

# PRODUCTION INTRODUCTION

**Object:** Melt-Blown Lab Machine

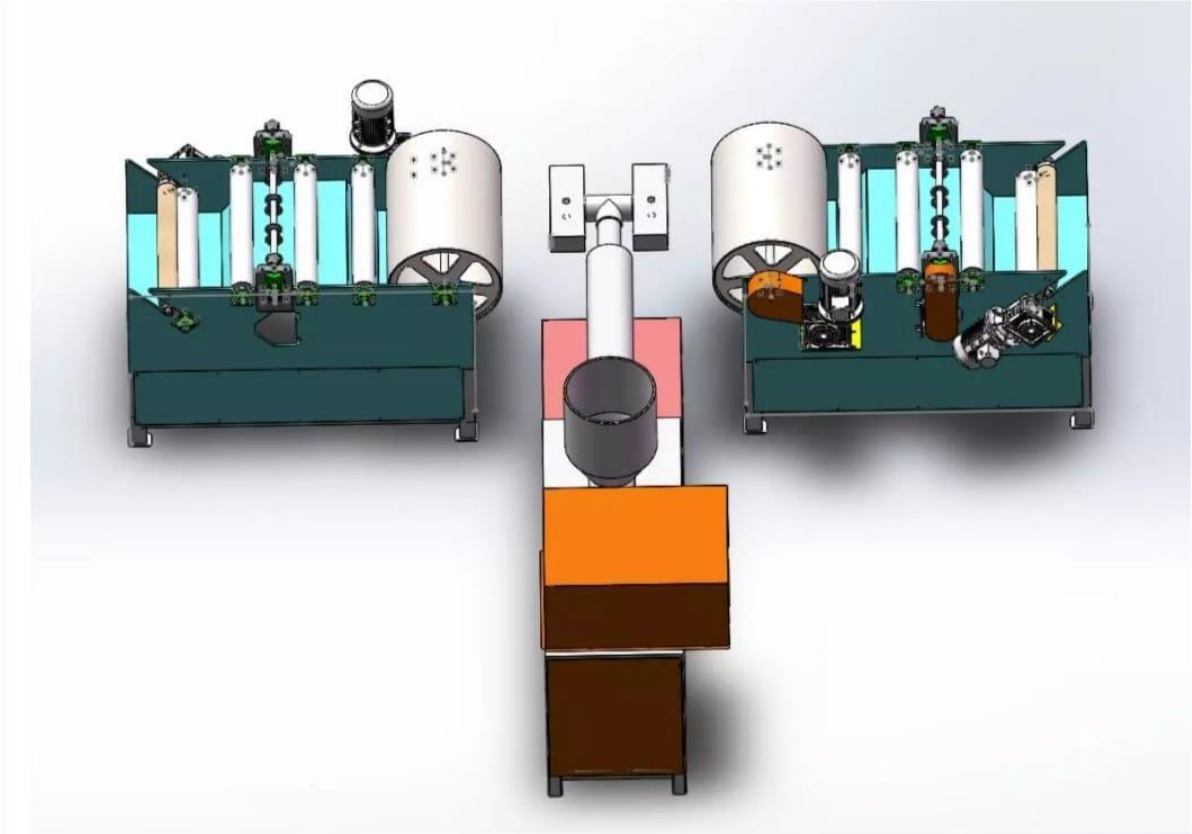
**Content:** Melt-Blown Machine Schematic Layout (for information only)

Machine Specification and Parameters

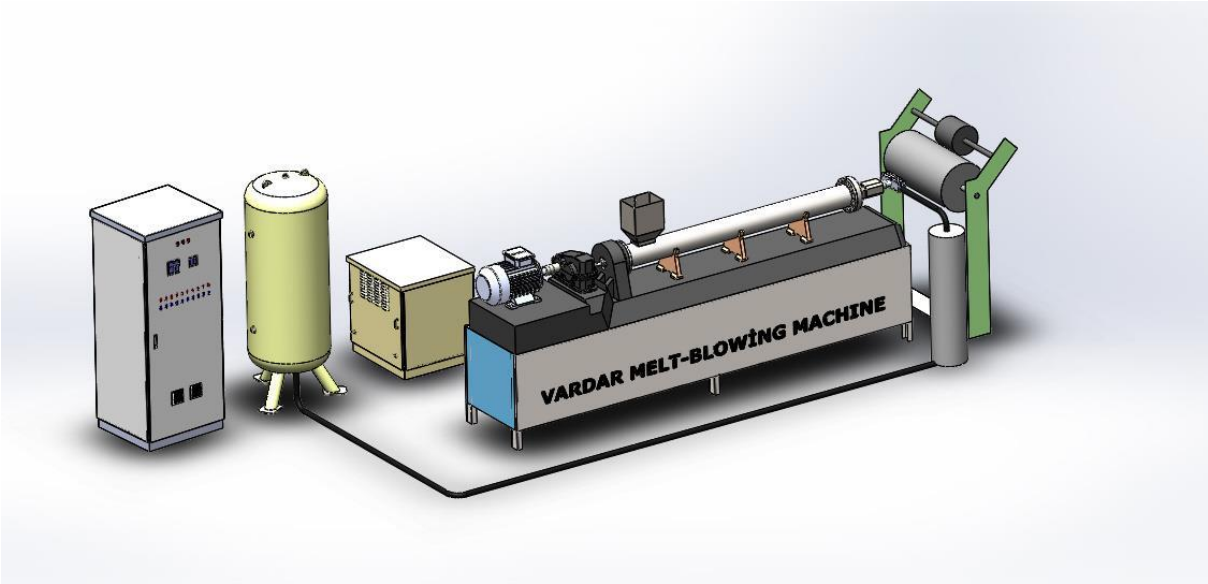
Machine Description and Technical Detail

Design and manufacture of the machine is made in Turkey by Vardar Deri Makinaları San. ve Tic. Ltd Sti. and Woody Global Trade San. Ve Tic. Ltd. Sti. Production is done with ISO 9001: 2015 quality certificate.

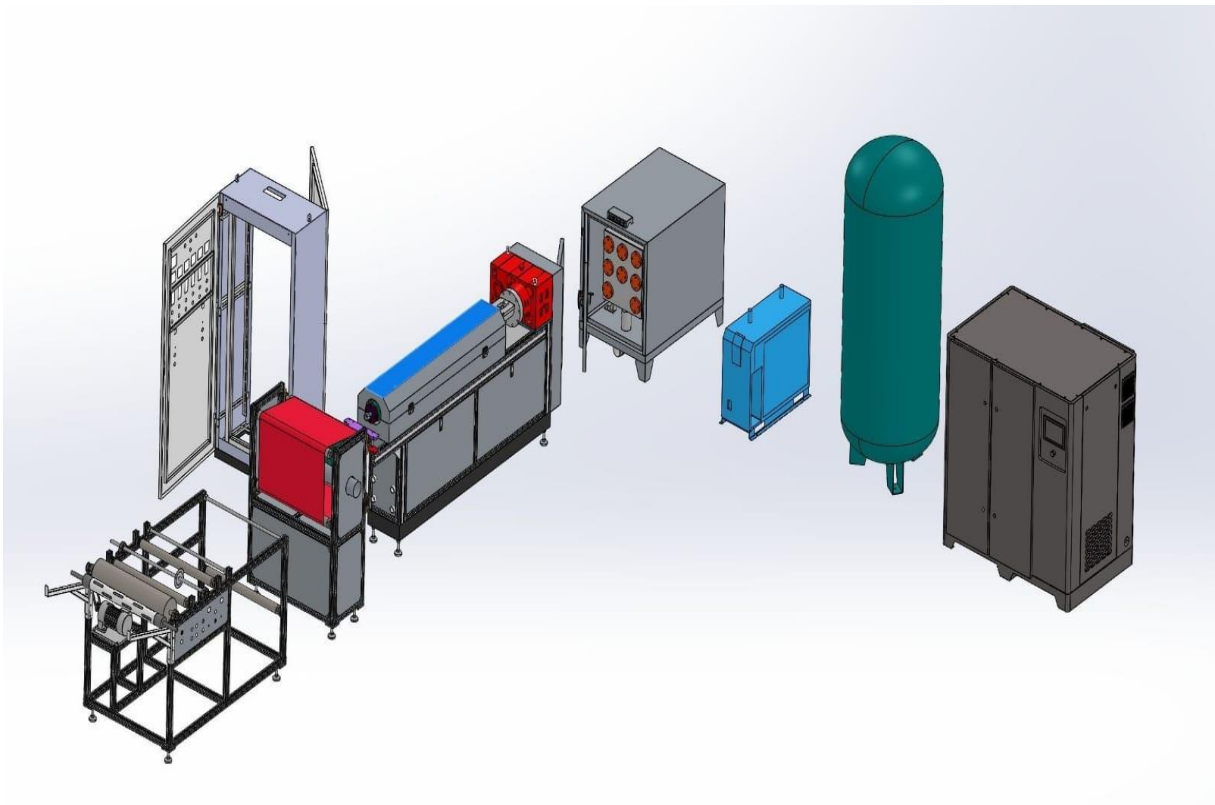
**DOUBLE HEAD SYSTEM SCHMATICS**



**SINGLE HEAD SYSTEM SCHMATICS**



## SINGLE HEAD BELT SYSTEM SCHMATICS



MELT-BLOWN MACHINE	SPECIFICATIONS	PARAMETERS
MELT-BLOWN MACHINE TECHNICAL INFORMATION	Effective Width	300mm
	Fibre Minimum Diameters	1,5 µm
	Grammage Range	10 - 150 g/m <sup>2</sup>
	Min. Raw Metarials Consumption for Single Test	300g
	Maksimum Operation Temperature	300°C
	Suitable Materials	PP; PE; PLA; TPU
NECESSARY EQUIPMENT	Maks. Electricity Consumption	100kW
	Maks. Air Consumption	5 m <sup>3</sup> /min
	Maks. Cooling Water	1,5 m <sup>3</sup> /min
	Bearing Capacity of Machine Installation Site	800 kg/m <sup>2</sup>
	Workshop Height	3.0 m

# MELT-BLOWN MACHINE DESCRIPTION & TECHNICAL DATA

## *1.1 Main Structure of the Machine*

Various electrical connections are used for fixing in the main frame of the machine.

The drive motor power adapt variable-frequency-drive system.

Filtration devices;

Melt transport pipelines;

Extruder Unit;

Electrical heating device & Temperature control system etc;

- Maximum operating temperatures is 300 °C.

Connecting Flange & pipeline;

Exhaust Collecting cover;

Protective cover;

Removeable feeding hopper.

## *1.2 Melt-Blown Machine Component Spin Pack*

Spinnerett length: 1200mm

Melt-Blown Machine component conversion box:

- Includes electrical heating devices & temperature control devices etc.

Measuring Pump:

- Metering pumps specification: 6cc/r.
- Melt Pressure measurement & control unit.
- Maximum pressurize capacity is 25MPa'dir.
- The drive motor speed of the melt metering is controlled by variable-frequency-drive system.

### **1.3 Melt – Blowing System**

Air heating system (electrical)

Hot air drawing system with maximum 300 ° C working temperature.

Hot air distribute & transport system.

The pressure of the drawing air is 0.5MPa.

- Pressure can be adjusted manually.
- Electrical heating device & temperature control system.

### **1.4 Belt Conveying System**

Electro welded chrome base structure

The process results in a collection roller after 4 chrome calibration rollers.

The final product can be measured with an additional cutting apparatus. (upon request)

The cooling system under the chrome transport unit is supported by 1 main blowing unit. (Blower system)

- The speed of the extract air under the belt is controlled by the variable frequency drive system.

- Belt max. speed: 35m/ min.
- Belt conveying speed is controlled by variable frequency drive system.

### **1.5. Electric Control System**

Installation method of the electric control unit: Independent.

Experiment data storage; data export function

Temperature measurement and control system: PLC

Pressure measurement and control system: PLC

Touch screen for man-machine interaction.

Electric Control Cabinet for Melt-Blown Machine Conveying System.

Centralized Control System.

