
Manual # 99904610

15/105DL Technical Specifications

Revision Date 20120910



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Revisions

DATE	LOCATION	DESCRIPTION
20090715		Added swing clearance information.
20100118	Geometric. configuration	Added stabilizer length and extension dimensions, stabilizer drawings.
20111214	Specs, stabilizer drawings.	ECN 11628 - Updated stabilizer wording.
20120502	Specifications	Updated crane weight to include tank, mtg bolts.
20120910	Drawings	Added manual swing-up stabilizers, stowed dimensions, and winch settings drawings.

CHAPTER 1

Technical Data and Charts

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15/105DL Technical Specifications

15/105DL	1-HYDRAULIC	2-HYDRAULIC	3-HYDRAULIC	4-HYDRAULIC	5-HYDRAULIC	6-HYDRAULIC
Crane Rating*	104,880 ft-lb (14.5 tm)	101,260 ft-lb (14.0 tm)	98,370 ft-lb (13.6 tm)	95,475 ft-lb (13.2 tm)	92,580 ft-lb (12.8 tm)	90,410 ft-lb (12.5 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	13,470 lb (6,110 kg)	13,115 lb (5,950 kg)	12,520 lb (5,680 kg)	11,970 lb (5,430 kg)	11,465 lb (5,200 kg)	11,000 lb (4,990 kg)
Max Cap @ Max Reach	5,135 lb (2,330 kg)	3,640 lb (1,650 kg)	2,645 lb (1,200 kg)	1,940 lb (880 kg)	1,435 lb (650 kg)	1,060 lb (480 kg)
Crane Weight **	3,350 lb (1,520 kg)	3,660 lb (1,660 kg)	3,970 lb (1,800 kg)	4,265 lb (1,935 kg)	4,530 lb (2,055 kg)	4,740 lb (2,150 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' 7" (785 mm)	2' 7" (800 mm)	2' 8" (820 mm)	2' 9" (835 mm)	2' 9" (850 mm)	2' 10" (860 mm)
Horizontal (C/L RotTo Bridge)	13.0" (330 mm)	12.8" (325 mm)	12.4" (315 mm)	12.0" (305 mm)	11.8" (300 mm)	11.0" (280 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.

15/105DL SPECIFICATIONS	
Stabilizer Pad Diameter	
Crane Storage Height	7' 5" (2,250 mm)
Mounting Space ***	2' 8" (820 mm)
Rotational Torque	12,295 ft-lb (1.7 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	518 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 25" (620 mm) at 7'-10" (2385 mm) from top of chassis frame.	

MINIMUM CHASSIS SPECIFICATIONS	
Front Axle Rating (GAWR)	12,000 lb (5,445 kg)
Rear Axle Rating (GAWR)	21,000 lb (9,525 kg)
Resistance To Bending Moment	1,850,000 in-lb (213,145 kg-m)

15/105DL Pressure Settings

WORKING PRESSURE ON MAIN-RELIEF VALVES & PORT RELIEF VALVES			
Function	Direction	Port	Pressure Setting
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			
Function	Direction	Port	Opening Pressure
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)

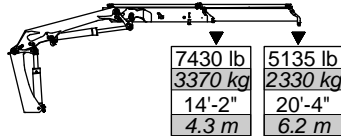
MAXIMUM PUMP PERFORMANCE	
Pump performance	13.2 gal/min (50 l/min)

Winch Technical Data

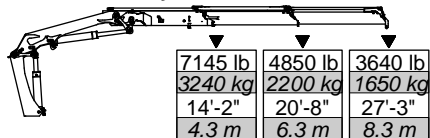
	1.5 T Winch (P9) (3305 lb / 1500 kg)	2.5 T Winch (P15) (5510 lb / 2500 kg)
PERFORMANCE (at 2175 psi (150 bar))		
Maximum wire pull - 1st layer	3305 lb (1500 kg)	5510 lb (2500 kg)
Maximum wire pull - 2nd layer	3020 lb (1370 kg)	5070 lb (2300 kg)
Maximum wire pull - 3rd layer	2278 lb (1260 kg)	4630 lb (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)

15/105DL Lifting Capacities

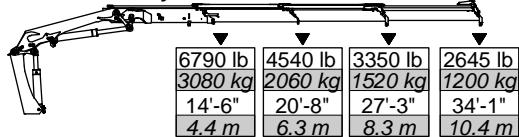
15/105DL - 1 Hydraulic



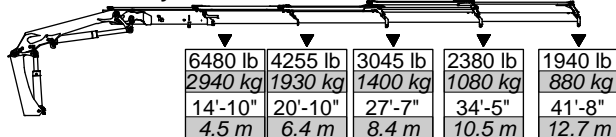
15/105DL - 2 Hydraulic



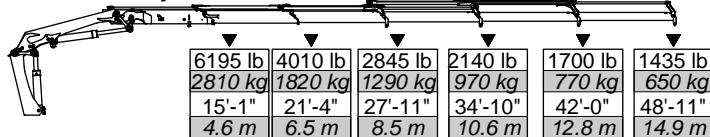
15/105DL - 3 Hydraulic



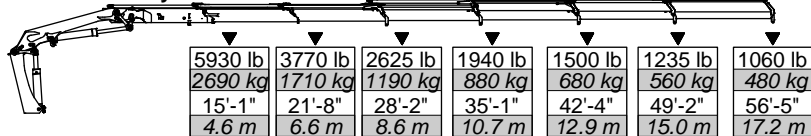
15/105DL - 4 Hydraulic



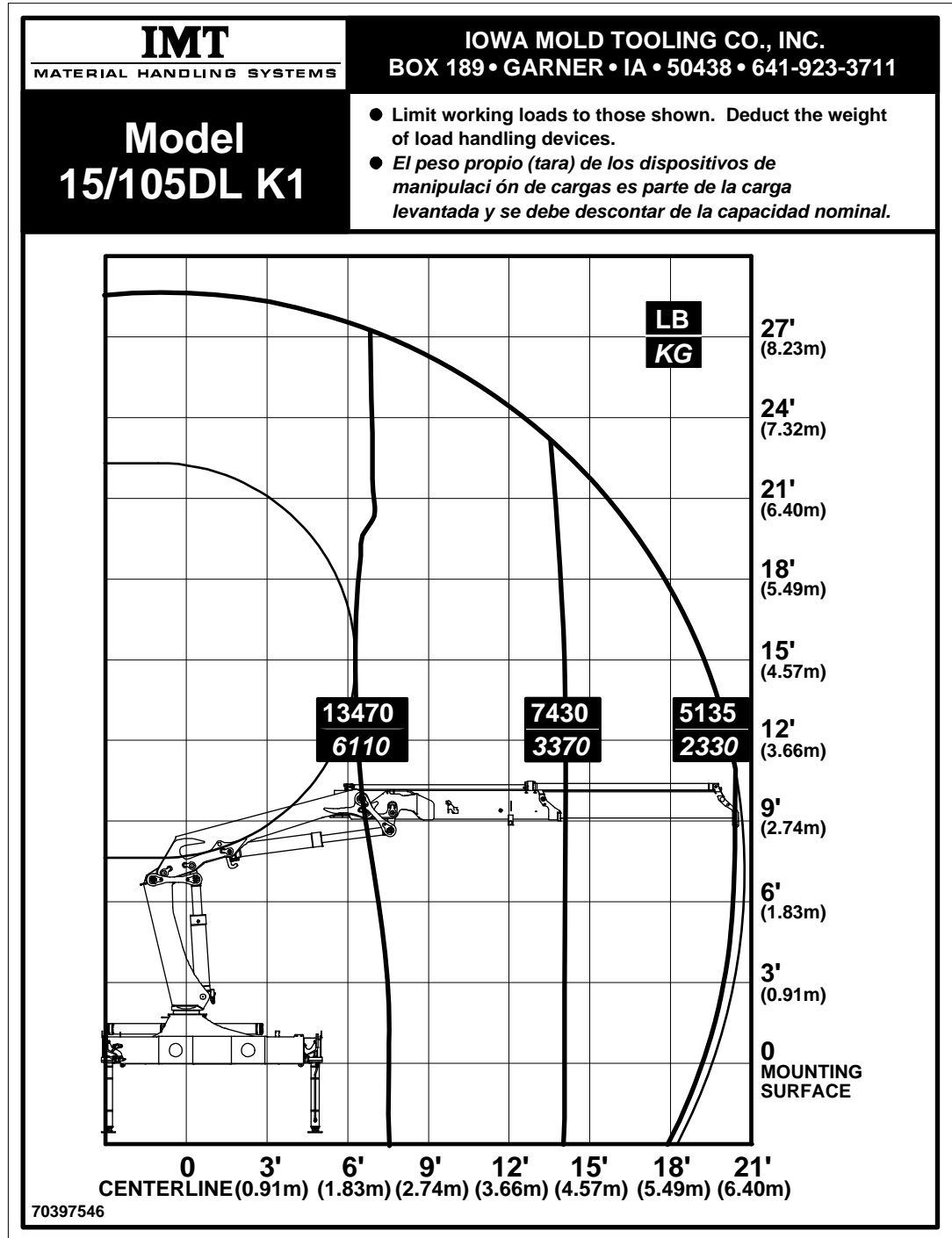
15/105DL - 5 Hydraulic



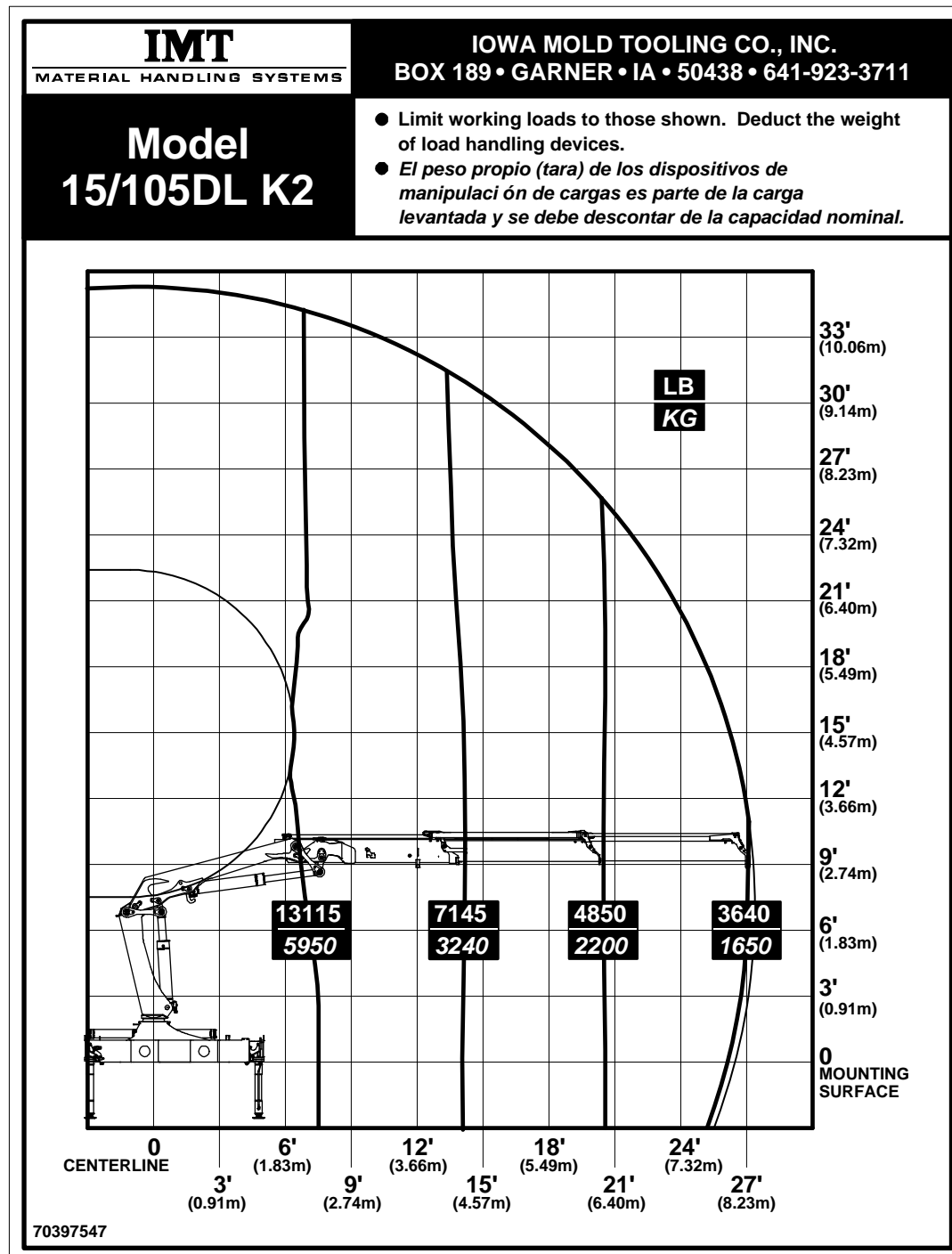
15/105DL - 6 Hydraulic



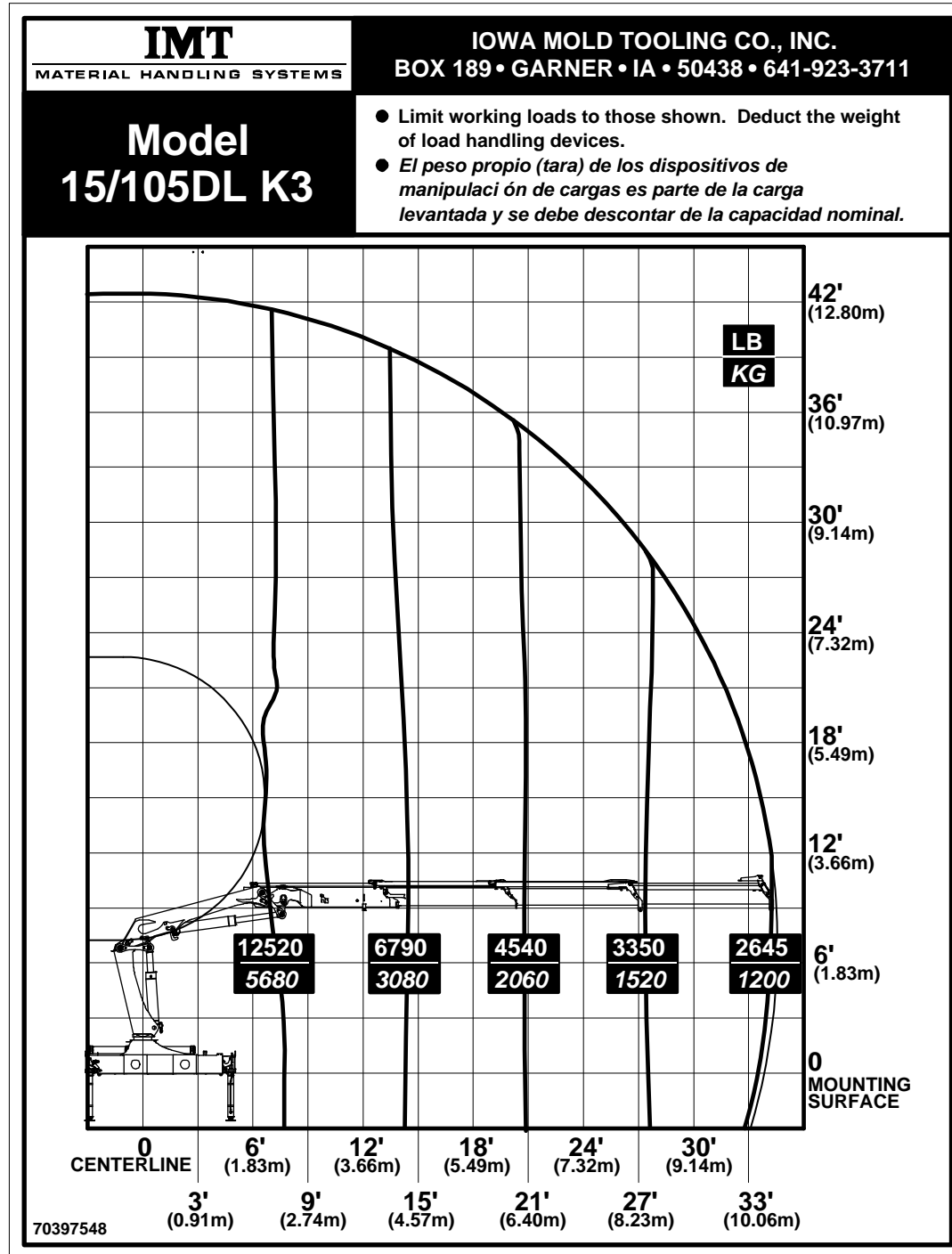
15/105DL K1 Capacity Chart



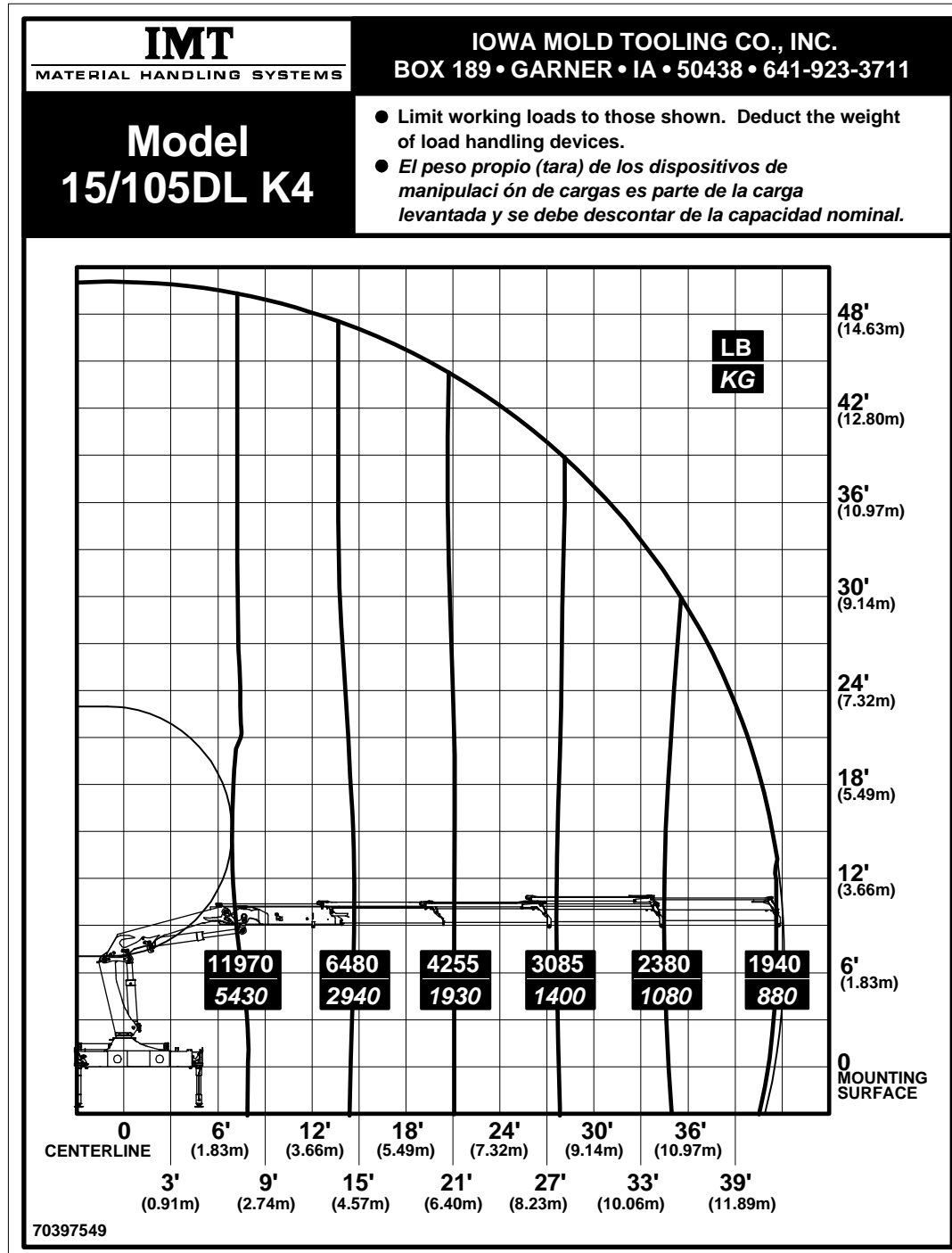
15/105DL K2 Capacity Chart



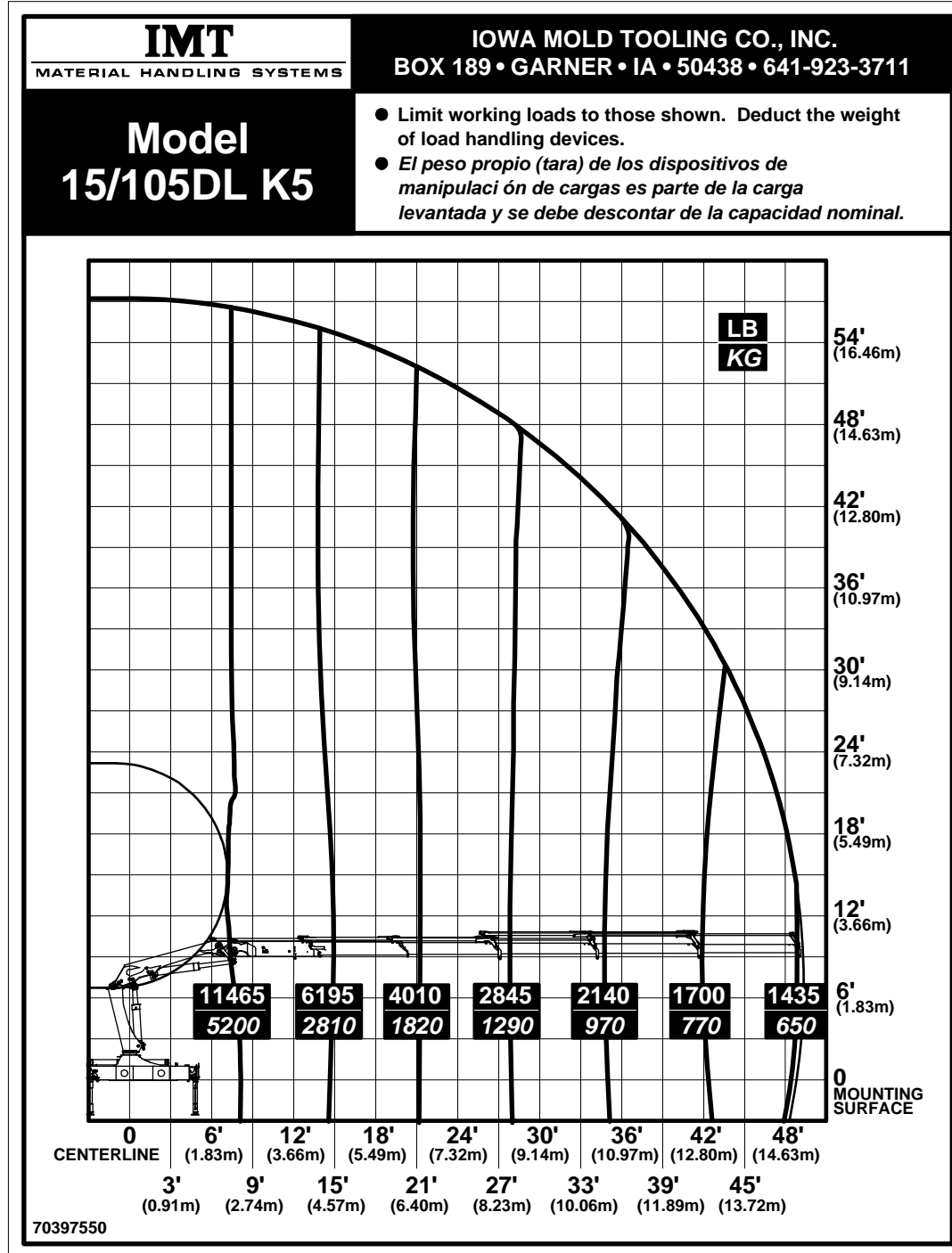
15/105DL K3 Capacity Chart



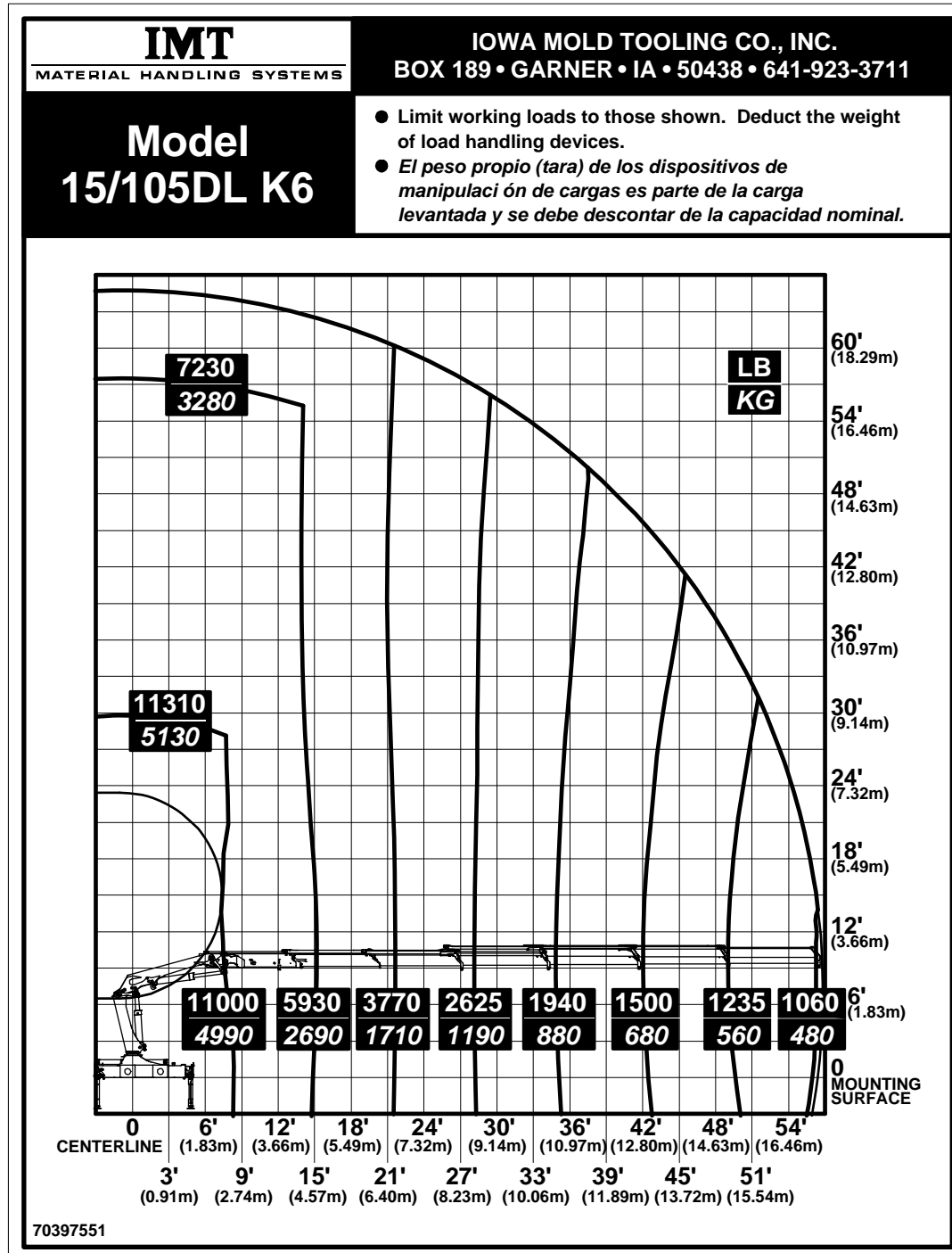
15/105DL K4 Capacity Chart



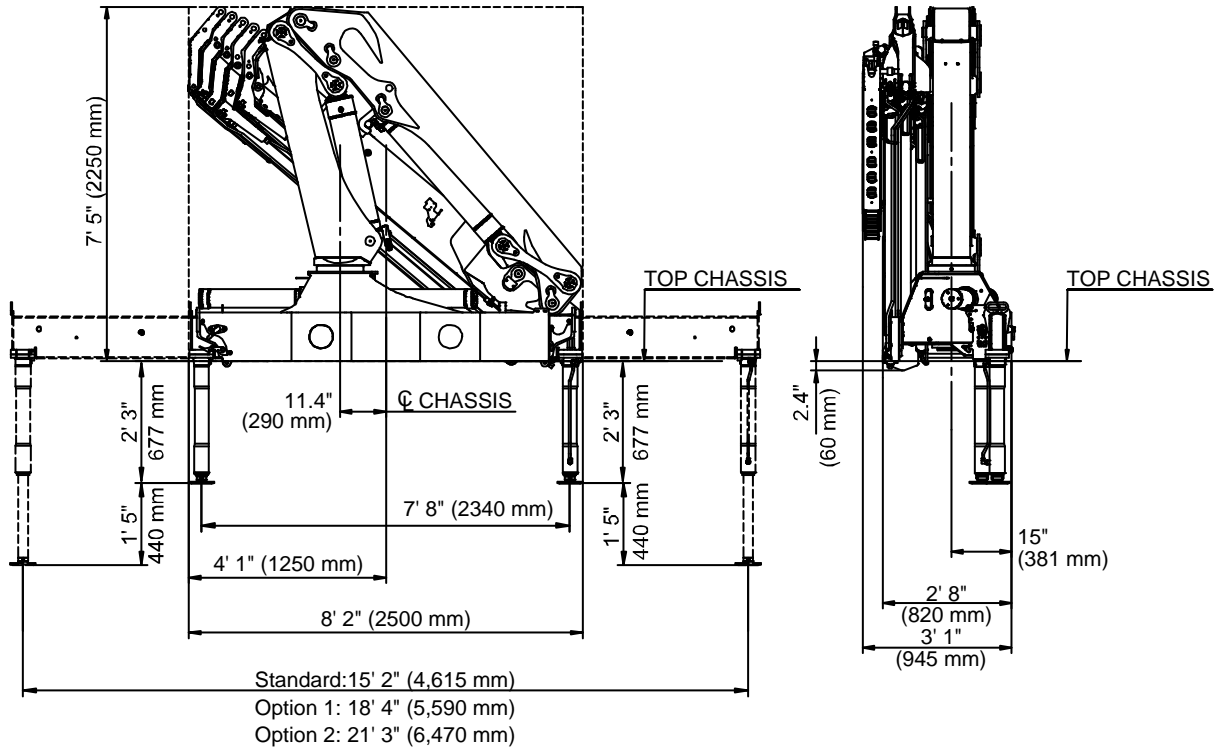
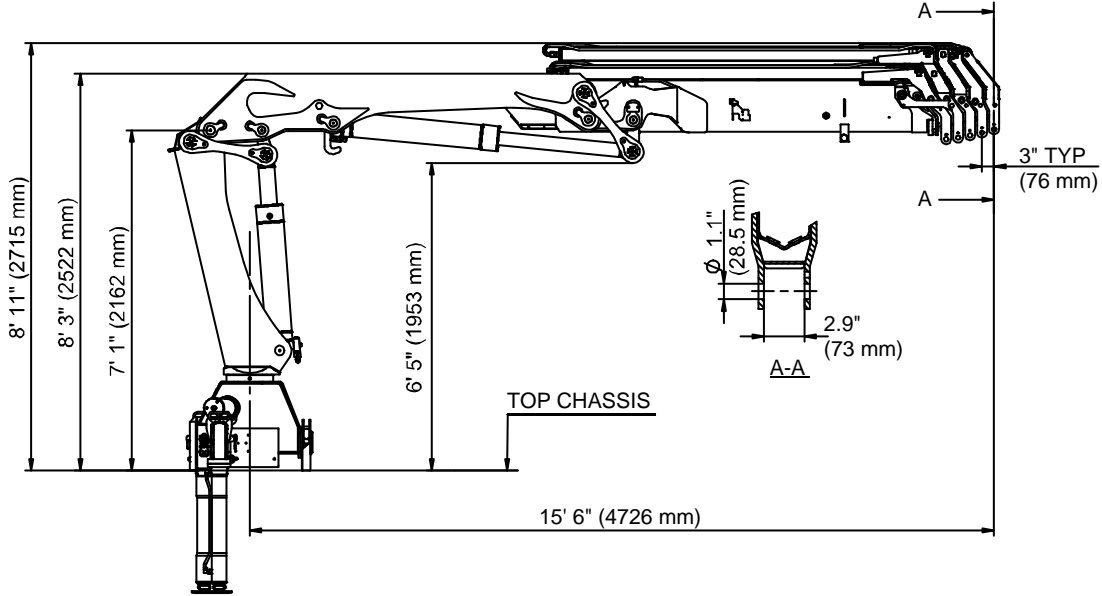
15/105DL K5 Capacity Chart



15/105DL K6 Capacity Chart

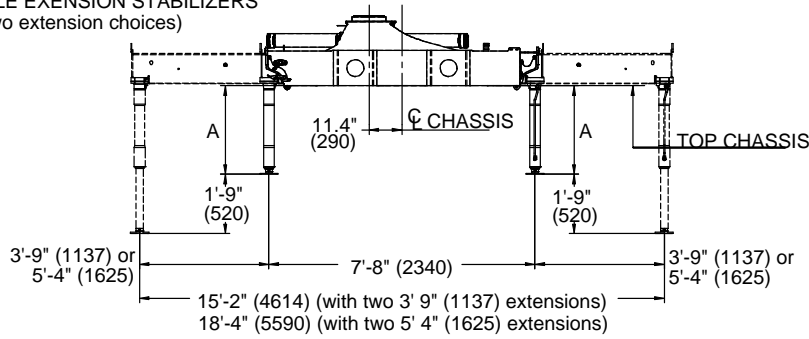


15/105DL Geometric Configuration

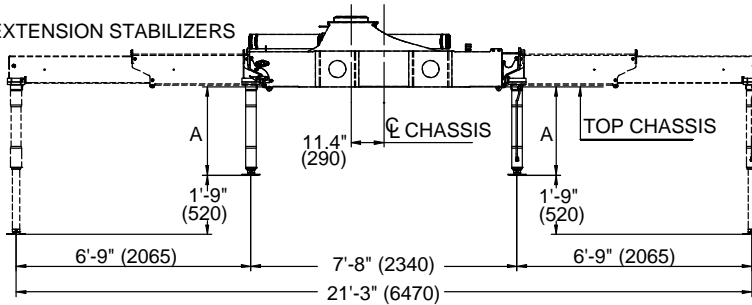


Stabilizer Dimensions, Fixed Legs




SINGLE EXTENSION STABILIZERS (Two extension choices)



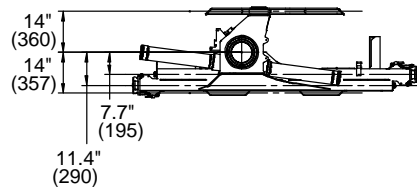
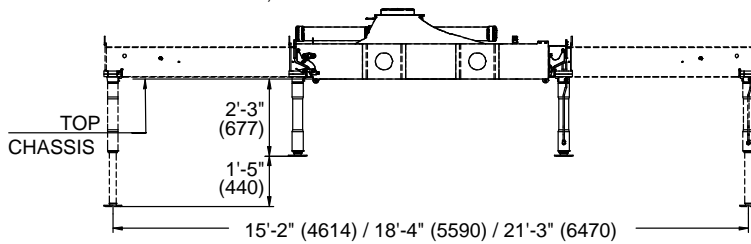
DOUBLE EXTENSION STABILIZERS



STABILIZER LEG EXTENSIONS

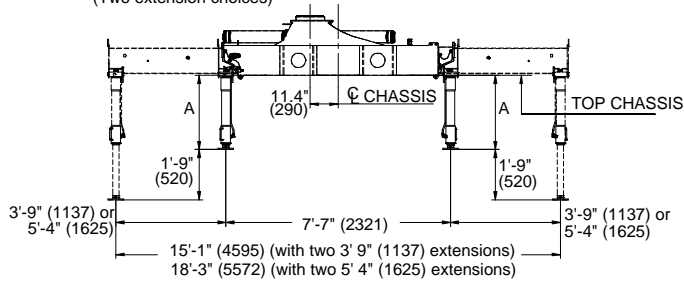
			
A	2'-6" (777)	2'-11" (877)	3'-2" (977)

STABILIZER CYLINDER, C80-440

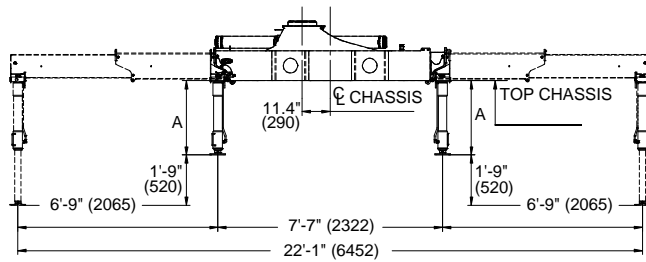


Stabilizer Dimensions, Manual Swing-Up Legs




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



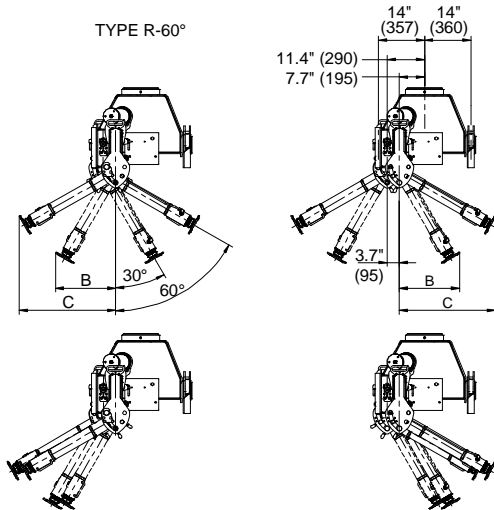
DOUBLE EXTENSION STABILIZERS WITH MANUAL SWING-UP LEGS






STABILIZER LEG EXTENSIONS

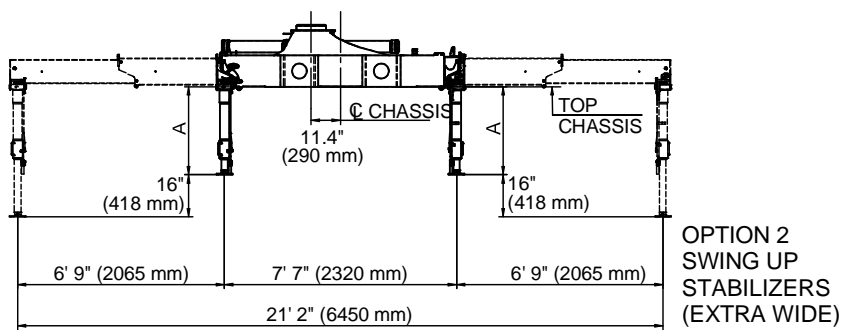
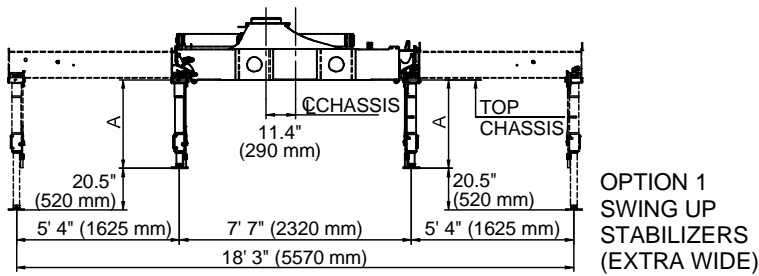
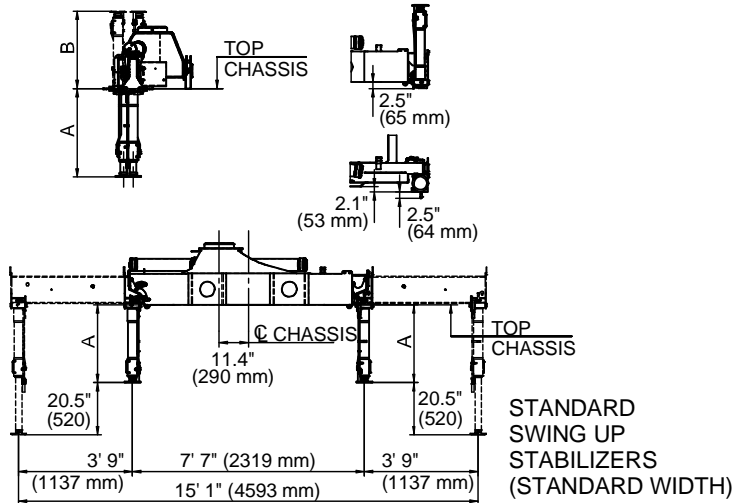
			
A	2'-6"	2'-10"	3'-2"
Type R-60°	(771)	(871)	(971)




TYPE R-60°



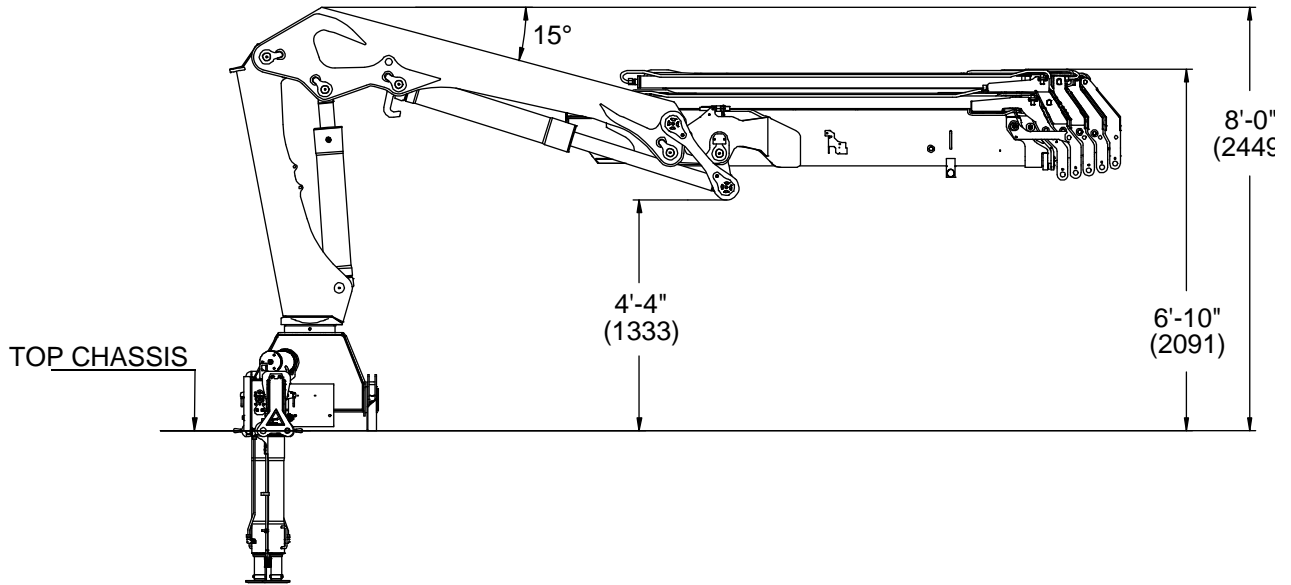
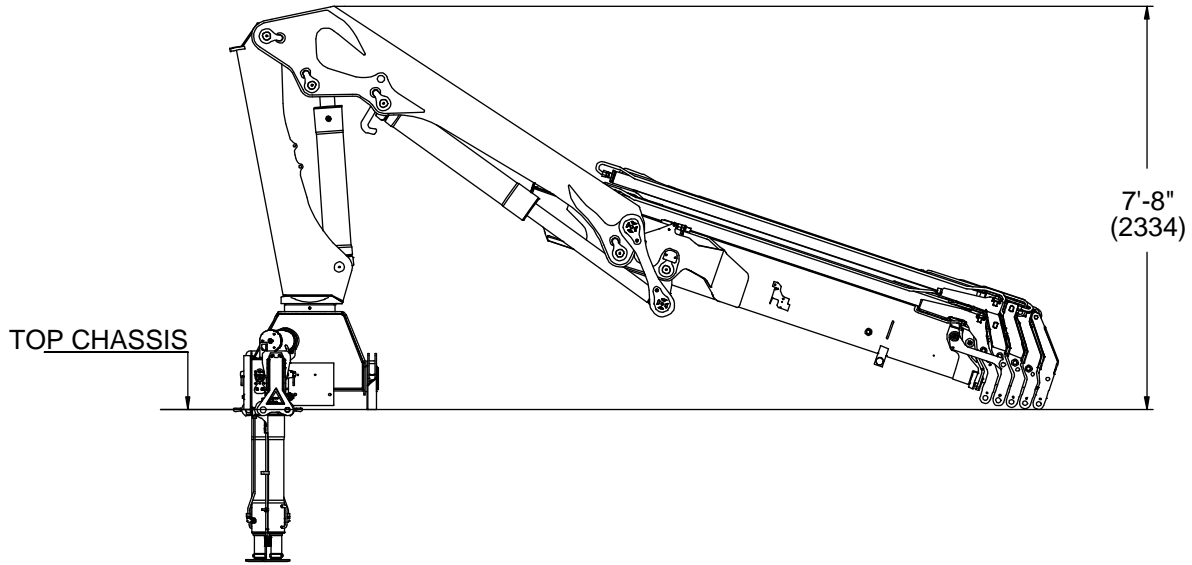
			
B	18.3"	20.3"	21.9"
	(465)	(515)	(565)
C	29.3"	32.7"	36.1"
	(744)	(831)	(918)

Stabilizer Dimensions, Hyd Swing-Up Legs



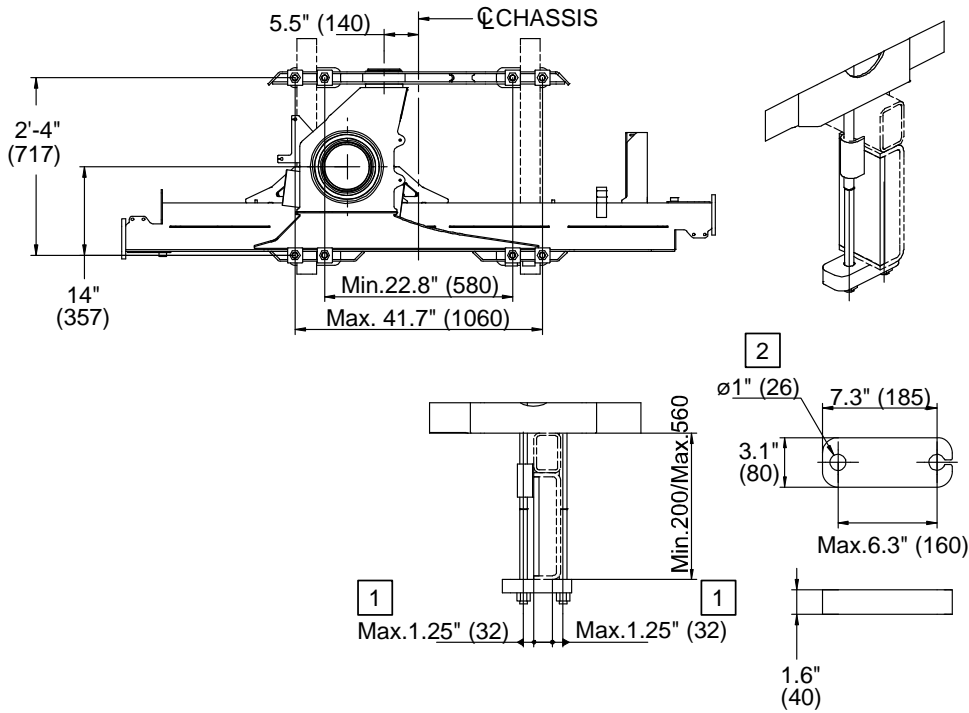
			
A	35" (881 mm)	39" (981 mm)	42.5" (1081 mm)
B	30.5" (775 mm)	34.4" (875 mm)	38.4" (975 mm)

Stowed Dimensions

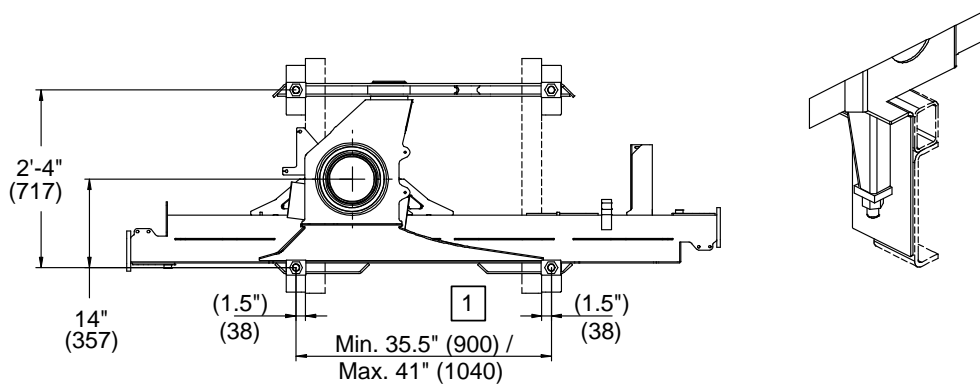


Mounting Dimensions

MOUNTING KIT 8 x M24x2 BOLTS



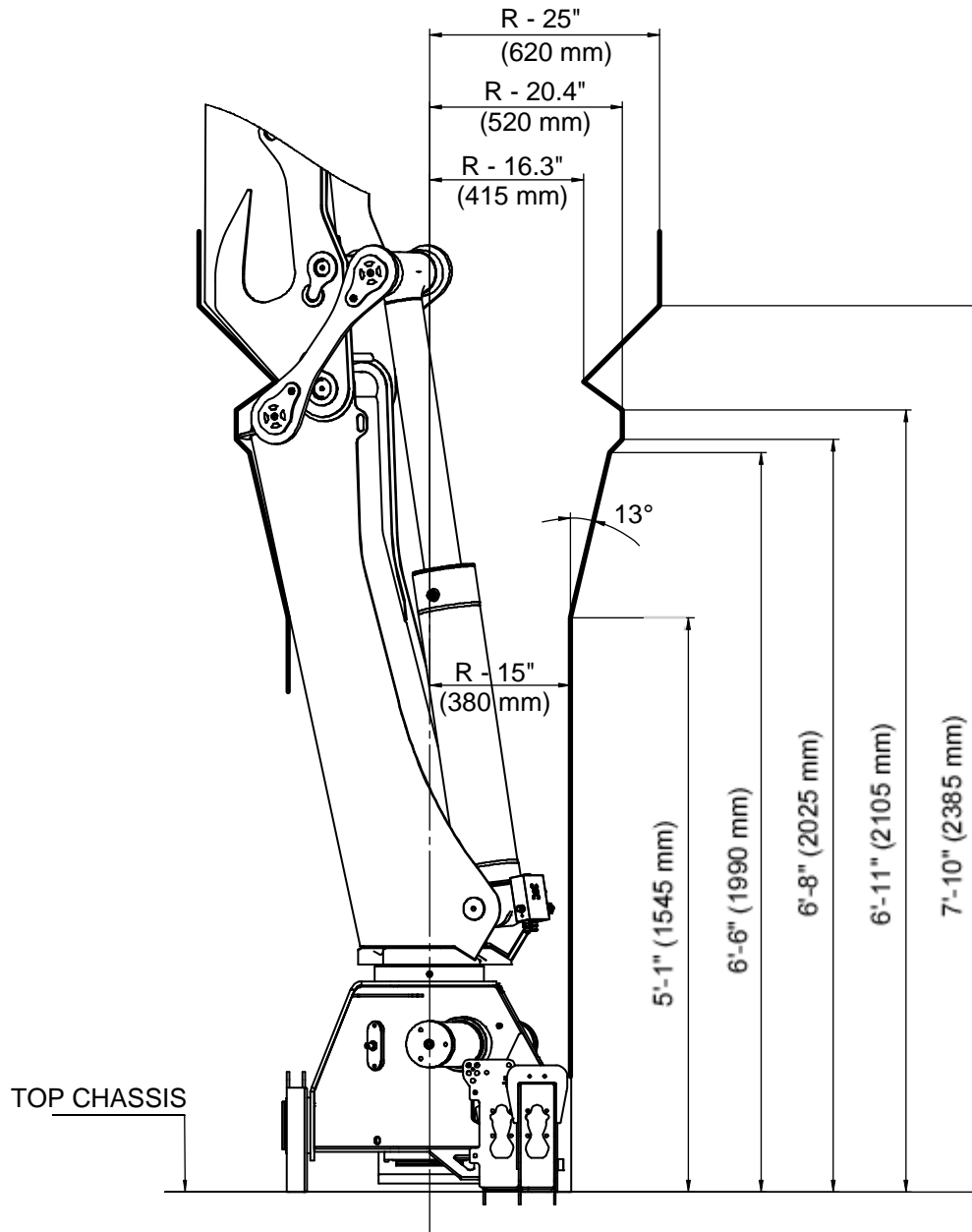
MOUNTING KIT 4 x M30x2 BOLTS



NOTES (SEE REFERENCE NUMBER IN BOX):

- 1 VALUES DICTATED BY STRENGTH CONSIDERATIONS.
- 2 DRILL HOLE WHEN ASSEMBLING.
- 3 SEE INSTALLATION MANUAL # 99901230 REGARDING INSTALLATION.
- 4 MOUNTING KIT AND REPLACEMENT PART NUMBERS ARE IN THE CRANE PARTS MANUALS.

15/105DL Swing Clearance



CHAPTER 2

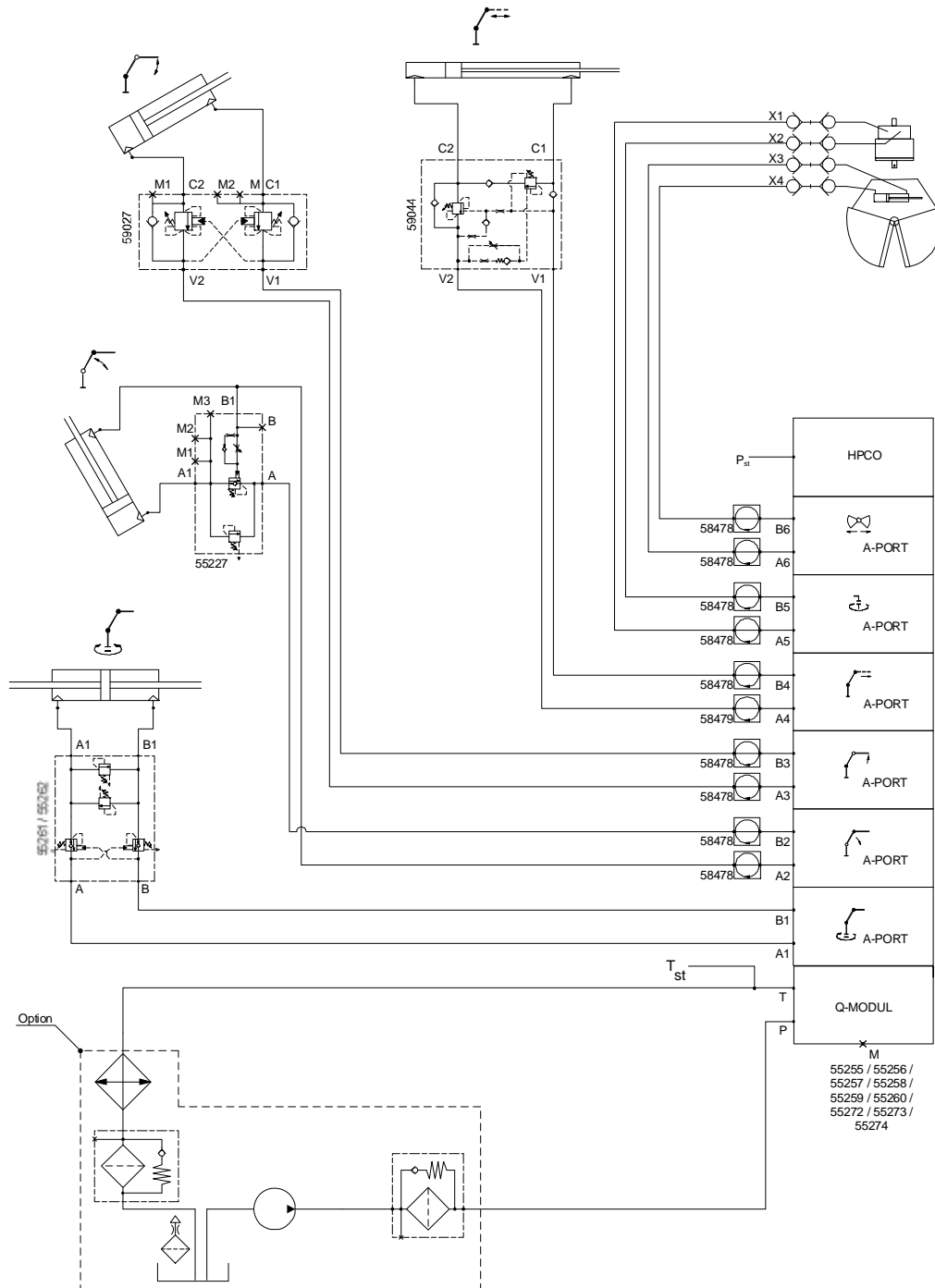
Hydraulic Schematics

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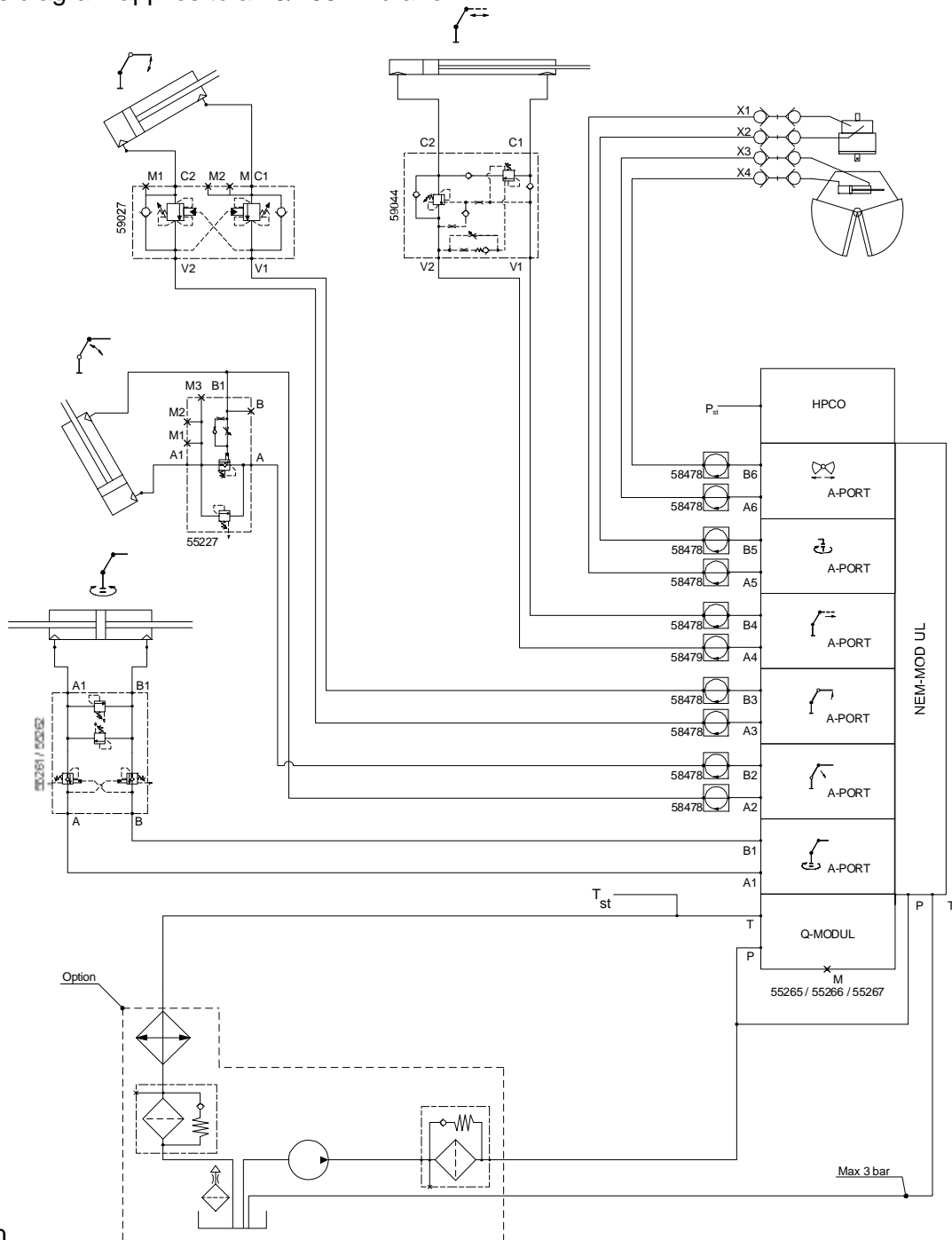
Hydraulic Diagram - 15/105DL Manual Control

This diagram applies to a 15/105DL crane with a single-circuit fixed pump and 6-function manual controls.



Hydraulic Diagram - 15/105DL Radio Control

This diagram applies to a 15/105DL crane



with circuit fixed pump and 6-function radio controls.

a single-

Hydraulic Diagram - 15/105DL Top Seat Control

This diagram applies to a 15/105DL crane with a single-circuit fixed pump and 6-function top seat controls.

