



Heimdal R located at a pre-determined position and maintaining a fixed position by means of Dynamic Positioning (DP2) with high accuracy during dredging activities. "No anchors, no spuds".

HEIMDAL R - RN OFFSHORE CLASS

MPV (Multi Purpose Vessel) HEIMDAL R is a truly flexible vessel within all offshore projects.

With high propulsion power, four transverse thrusters, combined with a **DP2 system** and a subsea monitoring system, this vessel is the perfect solution for all offshore and subsea works.

DYNAMIC POSITIONING	
Type	MT (Marine Technologies)
Approval / Class	DYNAPOS AM/A, IMO Class 2
Reference systems	2 x Leica MK 12, DGPS, Cyscan, Trimble SPS 855
Sensors	3 x Gyro
	2 x Motion Reference Unit
	2 x Wind Sensor
RADius	A radar-based relative positioning reference system
ERN number	99 99 94

GENERAL SPECIFICATIONS	
Classification	BV, 1 AUT-MS Hull, ICE MACH DYNAPOS AM/AT R, SDS Special service / Multi purpose ship Unrestricted Navigation
Operation	Unrestricted Navigation GMDSS A3
Dredge monitoring system	Reson PDS2000, on bridge with Sitech SP855 positioning system



DIMENSIONS	
Length o.a.	84,0 m
Length b.p.	76,0 m
Breadth mld.	18,7 m
Depth mld.	7,3 m
Draft max.	6,2 m
Air draft	26,0 m
GT	2898

PROPULSION	
General	2 x VARIABLE PITCH
Main engines	2 x Wartsila. Type: 8L32. 4800 BHP Total 9600 BHP (7040KW)
Fuel type	MDO/MGO
Speed	15 knots

BRIDGE / MANOEUVERING	
Bridge controls	Ulstein. 2 complete bridge control stands

Nordic mythology

Heimdal is one of the most mysterious gods in the Nordic mythology. With a fantastic sight and hearing he appears in the myths as the whitest of the gods who keeps watch for the onset of Ragnarok, and he blows the resounding horn gjallarhorn, when the enemies approach.

As the loyal guardian to the gods Heimdal kills the god Loke in battle.





AUXILIARIES / ELECTRICAL POWER	
Generators	2 x shaft generators Leroy somer, each 2700 kVA. 2 x auxiliaries Capercillar, each 450 kVA

THRUSTERS	
Bow thrusters	2 x Brunvoll Tunnel thrusters, each 1200 BHP
Stern thrusters	2 x Brunvoll Tunnel thrusters, each 1000 BHP

LIFESAVING / RESCUE	
Approved lifesaving Appliances for	LSA approved for 24 persons
Liferafts	4 x 25 persons - Viking liferafts
Rescue / MOB boat	NorSafe Midget MKII with 25 HP outboard. Approved for 6 persons

ACCOMMODATION	
Total no. berths	18 x beds
Total no. cabins	14 cabins: 12 x single cabin, 1 x 2 persons cabin, 1 x 4 persons cabin
Office	1 x office
Hospital	1 x hospital
Ventilation/A/C for accommodation	High pressure single-pipe fully redundant ventilation system. Full heating/AC throughout the accommodation
Other	Messroom, Dayroom, Gymnasium, Laundry, Galley, Dry provision, Cooling, Freezing room, Wardrobe
	IMO/ILO Certified accommodation containers can be placed on deck

OTHER	
Anti roll system	4 x Passive roll reduction tanks

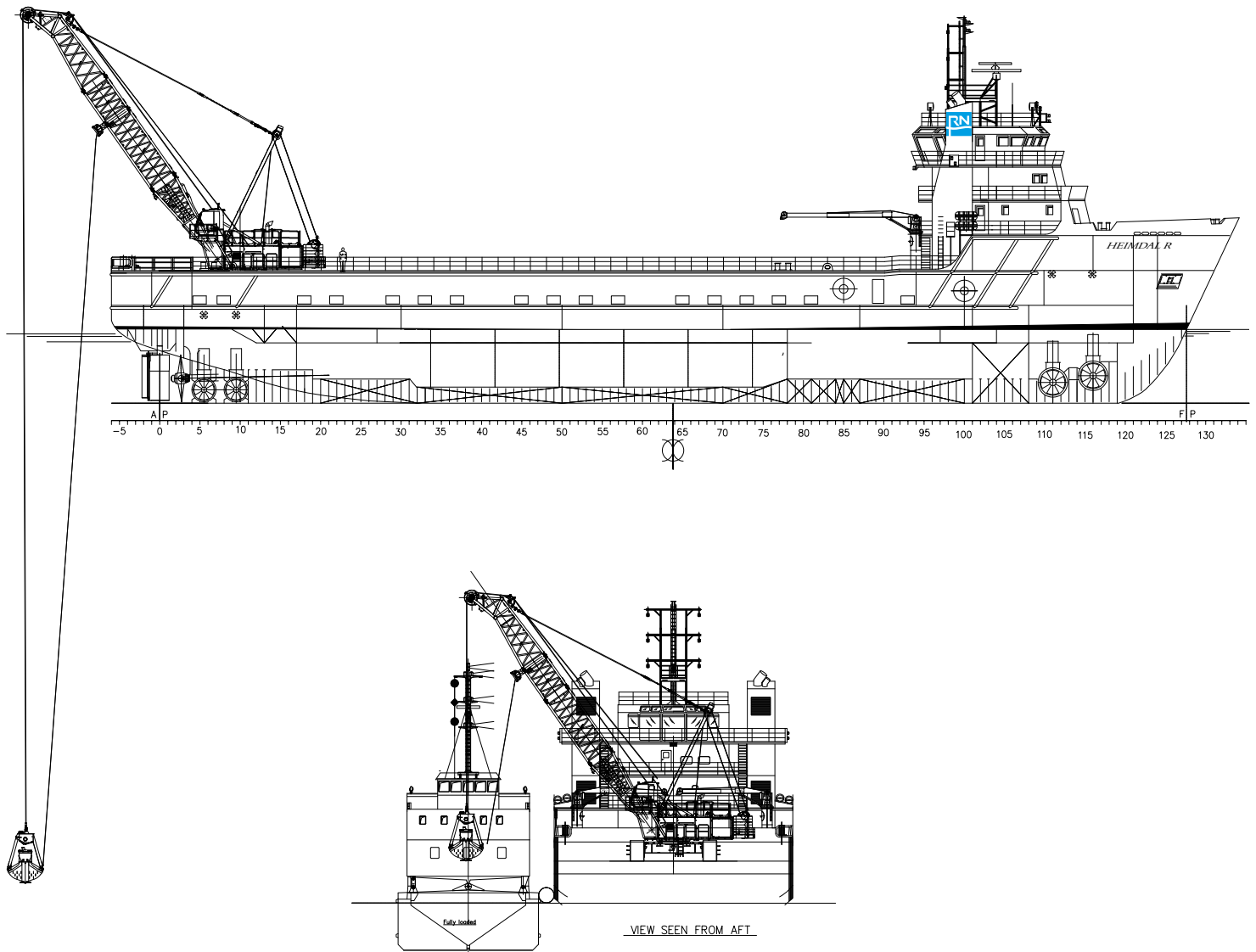


RN OFFSHORE CLASS

A vessel with very high propulsion power and four transvers thrusters.

GRAB DREDGER with clam shell/orange peel equipment going deeper and digging any soil as well as removing boulders. The whole operation is controlled by using the latest technology with PDS2000 monitoring system combined with very powerful and certified GPS positioning and tracking system for high precision works offshore and subsea.

The crane is a HS 895 HD crawler built for the marine environment, and delivered with boom sections for a reach from 14 m up to 46,4 m. With standard equipment it will reach water depths of 60 meter which can be extended.



Heimdal R is equipped with a variation of grabs to optimize production and to dredge material ranging from silt, granular to stiff clay and glacial till as well as removing boulders and handling crushed material taking penetration force and the specific gravity of the soil to be dredged into account.

The smallest grab for general dredging in medium hard soil is 8 m³ having a weight of 13000 kg. which can be increased to 14000 kg.



The 6 m³ heavy duty roundnose grab with very heavy penetration force for dredging glacial till and clay 300 – 600 Kpa. It is having a weight of 21000 kg.



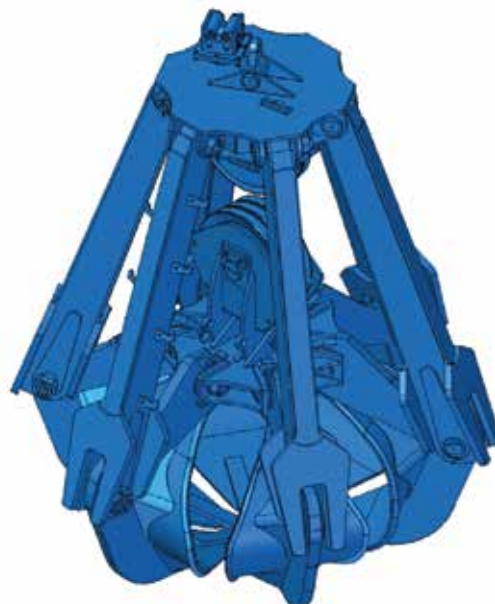
11,5 m³ grab for environmental dredging having a weight of 15000 kg. and a footprint of 29 m².



The 10 m³ grab is for lighter soil and it has got a weight of 14000 kg.



The extra heavy duty orange peel 5 m³ grab for handling of boulders and crushed material has got a weight of 15000 kg.



RN OFFSHORE CLASS

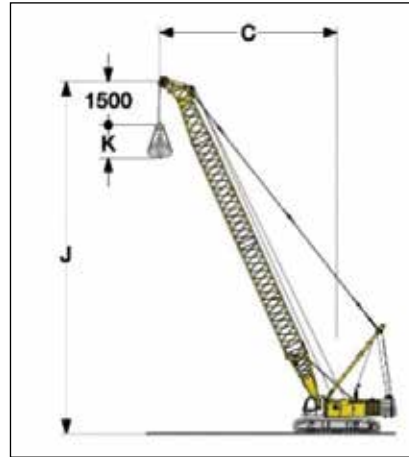
CRANE VESSEL for lifting operations and for handling material from the working deck.

Rock placing for breakwaters, rock protection of constructions, and erosion protection.

Piling, demolition, wreck removal, diving and ROV-operations are also options.

With a boom foot and boom head of 7,0 m. and 3 m., 6 m., and 11,7 m. extensions in stock, the boom can be extended to 46,4 m. with self-assembly feature.

Upon request the boom can be extended to 84,2 m. and the counterweight can be increased from 55,1 t. to 75,1 t. counterweight and 27 t. carbody counterweight.

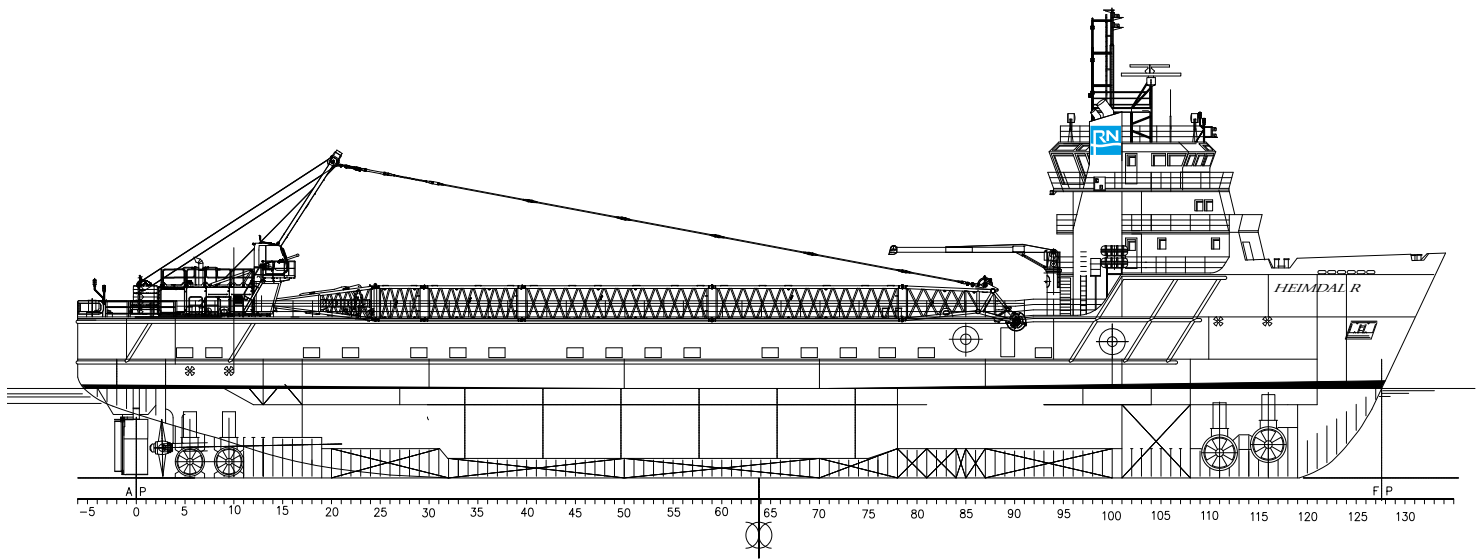


Working diagram

C = Radius / dumping radius

J = Height of boom head sheave centre above deck level

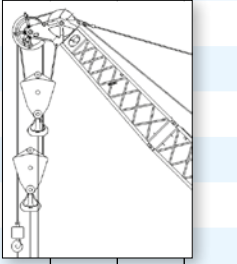
K = Length of clamshell (depending on type and capacity of bucket)



CLAMSHELL EQUIPMENT

Capacities in metric tons																		counterweight 55.1 t			
	Boom Length (m)																				
Boom	20m		23m		25.7m		28.7m		31.7m		34.7m		37.4m		40.4m		43.4m		46.4m		
	6		6+3		11.7		11.7+3		11.7+6		11.7+6+3		2x11.7		2x11.7+3		2x11.7+6		2x11.7+6+3		
C (m)	J (m)	t	J (m)	t	J (m)	t	J (m)	t	J (m)	t	J (m)	t	J (m)	t	J (m)	t	J (m)	t	J (m)	t	
6			25.1	49.2	27.8	49.2															
7	21.8	49.2	24.9	49.2	27.6	49.2	30.7	49.2	33.7	49.2	36.7	49.2									
8	21.5	49.2	24.6	49.2	27.4	49.2	30.5	49.2	33.5	49.2	36.6	49.2	39.3	49.2	42.3	49.2	45.4	49.2			
9	21.2	49.2	24.3	49.2	27.1	49.2	30.2	49.2	33.3	49.2	36.4	49.2	39.1	49.2	42.2	49.2	45.2	49.2	48.3	44.2	
10	20.8	49.2	24.0	49.2	26.8	49.2	30.0	49.2	33.1	49.2	36.2	49.2	38.9	49.2	42.0	49.2	45.0	49.2	48.1	44.2	
11	20.3	49.2	23.6	49.2	26.5	49.2	29.7	49.2	32.8	49.2	35.9	49.2	38.7	49.2	41.8	48.3	44.9	49.1	47.9	44.2	
12	19.8	49.2	23.2	49.2	26.1	49.2	29.3	49.2	32.5	49.2	35.6	49.2	38.4	49.2	41.5	46.8	44.6	45.8	47.7	42.7	
13	19.2	49.2	22.6	49.2	25.7	49.2	28.9	49.2	32.1	49.2	35.3	49.2	38.2	49.2	41.3	45.7	44.4	43.0	47.5	39.8	
14	18.5	45.3	22.1	45.3	25.2	45.5	28.5	45.4	31.8	45.4	35.0	45.2	37.8	45.2	41.0	44.6	44.1	40.8	47.2	37.4	
16	16.8	37.6	20.7	37.6	24.0	37.8	27.5	37.7	30.9	37.6	34.2	37.5	37.1	37.5	40.3	37.4	43.5	37.0	46.6	33.5	
18	14.6	31.9	19.0	32.0	22.6	32.1	36.3	32.1	29.8	32.0	33.2	31.8	36.2	31.8	39.5	31.7	42.8	31.5	46.0	29.7	
20	11.4	27.5	16.9	27.6	20.8	27.8	24.8	27.7	28.6	27.6	32.1	27.5	35.2	27.5	38.6	27.3	41.9	27.2	45.2	26.9	
22			14.0	24.1	18.7	24.3	23.1	24.2	27.1	24.2	30.8	24.0	34.1	24.0	37.5	23.9	40.9	23.7	44.3	23.5	
24					15.9	21.5	21.0	21.4	25.3	21.4	29.3	21.2	32.7	21.2	36.3	21.1	39.9	20.9	43.3	20.7	
26							18.3	19.1	23.2	19.0	27.6	18.9	31.2	18.9	35.0	18.7	38.6	18.6	42.2	18.4	
28							14.8	17.1	20.7	17.1	25.5	16.9	29.4	16.9	33.4	16.8	37.2	16.6	40.9	16.4	
30									17.5	15.4	23.0	15.2	27.3	15.3	31.6	15.1	35.6	14.9	39.5	14.7	

LOAD CHART FOR LIFT CRANE OPERATION - 55.1 t counterweight

Capacities in metric tons for boom lengths (20 m - 72.5 m) - with 350 kN winches																					
Radius (m)	Boom length (m)																		Radius (m)		
	20	23	25.7	28.7	31.7	34.7	37.4	40.4	43.4	46.4	49.1	52.1	55.1	58.1	60.8	63.8	66.8	69.8		72.5	
	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t		t	
4.9	175.5																			4.9	
5	173.8																			5	
6	161.4	161.0	154.9																	6	
7	137.7	132.5	128.3	123.6	119.3	115.2														7	
8	116.2	112.3	109.2	105.7	102.4	99.2	96.6	93.8	91.0											8	
9	100.3	97.2	94.9	92.1	89.5	87.0	84.9	82.6	80.4	78.2	76.4	74.4	72.7							9	
10	88.0	85.6	83.8	81.5	79.4	77.2	75.6	73.6	71.8	69.9	68.4	66.7	65.1	63.4	62.1	59.5				10	
12	67.3	67.3	67.5	65.9	64.4	62.8	61.6	60.2	58.8	57.4	56.3	55.0	53.7	52.4	51.4	50.2	49.0	47.4	42.9	12	
14	54.1	54.0	54.2	54.1	53.8	52.6	51.7	50.5	49.4	48.3	47.4	46.4	45.3	44.3	43.5	42.5	41.5	40.5	39.2	14	
16	44.8	44.8	45.0	44.9	44.8	44.6	44.3	43.3	42.4	41.4	40.7	39.8	38.9	38.0	37.4	36.5	35.7	34.8	34.2	16	
18	38.0	38.0	38.2	38.1	38.0	37.7	37.8	37.5	36.9	36.0	35.5	34.6	33.9	33.1	32.5	31.7	31.0	30.2	29.7	18	
20	32.7	32.7	33.0	32.8	32.7	32.5	32.5	32.3	32.1	31.7	31.2	30.5	29.8	29.1	28.5	27.9	27.2	26.5	26.0	20	
22		28.5	28.8	28.7	28.6	28.4	28.4	28.1	28.0	27.7	27.6	27.0	26.4	25.7	25.3	24.6	24.0	23.4	22.9	22	
24		25.0	25.4	25.3	25.2	25.0	25.0	24.8	24.6	24.3	24.2	24.0	23.5	22.9	22.5	21.9	21.3	20.7	20.3	24	
26			22.5	22.5	22.4	22.2	22.2	22.0	21.8	21.5	21.4	21.2	21.0	20.5	20.1	19.6	19.0	18.4	18.0	26	
28				20.1	20.0	19.8	19.9	19.6	19.4	19.2	19.1	18.8	18.6	18.3	18.1	17.5	17.0	16.5	16.1	28	
30				17.9	18.0	17.8	17.8	17.6	17.4	17.2	17.1	16.8	16.6	16.3	16.2	15.8	15.3	14.7	14.4	30	
32					16.2	16.0	16.1	15.9	15.7	15.4	15.3	15.1	14.8	14.6	14.4	14.2	13.7	13.2	12.9	32	
34							14.5	14.6	14.3	14.2	13.9	13.8	13.6	13.3	13.0	12.9	12.6	12.3	11.8	11.5	34
36								13.2	13.0	12.8	12.5	12.5	12.2	12.0	11.7	11.6	11.3	11.0	10.6	10.3	36
38								11.9	11.8	11.6	11.3	11.3	11.0	10.8	10.5	10.4	10.1	9.8	9.5	9.2	38
40									10.7	10.5	10.3	10.2	10.0	9.7	9.4	9.3	9.0	8.8	8.5	8.2	40
42										9.5	9.3	9.3	9.0	8.8	8.5	8.3	8.1	7.8	7.5	7.3	42
44										8.6	8.4	8.4	8.1	7.9	7.6	7.5	7.2	6.9	6.6	6.5	44
46											7.6	7.6	7.3	7.1	6.8	6.7	6.4	6.1	5.8	5.7	46
48												6.8	6.6	6.4	6.1	6.0	5.7	5.4	5.1	5.0	48
50													5.9	5.7	5.4	5.3	5.0	4.8	4.5	4.3	50
55														4.2	3.9	3.8	3.6	3.3	3.0	2.9	55
60																2.6	2.3	2.1	1.8	1.7	60
65																		1.0			65

Above load chart is for reference only. For actual lift duty please refer to load chart in operator's cab or manual

LOAD CHART FOR LIFT CRANE OPERATION - 75.1 t counterweight and 27 t carbody counterweight

Capacities in metric tons for boom lengths (20 m - 84.2 m) - with 350 kN winches																				
	Boom length (m)																			
Radius (m)	20	25.7	28.7	34.7	37.4	43.4	46.4	49.1	52.1	55.1	58.1	60.8	63.8	66.8	69.8	72-5	75.5	78.5*	84.2*	Radius (m)
	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	
5	200.0																			5
6	192.7	197.1	194.4																	6
7	179.6	168.3	162.3	151.3	146.9															7
8	152.9	143.8	139.3	130.9	127.3	120.1	116.7	111.1												8
9	132.3	125.2	121.6	115.0	112.4	104.2	103.5	101.1	98.5	93.9	88.2									9
10	116.2	110.8	107.8	102.4	100.2	95.4	93.1	90.9	88.7	86.6	83.8	73.1	68.7	64.5						10
12	89.2	89.4	87.6	83.7	82.2	78.6	76.8	75.4	73.5	72.0	70.4	66.6	62.5	58.7	55.3	50.6	47.3	49.8	41.3	12
14	72.0	72.2	72.1	70.4	69.3	66.5	65.1	64.0	62.7	61.4	59.9	58.9	57.7	53.8	50.5	46.3	43.2	47.2	39.8	14
16	60.0	60.2	60.1	59.8	59.7	57.4	56.2	55.3	54.2	53.2	52.1	51.1	50.0	49.0	47.1	43.3	40.1	45.2	38.5	16
18	51.1	51.4	51.2	50.9	50.9	50.2	49.2	48.5	47.5	46.6	45.7	45.0	43.9	43.0	42.1	40.9	37.8	39.7	37.5	18
20	44.3	44.6	44.5	44.1	44.1	43.7	43.5	43.0	42.1	41.3	40.5	39.9	39.1	38.2	37.3	36.7	35.7	35.4	33.8	20
22		39.2	39.1	38.8	38.8	38.4	38.1	38.0	37.7	37.0	36.2	35.6	34.9	34.2	33.5	32.7	32.0	31.5	30.3	22
24		34.8	34.7	34.4	34.4	34.0	33.7	33.7	33.4	33.2	32.6	32.1	31.4	30.7	30.0	29.4	28.7	28.2	27.1	24
26		31.1	31.1	30.8	30.8	30.4	30.1	30.0	29.8	29.6	29.3	29.0	28.4	27.8	27.1	26.7	25.9	25.4	24.4	26
28			28.0	27.8	27.8	27.3	27.1	27.0	26.7	26.5	26.2	26.1	25.8	25.2	24.6	24.1	23.6	23.0	22.0	28
30			25.3	25.1	25.2	24.8	24.5	24.4	24.1	23.9	23.6	23.5	23.2	22.9	22.3	21.9	21.4	20.8	19.9	30
32				22.9	22.9	22.5	22.2	22.2	21.9	21.7	21.4	21.3	21.0	20.7	20.4	20.0	19.5	18.9	18.0	32
34				20.9	20.9	20.5	20.3	20.2	19.9	19.7	19.4	19.3	19.0	18.8	18.5	18.3	17.7	17.2	16.3	34
36					19.2	18.8	18.5	18.5	18.2	18.0	17.7	17.6	17.3	17.0	16.7	16.6	16.2	15.7	14.8	36
38					17.6	17.3	17.0	16.9	16.7	16.4	16.2	16.0	15.7	15.5	15.2	15.0	14.8	14.3	13.5	38
40						15.9	15.6	15.6	15.3	15.1	14.8	14.7	14.4	14.1	13.8	13.7	13.4	13.1	12.3	40
42						14.6	14.4	14.3	14.1	13.8	13.5	13.4	13.1	12.9	12.6	12.4	12.1	11.9	11.1	42
44						13.4	13.2	13.2	12.9	12.7	12.4	12.3	12.0	11.8	11.5	11.3	11.0	10.8	10.1	44
46							12.2	12.2	11.9	11.7	11.4	11.3	11.0	10.8	10.5	10.3	10.0	9.7	9.2	46
48								11.2	11.0	10.8	10.5	10.4	10.1	9.8	9.5	9.4	9.1	8.8	8.3	48
50									10.1	9.9	9.6	9.5	9.2	9.0	8.7	8.5	8.2	8.0	7.5	50
55										8.0	7.7	7.6	7.4	7.1	6.8	6.7	6.4	6.1	5.6	55
60												6.1	5.8	5.6	5.3	5.1	4.9	4.6	4.1	60
65														4.2	4.0	3.8	3.6	3.3	2.8	65
70																2.7	2.4	2.2	1.7	70
75																	1.4	1.2		75

*) with mid-point suspension. Above load chart is for reference only. For actual lift duty please refer to load chart in operator's cab or manual.

