

EXTRUSION

COOKING SYSTEMS



World class extrusion

The broad line of Extrusion Cooking Systems from Extru-Tech Inc.® has evolved from numerous years of innovative engineering, metallurgical advancement, and the evolution of superior manufacturing processes. **From the line's conception, the overriding goal of the Extru-Tech® engineering staff has been to design an extrusion cooking system that will yield high production levels of premium quality products.** Whether it's snack, pet, aquatic or animal feed production, Extru-Tech® Extruders are the most efficient single screw extrusion cooking systems available on the market.

From the unprecedented 13.2 metric tons per hour production capacities of the E925 to the exacting finished product quality of the E525, Extru-Tech® Extrusion Cooking Systems have established the industry standards for performance and value. **All Extrusion Cooking Systems are engineered to properly distribute starch gelatinization levels between the dual shaft conditioning cylinder and extruder barrel to optimize both barrel**

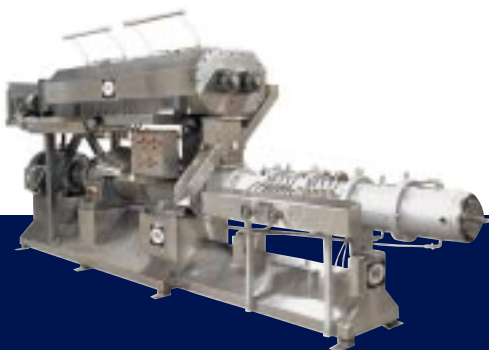
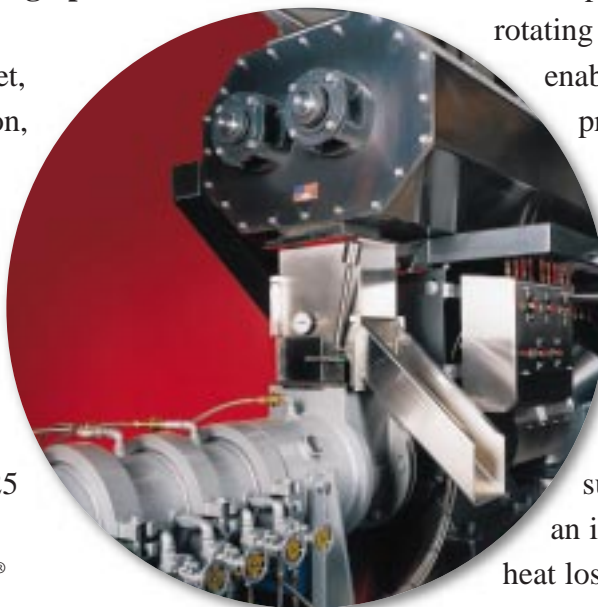
component performance and energy efficiency while maintaining the nutritive integrity and palatability of the products being produced.

The majority of our extruders feature Dual Shaft Conditioning Cylinders that provide continuous blending of water, steam, dyes, fats or meat slurries into the dry material flow prior to extrusion. The two counter rotating shafts turn at equivalent speeds,

enabling the intermeshing beaters to provide maximum uniform blending.

Extru-Tech's® unique beater design and configuration can be manipulated to achieve various retention times from 1 to 5 minutes depending on the model of conditioning cylinder utilized and material feed rate. An outer skin surrounds the cylinder walls to form an insulated thermal barrier to prevent heat loss, thus improving efficiency.

Hinged top clean-out lids with counter balances allow for complete access to the cylinder interior. The lid design, coupled with the unit's stainless steel construction, makes for safe and easy cleaning.



E925 Extrusion Cooking System

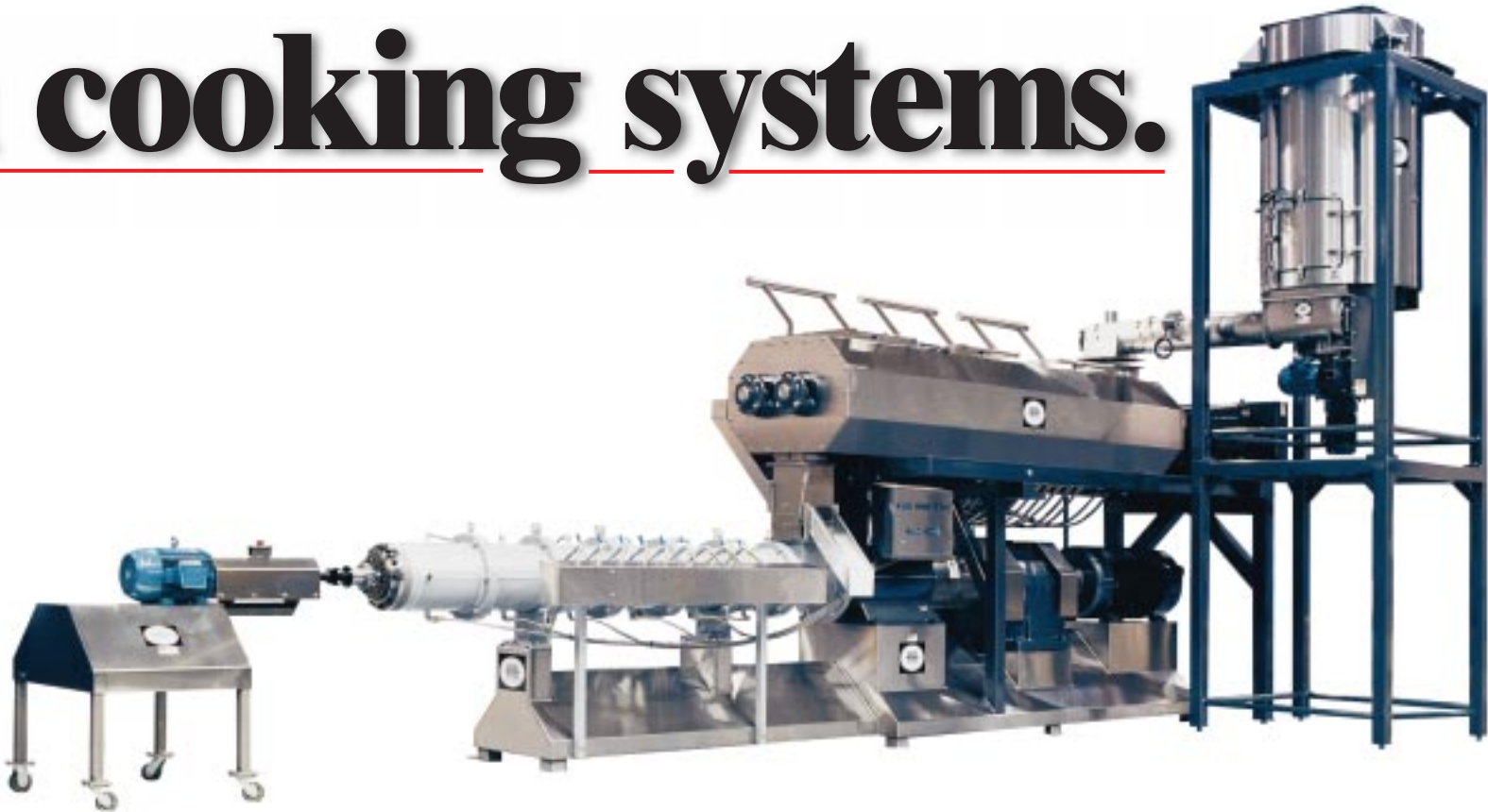


E750 Extrusion Cooking System



E525 Extrusion Cooking System

cooking systems.



Extruder Bases

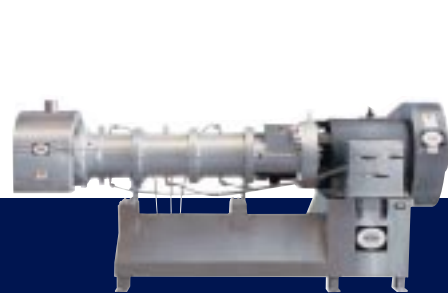
Extruder Bases are constructed of carbon steel plate with stainless steel lamination covering the complete exterior. Its sloped design combined with the stainless steel lamination provides not only a very durable, low maintenance base, but also a sanitary work area.

Extruder Drives

Extruder Drives consist of an “In-line” Drive Mechanism which utilizes an efficient helical gear speed reducer. The reducer decreases horsepower requirements by as much as 20 hp when compared to conventional “v-belt” drive systems with equal horsepower ratings. The “In-line” Drive also eliminates routine maintenance required to keep a “v-belt” drive system operating efficiently. An optional “v-belt” drive system is available for applications that require this configuration.



*E325 Extrusion
Cooking System*



*P.D.U.
(Product Densification Unit)*



Forming Extruders

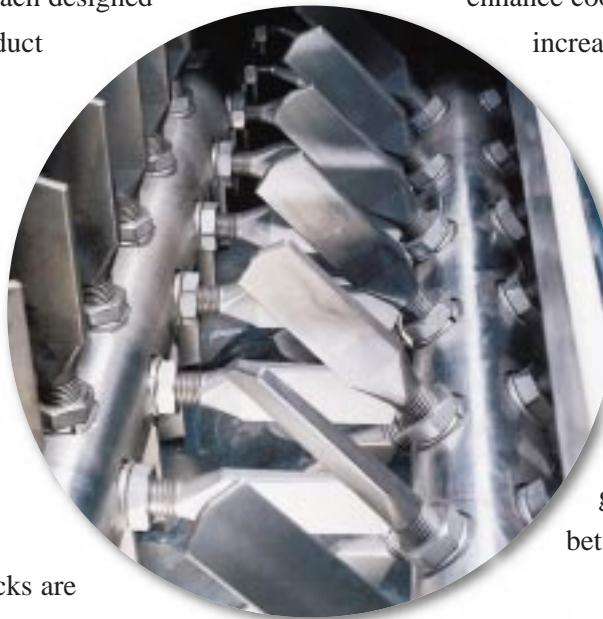


Extruder Barrels

Extruder Barrels are designed for broad production capabilities with maximum efficiency and minimal metal-to-metal wear. Each extruder model can be equipped with multiple barrel length packages, each designed for the production of specific product types. The back of the inlet heads incorporate two mechanical seals which prevent material leakage between the rear of the inlet head and drive shaft. Adequate spacing is provided between the inlet head and bearing housing to further prevent the chance of material reaching the bearing housing seals.

Segmented screws and shearlocks are positioned on the extruder drive shaft and can be configured to attain desired characteristics for a wide variety of extruded products. Segmented, jacketed heads with replaceable wear liners allow for easy injection of

either water or steam into the individual barrel segments to control extrusion temperatures. High-pressure steam is injected into the product zone to enhance cooking characteristics and increase the rate of production.



All screws and liners are constructed of high quality, wear-resistant stainless steel alloys. Upon completion of manufacturing, screws are polished, heat treated to required hardness specifications, and then parallel ground to ensure proper fit between barrel components.



Live-Bottom Bin



Variable-Speed Feeder Screw



Variable-Speed Knife Assembly



Dryer/Cooler Systems

Extru-Tech's® Continuous Horizontal Dryer/Cooler Systems are available in single, dual and triple pass with optional cooling assemblies for attaining desired moisture and temperature levels after extrusion processing. Extru-Tech® Dryers can be equipped with your choice of "Airflow One" or "Airflow Two" technologies. Our exclusive "Airflow Two" technology provides the industry's most advanced airflow control system for maximum finished product control. The Dryer/Coolers can be supplied with either gas-fired burners or steam coils incorporated into the drying sections depending on the customer's most available source of energy.



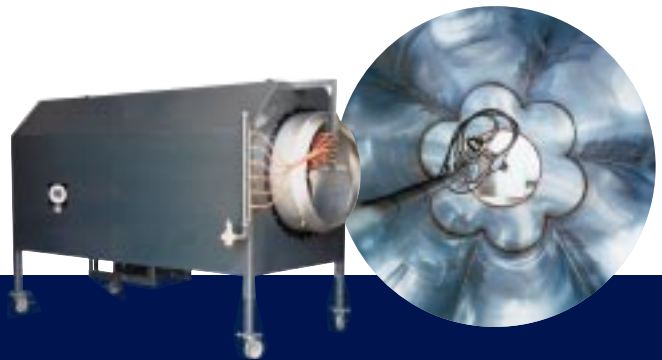
When utilizing Extru-Tech® Extrusion Cooking Systems, only your imagination will limit your production line. Different shapes, sizes, densities and cook levels are possible with only minor changes to the extruder barrel and components.



Dust Control Systems



Pneumatic Conveying Systems



Material Application Systems

General Extruder Specifications

EXTRU-TECH® E925 COOKER/EXTRUDERS*										
			AQUATIC FEEDS				PET FOODS			
MODEL	HP	KW	1.5 mm to 4.0 mm		5.0 mm to 10.0 mm		Chunk Style Dog Food		Cat Food	
			lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr
E925 XL	300	225	13,000-20,000	5,900-9,075	24,000-29,000	10,890-13,155	24,000-29,000	10,890-13,155	17,000-20,000	7,710-9,075
E925 A	250	190	10,000-18,000	4,535-8,165	20,000-24,000	9,075-10,890	20,000-24,000	9,075-10,890	14,000-17,000	6,350-7,710
E925 B	200	150	8,000-14,000	3,630-6,350	16,000-20,000	7,260-9,075	16,000-20,000	7,260-9,075	12,000-14,000	5,445-6,350

* The above chart illustrates typical capacity ranges for "floating" aquatic feeds and pet foods. Specific performance guarantees will be supplied by Extru-Tech® after each customer's particular application has been evaluated.

EXTRU-TECH® E750 COOKER/EXTRUDERS*										
			AQUATIC FEEDS				PET FOODS			
MODEL	HP	KW	1.5 mm to 4 mm		5 mm to 10 mm		Chunk Style Dog Food		Cat Food	
			lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr
E750 XL	250	190	8,000-14,000	3,630-6,350	15,000-20,000	6,805-9,075	15,000-20,000	6,805-9,075	12,000-14,000	5,445-6,350
E750 A	200	150	6,000-12,000	2,720-5,445	12,000-15,000	5,445-6,805	12,000-15,000	5,445-6,805	10,000-12,000	4,535-5,445

* The above chart illustrates typical capacity ranges for "floating" aquatic feeds and pet foods. Specific performance guarantees will be supplied by Extru-Tech® after each customer's particular application has been evaluated.

EXTRU-TECH® E525 COOKER/EXTRUDERS*							
MODEL	HP	KW	# HEADS	HUMAN FOOD APPLICATIONS		AQUATIC, ANIMAL, PET FOOD APPLICATIONS	
				lbs/hr	kg/hr	lbs/hr	kg/hr
E525 CH	100	75	3	400-800	181-363		
E525 BH	100	75	4	600-1,000	272-454		
E525 A	125	94	7	600-1,000	272-454	2,000-4,000	907-1,815
E525 B	100	75	7	600-1,000	272-454	1,000-2,500	454-1,134
E525 C	100	75	5	600-1,000	272-454	500-1,500	227-680

* The above chart illustrates typical capacity ranges for the applications stated. Specific performance guarantees will be supplied by Extru-Tech® after each customer's particular products have been evaluated.

Extru-Tech® offers an alternative model which is better adapted for these types of applications.

Note: In addition to horsepower and barrel length, the type of feeding system utilized and size of conditioning cylinder attribute to the variations in capacity rates between the above units.

EXTRU-TECH® E325 COOKER/EXTRUDERS*							
MODEL	HP	KW	# HEADS	HUMAN FOOD APPLICATIONS		AQUATIC, ANIMAL, PET FOOD APPLICATIONS	
				lbs/hr	kg/hr	lbs/hr	kg/hr
E325 BH	30	22	4	150-300	68-136		
E325 A	30	22	6			350-800	159-363

* The above chart illustrates typical capacity ranges for the applications stated. Specific performance guarantees will be supplied by Extru-Tech® after each customer's particular products have been evaluated.

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