
Manual # 99904614

18/124DL Technical Specifications

Revision Date 20120912



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Revisions

DATE	LOCATION	DESCRIPTION
20090813		Added swing clearance drawing and specification.
20100118	Geometric configuration	Added stabilizer length and extension.
20111214	Specs, Stabilizer drawings	ECN 11628 - Updated stabilizer wording.
20120502	Specifications	Updated crane weight to include mounting kit, tank.
20120910	Drawings	Added stowed dimensions, mounting dimensions, and winch settings drawings.

CHAPTER 1

Technical Data and Charts

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18/124DL Technical Specifications

18/124DL	2-HYDRAULIC	3-HYDRAULIC	4-HYDRAULIC	5-HYDRAULIC	6-HYDRAULIC	7-HYDRAULIC	8-HYDRAULIC
Crane Rating*	120,070 ft lb (16.6 tm)	116,450 ft lb (16.1 tm)	112,835 ft lb (15.6 tm)	109,940 ft lb (15.2 tm)	106,325 ft lb (14.7 tm)	103,430 ft lb (14.3 tm)	101,260 ft lb (14 tm)
Maximum Horizontal Reach	27' 3" (8.3 m)	33' 10" (10.3 m)	41' 0" (12.5 m)	48' 7" (14.8 m)	56' 5" (17.2 m)	63' 8" (19.4 m)	71' 2" (21.7 m)
Maximum Vertical Reach	35' 1" (10.7 m)	42' 0" (12.8 m)	49' 3" (15.0 m)	56' 5" (17.2 m)	64' 4" (19.6 m)	71' 10" (21.9 m)	79' 1" (24.1 m)
Maximum Capacity	14,265 lb (6470 kg)	13,625 lb (6180 kg)	13,005 lb (5900 kg)	12,435 lb (5640 kg)	11,925 lb (5410 kg)	11,400 lb (5170 kg)	10,980 lb (4980 kg)
Max Cap @ Max Reach	4365 lb (1980 kg)	3220 lb (1460 kg)	2380 lb (1080 kg)	1740 lb (790 kg)	1255 lb (570 kg)	860 lb (390 kg)	615 lb (280 kg)
Crane Weight **	4300 lb (1950 kg)	4640 lb (2105 kg)	5050 lb (2290 kg)	5355 lb (2430 kg)	5635 lb (2555 kg)	5865 lb (2660 kg)	6050 lb (2745 kg)
Hook Approach							
Vertical	7' 3" (2.21 m)	7' 6" (2.29 m)	7' 10" (2.38 m)	8' 1" (2.47 m)	8' 5" (2.56 m)	8' 8" (2.65 m)	9' 0" (2.74 m)
Horizontal	2' 3" (0.69 m)	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" (795 mm)	2' 8" (820 mm)	2' 9" (840 mm)	2' 10" (855 mm)	2' 10" (870 mm)	2' 11" (890 mm)	3' 0" (910 mm)
Horizontal (C/L RotTo Bridge)	12.8" (325 mm)	12.4" (315 mm)	12.0" (305 mm)	11.4" (290 mm)	10.8" (275 mm)	10.4" (265 mm)	10.0" (255 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.

18/124DL SPECIFICATIONS	
Stabilizer Pad Diameter	7" (175 mm)
Crane Storage Height	7' 6" (2295 mm)
Mounting Space ***	2' 11" (880 mm)
Rotational Torque	17,555 ft lb (2.4 tm)
Rotation	400°
Optimum Pump Performance	14.5 gpm (55 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)	18' 3" (5575 mm)
Weight	605 lb (275 kg)
Option (hydraulic out / hydraulic down)	21' 2" (6455 mm)
Weight	785 lb (355 kg)

*** Maximum swing clearance radius required is 25" (635 mm) at 8' (2430 mm) from top of chassis frame.

MINIMUM CHASSIS SPECIFICATIONS	
Front Axle Rating (GAWR)	14,000 lb (6350 kg)
Rear Axle Rating (GAWR)	40,000 lb (18,145 kg)
Resistance To Bending Moment	1,850,000 in-lb (213,145 kg-m)

18/124DL 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)

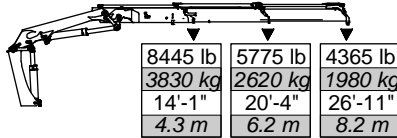
MAXIMUM PUMP PERFORMANCE	
Pump performance	14.5 gal/min (55 l/min)

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)

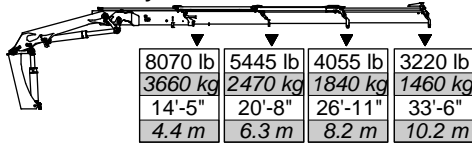
18/124DL Lifting Capacities

18/124DL - 2 Hydraulic



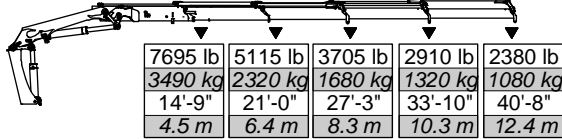
8445 lb	5775 lb	4365 lb
3830 kg	2620 kg	1980 kg
14'-1"	20'-4"	26'-11"
4.3 m	6.2 m	8.2 m

18/124DL - 3 Hydraulic



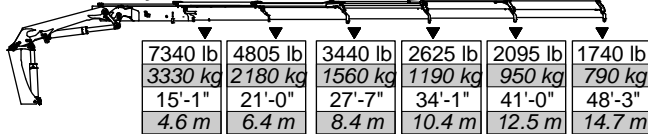
8070 lb	5445 lb	4055 lb	3220 lb
3660 kg	2470 kg	1840 kg	1460 kg
14'-5"	20'-8"	26'-11"	33'-6"
4.4 m	6.3 m	8.2 m	10.2 m

18/124DL - 4 Hydraulic



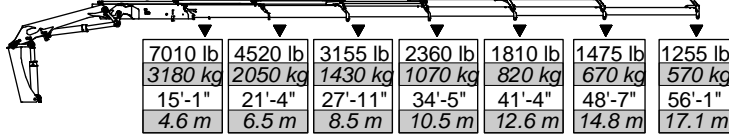
7695 lb	5115 lb	3705 lb	2910 lb	2380 lb
3490 kg	2320 kg	1680 kg	1320 kg	1080 kg
14'-9"	21'-0"	27'-3"	33'-10"	40'-8"
4.5 m	6.4 m	8.3 m	10.3 m	12.4 m

18/124DL - 5 Hydraulic



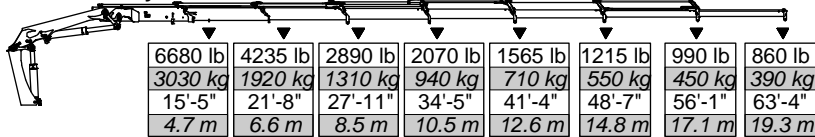
7340 lb	4805 lb	3440 lb	2625 lb	2095 lb	1740 lb
3330 kg	2180 kg	1560 kg	1190 kg	950 kg	790 kg
15'-1"	21'-0"	27'-7"	34'-1"	41'-0"	48'-3"
4.6 m	6.4 m	8.4 m	10.4 m	12.5 m	14.7 m

18/124DL - 6 Hydraulic



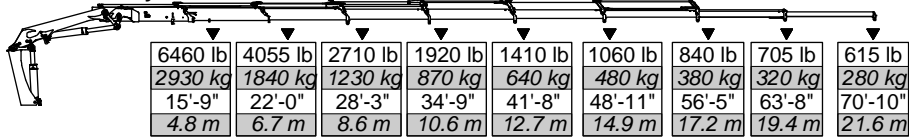
7010 lb	4520 lb	3155 lb	2360 lb	1810 lb	1475 lb	1255 lb
3180 kg	2050 kg	1430 kg	1070 kg	820 kg	670 kg	570 kg
15'-1"	21'-4"	27'-11"	34'-5"	41'-4"	48'-7"	56'-1"
4.6 m	6.5 m	8.5 m	10.5 m	12.6 m	14.8 m	17.1 m

18/124DL - 7 Hydraulic



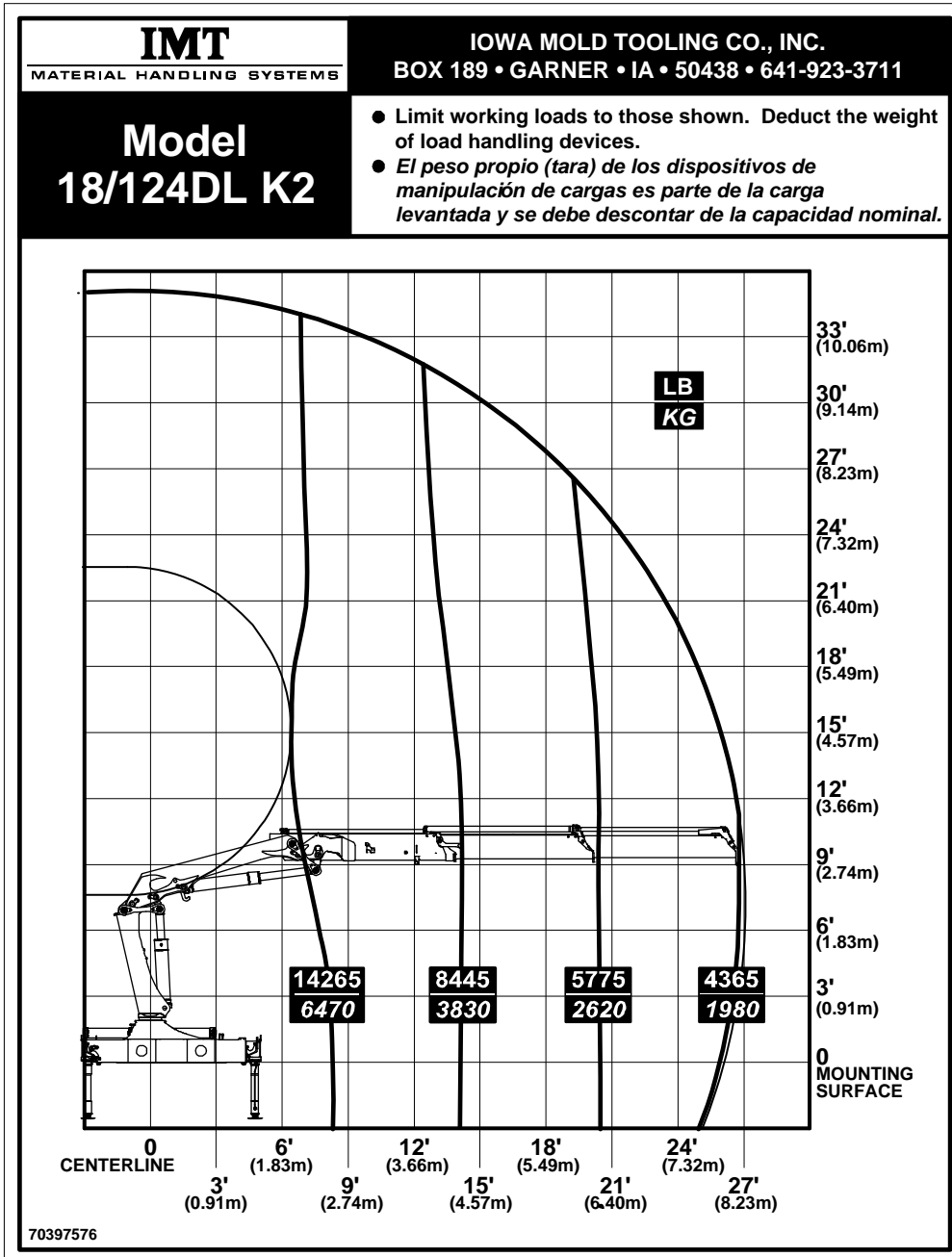
6680 lb	4235 lb	2890 lb	2070 lb	1565 lb	1215 lb	990 lb	860 lb
3030 kg	1920 kg	1310 kg	940 kg	710 kg	550 kg	450 kg	390 kg
15'-5"	21'-8"	27'-11"	34'-5"	41'-4"	48'-7"	56'-1"	63'-4"
4.7 m	6.6 m	8.5 m	10.5 m	12.6 m	14.8 m	17.1 m	19.3 m

18/124DL - 8 Hydraulic

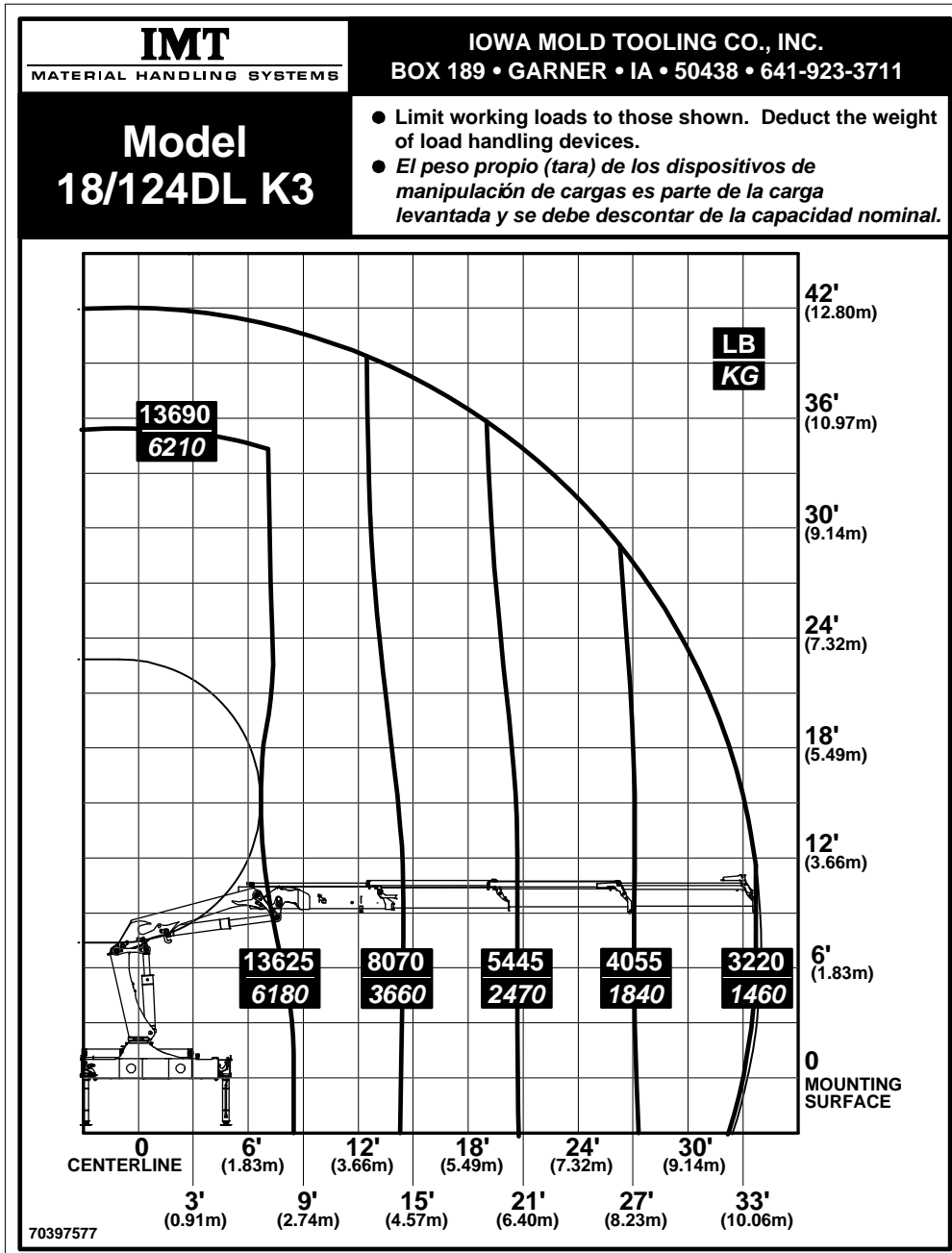


6460 lb	4055 lb	2710 lb	1920 lb	1410 lb	1060 lb	840 lb	705 lb	615 lb
2930 kg	1840 kg	1230 kg	870 kg	640 kg	480 kg	380 kg	320 kg	280 kg
15'-9"	22'-0"	28'-3"	34'-9"	41'-8"	48'-11"	56'-5"	63'-8"	70'-10"
4.8 m	6.7 m	8.6 m	10.6 m	12.7 m	14.9 m	17.2 m	19.4 m	21.6 m

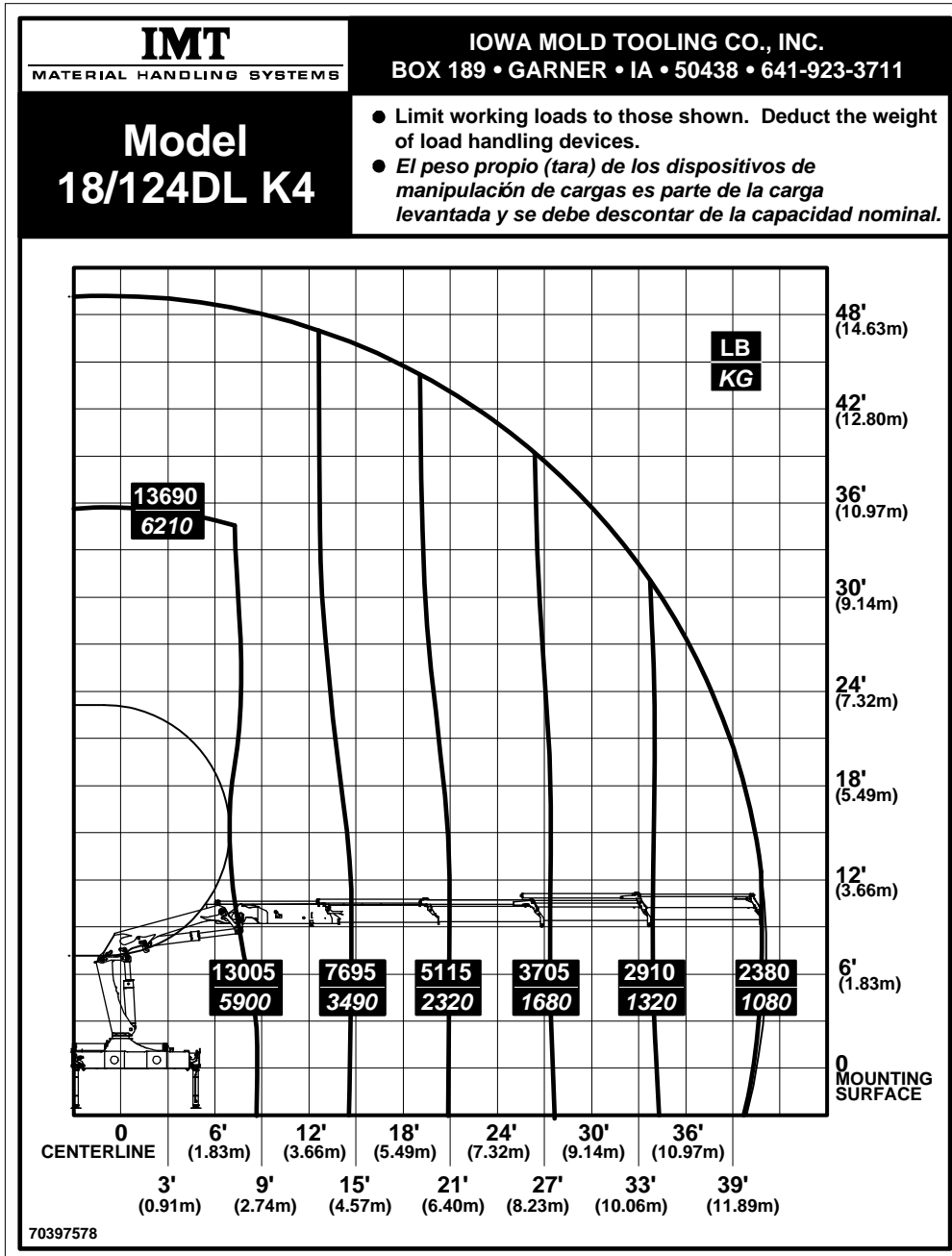
18/124DL K2 Capacity Chart



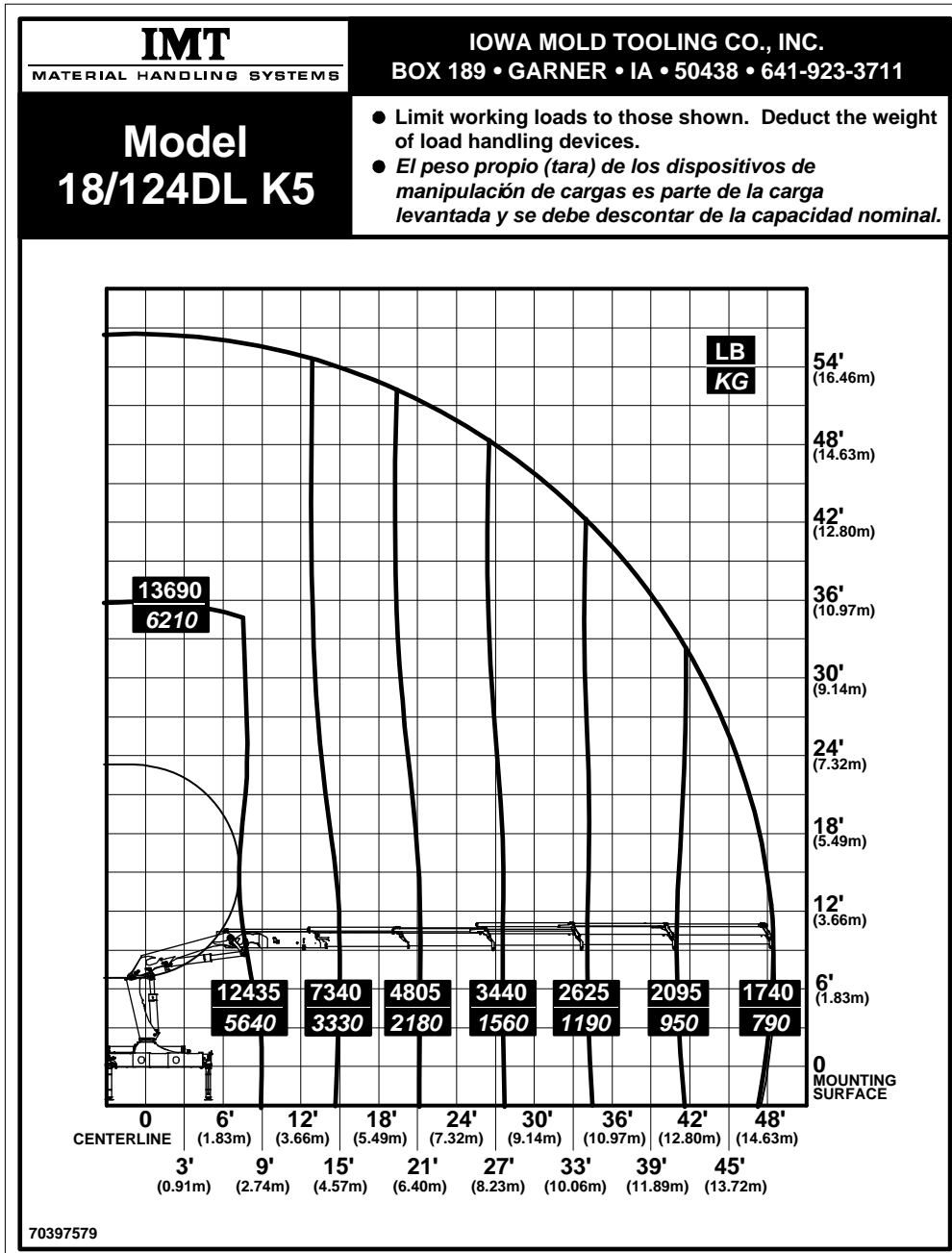
18/124DL K3 Capacity Chart



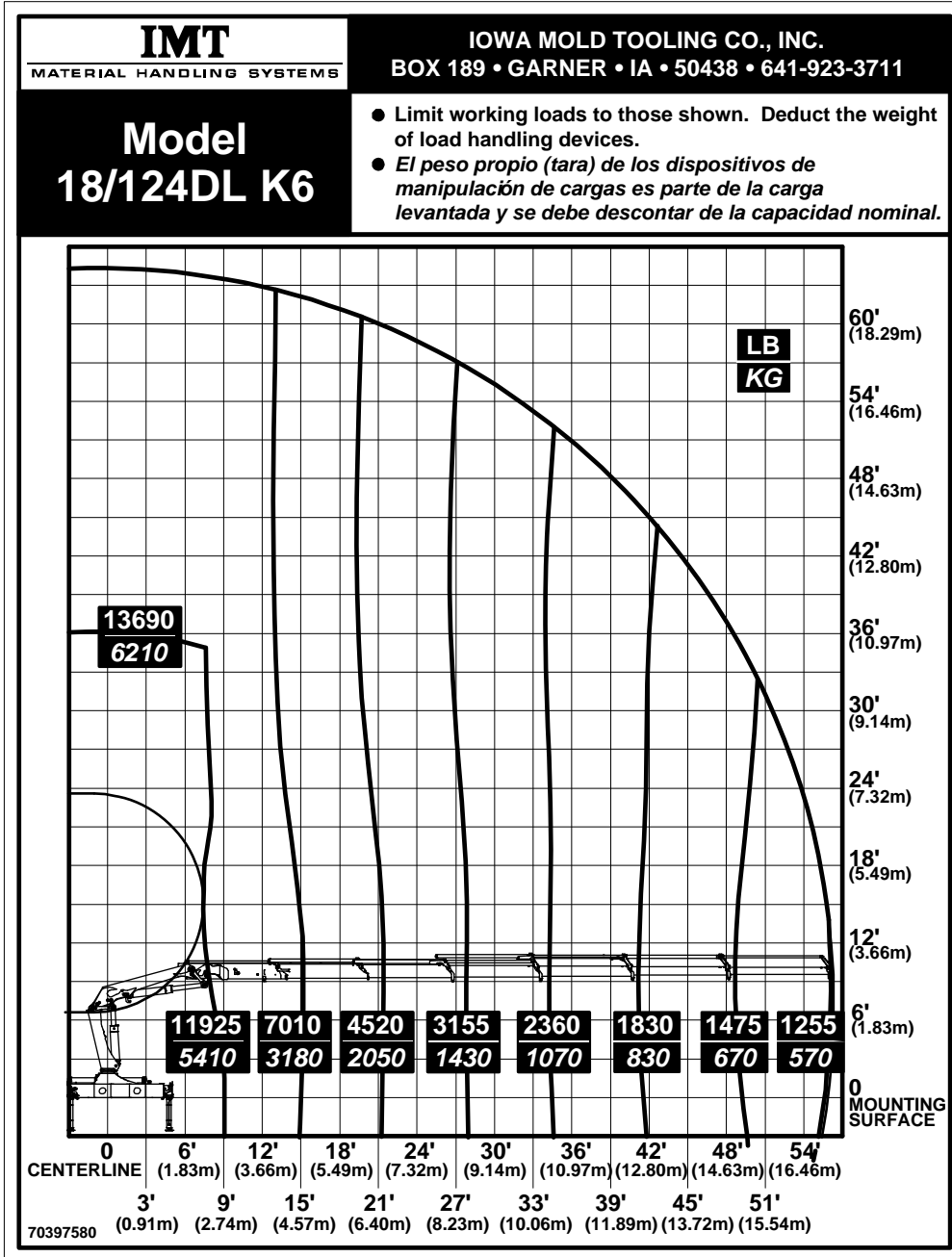
18/124DL K4 Capacity Chart



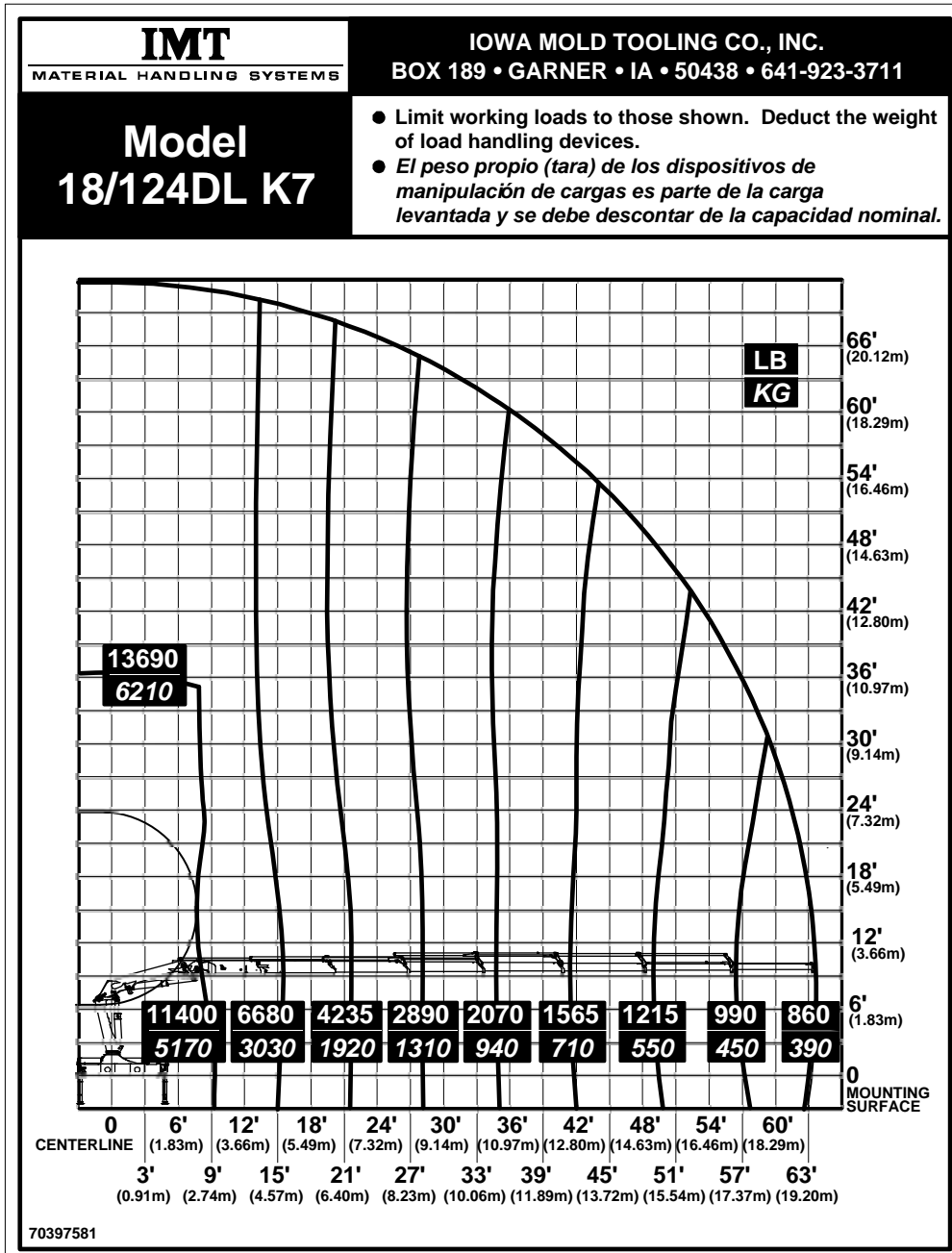
18/124DL K5 Capacity Chart



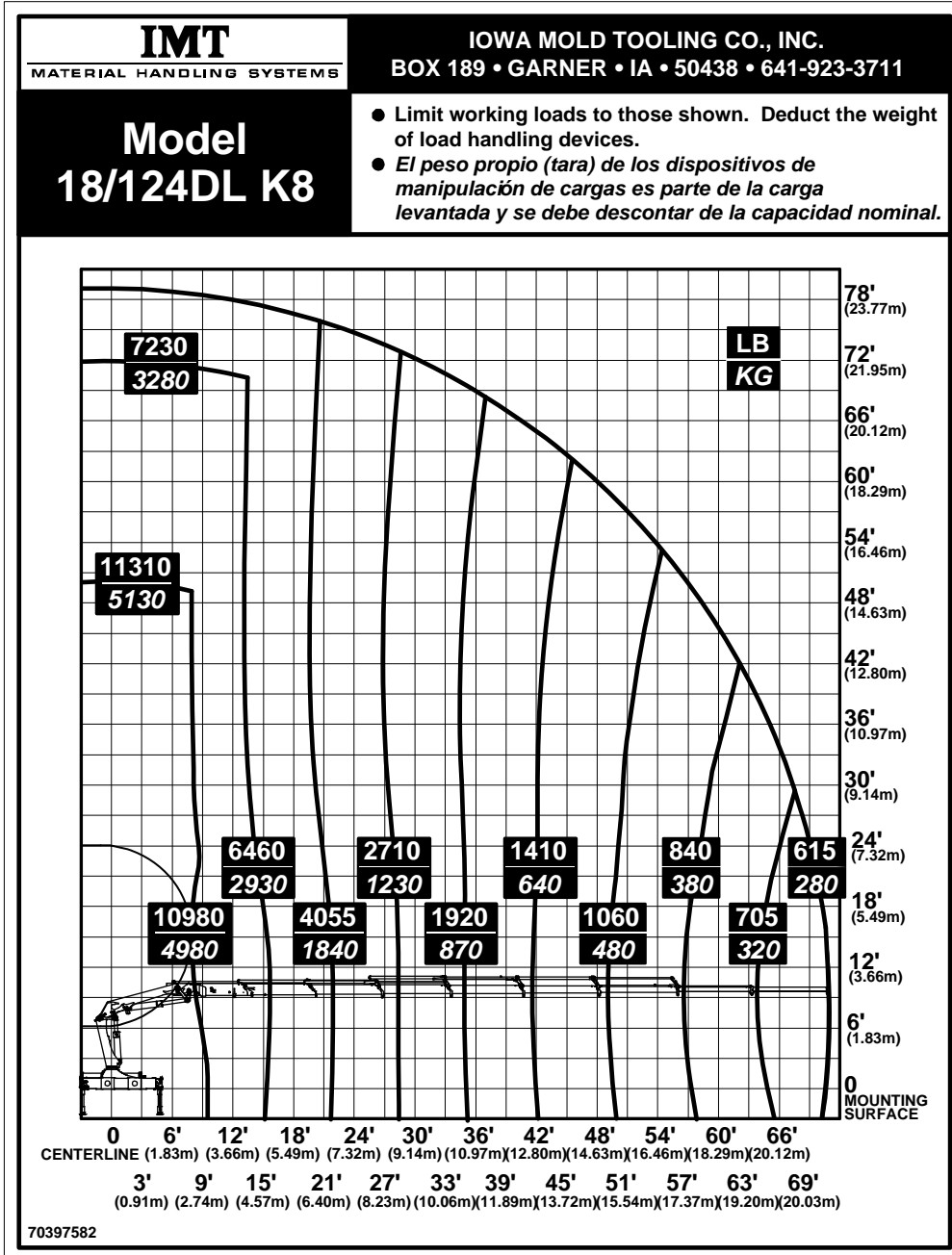
18/124DL K6 Capacity Chart



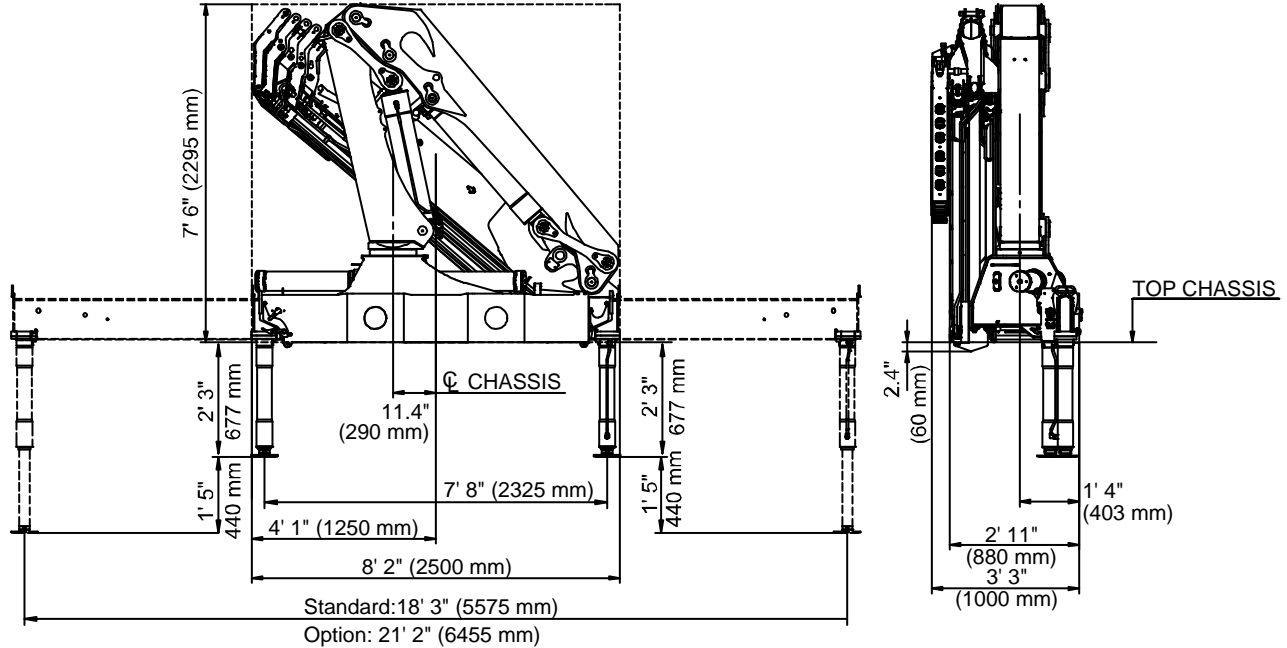
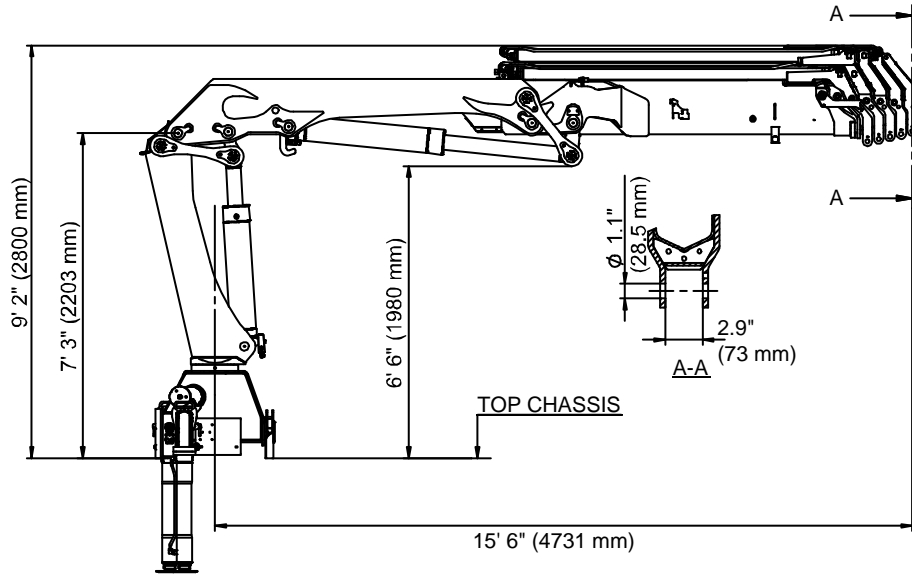
18/124DL K7 Capacity Chart



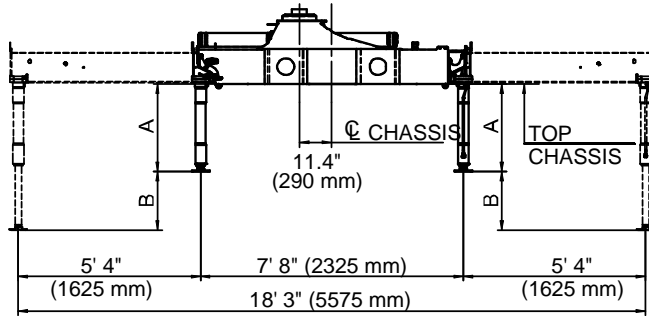
18/124DL K8 Capacity Chart



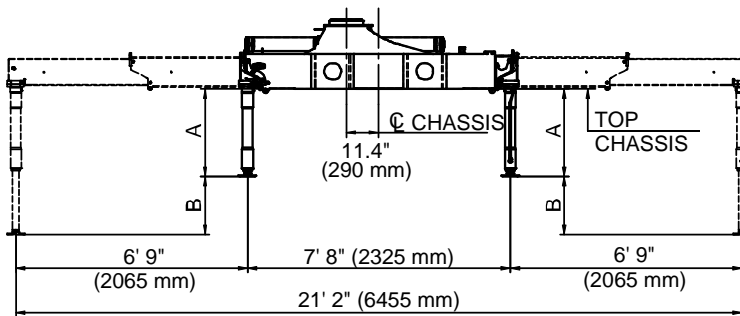
18/124DL Geometric Configuration



Stabilizer Dimensions, Fixed Legs, 18 tm up

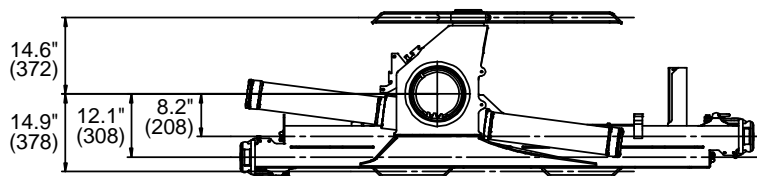
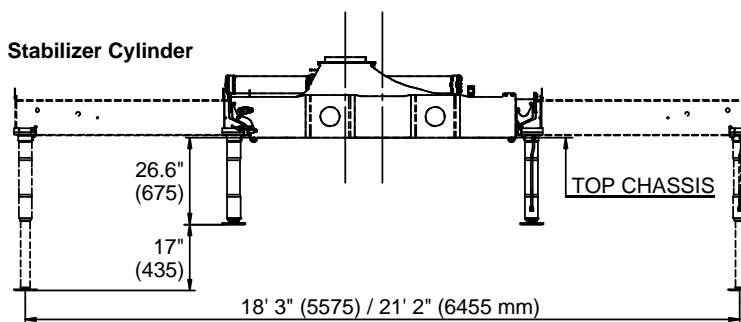


STANDARD
(Hydraulic Out /
Hydraulic Down)

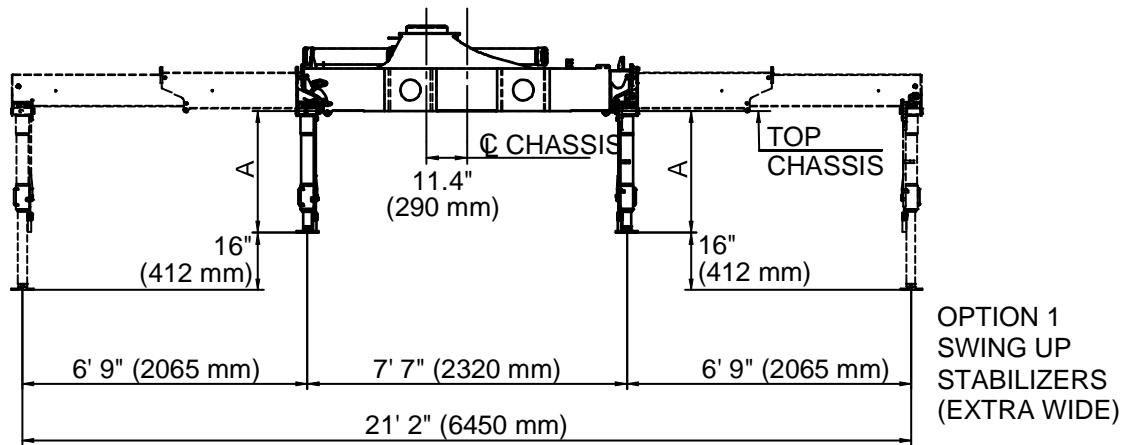
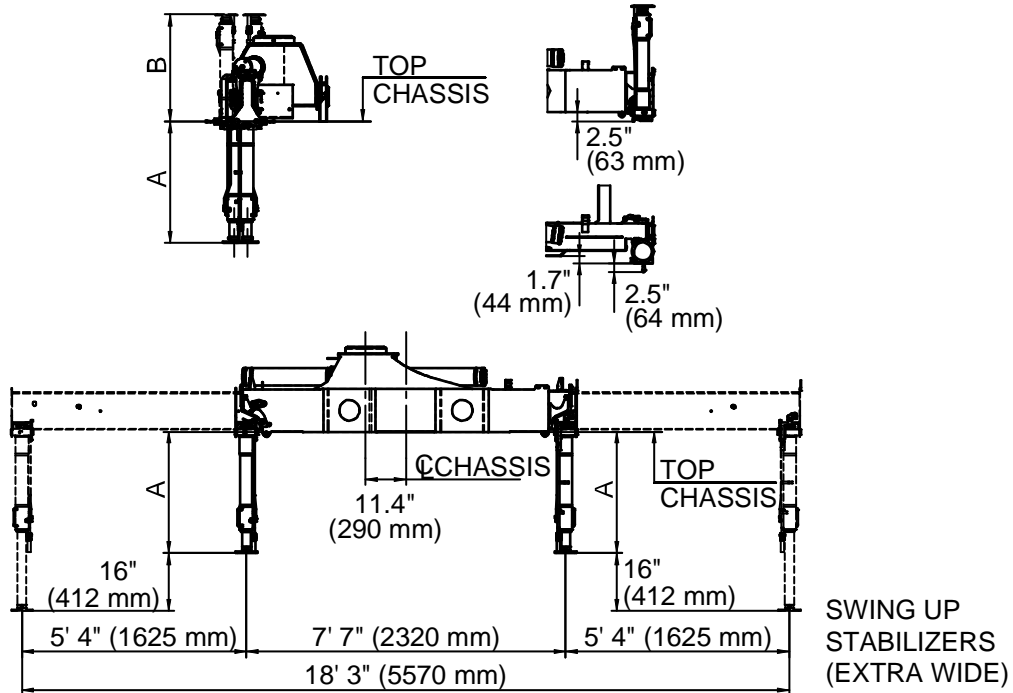




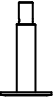
OPTION 1
(Extra Wide
Hydraulic Out /
Hydraulic Down)

A	2' 3" (677 mm)	2' 6" (777 mm)	2' 11" (877 mm)	3' 2" (977 mm)
B	1' 5" (440 mm)	1' 8" (515 mm)	1' 8" (515 mm)	1' 8" (515 mm)

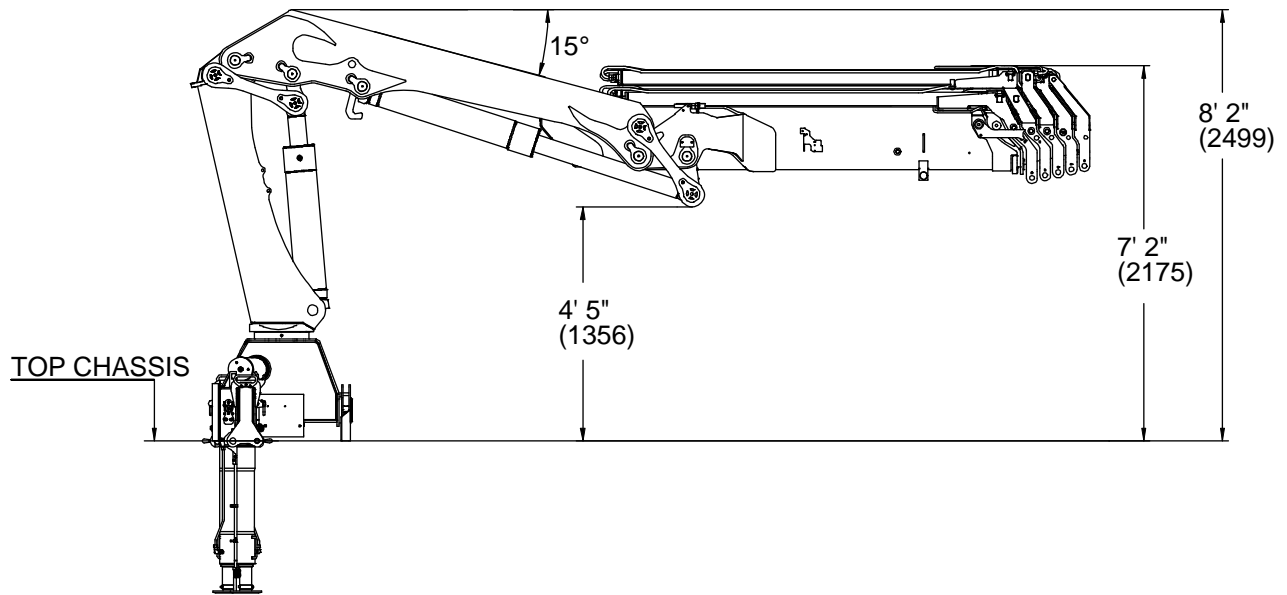
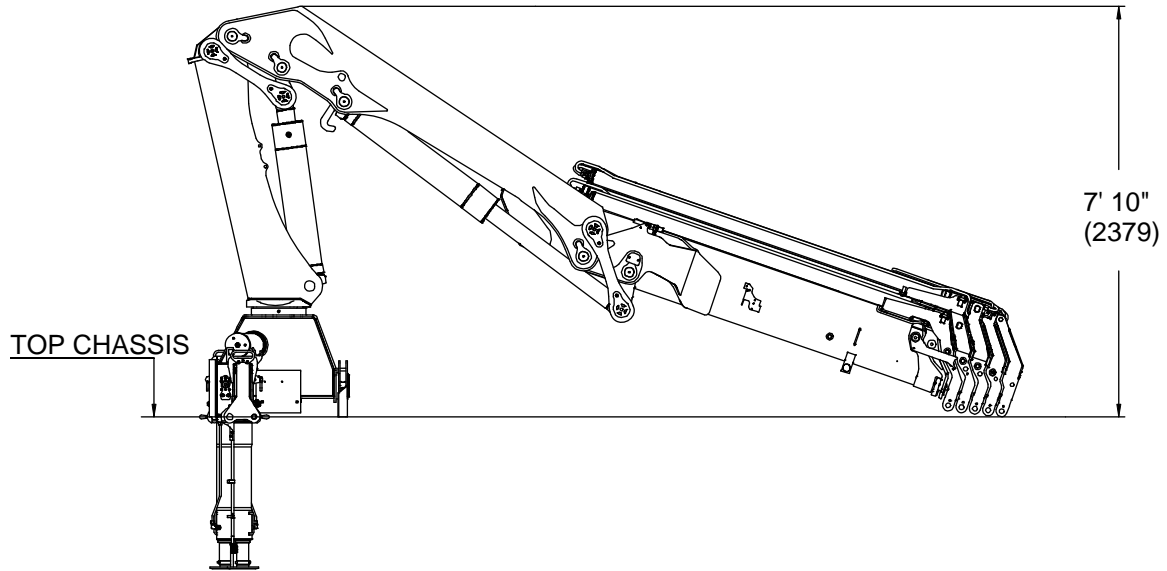


Stabilizer Dimensions, Swing-up, 18 tm up



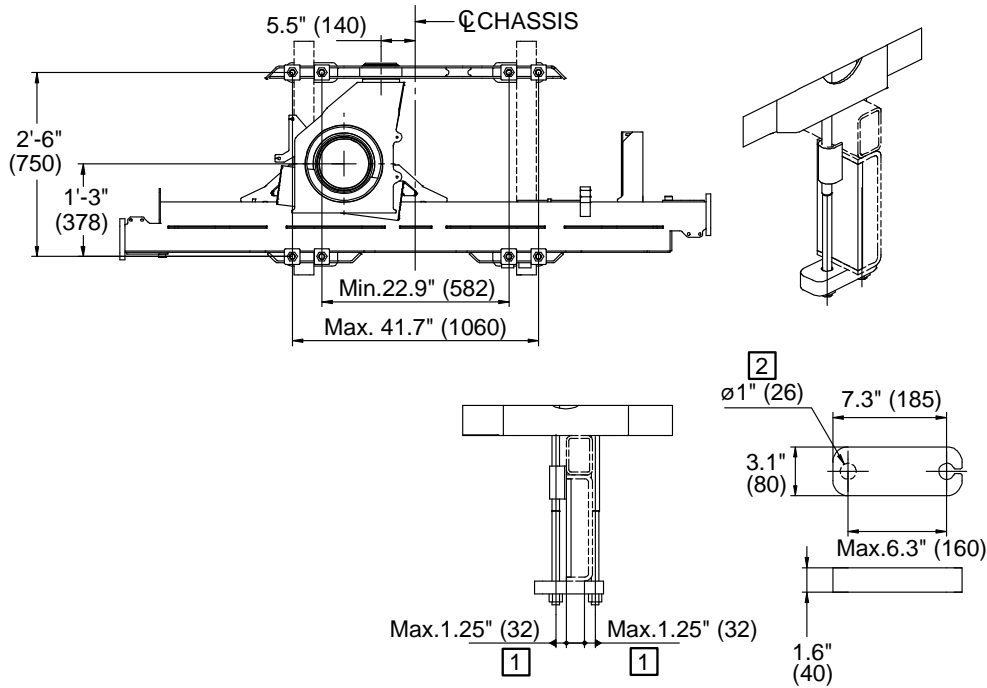
			
A	35" (879 mm)	39" (979 mm)	42.5" (1079 mm)
B	30.5" (777 mm)	34.4" (877 mm)	38.4" (977 mm)

Stowed Dimensions

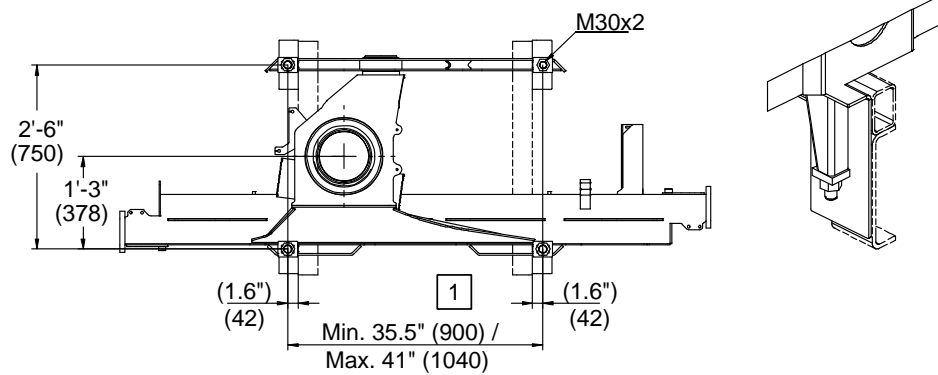


Mounting Dimensions

MOUNTING KIT 8 x M24x2 BOLTS



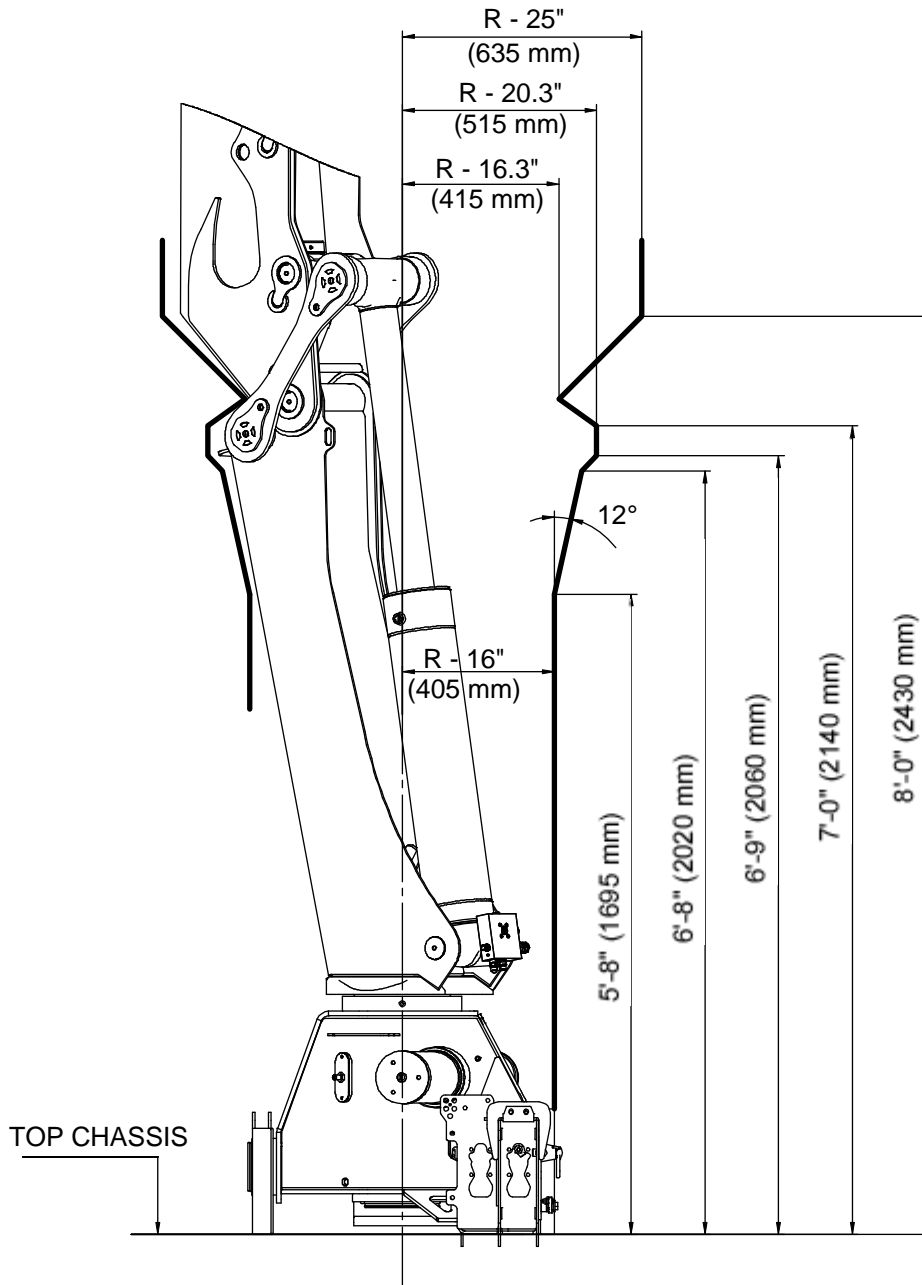
MOUNTING KIT 3 x M33x2 BOLTS + 1 M30x2 BOLT



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.

18/124DL Swing Clearance



CHAPTER 2

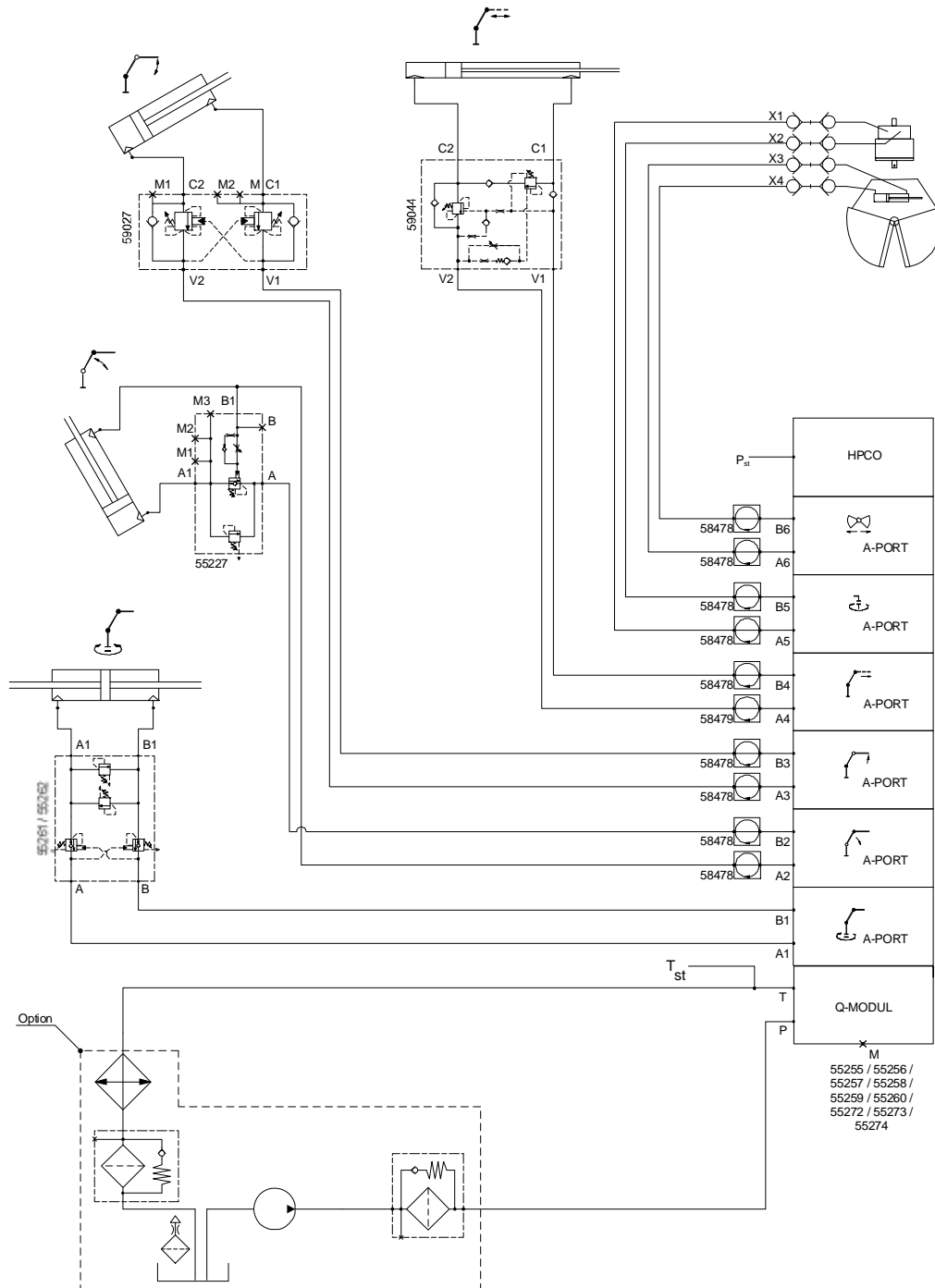
Hydraulic Schematics

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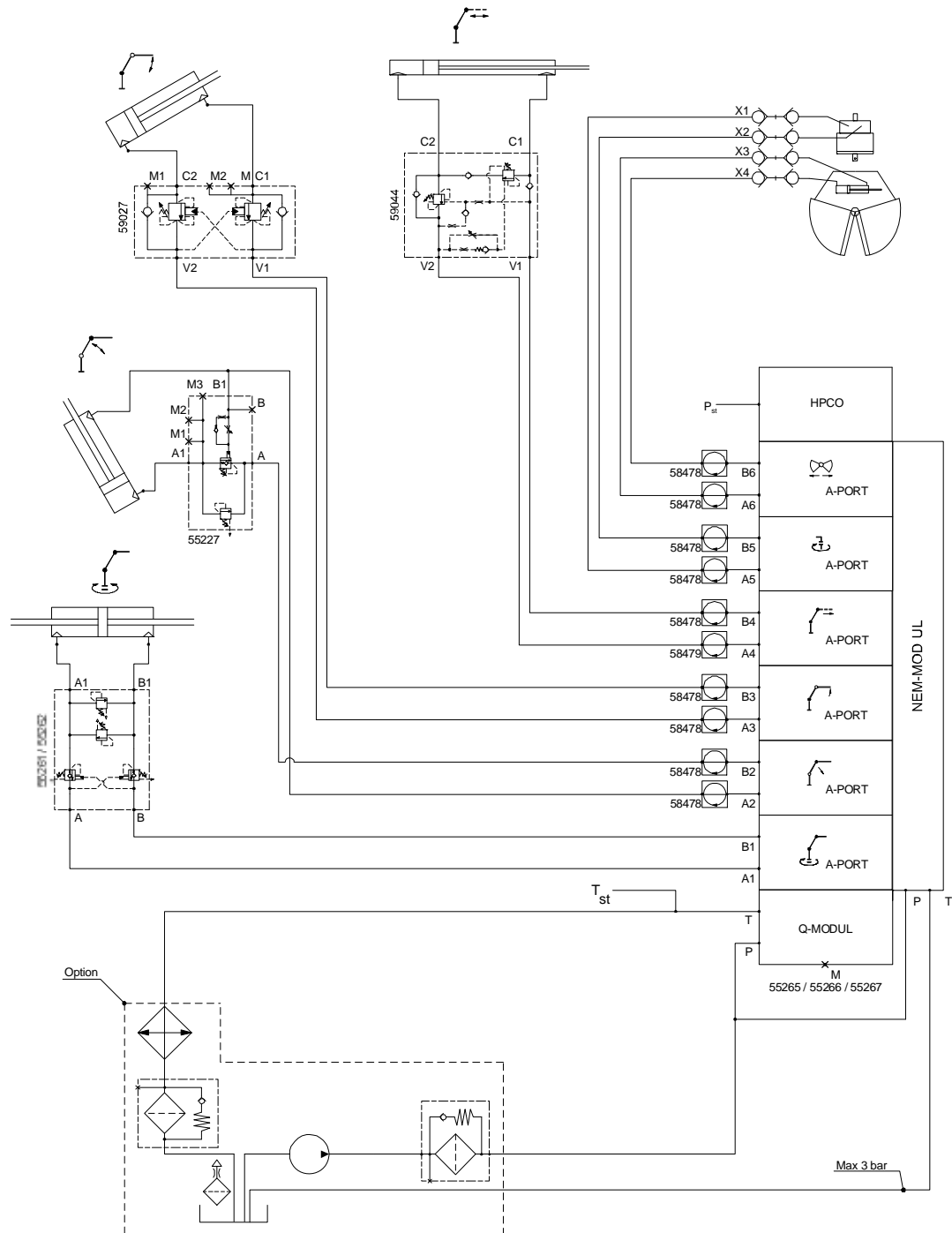
Hydraulic Diagram - 18/124DL Manual Control

This diagram applies to a 18/124DL crane with a single-circuit fixed pump and 6-function manual controls.



Hydraulic Diagram - 18/124DL Radio Control

This diagram applies to a 18/124DL crane with a single-circuit fixed pump and 6-function radio controls.



Hydraulic Diagram - 18/124DL Top Seat Control

This diagram applies to a 18/124DL crane with a single-circuit fixed pump and 6-function top seat.

