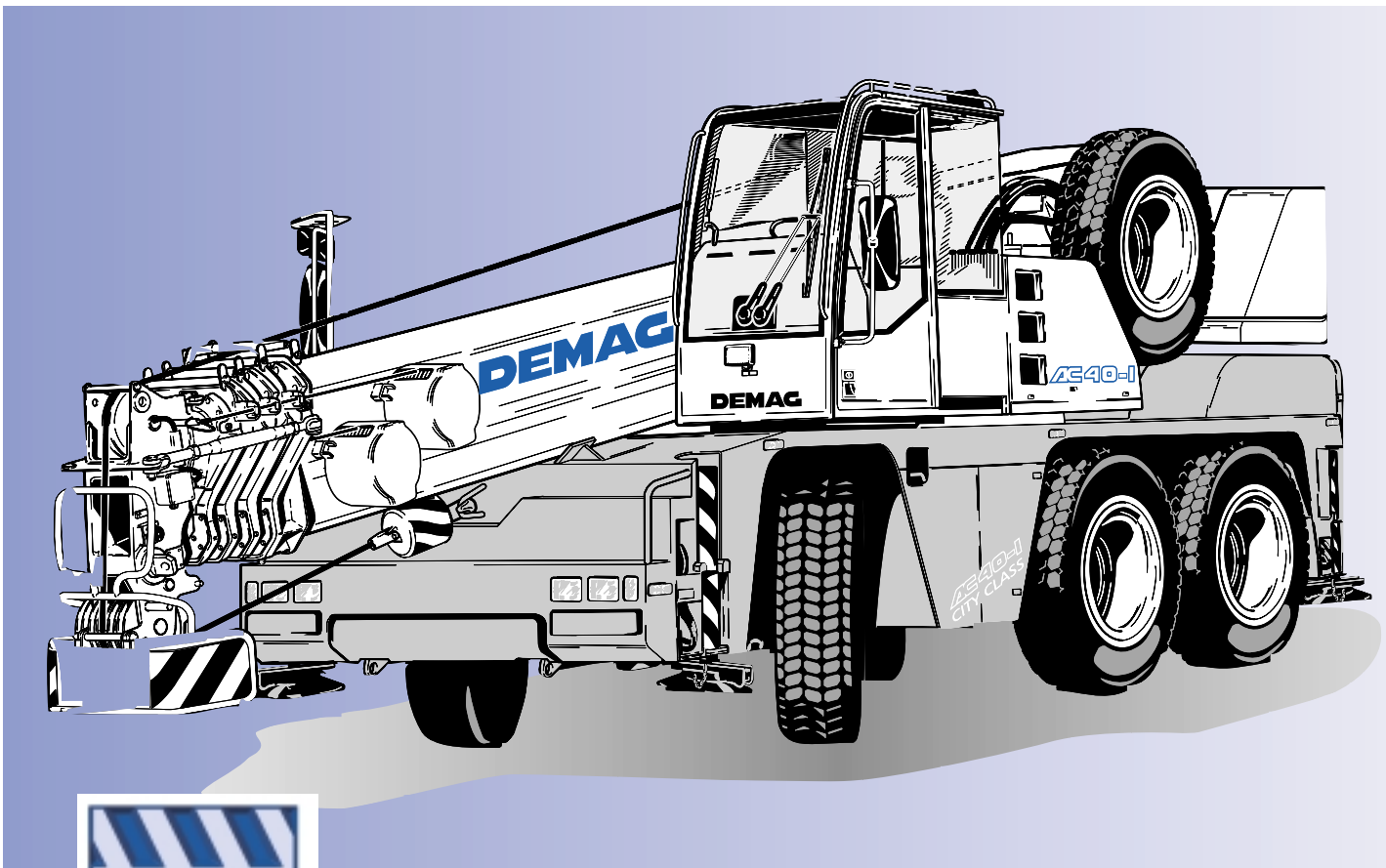


- Key
- Highlights
- Contents
- Specifications
- Dimensions
- Main boom
- Main boom extension
- Technical description

## Demag AC 40-1

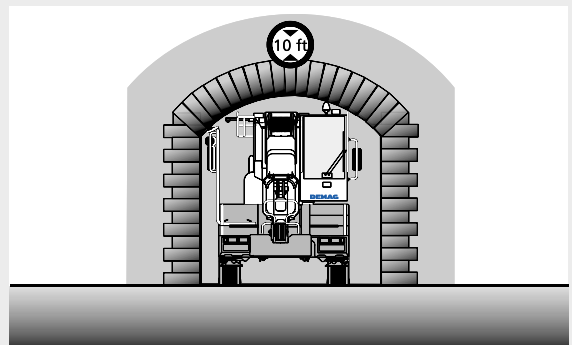
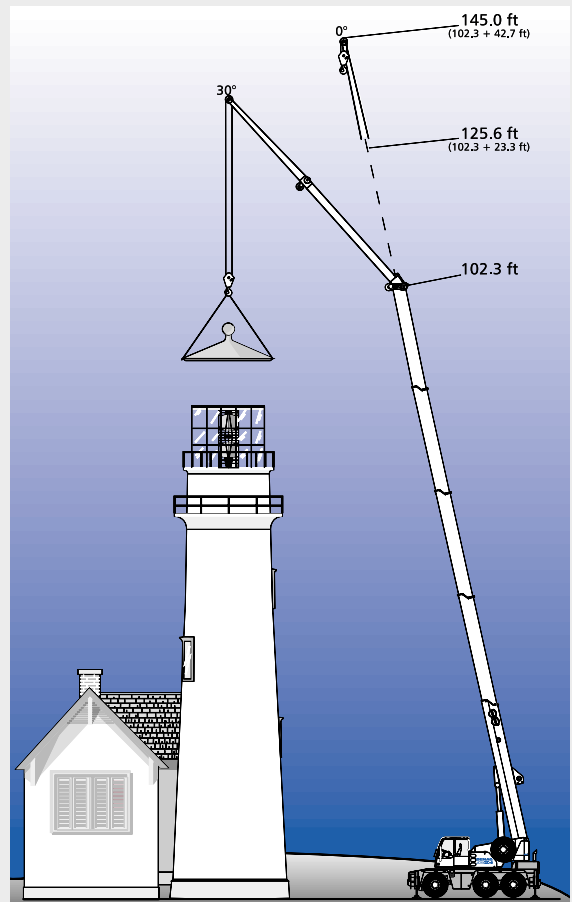


[MAIN MENU](#)

# HIGHLIGHTS

## Demag AC 40-1

- Most compact 3-axle crane in its category
- Fast on road and excellent manoeuvrability off road
- Universal applicability with a host of attachments
- Clearance height is just 3 m



[www.demag24.com](http://www.demag24.com)

MAIN MENU

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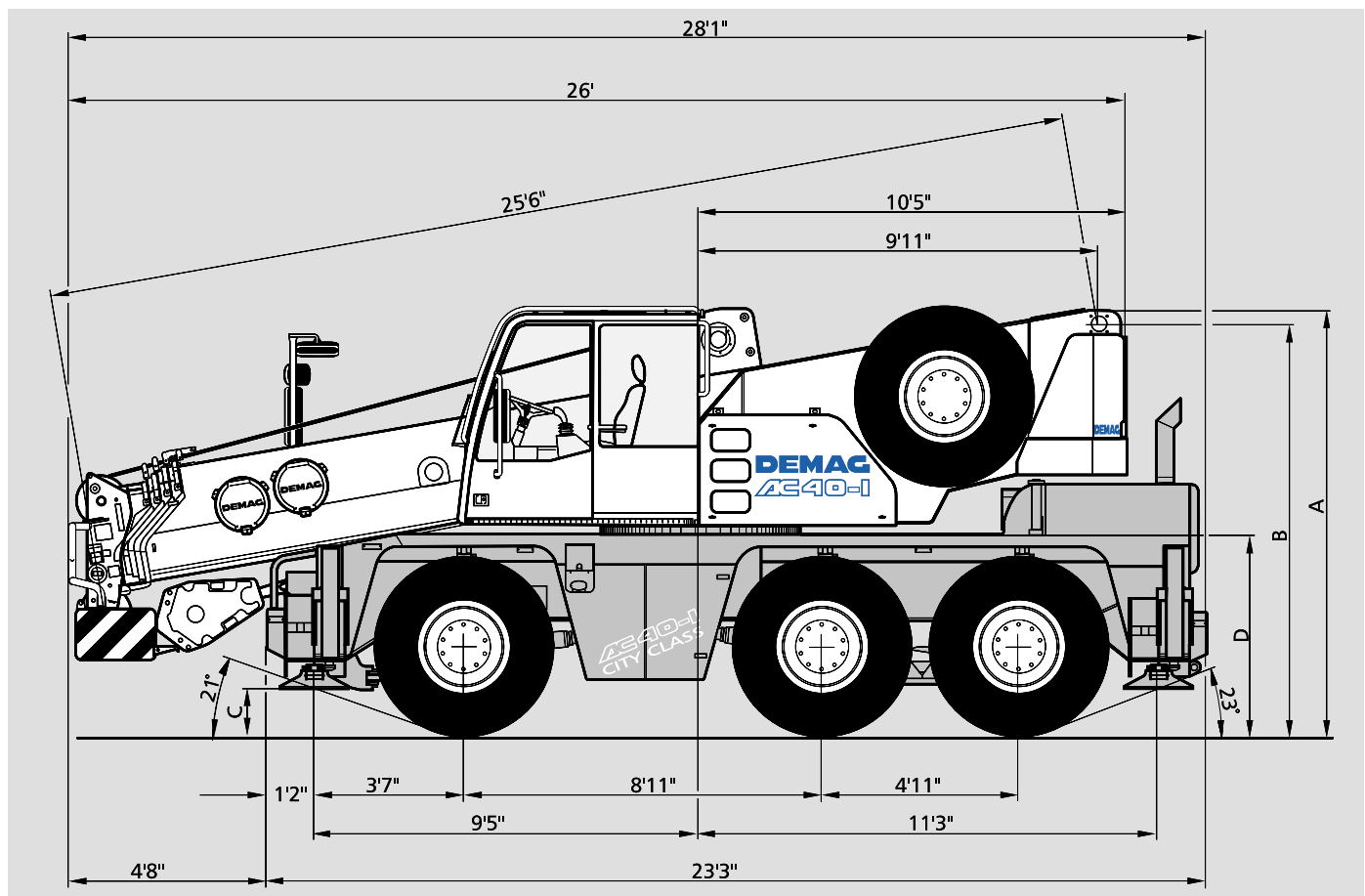
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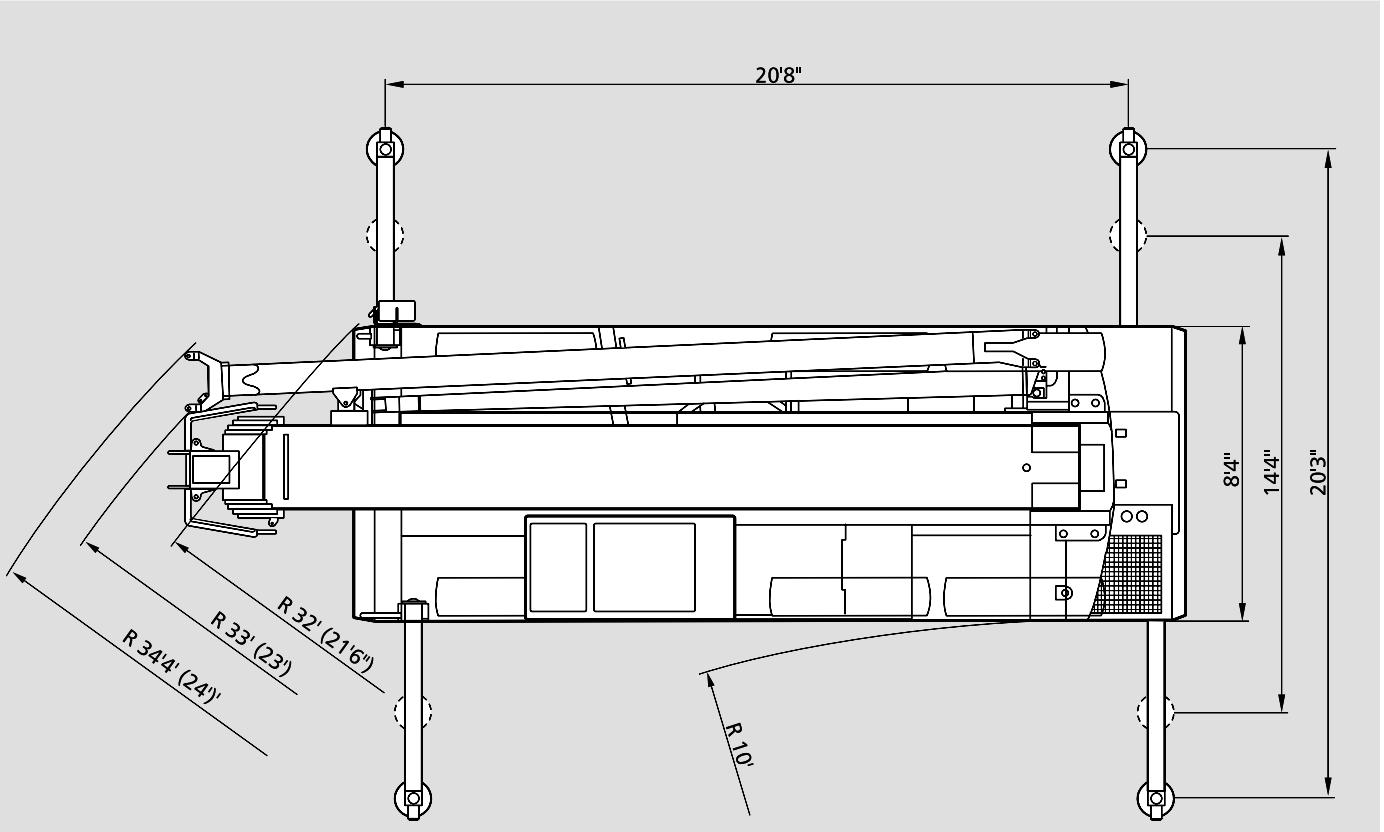
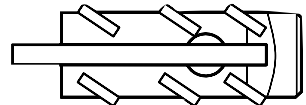
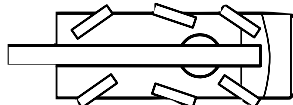
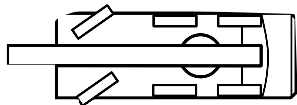
# Dimensions

Type of tires	Level	A	B	C	D
14.00	Road	10'5"	10'1"	1'2"	4'9"
14.00	Lowered	10'2"	9'9"	9"	4'6"
445 / 65	Road	10'1"	9'8"	8"	4'5"
445 / 65	Lowered	9'8"	9'5"	5"	4'2"



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( ) with independent rear axle steering

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# Specifications

## Axle loads

Crane with main boom, 42.6 ft main boom extension, counterweight, tyres 445/65 R 22.5, hook block.

Axles	Axle 1	20,000 lb
Total	Axle 2+3	25,000 lb
		70,000 lb

## Working speeds (infinitely variable)

Mechanisms	Normal speed	High speed	Max. permissible line pull <sup>1)</sup>	Rope length
Hoist I	197 ft/min	377 ft/min	43 kN	492.1 ft
Slewing				max. 2 1/min
Telescoping speed				25.6 – 102.3 ft: 90 s
Boom elevation				-10° – +78°: 50 s

## Carrier performance

Travel speed	0 .. 50 mph <sup>2)</sup>
Gradeability in travel order	> 60 %
Ground clearance	1' / 1'3" ft <sup>2)</sup>

## Hook block / Single line hook

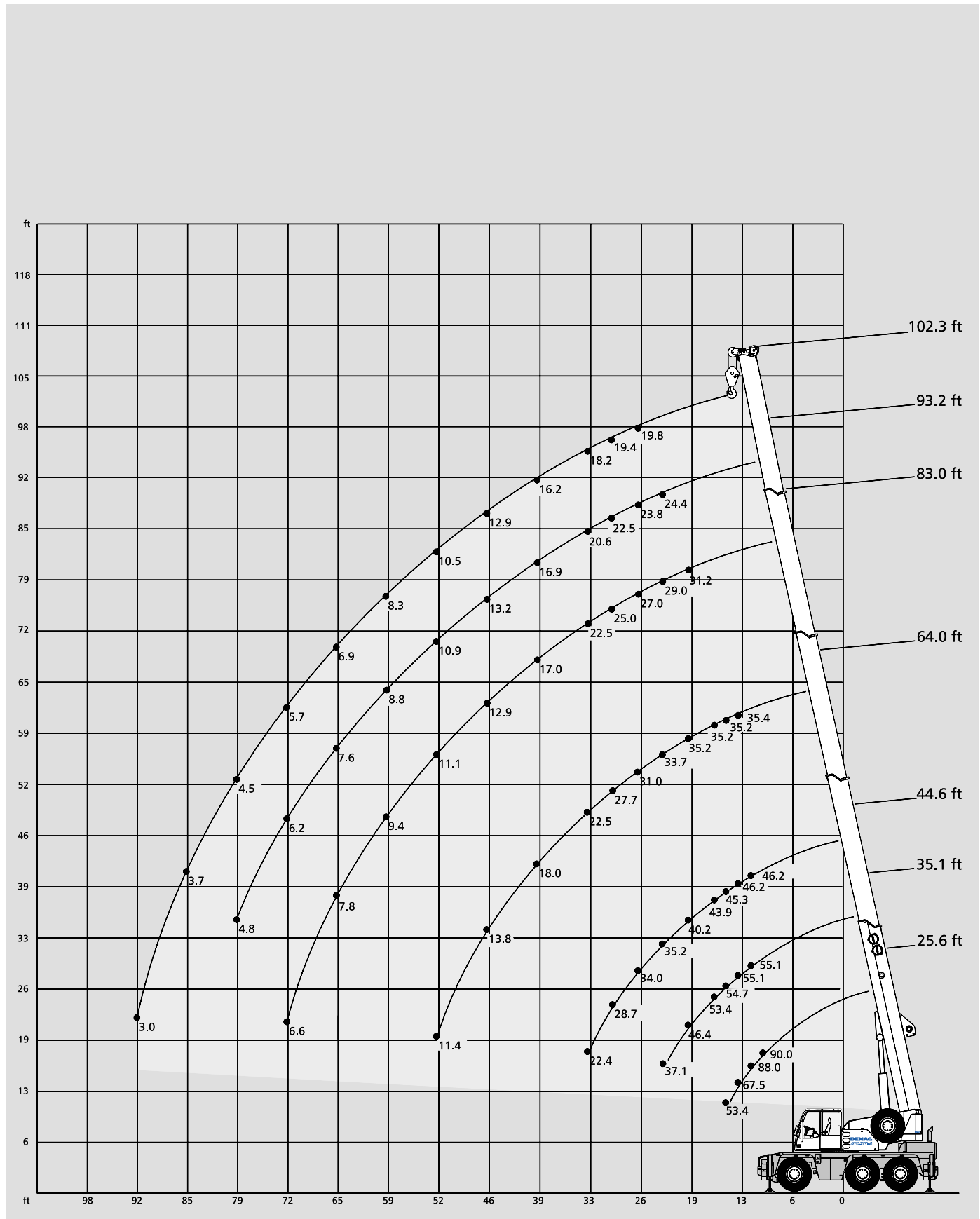
Type	Possible load <sup>1)</sup>	Number of sheaves	Weight	„D“	Max. reeving	Heavy-lift attachment
63	110,000 lb	6	1058 lb	6.6 ft	10	1 add. sheave
32	66,400 lb	3	716 lb	4.3 ft	7	
16	26,500 lb	1	551 lb	3.6 ft	3	
5	8,800 lb	Single line hook	287 lb	2.6 ft	1	

## Remarks

<sup>1)</sup> varies depending on national regulations

<sup>2)</sup> depending on type of tyres



# Working ranges main boom





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# Lifting capacities main boom

 <b>20'10" x 20'4" 360°</b> <b>DIN/ISO</b>									 <b>0°*</b> <b>DIN/ISO</b>			
Main boom									Main boom			
Radius	ft	25.6	35.1	44.6	64.0	83.0	93.2	102.3	25.6	35.1	44.6	Radius
ft	1,000 lb								1,000 lb			ft
10		88.0*	-	-	-	-	-	-	-	-	-	10
10		75.2	55.1	46.2	-	-	-	-	31.6	30.5	32.9	10
11		72.6	55.1	46.2	-	-	-	-	29.4	28.3	30.6	11
13		67.5	55.1	46.2	35.4	-	-	-	25.5	24.6	26.8	13
15		53.4	54.7	45.3	35.2	-	-	-	19.6	21.7	23.9	15
16		-	53.4	43.9	35.2	-	-	-	-	20.3	22.5	16
19		-	46.4	40.2	35.2	31.2	-	-	-	17.2	19.2	19
23		-	37.1	35.2	33.7	29.0	24.4	-	-	13.3	15.8	23
26		-	-	34.0	31.0	27.0	23.8	19.8	-	-	13.2	26
29		-	-	28.7	27.7	25.0	22.5	19.4	-	-	10.9	29
33		-	-	22.4	22.5	22.5	20.6	18.2	-	-	9.0	33
39		-	-	-	18.0	17.0	16.9	16.2	-	-	-	39
46		-	-	-	13.8	12.9	13.2	12.9	-	-	-	46
52		-	-	-	11.4	11.1	10.9	10.5	-	-	-	52
59		-	-	-	-	9.4	8.8	8.3	-	-	-	59
65		-	-	-	-	7.8	7.6	6.9	-	-	-	65
72		-	-	-	-	6.6	6.2	5.7	-	-	-	72
79		-	-	-	-	-	4.8	4.5	-	-	-	79
85		-	-	-	-	-	-	3.7	-	-	-	85
92		-	-	-	-	-	-	3.0	-	-	-	92
98		-	-	-	-	-	-	-	-	-	-	98
Capacities <sup>1)</sup>		44.0	30.8	19.4	9.9	5.5	3.9	2.4	17.6	8.8	6.6	Capacities <sup>1)</sup>

 <b>20'10" x 7'8" 360°</b> <b>DIN/ISO</b>						 <b>360°**</b> <b>DIN/ISO</b>				
Main boom						Main boom				
Radius	ft	25.6	35.1	44.6	64.0	25.6	35.1	44.6	Radius	
ft	1,000 lb				1,000 lb			ft		
13		26.5	25.0	28.1	28.7	-	-	-	13	
15		18.5	19.8	22.6	23.3	11.1	11.6	14.2	15	
16		-	17.7	20.4	21.1	-	10.7	13.2	16	
19		-	13.4	15.7	16.4	-	8.4	10.8	19	
23		-	9.3	11.6	12.1	-	6.1	8.3	23	
26		-	-	9.6	10.0	-	-	6.9	26	
29		-	-	8.1	8.6	-	-	5.9	29	
33		-	-	6.4	6.9	-	-	4.8	33	
39		-	-	-	5.1	-	-	-	39	
46		-	-	-	3.7	-	-	-	46	
52		-	-	-	2.9	-	-	-	52	
Capacities <sup>1)</sup>		17.6	6.1	4.6	-	10.6	4.2	2.9	Capacities <sup>1)</sup>	

## Remarks

- \* 0° over rear
- \*\* only stationary
- <sup>1)</sup> with horizontal boom

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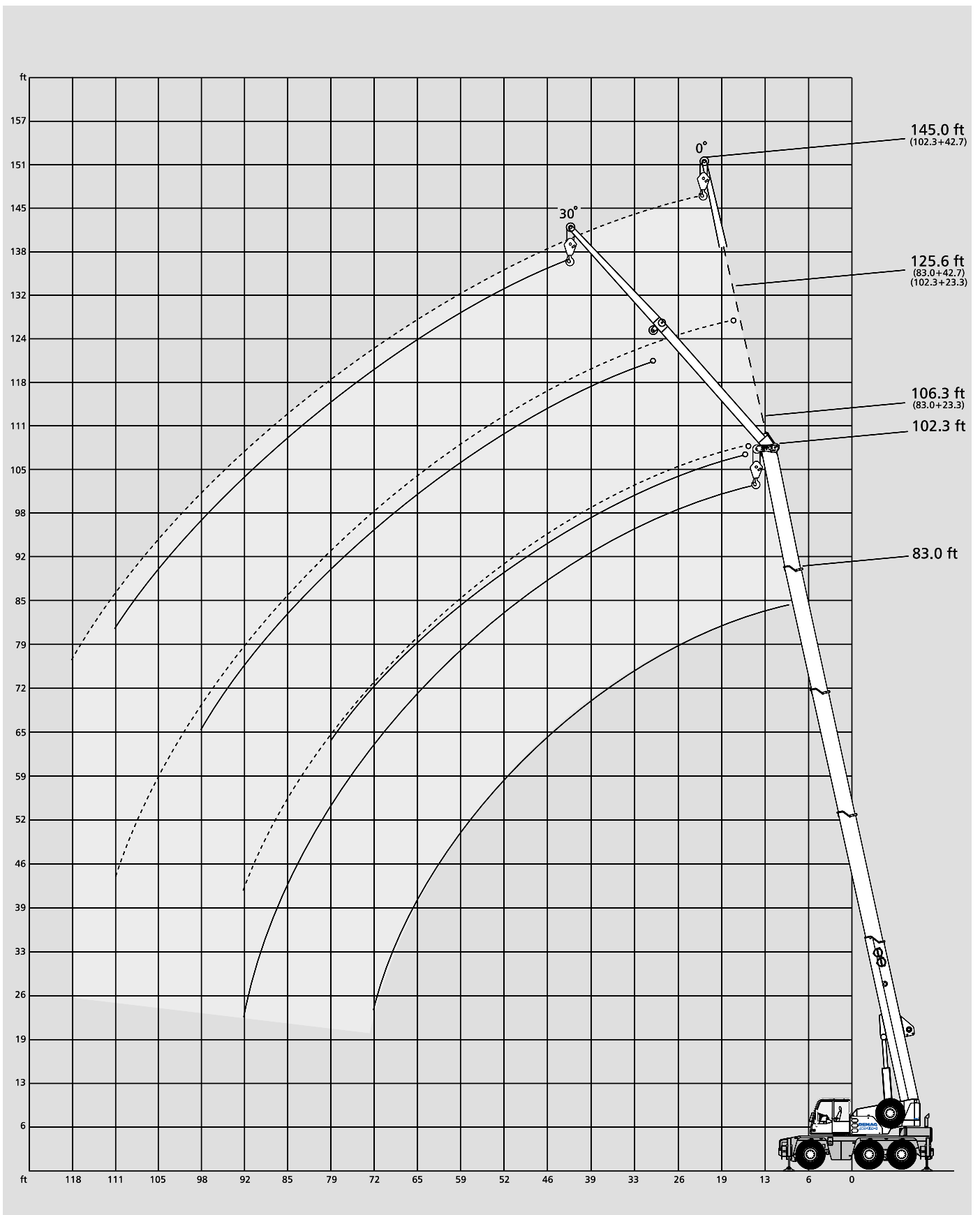
Main boom

Radius	ft	25.6	35.1	44.6	64.0	83.0	93.2	102.3	Radius
ft					1,000 lb				ft
10		74.9	55.1	46.2	-	-	-	-	10
11		70.7	55.1	46.2	-	-	-	-	11
13		62.8	55.1	46.2	35.4	-	-	-	13
15		44.9	49.2	44.7	35.2	-	-	-	15
16		-	43.0	41.1	35.2	-	-	-	16
19		-	31.1	32.4	32.1	31.2	-	-	19
23		-	21.3	24.4	25.0	23.9	23.7	-	23
26		-	-	19.9	20.6	19.5	19.5	19.6	26
29		-	-	16.6	17.3	17.2	16.8	16.4	29
33		-	-	13.2	14.0	14.2	13.7	13.3	33
39		-	-	-	10.7	11.0	10.5	10.1	39
46		-	-	-	8.1	8.3	7.9	7.4	46
52		-	-	-	6.7	6.7	6.3	6.0	52
59		-	-	-	-	5.5	5.0	4.6	59
65		-	-	-	-	4.7	4.0	3.8	65
72		-	-	-	-	3.7	3.3	2.8	72
79		-	-	-	-	-	2.6	2.1	79
85		-	-	-	-	-	-	1.7	85
92		-	-	-	-	-	-	1.3	92
Capacities <sup>1)</sup>		44.1	15.4	11.4	5.5	3.3	1.7	-	Capacities <sup>1)</sup>

Remarks

<sup>1)</sup> with horizontal boom

# Working ranges main boom extension



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# Lifting capacities main boom extension

 20'10" x 20'4" 360° DIN/ISO

83.0 ft Main boom	23.3 ft		Extension		42.7 ft	
	0° 30°		1,000 lb		0° 30°	
	Radius ft					
26	14.3	-	-	-	-	-
29	13.7	-	-	-	-	-
33	12.9	9.2	-	7.9	-	-
39	11.9	8.8	-	7.3	-	-
46	10.7	8.3	-	6.6	-	-
52	9.9	8.1	-	6.2	4.8	-
59	8.8	7.7	-	5.7	4.6	-
65	7.4	7.5	-	5.3	4.4	-
72	6.2	6.4	-	5.0	4.1	-
79	5.0	5.2	-	4.6	4.1	-
85	4.2	-	-	4.4	3.9	-
92	3.5	-	-	3.7	3.9	-
98	-	-	-	3.3	3.5	-
105	-	-	-	2.6	-	-
111	-	-	-	2.2	-	-

 20'10" x 14'5" 360° DIN/ISO

83.0 ft Main boom	23.3 ft		Extension		42.7 ft	
	0° 30°		1,000 lb		0° 30°	
	Radius ft					
26	14.3	-	-	-	-	-
29	13.7	-	-	-	-	-
33	12.9	9.2	-	7.9	-	-
39	10.5	8.8	-	7.3	-	-
46	7.9	8.3	-	6.6	-	-
52	6.3	6.9	-	6.2	4.8	-
59	5.0	5.5	-	5.2	4.6	-
65	4.0	4.5	-	4.2	4.4	-
72	3.3	3.5	-	3.5	4.1	-
79	2.6	2.8	-	2.8	3.5	-
85	2.0	-	-	2.2	2.8	-
92	1.5	-	-	1.7	2.1	-
98	-	-	-	1.3	1.7	-
105	-	-	-	-	-	-
111	-	-	-	-	-	-

102.3 ft Main boom

33	11.0	-	-	-	-	-
39	10.6	8.6	-	6.6	-	-
46	10.1	8.1	-	6.3	-	-
52	9.7	7.7	-	6.1	-	-
59	8.8	7.2	-	5.9	4.6	-
65	7.4	6.8	-	5.5	4.4	-
72	5.9	6.4	-	5.2	4.1	-
79	4.8	5.2	-	4.8	4.1	-
85	4.0	4.4	-	4.2	3.9	-
92	3.2	3.5	-	3.5	3.9	-
98	2.6	2.9	-	2.9	3.5	-
105	1.9	-	-	2.4	2.8	-
111	1.5	-	-	2.0	2.2	-
118	-	-	-	1.5	-	-

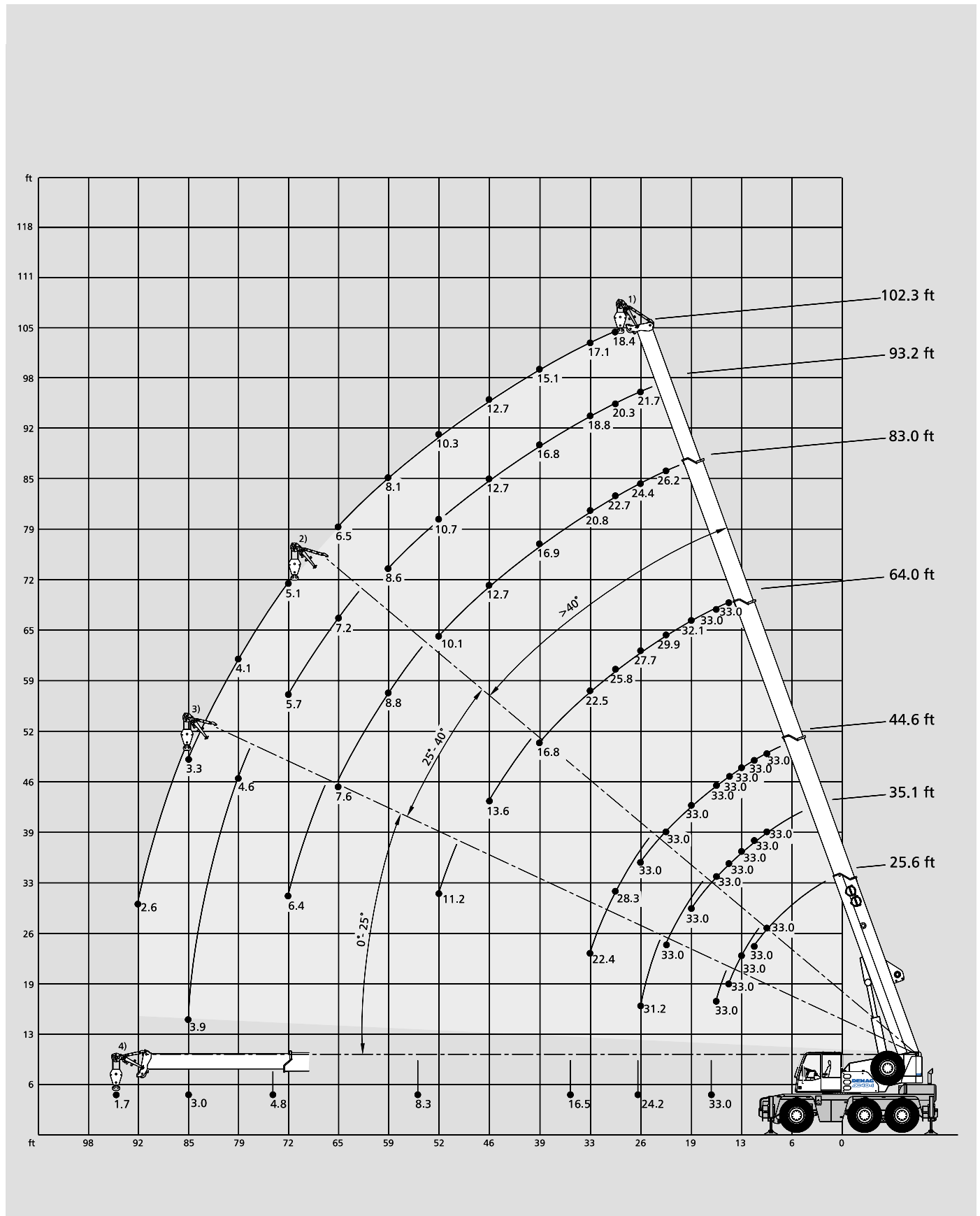
102.3 ft Main boom

33	10.9	-	-	-	-	-
39	10.1	8.6	-	6.6	-	-
46	7.7	8.1	-	6.3	-	-
52	6.2	6.9	-	6.1	-	-
59	4.8	5.5	-	5.0	4.6	-
65	3.8	4.5	-	4.0	4.4	-
72	3.1	3.5	-	3.3	3.9	-
79	2.3	2.8	-	2.6	3.2	-
85	1.7	2.2	-	2.0	2.6	-
92	1.3	1.5	-	1.5	2.1	-
98	-	-	-	-	1.5	-
105	-	-	-	-	-	-
111	-	-	-	-	-	-
118	-	-	-	-	-	-

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# Runner for workshop applications



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# Lifting capacities runner



20'10" x 20'4" 360°

DIN/ISO

		Main boom							
Radius	ft	25.6	35.1	44.6	64.0	83.0	93.2	102.3	
		1,000 lb							
ft									ft
10		33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	-	-	-	-	10
11		33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	-	-	-	-	11
13		33.0 <sup>2)</sup>	33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	-	-	-	-	13
15		33.0 <sup>2)</sup>	33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	-	-	-	15
16		33.0 <sup>3)</sup>	33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	-	-	-	16
19		-	33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	32.1 <sup>1)</sup>	-	-	-	19
23		-	33.0 <sup>2)</sup>	33.0 <sup>1)</sup>	29.9 <sup>1)</sup>	26.2 <sup>1)</sup>	-	-	23
26		-	31.2 <sup>3)</sup>	33.0 <sup>1)</sup>	27.7 <sup>1)</sup>	24.4 <sup>1)</sup>	21.7 <sup>1)</sup>	-	26
29		-	-	28.3 <sup>2)</sup>	25.8 <sup>1)</sup>	22.7 <sup>1)</sup>	20.3 <sup>1)</sup>	18.4 <sup>1)</sup>	29
33		-	-	22.4 <sup>2)</sup>	22.5 <sup>1)</sup>	20.8 <sup>1)</sup>	18.8 <sup>1)</sup>	17.1 <sup>1)</sup>	33
39		-	-	-	16.8 <sup>1)</sup>	16.9 <sup>1)</sup>	16.8 <sup>1)</sup>	15.1 <sup>1)</sup>	39
46		-	-	-	13.6 <sup>2)</sup>	12.7 <sup>1)</sup>	12.7 <sup>1)</sup>	12.7 <sup>1)</sup>	46
52		-	-	-	11.2 <sup>3)</sup>	10.1 <sup>1)</sup>	10.7 <sup>1)</sup>	10.3 <sup>1)</sup>	52
59		-	-	-	-	8.8 <sup>2)</sup>	8.6 <sup>1)</sup>	8.1 <sup>1)</sup>	59
65		-	-	-	-	7.6 <sup>2)</sup>	7.2 <sup>2)</sup>	6.5 <sup>1)</sup>	65
72		-	-	-	-	6.4 <sup>3)</sup>	5.7 <sup>2)</sup>	5.1 <sup>2)</sup>	72
79		-	-	-	-	-	4.6 <sup>3)</sup>	4.1 <sup>2)</sup>	79
85		-	-	-	-	-	3.9 <sup>3)</sup>	3.3 <sup>2)</sup>	85
92		-	-	-	-	-	-	2.6 <sup>3)</sup>	92
Capacities <sup>4)</sup>		33.0 <sup>2+3)</sup>	24.2 <sup>2+3)</sup>	16.5 <sup>2+3)</sup>	8.3 <sup>2+3)</sup>	4.8 <sup>2+3)</sup>	3.0 <sup>2+3)</sup>	1.7 <sup>2+3)</sup>	Capacities <sup>4)</sup>



20'10" x 14'5" 360°

DIN/ISO

		Main boom							
Radius	ft	25.6	35.1	44.6	64.0	83.0	93.2	102.3	
		1,000 lb							
ft									ft
10		33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	-	-	-	-	10
11		33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	-	-	-	-	11
13		33.0 <sup>2)</sup>	33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	-	-	-	-	13
15		33.0 <sup>2)</sup>	33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	-	-	-	15
16		33.0 <sup>3)</sup>	33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	33.0 <sup>1)</sup>	-	-	-	16
19		-	30.1 <sup>1)</sup>	32.5 <sup>1)</sup>	32.0 <sup>1)</sup>	-	-	-	19
23		-	21.9 <sup>2)</sup>	24.6 <sup>1)</sup>	24.1 <sup>1)</sup>	24.1 <sup>1)</sup>	-	-	23
26		-	17.7 <sup>3)</sup>	20.0 <sup>1)</sup>	20.5 <sup>1)</sup>	19.5 <sup>1)</sup>	19.4 <sup>1)</sup>	-	26
29		-	-	16.8 <sup>2)</sup>	17.3 <sup>1)</sup>	16.4 <sup>1)</sup>	16.5 <sup>1)</sup>	16.2 <sup>1)</sup>	29
33		-	-	13.2 <sup>2)</sup>	14.0 <sup>1)</sup>	14.2 <sup>1)</sup>	13.5 <sup>1)</sup>	13.1 <sup>1)</sup>	33
39		-	-	-	10.5 <sup>1)</sup>	10.7 <sup>1)</sup>	10.3 <sup>1)</sup>	9.6 <sup>1)</sup>	39
46		-	-	-	7.9 <sup>2)</sup>	8.1 <sup>1)</sup>	7.6 <sup>1)</sup>	7.2 <sup>1)</sup>	46
52		-	-	-	6.5 <sup>3)</sup>	6.5 <sup>1)</sup>	6.0 <sup>1)</sup>	5.6 <sup>1)</sup>	52
59		-	-	-	-	5.3 <sup>2)</sup>	4.6 <sup>1)</sup>	4.2 <sup>1)</sup>	59
65		-	-	-	-	4.2 <sup>2)</sup>	3.8 <sup>2)</sup>	3.3 <sup>1)</sup>	65
72		-	-	-	-	3.5 <sup>3)</sup>	2.8 <sup>2)</sup>	2.4 <sup>2)</sup>	72
79		-	-	-	-	-	2.3 <sup>3)</sup>	1.7 <sup>2)</sup>	79
85		-	-	-	-	-	1.7 <sup>3)</sup>	-	85
92		-	-	-	-	-	-	-	92
Capacities <sup>4)</sup>		33.0 <sup>2+3)</sup>	14.9 <sup>2+3)</sup>	10.5 <sup>2+3)</sup>	5.0 <sup>2+3)</sup>	2.6 <sup>2+3)</sup>	-	-	Capacities <sup>4)</sup>

## Remarks

- 1) Working range – max. offset for runner
- 2) Working range – medium offset for runner
- 3) Working range – min. offset for runner
- 4) with horizontal boom

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# Technical description

## Carrier

<b>Drive/steering</b>	6 x 4 x 6
<b>Frame</b>	Monobox main frame with outrigger boxes integral, of high-strength fine-grain structural steel.
<b>Outriggers</b>	4 hydraulically telescoping outrigger beams with hydraulic jack legs.
<b>Engine</b>	DaimlerChrysler OM 906 LA water-cooled 6-cylinder engine (EPA), output to DIN: 205 kW (279 hp), max. torque 1100 Nm at 1300 1/min. Fuel tank capacity: 79 gallons.
<b>Transmission</b>	Allison automatic transmission with torque-converter, 6 forward speeds and 1 reverse, transfer case with off-road range and longitudinal differential lock-out control incl. ADM.
<b>Axles</b>	Axle 1: with ext. planetary hubs, steering, transverse differential locks; axle 2: non-driving, steering for crab steer mode; axle 3: with ext. planetary hubs, steering for crab steer mode, transverse differential locks.
<b>Suspension</b>	Hydropneumatic suspension, blockable hydraulically.
<b>Wheels and tires</b>	6 wheels fitted with 445/65 R 22.5 tires.
<b>Travel speed</b>	50 mph.
<b>Steering</b>	ZF dual-circuit hydraulic steering with mech. steering end stop. 1 engine-driven master steering pump, 1 emergency steering pump. Independent rear axle steering.
<b>Brakes</b>	Service brake: dual-line air system. Parking brake: spring-loaded type. Sustained action brake: engine exhaust brake and constant decompression valve.
<b>Electrical equipment</b>	24 V system, 3-phase alternator 80 A, 2 batteries 12 V/120 Ah. Lighting in compliance with EC-directives.

## Superstructure

<b>Main boom</b>	Boom base and 4 telescopic sections, fabricated from fine-grain structural steel, telescoping with partial load, anti-deflection Demag ovaloid design.
<b>Counterweight</b>	Integrated into superstructure.
<b>Hydraulic system</b>	Powered by carrier engine, 1 variable-displacement axial piston pump to enable 3 simultaneous, independent working movements, separate fixed-displacement pump for slew unit.
<b>Hoist</b>	Fixed-displacement axial-piston motor, hoist drum with planetary reduction integral and spring-applied multi-disk brake.
<b>Slew unit</b>	Hydraulic motor with planetary gear reducer, pedal-operated service brake and spring-applied holding brake. Slewing speed infinitely variable.
<b>Boom elevation</b>	1 differential cylinder with pilot-controlled lowering brake valve.
<b>Crane cab</b>	Spacious all-steel comfortable cab with sliding door, large folding-out windscreen, roof window with armoured glass, vertically adjustable operator's seat, controls and instrumentation for all crane movements, washer and interval control wiper for windscreen and roof window.
<b>Safety devices</b>	Electronic safe load indicator with graphic display and digital readout for hook load, rated load, boom length, boom angle, load radius. Integrated display to indicate the percentage of tele sequence, limit switches on hoist and lowering motions, pressure-relief and safety holding valves.

## Optional equipment

<b>Drive/steering</b>	6 x 6 x 6.
<b>Wheels and tires</b>	14.00 R 25 or 17.5 R 25.
<b>Main boom extension</b>	Side-folding 1 or 2-part jib, 23.3 ft or 42.7 ft. 0° and 30° offset.
<b>Heavy-lift attachment</b>	1 additional sheave on boom head.
<b>Heavy-lift runner</b>	3.9 ft long, 3-sheave with several offset positions for working inside buildings.
<b>Searcher hook</b>	
<b>Air-conditioning</b>	
<b>Cool box</b>	

# Notes to lifting capacity

Ratings are in compliance with ISO 4305 and DIN 15019.2 (test load = 1.25 x suspended load + 0.1 x dead weight of boom reduced to boom point).

Weight of hook blocks and slings is part of the load, and is to be deducted from the capacity ratings.

Crane operation is permissible up to a  
wind pressure of ..... 1.25 lb/ft<sup>2</sup>  
wind speed of ..... 32 ft

Consult operation manual for further details.

Note: Data published herein is intended as a guide only and shall not be construed to warrant applicability for lifting purposes. Crane operation is subject to the computer charts and operation manual both supplied with the crane.

# Key



Lifting capacities on outriggers 360°



free on wheels

„D“

