

FABRIC ROLL UP MACHINE

OPERATION MANUAL



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Intended Purpose

This product is designed and constructed, with the intention of enhancing the productivity gains through quickly rolling up the fabric material used in the Windows furnishing industry. This product must be used with a table or bench to which this product should be attached. It is intended for safe and easy operation. Every possible care has been considered and adopted in the design and construction of this machine. Safety relies greatly on the operators and the owners, hence owners' must ensure that the operator is properly trained and fully aware of all the controls and limitations of the machine. It is expected that operator must pay full attention to the safety at all times and must take all possible care, to ensure a safe and productive utilisation of the product.

General Description

This machine has components which fall into following groups,

- Mechanical components
- Pneumatic components
- Electrical/Electronic components.

Mechanical Components:-

Frame:-

Built of high quality Aluminium extrusions and high quality standard and unique fasteners and fastening system, these are well tried out and are widely used in the machinery construction.

Brackets:-

Made from steel conforming to Australian and International standards and are surface coated for rust prevention and durability.

Dynamic components:-

Made from alloy steel conforming to Australian and International standards and are heat treated and are surface coated for durability.

Special washers:-

Made from steel conforming to the Australian and International standards.

Springs, slide clamp handle and other components:-

These are manufactured and supplied by reputed manufacturers/suppliers and comply with relevant Australian and International standards.

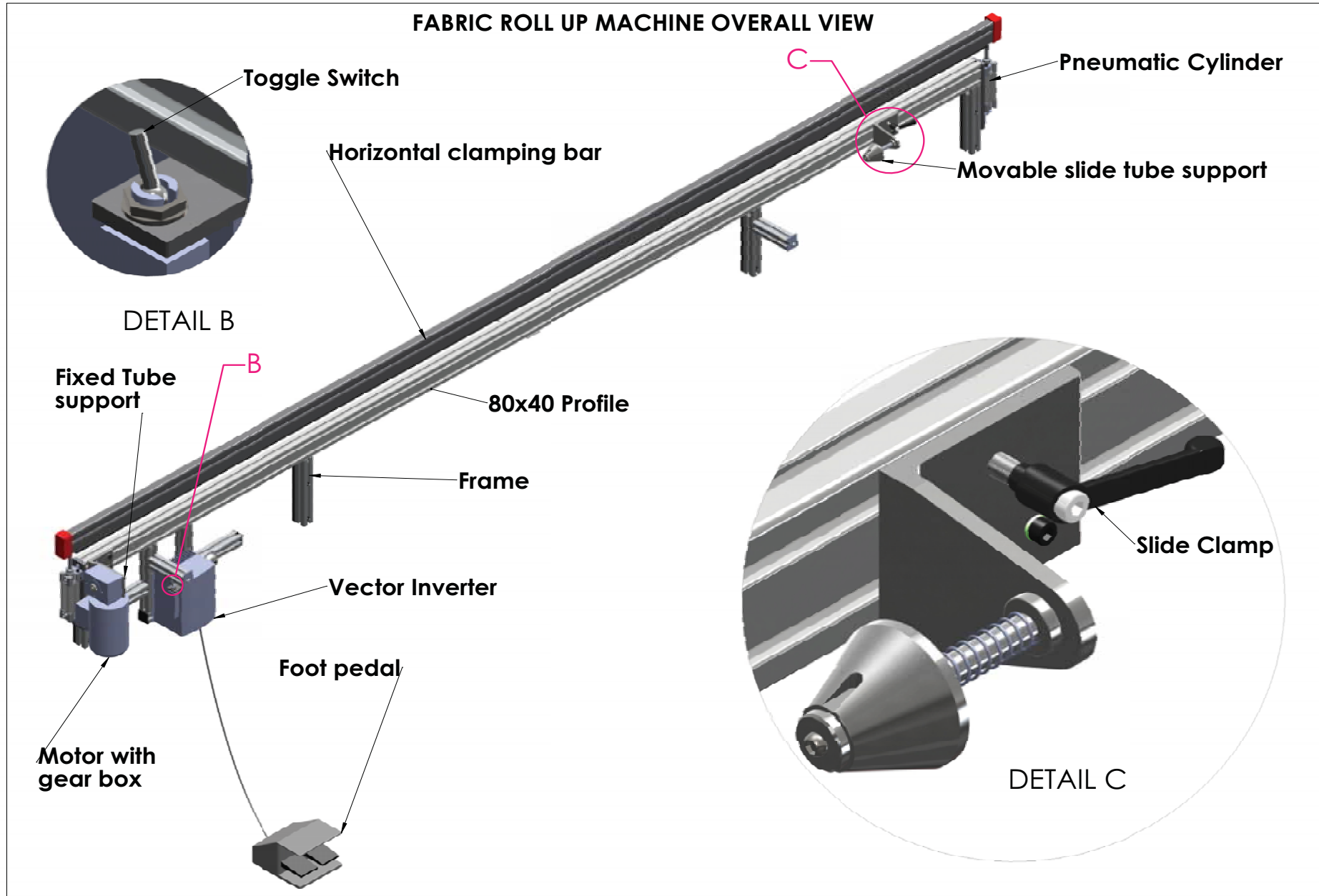
Pneumatic components:-

Cylinder, Pressure gauge, Filter, Toggle switch, hose and hose fittings are all manufactured to the relevant standards and are supplied by reputed manufacturers / Suppliers.

Electrical/Electronic components:-

Motor with gear box, frequency inverter and foot operated pedal switch are of high quality branded products supplied by well reputed suppliers.

Overall View



Technical Specifications

Electrical Power Requirements	240v 50/60Hz. Recommended to have a 10Amps 'D' Curve type circuit breakers at the mains power board.
Air Pressure Requirements.	<ul style="list-style-type: none"> • 0.1 CFM Clean Dry Air • Clamp Pressure - 250kPa
Machine Building Standards	Australian Standard AS 4024 - 2006 / CE Certified
Safety Features	<p>This is a low risk machine.</p> <p>Machine runs only on constantly pressing the foot pedal (Type D) releasing pedal will Halt the machine.</p> <p>Allows for forward and reverse action.</p> <p>Completely enclosed foot pedal (Type D).</p> <p>Motor controlled by a frequency inverter.</p>
Capacity	<p>Maximum Roll Size Diameter 140mm</p> <p>Maximum length of the tube 3600mm.</p> <p>Speeds:</p> <p>Min at 5Hz = ~0.03m/sec</p> <p>Max at 60Hz = ~ 0.38m/sec.</p>
Overall Dimensions	<ul style="list-style-type: none"> • Length = 3975 • Height = 512 • Width = 500

Installation

Machine installation procedure for Acmeda built Tables:

1. Aligning legs with the existing table on which the Fabric Roll up machine will be attached.
2. Fasten the machine to the table using M8 Soc Hd. Cap Screws.
 - After aligning the legs appropriately (position M8 T slot nuts to take Socket head cap screws must be positioned to line up with the M8 clearance hole on the legs, then position the M8 Socket Head Cap Screw in line with clearance holes and with the M8 nuts, tighten the M8 Socket Head Cap Screws to a moderate level, do not fully tighten.
3. Ensure the top face of the 80x40 profile is straight (Align with String line) This top face must be aligned along the Table Top Face as well.
4. Ensure the front face of the 80x 40 profile is straight. (Align with String line)
5. Fully tighten the M8 Soc. Hd. Cap screws ensuring the machine is firmly fixed to the table.

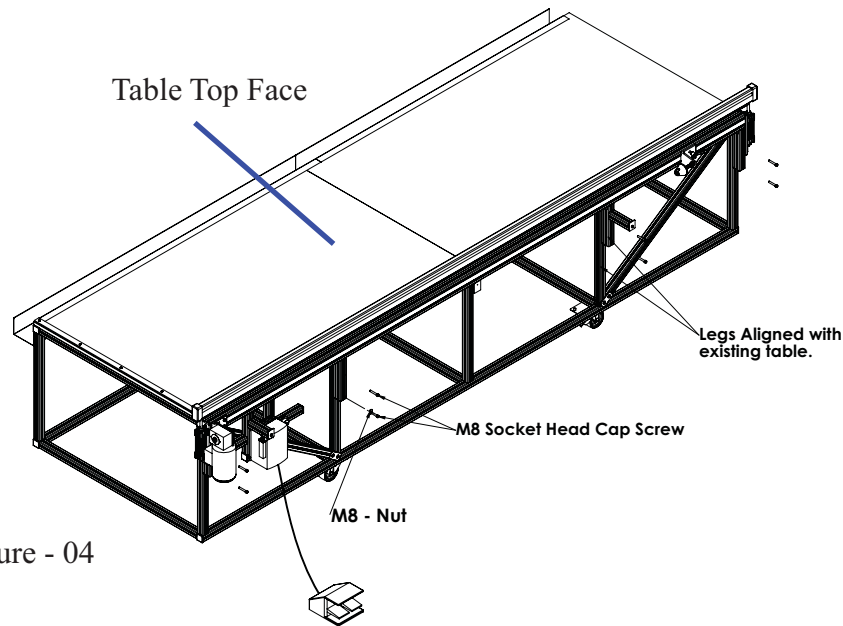


Figure - 04

- **Aligning Legs**

The legs on the frame could be slid and moved to position them in line with the existing table.

These legs come with a unique set of fastening system that allows for easy re-orientation.

Unique fastening system has 3 main components as shown in the figure -05

Item 1 = M8 Cap head screw

Item 2 = Orientation block

Item 3 = M8 Special 'T slot nut'.

Using 5mm Allen key M8 Screw can be loosened slightly and the leg can be slid to any desired position and then retightening the M8 screw will lock the leg in that position.

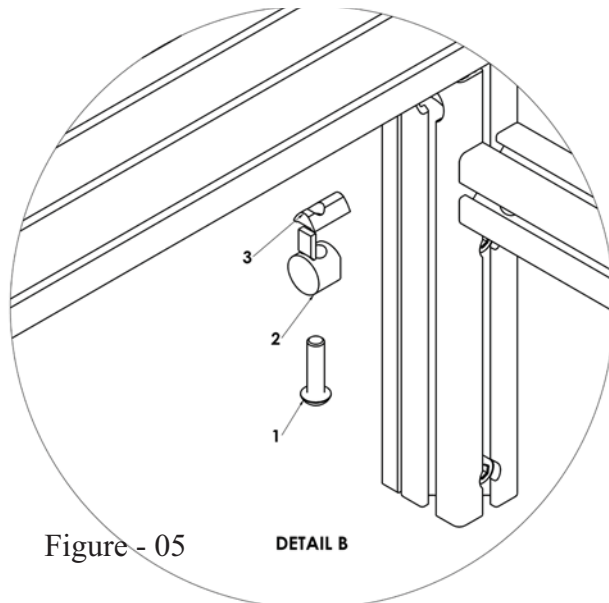


Figure - 05

NOTE:- If installing on non-Acmeda Table/Bench, please refer to installation instructions non-Acmeda benches

Installation

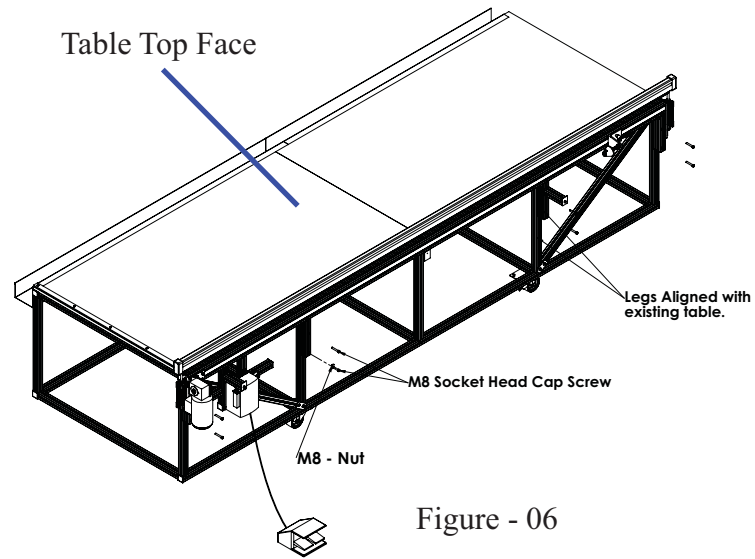


Figure - 06

- The Top face (shown in Figure - 07) of the 80 x 40 Profile must be set straight. (Align with String line.) This top face must be aligned along the Table Top Face as well.
- The Front face (shown in Figure - 07) of the 80 x 40 Profile must be set straight. (Align with String line)
- Once both faces are set straight, M8 Socket Head Cap Screws must be fully tightened.
- Plug in the Power and turn on the power.
- Connect air and set the Clamping pressure to 250kPa.

Note:-Pic 04 shows the location of the pressure gauge, Pic-05 shows close up view of the pressure gauge.

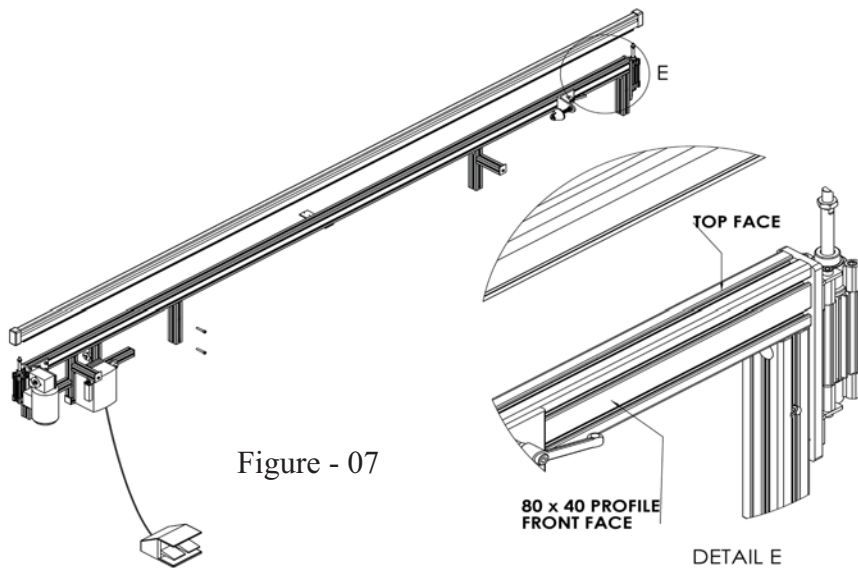


Figure - 07



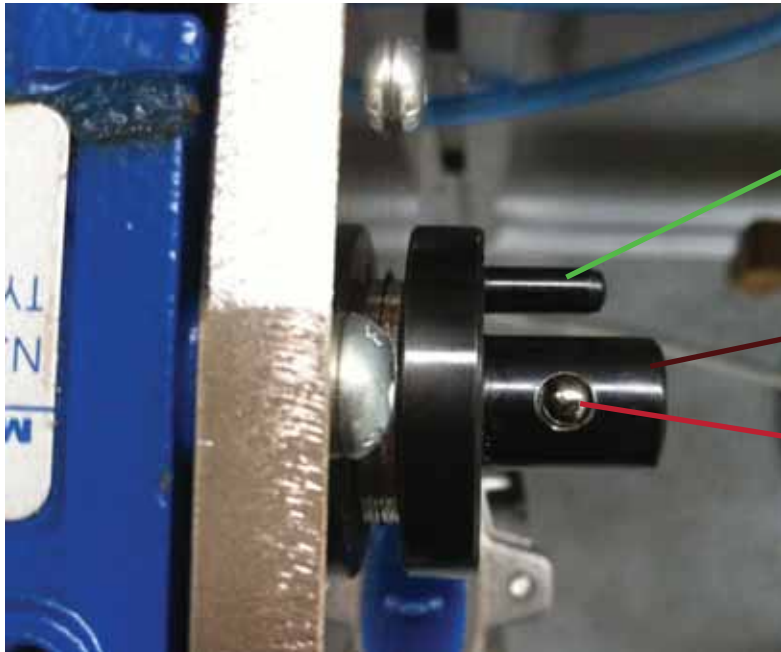
Pic-05



Pressure Gauge

Pic - 04

Inserting Adapter



Pic - 10

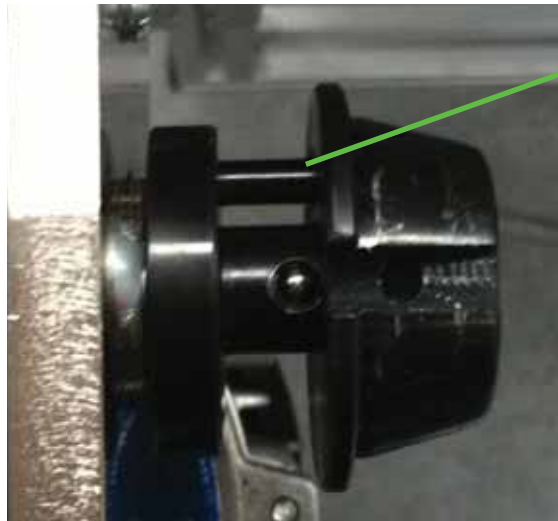
Adapter Drive Pin

Adapter Mounting Spindle

Ball Catch for Adapter

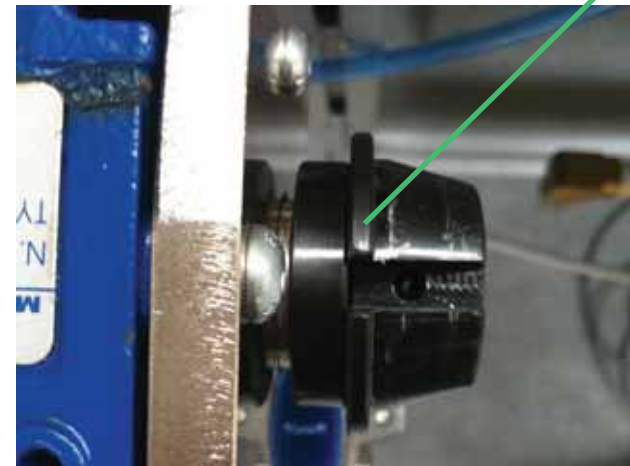
Adapter to suit the tube must be selected first and it has to be slid onto the 'Adapter Mounting Spindle'. The Adapter Mounting Spindle contains an Adapter Drive Pin and a spring-loaded Ball catch to retain the Adapter in place, also allowing for easy removal and replacement of Adapters. The following conditions must be observed while inserting the Adapter onto the Adapter Mounting Spindle:

1. Adapter has a hole that should line up with the Adapter Drive Pin.
2. The adapter must be pushed back so that the adapter is secured on the Adapter mounting Spindle.



Pic - 12

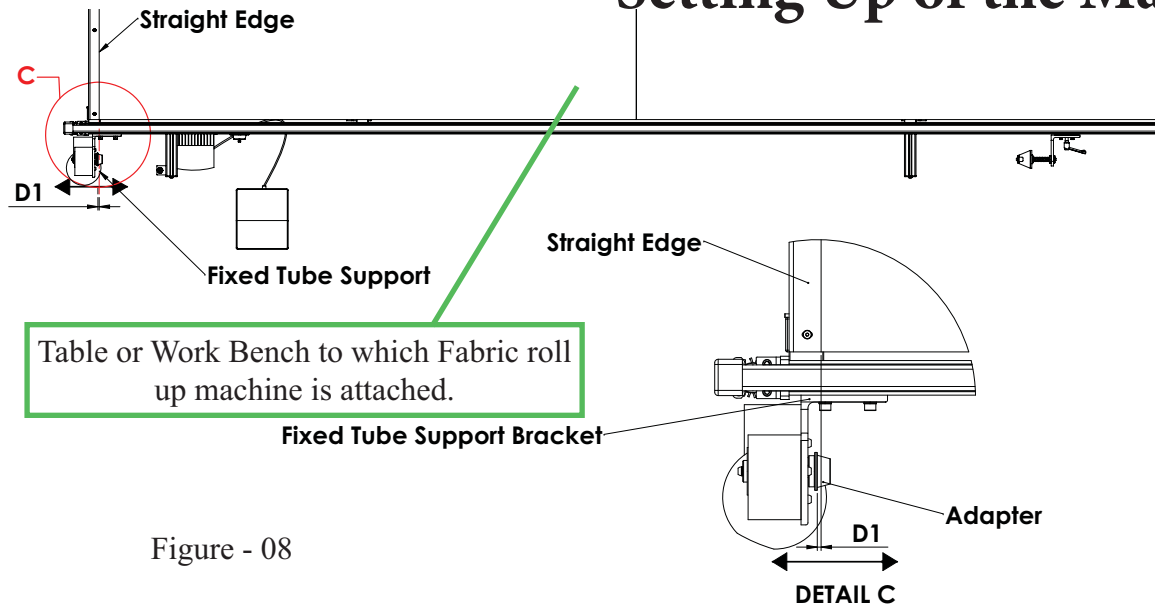
Adapter hole lining Up with the Drive Pin



Adapter fully pushed back onto the Adapter Mounting Spindle.

Pic - 11

Setting Up of the Machine.



Before commencing the production operation it is necessary to set the machine as follows,

Setting up of the Straight edge in line with the adapter's Shoulder is critical to get squareness on the rolled up fabric roll.

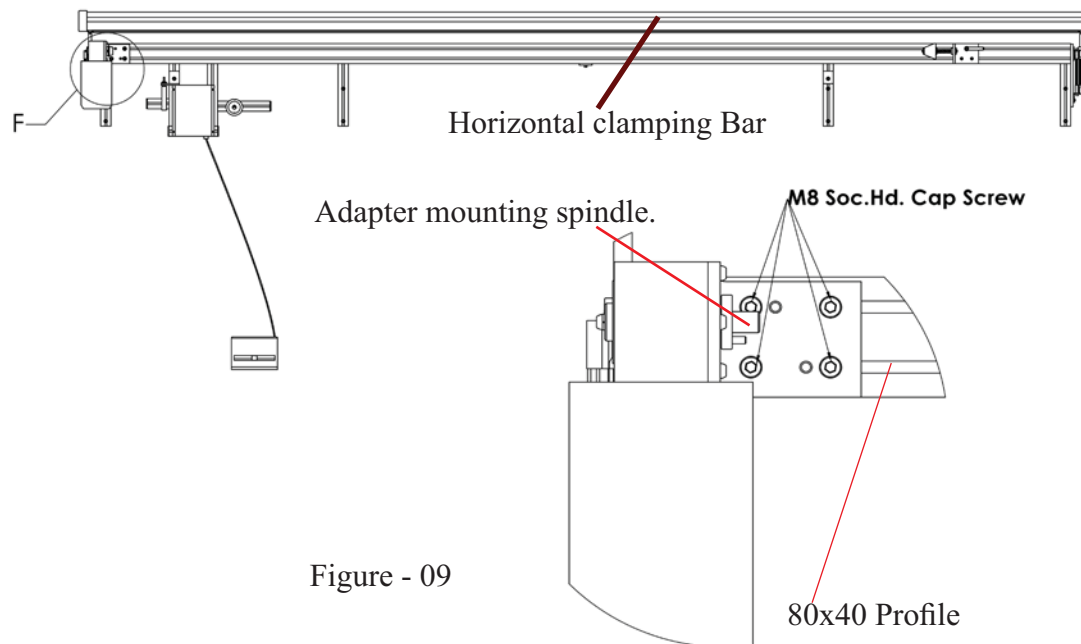
A predetermined gap of 'D1' must be set.

Following procedure describes how to set this gap,

1. Ensure that the Horizontal clamping bar is in Up position.
2. Undo the 4 M8 Soc.Hd.Cap Screws shown in Figure - 09.
3. Move Fixed Tube support bracket along '80x40 profile' to desired distance and set D1.
4. Fully tighten the M8 screws.

Note:-

Above setting will be required only once during the initial set up of the machine.

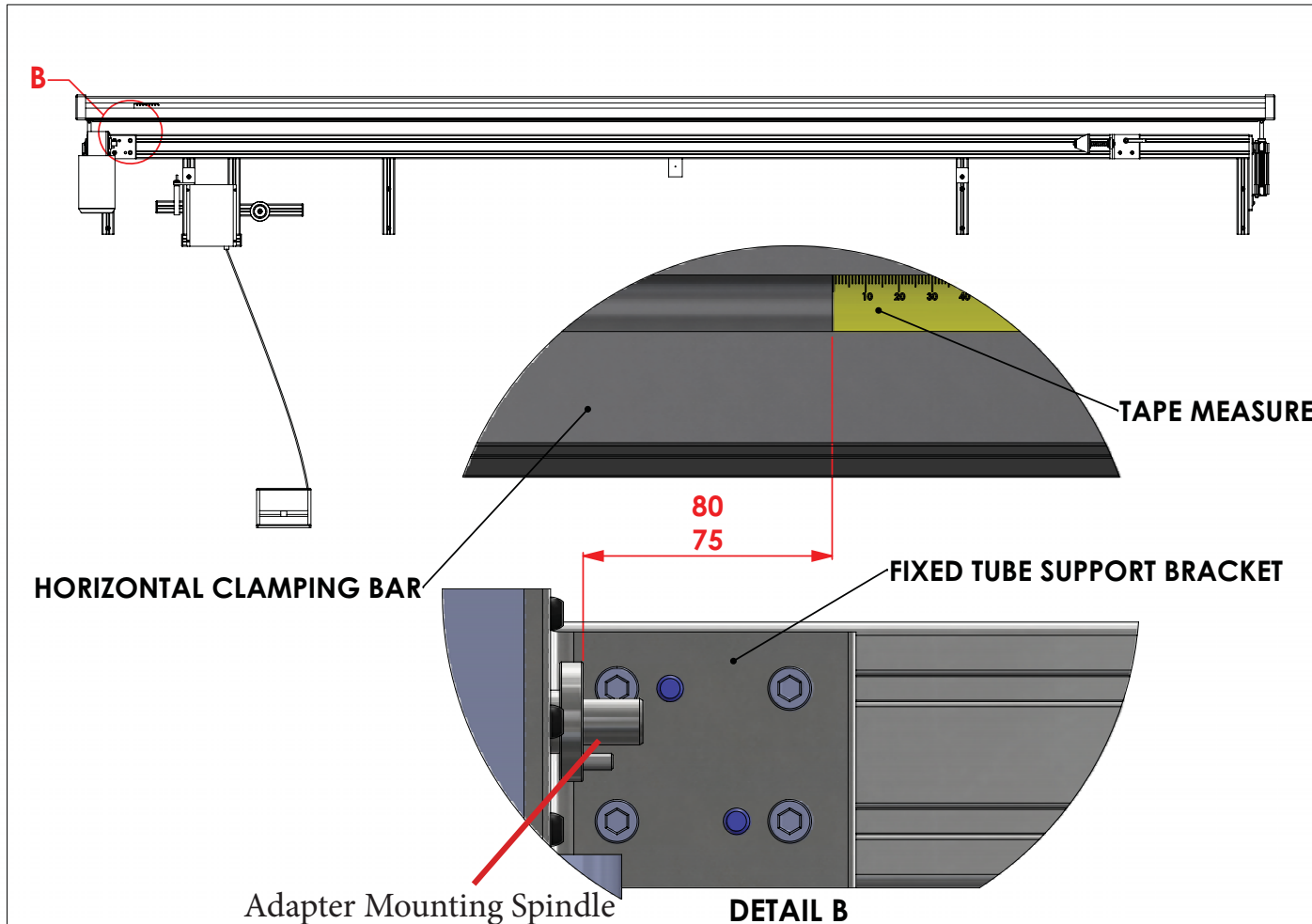


Tape Setting Procedure

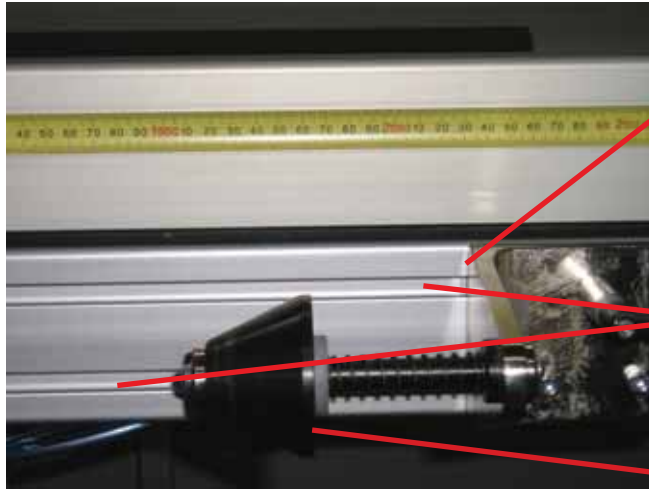
Before commencing the production operation the tape measure must be set correctly.

After locking the Fixed Tube support bracket in position (Refer page 10):

- Stick double sided tape (same width or less than the width of the tape about 10 - 20mm long) onto the ends of the tape,
- Peel of the other side exposing the glued face to the Horizontal clamping bar.
- Slide the tape in the slot of the Horizontal Clamping bar (ensure that the double sided tape does not stick to the horizontal clamp bar)
- Position the edge of the tape's '0' must be distanced at 75 to 80mm (not less than 75mm) from the shoulder face of the Adapter Mounting spindle as shown.
- Stick the tape measure to the Horizontal Clamp Bar using the double sided tape to retain its position permanently.



Setting Movable Bracket.



Pic - 06

Edge of the Movable Bracket.

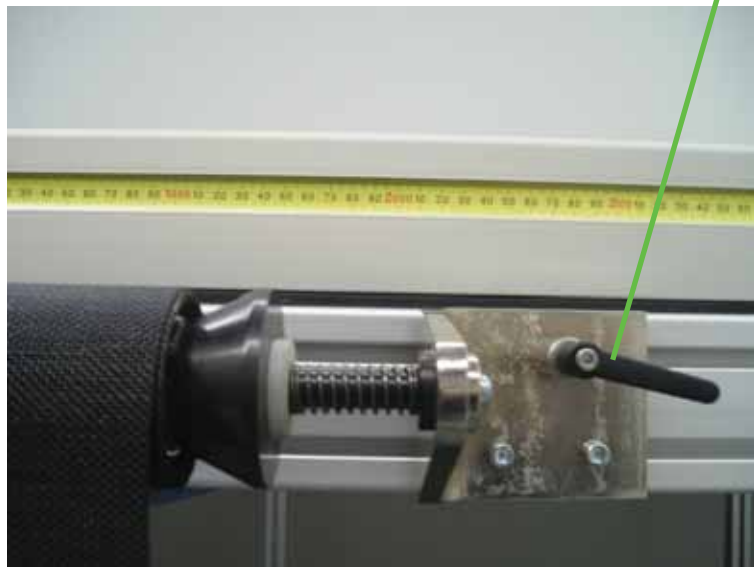
Spray with silicon spray into these grooves to allow smooth sliding

Cone

This machine allows for setting the clamps using the tube length as the guide. Once the tube length is known,

1. Unlock the Slide Clamp (*Support the bracket at the bottom to enable smooth sliding. Refer Pic - 12A and Pic - 06*)
2. Move the Slide,
3. Line up the edge of the movable bracket to the tape measure exactly to the length of the tube. within +/- 5mm.
4. Lock up the Slide Clamp.

For example if the tube length is 2020mm, set the Movable bracket to 2020 as shown in Pic - 06 and lock it in position by tightening the Slide Clamp.



Pic - 07

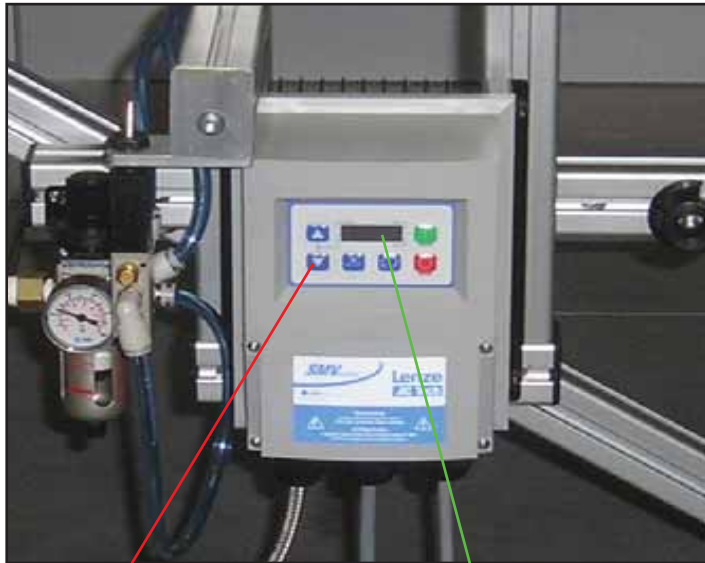
Slide Clamp

Fixed Bracket



Pic - 09

Operation Procedure



Up/Down buttons for setting speed.

Frequency out put is displayed here, 0 to 60.

Pic - 10

- Ensure the power and air are connected, Clamp pressure is set, correctly and the power and air is turned on.
- Set the desired speed, using the Up and down arrows on the Vector inverter, (Shown in Pic - 10) select the desired speed, LCD Panel indicates the output frequency in Hz. 60Hz gives maximum speed of 0.38m/sec¹, 5Hz. gives minimum speed of 0.03m/Sec¹. Recommended to have minimum speed setting not less than 10Hz and normal operating speed setting at 24Hz.
- Ensure the Clamp bar is lifted up.

1. Set the movable bracket to the tube length (Refer Page 12) (**Support the bracket at the bottom to enable smooth sliding. Refer Pic-12A and Pic - 06**)
2. Load the tube.(Refer Page 14, Loading the Tube.)
3. Slide the fabric under the Horizontal Clamp Bar over the tube. (Ensure that the fabric covers the adhesive area. as shown in Pic - 12)
4. Lower the Horizontal clamp bar using the toggle switch.
5. Peel off the Adhesive protector.
6. Lightly press the fabric on to the adhesive, along the Tube.
7. Lift up the clamp bar using the toggle switch.
8. Using the Foot Pedal press Forward, to roll the material, as the material rolls gently hold the material onto the table, by hand (allow material to roll smoothly).
9. Once the rolling is complete, remove the tube (Refer Page 14 Unloading the Tube.)
10. If the tube length is unchanged repeat steps 2 to 9. If the tube length is changed repeat steps 1 to 9.

¹**THESE ARE INDICATIVE VALUES ONLY, ACTUAL VALUES MAY VARY BASED ON INDIVIDUAL SITUATIONS.**

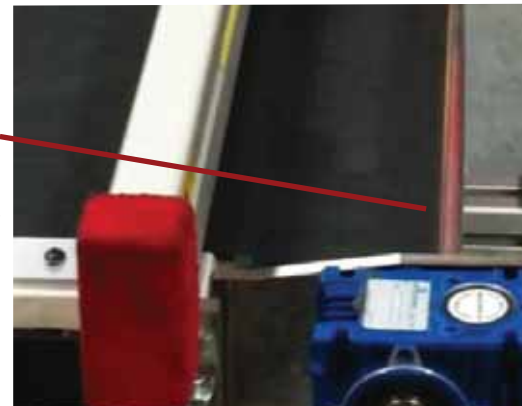


Pic - 11

Adhesive Protector

Toggle Switch

Fabric Covering the Adhesive Area.



Pic - 12



Pic - 12A

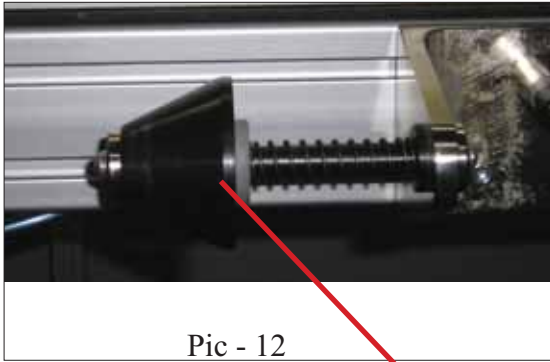
Loading and unloading the Tube

Procedure for loading the Tube.

1. Align the tube id with the Spring Loaded Cone on the movable slide. (Orient the tube with the Groove on the cone if required.)
2. Firmly push the cone against the spring
3. Align the other end of the tube with the Adapter, orient the tube, by lining up the tube groove and adapter groove.
4. Once the tube is placed firmly on the adapter, ensure that the Adhesive Surface is facing up, if necessary rotate the tube along with the adapter using the foot pedal.

Procedure for unloading the Tube:

1. Push the tube against the spring loaded Cone
2. Release the tube at the Adapter end.
3. Swing the tube (At adapter's end) away from the machine.
4. Remove the tube gently from the Spring loaded Cone.



Pic - 12

Spring Loaded Cone



Pic - 08

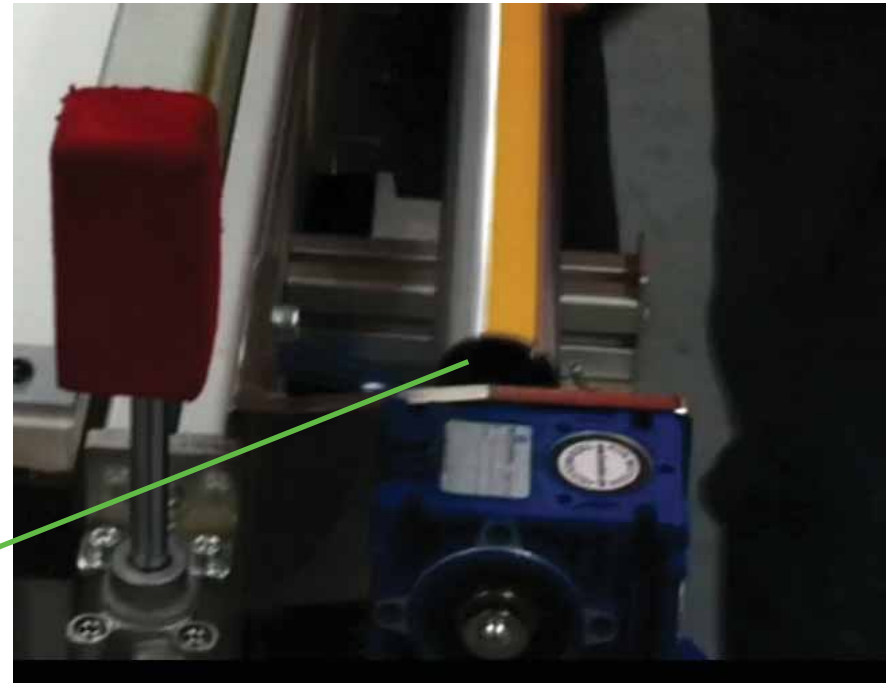
Adapter Tube
Orientation

Adhesive Protector Facing Up.



Pic - 14

Tube Inserting on to the
Adapter.



Pic - 13

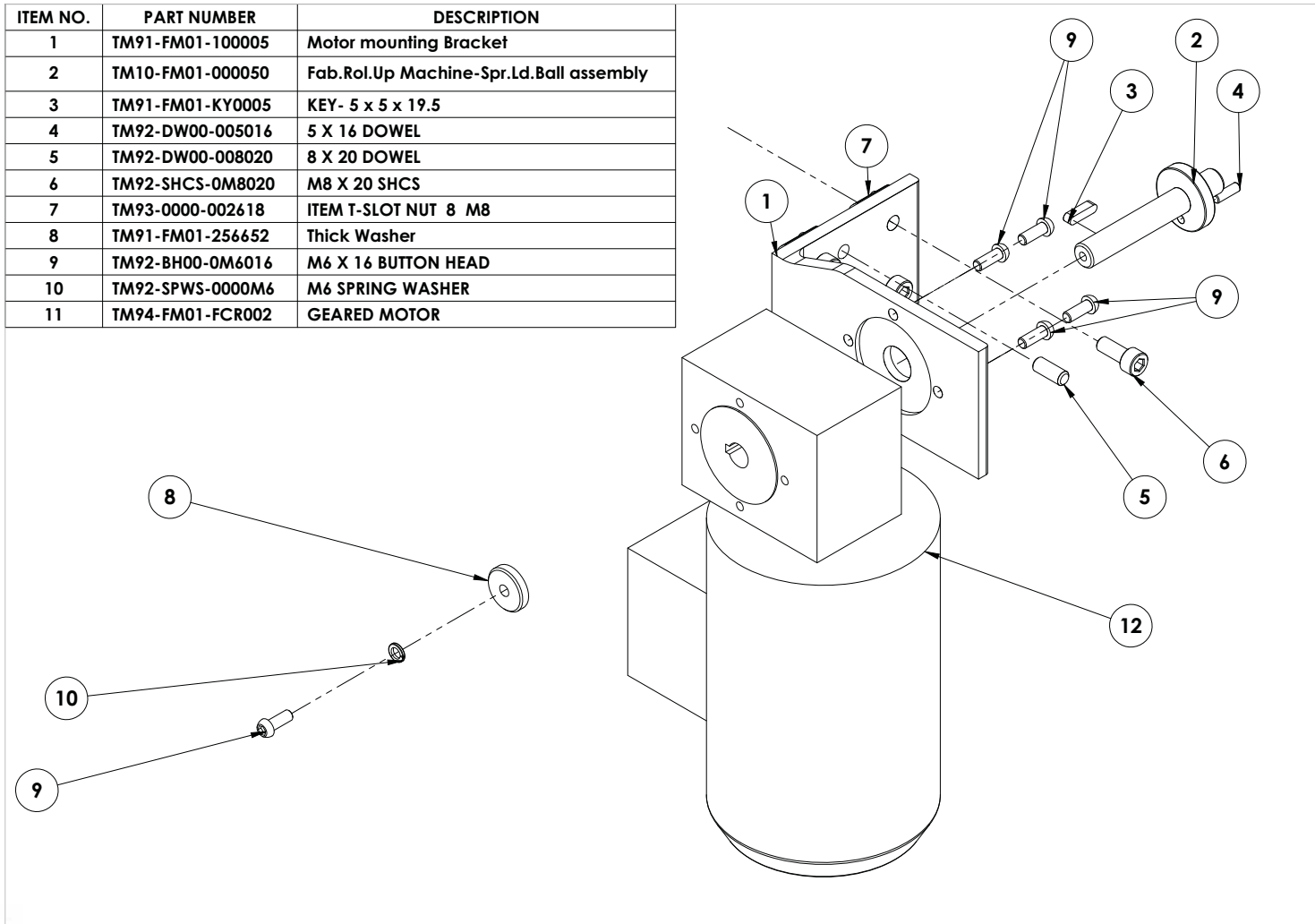
Maintenance & Spare parts:

This machine mostly requires very minimal maintenance, as there are no operator serviceable part/s, in most cases it will be only replacement of a worn out part with a new part. However following care is required,

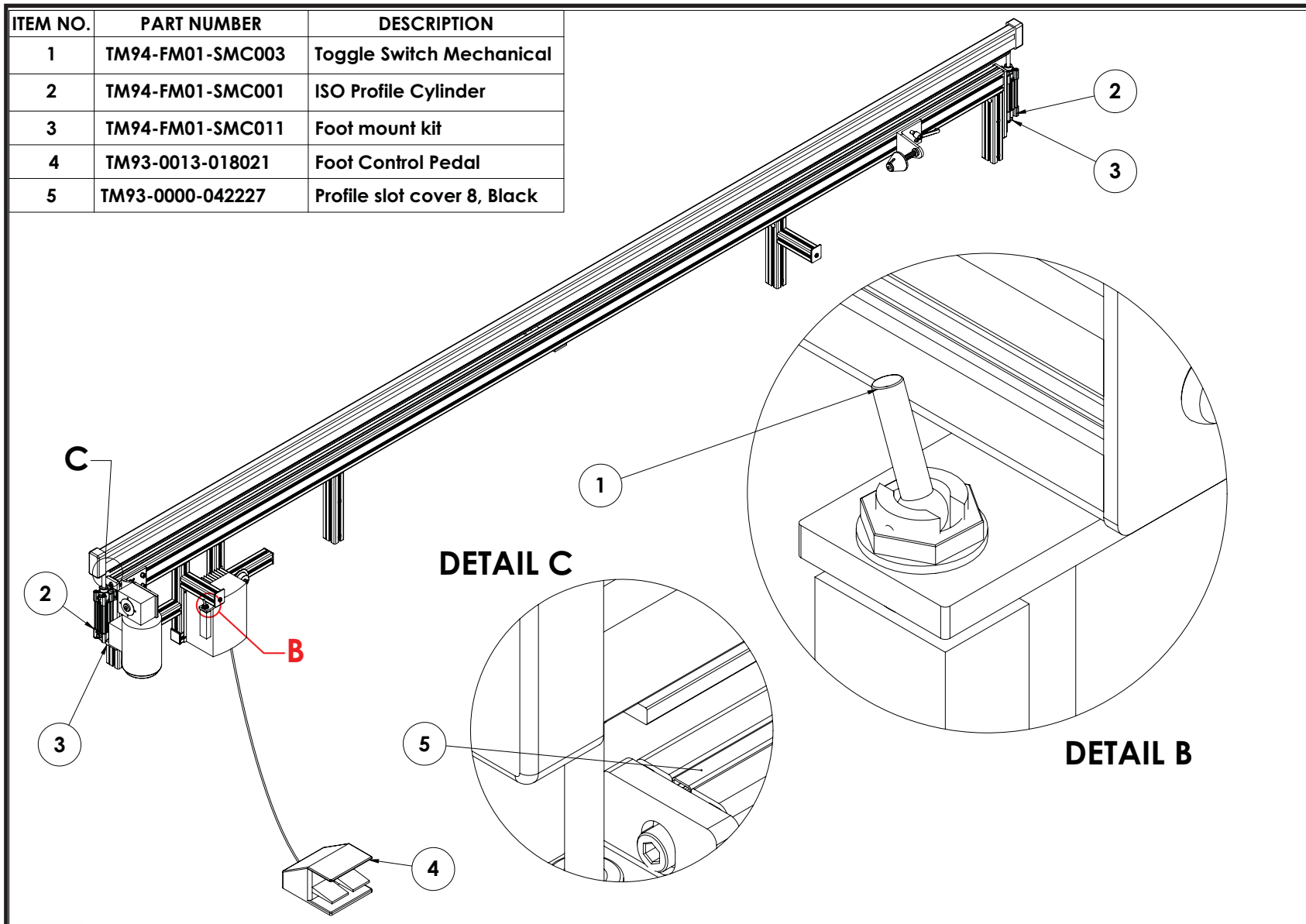
- Always keep the machine clean.
- Regularly check the moisture levels in the pneumatic air regulator and release any moisture that may have accumulated in the regulator.

Spare Parts: Fixed Tube Support Assembly

ITEM NO.	PART NUMBER	DESCRIPTION
1	TM91-FM01-100005	Motor mounting Bracket
2	TM10-FM01-000050	Fab.Rol.Up Machine-Spr.Ld.Ball assembly
3	TM91-FM01-KY0005	KEY- 5 x 5 x 19.5
4	TM92-DW00-005016	5 X 16 DOWEL
5	TM92-DW00-008020	8 X 20 DOWEL
6	TM92-SHCS-0M8020	M8 X 20 SHCS
7	TM93-0000-002618	ITEM T-SLOT NUT 8 M8
8	TM91-FM01-256652	Thick Washer
9	TM92-BH00-0M6016	M6 X 16 BUTTON HEAD
10	TM92-SPWS-0000M6	M6 SPRING WASHER
11	TM94-FM01-FCR002	GEARED MOTOR

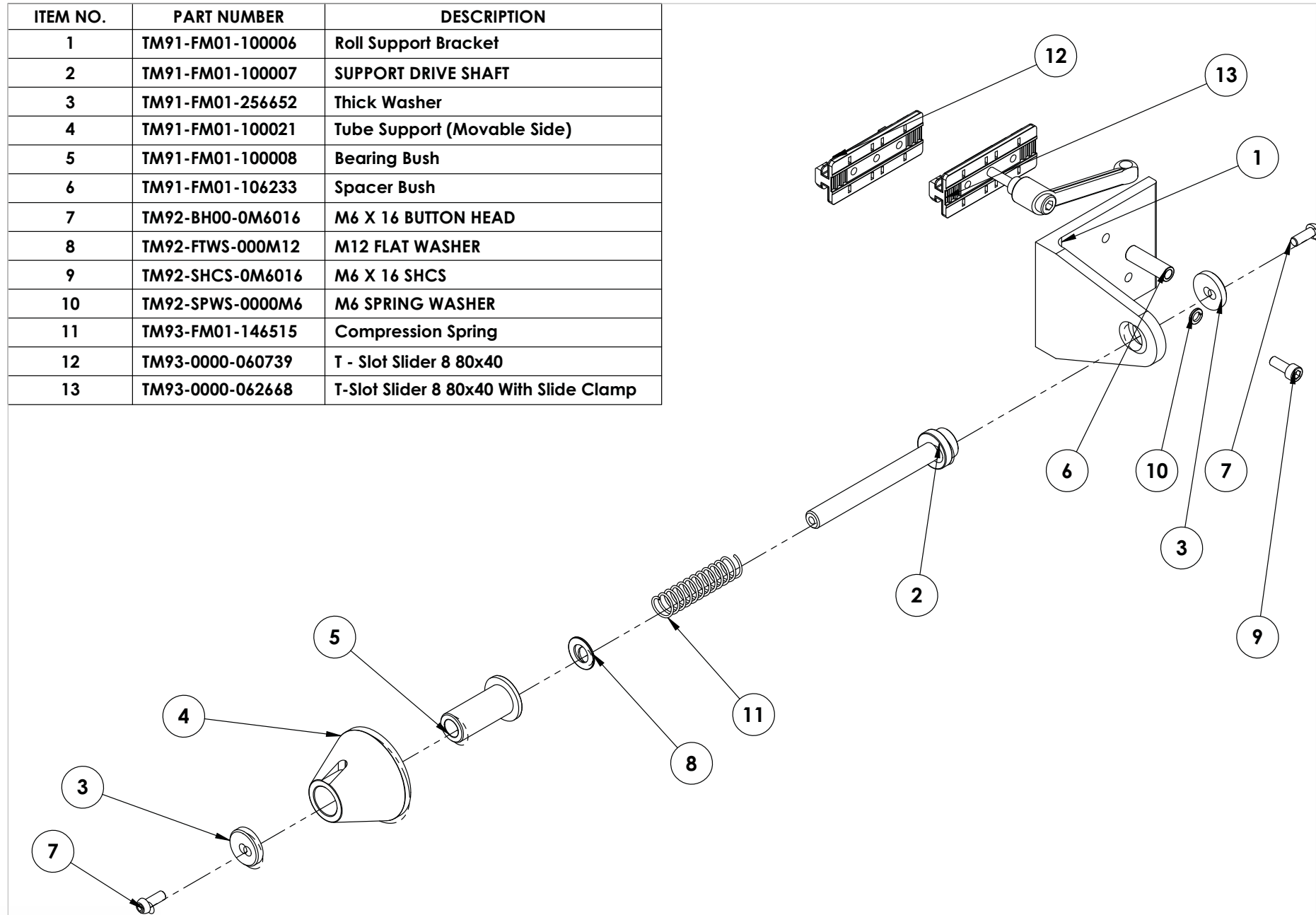


Miscellaneous Parts

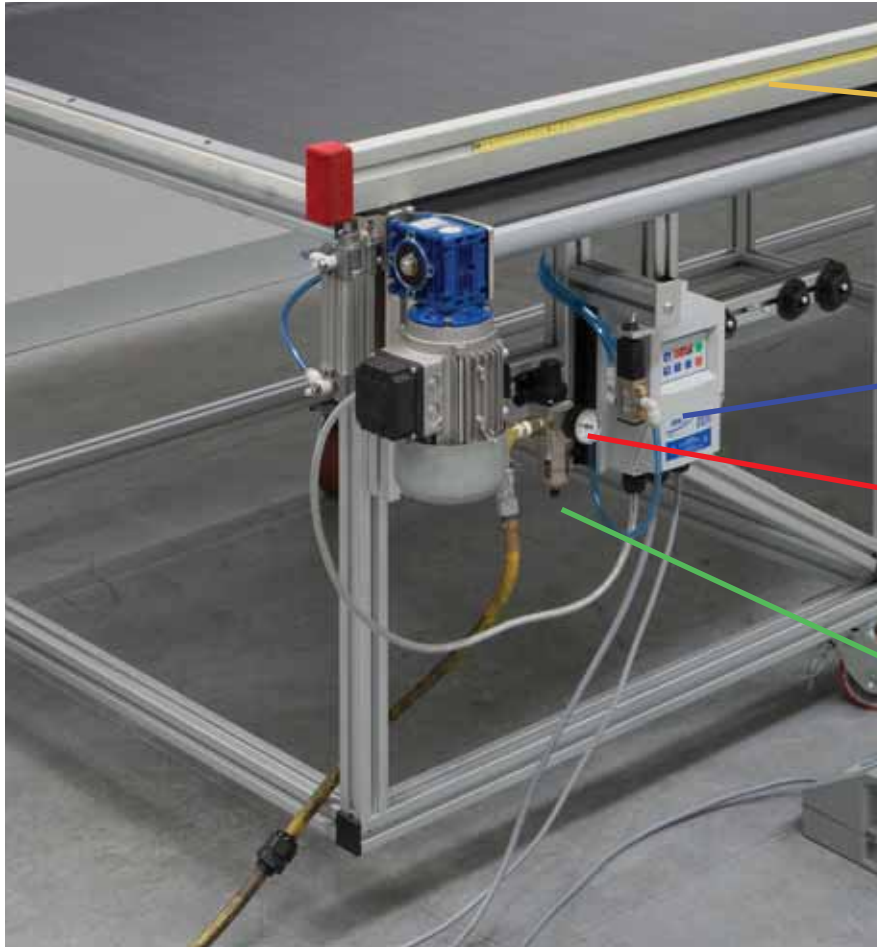


Movable Slide Tube Support

ITEM NO.	PART NUMBER	DESCRIPTION
1	TM91-FM01-100006	Roll Support Bracket
2	TM91-FM01-100007	SUPPORT DRIVE SHAFT
3	TM91-FM01-256652	Thick Washer
4	TM91-FM01-100021	Tube Support (Movable Side)
5	TM91-FM01-100008	Bearing Bush
6	TM91-FM01-106233	Spacer Bush
7	TM92-BH00-0M6016	M6 X 16 BUTTON HEAD
8	TM92-FTWS-000M12	M12 FLAT WASHER
9	TM92-SHCS-0M6016	M6 X 16 SHCS
10	TM92-SPWS-0000M6	M6 SPRING WASHER
11	TM93-FM01-146515	Compression Spring
12	TM93-0000-060739	T - Slot Slider 8 80x40
13	TM93-0000-062668	T-Slot Slider 8 80x40 With Slide Clamp



Pneumatic And Electronic Items.



Tape measure - 19mm x 8M
TM93-8015-800019

Vector Inverter
TM94-FM01-FCR001

40mm Air Gauge 0-1000KPA 1/8" Rear Connection
Part No. : TM94-FM01-SMC005

Filter Regulator
Part No.: TM94-FM01-SMC006

Clamp Bar Parts

ITEM NO.	PART NUMBER	DESCRIPTION
1	TM91-FM01-HB3950	Horizontal Bar
2	TM91-FM01-102024	Cylinder Rod End Nut
3	TM93-0003-004008	CROSS ARM ENDCAP
4	TM91-FM01-RUBO45	Rubber Extrusion

