

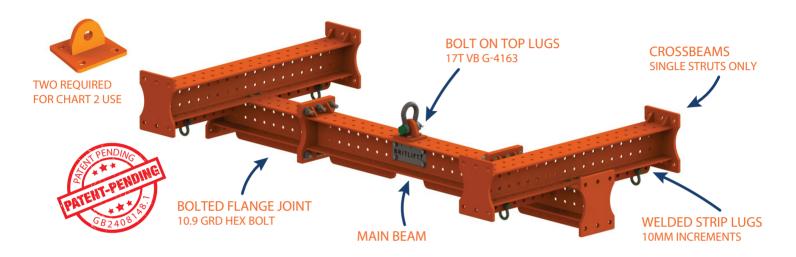
# **MULTILIFTER (ML180)**

LIFTING H-FRAME INSTRUCTIONS FOR USE REV-B

THIS SET OF USER INSTRUCTIONS IS FOR THE BRITLIFT ML180 MULTILIFTER. WHEN USED AS AN H FRAME THIS ML180 IS RATED TO A MAXIMUM VERTICAL LOAD OF 16 TONNES (16000KG) AND HAS A MAXIMUM SPAN (OR LENGTH) OF 10 METERS (10000MM) AND A MAXIMUM WIDTH OF 4 METERS (4000MM). THIS FRAME SHOULD BE LOADED VIA THE TOP CENTRAL CONNECTION POINT WHICH IS DESIGNED TO SUIT A 17T SHACKLE (VAN BEEST OR CROSBY) OR VIA TWO OF THESE POINTS. THE LOAD SHOULD BE CONNECTED VIA 6.5T BOW SHACKLES.

(PLEASE NOTE THAT SHACKLES AND SLINGS ARE NOT SUPPLIED WITH THE MULTILIFTER UNLESS PURCHASED).

THE MULTILIFTER MAY BE COMPRISED OF MULTIPLE SECTIONS AND AS THE SPAN INCREASES, THE CAPACITY DECREASES, PLEASE SEE CHARTS 1 AND 2 BELOW.



## WLL/SWL INFORMATION

**CHART 1: SINGLE TOP LUG LIFTING (TONNES)** 

C <sub>r</sub>	4	4	4	4	4						
Cross B	3	6	6	6	6	4					
Beam S	2	8	8	8	8	6	4	2	1		
Span (	1	10	10	10	10	8	6	4	2	1	1
(m)		1	2	3	4	5	6	7	8	9	10
	Primary Beam Span (m)										

CHART 2: DOUBLE TOP LUG LIFTING - 2 LEG CONNECTION (TONNES). TOP LUG SPAN MUST BE HALF THE LENGTH OF THE PRIMARY BEAM

C	4	6	6	6	6						
Cross B	3	7	7	7	7	6					
Beam S	2	10	10	10	10	8	6	3	2		
Span (m)	1	16	16	12	12	10	8	6	3	1	1
n)		1	2	3	4	5	6	7	8	9	10
Primary Beam Span (m)											

#### **CHART 3: COMPONENT INFORMATION**

DESCRIPTION	SELF WEIGHT
1m Beam Section	180kg
2m Beam Section	250kg
4m Beam Section	425kg

#### **CHART 4: SHACKLE INFORMATION**

LOCATION	SHACKLE SPEC
Top	17T Standard Bow
Shackle	Dims based upon VB
Ø45mm hole	Green Pin G-4163
Bottom	6.5T Standard Bow
Shackle	Dims based upon VB
Ø27mm hole	Green Pin G-4163



DEPENDING UPON THE LOAD BEING LIFTED AND THE DESIGN OF THE RIG, LIFTING WITH AN H-FRAME CAN BE UNSTABLE. ENSURE THAT FOR ANY USE OF AN H-FRAME, THE LIFT HAS BEEN PLANNED BY A COMPETENT AP (APPOINTED PERSON) FAMILIAR WITH THE USE OF H-FRAMES SPECIFICALLY, AND HOW THE COG (CENTRE OF GRAVITY) CAN AFFECT THEIR STABILITY.





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#### **SAFETY REOUIREMENTS**

- DUE TO THE FLEXIBILITY OF THE MULTILIFTER SYSTEM. ANY LIFTS USING THE SYSTEM MUST HAVE BEEN PLANNED. BY A COMPETENT AP AND HAVE A LIFT SPECIFIC METHOD STATEMENT. DO NOT USE THE SYSTEM WITH A BASIC **GENERIC LIFT PLAN**
- CONSIDER THE COG (CENTRE OF GRAVITY) OF THE LIFT, AND BE SURE THAT NO INDIVIDUAL COMPONENTS ARE OVERLOADED DUE TO OFFSET LOADING.
- CONSIDER THE COG OF THE ASSEMBLED SYSTEM, IF YOU HAVE ASSEMBLED THE SYSTEM TO SUIT AN OFFSET COG LIFT OR YOU HAVE AN UNSYMMETRICAL ASSEMBLY THEN THE SYSTEM MAY TILT SIGNIFICANTLY WHEN UNLOADED.
- USE A TAPE TO CONFIRM LOCATIONS OF LIFTING POINTS ARE IN ACCORDANCE WITH THE LIFT PLAN.

TERMINOLOGY: "LIFTING CENTRES" REFERS TO THE DISTANCE BETWEEN THE LUGS TAKEN FROM THEIR CENTRE POINTS (4M CENTRES = 2M FROM EACH SIDE OF THE CENTRE OF THE BEAM).

#### **CRITICAL INFORMATION**

- 1. THIS IS A CENTRAL OR DOUBLE LEG TOP POINT H-FRAME WHICH MUST BE USED WITH THE ATTACHMENTS PROVIDED, AND DETAILED WITHIN **FURTHER INFORMATION (ABOVE), CHARTS 1 & 2.**
- 2. ENSURE EACH COMPONENT YOU ARE USING IS FROM THE CORRECT ML SERIES AND CHECK THAT ALL RELEVANT CERTIFICATION IS PRESENT.
- 3. ENSURE THAT THE MATING FACES OF THE COMPONENTS ARE FREE FROM DEBRIS.
- 4. BOLT THE BEAM SECTIONS TOGETHER USING THE FASTENERS AND TIGHTENING TORQUE SPECIFIED.
- 5, BOLT THE ATTACHMENTS USING THE FASTENERS AND TIGHTENING TORQUE SPECIFIED.
- 6. CHECK AND ENSURE THAT THERE IS A BOLT IN EVERY HOLE REGARDING THE FLANGES AND CONNECTION POINTS IN USE.
- 7. CHECK AND ENSURE THAT THE BOLTS CONNECTING THE FLANGES ARE 10.9 GRADE SPECIFICALLY.

- 8. ALL CHARTS ON PAGE ONE MUST BE REFERRED TO.
- 9. YOU MUST NOT EXCEED ANY WLL WITHIN CHARTS 1 & 2.
- 10. CONNECT THE CROSS BEAMS TO THE TOP OF THE MAIN BEAM. NOTE THAT ONLY A SINGLE STRUT MAY BE USED AS A CROSS BEAM AT EITHER END.
- 11. THE WLL OF ANY COMPONENT MUST NOT BE EXCEEDED.
- 12. SHACKLE HOLE DIAMETERS ARE PROVIDED WITHIN SHACKLE CHARTS.
- 13. ANY PERSONNEL USING THIS PRODUCT MUST BE A TRAINED AND COMPETENT RIGGER OR SLINGER/ SIGNALLER.
- 14. THE ONGOING USE OF THIS PRODUCT MUST BE IN ACCORDANCE WITH THE REQUIREMENTS IN LOLER (LIFTING OPERATIONS AND LIFTING EQUIPMENT **REGULATIONS 1998).**
- 15, CHECK THAT NO RIGGING EQUIPMENT CLASHES WITH THE FRAME. THE FRAME MUST ONLY BE LOADED THROUGH THE SHACKLE PIN HOLES AT EACH END.

## **KEY CONSIDERATIONS FOR USE**

- ALWAYS FOLLOW THE LIFT PLAN CREATED BY THE APPOINTED PERSON WHEN USING THIS EQUIPMENT.
  DO NOT RIG THE LOWER SLINGS MORE THAN 6 DEGREES FROM VERTICAL.
- ENSURE THE CORRECT SHACKLES AND BOLTS ARE BEING USED, AS DETAILED WITHIN THIS DATASHEET.
- CONSULT WITH YOUR AP, SUPPLIER, OR BRITLIFT DIRECTLY IF YOU ARE UNSURE.

## **ASSEMBLY GUIDE**

- CONSULT THE LIFT PLAN AND ENSURE THAT YOU ARE USING THE CORRECT SYSTEM FOR YOUR LIFT REQUIREMENTS.
- 2. ENSURE EACH COMPONENT YOU ARE USING IS FROM THE CORRECT SERIES AND CHECK THAT ALL RELEVANT CERTIFICATION IS PRESENT.
- 3. ENSURE THAT THE MATING FACES OF THE COMPONENTS ARE FREE FROM DEBRIS.
- 4. BOLT THE SYSTEM TOGETHER USING THE FASTENERS AND TIGHTENING TORQUE SPECIFIED.
- 5. CHECK AND ENSURE THAT THERE IS A BOLT IN EVERY HOLE REGARDING THE FLANGES AND CONNECTION POINTS IN USE.
- 6. CHECK AND ENSURE THAT THE BOLTS CONNECTING THE FLANGES ARE 10.9 GRADE SPECIFICALLY.

- PLACE YOUR TOP SLING WITHIN THE TOP SHACKLE AND THEN LOWER THE SHACKLE INTO PLACE OVER THE LUGS. ONCE ALL THE HOLES ARE ALIGNED, PIN IN PLACE USING THE TOP SHACKLE PIN (OR PINS).
- ATTACH THE OTHER END OF THE TOP SLINGS TO THE CRANE HOOK.
- THE LOWER SLINGS AND SHACKLES CAN NOW BE CONNECTED TO THE STRIP LUGS. ENSURE THE CORRECT SHACKLES ARE BEING USED, IN LINE WITH THIS DATASHEET.
- 10. BEFORE MOVING THE FRAME OUT OF REACH. THE ASSEMBLY MUST BE THOROUGHLY INSPECTED BY A COMPETENT PERSON.
- 11. RAISE THE FRAME ABOVE THE LOAD AND CONNECT THE BOTTOM SLINGS TO THE LOAD AND CHECK TO ENSURE THAT THE RIGGING ARRANGEMENT IS IN ACCORDANCE WITH THE LIFT PLAN.





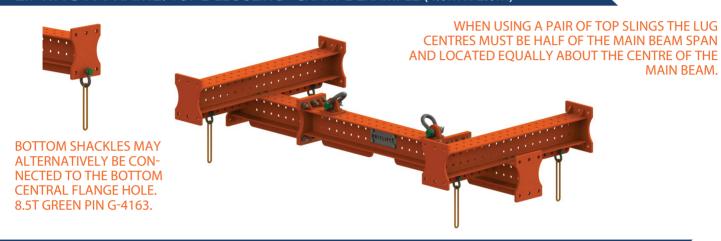
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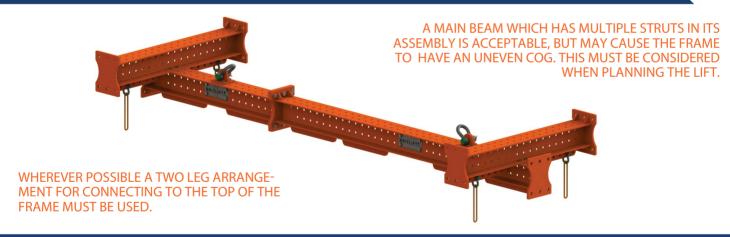
## **FURTHER INFORMATION**

- THE TOP LUGS ON THIS SYSTEM ARE BOLT ON. WHEN THE MULTILIFTER IS USED AS AN H-FRAME THEY MUST BE BOLTED ON CENTRALLY (INDIVIDUALLY OR AS A PAIR). THE LUGS SUIT A GRADE 10.9 M24x70 BOLT AND MUST BE TORQUED TO A MINIMUM OF 400NM.
- IF USING MULTIPLE SECTIONS THE BEAMS MAY BE CONNECTED TOGETHER USING THE BOLTED FLANGES. EACH FLANGE CONNECTION IS DESIGNED TO USE 6 OFF GRADE 10.9 M30x90 BOLTS AS SUPPLIED BY BRITLIFT. THESE BOLTS MUST BE TORQUED TO A MINIMUM OF 500NM.
- THE BOTTOM LUGS ON THIS SYSTEM ARE STRIP LUGS TO SUIT 6.5T STANDARD BOW SHACKLES. THE HOLES ARE LOCATED AT 100MM INCREMENTS.

## LIFTING H-FRAME: TOP 2-LEG SLING - CHART 2 EXAMPLE (4.0M X 2.0M)



#### USE ANY COMBINATION OF STRUT FOR MAIN BEAM - CHART 2 EXAMPLE (6.0M X 2.0M)



UNEVEN STRUT COMBINATIONS ARE NOT COVERED BY THIS DOCUMENT, BUT IF SUCH A USE HAS BEEN APPROVED BY BRITLIFT AS A ONE OFF, CONSIDER THE BELOW OFFSET IN WEIGHT AS PART OF THE LIFT PLAN



