



**TEREX LIFTING AUSTRALIA PTY LTD**

Curtin Avenue East • P.O. Box 1396 • Eagle Farm QLD 4009 AUSTRALIA  
Telephone: (+61) 7 3868 9600  
Internet: www.franna.com.au

Facsimile: (+61) 7 3268 2489  
E-Mail: info@franna.com.au

ABN 85 010 671 046  
ACN 010 671 048



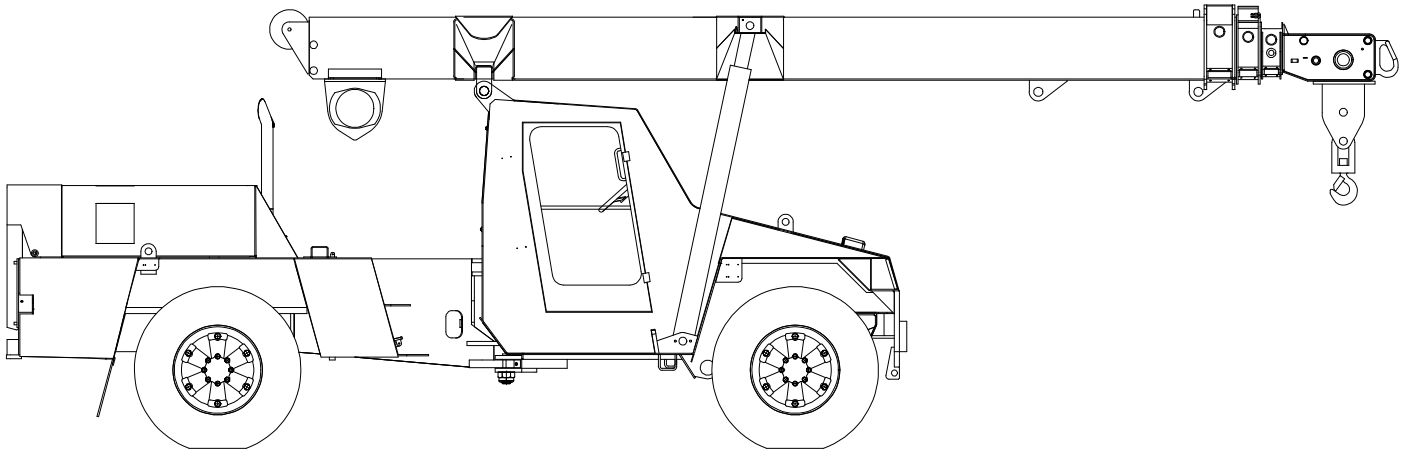
# CRANE RATING MANUAL

## MODEL AT-15

BOOK PART NUMBER C1325-

# HYDRAULIC ALL TERRAIN PICK & CARRY CRANE

## 15 TONNE MAXIMUM CAPACITY



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

C1325-/0-1

# **C1325- RATING CHART BOOK AT-15**

**ALL PAGES LISTED MUST BE INCLUDED IN THIS BOOK.**

Page No.	Description
	CRANE RATING MANUAL MODEL AT-15
0-1	MODEL NUMBER INDEX
0-2	PAGE LIST
0-3	INDEX, GENERAL
	SECTION 1 – WARNINGS
1-1	INDEX, SECTION 1
1-2	CAUTION
1-3	DEFINITIONS
1-4	WARNINGS, PAGE 1
1-5	WARNINGS, PAGE 2
	SECTION 2 – OPERATION
2-1	INDEX, SECTION 2
2-2	ATTACHMENT NOTICE
2-3	RANGE DIAGRAM & WORKING AREA
2-4	OPERATION
2-5	OPERATION ON SIDE SLOPES
2-6	SIDE SLOPE DERATION DIAGRAM
2-7	HOOK BLOCK WEIGHTS, WINCH LOAD CHART & TYRE INFLATION
	SECTION 3 – LIFTING CAPACITY
3-1	LMI CODES
3-2	RANGE DIAGRAM
3-3	LMI DUTY 01 : WINCH - POWERED SECTIONS
3-4	LMI DUTY 03 : WINCH – MANUAL EXTENSION
3-5	LMI DUTY 02 : RHINO HOOK - POWERED SECTIONS
3-6	LMI DUTY 04 : RHINO HOOK – MANUAL EXTENSION
3-7	LMI DUTY 05 & 06 : FLYJIB
3-8	LMI DUTY 10 : INNER LUG ON FIRST EXTENSION
3-9	LMI DUTY 11 : OUTER LUG ON FIRST EXTENSION
3-10	LMI DUTY 12 & 13 : MANBASKET
	SECTION 4 – CRANE DATA
4-1	INDEX, SECTION 4
4-2	MACHINE DIMENSIONS
4-3	HYDRAULIC DATA

# GENERAL SUBJECT INDEX

## SECTION 1: WARNINGS

CAUTION NOTE  
DEFINITIONS  
WARNING NOTES

## SECTION 2: OPERATION DATA

ATTACHMENT NOTICE  
RANGE DIAGRAM  
WORK AREA DIAGRAM  
OPERATIONAL NOTES  
OPERATION ON SIDE SLOPES  
HOOK BLOCK WEIGHTS  
WINCH LINE PULL & ROPE INFORMATION  
TYRE INFORMATION

## SECTION 3: LIFTING CAPACITY

LMI CODES  
RANGE DIAGRAM  
LMI DUTY 01 : WINCH - POWERED SECTIONS  
LMI DUTY 03 : WINCH – MANUAL EXTENSION  
LMI DUTY 02 : RHINO HOOK - POWERED SECTIONS  
LMI DUTY 04 : RHINO HOOK – MANUAL EXTENSION  
LMI DUTY 05 & 06 : FLYJIB  
LMI DUTY 10 : INNER LUG ON FIRST EXTENSION  
LMI DUTY 11 : OUTER LUG ON FIRST EXTENSION  
LMI DUTY 12 & 13 : MAN BASKET

## SECTION 4 – CRANE DATA

MACHINE DIMENSIONS  
HYDRAULIC DATA

# **SECTION 1**

# **WARNINGS**

CAUTION NOTE

DEFINITIONS

WARNINGS

# **! CAUTION !**

**IMPROPER CRANE USE, CARE OR OPERATION CAN CAUSE INJURY, DEATH OR PROPERTY DAMAGE.**

**DO NOT OPERATE THIS MACHINE UNLESS YOU HAVE READ AND UNDERSTAND THE OPERATOR'S MANUAL, SAFE OPERATING PRACTICES BOOKLET AND CRANE RATING MANUAL.**

**COPIES OF OPERATOR'S MANUALS, SAFE OPERATING PRACTICES BOOKLET AND CRANE RATING MANUAL MAY BE OBTAINED FROM:**



**TEREX LIFTING  
AUSTRALIA PTY LTD**

# 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.

**Safe Working Load (SWL)** – 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.

# ! WARNING !

## SPECIAL PRECATIONS FOR ARTICULATED CRANES

THERE IS A POTENTIAL FOR CRUSHING BETWEEN FRONT AND REAR CHASSIS WHEN THE MACHINE ARTICULATES. NEVER STAND IN THE PIVOT AREA WHEN THE ENGINE IS RUNNING OR EMERGENCY STEERING PUMP IS OPERATING. ALWAYS REMOVE THE KEY FROM THE IGNITION BEFORE WORKING IN THE PIVOT AREA. DO NOT LEAVE IGNITION KEY SWITCHED ON WITH ENGINE STOPPED AND PARK BRAKE OFF, AS EMERGENCY HYDRAULIC STEERING PUMP WILL ACTIVATE.

## GENERAL

1. This machine has been designed to meet the requirements of AS1418.1 & 1418.5 and has been tested in accordance with these standards for pick and carry operation on tyres.
2. Safe Working Loads shown are for this machine as originally manufactured by Terex Lifting Australia Pty Ltd. The lifting capacities only apply when all the instructions in this book are rigidly followed. Modifications to this machine or use of equipment other than that specified can result in a reduction of capacity.
3. If improperly operated or maintained, this machine can be hazardous. Operation and maintenance of this machine must be in compliance with the information in the operators, service, parts and safety manuals furnished. If these manuals are missing, obtain replacements through Terex Lifting Australia Pty Ltd or their agents.

## SET-UP

4. Reduced crane lifting capacities for the particular job shall be established by the user with due allowance for adverse operating conditions. These conditions include the supporting surface, pendulum action of the load, jerking or sudden stops of the load and other factors affecting stability, two machine lifts, electrical wires, adverse weather, wind, hazardous surroundings, experience of personnel, etc.
5. Safe Working Loads are based on freely suspended loads with the machine on a firm, level (max. slope 1% gradient / 0.6°) and uniform surface. Lifting or travelling with a load on soft or uneven ground can be hazardous and will reduce the capacity of the crane. No attempt shall be made to drag the load along the ground in any direction.

# ! WARNING !

6. Safe Working Loads above the red line are based on the machine's hydraulic or structural competence and not on machine stability. Safe Working Loads below the red line are based on machine stability.
7. The Safe Working Loads include the weight of hooks, blocks, slings and auxiliary lifting devices. Their weight must be subtracted from the listed rating to determine the net load that can be lifted.
8. Loaded boom angles at specified boom lengths give only an approximation of the operating radius. The boom angle before loading should be greater to account for boom deflection increasing the radius as the load is lifted.

## OPERATION

9. Side loading of the machine and load swing out may cause structural failure or machine tip-over. Side loads may be generated by: lifting when not level; sudden acceleration or deceleration in articulating with a load; dragging a load; pushing a load; wind forces on load and boom structure.
10. The capacity of the manual extension is structurally limited. The boom may be retracted and extended with the manual set, however the rating does not change from the fully extended position for the given boom angle.
11. It is safe to attempt to telescope any load within the limits of the rating chart. The maximum load that may be telescoped is limited by hydraulic pressure, boom angle and powered boom sections lubrication.
12. Do not allow the winch rope to unwind fully. Always ensure a minimum of two (2) wraps of rope remain on the winch drum. Note the areas on the range diagram where the fall block cannot reach the ground when reeved on three (3) parts of rope.
13. Crane lifting capacities on tyres depend on tyre capacity, condition of the tyres and tyre air pressure. Tyres must be inflated to the recommended pressure before lifting.
14. Pick & carry operation is permitted through the full articulation range, however capacity is reduced above 10° articulation. Use the reduced ratings in the chart if entering this articulation range during the operation.
15. The maximum speed for pick & carry operation is 0.4m/s (1.6km/h). The transmission shall be set to low range.
16. Operation of this crane in excess of rating configuration charts and disregard of the instructions is hazardous.



# **SECTION 2**

# **OPERATIONS**

ATTACHMENT NOTICE

RANGE DIAGRAM & WORKING AREA

OPERATION

OPERATION ON SIDE SLOPES

HOOK BLOCK WEIGHTS

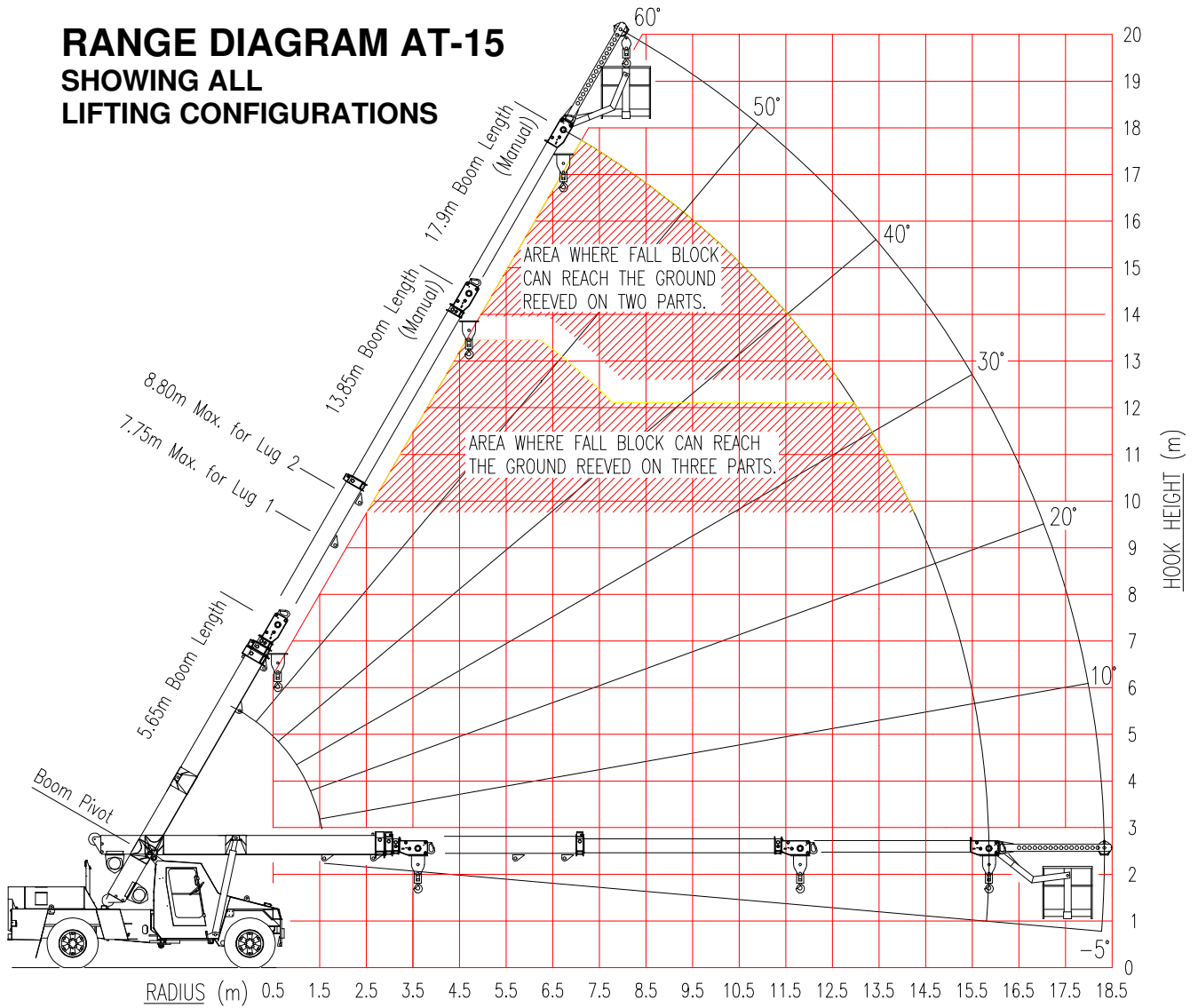
WINCH LOAD CHART

TYRE INFLATION CHART

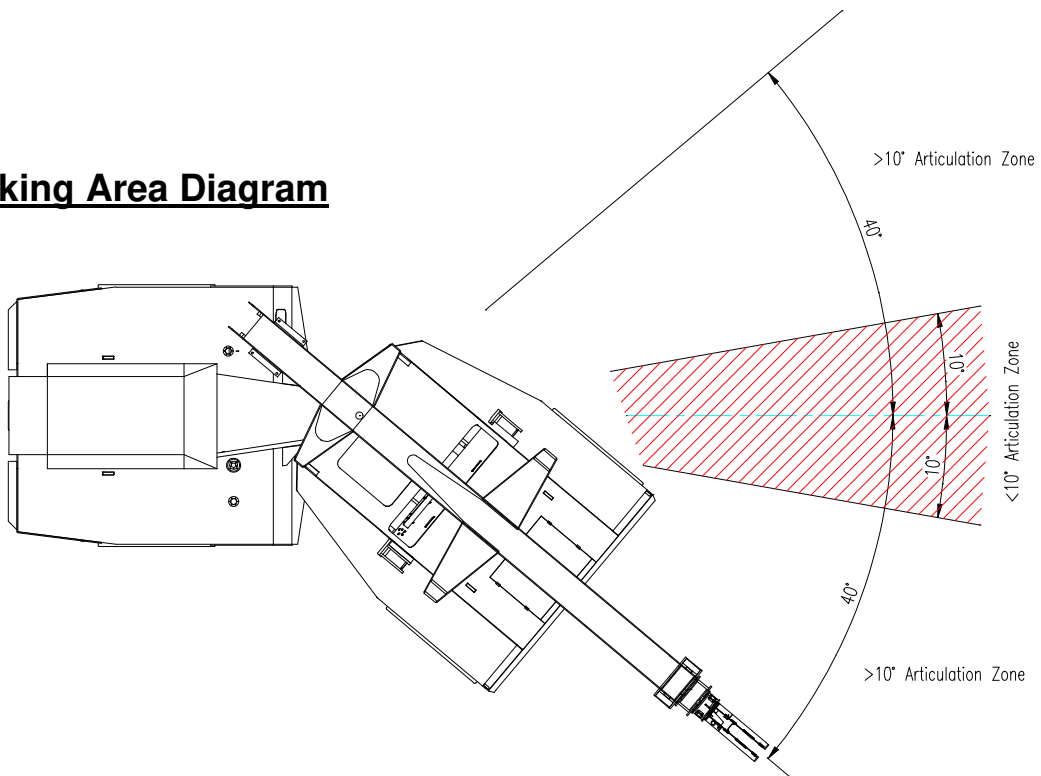
# NOTICE

**WRITTEN AUTHORISATION IS REQUIRED  
FROM TEREX LIFTING AUSTRALIA PTY LTD  
PRIOR TO THE USE OF ANY ATTACHMENT  
NOT SPECIFIED IN THE MANUAL.**

# RANGE DIAGRAM AT-15 SHOWING ALL LIFTING CONFIGURATIONS



## Working Area Diagram



C1325-/2-3

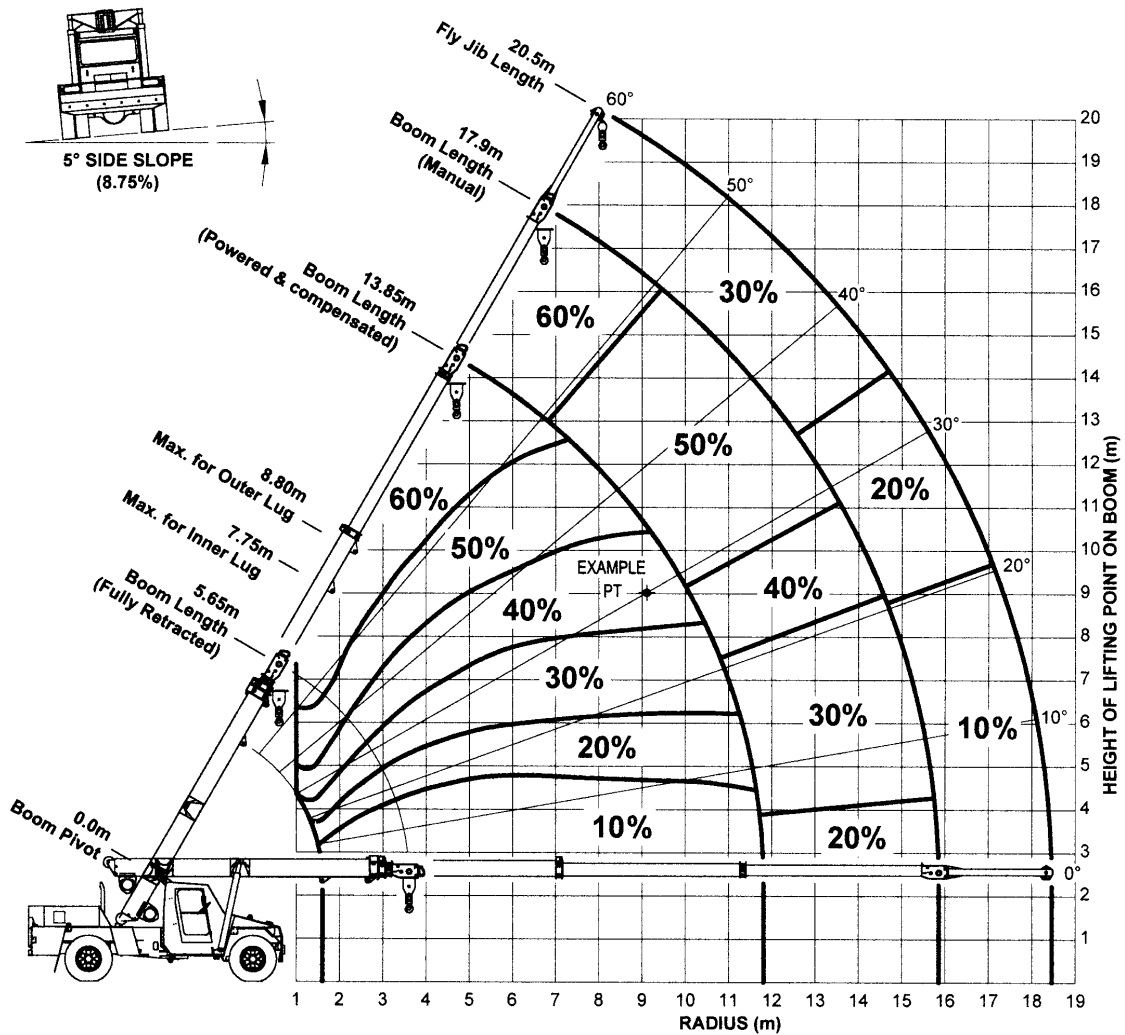
# OPERATION

1. Read and understand all warnings and instructional notes.
2. Safe Working Loads above the red line are based on the machine's hydraulic or structural competence and not on machine stability. Safe Working Loads below the red line are based on machine stability.
3. Do not tip the machine to determine allowable lifting capacities.
4. The Safe Working Loads include the weight of hooks, blocks, slings and auxiliary lifting devices. Their weight must be subtracted from the listed rating to determine the net load that can be lifted.
5. Crane lifting capacities on tyres depend on tyre capacity, condition of the tyres and tyre air pressure. Tyres must be inflated to the recommended pressure before lifting.
6. Pick & carry operation is permitted through the full articulation range, however capacity is reduced above 10° articulation. Use the reduced ratings in the chart if entering this articulation range during the operation.
7. Loads may be lifted from the main boom head on the winch, the rhino hook, or either of the two sliding lugs on boom 1. A flyjib is also available to extend the maximum boom length and a manbasket can be pinned to the head of the boom. Always use the correct rating chart for the lifting point in use and ensure the LMI is set to the correct duty.
8. Lifting from more than one lifting point simultaneously is neither intended nor approved.
9. When either the boom length or radius or both are between values listed, the smallest load shown at either the next larger radius or boom length shall be used, or the interpolated value shown on the LMI may be used
10. The winch rope is fully compensated for boom extension. The only exception is when the manual extension is being set. Refer to the operator's manual for the manual setting procedure. Once it is set the compensation is fully functional.
11. The maximum speed for pick & carry operation is 0.4m/s (1.6km/h). The transmission shall be set to low range.
12. Handling of personnel from the boom is neither intended nor approved, except in a Terex Lifting Australia supplied manbasket, correctly installed on the head of the boom, or other approved arrangement.

# OPERATION ON SIDE SLOPES

Mobile Cranes are primarily designed to be used on firm, flat, level ground (to within 1% gradient / 0.6°), according to AS 1418.5, any deviation from this requires that the Rated Capacity shall be reduced accordingly. As per AS 2550.5 – negotiation of slopes by mobile cranes travelling with suspended loads should be avoided. The following precautions should be taken when operating on side slopes of up to 5° (8.75% gradient) – **REMEMBER** surface depressions and potholes will create the same effect as a side slope.

- Ensure the tyres are correctly **INFLATED** as per load chart.
- Ensure the ground condition is **FIRM** enough to support the axle loads.
- **REDUCE** the rated capacity of the crane by the percentage value for the crane as shown in figure 1 for operating on side slopes up to 5° (8.75% gradient) - **REMEMBER** the crane's load indicator will **NOT** automatically derate the rated capacity.
- Use the crane's side slope inclinometer as a guide only, it is most accurate when the crane's articulation is straight ahead without suspending a load. All articulated chassis cranes will show some degree of side tilt, when articulated with a load – this should not be confused with the ground's side slope.
- Use the **MINIMUM** boom length and boom angle practical to keep the boom tip as close to the ground as possible.
- Keep the load as **CLOSE** to the ground as possible.
- Use the **MINIMUM** articulation angle practical - **REMEMBER** the crane will side tilt and hence the hook will move towards the direction of articulation whilst steering.
- Keep the load on the **UPHILL** side of the crane where possible, especially when articulated – **REMEMBER** the working radius will increase if the load is suspended in the downhill position.
- Load swing greatly reduces stability – **REMEMBER** to tagline loads to prevent pendulum motion of the load. Travel and crane motions should be applied gently to minimise this effect.



**Figure 1: Percentage Deration Chart for AT-15**

**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 SWL as read off the crane's load chart for the applicable boom length, boom angle, radius and articulation angle.

**Example (For AT-15 Crane, Load Chart C1325-):**

Lifting condition:

Boom Length: 13.0 m  
 Boom Angle: 32°  
 Radius: 9.0 m  
 Articulation Angle: Greater than 10°

SWL (Level ground): 2050 kg (From Load Chart LMI Duty 01, for above lifting conditions)

Percentage Deration: 40 % (From Figure 1: Percentage Deration Chart)

$$\begin{aligned}
 \text{SWL (5° Slide Slope)} &= \text{SWL (as per load chart)} - \text{Percentage Deration} \times \text{SWL (as per load chart)} / 100 \% \\
 &= 2050 \text{ kg} - 40\% \times 2050 \text{ kg} / 100\% \\
 &= 1230 \text{ kg}
 \end{aligned}$$

## HOOK BLOCK WEIGHTS

<b>SINGLE PART HOOK BLOCK</b>	<b>30 kg</b>
<b>TWO/THREE PART HOOK BLOCK</b>	<b>70 kg</b>
<b>15 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>3 500</b>
<b>2</b>	<b>7 000</b>
<b>3</b>	<b>10 500</b>

**Wire Rope :**     $\varnothing$ 13mm 35W x 7 Non-rotating Compak  
Minimum Breaking Force 138 kN  
Length - 60m

## TYRE SPECIFICATIONS

Condition	Speed	Load Rating
<b>Pick &amp; Carry</b>	<b>&lt;1.6 km/h</b>	<b>7100 kg per tyre (dual fitment)</b>
<b>Highway</b>	<b>90 km/h</b>	<b>2625 kg per tyre (dual fitment)</b>

## TYRE INFLATION CHART

Position	Construction	Inflation Pressure – PSI	
		Pick & Carry	Highway Travel
<b>Front</b>	<b>11.00 x 20</b>	<b>115</b>	<b>115</b>
<b>Rear</b>	<b>11.00 x 20</b>	<b>90</b>	<b>90</b>

# **SECTION 3**

## **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  
- POWERED SECTIONS

LMI DUTY 06 : LIFTING CAPACITY ON FLYJIB  
- MANUAL EXTENSION

LMI DUTY 10 : LIFTING CAPACITY ON INNER LUG  
- ON FIRST EXTENSION

LMI DUTY 11 : LIFTING CAPACITY ON OUTER LUG  
- ON FIRST EXTENSION

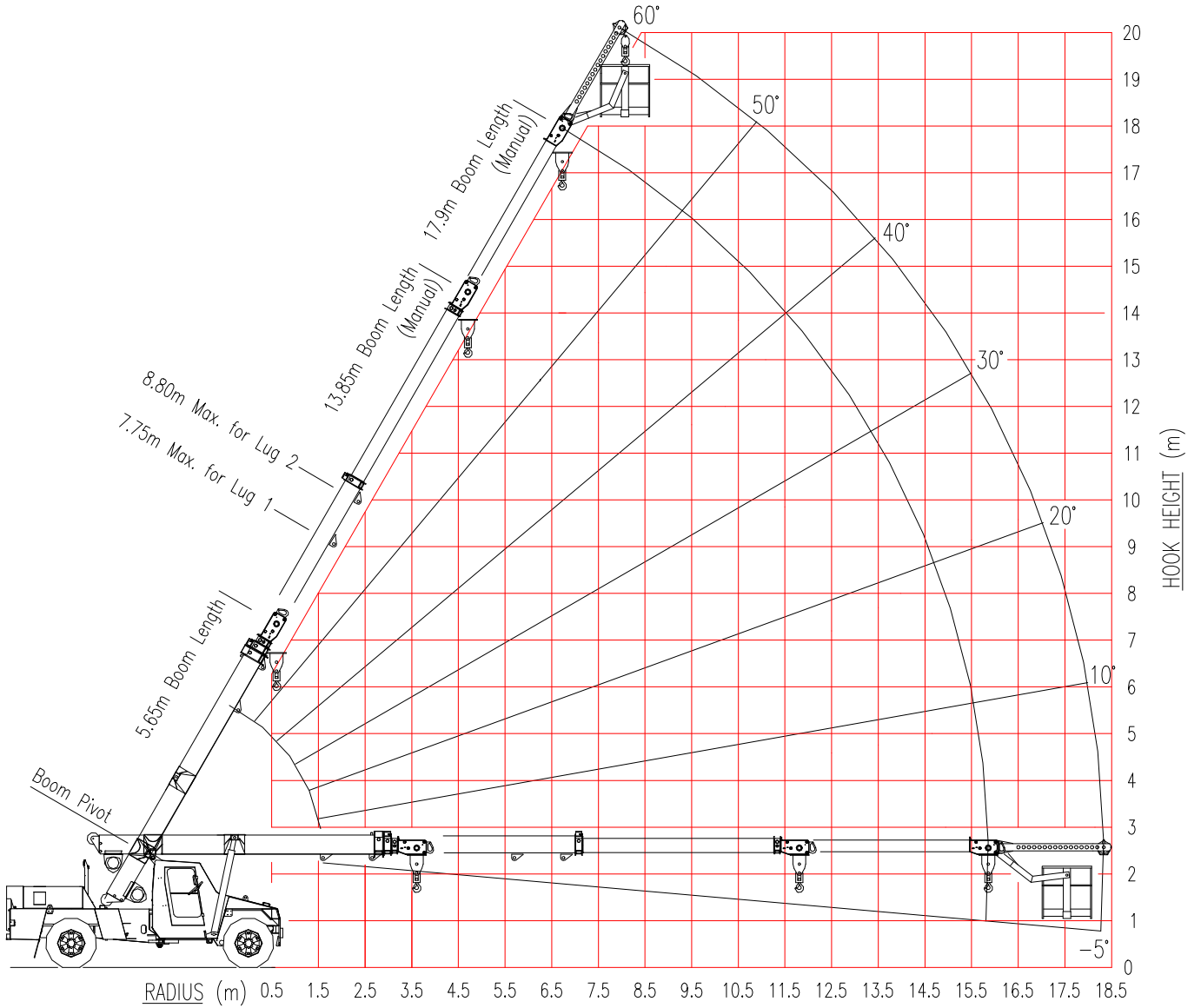
LMI DUTY 12 : LIFTING CAPACITY IN MAN BASKET  
- POWERED SECTIONS

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



# RANGE DIAGRAM AT-15

## SHOWING ALL LIFT CONFIGURATIONS



C1325-/3-3

RADIUS	BOOM LENGTH (m)																	
	5.66	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	13.86
1.6	10500	10500	10500	10500	10500													
	48	50	54	57	59													
2.0	10500	10500	10500	10500	10500	10500	10500											
	42	46	50	53	56	58	60											
2.5	10400	10350	10350	10350	10350	10350	10350	9950	9650									
	34	39	44	48	51	54	56	58	60									
3.0	8500	8500	8500	8500	8500	8500	8500	8500	8500	8300	7350							
	25	31	37	42	46	49	52	55	57	58	60							
3.5	7200	7200	7200	7200	7200	7200	7150	7150	7150	7150	6750	5950	5650					
	9	20	30	36	41	45	48	51	53	55	57	59	60					
4.0	6950	6250	6200	6200	6200	6200	6200	6200	6200	6150	6150	5500	5250	5000	4800			
	(3.61)	(3.95)	20	28	35	39	43	46	49	52	54	56	57	59	60			
4.5			5450	5400	5400	5400	5400	5400	5400	5400	5400	5150	4900	4650	4500	4300	4150	
			4850	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4650	4500	4300	4150	
5.0				4850	4800	4800	4800	4800	4800	4800	4800	4800	4550	4350	4200	4050	3900	3800
				4300	4250	4250	4250	4250	4250	4250	4250	4250	4250	4200	4200	4050	3900	3800
6.0					4300	3900	3850	3850	3850	3850	3850	3850	3850	3850	3700	3550	3300	3200
					3800	3450	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3300	3200
7.0						3550	3200	3200	3200	3200	3200	3200	3200	3200	3200	3050	2950	2850
						3100	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800
8.0																		
9.0																		
10.0																		
11.0																		
11.81																		



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

**LMI Duty**  
**Lifting on WINCH**  
**MANUAL EXTENDED**

**03**

	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 17.91	
MAX RADIUS	SWL
	<b>1850</b>
<b>6.72</b>	<b>1850</b>
	60
	<b>1600</b>
<b>9.29</b>	<b>1600</b>
	50
	<b>1300</b>
<b>11.53</b>	<b>1300</b>
	40
	<b>1150</b>
<b>13.35</b>	<b>1150</b>
	30
	<b>1050</b>
<b>14.70</b>	<b>1050</b>
	20
	<b>1050</b>
<b>15.54</b>	<b>950</b>
	10
	<b>1050</b>
<b>15.86</b>	<b>950</b>
	<b>0</b>

**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.

C1325-/3-5

RADIUS	BOOM LENGTH (m)																		
	5.95	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	14.15	
1.6	8000	8000	8000	8000															
	8000	8000	8000	8000															
2.0	50	54	57	59															
	8000	8000	8000	8000	8000	8000													
2.5	8000	8000	8000	8000	8000	8000	8000	8000											
	45	50	53	56	58	60													
3.0	8000	8000	8000	8000	8000	8000	8000	8000	8000										
	38	44	48	51	54	56	58	60											
3.5	7750	8000	8000	8000	8000	8000	8000	8000	8000	7950									
	30	37	42	46	49	52	55	57	59	60									
4.0	7250	7250	7250	7250	7200	7200	7200	7200	7200	7200	6300	5700							
	19	30	36	41	45	48	51	53	55	57	59	60							
4.5	6450	6450	6450	6450	6450	6450	6400	6400	6400	6400	6400	6400	5850	5300	5050	4850			
	5700	5550	5550	5550	5550	5550	5500	5500	5500	5500	5500	5500	5500	5300	5050	4850			
5.0	(3.90)	20	29	35	39	43	46	49	52	54	56	57	59	60					
		5500	5450	5450	5450	5450	5450	5450	5450	5450	5450	5450	4950	4700	4550	4350	4200		
5.5		4900	4850	4850	4850	4850	4850	4850	4800	4800	4800	4800	4800	4700	4550	4350	4200		
		(4.45)	19	28	34	38	42	45	48	50	52	54	56	57	59	60			
6.0			4900	4850	4850	4850	4850	4850	4800	4800	4800	4600	4400	4250	4100	3950	3800	3750	
			4300	4300	4300	4300	4300	4250	4250	4250	4250	4250	4250	4100	3950	3800	3750		
6.5			(4.95)	19	27	33	37	41	44	47	49	51	53	55	56	58	59	59	
				4350	3950	3900	3900	3900	3900	3900	3900	3900	3900	3750	3600	3500	3200	3200	
7.0				3850	3450	3450	3450	3450	3450	3450	3450	3400	3400	3400	3400	3400	3200	3200	
				(5.45)	(5.95)	17	25	31	35	39	42	45	47	49	51	53	54	55	
7.5					3550	3250	3250	3250	3250	3250	3250	3250	3200	3200	3100	3000	2900	2850	
					3150	2850	2850	2850	2850	2850	2850	2850	2850	2800	2800	2800	2800	2800	
8.0					(6.45)	(6.95)	17	24	29	34	37	40	43	45	47	49	49		
							3000	2750	2750	2750	2750	2750	2750	2700	2700	2700	2600	2550	
8.5							2600	2400	2400	2400	2400	2400	2400	2400	2400	2350	2350	2350	
							(7.45)	(7.95)	16	23	28	32	36	38	41	43	44		
9.0								2550	2350	2350	2350	2350	2350	2350	2350	2350	2350	2350	
								2200	2050	2050	2050	2050	2050	2050	2050	2050	2050	2050	
9.5								(8.45)	(8.95)	15	22	27	31	34	37	38			
										2200	2050	2050	2050	2050	2000	2000			
10.0												1900	1750	1750	1750	1750	1750	1750	
												(9.45)	(9.95)	15	21	26	30	31	
10.5														1900	1800	1750	1750	1750	
														1650	1500	1500	1500	1500	
11.0														(10.45)	(10.95)	14	20	22	
																1650	1550	1550	
11.5																1400	1350	1300	
																(11.45)	(11.95)	(12.00)	

NOTE: When using the rhino hook, ensure the winch rope is fully tensioned.



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 RHINO HOOK

02

**LMI Duty**  
**Lifting on RHINO HOOK**  
**MANUAL EXTENDED**

04

	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
7.01	<b>1750</b>
	<b>1750</b>
9.58	60
	<b>1500</b>
	<b>1500</b>
11.82	50
	<b>1200</b>
	<b>1200</b>
13.64	40
	<b>1050</b>
	<b>1050</b>
14.99	30
	<b>1000</b>
	<b>1000</b>
15.83	20
	<b>1000</b>
	<b>950</b>
16.15	10
	<b>1000</b>
	<b>900</b>
	<b>0</b>

**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**  
**MANUAL RETRACTED**

**05**

FLYJIB	
MAX LENGTH 16.46	
MAX RADIUS	SWL
<b>6.04</b>	750
	<b>750</b>
	60
8.40	700
	<b>700</b>
	50
10.44	650
	<b>650</b>
	40
12.11	600
	<b>600</b>
	30
13.35	550
	<b>550</b>
	20
14.13	500
	<b>500</b>
	10
14.41	500
	<b>500</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 :**  
 16.46m 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**  
**MANUAL EXTENDED**

**06**

MANUAL EXT'N	
MAX LENGTH 20.51	
MAX RADIUS	SWL
<b>8.07</b>	750
	<b>750</b>
	60
11.00	700
	<b>700</b>
	50
13.54	650
	<b>650</b>
	40
15.62	600
	<b>600</b>
	30
17.15	550
	<b>550</b>
	20
18.11	500
	<b>500</b>
	10
18.46	500
	<b>500</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 :**  
 20.51m 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.

*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)								
	3.65	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.75
1.6	15000	15000	15000	14500	13650	12550	11700	11200	
	13900	13950	13850	13800	13650	12550	11700	11200	
	(1.60)	24	36	43	48	53	56	59	
2.0		12550	12250	12200	12150	11500	10700	10250	9700
		11150	10850	10800	10750	10700	10650	10250	9700
		(1.95)	26	36	43	48	51	55	59
2.5			9700	9500	9450	9400	9350	9250	8750
			8550	8350	8350	8300	8250	8250	8200
			(2.45)	25	34	41	46	49	54
3.0				7800	7650	7600	7600	7550	7550
				6850	6700	6700	6650	6650	6600
				(2.95)	23	33	39	44	49
3.5					6450	6350	6300	6300	6250
					5650	5550	5500	5500	5450
					(3.45)	22	31	38	44
4.0						5400	5350	5350	5300
						4700	4650	4650	4600
						(3.95)	22	30	39
4.5							4650	4600	4550
							4000	3950	3950
							(4.45)	21	32
5.0								4000	3950
								3450	3400
								(4.95)	25
5.5									3450
									2950
									13
5.7									3300
									2800
									(5.70)

# LMI Duty

## Lifting on OUTER 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)								
	4.70	5.00	5.50	6.00	6.50	7.00	7.50	8.00	8.80
1.6	15000	15000	14650	14000	13050	11900			
	14650	14550	14400	14000	13050	11900			
	39	43	48	53	56	59			
2.0	12900	12850	12700	12600	12000	10900	10150		
	11500	11450	11350	11250	11150	10900	10150		
	31	36	43	48	51	55	57		
2.5	10100	10050	9950	9900	9800	9750	9200	8850	7700
	9000	8950	8850	8800	8700	8650	8600	8550	7700
	15	25	34	41	46	49	53	55	59
3.0	9450	8350	8150	8050	8000	7950	7900	7850	7050
	8400	7400	7200	7150	7100	7000	6950	6950	6850
	(2.65)	(2.95)	23	33	39	44	48	51	55
3.5			6900	6750	6700	6650	6600	6550	6500
			6100	5950	5900	5850	5800	5800	5700
			(3.45)	22	31	38	42	46	51
4.0				5850	5700	5700	5650	5600	5550
				5150	5050	5000	4950	4900	4850
				(3.95)	22	30	36	41	47
4.5					5000	4900	4900	4850	4800
					4400	4300	4250	4250	4200
					(4.45)	21	29	35	42
5.0						4350	4250	4250	4200
						3800	3700	3700	3650
						(4.95)	20	28	37
5.5							3800	3750	3700
							3300	3250	3200
							(5.45)	19	31
6.0								3350	3300
								2900	2850
								(5.95)	24
6.5									2950
									2500
									14
6.8									2750
									2350
									(6.75)



**LMI Duty**  
 Lifting in MANBASKET  
 MANUAL RETRACTED

**12**

**MAXIMUM MANBASKET SWL: 275 KG (SEE NOTE BELOW)**  
**BASKET WEIGHT: 225 KG**




*Read and understand warning notes before operating crane*

**NOTE:**  
**THE TOTAL WEIGHT OF THE MANBASKET PLUS MEN AND EQUIPMENT IS NOT TO EXCEED 1/3 OF THE SAFE WORKING LOAD AS READ ON LOAD CHART (LIFTING ON THE WINCH - DUTY 01) FOR THE BOOM LENGTH AND RADIUS BEING USED.**

**LMI Duty**  
 Lifting in MANBASKET  
 MANUAL EXTENDED

**13**

MANUAL EXT'N	
MAX LENGTH 17.91	
MAX RADIUS	SWL
7.98	275
	60
10.71	275
	275
	50
13.05	205
	205
	40
14.93	155
	155
	30
16.30	125
	125
	20
17.11	125
	90
	10
17.34	125
	90
	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 :**  
 17.91m 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.

# **SECTION 4**

# **CRANE DATA**

MACHINE DIMENSIONS

HYDRAULIC DATA



# HYDRAULIC DATA

MACHINE IS DESIGNED TO OPERATE AT THESE  
MAXIMUM PRESSURES.

FUNCTION	PUMP STANDBY PRESSURE	PUMP PRESSURE COMPEN- SATOR	STEERING RELIEF	TELE PORT RELIEF
SETTING (BAR)	24	210	175	170
TEST POINT	G1	G1	G2	G1

HYDRAULIC OIL TEMPERATURE MUST BE BETWEEN PLUS 20°C AND  
40°C WHEN SETTING ABOVE PRESSURES.

PRESSURES TO BE CHECKED AT 1000 RPM – STANDBY PRESSURE  
CAN BE CHECKED AT IDLE.

DO NOT HOLD ON RELIEF MORE THAN 10 SECONDS TO AVOID  
OVERHEATING THE OIL AND HYDRAULIC COMPONENT DAMAGE.

UNAUTHORISED PRESSURE SETTINGS IN EXCESS OF THE ABOVE  
VALUES WILL RESULT IN DENIAL OF WARRANTY CLAIMS.

PRESSURES TO BE WITHIN 5 BAR OF THE ABOVE VALUES.