



**FORTUNA ENGINEERING INDUSTRIES**

# **MONO WIRE PROFILING MACHINE**



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## MONO WIRE PROFILING MACHINE TECHNICAL SPECIFICATION

<b>Model</b>	MW4WPR-6X7	<b>Water Pressure Required</b>	2 Bar
<b>Type</b>	4 Wheel Type	<b>Wire Tension</b>	6 Bar
<b>Max Block Length</b>	2 Mtrs (7')	<b>Main Motor Power</b>	15 HP(A.C . Drive)
<b>Max Block Height</b>	1.8 Mtrs (6')	<b>Up and Down Motor</b>	Servo Motor 2 HP (A.C. Drive) 2 motor
<b>Max Block Width</b>	2 Mtrs (7')	<b>Guide Wheel Motor</b>	Stepper Motor 0.5 HP 2 motor (A.C. Drive)
<b>Max Wire Speed</b>	40 Mtrs/Second (Variable Speed by AC Drive)	<b>Trolley Motor Linear</b>	Servo Motor 2HP (A.C. Drive)
<b>Diamond Wire Length</b>	15.5 Mtrs	<b>Trolley Motor Revolving</b>	Servo Motor 2HP (A.C. Drive)
<b>Speed of Wire Lifting and Lowering</b>	305 mm/Min & 1500 mm/Hr (Fast Up and Down)	<b>Compressor</b>	1 HP
<b>Water Requirement</b>	40 Ltrs/Minute	<b>Total Installed Power Without Pump</b>	25 HP

**OVER ALL DIMENSIONS :** Length 5.5 Mtrs Width 7.5 Mtrs Height 5.5 Mtrs

### MACHINE INTRODUCTION

Mono Wire Profiling Machine is a fully automatic profiling machine for all kinds of stones. One machine different stones. It is operated by computer numerical control. This machine is used to cut profile of columns, roman columns, round, half round and various types of complicated shapes. 3 axis are used in this machine, supplemented by super high precision servo motor drive. The drive is operated by CNC controller. The machine runs automatically by programming codes. The speed of the diamond wire is controlled by PLC and AC drive. This machine has become very attractive for the temple construction, architecture, garden furniture manufacturing companies.

### MACHINE STRUCTURE

Machine Structure is made with Heat Treated Steel and Welded by MIG. Ensuring the required stiffness for avoiding vibration at the time of cutting the stone. It has two vertical columns and are connected to steel fabricated beam. The machine trolley is made of strong steel structure which is welded by MIG. For movement of trolley forward and backward a 4.5 meter long steel track is given.

### MACHINE MECHANISM

Diamond wire is fixed on the 4 wheels of which 2 wheels are 800 mm and the other 2 wheels are 1200 mm in diameter. This arrangement is mounted on a column that slides up and down. A set of 4 guide wheels rotate 360 degrees, which is synchronized and rotate as per the angle of cut required. Along with this the trolley moves backward and forward, thus forming a four-axial linkage. Different types of marble, stone and granite can be cut in this Mono Wire Profiling Machine. To name a few shapes which can be cut are Round, half round, square, angular, column etc.

**LUBRICATION :** Manually operated lubrication system provides lubrication to critical points.

**PAINTING :** In order to ensure a high corrosion strength, both the structure and the components are painted with water proof ISI make paint.

**PULLEY COATING :** All pulleys are coated with special, interchangeable, wear resistant PU profiles.

**SAFETY MEASURES:** Limit switch connected to the stretching cylinder detects any possible breakage of the wire and stops the machine instantly Also, a wire protection cover is provided to prevent accident in case of wire breakage.

**AUTOMATIC ADJUSTMENT OF LOWERING THE WIRE :** When cutting, wire lowering speed is automatically managed by A/C Drive control system. Lifting and lowering limits is controlled by means of limit switches.



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