



## AT20 - TEREX-FRANNA AT MOBILE CRANE



TECHNICAL SPECIFICATION	s
Maximum lifting capacity / radius:	20t @ 1.4m Radius
Main boom:	3.5 - 11.86m (4 section)
Main boom extension:	11.86 / 15.86m
Maximum system length:	15.86 + 2.66 = 18.4m
Overall length:	9.670m
Carrier length:	6.615m
Turning radius over boom head:	11.4 / 9.7m
Carrier engine:	Mercedes OM906LA inline 6.37litre, 6 cylinder, EC Turbo with Intercooled Turbo timer 205kw @ 2800rpm 1100nm @ 1000rpm. Onhighway Euro 3 compliant.
Maximum travel speed:	85 km/h
Drive Axles:	Kessler D71 PL478 Heavy Duty High Speed Planetary Axles. Front axle fitted with driver selectable diff lock.
Steering:	Full Power ORBITROL through twin Hydraulic double acting rams with end stop cushioning. Priority flow from main pump supply plus electro hydraulic emergency supply.
Tyres:	12.00 x 20 x 20 Ply Front & Rear
Maximum gradeability:	50%





## **DEFINITIONS**

**Articulation –** The crane pivots in the middle to allow steering and slewing the load. Working areas for the purpose of load rating are less than 10° articulation either way and greater than 10° (up to 40° articulation is possible either way). *See working area diagram* 

**Freely Suspended Load –** Load hanging free with no direct external force applied except by the hoist line.

**Load Radius –** Horizontal distance from the centre of the front wheels forwards to the centre of the hoist line or tackle with load applied.

**Loaded Boom Angle –** This is given to assist in setting up the crane only. It gives only an approximation of the radius for a specified boom length. No allowance is made for boom or tyre deflection. The ratings are for the boom length and Load Radius shown.

**Rated Lifting Capacity –** The total suspended load, including the weight of material and load handling equipment, that the machine can safely lift under ideal conditions at a given boom length and load radius.

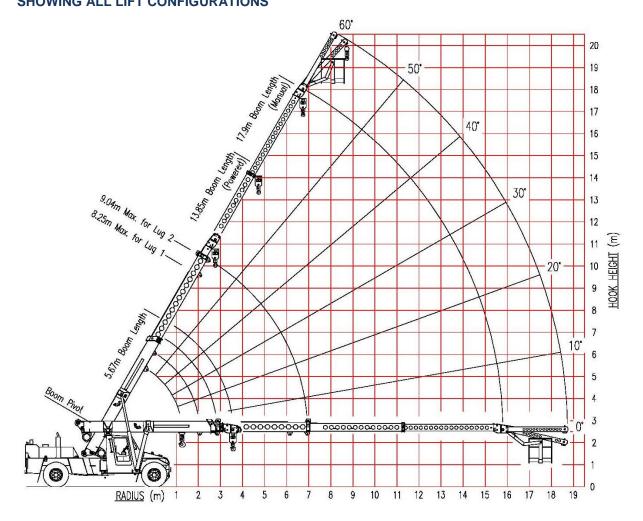
Side Load - Any external force applied either to the boom or load in a horizontal direction.

**Work Areas –** Area measured in an arc about the centre pivot as shown on the working area diagram. Lamps on the dash indicate which zone the crane is in.



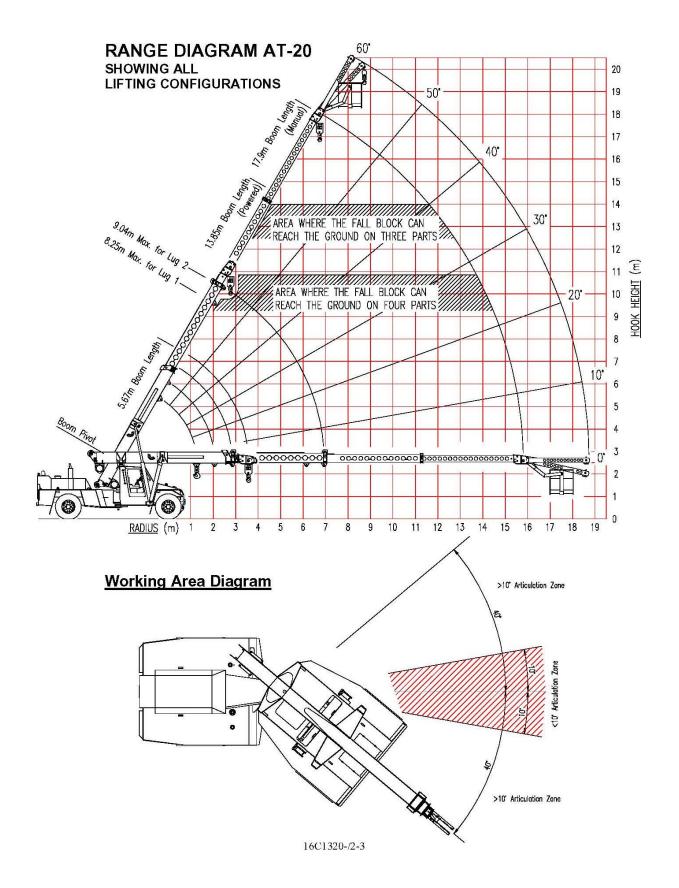


# RANGE DIAGRAM AT-20 SHOWING ALL LIFT CONFIGURATIONS













## LIFTING CAPACITY

RANGE DIAGRAM (ALL LIFTS)

LMI DUTY 01: LIFTING CAPACITY ON WINCH - POWERED SECTIONS

LMI DUTY 03: LIFTING CAPACITY ON WINCH – MANUAL EXTENSION

LMI DUTY 02: LIFTING CAPACITY ON RHINO HOOK - POWERED SECTIONS

LMI DUTY 04: LIFTING CAPACITY ON RHINO HOOK - MANUAL EXTENSION

LMI DUTY 05: LIFTING CAPACITY ON FLYJIB (0° OFFSET) - POWERED SECTIONS

LMI DUTY 06: LIFTING CAPACITY ON FLYJIB (0° OFFSET) - MANUAL EXTENSION

LMI DUTY 07: LIFTING CAPACITY ON FLYJIB (12.5° OFFSET) - POWERED SECTIONS

LIFTING CAPACITY ON FLYJIB (12.5° OFFSET) - MANUAL EXTENSION

LMI DUTY 09: LIFTING CAPACITY ON FIXED LUG ON BUTT

LMI DUTY 10: LIFTING CAPACITY ON INNER LUG ON FIRST EXT.

LMI DUTY 11: LIFTING CAPACITY ON OUTER LUG ON FIRST EXT.

LIFTING CAPACITY IN MAN BASKET – POWERED SECTIONS

LMI DUTY 13: LIFTING CAPACITY IN MAN BASKET – MANUAL EXTENSION



## LMI Duty Lifting on WINCH

01

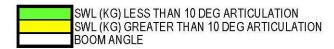
SWL (KG) LESS THAN 10 DEG ARTICULATION
SWL (KG) GREATER THAN 10 DEG ARTICULATION
BOOM ANGLE OR (RADIUS AT 0 DEG BOOM ANGLE)

Weight of slings & hook block to be added to load Read and understand warning notes before operating crane Loads above bold red line are structural

								BC	BOOM LENGTH		(m)							
RADIUS	5.67	00'9	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00	12.50	13.00	13.50	13.85
200	16800	16250	15450	14900														
9.	12600	12600	12600	12600														
	48	51	54	57														
1	16800	16800	16500	15700	15100	14700	14350											
2.0	12600	12600	12600	12600	12600	12600	12600								1		1	
	42	46	20	53	56		9											
	13900	13900	13900	13850			13850		13000									
2.5	12150	12150	12100	12100	12100	12100	12100	12050	12050									
	34	39	44	48	51	54	56	58	09									
1000	11450	11450	11450	11400	11400	11400	11400	11400	11400	11150	10250							
3.0	9950	9950	9950	9950	9950	9950	9900	0066	0066	0066	0066							
	25	31	37	42	46	49	52	55	22	29	09							
	9650	9650	9650	9650	9650	9650	9650	9650	9650	9650	9500	8150	7500					
3.5	8400	8400	8400	8400	8400	8400	8400	8400	8350	8350	8350	8150	7500					
	8	20	29	36	41	45	48	51	53	55	22	- 28	09					
4,000,000	9450	8550	8350	8350	8350	8350	8350	8350	8300	8300	8300	7600	7000	0029	6450			
4.0	8200	7450	7250	7250	7250	7250	7250	7250	7200	7200	7200	7200	7000	6700	6450			
	(3.57)	(3.90)	19	28	35	39	43	47	49	52	54	56	57	59	9			
			7500	7300	7300	7300	7300	7300	7300	7300	7300	7150	6550	6250	6050	5800	5650	
4.5			6500	6350	6350	6350	6350	6350	6300	6300	6300	6300	6300	6250	6050	5800	5650	
			(4.40)	19	27	34	38	42	45	48	20	52	54	99	58	59	09	
				6650	6500	6500	6500	6500	6500	6500	6500	6500	6150	2900	5650	5450	5300	5150
5.0				5750	2600	2600	5600	2600	2600	2600	2600	2600	2600	2600	5600	5450	5300	5150
				(4.90)	18	27	33	37	41	44	47	49	51	53	22	56	28	59
					5950	5350	5250	5250	5250	5250	5250	5250	5250	5250	5050	4850	4700	4600
0.9					5100	4600	4550	4550	4550	4500	4500	4500	4500	4500	4500	4500	4500	4500
				.0	(5.40)	(2.30)	17	25	31	35	39	42	45	47	49	51	53	54
1000							4850	4450	4400	4400	4400	4400	4400	4350	4350	4350	4200	3950
7.0							4200	3800	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750
							(6.40)	(06.9)	16	24	23	34	37	40	43	45	47	48
(1000 mm)									4100	3750	3700	3700	3700	3700	3700	3700	3700	3600
8.0									3500	3200	3150	3150	3150	3150	3150	3150	3150	3150
							$\int$		(7.40)	(7.30)	15	23	88	32	38	38	41	43
											3500	3250	3200	3200	3200	3200	3200	3200
0.6											2950	2750	2700	2700	2700	2700	2700	2700
											(8.40)	(8.90)	15	22	27	31	8	36
													3000	2800	2800	2800	2800	2800
10.0													2550	2400	2350	2350	2350	2350
									8				(9.40)	(06.6)	14	21	26	29
The second									0						2650	2500	2450	2450
11.0															2200	2100	2050	2050
															(10.40)	(10.90)	13	<u>0</u>
																	2350	2250
11.75															Ī			1850
																	(11.40)][	(11.75)



LMI Duty
Lifting on WINCH
MANUAL EXTENDED



Weight of slings & hook block to be added to load Read and understand warning notes before operating crane Loads above bold red line are structural

MANUA	L EXT'N
MAX LEN	GTH 17.90
MAX	SWL
RADIUS	2550
6.74	2550
	60
107 100 00	2250
9.31	2250
	50
13	2050
11.53	2050
	40
	1900
13.34	1700
	30
	1800
14.67	1500
	20
	1650
15.51	1350
PRINCE - C.	10
	1600
15.80	1300
7911 William 1 T. C.	0

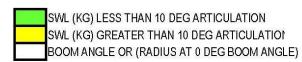
#### NOTE

17.9m Boom length includes Manual 3rd extension. Ratings for Manual extension are structural & based on Boom Angle, not radius. The ratings do not change if the power sections are retracted with the manual extended.



LMI Duty Lifting on RHINO HOOK

02



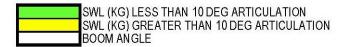
Weight of slings & hook block to be added to load Read and understand warning notes before operating crane Loads above bold red line are structural

								BG	JOM LE	BOOM LENGTH (m)	n)							Γ
RADIUS	5.97	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00	12.50	13.00	13.50	14.00	14.16
30 37 37 37 37 37 37 37 37 37 37 37 37 37	10000	10000	10000	10000														
9.1	10000	10000	10000	10000														
	51	54	57	09								1	1		1			
3	10000	10000	10000	10000	10000	10000												
2.0	10000	10000	10000	10000	10000	10000												
	46	20	53	92	ဆို	09		0000										Ī
	10000	10000	10000	10000	10000	10000	10000	10000										
2.5	10000	10000	10000	10000	10000	10000	10000	10000					Ī					
	39	_	48	51	24	27	_	9					1					
i i	10000		10000	10000	10000	10000		10000	10000	10000								
3.0	10000	10000	10000	10000	10000	10000	6	9950	9950	9950		1	1					T
	30	37	42	46	20	52	55	57	29	90								
	9750	9750	9750	9700	9700	9700	9700	9700	9700	9650	8850	7650						
3.5	8500	8500	8450	8450	8450	8450	8450	8400	8400	8400	8400	7650						
	19	30	36	41	45	48	51	53	55	57	59	09						
	8700	8400	8400	8400	8400	8400	8400	8350	8350	8350	8100	7100	6750	6500	9, 19			
4.0	7550	7300	7300	7300	7300	7300	7300	7250	7250	7250	7250	7100	6750	6500				
	(3.88)	19	29	32	40	43	47	49	52	54	56	22	29	09				
		7550	7400	7400	7350	7350	7350	7350	7350	7350	7350	6650	6300	6100	5850	5700		
4.5		6550	6400	6400	6400	6400	6400	6350	6350	6350	6350	6350	6300	6100	5850	5700		
		(4.40)	19	28	34	38	42	45	48	50	53	54	26	58	59	09		
110000000000000000000000000000000000000			6700	6550	6550	6550	6550	6550	6550	6500	6500	6250	5950	5700	5500	5350	5150	5100
5.0			5800	5650	5650	5650	5650	5650	5650	5650	5650	5650	2600	2600	5500	5350	5150	5100
			(4.90)	18	27	33	37	41	44	47	49	51	53	55	26	28	23	23
100				0009	5400	5300	5300	5300	5300	5300	5300	5300	5300	5100	4900	4750	4600	4550
0.9				5150	4650	4550	4550	4550	4550	4550	4550	4550	4550	4550	4550	4550	4550	4550
				(5.40)	(5.90)	17	25	31	35	39	42	45	47	64	51	53	54	55
						4900	4500	4400	4400	4400	4400	4400	4400	4400	4400	4250	4000	3950
7.0						4200	3850	3800	3800	3800	3800	3800	3800	3750	3750	3750	3750	3750
						(6.40)	(6.90)	16	24	29	34	37	40	43	45	47	49	20
								4100	3800	3750	3750	3750	3750	3750	3750	3750	3600	3550
8.0		9 0						3550	3250	3200	3200	3200	3200	3200	3200	3200	3200	3200
								(7.40)	(2.30)	15	23	28	32	36	39	41	43	44
900										3500	3250	3250	3250	3250	3250	3250	3250	3250
0.6										3000	2800	2750	2750	2750	2750	2750	2750	2750
										(8.40)	(8.30)	15	22	27	31	34	37	38
												3050	2850	2800	2800	2800	2800	2800
10.0												2600	2400	2400	2400	2400	2400	2400
												(0.40)	(06.6)	14	21	26	30	31
1000														2650	2500	2500	2500	2500
17.0														2250	2100	2100	2100	2100
														(10.40)	(10.90)	14		22
0000																2350		2200
12.00														1		1950	1850	1850
																(11.40)][(11.90)]	11.90)	12.00)



LMI Duty
Lifting on RHINO HOOK

04



Weight of slings & hook block to be added to load Read and understand warning notes before operating crane Loads above bold red line are structural

MANUA	L EXT'N
MAX LENG	GTH 18.20
MAX	SWL
RADIUS	2400
6.91	2400
	60
	2100
9.52	2100
NII - XXX	50
	1900
11.78	1900
	40
	1800
13.62	1650
	30
	1750
14.97	1450
	20
	1550
15.81	1350
117	10
	1550
16.11	1300
	0

#### NOTE:

18.2m Boom length includes Manual 3rd extension. Ratings for Manual extension are structural & based on Boom Angle, not radius. The ratings do not change if the power sections are retracted with the manual extended.



## LMI Duty Lifting on FLYJIB (0 offset)

05

В	FLY
16.78	MAX LENG
SWL	MAX
1500	RADIUS
1500	6.23
60	74-15
1200	AND CONTROL
1200	8.62
50	
970	
970	10.69
40	
850	40.07
850	12.37
30	
770	13.62
770 20	13.62
750	-
	14.40
	1-7.40
	14 68
750 10 750 750 0	14.40

SWL (KG) LESS THAN 10 DEG ARTICULATION
SWL (KG) GREATER THAN 10 DEG ARTICULATION
BOOM ANGLE

Weight of slings & hook block to be added to load Read and understand warning notes before operating crane Loads above bold red line are structural

### NOTE:

16.78m Boom length includes Flyjib.
Ratings for Flyjib are structural & based on Boom Angle, not radius. The ratings do not change if the power sections are retracted with the Flyjib installed

## LMI Duty Lifting on FLYJIB (0 offset)

06

MANUA	L EXT'N
MAX LENG	TH 20.83
MAX	SWL
RADIUS	1500
8.25	1500
	60
	1200
11.22	1200
	50
40 -0	970
13.79	970
	40
15.88	850 850
15.00	30
	770
17.43	770
1.5 1.5.7	20
	750
18.39	750
	10
	750
18.73	750
Carrier of Miles Ann	0

SWL (KG) LESS THAN 10 DEG ARTICULATION
SWL (KG) GREATER THAN 10 DEG ARTICULATION
BOOM ANGLE

Weight of slings & hook block to be added to load Read and understand warning notes before operating crane

Loads above bold red line are structural

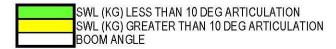
### NOTE:

20.83m Boom length includes Manual 3rd extension & Flyjib. Ratings for Flyjib are structural & based on Boom Angle, not radius. The ratings do not change if the power sections are retracted with the manual extended.



LMI Duty Lifting on FLYJIB (12.5 deg offset) 07

FLY	′JIB
MAX LENG	STH 16.71
MAX	SWL
RADIUS	1500
6.71	1500
	60
1.00	1200
9.04	1200
	50
0.000	970
11.03	970
	40
40.00	850
12.63	850 30
	770
13.78	770
13.70	20
	750
14.46	750
	10
	750
14.64	750
	0



Weight of slings & hook block to be added to load Read and understand warning notes before operating crane Loads above bold red line are structural

#### NOTE:

16.71m Boom length includes Flyjib.
Ratings for Flyjib are structural & based
on Boom Angle, not radius. The ratings do not
change if the power sections are retracted with
the Flyjib installed

LMI Duty Lifting on FLYJIB (12.5 deg offset) 08

MANUA	
	TH 20.76
MAX	SWL
RADIUS	1300
8.73	1300
1,000	60
	1120
11.64	1120
	50
	920
14.13	920
	40
Control of the contro	820
16.14	820
	30
	770
17.59	770
	20
	750
18.45	750
	10
40.00	750
18.69	750
	0

	SWL (KG) LESS THAN 10 DEG ARTICULATION
	SWL (KG) GREATER THAN 10 DEG ARTICULATION
10	BOOM ANGLE

Weight of slings & hook block to be added to load Read and understand warning notes before operating crane Loads above bold red line are structural

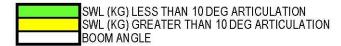
### NOTE:

20.76m Boom length includes Manual 3rd extension & Flyjib. Ratings for Flyjib are structural & based on Boom Angle, not radius. The ratings do not change if the power sections are retracted with the manual extended.



LMI Duty
Lifting on FIXED LUG

09



Weight of slings & hook block to be added to load Read and understand warning notes before operating crane Loads above bold red line are structural

FIXED	LUG
BOOM LEN	NGTH 3.36
MAX	SWL
RADIUS	
10/10/2	
	20000
0.86	20000
0.00	30
SOUTH MANAGEMENT	20000
1.09	20000
3	20000
1.23	20000
	10
	20000
1.26	20000
	0



LMI Duty
Lifting on INNER LUG

10

Weight of slings & hook block to be added to load Read and understand warning notes before operating crane Loads above bold red line are structural

SWL (KG) LESS THAN 10 DEG ARTICULATION
SWL (KG) GREATER THAN 10 DEG ARTICULATION
BOOM ANGLE OR (RADIUS AT 0 DEG BOOM ANGLE)

	BOOM LENGTH (m)								
RADIUS	4.16	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.25
1.4	20000	20000	20000	19300	18100	17200			
	16000	16000	16000	16000	16000	16000			
	34	40	46	51	55	58			
	19000	19000	19000	18700	17600	16500	15600	15000	
1.7	16000	16000	16000	16000	16000	16000	15600	15000	
	25	33	41	47	51	55	58	60	
	16950	16900	16800	16700	16650	16000	14650	14100	
2.0	14750	14700	14600	14500	14400	14350	14300	14100	
	11	25	36	43	48	52	55	57	
	16400	13800	13150	13100	13050	12950	12900	12750	11350
2.5	14300	11950	11400	11350	11250	11200	11150	11100	11050
	(2.06)	(2.40)	24	34	41	46	50	53	57
			11100	10700	10650	10600	10550	10500	10450
3.0			9600	9200	9150	9100	9050	9000	8950
			(2.90)	23	33	39	44	48	52
				9200	8900	8850	8800	8800	8750
3.5				7900	7650	7600	7550	7500	7450
				(3.40)	22	31	38	42	48
					7800	7550	7550	7500	7450
4.0					6700	6450	6450	6400	6350
					(3.90)	21	30	36	43
						6700	6550	6500	6450
4.5						5700	5550	5500	5500
						(4.40)	20	29	37
							5850	5700	5650
5.0							4950	4800	4800
=							(4.90)	19	31
								5150	5000
5.5								4350	4200
								(5.40)	23
6.0									4450
									3700
									11
6.15									4300
									3600
									(6.15)



LMI Duty
Lifting on OUTER LUG

11

Weight of slings & hook block to be added to load Read and understand warning notes before operating crane Loads above bold red line are structural

SWL (KG) LESS THAN 10 DEG ARTICULATION
SWL (KG) GREATER THAN 10 DEG ARTICULATION
BOOM ANGLE OR (RADIUS AT 0 DEG BOOM ANGLE)

	BOOM LENGTH (m) - READ OFF SCALE FOR INNER LUG								
RADIUS	4.16	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.25
1.4	20000	20000	20000	19900					
	16000	16000	16000	16000					
	46	50	54	57					
	19000	19000	19000	18850	17400	15650			
1.7	16000	16000	16000	16000	16000	15650			
- 1	41	45	50	54	57	59			
	17400	17300	17150	17050	16350	14700	13400		
2.0	15200	15100	14950	14850	14750	14650	13400		
	35	40	46	50	54	56	59		
	13700	13600	13500	13400	13300	13250	12350	11150	10150
2.5	11950	11850	11750	11650	11550	11500	11400	11150	10150
	23	31	38	44	48	52	54	57	60
	11850	11150	11050	11000	10900	10850	10750	10300	9350
3.0	10300	9700	9600	9500	9450	9350	9300	9250	9150
	(2.85)	17	29	37	42	46	50	53	56
		10350	9300	9250	9150	9100	9050	9000	8650
3.5		9000	8050	8000	7900	7850	7800	7750	7650
		(3.20)	16	28	35	41	45	48	52
			8700	7900	7850	7800	7750	7700	7650
4.0			7550	6800	6750	6700	6650	6600	6550
	- 1		(3.70)	15	27	34	39	43	48
				7450	6850	6800	6750	6700	6650
4.5				6400	5850	5800	5750	5750	5650
				(4.20)	15	26	33	38	44
					6500	6000	5950	5900	5850
5.0	·				5550	5100	5050	5000	4950
					(4.70)	14	25	32	39
					-2	5700	5250	5250	5200
5.5						4850	4450	4450	4400
						(5.20)	14	24	33
							5050	4700	4650
6.0							4250	3950	3900
	41				15		(5.70)	13	27
6.5								4500	4200
								3750	3500
								(6.20)	19
									3800
6.9									3150
									(6.94)



# LMI Duty Lifting in MANBASKET

12

MANBASKET					
MAX LENGTH 13.85					
MAX	SWL				
RADIUS	250				
6.18	250				
	60				
2002	250				
8.36	250				
	50				
10.22	250				
10.22	250 40				
	250				
11.71	250				
	30				
97	250				
12.79	250				
2.7	20				
40.40	250				
13.42	250				
	250				
13.58	250				
15.50	0				

SWL (KG) LESS THAN 10 DEG ARTICULATION
SWL (KG) GREATER THAN 10 DEG ARTICULATION
BOOM ANGLE

Read and understand warning notes before operating crane Loads above bold red line are structural

#### NOTE:

13.85m Boom length does not include Manbasket. Ratings for Manbasket are structural & based on Boom Angle, not radius. The ratings do not change if the power sections are retracted with the Manbasket installed

# LMI Duty Lifting in MANBASKET

13

MANUAL EXT'N				
MAX LENGTH 17.90				
MAX	SWL			
RADIUS	250			
8.20	250			
	60			
(1)000000000000000000000000000000000000	250			
10.96	250			
	50			
10/20/20/20	250			
13.32	250			
	40			
45.00	250			
15.22	250 30			
	250			
16.59	250			
10.55	20			
	250			
17.41	250			
77277	10			
	250			
17.63	250			
	0			

SWL (KG) LESS THAN 10 DEG ARTICULATION
SWL (KG) GREATER THAN 10 DEG ARTICULATION
BOOM ANGLE

Read and understand warning notes before operating crane Loads above bold red line are structural

#### NOTE:

17.90m Boom length includes Manual 3rd extension but not Manbasket. Ratings for Manbasket are structural & based on Boom Angle, not radius. The ratings do not change if the power sections are retracted with the manual extended.





## **FOOTPRINT**

