

MALIK'S

Foaming Extrusion systems

MALIK'S offer Foaming Extrusion systems for producing wide range of foam products ranging from bottle inner liners to very low density products like used in packaging, expansion joints and disposable plates & containers, etc...

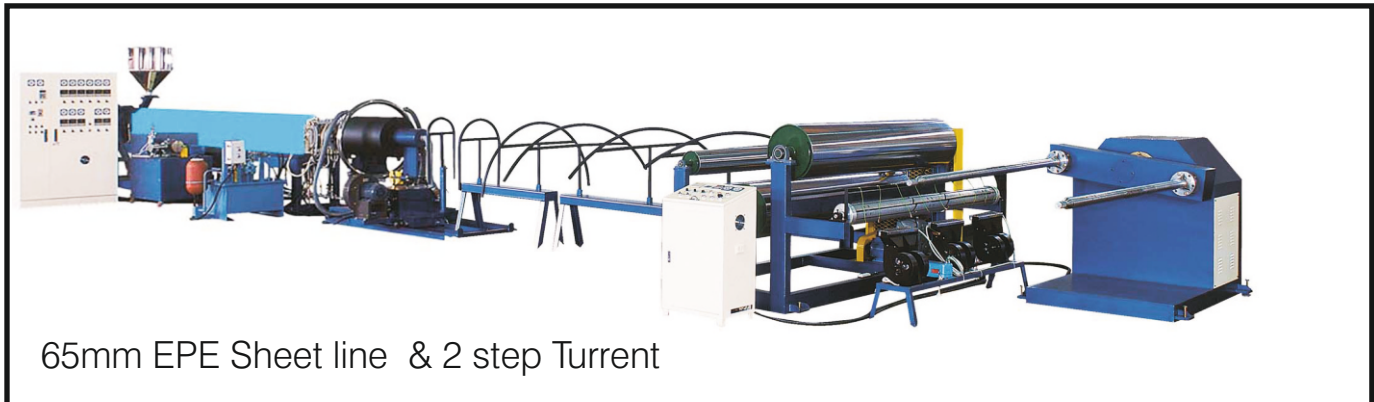




Foaming Extrusion systems

Two types of systems are offered: 1) For high density sheet from LDPE with density e.g 0.3-0.4g/cc for bottle inner liners 2) Low density EPE sheet, tube, rod & profile used for packaging, insulation, etc. Product density can be as low as 0.025g/cc.

Figures below show few Extruders manufactured by us for High density and Low density EPE foams:



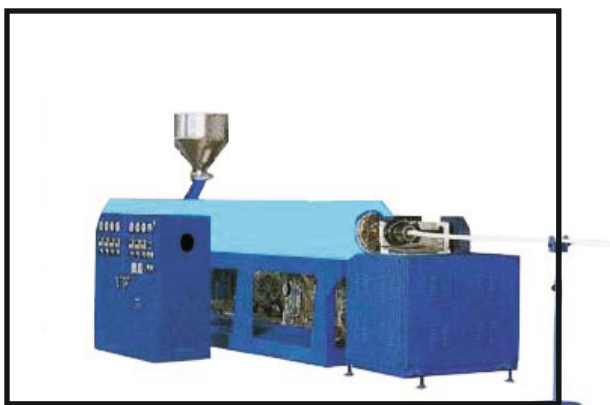
65mm EPE Sheet line & 2 step Turrent



MESS(BF)-170 @400 KPH



EPE FOAM TUBE ROD MESS(BF)-55



65mm Extruder for Foam Rod & Netting



MESS(BF)-55 EXTRUDER



Foaming Extrusion systems

In the foam extrusion process, special type of Extruder is used wherein the Polyethylene plastic is mixed and melted along with certain other additives and suitable physical blowing agent, e.g carbon dioxide, Butane, propane, pentane are injected at high pressure through metering pump under controlled conditions and extruded out of die to produce the desired shape and cell structure. The foam cells are formed in the product due to expansion created by the escaping gases from the gas laden melt and the product is calibrated, cooled and collected by suitable downstream equipment placed inline. Due to expansion and air pockets inside the structure of product, density and weight is considerably reduced.

The density of product depends on blowing agent used.

Industry standard is to use Butane as blowing agent for density down to 20 Kg/m³ and Co₂ for foamed products upto 300 Kg/m³. Research is still going on this. Basic Extruder also uses special chemicals premixed with polymer pellets which yield gaseous elements upon decomposition at temperatures inside Extruder which then help to form a foamed product, although this technique is only used for foams upto 450-500 Kg/cm³

The Injection pump is amongst important component of Foam plant. We provide precision Plunger Metering Pump with single/multiple heads in Stainless steel and closed loop electronic panel control with sensors to accurately mix the required amount of Blowing gas which is critical in determining the final density on product.

Also since temperature is critical in providing a satisfactory product, accurate PID controllers and sensors will ensure this in conjunction with Aluminum Heating/Cooling Jackets on the Barrel which provide satisfactory control for making a standard product.

Available Screw sizes are from 50mm upto 170mm diameter.

MALIK'S now offer Foam Extrusion Equipment from 30 Kg/hour low production line upto about 500 Kg/hour of low or high density foam. Various shapes from basic sheet and Rod/Tube forms to any other profiled shapes are possible.

Product possibilities: Flat Sheeting 1-5mm thick in width upto 2 metre. Rod/Tubes from 6-40mm OD(or larger) and various sections L, T, U or any other as per requirement. We design accurate moulds for getting any shape almost. You can take our word.



Manufacturers:



Precision pneumatic/
plunger pumps with
closed loop control used

MALIK ENGINEERS

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EPE Fruit Net producing Extruders



These Extruders are used like any other foam extruder to produce fruit net using polyethylene with chemicals and butane gas to get light density structure which well protects the fruit surface from damage in store & transit.

A special rotating mould is used at extruder to get the net product.

Since light in weight it produces fast output and automatic operation.

Note! All output figures are approximate & depend on processing condition and materials

Ì ÖÑÑÖ	Units	MEBFN-65	MEBFN-75	MEBFN-90
Screw diameter	Mm	65	75	90
Screw speed	Rpm	5-60	5-50	5-50
Foaming rate	Times	20-40	20-40	20-40
Cooling method	Water jackets	Water jackets	Water jackets	Water jackets
Spec. of product	Strand	10-30	20-40	20-40
Installed power	Kw	35	40	45
Main motor	Kw	15	19	22.5
Screw l/d ratio	times dia	55	55	55
Max. Blowing gas Pr. Of butane	Kg/cm2 (bars)	350	350	350
Output cap	Kg/h	10-40	10-60	20-80
App. dimensions	M	10x1.3x1.8	12x1.5x2	15x1.8x2



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