



Grove Manitowoc National Crane Potain

# Potain Igo T 85 A

## Product Guide



### Features

- 6000 kg (13,228 lb) maximum capacity
- 1400 kg (3086 lb) capacity at 45 m (148 ft)
- 45 m (148 ft) maximum operating hook radius
- 51 m (167 ft) maximum hook height with 45 m (148 ft) jib set at 30°
- 38 m (125 ft) maximum tip hook height with jib horizontal
- Variable height lattice mast from 20 m (66 ft) to 38 m (125 ft) with optional mast inserts



FEM 1.001-A3  
EN 14439 C25

## Features



### Optional hydraulic ballasting derrick

The optional hydraulic ballasting derrick arm is removeable and controlled by the radio remote control. This derrick can be adjusted to both radii of the Igo T 85 A as well as the radius of the Igo T 70 A.

### Remote control with indicators

Standard wireless radio remote control with indicators and auxiliary control unit can be supplemented with an optional tethered joystick control unit with 30 m (98 ft) cable.



### North American Highway Axle

Simplify road transport with the North American Highway Axle and adaptation kit 203. Multiple pin positions for optimal weight distribution, DOT compliance and an optional attachable 3rd axle make this an ideal solution for your transportation needs.



### Cab

The optional UltraView cab bolts onto the crane at a fixed height. Controls are integrated into the cab and operator's seat provides ergonomic comforts from an aerial position.



### Mast inserts

Increase your working height by up to 15 m (49 ft) with optional mast inserts. Each insert is 6 m (20 ft) and provides the operator with additional heights under hook.





# Contents

Specifications	4
Transport	5
Weights	6
Dimensions	7
Crane profile	8
Load charts	9
Mechanisms	10
Metric dimension	11
Metric crane profile	12
Metric load charts	13
Metric mechanisms	14
Symbols glossary	15

# Specifications



## Jib

45 m (148 ft) radius standard tri-folding offsettable lattice jib. Two (2) tie bar lines with adjustable lengths allow jib to be offset up to 30°. Opening and aligning are carried out automatically by three (3) hydraulic cylinders.



## Mast

Telescoping lattice mast raised by one (1) hydraulic cylinder. Hook heights of 20 m (66 ft) and 23 m (75 ft) achievable with standard mast. 360° rotation possible during raising sequence.



## \*Optional mast inserts

Three (3) 6 m (20 ft) mast inserts available to reach a maximum horizontal hook height of 38 m (125 ft). Increasing mast height with one insert provides hook heights of 26 m (85 ft) and 29 m (95 ft); second mast insert provides hook heights of 32 m (105 ft) and 35 m (115 ft); third mast insert provides a hook height of 38 m (125 ft).



## Chassis

Outriggers swing and lock into position. 4.5 m (14.8 ft) square outrigger spread with 3,3 m (10.8 ft) maximum turning radius. Outrigger pads are stowed on the crane during transport (600 mm x 600 mm [23.6 in x 23.6 in]).



## \*Ballast

Ballast requirement for the crane consists of, at minimum, fifteen (15) slabs each weighing 2200 kg (4850 lb). An additional slab is required if the cab or a mast insert(s) is used.



## \*Optional hydraulic ballasting derrick

Removable and able to be used on other Igo T 85 A and Igo T 70 A units, the hydraulic ballasting derrick uses the hoisting winch and is controlled by the remote control.



## Electrical requirement

480 volt, 60 Hz measured at the turntable. Earth rod and electric cable stored on the crane during transport.



## Reeving

SM/DM block for 2 (SM) or 4-part line (DM). Manual removal of one pin to change between SM and DM. Pure SM1 (section of hookblock removed) is possible with gain of 150 kg (331 lb) lifting capacity.



## \*Optional Anemometer

Electronic wind speed meter to alert the operator of wind speed conditions. Provides selective display on the radio remote. Maximum in service wind speed is 72 km/h (45 mph) and maximum out of service wind speed is 150 km/h (93 mph).



## Controls

Wireless remote control provides information to the operator about \*\*wind speed, radius, hook height, load, and moment. Lights and buzzers alert the operator when nearing limits of operation. Battery charger and extra battery are provided with crane.

Auxiliary remote attached by umbilical cord ensures continual operation in case of battery or other malfunction of the wireless remote control.



## Swing

RVF 151 Optima + slewing mechanism with maximum swing speed of 0.8 rpm. Progressive control of speed with counter-slewing possible, anti-load swinging system makes aligning the load and jib easier. Multiple rpm speeds possible depending upon parameter selected.



## Hoist

20 LVF 15 Optima: 20 HP variable frequency hoist with 1,5 t (1.7 USt) line pull. 3 notch, progressive speed change according to the accelerating or decelerating ramps. Optima allows the hoist to adapt its speed to the weight of the load.



## Trolley

5 DVF 5: 5.5 HP variable frequency hoist with 500 kg (1102 lb) line pull. 3 notch winch, progressive speed change according to acceleration or deceleration ramps controlled by the frequency converter.



## Hydraulic equipment

Hydraulic cylinders are used for raising the mast, unfolding the jib, and slewing the derrick. All actions are carried about by the remote control.



## \*Optional transport axle sets

Axle sets are available for both jobsite and highway applications. Jobsite axles are rated at either 10 km/h (6 mph) or 25 km/h (15.5 mph); highway axle set is rated at 80 km/h (50 mph)

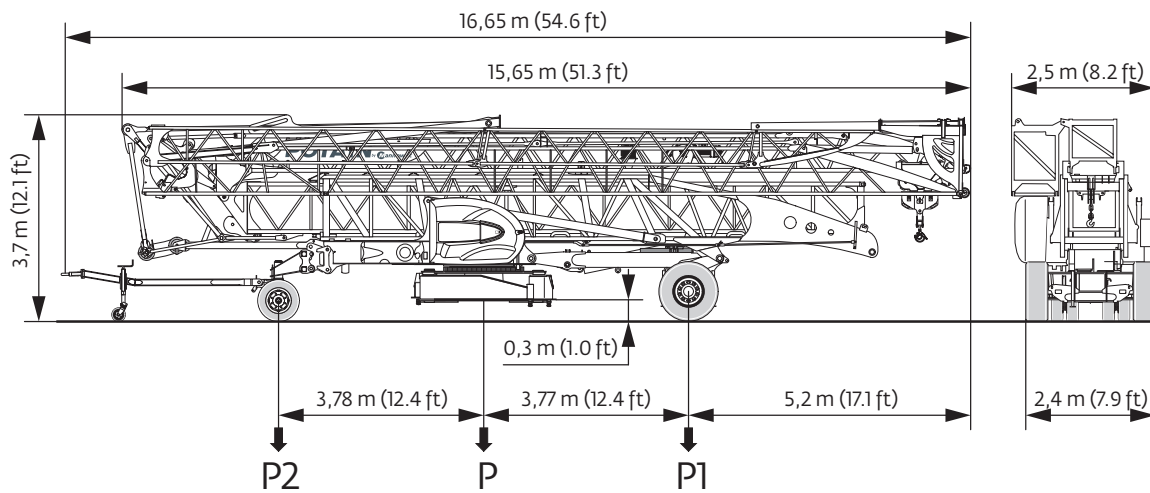
## \*Optional equipment

- \* STANDARD NORTH AMERICAN SPECIFICATION: includes offsettable jib, pre-equipment for interference system, Top Zone, 3 mast inserts and 17 counterweight slabs.
- \* Mast inserts 6 m (20 ft)
- \* Fixed height UltraView cab
- \* Access ladders
- \* Transport axles and kits
- \* Top Zone
- \* Top Tracing II
- \* Dialog Wind

\*Denotes optional equipment  
\*\*Requires optional anemometer

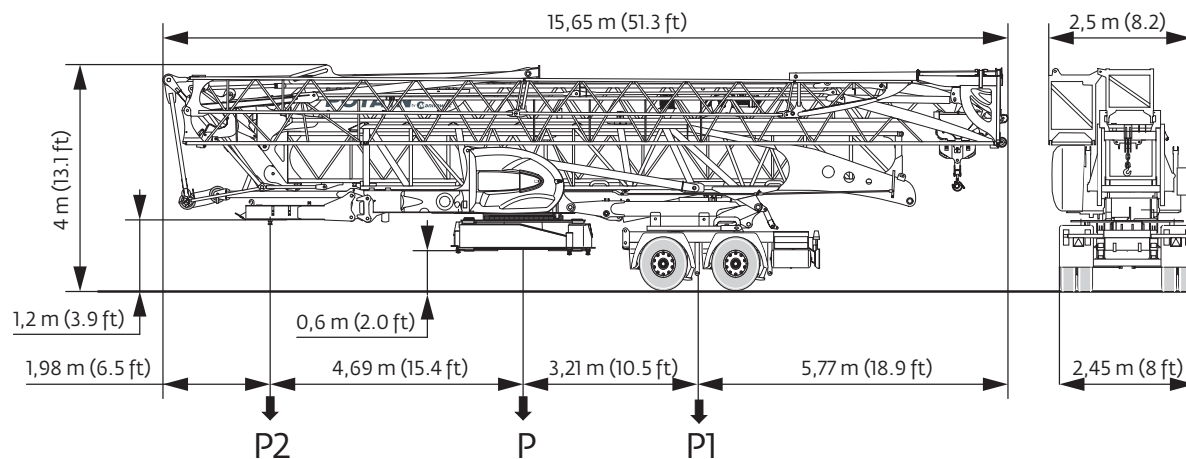
## DJ100 / S120

10 km/h / 6 mph



## SL122 / J215M

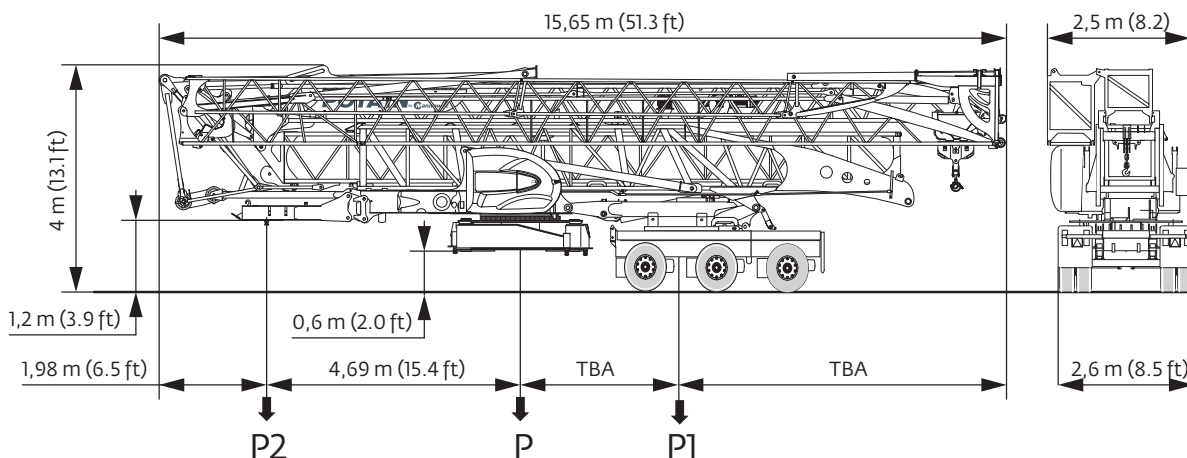
80 km/h / 50 mph



NOTE: Dimensions and weights may vary due to manufacturing tolerances.

# Weights

## North American Highway Axle



\*Other axle sets are available.

### Chassis data (in transport position)

	DJ100/S120 10 km/h (6 mph)		SL122/J215M 80 km/h (50 mph)		North American Highway Axle	
	meters	(feet)	meters	(feet)	meters	(feet)
Overall length	16,65	54.6	15,65	51.3	15,65	51.3
Overall height	3,7	12.1	4,0	13.1	4,0	13.1
Overall width	2,5	8.2	2,5	8.2	2,6	8.5
Overhang	5,2	17.1	5,8	18.9	TBA	TBA

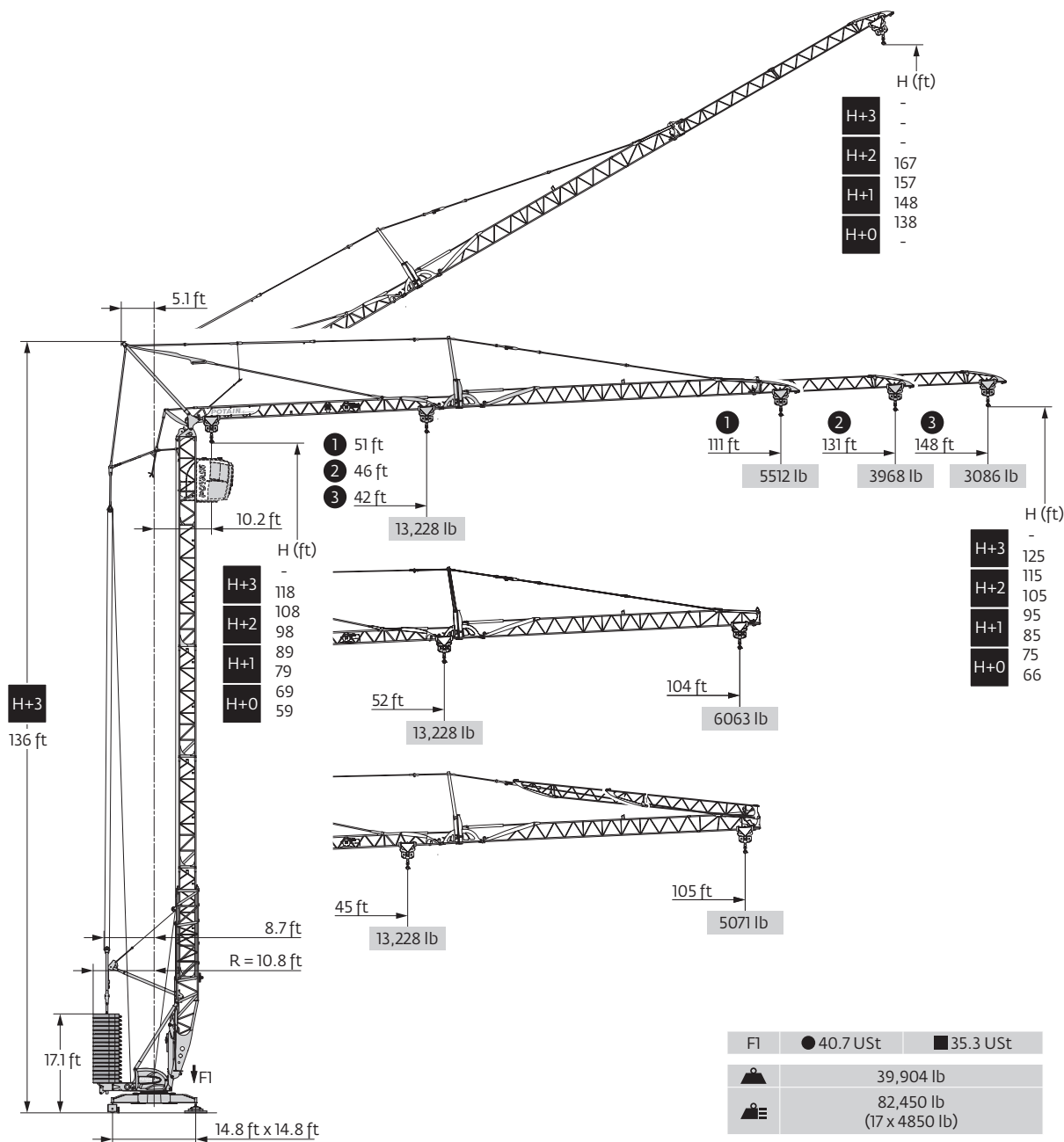
### Weights

Crane weight less counterweight:	18 100 kg	39,904 lb
Counterweight for operation:	33 000 kg	72,753 lb
Crane with counterweight:	51 100 kg	112,656 lb

	Crane with transport equipment					
	DJ100/S120 10 km/h (6 mph)		SL122/J215M 80 km/h (50 mph)		North American Highway Axle	
In transport with no counterweight:	kilograms	(pounds)	kilograms	(pounds)	kilograms	(pounds)
Gross (P)	19 360	42,681	21 050	46,407	TBA	TBA
Rear (P1)	11 491	25,333	15 075	33,234	TBA	TBA
Front (P2)	7869	17,869	5975	13,172	TBA	TBA

NOTE: Dimensions and weights may vary due to manufacturing tolerances.

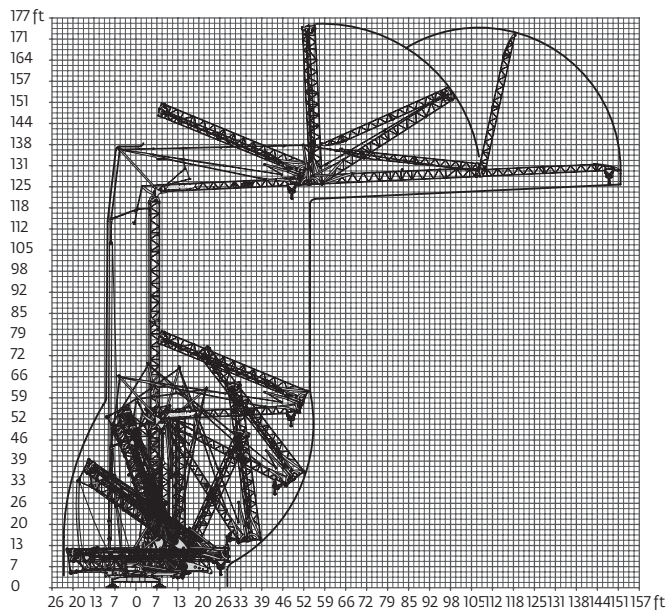
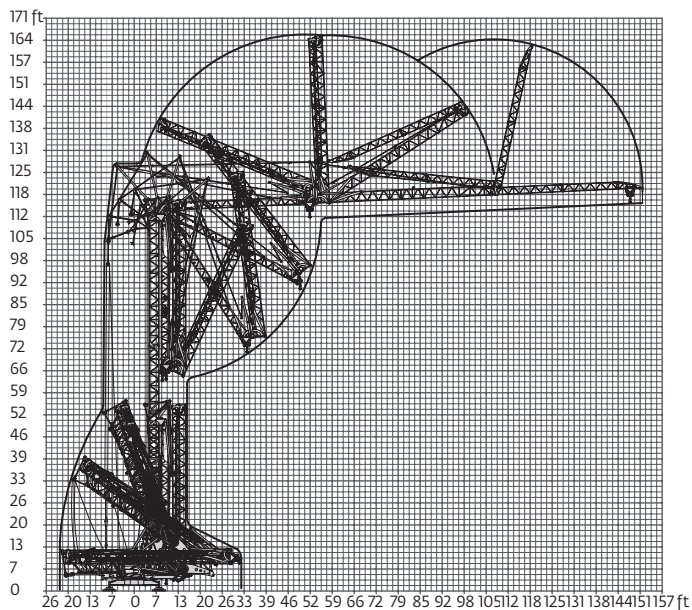
# Dimensions



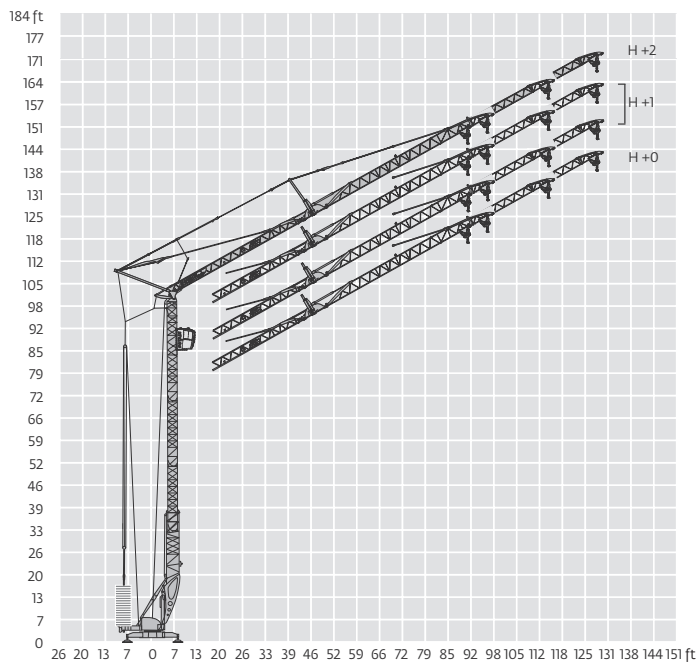
THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

Potain Igo T 85 A The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane

# Crane profile

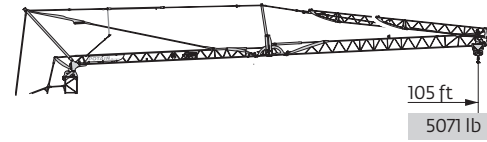
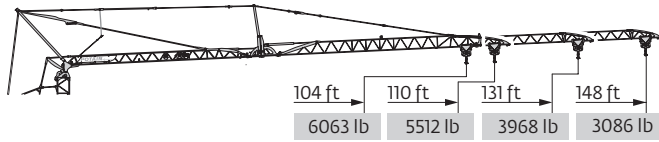


Jib raised 30°



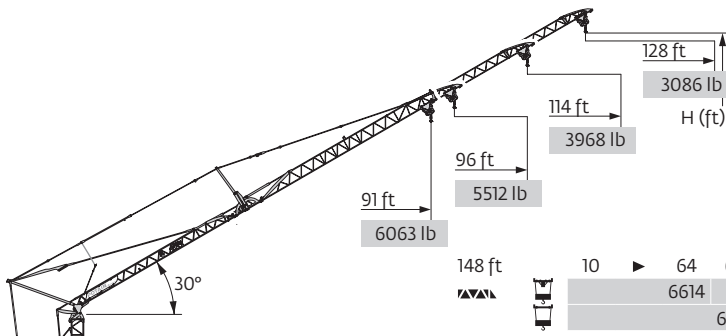


## Load charts



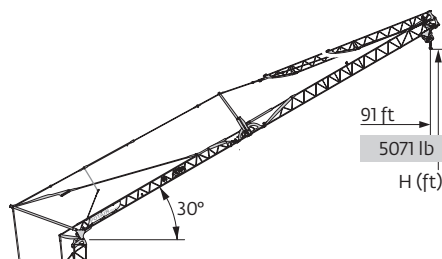
148 ft	10	▶	42	46	52	59	66	73	78	79	85	92	98	105	112	118	125	131	138	148	ft
▲▲▲			13228	11685	9921	8598	7496	6614	-	6063	5512	5071	4630	4299	3968	3638	3417	3197	2976	2756	lb
								6614	-	6063	5512	5071	4630	4299	3968	3638	3417	3197	2976	2756	lb
									6614	6504	5952	5401	4960	4630	4299	4079	3748	3527	3307	3086	lb
131 ft	10	▶	46	52	59	66	72	81	85	85	92	98	105	112	118	125	131	ft			
▲▲▲			13228	11023	9700	8378	7496	6614	-	6173	5622	5181	4850	4409	4189	3858	3638	lb			
								6614	-	6173	5622	5181	4850	4409	4189	3858	3638	lb			
									6614	6614	6063	5622	5181	4850	4519	4189	3968	lb			
111 ft	10	▶	51	59	66	72	79	85	91	95	98	105	111	ft							
▲▲▲			13228	11023	9700	8598	7716	7055	6614	-	5952	5512	5181	lb							
									6614	-	5952	5512	5181	lb							
										6614	6283	5842	5512	lb							
104 ft	10	▶	52	59	66	72	79	85	92	96	98	104	ft								
▲▲▲			13228	11244	9921	8818	7937	7275	6614	-	6173	5732	lb								
									6614	-	6173	5732	lb								
										6614	6504	6063	lb								
148 ft	10	▶	45	52	59	66	72	79	84	92	98	105	ft								
▲▲▲			13228	11023	9480	8378	7496	6614	-	5622	5181	4740	lb								
								6614	-	5622	5181	4740	lb								
									6614	5952	5512	5071	lb								

▲▲▲	148 ft
	131 ft
	111 ft
	104 ft
H+2	115
	105
H+1	95
	85
H+0	75
	66



▲▲▲	148 ft	131 ft	111 ft	104 ft
H+2	167	159	-	-
H+1	157	149	-	-
H+0	148	139	129	126

148 ft	10	▶	64	68	72	79	85	92	98	105	112	118	125	128	ft	
▲▲▲			6614	-	5732	5181	4630	4189	3858	3527	3307	3086	2866	2756	lb	
					6614	6173	5512	5071	4630	4189	3968	3638	3417	3197	3086	lb
131 ft	10	▶	70	74	79	85	92	98	105	114	ft					
▲▲▲			6614	-	5732	5181	4740	4409	4079	3638	lb					
					6614	6173	5622	5071	4740	4409	3968	lb				
111 ft	10	▶	79	82	85	92	96	ft								
▲▲▲			6614	-	5952	5512	5181	lb								
					6614	6393	5842	5512	lb							
104 ft	10	▶	80	84	85	91	ft									
▲▲▲			6614	-	6173	5732	lb									
					6614	6504	6063	lb								



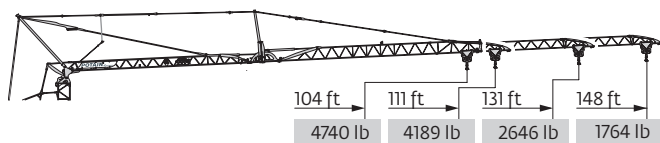
148 ft	10	▶	70	73	79	85	91	ft	
▲▲▲			6614	-	5732	5181	4740	lb	
					6614	6063	5512	5071	lb

▲▲▲	148 ft
	131 ft
	-
H+1	126
H+0	116

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

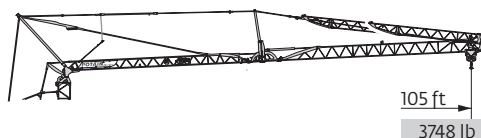
Potain Igo T 85 A The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane

# Mechanisms



148 ft	10	▶	54	59	66	72	79	85	92	98	105	112	118	125	131	138	144	148	ft
			6614	5952	5181	4630	4189	3748	3417	3086	2866	2646	2425	2205	2094	1940	1830	1764	lb
131 ft	10	▶		64	66	72	79	85	92	98	105	112	118	125	131				ft
				6614	6393	5732	5071	4630	4189	3858	3527	3307	3086	2866	2646				lb
111 ft	10	▶				76	79	85	92	98	105	111							ft
						6614	6393	5732	5291	4850	4519	4189							lb
104 ft	10	▶					79	85	92	98	104								ft
							6614	6063	5512	5071	4740								lb

	148ft
	131 ft
	111 ft
	104 ft
H+3	-
	125

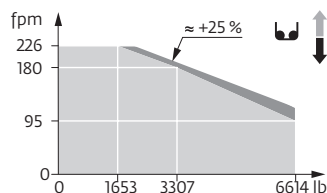


148 ft																				
131 ft	10	▶	67	72	79	85	92	98	105											ft
			6614	5952	5401	4850	4409	4079	3748											lb

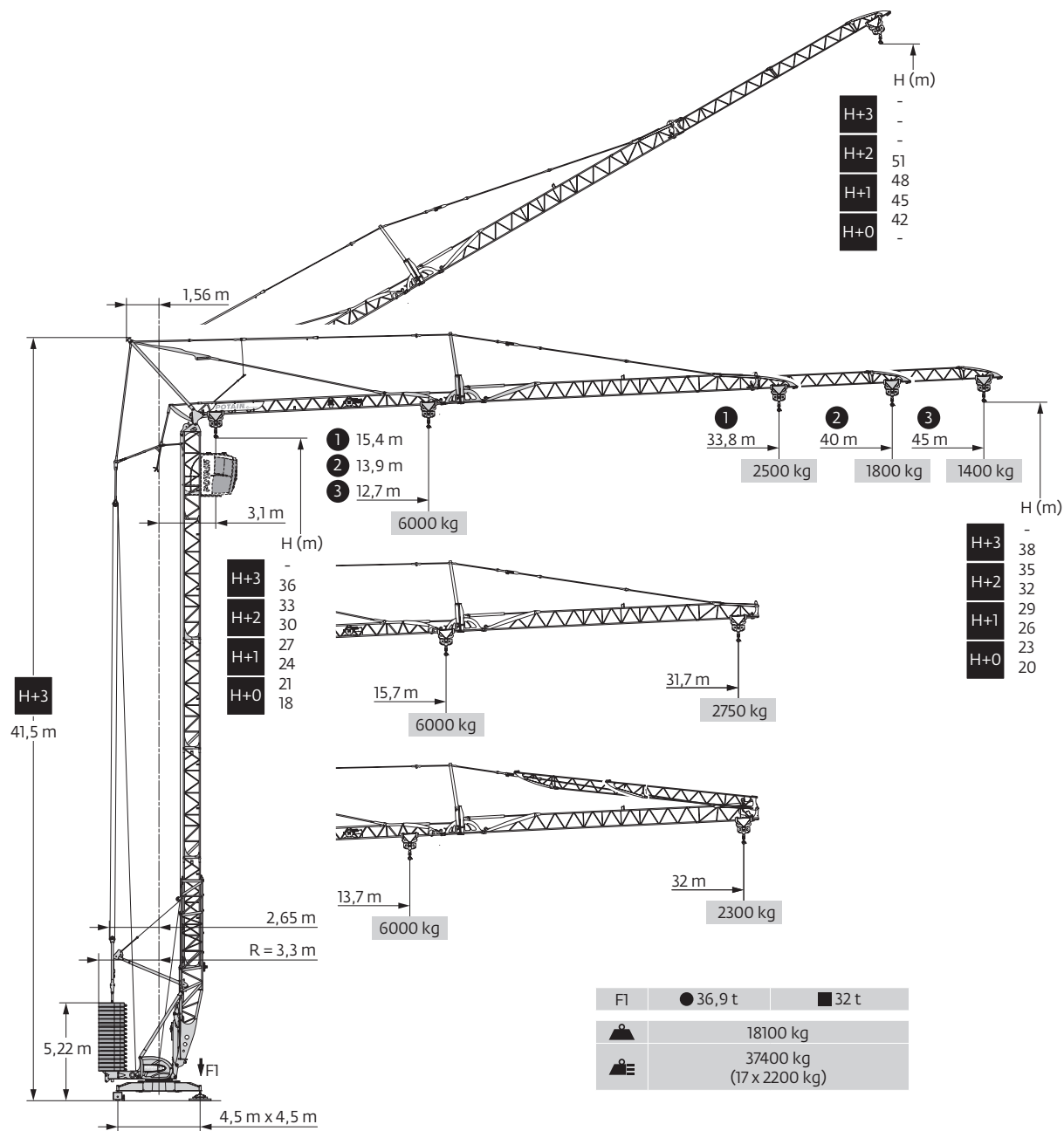
480 V - 60 Hz													hp	kW
	20 LVF 15 Optima	fpm	11	56	95	180	226	5	28	48	90	113	20	15
		lb	6614	6614	6614	3307	1653	13228	13228	13228	6614	3307		
	5 DVF 5	fpm	49 - 98 - 131 (4409 → 13,228 lb)									5.5	4	
			49 - 98 - 180 (0 → 4409 lb)											
	RVF 151 Optima+	rpm	0 → 0.8									5.5	4	
	TVF 324	fpm	82									2 x 4	2 x 3	

	IEC 60204-32	<b>kVA</b>
	480 V (+6% -10%) 60 Hz	→ 22 kVA → 25 kVA

20 LVF 15 Optima



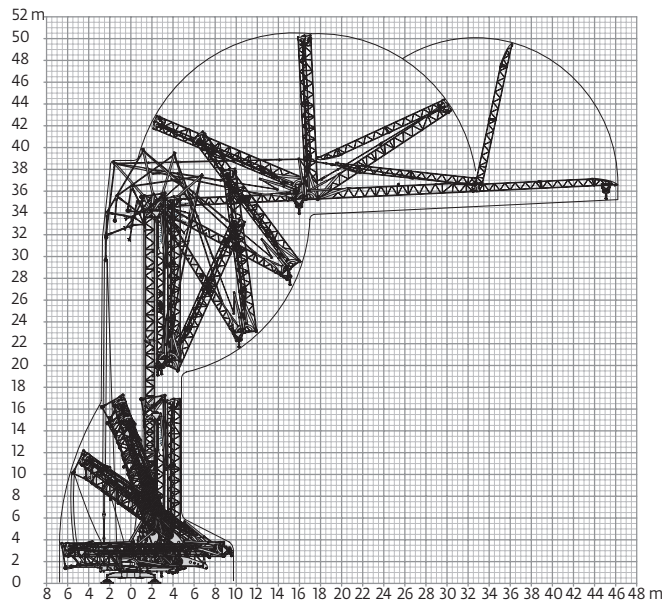
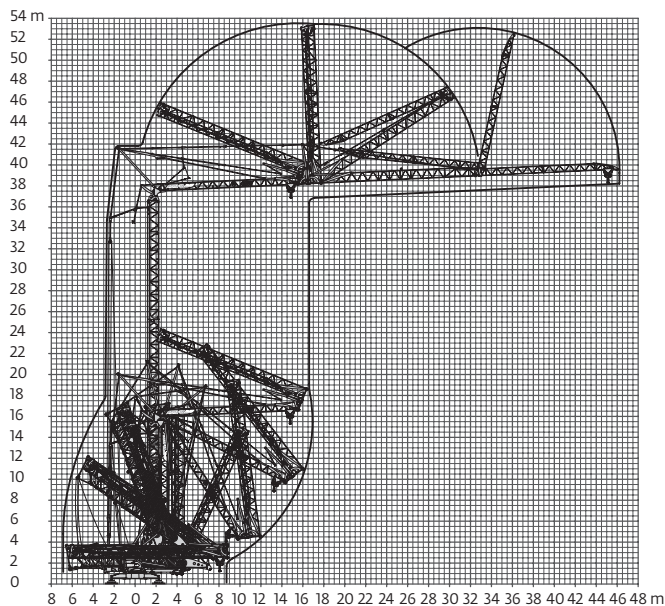
# Metric dimensions



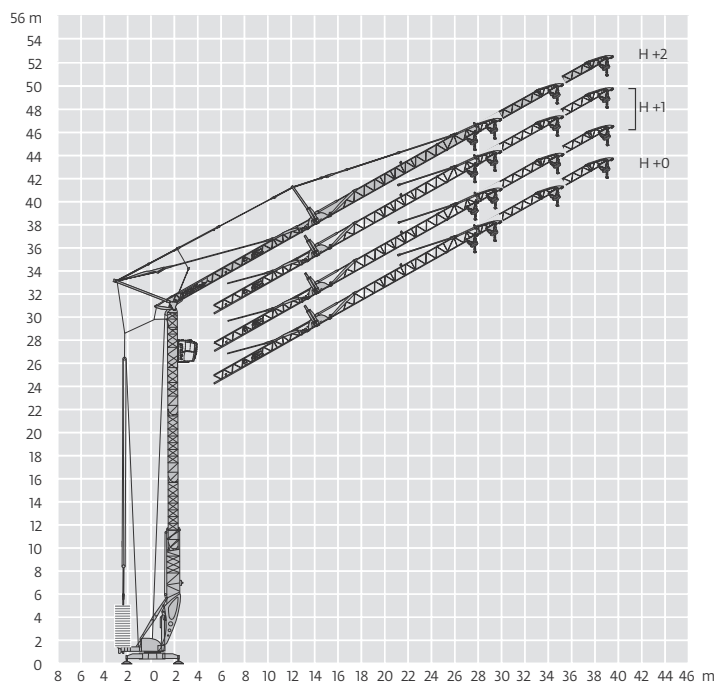
THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

Potain Igo T 85 A The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane

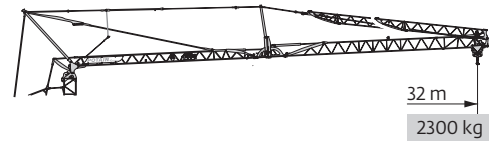
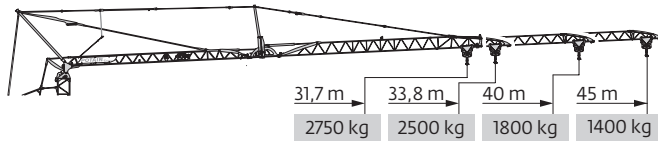
# Metric crane profile



Jib raised 30°



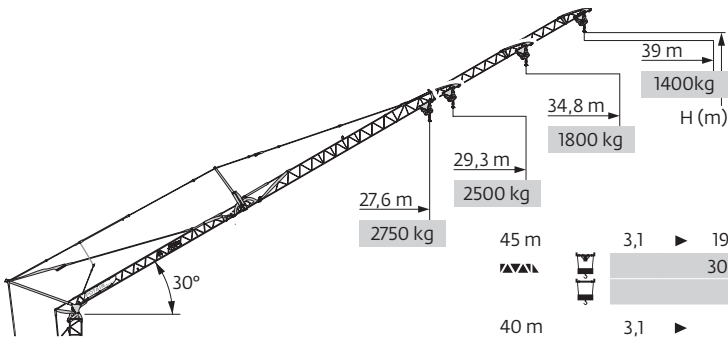
## Metric load charts



45 m	3,1	▶	12,7	14	16	18	20	22,4	23,7	24	26	28	30	32	34	36	38	40	42	45	m	
▲▲▲	6000 5300 4500 3900 3400 3000 - 2750 2500 2300 2100 1950 1800 1650 1550 1450 1350 1250																				kg	
▲▲▲	3000 - 2750 2500 2300 2100 1950 1800 1650 1550 1450 1350 1250																				kg	
▲▲▲	3000 2950 2700 2450 2250 2100 1950 1850 1700 1600 1500 1400																				kg	
40 m	3,1	▶	13,9	16	18	20	22	24,6	25,9	26	28	30	32	34	36	38	40					m
▲▲▲	6000 5000 4400 3800 3400 3000 - 2800 2550 2350 2200 2000 1900 1750 1650																				kg	
▲▲▲	3000 - 2800 2550 2350 2200 2000 1900 1750 1650																				kg	
▲▲▲	3000 3000 2750 2550 2350 2200 2050 1900 1800																				kg	
33,8 m	3,1	▶	15,4	18	20	22	24	26	27,6	28,9	30	32	33,8									m
▲▲▲	6000 5000 4400 3900 3500 3200 3000 - 2700 2500 2350														kg							
▲▲▲	3000 - 2700 2500 2350														kg							
▲▲▲	3000 2850 2650 2500														kg							
31,7 m	3,1	▶	15,7	18	20	22	24	26	28,1	29,4	30	31,7									m	
▲▲▲	6000 5100 4500 4000 3600 3300 3000 - 2800 2600												kg									
▲▲▲	3000 - 2800 2600												kg									
▲▲▲	3000 2950 2750												kg									

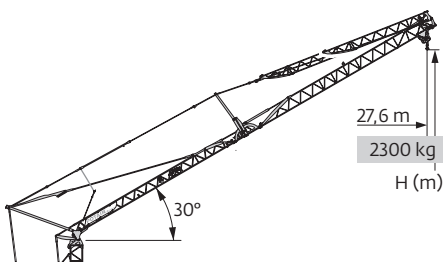
▲▲▲	45 m
▲▲▲	40 m
▲▲▲	33,8 m
▲▲▲	31,7 m
H+2	35
H+1	32
H+0	29
	26
	23
	20

45 m	3,1	▶	13,7	16	18	20	22	24,1	25,5	28	30	32			m
▲▲▲	6000 5000 4300 3800 3400 3000 - 2550 2350 2150												kg		
▲▲▲	3000 - 2550 2350 2150												kg		
▲▲▲	3000 2700 2500 2300												kg		



▲▲▲	45 m	40 m	33,8 m	31,7 m
H+2	51	48,5	-	-
H+1	48	45,5	-	-
H+0	42	39,5	36,4	35,4

45 m	3,1	▶	19,6	20,7	22	24	26	28	30	32	34	36	38	39	m
▲▲▲	3000 - 2600 2350 2100 1900 1750 1600 1500 1400 1300 1250														kg
▲▲▲	3000 2800 2500 2300 2100 1900 1800 1650 1550 1450 1400														kg
40 m	3,1	▶	21,4	22,5	24	26	28	30	32	34,8					m
▲▲▲	3000 - 2600 2350 2150 2000 1850 1650											kg			
▲▲▲	3000 2800 2550 2300 2150 2000 1800											kg			
33,8 m	3,1	▶	24	25,1	26	28	29,3								m
▲▲▲	3000 - 2700 2500 2350							kg							
▲▲▲	3000 2900 2650 2500							kg							
31,7 m	3,1	▶	24,5	25,6	26	27,6						m			
▲▲▲	3000 - 2800 2600						kg								
▲▲▲	3000 2950 2750						kg								



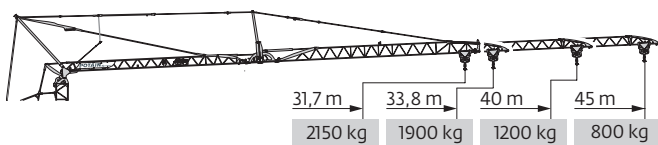
45 m	3,1	▶	21,2	22,2	24	26	27,6			m
▲▲▲	3000 - 2600 2350 2150								kg	
▲▲▲	3000 2750 2500 2300								kg	

▲▲▲	45 m
▲▲▲	40 m
H+1	-
H+0	38,4
	35,4

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

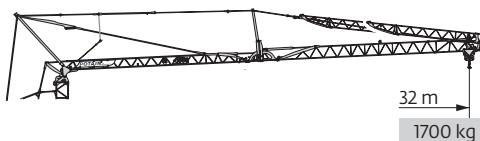
Potain Igo T 85 A The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane

# Metric mechanisms



45 m	3,1	▶	16,6	18	20	22	24	26	28	30	32	34	36	38	40	42	44	45	m
			3000	2700	2350	2100	1900	1700	1550	1400	1300	1200	1100	1000	950	880	830	800	kg
40 m	3,1	▶		19,5	20	22	24	26	28	30	32	34	36	38	40				m
				3000	2900	2600	2300	2100	1900	1750	1600	1500	1400	1300	1200				kg
33,8 m	3,1	▶			23,3	24	26	28	30	32	33,8								m
					3000	2900	2600	2400	2200	2050	1900								kg
31,7 m	3,1	▶				24,1	26	28	30	31,7									m
						3000	2750	2500	2300	2150									kg

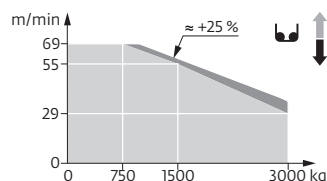
	45 m
	40 m
	33,8 m
	31,7 m
H+3	-
	38



45 m																			
40 m	3,1	▶	20,3	22	24	26	28	30	32										m
			3000	2700	2450	2200	2000	1850	1700										kg

480 V - 60 Hz												hp	kW	
	20 LVF 15 Optima	m/min	3,3	17	29	55	69	1,6	8,5	14,5	27,5	34,5	20	15
		kg	3000	3000	3000	1500	750	6000	6000	6000	3000	1500		
	5 DVF 5	m/min	15 - 30 - 40 (2000 → 6000 kg) 15 - 30 - 55 (0 → 2000 kg)									5,5	4	
	RVF 151 Optima+	rpm	0 → 0,8									5,5	4	
	TVF 324	m/min	25									2 x 4	2 x 3	

	kVA
480 V (+6% -10%) 60 Hz	→ 22 kVA → 25 kVA

**20 LVF 15 Optima**


# Symbols glossary



Anemometer



Jib



Reactions out of service



Slewing radius



Ballast



Mast



Reeving



Standard equipment



Chassis



Optional hydraulic ballasting derrick



Reeving 2-part



Total ballast weight



Controls



Optional mast inserts



Reeving 4-part



Traveling



Electrical equipment



Optional transport axle sets



Required power



Trolleying



Hoisting



Options



Slewing



Weight without load, without ballast, without transport axles, with max. jib and standard height



Hydraulic equipment



Reactions in service



## Manitowoc Cranes

### Regional headquarters

#### Americas

**Manitowoc, Wisconsin, USA**

Tel: +1 920 684 6621

Fax: +1 920 683 6277

**Shady Grove, Pennsylvania, USA**

Tel: +1 717 597 8121

Fax: +1 717 597 4062

#### Europe, Middle East, Africa

**Dardilly, France**

Tel: +33 (0)4 72 18 20 20

Fax: +33 (0)4 72 18 20 00

#### China

**Shanghai, China**

Tel: +86 21 6457 0066

Fax: +86 21 6457 4955

#### Greater Asia-Pacific

**Singapore**

Tel: +65 6264 1188

Fax: +65 6862 4040

### Regional offices

#### Americas

##### Brazil

Alphaville

##### Mexico

Monterrey

##### Chile

Santiago

#### Europe, Middle East,

##### Africa

##### France

Baudemont

Cergy

Decines

##### Germany

Langenfeld

##### Italy

Lainate

##### Netherlands

Breda

##### Poland

Warsaw

##### Portugal

Baltar

##### Russia

Moscow

##### South Africa

Johannesburg

##### U.A.E.

Dubai

##### U.K.

Buckingham

#### China

Beijing

Chengdu

Guangzhou

Xian

#### Greater Asia-Pacific

##### Australia

Brisbane

Melbourne

Sydney

##### India

Chennai

Delhi

Hyderabad

Pune

##### Korea

Seoul

##### Philippines

Makati City

##### Singapore

### Factories

#### Brazil

Passo Fundo

#### China

TaiAn

Zhangjiagang

#### France

Charlieu

Moulins

#### Germany

Wilhelmshaven

#### India

Pune

#### Italy

Niella Tanaro

#### Portugal

Baltar

Fânzeres

#### USA

Manitowoc

Port Washington

Shady Grove

This document is non-contractual. Constant improvement and engineering progress make it necessary that we reserve the right to make specification, equipment, and price changes without notice. Illustrations shown may include optional equipment and accessories and may not include all standard equipment.