

---

Manual # 99904619

# 22/153DL 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>

Copyright © 2012 Iowa Mold Tooling Co., Inc.  
All rights reserved

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior written permission of Iowa Mold Tooling Co., Inc.

Iowa Mold Tooling Co., Inc. is an Oshkosh Corporation company.

*Printed on 3 May, 2012*



---

# Contents

Revisions .....	ii
<b>Technical Data and Charts</b> .....	<b>3</b>
22/153DL Technical Specifications.....	4
22/153DL-24/169DL Pressure Settings, Hydrocontrol HC-D4.....	5
22/153DL K2 Capacity Chart .....	6
22/153DL K3 Capacity Chart .....	7
22/153DL K4 Capacity Chart .....	8
22/153DL K5 Capacity Chart .....	9
22/153DL K6 Capacity Chart .....	10
22/153DL K7 Capacity Chart .....	11
22/153DL K8 Capacity Chart .....	12
22/153DL Dimensional Drawing.....	13
Stabilizer Dimensions, Fixed Legs, 18 tm up .....	14
Stabilizer Dimensions, Swing-up, 18 tm up .....	15
22/153DL - 24/169DL Swing Clearance .....	16
<b>Hydraulic Schematics</b> .....	<b>17</b>
Hydraulic Diagram - 22/153DL Manual Control.....	18
Hydraulic Diagram - 22/153DL Radio Control .....	19
Hydraulic Diagram - 22/153DL Top Seat Control .....	20

---

## Revisions

DATE	LOCATION	DESCRIPTION
20100118	Geometric configuration	Added stabilizer length and extension, stabilizer drawings.
20111214	Specs, Stabilizer drawings.	ECN 11628 - Updated stabilizer wording.
20120502	Specifications	Updated crane weight to include tank, mtg kit.

## CHAPTER 1

# Technical Data and Charts

## In This Chapter

22/153DL Technical Specifications .....	3
22/153DL-24/169DL Pressure Settings, Hydrocontrol HC-D4 ...	5
22/153DL K2 Capacity Chart.....	6
22/153DL K3 Capacity Chart.....	7
22/153DL K4 Capacity Chart.....	8
22/153DL K5 Capacity Chart.....	9
22/153DL K6 Capacity Chart.....	10
22/153DL K7 Capacity Chart.....	11
22/153DL K8 Capacity Chart.....	12
22/153DL Dimensional Drawing.....	13
Stabilizer Dimensions, Fixed Legs, 18 tm up .....	14
Stabilizer Dimensions, Swing-up, 18 tm up.....	15
22/153DL - 24/169DL Swing Clearance.....	16

## 22/153DL Technical Specifications

22/153DL	2-HYDRAULIC	3-HYDRAULIC	4-HYDRAULIC	5-HYDRAULIC	6-HYDRAULIC	7-HYDRAULIC	8-HYDRAULIC
Crane Rating*	149,000 ft lb (20.6 tm)	145,385 ft lb (20.1 tm)	141,045 ft lb (19.5 tm)	138,150 ft lb (19.1 tm)	134,535 ft lb (18.6 tm)	132,365 ft lb (18.3 tm)	128,745 ft lb (17.8 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	17,550 lb (7960 kg)	16,820 lb (7630 kg)	16,115 lb (7310 kg)	15,475 lb (7020 kg)	14,880 lb (6750 kg)	14,330 lb (6500 kg)	13,800 lb (6260 kg)
Max Cap @ Max Reach	5465 lb (2480 kg)	4055 lb (1840 kg)	3040 lb (1380 kg)	2295 lb (1040 kg)	1655 lb (750 kg)	1235 lb (560 kg)	880 lb (400 kg)
Crane Weight **	4610 lb (2090 kg)	4980 lb (2260 kg)	5425 lb (2460 kg)	5755 lb (2610 kg)	6065 lb (2750 kg)	6295 lb (2855 kg)	6480 lb (2940 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" (905 mm)
Horizontal (C/L RotTo Bridge)	13.0" (330 mm)	12.8" (325 mm)	12.2" (310 mm)	11.8" (300 mm)	11.4" (290 mm)	10.8" (275 mm)	10.6" (270 mm)

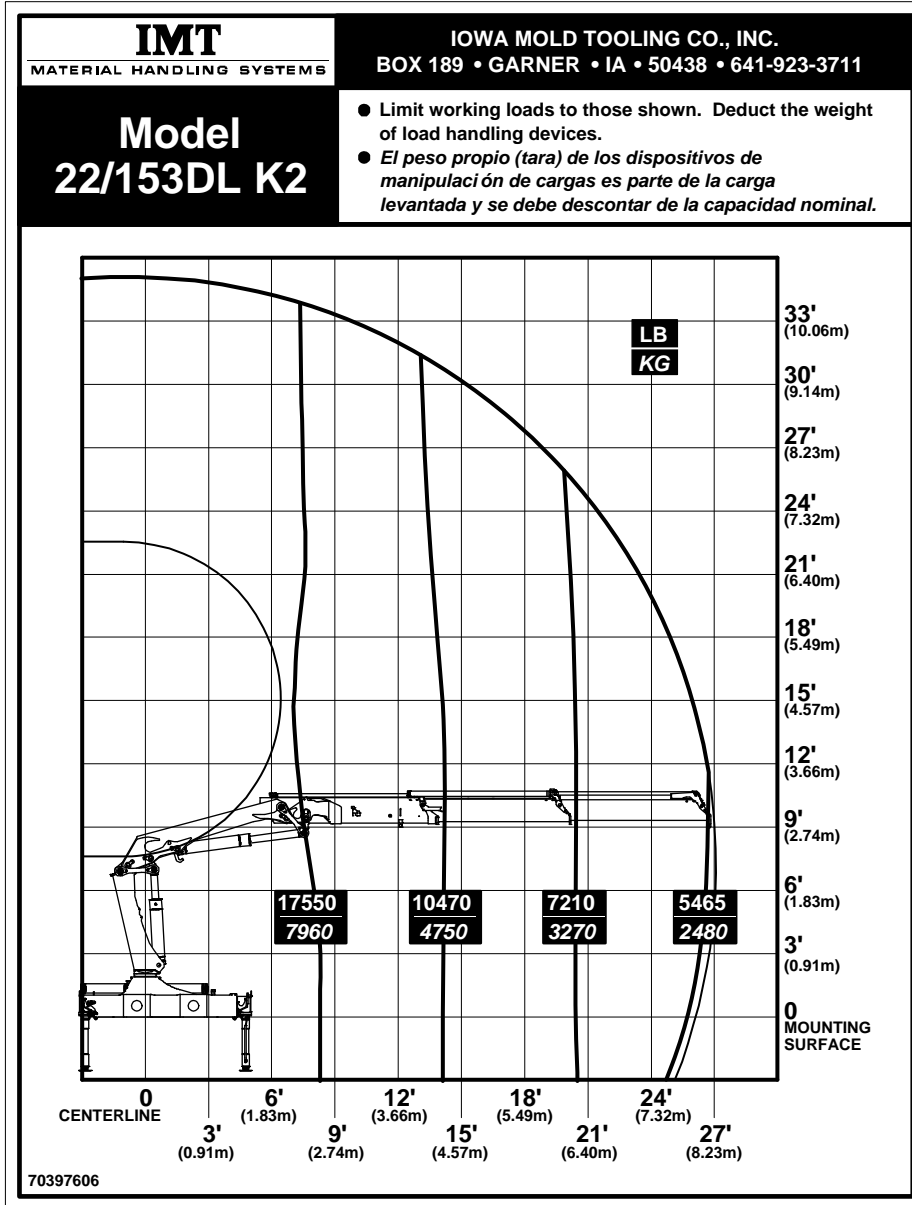
\* Crane rating (ft-lb) is the rated load (lb) multiplied by the respective distance (ft) from centerline of rotation with all extensions retracted and the inner and outer booms in a horizontal position, per ANSI B30.22. \*\* Crane weight is for standard crane with tank & 4-bolt mounting kit. Does not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

22/153DL SPECIFICATIONS	
Stabilizer Pad Diameter	7" (175 mm)
Crane Storage Height	7' 6" (2295 mm)
Mounting Space ***	2' 11" (880 mm)
Rotational Torque	19,990 ft lb (2.8 tm)
Rotation	400°
Optimum Pump Performance	15.9 gpm (60 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	640 lb (290 kg)
Option (hydraulic out / hydraulic down)	21' 2" (6455 mm)
Weight	805 lb (365 kg)
*** Maximum swing clearance radius required is 26" (660 mm) at 8' (2445 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	2,300,000 in-lb (264,990 kg-m)

## 22/153DL-24/169DL Pressure Settings, Hydrocontrol HC-D4

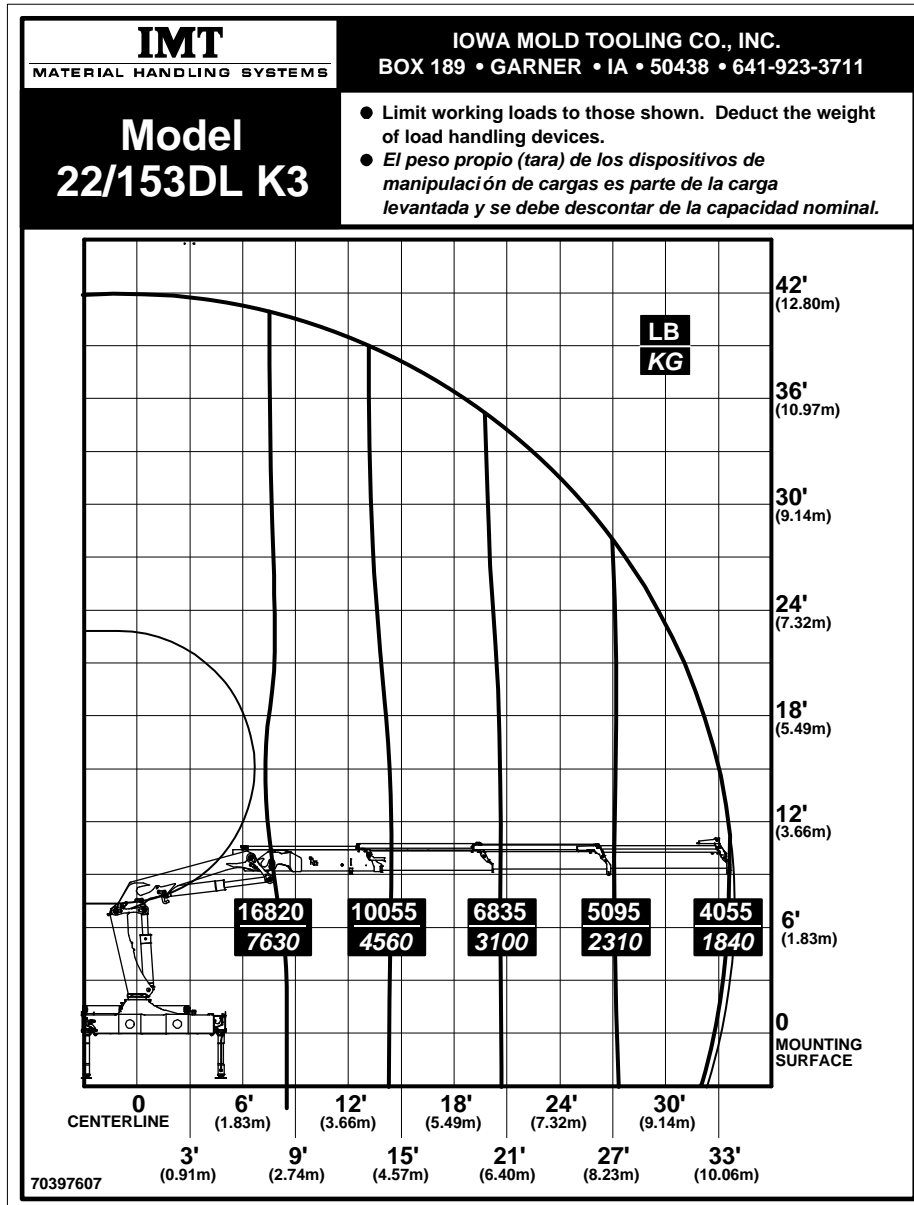
<b>WORKING PRESSURE ON MAIN-RELIEF VALVE &amp; PORT RELIEF VALVES</b>				
<b>FUNCTION</b>	<b>DIRECTION</b>	<b>PORT</b>	<b>22/153DL</b>	<b>24/169DL</b>
Main-relief valve			4350 psi (300 bar)	4785 psi (330 bar)
Slewing system	Right	A	P	P
	Left	B	P	P
Boom cylinder	Down	A	1450 psi (100 bar)	1450 psi (100 bar)
			4715 psi (325 bar)	4930 psi (340 bar)
Jib cylinder	Up	A	4715 psi (325 bar)	4930 psi (340 bar)
	Down	B	2900 psi (200 bar)	2900 psi (200 bar)
Extension cylinders	Extend	A	P	P
	Retract	B	P	P
Rotator	Right	A	2900 psi (200 bar)	2900 psi (200 bar)
	Left	B	2900 psi (200 bar)	2900 psi (200 bar)
Grab	Open	A	2900 psi (200 bar)	2900 psi (200 bar)
	Close	B	2900 psi (200 bar)	2900 psi (200 bar)
Separate stabilizer valve		All	2175 psi (150 bar)	2175 psi (150 bar)
<b>WORKING PRESSURE ON LOAD-HOLDING VALVES</b>				
Function	Direction	Port	Opening Pressure	
Boom cylinder			4715 psi (325 bar)	5075 psi (350 bar)
Jib cylinder			4785 psi (330 bar)	5075 psi (350 bar)
Slewing system			3045 psi (210 bar)	3045 psi (210 bar)
Extension cylinders	Extend	A	3045 psi (210 bar)	3045 psi (210 bar)
	Retract	B	6235 psi (430 bar)	6235 psi (430 bar)
<b>PRESSURE SETTING FOR LOAD MOMENT LIMITATION (LMB)</b>				
Load moment limitation (LMB)			4205 psi (290 bar)	4640 psi (320 bar)
HDL			-	4205 psi (290 bar)
<b>MAXIMUM PUMP PERFORMANCE</b>				
Pump performance			15.9 gpm (60 l/min)	15.9 gpm (60 l/min)

# 22/153DL K2 Capacity Chart





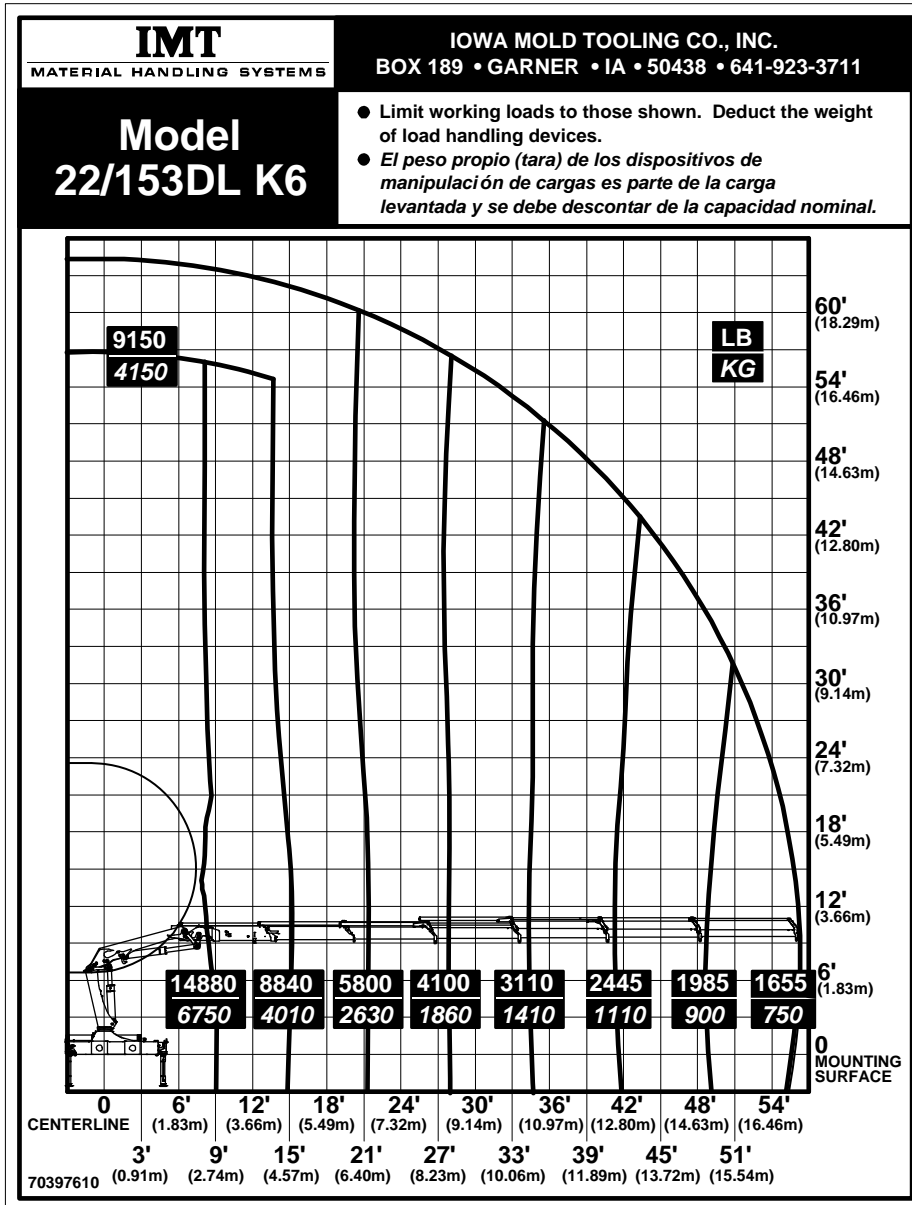
# 22/153DL K3 Capacity Chart



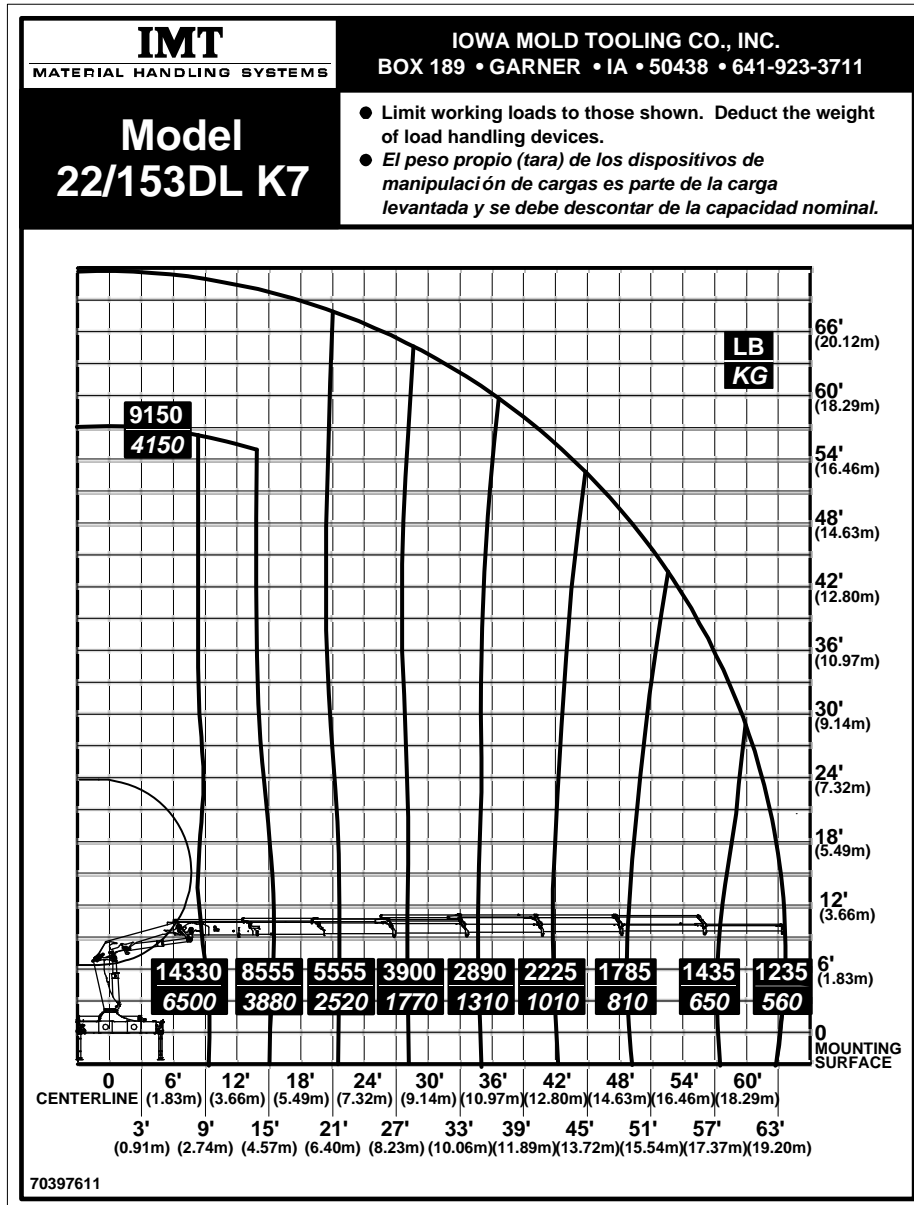




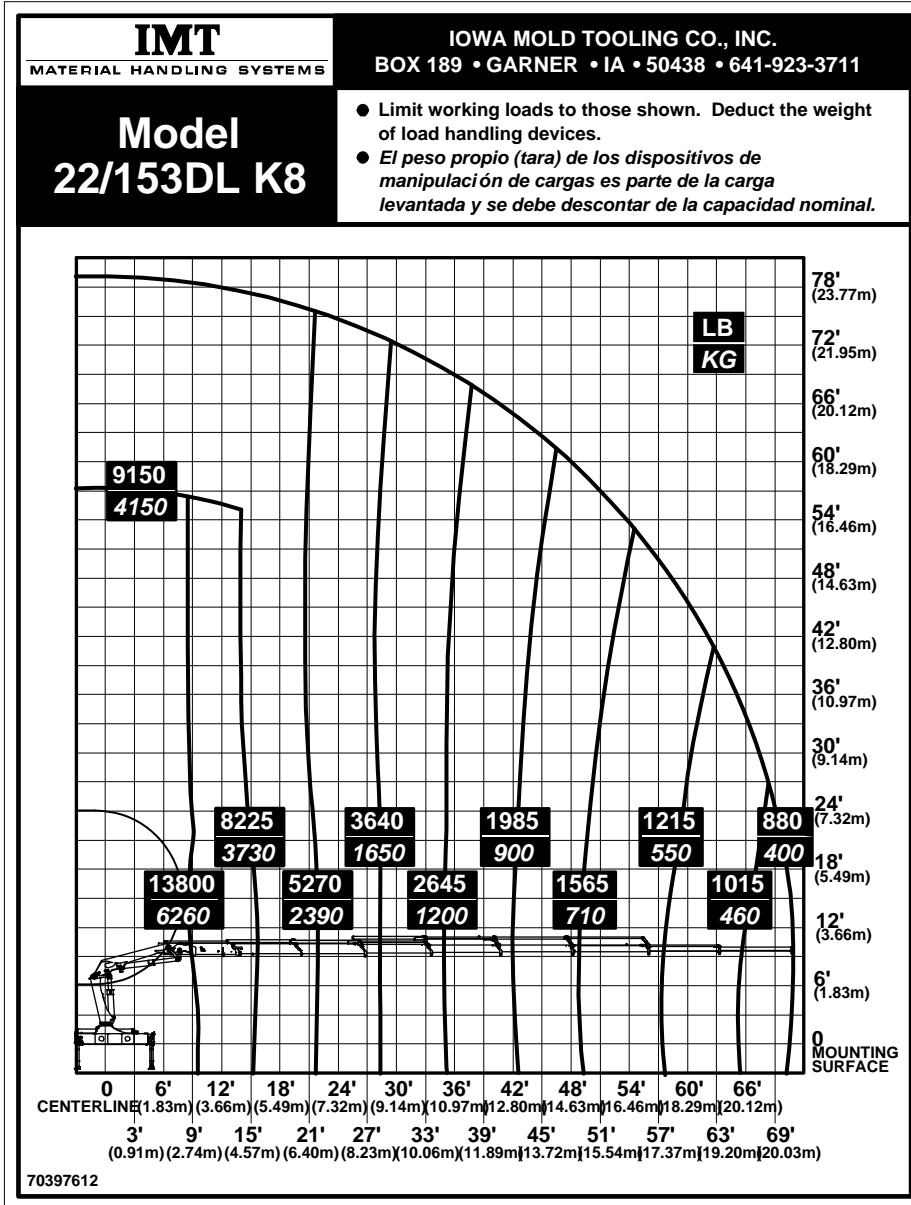
# 22/153DL K6 Capacity Chart



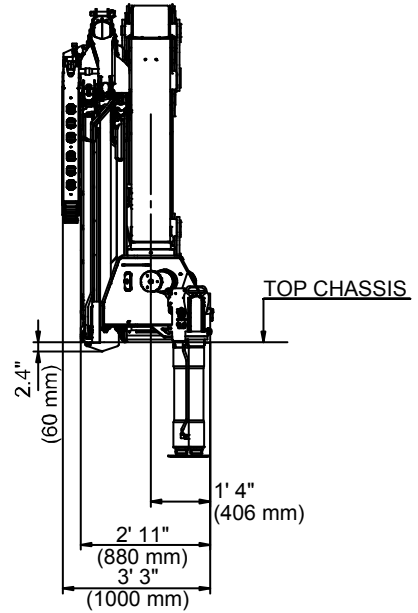
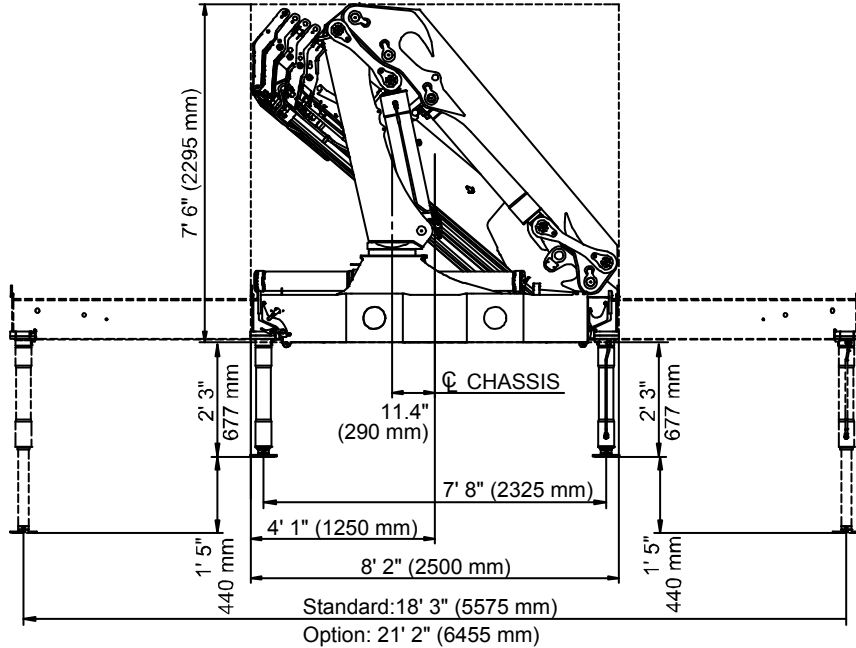
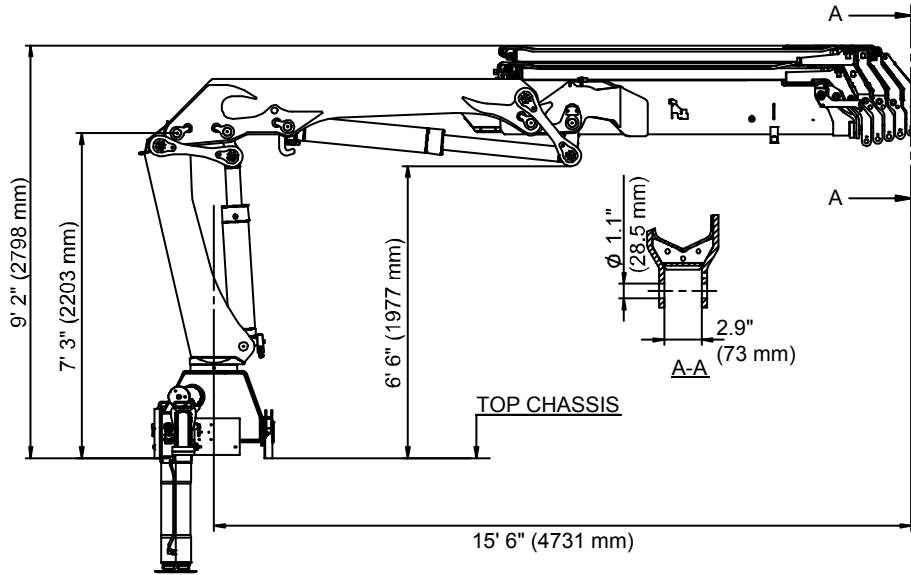
# 22/153DL K7 Capacity Chart



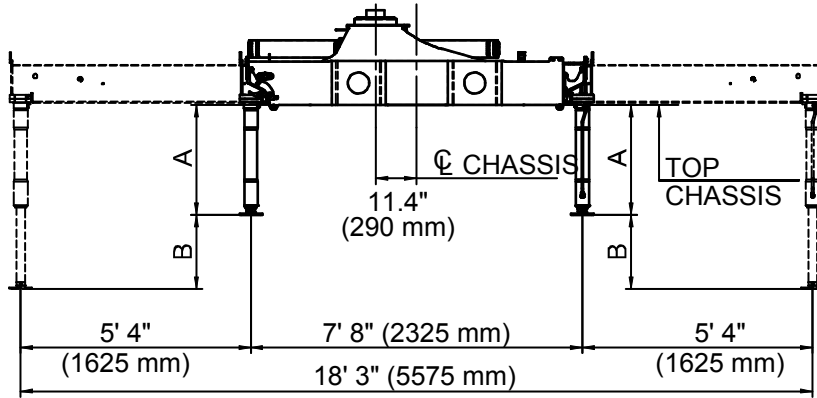
# 22/153DL K8 Capacity Chart



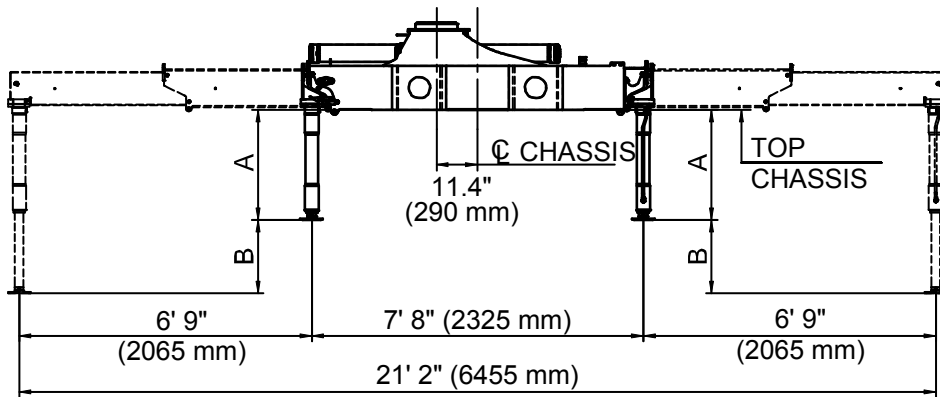
# 22/153DL Dimensional Drawing







# Stabilizer Dimensions, Fixed Legs, 18 tm up



STANDARD  
(Hydraulic Out /  
Hydraulic Down)

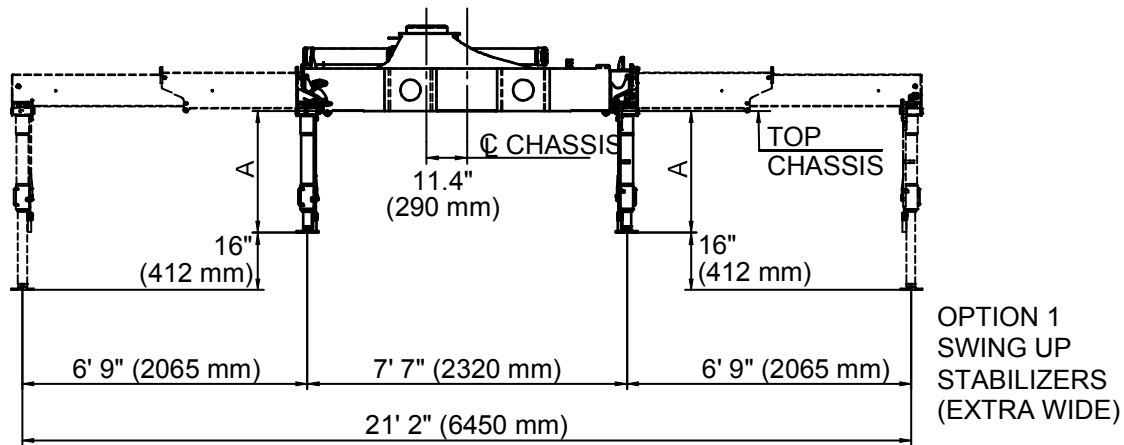
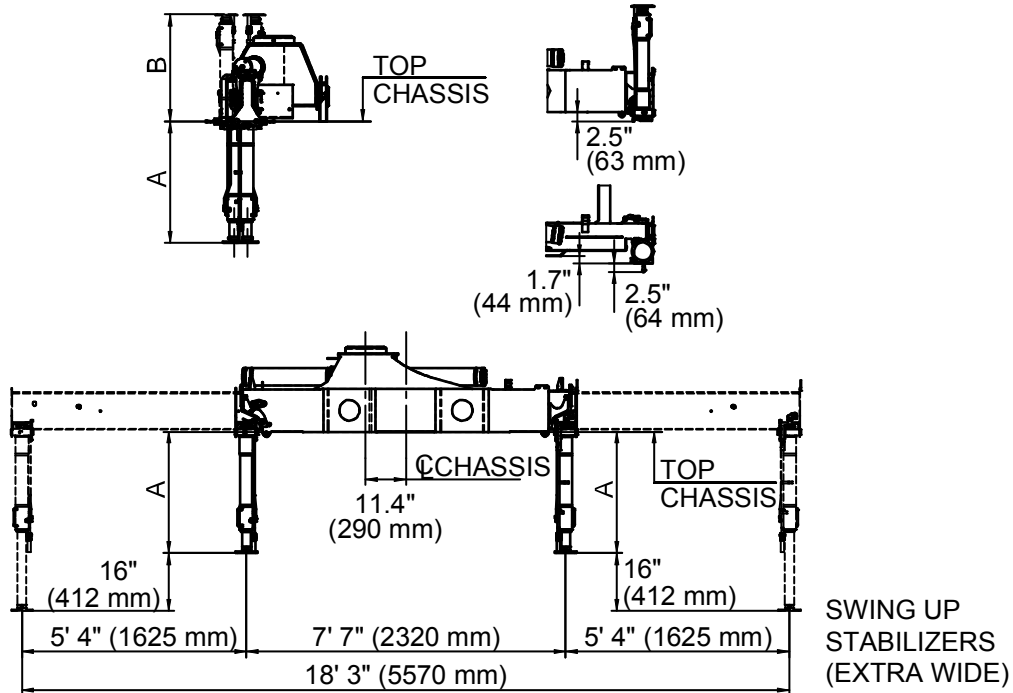




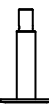
OPTION 1  
(Extra Wide  
Hydraulic Out /  
Hydraulic Down)

				
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)

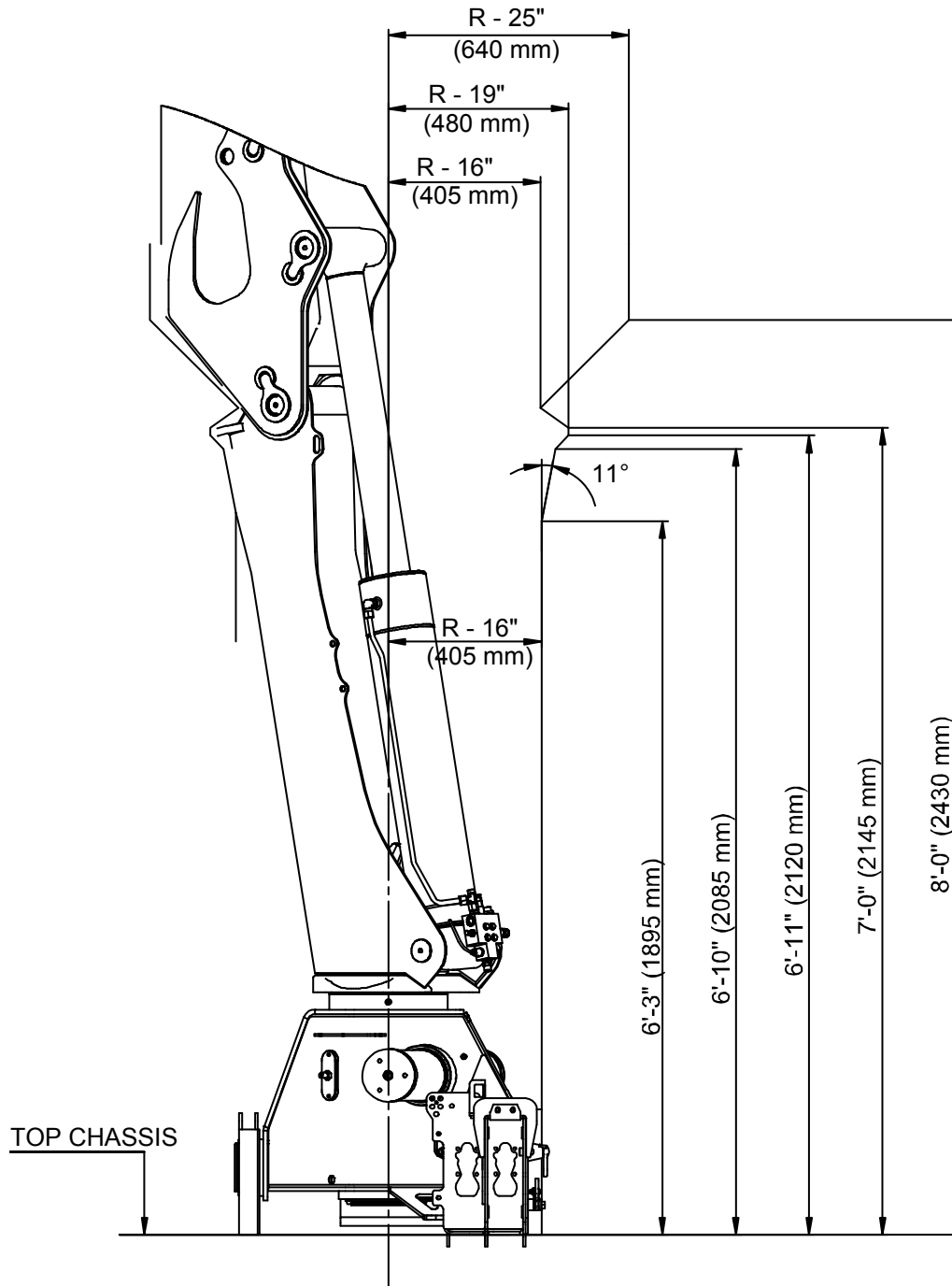


# Stabilizer Dimensions, Swing-up, 18 tm up



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

## 22/153DL - 24/169DL Swing Clearance



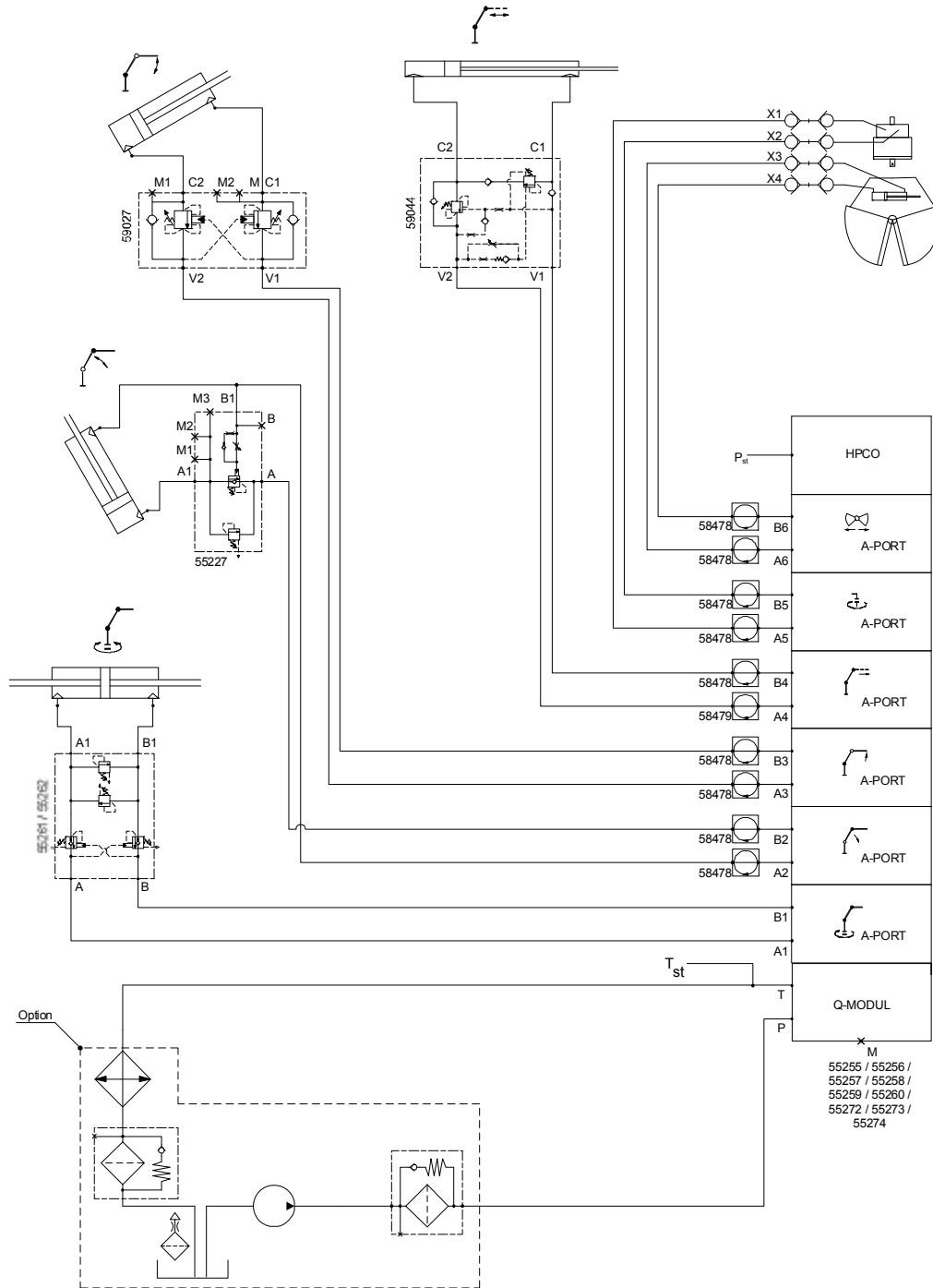
## CHAPTER 2

# Hydraulic Schematics

## In This Chapter

Hydraulic Diagram - 22/153DL Manual Control.....	18
Hydraulic Diagram - 22/153DL Radio Control .....	19
Hydraulic Diagram - 22/153DL Top Seat Control.....	20

# Hydraulic Diagram - 22/153DL Manual Control



# Hydraulic Diagram - 22/153DL Radio Control

