



Force Control Industries, Inc.
3660 Dixie Highway Fairfield, Ohio 45014 USA
Phone: 513-868-0900 Fax: 513-868-2105

MagnaShear Motor Brake Specifications

Brake Size	Mntg Bolt Circle FAK (ins.) (Inches)	Hub Bore FU Inches	Hub Depth Inches	Static Torque (Lb. Ft.) Lb. Ft.	Dynamic Torque Lb. Ft.	Max KE per Engmt Ft.Lbs.	Frame Size	Inertia Lb. Ft. ²	Oil Capacity Fl. Ozs	Input Voltage VAC	Inrush Current Amps	Inrush Time Seconds	Holding Current Amps
MSB2	5.876	.625 .875	1.00/2.19	6	5	7,975	56	0.011	28	115	2.5	0.4	0.8
				8	7		143						
				12	10		145						
MSB4	5.875 7.250	.875 1.125	1.37/2.89	14	12	22,000	182	0.024	40	115	5.5	0.4	1.7
				21	18		184						
				33	28		213 215						
MSB6	7.250	.875 1.125 1.375 1.625	1.62/4.25	38	32	26,500	213	0.058	50	115	6	0.4	1.8
				62	53		215						
				86	73		254						
				100	85		256						

Brake Size	Pilot Dia. FAK (ins.)	Hub Bore FU Inches	Hub Depth Inches	Static Torque Lb. Ft.	Dynamic Torque Lb. Ft.	Max KE per Engmt Ft.Lbs.	Frame Size	Inertia Lb. Ft. ²	Oil Capacity Fl. Ozs	Input Voltage VAC	Inrush Current Amps	Inrush Time Seconds	Holding Current Amps
MSB7	8.5 10.5	1.375 1.625	3.00 4.38	95	83	26,500	254	CF	CF	115	6	0.4	1.8
				135	115		256						
				170	148		284 286						
MSB8	8.5 10.5	1.375 1.625 1.875	3.00 4.38	100	86	41,500	254	0.267	180	115	6	0.4	1.8
				150	129		256						
				200	172		284						
				250	215		286						
MSB9	10.5 12.5	1.625 1.875 2.000 2.125 2.250 2.375	2.75 4.62	250	215	48,000	284	0.962	192	115	6	1.4	1.8
				300	258		286						
				350	301		324						
				450	387		326 364 365 404 405						
MSB10	10.5 12.5	1.875 2.000 2.125 2.250 2.375	2.75 4.62	500	430	69,000		1.244	192	115	6	1.4	1.8
				600	516								
				650	559								
				750	645								
				900	774								
MSB12	16	1.875 2.125 2.375 2.625 2.875 3.125 3.375 3.500 3.625	3.00 5.12	625	538	158,000	444	2.068	384	115	8	1.4	2.5
				950	817		445						
				1250	1075		447 449						



MagnaShear Thermal Horsepower Rating

MSB2

% Duty Cycle	Cycle Rate <i>cpm</i>	Ambient Temperature	
		25° C	25° C
25%	2	0.45	0.17
	5	0.45	0.17
	10	0.44	0.16
50%	2	0.37	0.16
	5	0.36	0.15
	10	0.35	0.14
75%	2	0.28	0.13
	5	0.27	0.13
	10	0.26	0.12

MSB4

% Duty Cycle	Cycle Rate <i>cpm</i>	Ambient Temperature			
		TEFC 25° C	TENV 25° C	TEFC 25° C	TENV 25° C
25%	2	0.43	0.28	0.41	0.27
	5	0.41	0.27	0.4	0.26
	10	0.39	0.25	0.38	0.24
50%	2	0.18	NR	0.15	NR
	5	0.17	NR	0.14	NR
	10	0.15	NR	0.12	NR
75%	2	NR	NR	NR	NR
	5	NR	NR	NR	NR
	10	NR	NR	NR	NR

MSB6

% Duty Cycle	Cycle Rate <i>cpm</i>	Ambient Temperature			
		TEFC 25° C	TENV 25° C	TEFC 25° C	TENV 25° C
25%	2	0.18	0.12	0.14	0.09
	5	0.16	0.11	0.13	0.08
	10	0.14	0.08	0.11	0.06
50%	2	0.12	0.06	0.05	NR
	5	0.11	0.12	0.14	0.09
	10	0.09	NR	0.12	NR
75%	2	0.07	NR	NR	NR
	5	0.06	NR	NR	NR
	10	NR	NR	NR	NR

MSB8

% Duty Cycle	Cycle Rate <i>cpm</i>	Ambient Temperature			
		TEFC 25° C	TENV 25° C	TEFC 25° C	TENV 25° C
25%	2	0.43	0.28	0.41	0.27
	5	0.41	0.27	0.4	0.26
	10	0.39	0.25	0.38	0.24
50%	2	0.18	NR	0.15	NR
	5	0.17	NR	0.14	NR
	10	0.15	NR	0.12	NR
75%	2	NR	NR	NR	NR
	5	NR	NR	NR	NR
	10	NR	NR	NR	NR

NOTES:

Above ratings are based on 96° C maximum oil temperature and 1800 RPM motor.

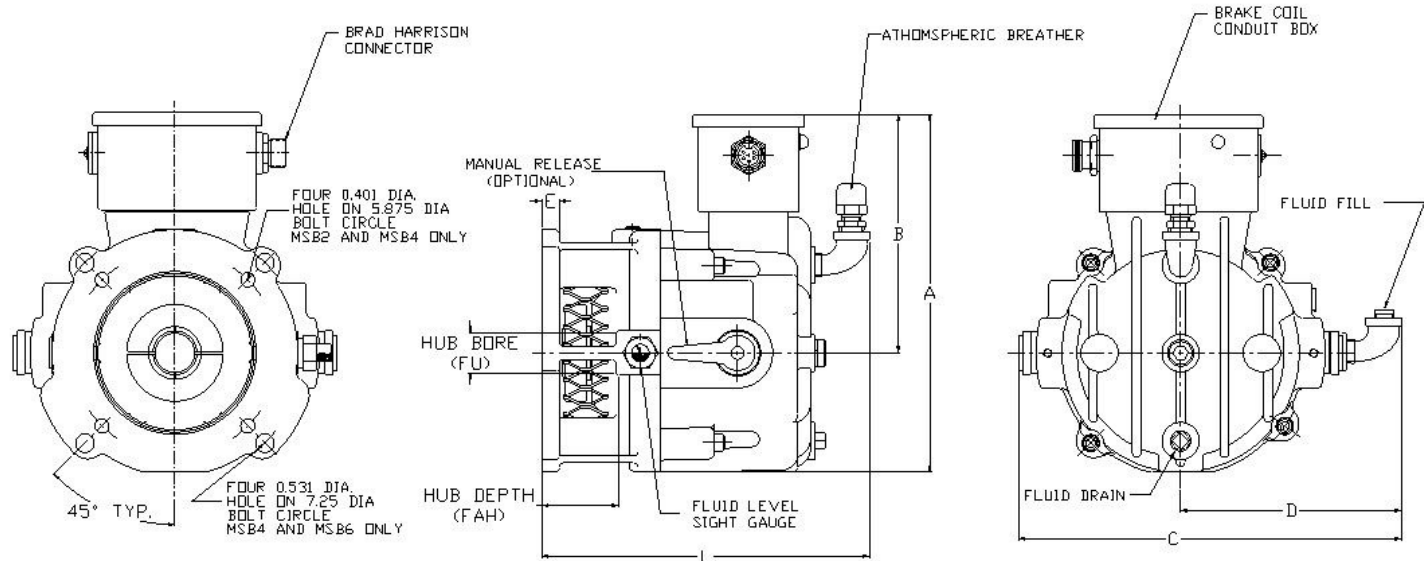
NR—Not Recommended.

% - Duty is a percentage of time the brake is released. (Coil is energized).



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MSB2, MSB4 & MSB6 MagnaShear Motor Brake Dimensions



Brake Size	Mntg Bolt Circle FAK In.	Hub Bore FU In.	Hub Depth In.	Static Torque (Lb. Ft.) Lb. Ft.	Dynamic Torque Lb. Ft.	Max KE per Engmt Ft.Lbs.	Frame Size	Inertia Lb. Ft. ²	Oil Capacity Fl. Ozs	Input Voltage VAC	Inrush Current Amps	Inrush Time Seconds	Holding Current Amps
MSB2	5.876	.625 .875	1.00/2.19	6	5	7,975	56	.011	28	115	2.5	0.4	0.8
				8	7		143						
				12	10		145						
MSB4	5.875 7.250	.875 1.125	1.37/2.89	14	12	22,000	182		40	115	5.5	0.4	1.7
				21	18		184						
				33	28		213						
MSB6	7.250	.875 1.125 1.375 1.625	1.62/4.25	38	32	26,500	213	0.024	50	115	6	0.4	1.8
				62	53		215						
				86	73		254						
				100	85		256						

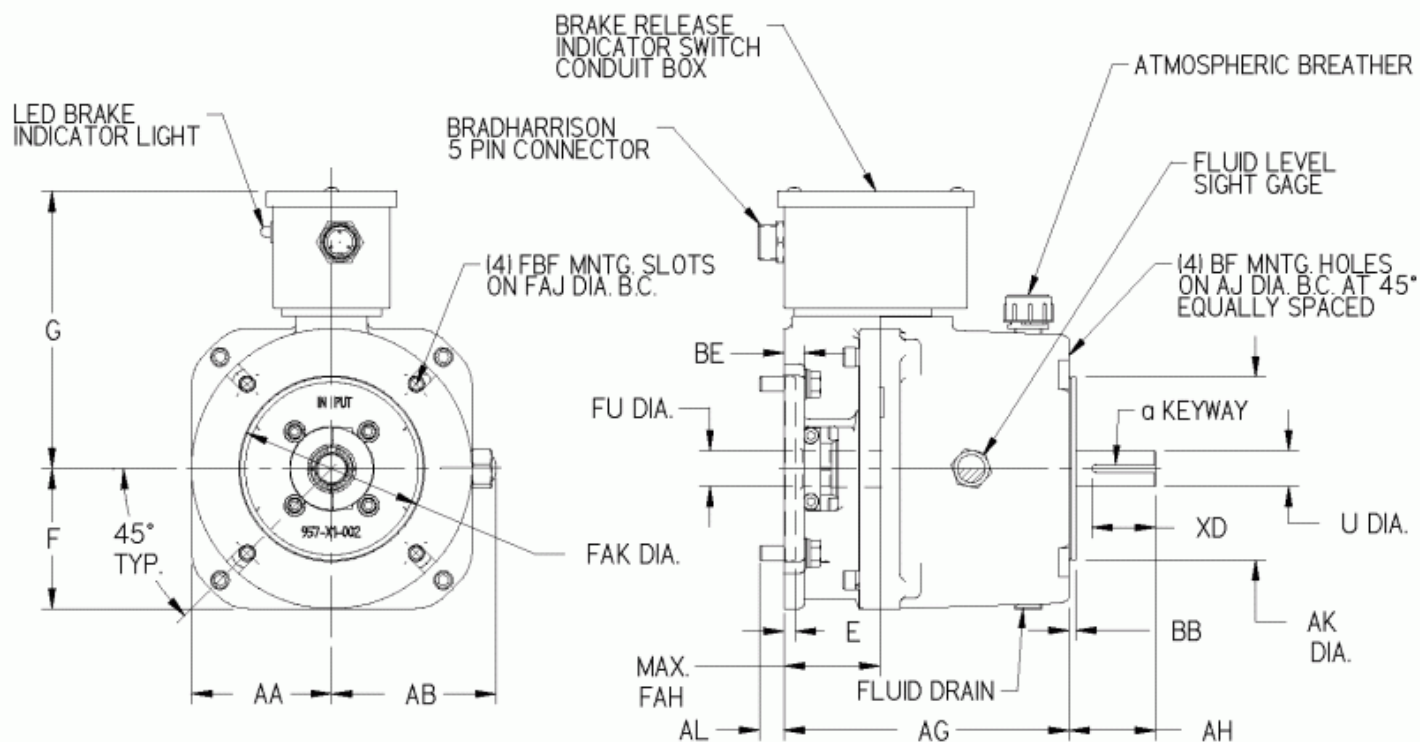
NOTES:

Maximum torque of 62 Lb. Ft. with 0.625" and 0.875" shaft.



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MSB2, MSB4 & MSB6 MagnaShear Coupler Brake Dimensions

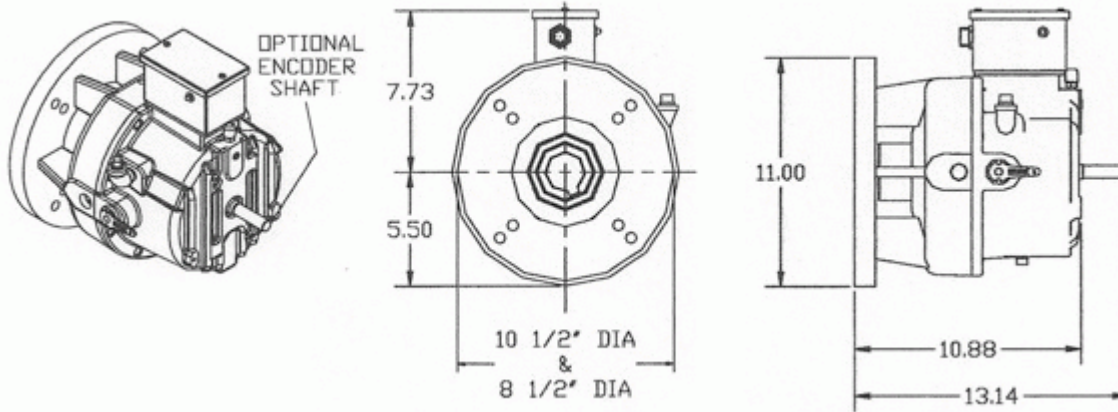


Brake Size	Overall Dimensions						
	U/FU	AK/FAK	AG	AA	AB	F	
MSB2	.875	4.50	7.00	3.44	4.04	3.44	6.78
MSB4	---	---	---	---	---	---	---
MSB6	---	---	---	---	---	---	---



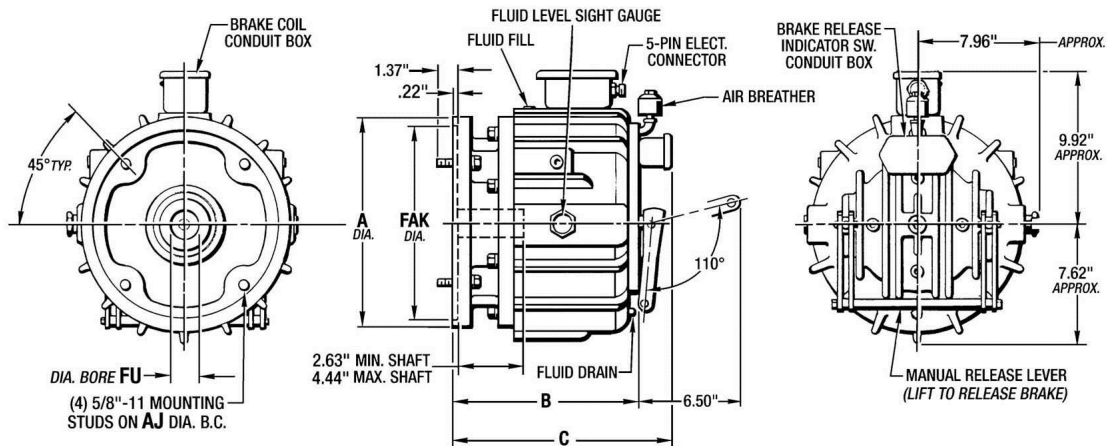
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MSB7 MagnaShear Motor Brake Dimensions



Brake Size	Pilot Dia. FAK Ins.	Hub Bore FU Ins.	Hub Depth Ins.	Static Torque Lb. Ft.	Dynamic Torque Lb. Ft.	Max KE per Engmt Ft.Lbs.	Frame Size	Inertia Lb. Ft. ²	Oil Capacity Fl. Ozs	Input Voltage VAC	Inrush Current Amps	Inrush Time Seconds	Holding Current Amps
MSB7	8.5 10.5	1.375 1.625	3.00 4.38	95	83	26,500	254	CF	CF	115	6	0.4	1.8
				135	115		256						
				170	148		284 286						

MSB8 MagnaShear Motor Brake Dimensions

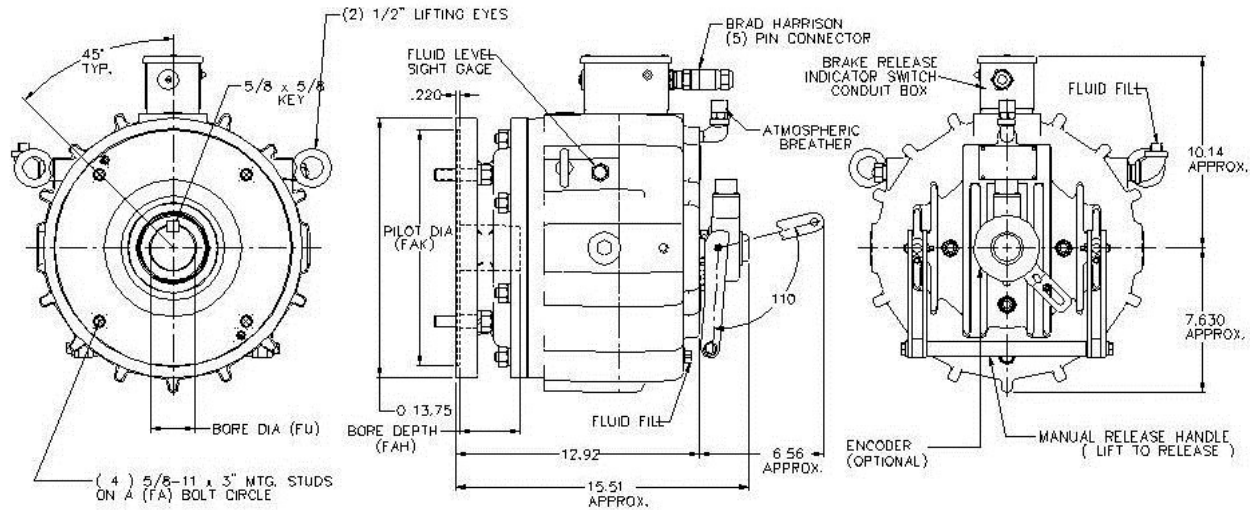


Brake Size	Pilot Dia. FAK Ins.	Hub Bore FU Ins.	Hub Depth Ins.	Static Torque Lb. Ft.	Dynamic Torque Lb. Ft.	Max KE per Engmt Ft.Lbs.	Frame Size	Inertia Lb. Ft. ²	Oil Capacity Fl. Ozs	Input Voltage VAC	Inrush Current Amps	Inrush Time Seconds	Holding Current Amps
MSB 8	8.5 10.5	1.375 1.625 1.875	3.00 4.38	100	86	41,500	254	0.267	180	115	6	0.4	1.8
				150	129		256						
				200	172		284						
				250	215		286						



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MSB9 & MSB10 MagnaShear Motor Brake Dimensions



Brake Size	Pilot Dia. FAK Inches	Hub Bore FU Inches	Hub Depth Inches	Static Torque Lb. Ft.	Dynamic Torque Lb. Ft.	Max KE per Engmt Ft.Lbs.	Frame Size	Inertia Lb. Ft. ²	Oil Capacity Fl. Ozs	Input Voltage VAC	Inrush Current Amps	Inrush Time Seconds	Holding Current Amps
MSB9	10.5 12.5	1.625	2.75 4.62	250	215	48,000	284 286 324 326 364 365 404 405	0.962	192	115	6	1.4	1.8
		1.875		300	258								
		2.000		350	301								
		2.125		450	387								
		2.250											
MSB10	10.5 12.5	1.875	2.75 4.62	500	430	69,000	284 286 324 326 364 365 404 405	1.244	192	115	6	1.4	1.8
		2.000		600	516								
		2.125		650	559								
		2.250		750	645								
		2.375		900	774								

NOTES:

Maximum torque of 350 Lb. Ft. with 1.625" shaft

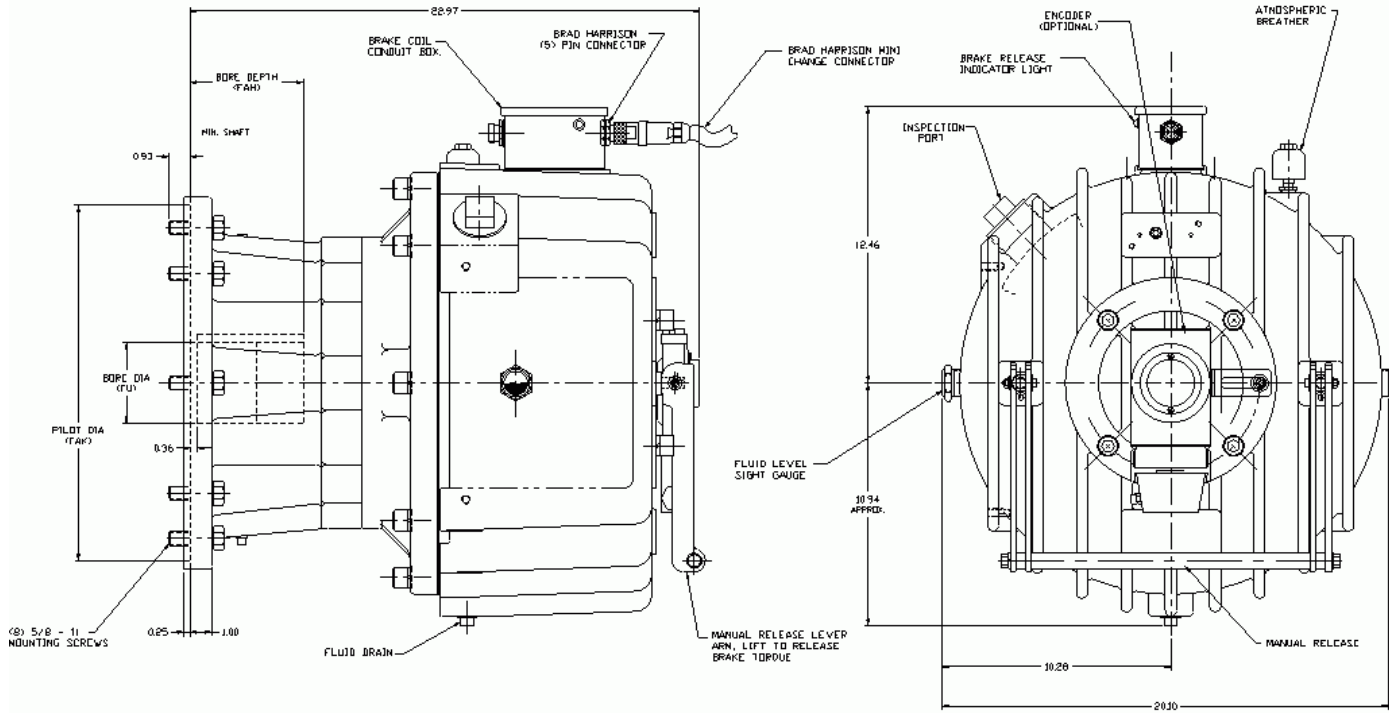
Maximum torque of 750 Lb. Ft. with 1.875" shaft

"Other" requires step down transformer.



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MSB12 MagnaShear Motor Brake Dimensions



Brake Size	Pilot Dia. FAK (Ins.) Inches	Hub Bore FU Inches	Hub Depth Inches	Static Torque Lb. Ft.	Dynamic Torque Lb. Ft.	Max KE per Engmt Ft.Lbs.	Frame Size	Inertia Lb. Ft. ²	Oil Capacity Fl. Ozs	Input Voltage VAC	Inrush Current Amps	Inrush Time Seconds	Holding Current Amps
MSB12	16	2.125	3.00	625	538	158,000	444 445 447 449	2.068	384	115	8	1.4	2.5
		2.375		950	817								
		2.625		1250	1075								
		2.875											
		3.125											
		3.375											
		3.500											
3.625													

NOTES:

Maximum torque of 950 Lb. Ft. with 1.625" shaft

Maximum torque of 625 Lb. Ft. with 2.125" & 2.375" shaft



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How To Order a MagnaShear Motor Brake

MSB	1	2	3	4	5	6	7	8	9
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(1) Brake Size

2	=MSB2
4	=MSB4
6	=MSB6
7	=MSB7
8	=MSB8
9	=MSB9
A	=MSB10
C	=MSB12

(2) Pilot Dia. (FAK)

4	=MSB2 (5.875 Dia.)
5	=MSB4 (5.875 Dia. & 7.250 Dia.)
8	=MSB6 (7.250 Dia.)
C	=Coupler, MSB2 4.500 Dia, MSB4 (8.500 Dia)
Q	=MSB8 (8.50" Dia.)
R	=MSB8, MSB9, MSB10 (10.50" Dia.)
S	=MSB9, MSB10 (12.50") Dia.)
T	=MSB12 (16.00")

(3) Mounting Position

H	=Horizontal <i>Standard (All Sizes)</i>
J	=Horizontal <i>high oil level (Except MSB2, 4 & 6)</i>
Z	=Horizontal <i>Marine Duty (Except MSB2, 4 & 6)</i>
U	=Vertical <i>Brake Up (Except MSB7, MSB12)</i>
D	=Vertical <i>Brake Down (Except MSB7, MSB12)</i>

(4,5,6) Torque

Size MSB2	
006	=6 Lb. Ft.
008	=8 Lb. Ft.
012	=12 Lb. Ft.
Size MSB4	
014	=14 Lb. Ft.
021	=21 Lb. Ft.
033	=33 Lb. Ft.
Size MSB6	
038	=38 Lb. Ft.
062	=62 Lb. Ft.
086	=86 Lb. Ft.
100	=100 Lb. Ft.
Size MSB7	
95	=95 Lb. Ft.
135	=135 Lb. Ft.
170	=175 Lb. Ft.
Size MSB8	
100	=100 Lb. Ft.
150	=150 Lb. Ft.
200	=200 Lb. Ft.
250	=250 Lb. Ft.
Size MSB9	
250	=250 Lb. Ft.
300	=300 Lb. Ft.
350	=350 Lb. Ft.
450	=450 Lb. Ft.
500	=500 Lb. Ft.
MSB10	
600	=600 Lb. Ft.
650	=650 Lb. Ft.
750	=750 Lb. Ft.
900	=900 Lb. Ft.
MSB12	
625	=625 Lb. Ft.
950	=950 Lb. Ft.
125	=1250 Lb. Ft.

(8) Bore Dia.

A	=.625"
0	=.875"
1	=1.125"
2	=1.250"
3	=1.375"
5	=1.625"
7	=1.875"
B	=2.000"
C	=2.125"
D	=2.250"
E	=2.375"
G	=2.625"
J	=2.875"
K	=3.000"
N	=3.125"
P	=3.375"
Q	=3.500"
R	=3.625"
Coupler Brakes	
v	=.625"-.625" MSB2
w	=.625"-.875" MSB2
z	=.875"-.875" MSB2
1	=1.250"-1.250"

(9) Voltage

M	=115 VAC
N	=Other (other requires optional)

(7) Manual Release

R	R=Manual Release
B	B=Manual Release with Stub