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Manual # 99904590

# 15/105SL Technical Specifications

Revision Date 20120910



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## Revisions

DATE	LOCATION	DESCRIPTION
20090813		Added swing clearance dimensions.
20100118	Geometric Configuration	Added stabilizer height, extension distance, stabilizer drawings.
20111214	Specs, Stabilizer drawings	ECN 11628 - Updated stabilizer wording.
20120502	Specifications	Updated crane weight to include mounting bolts, tank.
20120910	Drawings	Added manual swing-up stabilizers, stowed dimensions, and winch settings drawings.

## CHAPTER 1

# Technical Data and Charts

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# 15/105SL Technical Specifications

15/105SL	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)	90,415 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	12,125 lb (5,500 kg)	11,575 lb (5,250 kg)	11,135 lb (5,050 kg)	10,690 lb (4,850 kg)	10,205 lb (4,630 kg)	9,920 lb (4,500 kg)
Max Cap @ Max Reach	5,135 lb (2,330 kg)	3,660 lb (1,660 kg)	2,645 lb (1,200 kg)	1,940 lb (880 kg)	1,435 lb (650 kg)	1,060 lb (480 kg)
Crane Weight **	3,240 lb (1,470 kg)	3,550 lb (1,610 kg)	3,860 lb (1,750 kg)	4,155 lb (1,885 kg)	4,420 lb (2,005 kg)	4,630 lb (2,100 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' 5" (730 mm)	2' 6" (755 mm)	2' 7" (780 mm)	2' 8" (805 mm)	2' 8" (825 mm)	2' 9" (840 mm)
Horizontal (C/L RotTo Bridge)	14.0" (355 mm)	13.8" (350 mm)	13.2" (335 mm)	12.6" (320 mm)	12.0" (305 mm)	11.4" (290 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.

15/105SL SPECIFICATIONS	
Stabilizer Pad Diameter	6" (160 mm)
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	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 25" (620 mm) at 7'-10" (2390 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)

## 15/105SL Pressure Settings

<b>WORKING PRESSURE ON MAIN-RELIEF VALVES &amp; PORT RELIEF VALVES</b>			
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)

<b>WORKING PRESSURE ON LOAD-HOLDING VALVES</b>			
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)

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

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

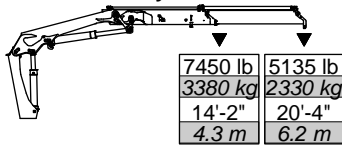
## Winch Technical Data

	<b>1.5 T Winch (P9)</b> <b>(3305 lb / 1500 kg)</b>	<b>2.5 T Winch (P15)</b> <b>(5510 lb / 2500 kg)</b>
<b>PERFORMANCE</b> (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)
<b>WIRE SPEED</b> (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)
<b>WEIGHTS</b>		
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)

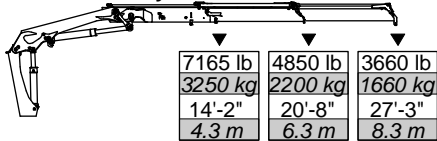


# 15/105SL Lifting Capacities

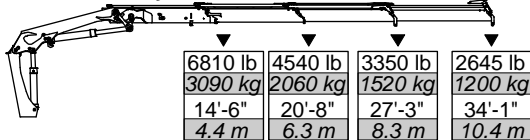
15/105SL - 1 Hydraulic



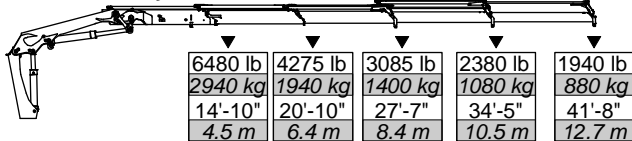
15/105SL - 2 Hydraulic



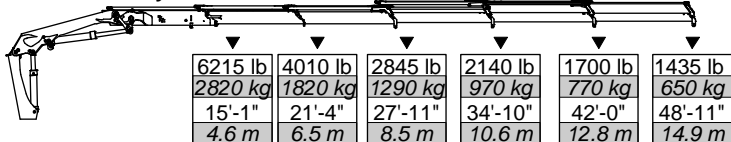
15/105SL - 3 Hydraulic



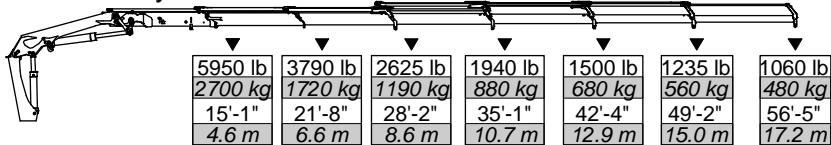
15/105SL - 4 Hydraulic



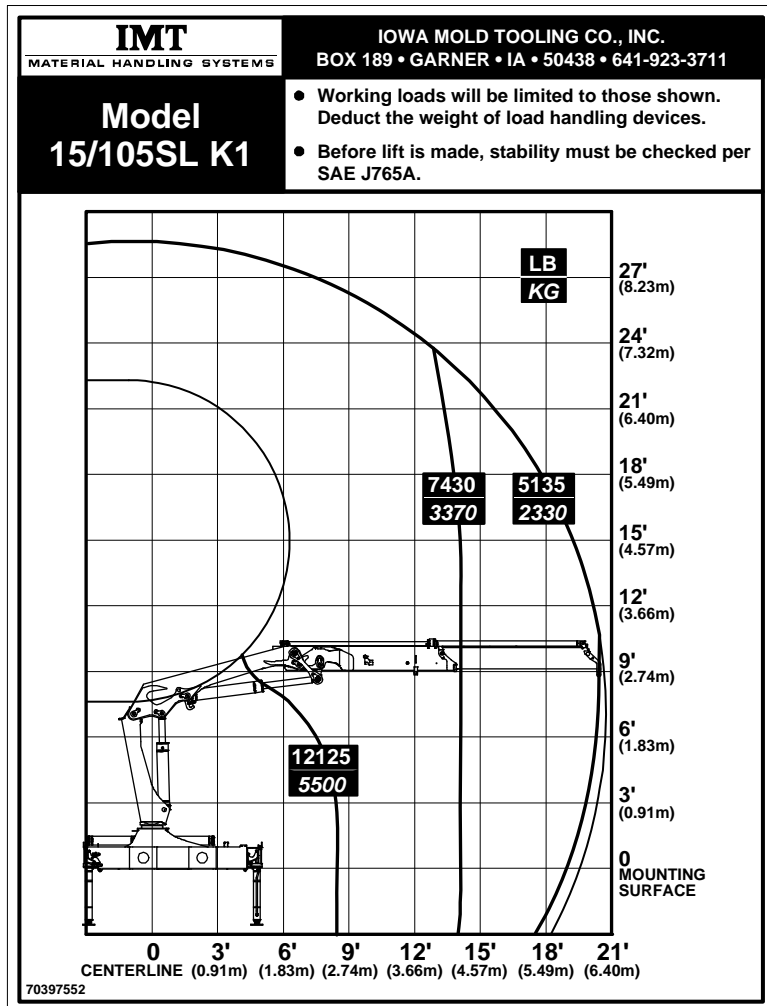
15/105SL - 5 Hydraulic



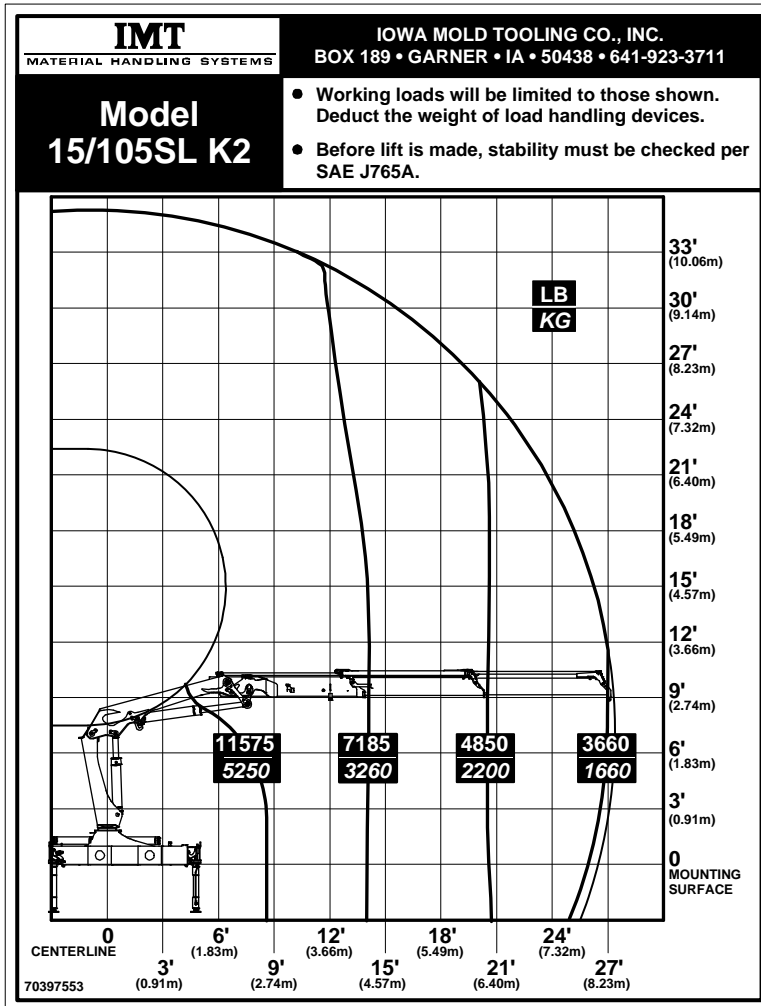
15/105SL - 6 Hydraulic



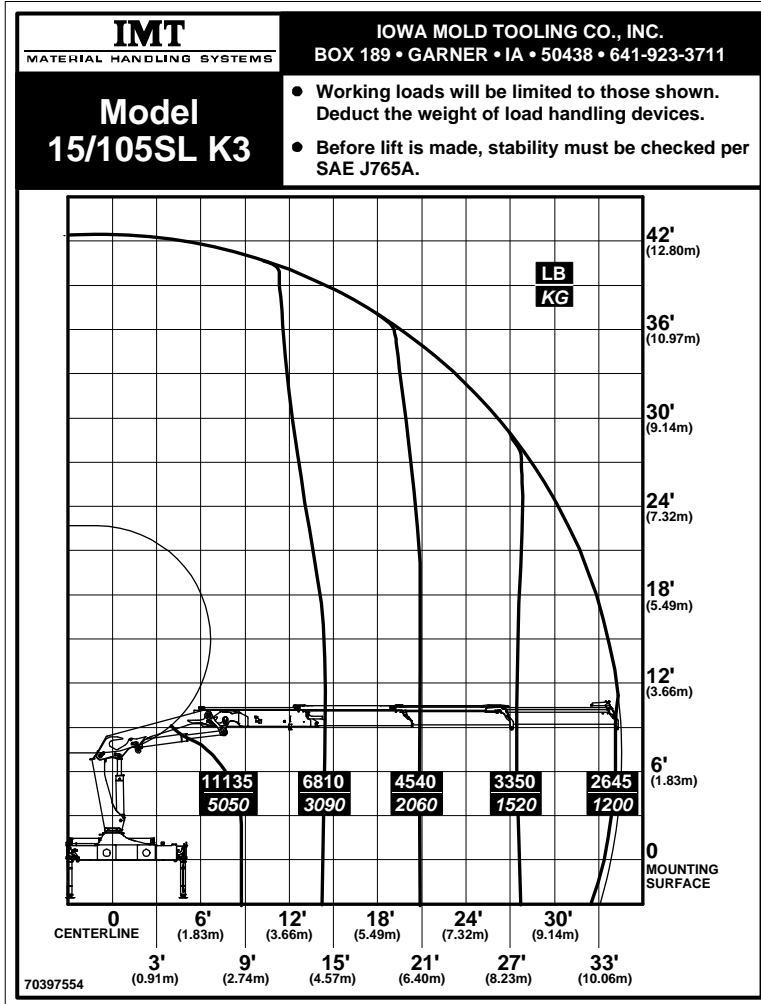
# 15/105SL K1 Capacity Chart



# 15/105SL K2 Capacity Chart

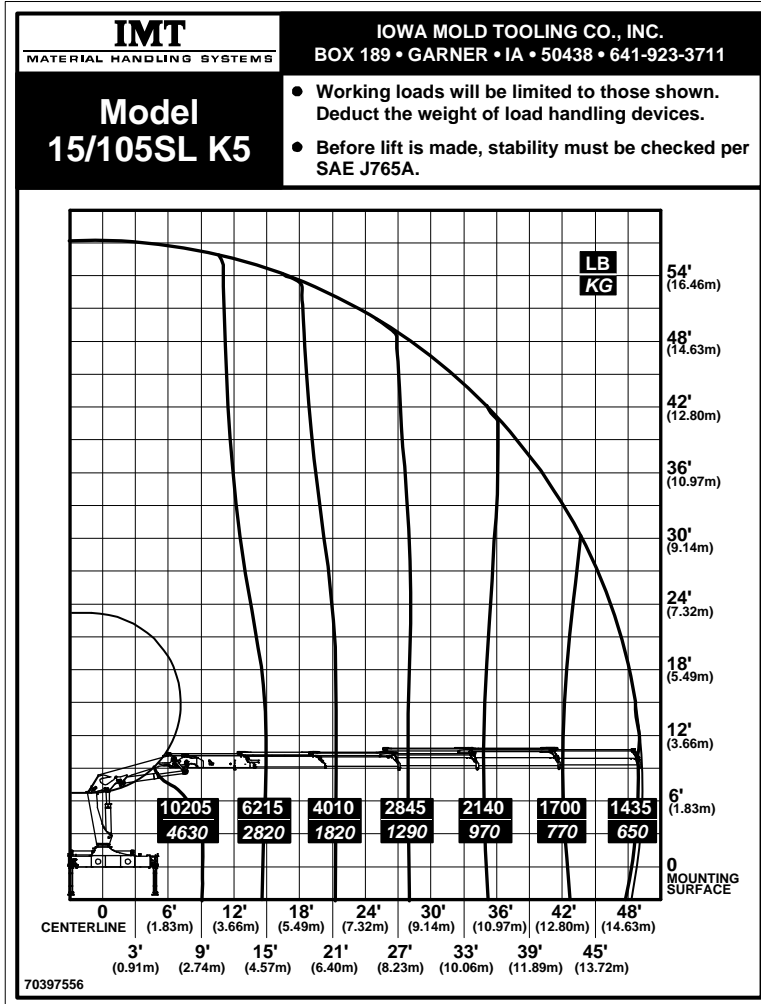


# 15/105SL K3 Capacity Chart

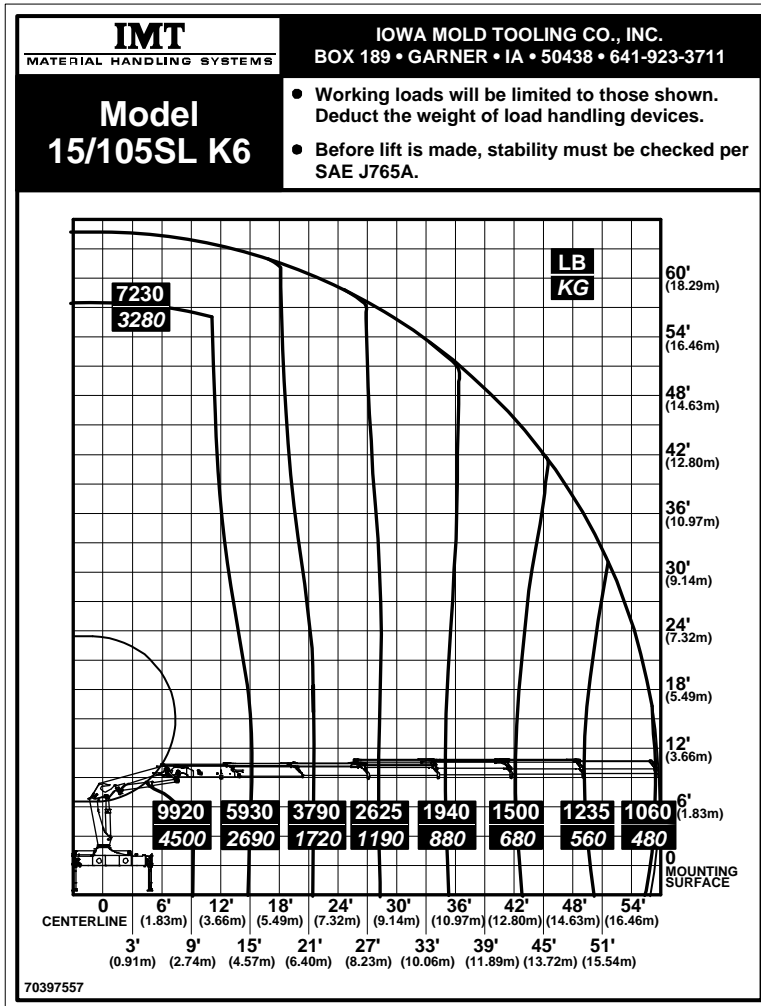




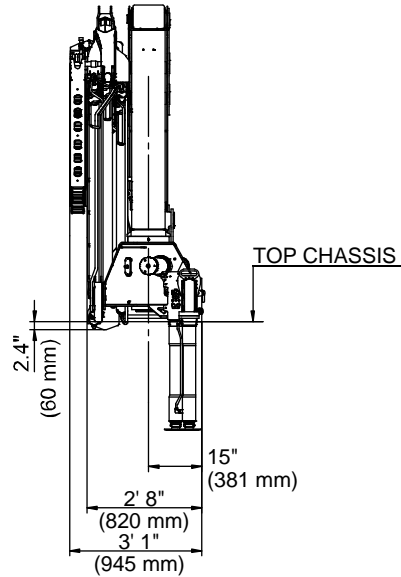
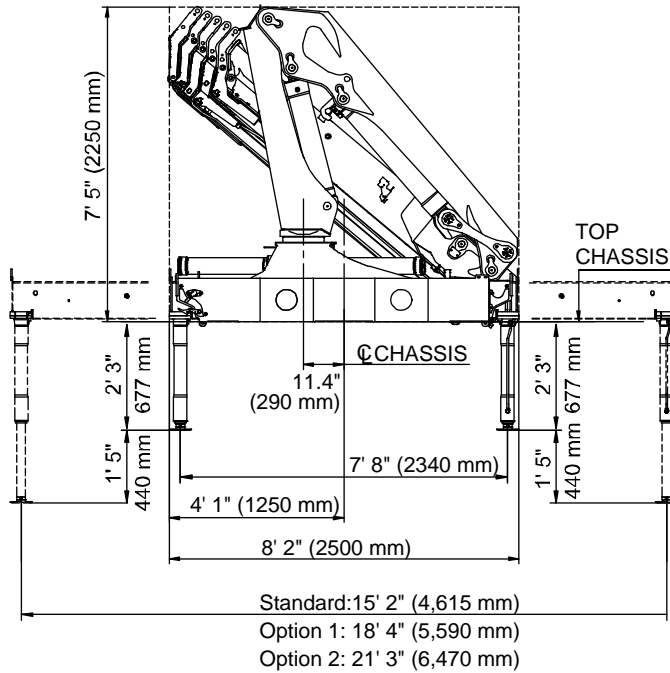
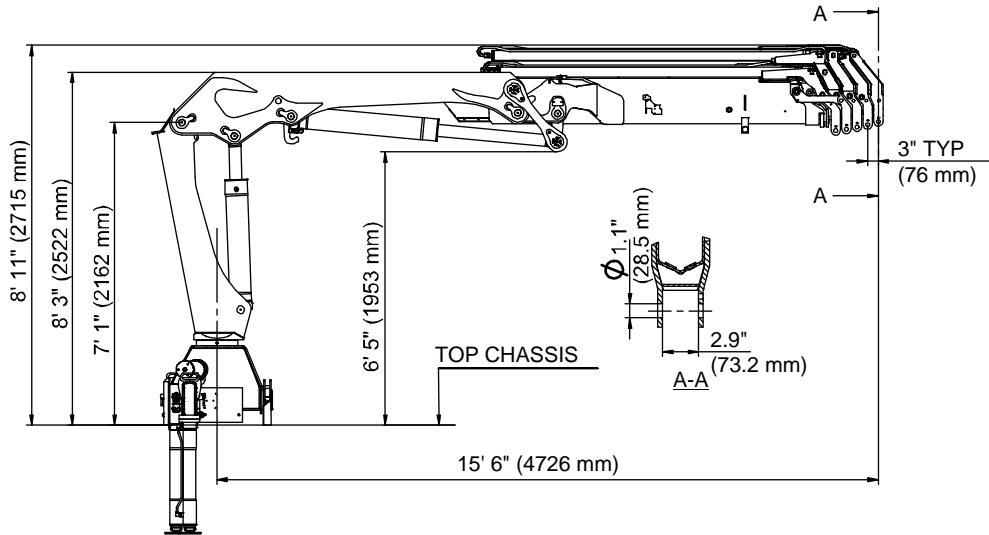
# 15/105SL K5 Capacity Chart



# 15/105SL K6 Capacity Chart



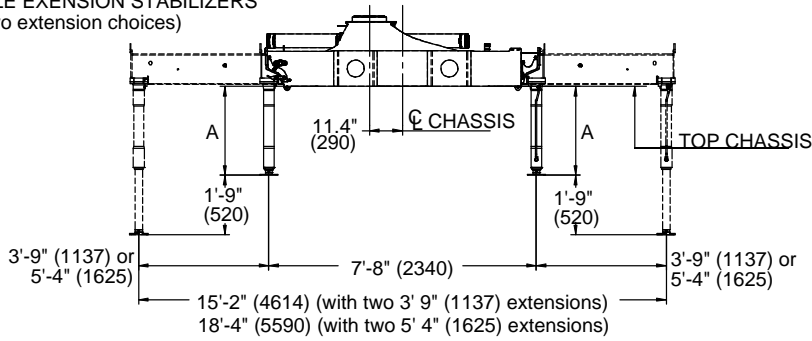
# Geometric Configuration



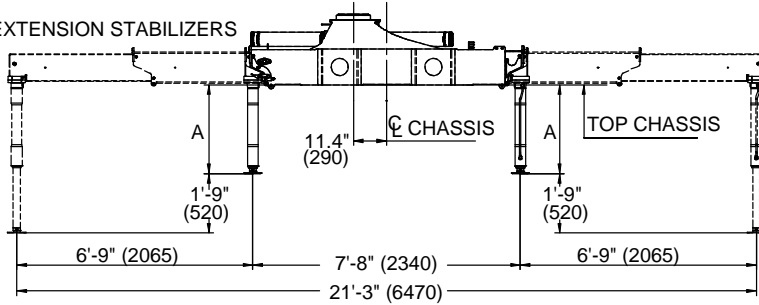


# Stabilizer Dimensions, Fixed Legs




## SINGLE EXTENSION STABILIZERS (Two extension choices)



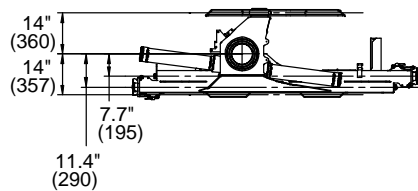
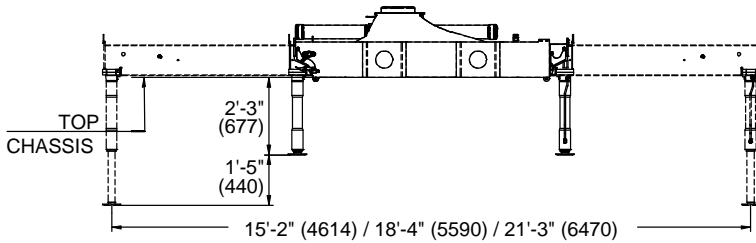
## DOUBLE EXTENSION STABILIZERS



### STABILIZER LEG EXTENSIONS

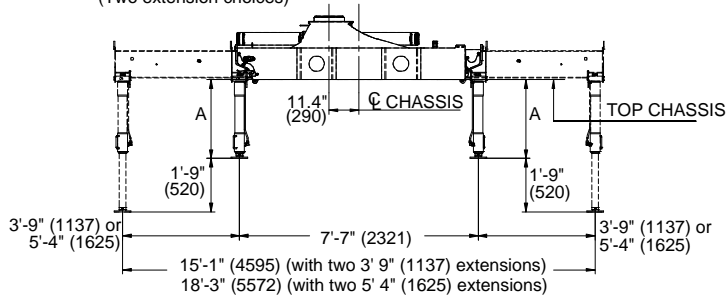
			
A	2'-6" (777)	2'-11" (877)	3'-2" (977)

## STABILIZER CYLINDER, C80-440

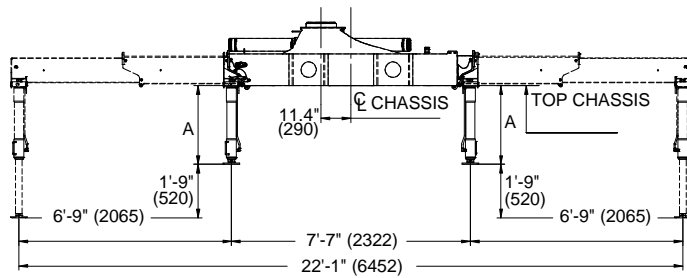


# Stabilizer Dimensions, Manual Swing-Up Legs




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

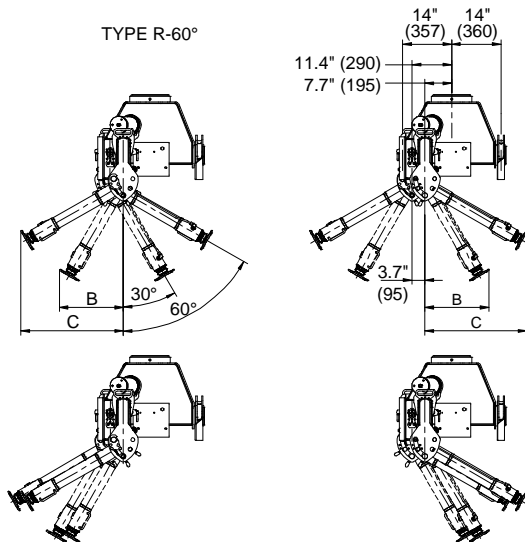





DOUBLE EXTENSION STABILIZERS WITH MANUAL SWING-UP LEGS



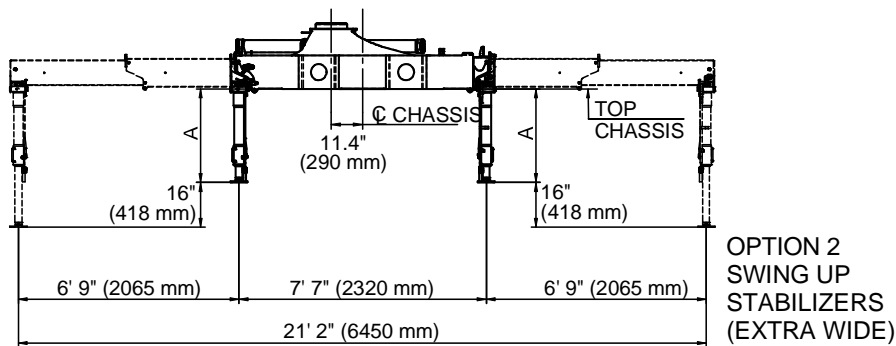
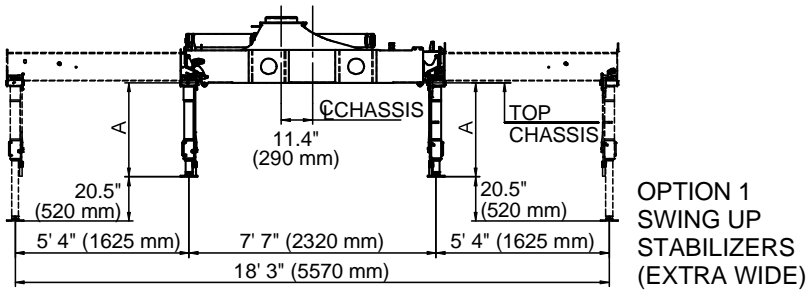
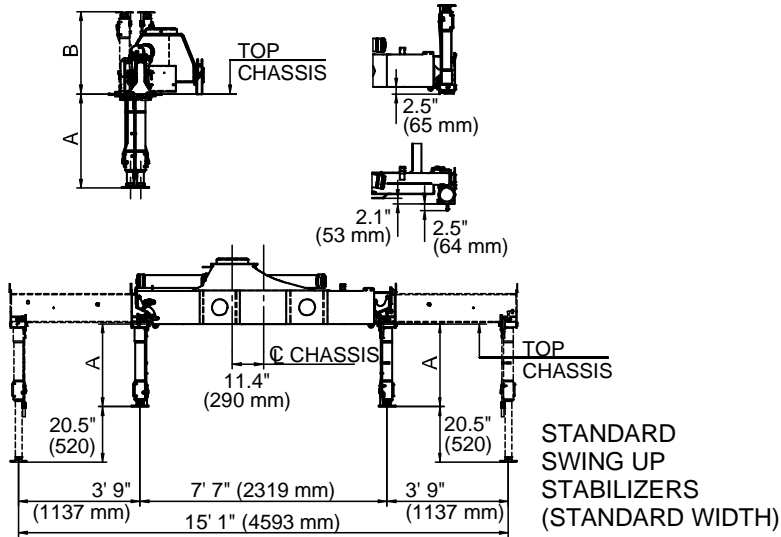
STABILIZER LEG EXTENSIONS

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



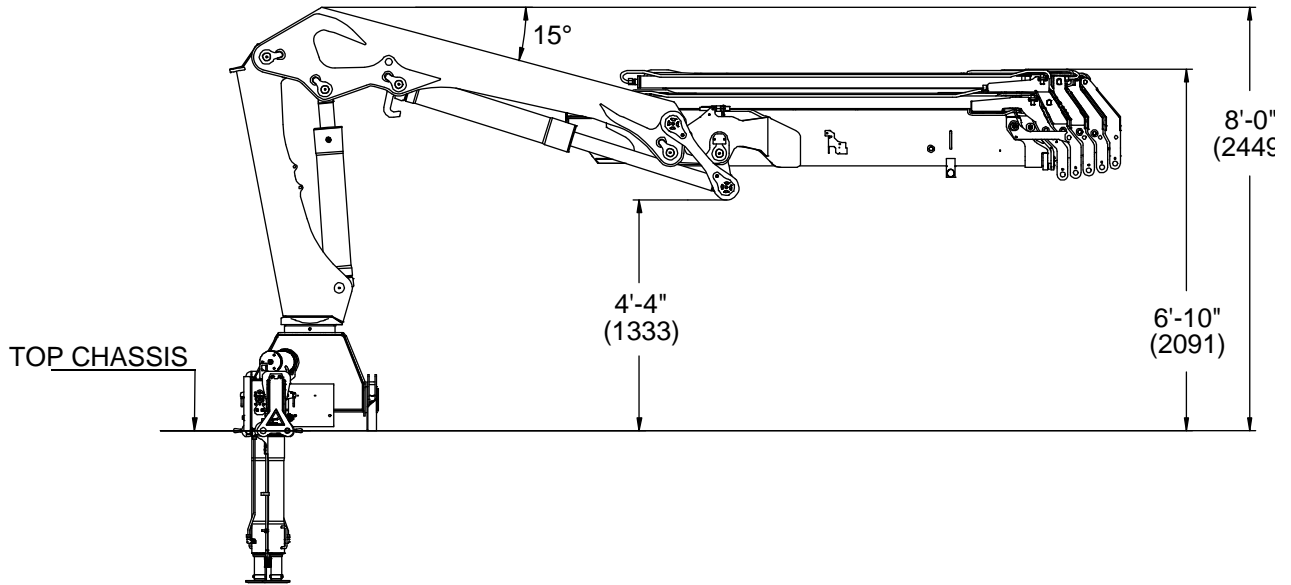
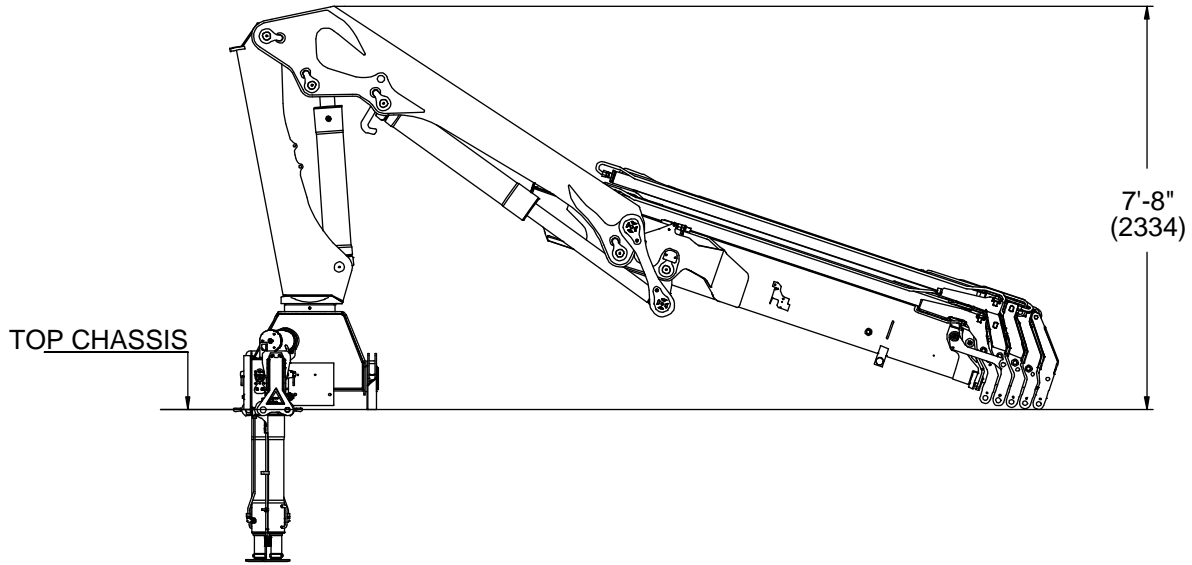
			
B	18.3"	20.3"	21.9"
	(465)	(515)	(565)
C	29.3"	32.7"	36.1"
	(744)	(831)	(918)

# Stabilizer Dimensions, Hyd Swing-Up Legs



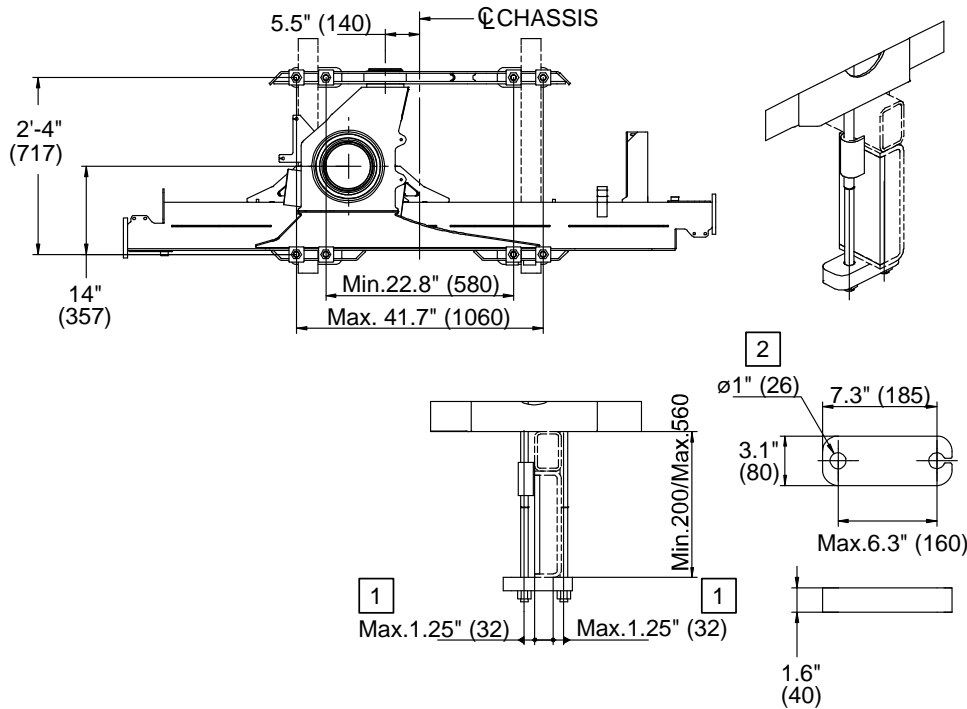
A	35" (881 mm)	39" (981 mm)	42.5" (1081 mm)
B	30.5" (775 mm)	34.4" (875 mm)	38.4" (975 mm)

## Stowed Dimensions

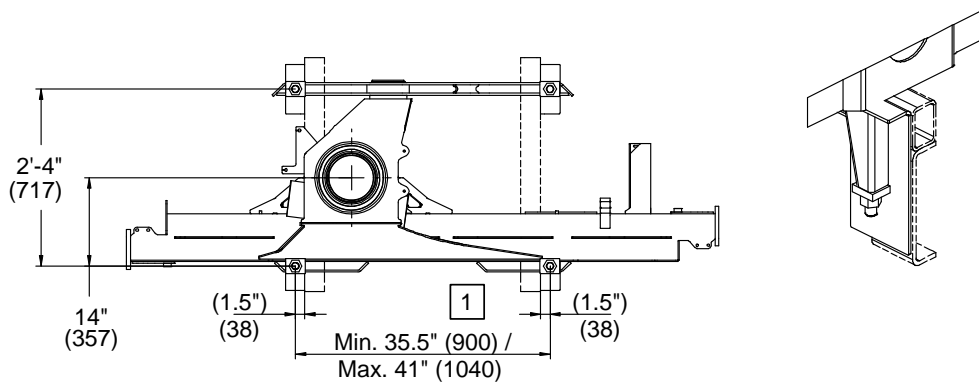


# Mounting Dimensions

## MOUNTING KIT 8 x M24x2 BOLTS



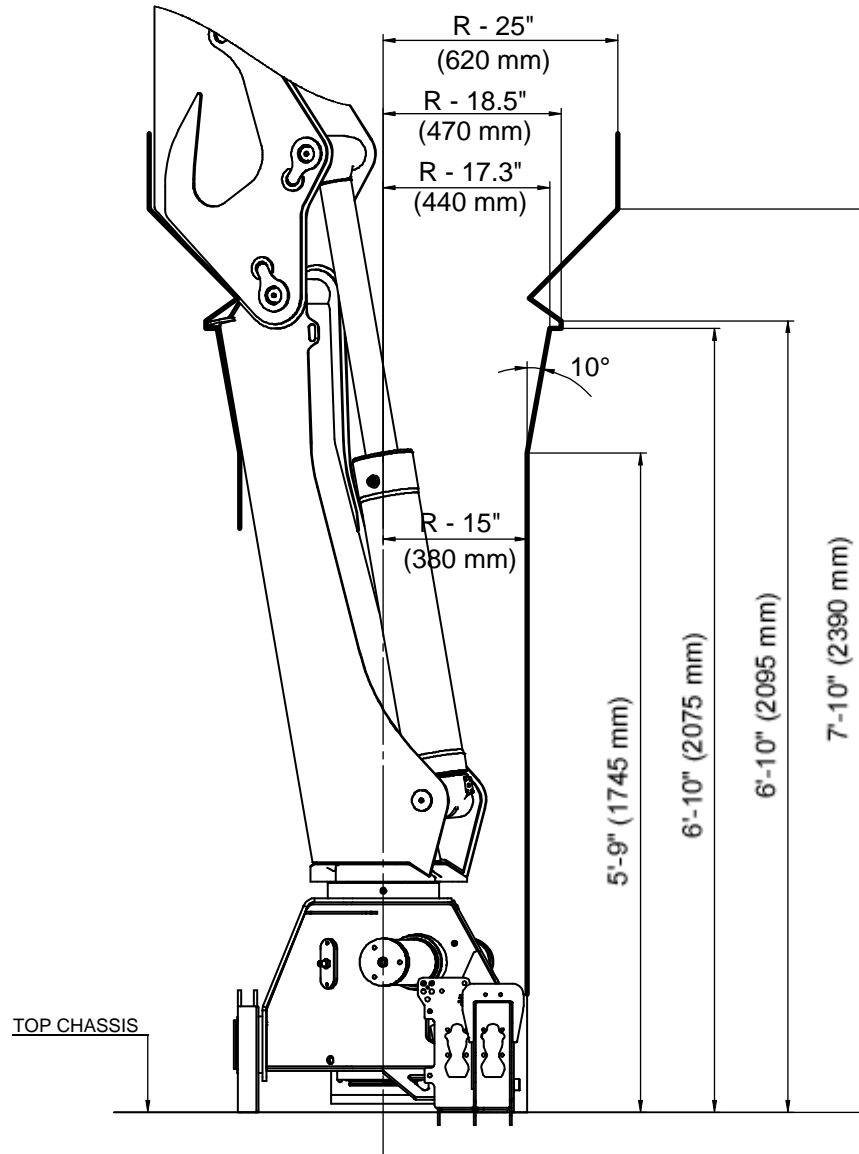
## MOUNTING KIT 4 x M30x2 BOLTS



### 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.

# 15/105SL Swing Clearance



## CHAPTER 2

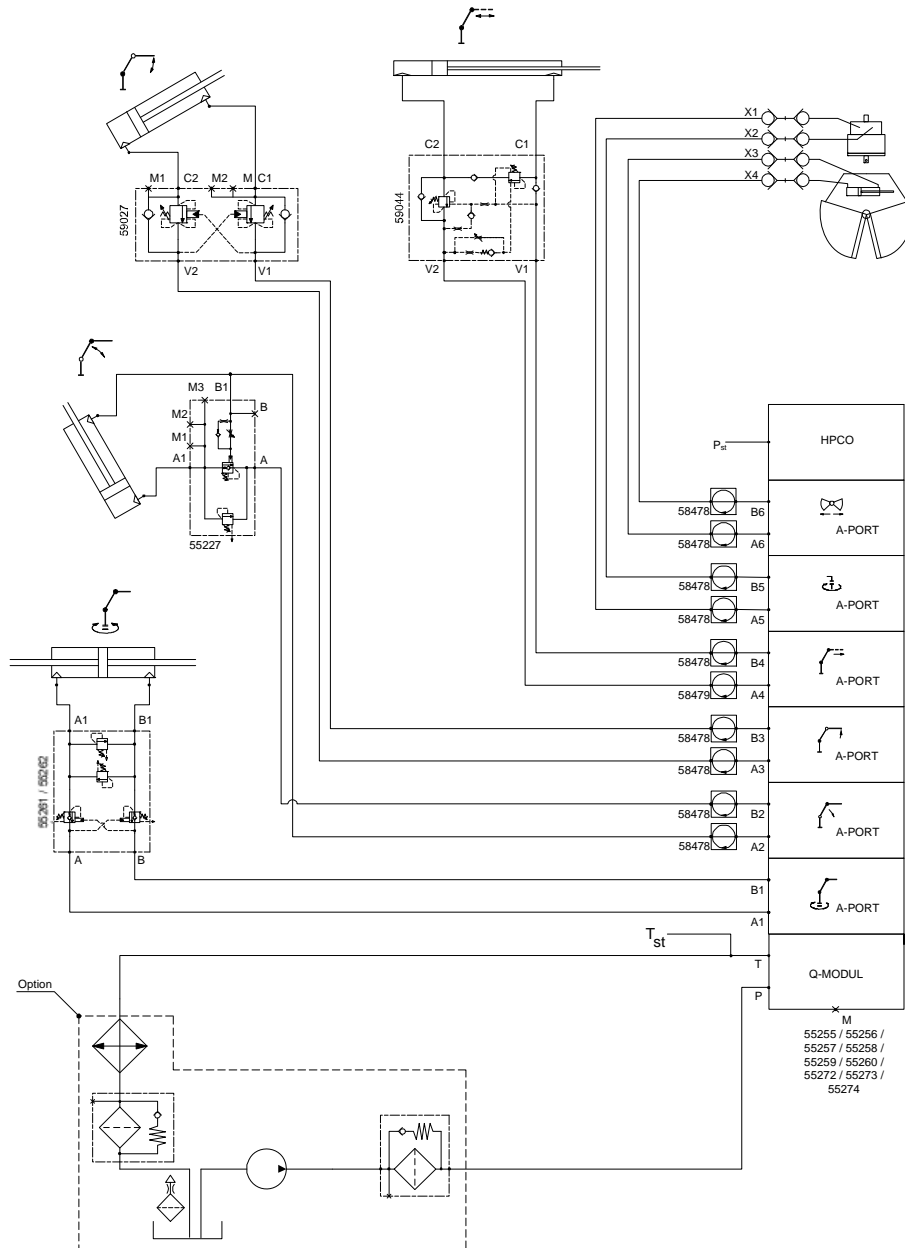
# Hydraulic Schematics

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# Hydraulic Diagram - 15/105SL Manual Control

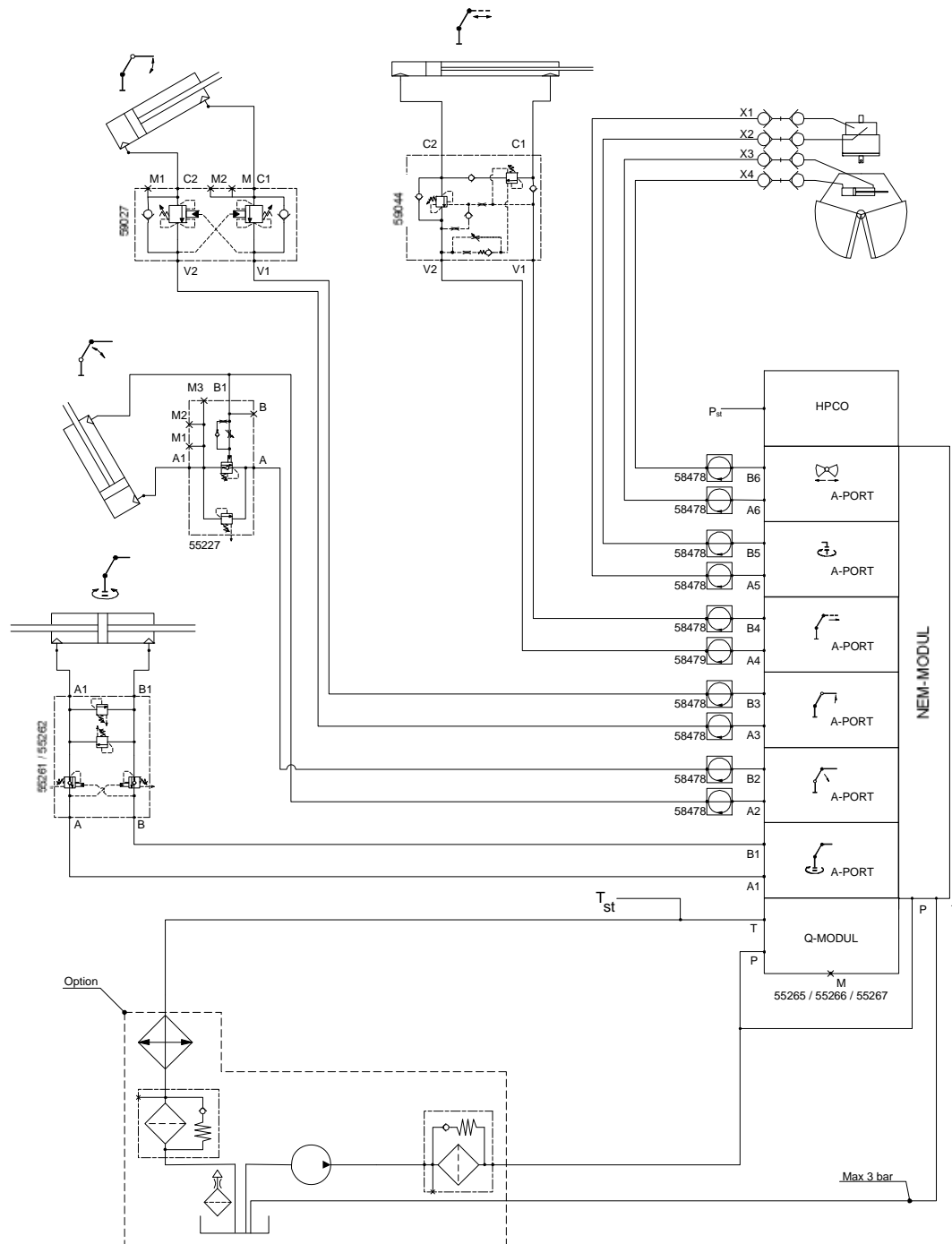
This diagram applies to a 15/105SL crane with a single-circuit fixed pump and 6-function manual controls.





# Hydraulic Diagram - 15/105SL Radio Control

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



# Hydraulic Diagram - 15/105SL Top Seat Control

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

