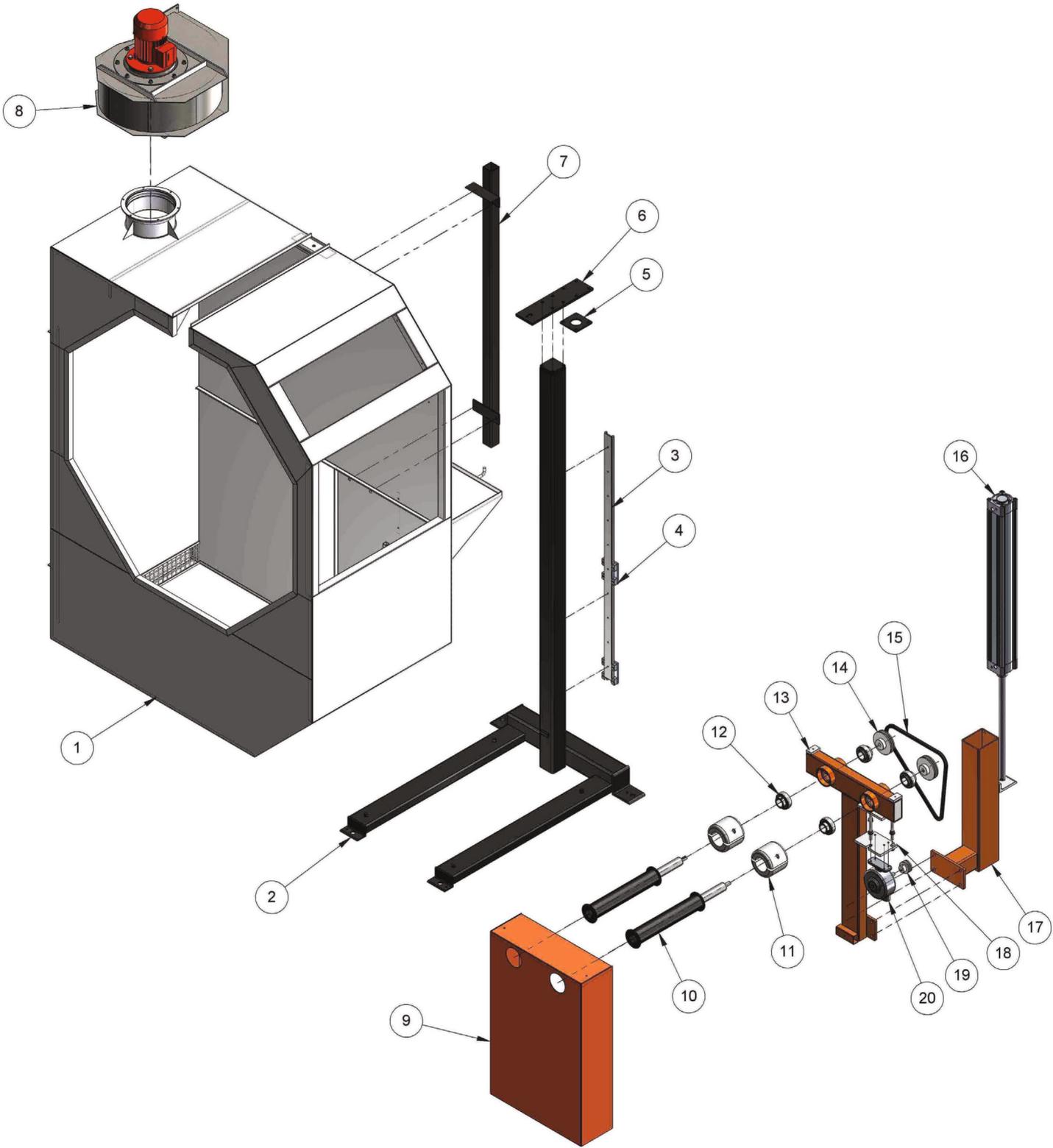
Daily maintenance

- Check for air leakage in the pneumatic assembly.
- Deplete the humidity of the air regulator filter.

Weekly maintenance

- Clean the equipment by removing any rubber residue.
- Check the general condition of the pneumatic assembly.
- Check the general condition of the electrical assembly.
- Lubricate the moving parts.
- Check that the screws are tight.

12 Parts List



Parts List - BOM

S. No.	Order Code	Description	UOM	Qty.
1	MA211/1	CABIN ASSY RH - TRUCK	Nos	1
2	MA211/2	MAIN FRAME ASSEMBLY	Nos	1
3	MA211/3	RAIL	Nos	1
4	MA211/4	LINEAR GUIDE CARRIER ASSEMBLY - IGUS	Nos	1
5	MA211/5	TOP SUPORT SPACER PLATE	Nos	1
6	MA211/6	TOP CYLINDER SUPORT PLATE	Nos	1
7	MA211/7	HOSE SUPPORT FRAME ASSEMBLY	Nos	1
8	MA211/8	1HP BLOWER ASSEMBLY - CB1	Nos	1
9	MA211/9	ROLLER COVER ASSEMBLY	Nos	1
10	MA211/10	ROLLER - CEMENT CABIN	Nos	2
11	MA211/11	AI. TYRE ALIGNMENT BLOCK	Nos	2
12	MA211/12	NTN BALL BEARING SET SCREW TYPE - UC207D1	Nos	4
13	MA211/13	TYRE LIFT ROLLER FRAME ASSEMBLY	Nos	1
14	MA211/14	4" PULLY	Nos	2
15	MA211/15	V BELT	Nos	1
16	MA211/16	PNEUMATIC CYLINDER FESTO 1463500_DSBC-80-700-PPSA-N3	Nos	1
17	MA211/17	SLIDER TUBE ASSEMBLY	Nos	1
18	MA211/18	MOTOR MOUNTING PLATE	Nos	1
19	MA211/19	2" PULLY	Nos	1
20	MA211/20	PNEUMATIC MOTOR	Nos	1