1) GENERAL DESCRIPTION

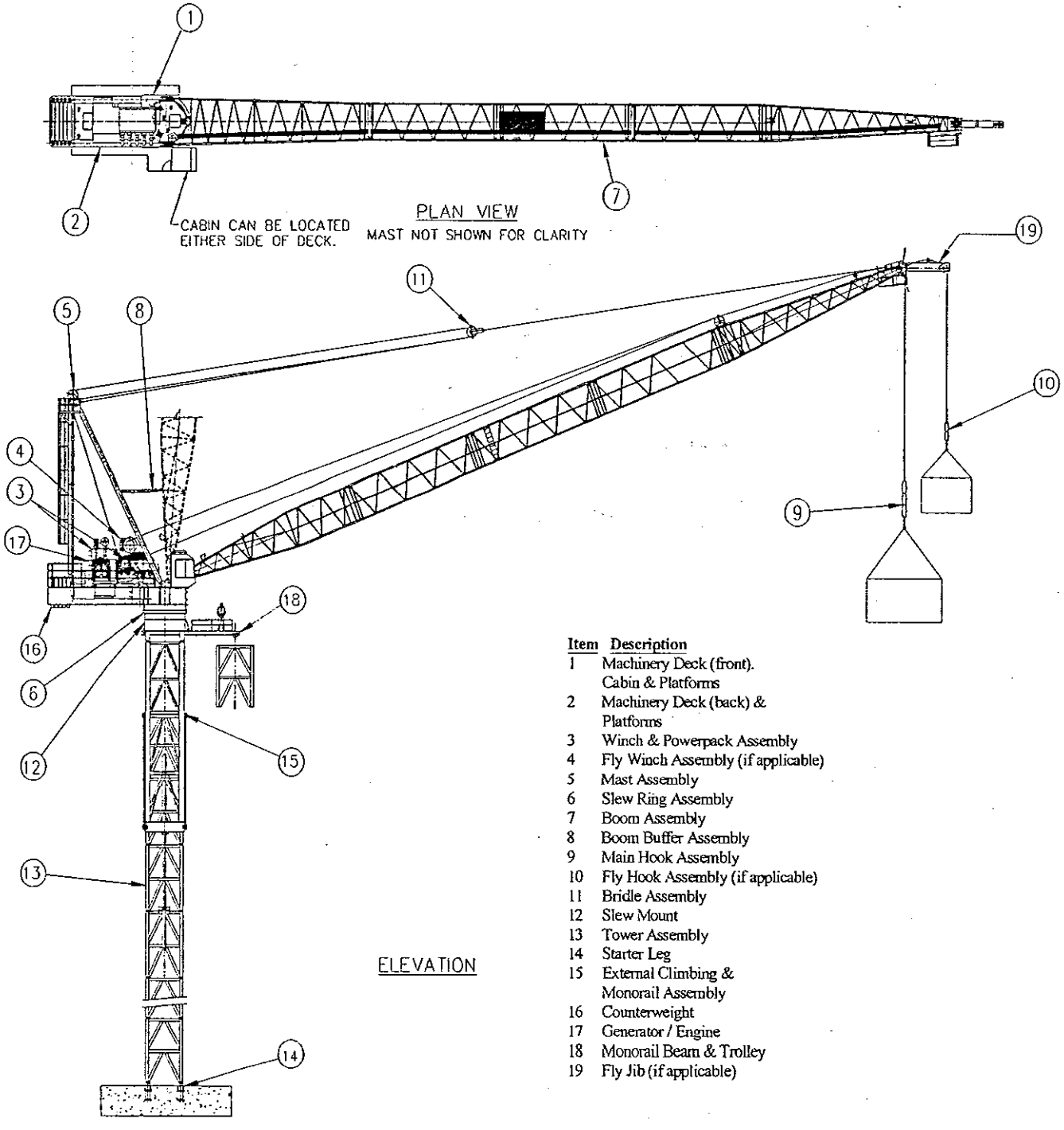
The M760D is a versatile heavy lifting construction crane. It uses the standard Favelle Favco hydraulic transmission with stepless control of all motions, and powerful heavy line pull winches.

This Crane is particularly suitable for heavy steel erection work in buildings and industrial complexes and shipyards.

The heavy lift capacity in single or multifall allows heavier preformed components to be lifted to position thereby improving productivity and shortening the construction program. This brings benefits to the developer and the contractor.

Higher winch performance in both luff and hoist with new general hydraulics.
Safety systems are vastly improved.
Optional modular booms (up to 73.4 m [240 ft]) depending on application needs.
Offered with two-piece machinery deck for ease of erection and recovery.

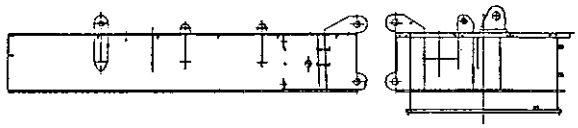
To date M760Ds have been built for export and are being used in various high rise building projects in USA, Australia, Taiwan, Korea, Malaysia, Middle East and China.



Item	Description
1	Machinery Deck (front). Cabin & Platforms
2	Machinery Deck (back) & Platforms
3	Winch & Powerpack Assembly
4	Fly Winch Assembly (if applicable)
5	Mast Assembly
6	Slew Ring Assembly
7	Boom Assembly
8	Boom Buffer Assembly
9	Main Hook Assembly
10	Fly Hook Assembly (if applicable)
11	Bridle Assembly
12	Slew Mount
13	Tower Assembly
14	Starter Leg
15	External Climbing & Monorail Assembly
16	Counterweight
17	Generator / Engine
18	Monorail Beam & Trolley
19	Fly Jib (if applicable)

UPPERWORKS

MACHINERY DECK (SPLIT)



The machinery deck is split into two pieces (front and back) of fully welded construction, joint by pins. This reduces the weight of each component, thus eliminating the need for large street cranes during erection and dismantling.

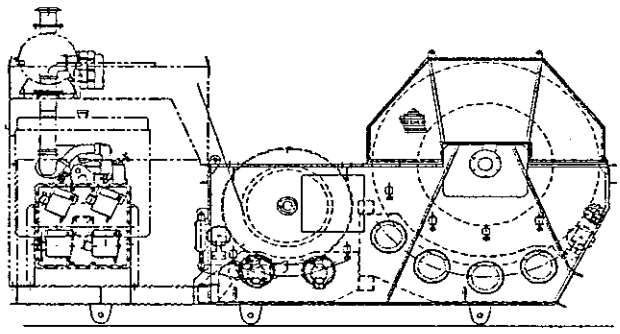
PUMP DRIVE GEARBOX

Multiple Output – Spur Gear – Splash Lubricated

HYDRAULIC PUMPS

Multiple variable displacement Hydraulic Pumps dedicated to Luff, Slew, Hoist and Climbing.

WINCH



Winches consist of parallel grooved drums for hoist and luff motion. Each drum is driven by fixed or variable displacement hydraulic motors, which through oil immersed disc brake and multiple planetary gearboxes and pinion, drive the external drum gear.

Multiple drives are used on each drum, providing multiple brakes on each winch.

The Luff Drum is fitted with a pawl and ratchet system, which engages whenever the crane is shutdown. This allows for maintenance on pumps or motors with the boom held firmly in position.

Average luff speed from maximum to minimum radius with maximum radius load on hook is 90 to 120 seconds.

For Hoist Speeds refer to separate winch performance sheet..

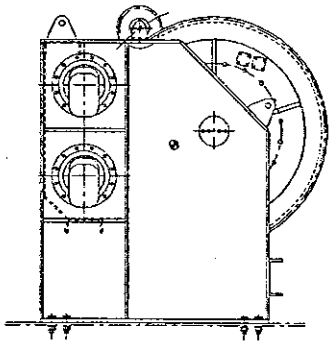
Winch Options

32 t (70,548 lb) winch with 515 hp Caterpillar 3406 engine. Using a 42 mm hoist rope, lifting 64,000 kg (141,096 lb) with double fall hook or 96,000 kg (211,644 lb) with 3 fall hook.

Caterpillar 3406
(275 – 525 bhp/ 205 – 392 kW, 1800 – 2100 rpm)
Specifications
In-Line 6, Four Stroke Cycle Diesel

Bore	*5.4 in (137 mm)*
Stroke	*6.5 in (165 mm)*
Displacement	*893 cu in (14.6 L)*
Low Idle	*600 rpm*
Rotation (from flywheel end)	*Counterclockwise*
Capacity for Liquids	
Cooling System (engine only)	*9.0 US gal (34.1 L)*
Lube Oil System (refill)	*9.0 US gal (34.1 L)*
Weight, Net Dry (approx)	*2,990 lb (1,356 kg)*
Approximate Dimensions	*1661 x 901 x 1336 mm*
(L x W x H)	*65.4 x 35.5 x 52.6 in*

Fly Winch Option



12 t (26,456 lb) fly winch using 32 mm (1¼ in) rope lifting 12,000 kg (26,456 lb) on a single fall hook.

WIRE ROPES

Luff
32 mm (1¼ in) diameter rope, galvanized and compact outer strand.

Hoist

42 mm (1 5/8 in) diameter rope, low rotation balanced (it is dependant on size of winch), non-rotating construction.

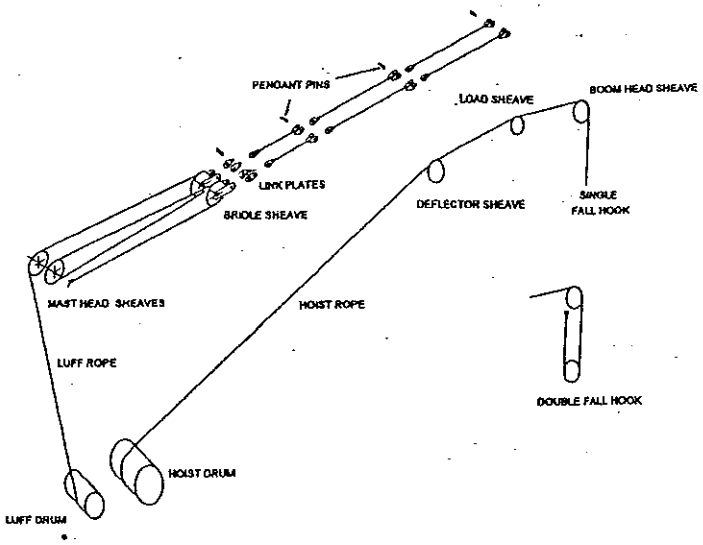
Fly

32 mm (1¼ in) diameter rope, low rotation balanced non-rotating construction.

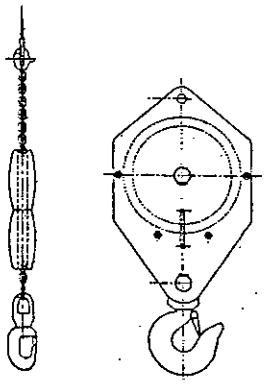
Pendants

48 mm (1 7/8 in) diameter rope, low rotation balanced non-rotating construction.

Reeving Diagram



HOOKS

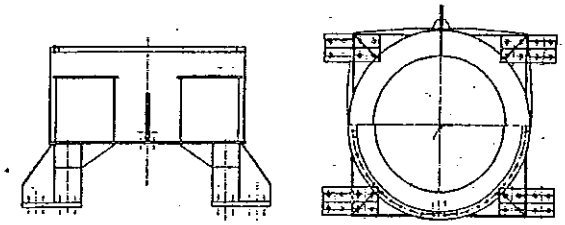


32,000 kg (70,545 lb) Single fall Swivel Hook Block.

Optional Double Fall Hook Block of 64,000 kg (141,096 lb) available.

Single fall Fly Hook Block of 12,000 kg (26,456 lb) S.W.L.

SLEW SYSTEM



The slew mount is a rigid welded structure which is bolted to the crane tower and to which the slew bearing is fastened. The slew bearing has an integral gear to provide a drive via a hydraulic motor and gearbox situated on the machinery deck.

Bearing

Ball Bearing Ring with internal gear from Rothe-Erde, Germany.

Drive(s)

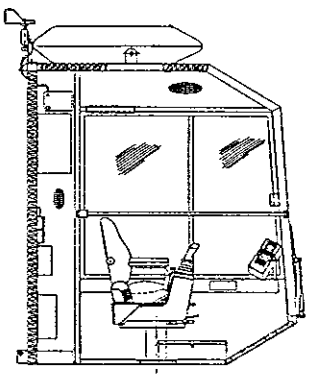
Fixed displacement motor drives through oil immersed disc brake and triple stage epicyclic gearbox and pinion, which meshes with the internal gear of the slew ring.

Slew speed is variable from zero to maximum rpm.

Brake(s)

Slew brake is manually controlled and used as a parking brake only. Normal braking is by closed loop hydrostatic transmission.

CABIN



The cabin can be mounted on either side of the machinery deck.

Suspension Seat
Air Conditioning & Heater
Tinted Glass
Insulation for sound and heat

Optional radio and telephone are available for in-cabin communications.

CONTROLS

Dead man" controls operate all functions and are stepless, allowing excellent "feel" for maximum productivity.

All controls are load sensitive and operate at the optimum speed for the load being lifted or lowered. The control system is a constant horsepower system.

Luff and Hoist are by fingertip lever control (forward/backward).

Slew (left/right) is incorporated into the luff hand lever.

INDICATION EQUIPMENT

Power System Monitor

A Power Pack Annunciator Panel in the cabin monitors the operation of the Prime Mover System.

Engine performance and Hydraulic System integrity is constantly monitored. If an irregularity is detected in the following areas, a visible and audible warning is given and the display panel indicates the problem:

- engine water temperature
- engine oil pressure
- hydraulic oil level
- engine coolant level
- filter bypass
- gearbox temperature
- engine over-speed
- boost pressure
- coolant filter blocked
- reeving bypass

Crane Safety System

An onboard computer designed for the M760D and programmable for any boom or hook configuration of the crane is installed.

The system constantly monitors the load on the hook, and the load radius, it calculates and displays the permitted load, the actual load and the radius of the load, indicating the safe working zones.

As the crane reaches the limits, a visual and audible alarm sounds and the hydraulic system is neutralized, to prevent the crane leaving the safe zone of operation.

Limited functions are still available to allow the crane to resume working in the safe zone.

The functions are:

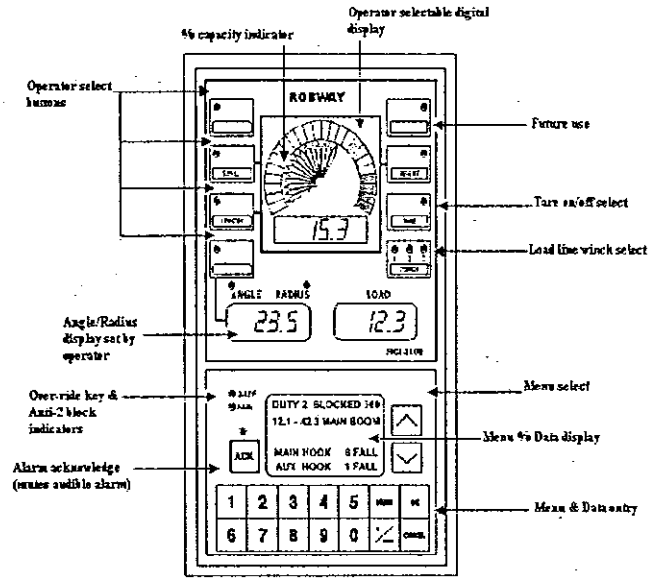
a) "Luff in" to reduce radius

b) "Hoist down" to lower load

This electronic safety system is also fitted with lighting protection to minimize damage to the unit in the event of a direct lightning strike.

Safe Load Indicator

RCI-3100



The RCI-3100 automatic Rated Capacity Indicator (RCI) is designed to assist the operator in the course of normal crane operation and consists of boom angle, length and slew.

The RCI-3100 display provides the following capabilities:

- *Multi-hoisting winch operation*
- *Monitoring and display of*
  - *Boom Length*
  - *Boom Angle & Luffing Fly Jib Angle*
  - *Boom Tip Radius*
  - *Boom Tip Height*
  - *Lifted Load*
  - *Selected Hook Falls*
  - *Selected Crane configuration*
  - *Cranes configured SWL*
  - *SWL as a percentage of Crane configured SWL*
  - *Restricted Slew Zones*
- *Provides visual and audible warnings and motion-cut.*
- *Self-diagnosis and error codes*
- *Unique simulated analogue display for visual feedback of SWL percentage*
- *Multi-line text character window to display messages*
- *Built-in calibration and fault-finding tools*
- *Other options available are such as Remote Access and Debugging via radio or telephone link, slew zones*

engine management, special alarms, on-site configurable user data and data logging.

Safety Devices and Limits

Luff and Hoist Motions are fitted with working and final limits. The Luff-up Limit has a deceleration motion fitted.

All operating circuits are protected from overload by hydraulic relief valves. The system brakes are fail-safe, spring applied, and are crane code rated to hold the design load of the winch. In the case of hydraulic circuit malfunction such as loss of pressure, the braking system is applied.

DESIGN STANDARDS & QUALITY ASSURANCE

Favelle Favco cranes are designed to meet Australian Standards AS 1418.4 – Tower Cranes, which was derived from European Standards and comply with the relevant ANSI standards.

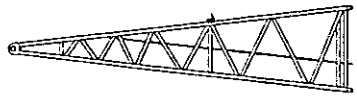
All Favelle Favco manufacturing facilities are certified to ISO 9001 standards and the API 2C monogram.

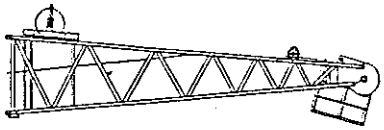
Favelle Favco also manufactures cranes for the Offshore Oil industry and is required to meet stringent manufacturing standards laid down by various international testing authorities.

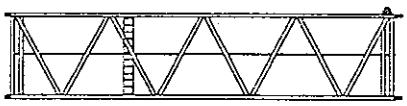
Our construction tower cranes are manufactured in conjunction with the offshore cranes and are subject to the same Q.A. systems.

ATTACHMENTS

BOOMS



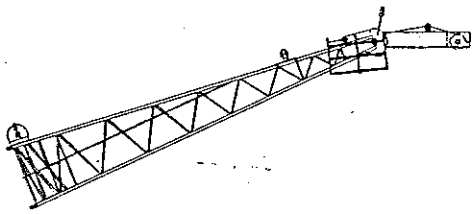




The boom sections are of tubular steel construction, fully welded high yield steel, pin connected with various insert lengths. All sections are jig assembled to allow interchangeability of sections for boom extension.

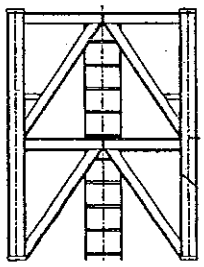
Boom Butt & Top	27.4m (89 ft)
Boom Inserts	4.6 m (15 ft) and 9.2 m (30 ft)
Maximum Boom	73.4 m (240 ft)

FLY JIB



This 3.1m (10.2 ft) fly jib section is pinned to the end of the boom top section at an offset of 30°.

TOWERS

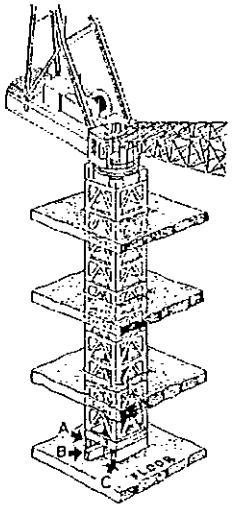


Tower sections are of welded construction and are braced for maximum torsional bending strength. Connection is made by high tensile steel bolts at each corner, developing the full strength of each corner. The tower sections have included a platform and ladders to provide access to machinery deck.

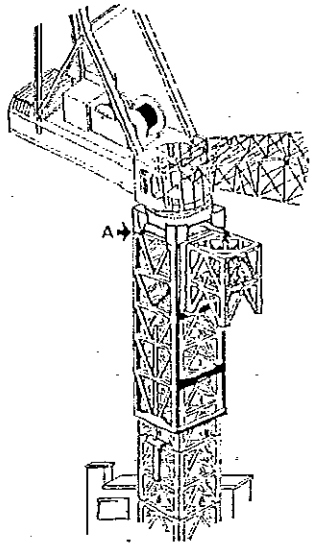
Type 763 4m x 3.01m x 3.03m (13.1ft x 9.9ft x 9.9ft)

CLIMBING SYSTEMS

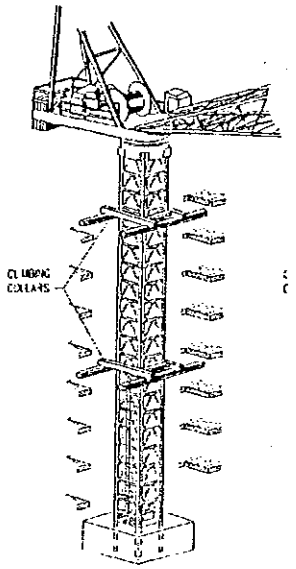
☑ Internal 3-Beam Climbing



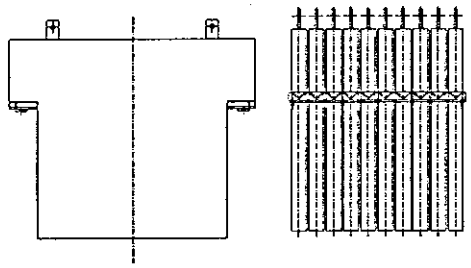
☑ External Climbing Frame



☑ Internal Ladder Climbing Frame with 32 m (105 ft) ladder and 3 sets of collars



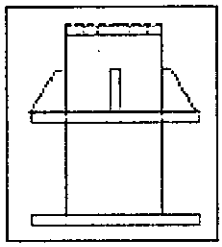
COUNTERWEIGHTS



The counterweights of 65,000 kg (143,300 lb) consist of heavy steel plate or concrete sections, which are supported on the rear of the machinery deck.

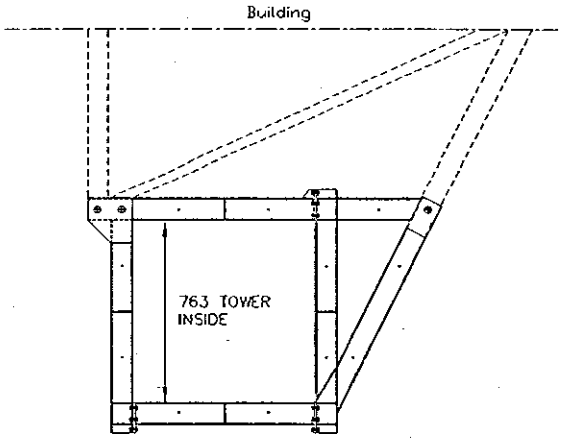
(Refer to manufacturer for details)

STARTER LEGS



Consists of 4 units in a set, typically 2,210 mm (87.0 in) in height, cast into the concrete with approximately 305 mm (12.0 in) protrusion above the concrete surface. The starter legs are normally set in by using the first tower section as template.

TIE BEAM COLLARS



The collar is used to transfer the horizontal forces (exerted by the tower to the tie beam which is in turn transferred to the building). The collar is pin jointed to the tie beam. Pin joints are used to ease the dismantling process.

PERFORMANCE CHARTS - SAFE WORKING LOAD

32 TONNE WINCH - MAIN HOIST ONE FALL

Boom Without Fly Fitted – 65 Tonne Counterweight

BOOM LENGTH		RADIUS (m) 6.1	9.1	12.2	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6	39.6	42.7	45.7	48.8	51.8	54.9	57.9	61.0	64.0	67.1	70.1	73.2
		20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240
73.4 m	(kg)	32,000	32,000	30,500	28,500	26,300	24,400	23,500	22,400	21,400	20,400	19,400	18,500	17,600	16,700	15,350	13,910	12,630	11,490	10,460	9,500	8,570	7,130	4,800
240.8 ft	(lb)	70,548	70,548	67,241	62,832	57,982	53,793	51,809	49,383	47,179	44,974	42,770	40,785	38,801	36,817	33,841	30,666	27,844	25,331	23,060	20,944	18,872	15,719	10,582
68.8 m	(kg)	32,000	32,000	32,000	32,000	32,000	30,870	30,310	29,320	27,900	26,470	23,520	21,040	18,900	17,060	15,440	14,020	12,760	11,580	10,500	9,530	7,690		
225.7 ft	(lb)	70,548	70,548	70,548	70,548	70,548	68,057	66,822	64,640	61,509	58,357	51,853	46,386	41,668	37,611	34,040	30,909	28,131	25,530	23,149	21,010	16,954		
64.2 m	(kg)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	30,630	27,100	24,150	21,670	19,540	17,690	16,080	14,650	13,390	12,270	11,010	8,360			
210.6 ft	(lb)	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,548	67,526	59,746	53,242	47,774	43,079	39,000	35,451	32,296	29,520	27,051	24,273	18,431			
59.6	(kg)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	30,620	27,440	24,500	22,010	19,880	18,040	16,420	15,000	13,380	10,980					
195.5 ft	(lb)	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,548	67,506	60,495	54,014	48,524	43,828	39,772	36,200	33,070	29,454	24,207					
55.0 m	(kg)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	31,450	27,920	24,960	22,490	20,360	18,510	16,900	14,830	11,390						
180.4 ft	(lb)	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,548	69,336	61,553	55,072	49,582	44,886	40,808	37,256	32,695	25,111						
50.4 m	(kg)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	31,640	28,110	25,160	22,690	20,560	18,720	16,800								
165.4 ft	(lb)	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,548	69,755	61,972	55,513	50,023	45,327	41,271	37,038								
45.8 m	(kg)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	28,580	25,640	23,150	20,950	17,090									
150.3 ft	(lb)	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,548	63,008	56,527	51,037	46,187	37,677									
41.2 m	(kg)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	28,800	25,870	23,390											
135.2 ft	(lb)	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,548	63,493	57,034	51,566											
36.6 m	(kg)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	29,250	23,600												
120.1 ft	(lb)	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,548	64,486	52,029												

Boom With Fly Fitted – 65 Tonne Counterweight

BOOM LENGTH		RADIUS (m) 6.1	9.1	12.2	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6	39.6	42.7	45.7	48.8	51.8	54.9	57.9	61.0	64.0	67.1	70.1	73.2
		20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240
73.4 m	(kg)	32,000	32,000	30,600	28,100	25,900	24,000	23,100	22,100	21,000	20,000	19,100	18,100	17,200	16,300	14,770	13,320	12,030	10,870	9,540	8,680	7,700	6,100	3,770
240.8 ft	(lb)	70,548	70,548	67,461	61,950	57,100	52,911	50,927	48,722	46,297	44,092	42,108	39,904	37,909	35,935	32,547	29,348	26,504	23,960	21,014	19,127	16,954	13,435	8,300
68.8 m	(kg)	32,000	32,000	32,000	30,560	28,100	26,130	24,940	23,800	22,710	21,660	20,640	19,650	18,420	16,650	15,000	13,550	12,160	10,910	9,790	8,310	6,460		
225.7 ft	(lb)	70,548	70,548	70,548	67,374	61,950	57,607	54,964	52,470	50,067	47,752	45,504	43,321	40,609	36,707	33,070	29,873	26,808	24,053	21,583	18,321	14,242		
64.2 m	(kg)	32,000	32,000	32,000	32,000	31,820	30,030	28,750	27,530	26,360	25,230	23,710	21,170	19,000	17,120	15,470	13,930	12,730	11,500	9,560	6,920			
210.6 ft	(lb)	70,548	70,548	70,548	70,548	70,151	66,205	63,383	60,694	58,114	55,623	52,272	46,672	41,888	37,743	34,106	30,711	28,055	25,353	21,076	15,258			
59.6	(kg)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	31,480	29,140	27,060	24,050	21,520	19,340	17,460	15,820	13,970	11,900	9,530					
195.5 ft	(lb)	70,548	70,548	70,548	70,548	70,548	70,548	70,548	69,402	64,243	59,657	53,043	47,444	42,638	38,493	34,877	30,799	26,235	21,010					
55.0 m	(kg)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	30,680	27,260	24,270	21,580	19,810	17,930	15,940	13,370	9,930						
180.4 ft	(lb)	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,548	67,638	60,096	53,506	47,576	43,674	39,529	35,142	29,476	21,892						
50.4 m	(kg)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	31,320	27,720	24,720	22,190	20,020	18,140	15,330								
165.4 ft	(lb)	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,548	69,049	61,112	54,499	48,921	44,137	39,992	33,797								
45.8 m	(kg)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	31,780	28,180	25,180	22,850	19,470	15,620									
150.3 ft	(lb)	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,063	62,127	55,513	49,935	42,924	34,436									
41.2 m	(kg)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	28,400	25,400	22,010											
135.2 ft	(lb)	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,548	70,548	62,612	55,996	48,524											
36.6 m	(kg)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	28,390	22,110												

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32 TONNE WINCH - MAIN HOIST TWO FALL

Boom Without Fly Fitted – 65 Tonne Counterweight

BOOM LENGTH	(m) / (ft)	RADIUS 6.1 / 20	9.1 / 30	12.2 / 40	15.2 / 50	18.3 / 60	21.3 / 70	24.4 / 80	27.4 / 90	30.5 / 100	33.5 / 110	36.6 / 120	39.6 / 130	42.7 / 140	45.7 / 150	48.8 / 160	51.8 / 170	54.9 / 180	57.9 / 190	61.0 / 200	64.0 / 210	67.1 / 220
68.8 m	(kg)	48,490	43,220	38,870	35,270	32,230	30,870	30,310	29,320	27,900	26,540	23,990	21,710	19,600	17,550	15,760	14,200	12,810	11,580	10,500	9,530	7,690
225.7 ft	(lb)	106,903	95,284	85,694	77,757	71,055	68,057	66,822	64,640	61,509	58,511	52,889	47,863	43,211	38,691	34,745	31,306	28,241	25,530	23,149	21,010	16,954
64.2 m	(kg)	54,120	48,730	44,620	40,440	37,060	36,430	35,730	34,190	31,510	28,310	25,260	22,640	20,410	18,420	16,640	15,080	13,700	12,490	11,010	8,360	
210.6 ft	(lb)	119,315	107,432	98,371	89,155	81,704	80,315	78,772	75,376	69,468	62,413	55,689	49,913	44,997	40,609	36,685	33,246	30,203	27,536	24,273	18,431	
59.6	(kg)	59,490	53,830	49,500	45,940	43,240	42,450	39,010	34,410	30,620	28,750	25,660	23,050	20,820	18,890	17,160	15,430	13,360	10,980			
195.5 ft	(lb)	131,154	118,235	109,129	101,281	95,328	93,587	86,003	75,861	67,506	63,383	56,571	50,817	45,900	41,646	37,832	34,018	29,454	24,207			
55.0 m	(kg)	64,000	58,600	54,290	51,160	48,910	47,130	41,050	36,190	32,170	28,750	25,750	23,060	21,360	19,440	17,410	14,830	11,390				
180.4 ft	(lb)	141,097	129,192	119,690	112,789	107,829	103,904	90,500	79,786	70,923	63,383	56,769	50,839	47,091	42,858	38,383	32,695	25,111				
50.4 m	(kg)	64,000	63,890	59,590	56,500	54,360	50,780	43,470	37,790	33,250	29,540	26,460	23,860	21,640	19,730	16,800						
165.4 ft	(lb)	141,097	140,854	131,374	124,562	119,844	111,951	95,835	83,313	73,304	65,125	58,335	52,603	47,708	43,497	37,038						
45.8 m	(kg)	64,000	64,000	64,000	62,700	60,510	51,310	44,000	38,320	33,780	30,080	27,000	24,400	20,950	17,090							
150.3 ft	(lb)	141,097	141,097	141,097	138,231	133,402	113,120	97,004	84,482	74,473	66,315	59,525	53,793	46,187	37,677							
41.2 m	(kg)	64,000	64,000	64,000	64,000	61,300	51,560	44,260	38,590	34,060	30,360	27,290	23,500									
135.2 ft	(lb)	141,097	141,097	141,097	141,097	135,144	113,671	97,577	85,077	75,090	66,933	60,164	51,809									
36.6 m	(kg)	64,000	64,000	64,000	64,000	61,830	52,090	44,790	39,110	34,590	29,890	23,600										
120.1 ft	(lb)	141,097	141,097	141,097	141,097	136,313	114,839	98,746	86,223	76,258	65,897	52,029										

Boom With Fly Fitted – 65 Tonne Counterweight

BOOM LENGTH	(m) / (ft)	RADIUS 6.1 / 20	9.1 / 30	12.2 / 40	15.2 / 50	18.3 / 60	21.3 / 70	24.4 / 80	27.4 / 90	30.5 / 100	33.5 / 110	36.6 / 120	39.6 / 130	42.7 / 140	45.7 / 150	48.8 / 160	51.8 / 170	54.9 / 180	57.9 / 190	61.0 / 200	64.0 / 210	67.1 / 220
68.8 m	(kg)	47,650	42,420	38,110	34,520	31,500	30,070	29,480	28,840	27,600	25,350	22,740	20,450	18,420	17,020	15,190	13,560	12,160	10,910	9,790	8,310	6,460
225.7 ft	(lb)	105,051	93,521	84,019	76,104	69,446	66,293	64,993	63,582	60,848	55,887	50,133	45,085	40,609	37,523	33,488	29,939	26,808	24,053	21,583	18,321	14,242
64.2 m	(kg)	55,430	48,980	43,870	39,710	36,270	35,610	34,900	33,840	30,030	26,830	24,080	21,660	19,490	17,510	15,670	13,930	12,850	11,500	9,560	6,920	
210.6 ft	(lb)	122,203	107,983	96,717	87,546	79,962	78,507	76,942	74,605	66,205	59,150	53,088	47,752	42,968	38,603	34,547	30,711	28,330	25,353	21,078	15,256	
59.6	(kg)	61,670	55,890	49,960	45,210	42,450	41,630	37,510	32,910	29,140	28,110	25,180	22,530	20,230	18,050	15,990	13,970	11,900	9,530			
195.5 ft	(lb)	135,960	123,217	110,144	99,672	93,587	91,779	82,696	72,555	64,243	61,972	55,513	49,670	44,600	39,794	35,252	30,799	26,235	21,010			
55.0 m	(kg)	64,000	62,060	56,650	51,290	49,410	45,610	39,540	34,690	30,880	27,260	24,270	21,580	20,790	18,380	15,940	13,370	9,930				
180.4 ft	(lb)	141,097	136,820	124,893	113,076	108,931	100,553	87,171	76,479	67,638	60,098	53,506	47,576	45,834	40,521	35,142	29,476	21,892				
50.4 m	(kg)	64,000	64,000	63,600	57,960	56,720	50,790	43,340	37,540	32,910	29,130	25,980	23,330	21,060	18,830	15,330						
165.4 ft	(lb)	141,097	141,097	140,215	127,761	125,047	111,973	95,549	82,762	72,555	64,221	57,276	51,434	46,430	41,513	33,797						
45.8 m	(kg)	64,000	64,000	64,000	64,000	58,970	50,050	43,870	38,070	33,440	29,660	26,520	23,270	19,470	15,820							
150.3 ft	(lb)	141,097	141,097	141,097	141,097	130,007	110,342	96,717	83,930	73,723	65,389	58,467	51,302	42,924	34,436							
41.2 m	(kg)	64,000	64,000	64,000	64,000	61,500	51,570	44,120	38,330	33,710	29,940	26,810	22,010									
135.2 ft	(lb)	141,097	141,097	141,097	141,097	135,585	113,693	97,268	84,504	74,318	66,007	59,106	48,524									
36.6 m	(kg)	64,000	64,000	64,000	64,000	62,020	52,080	44,640	38,850	34,230	28,390	22,110										
120.1 ft	(lb)	141,097	141,097	141,097	141,097	136,731	114,817	98,415	85,650	75,465	62,590	48,744										

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32 TONNE WINCH - MAIN HOIST THREE FALL

Boom Without Fly Fitted – 65 Tonne Counterweight

BOOM LENGTH	(m) (ft)	RADIUS 6.1 20	9.1 30	12.2 40	15.2 50	18.3 60	21.3 70	24.4 80	27.4 90	30.5 100	33.5 110	36.6 120	39.6 130	42.7 140	45.7 150	48.8 160	51.8 170	54.9 180	57.9 190	61.0 200	64.0 210	67.1 220
68.8 m	(kg)	50,120	44,740	40,200	36,400	33,190	32,210	31,650	31,010	28,630	25,670	23,130	20,920	18,950	17,090	15,330	13,790	12,430	11,240	10,190	9,220	7,470
225.7 ft	(lb)	110,496	98,635	88,626	80,249	73,172	71,011	69,777	68,368	63,119	56,593	50,993	46,121	41,778	37,677	33,797	30,402	27,404	24,780	22,465	20,327	16,469
64.2 m	(kg)	58,560	51,840	46,420	41,980	38,910	38,300	37,590	33,950	30,270	27,170	24,500	22,150	19,840	17,810	16,060	14,520	13,180	12,010	10,510	8,040	
210.6 ft	(lb)	129,103	114,288	102,339	92,551	85,782	84,437	82,872	74,847	66,734	59,900	54,014	48,833	43,740	39,265	35,406	32,011	29,057	26,476	23,171	17,725	
59.6	(kg)	67,140	59,380	53,050	47,950	45,730	43,080	37,520	33,090	29,430	28,480	25,480	22,730	20,390	18,370	16,630	14,790	12,800	10,530			
195.5 ft	(lb)	148,019	130,911	116,958	105,712	100,818	94,976	82,718	72,951	64,882	62,788	56,174	50,111	44,952	40,499	36,663	32,607	28,219	23,215			
55.0 m	(kg)	73,810	66,710	60,390	54,590	52,970	45,370	39,540	34,870	31,000	27,690	24,790	22,190	21,120	19,110	16,770	14,300	11,060				
180.4 ft	(lb)	162,724	147,071	133,138	120,351	116,779	100,024	87,171	76,876	68,344	61,046	54,653	48,921	46,562	42,131	36,972	31,526	24,383				
50.4 m	(kg)	80,740	73,420	68,120	62,940	59,130	50,690	44,170	38,530	33,730	29,810	26,560	23,830	21,510	19,540	18,310						
165.4 ft	(lb)	178,002	161,864	150,180	138,760	130,360	111,753	97,379	84,945	74,362	65,720	58,555	52,536	47,422	43,079	35,958						
45.8 m	(kg)	88,380	81,070	76,220	69,850	58,260	49,770	45,050	39,190	34,430	30,520	27,280	24,010	20,340	16,740							
150.3 ft	(lb)	194,846	178,730	168,037	153,994	128,442	109,725	99,319	86,400	75,906	67,285	60,142	52,933	44,842	36,906							
41.2 m	(kg)	96,000	90,040	85,630	77,030	62,950	52,890	45,360	39,510	34,820	30,930	27,710	22,920									
135.2 ft	(lb)	211,645	198,505	188,783	169,823	138,782	116,603	100,002	87,105	76,765	68,189	61,090	50,530									
36.6 m	(kg)	96,000	96,000	96,000	76,940	63,520	53,470	45,940	40,100	35,100	29,110	23,210										
120.1 ft	(lb)	211,645	211,645	211,645	169,625	140,038	117,882	101,281	88,408	77,383	64,177	51,170										

Boom With Fly Fitted – 65 Tonne Counterweight

BOOM LENGTH	(m) (ft)	RADIUS 6.1 20	9.1 30	12.2 40	15.2 50	18.3 60	21.3 70	24.4 80	27.4 90	30.5 100	33.5 110	36.6 120	39.6 130	42.7 140	45.7 150	48.8 160	51.8 170	54.9 180	57.9 190	61.0 200	64.0 210	67.1 220
68.8 m	(kg)	49,230	43,900	39,390	35,610	32,420	31,340	30,760	30,090	27,180	24,220	21,680	19,470	17,500	16,350	14,550	12,970	11,580	10,360	9,280	7,790	6,040
225.7 ft	(lb)	108,534	96,783	86,841	78,507	71,474	69,093	67,815	66,337	59,922	53,396	47,796	42,924	38,581	36,046	32,077	28,594	25,530	22,840	20,459	17,174	13,316
64.2 m	(kg)	57,690	51,010	45,610	41,200	38,060	37,420	36,680	32,490	28,810	25,720	23,050	20,700	18,600	16,680	14,910	13,220	12,330	10,920	9,070	6,810	
210.6 ft	(lb)	127,185	112,458	100,553	90,831	83,908	82,497	80,866	71,629	63,516	56,703	50,817	45,636	41,006	36,773	32,871	29,145	27,183	24,075	19,996	14,573	
59.6	(kg)	66,630	58,560	52,250	47,170	44,870	41,600	36,040	31,620	27,970	27,020	24,180	21,660	19,380	17,280	15,280	13,340	11,350	9,090			
195.5 ft	(lb)	146,895	129,103	115,192	103,993	98,922	91,713	79,455	69,711	61,664	59,569	53,308	47,752	42,726	38,096	33,687	29,410	25,023	20,040			
55.0 m	(kg)	76,370	66,870	59,610	53,820	51,480	43,880	38,060	33,400	29,530	26,230	23,330	20,730	20,060	17,670	15,320	12,850	9,610				
180.4 ft	(lb)	168,368	147,424	131,418	118,653	113,495	96,739	83,908	73,635	65,103	57,828	51,434	45,702	44,225	38,956	33,775	28,330	21,187				
50.4 m	(kg)	84,100	75,570	67,340	62,110	57,630	49,200	42,680	37,430	33,030	29,230	25,860	22,790	20,810	18,200	14,650						
165.4 ft	(lb)	185,410	166,604	148,460	136,930	127,053	108,468	94,094	82,519	72,819	64,441	57,012	50,244	45,878	40,124	32,739						
45.8 m	(kg)	92,080	85,180	78,040	68,330	56,760	48,270	44,680	38,920	34,010	29,970	26,150	22,540	18,880	15,280							
150.3 ft	(lb)	203,003	187,791	167,640	150,643	125,135	106,418	98,503	85,804	74,980	66,073	57,651	49,692	41,623	33,687							
41.2 m	(kg)	96,000	95,230	85,260	76,430	63,150	52,900	45,210	39,250	34,390	29,570	26,510	21,450									
135.2 ft	(lb)	211,645	209,947	187,967	168,500	139,223	116,625	99,672	86,532	75,817	65,191	58,445	47,289									
36.8 m	(kg)	96,000	96,000	85,060	75,400	63,720	53,460	45,780	39,820	33,610	27,630	21,730										
120.1 ft	(lb)	211,645	211,645	209,573	166,229	140,479	117,860	100,928	87,789	74,098	60,914	47,907										

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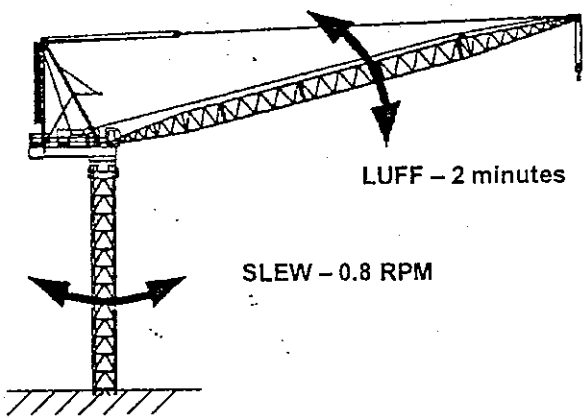
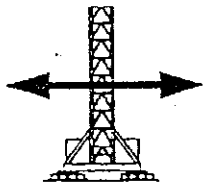
MOTION SPEEDS

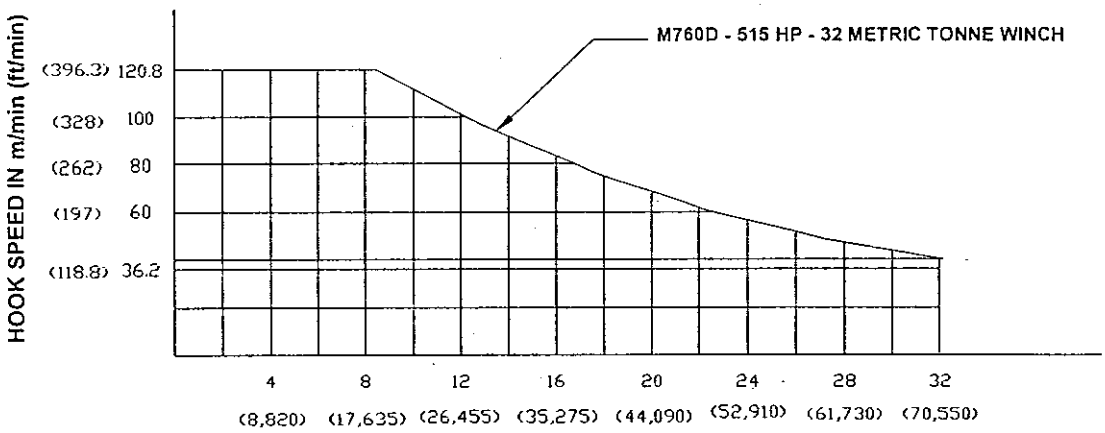




Optional

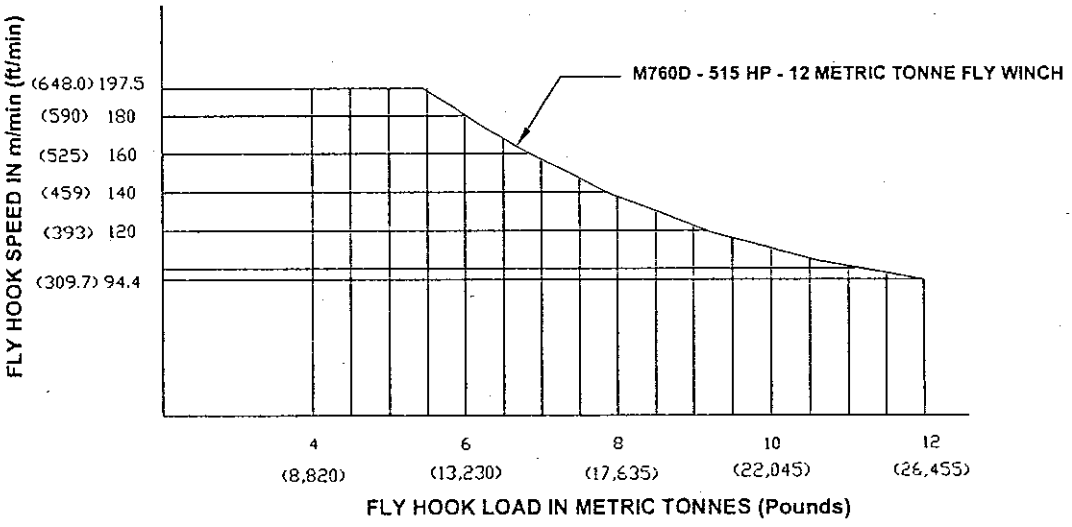
HOOK SPEED

MAIN HOIST



FLY HOIST

12.0 t (26,455 lb) fly winch lifting on a single fall hook

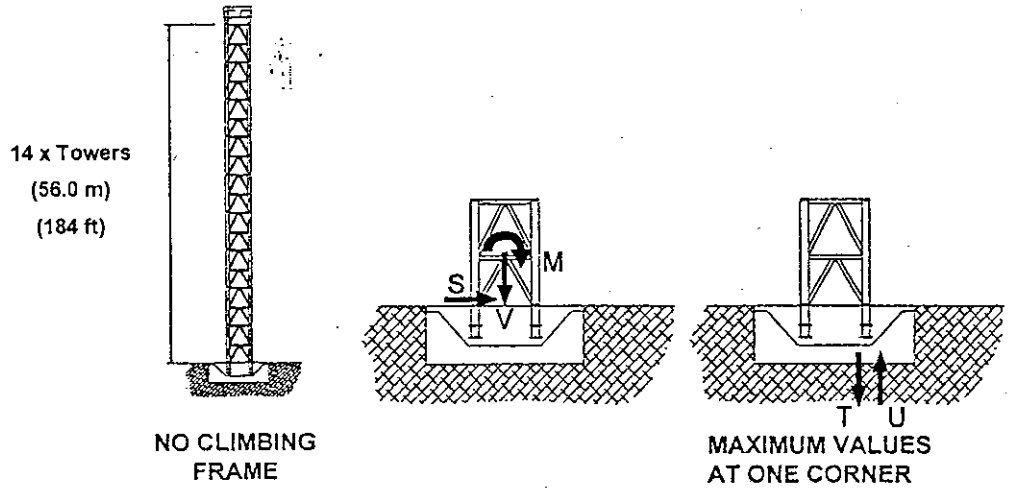


FORCES - FOUNDATION REACTION

CRANE ON BASE – FREE STANDING (for 64.2 m boom)

For in-service wind speeds up to **20 m/s (45 mph)** and out-of-service wind speeds up to **40.2 m/s (90 mph)**.
(Please refer to manufacturer for individual requirements)

No Climbing Frame



NO CLIMBING FRAME

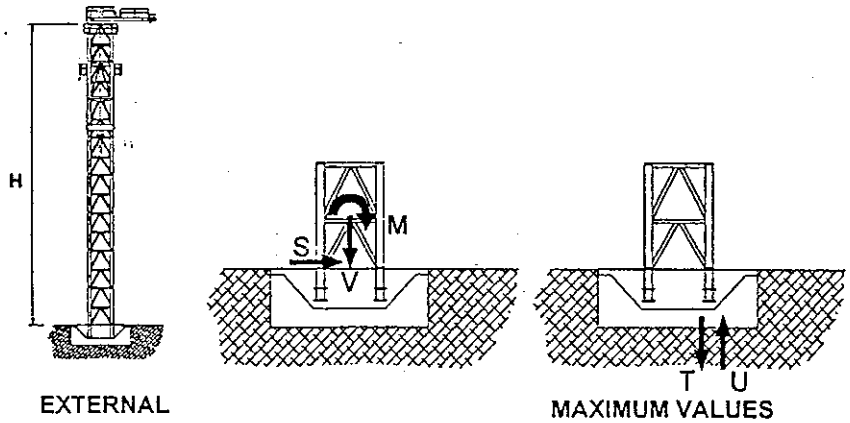
MAXIMUM VALUES AT ONE CORNER

Foundation Reactions – Freestanding on 763 Towers

		In Service		Out of Service	
Wind Speed	*m/s (mph)*	20	(45)	40.2	(90)
M	*mT (ft t)*	1,055	(7,631,125)	1,410	(10,198,940)
V	*t (lb)*	212	(467,380)	196	(432,105)
S	*t (lb)*	8	(17,635)	33	(72,750)
T	*t (lb)*	329	(725,320)	418	(921,530)
U	*t (lb)*	223	(491,630)	320	(705,480)

External Climbing

13 x Towers
(52.0 m)
(171 ft)



EXTERNAL CLIMBER

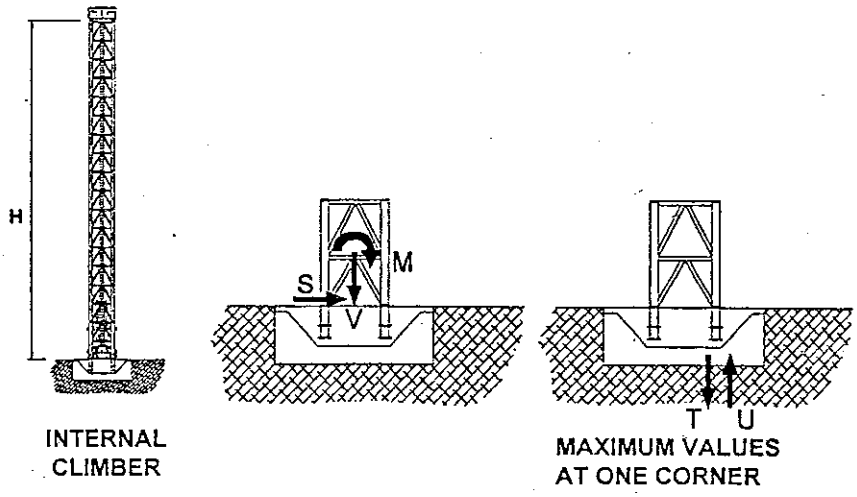
MAXIMUM VALUES AT ONE CORNER

Foundation Reactions
Freestanding with Climbing Frame on 763 Towers

		In Service		Out of Service	
Wind Speed	*m/s (mph)*	20	(45)	40.2	(90)
M	*mT (ft.lb)*	1,065	(7,703,455)	1,479	(10,698,035)
V	*t (lb)*	222	(489,425)	206	(454,150)
S	*t (lb)*	9	(19,840)	36	(79,365)
T	*t (lb)*	334	(736,345)	439	(967,830)
U	*t (lb)*	223	(491,630)	336	(740,755)

Internal Climbing

14 x Towers
(56.0 m)
(184 ft)



INTERNAL CLIMBER

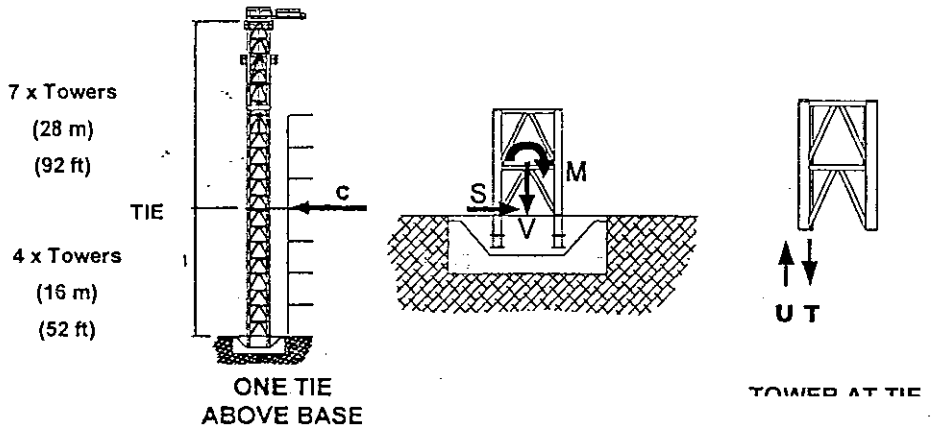
MAXIMUM VALUES AT ONE CORNER

Foundation Reactions
Freestanding with Internal Climber on 763 Towers

		In Service		Out of Service	
Wind Speed	*m/s (mph)*	20	(45)	40.2	(90)
M	*mT (ft.lb)*	1,055	(7,631,120)	1,410	(10,198,940)
V	*t (lb)*	227	(500,450)	211	(465,175)
S	*t (lb)*	8	(17,635)	33	(72,750)
T	*t (lb)*	332	(731,935)	422	(930,350)
U	*t (lb)*	220	(485,020)	316	(696,660)

FORCES - BUILDING REACTION

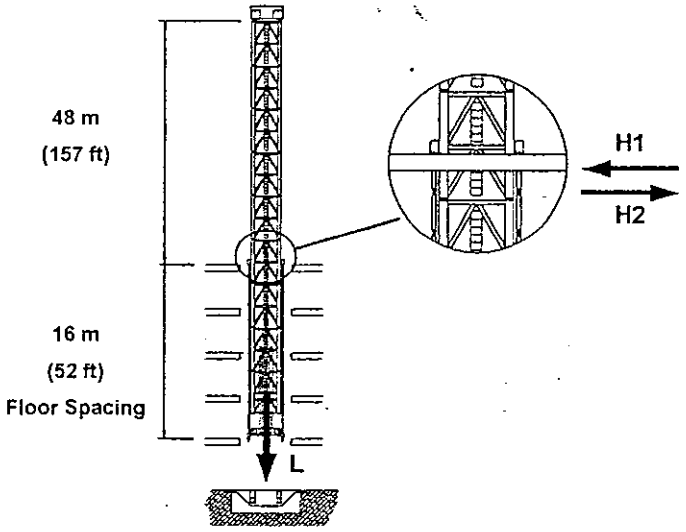
External Climbing



Building Reaction - External Climbing on 763 Towers

		In Service		Out of Service	
Wind Speed	*m/s (mph)*	20	(45)	40.2	(90)
M	*mT (ft.lb)*	422	(3,052,450)	451	(3,262,215)
V	*t (lb)*	215	(473,995)	198	(436,515)
S	*t (lb)*	79	(174,165)	85	(187,390)
T	*t (lb)*	270	(595,250)	281	(619,500)
U	*t (lb)*	172	(379,195)	192	(423,290)
Tie (C)	*t (lb)*	86	(189,600)	112	(246,920)

Internal Ladder Climbing



Building Reaction - Internal Climbing on 763 Towers

		In Service		Out of Service	
Wind Speed	*m/s (mph)*	20	(45)	40.2	(90)
L	*t (lb)*	240	(529,110)	223	(491,630)
H1	*t (lb)*	70	(154,325)	117	(257,940)
H2	*t (lb)*	62	(136,685)	86	(189,600)

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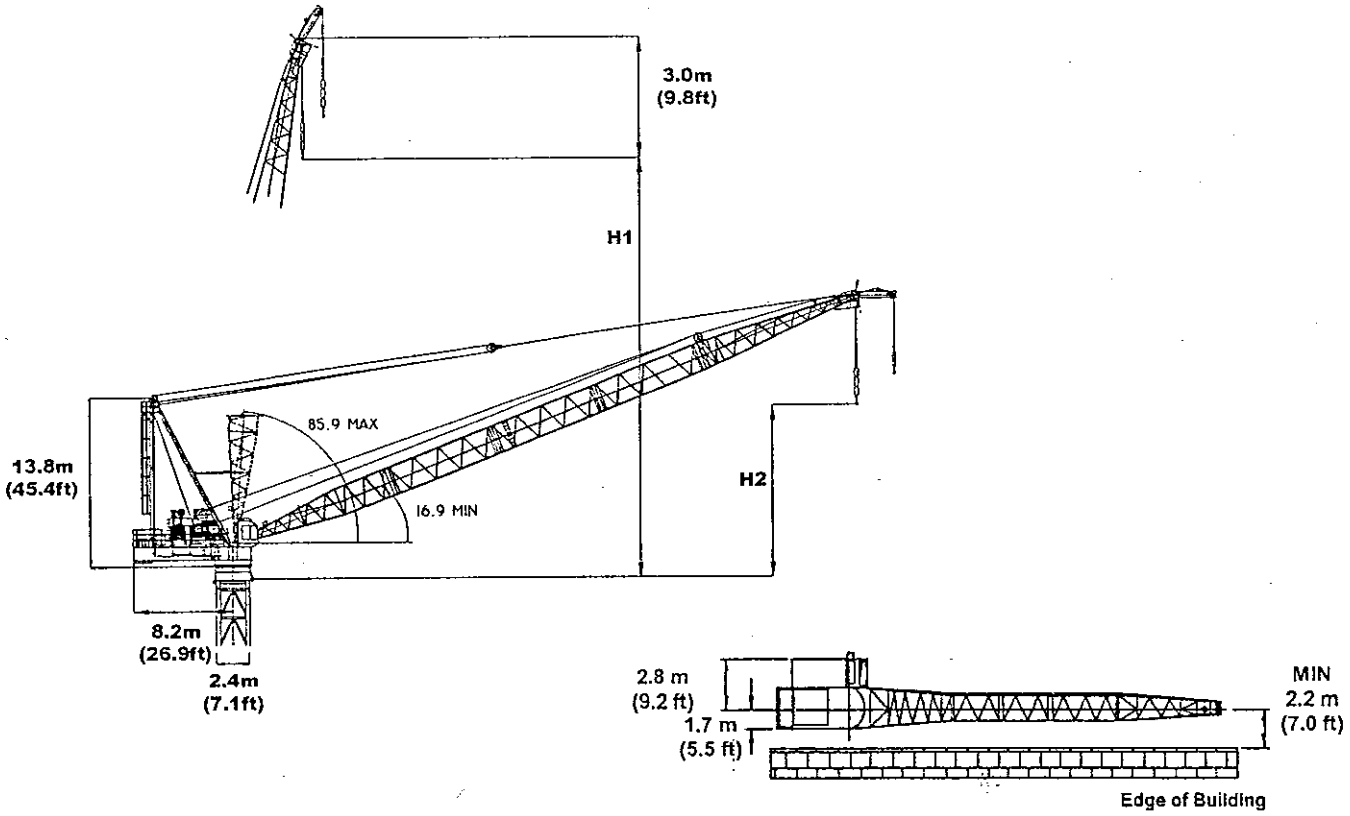
3) CRANE DIMENSIONS



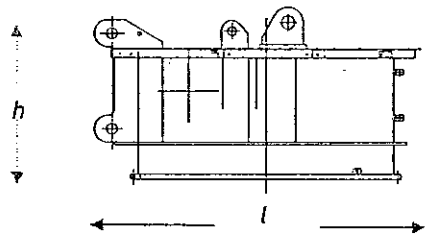
Boom Length		Maximum Radius		Hook Height H1		Hook Height H2	
m	*(ft)*	*m*	*(ft)*	*m*	*(ft)*	*m*	*(ft)*
70.0	(229.7)	73.4	(240.8)	73.6	(241.5)	24.4	(80.1)
65.0	(213.3)	68.8	(225.7)	69.3	(227.4)	24.7	(81.0)
60.0	(196.8)	64.2	(210.6)	64.4	(211.3)	24.9	(81.7)
55.0	(180.4)	59.6	(195.5)	59.9	(196.5)	24.9	(81.7)
52.5	(172.2)	55.0	(180.4)	55.3	(181.4)	18.7	(61.4)
47.5	(155.8)	50.4	(165.4)	50.7	(166.3)	19.0	(62.3)
42.5	(139.4)	45.8	(150.3)	46.1	(151.2)	19.0	(62.3)
40.0	(131.2)	41.2	(135.2)	41.5	(136.2)	12.4	(40.7)
35.0	(114.8)	36.6	(120.1)	37.0	(121.4)	13.0	(42.7)
30.0	(98.4)	32.0	(104.9)	32.4	(106.3)	13.2	(43.3)

COMPONENTS DIMENSION & WEIGHTS

Split Deck - Front

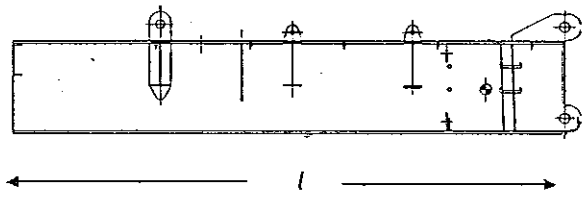
Length (l)		Width (w)		Height (h)		Weight	
3.10	m	3.40	m	2.12	m	10,200	kg
10.17	ft	11.15	ft	6.95	ft	22,487	lb

Note : Weight for Split Deck - Front inclusive of Slew Ring and Slew Drive Assembly.



Split Deck - Back

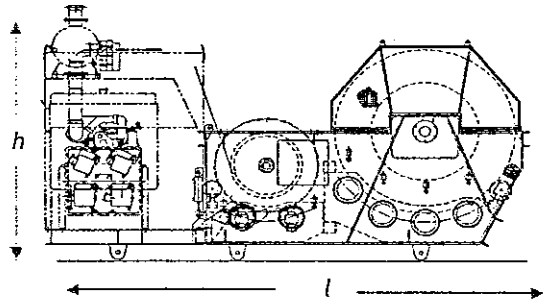
Length (l)		Width (w)		Height (h)		Weight	
7.41	m	3.40	m	1.61	m	8,650	kg
24.31	ft	11.12	ft	5.28	ft	19,070	lb



Powerpack Winches

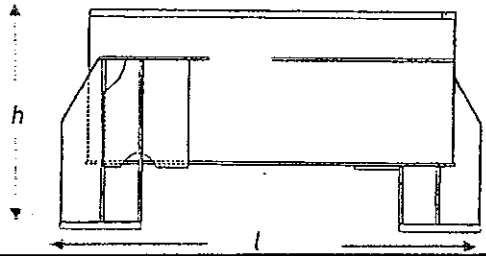
Length (l)		Width (w)		Height (h)		Weight	
5.80	m	3.03	m	3.37	m	24,495	kg
19.03	ft	9.94	ft	11.05	ft	54,000	lb

Note : Weight for Powerpack Winches inclusive of Wire Ropes, Hydraulic Oil, Lubricant, Coolant and Hoses.
** The Powerpack and Luff Drum weigh is 34,000 lb (15,422 kg)*



Slew Mount

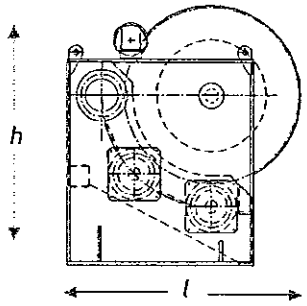
Length (l)		Width (w)		Height (h)		Weight	
3.70	m	4.19	m	1.87	m	5,310	kg
12.14	ft	11.35	ft	6.14	ft	11,706	lb



Fly Winch

Length (l)		Width (w)		Height (h)		Weight	
1.65	m	1.74	m	1.82	m	5,500	kg
5.41	ft	5.71	ft	5.97	ft	12,125	lb

Note : Weight for Fly Winch inclusive of Wire Ropes.

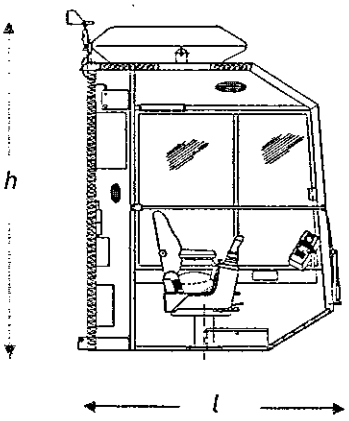


Cabin

Length (l)		Width (w)		Height (h)		Weight	
1.89	m	1.65	m	2.47	m	1,200	kg
6.20	ft	5.41	ft	8.10	ft	2,646	lb

Cabin Support *(not shown)*

Length		Width		Height		Weight	
3.83	m	1.75	m	1.12	m	234	kg
12.57	ft	5.74	ft	3.67	ft	516	lb



(A) Mast & Sheaves

Length		Width		Height		Weight	
6.62	m	2.81	m	12.81	m	8,020	kg
21.72	ft	9.22	ft	42.02	ft	17,681	lb

(B) Mast Ladder

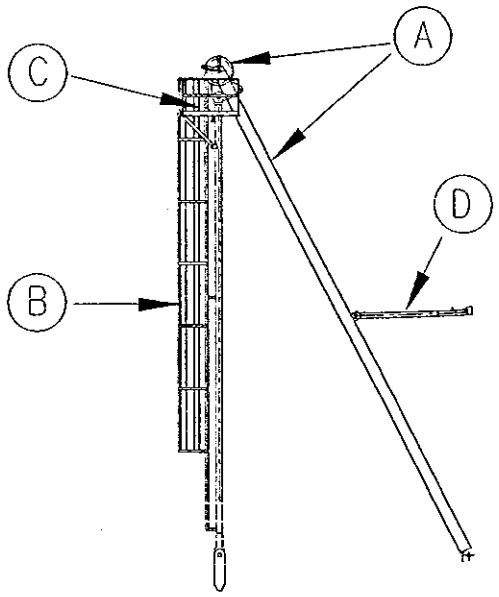
Length		Width		Height		Weight	
1.03	m	0.82	m	11.31	m	305	kg
3.38	ft	2.69	ft	37.11	ft	672	lb

(C) Mast Platform

Length		Width		Height		Weight	
2.54	m	1.58	m	1.12	m	233	kg
8.33	ft	5.18	ft	3.67	ft	518	lb

(D) Boom Buffer

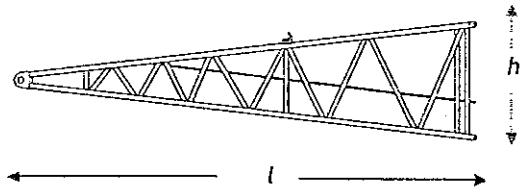
Length		Width		Height		Weight	
3.21	m	2.06	m	0.15	m	284	kg
10.53	ft	6.75	ft	0.49	ft	626	lb



ATTACHMENTS

Boom Bottom Section

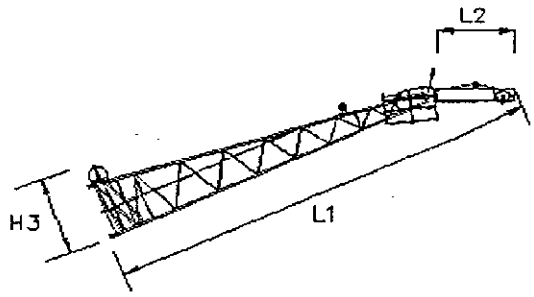
Length (l)		*Width (w)*		*Height (h)*		*Weight*	
13.9	m	3.05	m	2.82	m	2,890	kg
45.60	ft	10.00	ft	9.25	ft	6,371	lb



Boom Top Section

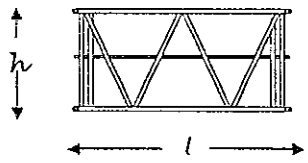
Length (L1)		*Width (w)*		*Height (h3)*		*Weight*	
16.90	m	2.82	m	2.82	m	4,690	kg
55.45	ft	9.25	ft	9.25	ft	10,340	lb

Length (L2)	
2.20	m
7.22	ft



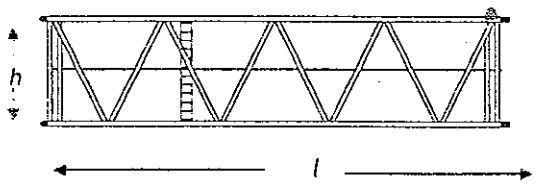
Boom Insert

Length (l)		*Width (w)*		*Height (h)*		*Weight*	
4.60	m	2.82	m	2.82	m	930	kg
15.09	ft	9.25	ft	9.25	ft	2,050	lb



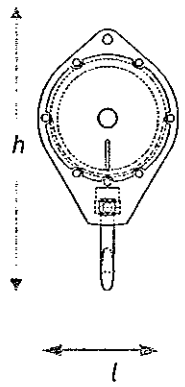
Boom Insert

Length (l)		*Width (w)*		*Height (h)*		*Weight*	
9.20	m	2.82	m	2.82	m	1,860	kg
30.18	ft	9.25	ft	9.25	ft	4,100	lb



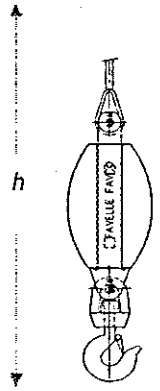
2-Fall Hook

Length (l)		Width (w)		Height (h)		Weight	
1.24	m	0.51	m	2.27	m	1,260	kg
4.07	ft	1.67	ft	7.45	ft	2,777	lb



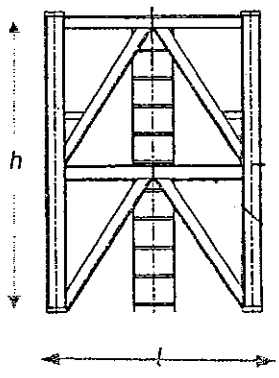
Fly Hook

Height (h)		Weight	
1.48	m	385	kg
4.86	ft	848	lb



Tower Type 763

Length (l)		Width (w)		Height (h)		Weight	
3.03	m	3.01	m	4.00	m	5,180	kg
9.94	ft	9.88	ft	13.12	ft	11,419	lb



CLIMBING SYSTEMS

External Climber

(A) Climbing Cylinder

Length		*Width*		*Height*		*Weight*	
5.03	m	0.29	m	0.29	m	1,500	kg
16.50	ft	0.95	ft	0.95	ft	3,307	lb

(B) Side Panel

Length		*Width*		*Height*		*Weight*	
11.52	m	0.37	m	2.74	m	4,973	kg
37.80	ft	1.21	ft	8.99	ft	10,964	lb

(C) Tie

Length		*Width*		*Height*		*Weight*	
7.02	m	0.17	m	3.41	m	907	kg
23.03	ft	0.56	ft	11.19	ft	2,000	lb

(D) Climbing Support

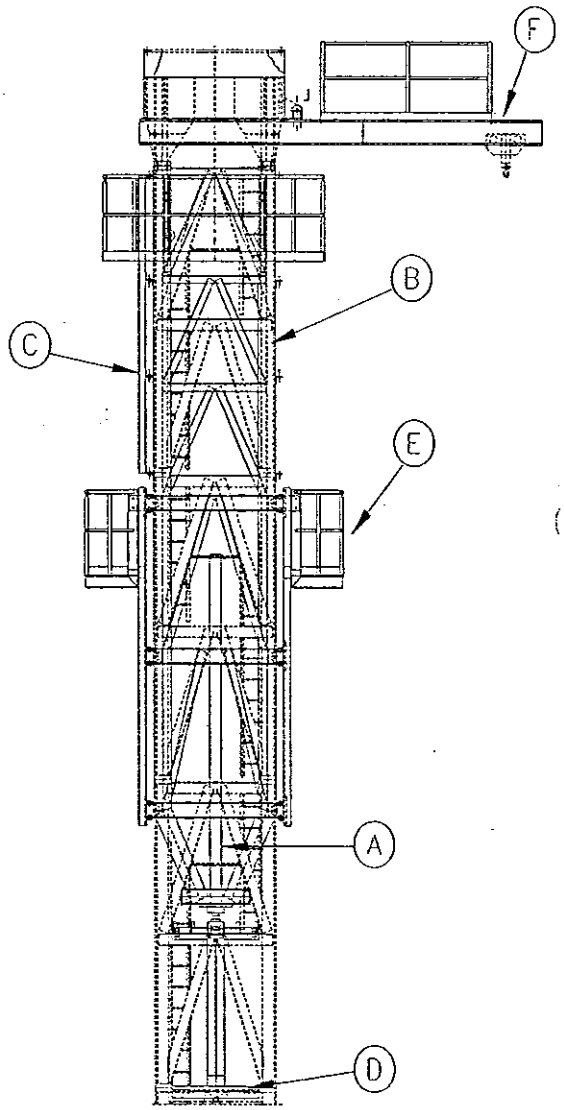
Length		*Width*		*Height*		*Weight*	
2.65	m	0.34	m	0.80	m	332	kg
8.69	ft	1.12	ft	2.62	ft	732	lb

(E) Access Platform

Length		*Width*		*Height*		*Weight*	
3.55	m	1.07	m	1.24	m	199	kg
11.65	ft	3.51	ft	4.07	ft	439	lb

(F) Monorail Beam & Trolley x 1

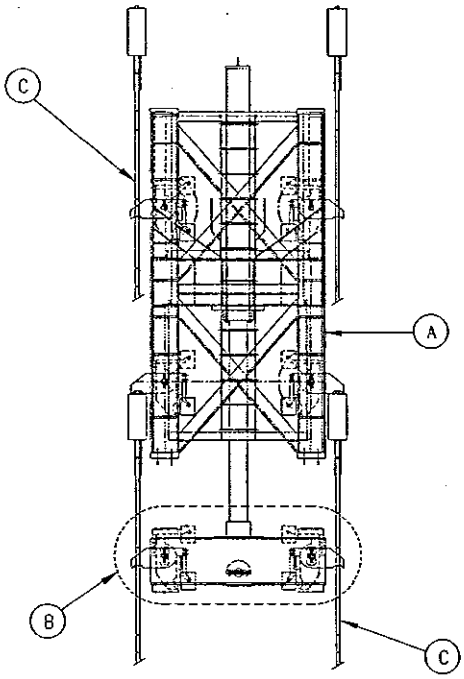
Length		*Width*		*Height*		*Weight*	
7.43	m	1.68	m	1.40	m	1,695	kg
24.38	ft	5.51	ft	4.59	ft	3,737	lb



Internal Ladder Climber

A) Bottom Climbing Tower (incl cylinders)

Length		Width		Height		Weight	
4.00	m	2.71	m	2.72	m	9,136	kg
13.12	ft	8.89	ft	8.92	ft	20,141	lb



B) Climbing Foot

Length		Width		Height		Weight	
2.73	m	0.61	m	0.88	m	1,435	kg
8.96	ft	2.00	ft	2.89	ft	3,164	lb

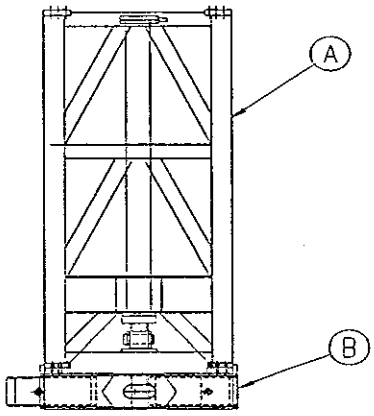
C) Climbing Ladder

Length		Width		Height		Weight	
0.21	m	0.17	m	7.99	m	525	kg
0.69	ft	0.56	ft	26.21	ft	1,157	lb

3-Beam Climber

A) Bottom Climbing Tower

Length		Width		Height		Weight	
2.09	m	2.70	m	4.58	m	8,509	kg
6.86	ft	8.86	ft	15.03	ft	18,759	lb



B) Climbing Beams

Length		Width		Height		Weight	
0.45	m	2.70	m	0.80	m	1,630	kg
1.48	ft	8.86	ft	2.62	ft	3,594	lb

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