IOWA MOLD TOOLING CO., INC.

P.O. Box 189
Garner, IA 50438
Tel: 641.923.3711
Fax: 641.923.2424
www.imt.com

Manual # 99906493

1030 MCS Technical Specifications

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1030 MCS - Technical Specifications

Section - 1

1030 MCS - Specifications

Performance	Unit	K1	K2	K3	K4	K5
Loading group (EN12999)		HC1 / HD4	HC1 / HD4	HC1 / HD4	HC1 / HD4	HC1 / HD4
Load moment	ft-lb	72182	70017	67851	66407	64964
Hydraulic reach	ft	18’	24.6’	31.8’	38.7	45.9’
Hydraulic telescopic movement	in	65.4”	142.8”	224.1”	305.1”	386.6”
Lifting capacity, hydraulic	lb-ft	5842 - 12.5’	5556 - 12.5’	5291 - 12.8’	5049 -13.1’	4828 - 13.5’
		4057 - 17.7’	3836 - 18’	3594 - 18.4’	3395 - 18.7’	3219 - 18.7’
			2800 - 24.7’	2601 - 24.6’	2403 - 24.9’	2227 - 25.3’
				2006 - 31.5’	1830 - 31.8’	1676 - 32.2’
					1477 - 38.4’	1323 - 38.7’
						1102 - 45.6’
Lifting capacity, manual extensions	lb-ft		2127 - 31.2’	1543 - 38.7’	1102 - 45.9’	772 - 52.8’
Slewing torque, gross	lb-ft	2945				
Slewing angle	°	420°				
Max. heel at max. load moment	°	5				
Slewing speed	°/s	24				

Minimum Chassis Specs	
Front Axle Rating (GAWR)	9000 lb (4800 kg)
Rear Axle Rating (GAWR)	17,000 lb (7710 kg)
Resistance to Bending Moment	976,500 in-lb (112,505 kg-m)

1) Weights ± 5% because of tolerances for plate thickness.

1030 MCS - Specifications - Continued

Dimensions	Unit	K1	K2	K3	K4	K5
Height above chassis	in	84”				
Width	in	92.5”				
Length, no extra valves	in	29.4”				
Length, with extra valves (hose guides)	in	34.1”				
Length, with extra valves (int. hose routing)	in	29.8”				
Stabilizer spread, S1 (standard)	in	163.9”				
Stabilizer spread, S2	in	202.3”				
Weights, basic loader	**Unit**	**K1**	**K2**	**K3**	**K4**	**K5**
Standard loader 1), excl. stabilizers	lb	2172	2403	2623	2822	2998
Stabilizers, S1 fixed	lb	353				
Stabilizers, S1 swing-up	lb	364				
Stabilizers, S2 fixed	lb	408				
Stabilizers, S2 swing-up	lb	419				
Mounting kit, 4 bolts	lb	121				
Mounting kit, 8 bolts	lb	132				
Tank, excl. oil (fitted on loader)	lb	88				
Manual Extensions	lb		110	97	84	66
Oil in loader (stowing position)	lb	40	49	57	66	75

1) Weights ± 5% because of tolerances for plate thickness

1030 MCS - Specifications - Continued

Weights, equipment	Unit	K1	K2	K3	K4	K5
Stand-up controls (HS), std.	lb					
Top seat (TS)	lb					
Top seat, ladder	bl					
1 extra valve, hose routing	lb	88	121	143	165	187
1 extra valve, int. hose routing	lb			165		
2 extra valves, hose guides	lb	132	165	198	231	265
2 extra valves, int. hose routing	lb			287		
Winch (1.5 t), single snatch block	lb			386		
Winch (1.5 t), double snatch block	lb			375		
High-pressure filiter	lb			15		
Oil cooler	lb			55		

Max. Load on stabilizers (per stabilizer cylinder)	Unit	K1	K2	K3	K4	K5
S1, fixed	ft-lb					
S1, swing-up	ft-lb			14612		
S2, fixed	ft-lb					
S2, swing-up	ft-lb					

Power consumption (oil capacity)	Unit	K1	K2	K3	K4	K5
Working pressure	psi			4786		
Tank capacity (fitted on loader)	gal			14.5		
Max. pump performance, Hydrocontrol, 1-circuit	g/min			10.6		

1030 MCS - Specifications - Metric

Performance	Unit	K1	K2	K3	K4	K5
Loading group (EN12999)		H1/B3	H1/B3	H1/B3	H1/B3	H1/B3
Load moment	tm	10.0	9.7	9.4	9.2	9.0
Hydraulic reach	m	5.5	7.5	9.7	11.8	14
Hydraulic telescopic movement	mm	1662	3629	5693	7751	9820
Lifting capacity, hydraulic	kg-m	2650 - 3.8	2520 - 3.8	2400 - 3.9	2290 - 4.0	2190 - 4.1
		1840 - 5.4	1740 - 5.5	1630 - 5.6	1540 - 5.7	1460 - 5.7
			1270 -7.5	1180 - 7.5	1090 - 7.6	1010 - 7.7
				910 - 9.6	830 -9.7	760 - 9.8
					670 - 11.7	600 - 11.8
						500 - 13.9
Lifting capacity, manual extensions			965 - 9.5	700 - 11.8	500 - 13.9	350 - 16.1
Slewing torque, gross		13.1	13.1	13.1	13.1	13.1
Slewing angle	°	400°				
Max. heel at max. load moment	°	5				
Slewing speed	°/s	24				

1030 MCS - Specifications - Continued

Dimensions	Unit	K1	K2	K3	K4	K5
Height above chassis	mm	2135				
Width	mm	2350				
Length, no extra valves	mm	747				
Length, with extra valves (hose guides)	mm	868				
Length, with extra valves (int. hose routing)	mm	757				
Stabilizer spread S1 (standard)	mm	4165				
Stabilizer spread, S2	mm	5140				

Weights, basic loader	Unit	K1	K2	K3	K4	K5
Standard loader 1), excl. stabilizers	kg	985	1090	1190	1280	1360
Stabilizers S1 fixed	kg	160				
Stabilizers S1 swing-up	kg	165				
Stabilizer S2 fixed	kg	185				
Stabilizers S2 swing-up	kg	190				
Mounting kit, 4 bolts	kg	55				
Mounting kit, 8 bolts	kg	60				
Tank, excl. oil (fitted on loader)	kg	40				
Manual extensions	kg		50	44	38	30
Oil in loader (stowing position)	kg	18	22	26	30	34

1030 MCS - Metric Specifications - Continued

Weights, equipment	Unit	K1	K2	K3	K4	K5
Stand-up controls (HS), std.	kg					
Top seat (TS)	kg					
Top seat, ladder	kg					
1 extra valve, hose guides	kg	40	55	65	75	85
1 extra valve, int. hose routing	kg	75	75	75	80	80
2 extra valves, hose guides	kg	60	75	90	105	120
2 extra valves, int. hose routing	kg	130	130	130	130	130
Winch (1.5 t), single snatch block	kg	175	175	175	175	175
Winch (1.5 t), double snatch block	kg	170	170	170	170	170
High-pressure filiter	kg	7				
Oil cooler	kg	25				

Max. Load on stabilizers (per stabilizer cylinder)	Unit	K1	K2	K3	K4	K5
S1, fixed	kN	65				
S1, swing-up	kN					
S2, fixed	kN					
S2, swing-up	kN					

Power consumption (oil capacity)	Unit	K1	K2	K3	K4	K5
Working pressure	Bar	330				
Tank capacity (fitted on loader)	L	55				
Max. pump performance, Hydrocontrol, 1-circuit	L/min	40				

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1030 MCS - K1-K5 Load Capacity Charts

Section - 2

1030 MCS - Lifting Capacity Chart, K1

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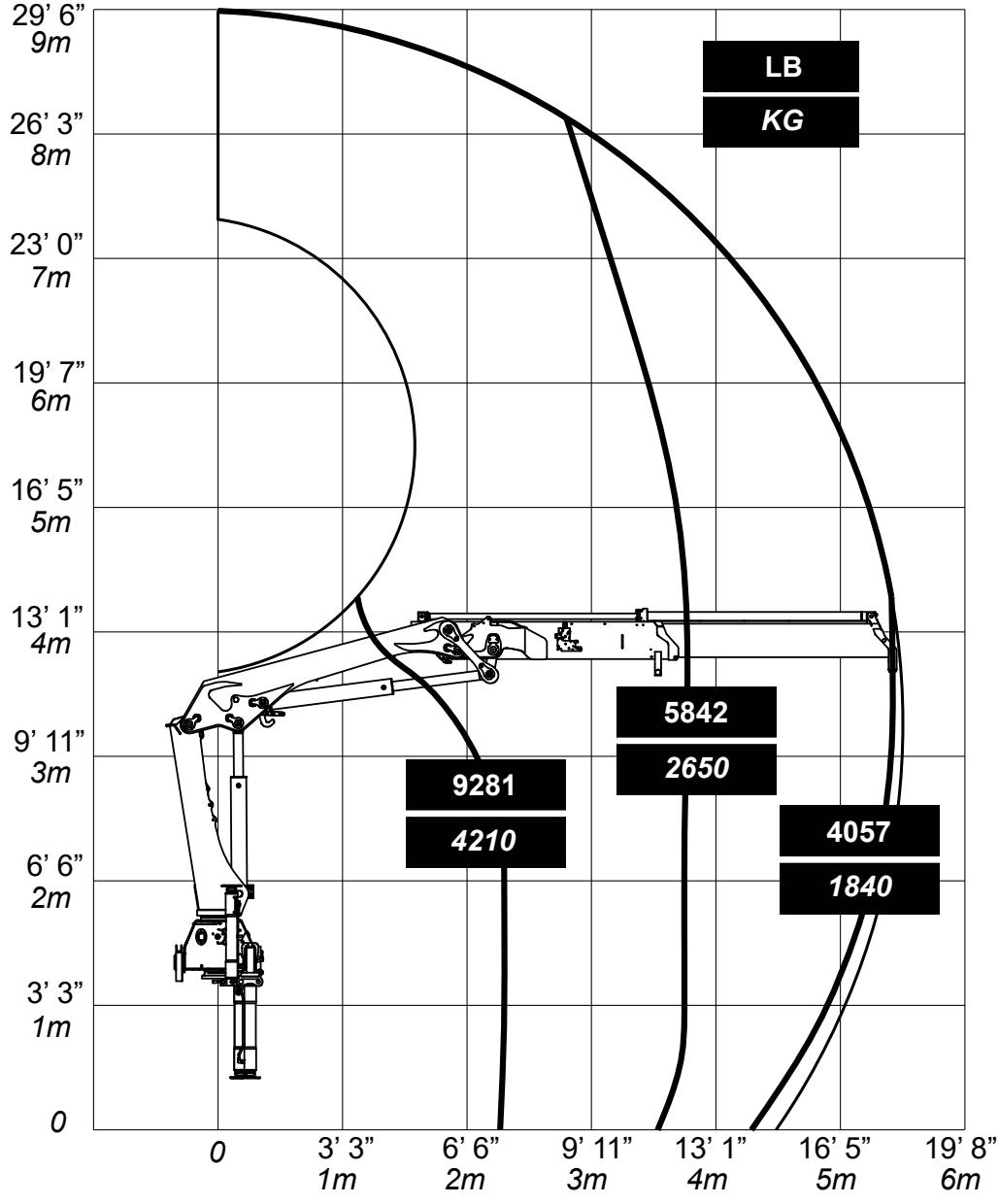
Model 1030 MCS K1

- **Limit working loads to those shown. Deduct the weight of load handling devices.**
- ***El peso propio (tara) de los dispositivos de manipulación de cargas es parte de la carga levantada y se debe descontar de la capacidad nominal.***



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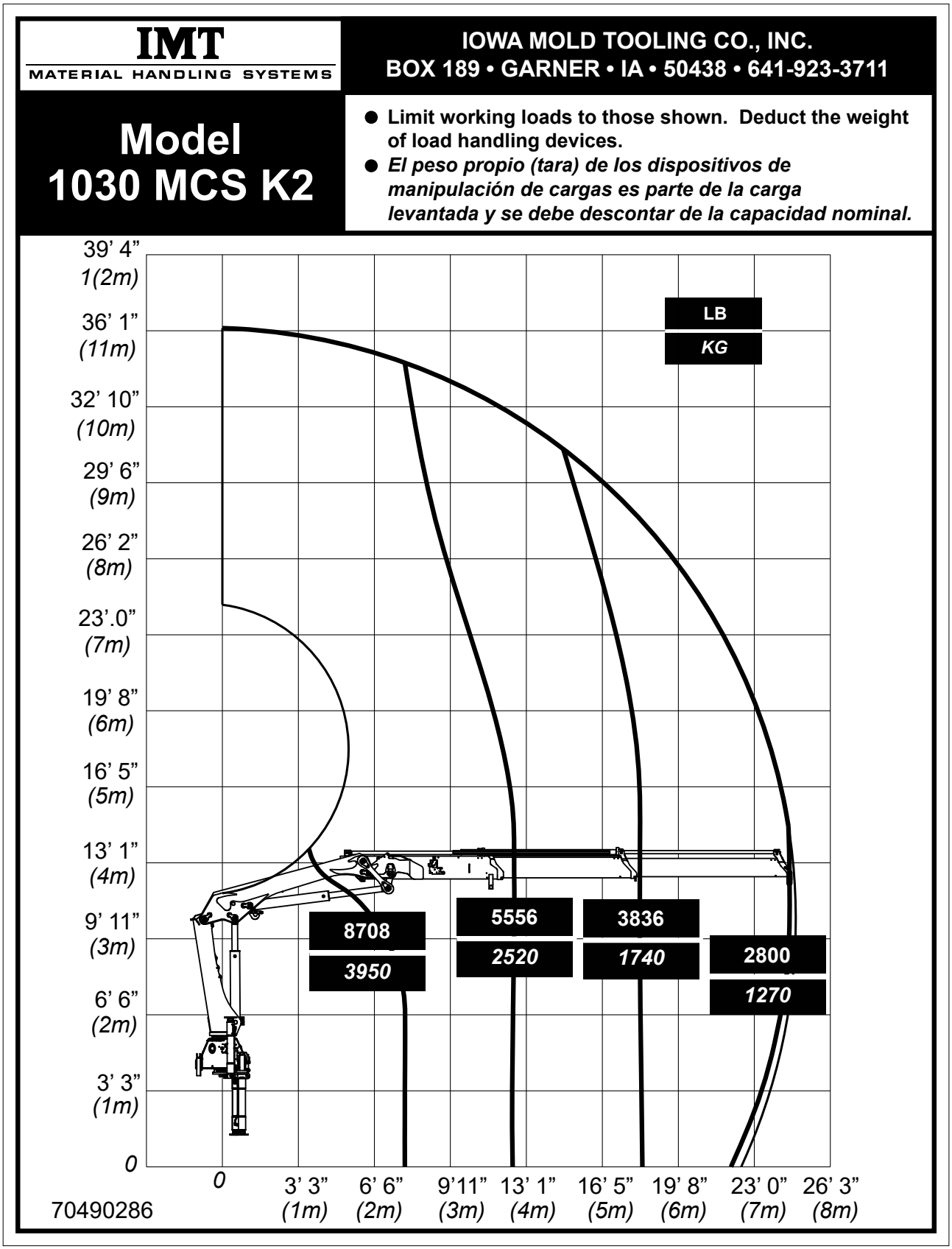
1030 MCS - Lifting Capacity Chart, K2



1030 MCS - Lifting Capacity Chart, K3

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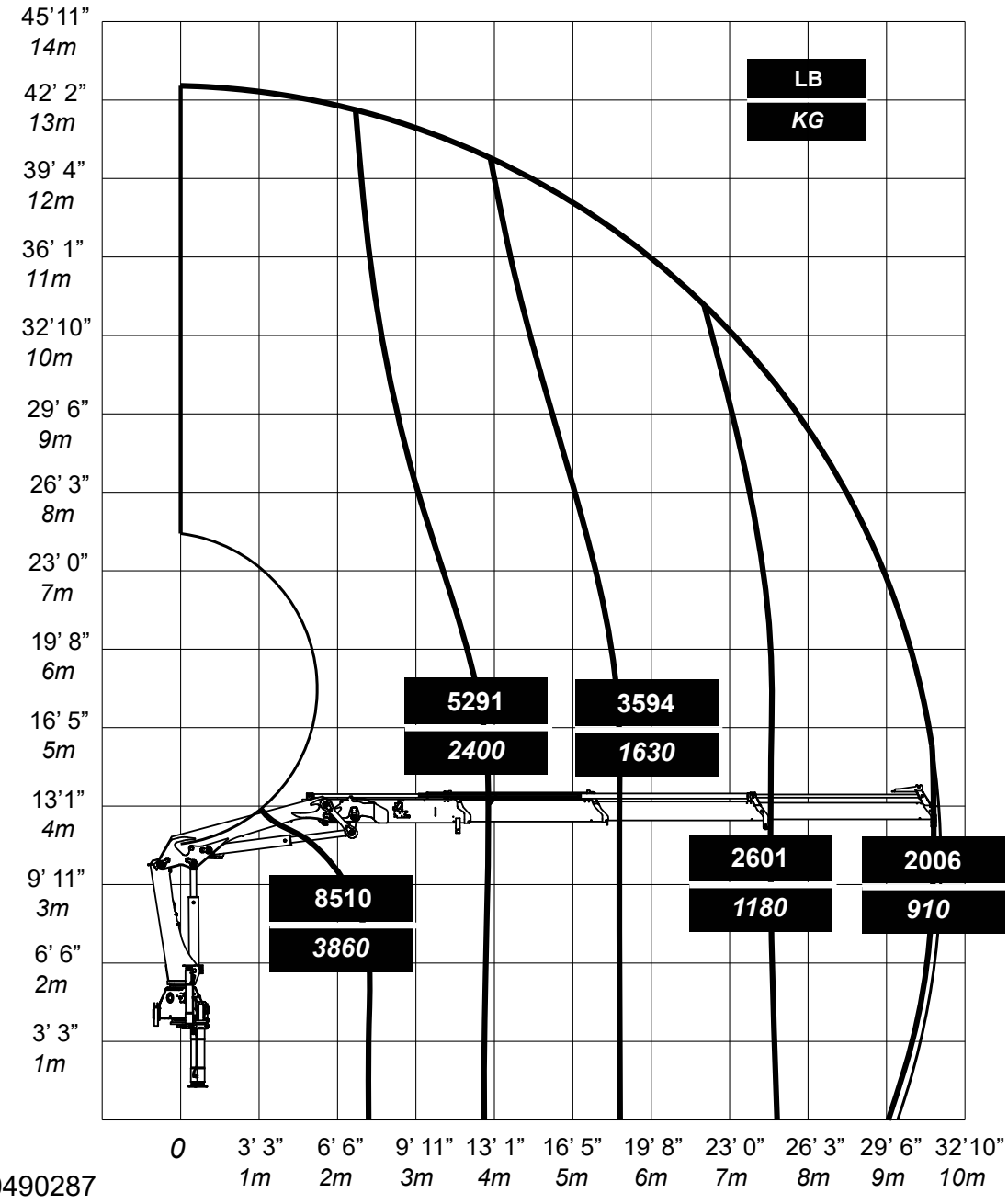
Model 1030 MCS K3

- **Limit working loads to those shown. Deduct the weight of load handling devices.**
- ***El peso propio (tara) de los dispositivos de manipulación de cargas es parte de la carga levantada y se debe descontar de la capacidad nominal.***



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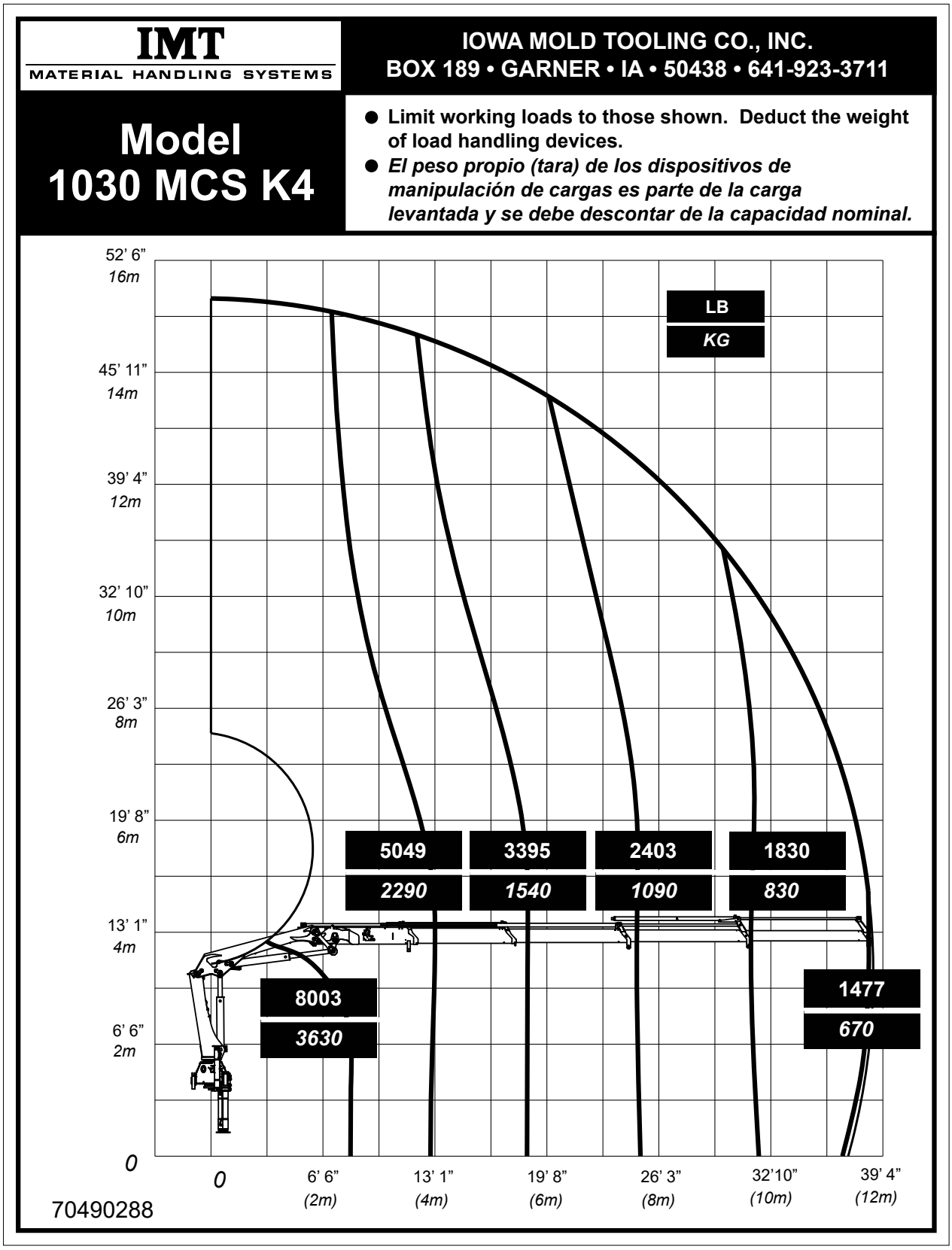
1030 MCS - Lifting Capacity Chart, K4



1030 MCS - Lifting Capacity Chart, K5

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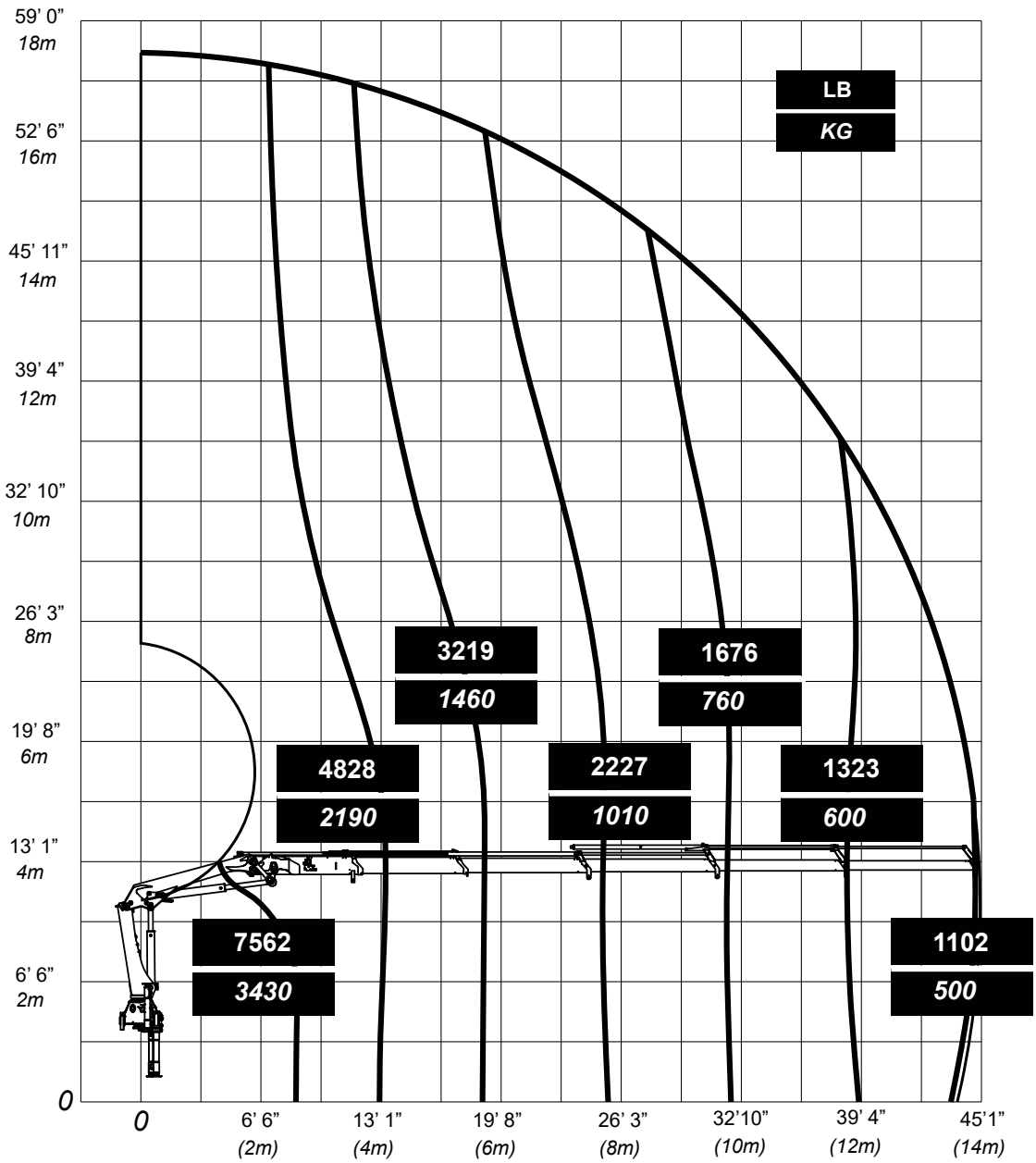
Model 1030 MCS K5

- **Limit working loads to those shown. Deduct the weight of load handling devices.**
- ***El peso propio (tara) de los dispositivos de manipulación de cargas es parte de la carga levantada y se debe descontar de la capacidad nominal.***



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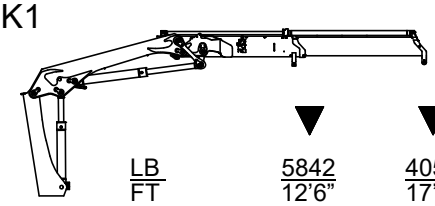
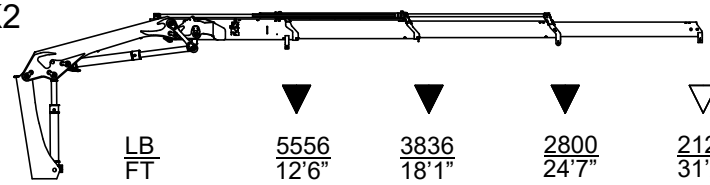
1030 MCS - Lifting Capacity Chart, K

K1



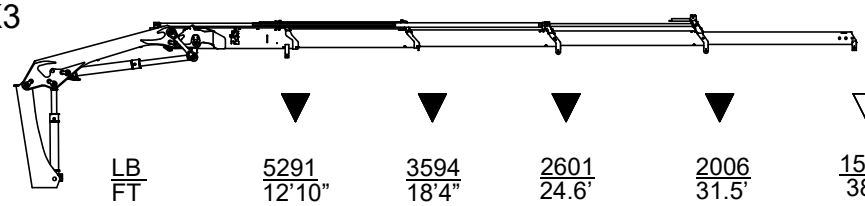
LB / FT	5842 / 12’6”	4057 / 17’9”
KG / M	2650 / 3,8	1840 / 5,4

K2



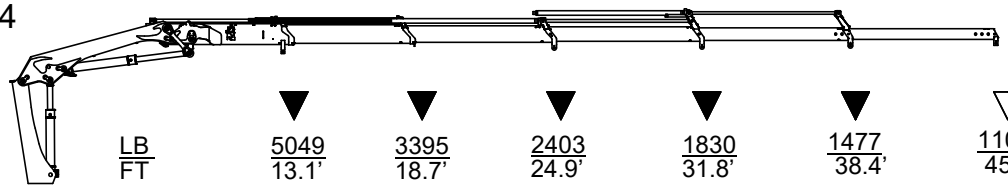
LB / FT	5556 / 12’6”	3836 / 18’1”	2800 / 24’7”	2127 / 31’2”
KG / M	2520 / 3,8	1740 / 5,5	1270 / 7,5	965 / 9,5

K3



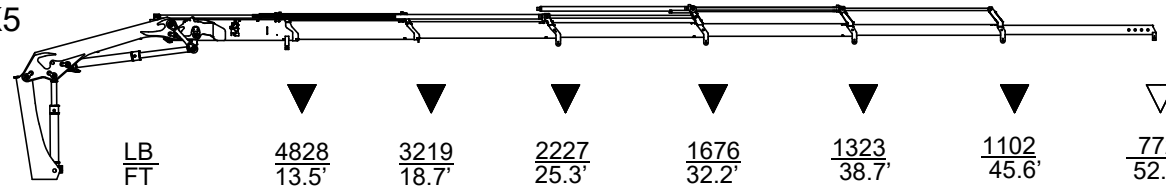
LB / FT	5291 / 12’10”	3594 / 18’4”	2601 / 24.6’	2006 / 31.5’	1543 / 38.7’
KG / M	2400 / 3,9	1630 / 5,6	1180 / 7,5	910 / 9,6	700 / 11,8

K4



LB / FT	5049 / 13.1’	3395 / 18.7’	2403 / 24.9’	1830 / 31.8’	1477 / 38.4’	1102 / 45.9’
KG / M	2290 / 4,0	1540 / 5,7	1090 / 7,6	830 / 9,7	670 / 11,7	500 / 13,9

K5



LB / FT	4828 / 13.5’	3219 / 18.7’	2227 / 25.3’	1676 / 32.2’	1323 / 38.7’	1102 / 45.6’	772 / 52.8’
KG / M	2190 / 4,1	1460 / 5,7	1010 / 7,7	760 / 9,8	600 / 11,8	500 / 13,9	350 / 16,1

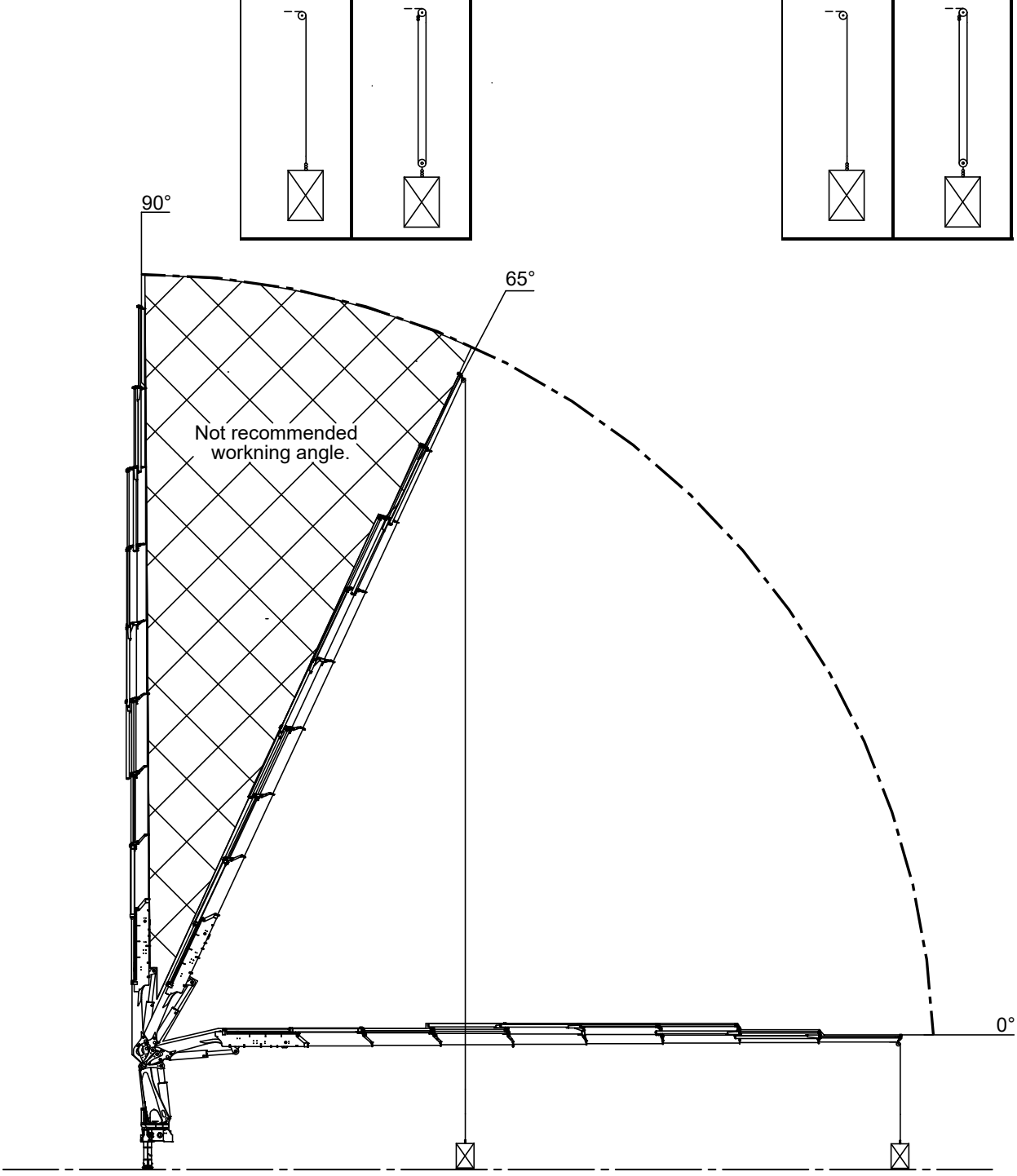
▽ Lifting Capacities with manual extensions

▼ Lifting capacities without manual extensions

1030 MCS - Lifting Capacity with Winch

Hydraulic hoist type	MAXW	MAXWD
Dinamic P9E	1500 kg	3000 kg
Dinamic P15E	2500 kg	5000 kg
Dinamic S 25 Brevini 2500	3200 kg	6400 kg

Hydraulic hoist type	MAXW	MAXWD
Dinamic P9E	3307 lb	6614 lb
Dinamic P15E	5512 lb	11023 lb
Dinamic S 25 Brevini 2500	7055 lb	14110 lb



1030 MCS - Hydraulics

Section - 3

1030 MCS - Pressure setting diagram, MC - RS210

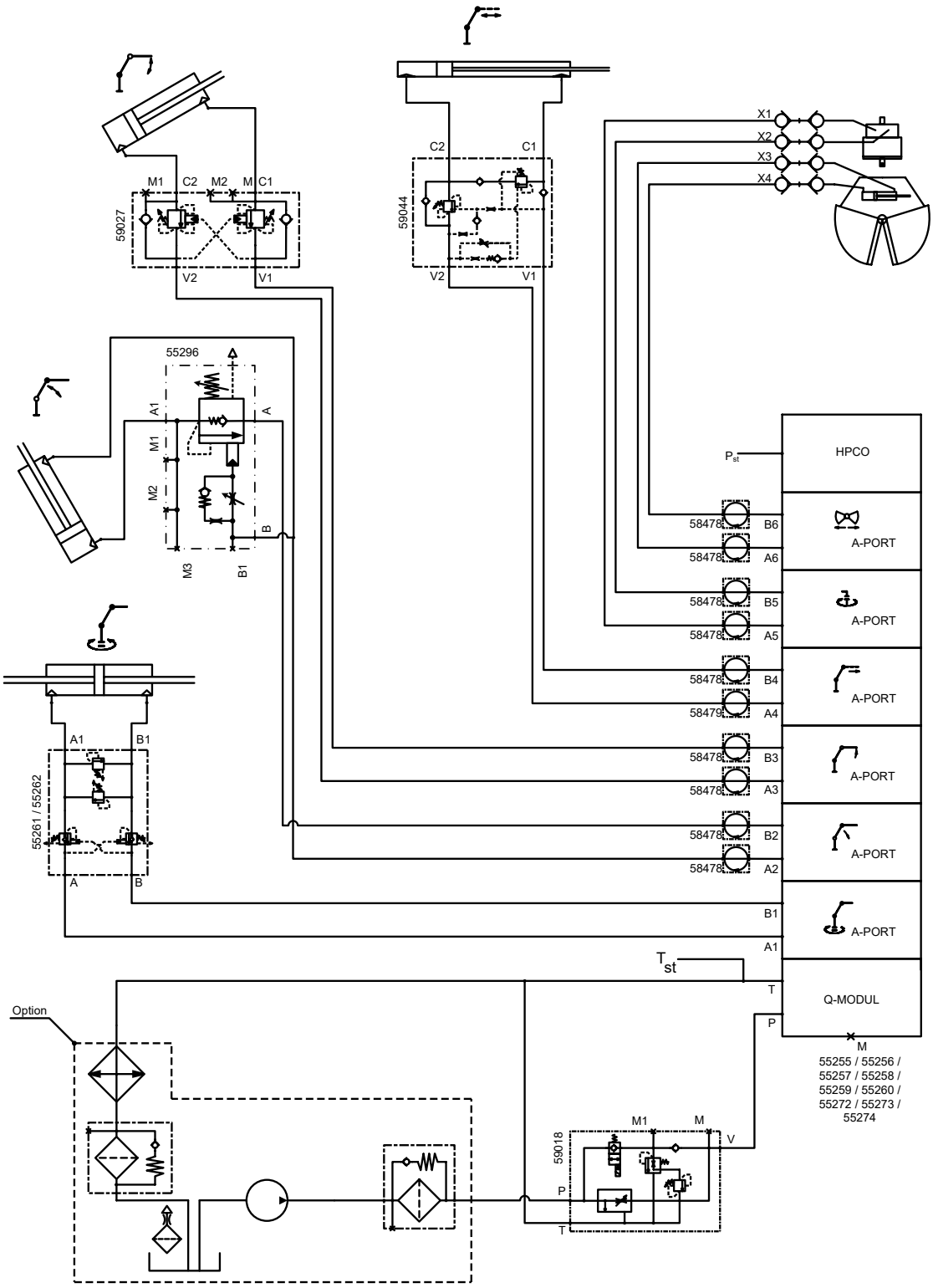
Working Pressure on Main-Relief Valve & Port- Relief Valves				
Function	**Direction**	**Port**	**1030 MCS K1-K6 (PSI)**	**1730 MCS K1-K6 (METRIC) (BAR)**
Main-relief valve			4786	330
Slewing system	Right	A	P	P
	Left	B	P	P
Boom cylinder	Up	A	1450	100
	Down	B	4931	340
Jib cylinder	Up	A	4931	340
	Down	B	2901	200
Extension cylinders	Extend	A	P	P
	Retract	B	P	P
Grab / Flyjib lift*	Up	A	2901	200
	Down	B	2901	200
Rotator / Fly-jib ext. cylinders*	Extend	A	2901	200
	Retract	B	2901	200
Separate stabilizer valve		All	2176	150

Working Pressure on Load-holding Valves				
Function	**Direction**	**Port**	**Opening pressure [PSI]**	**Opening pressure [BAR]**
Slewing system			5076	350
Boom cylinder			5076	350
Jib cylinder			3046	210
Extension cylinders	Retract	A	3046	210
	Extend	B	6237	430

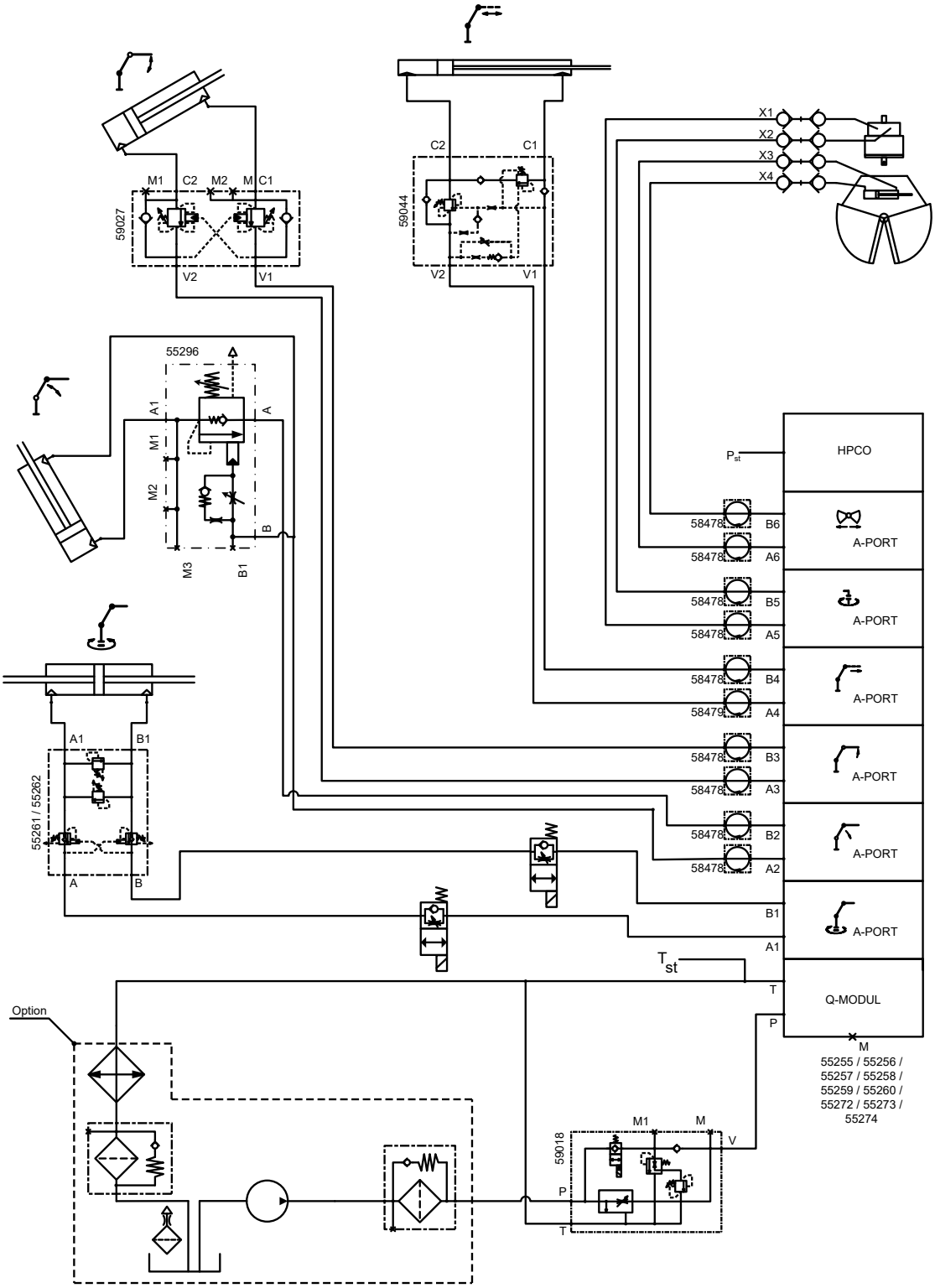
Pressure setting for Load Moment Limitation (LMB)		
Load moment limitation (LMB)	4641	320
HDL	4206	290

Max. pump performance		
Pump performance, 1-circuit	10.6 gpm	40 lpm

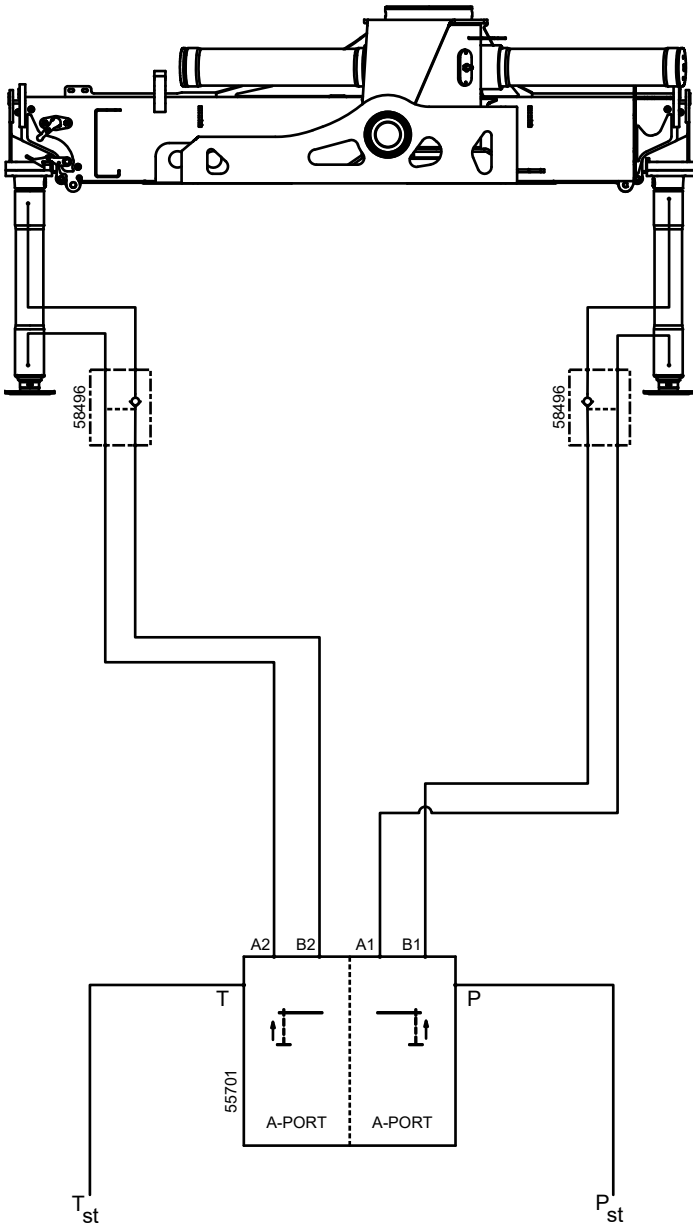
1030 MCS - Hydraulic Diagram - MC - RS210, single-circuit fixed 6fcts. Std./HS, std. HDL (2 EXV: Grab + Rotator)



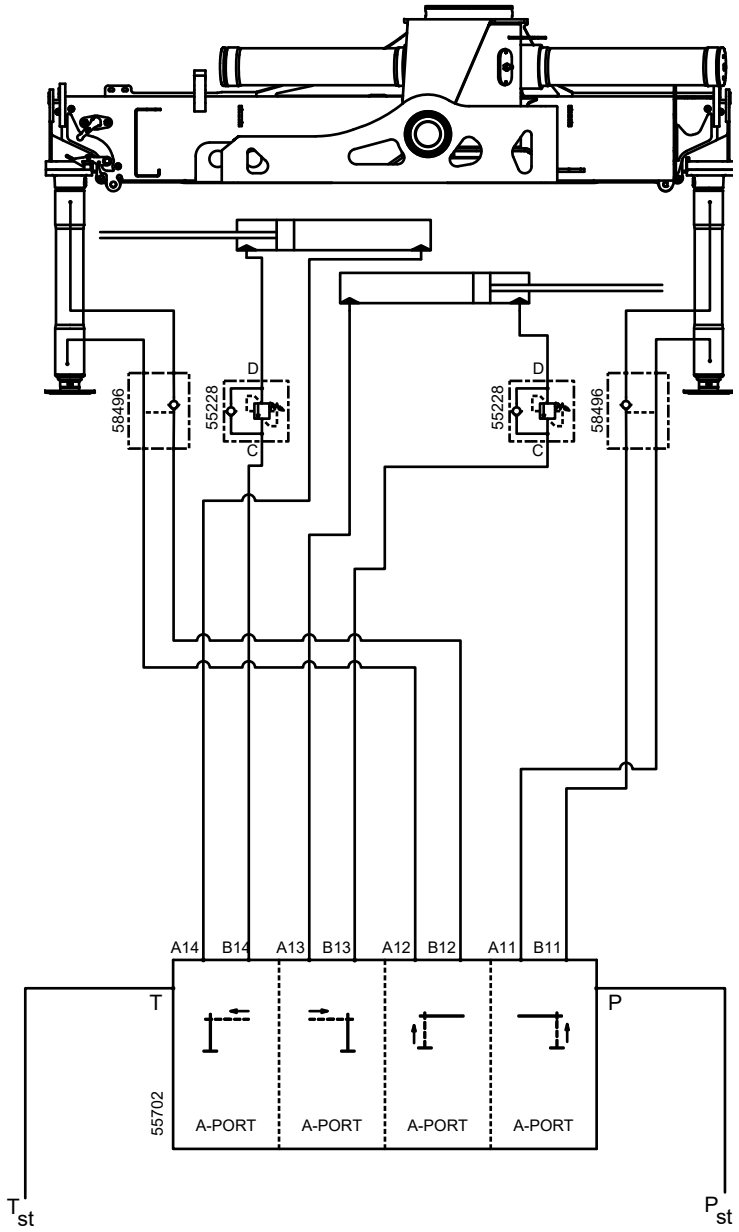
1030 MCS - Hydraulic Diagram - EVS-h MC - RS210, single-circuit fixed 6 fcts. Std./HS, std. HDL (2 EXV: Grab + Rotator)



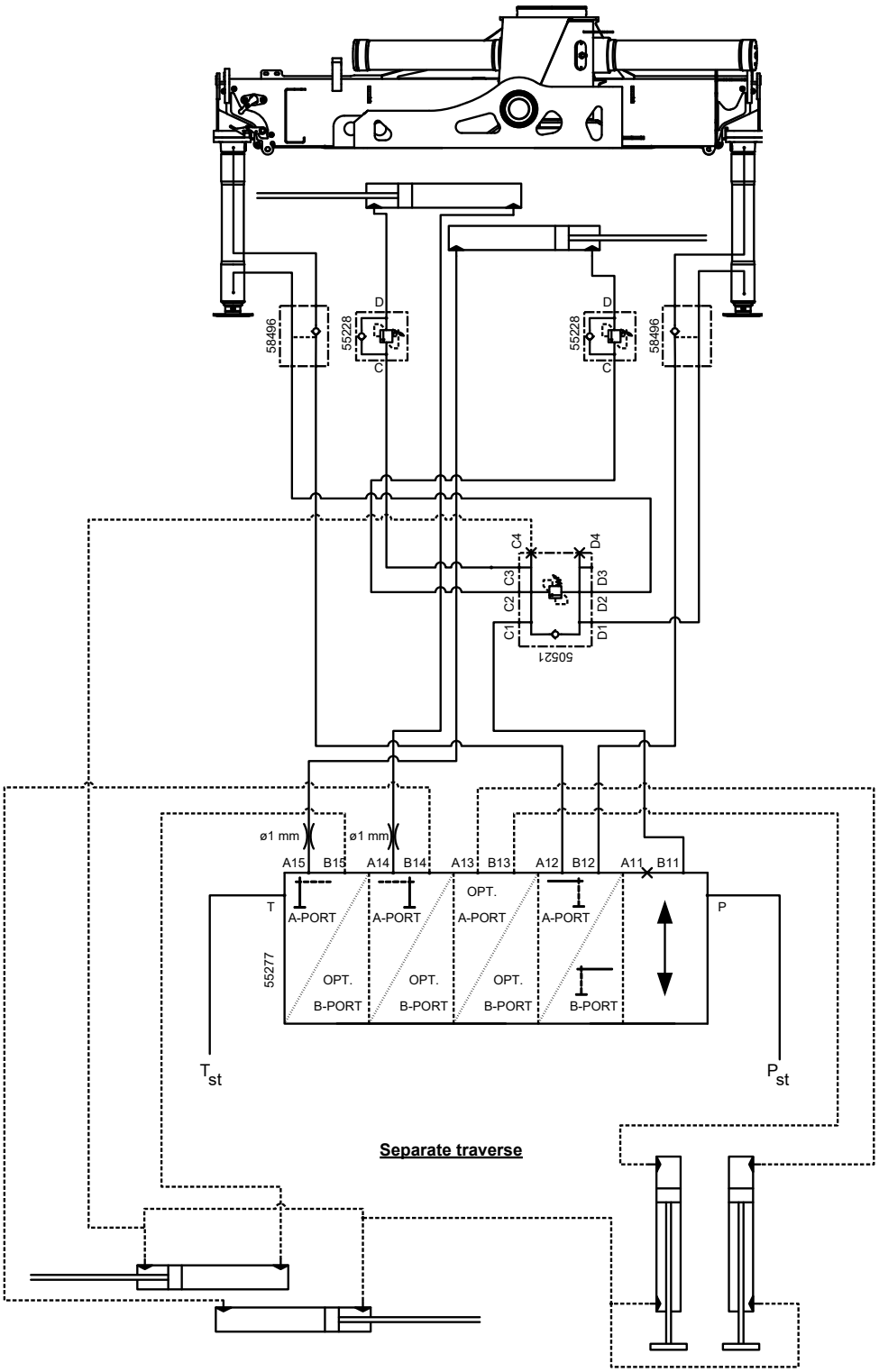
1030 MCS - Hydraulic Diagram - Stablilizer circuit – 2 fcts.



1030 MCS - Hydraulic Diagram - Stablilizer circuit – 4 fcts.



1030 MCS - Hydraulic Diagram - Stablilizer circuit – 4 fcts. + 4 available fcts.



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1030 MCS - Service Information

Section - 4

1030 MCS - Lubrication Instructions

Please read and follow the instructions for recommended oil and greasing in this section
The 1730 MCS K1-K6 are mainly equiped with maintenance-free composite bearings; however, for a limited number of bearings, regular greasing is required.
The crane has to be greased in the following areas:

1. Central greasing on the base
2. The push rods at the boom and jib cylinders.
3. Sliding surfaces in the boom system.

Central Lubrication on the Base:

The base is equipped with a central greasing point where all lubrication of moving parts in the slewing system is carried out.
The central greasing point is placed on the cross beam of the base and is indicated in the figure below.

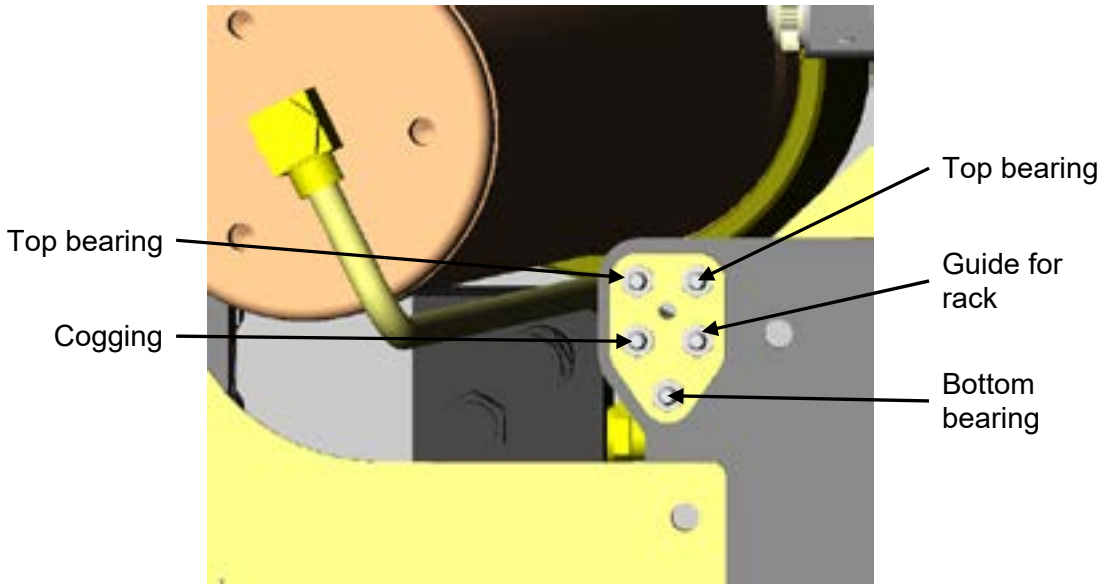


Figure 1 - Central greasing point on the base

Greasing has to be carried out at the greasing points indicated above, while the crane is swung from stop to stop. Repeat the lubrication of the cogging twice. The crane has to be lubricated again after 50 hours of operation or as a minimum every month. Furthermore the crane has to be lubricated right before a longer period of standstill.

Below is indicated where the central greasing points are connected on the central part of the base.

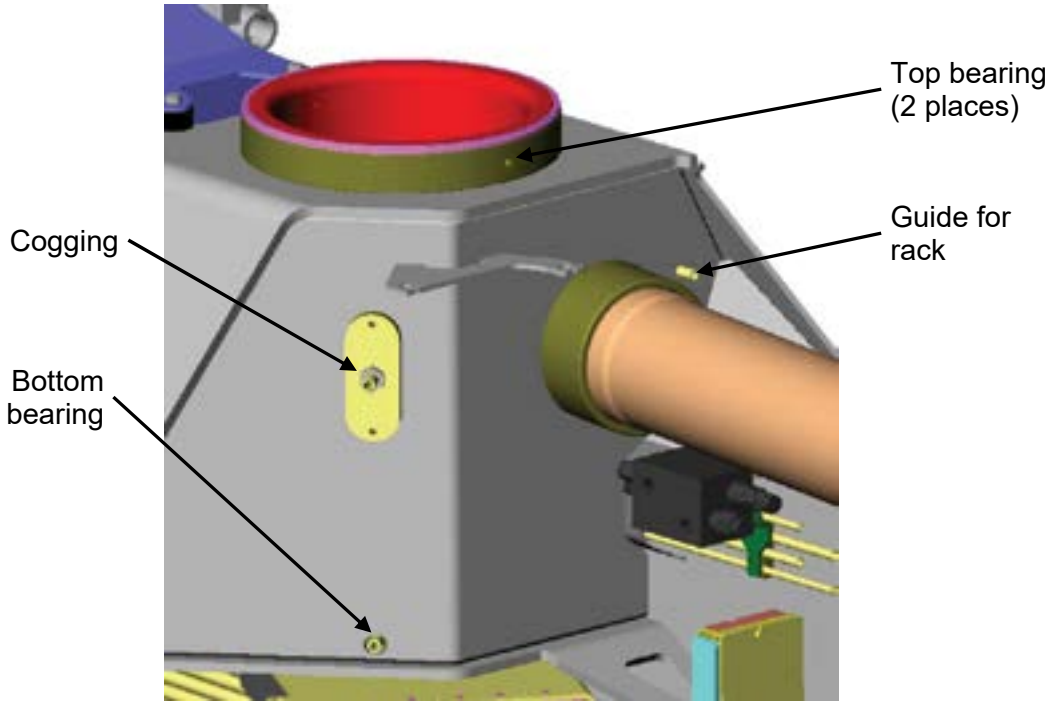


Figure 2 – Connection points on the central part of the base.

Push Rods at the Boom and Jib Cylinders:

Lubricate the crane's push rods at the boom cylinder at the points indicated below. They have to be greased after 250 hours of operation or every third month as a minimum.

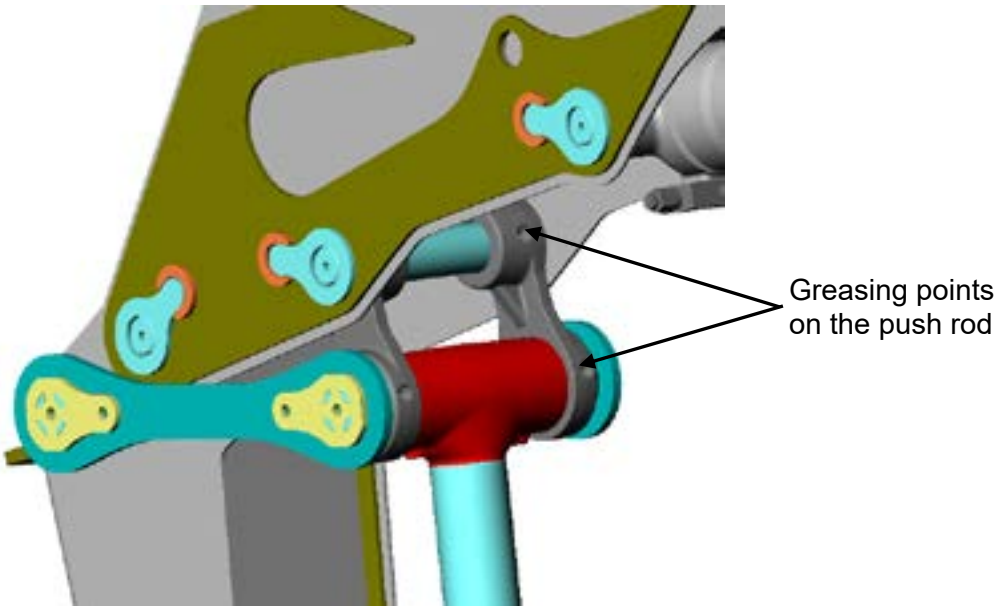


Figure 3 - Greasing points on inner push rods at the boom cylinder

NOTE:
The 1310K, 1430K, 1530K, 1510K, 1730K, 1830K, 1810K, 2030K, 2130, 2210K, 2430K, 2630K Series only have a push rod at the jib cylinder.

Lubricate the crane's outer push rod at the jib cylinder at the points indicated below. They have to be greased after 250 hours of operation or every third month as a minimum.

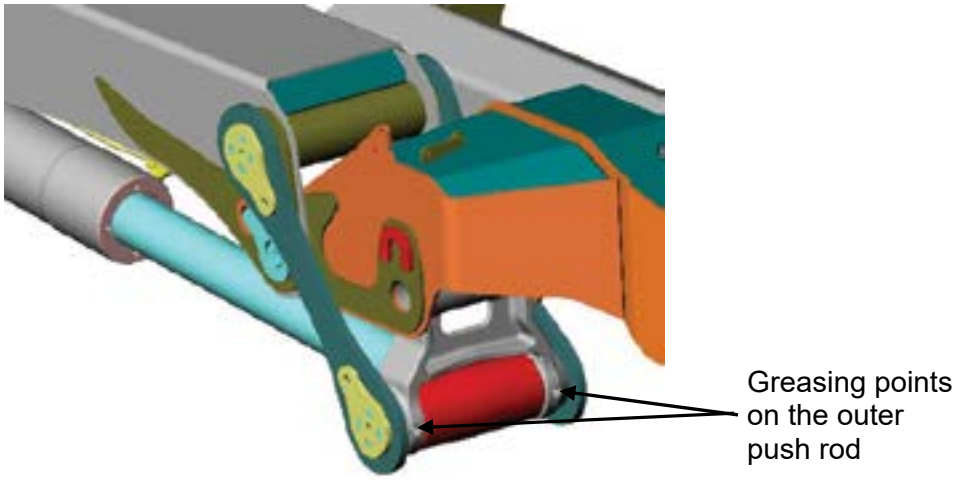
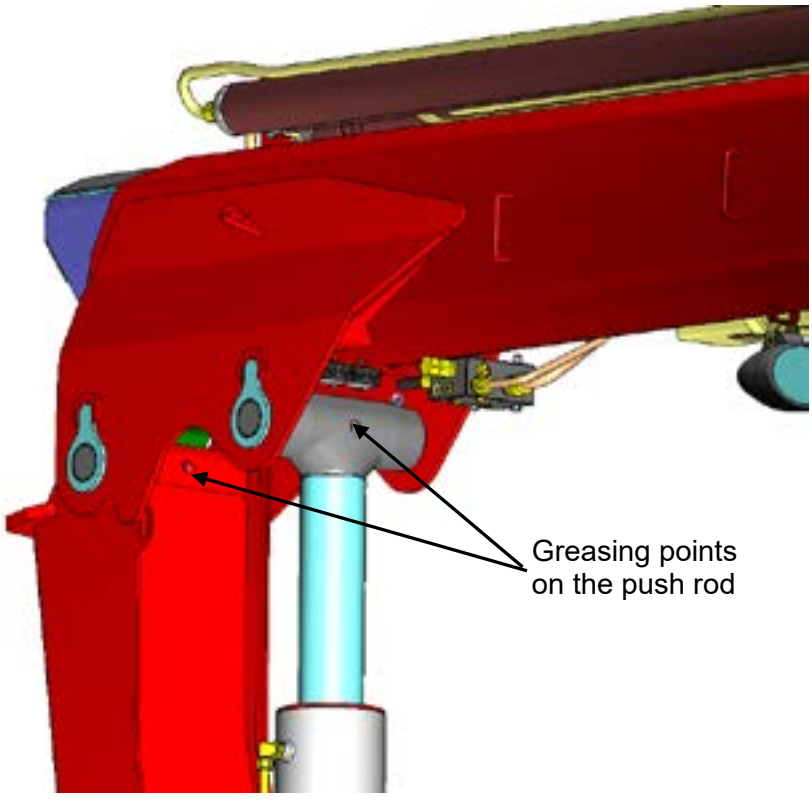


Figure 4 – Greasing points on outer push rod at the jib cylinder

Pins on the Main Boom:

Lubricate the pins of the crane on the main boom at the points indicated below. They have to be greased after 250 hours of operation or every third month as a minimum.



Pins on the Main Boom:

Grease the boom system on all surfaces where the bearing slide blocks are running. I.e. grease the extensions externally on the underside and internally on the upper side.

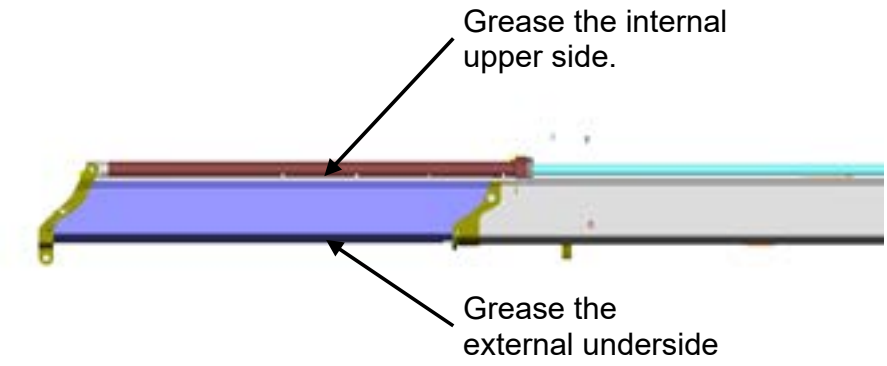


Figure 5 - Boom system with indication of greasing points

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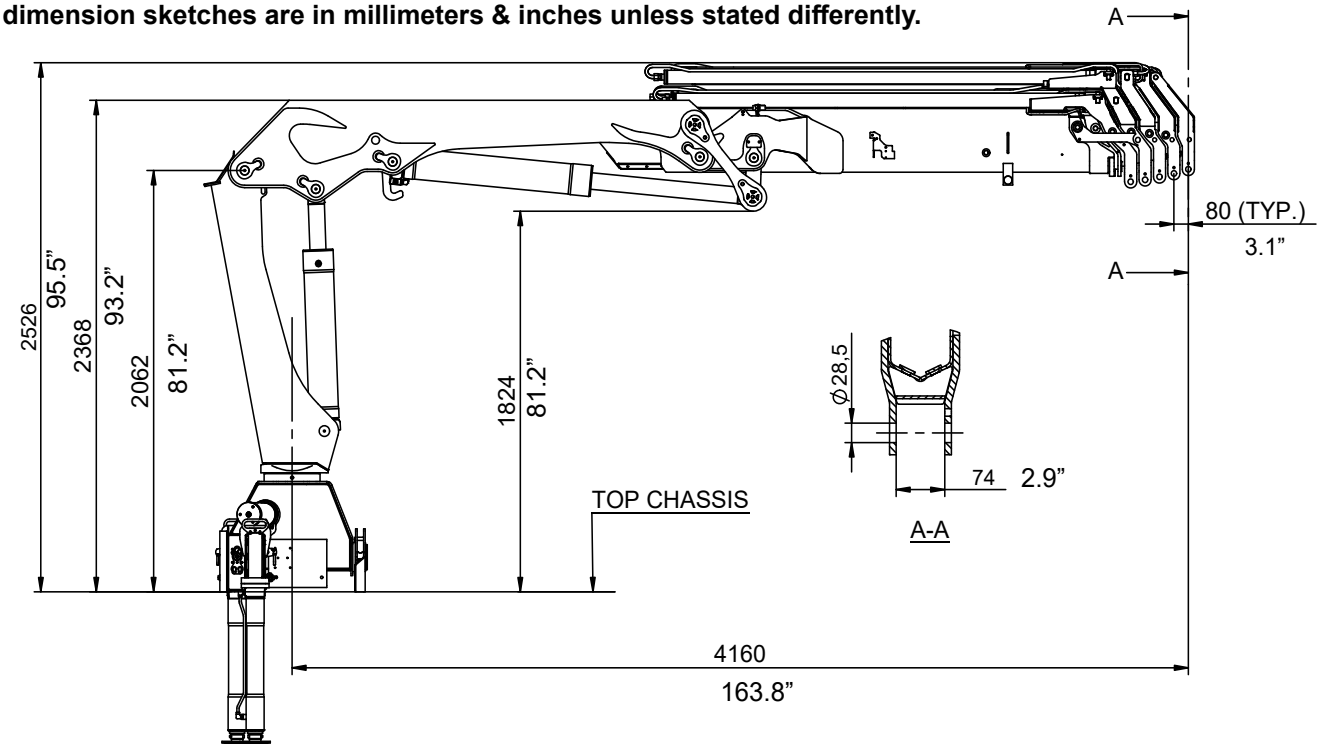
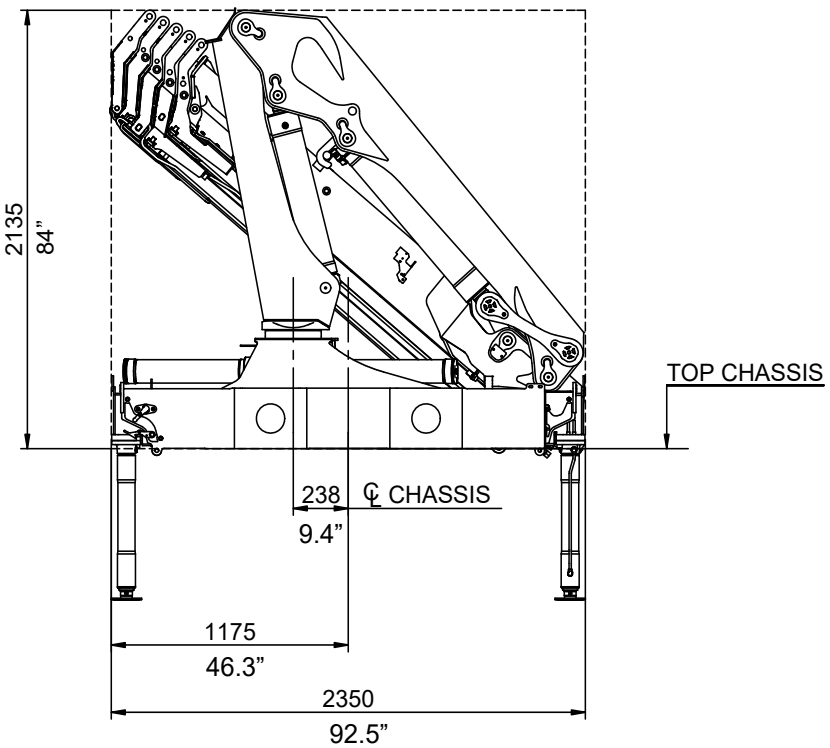
1030 MCS - Dimension Drawings

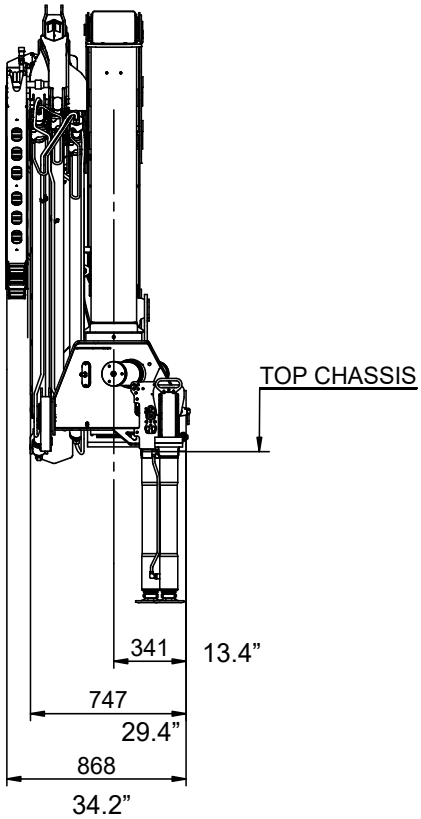
Section - 5

1030 MCS - Dimension Sketch

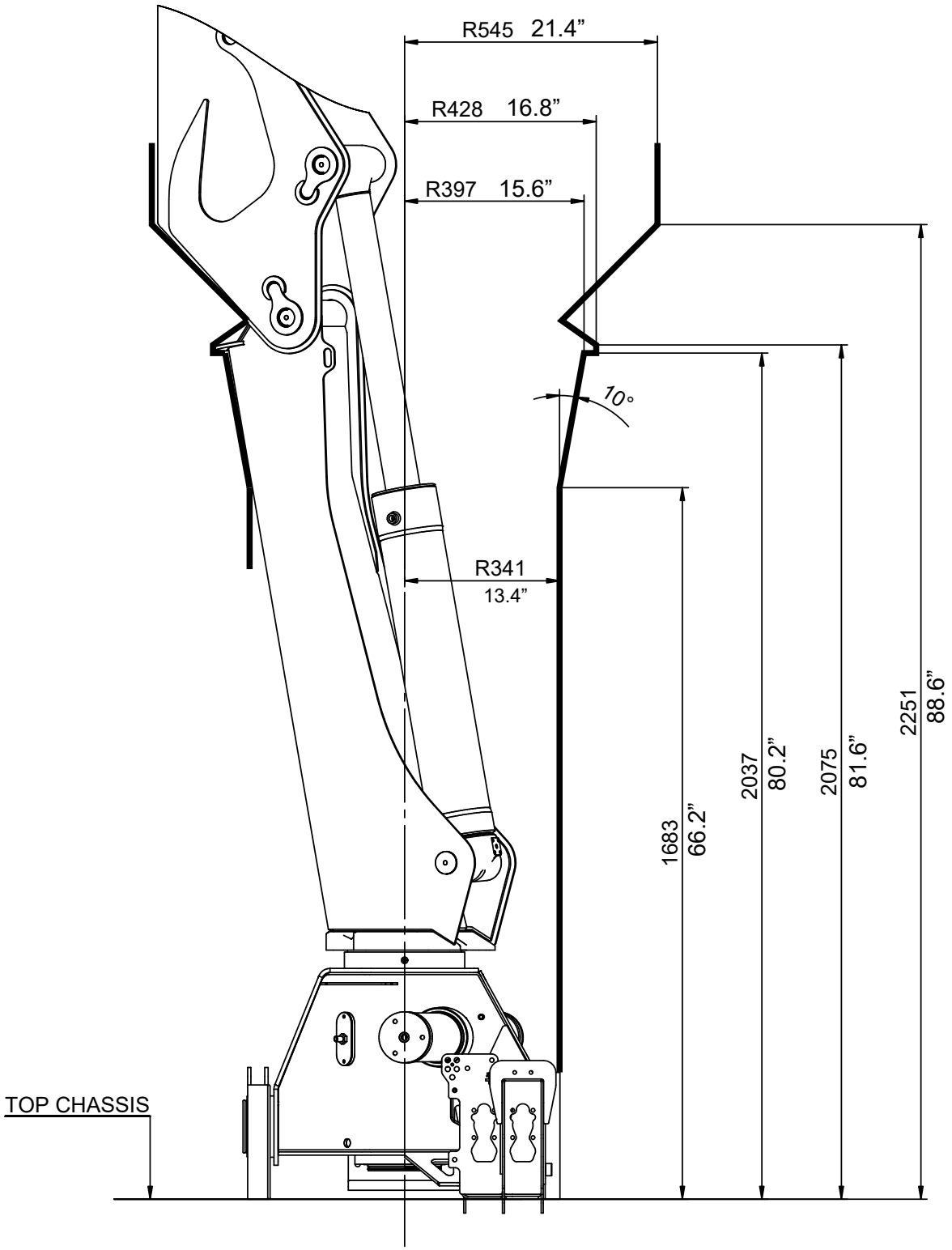
All dimension sketches are in millimeters & inches unless stated differently.





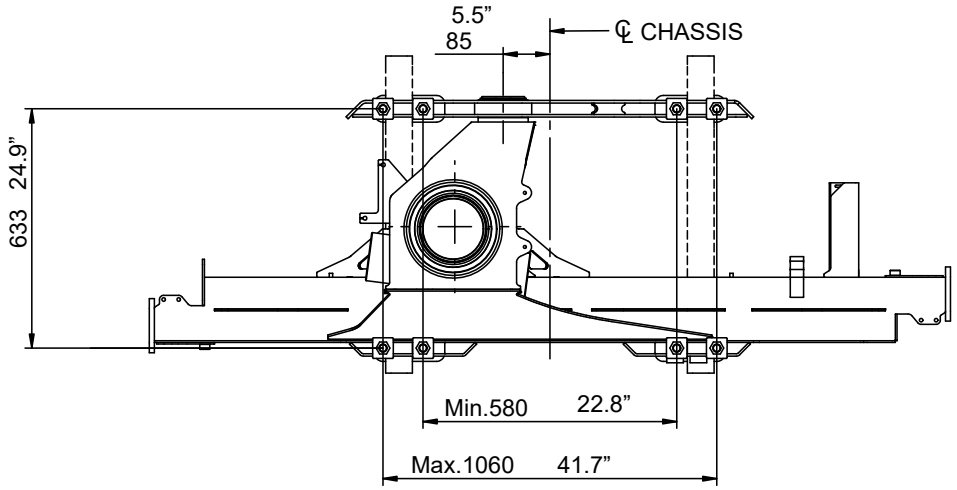


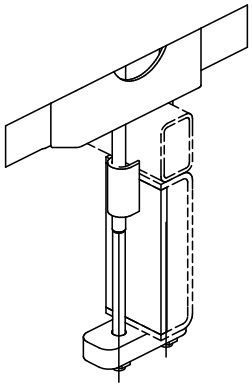
1030 MCS - Slewing Radius



1030 MCS - Dimension Sketch for Truck Mounted Loader

Mounting kit 8 x M24x2 bolts





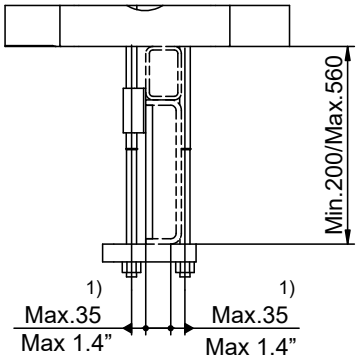
Notes:

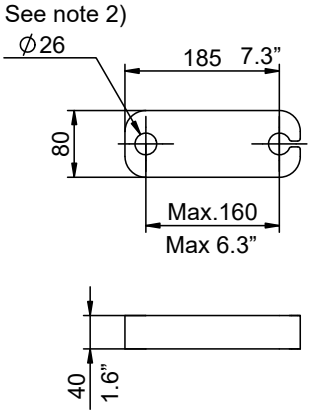
1) Values dictated by strength considerations.

2) Drill hole when assembling

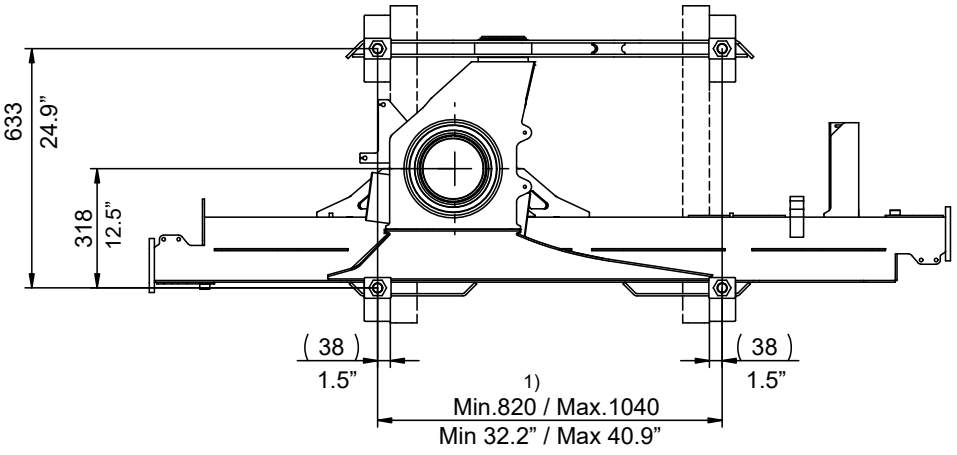
3) As regards installation - please see HMF Installation Manual

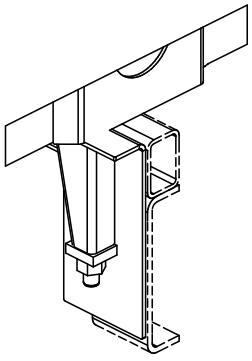
4) Mounting kits or spare parts - please see the Spare Parts Catalogue of the individual loader



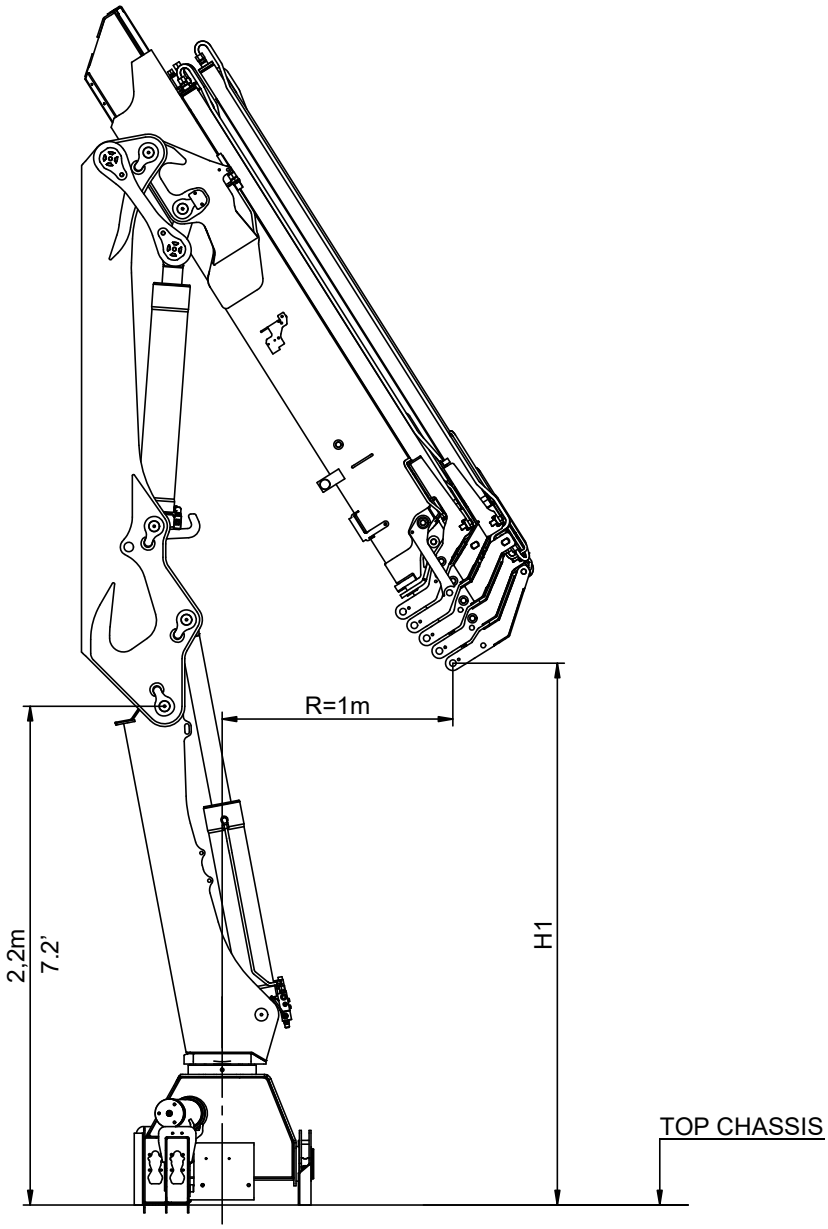


Mounting kit 4 x M30x2 bolts



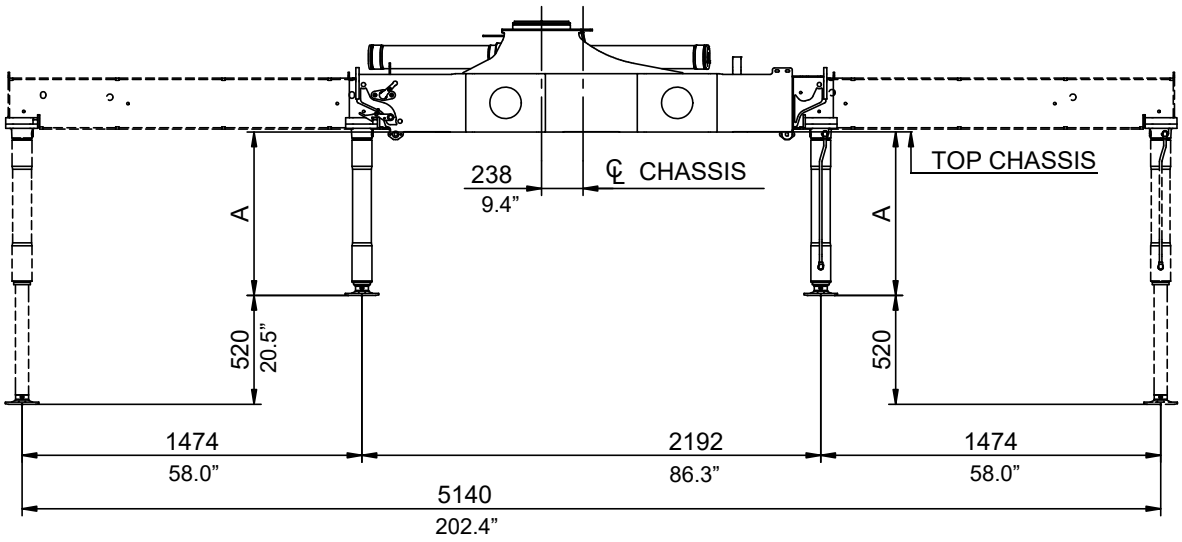


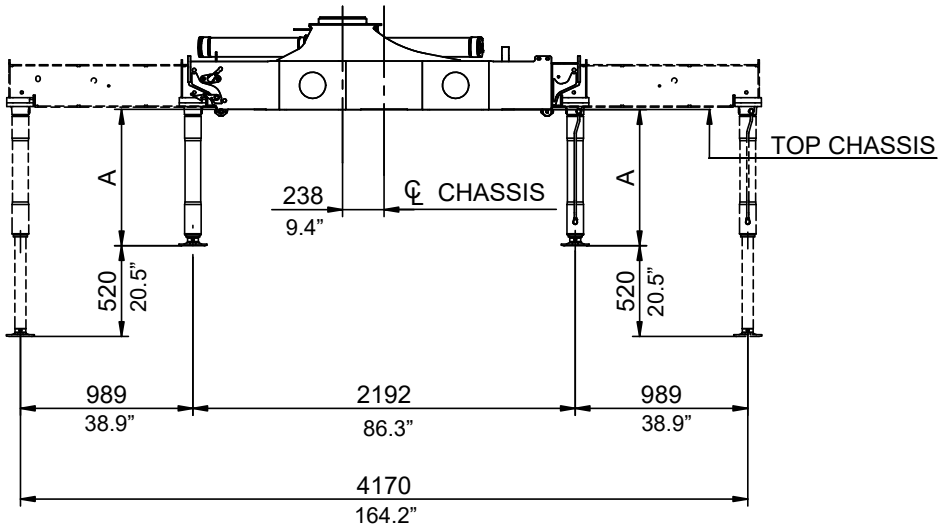
1030 MCS - Lifting Height at Column

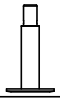
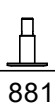
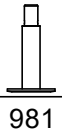


	Feet		Meters
	H1		**H1**
K1	9.6'	K1	2,94m
K2	9.3'	K2	2,84m
K3	9.0'	K3	2,74m
K4	8.7'	K4	2,64m
K5	8.3'	K5	2,54m

1030 MCS - Fixed Stabilizer Legs

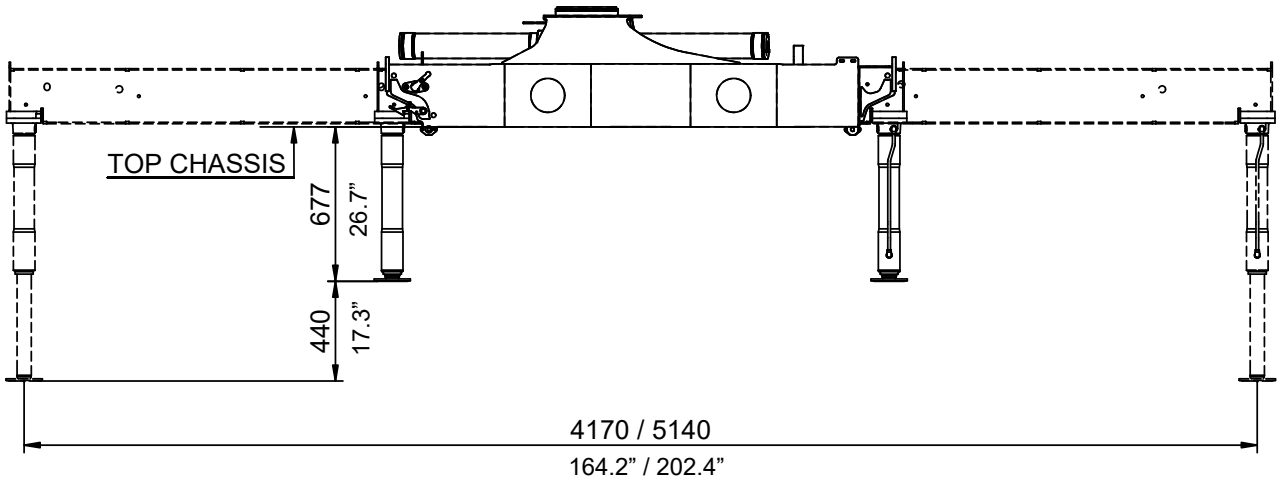


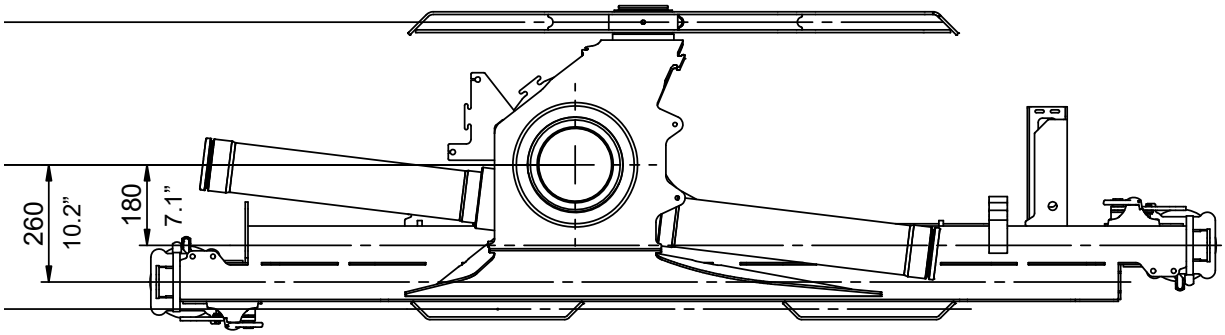


	Inches				Millimeters		
							
A	30.7”	34.7”	38.6”	**A**	781	881	981

1030 MCS - Fixed Stabilizer Legs (continued)

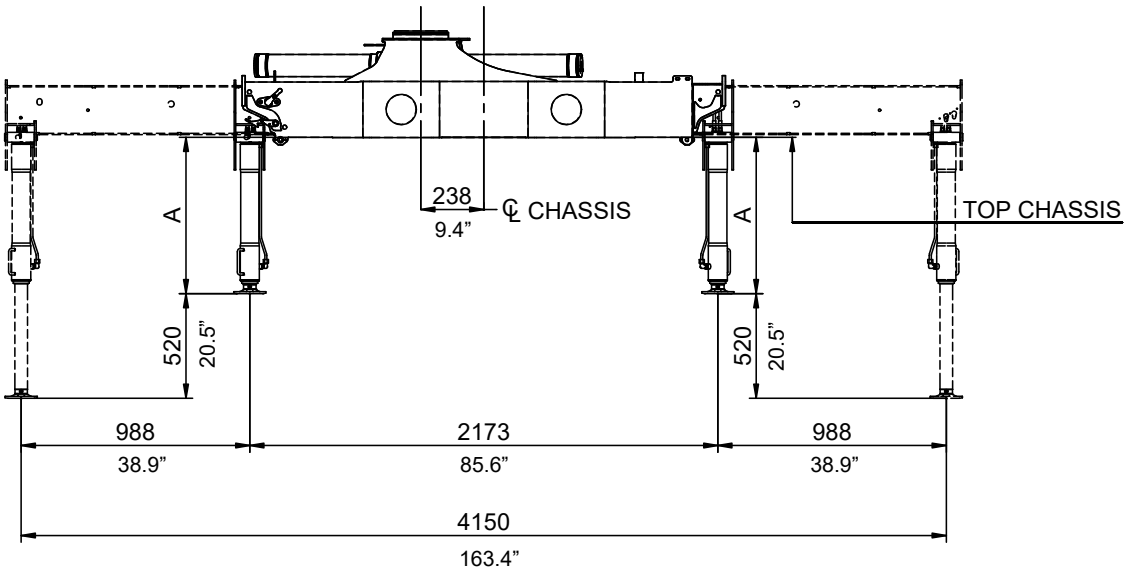
Stabilizer cylinder, C80-440

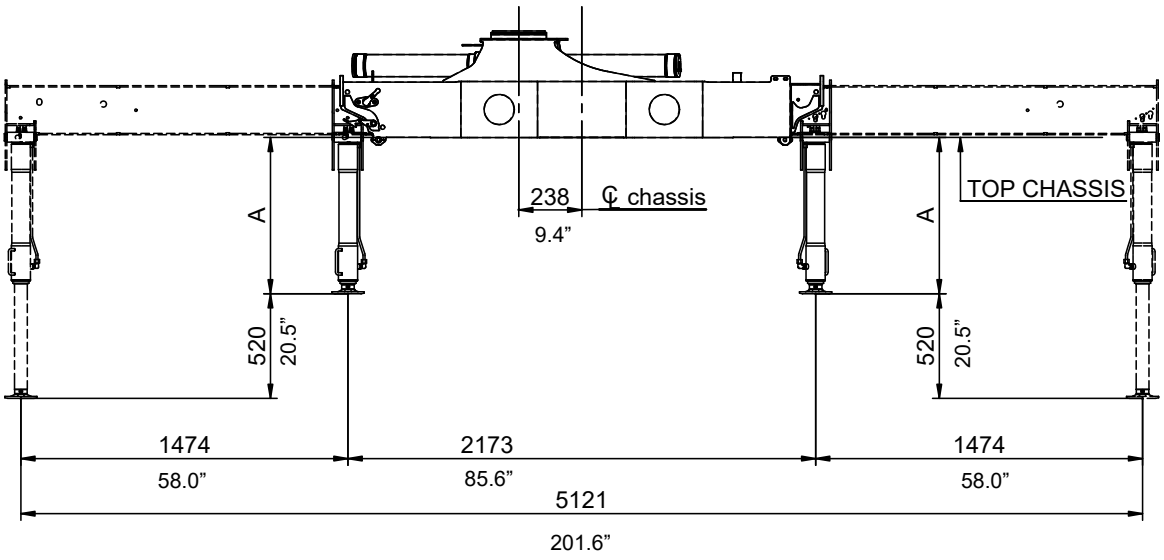




1030 MCS - Swing-Up Stabilizer Legs, Manual

Type SR 30°/60°

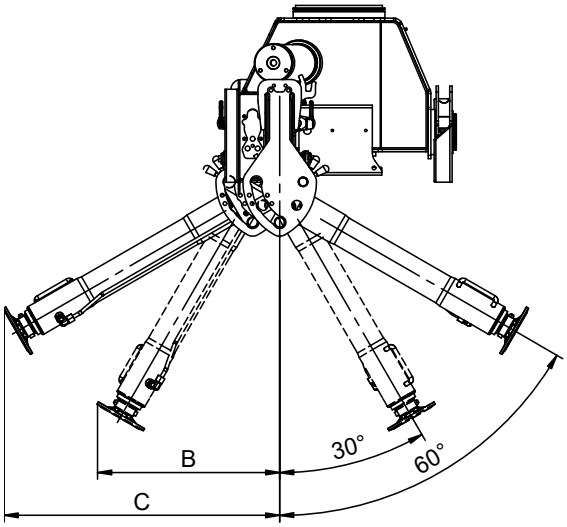


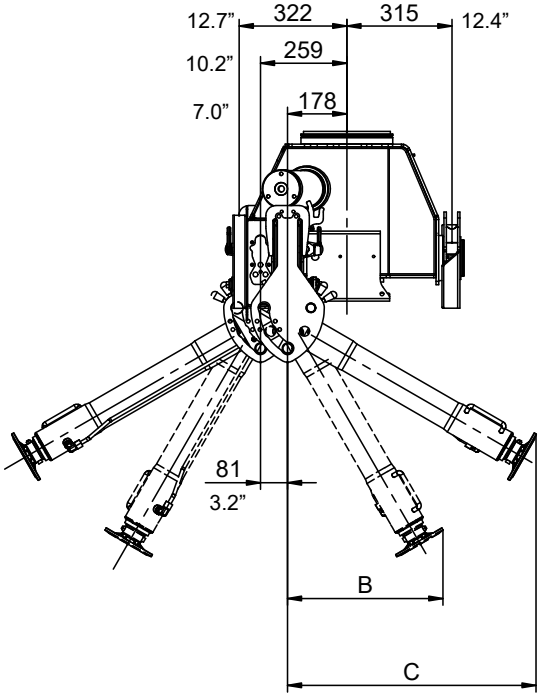


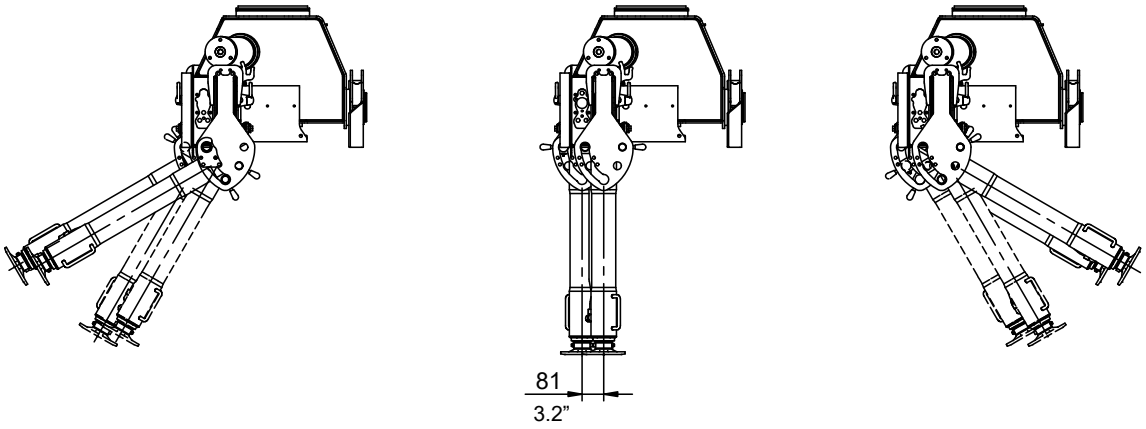
	Inches				Millimeters		
A	30.5”	34.4”	38.4”	A	775	875	975

1030 MCS - Swing-Up Stabilizer Legs, Manual

Type SR 30°/60°





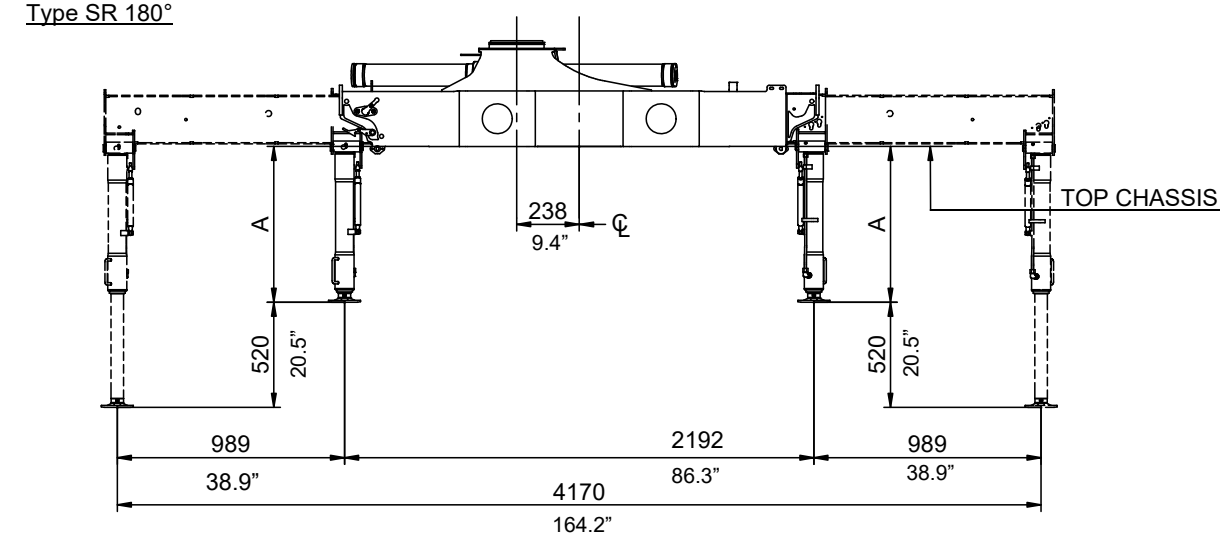


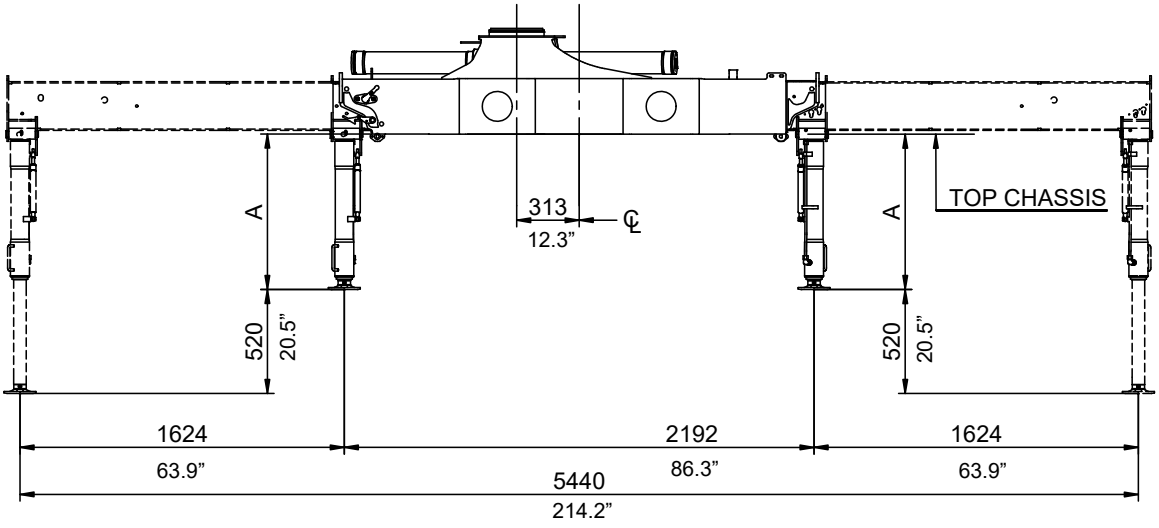
Inches

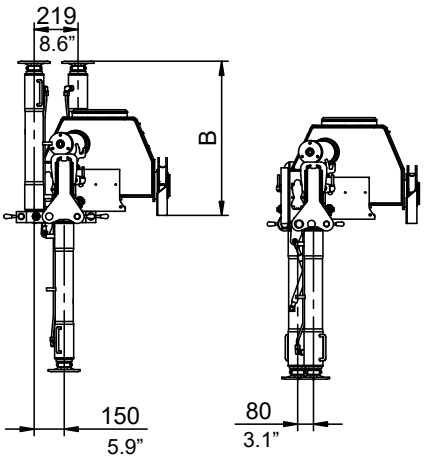
				Millimeters			
B	18.3	20.3	22.2	B	465	515	565
C	29.3	32.7	36.1	C	745	831	918

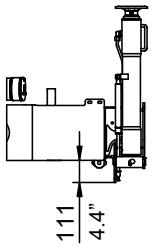
1030 MCS - Dimension Sketch, Swing-Up Stabilizer Legs, Manual

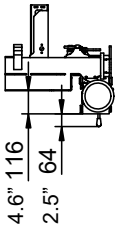
Type SR 180°











Inches

A	30.9	34.8	38.8
B	30.5	34.4	38.4

Millimeters

A	785	885	985
B	775	875	975

1030 MCS - Technical Data, Winch

Performance (at 2176 lb):	Unit	1,5T winch
Max. wire pull – 1st layer	lb	3307
Max. wire pull – 2nd layer	lb	3020
Max. wire pull – 3rd layer	lb	2778
Max. wire pull – 4th layer	lb	2579

Wire speed (at 10.6 ft / min.):	Unit	1,5T winch
Max. wire speed – 1st layer	ft/min	72.1
Max. wire speed – 2nd layer	ft/min	78.7
Max. wire speed – 3rd layer	ft/min	85.3
Max. wire speed – 4th layer	ft/min	91.8

Weights:	Unit	1,5T winch
Tare weight, winch (CE)	lb	143
Fixed parts (valve section, brackets, hoses etc.)	lb	110
Wire Ø10 x 164 ft	lb	66
Spare parts, single snatch block	lb	66
Spare parts, double snatch block	lb	88

1030 MCS - Technical Data, Winch Metric

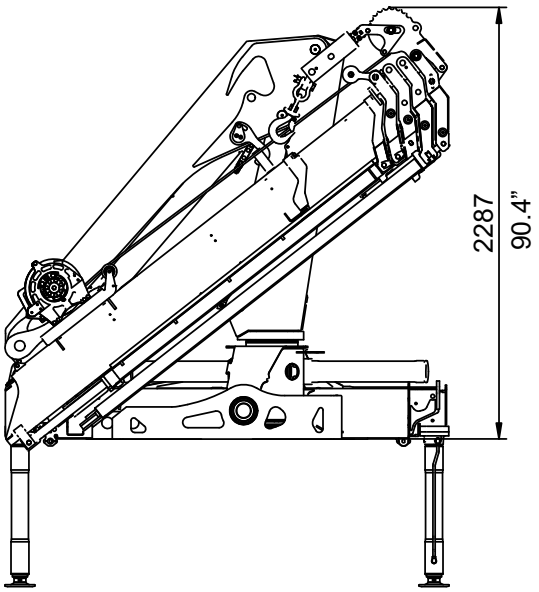
Performance (at 150 bar):	Unit	1,5T winch
Max. wire pull – 1st layer	kg	1500
Max. wire pull – 2nd layer	kg	1370
Max. wire pull – 3rd layer	kg	1260
Max. wire pull – 4th layer	kg	1170

Wire speed (at 40 l/min.):	Unit	1,5T winch
Max. wire speed – 1st layer	m/min	22
Max. wire speed – 2nd layer	m/min	24
Max. wire speed – 3rd layer	m/min	26
Max. wire speed – 4th layer	m/min	28

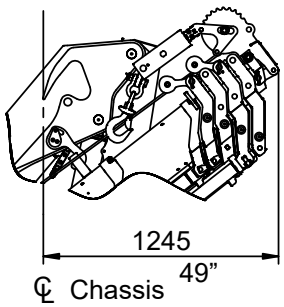
Weights:	Unit	1,5T winch
Tare weight, winch (CE)	kg	65
Fixed parts (valve section, brackets, hoses etc.)	kg	50
Wire Ø10 x 50 m	kg	30
Spare parts, single snatch block	kg	30
Spare parts, double snatch block	kg	40

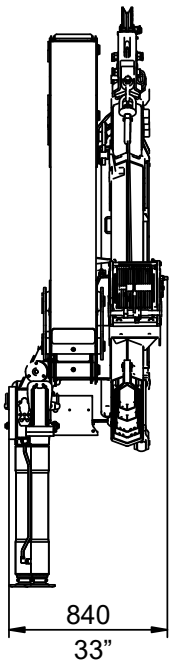
1030 MCS - Dimension Sketch, Winch

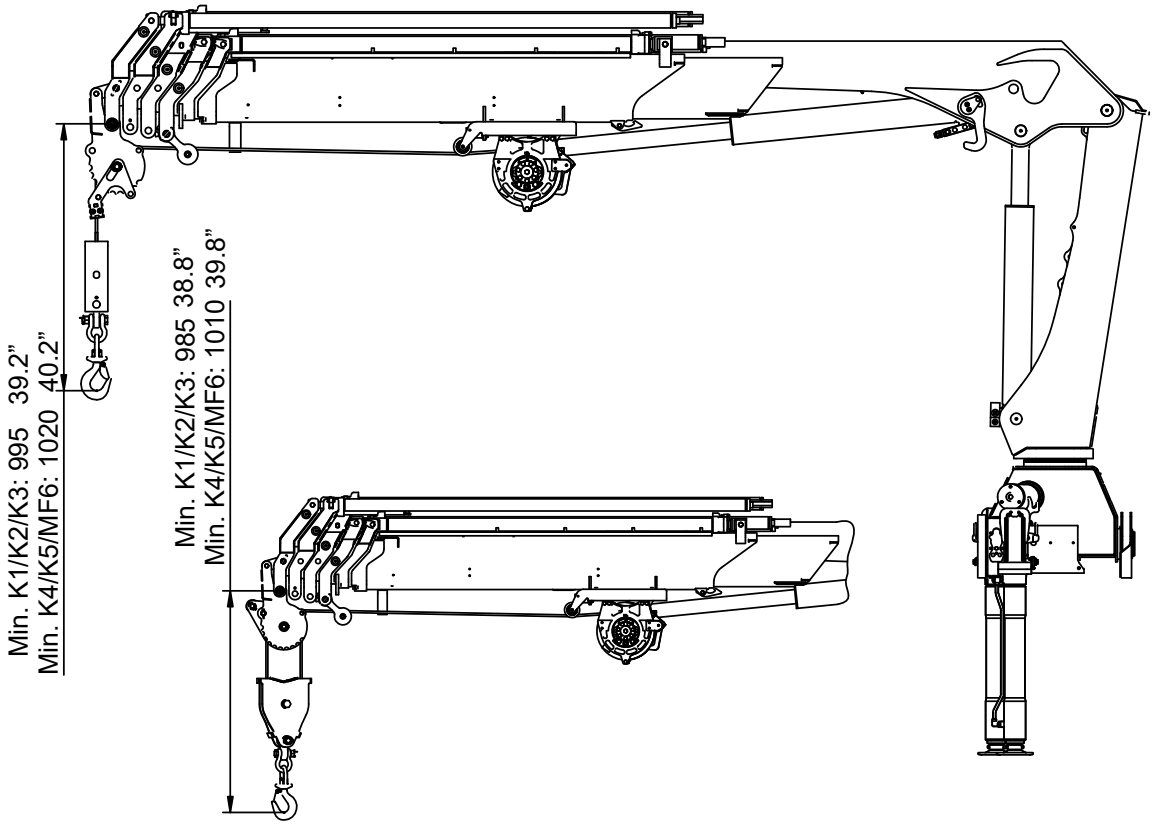
K5 armsystem.



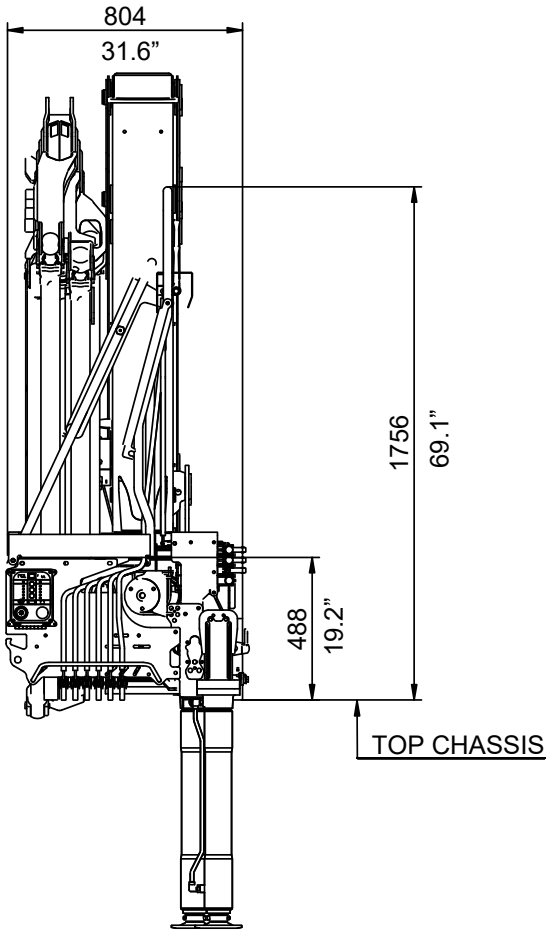
K5/MF6 armsystem.

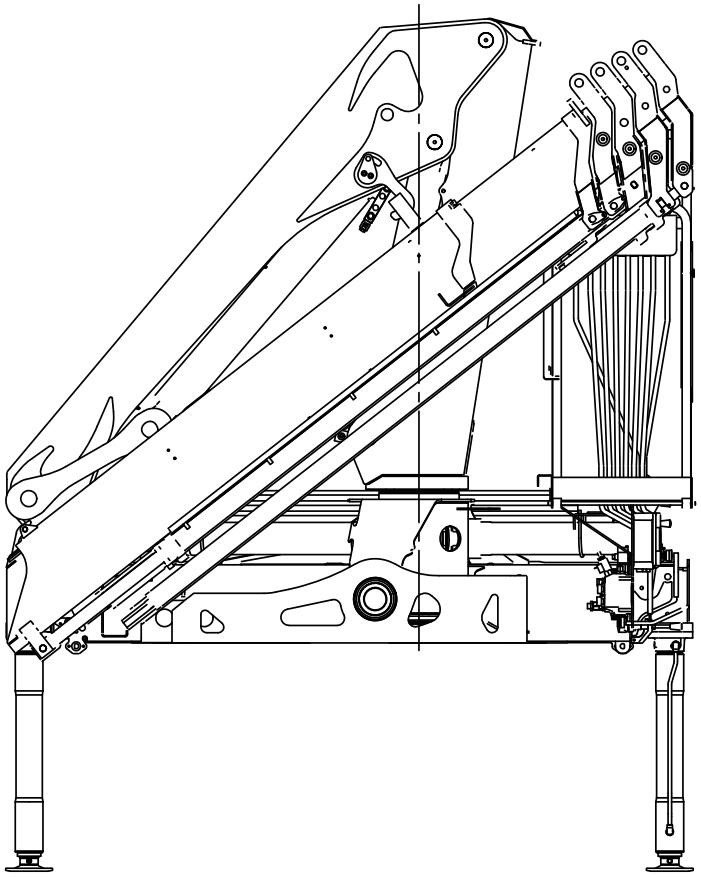




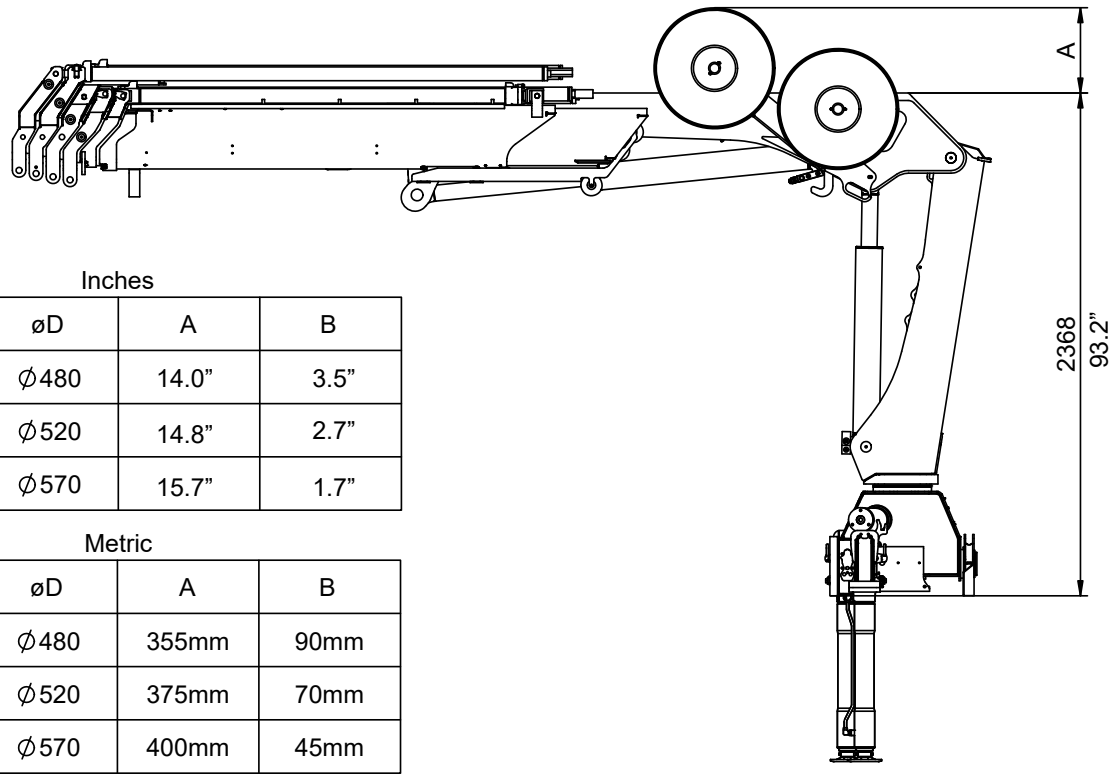


1030 MCS - Dimension Sketch, Stand-Up Platform (STD.)





1030 MCS - Dimension Sketch, Internal Hose Routing

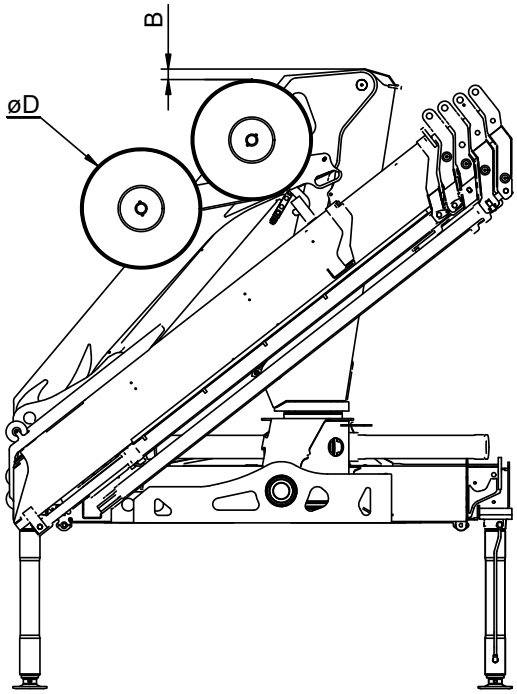


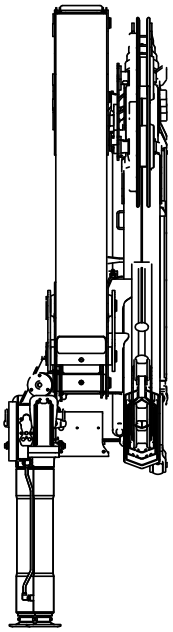
Inches

	øD	A	B
K1, K2, K3	∅480	14.0”	3.5”
K4	∅520	14.8”	2.7”
K5	∅570	15.7”	1.7”

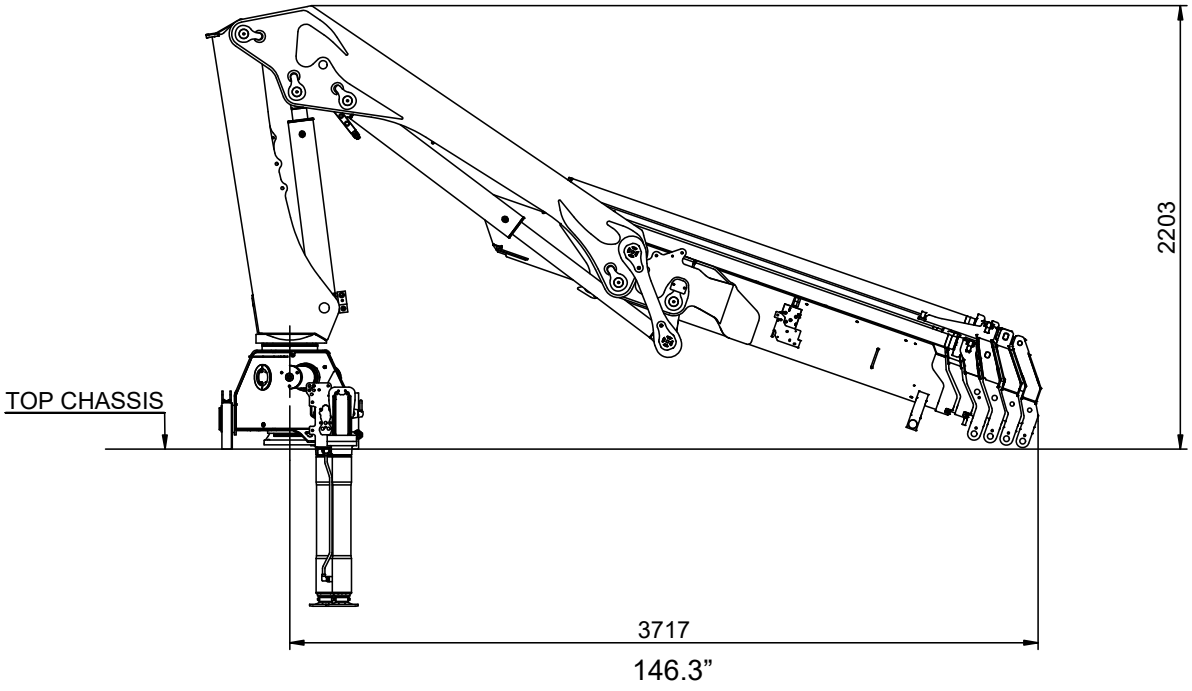
Metric

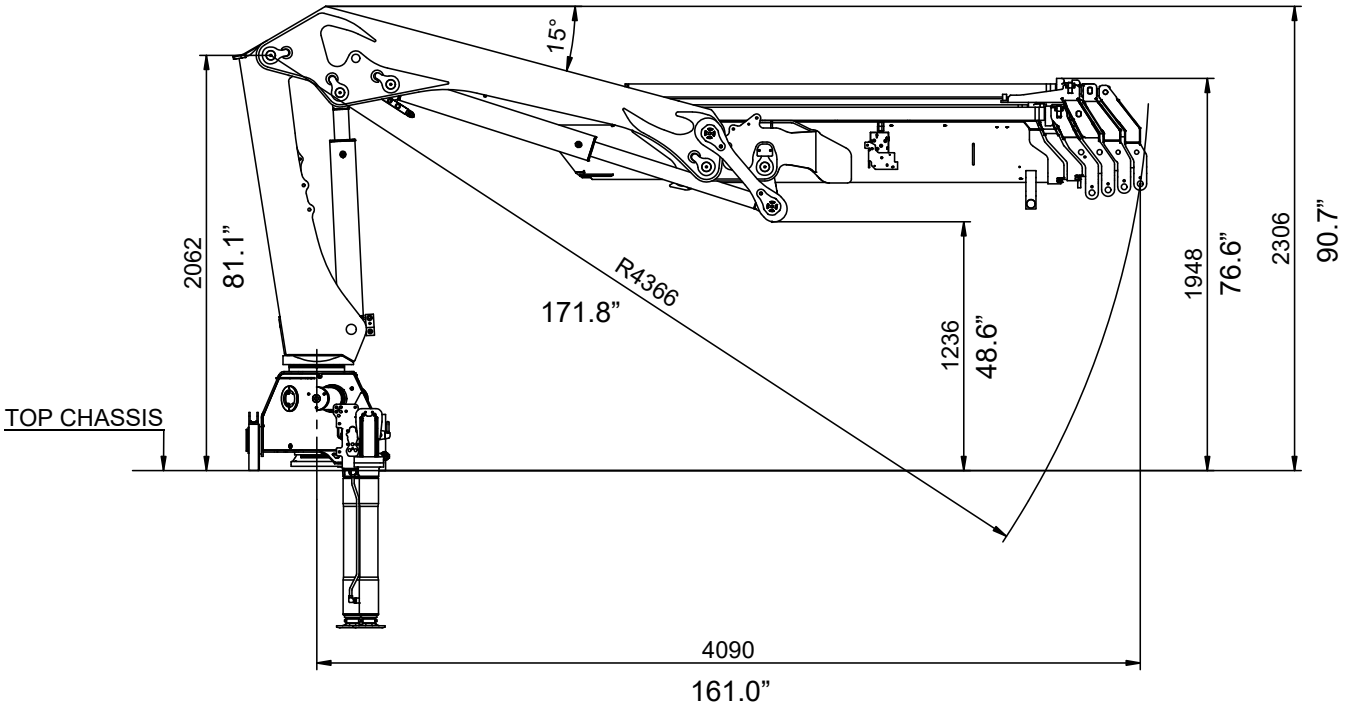
	øD	A	B
K1, K2, K3	∅480	355mm	90mm
K4	∅520	375mm	70mm
K5	∅570	400mm	45mm





1030 MCS - Stowed In Truck Body



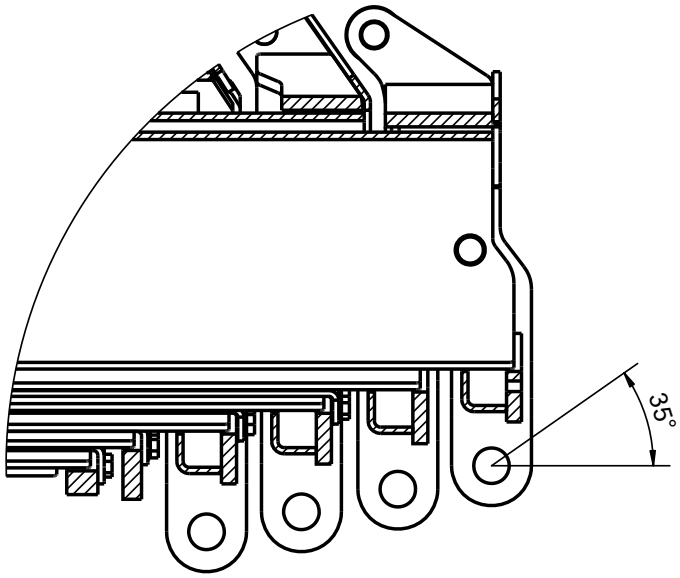


1030 MCS - Dimension Sketch for Connecting Link

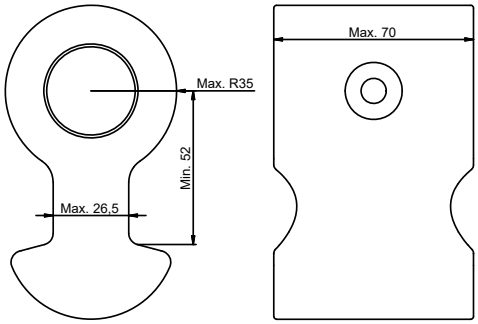
Manufacturing of connecting links for crane equipment:

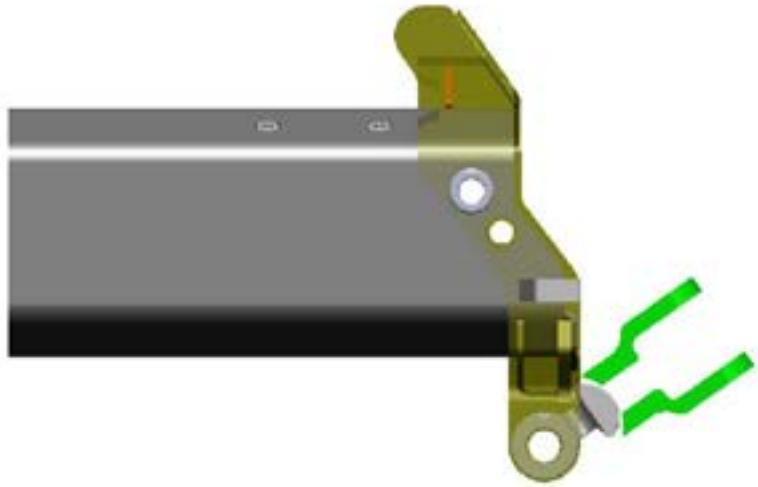
The following design considerations are recommended to ensure that the connecting link can swing sufficiently when using the equipment connected and when stowing in truck body and/or folding.

In general, we recommend that the connecting link can move freely in an angle of minimum 35° in both directions in relation to the longitudinal direction of the jib extension. This is to minimize the risk of damage to the hook suspension when placing crane equipment in the truck body.

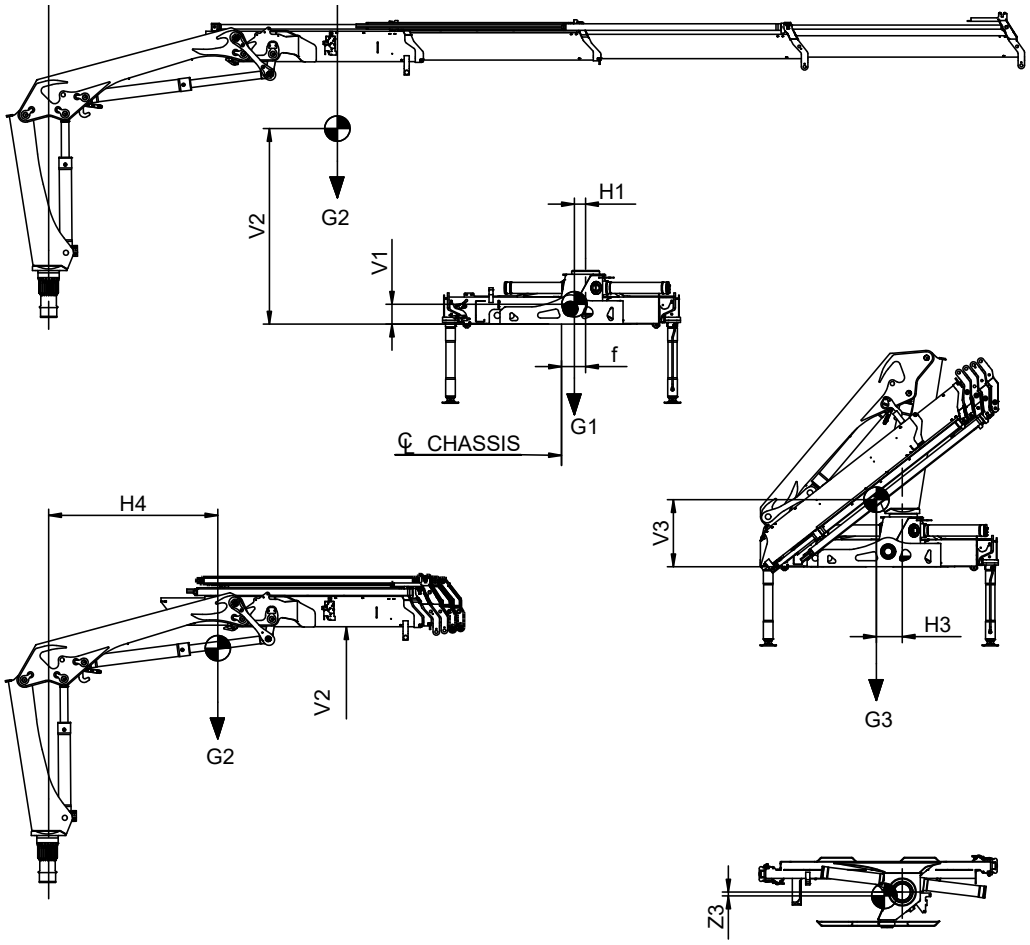


Recommended dimensions for connecting link





1030 MCS - Center of Gravity



1030	Inches									lb		
	V1	V2	V3	H1	H2	H3	H4	Z3	f	G1	G2	G3
K1	7.7”	72.0”	23.7”	4.3”	60.8”	10.6”	52.1”	0	9.3”	1091	1411	2502
K2	7.7”	74.2”	24.9”	4.3”	84.6”	10.4”	59.6”	0.91”	9.3”	1091	1631	2723
K3	7.7”	75.9”	26.0”	4.3”	112.2”	10.0”	65.7”	1.5”	9.3”	1091	1852	2943
K4	7.7”	77.1”	27.0”	4.3”	140.1”	9.2”	70.4”	2.2”	9.3”	1091	2050	3142
K5	7.7”	77.9”	27.7”	4.3”	167.1	8.9”	74.2”	2.6”	9.3”	1091	2227	3318

Metric

1030	[mm]									[Kg]		
	V1	V2	V3	H1	H2	H3	H4	Z3	f	G1	G2	G3
K1	196	1830	604	110	1545	270	1325	0	238	495	640	1135
K2	196	1885	633	110	2150	265	1515	23	238	495	740	1235
K3	196	1930	662	110	2850	255	1670	39	238	495	840	1335
K4	196	1960	688	110	3560	236	1790	57	238	495	930	1425
K5	196	1980	704	110	4245	228	1885	66	238	495	1010	1505

IOWA MOLD TOOLING CO., INC.

P.O. Box 189 Garner, IA 50438
Tel: 641.923.3711
Fax: 641.923.2424
www.imt.com

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