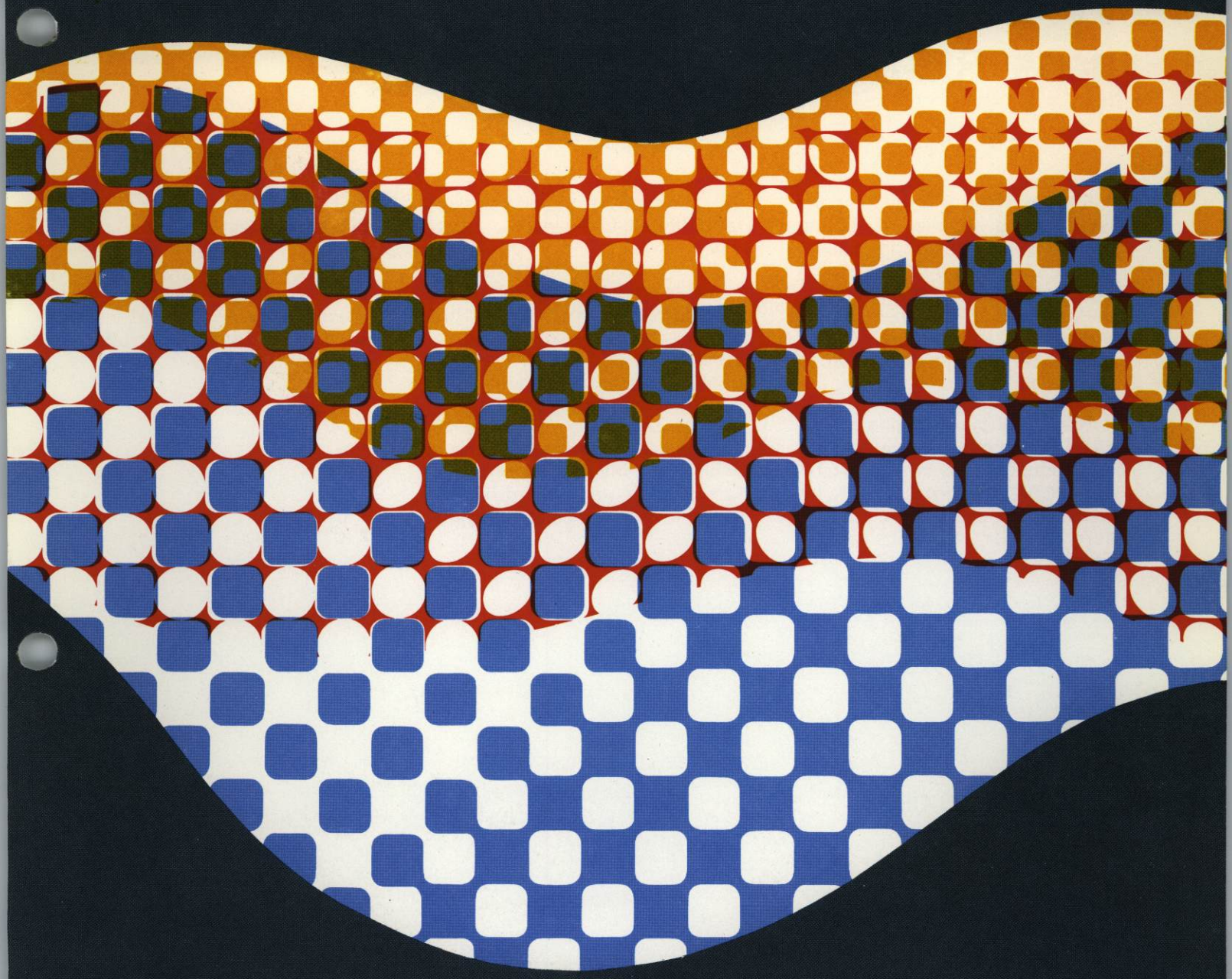
RB-978

RIBBON BLENDERS



ROSS

ROSS RIBBON BLENDERS

Charles Ross & Son Company is a leading supplier of Ribbon Blenders to the major process industries. Many products, including pharmaceuticals, foods, chemicals, fertilizers, plastics, confectionary products, pigments, and cosmetics are made in Ross Blenders.

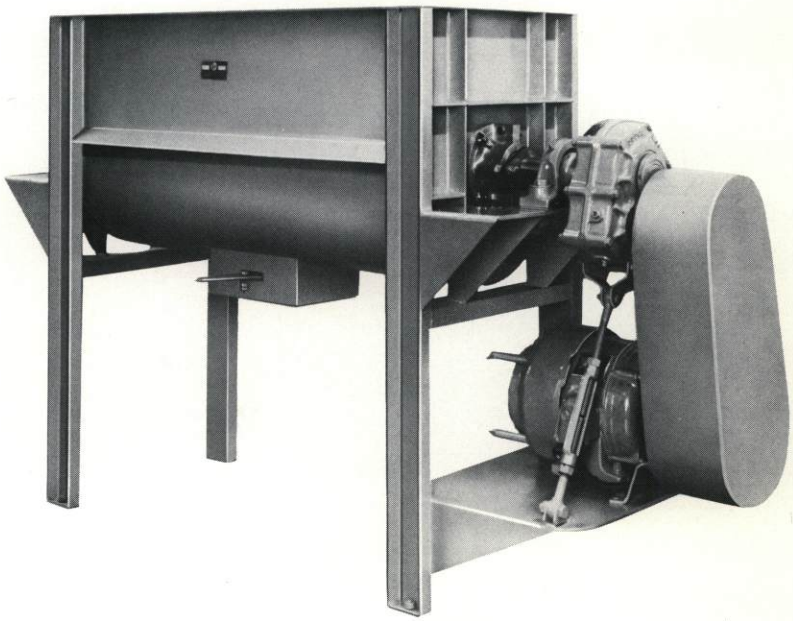
Based on data supplied by our clients or gathered during tests in our Customer Service Laboratory, our engineers select the most efficient machine for each application. Superior workmanship and use of top quality materials assure long, trouble-free service.

Ross Ribbon Blenders range in capacity from 1 cu. ft. laboratory models to 515 cu. ft. production units. A wide variety of horsepower and speed combinations satisfy the most demanding applications. When required by the process, we can provide jackets for heating or cooling, a choice of materials of construction, center or end discharge designs and various stuffing box options.

If you would like us to assist in determining your equipment needs, or to arrange for a test in our laboratory, kindly let us have your present operating data. Please write or call and we will send you the appropriate information promptly.

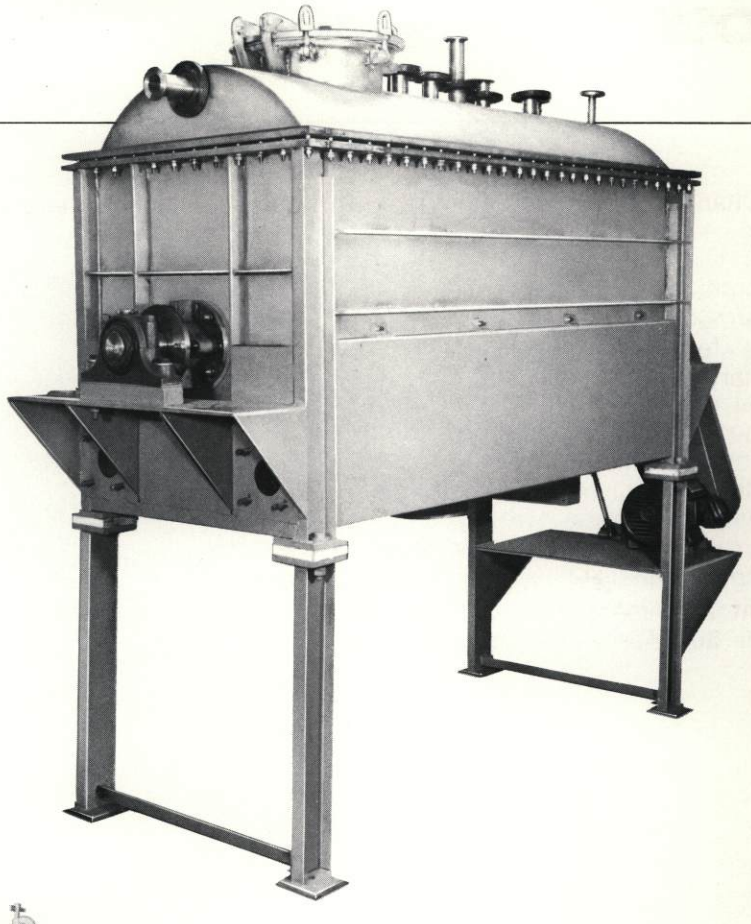
CONFECTIONARY

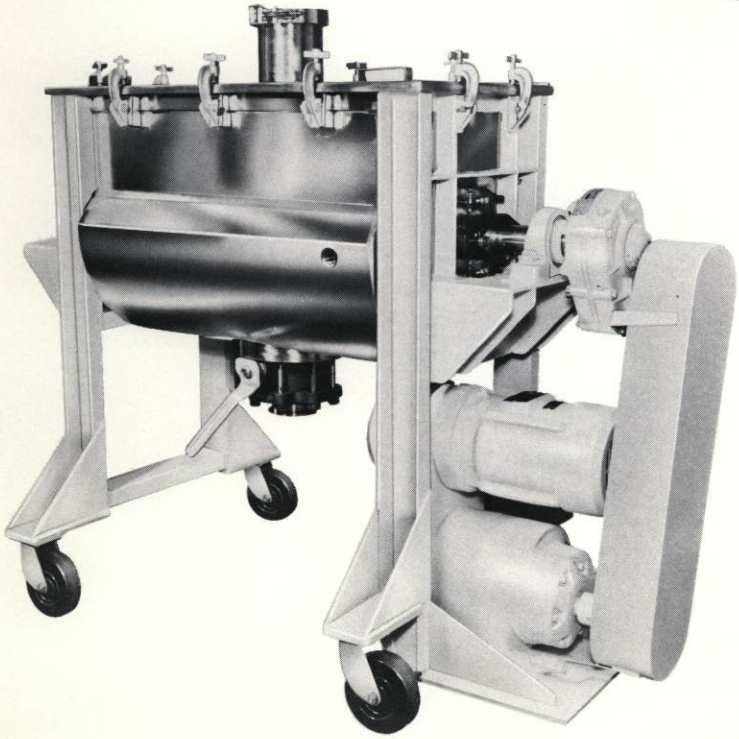
Our standard 10 cu. ft. model blends materials having an average bulk density of 32 lbs./cu. ft. One-piece or flanged shaft designs are suitable for end or top removal depending on space limitations. Shaft-mounted torque-arm reducers and quiet belt-drives are common on the smaller machines. A torque controlling coupling permits starting under full load.



CHEMICALS

80 cu. ft. blender successfully mixes proprietary chemicals. Machine is suitable for operation under vacuum or internal pressure. It is electrically heated, and cooled by means of air being forced through sheet metal flow chambers.





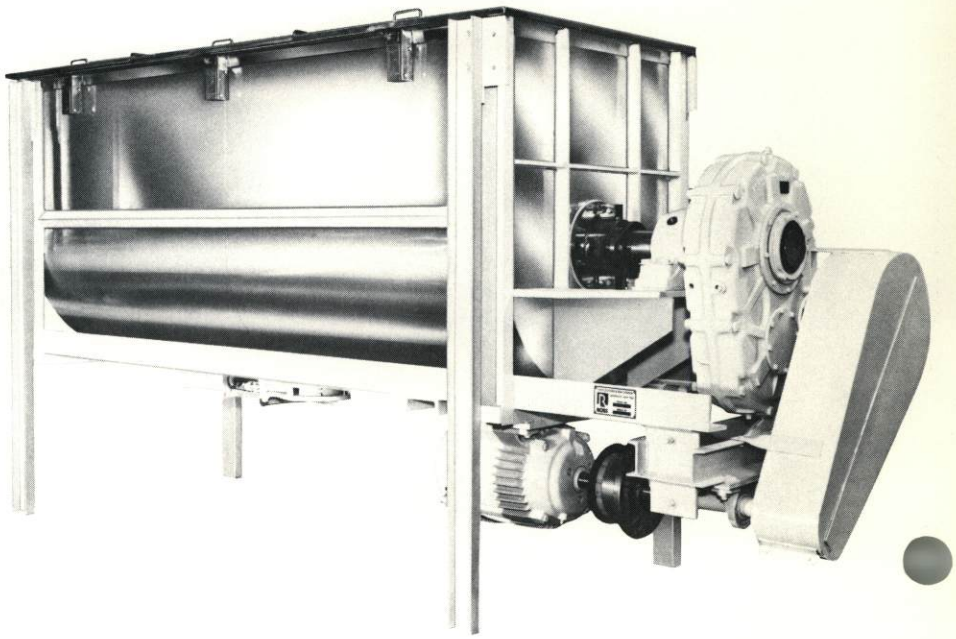
COSMETICS

A well-known cosmetics manufacturer uses the 5 cu. ft. model shown to blend pilot plant batches of new products under development. The stainless steel blender includes a 3 HP variable-speed drive and operates between 30 and 300 rpm. Unit has a 15 psig jacket, 3" flush type ball valve and sanitary stuffing boxes.

ROSS RIBBON BLENDERS

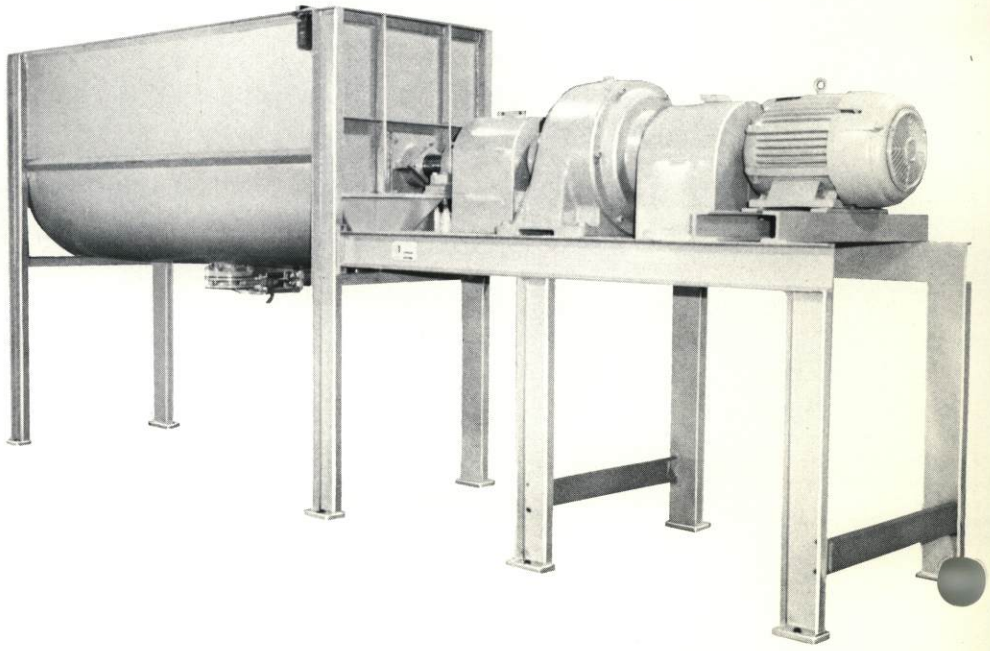
PHARMACEUTICALS

80 cu. ft. ribbon blender compounds tablet granulations for a prominent pharmaceutical manufacturer. All wetted parts are polished stainless steel type 304. Through-the-floor mounting facilitates materials handling. Safety devices include cover grates and microswitches.



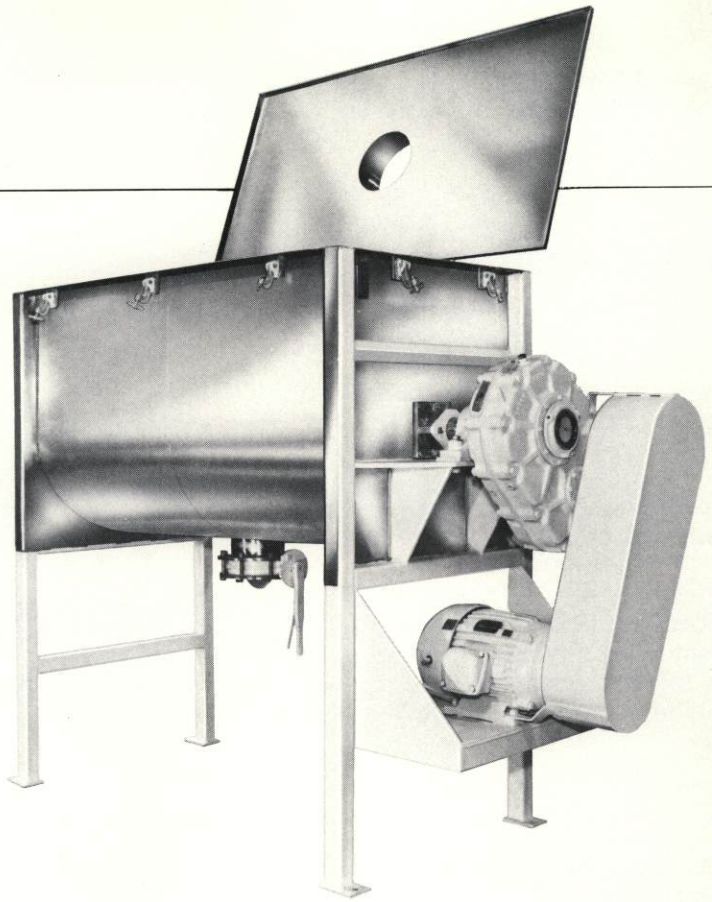
PIGMENTS

This rugged 80 cu. ft. blender mixes high solids presscake for a major pigment manufacturer. A 25 HP direct drive powers this heavy-duty unit. A special torque controlling coupling is used to permit start-up under full load conditions.



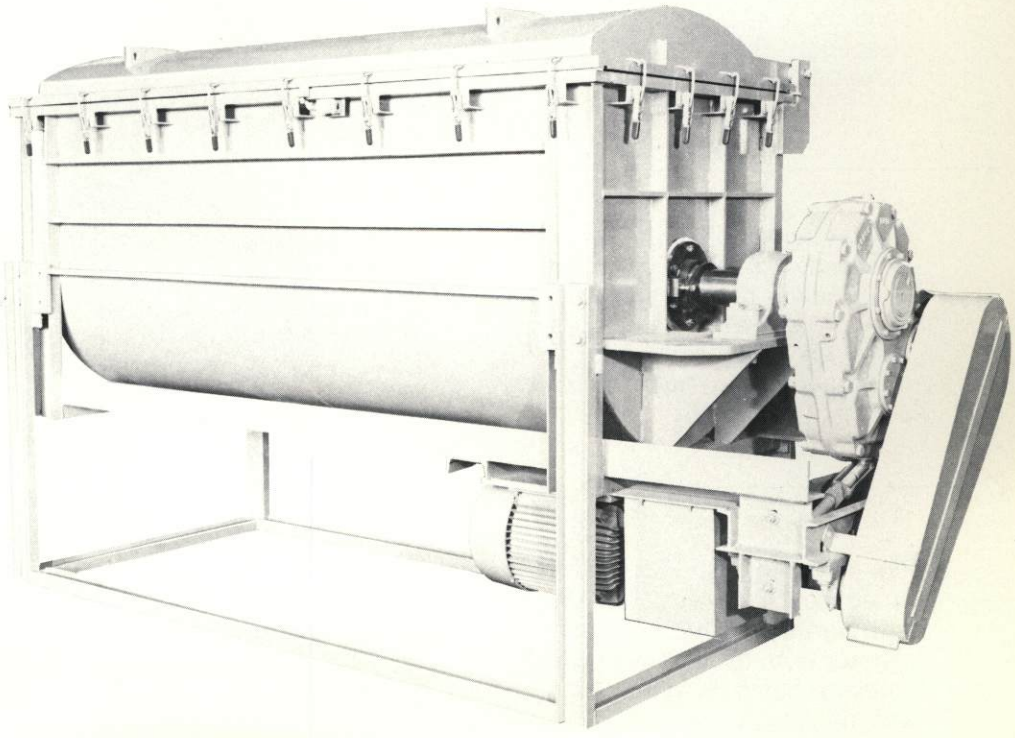
FOODS

Instant beverage premixes are blended in this 120 cu. ft. horizontal (paddle) blender having a 40 HP drive. All exposed stainless steel surfaces have a 140 grit finish. The high clearance under the discharge valve permits discharging into bins which are moved to the packaging area. A pneumatic cylinder raises the cover for quick access and washdown.



PLASTICS

A 71 cu. ft. (500 gallon) vacuum machine produces plastisol for a major textile manufacturer. Unit is made of carbon steel. An "O" ring is used to seal between the domed cover and the mix trough. Blender has a 20 HP drive and special vacuum-type stuffing boxes.



ROSS RIBBON BLENDERS

AGITATOR DESIGNS

Three standard agitator designs are available: Continuous ribbon, interrupted ribbon and paddle-type. They can be arranged for either center or end discharge.

Fig. 1 Continuous ribbon, arranged for center discharge
Most universal design, produces homogeneous blends quickly. Outer ribbons move materials toward center. Inner ribbons move materials toward endplates. Both provide radial movement of materials.

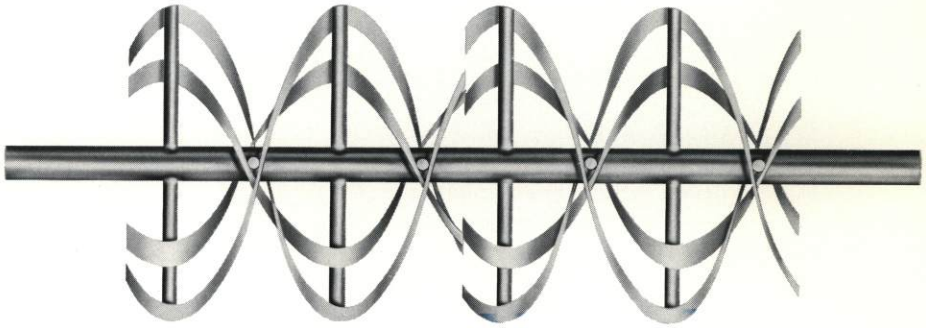


Fig. 2 Continuous ribbon, arranged for end discharge
Outer ribbons move materials toward discharge end. Inner ribbons move materials in opposite direction. Both provide radial movement of materials.

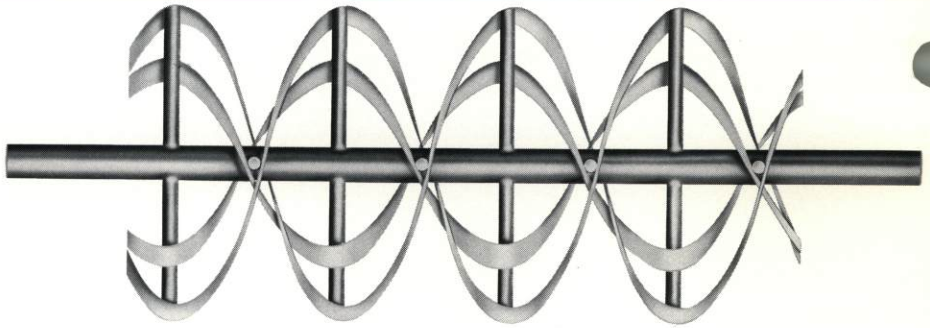


Fig. 3 Interrupted ribbon
Provides same basic action as continuous ribbon agitator. Requires slightly less power, therefore, is generally applied for materials having higher bulk density.

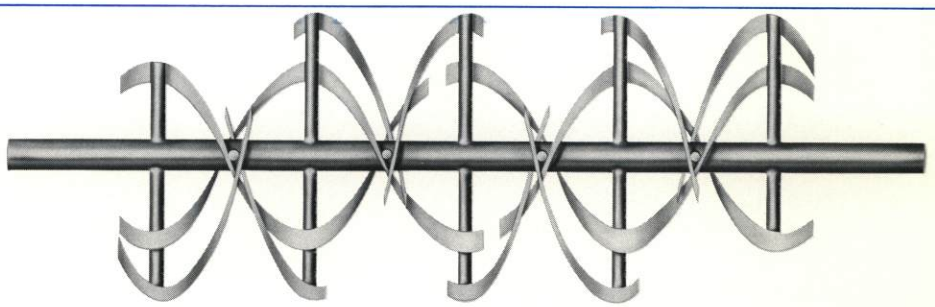
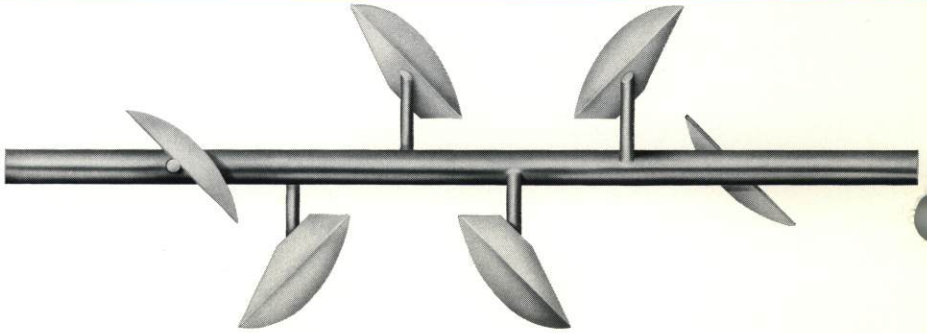


Fig. 4 Paddle-type
When the machine will be used for both partial and full batches, this agitator is an excellent choice. An efficient blend is obtained even with minimal loads.



DISCHARGE VALVES

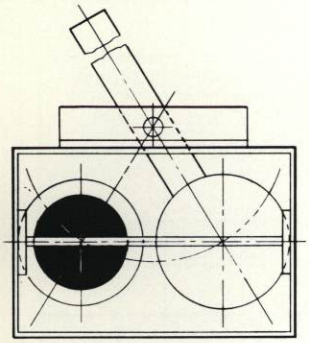


Fig. 5 Standard Slide Paddle Valve
This valve is the most common choice for the majority of applications. Available for manual or pneumatic operation. Provides positive solids shut off.

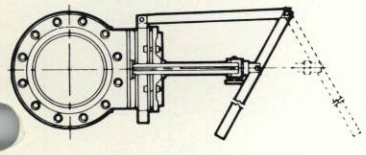


Fig. 6 Optional Slide Gate Valve
Used for dust tight operation or where liquids are present in the blend.

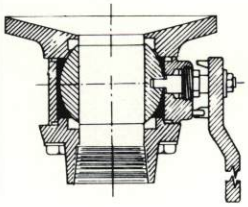


Fig. 7 Ball Valve
Used for vacuum service or for retention of liquids.

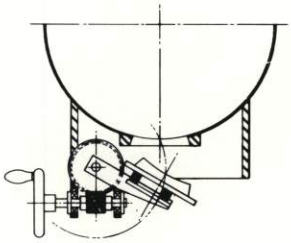


Fig. 8 Flush Plug Valve
Eliminates dead spots in the mix trough. Equipped for either manual of pneumatic operation.

STUFFING BOXES

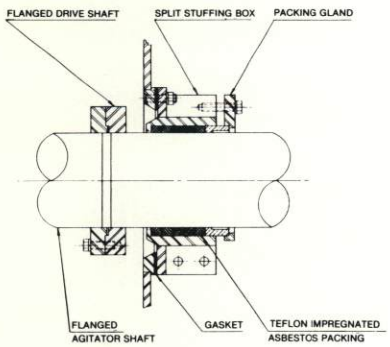


Fig. 9 Standard Type
The split housing is readily disassembled for repacking. Teflon-impregnated, braided asbestos packing is normally used.

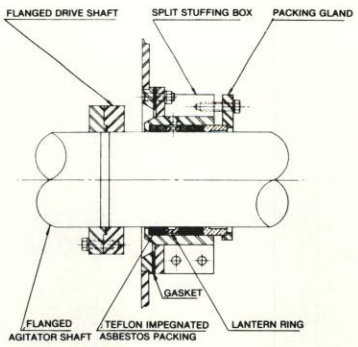


Fig. 10 Air or Liquid Seal
Designed to prevent migration of liquids or solids into the packing area. Either air or a liquid enter the blender continuously under slight pressure through a lantern ring in the stuffing box.

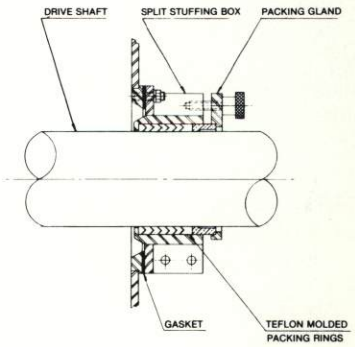


Fig. 11 Sanitary Type
When thorough cleaning must be achieved between batches, this design is used. Stuffing box is easily disassembled with simple hand tools and includes special molded Chevron-Teflon packing rings.

ROSS RIBBON BLENDERS

Charles Ross & Son Company
710 Old Willets Path,
Hauppauge, New York 11787
(516) 234-0500
Cable Address: Rossson Hauppauge NY, Telex: 144538

SPECIFICATIONS

MODEL NUMBER	WORKING CAPACITY		FULL CAPACITY		STANDARD MOTOR H.P.★	AGITATOR SPEED R. P. M.	TROUGH SIZE			OVERALL DIMENSION			SHIPPING WEIGHT LBS.
	CU. FT.	GAL.	CU. FT.	GAL.			WIDTH	LENGTH	DEPTH	A	B	C	
42A-5 †	5	37	7	52	1½	70	17	38	21	72	23	62	800
42A-10 †	10	74	13	94	3	60	21	48	25	86	27	66	1,200
42A-18 †	18	134	22	165	5	55	24	60	29	102	30	69	1,500
42A-25 †	25	187	30	224	5	45	29	60	33	104	35	74	2,300
42A-36 †	36	269	41	307	7½	45	30	78	34	121	36	75	2,800
42A-52 †	52	388	56	424	7½	40	34	84	38	127	40	79	3,900
42A-62.5 †	62.5	465	72	540	10	35	36	96	40	142	42	81	4,600
42A-71 †	71	530	80	598	15	35	38	96	42	144	44	83	5,200
42A-80 †	80	598	90	673	15	30	38	108	42	152	44	83	6,000
42A-100 †	100	748	110	825	20	25	40	120	44	166	46	86	6,600
42A-120 †	120	897	132	988	25	25	44	120	48	166	46	90	8,000
42A-155 •	155	1159	168	1263	30	25	50	120	54	166	56	102	9,300
42A-180 •	180	1345	195	1459	30	20	54	120	58	166	60	106	10,200
42A-215 •	215	1610	235	1756	40	20	54	144	58	190	60	106	12,500

★ HP shown is based on average mix bulk density of 32 lbs/cu. ft. of free flowing products. Higher horsepowers available on application.
†For Outline see Fig. I
•For Outline see Fig. II
All dimensions in inches are approximate.

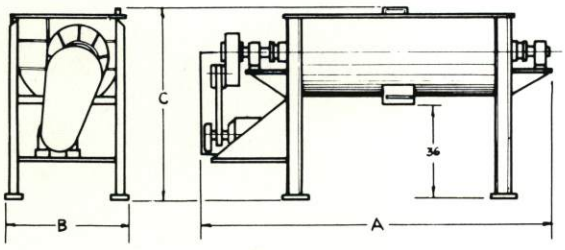


Fig. I.

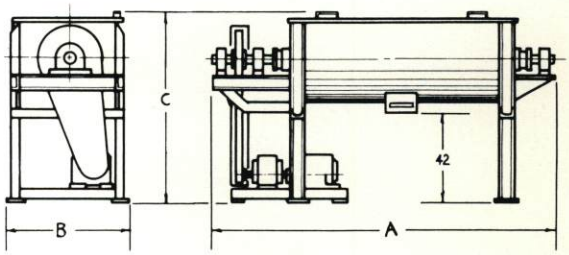


Fig. II.

For information on the 1 cu. ft. laboratory blender and units larger than 215 cu. ft., please contact us.