

World Class

Machines

For

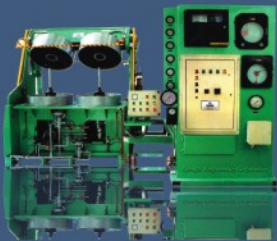
World Class Tyres



SPECIFIC
ENGINEERING CORPORATION



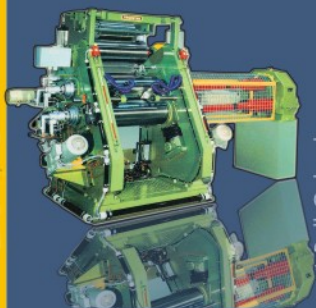
Specific Engineering Corporation Pvt Ltd



Tyre Curing Press



Bladder Press



4-Roll Calendar



Rubber Mixing Mill



Tube Splicer



Temperature Controller Unit

Temperature Controller Units

Range of SEC Extruders

HOT Feed Extruders

- 4.5 inches (114 mm)
- 6 inches (152 mm)
- 8 inches (203 mm)
- 10 inches (254 mm)

COLD Feed Extruders

- 4.5 inches (114 mm)
- 6 inches (152 mm)
- 8 inches (203 mm)
- 10 inches (254 mm)

PIN and BARREL Extruders

- 4.5 inches (114 mm)
- 6 inches (152 mm)
- 8 inches (203 mm)
- 10 inches (254 mm)

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6 inch Hot Feed Extruder



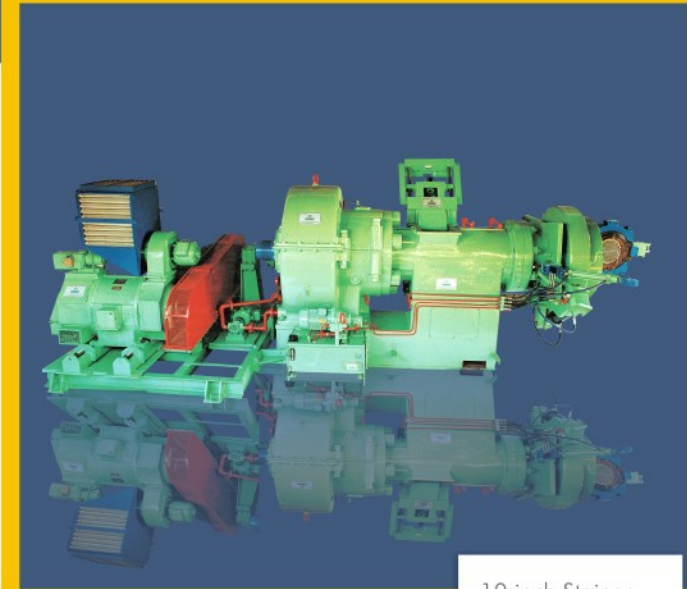
Quick Locking Twin Diehead for 6" Extruder



Extruders

Product Pictures

Cold Feed Extruder with 4- Zone Temperature Controller Unit



10 inch Stainer

10 inch Hot Feed Extruder



dual head 6 inch stainer
extruder with quick locking
system



8 inch stainer Head



Machine Features

SEC manufactures three main types of Extruders

HOT Feed Extruders

COLD Feed Extruders

PIN & BARREL Type Extruders

The general Specifications of a typical SEC Extruder are the following

Screw - Alloy steel of EN-24 with flights cut on thread milling machine duly centrally bored for water circulation. Flights heat treated hardened nitrided & ground with hardness approx. 65 to 70 RC. The screw is machined in Right Hand profile on a special thread milling machine from alloy steel EN41 B and heat treated hardened nitrided to approx. 70 RC. The working length of screw is 5 X Diameter (L/D Ratio 5) in case of Hot Feed Extruders and in case of Cold Feed Extruders, the ratio varies from 12 to 16 and carries reverse threads at rear end to prevent the material flow in backward direction.

Barrel Cylinder - Alloy steel tested pipe fabricated from steel pipe with Horizontal passages for water circulation.

Liner - EN 41 B alloy steel with inner dia drilled, Bored Ground and heat treated hardened (nitrided) for hardness app. 65 to 70 RC.

Bed Plate - The Bed Plate is of Steel welded fabrication construction composed of Steel beams, channels and plates. Machined pads are provided to mount main motor, Gear Reducer, Extruder Barrel and Cylinder support, Leveling pads included at bottom side, in addition to foundation holes, for filed installation. The standard arrangement for drive mounting is motor mounted outward for ease of maintenance / disassembly.

Gear and Gear Reducer - The inter connecting gears are grease lubricated and made of EN 36 alloy steel, teeth hob cut & case carburized hardened for better wear life. This is of Indian Standard make Greaves /Flender / Elecon / Shanthi Gears and is of horizontally mounted, parallel shaft, multi-reduction, case hardened and ground helical gearing supported on heavy duty antifriction bearings. The case is steel fabricated stress relieved and fully machined horizontally split design unit and carries Thrust Bearing inbuilt housing at output end.

The output shaft is internally bored to permit mounting of screw cooling arrangement.

The gearing and bearings including Thrust Bearing is splash lubricated with bottom race of Thrust Bearing remaining in oil bath always.

The Main Motor to Gear Reducer is connected through Lovejoy type flexible coupling . A coupling guard included.

Forward Cylinder Support - A rugged, fabrication steel support, mounted in front of Extruder, to accommodate the weight of the forward cylinder and Head.



Machine Features

Forward Cylinder Barrel - Manufactured from ultrasonically & chemically tested Alloy steel & jacketed/drilled & connected in alternate circuits for circulation of temperature control water media with inlet & outlet connections. The Inner bore is heat treated (Nitrided) hardened to 60 / 70 RC for a depth of 0.5 –0.6 mm. The Forward Cylinder in full length has Two Temperature Control Zones.

The Barrel is designed for max. operating pressure of 5,700 psi (400 bar) & normal working pressure is appx. 5000 psi (350 bar) & is based on Die Opening. The forward and rear sections of the Barrel Cylinder are fitted with flanges to accept Die in front and to bolt to Feed Hopper section at rear.

Feed Hopper

Manufactured of steel welded construction with double wall jacketed construction with connections for cooling / heating media (water) circulation, the Feed Hopper is cut machined to mount Feed Roll and also has an undercut to facilitate Rubber strip continuous feed into Extruder barrel. An integral extension to the rear of the Feed opening isolates the feed zone from the gearbox Thrust Bearing to prevent any material working past the bronze gland at the rear of the screw into the Bearing area. A cage made of smooth rotating thin bars is mounted over feed opening to guide rubber strip to the feed section. The Feed opening width is 150 mm

Feed Roll

The Feed Roll is centrally hollow and provision is made for water-cooling. An adjustable scrapper is mounted underneath Feed Roll to scrap the Roll thus ensuring roll surface to be clean of rubber. The Feed Roll housing is bolted to the Feed Hopper Extruder and can be easily dismantled when required. The feed roll is positively driven from screw by inter connecting gears and carries a tangential speed friction of minor value of 1:1.12 for pushing the rubber in.

Main Motors

A fixed or variable speed (AC/DC drives) main motor can be provided as per the customer requirement. The motors will be Indian standard make - siemens Abb/ BB/Kirloskar etc with class F insulation and continuous rating.

Controls

In case of DC drives the controls will be 3 phase, 6 pulse, 440 V, Digital Thyristor converter Panel with Tacho included. Ambient 45 ° C , Class 1 duty (100% continuous), IP 30 Protection Panel. The controls are suitable for unidirectional operation with speed control range 1:20 of base speed with constant torque Speed regulation shall be + 0.5% of base speed at base speed by means of Tacho feedback. Necessary switch gear along with drive module such as Incoming MCCB, Line reactor, Feeder for DC Motor field and blower included.



HOT FEED EXTRUDERS

MODEL	SEC - HFE-115	SEC - HFE - 150	SEC- HFE- 200	SEC - HFE - 250
Size	4.5 inches (114 mm)	6 inches (152 mm)	8 inches (203 mm)	Up to 95
Output per hour	410-635 kgs	680 - 1100 kgs	1135 - 1900 kgs	1955 -2950 kgs
L/D ratio	5:01	5:01	5:01	5:01
Drive Horse Power	45hp (34 kw)	60hp (45kw)	75hp (57kw)	125hp(95kw)
Motor Base Speed	1500	1150	1150	1150
Gear Ratio	25:01:00	25:01:00	25:01:00	25:01:00
Screw Speed RPM	60	60	60	60
Torque HP/ RPM	3.2	6.2	13.8	25.9
No of Barrel Zones	1	1	1	1
Weight	1800 kgs	3500 kgs	5000 kgs	7000 kgs

COLD FEED EXTRUDERS

MODEL	SEC - CFE-115	SEC - CFE - 150	SEC- CFE- 200	SEC - CFE - 250
Size	4.5 inches (114 mm)	6 inches (152 mm)	8 inches (203 mm)	Up to 95
Output per hour	410-635 kgs	680 - 1100 kgs	1135 - 1900 kgs	1955-2950 kgs
L/D ratio	12:01	12:01	12:01	12:01
Drive Horse Power	150hp (112 kw)	250 hp (190kw)	400hp (300kw)	700hp (525kw)
Motor Base Speed	1750	1150	1150	1150
Gear Ratio	17:36:1	17:21:01	39:04:01	42:59:01
Screw Speed RPM	47	44	29	27
Torque HP/ RPM	3.2	6.2	13.8	25.9
No of Barrel Zones	2	2	2	2
Weight	5-5.5 kgs	7-8 kgs	11-14 kgs	16-18 kgs



PIN & BARREL EXTRUDERS

MODEL	SEC - PBE-115	SEC - PBE- 150	SEC- PBE- 200	SEC - PBE - 250
Size	4.5 inches (114 mm)	6 inches (152 mm)	8 inches (203 mm)	Up to 95
Output per hour	545-860 kgs	900 - 1350 kgs	1400 - 2200 kgs	2300 -3600 kgs
L/D ratio	16:01	16:01	16:01	16:01
Drive Horse Power	150hp (115kw)	250hp (190kw)	400hp (300kw)	700hp (525kw)
Motor Base Speed	1750	1150	1150	1150
Gear Ratio	17:36:01	17:21:01	39:04:01	42:59:01
Screw Speed RPM	47	40	29	27
Torque HP/ RPM	3.2	6.2	13.8	25.9
No of Pin rows	10	10	10	10
No of Pins/ Rows	8	8	10	10
No of Barrel Zones	2	2	2	2
Weight	5-5.5 kgs	7-8 kgs	11-14 kgs	16-19 kgs

OPTIONAL ACCESSORIES

1. Extruder Diehead
 - a. Tread Heads - Suitable Tread Heads can be provided with hydraulic clamping or mechanical based on customer need.
 - b. Strainer Heads - Strainer Heads can be fixed or swing Type. The Strainer Heads can be with Hydraulic or mechanical locking system. The units can be fitted with continuous Auto Cutter Assembly.
 - c. Tube Heads - The tube Heads are normally fitted with 'S' type spiders and provision for vacuum and powder spraying. The Die and cones are hard chrome plated.
2. Temperature Controller Unit - The Extruders can be supplied with SEC Temperature Controller Units based on the size and process requirement.





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