

A & M Process Equipment Ltd. 5743 72 113 06 10:27

August 20, 2002

Dockets Management Branch (HFA-305)
FOOD AND DRUG ADMINISTRATION
12420 Parklawn Drive
Room 1-23
Rockville, Maryland 20857

RE: SUPAC-IR/MR Guidance For Industry
Mechanical Equipment Addendum
Docket No. 95D-0349

Gentlemen,

A & M Process Equipment has been a Canadian manufacturer of Blending & Mixing Equipment for solid dosage applications since 1986. At present, approximately 60-70% of our business is serving the pharmaceutical and nutritional food industry. A copy of our brochures are attached for your reference.

We request that A & M Process Equipment be added to the list of companies under the following categories:

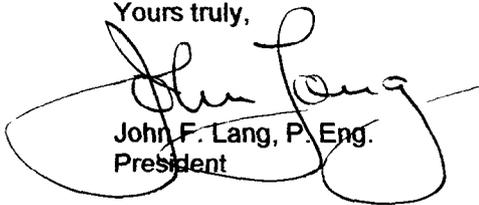
Under Unit Operation – Blending and Mixing:

Class – Diffusion Mixers; Subclass – V Blenders; Double Cone Blender; Bin Blenders; Horizontal/Vertical/Drum Blenders.

Class – Convection Mixers; Subclass – Ribbon Blenders; Diffusion Mixers (Tumble) wit Intensifier/Agitator.

We thank you for your co-operation in this matter and should any additional information be required, please do not hesitate to contact me.

Yours truly,


John F. Lang, P. Eng.
President

A & M Process Equipment Ltd.



John Lang, P ENG

JFL/ms

Encl.

487 Westney Rd. S.
Unit #1
Ajax, Ontario L1S 6W7

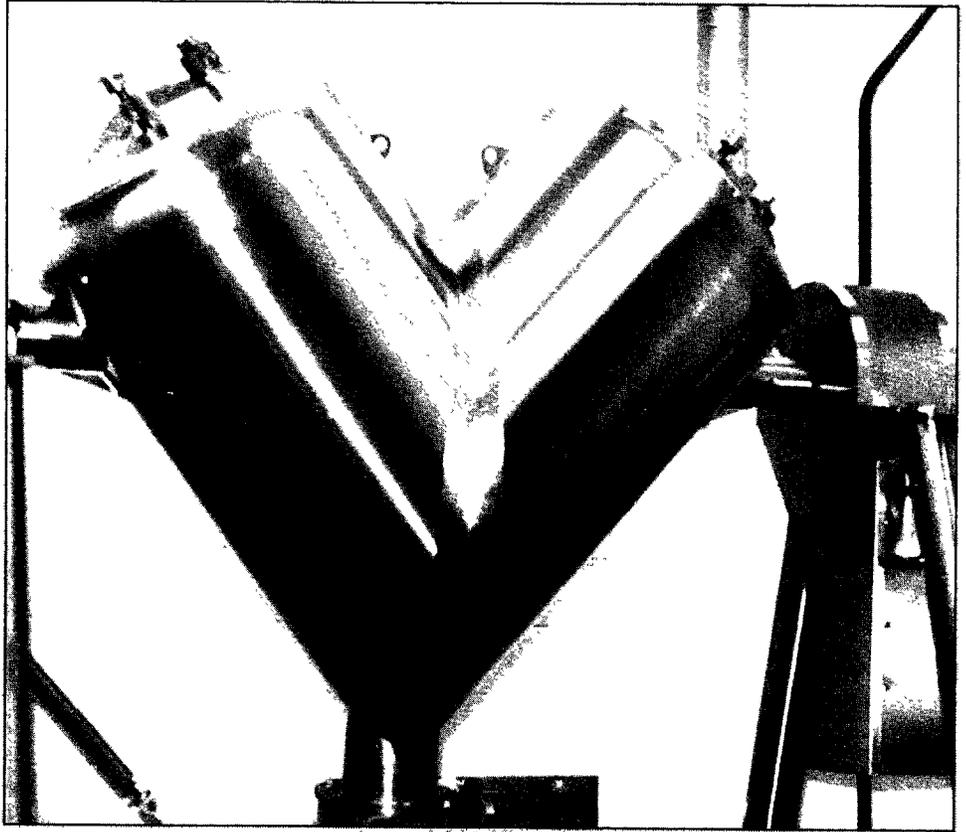
Telephone: 905-619-8001
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email: johnlang@amprocess.com
website: www.amprocess.com

95D-0349

487 Westney Rd. S., Unit #1, Ajax, Ontario L1S 6W7

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A + M Process Equipment was founded in 1986 by John Lang, a graduate mechanical engineer who has been involved in the process equipment industry for over 15 years. John fulfilled the engineering designs of a complete range of solids/solids and liquid/solids blending and mixing process equipment and brings a current understanding of today's fast changing process needs to apply to these well proven standardized equipment designs. Each application is evaluated according to our customer's real requirements and A + M strives to provide the highest quality products available. We offer design available from our regular sources. We guarantee competent, personalized service and stay abreast of the latest in process technologies and trends in a diverse range of industries. This enables us to offer knowledgeable service resulting in the most cost effective equipment resolving your process problem. At A + M, we are offering a reputation for quality, reliability and durability to which we are fully committed. Why not ask us for the test? We are confident you will not be disappointed.

Outperforms Other Mixers

From gentle blending to intensive mixing, the A + M Twin Shell Blender uniformly displaces your materials for a complete blending of products by the intermeshing action of two inclined cylinders. This combines precise blending with short blending times. Tumble blending is most suited to products of uniform product size and density and where requirements for fast, thorough cleaning are desirable in sanitary applications. For the dispersion of minor ingredients and/or breaking up materials which tend to form agglomerates, the blender can be equipped with a solids intensifier bar which is designed for ease of removal. For incorporation of liquids, the bar assembly is cored and equipped with a feed tube to disperse liquid between the disc assemblies in a finely atomized spray throughout the product mix.

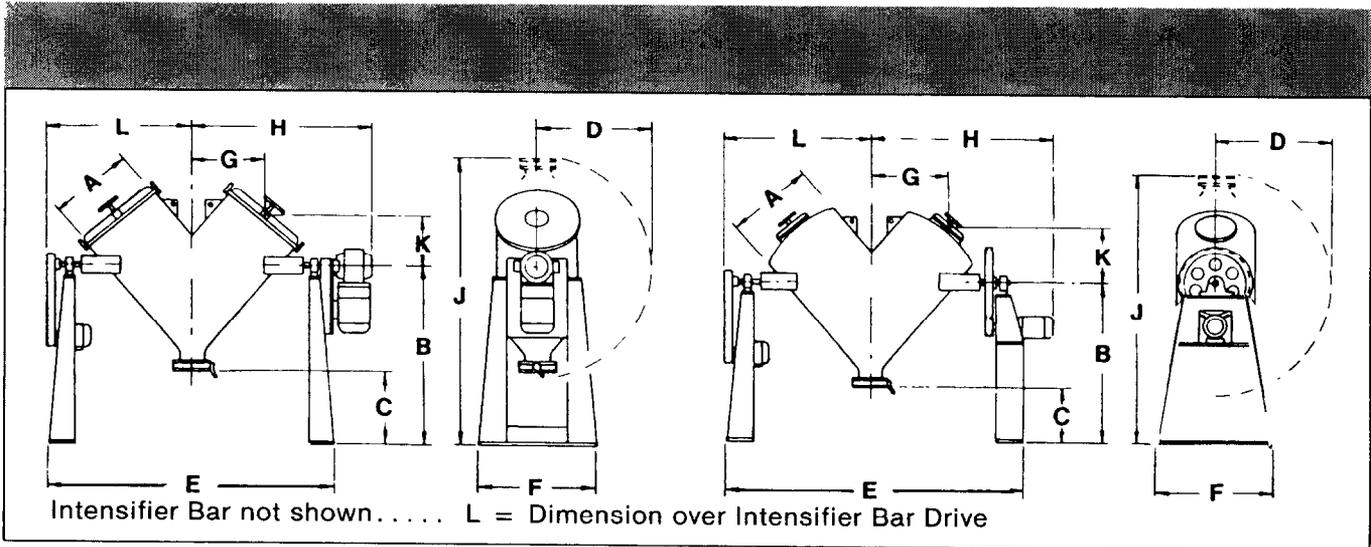
Ultra Sanitary

Stainless Steel Construction Easy to Clean, Dust Tight Drives Fully Enclosed

Complete attention is given to ensure strict GMP requirements are met in every Twin Shell Blender manufactured. Standard Sanitary design includes welds of the blender shell to be continuous, free from all cracks and crevices, with all internal surfaces ground smooth to a No. 4 (150 - 180 grit) finish and all external surfaces ground smooth to a buff (120 grit) finish. Rugged, tubular support frameworks are solid stainless steel, glass beaded with fully polished surfaces optional. Bearings, gear and motor drives are fully enclosed with stainless steel guards. Large charge ports facilitate ready access to blender interior for charging ingredients and ease of cleaning. Optional sanitary pipe adaptors provide capability for dust free loading via vacuum conveying systems. Special cover adaptors and spray nozzles are available for interconnection to "Clean-In-Place" systems. Blenders are fully passivated following fabrication.

Quality Construction

Owing to today's more stringent sanitary requirements in the food and pharmaceutical industries, all A + M Twin Shell Blenders are constructed entirely of stainless steel or other special nickel alloys. Upon request, carbon steel construction is also available for applications in the metal powder and plastic industries. No matter which industry, each blender is ruggedly built utilizing the highest quality materials. Our skilled craftsmen practice the latest in metal fabrication techniques to assure you the highest quality available in the industry. Batch working capacities range from 1 cubic foot to 150 cubic feet. Each blender design is customized to suit the customer's specific requirements taking into consideration the need for solids or liquid/solids intensifier bar, loading/unloading systems, material finish requirements, discharge valve designs, etc. Our extensive process experience combined with our flexibility to customize each blender ensures the most cost effective blender design is offered for each and every application.



WITH DIRECT DRIVE

Model	Cu. Ft. Cap.	A	B	C	D	E	F	G	H	J	K	L	Discharge Size	Mtr. H.P.	Bl'nd RPM	Int. Mtr. H.P.	Int. RPM	Max. Den.
ATS10	1	11-1/2	34	20	14	3'-8"	21	9-3/8	2'-5"	48	6-1/4	2'-4"	6"	1/4	30	1	1900	125
ATS30	3	16-1/2	39	17-1/4	21-3/4	5'-0"	28	13-5/8	3'-1"	60-3/4	9-3/8	3'-0"	6"	3/4	25	1	1900	100
ATS50	5	19-1/2	39	14	25	5'-5"	28	16	3'-8"	64	10-7/8	3'-3"	6"	1	25	1-1/2	1300	80
ATS100	10	25	44	12-1/2	31-1/2	6'-6"	32	21-1/2	4'-5"	75-1/2	15-1/4	3'-9"	8"	2	20	3	1300	75
ATS200	20	30	48	11	37	7'-6"	36	25-1/4	4'-11"	85	17-1/4	4'-3"	8"	3	17	5	1300	65

WITH GEAR DRIVE

Model	Cu. Ft. Cap.	A	B	C	D	E	F	G	H	J	K	L	Discharge Size	Mtr. H.P.	Bl'nd RPM	Int. Mtr. H.P.	Int. RPM	Max. Den.
ATS300	30	36	55	11	44	9'-6"	42	30-7/8	5'-10"	99	21-5/8	5'-3"	10"	5	15	7-1/2	1100	55
ATS400	40	40	65	15	49	10'-4"	48	35	6'-10"	114	24-1/2	5'-8"	10"	5	14	7-1/2	1100	55
ATS500	50	42	65	13	52	10'-9"	48	36-1/4	7'-4"	117	25-7/8	5'-11"	10"	5	14	10	960	55
ATS600	60	45	68	12	56	11'-6"	54	39	7'-6"	124	27-7/8	6'-3"	12"	7-1/2	11	15	850	50
ATS750	75	48	72	12	60	12'-4"	54	41	7'-9"	132	28-3/4	6'-9"	12"	7-1/2	11	15	850	50
ATS1000	100	54	78	12	66	13'-8"	60	45-5/8	8'-5"	144	31-7/8	7'-4"	12"	7-1/2	8	20	850	50
ATS1250	125	57	81	11	70	14'-6"	66	48-3/4	8'-9"	151	34-3/8	7'-9"	12"	10	8	25	850	50
ATS1500	150	60	84	10	74	15'-4"	66	50-3/4	9'-3"	158	35-3/4	8'-2"	12"	10	7	25	850	50

* DIMENSIONS ARE APPROXIMATE, SUBJECT TO CERTIFICATION BY A + M PROCESS EQUIPMENT LTD

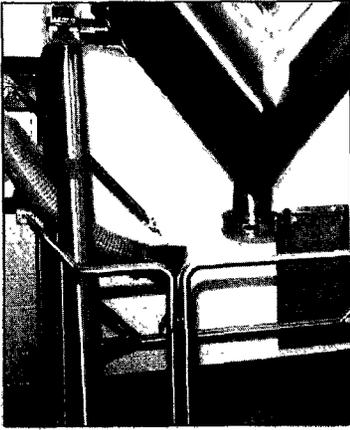


Solids Intensifier Bar

Especially suited to pilot plant and/or small production requirements, A + M Portable Twin Shell Blenders are fully equipped and shipped preassembled, ready for use. Design includes a prewired NEMA 4X stainless steel control panel and hinged safety rail. Available in 1, 3 and 5 cubic foot working capacities, portable units can be supplied in T304, T316 stainless steel or special alloys construction. Optional features include cantilever solids/liquids intensifier bars, spray nozzle assemblies, explosion proof controls and variable speed drives. Many other options and accessories can be selected to customize the blender to suit our customer's individual requirements.

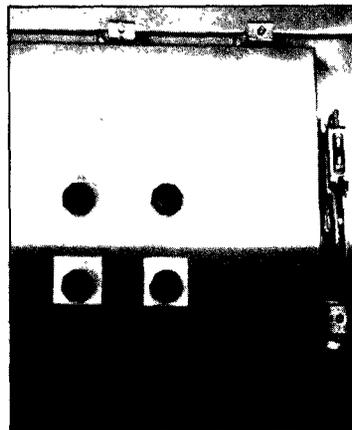
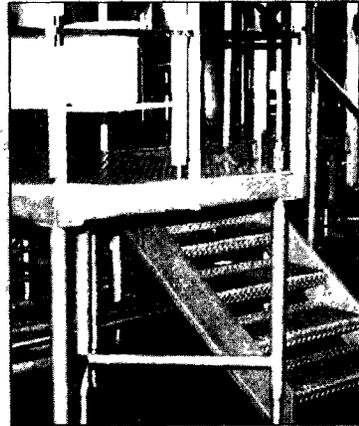


Portable Unit



Custom safety railings or electronic motion sensors can be furnished for operator safety.

Stainless steel or aluminum mezzanines with stairs and hand-rails provide access to blender charge ports for loading and cleaning. Fixed and portable designs available.

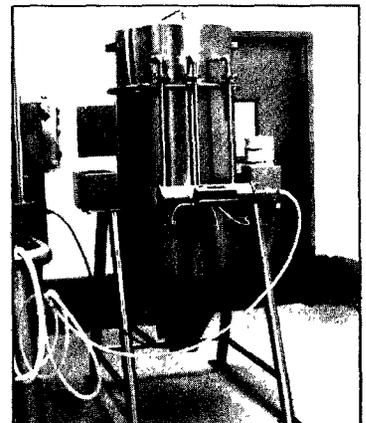


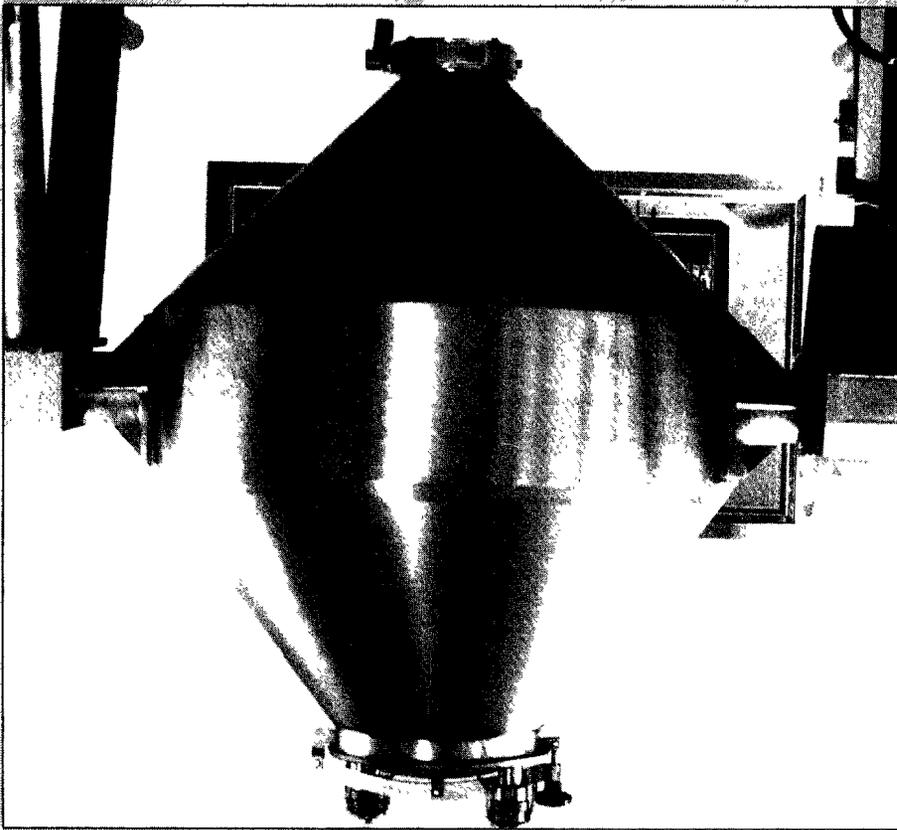
Prewired, pretested control panels in NEMA 4X or air purged stainless steel enclosures include disconnect, starters, pushbuttons and timers.



A & M Process Equipment Ltd.
487 Westney Rd. S., Unit 1
Ajax, Ontario L1S 6W7
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Vacuum loading/unloading systems designed to suit each product and customer's conveying capacity for dust free operation.





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Gentle, Homogeneous Blending

The folding, spreading and cascading action of the A + M Conical Blender provides a rapid homogeneous blending of dry and semi dry materials. The end over end revolving action moving materials in and out of a restricted area results in a thorough intermeshing of the products into a uniform mix. Dependent on materials, blending times of 5 - 20 minutes can be achieved. When required, A + M Conical Blenders can be equipped with a solids intensifier bar for disintegrating lumps or agglomerates and for dispersing minor ingredients. With the addition of a rotary union and liquid feed tube, the agitator assembly can incorporate minute quantities of liquids in a finely dispersed mist through the agitator discs into the product mix. For dispersion of viscous liquids, special spray nozzle assemblies can be fitted enabling precise control of droplet size with independent control of the solids intensifier bar.

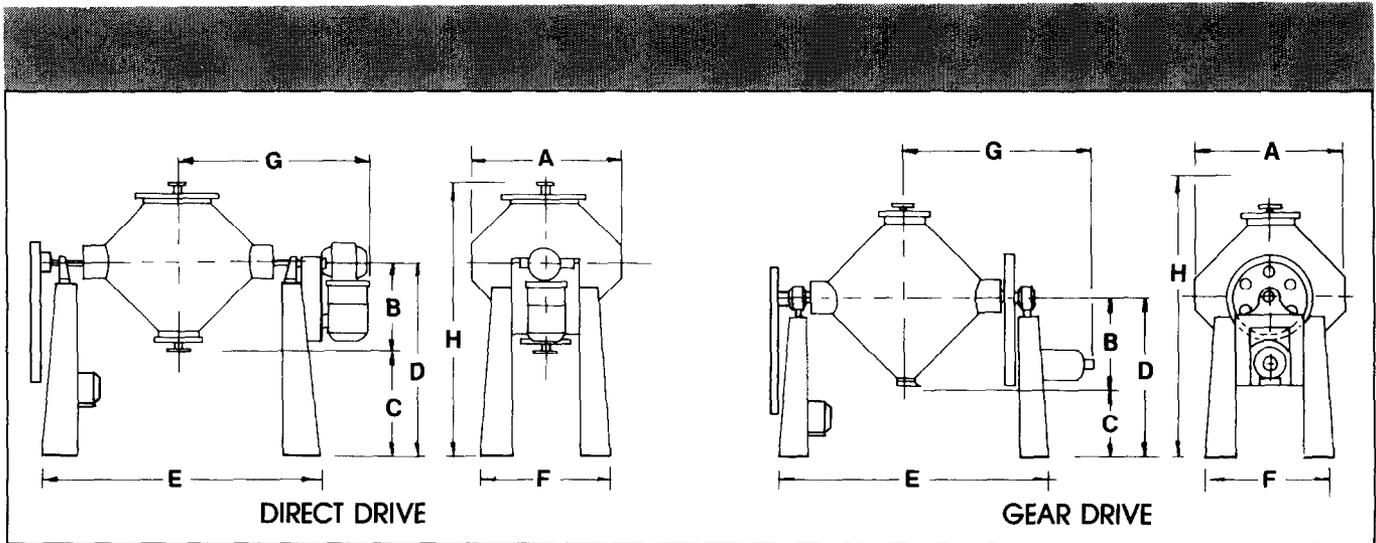
Ultra Sanitary

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Complete attention is given to ensure strict GMP requirements are met in every Conical Blender manufactured. Standard Sanitary design includes welds of the blender shell to be continuous, free from all cracks and crevices, with all internal surfaces ground smooth to a No. 4 (150 - 180 grit) finish and all external surfaces ground smooth to a buff (120 grit) finish. Rugged, tubular support frameworks are solid stainless steel, glass beaded with fully polished surfaces optional. Bearings, gear and motor drives are fully enclosed with stainless steel guards. Large charge ports facilitate ready access to blender interior for charging ingredients and ease of cleaning. Optional sanitary pipe adaptors provide capability for dust free loading via vacuum conveying systems. Special cover adaptors and spray nozzles are available for interconnection to "Clean-In-Place" systems. Blenders are fully passivated following fabrication.

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WITH DIRECT DRIVE

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ACB10	1	18	14	20	34	3'-1"	22	2'-4"	48	4"	1/4	30	1	1900	150
ACB30	3	27	18	18	36	4'-2"	26	3'-0"	54	6"	3/4	30	1	1900	125
ACB50	5	31	20	20	40	4'-4"	28	3'-2"	60	6"	1	30	1-1/2	1300	60
ACB100	10	39	24	20	44	5'-4"	30	3'-2"	68	8"	2	27	3	1300	80
ACB200	20	49	30	18	48	6'-3"	36	4'-3"	78	8"	3	23	5	1300	55

WITH GEAR DRIVE

Model	Cu. Ft. Cap.	A	B	C	D	E	F	G	H	Discharge Size	Mtr. H.P.	Bl'nd RPM	Int. Mtr. H.P.	Int. RPM	Max. Den.
ACB300	30	56	34	14	48	7'-8"	42	5'-3"	82	10"	5	23	7-1/2	1100	50
ACB400	40	62	39	11	50	8'-6"	46	6'-4"	89	10"	7-1/2	20	7-1/2	1100	100
ACB500	50	66	42	10	52	8'-8"	48	6'-6"	94	10"	7-1/2	20	10	960	70
ACB600	60	70	45	9	54	9'-2"	54	6'-8"	99	12"	7-1/2	20	15	850	60
ACB750	75	76	46	12	58	9'-6"	54	7'-10"	104	12"	7-1/2	16	15	850	60
ACB1000	100	84	53	9	62	10'-9"	60	7'-10"	115	12"	10	15	20	850	50
ACB1250	125	90	55	11	66	11'-6"	66	8'-2"	121	12"	15	14	25	850	50
ACB1500	150	96	59	10	69	12'-0"	66	8'-2"	128	12"	15	7	25	850	50

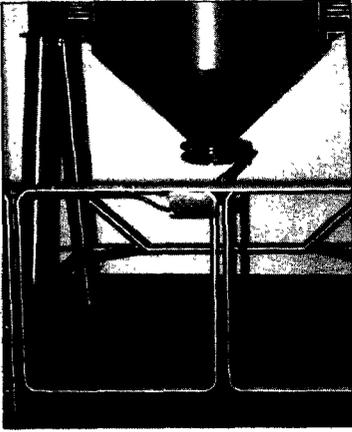
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Solids Intensifier Bar

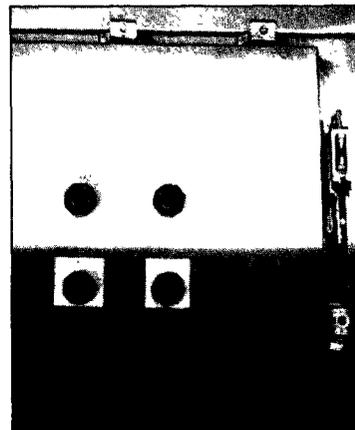
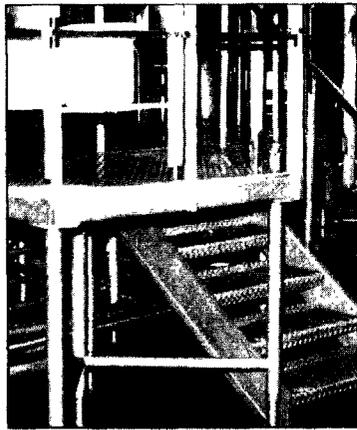
Portable Unit

Especially suited to pilot plant and/or small production requirements, A + M Portable Conical Blenders are fully equipped and shipped preassembled, ready for use. Design includes a prewired NEMA 4X stainless steel control panel and hinged safety rail. Available in 1, 3 and 5 cubic foot working capacities, portable units can be supplied in T304, T316 stainless steel or special alloys construction. Optional features include cantilever solids/liquids intensifier bars, spray nozzle assemblies, explosion proof controls and variable speed drives. Many other options and accessories can be selected to customize the blender to suit our customer's individual requirements.



Custom safety railings or electronic motion sensors can be furnished for operator safety.

Stainless steel or aluminum mezzanines with stairs and hand-rails provide access to blender charge ports for loading and cleaning. Fixed and portable designs available.

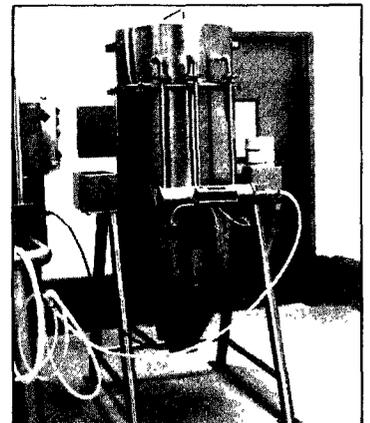


Prewired, pretested control panels in NEMA 4X or air purged stainless steel enclosures include disconnect, starters, pushbuttons and timers.

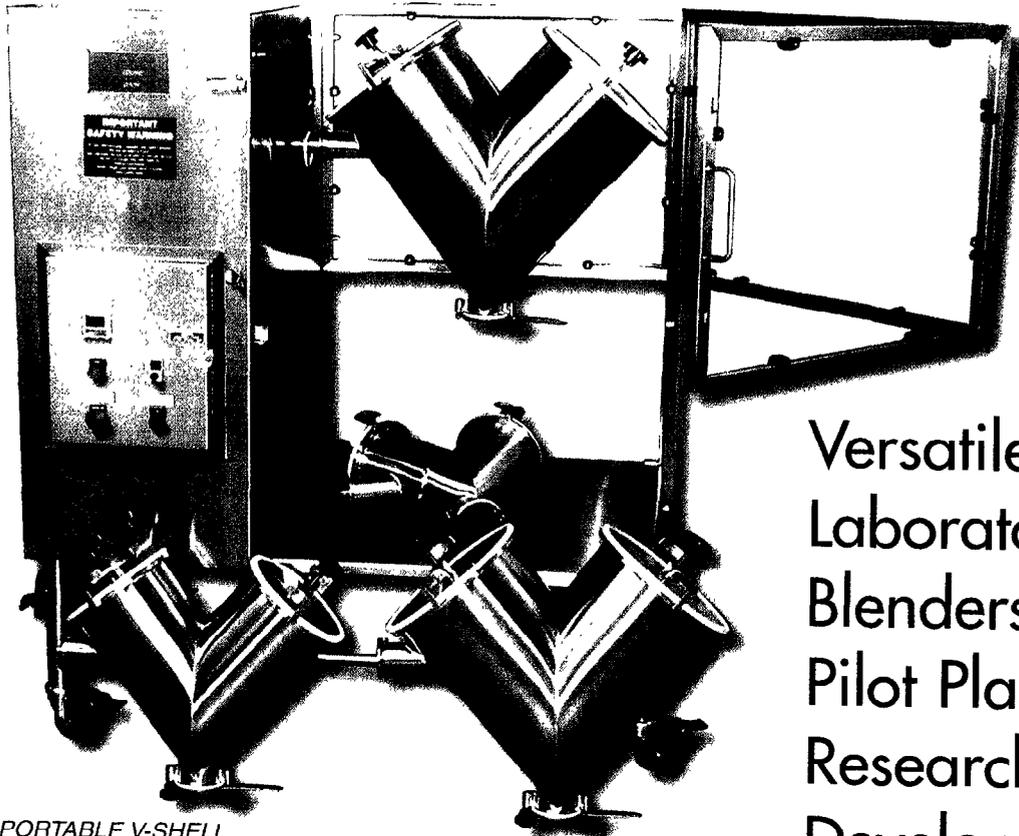


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A & M PROCESS EQUIPMENT LTD.

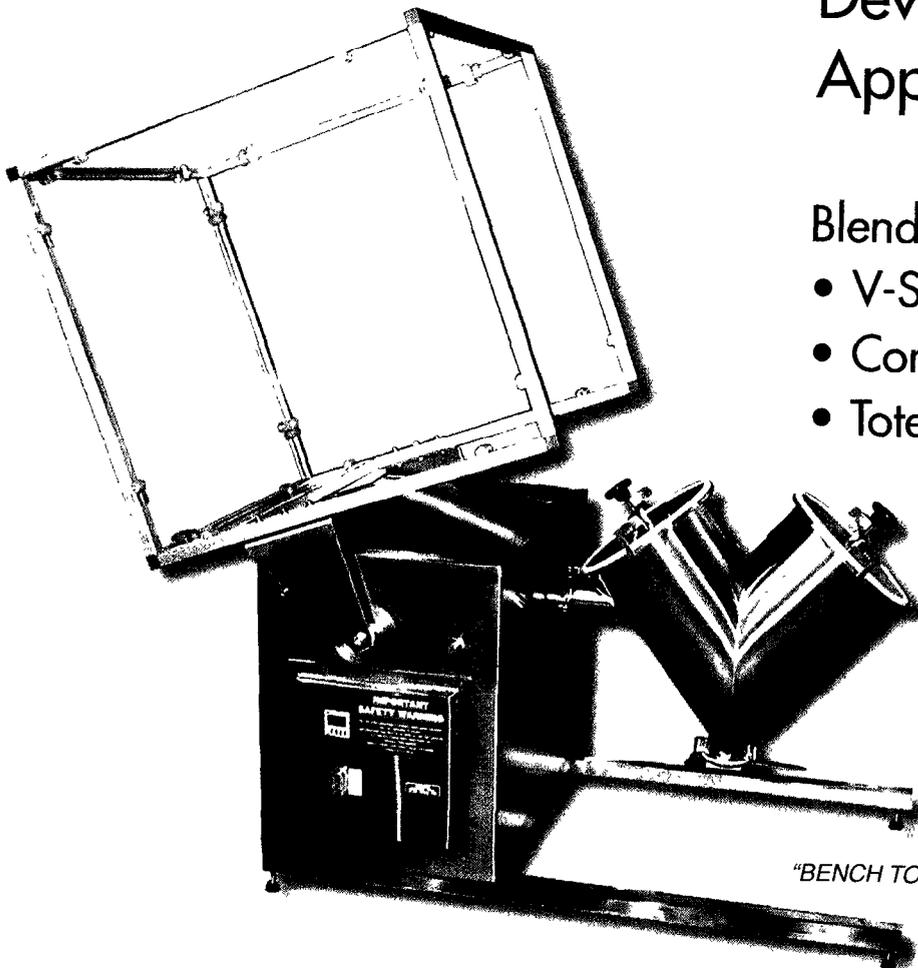


PORTABLE V-SHELL

Versatile
Laboratory
Blenders for
Pilot Plant and
Research
Development
Applications

Blender Types:

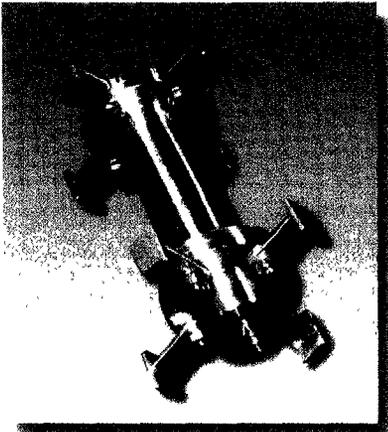
- V-Shell
- Conical
- Tote Bin



"BENCH TOP" VERSION



LABORATORY V-SHELL & CONICAL BLENDERS

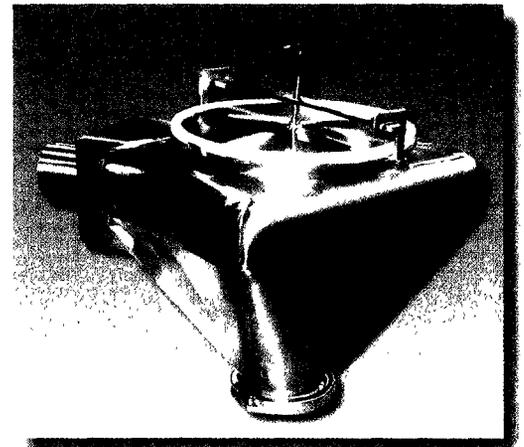


LIQUID-SOLIDS INTENSIFIER BAR

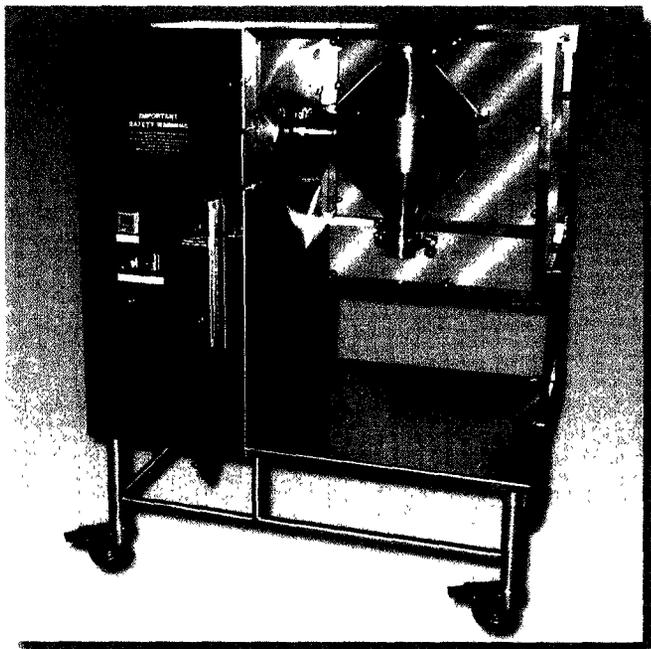
A & M Process Equipment supplies a full range of laboratory blenders for the pharmaceutical, food and chemical industry. Designs incorporate interchangeable, cantilevered blender shell modules including V-shell, Conical and Tote Bin shapes having working volumes ranging from 4 quart to 1 cu. ft. Blenders for both solids-solids, and liquids-solids applications are available with a variety of intensifier bar designs in both "Portable", and "Bench-Top" versions.

STANDARD DESIGN FEATURES:

- AISI 316 stainless steel blending modules having a No. 4 interior and exterior with all welds ground smooth to 180 grit finish.
- AISI 304 stainless steel support stand having a "Buff" external finish with welds ground smooth to 120 grit finish. Portable blender incorporates integral product container shelf.
- Safety Fence constructed of AISI 304 stainless steel (portable version) and Aluminum (Bench-top version) square tubing with Lexan panels secured by corrosion resistant panel clamps. Exposes all surfaces for ease of cleaning. Access gate protected via proximity sensor to disconnect power to motor when gate is opened.
- Cantilevered shells are secured via sanitary clamp for ease of removal for cleaning.



TOTE BIN MODULE, 16 quart capacity

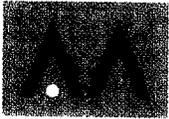


PORTABLE CONICAL BLENDER, 16 quart capacity

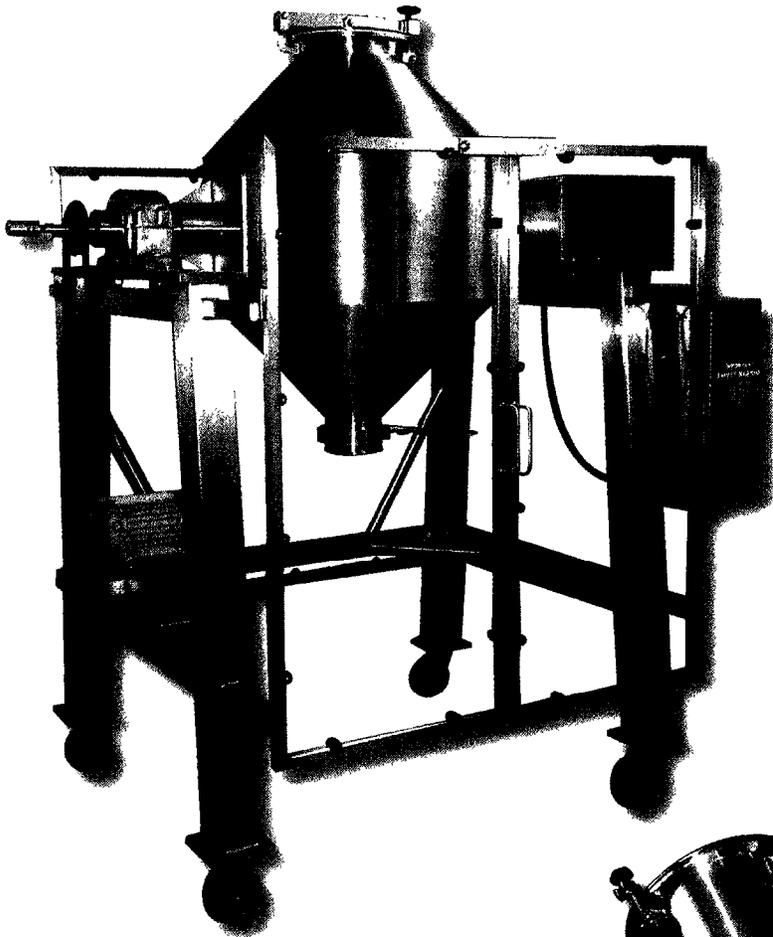
- Shell modules are available in 4, 8, & 16 quart working capacity in Bench-top design, and 4, 8, 16, 21 quart, as well as our **NEW** 1 cu.ft. working capacity in Portable design.
- Variety of cantilevered Intensifier Bars (high speed liquid-solids, solids pin bar, liquid addition) are available to satisfy a complete range of applications. Drive shaft is protected via double O-ring and V-ring seal.
- Solids blenders utilize a direct-connected gear motor for quiet operation while Liquid-Solids design utilizes a HTD timing belt. Both are available with optional AC frequency inverter for variable speed operation.
- Electrical controls are supplied in NEMA 4X stainless steel, water-tight enclosure with start/stop/jog pushbuttons, and digital timer.
- Manual pivot valve with silicone gasket is standard. Sanitary Butterfly Valve is optional.

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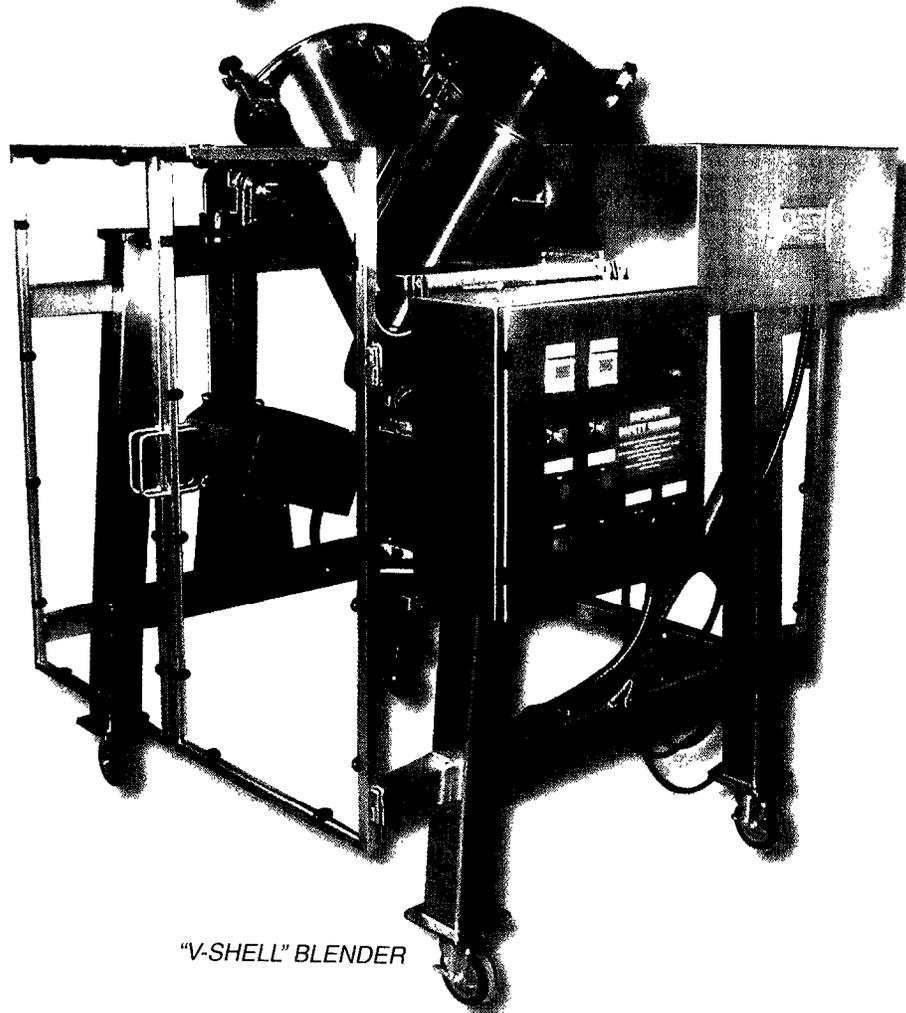


A & M PROCESS EQUIPMENT LTD.



CONICAL BLENDER

Pre-Packaged
Blenders for
Pilot Plant
and/or small
Production
Applications



"V-SHELL" BLENDER



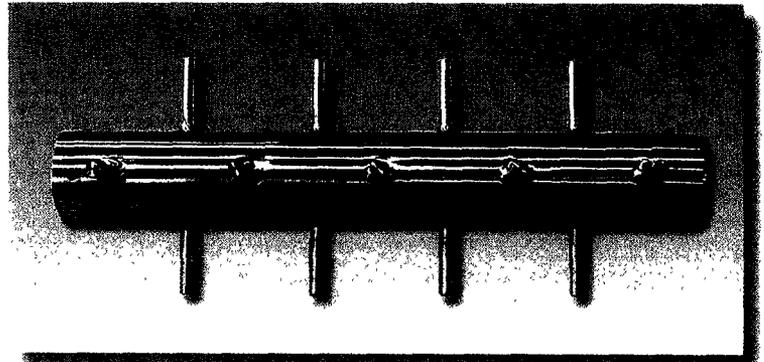
PRE-PACKAGED, PORTABLE BLENDERS READY TO PERFORM



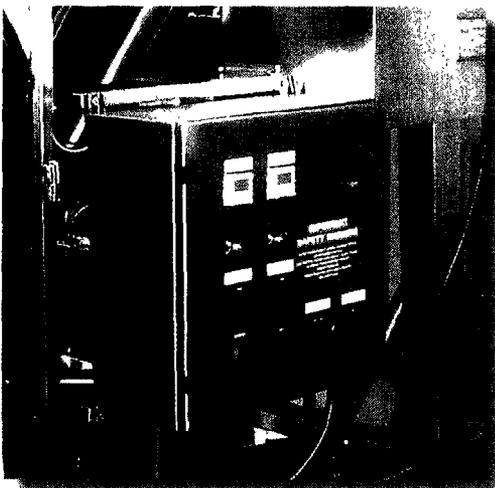
CANTILEVERED LIQUID/SOLIDS
INTENSIFIER BAR

STANDARD FEATURES

- 1 to 5 cubic feet working capacities
- T316 stainless steel vessel with internal surfaces and welds polished to 20-25 micro inch Ra, and external surfaces polished to 50 micro inch Ra.
- T304 stainless steel supports having continuous welds and surfaces glass bead blasted. Provides 36" clearance under valve.
- Sanitary, stainless steel butterfly discharge valve with manual handle and locking pin.
- Safety gates installed front and rear.
- Supplied with casters for portability.
- Pre-wired Electrical Controls supplied in NEMA 4X stainless steel, water-tight enclosure. Includes fused disconnect, magnetic motor starter, digital timer, start/stop/jog pushbuttons.
- Passivation after fabrication.



SOLIDS PIN BAR

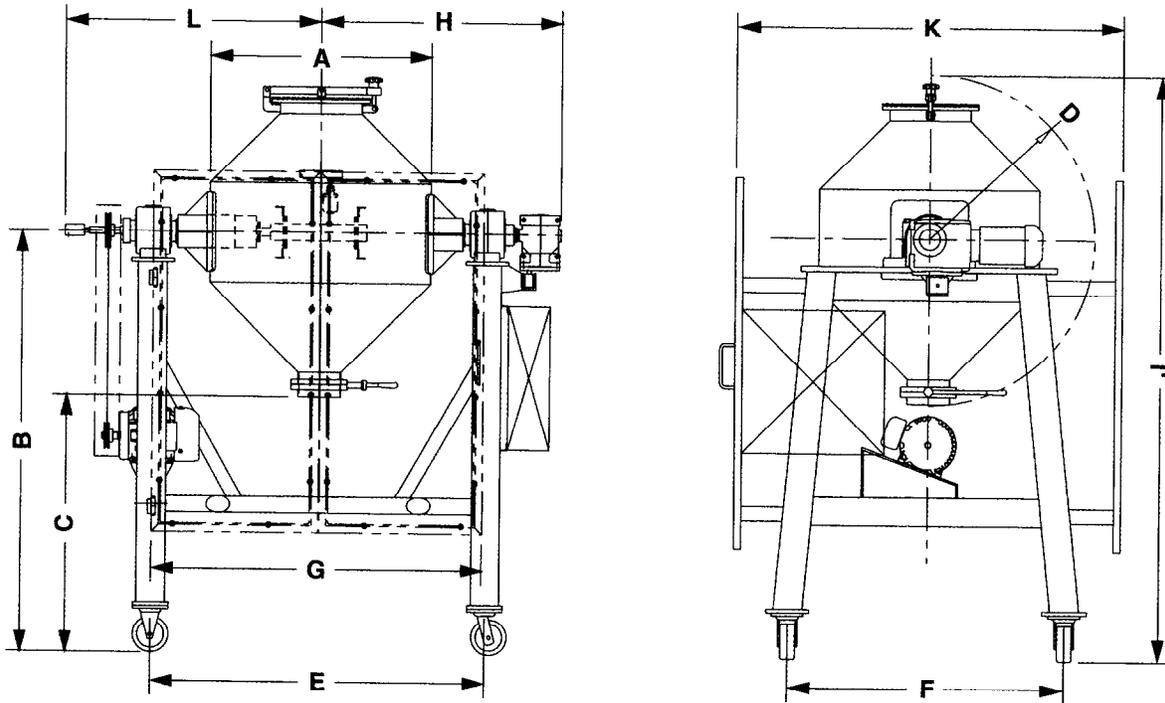


ELECTRICAL CONTROLS

OPTIONAL FEATURES

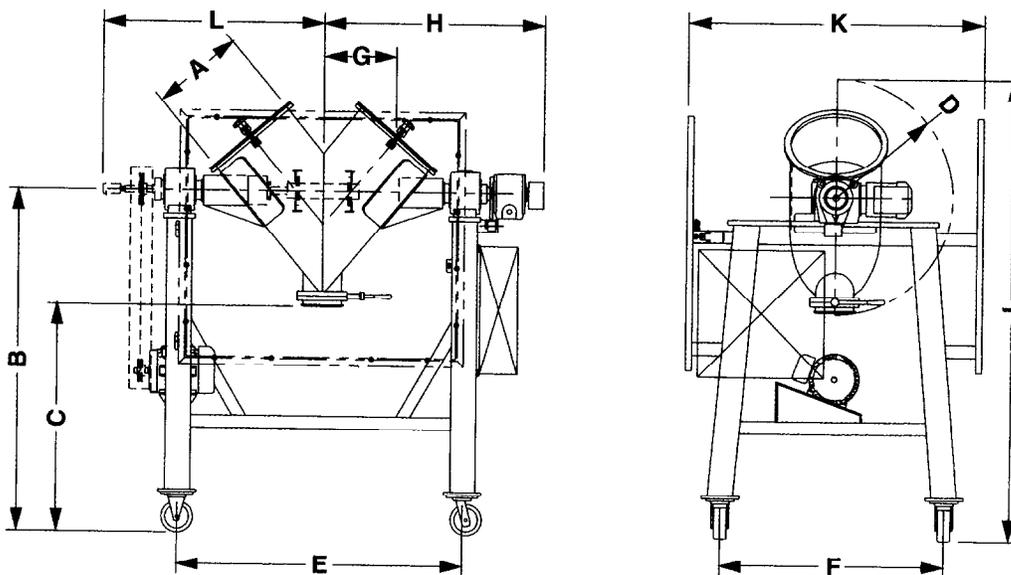
- Variety of Intensifier Bar Designs - Solids, Liquid/Solids, Pin bar, Variable Speed option.
- Polished support framework.
- Explosion proof controls and wiring for NEMA 7, 9 hazardous classification.
- Vacuum tube adapters installed in manway covers for vacuum loading.
- Variable speed operation.
- Customized control packages
- Stainless steel motor guards.

CONICAL PORTABLE BLENDERS



Model	Cu. Ft. Cap	A	B	C	D	E	F	G	H	J	K	** L	Dis-Charge Size	Mtr. HP	Blnd RPM	Int. Mtr. HP	Int. RPM	Max. Den.
ACB10	1	18	51 1/2	36	15 5/8	33 3/4	28	33 3/4	28 3/4	67 1/8	37 1/2	29 3/8	4	1/3	30	1	1300	150
ACB20	2	23	54 3/4	36	18 7/8	38 3/4	35 5/8	38 3/4	31 1/2	73 5/8	47	31 7/8	4	1/2	30	1	1300	125
ACB30	3	27	56 1/2	36	21 3/8	42 3/4	38 1/4	42 3/4	33 1/2	77 1/4	50 3/8	33	6	3/4	30	1	1300	125
ACB50	5	31	59 1/2	36	23 1/4	47	39 1/4	46 1/2	36 1/4	82 3/4	54 3/8	36	6	1	30	1 1/2	1300	60

V-SHELL PORTABLE BLENDERS

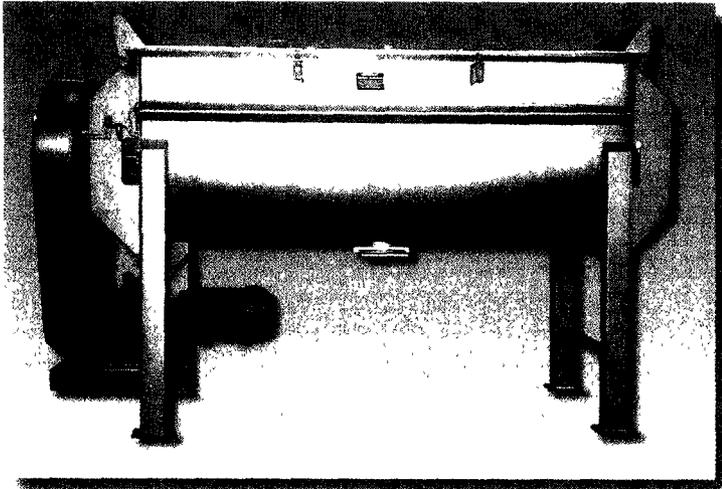


Model	Cu. Ft. Cap	A	B	C	D	E	F	G	H	J	K	** L	Dis-Charge Size	Mtr. HP	Blnd RPM	Int. Mtr. HP	Int. RPM	Max. Den.
ATS10	1	11 1/2	52 1/8	36	16 1/2	38 1/2	28	9 3/8	31	68 5/8	38 1/2	31 3/4	4	1/3	30	1	1300	125
ATS20	2	14 1/2	57	36	21	48	36 1/2	11 1/2	35	78	48	35	4	1/2	25	1	1300	115
ATS30	3	16 1/2	59 1/8	36	23 3/8	50 7/8	38 1/2	14	37 1/2	82 1/2	52 3/4	37	6	3/4	25	1	1300	100
ATS50	5	19 1/2	62 7/8	36	27	57	39 1/8	16	40 1/2	89 7/8	60	40	6	1	25	1 1/2	1300	80

* DIMENSIONS SUBJECT TO CERTIFICATION BY A & M PROCESS EQUIPMENT

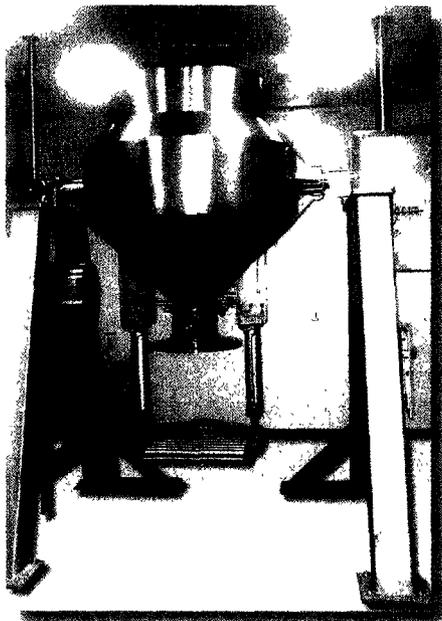
** DIMENSION APPLIES TO MODELS EQUIPPED WITH INTENSIFIER BAR

OTHER A & M PRODUCTS



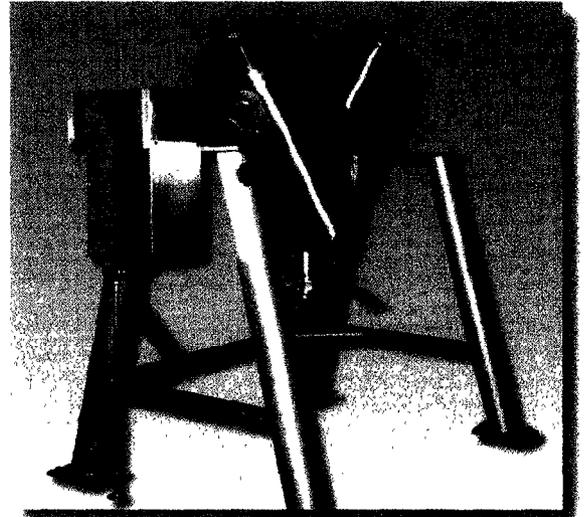
RIBBON & PADDLE BLENDERS

Ribbon & Paddle Blenders are designed for light, medium, and heavy duty blending of powders, pastes, emulsions and liquids. Working capacities range between 1/2 cubic foot to 380 cubic feet.



"V-SHELL" BLENDERS

"V-Shell" Blenders achieve an uniform blend by the intermeshing of two inclined cylinders, and provide fast, thorough discharge of ingredients. Working capacities range between 1 through 150 cubic feet.

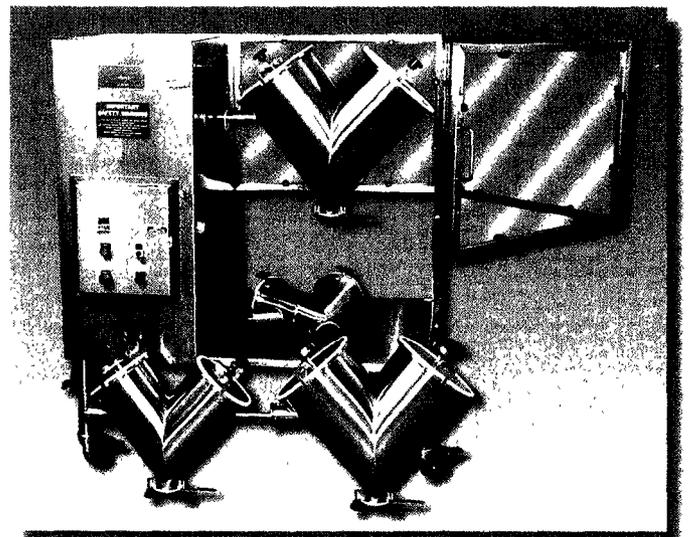
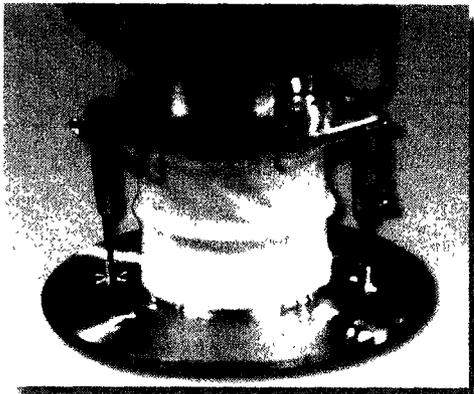


AUTOMATED DRUM LOADING FEATURE

Both V-Shell and Conical Blenders can be supplied with our PLC controlled Drum Loading System for direct, dust free loading of products from drums.

RETRACTABLE SLEEVE

For dust free filling of drums, or, to interface with upstream and downstream equipment, tumble blenders can be equipped with a pneumatically operated, retractable sleeve, and optional cam positioning system.

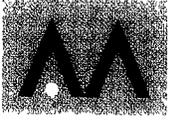


LABORATORY BLENDERS

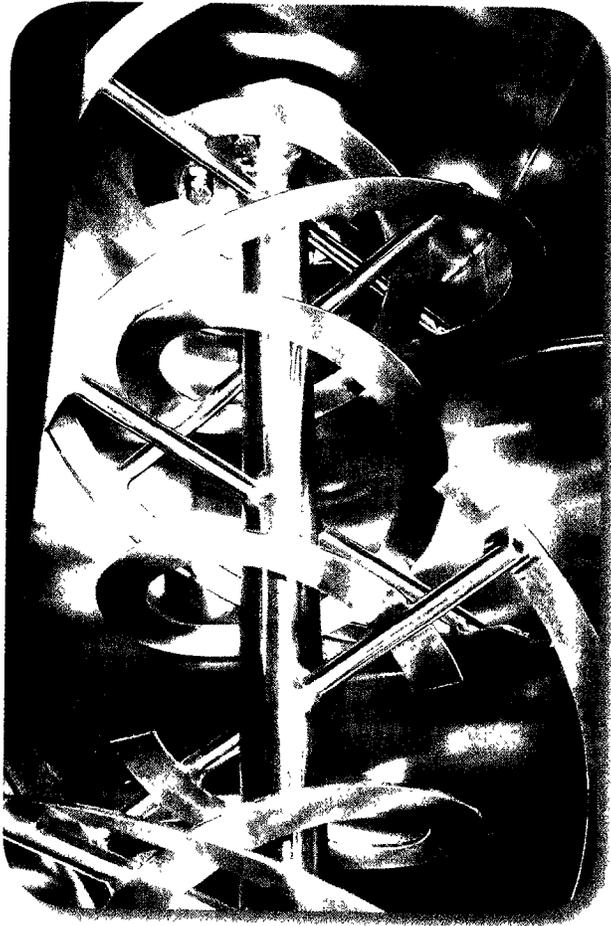
Laboratory Blenders are available with interchangeable blender shell modules in V-shell, Conical and tote bin design. "Bench-top" and Portable configurations are offered with 4, 8, 16, 21 quart and our **NEW** 1 cu. ft capacity shell modules.

A & M Process Equipment Ltd.

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A & M PROCESS EQUIPMENT LTD.



Scientifically
Engineered
Customized
Blenders to suit
your every
application

Blenders for the processing of:

- Food
- Dairy
- Pharmaceutical
- Chemical
- Plastics
- Other Industries



SCIENTIFICALLY
ENGINEERED
CUSTOMIZED
BLENDERS TO SUIT
YOUR EVERY
APPLICATION

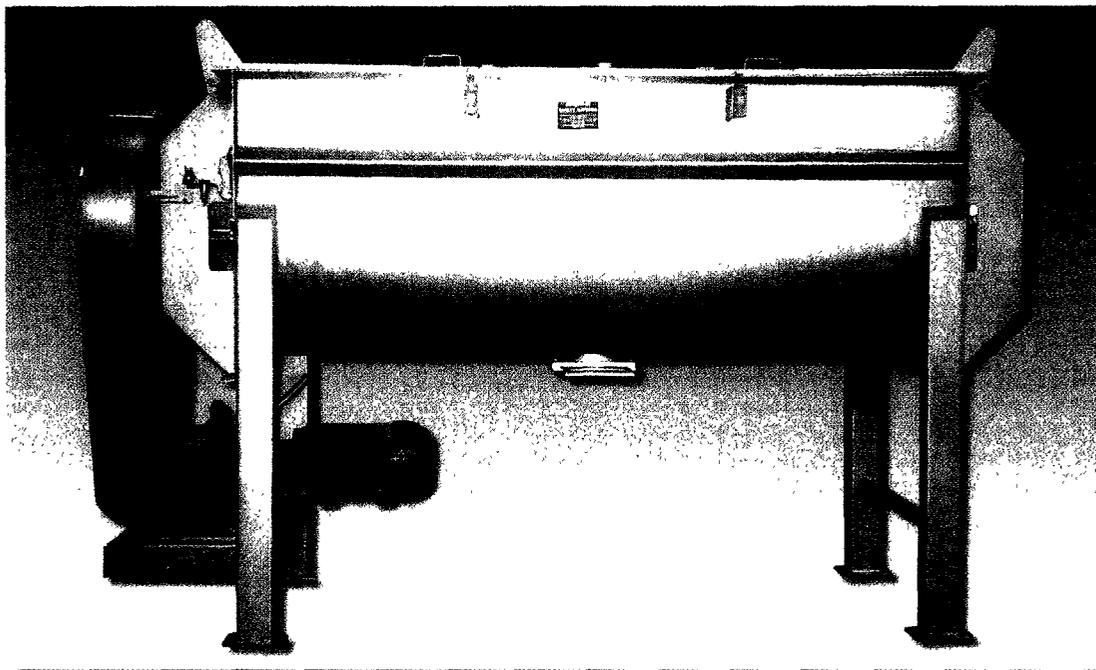


A & M RIBBON & PADDLE BLENDERS

A & M Ribbon and Paddle Blender designs have served Canadian industry for over 80 years in the processing of food, dairy, pharmaceutical, chemical, plastics and other process industries. Each blender is customized to suit its intended application. The balanced ribbon design assures a constant and complete mixing action, while preventing product build up and minimal degradation. This positive mix action is based on multiple mixing of the feed product incorporating tumbling, shearing and horizontal displacement of every particle. The outer ribbons

convey the material to the center or discharge point, while the inner ribbons move the material in the opposite direction for thorough end to end mixing.

Paddle agitators are specially designed to lift, scoop, and tumble materials in a gentle, but thorough "figure 8" mixing action. This agitator design is ideal for mixing fragile or abrasive ingredients, and for mixing solids or liquids of various particle size, shape and density.



STANDARD RUGGED CONSTRUCTION

A & M Ribbon Blenders are available in batch working capacities from 1 cubic foot to 380 cubic feet for light, medium and heavy duty blending of powders, pastes, emulsions, and liquids. While A & M has specialized in the manufacture of sanitary stainless steel blenders, other materials of construction are also available including carbon steel, abrasion resistant steel, and other special nickel alloys. The "U" shaped blender shell is a one piece, all welded construction with radiused corners. Ribbon assembly is a three piece construction with bolted coupling flanges for ease of removal of the center ribbon section through the shell top. Agitators are supported on

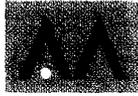
self-aligning, roller bearings in outboard, pillow block housings. Shafts are sealed with a robust stuffing box packing gland. The entire blender is supported on heavy, tubular legs with cross ties. Dependent on application and customer's needs, selection of drive type, cover design, valve selection, etc. is customized for each individual blender.

A diversified range of peripheral equipment can be incorporated into a complete system, including: filtered bag dump stations, sifters, lump breakers, feed and discharge conveyors, mezzanine platforms, weigh scale hoppers, etc.

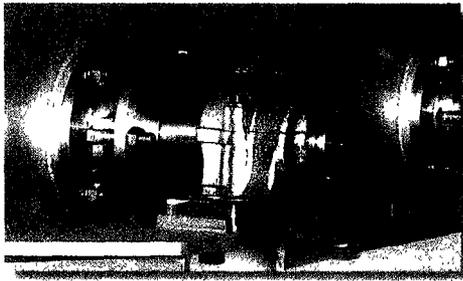
SANITARY CONSTRUCTION

To meet today's more stringent sanitary requirements in the food and pharmaceutical industry, close attention is given to ensure our equipment satisfies strict GMP standards. All interior welds are continuous, free from cracks and crevices, radiused (1/4" minimum), and ground smooth to a No. 4 (150-180 grit) finish. Agitators are one

piece, solid round bar construction. Shaft seals are split design for ease of maintenance, are constructed entirely of stainless steel, and supplied with either FDA approved Teflon braided packing, or Pure PTFE Chevron seals. Equipment is fully passivated after fabrication.



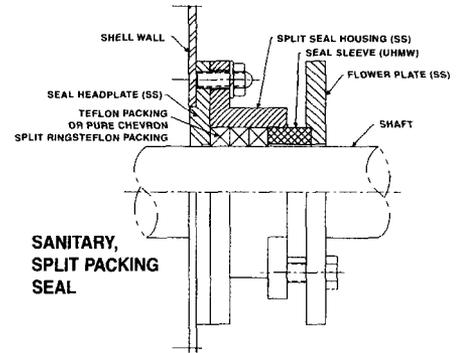
OPTIONAL FEATURES



1. SHAFT SEALS

Based on application, the following seal configurations are available:

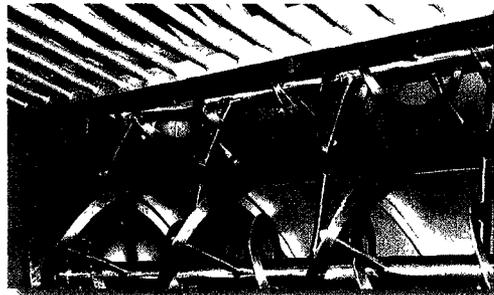
- Standard packing gland
- Split, Sanitary packing gland
- Air purge packing gland
- Mechanical face seal
- MECO™ modular seal



2. DISCHARGE VALVES

Discharge valve designs can be either manually or pneumatically actuated, and selected from:

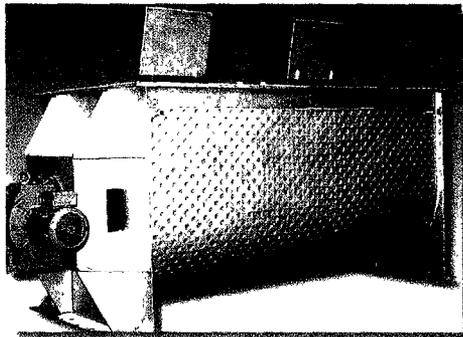
- Flat or curved Slide Gate Valve
- Paddle Valve
- Butterfly Valve
- Flush Contour or Plug style Valve
- Iris Diaphragm Valve
- Spherical Disc Valve
- Ball Valve



3. AGITATOR DESIGNS

Various agitator arrangements can be selected from:

- Double Ribbon, center discharge (standard) for most solids blending
- Interrupted Outer Ribbon, center discharge for poor flowing materials
- Combination Ribbon/Paddle design.
- Paddle for fragile and abrasive products
- Twin Shaft Ribbon (single and double ribbon flights), end discharge. (Illustrated)

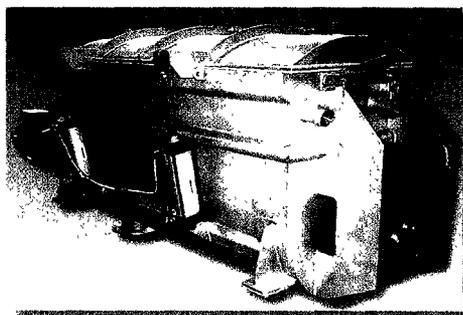


4. HEATING/COOLING JACKET

Dimpled or labyrinth heating/cooling jackets are available complete with insulation and protective sheathing, and optional thermowells.

5. HIGH SPEED CHOPPERS

High speed choppers can be supplied on paddle blenders for the dispersion of either liquid or solid minor ingredients and to control agglomeration.



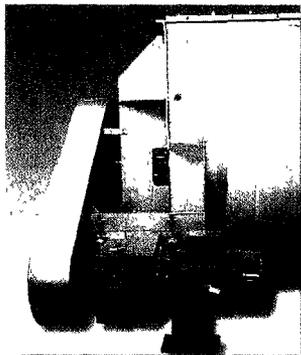
6. COVER ASSEMBLY

All blenders are supplied with either one, two, or three piece customized cover assembly, dependent on blender size. Each is supplied with hold down clamps, lift handles, gasket, and safety switch on hinged covers. Removable screen grids can be supplied under hinged covers, when it is preferred to load the blender with cover open and agitator running.

Special vacuum covers can be furnished for vacuum loading of ingredients or for drying applications. (Illustrated)

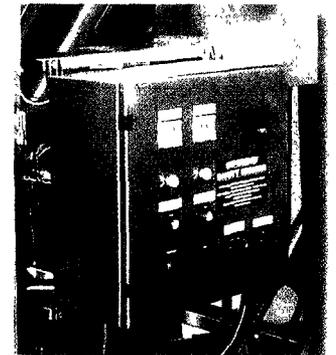
7. AGITATOR DRIVE SYSTEM

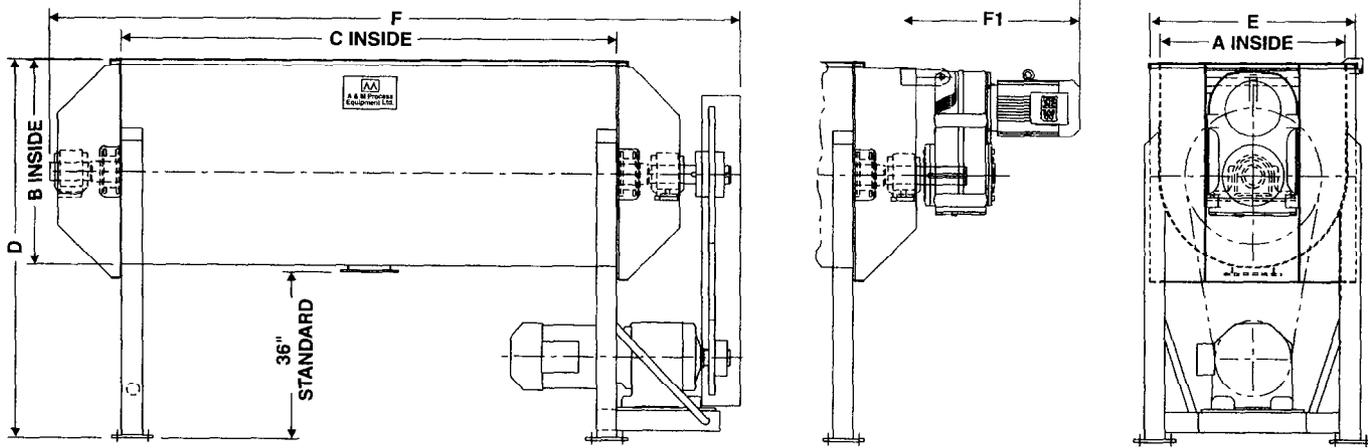
A variety of drive systems are available. For motor horsepower up to 30 HP, an integral, shaft-mounted, parallel/helical gear motor is supplied. Where space limitations exist, right-angled, helical-bevel reducers can be utilized at premium cost. For applications exceeding 30 HP, a foot-mounted gear motor with chain drive is typically recommended. Electronic variable speed units can be offered.



8. ELECTRICAL CONTROLS

Standard motor starter control packages, pre wired and installed on the blender frame can be supplied in a variety of electrical classifications. Advanced PLC controllers connected to Operator Interface Displays can be customized to customer's needs.

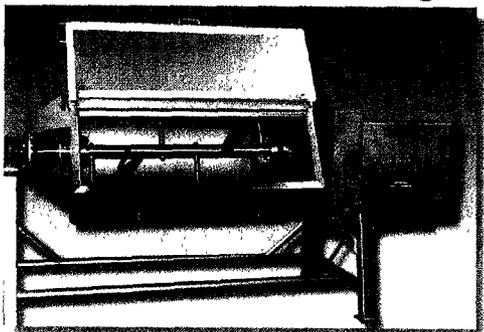




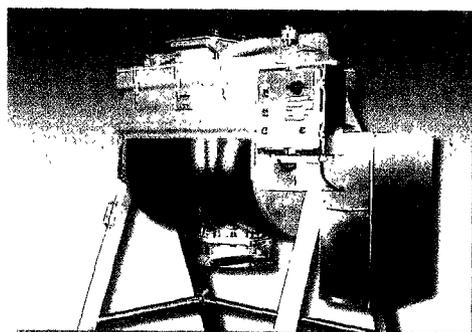
Model RB	Working Cap Cu.ft.	SHELL Inches			DIMENSIONS Inches				Discharge Opening	Material 20-45 lbs.		Material 46-65 lbs.	
		A	B	C	D	E	F	F1		HP	RPM	HP	RPM
10	1	12	15	18	53	14	N/A	50	3	1/2	60	1	55
30	3	14	17	36	55	16	N/A	70	4	1	60	2	55
50	5	16	19	44	57	19	N/A	78	4	1 1/2	60	3	55
80	8	20	23	44	61	23	N/A	83	5	2	60	5	55
100	10	21	24	48	62	24	N/A	90	5	3	60	5	55
140	14	24	27	56	65	27	N/A	101	5	5	60	7 1/2	55
170	17	24	27	66	65	27	N/A	111	6	5	60	7 1/2	55
200	20	26	30	72	68	29	N/A	117	6	5	55	7 1/2	50
250	25	28	32	72	70	31	N/A	123	6	7 1/2	50	10	45
300	30	30	34	78	72	34	N/A	129	6	7 1/2	50	10	45
350	35	32	36	78	74	36	N/A	131	6	10	50	15	45
400	40	32	36	84	74	36	N/A	139	6	10	50	15	45
500	50	34	38	96	76	38	N/A	155	6	10	45	15	40
600	60	36	40	96	78	40	134	159	8	15	40	20	35
700	70	40	46	96	84	45	133	160	8	20	35	25	30
800	80	42	48	96	86	48	138	164	10	25	25	30	20
1000	100	42	48	120	86	48	162	188	10	25	25	30	20
1200	120	48	54	120	92	54	162	188	10	25	25	30	20
1500	150	52	58	120	96	58	162	188	10	25	25	30	20
1800	180	56	62	120	100	62	162	188	10	25	25	30	20
2500	250	60	68	144	106	66	186	N/A	10	30	25	40	20
3000	300	66	74	144	112	72	189	N/A	10	30	20	40	15
3800	380	74	82	144	120	80	189	N/A	12	30	20	40	15

* All dimensions are approximate and subject to certification by A & M Process Equipment.

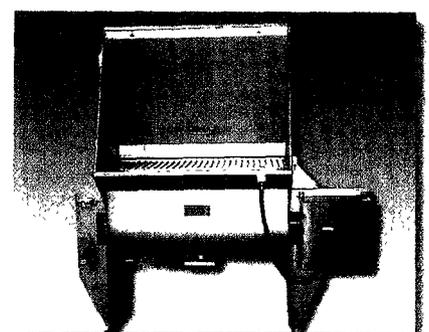
Specialized Blender Designs



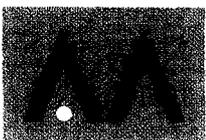
Paddle Blender w/Tilting Shell



Wet Granulator w/Vacuum Cover



Paddle Blender w/Bag Dump Hood

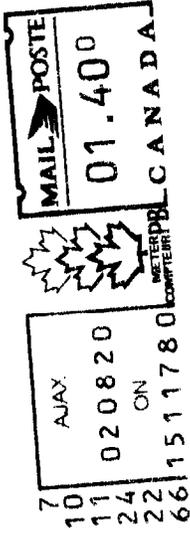


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