

adhesives

ceramics

chemicals

coatings

cosmetics

fine chemicals

foods

inks

pharmaceuticals

plastics



A New... and Better Generation of Conical Screw Processors



21st Century Technology For Today's Processing Equipment... Designed & Built To Be The Best!

# Saturn

## Conical Screw Processors

**Achieve New Levels of  
Mixing & Drying Efficiency**

Profit from all the benefits of advanced design with the Saturn Conical Screw Processor from SPS Group. Backed by years of experience in conical screw engineering and manufacturing, the Saturn delivers new levels of operating flexibility, production efficiency and cost-effective operation.

This space-saving, maintenance-free, thoroughly dependable unit incorporates patented systems that establish new standards in solids handling. The Saturn is today's high performance production tool for a variety of industrial applications, including pharmaceuticals, chemicals, petrochemicals, food, cosmetics, plastics and rubber.

With working capacities up to 2,650 cubic feet (75cu. meters) available, Saturn processors are available with numerous options, so the unit you order is virtually customized to meet the needs of your operation. Various options include:

- Vacuum drying unit for removal of solvents from powder and granules
- Vacuum unit for degassing products that entrap air during processing
- Sampling during operation • Continuous product level readings
- Central dispersion tool for delumping and dispersing
- Spray systems for liquid additions or coating powders
- CIP systems • Nitrogen purging • Type of discharge valve
- Steam sterilization of vessel and seals

Additionally, the SPS Group Engineering Department utilizes the latest computer software to design complete systems to meet your requirements. Other services include:

- Designs and price quotations evaluated by "Finite Element Analysis" program to assure that units meet or exceed all commercial design requirements.
- Fully equipped test facility/pilot plant available to customers.
- Maintenance/rebuilding services for all conical screw equipment.

The new Saturn Conical Screw Processor from SPS Group.

**21st Century Technology  
For Today's Processing Equipment...  
Designed & Built To Be The Best!**

Heated vacuum filter housing available for drying.

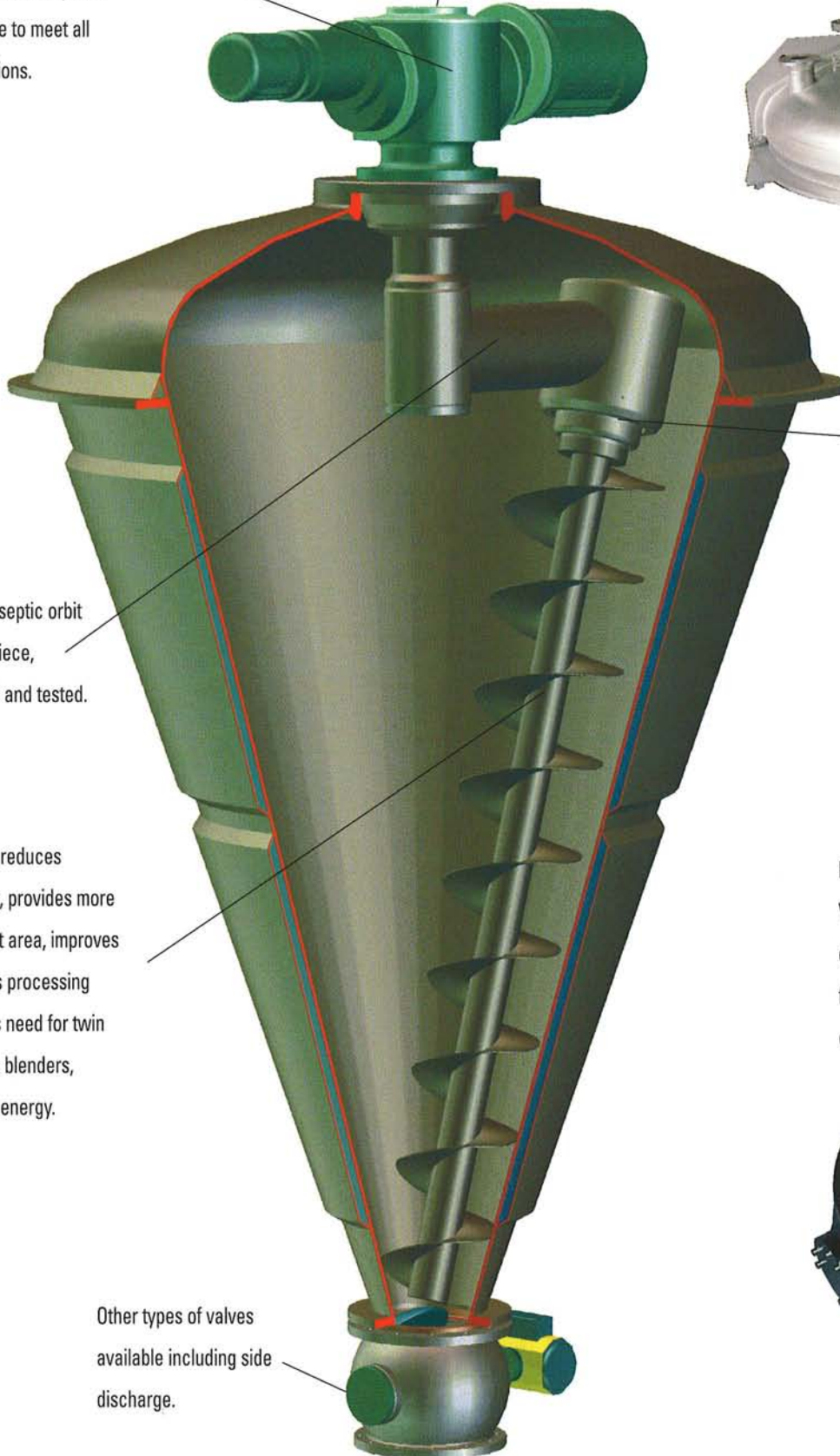
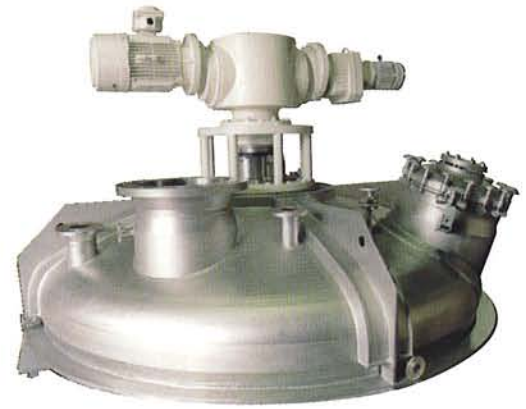


Vessel design permits internal pressure or vacuum, jackets for cooling or heating. Available in carbon steel, stainless steel or special alloys. Pharmaceutical, sanitary or commercial finish.

New patented top drive gearing system delivers extra strength, durability, low noise levels, smooth power transmission, and low energy consumption. Motors available to meet all area classifications.

Top drive has enlarged hollow shaft design for options such as thermocoupling, purging, spray coating, dispersing, lump breaking, and CIP. Low head room design saves space.

Mechanical seal access without entering vessel.



Special dam construction in main drive and orbit arm prevents contaminants or lubricants from entering the mixing vessel.

Standard and aseptic orbit arms are one-piece, pre-assembled and tested.

Available screw drive seal designs include positive lip seals, single acting mechanical, or double acting mechanical. All seals dry running.

Tapered screw reduces machine height, provides more product contact area, improves mixing, reduces processing time, eliminates need for twin screws in large blenders, consumes less energy.

Ball segment valve with expandable Teflon®, Viton® or Kalrez® seals that deflate for opening and inflate when closed. Designed for overpressure and full vacuum. Bottom or side discharge available.

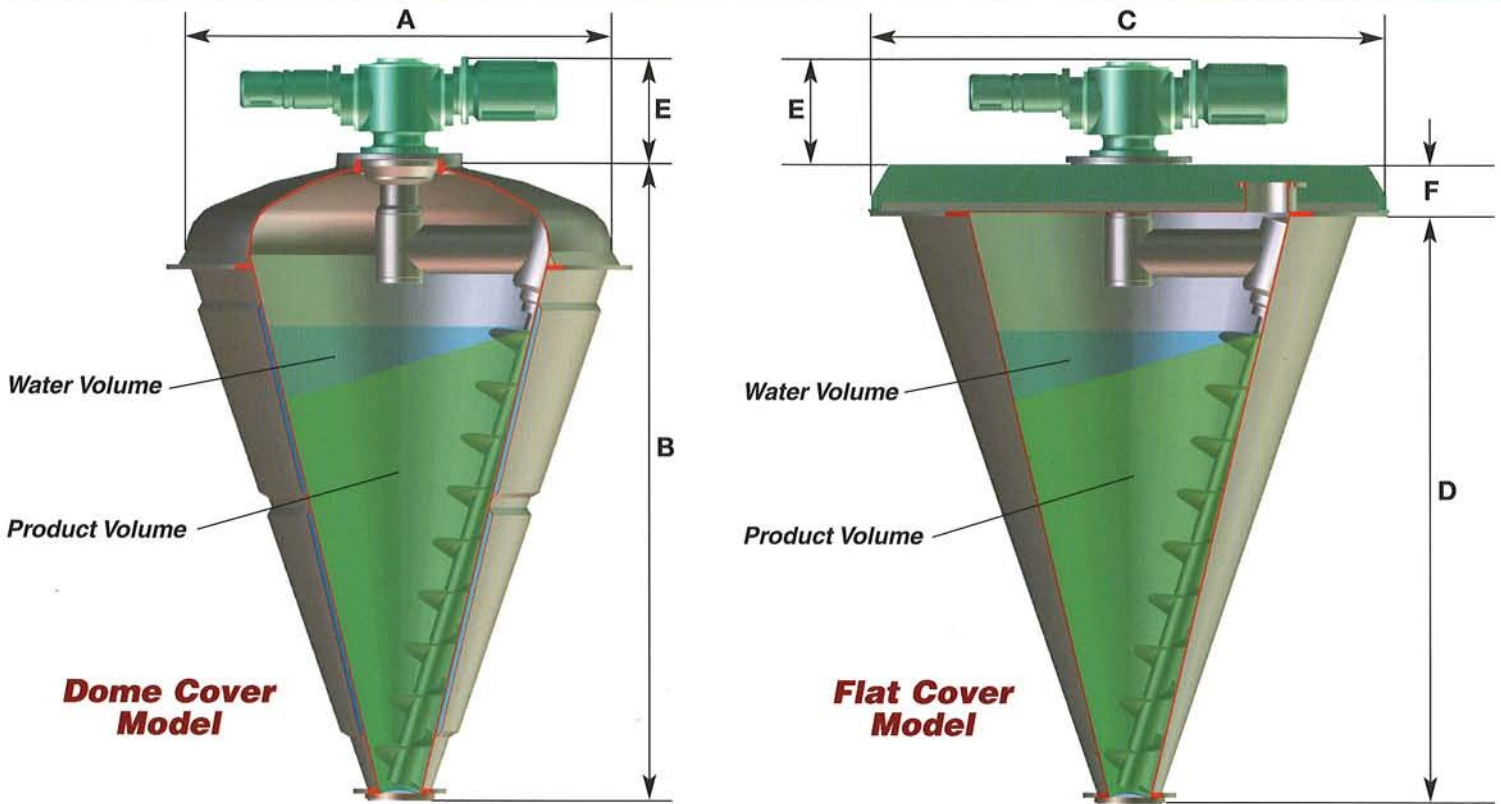
Other types of valves available including side discharge.



Teflon®, Viton® and Kalrez® are registered trademarks of E.I. DuPont de Nemours & Co., Inc.

**JAYGO**  
INCORPORATED

# Dimensions and Sizes



Model Code	Working Capacity		Liquid Level		Dome Cover Model								Flat Cover Model							
					Drive I		Drive II		Drive III		Drive IV		Drive I		Drive II		Drive III		Drive IV	
					A Inches	B Inches	A Inches	B Inches	A Inches	B Inches	A Inches	B Inches	C Inches	D Inches	C Inches	D Inches	C Inches	D Inches	C Inches	D Inches
50	18	500	20	560	53	73	59	80					57	67	59	70				
80	28	800	31	890	61	86	65	91					64	78	67	81				
100	35	1000	39	1110	65	92	69	97					68	85	71	87				
150	53	1500	59	1570	73	106	77	111					76	95	79	99				
200	71	2000	78	2220	79	115	83	121					83	105	85	109				
250	88	2500	98	2780			87	129							91	117				
300	106	3000	118	3330			91	136	97	144					96	124	99	129		
350	124	3500	137	3890			95	142	100	151					100	130	104	135		
400	141	4000	157	4440			98	148	104	157					104	136	107	141		
500	177	5000	196	5560			104	159	110	167					110	147	114	151		
600	212	6000	235	6670			110	168	116	178					117	156	120	160		
700	247	7000	275	7780					122	188							126	168		
800	283	8000	314	8890					126	195							130	176		
1000	353	10000	392	11110					134	208	138	212					139	188	143	190
1200	434	12000	471	13330					142	222	144	229					147	199	150	202
1500	530	15000	588	16070					150	235	157	245					157	213	160	216
2000	706	20000	784	22220							169	266							174	237
2500	883	25000	981	27780							181	283							186	254
3000	1059	30000	1177	33330							189	298							196	269

Models available to 2650 cubic feet (75 cubic meters).  
All dimensions are approximate.

Drive Number	Power HP	E Inches	F Inches
I	10	18.5	7-5/8
II	20	22	10
III	40	27	12-3/8
IV	75	33	14-3/4



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