

## Model F-212

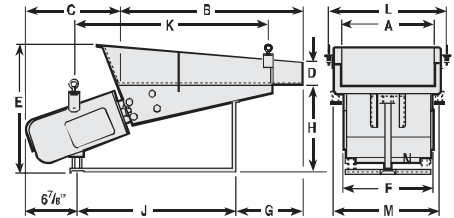
Syntron® F-212 feeder offers the same design features as model F-152, but with a maximum capacity of 20 tons per hour. This proven, rugged unit is ideal for heavy-duty applications. Model F-212 can be supplied with either base or suspension mounting. Above-deck drives are an option.



Syntron F-212 Feeder

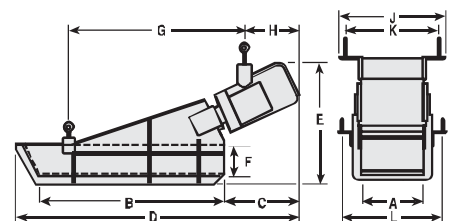
### Below-Deck Drive

Trough Type	A	B	C	D	E	F	G	H	J	K	L	M
Std. Flat Pan (in)	12	36	8 3/8	3	17 3/4	12	17 1/4	12 5/8	20 1/4	26 1/2	16 3/4	15
Std. Flat Pan (mm)	305	914	213	76	448	305	438	321	514	673	425	381
Spec. Flat Pan (in)	8	42	2 3/8	3	17 3/4	12	20 1/4	12 5/8	20 1/4	26 1/2	12 3/4	15
Spec. Flat Pan (mm)	203	1067	60	76	448	305	514	321	514	673	324	381
Spec. Flat Pan (in)	16	30	11 3/8	3	17 3/8	12	14 1/4	12 5/8	20 1/4	27	20 3/4	15
Spec. Flat Pan (mm)	406	762	289	76	448	305	362	321	514	686	527	381
Spec. Flat Pan (in)	18	24	14 3/4	3	17 3/4	12	11 1/4	12 5/8	20 1/4	27	22 1/2	15
Spec. Flat Pan (mm)	457	610	365	76	448	305	286	321	514	686	578	381
Spec. Tubular (in)	10 dia	24	12	10	23 3/4	12	8 7/8	11 3/4	20 1/4	25 1/2	-	15
Spec. Tubular (mm)	254	610	305	254	603	305	225	298	514	648	-	381
Spec. Tubular (in)	8 dia.	30	9	8	21 3/4	12	11 1/8	11 3/4	20 1/4	24 1/2	-	15
Spec. Tubular (mm)	203	762	229	203	552	305	302	298	514	622	-	381
Spec. Tubular (in)	6 dia.	36	6	6	19 3/4	12	14 7/8	11 3/4	20 1/4	20 1/2	-	15
Spec. Tubular (mm)	152	914	152	152	502	305	378	298	514	521	-	381
Spec. Tubular (in)	4 dia.	42	5 3/8	4	18 3/4	12	14 3/4	12 7/8	25 3/4	23 1/2	-	15
Spec. Tubular (mm)	102	1067	137	102	473	305	375	292	654	597	-	381



### Above-Deck Drive

Trough Type	A	B	C	D	E	F	G	H	J	K	L
Spec. Flat Pan (in)	8	36	9	45	18	5 1/2	32 1/4	8 1/2	15	12	13
Spec. Flat Pan (mm)	203	914	229	1143	457	140	819	210	381	305	330
Spec. Flat Pan (in)	10	30	12	45	18	5 1/2	29 1/4	8 1/2	15	12	15
Spec. Flat Pan (mm)	254	762	305	1143	457	140	743	210	381	305	381
Spec. Flat Pan (in)	10	36	9	48	18	5 1/2	32 1/4	8 1/2	15	12	15
Spec. Flat Pan (mm)	254	914	229	1219	457	140	819	210	381	305	381
Spec. Flat Pan (in)	12	24	15	42	18	5 1/2	26	8 7/8	15	12	17
Spec. Flat Pan (mm)	305	610	381	1067	457	140	650	213	381	305	432
Spec. Flat Pan (in)	12	30	12	45	18	5 1/2	30 1/4	8 1/2	15	12	17 1/8
Spec. Flat Pan (mm)	305	762	305	1143	457	140	768	210	381	305	435
Spec. Flat Pan (in)	12	36	9	48	18	5 1/2	32 1/4	8 1/2	15	12	17 1/8
Spec. Flat Pan (mm)	305	914	229	1219	457	140	819	210	381	305	435
Spec. Flat Pan (in)	16	24	15	42	18	5 1/2	26 1/4	8 1/2	15	12	21
Spec. Flat Pan (mm)	406	610	381	1067	457	140	667	210	381	305	553



Feed rate: 20 tons per hour

Approx. Current Input: 115 volt, 60 cycle, 4.5 amps

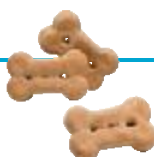
Approx. Net Weight, Feeder: 170 lb

Control Selection: Pages 20-21

Approx. Ship. Weight, Feeder and Control: 265 lb

Feed rate based upon granular material weighing 100 pounds per cubic foot and feeder with standard flat pan.

\*Unit can be ordered to operate from virtually any commercial power supply up to 575 volts. Please specify the voltage required and either 50 or 60 Hz at time of order.



# feeder models and specifications cont'd.

## BF-Series Feeders

### Model BF-01

Syntron® BF-01 feeder gives you maximum feed control through instantaneous material flow cutoff. Rated at a maximum capacity of 5 tons per hour, when equipped with standard 6 x 24-inch trough. Since the electromagnetic drive is both dust-proof and splash-proof, it can be cleaned with steam or water without damaging the electrical components.



Syntron BF-01 Feeder

Trough Type	A	B	C	D	E	F	G	H •	J	K	L	M
Std. Flat Pan (in)	6	24	15 5/8	2	9 1/8	6 9/16	10 3/8	6 11/16	-	6 9/16	3 1/8	9/16
Std. Flat Pan (mm)	152	610	389	51	246	167	273	170	-	167	79	14
Spec. Flat Pan (in)	5	20	13 3/8	2	9 1/8	6 9/16	10 3/8	6 11/16	-	6 9/16	3 1/8	9/16
Spec. Flat Pan (mm)	127	508	338	51	246	167	273	170	-	167	79	14
Spec. Flat Pan (in)	8	20	13 3/8	2	10 1/16	6 9/16	10 3/8	7 1/16	-	6 9/16	3 1/8	9/16
Spec. Flat Pan (mm)	203	508	338	51	271	167	273	195	-	167	79	14
Spec. Flat Pan (in)	10	20	13 3/8	2	10 1/16	6 9/16	10 3/8	7 1/16	-	6 9/16	3 1/8	9/16
Spec. Flat Pan (mm)	254	508	338	51	271	167	273	195	-	167	79	14
Spec. Flat Pan (in)	12	14	9 1/16	2	10 1/16	6 9/16	10 3/8	7 1/16	-	6 9/16	3 1/8	9/16
Spec. Flat Pan (mm)	305	356	230	51	271	167	273	195	-	167	79	14
Spec. Tubular (in)	3 dia	24	15 3/8	-	10 5/8	6 9/16	10 3/8	6 5/8	7 sq	6 9/16	3 1/8	9/16
Spec. Tubular (mm)	76	610	389	-	270	167	273	168	178	167	79	14
Spec. Tubular (in)	4 dia	20	9 3/16	-	11 3/8	6 9/16	10 3/8	6 3/4	8 sq	6 9/16	3 1/8	9/16
Spec. Tubular (mm)	102	508	249	-	295	167	273	168	203	167	79	14

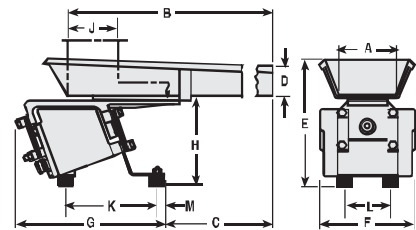
Feed Rate ■: 5 tons per hour

Current Input: 115 V 60 cycle @ 2.3 amps

Approx Net Weight Feeder: 35 lb

Control Selection: Pages 20-21

Approx Shipping Weight Feeder and Control: 60 lb



### Model BF-2

Syntron® BF-2 feeder offers the same innovative features as the smaller model BF-01, but with a higher feeding capacity of 7 1/2 tons per hour. ■



Syntron BF-2 Feeder

Trough Type	A	B	C	D	E	F	G	H •	J	K	L	M	N	P	R
Std. Flat Pan (in)	8	30	17 3/8	2	11 3/8	8	12 5/8	7 5/16	-	7	6	1	1 1/4	3	3/4
Std. Flat Pan (mm)	203	762	448	51	289	203	321	186	-	178	152	25	38	76	19
Spec. Flat Pan (in)	10	30	17 3/8	2	11 3/8	8	12 5/8	7 5/16	-	7	6	1	1 1/4	3	3/4
Spec. Flat Pan (mm)	254	762	448	51	289	203	321	186	-	178	152	25	38	76	19
Spec. Flat Pan (in)	12	24	14 5/8	2	11 3/8	8	12 5/8	7 5/16	-	7	6	1	1 1/4	3	3/4
Spec. Flat Pan (mm)	305	610	371	51	289	203	321	186	-	178	152	25	38	76	19
Spec. Flat Pan (in)	14	24	14 5/8	2	11 3/8	8	12 5/8	7 5/16	-	7	6	1	1 1/4	3	3/4
Spec. Flat Pan (mm)	356	610	371	51	289	203	321	186	-	178	152	25	38	76	19
Spec. Tubular (in)	3 dia	30	17 3/8	-	12 1/8	8	12 5/8	7 5/16	8 sq	7	6	1	1 1/4	3	3/4
Spec. Tubular (mm)	76	762	448	-	314	203	321	186	203	178	152	25	38	76	19
Spec. Tubular (in)	4 dia	24	14 5/8	-	13 3/8	8	12 5/8	7 5/16	8 sq	7	6	1	1 1/4	3	3/4
Spec. Tubular (mm)	102	610	371	-	340	203	321	186	203	178	152	25	38	76	19
Spec. Tubular (in)	6 dia	18	11 3/8	-	15 3/8	8	12 5/8	7 5/16	9 sq	7	6	1	1 1/4	3	3/4
Spec. Tubular (mm)	152	457	295	-	391	203	321	186	229	178	152	25	38	76	19

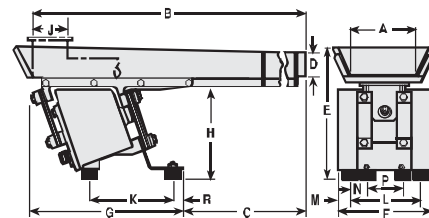
Feed Rate ■: 7 1/2 tons per hour

Approx. Current Input ■: 115 volt, 60 cycle 4.0 amps

Approx. Net Weight, Feeder: 67 lb

Control Selection: Pages 20-21

Approx. Ship. Weight, Feeder and Control: 100 lb



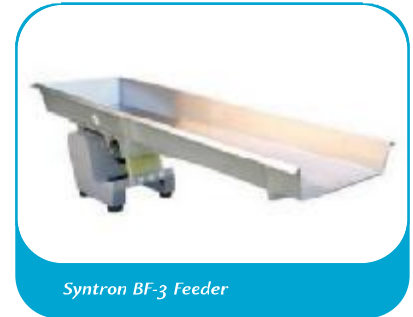
■ Feed rate based upon granular material weighing 100 pounds per cubic foot and feeder with standard flat pan.

• Height H with standard cushion rubber mount. For other mounting options, see Available Rubber Mountings chart on page 16.

\* Unit can be ordered to operate from virtually any commercial power supply up to 460 volts. Please specify the voltage required and either 50 or 60 Hz at time of order.

## Model BF-3

The Syntron® BF-3 feeder is an exciting new addition to FMC Technologies' existing line of products by offering a single drive solution for larger trough sizes. The BF-3 utilizes a sealed, sanitary design capable of handling a diverse range of feeding applications while providing solutions for industries such as food, pharmaceutical, material handling and packaging.



Syntron BF-3 Feeder

Trough Type	A	B	C	D	E	F	G	H •	J	K	L
Std. Flat Pan (in)	12	42	28 <sup>5/16</sup>	4	16 <sup>5/16</sup>	10	16 <sup>1/16</sup>	11 <sup>3/16</sup>	7 <sup>1/2</sup>	7 <sup>3/4</sup>	1 <sup>3/16</sup>
Std. Flat Pan (mm)	305	1,067	735	102	414	254	408	287	191	197	30
Spec. Flat Pan (in)	8	48	31 <sup>3/16</sup>	4	16 <sup>7/16</sup>	10	19 <sup>1/16</sup>	11 <sup>3/16</sup>	7 <sup>1/2</sup>	7 <sup>3/4</sup>	1 <sup>3/16</sup>
Spec. Flat Pan (mm)	203	1,219	811	102	414	254	484	287	191	197	30
Spec. Flat Pan (in)	10	48	31 <sup>3/16</sup>	4	16 <sup>7/16</sup>	10	19 <sup>1/16</sup>	11 <sup>3/16</sup>	7 <sup>1/2</sup>	7 <sup>3/4</sup>	1 <sup>3/16</sup>
Spec. Flat Pan (mm)	254	1,219	811	102	414	254	484	287	191	197	30
Spec. Flat Pan (in)	10	38	24 <sup>5/16</sup>	4	16 <sup>7/16</sup>	10	16 <sup>1/16</sup>	11 <sup>3/16</sup>	7 <sup>1/2</sup>	7 <sup>3/4</sup>	1 <sup>3/16</sup>
Spec. Flat Pan (mm)	254	965	633	102	414	254	408	287	191	197	30
Spec. Flat Pan (in)	12	48	31 <sup>3/16</sup>	4	16 <sup>7/16</sup>	10	19 <sup>1/16</sup>	11 <sup>3/16</sup>	7 <sup>1/2</sup>	7 <sup>3/4</sup>	1 <sup>3/16</sup>
Spec. Flat Pan (mm)	305	1,219	811	102	414	254	484	287	191	197	30
Spec. Flat Pan (in)	14	30	21 <sup>5/16</sup>	4	16 <sup>7/16</sup>	10	15 <sup>5/16</sup>	11 <sup>3/16</sup>	7 <sup>1/2</sup>	7 <sup>3/4</sup>	1 <sup>3/16</sup>
Spec. Flat Pan (mm)	356	762	557	102	414	254	405	287	191	197	30
Spec. Flat Pan (in)	16	30	12 <sup>5/16</sup>	4	16 <sup>7/16</sup>	10	15 <sup>5/16</sup>	11 <sup>3/16</sup>	7 <sup>1/2</sup>	7 <sup>3/4</sup>	1 <sup>3/16</sup>
Spec. Flat Pan (mm)	406	762	329	102	414	254	405	287	191	197	30

Feed Rate ■: 25 tons per hour

Current Input\*: 115 V 60 cycle (@ 8 amps)

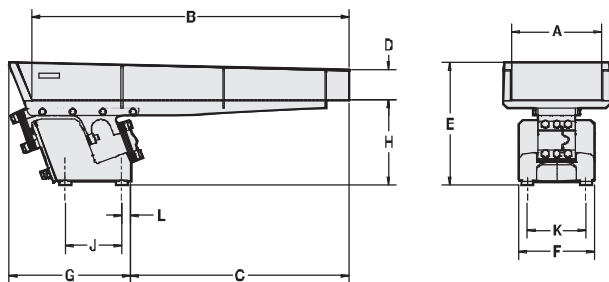
Approx Net Weight Feeder: 150 lb

Approx Shipping Weight Feeder and Control: 158 lb

■ Feed rate based upon granular material weighing 100 pounds per cubic foot and feeder with standard flat pan.

\* Unit can be ordered to operate from virtually any commercial power supply up to 575 volts.

Please specify the voltage required and either 50 or 60 Hz at time of order. Contact the factory for assistance.



Integrated high stroke system using BF-3, RS drive, BF-2 and a Link-Belt bucket elevator.

## Features

- Designed for high speed feeding up to 60 ft per minute ■
- Sanitary design eliminates contamination during washdown
- Drive design is IP 66 compliant
- CE and CSA certified
- Feeder capable of operating at .090" stroke with a trough carrying weight ranging from 20 to 40 pounds
- Other trough sizes available – contact the factory for assistance
- Externally adjustable tuning



## feeder models and specifications cont'd.

### Model BF-4

Syntron® BF-4 feeder provides fast, accurate, yet gentle feeding of a wide range of bulk materials from food products such as snacks and vegetables, to other materials such as plastics and chemicals. Model BF-4 is ideal for feeding various types of packaging and processing equipment, such as multi-head weigh scales and filling machines. It can also be used in modular distribution systems for transfer feeding.

BF-4 feeders can achieve product travel speeds up to 50 feet (15 meters) per minute. Continuous welds on stainless steel troughs provide extra sanitation for food and pharmaceutical applications.



*Syntron BF-4 Feeder with peripheral discharge feeds candy to a weigh scale.*



*The Syntron BF-4 Low Frequency Feeder features coil spring isolation.*

The actual capacity of all Syntron Vibrating Feeders varies according to the density of the bulk material being handled and the feeder trough size.

### Features

- Long trough overhang for optimum feeder positioning minimizes product drop and degradation
- Electromagnetic drive allows adjustable vibration control and gentle product handling
- Product travel speeds up to 50 fpm (15 mpm)
- Adjustable stroke—up to .150 inches (4 mm)—maintains feed rate of difficult-to-handle or sticky products
- Continuous welds on stainless steel troughs provide extra sanitation in FDA applications
- Totally sealed drive is ideal for washdown applications
- Excellent for cold room applications
- Externally adjustable air gap for simple, easy tuning
- Low noise level; approximately 70 db for high-frequency models and 60 db for low-frequency models (while running empty)
- Trough options include:
  - Straight, diagonal or peripheral type discharges
  - Trough covers to prevent contamination

## Model BF-4

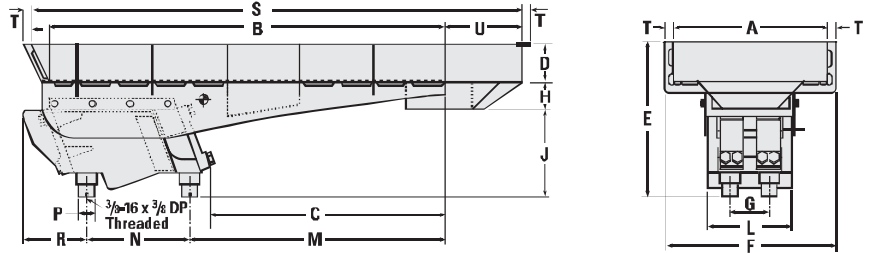
	A	B	C	D	E	F	G	H	J	L	M	N	P	R	S	T	U	V	W	
Typical peripheral type discharge	inches mm	20 508	51 1,295	30 <sup>3/8</sup> 772	5 127	19 <sup>5/16</sup> 491	22 <sup>1/8</sup> 562	5 127	3 <sup>1/2</sup> 89	11 <sup>1/8</sup> 283	11 <sup>1/8</sup> 279	33 <sup>7/16</sup> 845	13 330	2 51	8 <sup>5/8</sup> 206	63 <sup>3/16</sup> 1,608	1 <sup>1/2</sup> 32	10 254	— —	— —
Typical straight type discharge	inches mm	14 356	73 1,854	48 1,219	5 127	19 <sup>1/16</sup> 500	16 <sup>7/8</sup> 411	5 127	1 <sup>1/2</sup> 38	13 <sup>1/16</sup> 354	11 279	51 <sup>7/16</sup> 1,300	13 330	2 51	7 178	75 <sup>1/16</sup> 1,913	1 <sup>1/2</sup> 32	11 279	4 102	3/4 19

Many other trough sizes available.

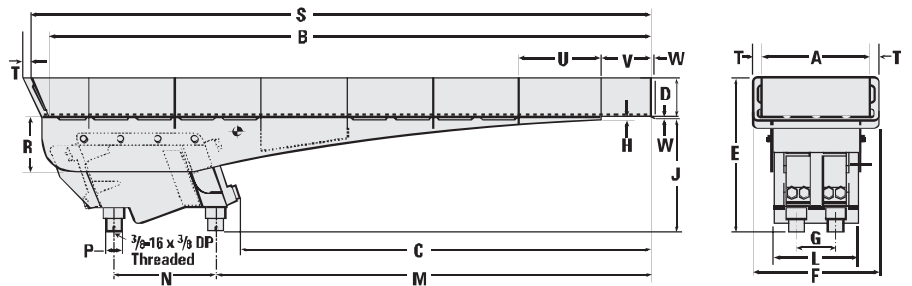
Feed rate: 11 tons per hour  
 Approx. Ship. Wt: 500 lb (267 kg)  
 Control Selection: Pages 20-21  
 Approx. Net Wt, Feeder: 400 lb (181 kg)  
 Approx. Current Input:  
 @ 230 V, 50 Hz or 60 Hz, 9 amps  
 Available for:  
 115 V, 230 V, 460 V, 3600 VPM @ 60 Hz  
 208 V, 230 V, 380 V, 3000 VPM @ 50 Hz

Based on material weighing 25 lb per ft<sup>3</sup> on a 20-inch wide trough.

Typical peripheral type discharge



Typical straight type discharge



## Model BF-4 Low Frequency

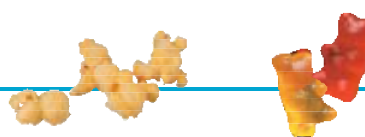
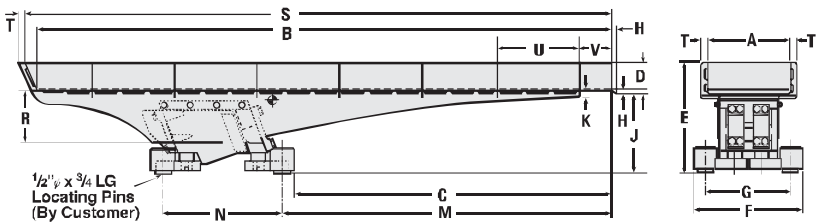
### Straight Discharge BF-4-LF (Low Frequency)

	A	B	C	D	E	F	G	H	J	K	M	N	R	S	T	U	V
inches	16	115	66	5	20 <sup>5/8</sup>	20 <sup>1/2</sup>	16	3/4	14 <sup>5/8</sup>	1 <sup>1/2</sup>	68 <sup>1/2</sup>	21 <sup>1/8</sup>	9 <sup>1/2</sup>	117 <sup>3/16</sup>	1 <sup>1/4</sup>	15	4
mm	406	2,921	1,676	127	518	521	406	19	371	38	1,734	549	241	2,980	32	381	102

Many other trough sizes available.

Feed rate: 12 tons per hour  
 Approx. Ship. Weight: 555 lb (252 kg)  
 Approx. Net Wt, Feeder: 455 lb (206 kg)  
 Control Selection: Pages 20-21  
 Approx. Current Input: 230 V, 50 Hz or 60 Hz, 9 amps  
 Available for 230 V, 460 V, 1800 VPM @ 60 Hz  
 208 V, 230 V, 380 V, 2000 VPM @ 50 Hz

Based on material weighing 25 lb per cu ft on a 20-inch wide trough.  
 Height dimension F and J varies with trough weight.



## standard and special troughs

### Standard troughs

All Syntron® Light Industry Electromagnetic Vibrating Feeders are furnished with mild steel or stainless steel troughs. Mild steel troughs are painted or powder coated inside and outside with a high-quality polyurethane.

To meet food and pharmaceutical requirements, troughs are available in a variety of stainless steel finishes. A glass-beaded finish on stainless steel troughs is available for non-food applications.

Special coating can be applied to trough interiors. These include Teflon, Urethane, rubber and others. Stainless steel and glass trough liners are also available to provide flat conveying surfaces. In addition, covers and/or downspouts are available.

The rule of thumb for trough selection suggests that the maximum dimension of the largest particle to be handled should not exceed one-third to one-half the trough width. Contact your FMC Technologies Sales Engineer or Application Specialist for a complete review of your application.

Modifications or additions to feeder troughs should not be made without first consulting FMC Technologies.



*Flat Pan troughs are furnished as standard equipment for general purpose feeding. The trough bottom width is constant for its entire length. Straight or tapered walls are available.*

### Special trough styles



*Tapered Width troughs provide nominal material concentration at discharge.*



*Diagonal Discharge troughs are used to spread the material discharge over the width of a belt or bucket lift positioned at 90 degrees.*



*V-Shaped troughs are used to discharge granular materials in a concentrated, narrow stream.*



*Tubular troughs are used when sealed conveying or feeding is required.*