

Mongoose PT Platform Shale Shaker

Technical Specification (UL VERSION)

Revision:

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By:

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NOTE:

The attached Technical Specification is a reference to M-I SWACO's STANDARD Mongoose Platform Shale Shaker. The configuration is a three motor, UL Mongoose PT Platform Shaker with standard header box. All components detailed are offered as standard items. Additional non-standard configurations of the Mongoose Platform Shale Shaker will be made available upon customer request.

M-I SWACO reserves the right to update these specifications when applicable. If there are any questions concerning the data specified in this document, please contact M-I SWACO.

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General Specifications

Equipment Type	-	Shale Shaker		
Vibratory Motion Type	-	Dual (Linear, Balanced Elliptical)		
Angle of Motion	-	Fixed		
Material of Construction	-	Vibrating Basket	-	Carbon Steel
	-	Screen Bed	-	316L SS
	-	Skid	-	Carbon Steel
	-	Feeder	-	304 SS
	-	Clamping System	-	Polyurethane Wedge
Maximum Ambient Temperature	-	40° C (104° F)		
Minimum Ambient Temperature	-	-20° C (-4° F)		
Applicable Standards	-	UL/cUL (CE/ATEX Available)		

Mechanical Specifications

Screen Arrangement

Screen Configuration	-	Single Deck		
Screen Types	-	Primary Deck	-	Pre-tensioned Composite
Screen Clamping	-	Primary Deck	-	Wedge Driven
Deck Angle Adjustment	-	+3°, -3°		
Gross Screen Deck Area	-	Primary	-	2.8m ² (30.0ft ²)
Total Screen Non-Blanked Area (API)	-	Primary	-	1.9m ² (21.2ft ²)
Mesh Sizes	-	See Page 9		

Drive System

Drive System	-	Electrically Driven	-	Direct Drive
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Dry Operating Weights and Dimensions

Weight	Length	Width	Height
1724 kg (3800 lbs)	3044 mm (119.8 in.)	1749 mm (68.9 in.)	1297 mm (51.1 in.)

Operating Weight with fluid at 1.8 specific gravity

2770 kg (6100 lbs)

Screens – Boxed for Shipping

Primary	-	Qty (4)	-	11.8 kg (26 lbs) each
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Electrical Specifications

Motion Generator Specifications (2 HP – Qty 2)

Manufacturer	-	Martin Engineering
Certification	-	UL/cUL File: E129825
	-	ATEX # 01ATEX0135585
Protection	-	Class I, Groups C,D
	-	IP66
	-	EExd IIB 160 C
Voltage	-	460V (220-600V Available)
Frequency	-	60 Hz (50 Hz Available)
Phase	-	3
Nominal Current (amps)	-	2.9
Maximum Speed	-	1800 RPM (1500 RPM w/50 Hz Line Power)
Frame Size	-	60X

Motion Generator Specifications (0.6 HP – Qty 1)

Manufacturer	-	Martin Engineering
Certification	-	UL/cUL File: E129825
	-	ATEX # 01ATEX0135585
Protection	-	Class I, Groups C,D
	-	IP66
	-	EExd IIB T4
Voltage	-	460V (220-600V Available)
Frequency	-	60 Hz (50 Hz Available)
Phase	-	3
Nominal Current (amps)	-	0.9
Maximum Speed	-	1800 RPM (1500 RPM w/50 Hz Line Power)
Frame Size	-	30X

Starter Enclosure Specifications

Type	-	XCE 121206 NA
Manufacturer	-	Adalet, Scott Fetzer Co
Certification	-	FTRV.E81696
Protection	-	Class I Groups C & D, Class II Group E, F, & G Class III Type 4
Ingress Protection	-	In accordance with IP66
Description	-	Cast aluminum enclosure with hinged lids (LHS)

Components:

Contactor (Non-Reversing)	-	qty (2)
	-	120V/60Hz
Contactor (Reversing)	-	qty (1)
	-	120V/60Hz

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Transformer, Control	-	Primary Voltages		-	440-480V (220-600V Available)
	-	Secondary Voltages		-	110-120V
	-	100VA			
Fuses	-	qty (2)			
	-	1 A			
Power Distribution Block	-	qty (1)			
	-	Voltage		-	600V
	-	Load Wire Range		-	#10-#16AWG
	-	2 motor protectors			
Thermal Overload	-	qty (2) 2.4 - 4.0 A, 600 VAC			
	-	qty (1) 0.6 - 1.0 A, 600 VAC			
	-	qty (1) 6.0 - 10.0 A, 600 VAC			
Supply	-	440-480 VAC			
Entries	-	qty (5) ¾ inch NPT			
	-	qty (1) ½ inch NPT			
Dimensions	-	Width	Height		Depth
	-	412.75 mm (16.25 in)	412.75 mm (16.25 in)		258.76 mm (10.19 in)
Mounting Centers	-	Width		Height	
	-	400.05 mm (15.75 in)		219.08 mm (8.63 in)	
Cable Specification					
Type	-	Oil Rig/Commercial Marine Multiconductor Cable			
Part Reference	-	7906231			
Nominal Conductor Area	-	2.1 mm ² (14 Ga)			
Number of Cores	-	qty (4)			
Nominal Outside Diameter	-	16.25 mm (0.64 in)			
Approvals	-	UL			
Standards Applied	-	American Bureau of Shipping (ABS) 99-BT5905-X			
	-	Transport Canada 8700-20-2			
	-	Det Norske Veritas (DNV) E-4999, E-5000, E-5001, E-5002			
	-	Lloyd's Register of Shipping (LRS) 91/60333 (E4)			
	-	NVE 95/1696, FAL			
	-	UL Listed as Marine Shipboard Cable (E111461)			
	-	United States Coast Guard November 2, 1987/9304			
	-	CSA Listed as Type RW90 (LL80350)			

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Construction	-	Conductor	-	Soft annealed flexible stranded tinned copper
	-	Insulation	-	Cross-linked polyolefin
	-	Color Code	-	Black-White-Red-Green
	-	Jacket	-	Black, arctic grade thermosetting compound
	-	Armor	-	Basket weave wire armor, bronze, aluminum or tinned copper
	-	Outer Sheath	-	Black, arctic grade thermosetting compound
Properties	-	110° C temperature rating		
	-	Low dielectric constant and high insulation resistance		
	-	Flame retardant		
	-	Chemical and oil resistant		
	-	Moisture, abrasion and sunlight resistant		
Protective Earth				
Basket to Skid	-	qty (2) parallel mounted earth bosses		

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Noise Data per ISO 3744 (Linear Motion)

As Built Noise Data Measured noise levels (Note)	SPL dBA	Octave band center frequency, Hz, Sound Pressure Level (SPL) in units of dBA									
		32	63	125	250	500	1000	2000	4000	8000	16000
Front Side	-	53.9	51.9	58.5	71.8	75.1	73.2	68.6	61.6	54.9	38.4
Right Side (from front)	-	49.0	50.1	58.8	69.7	74.6	71.8	66.6	59.5	54.3	38.4
Rear Side	-	57.3	51.4	59.3	68.1	72.7	70.7	65.2	58.0	51.0	38.4
Left Side (from front)	-	53.8	51.3	58.7	71.7	76.3	71.1	66.1	59.1	55.4	38.4

The average surface sound pressure level is 77.1 dBA

The total sound power emission is 95 dBA Watts

Noise Data per ISO 3744 (Elliptical Motion)

As Built Noise Data Measured noise levels (Note)	SPL dBA	Octave band center frequency, Hz, Sound Pressure Level (SPL) in units of dBA									
		32	63	125	250	500	1000	2000	4000	8000	16000
Front Side	-	53.7	56.9	59.8	68.3	71.5	71.9	70.3	65.0	57.2	38.4
Right Side (from front)	-	49.2	57.2	61.0	67.5	71.2	71.0	68.4	64.2	57.5	42.6
Rear Side	-	57.3	59.4	61.3	66.9	71.3	73.1	70.3	65.4	58.1	38.4
Left Side (from front)	-	53.9	59.2	60.9	67.0	72.0	72.7	70.4	64.5	56.1	38.4

The average surface sound pressure level is 76.4 dBA

The total sound power emission is 94 dBA Watts

Special Requirement: Average ambient measurement was 66.2 dBA. Ambient did not exceed 78.5 dBA. Machine was empty and connected to electric utilities during data acquisition. Measurement conducted inside – no conducting walls within area. Measurements taken at a distance of 1 meter.

Note: SPL Sound pressure level in dB (re. 20 m Pa) at 1 m distance free field conditions.
SWL Sound power level in dB (re. 1 pW).

Paint Specifications

Shaker Coating

Manufacturer	-	Carboline Company
Surface Preparation	-	Aluminum Oxide
Color	-	M-I SWACO Orange
Description	-	Carboline Aliphatic Polyurethane #8812 or equivalent
DFT	-	5-8 mils

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Screen Data

Mesh Size	Mesh Type	API RP 13C No.	API RP 13C d ₁₀₀ (microns)	*Performance d ₅₀ (microns)	Non-Blanked Area (ft ²)	**Conductance (Kd/mm)
84	XR	50	308	215	5.30	4.13
105	XR	60	250	204	5.30	3.46
120	XR	70	211	156	5.30	3.18
145	XR	80	188		5.30	2.63
165	XR	80	181	130	5.30	2.47
180	XR	100	161	129	5.30	2.21
200	XR	100	162	104	5.30	1.88
230	XR	120	118	91	5.30	1.48
270	XR	140	110	89	5.30	1.26
325	XR	170	89	64	5.30	0.94
400	XR	200	73	62	5.30	0.68
84	HC	60	264	214	5.30	4.83
105	HC	60	249	212	5.30	5.51
120	HC	60	232	164	5.30	4.48
165	HC	80	179	139	5.30	3.63
200	HC	100	163	119	5.30	3.21
230	HC	120	133	109	5.30	2.62
270	HC	170	96	92	5.30	1.61
325	HC	170	82	66	5.30	1.17
84	XL	60	237	208	5.30	3.54
105	XL	70	198	166	5.30	2.93
120	XL	100	162	136	5.30	2.34
165	XL	120	120	119	5.30	1.86
200	XL	140	111	91	5.30	1.66
230	XL	170	80	69	5.30	1.24
270	XL	200	78	66	5.30	1.22
325	XL	230	55	59	5.30	0.79

* Cut Point procedure using drilling fluid and sand per ASME Drilling Fluids Processing Handbook Ch. 4

** Conductance calculated in accordance to API RP 13E

