



**TEREX LIFTING AUSTRALIA PTY LTD**

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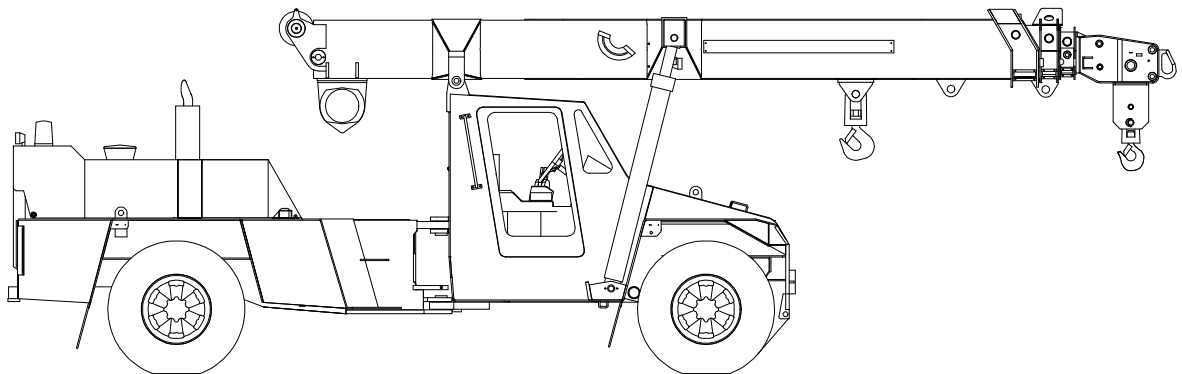
# CRANE RATING MANUAL

## MODEL AT-20

BOOK PART NUMBER 16C1320-

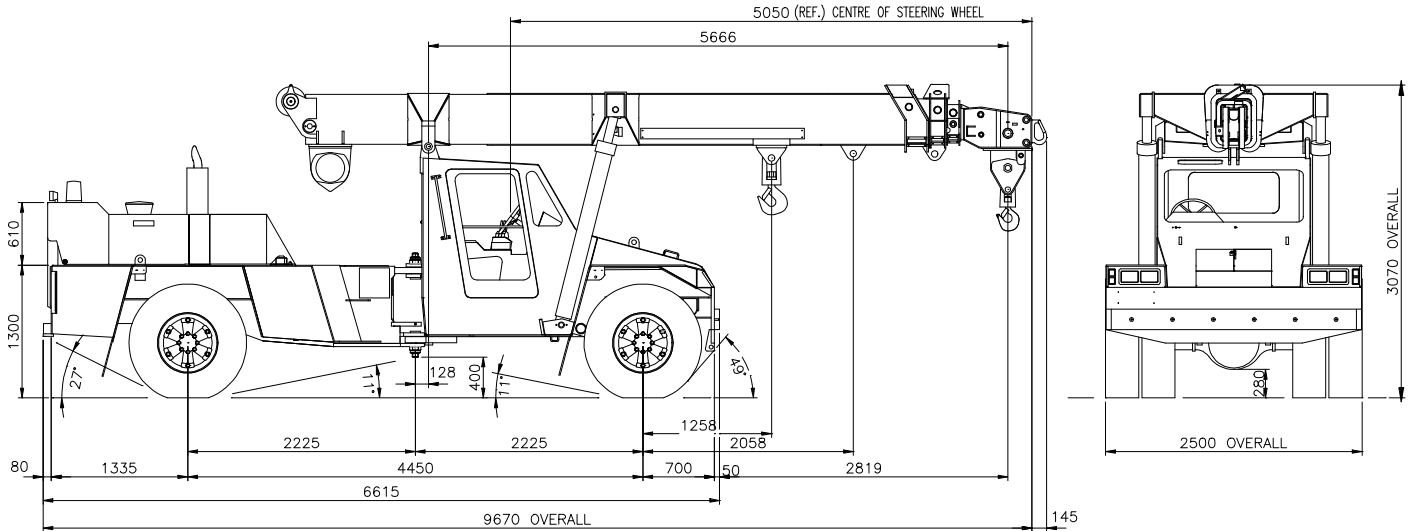
# HYDRAULIC ALL TERRAIN PICK & CARRY CRANE

20 TONNE MAXIMUM CAPACITY



**Do not operate this  
crane unless you have  
read and understood  
the information in this  
book.**

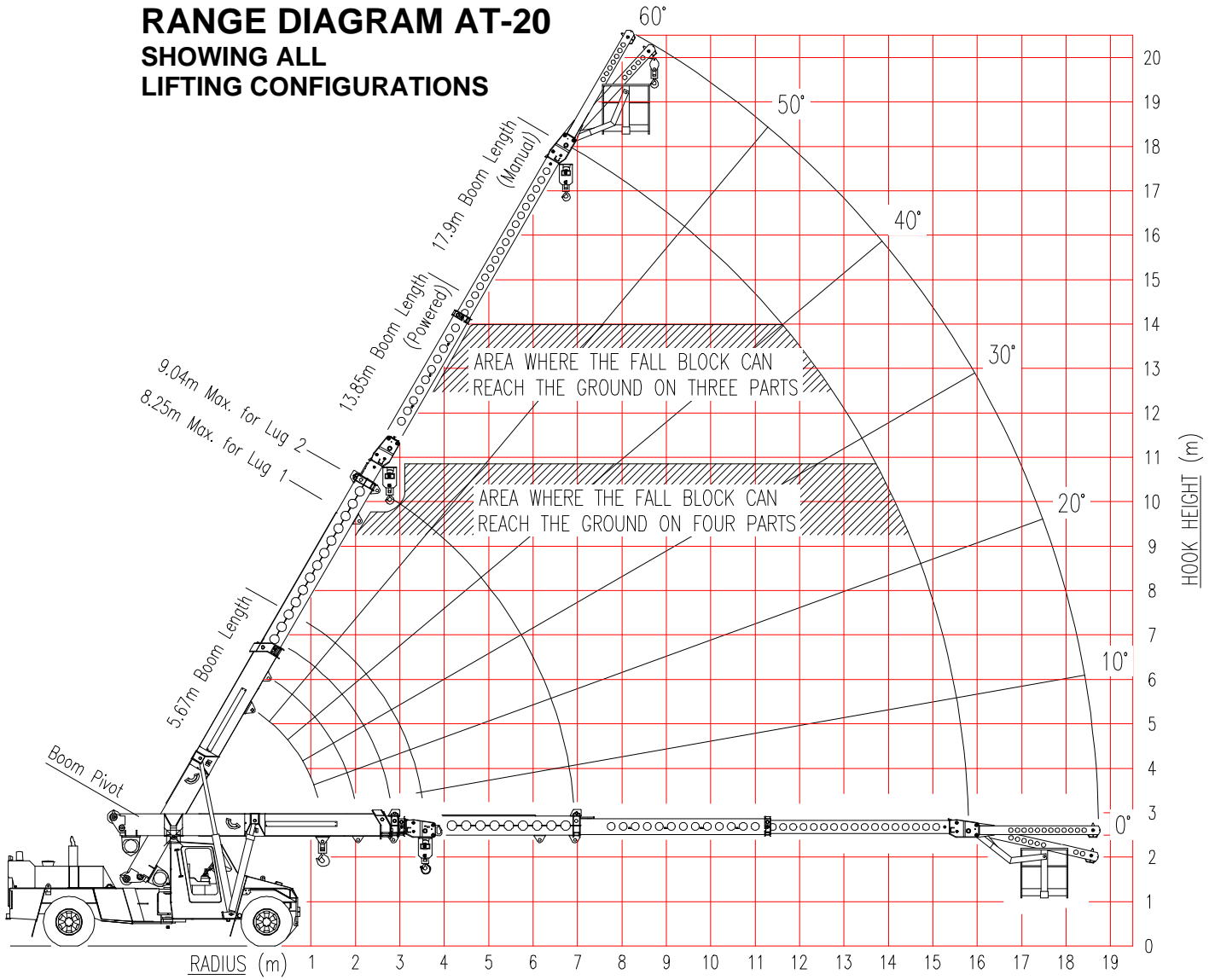
# INFORMATIONAL DATA



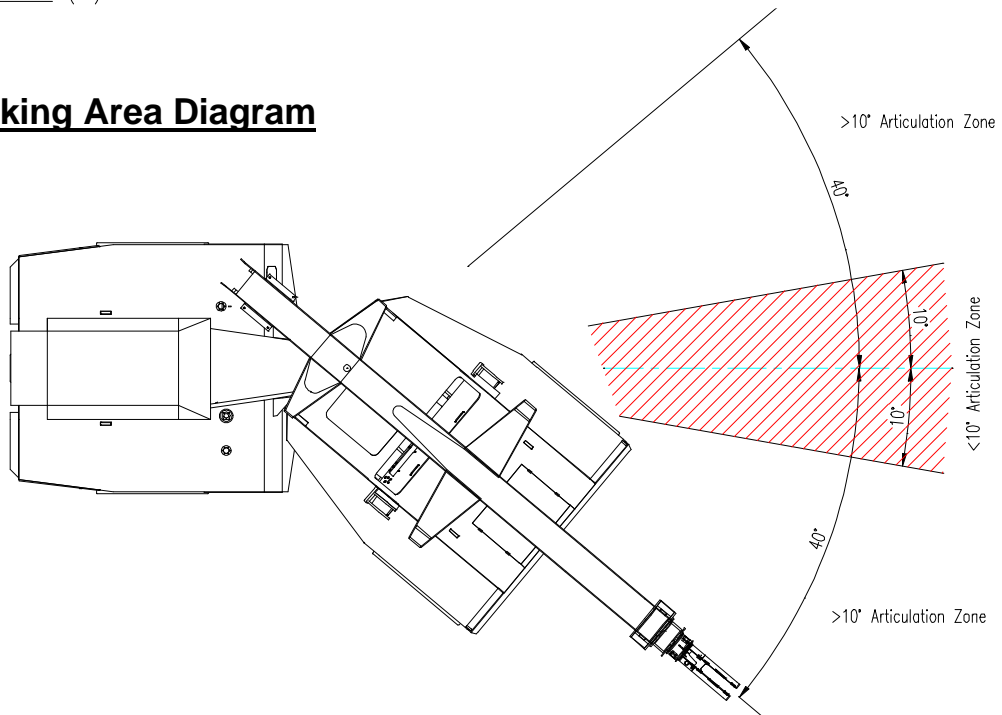
## Crane Dimensions

<b>Length (carrier)</b>	<b>6 615</b>
<b>Width</b>	<b>2 500</b>
<b>Height (with Boom)</b>	<b>3 070</b>
<b>Length Overall</b>	<b>9 670</b>
<b>Wheelbase</b>	<b>4 450</b>
<b>Front Axle Weight</b>	<b>8 000 kg</b>
<b>Rear Axle Weight</b>	<b>11 500 kg</b>

# RANGE DIAGRAM AT-20 SHOWING ALL LIFTING CONFIGURATIONS



## Working Area Diagram



## HOOK BLOCK WEIGHTS

<b>SINGLE PART HOOK BLOCK</b>	<b>30 kg</b>
<b>TWO/THREE PART HOOK BLOCK</b>	<b>95 kg</b>
<b>FOUR PART HOOK BLOCK</b>	<b>125 kg</b>
<b>20 METRIC TONNE HOOK</b>	<b>15 kg</b>

**NOTE : THESE WEIGHTS APPLY ONLY TO TEREX LIFTING AUSTRALIA PTY LTD SUPPLIED EQUIPMENT.**

## WINCH LOAD CHART

Number of Parts of Rope	Permissible Winch Load (kg)
<b>1</b>	<b>4 200</b>
<b>2</b>	<b>8 400</b>
<b>3</b>	<b>12 600</b>
<b>4</b>	<b>16 800</b>

**Wire Rope : 14mm 35W x 7 Non-rotating Compak  
Minimum Breaking Force 165 kN**

## TYRE INFLATION CHART

Position	Construction & Ply Rating	Inflation Pressure - PSI	
		Pick & Carry	Highway Travel
Front	12.00 – 20 x 20 Ply	125	125
Rear	12.00 – 20 x 20 Ply	90	90

16C1320-/3-3

RADIUS	BOOM LENGTH (m)																	
	5.67	6.00	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
1.6	16800	16250	15450	14900														
	12600	12600	12600	12600														
2.0	48	51	54	57														
	16800	16800	16500	15700	15100	14700	14350											
2.5	12600	12600	12600	12600	12600	12600	12600	12600										
	42	46	50	53	56	58	60											
3.0	13900	13900	13900	13850	13850	13850	13850	13200	13000									
	12150	12150	12100	12100	12100	12100	12100	12050	12050									
3.5	34	39	44	48	51	54	56	58	60									
	11450	11450	11450	11400	11400	11400	11400	11400	11400	11150	10250							
4.0	9950	9950	9950	9950	9950	9950	9900	9900	9900	9900	9900							
	25	31	37	42	46	49	52	55	57	59	60							
4.5	9650	9650	9650	9650	9650	9650	9650	9650	9650	9650	9650	9500	8150	7500				
	8400	8400	8400	8400	8400	8400	8400	8400	8400	8350	8350	8350	8150	7500				
5.0	8	20	29	36	41	45	48	51	53	55	57	59	60					
	9450	8550	8350	8350	8350	8350	8350	8350	8300	8300	8300	8300	7600	7000	6700	6450		
5.5	8200	7450	7250	7250	7250	7250	7250	7200	7200	7200	7200	7200	7200	7000	6700	6450		
	(3.57)	(3.90)	19	28	35	39	43	47	49	52	54	56	57	59	60			
6.0			7500	7300	7300	7300	7300	7300	7300	7300	7300	7150	6550	6250	6050	5800	5650	
			6500	6350	6350	6350	6350	6350	6300	6300	6300	6300	6300	6300	6250	6050	5800	5650
6.5			(4.40)	19	27	34	38	42	45	48	50	52	54	56	58	59	60	
			6650	6500	6500	6500	6500	6500	6500	6500	6500	6500	6150	5900	5650	5450	5300	5150
7.0			5750	5600	5600	5600	5600	5600	5600	5600	5600	5600	5600	5600	5600	5450	5300	5150
			(4.90)	18	27	33	37	41	44	47	49	51	53	55	56	58	59	59
7.5				5950	5350	5250	5250	5250	5250	5250	5250	5250	5250	5250	5050	4850	4700	4600
				5100	4600	4550	4550	4550	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
8.0				(5.40)	(5.90)	17	25	31	35	39	42	45	47	49	51	53	54	
				4850	4450	4400	4400	4400	4400	4400	4400	4400	4350	4350	4350	4200	3950	
8.5						4200	3800	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	
						(6.40)	(6.90)	16	24	29	34	37	40	43	45	47	48	
9.0								4100	3750	3700	3700	3700	3700	3700	3700	3700	3600	
								3500	3200	3150	3150	3150	3150	3150	3150	3150	3150	
9.5								(7.40)	(7.90)	15	23	28	32	36	38	41	43	
								3500	3250	3200	3200	3200	3200	3200	3200	3200	3200	
10.0										2950	2750	2700	2700	2700	2700	2700	2700	
										(8.40)	(8.90)	15	22	27	31	34	36	
10.5												3000	2800	2800	2800	2800	2800	
												2550	2400	2350	2350	2350	2350	
11.0												(9.40)	(9.90)	14	21	26	29	
														2650	2500	2450	2450	
11.5														2200	2100	2050	2050	
														(10.40)	(10.90)	13	18	
11.75																2350	2250	
																1950	1850	
																(11.40)	(11.75)	



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

LMI Duty  
 Lifting on WINCH  
 01

	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*

MANUAL EXT'N	
MAX LENGTH 17.90	
MAX RADIUS	SWL
6.74	2550
	2550
9.31	60
	2250
	2250
11.53	50
	2050
	2050
13.34	40
	1900
	1700
14.67	30
	1800
	1500
15.51	20
	1650
	1350
15.80	10
	1600
	1300
	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.

RADIUS	BOOM LENGTH (m)																		
	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	
1.6	10000	10000	10000	10000															
	51	54	57	60															
2.0	10000	10000	10000	10000	10000	10000													
	46	50	53	56	58	60													
2.5	10000	10000	10000	10000	10000	10000	10000	10000											
	39	44	48	51	54	57	59	60											
3.0	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000									
	30	37	42	46	50	52	55	57	59	60									
3.5	9750	9750	9750	9700	9700	9700	9700	9700	9700	9650	8850	7650							
	19	30	36	41	45	48	51	53	55	57	59	60							
4.0	8700	8400	8400	8400	8400	8400	8400	8350	8350	8350	8100	7100	6750	6500					
	7550	7300	7300	7300	7300	7300	7300	7250	7250	7250	7250	7100	6750	6500					
4.5	(3.88)	19	29	35	40	43	47	49	52	54	56	57	59	60					
	7550	7400	7400	7350	7350	7350	7350	7350	7350	7350	7350	6650	6300	6100	5850	5700			
5.0	(4.40)	19	28	34	38	42	45	48	50	53	54	56	58	59	60				
	6700	6550	6550	6550	6550	6550	6550	6550	6550	6500	6250	5950	5700	5500	5350	5150	5100		
6.0	(4.90)	18	27	33	37	41	44	47	49	51	53	55	56	58	59	59			
	6000	5400	5300	5300	5300	5300	5300	5300	5300	5300	5300	5300	5100	4900	4750	4600	4550		
7.0	(5.40)	(5.90)	17	25	31	35	39	42	45	47	49	51	53	54	53	54	55		
	4900	4500	4400	4400	4400	4400	4400	4400	4400	4400	4400	4400	4400	4400	4400	4250	4000	3950	
8.0	(6.40)	(6.90)	16	24	29	34	37	40	43	45	47	49	51	53	54	53	54	55	
	4200	3850	3800	3800	3800	3800	3800	3800	3800	3800	3800	3750	3750	3750	3750	3750	3750	3750	
9.0	(7.40)	(7.90)	15	23	28	32	36	39	41	43	44	44	44	44	44	44	44	44	
	4100	3800	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3600	3550	
10.0	(8.40)	(8.90)	15	22	27	31	34	37	40	43	45	47	49	51	53	54	53	54	
	3500	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250	
11.0	(9.40)	(9.90)	15	22	27	31	34	37	40	43	45	47	49	51	53	54	53	54	
	3000	2800	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	
12.00	(10.40)	(10.90)	14	21	26	30	31	31	31	31	31	31	31	31	31	31	31	31	
	3050	2850	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	
	(11.40)	(11.90)	(12.00)																



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

	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*

MANUAL EXT'N	
MAX LENGTH 18.20	
MAX RADIUS	SWL
<b>6.91</b>	<b>2400</b>
	<b>2400</b>
<b>9.52</b>	60
	<b>2100</b>
	<b>2100</b>
<b>11.78</b>	50
	<b>1900</b>
	<b>1900</b>
<b>13.62</b>	40
	<b>1800</b>
	<b>1650</b>
	30
<b>14.97</b>	<b>1750</b>
	<b>1450</b>
	20
<b>15.81</b>	<b>1550</b>
	<b>1350</b>
	10
<b>16.11</b>	<b>1550</b>
	<b>1300</b>
	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**

FLYJIB	
MAX LENGTH 16.78	
MAX RADIUS	SWL
6.23	<b>1500</b>
	60
8.62	<b>1200</b>
	<b>1200</b>
	50
10.69	<b>970</b>
	<b>970</b>
	40
12.37	<b>850</b>
	<b>850</b>
	30
13.62	<b>770</b>
	<b>770</b>
	20
14.40	<b>750</b>
	<b>750</b>
	10
14.68	<b>750</b>
	<b>750</b>
	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 :**  
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**

MANUAL EXT'N	
MAX LENGTH 20.83	
MAX RADIUS	SWL
8.25	<b>1500</b>
	60
11.22	<b>1200</b>
	<b>1200</b>
	50
13.79	<b>970</b>
	<b>970</b>
	40
15.88	<b>850</b>
	<b>850</b>
	30
17.43	<b>770</b>
	<b>770</b>
	20
18.39	<b>750</b>
	<b>750</b>
	10
18.73	<b>750</b>
	<b>750</b>
	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**

FLYJIB	
MAX LENGTH 16.71	
MAX RADIUS	SWL
6.71	1500
	60
9.04	1200
	1200
	50
11.03	970
	970
	40
12.63	850
	850
	30
13.78	770
	770
	20
14.46	750
	750
	10
14.64	750
	750
	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 :**  
 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**

MANUAL EXT'N	
MAX LENGTH 20.76	
MAX RADIUS	SWL
8.73	1300
	60
11.64	1120
	1120
	50
14.13	920
	920
	40
16.14	820
	820
	30
17.59	770
	770
	20
18.45	750
	750
	10
18.69	750
	750
	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 :**  
 20.76m 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 INNER LUG

*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)

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

*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)

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

**LMI Duty**  
Lifting in MANBASKET

**12**

MANBASKET	
MAX LENGTH 13.85	
MAX RADIUS	SWL
<b>6.18</b>	250
	<b>250</b>
	60
8.36	250
	<b>250</b>
	50
10.22	250
	<b>250</b>
	40
11.71	250
	<b>250</b>
	30
12.79	250
	<b>250</b>
	20
13.42	250
	<b>250</b>
	10
13.58	250
	<b>250</b>
	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 RADIUS	SWL
<b>8.20</b>	250
	<b>250</b>
	60
10.96	250
	<b>250</b>
	50
13.32	250
	<b>250</b>
	40
15.22	250
	<b>250</b>
	30
16.59	250
	<b>250</b>
	20
17.41	250
	<b>250</b>
	10
17.63	250
	<b>250</b>
	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.