

FOOD EXTRUDER IP2000 SERIES



Features:

- Suitable for unlimited food processing applications,
- High heat, short cook time for high quality foods,
- Stainless steel hopper with variable speed feed drive,
- Modular interchangeable barrels and screws,
- Special screw alloys for extra wear-resistance,
- Generously designed special main bearing system,
- Complete internal cabling for quick installation,
- Robust and compact fabrication,
- Safety measures as per international norms,
- Lifetime availability of replacement parts,
- Low investment and operating costs,
- Full installation and supporting services.

APPLICATIONS

- Extruder IP2000 series is used for the extrusion of various combination of cereals (wheat, maize, etc) and oil seeds (such as soyabean) to produce fully or partially cooked food products.

FUNCTIONING

- The IP2000 is a "high temperature short time" bioreactor that transforms a variety of raw ingredients into intermediate and finished products. It may also be used as a thermal process to eliminate undesirable flavors, to inactivate growth inhibitors, and to modify starch.
- The extrusion process accepts relatively dry materials, adds liquids to plasticize the raw material, gelatinizes starch, denatures protein, and inactivates enzymes, before expanding (texturizing) the finished product.
- The IP2000 combines several unit operations - mixing, cooking, kneading, shear, cooling, and/or final shaping/forming. The combination of operations is possible because of a multitude of controllable variables such as feed rate, total moisture in barrel, screw speed, barrel temperature, screw profile, and die configuration.

Feed Hopper and Screw

The top-mounted stainless steel feed hopper contains a feed screw which feeds the material into the main extrusion section. The intake is regulated by varying the speed of the feed screw.



Extrusion Section

Responsible for cooking of raw ingredients. The material is mixed with water at the inlet section and the whole doughy mass undergoes physio-chemical changes in the compression and treatment section.

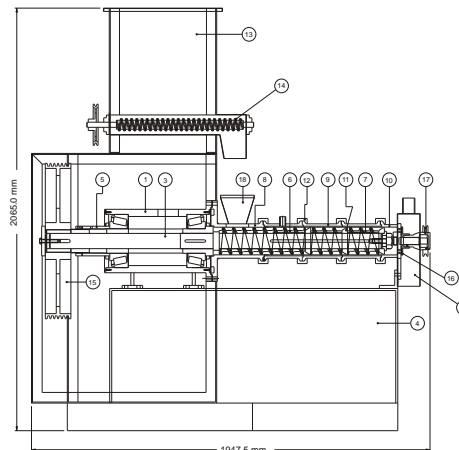


Cutter Assembly

The product is forced out through the die head giving it a definite form and the attached cutter assembly cuts the extruded product into small pieces / pellets with rotating cutter blades.

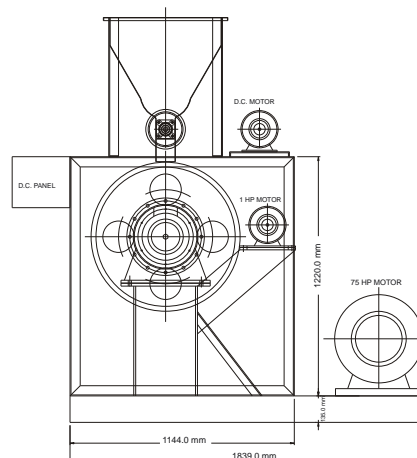


3 Head Single Screw Extruder (Complete Unit) Model	IP2000W	IP2000N
Applications		
Cereal-Based Blended Foods	Y	Y
Puffed Snack Foods	N	Y
Pet Foods	N	Y
Texturised Soya Protein	N	Y
Technical Overview		
Production Capacity	400-800 kg/h	200-400 kg/h
Head Temperature	upto 170°C	upto 150°C
Operating Temperature	0-45°C	0-45°C
Pressure	> 20 Atm	> 20 Atm
Weight	1250 kg	1325 kg
Materials of Construction		
Body	Mild steel	Mild steel
Feed Hopper	Stainless steel	Stainless steel
Screws	Special Alloy	Special Alloy
Custom Changes Possible?	Y	Y
Extruder Chambers		
Number of Chambers	3	3
Modular Barrel and Screws	Y	Y
Cooking Unit	Y	Y
Compression Unit	Y	Y
Water Supply	Y	Y
Heating / Cooling Jacket	No	Water cooling jacket
Main Extruder Drive		
Motor Type	TEFC Squirrel cage Induction motor	
Control Unit	Oil type star delta starter	
Electricity Voltage	415 V	415 V
Electricity Type	AC	AC
Electricity Frequency	50 Hz	50 Hz
Electricity Phases	3	3
Power Consumption	55 KW (75 HP)	55 KW (75 HP)
Motor Rotation	1475 r/min	1475 r/min
Shaft Speed	530 r/min	530 r/min
Driving Belts	6C	6C
Feeder with Feed Screw		
Feeder type	Double start screw mounted in a feed hopper	
Motor Type	Laminated yoke	
Control Unit	Rectifier type DC motor starting panel	
Electricity Voltage	220 V	220 V
Electricity Type	DC	DC
Electricity Frequency	50 Hz	50 Hz
Electricity Phases	1	1
Power Consumption	0.75 KW (1 HP)	0.75 KW (1 HP)
Motor Rotation	1400 r/min	1400 r/min
Feeder Screw Rotation	Variable	variable
Driving Belts	1B	1B
Cutter Assembly		
Type of Cutter	Rotating cutter blade assembly mounted on the main frame	Rotating cutter blades assembly mounted separately on a trolley
Motor Type	TEFC Squirrel cage Induction motor	Laminated yoke
Control Unit	DOL starter	Rectifier type starter
Electricity Voltage	415 V	220 V
Electricity Type	AC	DC
Electricity Frequency	50 Hz	50 Hz
Electricity Phases	3	1
Power Consumption	0.75 KW (1 HP)	0.75 KW (1 HP)
Rotation	1415 r/min	1400 r/min
Knife-Rotation	720 r/min	Variable
Driving Belts	1B	direct couple



MAJOR COMPONENTS

- Bearing Housing
- Exhaust Hood
- Shaft
- Fabricated Body
- Bush
- Inlet Screw
- Screw
- Inlet Barrel
- Barrel
- Die Head
- Steam Lock
- Clamp
- Feed Hopper
- Feed Screw
- Pulley
- Cutter Blade
- Cutter Housing
- Inlet Hopper



www.indopol.com
ISO9001:2000 CERTIFIED

FACTORY DIVISION

Indopol Food Processing Machinery Pvt. Ltd.
Email: info@indopol.com
Tel: +91 129 2276161/ 2276162 / 2275823 / 2274756
Fax: +91 129 272 0549 / +91 11 216 50444

Factory:
Industrial Plot No. 28
Sector 27-C, Faridabad,
Haryana 121 003, India

TECHNICAL CONSULTING DIVISION

Dr.-Ing. N.K. Gupta Technical Consultants Pvt. Ltd.
Email: drnk@indopol.com
Tel: +91 11 2984 7794
Fax: +91 11 2984 0557

Registered Office:
Flat No. 207 A (2nd Floor)
28-29 Feroz Gandhi Road, Lajpat Nagar-III
New Delhi 110024, India

Registered Office:
AB-16 Community Centre
Safdarjung Enclave
New Delhi 110029, India