
Manual # 99904606

13/88DL Technical Specifications

Revision Date 20120910



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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		ECN 11628 - Updated stabilizer wording.
20120502	Specifications	Added tank and mounting kit weights to crane weight.
20120910	Drawings	Added manual swing up stabilizer drawings, stowed dimension drawing. Added winch data.

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)	4,200 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 does not include stabilizers.
** 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)

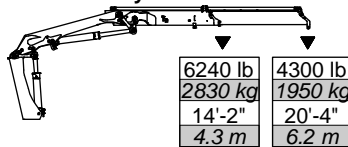
MAXIMUM PUMP PERFORMANCE	
Pump performance	11.9 gal/min (45 l/min)

Winch Technical Data

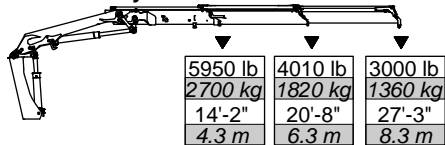
	1.5 T Winch (P9) (3305 lb / 1500 kg)	2.5 T Winch (P15) (5510 lb / 2500 kg)
PERFORMANCE (at 2175 psi (150 bar))		
Maximum wire pull - 1st layer	3305 lb (1500 kg)	5510 lb (2500 kg)
Maximum wire pull - 2nd layer	3020 lb (1370 kg)	5070 lb (2300 kg)
Maximum wire pull - 3rd layer	2278 lb (1260 kg)	4630 lb (2100 kg)
Maximum wire pull - 4th layer	2580 lb (1170 kg)	4300 lb (1950 kg)
WIRE SPEED (at 10.5 gpm (40 l/min))		
Maximum wire speed - 1st layer	72 ft/min (22 m/min)	79 ft/min (24 m/min)
Maximum wire speed - 2nd layer	79 ft/min (24 m/min)	85 ft/min (26 m/min)
Maximum wire speed - 3rd layer	85 ft/min (26 m/min)	92 ft/min (28 m/min)
Maximum wire speed - 4th layer	92 ft/min (28 m/min)	98 ft/min (30 m/min)
WEIGHTS		
Tare weight, winch	143 lb (65 kg)	198 lb (90 kg)
Fixed parts (valve section, brackets, hoses, etc.)	110 lb (50 kg)	110 lb (50 kg)
Wire 10 mm dia x 50 m	66 lb (30 kg)	66 lb (30 kg)
Spare parts, single snatch block	66 lb (30 kg)	66 lb (30 kg)
Spare parts, double snatch block	88 lb (40 kg)	88 lb (40 kg)

Lifting Capacities - 13/88DL K1-K6

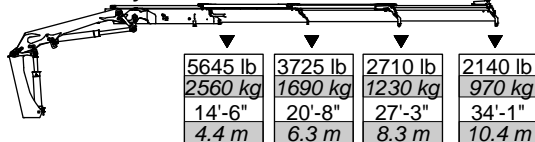
13/88DL - 1 Hydraulic



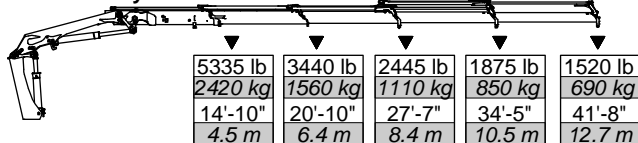
13/88DL - 2 Hydraulic



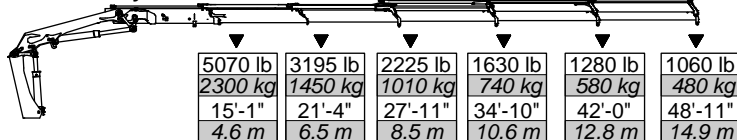
13/88DL - 3 Hydraulic



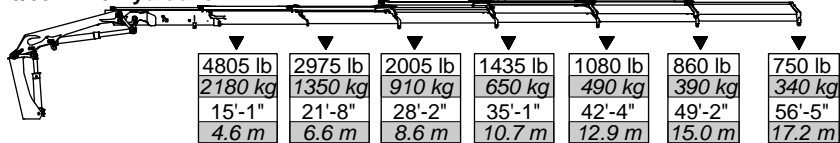
13/88DL - 4 Hydraulic



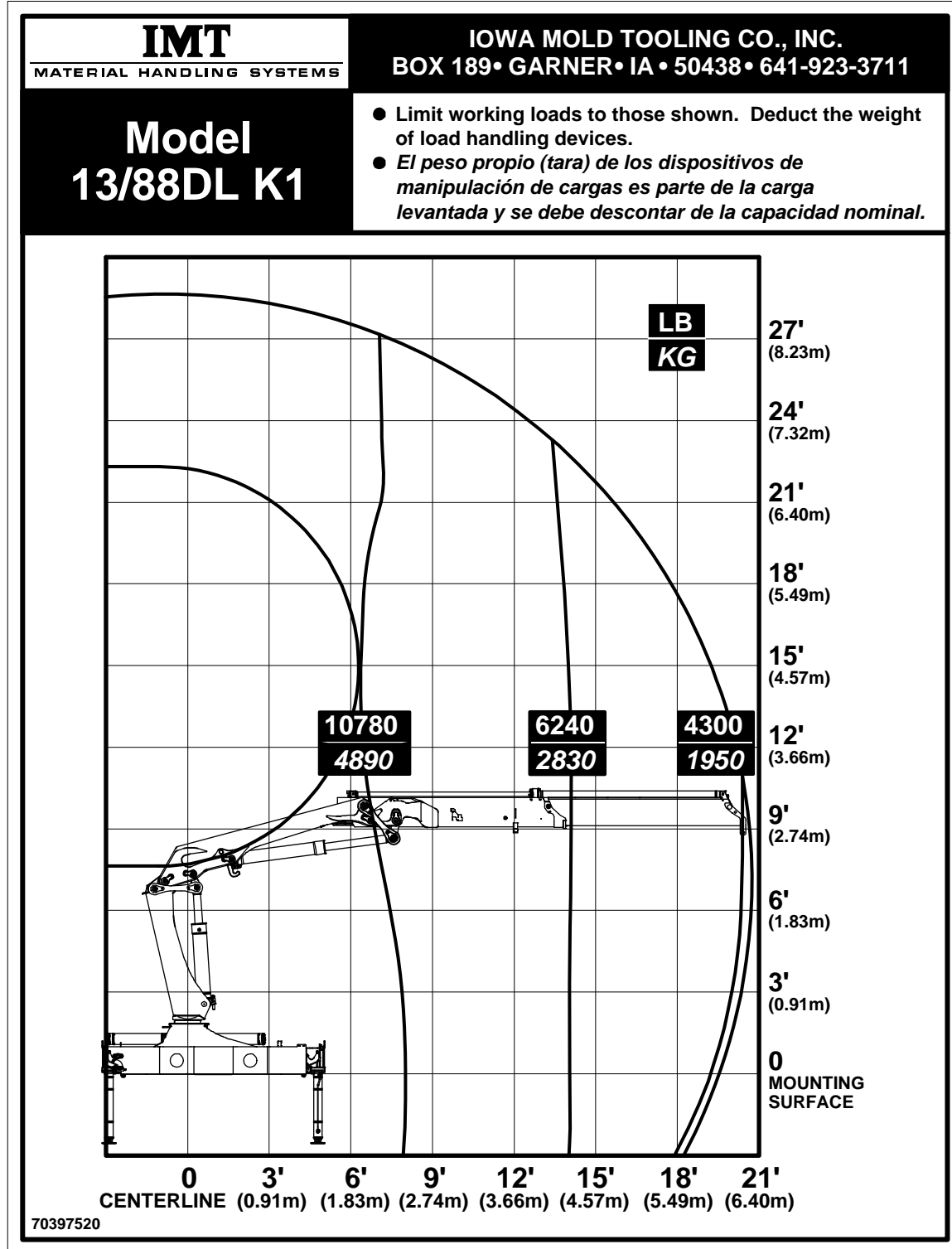
13/88DL - 5 Hydraulic



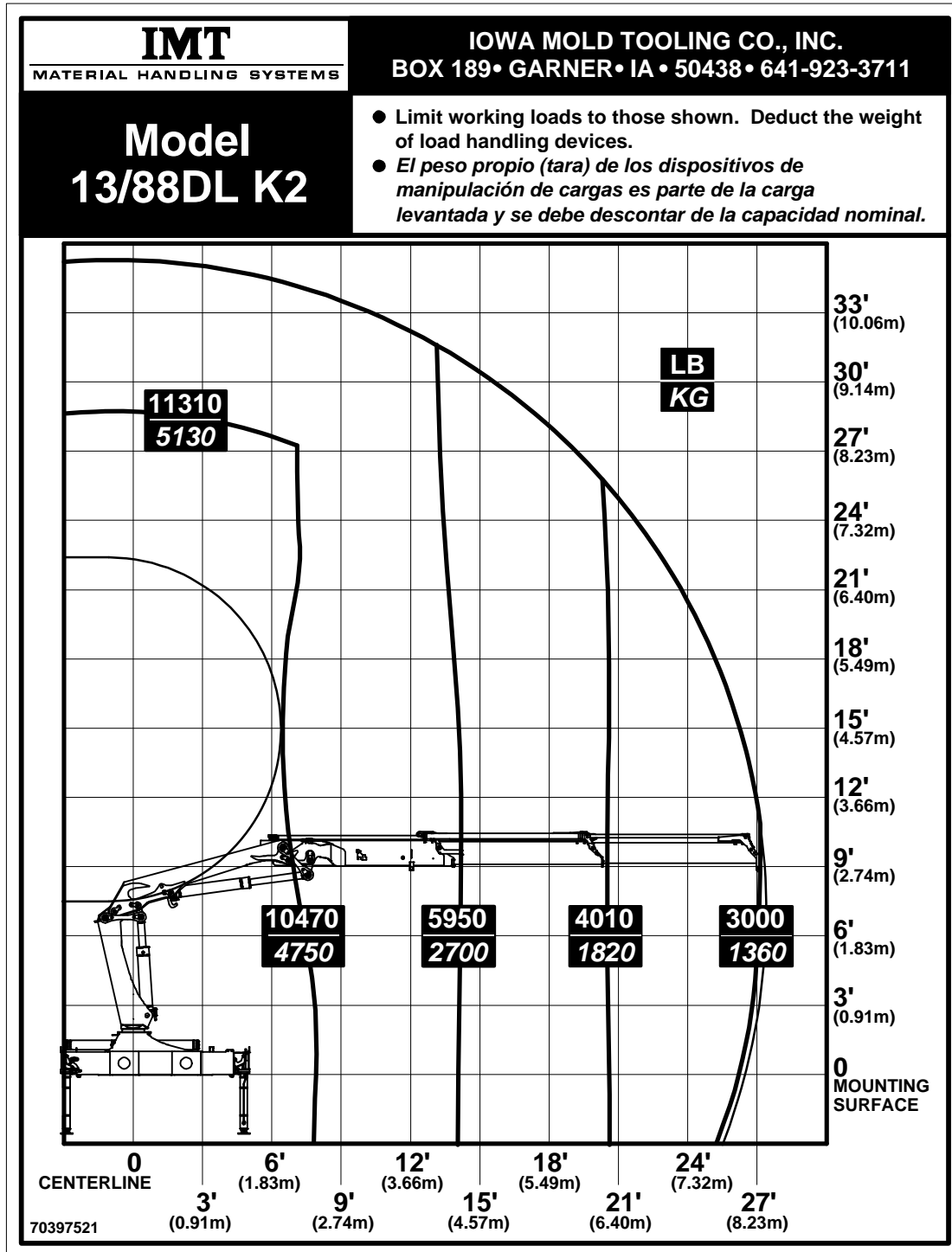
13/88DL - 6 Hydraulic



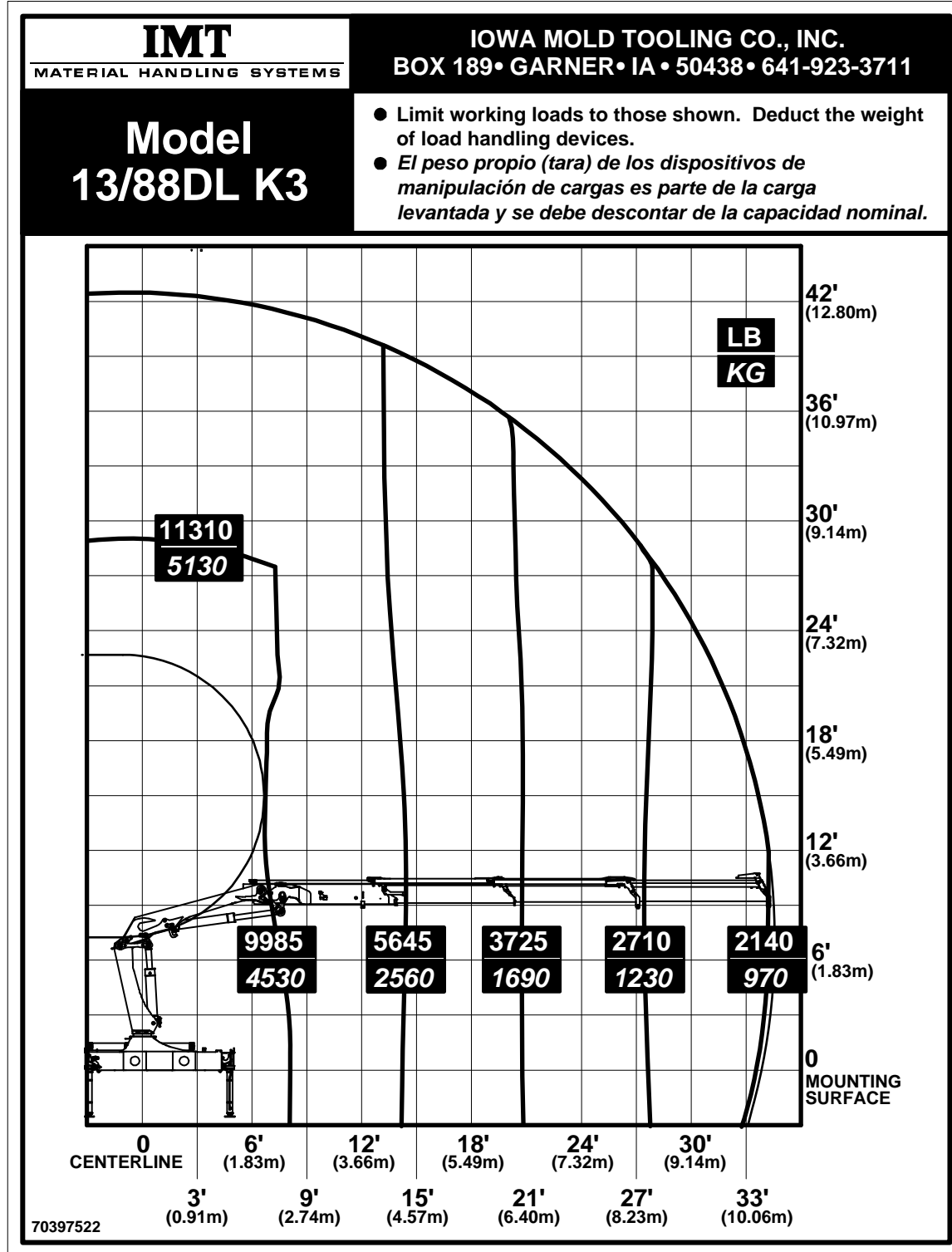
13/88DL K1 Capacity Chart



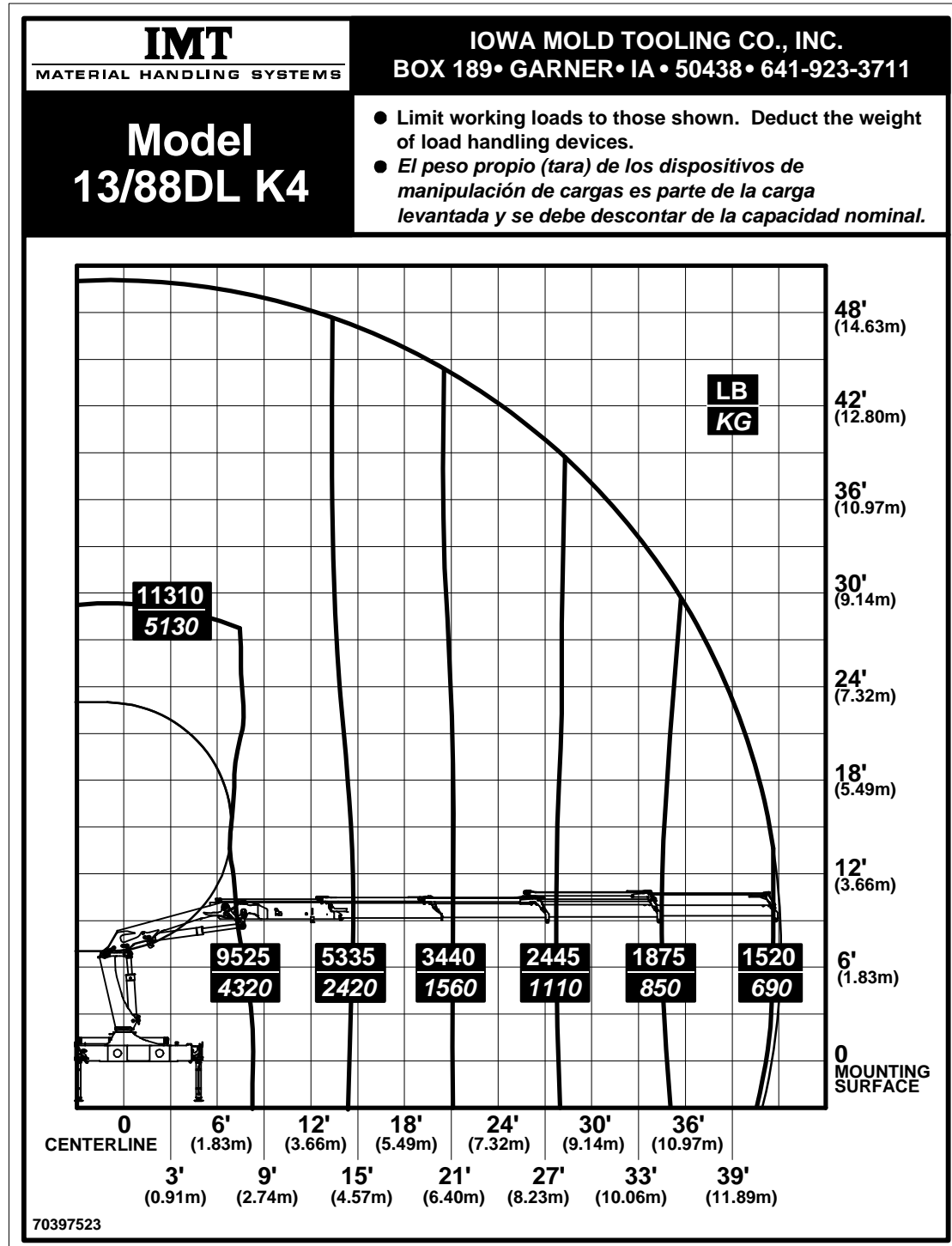
13/88DL K2 Capacity Chart



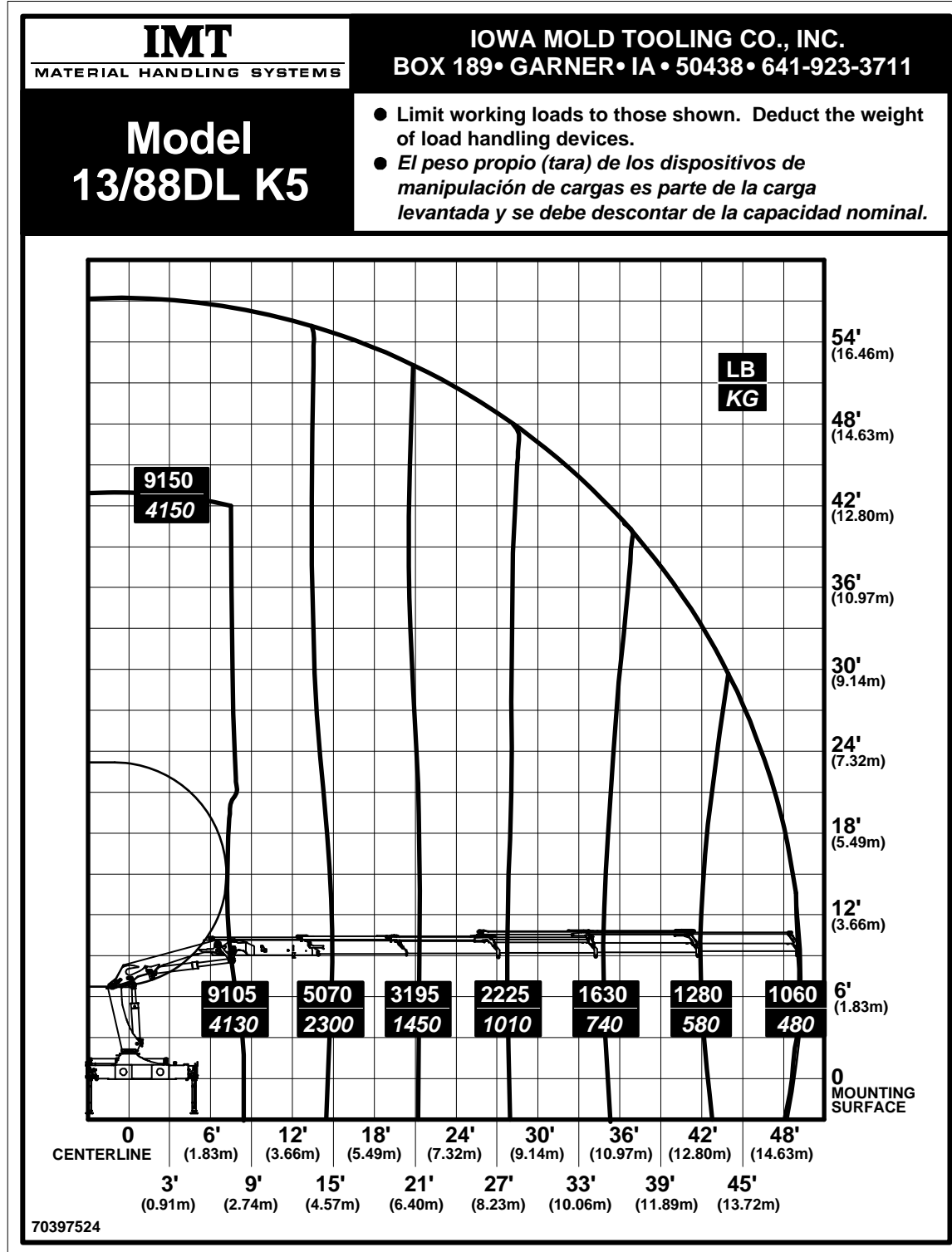
13/88DL K3 Capacity Chart



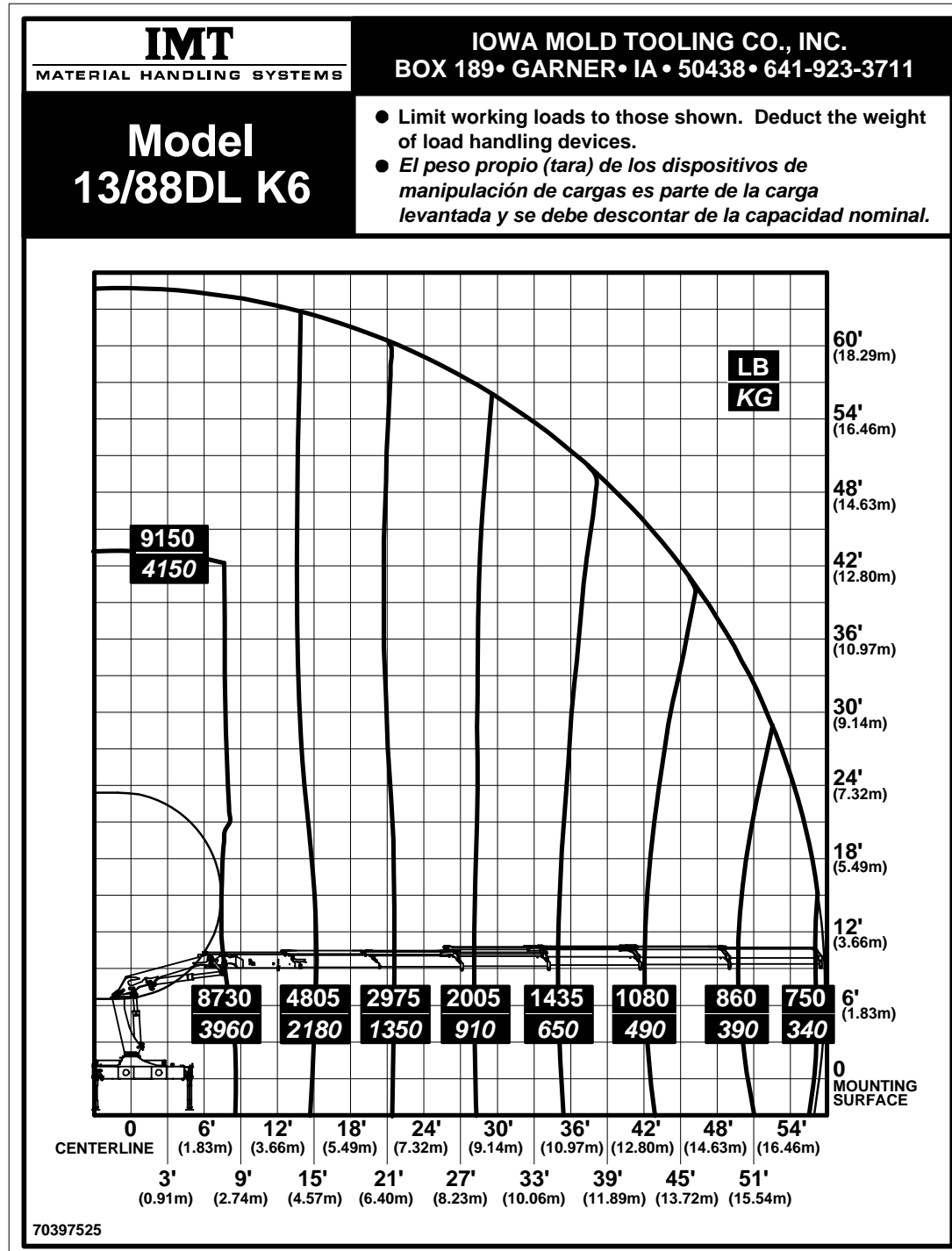
13/88DL K4 Capacity Chart



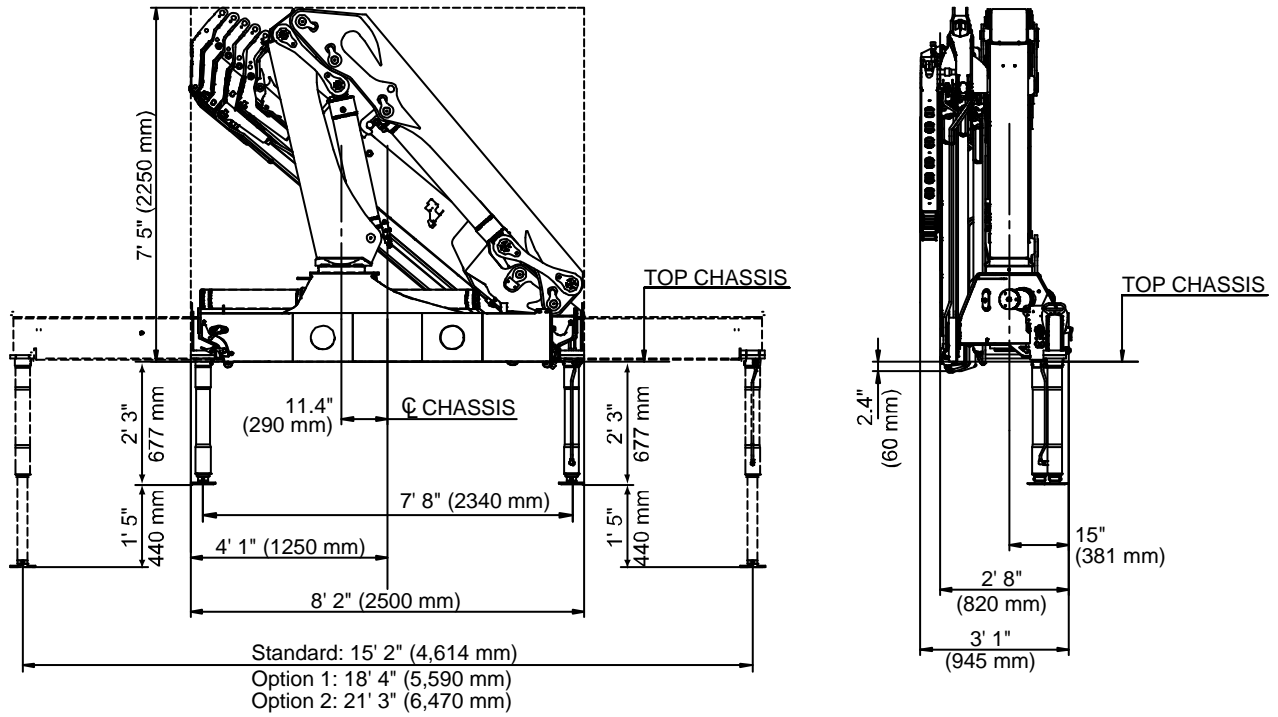
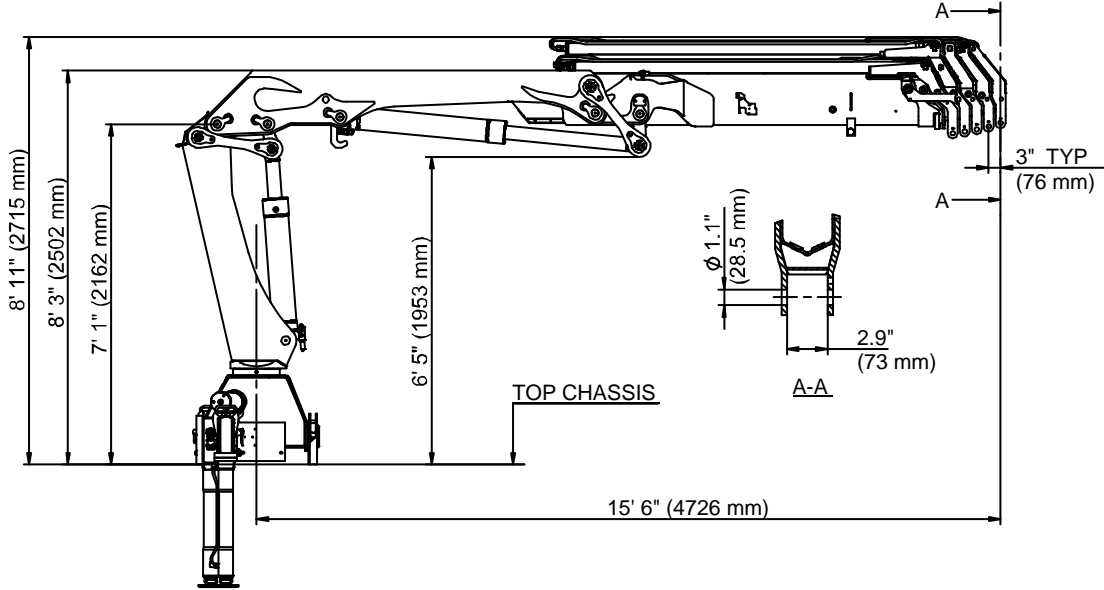
13/88DL K5 Capacity Chart



13/88DL K6 Capacity Chart

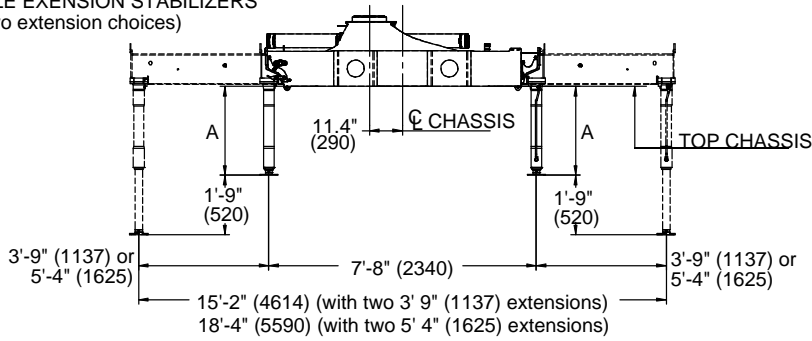


13/88DL Geometric Configuration

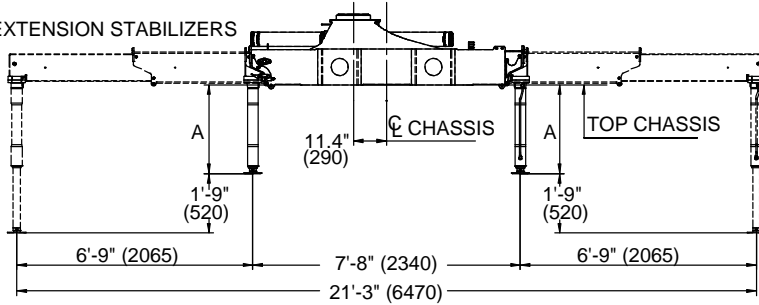


Stabilizer Dimensions, Fixed Legs

SINGLE EXTENSION STABILIZERS (Two extension choices)



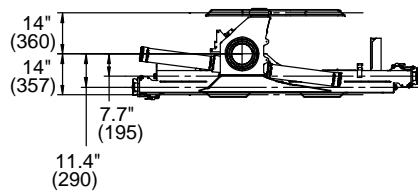
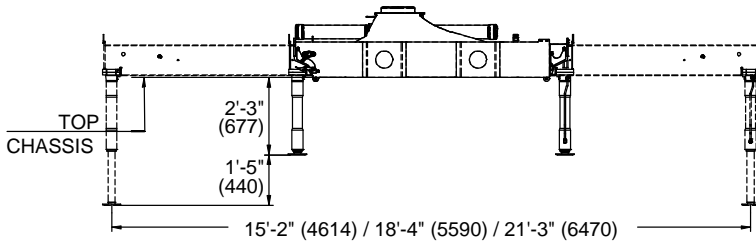
DOUBLE EXTENSION STABILIZERS



STABILIZER LEG EXTENSIONS

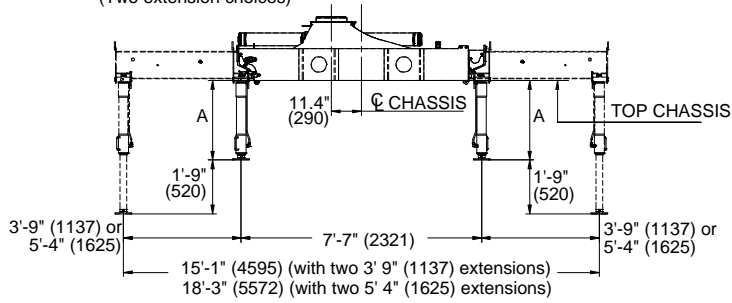
A	2'-6" (777)	2'-11" (877)	3'-2" (977)

STABILIZER CYLINDER, C80-440

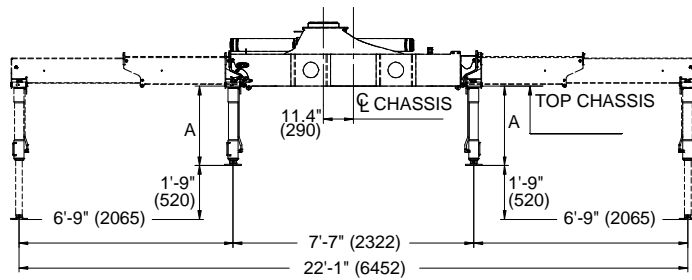


Stabilizer Dimensions, Manual Swing-Up Legs




SINGLE EXTENSION STABILIZERS WITH MANUAL SWING-UP LEGS
(Two extension choices)



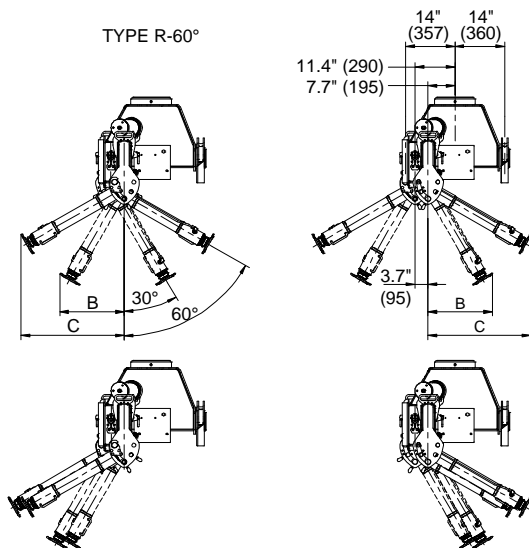
DOUBLE EXTENSION STABILIZERS WITH MANUAL SWING-UP LEGS






STABILIZER LEG EXTENSIONS

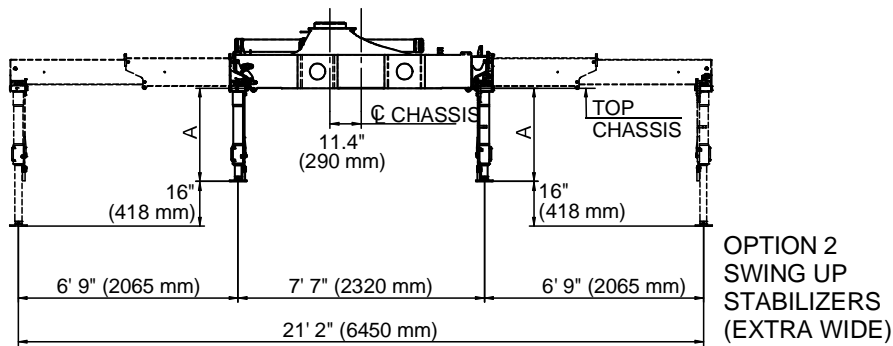
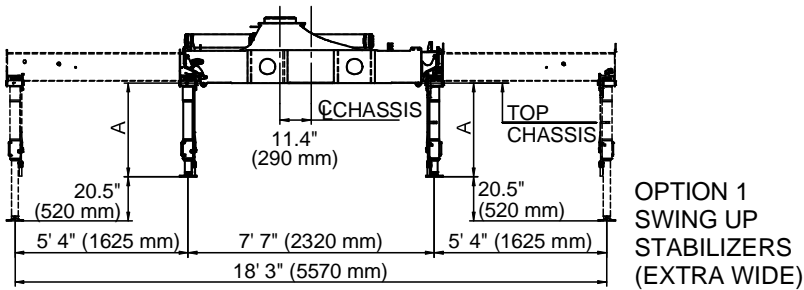
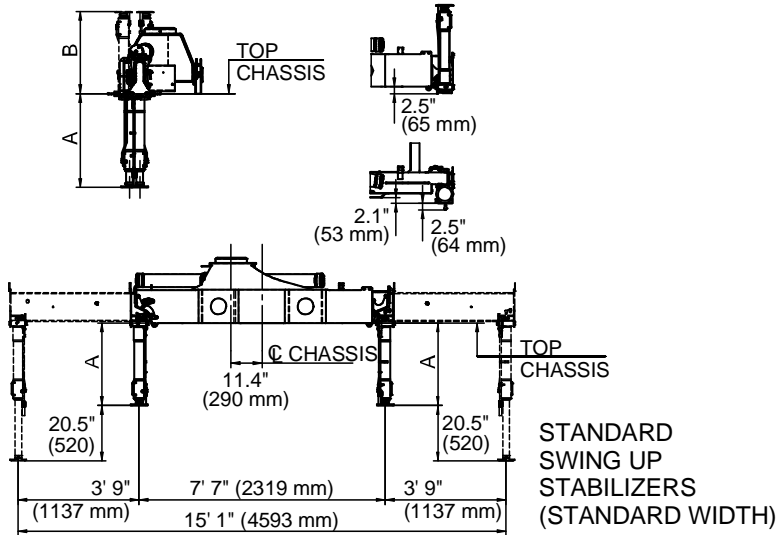
			
A Type R-60°	2'-6" (771)	2'-10" (871)	3'-2" (971)

TYPE R-60°



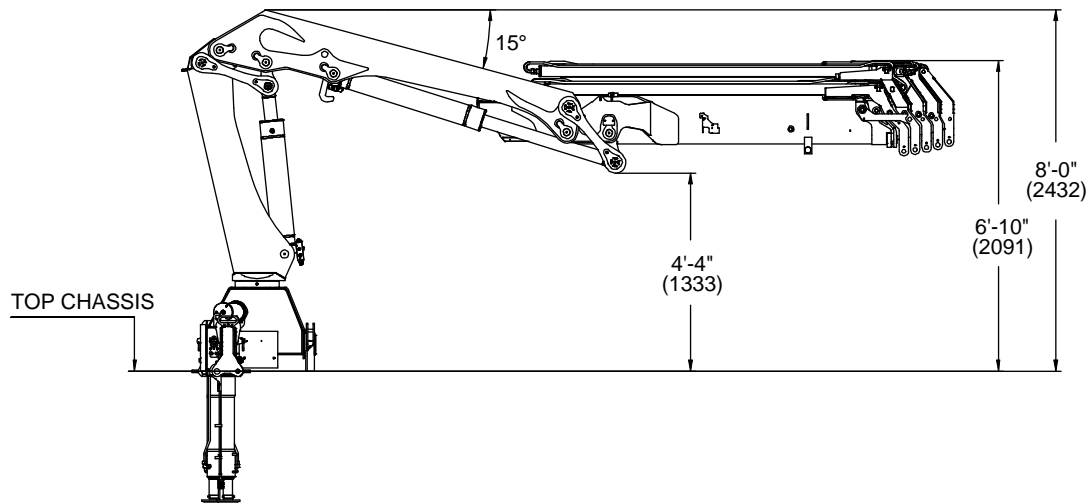
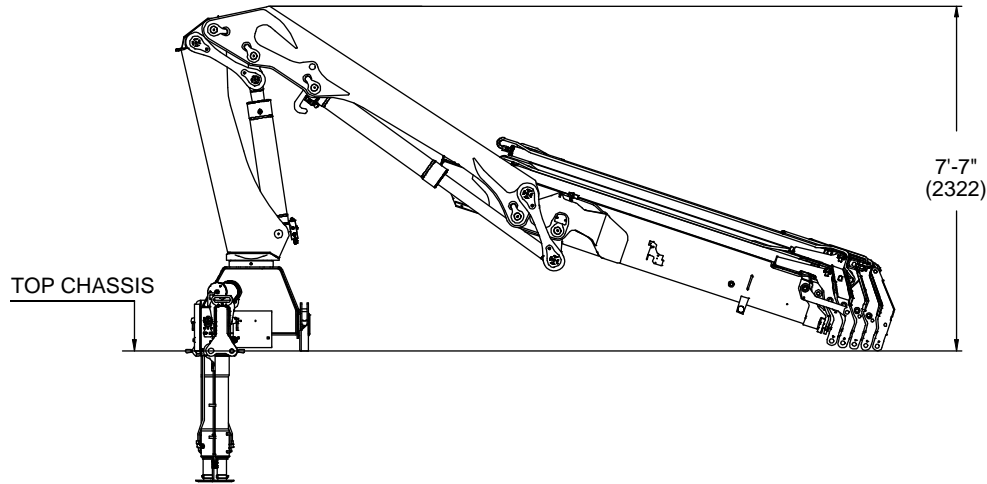
			
B	18.3" (465)	20.3" (515)	21.9" (565)
C	29.3" (744)	32.7" (831)	36.1" (918)

Stabilizer Dimensions, Hyd Swing-Up Legs



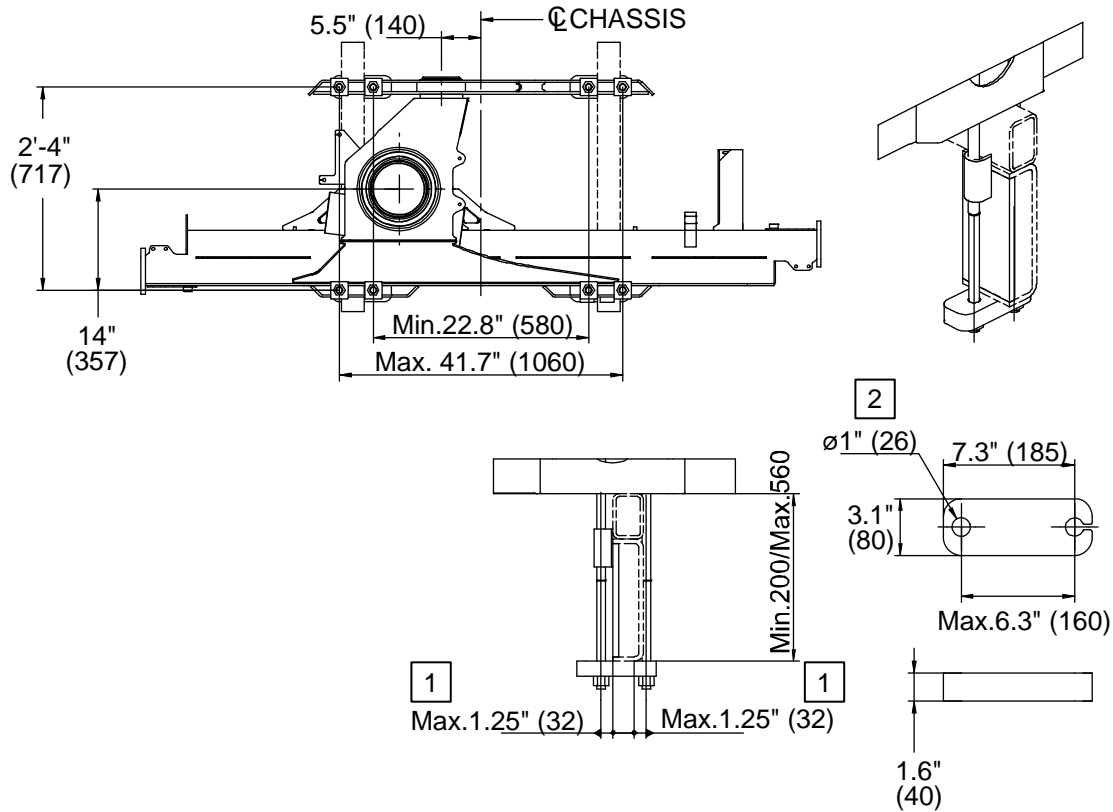
A	35" (881 mm)	39" (981 mm)	42.5" (1081 mm)
B	30.5" (775 mm)	34.4" (875 mm)	38.4" (975 mm)

Stowed Dimensions

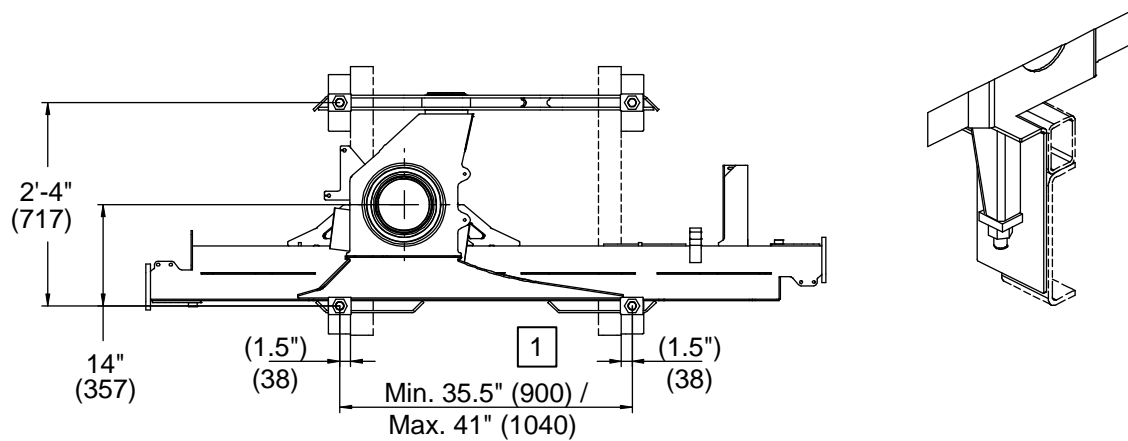


Mounting Dimensions

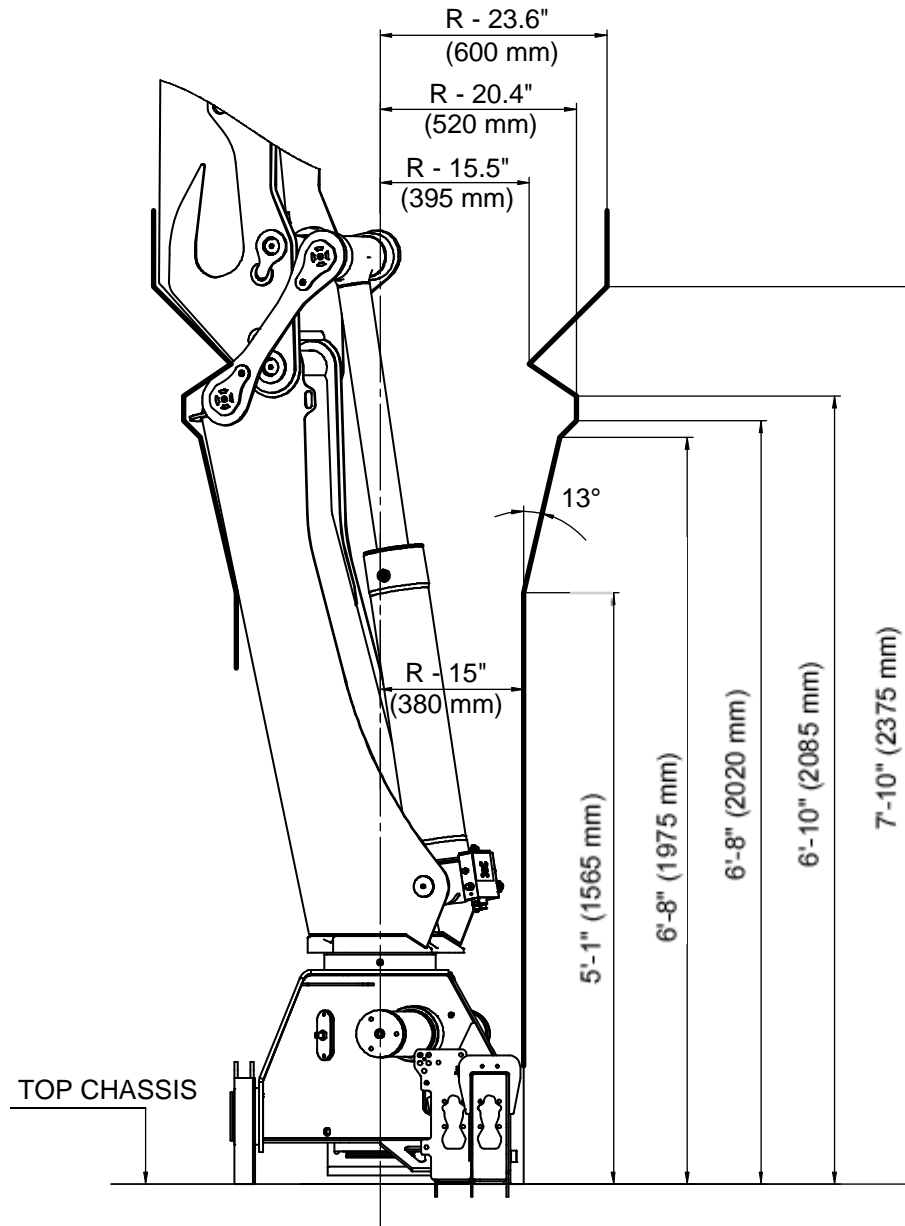
MOUNTING KIT 8 x M24x2 BOLTS



MOUNTING KIT 4 x M30x2 BOLTS



13/88DL Swing Clearance



CHAPTER 2

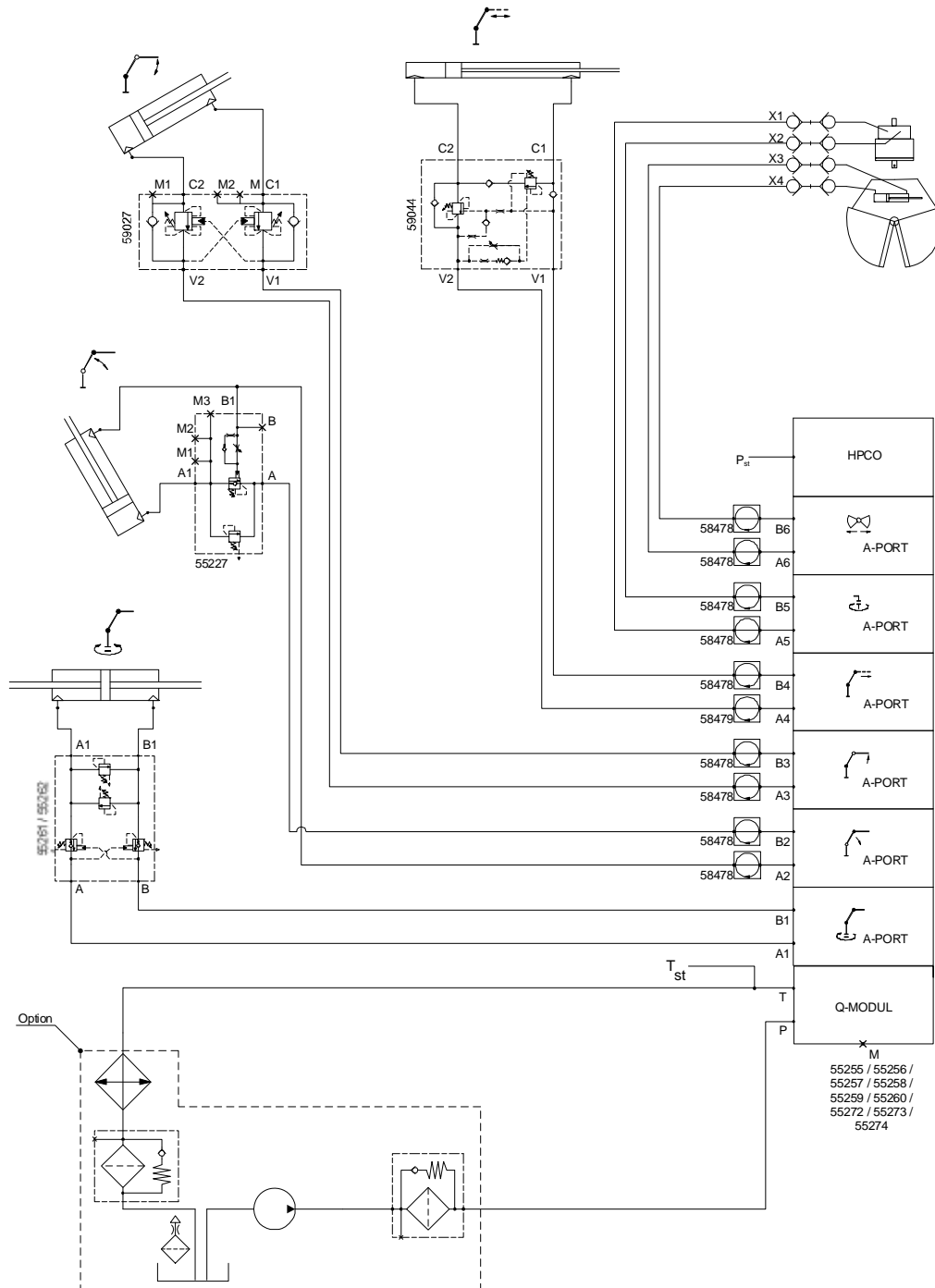
Hydraulic Schematics

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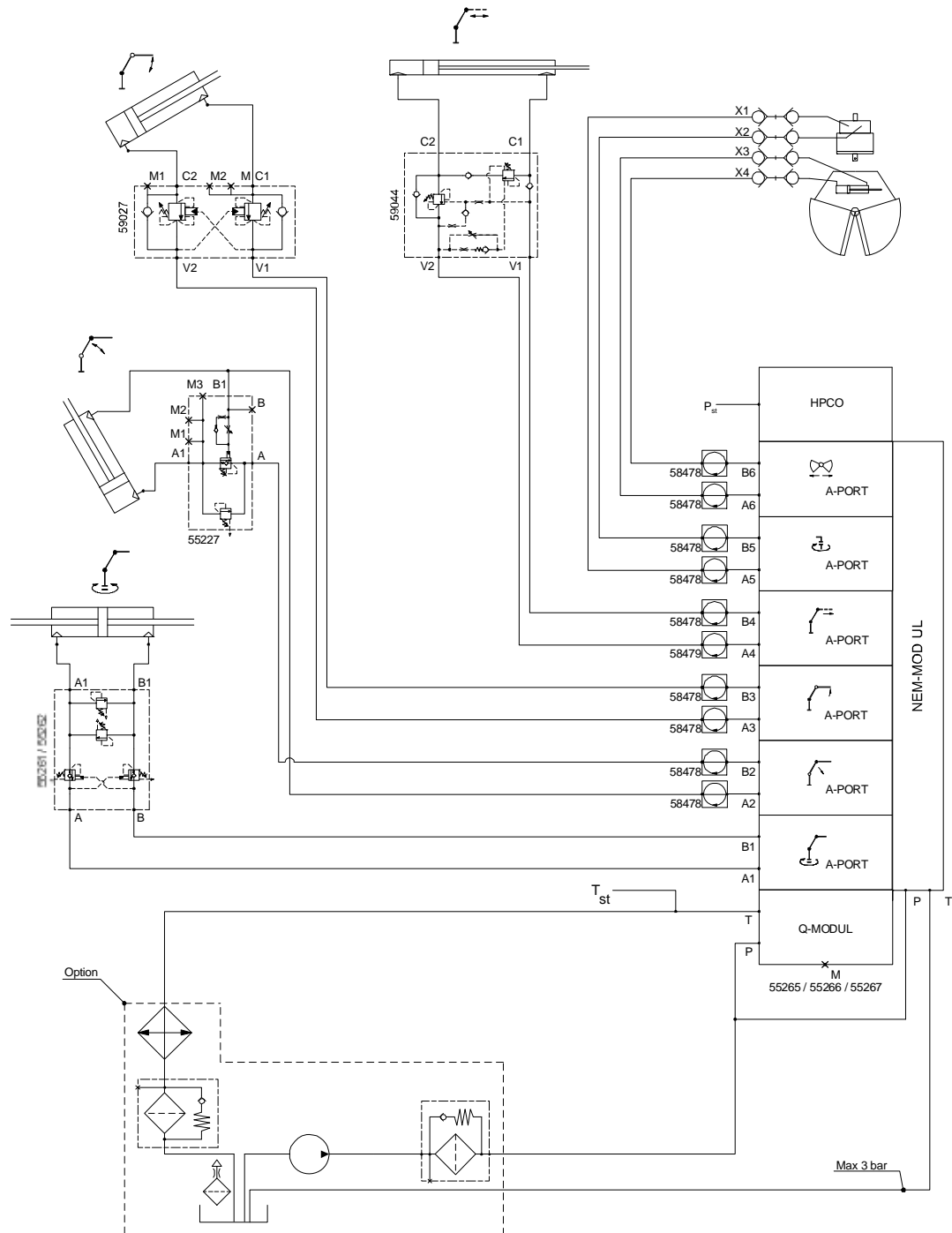
Hydraulic Diagram - 13/88DL Manual Control

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.

