LOAD CHART

MANTIS Model 14010

70 Ton Hydraulic Crane
with STANDARD 4-STAGE BOOM
on a Static Barge Pedestal with

Maximum Operating Conditions of 2 Degrees List and/or 3 Degrees Trim

Limitations and General Conditions.

This MANTIS CRANE as manufactured by SpanDeck, Inc., meets the requirements of ANSI B30.5c (1992), (When specifically equipped). Structure and stability have been tested in accordance with SAE J1063 and SAE J765, respectively. Lifting capacities as determined by boom length, angle, or radius apply only to machines as originally equipped by manufacturer and in a properly maintained condition. Capacities given are the maximum cover by the manufacturer under warranty.

The machine shall be mounted on a properly designed pedestal with machine list and trim not to exceed the degrees noted. Operator judgement must be used to allow for dynamic load effects of swinging, hoisting or lowering, wind conditions, as well as adverse operating conditions and physical machine depreciation.

Lifting capacities are given for a pedestal mounted machine when operating on a static barge. Lifting capacities for various boom lengths and operating radii are for freely suspended loads. **All values given on the following chart are structural and intended for design reference only. A final load chart must be established by the barge manufacturer based on the maximum list and trim conditions. The final load chart shall not exceed the capacity of this chart at any point.**

DO NOT attempt to lift any load when the wind speed exceeds 20 mph.

When making lifts where capacities may be within a zone limited by structural strength, the operator shall determine that the weight of the load is known within plus or minus (+/-) ten percent (10%) before making lift. **DO NOT** lift load or extend boom without consulting the **LOAD CHART**. Deductions from rated capacities must be made for the weight of the hook block, hook/ball, slings, spreader bar, or other suspended equipment.

Side pull on boom is extremely dangerous and must be avoided.

DO NOT exceed manufacturers maximum specified reeving.

Trim is the fore and aft inclination of the crane.

List is the side-to-side inclination of the crane.

Load radius is defined as the horizontal distance from the axis of rotation (with no load) to the center of the lifting device after load is applied.

Boom angle is the included angle between the longitudinal axis of the boom base section and the horizontal axis, after lifting load. The boom angle before lifting should be slightly greater than desired to account for boom deflection.

Boom angle/boom length relationships given are an approximation of the resulting load radius, which should be an accurate measurement.

Boom height dimensions are measured from the barge deck to center of lower boom head sheave.

It is permissible to attempt to telescope boom with a load within the limits of rated capacities. However, boom angle system hydraulic pressure, and/or boom lubrication may affect operation.

Specifications subject to change without notice.

CHART #1: MAIN BOOM LOAD CHART

MANTIS Model 14010

Pedestal Mounted on a Static Barge

as originally manufactured and equipped by SpanDeck, Inc.

Maximum Operating Conditions of

2 Degrees List and/or 3 Degrees Trim

Maximum Wind Speed of 20 mph

30,000 lb. COUNTERWEIGHT
360 DEGREE RATING - LOADS IN lb. x 1000

RADIUS	MAIN BOOM LENGTH (ft)								RADIUS
(ft)	37.5	42.0	49.0	61.0	73.0	86.0	99.0	111.5	(ft)
10	125.0	90.0	86.0	79.0					10
12	100.0	88.0	84.0	72.6					12
15	90.0	83.0	78.0	68.0	48.0	44.0			15
20	72.0	71.7	67.5	56.0	43.0	38.0	32.9		20
25	51.0	50.5	49.9	47.0	39.5	32.8	28.4	25.3	25
30	37.8	37.4	36.9	36.3	34.8	28.5	24.8	22.2	30
35		29.2	28.7	28.1	29.1	25.5	22.0	19.8	35
40			24.8	24.5	23.4	22.8	19.9	17.9	40
45			20.9	18.3	19.2	19.9	17.8	16.1	45
50				15.2	16.0	16.7	16.0	14.6	50
55				12.7	13.5	14.2	14.7	13.3	55
60					11.5	12.2	12.6	12.2	60
65					9.8	10.5	10.9	11.3	65
70						9.1	9.5	9.8	70
75						7.9	8.3	8.6	75
80						6.8	7.3	7.6	80
85							6.4	6.7	85
90							5.6	5.9	90
95							4.9	5.2	95
100								4.6	100
105								4.0	105

NOTE:
All capacities are based on structural strength.

Trim is the fore and aft inclination of the crane.

List is the side-to-side inclination of the crane.

CHART #2: AUXILIARY BOOM NOSE SHEAVE LOAD CHART

MANTIS Model 14010

Pedestal Mounted on a Static Barge

as originally manufactured and equipped by SpanDeck, Inc.

Maximum Operating Conditions of

2 Degrees List and/or 3 Degrees Trim

Maximum Wind Speed of 20 mph

30,000 lb. COUNTERWEIGHT
360 DEGREE RATING - LOADS IN lb. x 1000

RADIUS	MAIN BOOM LENGTH (ft)								RADIUS
(ft)	37.5	42.0	49.0	61.0	73.0	86.0	99.0	111.5	(ft)
10	11.0	11.0	11.0	11.0					10
12	11.0	11.0	11.0	11.0					12
15	11.0	11.0	11.0	11.0	11.0	11.0			15
20	11.0	11.0	11.0	11.0	11.0	11.0	11.0		20
25	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	25
30	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	30
35		11.0	11.0	11.0	11.0	11.0	11.0	11.0	35
40			11.0	11.0	11.0	11.0	11.0	11.0	40
45			11.0	11.0	11.0	11.0	11.0	11.0	45
50				11.0	11.0	11.0	11.0	11.0	50
55				11.0	11.0	11.0	11.0	11.0	55
60					11.0	11.0	11.0	11.0	60
65					9.8	10.5	10.9	11.0	65
70						9.1	9.5	9.8	70
75						7.9	8.3	8.6	75
80						6.8	7.3	7.6	80
85							6.4	6.7	85
90							5.6	5.9	90
95							4.9	5.2	95
100								4.6	100
105								4.0	105

NOTE:
All capacities are based on structural strength.

Trim is the fore and aft inclination of the crane.

List is the side-to-side inclination of the crane.

RANGE CHART

MANTIS Model 14010
Pedestal Mounted on a Static Barge

as originally manufactured and equipped by SpanDeck, Inc.