

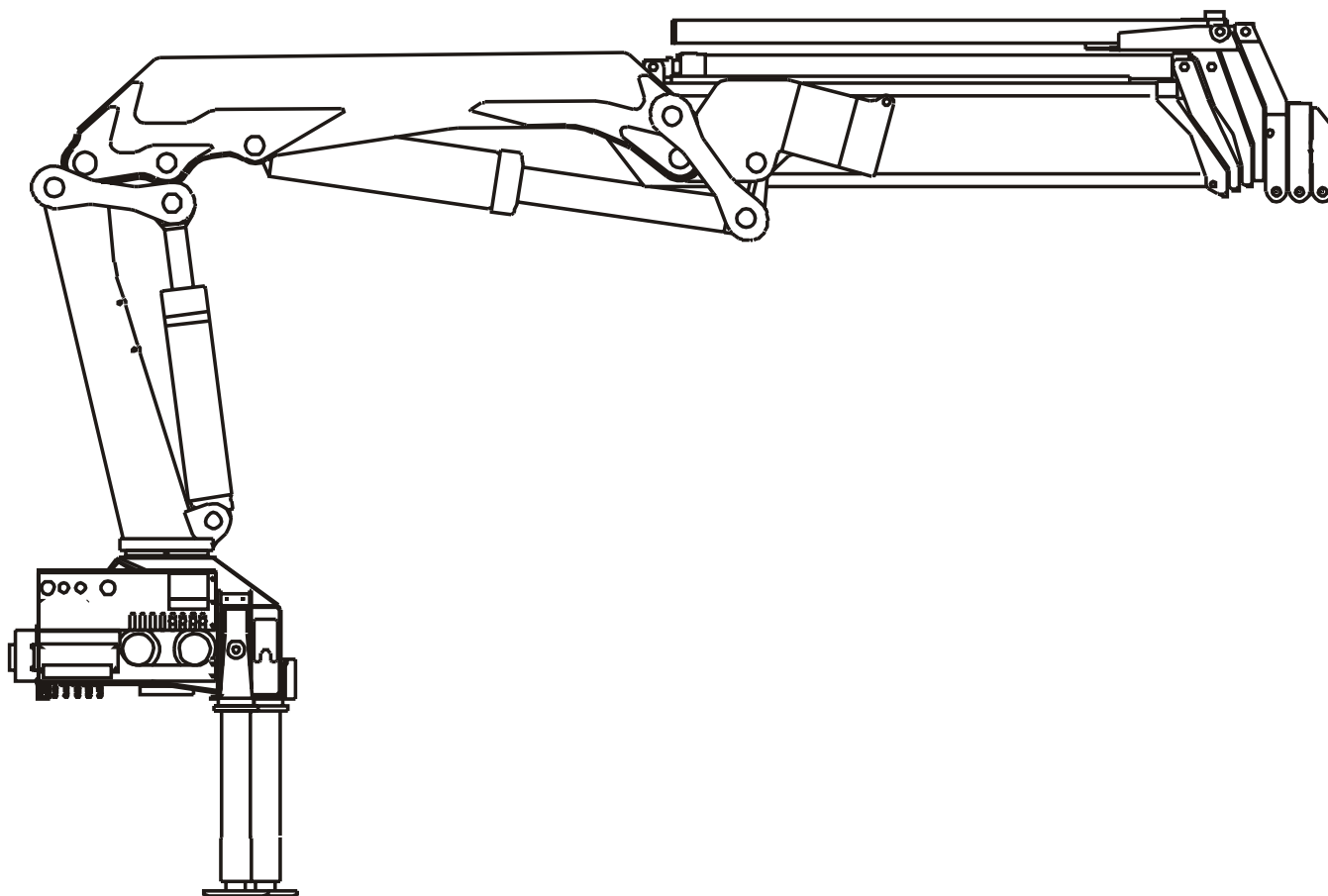


99903243: IM-34/235&37/266: PAGE 1: 20070228



Model 34/235
Model 37/266

Instruction Manual



NOTE

Read and understand this manual, the
IMT Operators Crane Safety Manual
and Safety Manual Supplement
before operating or maintaining your crane.

IOWA MOLD TOOLING CO., INC.

BOX 189, GARNER, IA 50438-0189

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

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REVISIONS LIST

DATE	LOCATION	DESCRIPTION OF CHANGE
-	-	-
20010830	26-29	PUMP CHANGE FROM 17 GPM TO 23 GPM
20011130	31	CORRECTED EXTERNAL RELIEF VALVE PRESSURE SETTING
20040108	26	ADDED GEOMETRIC CONFIGURATION DRAWINGS
20070228	COVER	UPDATED OWNERSHIP STATEMENT



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1.0 INTRODUCTION

This instruction manual contains a description of the loader, instructions for operation, maintenance and repair of the loader. The instruction manual includes the following sections:

Sections 1 through 8 contain general instructions for the daily operation of the loader.

Sections 9 through 18 are primarily aimed at operators, installation and maintenance personnel and contain instructions for installation, adjustment, inspection, and maintenance.

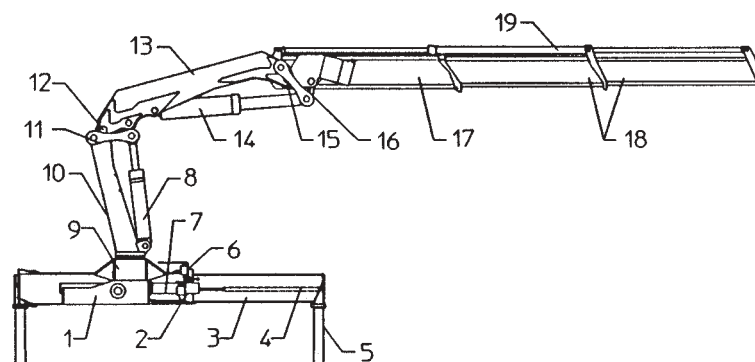
It is important that you familiarize yourself with the contents of this manual before putting the loader into operation. The same applies to any operators and maintenance personnel of the loader. Also familiarize yourself with any other manuals or instructions which accompanied the loader.

It is also important to follow the recommended service schedules. These service overhauls aid in operational safety. They will also be of importance in the event of any warranty claims since IMT will attach great importance to whether these overhauls have been carried through by an authorized service center or not.

Due to continuous development and improvements, your loader model may have been changed slightly since the printing of this instruction manual.

2.0 LOADER TERMINOLOGY

The loader is designed as a truck mounted loader and therefore stationary mounting of the loader, mounting on agricultural tractors, special purpose vehicles and the like may only be performed according to specific agreement with IMT.



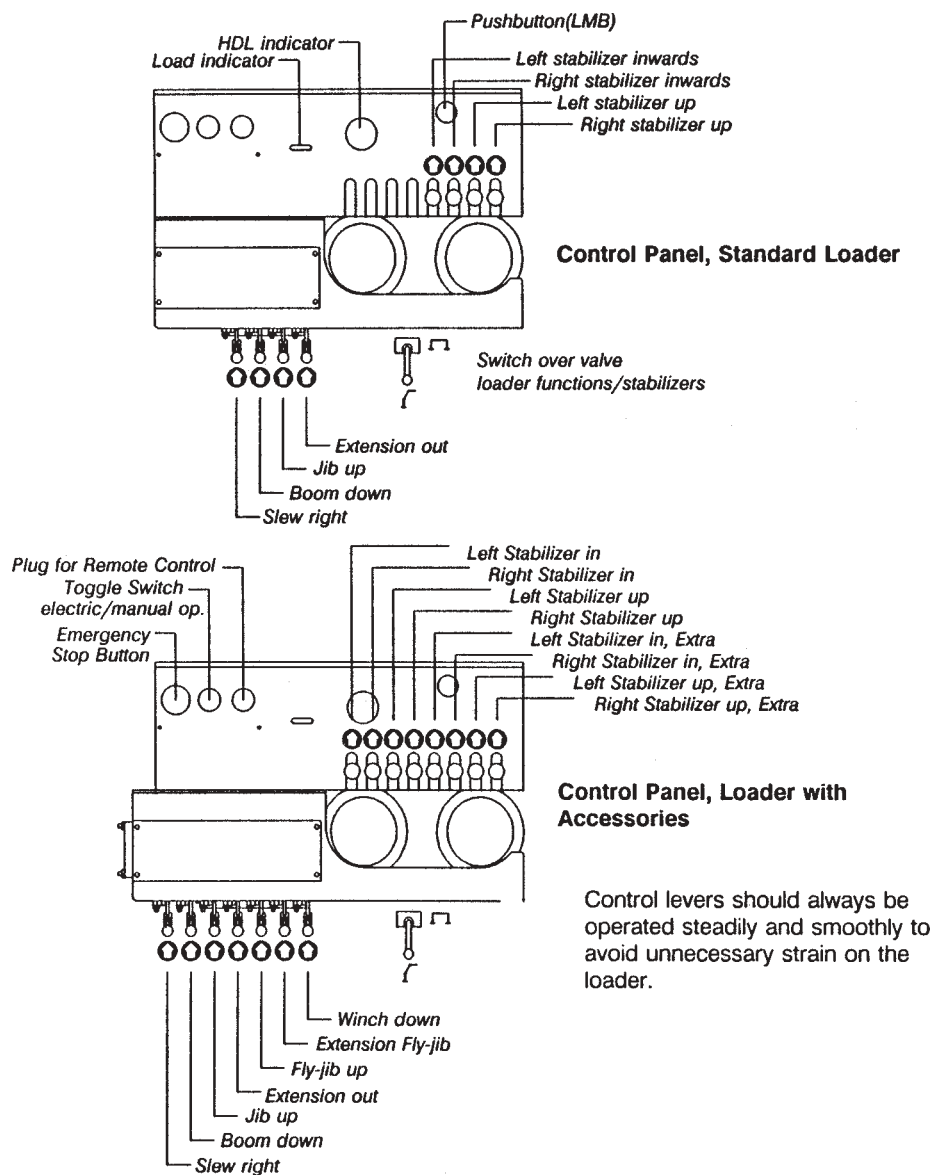
- | | |
|--|--------------------------|
| 1. Suspension traverse | 11. Link arm, Inner boom |
| 2. Control valve, loader | 12. Hinge pin |
| 3. Outrigger arm/Stabilizer beam | 13. Inner/Main boom |
| 4. Outrigger/Stabilizer extension cylinder | 14. Outer/Jib cylinder |
| 5. Outrigger/Stabilizer leg | 15. Outer/Jib pin |
| 6. Control valve, outrigger | 16. Link arm, outer/jib |
| 7. Rotation/Slewing cylinder | 17. Outer boom/Jib |
| 8. Inner Boom cylinder | 18. Extension booms |
| 9. Base | 19. Extension cylinder |
| 10. Mast/Column | |



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3.0 CONTROL VALVES, SYMBOLS

Each control valve is labeled showing the functions of that particular valve.





4.0 OPERATING INSTRUCTIONS

4.1 START UP

WARNING

Prior to operation, read and understand the IMT Operators Crane Safety manual and any other safety manuals which accompanied the loader.

Before start up the operator must make sure that loader operation does not entail any unnecessary risk. Special attention must be paid to the following factors:

1. The ground must be sufficiently firm to accept the pressure from the outrigger legs. In case of heavy lifts we recommend the use of steel plates under the outrigger foot plates.
2. The ground must not be slippery (i.e., covered with ice, sand, etc.). After the driver has applied the parking brake, the truck must be able to accept the horizontal forces from the loader without skidding or moving.
3. The truck must be parked in such a manner that the operator has a complete and unobstructed view of the field of operation.
4. The operator must make sure that there are no electric wires or any other obstacles within the working radius of the loader.
5. The operator must inform any unauthorized persons that entry into the working area is not permitted.



DANGER

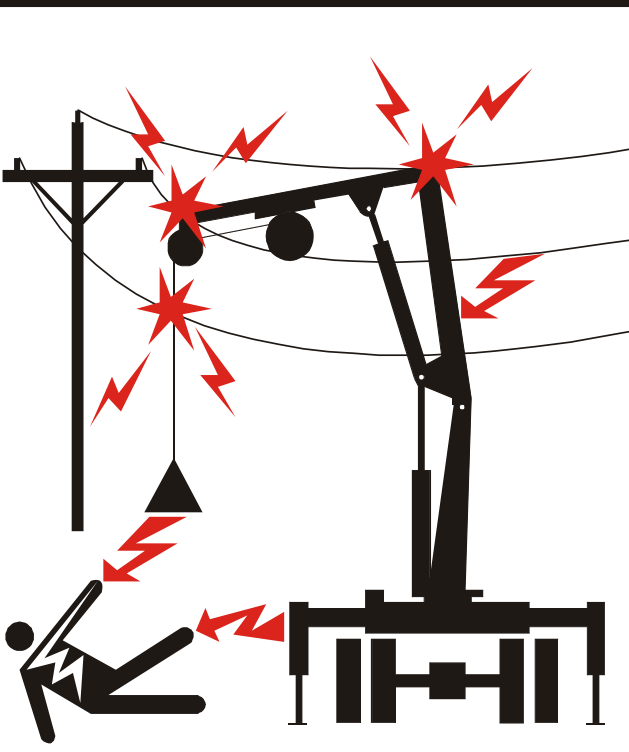
ELECTROCUTION HAZARD
THIS CRANE IS NOT INSULATED
DEATH OR SERIOUS INJURY
WILL RESULT FROM CONTACT
OR INADEQUATE CLEARANCE

Maintain safe clearance from electrical lines.
Allow for boom, electrical line, and loadline swaying.

This crane does not provide protection from contact
with or proximity to an electrically charged conductor.

Maintain a clearance of at least 10 feet between
any part of the crane, loadline or load and any electrical
line carrying up to 50,000 volts (50 kV). **If electrical
line voltage is unknown, assume maximum voltage
and maintain a clearance of at least 45 feet.**

NOMINAL VOLTAGE, kV (Phase to Phase)	MINIMUM REQUIRED DISTANCE
to 50	10 feet
Over 50 to 200	15 feet
Over 200 to 350	20 feet
Over 350 to 500	25 feet
Over 500 to 750	35 feet
Over 750 to 1000	45 feet



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**General Rules:**

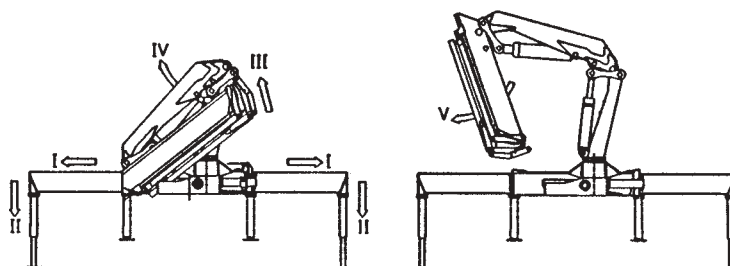
For all work in proximity to power supply plants or overhead wires, the following general rules apply:

1. Caution must be exercised in the planning, instruction for, and execution of such work to prevent any risk or danger to persons, equipment or goods.
2. Any power supply plant, installation or wire must be considered live until the responsible power supply authority has provided a declaration that the opposite is true.
3. Any directions or guidelines from the responsible power supply authorities or public bodies must be strictly observed.

Any person or company directly responsible for the implementation of work in the proximity of overhead wires or electric power stations must make sure that all personnel involved in the execution of such work is familiar with any laws, rules or safety regulations, national as well as local, governing such work in the relevant country, territory or zone.

Not until the operator has checked the above may loader operation start.

1. Switch the change-over valve, if any, to "loader"
2. Engage the PTO at low revolutions. The engine revolution speed is regulated by means of the hand accelerator to ensure that the oil flow from the hydraulic pump corresponds to the recommended pump flow for the loader. When starting up in the cold, the oil should circulate for a few minutes before operation starts.
3. Apply the vehicle parking brake.
4. The stability of the vehicle and the loader is based on the outrigger legs fully deployed. The operator must make sure that the vehicle is sufficiently stable in the area in front of the outriggers (above the cab). The outriggers should be lowered just enough to raise the truck chassis a little in its suspension. The tires must retain contact with the ground. During loading of the truck, the operator must raise the outrigger legs periodically to insure that the truck, and not the outriggers, carry the weight. The outrigger legs are not designed to support the excessive load.
5. The best possible loader operation will be achieved when the vehicle is positioned as close to horizontal as possible. The driver should place the truck in a position as close to horizontal as possible by means of the outrigger legs before operating the loader.
6. If the ground is not firm enough to take up the pressure of the outrigger legs, a steel plate must be placed under the outrigger feet.
7. The unfolding of the loader is performed as follows:
 - I Extend outriggers fully.
 - II Lower outriggers per items 4 and 5.
 - III Raise the outer (jib) by pressing down the control lever) to release it from the lock bracket.
 - IV Raise the Inner (main) boom from the bracket. The Inner boom is raised somewhat above horizontal so the outer boom may be moved freely downward.
 - V Raise the Outer boom until it is free of the base.





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4.2 USING THE LOADER

After unfolding the loader, work may begin.

The lifting capacity of the loader is shown on the Capacity Chart on the loader and in this instruction manual. The capacity limits indicated must never be exceeded.

The loader is designed to lift loads vertically and therefore diagonal stresses must be avoided. Consequently the dragging of loads across the ground using the extension cylinders or the rotation system must be avoided. These functions should only be activated once the load is free of the ground.

When mounting a grapple, the total weight (grapple, rotator, and contents) must not exceed the lifting capacity of the loader at maximum reach. The grapple may be used to move soil only. It must not be used to excavate earth. Damage caused by improper operation of the loader will not be covered by the Warranty.

If the load is extended so far that the lifting capacity is exceeded, the inner boom will slowly begin to lower. To stop this movement, the load should be brought closer to the mast (column) by means of the outer or extension booms.

WARNING

Never stand under the booms when the loader is working.

NOTES

Position the truck as closely to the load as possible to lift the load on the shortest possible boom.

The rotation system should be operated with care, especially when the inner boom is at an acute angle to the outer boom.

The outriggers may not be activated when the loader is working.

Never drive off with a suspended load.

4.3 AFTER OPERATION

The loader is folded up by reversing the procedure described in item 7, chapter 4.1 "Starting up".

If the boom is parked on the truck platform it must be properly secured to prevent the boom from swinging out during transport. Also, the operator must check that the total height does not exceed 157" (4000mm).

If the loader is equipped with swing-up outrigger legs, they must also be secured in position before driving off. Before the vehicle is started, the PTO must be disengaged; i.e. the pump must be turned off.



5. MAINTENANCE

Careful maintenance of the loader is the best way to ensure reliable loader operation.

At regular intervals, every day or every week, depending on frequency of loader application, you should check the following:

1. The oil level in tank and rotation system. Oil must be visible in the oil level glass of the tank when the loader is folded. The oil level in the rotation system should also be visible in the oil level glass. Note that if there is no tank line, the oil level may be excessive.
2. Any defects, damage or leaks should be repaired at an authorized service center as soon as discovered.
3. Loader to truck mounting hardware.
4. Slide blocks and bushings reduce friction and therefore they are naturally subject to wear. Slide blocks should be replaced when slack is detected in the boom system. Bushings should be replaced before the metal components physically touch each other.
5. Check all hoses for defects and kinks.
6. Check that hooks, straps and safety latches are in good working order.
7. Check all lock pins and bolts for wear.

Service overhauls should be undertaken according to Section 10. In case of any warranty claims later, great importance will be attached to observance of these service overhauls.

5.1 LUBRICATION INTERVALS

Base bearings: after 20 hours of operation/1 week (whichever occurs first)

Extension system/Slide blocks: after 50 hours of operation/1 month (whichever occurs first)

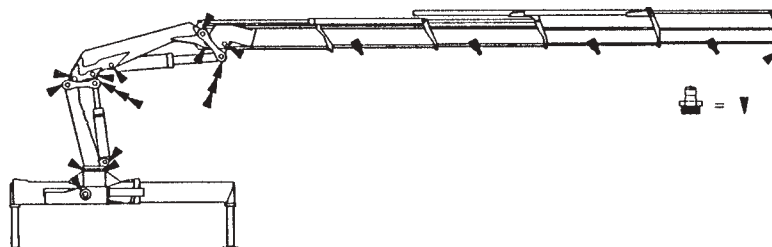
Pin connections/Bolts: after 50 hours of operation/1 month (whichever occurs first)

Outrigger beams: as required

Control valves and rod connections (Oil spray): as required

The loader should be lubricated according to the lubrication chart below. Also see "Recommended Lubricants".

5.2 LUBRICATION CHART



The rotation system should be activated and the loader swung from stop to stop several times within the entire rotation area at the same time as the bearings in the base are lubricated.

Hydraulic oil and lubrication grease are chosen according to the table in Section 10.

The telescopic extensions and planetary gear are lubricated with a special grease (ESSO EDL 501 or LE Pyroshield 5182).



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6.0 LIFTING CAPACITY DIAGRAMS

CAPACITY CHARTS

From the factory, the loader is equipped with lifting capacity labels for the loader as well as for the options (manual extensions, Fly-Jib), if any. These labels must, just like any other labels on the loader, be intact and legible. If the label has been damaged or removed, you can order a new label from IMT. Use the part number used on the label or consult the parts manual, decal kit.

CAPACITY DIAGRAMS

As a supplement to the loader's lifting capacity labels, the following pages contain load and lifting capacities of the different K-versions in standard applications, i.e. special applications and customized labels and options are not taken into consideration. In these cases we refer to the supplementary documentation delivered and/or the lifting capacity labels on the loader.

WARNING

The lifting capacity limits indicated must never be exceeded.



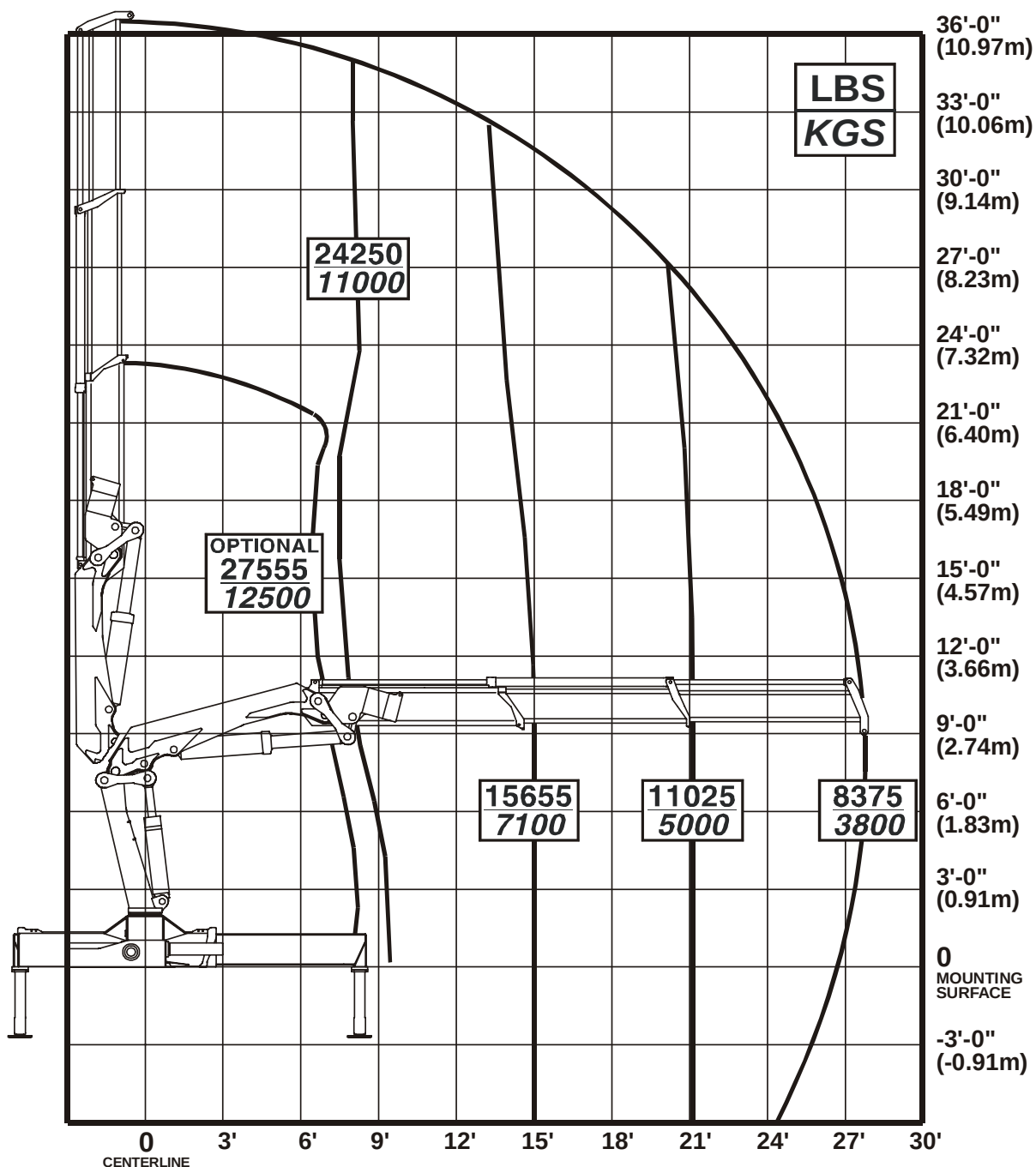
CAPACITY CHART-34/235K2

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Model 34/235K2

- Working loads will be limited to those shown. Deduct the weight of load handling devices.
- Before lift is made, stability must be checked per SAE J765A.



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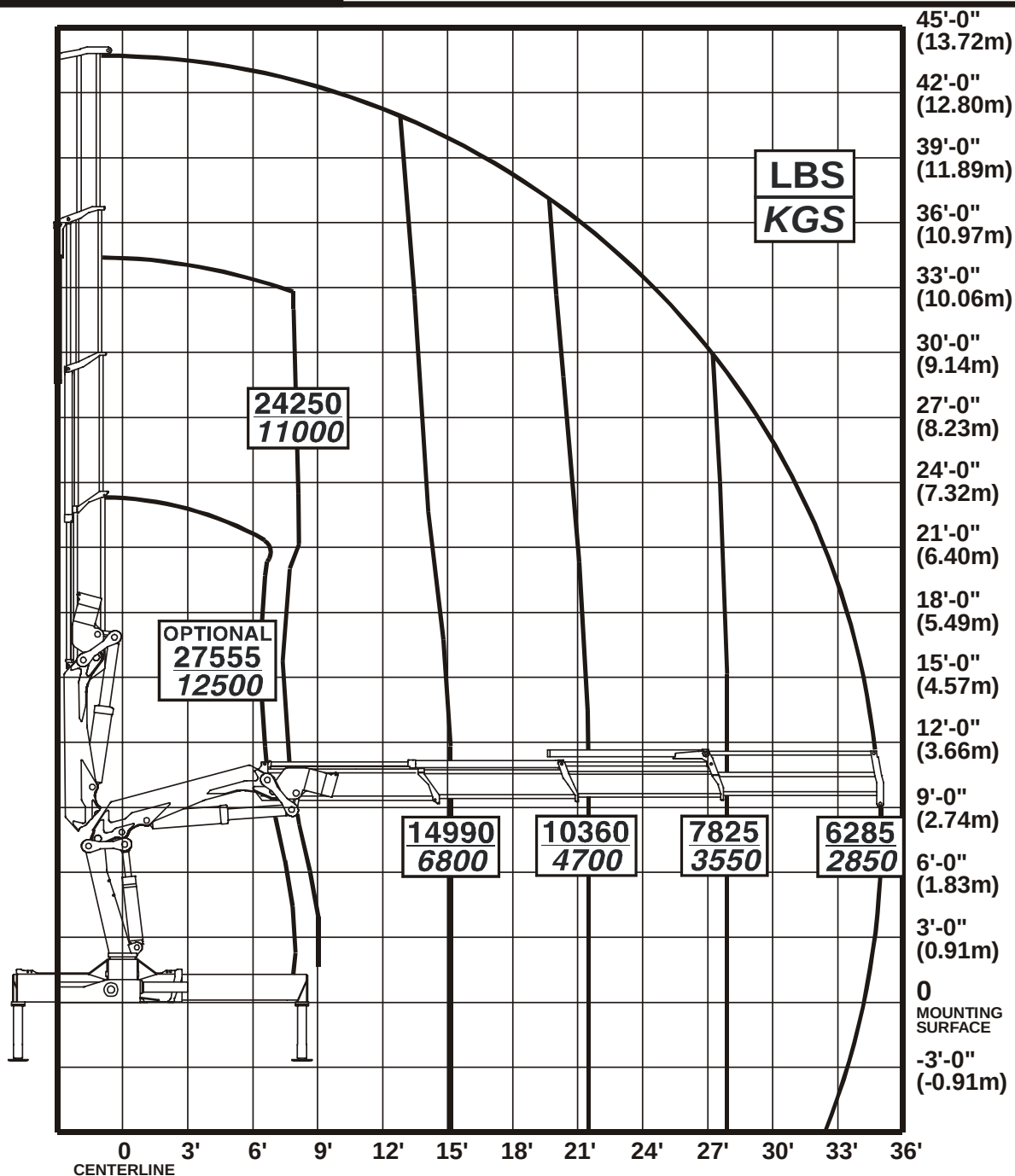
CAPACITY CHART-34/235K3

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Model 34/235K3

- Working loads will be limited to those shown. Deduct the weight of load handling devices.
- Before lift is made, stability must be checked per SAE J765A.



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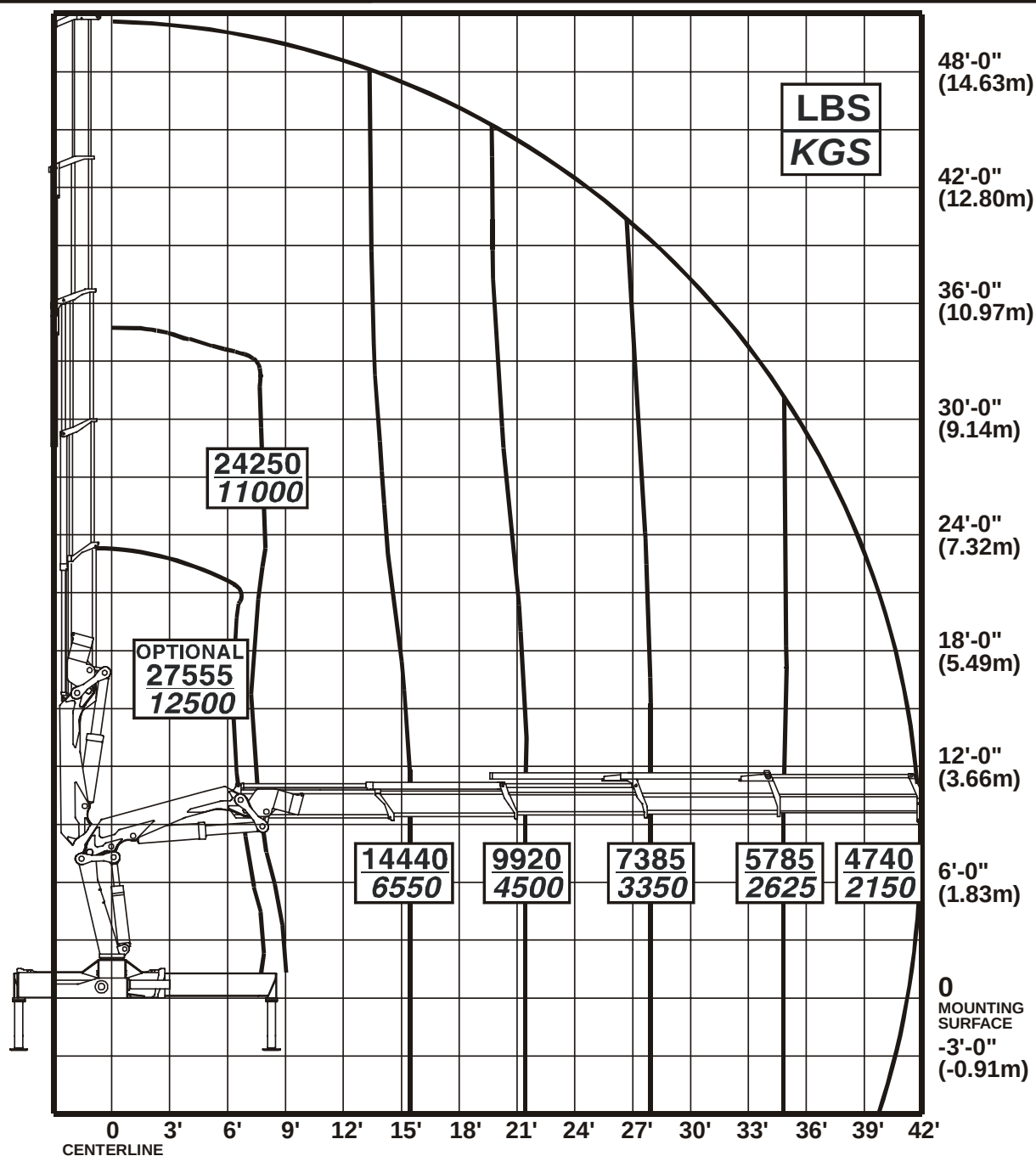
CAPACITY CHART-34/235K4

IMT
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Model 34/235K4

- Working loads will be limited to those shown. Deduct the weight of load handling devices.
- Before lift is made, stability must be checked per SAE J765A.



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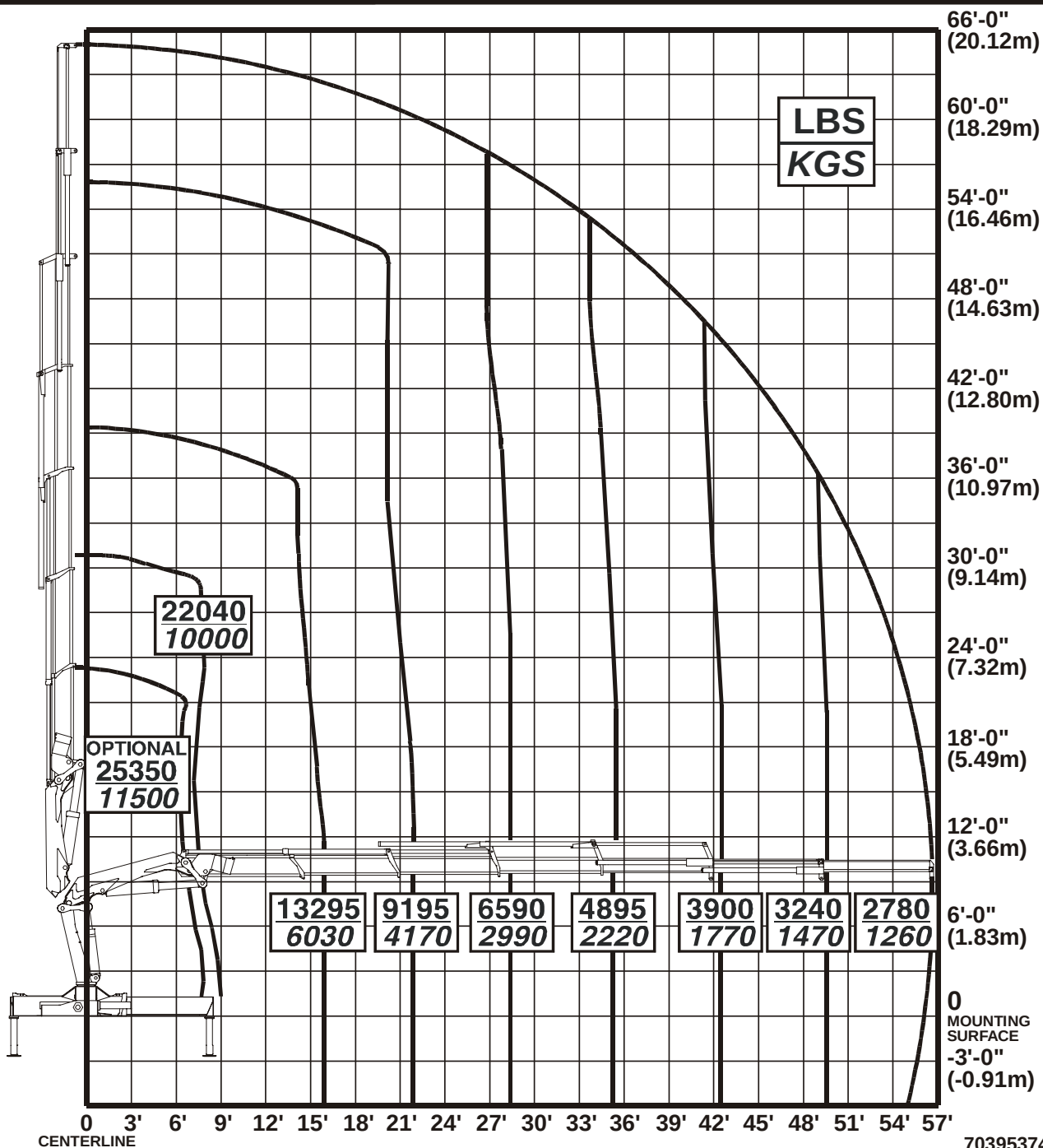
CAPACITY CHART-34/235K6



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Model 34/235K6

- Working loads will be limited to those shown. Deduct the weight of load handling devices.
- Before lift is made, stability must be checked per SAE J765A.





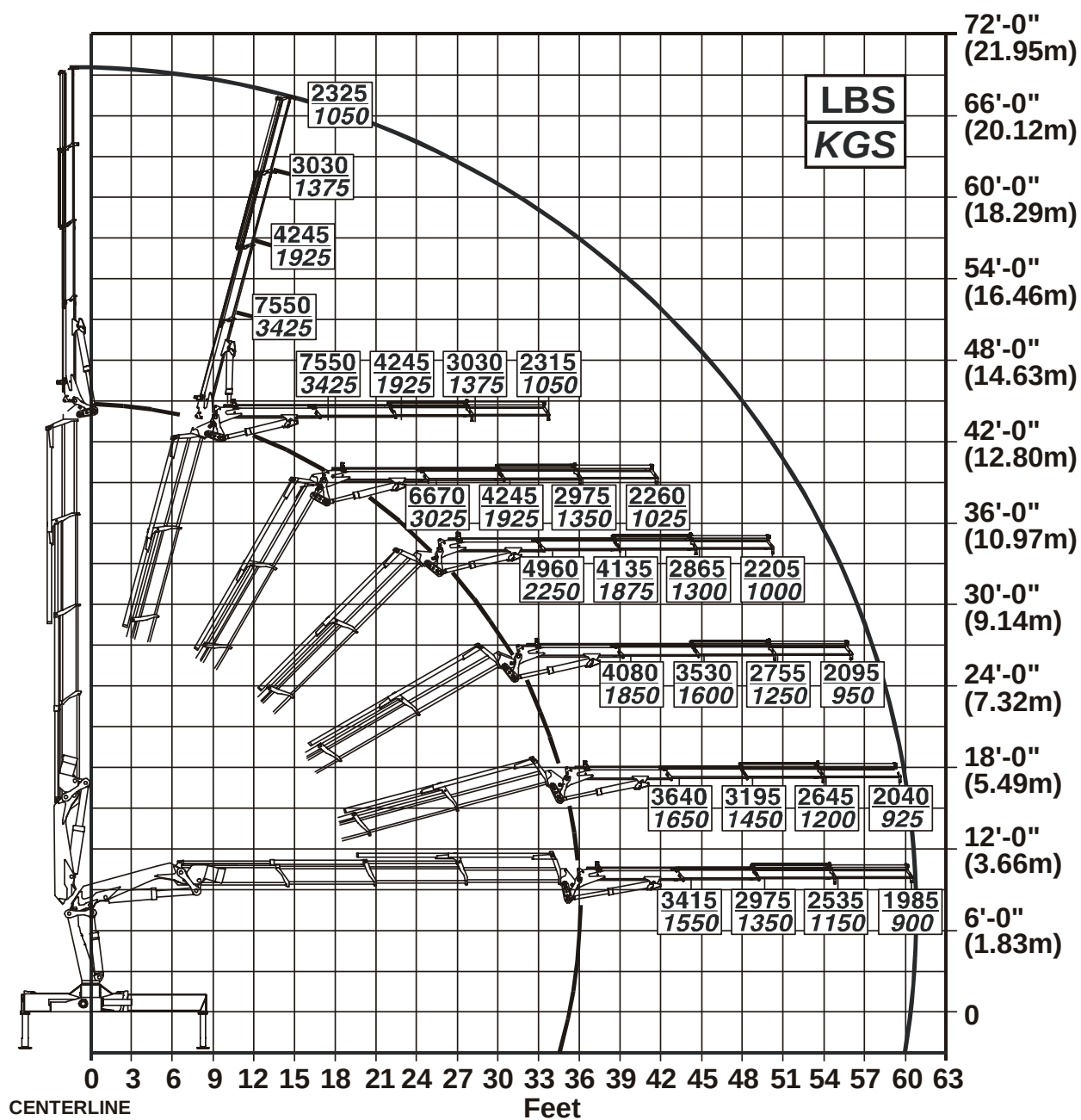
CAPACITY CHART-34/235K3-J9K3

IMT
MATERIAL HANDLING SYSTEMS

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Model 34/235 K3 / J9K3

- Working loads will be limited to those shown. Deduct the weight of load handling devices.
- Before lift is made, stability must be checked per SAE J765A.



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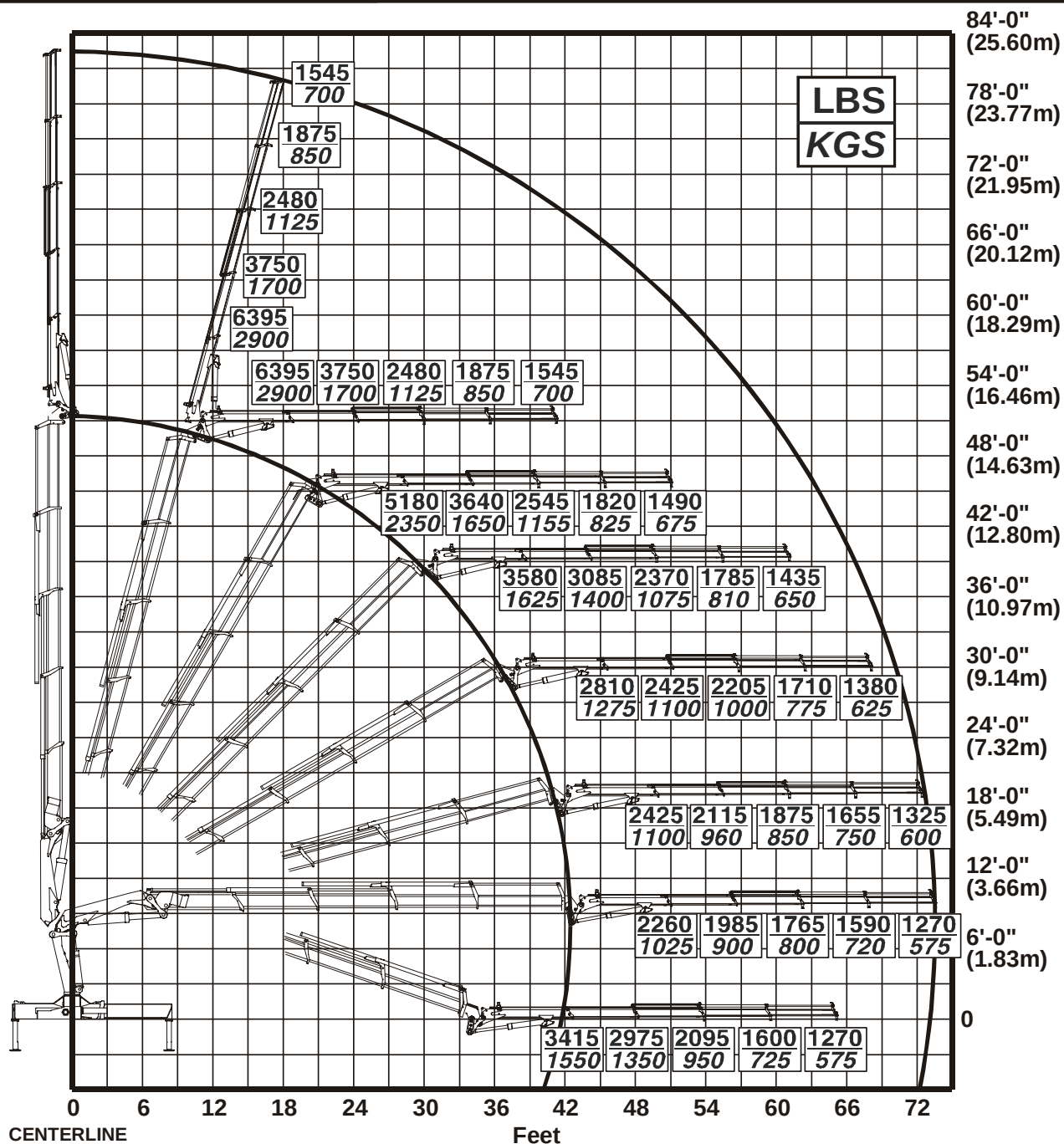
CAPACITY CHART-34/235K4-J9K4

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Model 34/235 K4 / J9K4

- Working loads will be limited to those shown. Deduct the weight of load handling devices.
- Before lift is made, stability must be checked per SAE J765A.





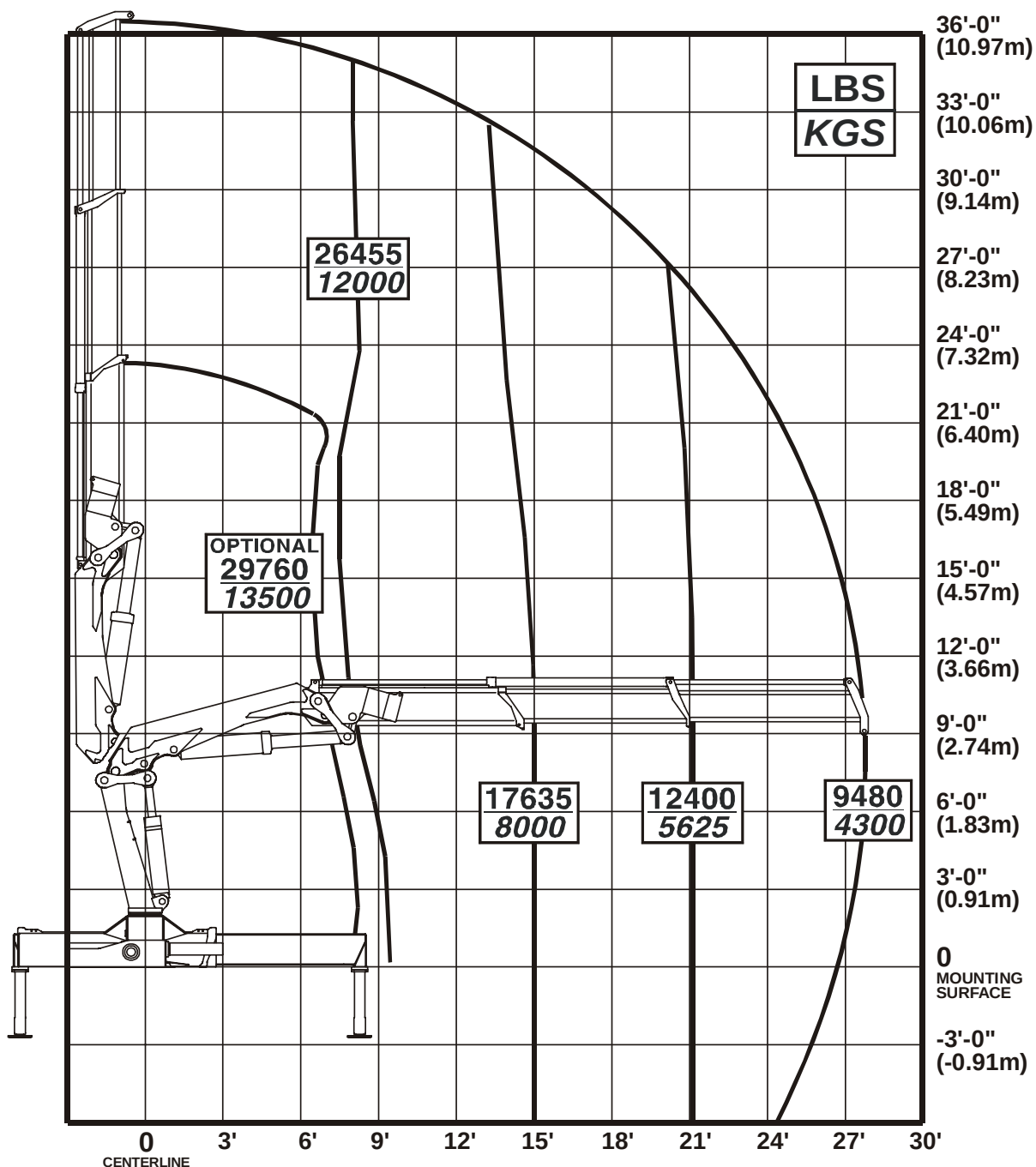
CAPACITY CHART-37/266K2



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Model 37/266K2

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- Before lift is made, stability must be checked per SAE J765A.



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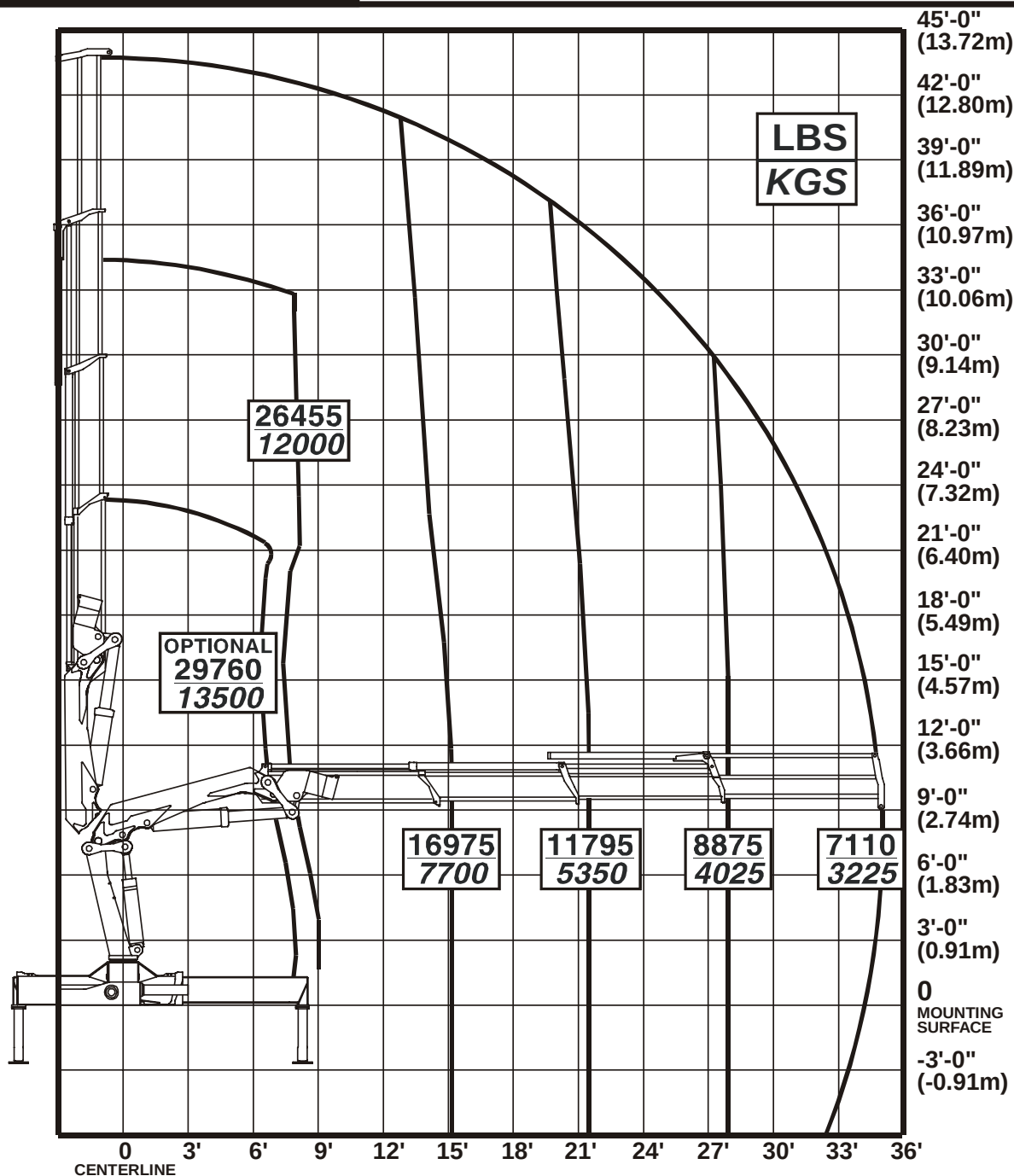
CAPACITY CHART-37/266K3

IMT
MATERIAL HANDLING SYSTEMS

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Model 37/266K3

- Working loads will be limited to those shown. Deduct the weight of load handling devices.
- Before lift is made, stability must be checked per SAE J765A.



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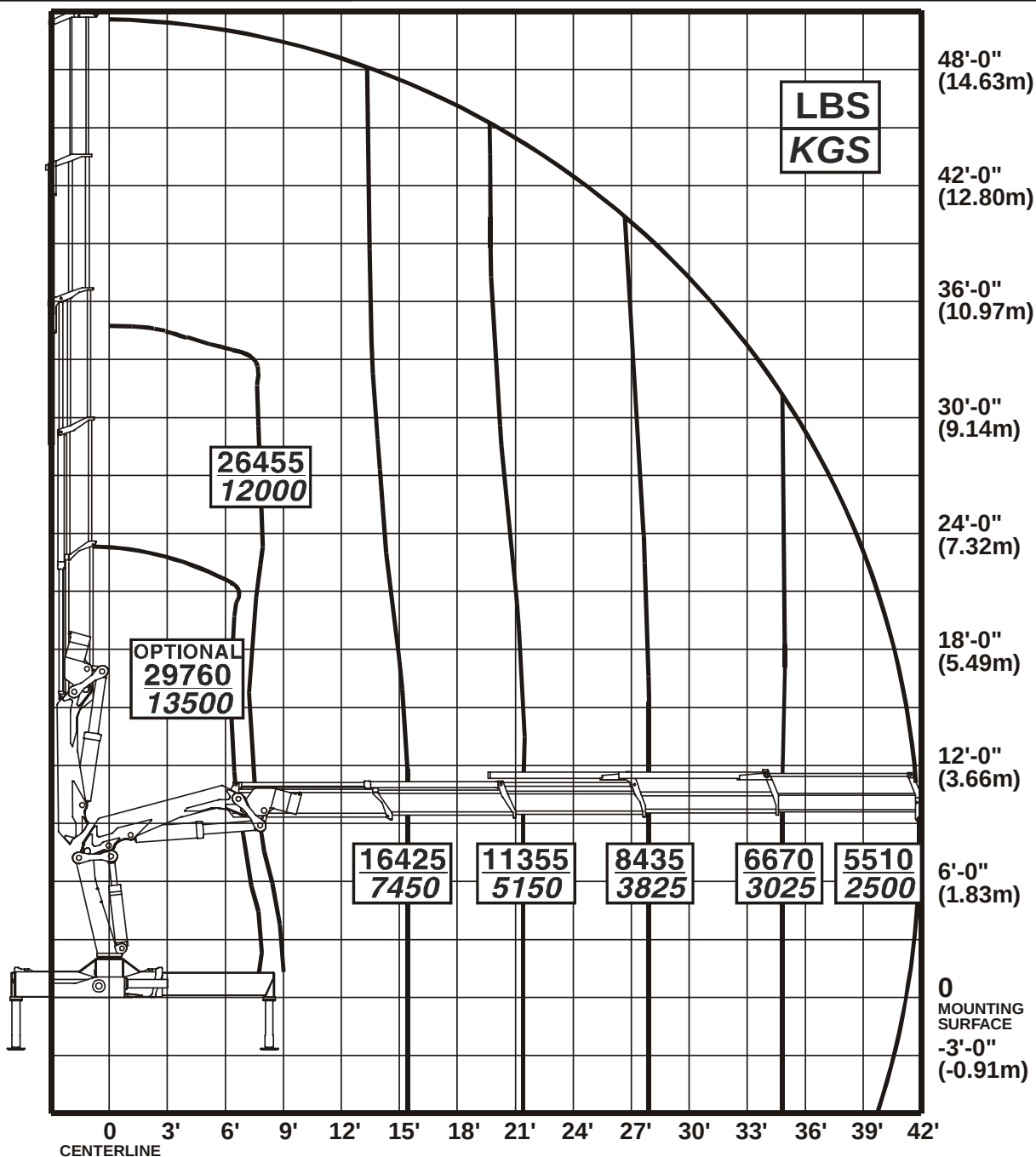
CAPACITY CHART-37/266K4

IMT
MATERIAL HANDLING SYSTEMS

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Model 37/266K4

- Working loads will be limited to those shown. Deduct the weight of load handling devices.
- Before lift is made, stability must be checked per SAE J765A.



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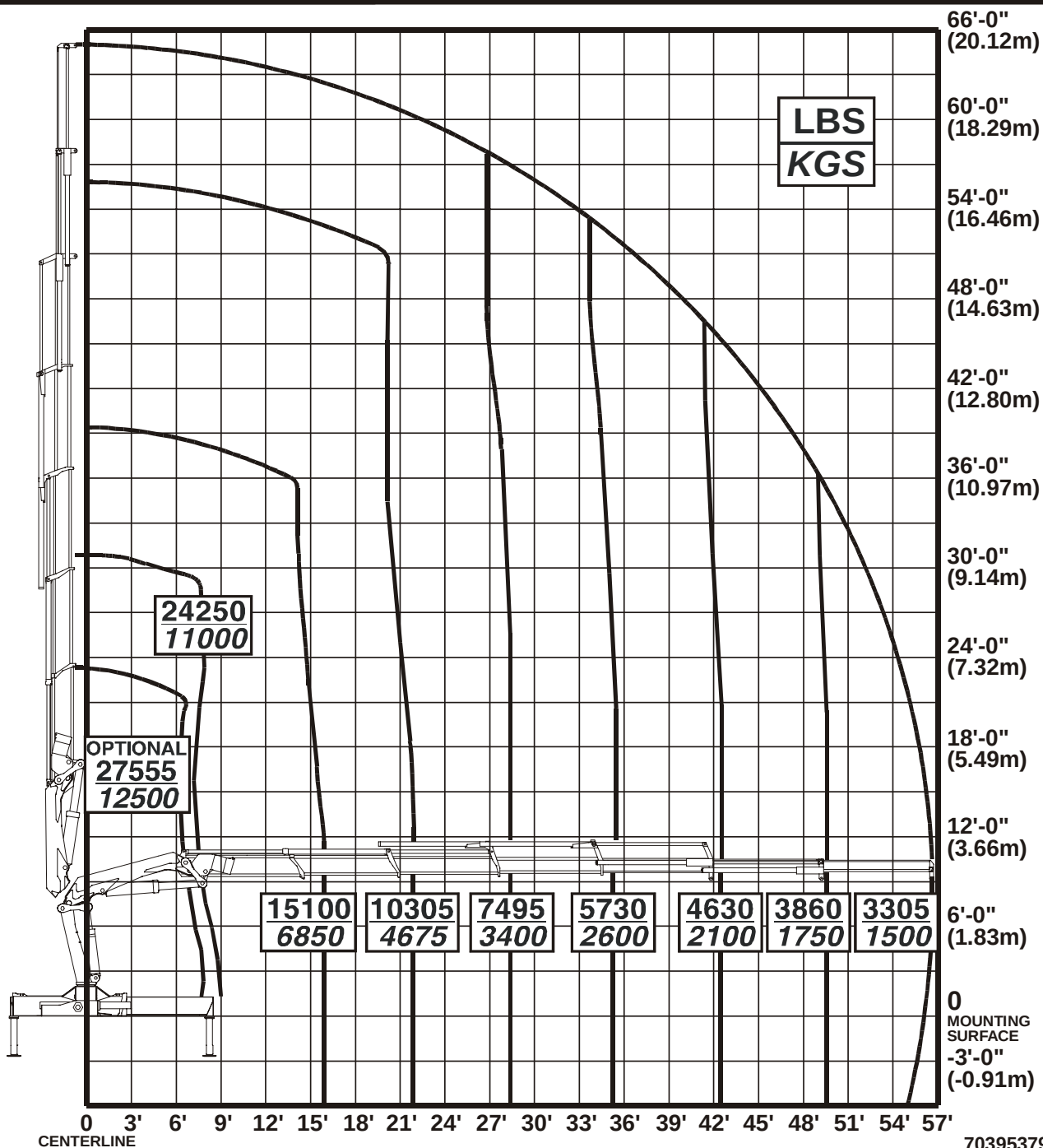
CAPACITY CHART-37/266K6



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Model 37/266K6

- Working loads will be limited to those shown. Deduct the weight of load handling devices.
- Before lift is made, stability must be checked per SAE J765A.





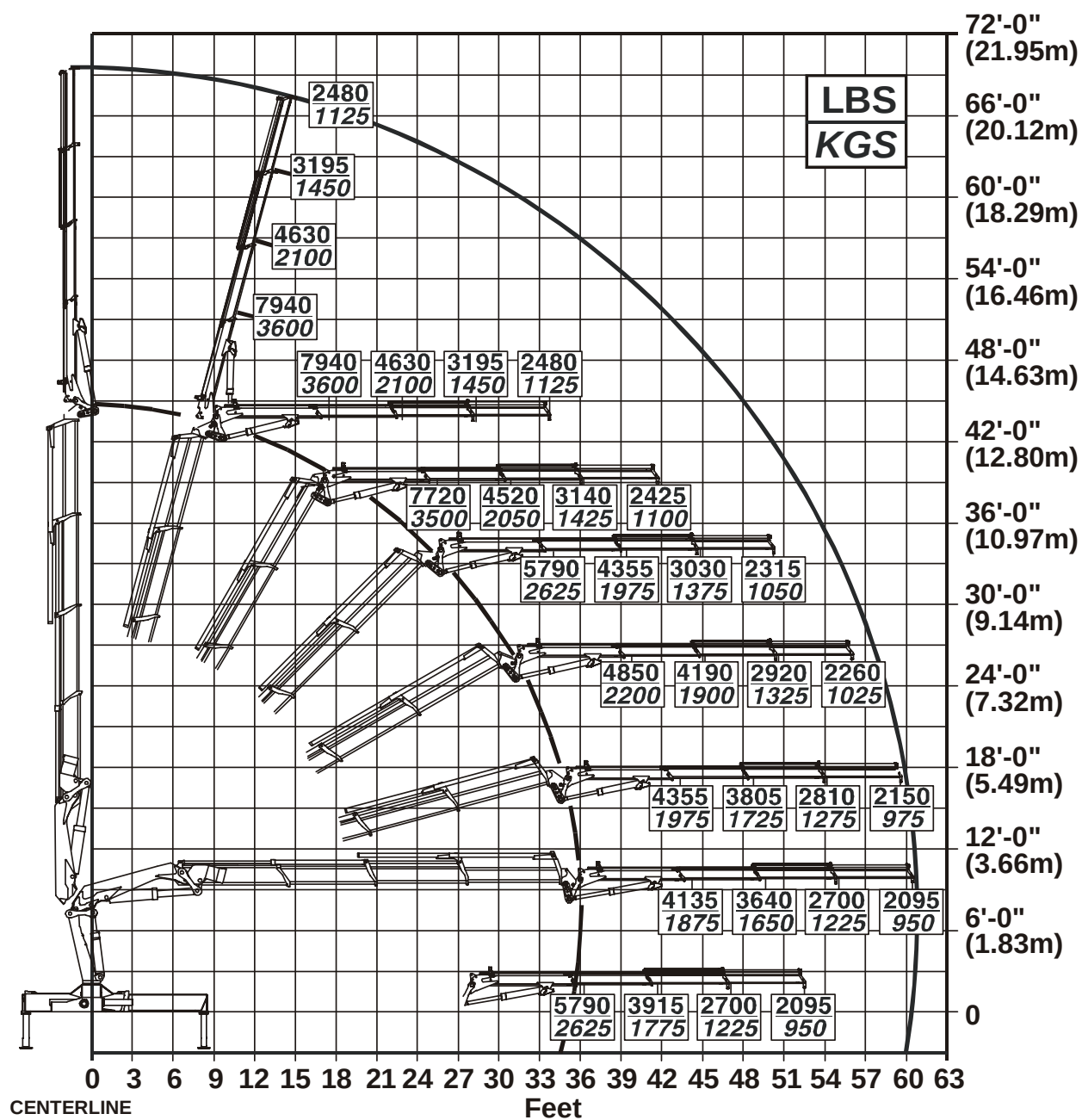
CAPACITY CHART-37/266K3-J9K3

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MATERIAL HANDLING SYSTEMS

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Model 37/266 K3 / J9K3

- Working loads will be limited to those shown. Deduct the weight of load handling devices.
- Before lift is made, stability must be checked per SAE J765A.



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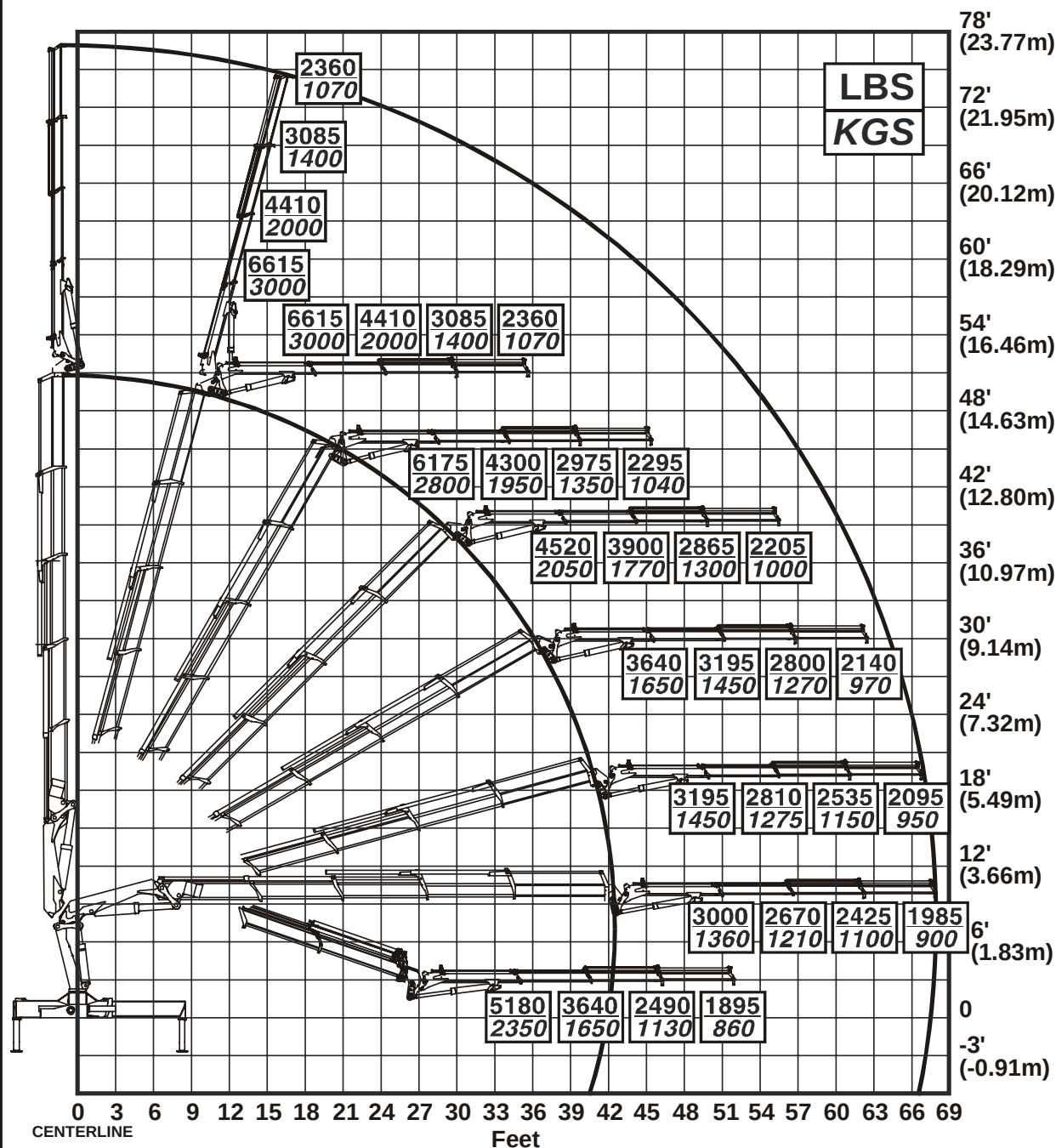
CAPACITY CHART-37/266K4-J9K3

IMT
MATERIAL HANDLING SYSTEMS

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Model 37/266 K4 / J9K3

- Working loads will be limited to those shown. Deduct the weight of load handling devices.
- Before lift is made, stability must be checked per SAE J765A.



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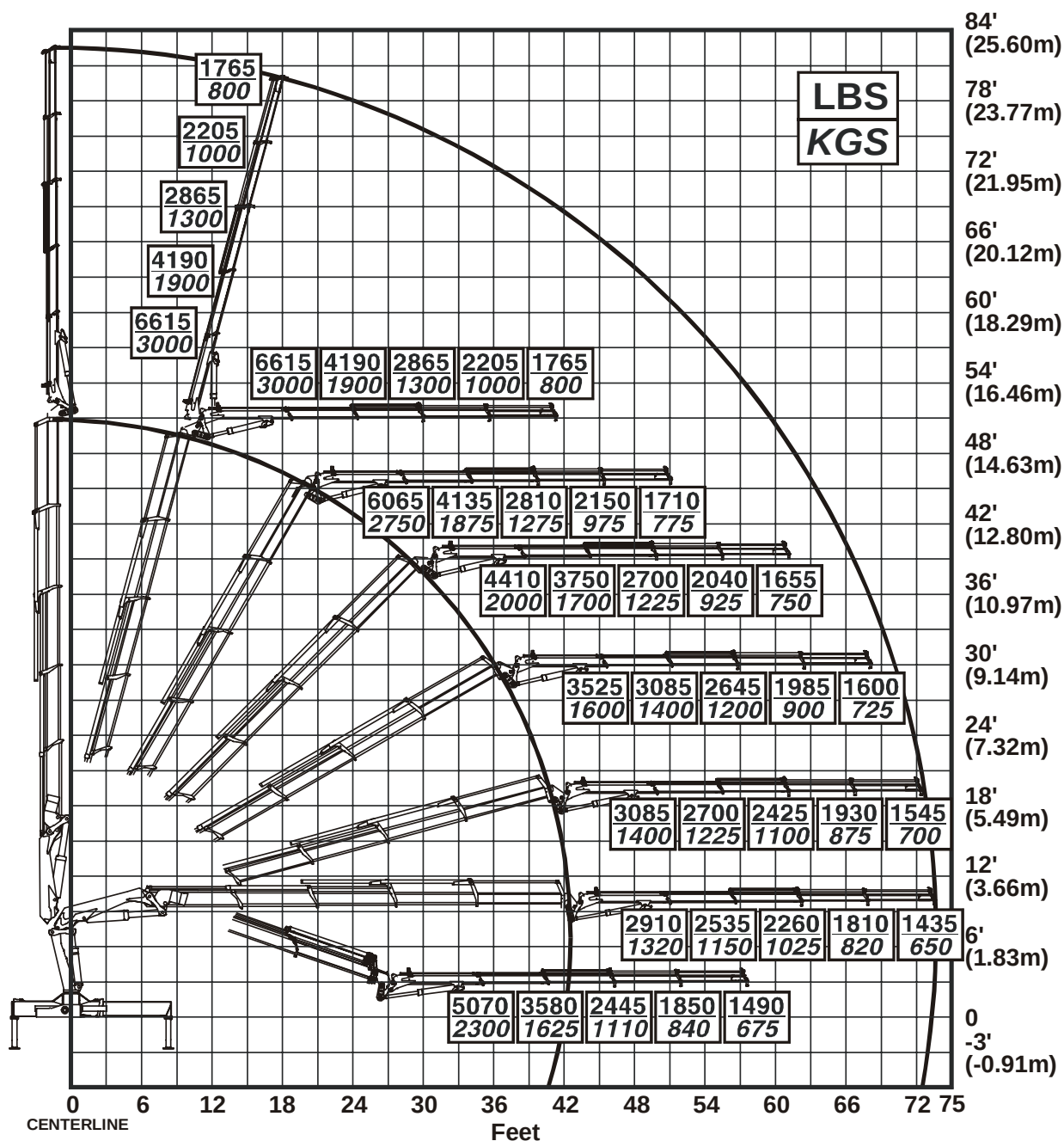
CAPACITY CHART-37/266K4-J9K4

IMT
MATERIAL HANDLING SYSTEMS

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Model 37/266 K4 / J9K4

- Working loads will be limited to those shown. Deduct the weight of load handling devices.
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MANUAL EXTENSIONS

WARNING

The load capacity limits must never be exceeded.

The load capacity limits indicated for the hydraulic extensions will be reduced if the loader is mounted with manual extensions. This reduction in loader lifting capacity will correspond to the weight of the manual extensions mounted.

SPECIFIC INFORMATION NOT AVAILABLE AT TIME OF PRINTING



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7.0 OPTIONS

Various options are available with the loader:

- Fly-Jib
- Manual extensions
- Winch
- Pallet fork
- Top seat
- Remote control
- Radio remote control
- Stand-up controls

You should always consult your authorized dealer before mounting any optional equipment. This also applies to equipment already in your possession.

CAUTION

Welding onto or drilling into the structural components of the loader will automatically invalidate any liability on the part of IMT.

7.1 MANUAL EXTENSIONS

When working with manual extensions, please note:

The load limits indicated for manual extensions must never be exceeded. Not all extensions are protected by the safety system of the loader.

For the Model 34/235 with all hydraulic extensions fully extended, the following applies:

- K3 The first three manual extensions are protected by the safety system of the loader, but the load limits indicated on the last two extensions must never be exceeded.
- K4 The first two manual extensions are protected by the safety system of the loader, but the load limits indicated on the last two extensions must never be exceeded.

Great care must be taken if the rotation system is to be activated during work with manual extensions.

If the loader is fitted with manual extensions or other options, the lifting capacity of the loader must be reduced by the weight of the options.

If the loader is fitted with several extensions and a certain lifting job requires the use of one extension only, use the extension with the largest box profile.

WARNING

Only pull out the manual extensions when the outer (jib) is as close to horizontal as possible. If the outer (jib) is pointed downwards when the lock is removed, the extensions will drop out at uncontrollable speed. This may damage the stop at the risk of resulting in personal injury.



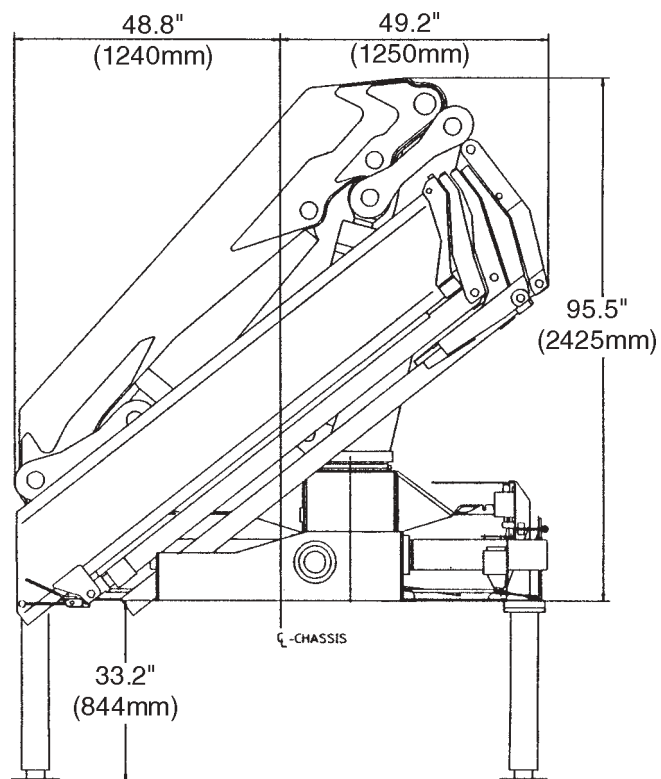
99903243: IM-34/235&37/266: PAGE 25: 20001222

8.0 TECHNICAL DATA

The following pages contain tables with technical data on loader and Fly-Jib respectively, if a Fly-Jib is available as standard.

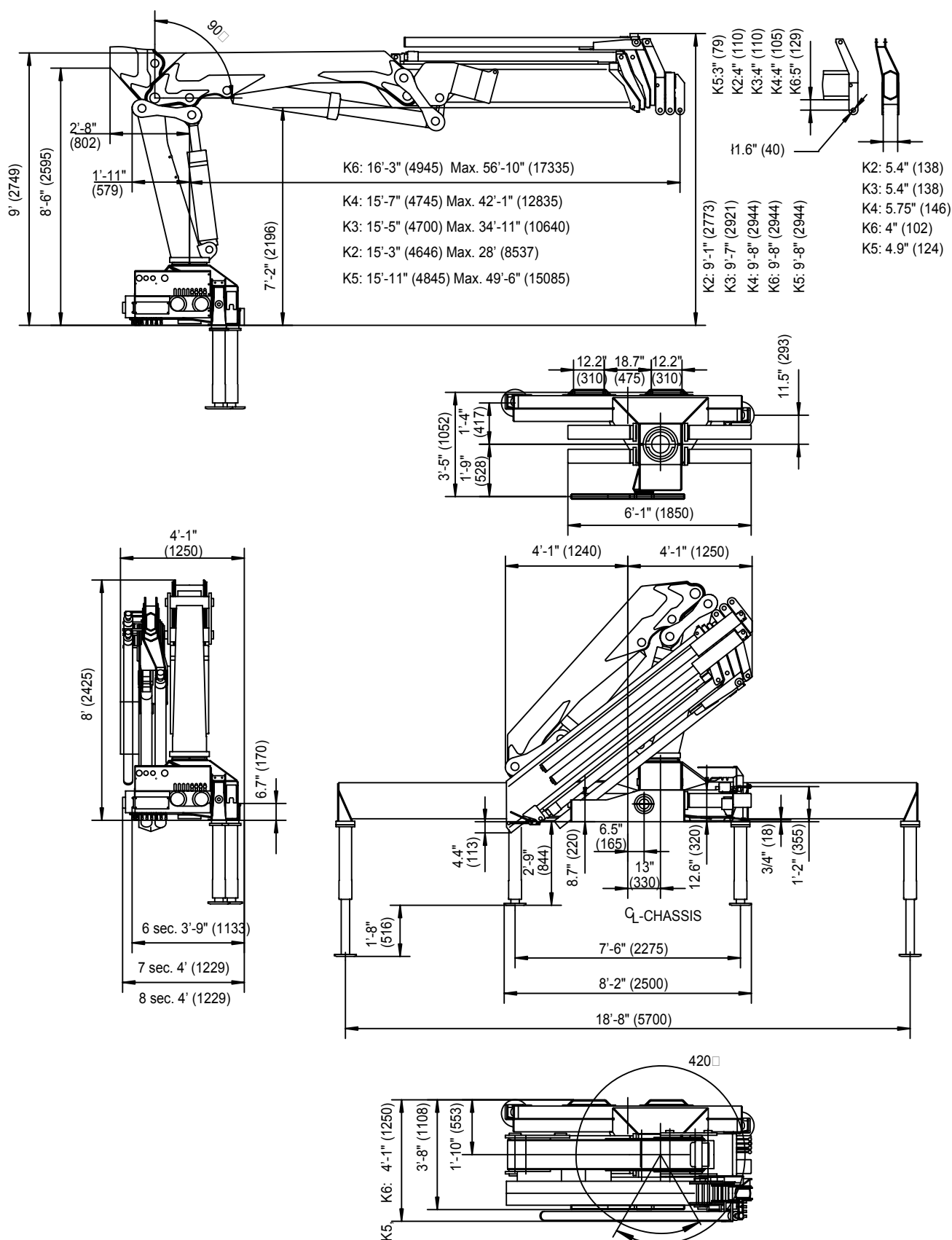
As standard the 34/235 K3 loader designation describes a loader with a 34 ton-meter/235000 foot-pound load moment and utilizes 3 hydraulic extensions. The 37/266 K3 loader designation describes a loader with a 37 ton-meter/266000 foot-pound load moment and utilizes 3 hydraulic extensions.

REFERENCE DIMENSIONS



GEOMETRIC CONFIGURATION

UNITS: Feet-inches (millimeters)



**TECHNICAL DATA-34/235K2,K3,K4,K6 (Domestic)**

Performance	Unit	2 hyd ext	3 hyd ext	4 hyd ext	6 hyd ext
Crane Rating*	ft-lbs	235070	226393	220607	215543
Max Horiz Reach	ft & in	28'-3"	35'-1"	42'-4"	57'-0"
Max Vert Reach	ft & in	36'-8"	43'-11"	50'-10"	65'-0"
Max. Capacity	lbs	27560	27560	27560	25350
Max Cap@Max Reach	lbs	8380	6280	4750	2930
Crane Weight**	lbs	7880	8440	8930	9920
Hook Approach					
Vertical	ft & in	9'-2"	9'-0"	8'-10"	8'-6"
Horizontal	ft & in	2'-11"	3'-1"	3'-3"	3'-7"
Center of Gravity (Stored)					
Vertical	inches	33.0"	33.0"	33.0"	34.1"
Horiz (C/L Rot-Bridge)	inches	2.0"	3.0"	3.5"	4.1"
Max Jib Reach					
Vertical	ft & in		(K3)69'-10"	(K4)82'-4"	
Horizontal	ft & in		61'-0"	73'-6"	
Max Cap @ Max Reach	lbs		1985	1275	
Jib Weight	lbs		1455	1640	
Outrigger Pad Diameter	inches	9.0"	9.0"	9.0"	9.0"
Crane Storage Height	ft & in	7'-11"	7'-11"	7'-11"	7'-11"
Mounting Space***	inches	44.0"	44.0"	44.0"	44.0"
Rotation Torque	ft-lbs	34710	34710	34710	34710
Rotation Angle	degrees	420	420	420	420
Optimum Pump Capacity	gpm (US)	23	23	23	23
System Pressure	psi	3770	3770	3770	3770
Oil Reservoir Capacity	gal	42.3	42.3	42.3	42.3
Outrigger Extension Span					
Std-hyd out/hyd dn	ft & in	18'-9"	18'-9"	18'-9"	18'-9"
Weight	lbs	1100	1100	1100	1100
Opt-hyd out/hyd dn	ft & in	22'-0"	22'-0"	22'-0"	22'-0"
Weight	lbs	1400	1400	1400	1400
Minimum Chassis Specifications					
Front Axle Rating (GAWR)	lbs	16000	16000	16000	16000
Rear Axle Rating (GAWR)	lbs	40000	40000	40000	40000
RBM	in-lb	3,500,000	3,500,000	3,500,000	3,500,000
Measures					
Height above chassis when folded	in	95.5	95.5	95.5	95.5
Width when folded	in	98.4	98.4	98.4	98.4
Length, without extra valves	in	43.6	43.6	43.6	43.6

* Maximum Crane Rating (ft-lbs) is defined as that rated load (lbs) which when multiplied by its respective distance (ft) from centerline of rotation gives the greatest ft-lb value.

** Crane weight excluding outriggers.

*** Additional mounting space of 11" will be required to provide crane rotational clearance.

**TECHNICAL DATA-34/235K2,K3,K4,K6 (Metric)**

Performance	Unit	2 hyd ext	3 hyd ext	4 hyd ext	6 hyd ext
Crane Rating*	ton-m	32.5	31.3	30.5	29.8
Max Horiz Reach	m	8.6	10.7	12.9	19.8
Max Vert Reach	m	11.2	13.4	15.5	19.8
Max. Capacity	kgs	12500	12500	12500	11500
Max Cap@Max Reach	kgs	3800	2850	2150	1330
Crane Weight	kgs	3575	3830	4050	4500
Hook Approach					
Vertical	m	2.8	2.8	2.7	2.6
Horizontal	m	0.86	0.94	1.00	1.09
Center of Gravity (Stored)					
Vertical	mm	840	840	840	867
Horiz (C/L Rot-Bridge)	mm	50	70	85	104
Max Jib Reach					
Vertical	m		(K3)21.3	(K4)25.1	
Horizontal	m		18.6	22.4	
Max Cap @ Max Reach	kgs		900	575	
Jib Weight	kgs		660	743	
Outrigger Pad Diameter	mm	230	230	230	230
Crane Storage Height	m	2.4	2.4	2.4	2.4
Mounting Space	mm	1100	1100	1100	1100
Rotation Torque	ton-m	4.8	4.8	4.8	4.8
Rotation Angle	degrees	420	420	420	420
Optimum Pump Capacity	liters/min	87	87	87	87
System Pressure	bar	260	260	260	260
Oil Reservoir Capacity	liters	160	160	160	160
Outrigger Extension Span					
Std-hyd out/hyd dn	m	5.7	5.7	5.7	5.7
Weight	kgs	500	500	500	500
Opt-hyd out/hyd dn	m	6.7	6.7	6.7	6.7
Weight	kgs	635	635	635	635

Minimum Chassis Specifications

Front Axle Rating (GAWR)	lbs/kgs	16000/7260	16000/7260	16000/7260	16000/7260
Rear Axle Rating (GAWR)	lbs/kgs	40000/18145	40000/18145	40000/18145	40000/18145
RBM	in-lb	3,500,000	3,500,000	3,500,000	3,500,000

Measures

Height above chassis					
when folded	mm	2425	2425	2425	2425
Width when folded	mm	2500	2500	2500	2500
Length, without extra valves					
	mm	1108	1108	1108	1108

* Maximum Crane Rating (ton-m) is defined as that rated load (ton) which when multiplied by its respective distance (m) from centerline of rotation gives the greatest ton-m value.

** Crane weight excluding outriggers.

*** Additional mounting space of 280mm will be required to provide crane rotational clearance.

**TECHNICAL DATA-37/266K2,K3,K4,K6 (Domestic)**

Performance	Unit	2 hyd ext	3 hyd ext	4 hyd ext	6 hyd ext
Crane Rating*	ft-lbs	266175	256050	253155	243030
Max Horiz Reach	ft & in	28'-3"	35'-1"	42'-4"	57'-0"
Max Vert Reach	ft & in	36'-8"	43'-11"	50'-10"	65'-0"
Max. Capacity	lbs	29760	29760	29760	27560
Max Cap@Max Reach	lbs	9480	7110	5510	3310
Crane Weight**	lbs	7925	8490	8970	9920
Hook Approach					
Vertical	ft & in	9'-2"	9'-0"	8'-10"	8'-6"
Horizontal	ft & in	2'-11"	3'-1"	3'-3"	3'-7"
Center of Gravity (Stored)					
Vertical	inches	33.0"	33.0"	33.0"	33.5"
Horiz (C/L Rot-Bridge)	inches	2.0"	3.0"	3.5"	4.5"
Max Jib Reach (K3)					
Vertical	ft & in		(K3)69'-10"	(K3)76'-9"	
Horizontal	ft & in		61'-0"	68'-3"	
Max Cap@Max Reach	lbs		2095	1985	
Jib Weight	lbs		1455	1455	
Max Jib Reach (K4)					
Vertical	ft & in			(K4)82'-4"	
Horizontal	ft & in			73'-6"	
Max Cap@Max Reach	lbs			1435	
Jib Weight	lbs			1640	
Outrigger Pad Diameter	inches	9.0"	9.0"	9.0"	9.0"
Crane Storage Height	ft & in	7'-11"	7'-11"	7'-11"	7'-11"
Mounting Space***	inches	44.0"	44.0"	44.0"	44.0"
Rotation Torque	ft-lbs	34710	34710	34710	34710
Rotation Angle	degrees	420	420	420	420
Optimum Pump Capacity	gpm (US)	23	23	23	23
System Pressure	psi	4205	4205	4205	4205
Oil Reservoir Capacity	gal	42.3	42.3	42.3	42.3
Outrigger Extension Span					
Std-hyd out/hyd dn	ft & in	18'-9"	18'-9"	18'-9"	18'-9"
Weight	lbs	1100	1100	1100	1100
Opt-hyd out/hyd dn	ft & in	22'-0"	22'-0"	22'-0"	22'-0"
Weight	lbs	1400	1400	1400	1400

Minimum Chassis Specifications

Front Axle Rating (GAWR)	lbs	16000	16000	16000	16000
Rear Axle Rating (GAWR)	lbs	40000	40000	40000	40000
RBM	in-lb	3,500,000	3,500,000	3,500,000	3,500,000

Measures

Height above chassis					
when folded	in	92.7	92.7	92.7	92.7
Width when folded					
	in	98.4	98.4	98.4	98.4
Length, without extra valves					
	in	41.7	41.7	41.7	41.7
Length, with extra valves					
	in	46.25	46.25	46.25	46.25

* Maximum Crane Rating (ft-lbs) is defined as that rated load (lbs) which when multiplied by its respective distance (ft) from centerline of rotation gives the greatest ft-lb value.

** Crane weight excluding outriggers.

*** Additional mounting space of 11" will be required to provide crane rotational clearance.

**TECHNICAL DATA-37/266K2,K3,K4,K6 (Metric)**

Performance	Unit	2 hyd ext	3 hyd ext	4 hyd ext	6 hyd ext
Crane Rating*	ton-m	36.8	35.4	35.0	33.6
Max Horiz Reach	m	8.6	10.7	12.9	17.4
Max Vert Reach	m	11.2	13.4	15.5	19.8
Max. Capacity	kgs	13500	13500	13500	12500
Max Cap@Max Reach	kgs	4300	3225	2500	1500
Crane Weight	kgs	3595	3850	4070	4500
Hook Approach					
Vertical	m	2.8	2.8	2.7	2.6
Horizontal	m	0.86	0.94	1.00	1.09
Center of Gravity (Stored)					
Vertical	mm	840	840	840	850
Horiz (C/L Rot-Bridge)	mm	50	70	85	115
Max Jib Reach (K3)					
Vertical	m		(K3)21.3	(K3)23.4	
Horizontal	m		18.6	20.8	
Max Cap@Max Reach	kgs		950	900	
Jib Weight	kgs		660	660	
Max Jib Reach (K4)					
Vertical	m			(K4)25.1	
Horizontal	m			22.4	
Max Cap@Max Reach	kgs			650	
Jib Weight	kgs			743	
Outrigger Pad Diameter	mm	230	230	230	230
Crane Storage Height	m	2.4	2.4	2.4	2.4
Mounting Space	mm	1108	1108	1108	1108
Rotation Torque	ton-m	4.8	4.8	4.8	4.8
Rotation Angle	degrees	420	420	420	420
Optimum Pump Capacity	liters/min	87	87	87	87
System Pressure	bar	290	290	290	290
Oil Reservoir Capacity	liters	160	160	160	160
Outrigger Extension Span					
Std-hyd out/hyd dn	m	5.7	5.7	5.7	5.7
Weight	kgs	500	500	500	500
Opt-hyd out/hyd dn	m	6.7	6.7	6.7	6.7
Weight	kgs	635	635	635	635

Minimum Chassis Specifications

Front Axle Rating (GAWR) lbs/kgs		16000/7260	16000/7260	16000/7260	16000/7260
Rear Axle Rating (GAWR) lbs/kgs		40000/18145	40000/18145	40000/18145	40000/18145
RBM	in-lb	3,500,000	3,500,000	3,500,000	3,500,000

Measures

Height above chassis					
when folded	mm	2425	2425	2425	2425
Width when folded	mm	2500	2500	2500	2500
Length, without extra valves					
	mm	1108	1108	1108	1108

* Maximum Crane Rating (ton-m) is defined as that rated load (ton) which when multiplied by its respective distance (m) from centerline of rotation gives the greatest ton-m value.

** Crane weight excluding outriggers.

*** Additional mounting space of 280mm will be required to provide crane rotational clearance.



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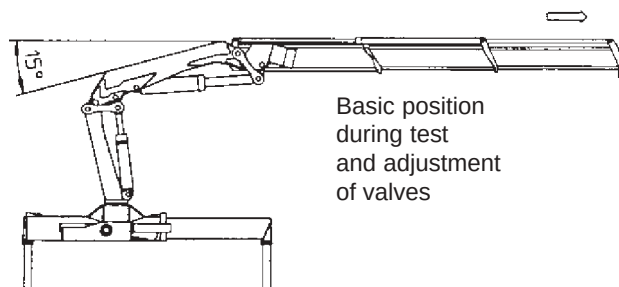
9. WORKING PRESSURE/PERFORMANCE

The working pressure should be set with a pressure gauge and the limits stated in the tables below must be kept.

The working pressure must be checked during the annual service overhaul and in the event of any major repairs.

The procedure for checking and setting of load-holding valves is described in Service Information. All adjustable valves must be resealed after pressure setting adjustment.

Please note that any warranty obligations on the part of IMT will be invalidated if the conditions stated in this manual are not complied with.

**WORKING PRESSURE (Domestic units)****Working pressure on main-relief valve & port-relief valves (in psi)**

Function		Port	34/235	37/266
Main-relief valve			3770	4205
Outrigger legs/	up	A-port	2540	2540
Grapple rotator	down	B-port	2540	2540
Beam cylinder		A-port	1015	1015
		B-port	1815	1815
Extension cylinders	extend	A-port	3335	3335
	retract	B-port	P	P
Outer boom cylinder	up	A-port	4350	4350
	down	B-port	3045	3045
Inner boom cylinder	down	A-port	2175	2175
	up	B-port	4060	4350
Rotation system	right	A-port	2755	2755
	left	B-port	2755	2755
Separate outrigger valve			2540	2540

Opening pressure on load holding valves

Inner boom cylinder		V2 - C2	4715	4860
Outer boom cylinder		V2 - C2	4570	4715
Extension cyl	Extend	V2 - C2	3265	3265
	Retract	V1 - C1	4350	4350

Pressure setting for load moment limitation

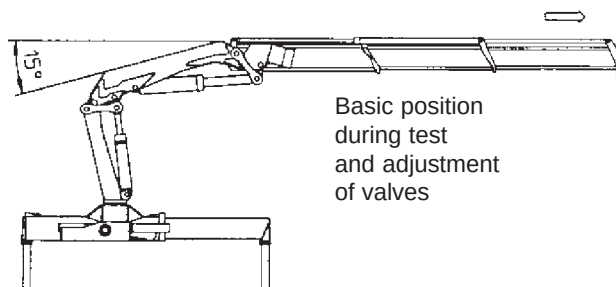
LMB			3915	4060
External relief valve			4060	4495
HDL - Sequence valve				3625

Working pressure for Fly-Jib 6 (in psi)

Function		Port	Loading Group
Port relief valves for jib cylinder	up	A-port	4060
	down	B-port	2175
Port relief valves for extension cylinders	extend	A-port	2755
	retract	B-port	4060
Load holding valve on jib cylinder	up	V2-C2	4350
	down	V1-C1	2900
Load holding valve on extension cylinders	extend	V2-C2	4350
	retract	V1-C1	2900
PL 2 - Winch	down	A-port	2320
	up	B-port	2320

Working pressure for Winch (in psi)

Function		Port	Loading Group
PL 8-2 ton on K4	down	A-port	2320
	up	B-port	2320
PL 8-2 ton on K3	down	A-port	2320
	up	B-port	2320

**WORKING PRESSURE (Metric units)****Working pressure on main-relief valve & port-relief valves (in MPa)**

Function	Port	34/235	37/266
Main-relief valve		26.0	29.0
Outrigger legs/	up	A-port	17.5
Grapple rotator	down	B-port	17.5
Beam cylinder		A-port	7.0
		B-port	12.5
Extension cylinders	extend	A-port	23.0
	retract	B-port	P
Outer boom cylinder	up	A-port	30.0
	down	B-port	21.0
Inner boom cylinder	down	A-port	15.0
	up	B-port	28.0
Rotation system	right	A-port	19.0
	left	B-port	19.0
Separate outrigger valve		17.5	17.5

Opening pressure on load holding valves

Inner boom cylinder		V2 - C2	32.5	33.5
Outer boom cylinder		V2 - C2	31.5	32.5
Extension cyl	Extend	V2 - C2	22.5	22.5
	Retract	V1 - C1	30.0	30.0

Pressure setting for load moment limitation

LMB		27.0	28.0
External relief valve		28.0	31.0
HDL - Sequence valve			25.0

Working pressure for Fly-Jib 6 (in MPa)

Function	Port	Loading Group
Port relief valves	up	A-port
for jib cylinder	down	B-port
Port relief valves	extend	A-port
for extension cylinders	retract	B-port
Load holding valve	up	V2-C2
on jib cylinder	down	V1-C1
Load holding valve	extend	V2-C2
on extension cylinders	retract	V1-C1
PL 2 - Winch	down	A-port
	up	B-port

Working pressure for Winch (in MPa)

Function	Port	Loading Group
PL 8-2 ton on K4	down	A-port
	up	B-port
PL 8-2 ton on K3	down	A-port
	up	B-port

1 MPa = 10 bar



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10. SERVICE

10.1 FIRST SERVICE OVERHAUL

We recommend that the first service overhaul takes place at an authorized IMT service center after the first 20 hours of service or after one month of loader use at the latest. This service check is rather important since the loader will be properly run in after 20 hours of use.

The first service overhaul should include the following:

1. Change of return filter element and high pressure filter cartridge.
2. The oil level in tank and rotation system. Oil must be visible between maximum and minimum lubrication on the oil level rod, when the loader is in the folded position. The oil level in the slewing system should also be visible in the inspection tube.
3. Overall lubrication according to the lubrication chart in this manual.
4. Leak check and tightening of fittings, if required.
5. Checking of working pressure and lead seals. The correct working pressures are stated in relevant Technical Information sheets.
6. Test of all functions under load.
7. Checking and, if required, tightening of mounting bolts and pin connections.
8. Checking of all lock bolts and pins.



10.2 ANNUAL SERVICE OVERHAUL

Once a year the loader should be given a main service overhaul at an authorized IMT service center. The loader should be thoroughly checked and special attention should be paid to the following items:

1. Change of hydraulic oil in tank and rotation system.
2. Change of return filter element and high pressure filter cartridge.
3. Cleaning or replacement of air filter.
4. Checking of working pressure and valve lead seals.
5. Idling pressure check.
6. Test of all functions under load.
7. Checking of slide blocks and bearing bushings for wear and, if required, replacement of the same.
8. Check of hydraulic hoses.
9. Leak check and tightening of all connections.
10. Check of pump and transmission.
11. Check of loader base to chassis mounting hardware.
12. Checking of all bolt connections and tightening, if required.
13. Overall checking of loader structure for damage. Any damage found should be repaired immediately.
14. Checking of all bolts and lock plates.

10.3 RECOMMENDED HYDRAULIC OIL TYPES

Oil Brand	Oil Type	Low Temp Oil Type
BP	Bartran HV 32	Bartran HV 22
Castrol	Hyspin AWS 32	Hyspin AWH 32
ESSO	Nuto H 32	Univis N 22
Kuwait petroleum Q8	Harmony 32 AW	Hydraulic L 32
Mobil	DTE 13	DTE 11
Shell	Tellus S 32	Tellus T 32
Statoil	Hydra Way HM 32	Hydra Way HV 22
Texaco	Rando HD 32	Rando HDZ 32

10.4 RECOMMENDED LUBRICANTS

Grease Brand	Grease for Bearings
BP	Energrease LS2
Castrol	LM Grease
ESSO	MP Grease / Beacon EP 2
Mobil	Mobilux EP 2 or Mobilgrease HP
Shell	Retinox MS
Texaco	Multifak All Purpose EP 2

Grease containing molybdenum disulphide must not be used.

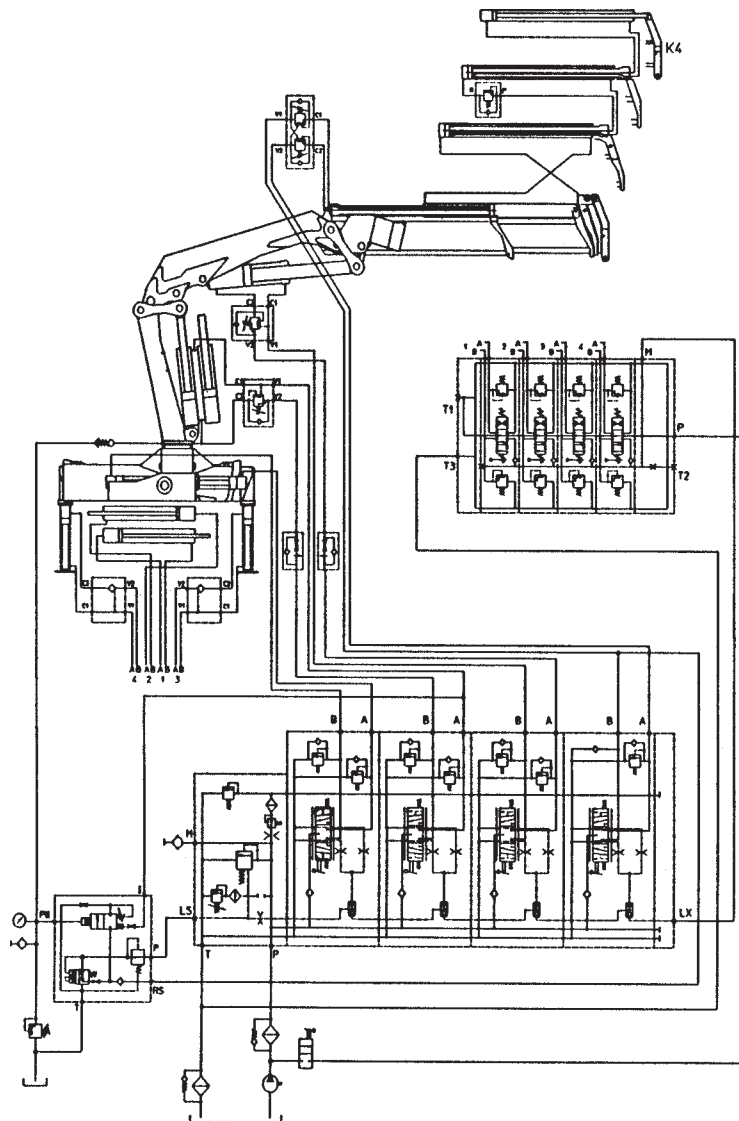
Grease Brand	Grease for Telescopic Extensions
ESSO	ESSO EDL 501
Lubrication Engineers	LE pyroshield 5182



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11. HYDRAULIC SYSTEM

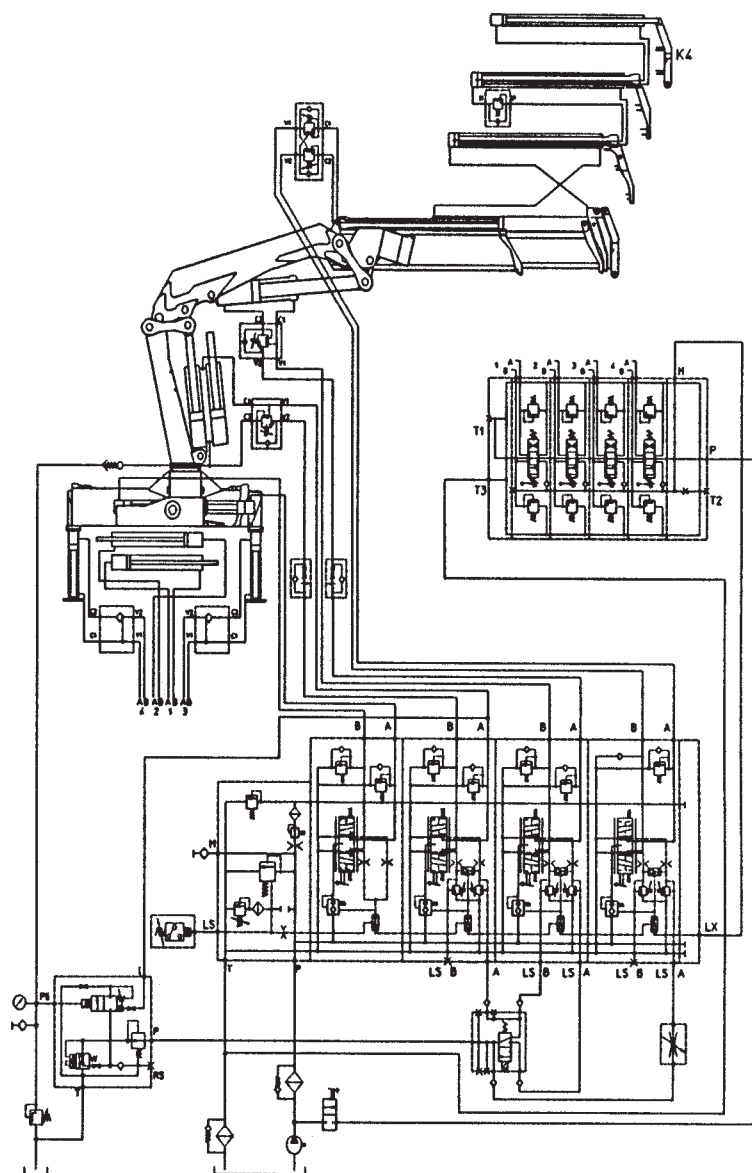
11.1 34/235 STD W/LMB 8.5





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11.2 34/235 STD W/LMB 8.6



11.3 37/266 STD

NOT AVAILABLE AT TIME OF PRINTING



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11.4 DESCRIPTION

The valve block of the loader is of the "stack" type, i.e., it is made up of a number of separate control valves. This ensures great flexibility and low maintenance costs.

A main relief valve is fitted in the inlet section of the valve block to ensure that the oil pressure in the pump line does not exceed the permissible limit. This valve is adjustable and must always remain sealed.

Port relief valves are mounted at the ports of the individual control valves to limit the pressure in the individual circuits. Normally the port relief valves will be pre-set and not adjustable.

The inner, outer, and extension cylinders are mounted with load holding valves with the following functions:

1. Protection of cylinders against excessive pressure.
2. Checking of the lowering speed of the boom.
3. Maintain the boom in position during operations where a fixed boom position is required.
4. To lock the boom and maintain the load in position in case of hose or pipe rupture.

The outrigger cylinders are equipped with a piloted check valve that locks the cylinder in case of damage to the hydraulic system.

CAUTION

The main relief valve, the load holding valves, the dump valve and the external relief valve are sealed. If these seals are broken or removed the warranty will automatically be invalidated. Therefore, it is in your own interest to have the seals checked from time to time and to make sure that they are replaced by an authorized IMT service center should they be damaged.

Any modification or alteration to the hydraulic system must be in accordance to specific agreement with IMT and such alterations should always take place at an IMT service center.



12. LOAD MOMENT LIMITATION

The loader is equipped with a load moment limitation system (LMB). This system ensures that the permissible load moment is never exceeded, irrespective of operator action. However, it is important to remember that the LMB system does not necessarily ensure sufficient vehicle stability. Before beginning work with the loader, the operator must always make sure that the vehicle is stable in the entire rotation area of the loader.

The Model 34/235 loader will be equipped with one of the following two types of LMB systems:

LMB 8.5

The system is regulated by the pressure in the boom cylinder. When the maximum permissible load limit for a certain boom position is reached, an LMB-valve will open and lead the control oil to the tank. This will cut off the oil supply from the pump to the control valve. The only function that will remain free when the LMB couples in, is retraction of extensions. This function will always be safe as it reduces load moment in all positions.

If the main boom is raised to top position the LMB will couple in and freeze the load moment increasing functions. To release the system, lower the main boom and retract extensions at the same time.

LMB 8.6

The pressure in the boom cylinder regulates the system. When the maximum permissible load limit for a certain boom position is reached, an LMB-valve will open and lead the control oil to the tank. This prevents oil pressure for load moment increasing functions from building up. What functions will be load moment increasing will depend on the jib position in each case.

If the jib is positioned at an angle between -20° and $+90^{\circ}$ to horizontal, the following load moment increasing movements will be locked: boom down, jib down, and extension out, while the following neutral or load moment reducing movements will remain free: boom up, jib up, extensions in, and rotation. See Figure 1.

If the jib is positioned at an angle of less than -20° to horizontal, the following load moment increasing movements will be blocked: jib up, and extensions out, while the moment reducing movements will remain free. See Figure 2.

If the main boom is raised to top position, the LMB system will couple in. If the jib is positioned at an angle between -20° and $+90^{\circ}$ to horizontal, it is impossible for the LMB valve to couple out again due to the pressure, which is locked up in the cylinder, keeping the LMB valve open. In order to release the system again: Press the push button and operate the control lever for "boom down" at the same time.

The push button activates the solenoid valve thus enabling the lowering of the main boom. The push button is for emergency purposes only and must not be used to couple out the LMB system intentionally.

13. HEAVY DUTY LIFTING (HDL)

Not available at time of printing.



14. WINCH

The winch is fitted with a free-wheeling device, as well as a spring-loaded brake. During lowering movements the oil pressure will loosen the brake so that the load may be lowered. Simultaneously, a small amount of oil (approx 5 l/min) is led through the brake, together with the engine leak oil, in order to reduce the heat generated from the lowering operation. This oil is returned to tank by means of a separate line, as the pressure in the normal return line is excessive.

A built-in safety device prevents overload of the cable when the telescopic jib is extended with the hook against stop on the winch drum. The function of the cable safety device is as follows: When the telescopic jib is extended, oil is led to the lowering movement of the winch, so that the cable will be wound out simultaneously.

The oil is led through a cable safety valve with incorporated adjustable restrictor valve and thus the cable speed can be regulated. The lowering speed of the winch is dependant on the load and therefore at maximum load the cable will unwind at a greater speed than that of the telescopic movement thus causing the load to descend slowly. At less load the winch will run at a lower speed than that of the telescopic movement and therefore the load will move towards the cable pulley. After this, the cable load will increase until the winch will adjust to the speed of the telescopic movement, but without exceeding the maximum permissible cable load.

If the load is suspended from the cable, the lifting capacity indicated on the SWL label on the swivel hook must not be exceeded. The LMB system of the loader will also freeze the hoisting movement of the winch.

15. FLY-JIB, FJ6

The Fly-Jib, FJ6 is equipped with 2 hydraulic extensions and can be mounted with 2 manual extensions that can remain in the loader in stowed position. The Fly-Jib is protected by the same LMB system as the loader in the entire lifting area. The manual extensions of the fly-jib are not protected by this safety system and therefore the load limits indicated on the lifting capacity chart must not be exceeded.

If the fly-jib is mounted with a winch, lifting on the manual extensions by means of the winch is not permitted.

When the fly-jib is dismantled, all quick release couplings must be equipped with dust caps in order to avoid penetration of dirt into the hydraulic system.

16. HOSES AND HYDRAULIC PIPES

The following dimensions are used:

Ø8x1
Ø12x1.5
Ø16x2
Ø22x2.5

17. BLEEDING OF AIR

If air has entered the hydraulic system, the loader is bled as follows:

1. Raise and lower each outrigger leg twice.
2. Swing the loader from stop to stop 2-3 times to bleed the rotation cylinders.
3. Extend and retract the inner boom cylinder twice.
4. Extend and retract the outer cylinder twice with the inner boom pointing downward, and twice with the inner boom pointed upward.
5. Extend and retract the extension cylinder twice with the outer boom pointed almost vertically upward, and twice with the outer boom pointed almost vertically downward.

18. REPAIR

If defects, damage or leaks are found, repair them immediately. Always have your repairs performed by an authorized IMT service center. Repairs to the hydraulic system must be made only at an authorized service center.

When ordering parts for your loader, please state:

- Loader model
- Loader serial number (found on serial number placard on loader)





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