

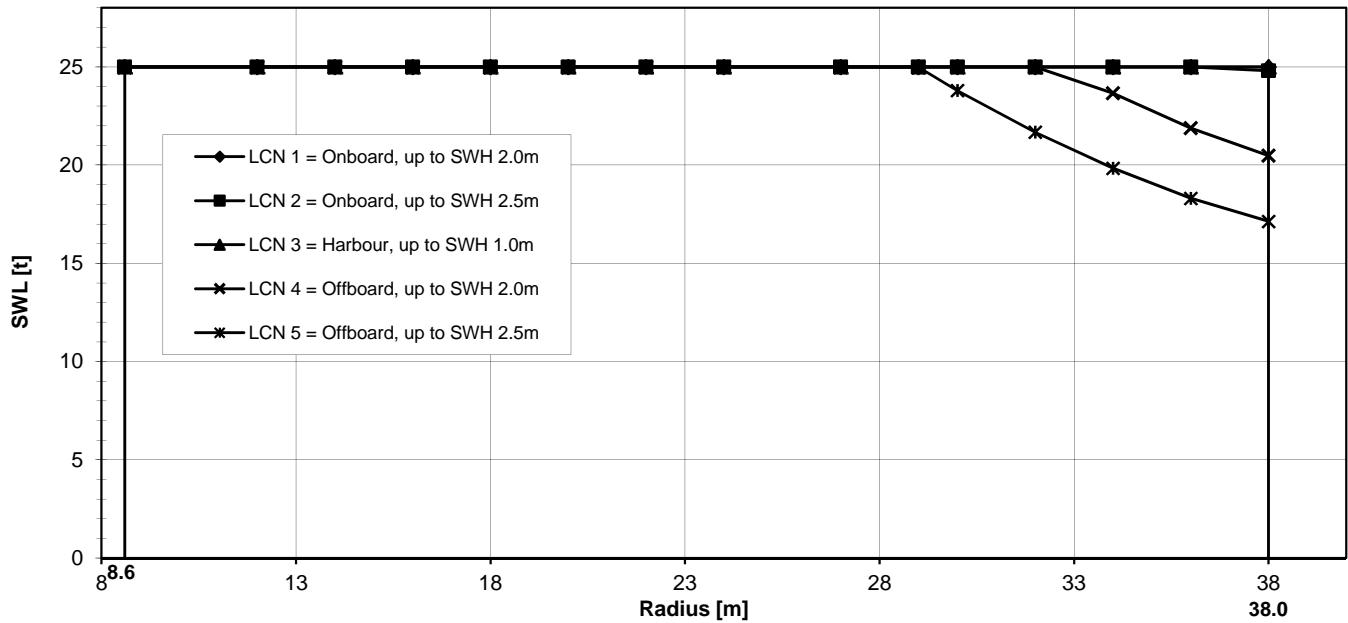
General

Crane model / type:	BOS 2600-25 D LITRONIC	Crane location:	Type: Semi - Submersible
Serial No.:	170800		Name: Bristolia
Manufacturer :	LIEBHERR-MCCtec GmbH		
Ambient temperature:	min -20 [°C] max 40 [°C]	HUP:	min 17.8 [m] max 49.8 [m]
Design temperature:	-20 [°C]		

Abbreviations and definitions used on the load diagrams and load tables

Lift mode:	Onboard lift mode Lifting a load from and to the deck of the installation that the crane is mounted on. Offboard lift mode Lifting a load from or to anywhere not on the installation that the crane is mounted on. Personnel lift mode Lifting operation where personnel are lifted by the crane.								
Crane location:	Type of installation, in general fix supported or floating installation								
Crane is lifting to or from:	Type of load supporting installation, in general fix supported or floating								
SWL:	Safe Working Load is the actual hook load permitted for a given operation condition, also called rated load or rated capacity.								
Load radius or radius:	The load radius or radius is the horizontal distance between the crane's centre line and the hook position under consideration of an undeformed crane system.								
SWH:	Significant Wave Height = $H_{1/3} = H_{\text{significant}}$								
LCN:	Load curve number								
Dynamic factor ϕ :	A variable factor representing the dynamic effects that the working load is exposed to. Also named dynamic coefficient or dynamic hoisting factor. In connection with subsea- / seabed lifts, the expression DAF (Dynamic Amplification Factor) is used instead of dynamic factor.								
OPL:	Operational Limitations If operational limitations are given in the load tables see advices in chapter "Operational Limitations" in operating manual.								
HUP:	Height Under Pivot - allowed height of load suspension point below boom pivot point due to rope length limitation (hook in air if not otherwise released on load chart table).								
Calculation method:	Three methods are available for calculating the dynamic forces acting on a crane in a specific load condition: <table border="1"> <thead> <tr> <th>Method</th> <th>Main characteristic</th> </tr> </thead> <tbody> <tr> <td>DDM - Default Dynamic Method</td> <td>A constant value is used for the dynamic factor ϕ. The value is given by the valid design code or via customer specification.</td> </tr> <tr> <td>GM - General method</td> <td>The calculation of the dynamic factor ϕ is partly based on motion data given in the valid design code.</td> </tr> <tr> <td>VSM - Vessel Specific Method</td> <td>The calculation of the dynamic factor ϕ is partly based on installation specific motion data calculated within a specific motion analysis.</td> </tr> </tbody> </table> <p>The method used is given on the "LOAD DIAGRAM AND LOAD TABLE"</p>	Method	Main characteristic	DDM - Default Dynamic Method	A constant value is used for the dynamic factor ϕ . The value is given by the valid design code or via customer specification.	GM - General method	The calculation of the dynamic factor ϕ is partly based on motion data given in the valid design code.	VSM - Vessel Specific Method	The calculation of the dynamic factor ϕ is partly based on installation specific motion data calculated within a specific motion analysis.
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GM - General method	The calculation of the dynamic factor ϕ is partly based on motion data given in the valid design code.								
VSM - Vessel Specific Method	The calculation of the dynamic factor ϕ is partly based on installation specific motion data calculated within a specific motion analysis.								
Motion limits:	If applicable, the following motion data are given on each load table. The values are maximum values which shall not be exceeded during lift operation. The size of the values is based on the calculation method used (s. above). It is within the responsibility of the operator, that the operation is, among others, done within these limits. If required, the real values occurring in practise must be evaluated by help of measuring or by help of a motion analysis of the involved installations. v_c : Maximum allowed vertical velocity of the crane boom tip due to movement of the crane base. Only applicable if the crane is located on a floating unit. v_d : Maximum allowed vertical velocity of the load supporting deck. a_z : Maximum allowed vertical crane base acceleration (at top of pedestal). Only applicable if the crane is located on a floating unit. a_y : Maximum allowed horizontal crane base acceleration (at top of pedestal). Only applicable if the crane is located on a floating unit. $v_{h,\text{min}}$: Minimum required hoisting speed to avoid re-contact with the load supporting deck after the load is lifted.								
n.a.	not applicable								
	are given on the load chart table (DAF, wind speed, static inclination, off- and sidelead forces / angles, up to water depth, etc.).								

LOAD DIAGRAM AND LOAD TABLE - BOS 2600-25 D LITRONIC

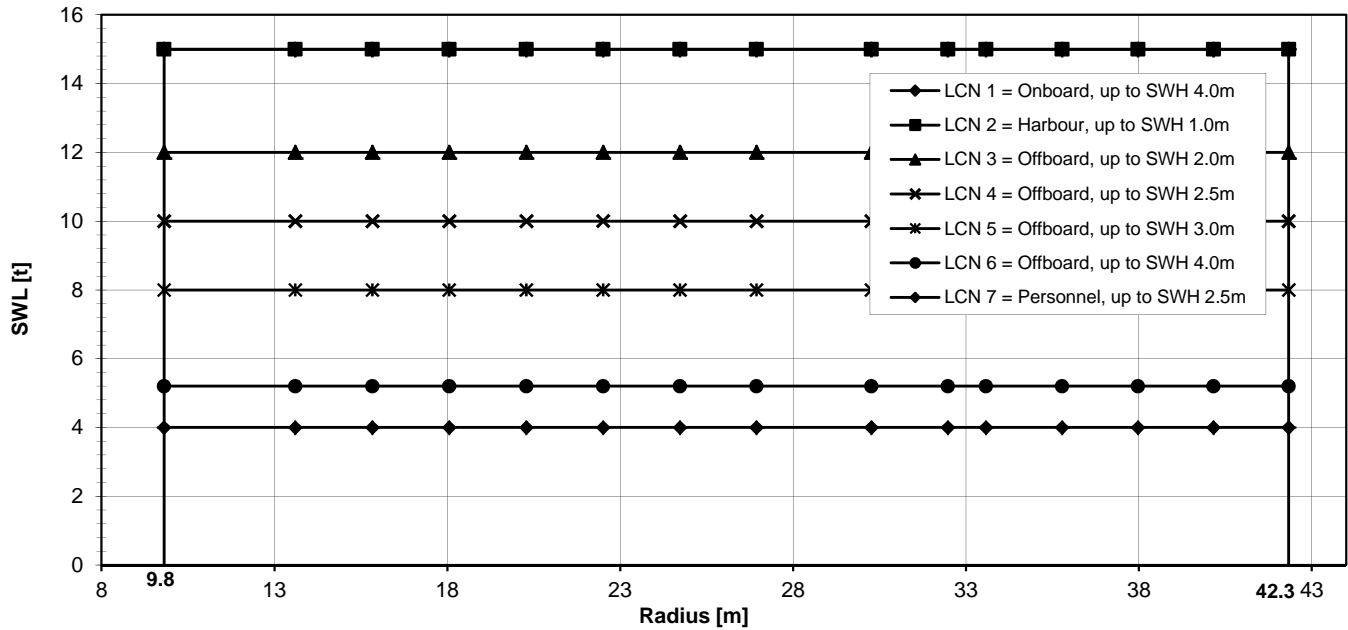


Lift mode	[-]	Onboard 1	Onboard 2	Harbour 3	Offboard 4	Offboard 5
LCN	[-]	1	2	3	4	5
SWH	[m]	2.0	2.5	1.0	2.0	2.5
vc	[m/s]	0.33	0.51	0.08	0.33	0.51
vd	[m/s]	0.00	0.00	0.60	1.20	1.50
az	[g]	0.070	0.070	0.070	0.070	0.070
ay	[g]	0.046	0.057	0.030	0.046	0.057
vh_min	[m/s]	0.00	0.00	0.11	0.20	0.23

Angle	Radius	SWL	SWL	SWL	SWL	SWL
[°]	[m]	[t]	[t]	[t]	[t]	[t]
82.7	8.6	25.0	25.0	25.0	25.0	25.0
77.6	12.0	25.0	25.0	25.0	25.0	25.0
74.6	14.0	25.0	25.0	25.0	25.0	25.0
71.5	16.0	25.0	25.0	25.0	25.0	25.0
68.3	18.0	25.0	25.0	25.0	25.0	25.0
65.1	20.0	25.0	25.0	25.0	25.0	25.0
61.8	22.0	25.0	25.0	25.0	25.0	25.0
58.4	24.0	25.0	25.0	25.0	25.0	25.0
52.9	27.0	25.0	25.0	25.0	25.0	25.0
49.1	29.0	25.0	25.0	25.0	25.0	25.0
47.1	30.0	25.0	25.0	25.0	25.0	23.8
42.8	32.0	25.0	25.0	25.0	25.0	21.7
38.1	34.0	25.0	25.0	25.0	23.7	19.8
32.9	36.0	25.0	25.0	25.0	21.9	18.3
26.8	38.0	25.0	24.8	25.0	20.5	17.1

Design code:	API 2C, 7th Edition, Specification for Offshore Pedestal Mounted Cranes, 2012, LMB-Curve API				
Calculation method:	GM	Additional hoist gear:	DCN	LCN	
Installation	Status: floating	none	none	none	
	Max. static trim: [°]	3.0			
	Max. static heel: [°]	3.0			
Crane is lifting to or from (offboard):	Supply vessel				
Max. mean wind speed:	[m/s]	25	Available tugger winch	Reeving	max. avail. line pull
Boom length:	[m]	39.00	none	[-]	[t] [%]
Reeving luffing gear:	[-]	8			
Operational limitations:	1. due to low vertical hook velocity: none 2. due to low radial hook velocity: none 3. due to low lateral hook velocity: none 4. due to wave induced motions of the load: none 5. for the lifting of personnel: n.a.				

LOAD DIAGRAM AND LOAD TABLE - BOS 2600-25 D LITRONIC



Lift mode	[-]	Onboard	Harbour	Offboard	Offboard	Offboard	Offboard	Personnel
LCN	[-]	1	2	3	4	5	6	7
SWH	[m]	4.0	1.0	2.0	2.5	3.0	4.0	2.5
vc	[m/s]	1.31	0.08	0.33	0.51	0.74	1.31	0.51
vd	[m/s]	0.00	0.60	1.20	1.50	1.80	2.10	1.50
az	[g]	0.121	0.070	0.070	0.070	0.070	0.121	0.070
ay	[g]	0.092	0.030	0.046	0.057	0.069	0.092	0.057
vh_min	[m/s]	0.00	0.11	0.20	0.23	0.27	0.34	0.23
Angle	Radius	SWL	SWL	SWL	SWL	SWL	SWL	SWL
[°]	[m]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
82.7	9.8	15.0	15.0	12.0	10.0	8.0	5.2	4.0
77.6	13.6	15.0	15.0	12.0	10.0	8.0	5.2	4.0
74.6	15.8	15.0	15.0	12.0	10.0	8.0	5.2	4.0
71.5	18.1	15.0	15.0	12.0	10.0	8.0	5.2	4.0
68.3	20.3	15.0	15.0	12.0	10.0	8.0	5.2	4.0
65.1	22.5	15.0	15.0	12.0	10.0	8.0	5.2	4.0
61.8	24.7	15.0	15.0	12.0	10.0	8.0	5.2	4.0
58.4	26.9	15.0	15.0	12.0	10.0	8.0	5.2	4.0
52.9	30.3	15.0	15.0	12.0	10.0	8.0	5.2	4.0
49.1	32.5	15.0	15.0	12.0	10.0	8.0	5.2	4.0
47.1	33.6	15.0	15.0	12.0	10.0	8.0	5.2	4.0
42.8	35.8	15.0	15.0	12.0	10.0	8.0	5.2	4.0
38.1	38.0	15.0	15.0	12.0	10.0	8.0	5.2	4.0
32.9	40.2	15.0	15.0	12.0	10.0	8.0	5.2	4.0
26.8	42.3	15.0	15.0	12.0	10.0	8.0	5.2	4.0

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Calculation method:	GM			Additional hoist gear:			DCN	LCN	
Installation	Status:	floating			none			none	none
	Max. static trim:	[°]	3.0						
	Max. static heel:	[°]	3.0						
Crane is lifting to or from (offboard):	Supply vessel								
Max. mean wind speed:	[m/s]	25			Available tugger winch	Reeving	max. avail. line pull		
Boom length:	[m]	39.00			none	[-]	[t]	[%]	
Reeving luffing gear:	[-]	8							
Operational limitations:	1. due to low vertical hook velocity:			none					
	2. due to low radial hook velocity:			none					
	3. due to low lateral hook velocity:			none					
	4. due to wave induced motions of the load:			none					
	5. for the lifting of personnel:			visibility:	daylight or adequate illumination of work area				
				for mean wind speed > 10m/s:	see advice in operating manual				
				for SWH > 2.0m:	see advice in operating manual				