



Manual # 99904606

13/88DL Technical Specifications

Revision Date 20120503



IOWA MOLD TOOLING CO., INC.

PO Box 189

Garner, IA 50438

Tel: 641-923-3711 FAX: 641-923-2424

Website: <http://www.imt.com>

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Revisions

DATE	LOCATION	DESCRIPTION
20090715		ADDED SWING CLEARANCE DRAWING
20100118	Geometric. configuration	Added stabilizer length and extension dimensions, stabilizer drawings.
20111213	Specifications, Stabilizer drawings	ECN 11628 – Updated stabilizer wording.
20120502	Specifications	Added tank and mounting kit weights to crane weight.



CHAPTER 1

Technical Data and Charts

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13/88DL Specifications

13/88 DL	1-HYDRAULIC	2-HYDRAULIC	3-HYDRAULIC	4-HYDRAULIC	5-HYDRAULIC	6-HYDRAULIC
Crane Rating*	87,520 ft lb (12.1 tm)	84,625 ft lb (11.7 tm)	81,735 ft lb (11.3 tm)	78,116 ft lb (10.8 tm)	75,945 ft lb (10.5 tm)	73,055 ft lb (10.1 tm)
Maximum Horizontal Reach	20' 4" (6.2 m)	27' 3" (8.3 m)	34' 1" (10.4 m)	41' 8" (12.7 m)	48' 11" (14.9 m)	56' 5" (17.2 m)
Maximum Vertical Reach	28' 7" (8.7 m)	35' 5" (10.8 m)	42' 4" (12.9 m)	49' 10" (15.2 m)	57' 1" (17.4 m)	64' 8" (19.7 m)
Maximum Capacity	10,780 lb (4,890 kg)	10,470 lb (4,750 kg)	9,985 lb (4,530 kg)	9,525 lb (4,320 kg)	9,105 lb (4,130 kg)	8,730 lb (3,960 kg)
Max Cap @ Max Reach	4,300 lb (1,950 kg)	3,000 lb (1,360 kg)	2,140 lb (970 kg)	1,520 lb (690 kg)	1,060 lb (480 kg)	750 lb (340 kg)
Crane Weight **	3,220 lb (1,460 kg)	3,525 lb (1,600 kg)	3,835 lb (1,740 kg)	4,135 lb (1,875 kg)	4,400 lb (1,995 kg)	4,610 lb (2,090 kg)
Hook Approach						
Vertical	9' 1" (2.76 m)	8' 11" (2.71 m)	8' 7" (2.62 m)	8' 4" (2.53 m)	8' 0" (2.44 m)	7' 9" (2.35 m)
Horizontal	2' 5" (0.74 m)	2' 7" (0.79 m)	2' 9" (0.84 m)	2' 11" (0.89 m)	3' 1" (0.94 m)	3' 3" (1.0 m)
Center of Gravity - Stored						
Vertical	2' 4" (710 mm)	2' 5" (735 mm)	2' 6" (760 mm)	2' 7" (785 mm)	2' 8" (805 mm)	2' 8" (820 mm)
Horizontal (C/L RotTo Bridge)	12.2" (310 mm)	12.0" (305 mm)	11.8" (300 mm)	11.2" (285 mm)	10.6" (270 mm)	10.2" (260 mm)

* Crane rating (ft-lb) is the rated load (lb) multiplied by the respective distance (ft) from centerline of rotation with all extensions retracted and the inner and outer booms in a horizontal position, per ANSI B30.22** Crane weight is for standard crane with tank & 4-bolt mounting kit. Does not include stabilizers, oil.

13/88DL SPECIFICATIONS

Stabilizer Pad Diameter	6" (160 mm)
Crane Storage Height	7' 5" (2,250 mm)
Mounting Space ***	2' 8" (820 mm)
Rotational Torque	10,850 ft lb (1.5 tm)
Rotation	400°
Optimum Pump Performance	13.2 gpm (50 L/min)
System Pressure	4,350 psi (300 bar)
Oil Reservoir Capacity	23.8 gal(90 L)
Stabilizer Extension Span	
Standard (manual out / hydraulic down)	15' 2" (4,615 mm)
Weight	440 lb (200 kg)
Opt. 1 (manual out / hydraulic down)	18' 4" (5,590 mm)
Weight	520 lb (235 kg)
Opt. 2 (hydraulic out / hydraulic down)	21' 3" (6,470 mm)
Weight	660 lb (300 kg)

*** Maximum swing clearance radius required is 24" (600 mm) at 7'-10" (2375 mm) from top of chassis frame.

MINIMUM CHASSIS SPECIFICATIONS

Front Axle Rating (GAWR)	9,000 lb (4,080 kg)
Rear Axle Rating (GAWR)	18,500 lb (8,390 kg)
Resistance To Bending Moment	1,230,000 in-lb (141,710 kg-m)



13/88DL Pressure Settings

WORKING PRESSURE ON MAIN-RELIEF VALVES & PORT RELIEF VALVES			
<i>Function</i>	<i>Direction</i>	<i>Port</i>	<i>Pressure Setting</i>
Main-relief valve			4350 psi (300 bar)
Rotation system	Right	A	P
	Left	B	P
Boom cylinder	Down	A	1450 psi (100 bar)
	Up	B	4715 psi (325 bar)
Jib cylinder	Up	A	4715 psi (325 bar)
	Down	B	2900 psi (200 bar)
Extension cylinders	Extend	A	P
	Retract	B	P
Rotator	Right	A	2900 psi (200 bar)
	Left	B	2900 psi (200 bar)
Grab	Open	A	2900 psi (200 bar)
	Close	B	2900 psi (200 bar)
Separate stabilizer valve		All	2175 psi (150 bar)

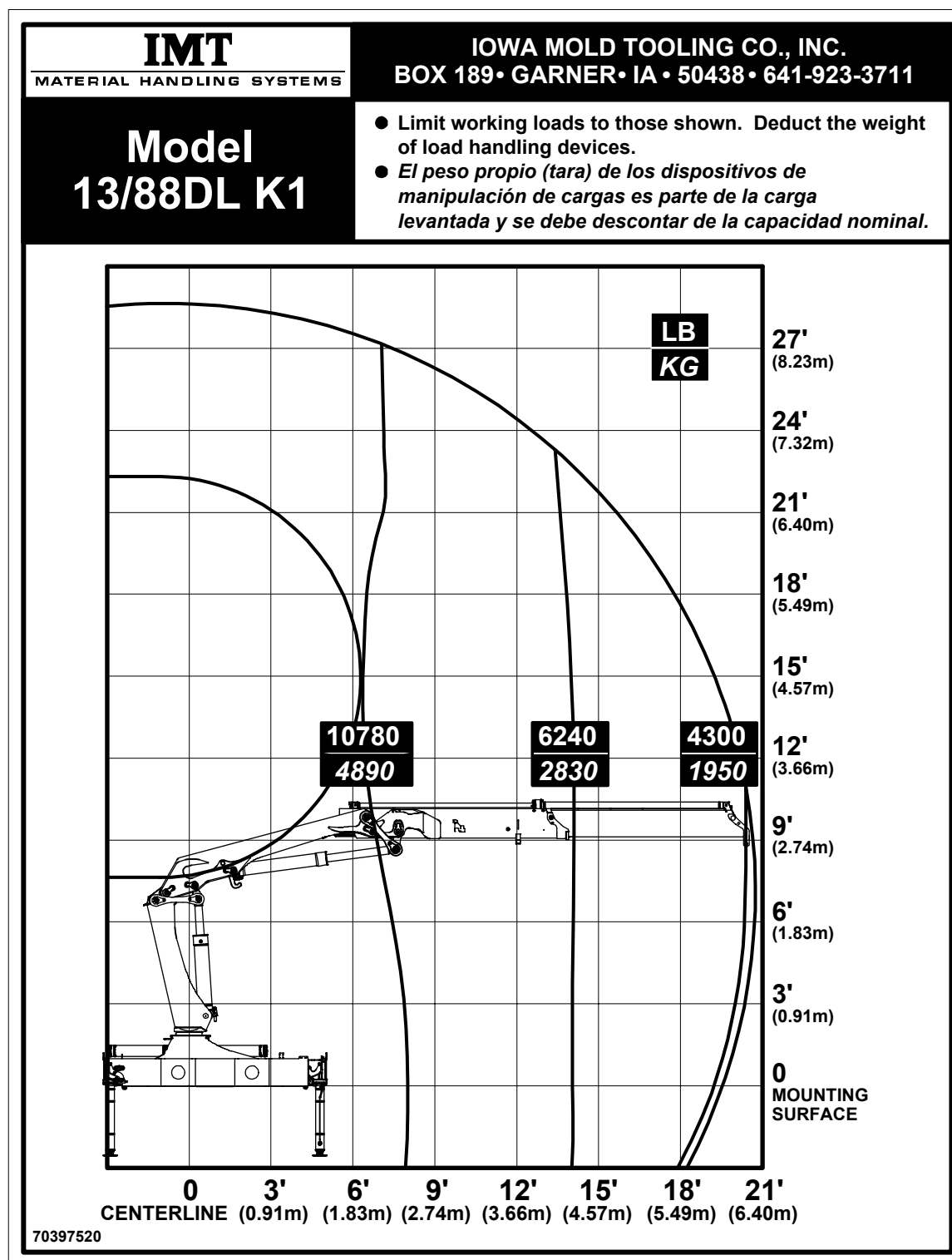
WORKING PRESSURE ON LOAD-HOLDING VALVES			
<i>Function</i>	<i>Direction</i>	<i>Port</i>	<i>Opening Pressure</i>
Boom cylinder			4715 psi (325 bar)
Jib cylinder			4785 psi (330 bar)
Rotation system			2685 psi (185 bar)
Extension cylinders	Extend	A	3045 psi (210 bar)
	Retract	B	6235 psi (430 bar)

PRESSURE SETTING FOR LOAD-MOMENT LIMITATION (LMB)	
Load moment limitation (LMB)	4205 psi (290 bar)

MAXIMUM PUMP PERFORMANCE	
Pump performance	11.9 gal/min (45 l/min)

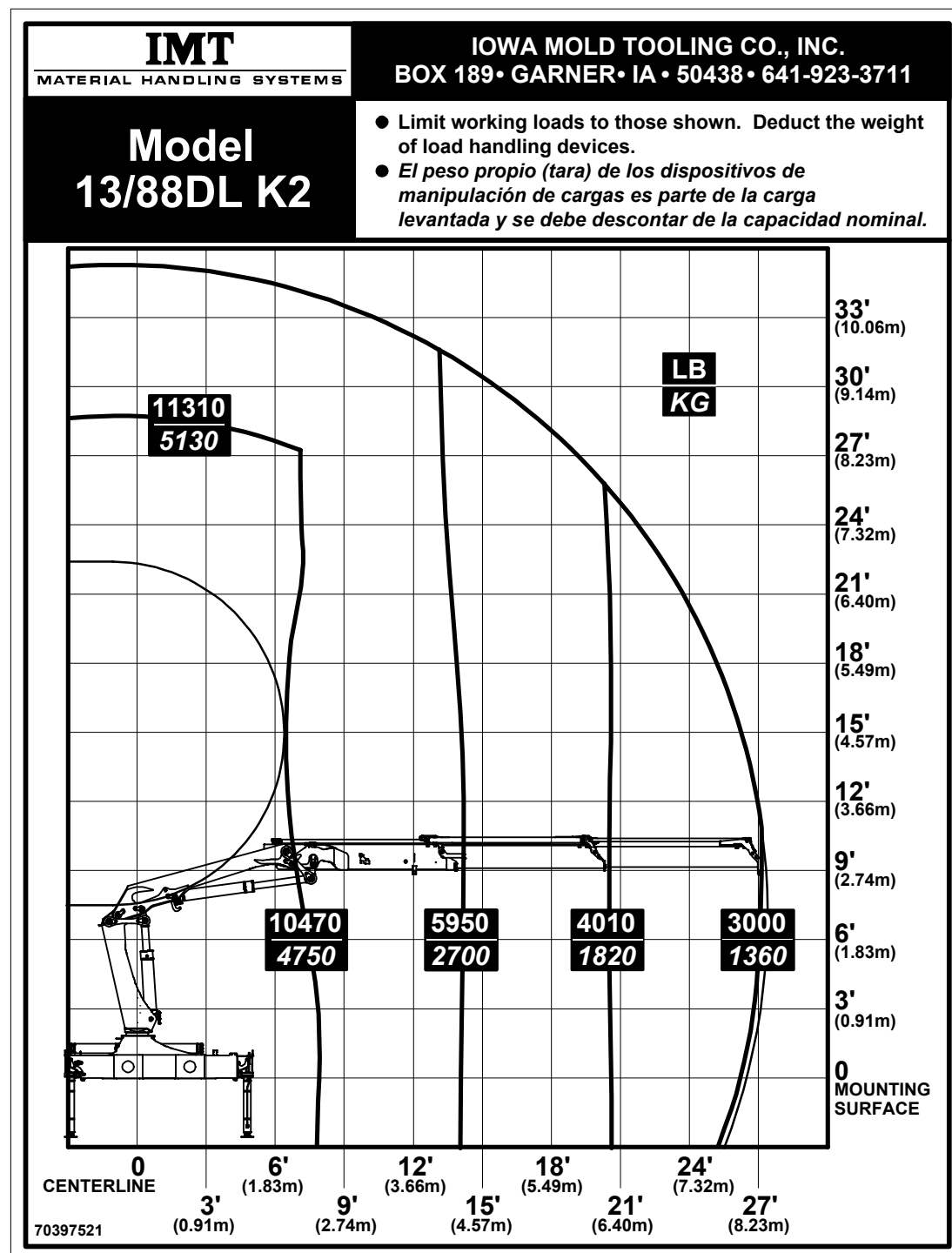


13/88DL K1 Capacity Chart



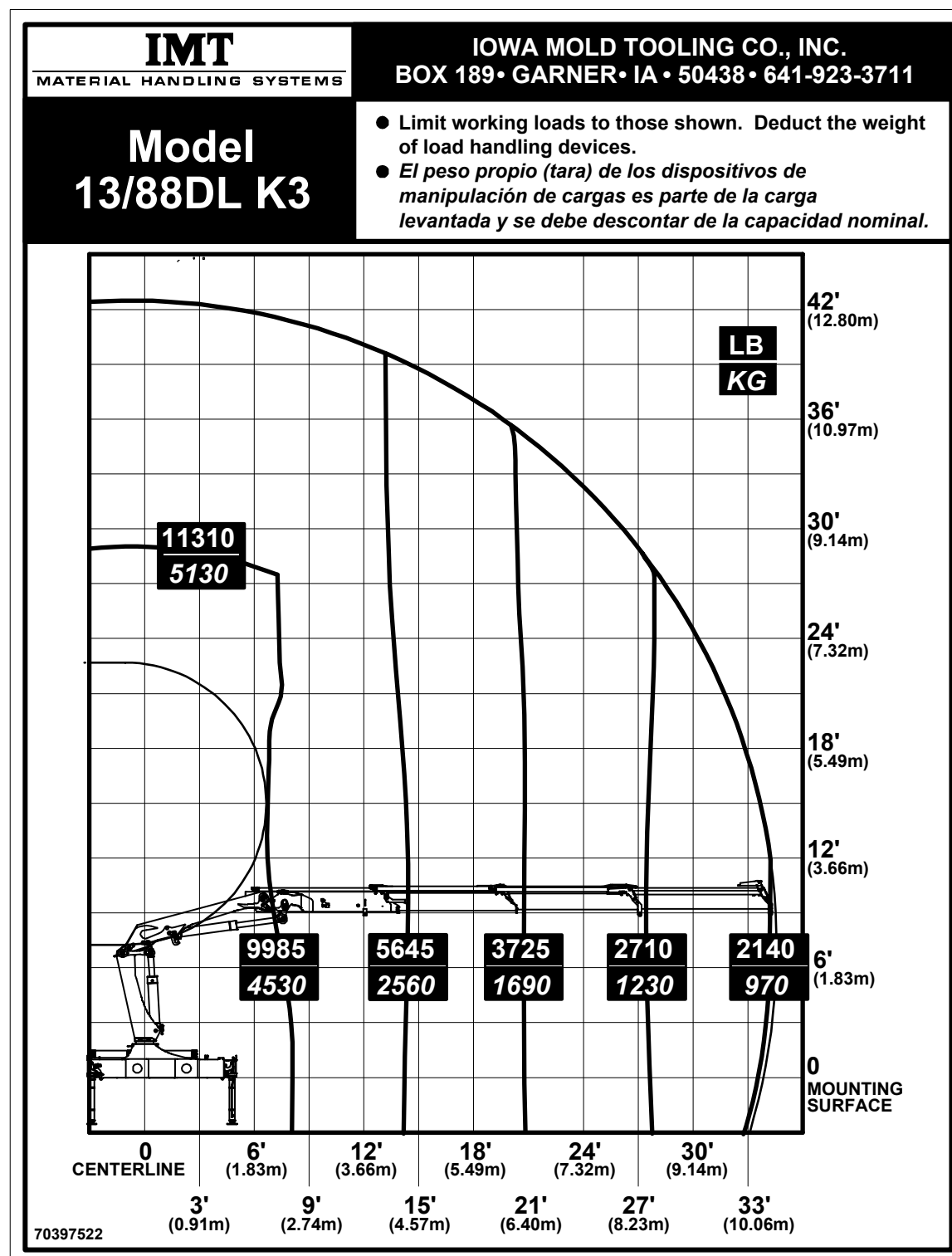


13/88DL K2 Capacity Chart



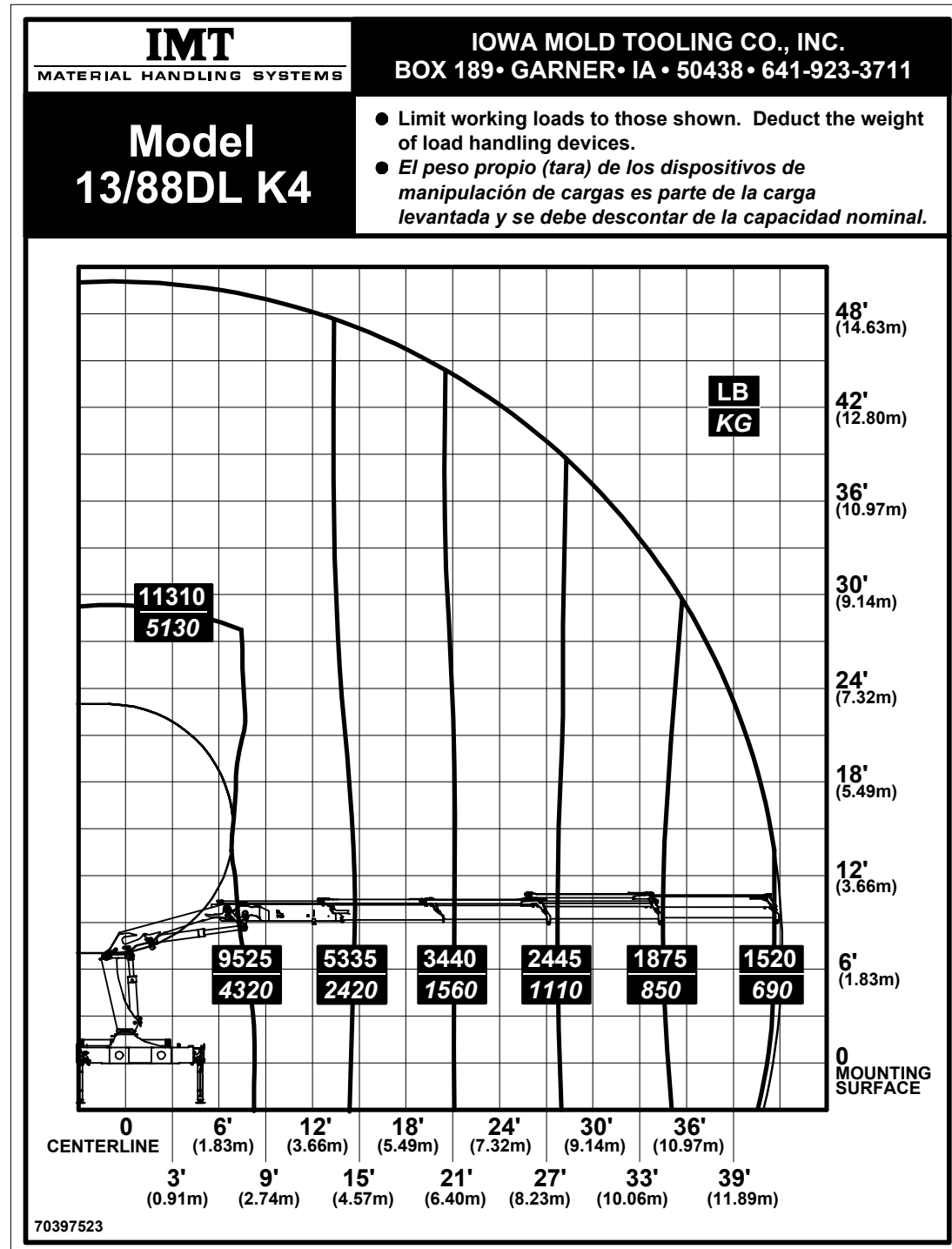


13/88DL K3 Capacity Chart

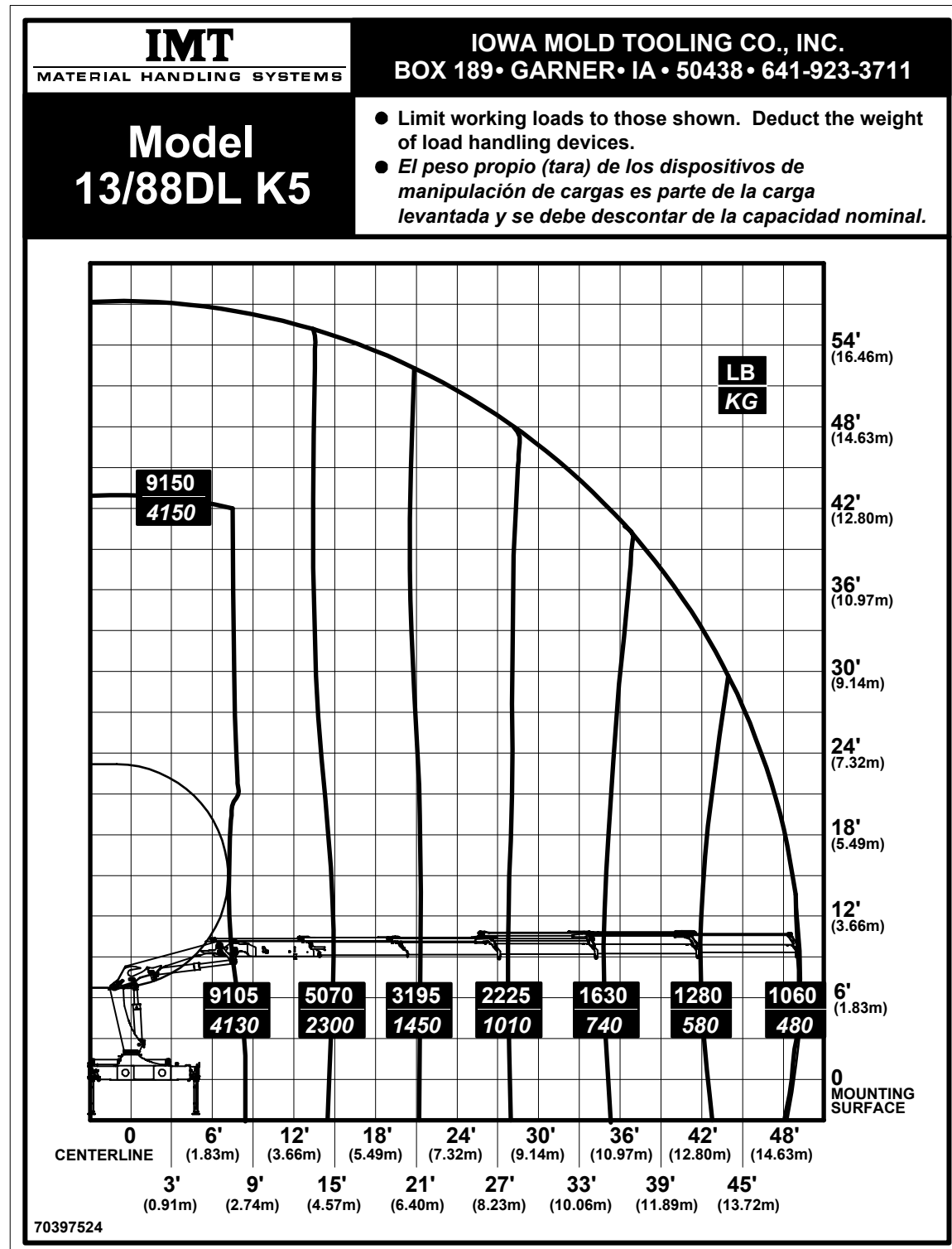




13/88DL K4 Capacity Chart

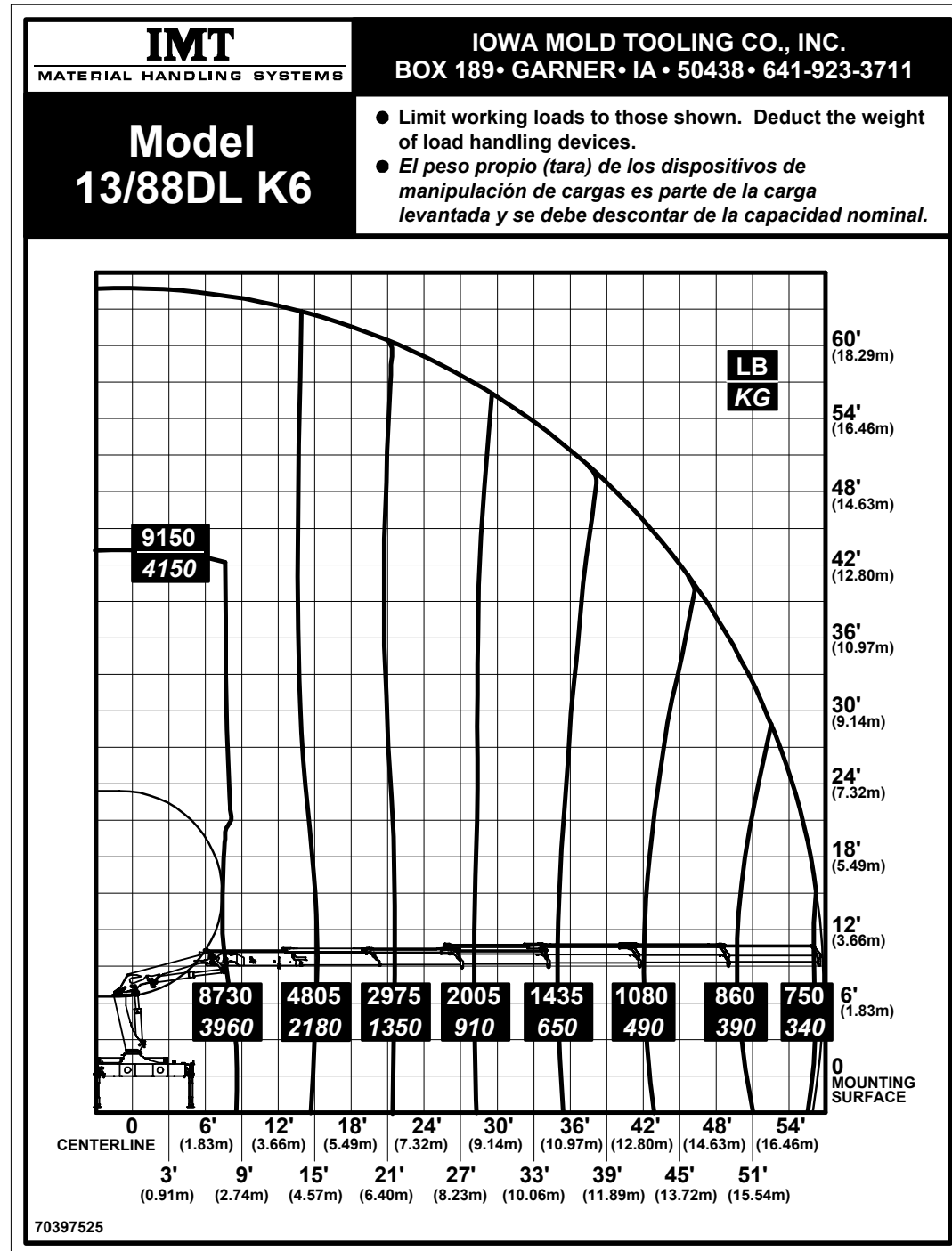


13/88DL K5 Capacity Chart



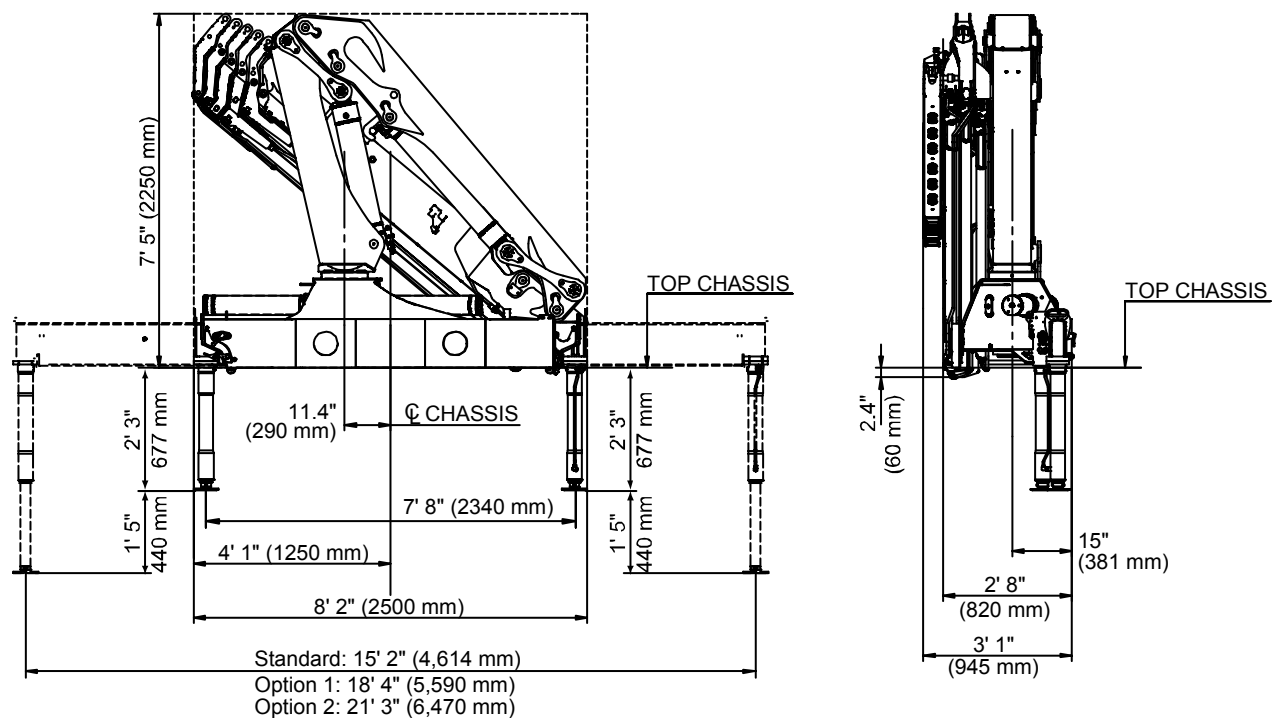
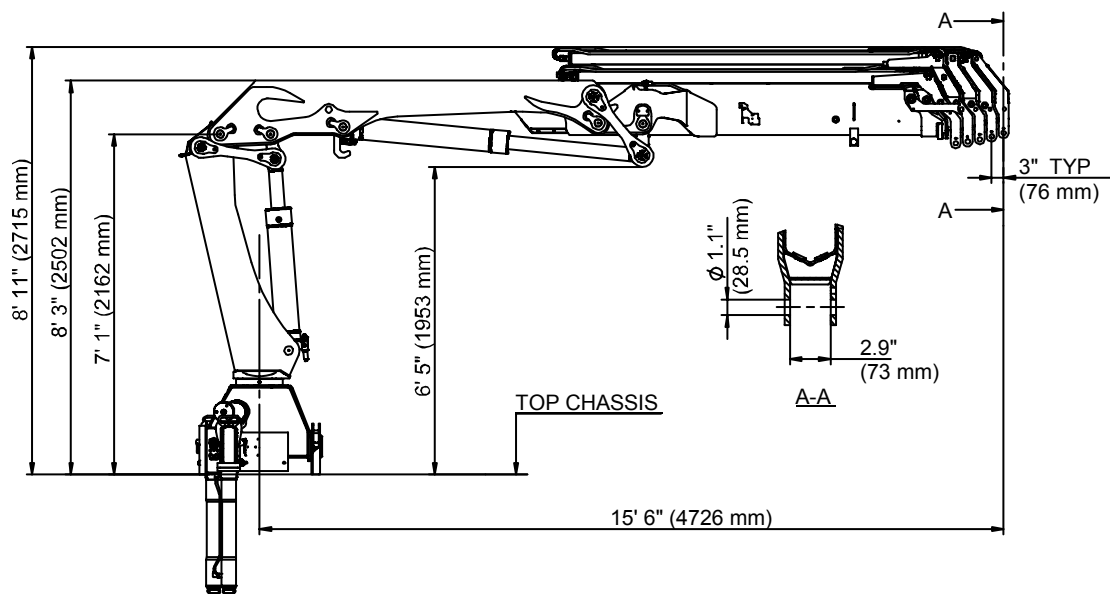


13/88DL K6 Capacity Chart



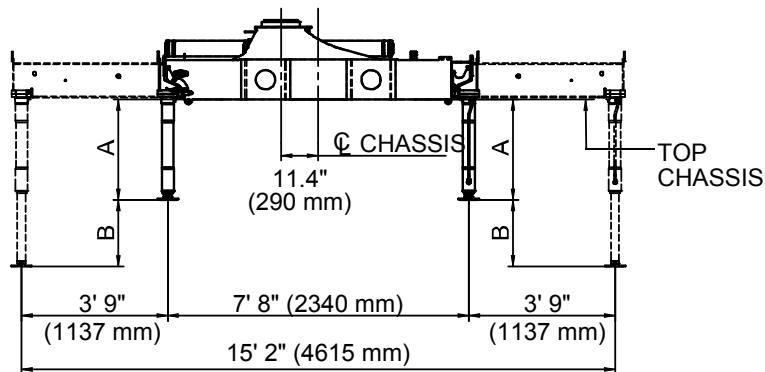


13/88DL Geometric Configuration

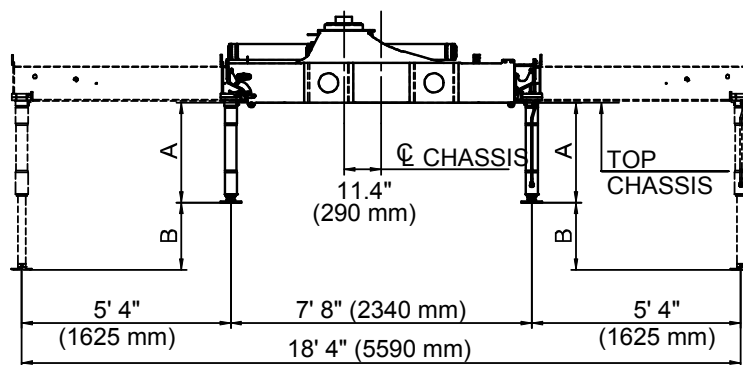




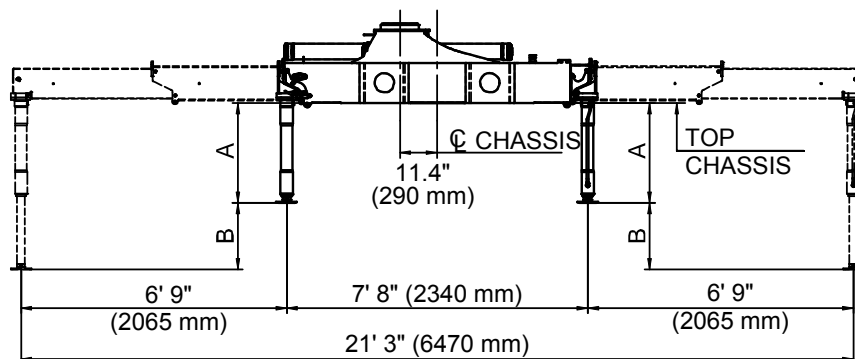
Stabilizer Dimensions, Fixed Legs



STANDARD



OPTION 1
(Manual Out /
Hydraulic Down)

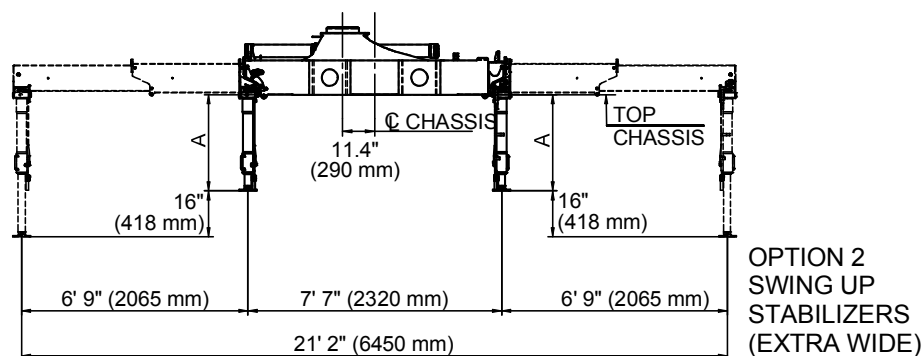
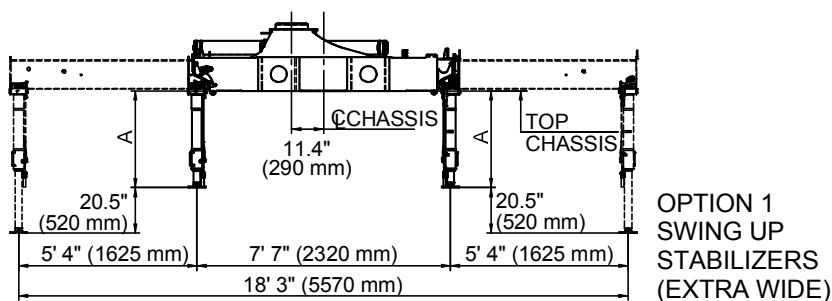
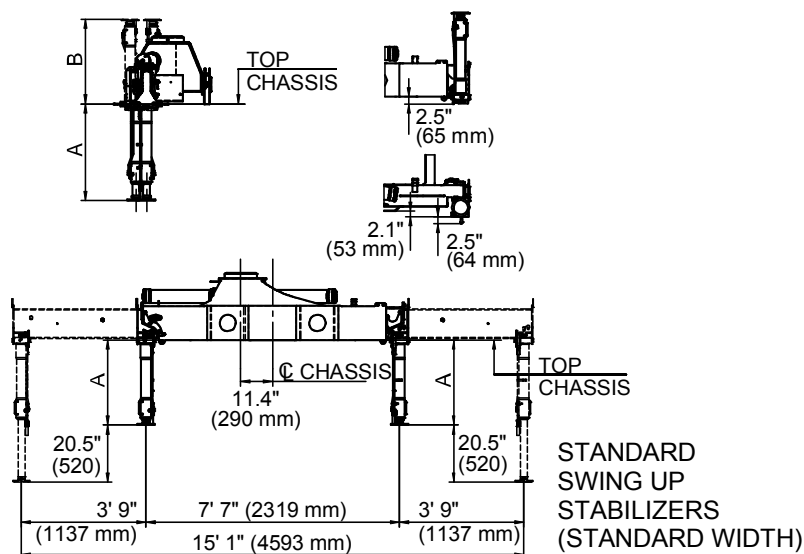


OPTION 2
(Hydraulic Out /
Hydraulic Down)

A	2' 3" (677 mm)	2' 6" (777 mm)	2' 11" (877 mm)	3' 2" (977 mm)
B	1' 5" (440 mm)	1' 8" (520 mm)	1' 8" (520 mm)	1' 8" (520 mm)



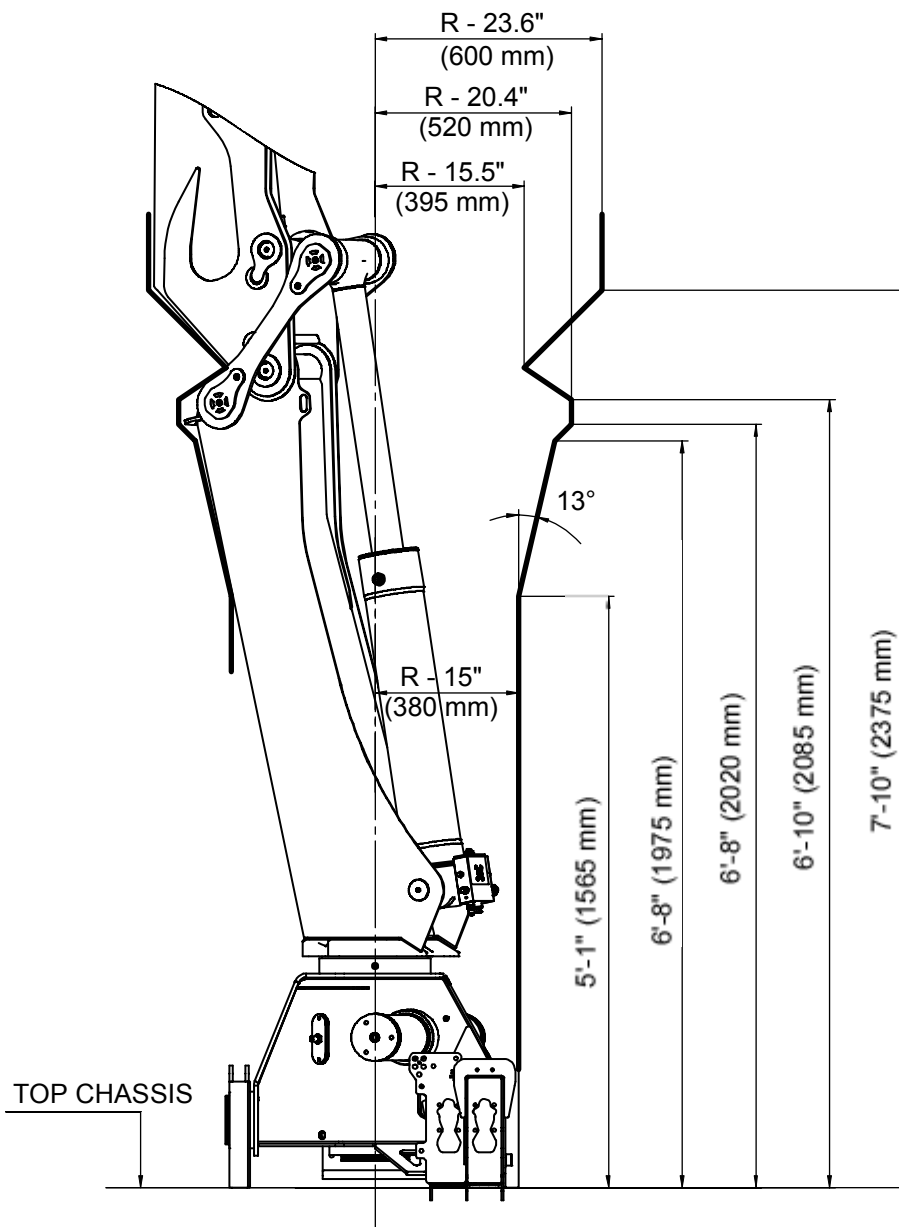
Stabilizer Dimensions, Hyd Swing-Up Legs



A	35" (881 mm)	39" (981 mm)	42.5" (1081 mm)
B	30.5" (775 mm)	34.4" (875 mm)	38.4" (975 mm)



13/88DL Swing Clearance







CHAPTER 2

Hydraulic Schematics

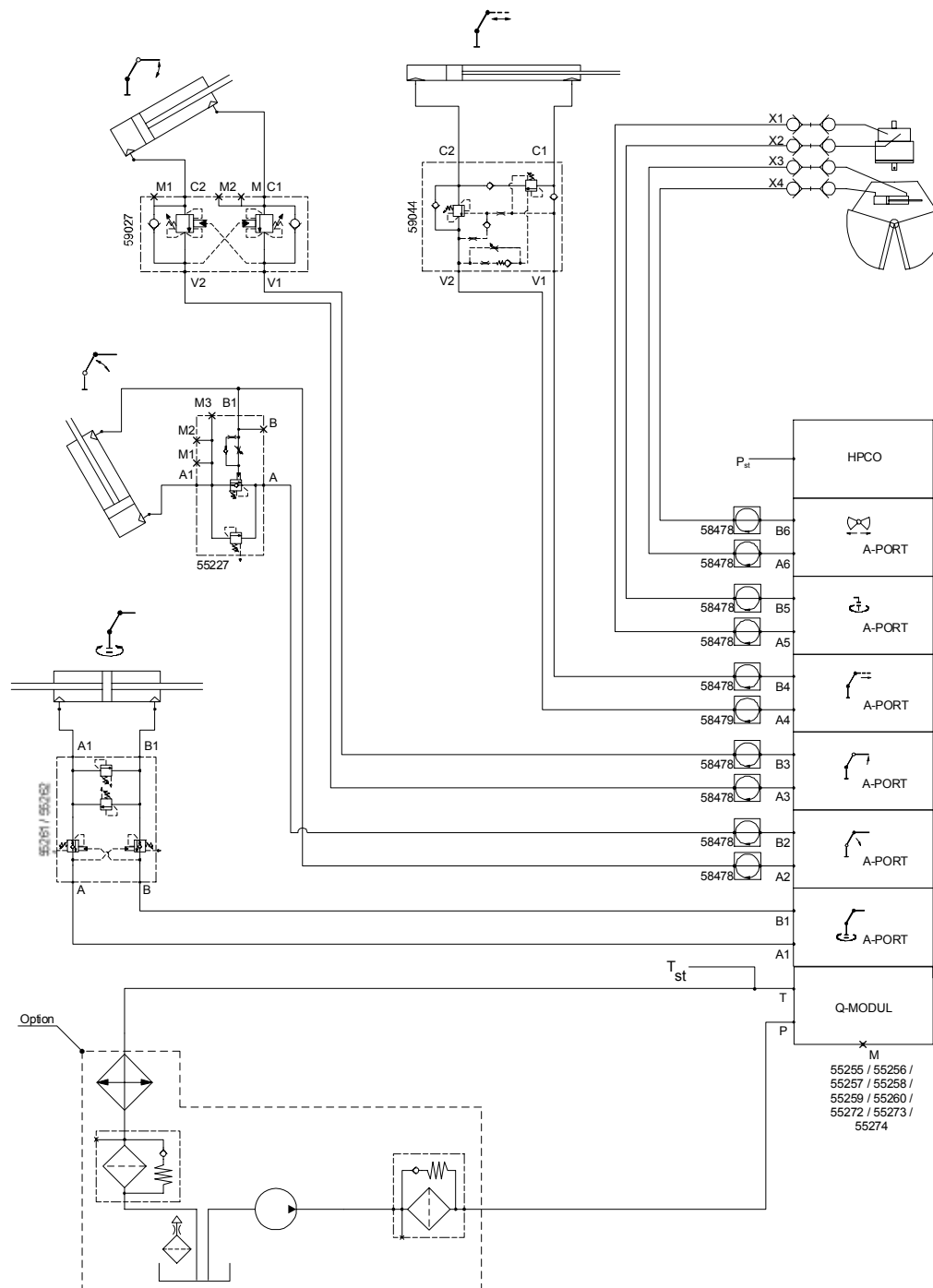
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Hydraulic Diagram - 13/88DL Manual Control

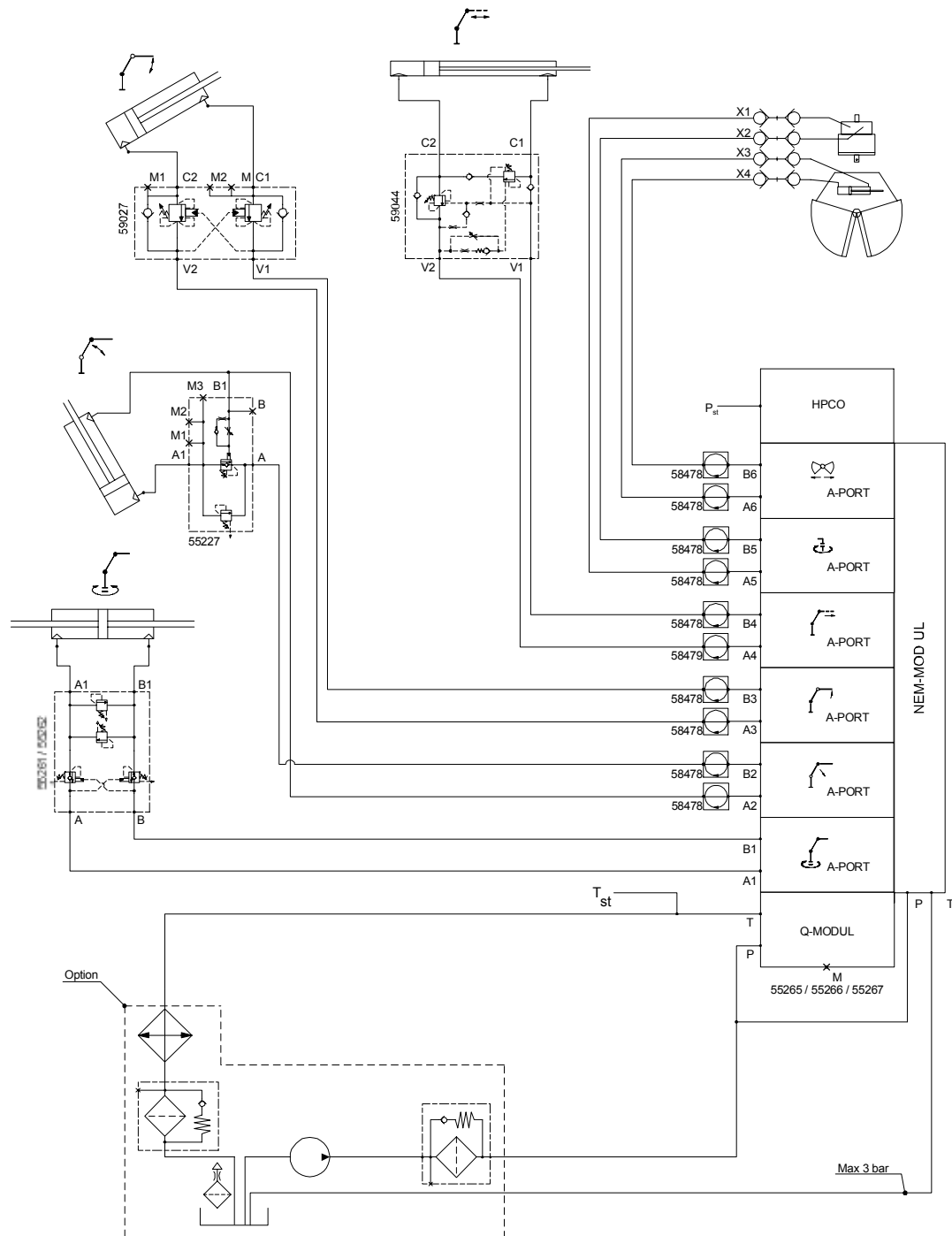
This diagram applies to a 13/88DL crane with a single-circuit fixed pump and 6-function manual controls.





Hydraulic Diagram - 13/88DL Radio Control

This diagram applies to a 13/88DL crane with a single-circuit fixed pump and 6-function radio controls.





Hydraulic Diagram - 13/88DL Top Seat Control

This diagram applies to a 13/88DL crane with a single-circuit fixed pump and 6-function top seat controls.

