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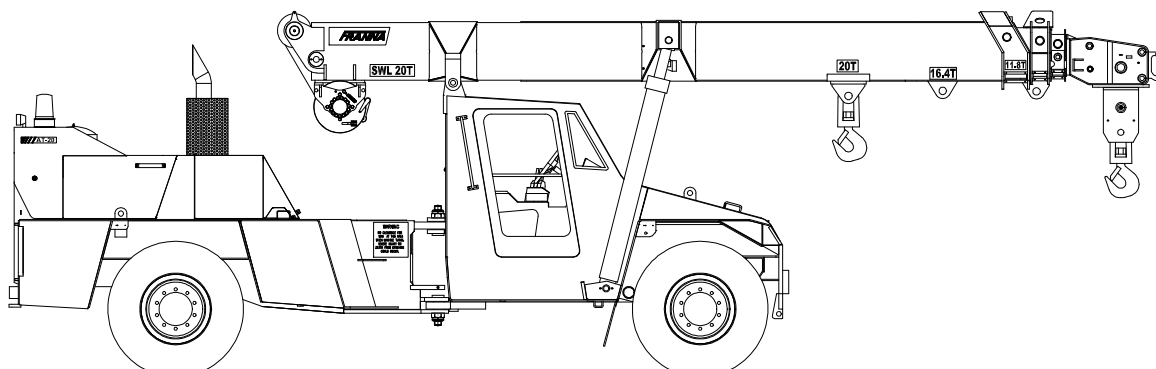
RATED CAPACITY MANUAL

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.**

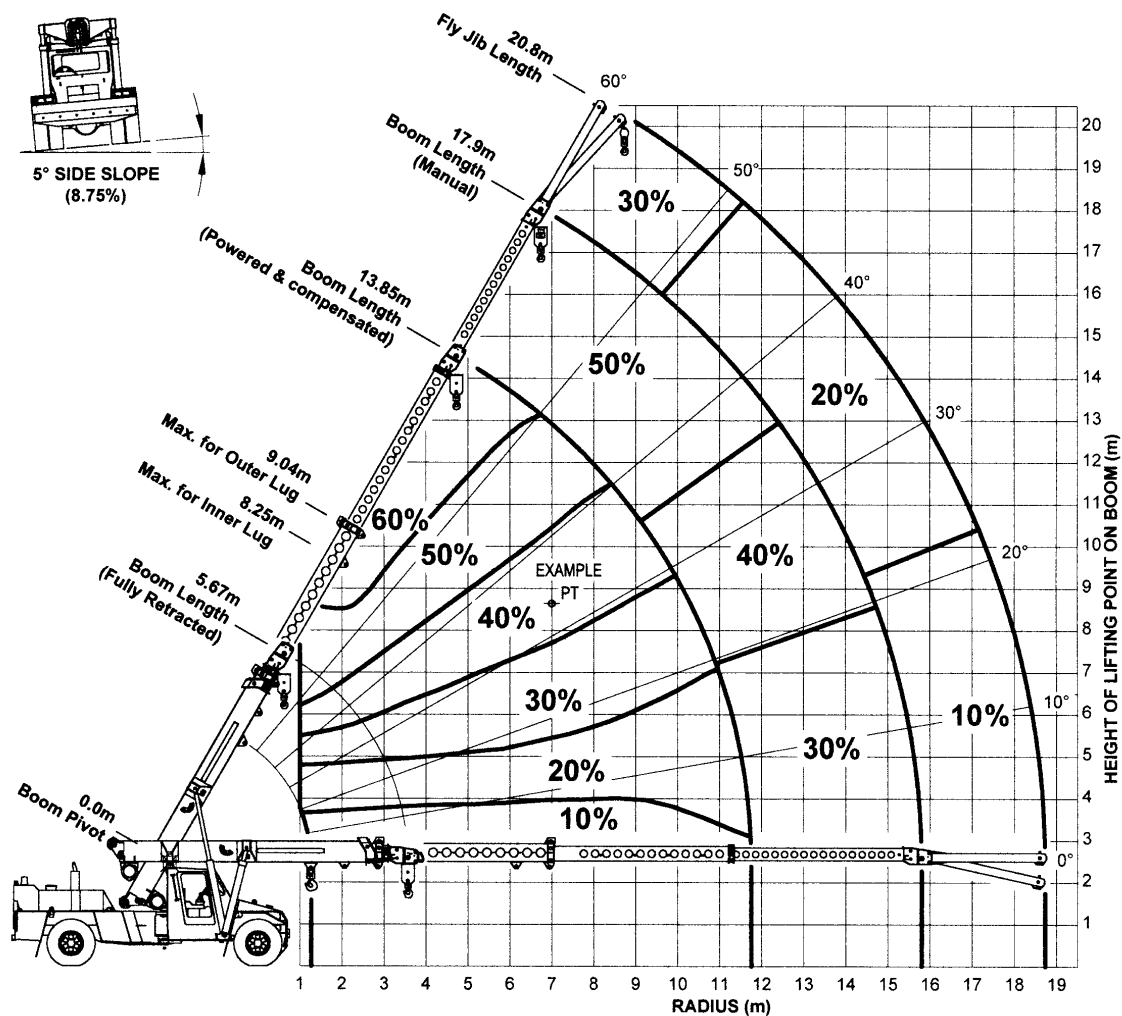


Figure 1: Percentage Deration Chart for AT-20 at 5° Side Slope

Note:

1. Percentage deration chart is based on 66.6% stability as per AS 1418.5 with the crane on a firm side slope of 5° (8.75% Gradient).
2. The percentage deration is dependent upon the location of the lifting point on the boom.
3. The percentage deration should be applied to the Rated Capacity as read off the Rated Capacity Manual for the applicable boom length, Loaded Boom Angle, Load Radius and Articulation angle.

Example (For AT-20 Crane, Rated Capacity Manual 16C1320-):

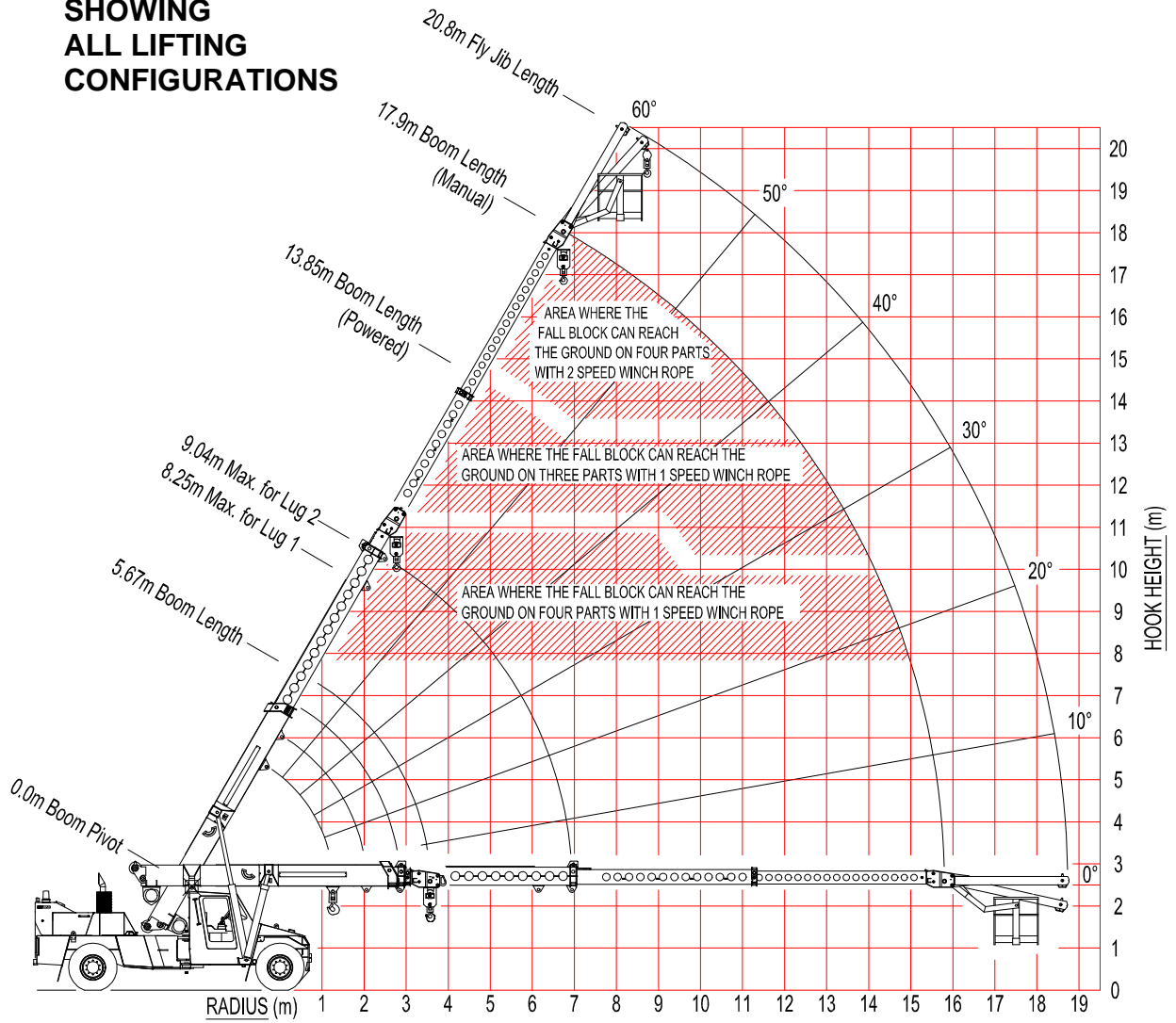
Lifting condition:
 Boom Length: 11.0 m
 Loaded Boom Angle: 34.0°
 Load Radius: 7.0 m
 Articulation Angle: Greater than 10°

RC (Level ground): 3750 kg (From Rated Capacity Manual LMI Duty 01, for above lifting conditions)
 Percentage Deration: 40 % (From Figure 1: Percentage Deration Chart)

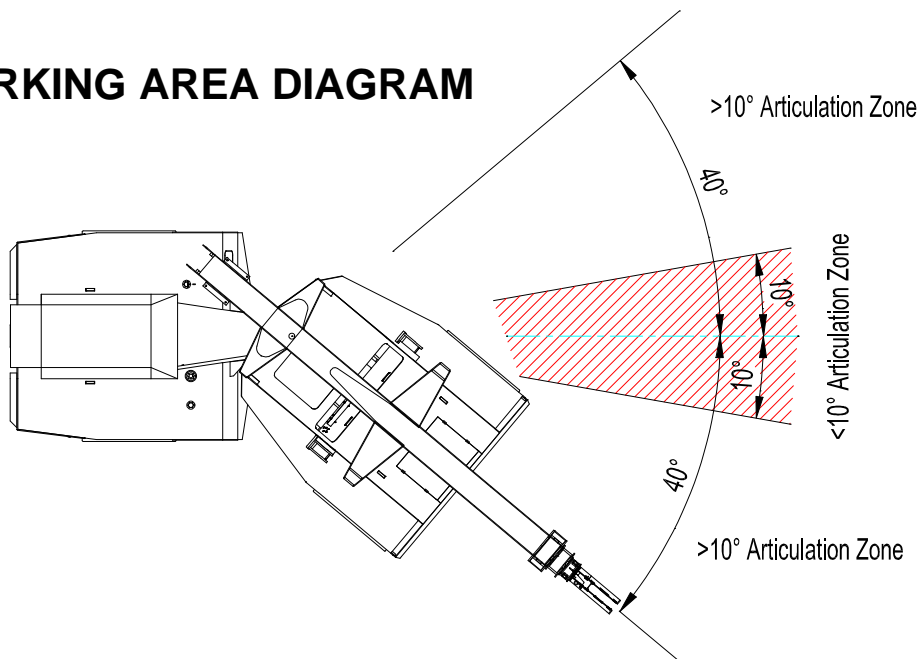
RC (5° Slide Slope) = RC (as per Rated Capacity Manual) – Percentage Deration x RC (as per Rated Capacity Manual) / 100 %
 = 3750 kg – 40% x 3750 kg / 100%
 = **2250 kg**

RANGE DIAGRAM AT-20

SHOWING ALL LIFTING CONFIGURATIONS

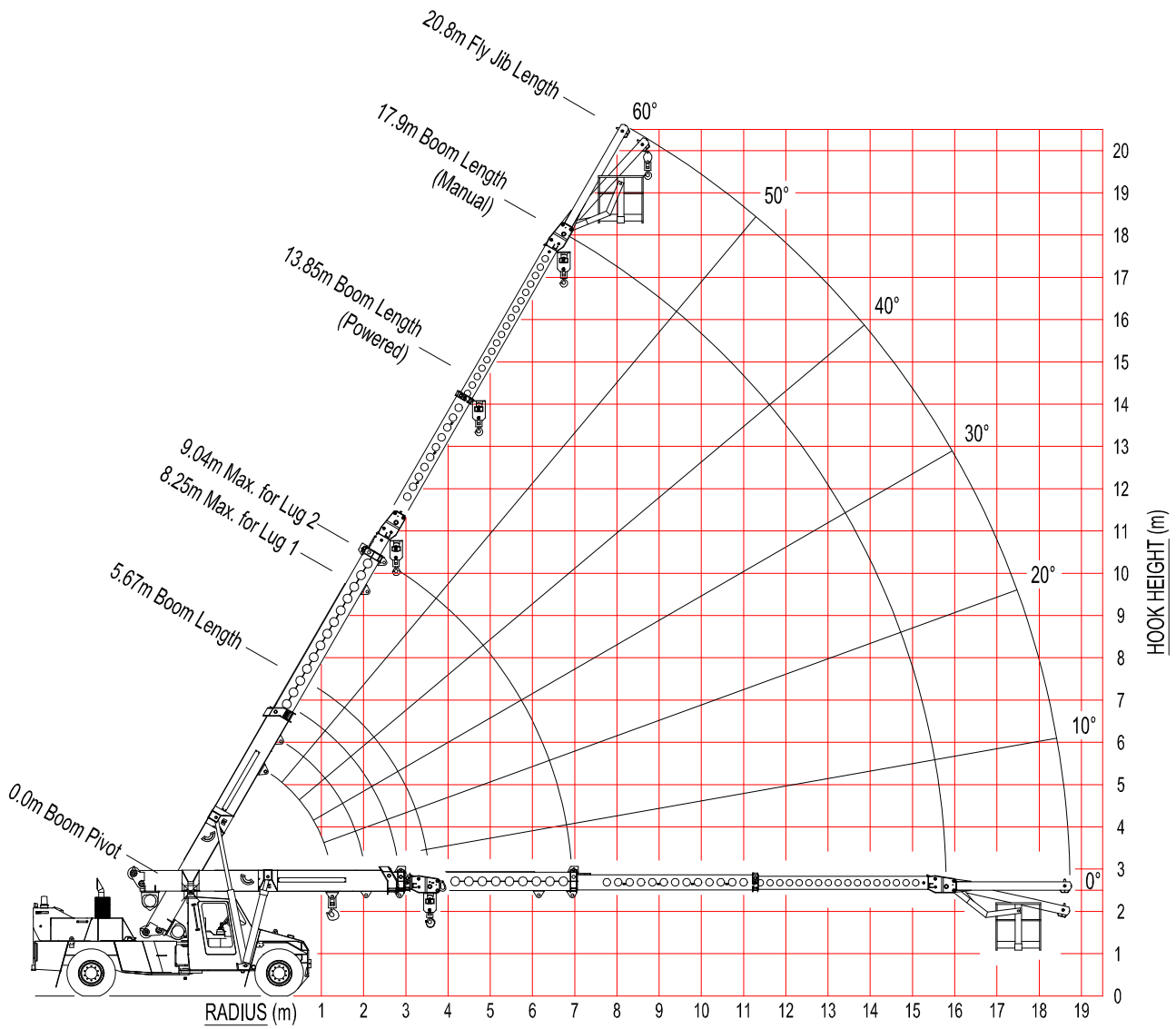


WORKING AREA DIAGRAM



RANGE DIAGRAM AT-20

SHOWING ALL LIFT CONFIGURATIONS



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

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

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	42	46	50	53	56	58	60												
	13900	13900	13900	13850	13850	13850	13850	13200	13000										
3.0	34	39	44	48	51	54	56	58	60										
	11450	11450	11450	11400	11400	11400	11400	11400	11400	11150	10250								
3.5	25	31	37	42	46	49	52	55	57	59	60								
	9650	9650	9650	9650	9650	9650	9650	9650	9650	9650	9500	8150	7500						
4.0	8	20	29	36	41	45	48	51	53	55	57	59	60						
	8400	8400	8400	8400	8400	8400	8400	8400	8350	8350	8350	8150	7500						
4.5	8200	7450	7250	7250	7250	7250	7250	7250	7200	7200	7200	7000	6450						
	(3.57)	(3.90)	19	28	35	39	43	47	49	52	54	56	57	59	60				
5.0			7500	7300	7300	7300	7300	7300	7300	7300	7300	7150	6550	5800	5650				
			6500	6350	6350	6350	6350	6350	6300	6300	6300	6300	6300	6250	6050	5800	5650		
6.0				6650	6500	6500	6500	6500	6500	6500	6500	6500	6150	5900	5650	5450	5300	5150	
				5750	5600	5600	5600	5600	5600	5600	5600	5600	5600	5600	5600	5600	5300	5150	
7.0				(4.90)	18	27	33	37	41	44	47	49	51	53	55	56	58	59	
				5950	5350	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5050	4850	4700	4600
8.0					5100	4600	4550	4550	4550	4500	4500	4500	4500	4500	4500	4500	4500	4500	
					(5.40)	17	25	31	35	39	42	45	47	49	51	53	54	54	
9.0						4850	4450	4400	4400	4400	4400	4400	4400	4400	4350	4350	4200	3950	
						4200	3800	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	
10.0							(6.40)	16	24	29	34	37	40	43	45	47	48	48	
								4100	3750	3700	3700	3700	3700	3700	3700	3700	3700	3600	
11.0									3500	3200	3150	3150	3150	3150	3150	3150	3150	3150	
									(7.40)	15	23	28	32	36	38	41	43	43	
11.75										3500	3250	3200	3200	3200	3200	3200	3200	3200	
										(8.40)	15	22	27	31	34	36	36	36	
											3000	2800	2800	2800	2800	2800	2800	2800	
											2550	2400	2350	2350	2350	2350	2350	2350	
											(9.40)	14	21	26	29	29	29	29	
												2650	2500	2450	2450	2450	2450	2450	
												2200	2100	2050	2050	2050	2050	2050	
												(10.40)	13	18	18	18	18	18	
													2350	2250	2250	2250	2250	2250	
													1950	1850	1850	1850	1850	1850	
																		(11.40)	(11.75)

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

Mass 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'D	
MAX LENGTH 17.90	
MAX RADIUS	RC
6.74	2550
	2550
9.31	60
	2250
	2250
11.53	50
	2050
	2050
	40
13.34	1900
	1700
	30
	1800
14.67	1500
	20
	1650
15.51	1350
	10
	1600
15.80	1300
	0
	1600

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.

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

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

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														
2.0	10000	10000	10000	10000	10000	10000	10000	10000										
2.5	10000	10000	10000	10000	10000	10000	10000	10000	10000									
3.0	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000								
3.5	9750	9750	9750	9700	9700	9700	9700	9700	9700	9650	8850	7650						
4.0	8500	8500	8450	8450	8450	8450	8450	8400	8400	8400	8400	7650						
4.5	8700	8400	8400	8400	8400	8400	8350	8350	8350	8350	8100	7100	6750	6500				
5.0	7550	7300	7300	7300	7300	7300	7250	7250	7250	7250	7250	7100	6750	6500				
5.5	7550	7400	7400	7400	7350	7350	7350	7350	7350	7350	7350	7350	6650	6300	6100	5850	5700	
6.0	6550	6400	6400	6400	6400	6400	6400	6350	6350	6350	6350	6350	6350	6100	5850	5700		
6.5	6700	6550	6550	6550	6550	6550	6550	6550	6550	6550	6550	6500	6250	5950	5700	5500	5350	5100
7.0	5800	5650	5650	5650	5650	5650	5650	5650	5650	5650	5650	5650	5600	5600	5500	5500	5350	5100
7.5	6000	5400	5300	5300	5300	5300	5300	5300	5300	5300	5300	5300	5300	5100	4900	4750	4600	4550
8.0	5150	4650	4550	4550	4550	4550	4550	4550	4550	4550	4550	4550	4550	4550	4550	4550	4550	4550
8.5	4900	4500	4400	4400	4400	4400	4400	4400	4400	4400	4400	4400	4400	4400	4400	4400	4000	3950
9.0	4200	3850	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3750	3750	3750	3750
9.5	4100	3800	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3600	3550
10.0	3550	3250	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200
10.5	3500	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250	3250
11.0	3000	2800	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750
11.5	3050	2850	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800
12.0	2600	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400
12.5	2650	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500
13.0	2250	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
13.5	2350	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
14.0	1950	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
14.16																		

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

Mass 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'D	
MAX LENGTH 18.20	
MAX RADIUS	RC
6.91	2400
	2400
9.52	60
	2100
	2100
11.78	50
	1900
	1900
13.62	40
	1800
	1650
14.97	30
	1750
	1450
15.81	20
	1550
	1350
16.11	10
	1550
	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

FLYJIB	
MAX LENGTH 16.78	
MAX RADIUS	RC
6.23	1500
	1500
	60
8.62	1200
	1200
	50
10.69	970
	970
	40
12.38	850
	850
	30
13.63	770
	770
	20
14.40	750
	750
	10
14.68	750
	750
	0

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

*Mass 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)
MANUAL EXTENDED

06

MANUAL EXT'D	
MAX LENGTH 20.83	
MAX RADIUS	RC
8.25	1500
	1500
	60
11.22	1200
	1200
	50
13.79	970
	970
	40
15.88	850
	850
	30
17.43	770
	770
	20
18.39	750
	750
	10
18.73	750
	750
	0

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

*Mass 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 and Flyjib installed.

LMI Duty

07

Lifting on FLYJIB (12.5 deg offset)

FLYJIB	
MAX LENGTH 16.74	
MAX RADIUS	RC
6.70	1500
	60
9.03	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

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

*Mass 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 :

16.74m 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

08

Lifting on FLYJIB (12.5 deg offset)
MANUAL EXTENDED

MANUAL EXT'D	
MAX LENGTH 20.79	
MAX RADIUS	RC
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

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

*Mass 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 :

20.79m 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 and Flyjib installed.

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

Mass 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 LENGTH 3.36	
MAX RADIUS	RC
0.86	20000
	20000
	30
1.09	20000
	20000
	20
1.23	20000
	20000
	10
1.26	20000
	20000
	0

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

	RC (KG) LESS THAN 10 DEG ARTICULATION
	RC (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)

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




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

RADIUS	BOOM LENGTH (m)								
	4.95	5.30	5.80	6.30	6.80	7.30	7.80	8.30	9.04
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	RC
6.06	275
	275
	60
8.24	275
	275
	50
10.10	275
	275
	40
11.59	275
	275
	30
12.67	275
	275
	20
13.30	275
	275
	10
13.46	275
	275
	0

 RC (KG) LESS THAN 10 DEG ARTICULATION
 RC (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
MANUAL EXTENDED

13

MANUAL EXT'N	
MAX LENGTH 17.90	
MAX RADIUS	RC
8.09	275
	275
	60
10.85	275
	275
	50
13.21	275
	275
	40
15.10	275
	275
	30
16.46	275
	275
	20
17.29	275
	225
	10
17.51	275
	205
	0

 RC (KG) LESS THAN 10 DEG ARTICULATION
 RC (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 and Manbasket installed.