

# Syntron® MF Electromechanical Feeders

## MF Heavy-Duty Electromechanical Feeders

### The high-capacity performers

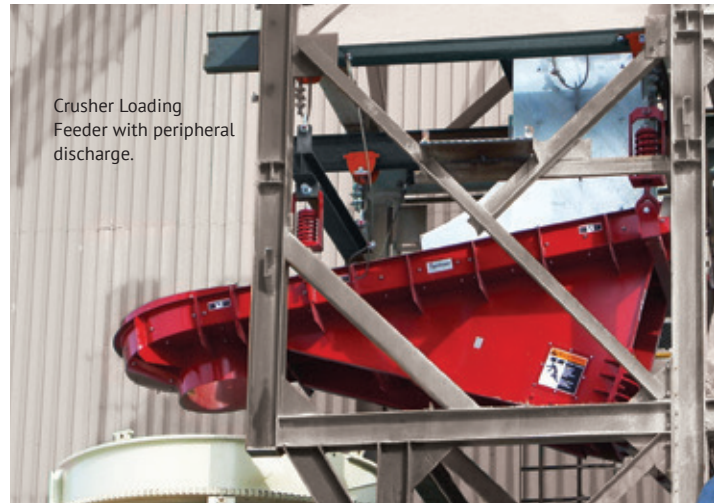
Syntron® MF Heavy-Duty Electromechanical Feeders are the heavy-weights of bulk material handling and are used for higher capacity requirements. The ten heavy-duty models handle capacities from 600 to 4,000 tons per hour.\*

Syntron® Heavy-Duty Electromechanical Feeders combine extra structural strength with durable components. The deep wing plates form a bridge between inlet and discharge suspension supports, providing extra strength for years of dependable service. Standard troughs feature unitized weldments – one-piece, completely welded units for greater strength. Troughs are also available with bolt-together construction for tunnel installations or other confined areas.

MF Heavy-Duty Electromechanical Feeders are two-mass, spring-connected and sub-resonant-tuned. The exciter unit is connected to the trough with corrosion resistant polymeric springs, which are more stable under varying conditions. The springs are compressed for improved load stability, improved feed angles and straight line motion. The spring design eliminates pinch points, an important safety feature.

All Syntron® MF Electromechanical Feeder motors are labeled for inverter duty and vibration service. Motors can be supplied to meet UL explosion-proof requirements.

\* Based on sand weighing 100 pounds per cubic foot. Capacities vary depending on material characteristics, material density, trough length and width, trough liner type, feeder installation, skirt boards and hopper transitions.



Crusher Loading Feeder with peripheral discharge.

### NEW! Two-Mass Direct Drive

All MF Mechanical Feeders, except MF-1600 and 2000, are designed using the new Two-Mass Direct Drive. This drive provides reliable service using a rotary vibrator to minimize components. Belts and pulleys, which commonly require adjustment and replacement due to wear, are eliminated. The new Two-Mass Direct Drive is also maintenance friendly and requires minimal time for thrust adjustment or replacement.



Syntron® MF-200 Electromechanical Feeder feeding crushed stone in an aggregate operation.



Syntron® MF-600 Electromechanical Feeder feeding rock to a crusher.

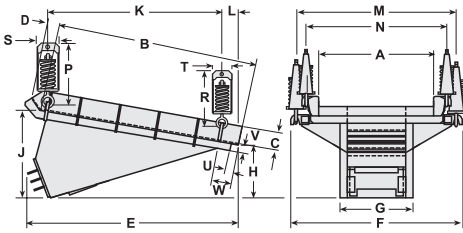
## MF Electromechanical Direct Drive Feeder Features

- Operating frequency - 1100 VPM at 55.4 Hz
- Stroke: 0.25 - 0.30 inches
- Dependable, flexible, easily adjustable
  - Minimal component design to reduce adjustments and replacements due to wear
  - Quick replacement of Drive Unit
  - Infinite unbalance adjustment
  - VFD control providing 10:1 turn-down feed adjustment
- Sub-resonant tuning
  - Stroke consistency and speed stability under varying headload and material dampening
- Start and operate fully loaded or empty
- Structural strength
  - Deep wing plates
  - Engineered weldments using the latest FEA techniques and software
- Hazardous Area Service
  - Explosion proof motors
  - ULXP:
    - Class 1, Div 1, Group C & D
    - Class 2, Div 1, Group E, F, & G
- Bolt-in trough liners
  - T1-A
  - AR-400, AR-500
  - 304 stainless steel
  - Chromium carbide overlay ceramic
  - UHMW, TIVAR, rubber



# MF Heavy-Duty Feeder Specifications

## MODEL MF-200-DD



Please request a certified drawing for installation.

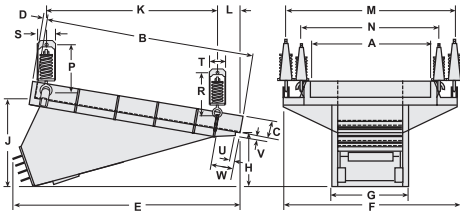
Approx. Trough W x L	Approx. Capacity tph	HP	KW	Approx. Current (460V)	Control Model	Net Wt. (lb)	Net Wt. (kg)	Approx. Ship Wt. (lbs) Feeder/Control	Approx. Ship Wt. (kg) Feeder/Control
36 x 72	600	4	3	4.4 amps	VF-5D2	2200	997	2800	1270
42 x 72	700	4	3	4.4 amps	VF-5D2	2400	1088	3000	1360
48 x 84	900	4	3	4.4 amps	VF-5D2	2500	1133	3100	1406
48 x 96	900	4	3	4.4 amps	VF-5D2	2600	1179	3200	1451
54 x 96	1000	4	3	4.4 amps	VF-5D2	2800	1270	3400	1542

◆ Based on feeder with 10° down slope, below-deck drive unit, installed with proper hopper transition and skirt board arrangement, feeding sand weighing 100 pounds per cubic foot. 460/575 Volt 60 Hz three-phase. 380/415 Volt 50 Hz three-phase.

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W
in	36	72	8	2 1/2	81 3/16	60 1/2	30	23 1/8	35 1/8	65 1/4	8 3/8	54	45 1/2	21 3/4	19	8	7 1/4	2	2	9 7/16
mm	914	1829	203	64	2062	1537	762	587	905	1657	213	1372	1156	552	483	203	184	51	51	240
in	42	72	8	4	81 1/4	65	30	23 1/8	35 1/8	64	3	60	51 1/2	21 3/4	19	8	7 1/4	4	3	4
mm	1066	1829	203	102	2064	1651	762	587	905	1626	76	1524	1308	552	483	203	184	102	76	104
in	48	84	8	4	87 1/8	72 1/2	30	22 1/16	36 11/16	71 1/4	6 13/16	66	57 1/2	25	21 3/4	9	8	-	3	7 13/16
mm	1219	2134	203	102	2213	1842	762	560	932	1810	173	1676	1461	635	552	229	203	-	76	198
in	48	96	8	4	93	72 1/2	30	21	37 3/4	76 1/4	10 7/8	66	57 1/2	25	21 3/4	9	8	2	2	12
mm	1219	2438	203	102	2362	1842	762	533	959	1937	276	1676	1461	635	552	229	203	51	51	305
in	54	96	8	4	93	77	30	21	34 3/4	74 7/8	12 1/8	72	72	21 3/4	21 3/4	8	8	2	2	10
mm	1372	2438	203	102	2362	1956	762	533	883	1902	308	1829	1829	552	552	203	203	51	51	25

Many other trough sizes are available. Capacities vary depending on drive unit location, material characteristics, material density, trough length and width, trough liner type, feeder installation, skirt boards and hopper transitions. Cad drawings are available. Please call Syntron Material Handling for expert help with your application.

## MODEL MF-400-DD



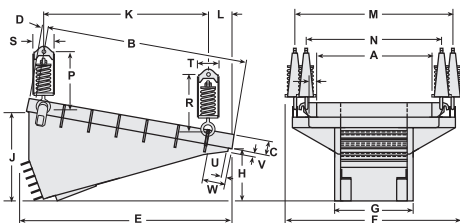
Please request a certified drawing for installation.

Approx. Trough W x L	Approx. Capacity tph <span style="color: red;">◆</span>	HP	KW	Approx. Current (460V)	Control Model	Net Wt. (lb)	Net Wt. (kg)	Approx. Ship Wt. (lbs) Feeder/Control	Approx. Ship Wt. (kg) Feeder/Control
<b>54 x 84</b>	900	9	6.7	10.0 amps	VF-10D2	4500	2041	5200	2358
<b>54 x 96</b>	1000	9	6.7	10.0 amps	VF-10D2	4600	2086	5300	2404
<b>60 x 84</b>	1000	9	6.7	10.0 amps	VF-10D2	4600	2086	5300	2404
<b>60 x 96</b>	1200	9	6.7	10.0 amps	VF-10D2	4800	2177	5400	2449
<b>66 x 96</b>	1400	9	6.7	10.0 amps	VF-10D2	4900	2222	5600	2540
<b>72 x 96</b>	1600	9	6.7	10.0 amps	VF-10D2	5100	2313	5800	2630

◆ Based on feeder with 10° down slope, below-deck drive unit, installed with proper hopper transition and skirt board arrangement, feeding sand weighing 100 pounds per cubic foot. 460/575 Volt 60 Hz three-phase. 380/415 Volt 50 Hz three-phase.

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W
<b>in</b>	<b>54</b>	<b>84</b>	8	2 1/2	105 1/16	80 1/2	38	28 3/8	42 15/16	80	10 3/4	74	63 1/2	26 1/2	21 3/4	9	8	2	2	11 13/16
<b>mm</b>	<b>1372</b>	<b>2134</b>	203	64	2669	2045	965	721	1091	2032	273	1880	1613	673	552	229	203	51	51	300
<b>in</b>	<b>54</b>	<b>96</b>	8	2 1/2	113 5/16	80 1/2	38	28 3/16	44 13/16	85 5/16	10 3/4	74	63 1/2	26	21 3/4	9	8	2	2	11 13/16
<b>mm</b>	<b>1372</b>	<b>2438</b>	203	64	2878	2045	965	716	1138	2167	273	1880	1613	660	552	229	203	51	51	300
<b>in</b>	<b>60</b>	<b>84</b>	8	2 1/2	105 1/16	88 1/2	38	28 3/8	42 15/16	80 1/2	10 3/4	82	69 1/2	26 1/2	21 3/4	9	8	2	2	11 13/16
<b>mm</b>	<b>1524</b>	<b>2134</b>	203	64	2669	2248	965	721	1091	2045	273	2083	1765	673	552	229	203	51	51	300
<b>in</b>	<b>60</b>	<b>96</b>	8	8	113 5/16	90 1/2	38	28 3/16	44 13/16	85 3/4	11 1/4	84	69 1/2	26	21 3/4	9	8	2	2	12 5/16
<b>mm</b>	<b>1524</b>	<b>2438</b>	203	203	2878	2299	965	716	1138	2178	286	2134	1765	660	552	229	203	51	51	313
<b>in</b>	<b>66</b>	<b>96</b>	8	2 1/2	113 5/16	96 1/2	38	28 3/16	44 13/16	85 3/4	11 1/4	90	75 1/2	26	21 3/4	9	8	2	2	12 5/16
<b>mm</b>	<b>1676</b>	<b>2438</b>	203	64	2878	2451	965	716	1138	2178	286	2286	1918	660	552	229	203	51	51	313
<b>in</b>	<b>72</b>	<b>96</b>	8	2 1/2	114 3/4	98 1/2	38	28 3/4	45 5/16	86 1/2	11 1/4	92	81 1/2	26	21 3/4	9	8	2	2	12 5/16
<b>mm</b>	<b>1829</b>	<b>2438</b>	203	64	2915	2502	965	729	1151	2197	286	2337	2070	660	552	229	203	51	51	313

## MODEL MF-600-DD



Please request a certified drawing for installation.

Approx. Trough W x L	Approx. Capacity tph <span style="color: red;">◆</span>	HP	KW	Approx. Current (460V)	Control Model	Net Wt. (lb)	Net Wt. (kg)	Approx. Ship Wt. (lbs) Feeder/Control	Approx. Ship Wt. (kg) Feeder/Control
<b>66 x 108</b>	1600	15	11.2	19.4 amps	VF-15D2	8300	3764	9100	4127
<b>72 x 96</b>	1800	15	11.2	19.4 amps	VF-15D2	8100	3674	8900	4036

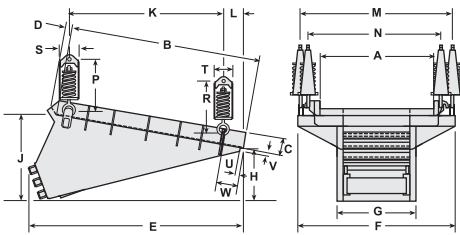
◆ Based on feeder with 10° down slope, below-deck drive unit, installed with proper hopper transition and skirt board arrangement, feeding sand weighing 100 pounds per cubic foot. 460/575 Volt 60 Hz three-phase. 380/415 Volt 50 Hz three-phase.

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W
<b>in</b>	<b>66</b>	<b>108</b>	8	8	120 1/8	99	45	30 1/8	48 7/8	94	13 5/8	90	81 1/8	32 1/2	33 1/4	11 3/4	11 3/4	2	2	14 11/16
<b>mm</b>	<b>1676</b>	<b>2743</b>	203	203	3051	2515	1143	765	1241	2388	346	2286	2061	826	845	298	298	51	51	373
<b>in</b>	<b>72</b>	<b>96</b>	8	8	114 1/4	105	45	31 3/16	47 13/16	85 3/16	12 3/4	96	87 1/2	32 1/2	33 1/4	11 3/4	11 3/4	2	3	13 11/16
<b>mm</b>	<b>1829</b>	<b>2438</b>	203	203	2902	2667	1143	792	1214	2164	324	2438	2213	826	845	298	298	51	76	348

Many other trough sizes are available. Capacities vary depending on drive unit location, material characteristics, material density, trough length and width, trough liner type, feeder installation, skirt boards and hopper transitions. Cad drawings are available. Please call Syntron Material Handling for expert help with your application.

# MF Heavy-Duty Feeder Specifications

## MODEL MF-800-DD



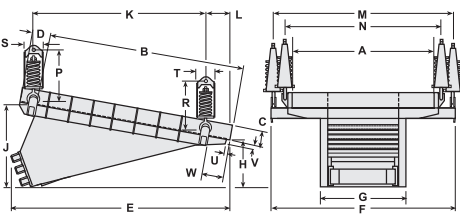
Approx. Trough W x L	Approx. Capacity tph <span style="color: red;">◆</span>	HP	KW	Approx. Current (460V)	Control Model	Net Wt. (lb)	Net Wt. (kg)	Approx. Ship Wt. (lbs) Feeder/Control	Approx. Ship Wt. (kg) Feeder/Control
<b>72 x 108</b>	1800	15	11.2	19.4 amps	VF-20D2	11550	5238	12350	5601
<b>84 x 108</b>	2300	15	11.2	19.4 amps	VF-20D2	12350	5601	13150	5964

Please request a certified drawing for installation.

◆ Based on feeder with 10° down slope, below-deck drive unit, installed with proper hopper transition and skirt board arrangement, feeding sand weighing 100 pounds per cubic foot. 460/575 Volt 60 Hz three-phase. 380/415 Volt 50 Hz three-phase.

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W
<b>in</b>	<b>72</b>	<b>108</b>	10	8 ½	128 5/8	107	50	32 7/16	51 1/8	93 ¼	16 3/8	96	87 ¼	33 ¼	33 ¼	12 ½	11 ¾	3	3	17 5/8
<b>mm</b>	<b>1829</b>	<b>2743</b>	254	216	3267	2718	1270	824	1299	2369	416	2438	2216	845	845	318	296	76	76	448
<b>in</b>	<b>84</b>	<b>108</b>	8	8	128 5/8	117	45	31 11/16	51 1/8	94	16 5/8	108	99 1/8	32 ½	33 ¼	11 ¾	11 ¾	2	2	14 11/16
<b>mm</b>	<b>2134</b>	<b>2743</b>	203	203	3267	2972	1143	805	1299	2388	422	2743	2518	826	845	298	298	51	51	373

## MODEL MF-1000-DD



Approx. Trough W x L	Approx. Capacity tph <span style="color: red;">◆</span>	HP	KW	Approx. Current (460V)	Control Model	Net Wt. (lb)	Net Wt. (kg)	Approx. Ship Wt. (lbs) Feeder/Control	Approx. Ship Wt. (kg) Feeder/Control
<b>72 x 120</b>	2000	20	14.92	21.8 amps	VF-25D2	13500	6123	14500	6577
<b>84 x 132</b>	2500	20	14.92	21.8 amps	VF-25D2	14000	6350	15000	6803

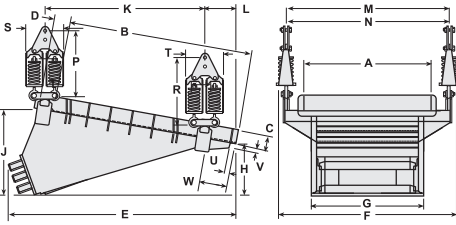
Please request a certified drawing for installation.

◆ Based on feeder with 10° down slope, below-deck drive unit, installed with proper hopper transition and skirt board arrangement, feeding sand weighing 100 pounds per cubic foot. 460/575 Volt 60 Hz three-phase. 380/415 Volt 50 Hz three-phase.

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W
<b>in</b>	<b>72</b>	<b>120</b>	10	10	143 7/16	109	58	33 ½	54 5/16	106 1/8	17 3/8	98	87 ¼	33 ¼	33 ¼	12 ½	11 ¾	3	3	18 ¾
<b>mm</b>	<b>1829</b>	<b>3048</b>	254	254	3643	2769	1473	851	1380	2696	441	2489	2216	845	845	318	298	76	76	476
<b>in</b>	<b>84</b>	<b>132</b>	10	10	149 3/8	121	58	32 7/16	55 3/8	116 1/2	16 5/8	110	110	33 ¼	32 ½	12 ½	11 ¾	3	3	15
<b>mm</b>	<b>2134</b>	<b>3353</b>	254	254	3794	3073	1473	824	1407	2959	422	2794	2794	845	826	318	298	76	76	381

Many other trough sizes are available. Capacities vary depending on drive unit location, material characteristics, material density, trough length and width, trough liner type, feeder installation, skirt boards and hopper transitions. Cad drawings are available. Please call Syntron Material Handling for expert help with your application.

## MODEL MF-1600



Approx. Trough W x L	Approx. Capacity tph	HP	Approx. Current (460V)	Control Model	Net Wt. (lb)	Net Wt. (kg)	Approx. Ship Wt. (lbs) Feeder/Control	Approx. Ship Wt. (kg) Feeder/Control
<b>70 x 132</b>	<b>3200</b>	<b>30</b>	<b>35.0 amps</b>	<b>VF-30D2</b>	<b>19800</b>	<b>8981</b>	<b>21600</b>	<b>9797</b>

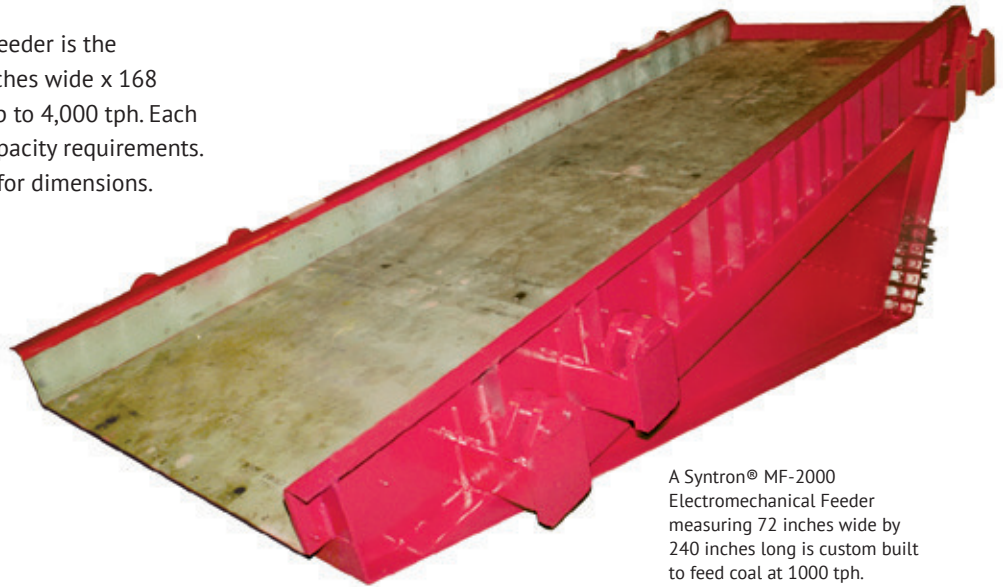
◆ Based on feeder with 10° down slope, below-deck drive unit, installed with proper hopper transition and skirt board arrangement, feeding sand weighing 100 pounds per cubic foot. 460/575 Volt 60 Hz three-phase. 380/415 Volt 50 Hz three-phase.

Please request a certified drawing for installation.

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W
<b>in</b>	<b>90</b>	<b>132</b>	<b>10</b>	<b>10</b>	<b>161 1/8</b>	<b>127</b>	<b>80</b>	<b>36 11/16</b>	<b>59 1/8</b>	<b>113 1/2</b>	<b>22 1/2</b>	<b>116</b>	<b>116</b>	<b>53</b>	<b>53</b>	<b>27</b>	<b>27</b>	<b>4</b>	<b>4</b>	<b>19 1/2</b>
<b>mm</b>	<b>2286</b>	<b>3353</b>	<b>254</b>	<b>254</b>	<b>4093</b>	<b>3226</b>	<b>2032</b>	<b>932</b>	<b>1514</b>	<b>2883</b>	<b>572</b>	<b>2946</b>	<b>2946</b>	<b>1346</b>	<b>1346</b>	<b>686</b>	<b>686</b>	<b>102</b>	<b>102</b>	<b>495</b>

## MODEL MF-2000

The largest Syntron® Electromechanical Feeder is the MF-2000. With a trough measuring 120 inches wide x 168 inches long, the MF-2000 has capacities up to 4,000 tph. Each one is custom built to meet demanding capacity requirements. Please contact Syntron Material Handling for dimensions.



A Syntron® MF-2000 Electromechanical Feeder measuring 72 inches wide by 240 inches long is custom built to feed coal at 1000 tph.

Many other trough sizes are available. Capacities vary depending on drive unit location, material characteristics, material density, trough length and width, trough liner type, feeder installation, skirt boards and hopper transitions. Cad drawings are available. Please call Syntron Material Handling for expert help with your application.