vectorcorporation
A FREUND GROUP COMPANY
675 44th Street, Marion, IA 52302-3800
Voice: 319-377-8263 • Fax: 319-377-5574
Web: www.vectorcorporation.com

ISO 9001 Certified

March 7, 2002

Public Docket #95D-0349
Dockets Management Branch (HFA-305)
Food and Drug Administration
5630 Fishers Lane, Rm. 1061
Rockville, MD 20852

To Whom It May Concern:

Vector Corporation is now manufacturing and marketing our own high shear granulator mixer system and would like to be listed in the appropriate areas of the SUPAC equipment addendum. For your reference, I have enclosed our standard product line brochure and style sheet that describes the system.

Name of SUPAC document: SUPAC-IR/MR: Immediate Release and Modified Release Solid Oral Dosage Forms Manufacturing Equipment Addendum.

Nature of the proposed change: Add "Vector" as an example to the following classes/subclasses:

Class: Convection Mixer
Subclass: Vertical High Intensity Mixers (Top or Bottom Driven)

Class: Wet High-Shear Granulation
Subclass: Vertical (Top or Bottom Driven)

Proposed equipment listing: Vector

I have sent two copies of this same request and sales information to the Quality Implementation Staff (HFD-357) at:

Food and Drug Administration
Center for Drug Evaluation and Research
Office of Pharmaceutical Science
5600 Fishers Lane
Rockville, MD 20857

Sincerely,

VECTOR CORPORATION

Greg Smith
Vice President of Engineering

Gregory R. Smith
Vice President, Engineering

greg.smith@vectorcorporation.com

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675 44th Street, Marion, IA 52302-3800
Telephone 319-377-8263
Facsimile 319-377-5574

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GS/ddh

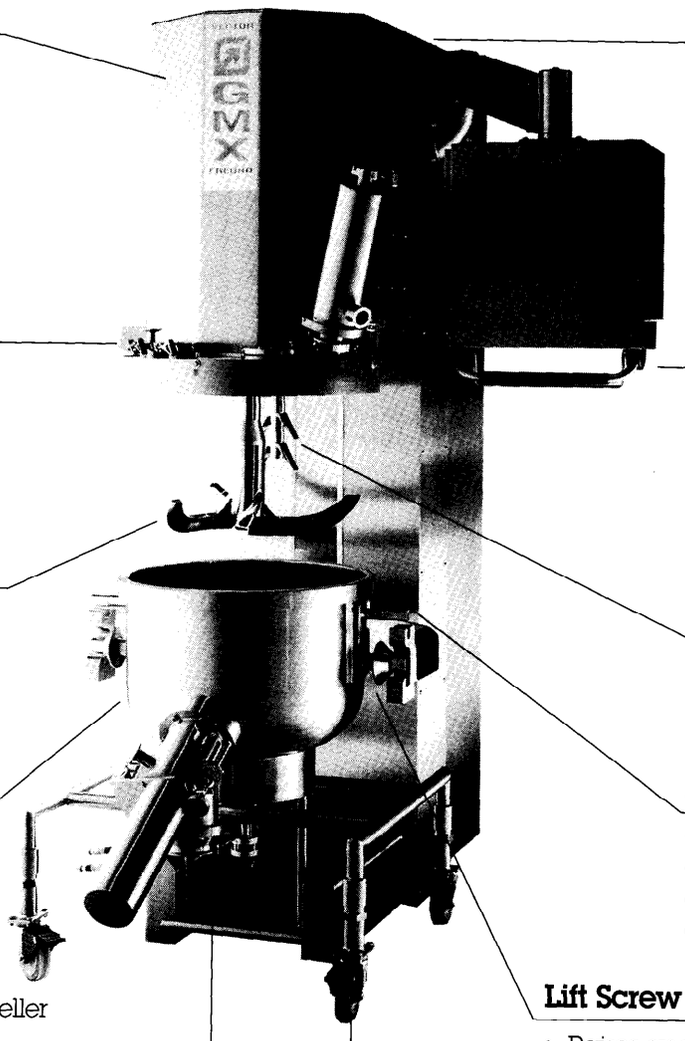
Enclosures:
Technical Brochure and Style Sheet (3 copies)

VECTOR HIGH SHEAR GRANULATOR/MIXER

Efficient and Homogeneous Granulation and Mixing of Powders:

Reproducible Granulation Process - Narrow particle size distribution -
Excellent flowability - Ideal compressibility characteristics - High Mechanical Strength

GMX - 5 • 25 • 75 • 150 • 300 • 600 • 1200



Free Standing Design

- Floor Level Operation
- No Platform Required
- Ease of Access, Operation, Inspection, Cleaning
- Operator Safety (floor level)
- CIP System
- Safety Interlocks

Bowl Cover

- Fixed Position
- Safety Ring
- Inspection Opening
- Air Filter
- Liquid Fill Opening

Mixer Impeller

- 3 Dimensional Product Flow
- Conforms to bowl shape
- Precision Tolerances
- Top Drive
- No lift device required for removal
- 316 Stainless Steel
- Variable Speed

Product Bowl

- Removable
- Precision Tolerances
- Matches Shape of Mixer Impeller
- Drain Valve for Cleaning
- Reduced Clean-up Time
- No Drive Seals in Product Area
- No Bearings in Product Area
- 316 Stainless Steel
- Jacketed (opt.)

Product Discharge

- Pneumatically Operated
- Vertical Outlet
- Flush Radius to Bowl
- CIP Ports (opt.)
- 316 Stainless Steel

Full Length Enclosure

- Isolates Motors
- GMP
- Removable for Service

In-Wall Design (opt.)

- All motors and utilities are totally out of production area

Control System (onboard opt.)

- PLC Based Machine Control
- Output Controlled Granulation
- End Point Determination (opt.)
- Fully Automated Processing (opt.)
- Batch Documentation (opt.)
- Total System Integration (opt.)

Chopper

- Top Driven
- Dual Speed
- 316 Stainless Steel

Removable Seal

- GMP Cleaning
- Positive Compression
- Dust Free Sealing
- Silicone

Lift Screw

- Raises and Lowers Bowl
- Precision Movement and Control
- No Hydraulics

Bowl Cart

- Transports Bowl
- Remote Cleaning
- Product Handling
- Production Efficiency

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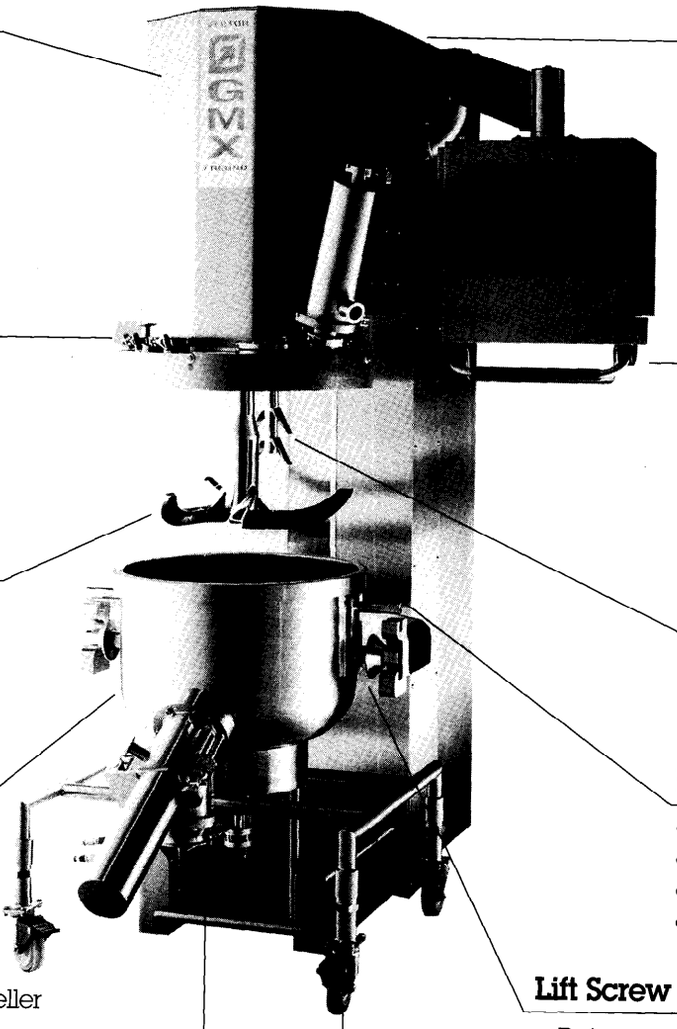

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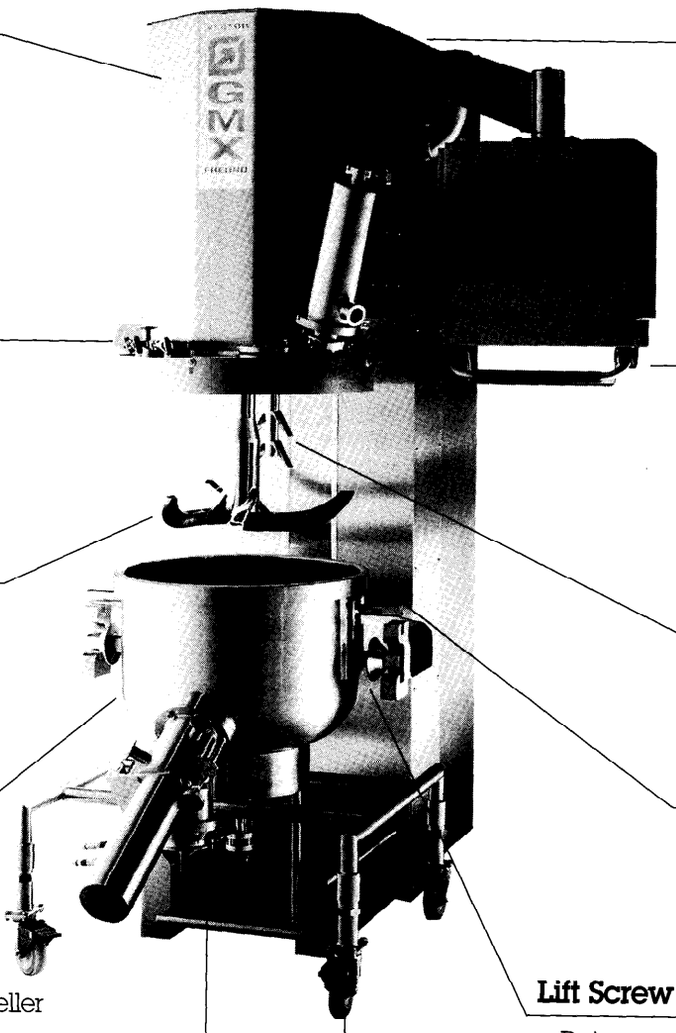

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Efficient and Homogeneous Granulation and Mixing Of Powders

Vector Corporation High Shear Granulator/Mixer

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Vector's Full Line of High Shear Granulator/Mixers: G

The Vector GMX High Shear Mixer/Granulator

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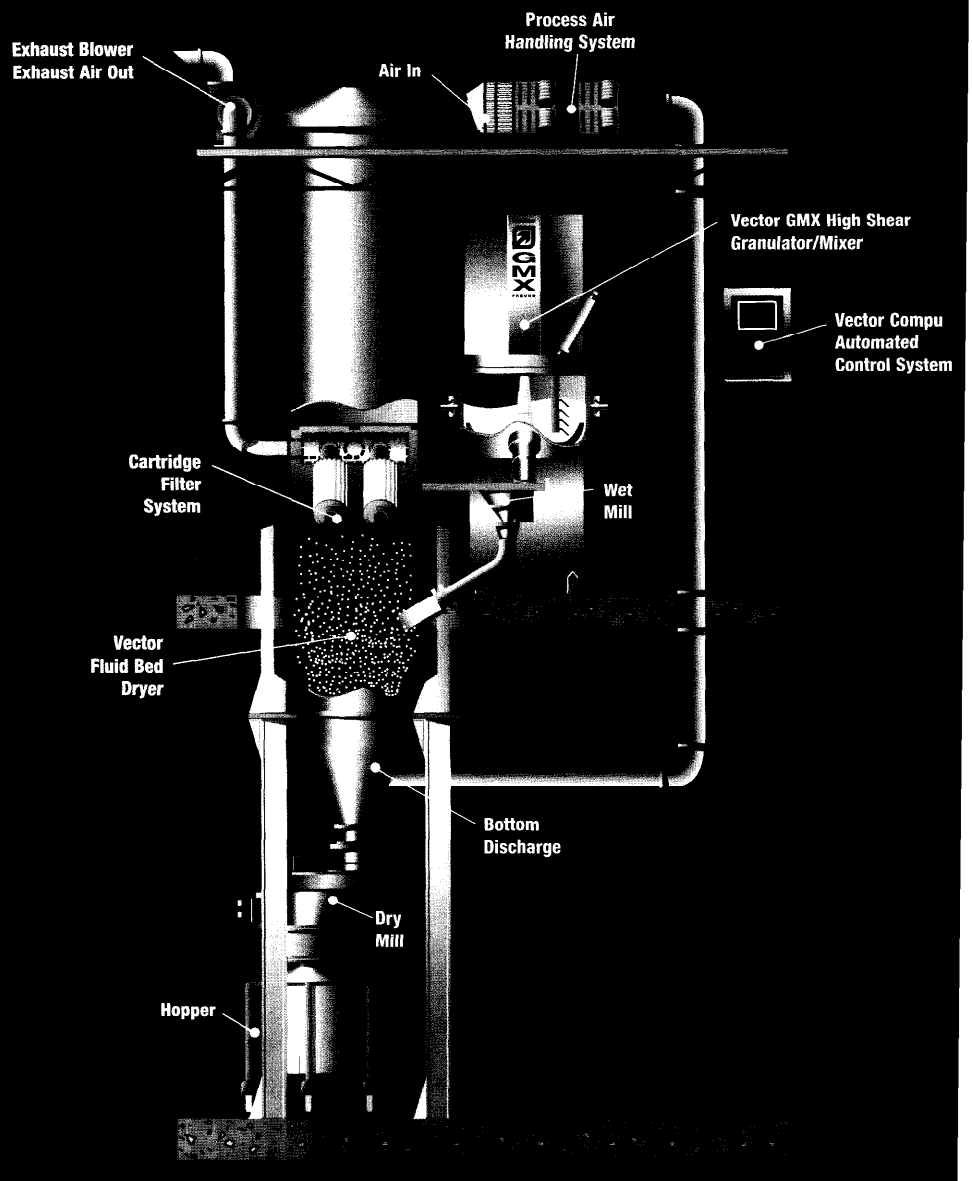
- Narrow Particle Size Distribution
- Excellent Flowability
- Ideal Compressibility Characteristics
- High Mechanical Strength

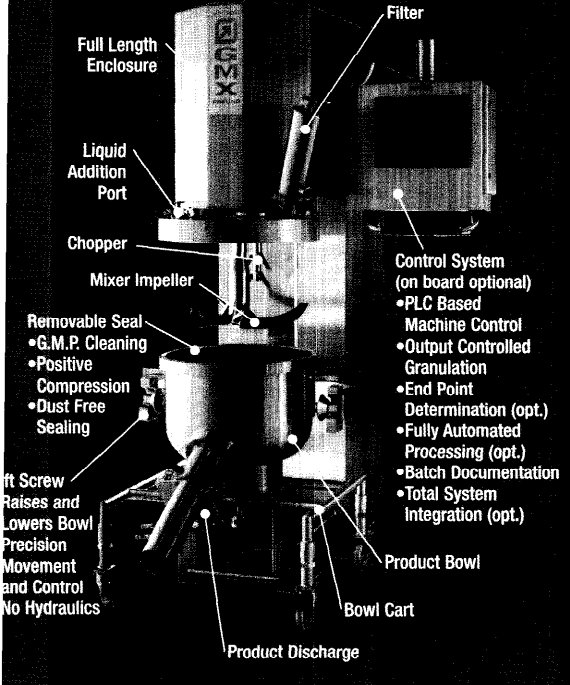
The wet granulation process plays an important role in the production of granules. The properties of the granules have a great impact on the quantity of the end product, making granulation a key phase of the overall production process. The wet granulation process has, until recent years, been a time consuming and labor intensive process.

With the introduction of the Vector GMX mixer/granulators, wet granulation is now a viable, cost-effective solution. All systems are designed to meet G.M.P. standards, and may be ordered as thru-the-wall units, separating the processing portion of the granulator/mixer from its mechanical components.

Vector manufactures the granulator/mixers and their automated control systems at its Marion, Iowa plant.



GMX Features:



Fully Integrated High Shear Mixing, Granulating, and Drying Systems

Vector GMX granulator/mixers, in combination with Vector fluid bed dryers and automated process controls, offer the industry the ultimate in integrated wet granulation and drying systems.

Vector Corporation, as a developer of new granulation and drying technology, is able to provide all the professional disciplines necessary to design, test, manufacture, provide installation support and start-up assistance for the specific system you require.

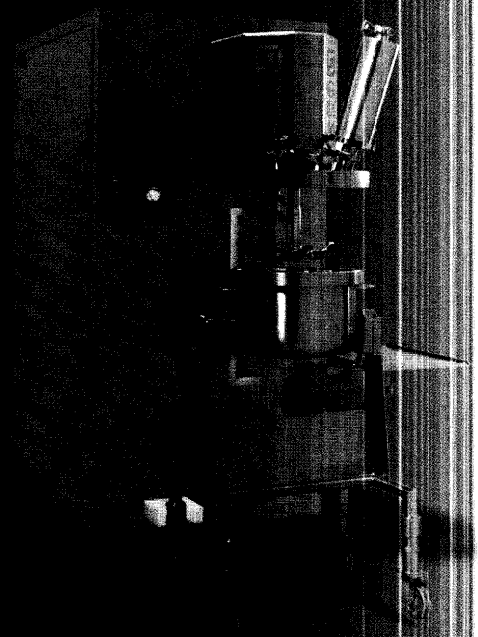
Craftsmanship, reliability, flexibility, state-of-the-art and often breakthrough technology are all integrated into total operating systems and indicative of the quality Vector puts into every GMX granulator/mixer system.

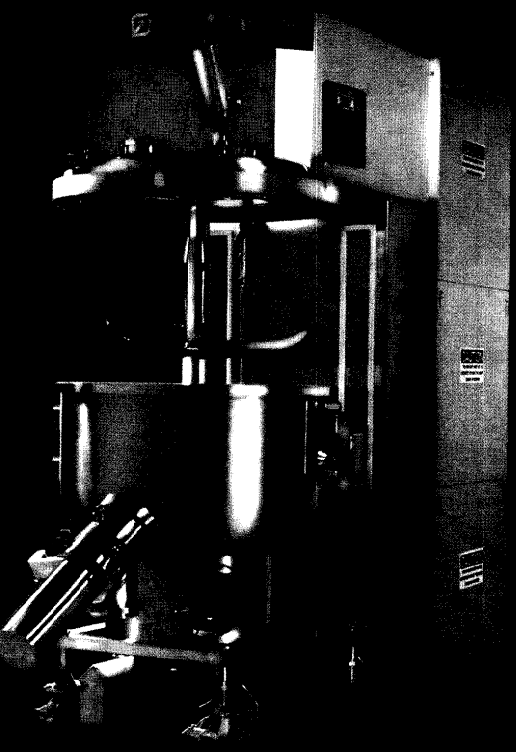
Vector GMX integrated high shear mixing, granulating and drying systems meet the exacting standards of a wide range of solid form manufacturers including the pharmaceutical, cosmetic, chemical, vitamin and food industries.

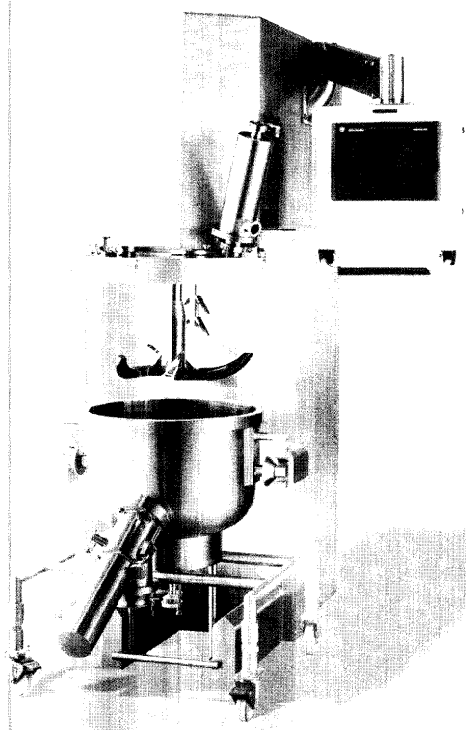
- GMX granulator/mixers, combined with Vector fluid bed dryers, provide a total, state-of-the-art, integrated granulation system.
- GMX high shear granulator/mixers an their automated controls are manufac tured in the U.S. by Vector Corporatio
- GMX granulator/mixers feature remov processing bowls and carts for ease product handling.
- GMX granulator/mixers are specificall designed and manufactured to meet G.M.P. compliance.

X 10 • 25 • 75 • 150 • 300 • 400 • 600 • 900 • 1200

- G.M.P. Design
- Totally Enclosed
- Free Standing
- Through-the-wall Design
- PLC Based Controls
- Removable Product Bowl
- Jacketed Bowl
- Additional Bowls
- Top Drive System
- No Seals In Product Area
- Mechanical Lift Screw — No Hydraulics
- All 316 Stainless Steel
- Vacuum Loading
- Vacuum Drying
- Variable Speed
- Safety Interlocks
- Integrated Granulating & Drying System







GMX-25

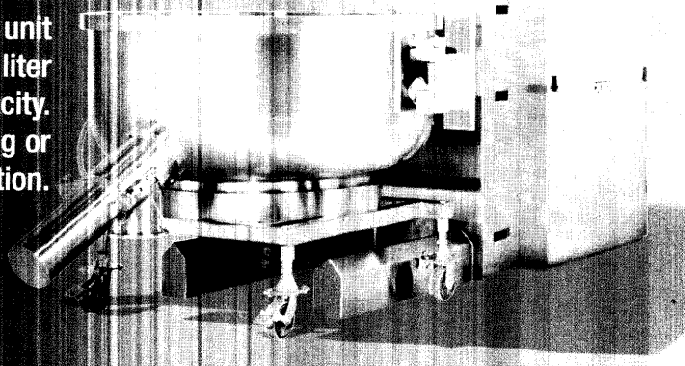
GMX-10 & GMX-25 systems are portable, self-contained systems, ideal for product and process development applications.

GMX-600

A production sized unit with a 200 to 400 liter working volume capacity. Available as a free standing or through-the-wall configuration.

GMX-1200

A production sized unit with a 400 to 800 liter working volume capacity. Available as a free standing or through-the-wall configuration.



GMX SPECIFICATIONS

GMX Granulator/Mixer Specifications	Units English (E)	Units Metric (M)	GMX 10 (E)	GMX 10 (M)	GMX 25 (E)	GMX 25 (M)	GMX 75 (E)	GMX 75 (M)	GMX 150 (E)	GMX 150 (M)	GMX 300 (E)	GMX 300 (M)	GMX 400 (E)	GMX 400 (M)	GMX 600 (E)	GMX 600 (M)	GMX 900 (E)	GMX 900 (M)	GMX 1200 (E)	GMX 1200 (M)
Bowl																				
Top Diameter (O.D.)	Inches	mm	10	254	15	381	21	533	28	711	34	864	38	965	43	1092	50	1270	59	1499
Height	Inches	mm	7	178	10	260	15	380	18	450	24	600	26	650	28	700	28	700	28	700
Brim Volume	ft^3	Liters	0.283	8	0.88	25	2.65	75	5.3	150	10.59	300	14.12	400	21.19	600	31.78	900	42.37	1200
Working Capacity (min.)	ft^3	Liters	0.094	2.6	0.3	8.25	0.88	25	1.77	50	3.53	100	4.71	133	7.06	200	10.59	300	14.12	400
Working Capacity (max.)	ft^3	Liters	0.189	5.3	0.6	16	1.77	50	3.53	100	7.06	200	9.42	267	14.12	400	21.19	600	28.25	800
Weight of Bowl	Pounds	kilograms	16	7.25	41	18.6	150	68	350	159	450	205	600	273	750	341	900	409	1100	500
Weight of Full Bowl (water)	Pounds	kilograms	34	15.5	95	43	300	136	700	318	1080	490	1500	682	2000	909	2900	1318	3750	1705
Bowl Process Area	in^2	m^2	255	0.16	600	0.387	1174	0.757	1737	1.12	2829	1.83	3720	2.4	4495	2.9	5600	3.61	6848	4.42
Lid Process Area	in^2	m^2	78	0.05	198	0.13	370	0.24	971	0.63	1332	0.86	1552	1	2079	1.34	2732	1.76	3386	2.18
Total Process Area (with blades)	in^2	m^2	422	0.272	962	0.62	1914	1.23	3215	2.07	4964	3.2	6357	4.1	7750	5	9807	6.32	11865	7.65
Product Discharge	Inches	mm	n/a	n/a	n/a	n/a	4	100	6	152	8	203	8	203	8	203	8	203	8	203
Product Discharge Height	Inches	mm	n/a	n/a	n/a	n/a	32.5	826	30.38	772	42.6	1082	46	1169	54	1372	51	1295	51	1295
Drain Connection	1.5 inch Tri Clamp (38mm)																			
Machine																				
Floor to Top	inches	mm	66	1676	71	1800	81	2134	85.5	2089	105.5	2629	108	2743	119	3023	122	3099	122	3099
Widest Point	inches	mm	26.5	669	32	813	30.5	775	37.75	959	43.5	1105	48	1219	54.25	1378	63	1610	70	1778
Depth	Inches	mm	56.75	1442	61.5	1562	75	1905	101.3	2573	116.5	2959	112	2851	129	3276	145	3683	152	3861
Machine Weight	Pounds	kilograms	1550	703	1750	794	3000	1364	4700	2132	6000	2727	7500	3409	10000	4545	13000	5909	16000	7273
Gross Weight	Pounds	kilograms	1600	726	1810	821	3900	1773	5300	2404	7400	3364	9100	4136	12000	5455	15750	7159	19500	8864
Shipping Weight	Pounds	kilograms	2000	907	2500	1136	4000	1818	6000	2721	8000	3636	9500	4318	12500	5682	16500	7484	18750	8523
Mixer Motor - TEFC	HP	KW	1.5	1.1	5	3.7	7.5	5.6	15	11.2	25	18.6	30	22.4	50	37	60	45	75	56
Drive Type	Belt and Pulley																			
Chopper Motor (Dual Range) TEFC	HP	KW	1	.75	1/2	.75/ 1.5	2.5/ 5	1.8/ 3.7	3.75/ 7.5	2.8/ 5.6	5/ 10	3.7/ 7.5	7.5/ 15	5.6/ 11	10/ 20	7.5/ 14.9	10/ 20	7.5/ 14.9	10/ 20	7.5/ 14.9
Drive Type	Belt and Pulley																			
Lift Motor HP	HP	KW	n/a		0.75	0.56	0.75	0.56	0.33	0.25	1.5	1.2	3	2.24	3	2.24	3	2.24	3	2.24
Mixer Speed High	RPM*		660		425		300		230		190		155		140		135		115	
Mixer Speed Low	RPM*		440		300		200		150		125		103		95		90		75	
Mixer Speed Crawl	RPM*		none		none		30		23		19		16		14		14		12	
Chopper Speed High	RPM		3600		3000		3000		3000		3000		3000		2600		2400		2400	
Chopper Speed Low	RPM		1800		1500		1500		1500		1500		1500		1300		1200		1200	
Control System																				
Control Panel 230 or 460		KVA		2		2		2		2		2		2		2		2		2
Pump Motor HP (Max.)	HP	KVA	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8

Air Requirements 2 SCFM @ 100 PSIG 57 Liters/min @ 6.9 BAR

***Mixer Speed:** operates on a variable frequency drive for speed set point adjustment

Note: Specifications are subject to change without notice

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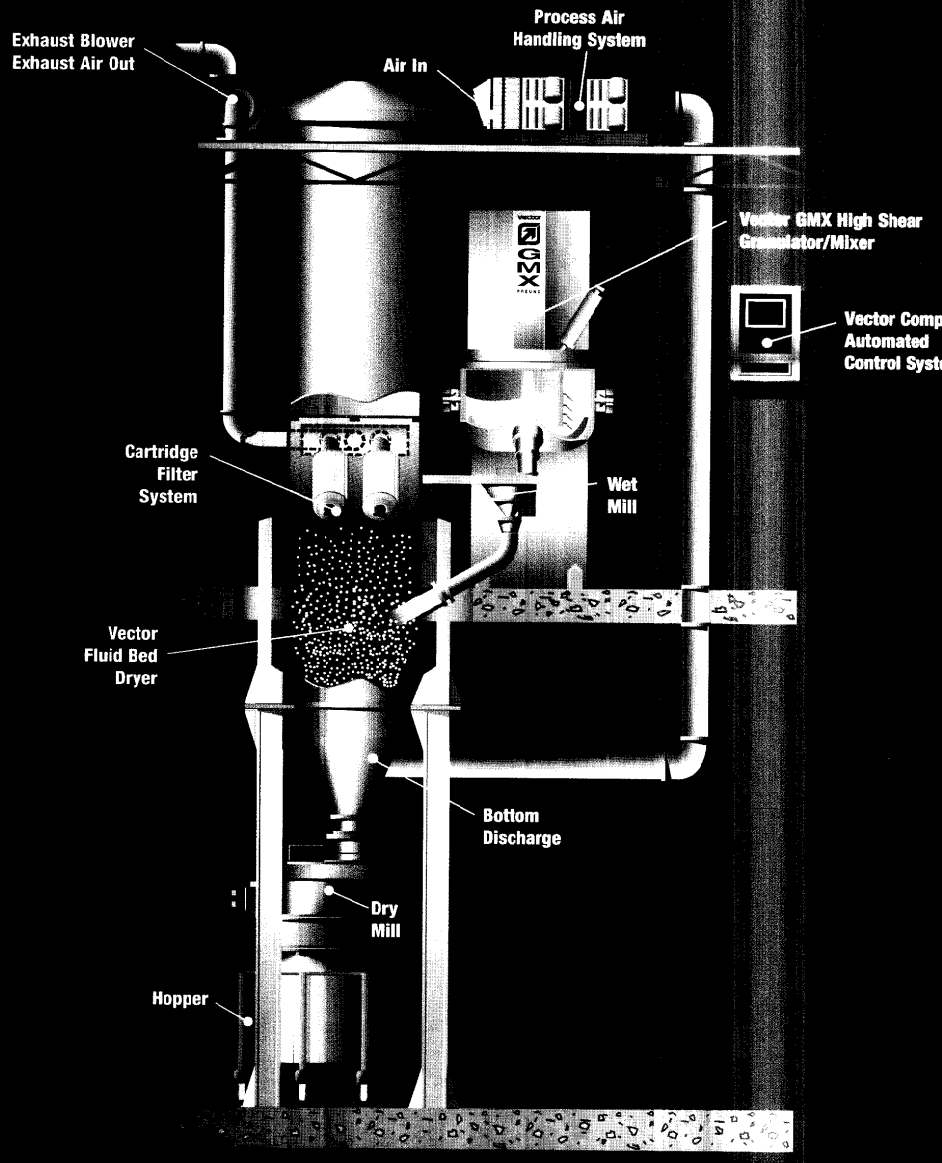

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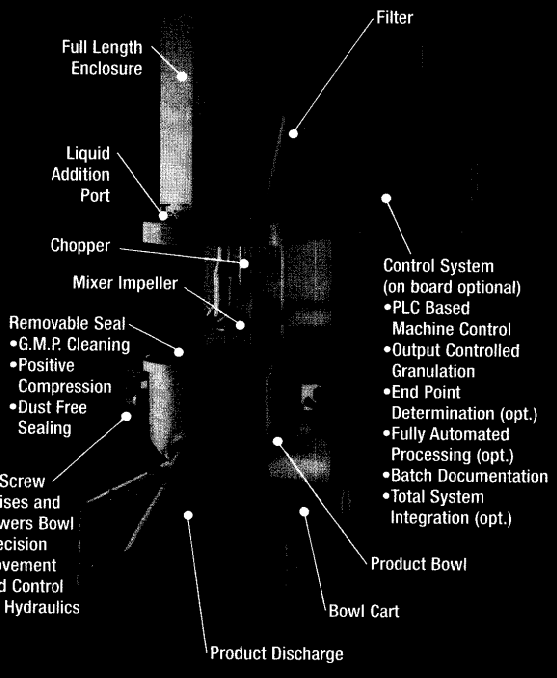

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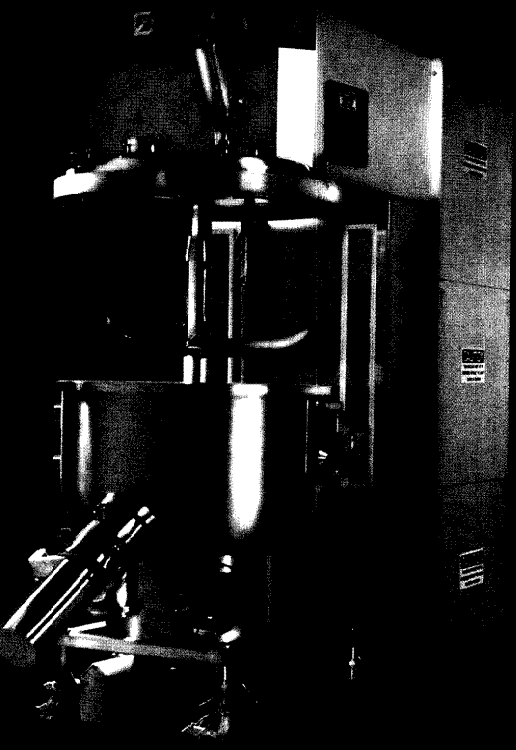

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GMX-600

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GMX-1200

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Brim Volume	ft^3	Liters	0.283	8	0.88	25	2.65	75	5.3	150	10.59	300	14.12	400	21.19	600	31.78	900	42.37	1200
Working Capacity (min.)	ft^3	Liters	0.094	2.6	0.3	8.25	0.88	25	1.77	50	3.53	100	4.71	133	7.06	200	10.59	300	14.12	400
Working Capacity (max.)	ft^3	Liters	0.189	5.3	0.6	16	1.77	50	3.53	100	7.06	200	9.42	267	14.12	400	21.19	600	28.25	800
Weight of Bowl	Pounds	kilograms	16	7.25	41	18.6	150	68	350	159	450	205	600	273	750	341	900	409	1100	500
Weight of Full Bowl (water)	Pounds	kilograms	34	15.5	95	43	300	136	700	318	1080	490	1500	682	2000	909	2900	1318	3750	1705
Bowl Process Area	in^2	m^2	255	0.16	600	0.387	1174	0.757	1737	1.12	2829	1.83	3720	2.4	4495	2.9	5600	3.61	6848	4.42
Lid Process Area	in^2	m^2	78	0.05	198	0.13	370	0.24	971	0.63	1332	0.86	1552	1	2079	1.34	2732	1.76	3386	2.18
Total Process Area (with blades)	in^2	m^2	422	0.272	962	0.62	1914	1.23	3215	2.07	4964	3.2	6357	4.1	7750	5	9807	6.32	11865	7.65
Product Discharge	Inches	mm	n/a	n/a	n/a	n/a	4	100	6	152	8	203	8	203	8	203	8	203	8	203
Product Discharge Height	Inches	mm	n/a	n/a	n/a	n/a	32.5	826	30.38	772	42.6	1082	46	1169	54	1372	51	1295	51	1295
Drain Connection	1.5 inch Tri-Clamp (38mm)																			
Machine																				
Floor to Top	Inches	mm	68	1727	74	1880	84	2134	82.5	2095	103.5	2629	108	2743	119	3023	122	3099	122	3099
Widest Point	Inches	mm	26.3	668	30	762	30.5	775	37.75	959	43.5	1105	46	1219	54.25	1378	63	1610	70	1778
Depth	Inches	mm	56.75	1442	61.5	1562	75	1905	101.3	2573	116.5	2959	112	2851	129	3276	145	3683	152	3861
Machine Weight	Pounds	kilograms	1550	703	1750	794	3000	1364	4700	2132	6000	2727	7500	3409	10000	4545	13000	5909	16000	7273
Gross Weight	Pounds	kilograms	1600	726	1836	833	3900	1773	5300	2404	7400	3364	9100	4136	12000	5455	15750	7159	19500	8864
Shipping Weight	Pounds	kilograms	1700	771	2500	1136	4000	1818	6000	2721	8000	3636	9500	4318	12500	5682	16500	7484	18750	8523
Mixer Motor - TEFC	HP	KW	1.5	1.1	5	3.7	7.5	5.6	15	11.2	25	18.6	30	22.4	50	37	60	45	75	56
Drive Type	Belt and Pulley																			
Chopper Motor (Dual Range) TEFC	HP	KW	1	.75	1/2	.75/1.5	2.5/5	1.8/3.7	3.75/7.5	2.8/5.6	5/10	3.7/7.5	7.5/15	5.6/11	10/20	7.5/14.9	10/20	7.5/14.9	10/20	7.5/14.9
Drive Type	Belt and Pulley																			
Lift Motor HP	HP	KW	n/a		0.75	0.56	0.75	0.56	0.33	0.25	1.5	1.2	3	2.24	3	2.24	3	2.24	3	2.24
Mixer Speed High	RPM*		660		425		300		230		190		155		140		135		115	
Mixer Speed Low	RPM*		440		300		200		150		125		103		95		90		75	
Mixer Speed Crawl	RPM*		none		none		30		23		19		16		14		14		12	
Chopper Speed High	RPM		3600		3000		3000		3000		3000		3000		2600		2400		2400	
Chopper Speed Low	RPM		1800		1500		1500		1500		1500		1500		1300		1200		1200	
Control System																				
Control Panel 230 or 460		KVA		2		2		2		2		2		2		2		2		2
Pump Motor HP (Max.)	HP	KVA	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8

Air Requirements 2 SCFM @ 100 PSIG 57 Liters/min @ 6.9 BAR

***Mixer Speed:** operates on a variable frequency drive for speed set point adjustment

Note: Specifications are subject to change without notice

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Efficient and Homogeneous Granulation And Mixing Of Powders

Vector Corporation High Shear Granulator/Mixer

Vector's Full Line of High Shear Granulator/Mixers: G

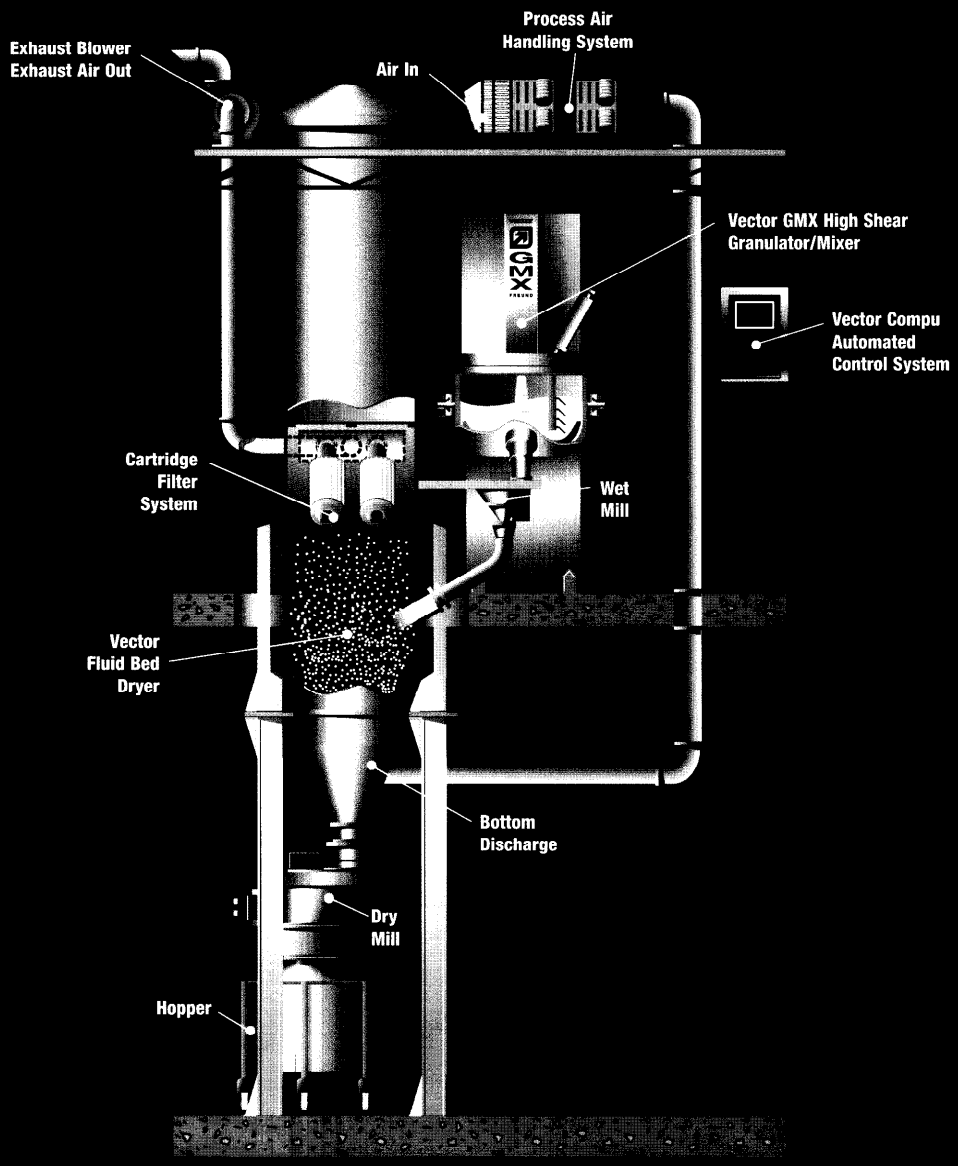
The Vector GMX High Shear Mixer/Granulator

- Reproducible Granulation Process
- Narrow Particle Size Distribution
- Excellent Flowability
- Ideal Compressibility Characteristics
- High Mechanical Strength

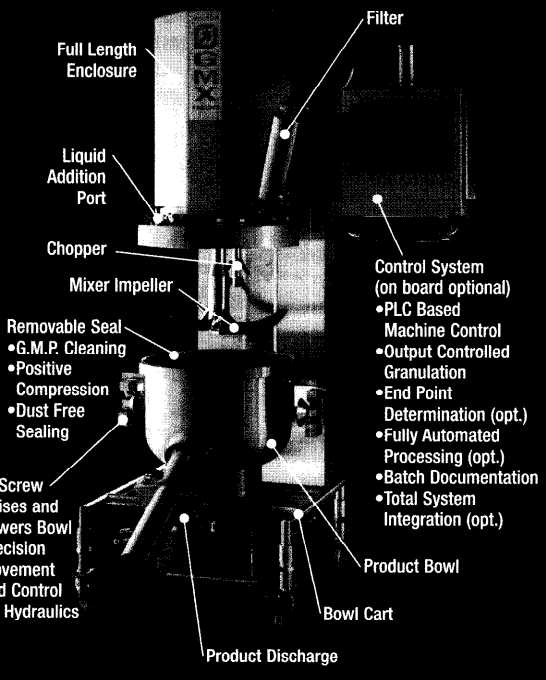
The wet granulation process plays an important role in the production of granules. The properties of the granules have a great impact on the quantity of the end product, making granulation a key phase of the overall production process. The wet granulation process has, until recent years, been a time consuming and labor intensive process.

With the introduction of the Vector GMX mixer/granulators, wet granulation is now a viable, cost-effective solution. All systems are designed to meet G.M.P. standards, and may be ordered as thru-the-wall units, separating the processing portion of the granulator/mixer from its mechanical components.

Vector manufactures the granulator/mixers and their automated control systems at its Marion, Iowa plant.



GMX Features:



Fully Integrated High Shear Mixing, Granulating, and Drying Systems

Vector GMX granulator/mixers, in combination with Vector fluid bed dryers and automated process controls, offer the industry the ultimate in integrated wet granulation and drying systems.

Vector Corporation, as a developer of new granulation and drying technology, is able to provide all the professional disciplines necessary to design, test, manufacture, provide installation support and start-up assistance for the specific system you require.

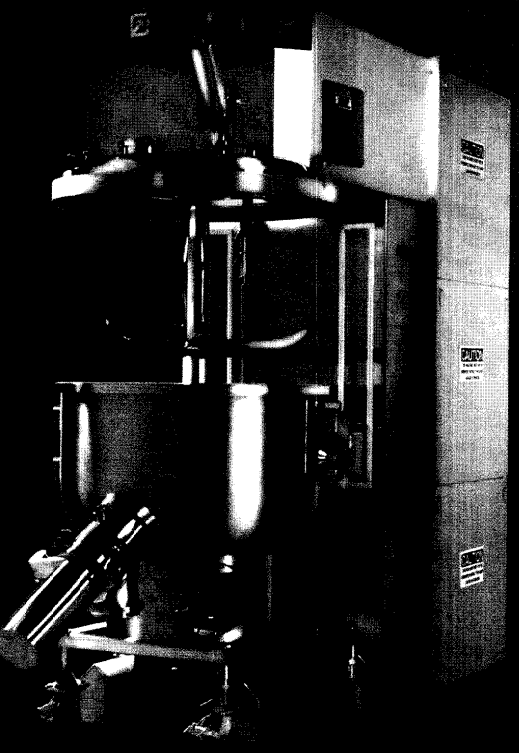
Craftsmanship, reliability, flexibility, state-of-the-art and often breakthrough technology are all integrated into total operating systems and indicative of the quality Vector puts into every GMX granulator/mixer system.

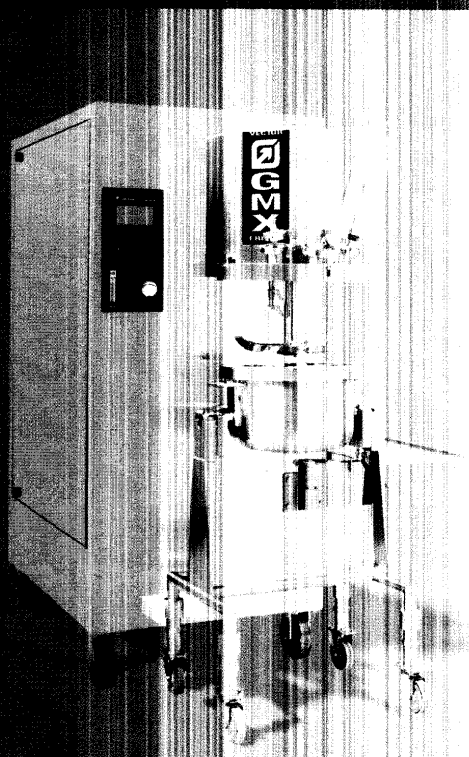
Vector GMX integrated high shear mixing, granulating and drying systems meet the exacting standards of a wide range of solid form manufacturers including the pharmaceutical, cosmetic, chemical, vitamin and food industries.

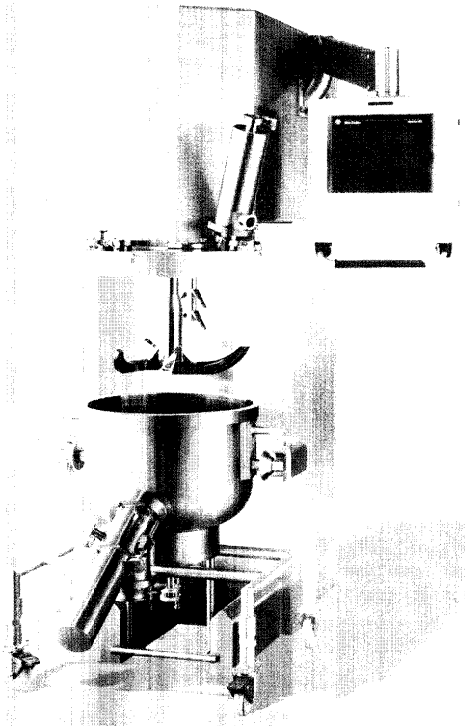
- GMX granulator/mixers, combined with Vector fluid bed dryers, provide a total, state-of-the-art, integrated granulation system.
- GMX high shear granulator/mixers and their automated controls are manufactured in the U.S. by Vector Corporation.
- GMX granulator/mixers feature removal processing bowls and carts for ease of product handling.
- GMX granulator/mixers are specifically designed and manufactured to meet G.M.P. compliance.

X 10 • 25 • 75 • 150 • 300 • 400 • 600 • 900 • 1200

- G.M.P. Design
- Totally Enclosed
- Free Standing
- Through-the-wall Design
- PLC Based Controls
- Removable Product Bowl
- Jacketed Bowl
- Additional Bowls
- Top Drive System
- No Seals In Product Area
- Mechanical Lift Screw — No Hydraulics
- All 316 Stainless Steel
- Vacuum Loading
- Vacuum Drying
- Variable Speed
- Safety Interlocks
- Integrated Granulating & Drying System

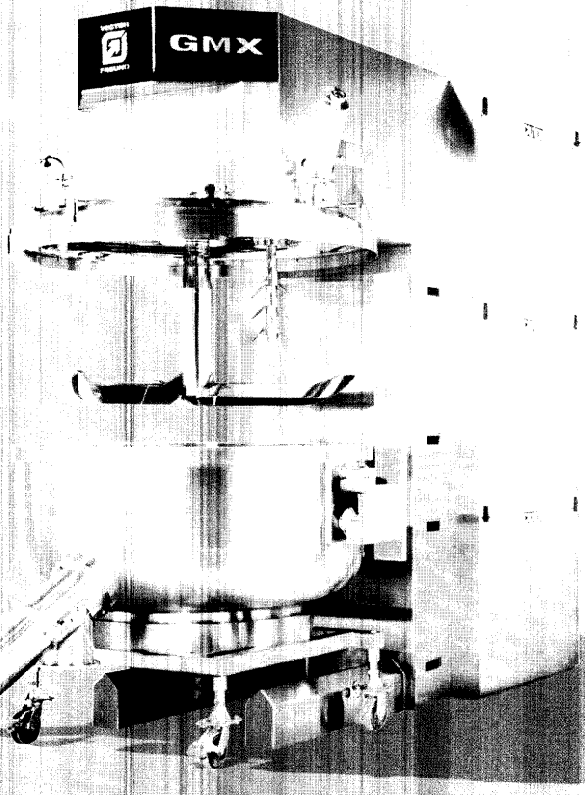






GMX-25

GMX-10 & GMX-25
portable, self-con
ideal for product
development appli



GMX-600

A production sized
400 liter working v
Available as a free
through-the-wall c

GMX-1200

A production size
with a 400 to 8
working volume ca
Available as a free stand
through-the-wall configu

GMX Granulator/Mixer Specifications	Units English (E)	Units Metric (M)	GMX 10 (E)	GMX 10 (M)	GMX 25 (E)	GMX 25 (M)	GMX 75 (E)	GMX 75 (M)	GMX 150 (E)	GMX 150 (M)	GMX 300 (E)	GMX 300 (M)	GMX 400 (E)	GMX 400 (M)	GMX 600 (E)	GMX 600 (M)	GMX 900 (E)	GMX 900 (M)	GMX 1200 (E)	GMX 1200 (M)
Bowl																				
Top Diameter (O.D.)	Inches	mm	10	254	15	381	21	533	28	711	34	864	38	965	43	1092	50	1270	59	1499
Height	Inches	mm	7	178	10	260	15	380	18	450	24	600	26	650	28	700	28	700	28	700
Brim Volume	ft	Liters	0.283	8	0.88	25	2.65	75	5.3	150	10.59	300	14.12	400	21.19	600	31.78	900	42.37	1200
Working Capacity (min.)	ft	Liters	0.094	2.6	0.3	8.25	0.88	25	1.77	50	3.53	100	4.71	133	7.06	200	10.59	300	14.12	400
Working Capacity (max.)	ft	Liters	0.189	5.3	0.6	16	1.77	50	3.53	100	7.06	200	9.42	267	14.12	400	21.19	600	28.25	800
Weight of Bowl	Pounds	kilograms	16	7.25	41	18.6	150	68	350	159	450	205	600	273	750	341	900	409	1100	500
Weight of Full Bowl (water)	Pounds	kilograms	34	15.5	95	43	300	136	700	318	1080	490	1500	682	2000	909	2900	1318	3750	1705
Bowl Process Area	in	m	255	0.16	600	0.387	1174	0.757	1737	1.12	2829	1.83	3720	2.4	4495	2.9	5600	3.61	6848	4.42
Lid Process Area	in	m	78	0.05	198	0.13	370	0.24	971	0.63	1332	0.86	1552	1	2079	1.34	2732	1.76	3386	2.18
Total Process Area (with blades)	in	m	423	0.272	962	0.62	1914	1.23	3215	2.07	4964	3.2	6357	4.1	7750	5	9807	6.32	11865	7.65
Product Discharge	Inches	mm	n/a	n/a	n/a	n/a	4	100	6	152	8	203	8	203	8	203	8	203	8	203
Product Discharge Height	Inches	mm	n/a	n/a	n/a	n/a	32.5	826	30.38	772	42.6	1082	46	1169	54	1372	51	1295	51	1295
Drain Connection	1.5 inch Tri Clamp (Glass)																			
Machine																				
Floor to Top	inches	mm	68	1727	54	1380	84	2134	80.5	2035	103.5	2629	108	2743	119	3023	122	3099	122	3099
Widest Point	inches	mm	26.3	668	32	813	30.5	775	37.75	959	43.5	1105	48	1219	54.25	1378	63	1610	70	1778
Depth	inches	mm	56.75	1442	61.5	1562	75	1905	101.5	2577	116.5	2959	112	2851	129	3276	145	3683	152	3861
Machine Weight	Pounds	kilograms	550	705	1750	794	3000	1364	4700	2132	6000	2727	7500	3409	10000	4545	13000	5909	16000	7273
Gross Weight	Pounds	kilograms	1600	726	1810	821	3900	1773	5300	2404	7400	3364	9100	4136	12000	5455	15750	7159	19500	8864
Shipping Weight	Pounds	kilograms	2000	907	2500	1136	4000	1818	6000	2721	8000	3636	9500	4318	12500	5682	16500	7484	18750	8523
Mixer Motor (TEFC)	HP	kW	1.5	1.1	3	2.2	7.5	5.6	15	11.2	25	18.6	30	22.4	50	37	60	45	75	56
Drive Type	Belt and Pulley																			
Chopper Motor (Dual Range TEFC)	HP	kW	1	.75	1.5	1.1	2.5	1.8	3.75	2.8	5	3.7	7.5	5.6	10	7.5	10	7.5	10	7.5
							5	3.7	7.5	5.6	10	7.5	15	11	20	14.9	20	14.9	20	14.9
Drive Type	Belt and Pulley																			
UP Motor (IP)	HP	kW	n/a	n/a	0.75	.559	0.75	.559	0.75	.559	3	2.2	3	2.24	3	2.24	3	2.24	3	2.24
Mixer Speed High	RPM*		660		425		300		230		190		155		140		135		115	
Mixer Speed Low	RPM*		440		300		200		150		125		103		95		90		75	
Mixer Speed Crawl	RPM*		none		none		30		23		19		16		14		14		12	
Chopper Speed High	RPM		3600		3000		3000		3000		3000		3000		2600		2400		2400	
Chopper Speed Low	RPM		1800		1500		1500		1500		1500		1500		1300		1200		1200	
Control System																				
Control Panel 230 or 460		KVA		2		2		2		2		2		2		2		2		2
Pump Motor HP (Max.)	HP	KVA	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8

Air Requirements 2 SCFM @ 100 PSIG 57 Liters/min @ 6.9 BAR

***Mixer Speed:** operates on a variable frequency drive for speed set point adjustment

Note: Specifications are subject to change without notice

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