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Manual # 99906439

1610 / 1620 RCS Technical Specifications

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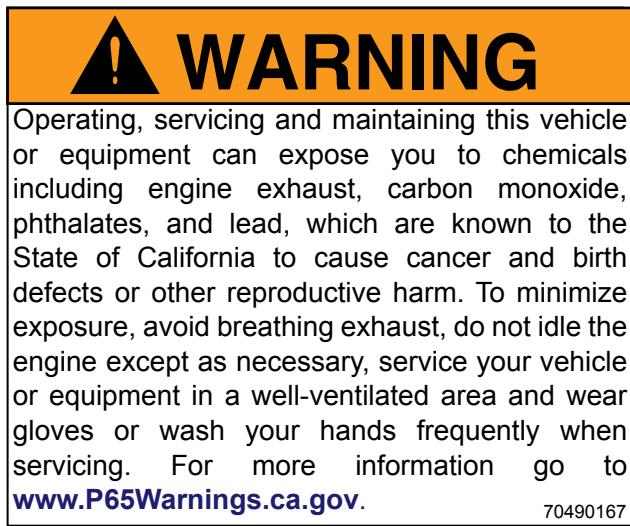


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1610 - RCS Technical Specifications

Section - 1

1610 - RCS K1-K6, Specifications

Performance	Unit	K1	K2	K3	K4	K5	K6
Loading group (EN12999)		H1/B3	H1/B3	H1/B3	H1/B3	H1/B3	H1/B3
Load moment	ft-lb	110665	107048	103432	100539	98369	95476
Hydraulic reach	ft	20'8"	27'5"	34'6"	42'0"	49'3"	56'89"
Hydraulic telescopic movement	ft	6'3"	12'11"	19'9"	27'0"	34'1"	41'3"
Lifting capacity, hydraulic	lb-ft	7828 - 14'0"	7541 - 14'2"	7188 - 14'5"	6858 - 14'9"	6571 - 15'2"	6306 - 15'2"
	lb-ft	5424 - 20'4"	5116 - 20'8"	4829 - 20'9"	4520 - 21'0"	4278 - 21'3"	4057 - 21'6"
	lb-ft		3859 - 27'1"	3572 - 27'4"	3285 - 27'7"	3043 - 27'10"	2822 - 28'1"
	lb-ft			2822 - 34'3"	2536 - 34'5"	2315 - 34'8"	2095 - 34'11"
	lb-ft				2073 - 41'8"	1830 - 41'11"	1632 - 42'2"
	lb-ft					1544 - 49'0"	1345 - 49'2"
	lb-ft						1169 - 56'5"
Lifting capacity, manual extensions	lb-ft		2933- 34'1"	2183 - 41'6"	1632 - 49'5"	1257 - 56'5"	948 - 64'2"
Slewing torque, gross	°/s	12989	12989	12989	12989	12989	12989
Slewing angle	°	400	400	400	400	400	400
Max. heel at max. load moment	°	5	5	5	5	5	5
Slewing speed	°/s	24	24	24	24	24	24

Dimensions	Unit	K1	K2	K3	K4	K5	K6
Height above chassis	ft	7'4"	7'4"	7'4"	7'4"	7'4"	7'4"
Width	ft	8'2"	8'2"	8'2"	8'2"	8'2"	8'2"
Width with extra valves (int. hose routing)	ft	8'3"	8'3"	8'3"	8'3"	8'3"	8'3"
Length, no extra valves	ft	2'8"	2'8"	2'8"	2'8"	2'8"	2'8"
Length, with extra valves (hose guides)	ft	3'1"	3'1"	3'1"	3'1"	3'1"	3'1"
Length, with extra valves (int. hose routing)	ft	2'8"	2'8"	2'8"	2'8"	2'8"	2'8"
Stabilizer spread, S1 (standard)	ft	15'1"	15'1"	15'1"	15'1"	15'1"	15'1"
Stabilizer spread, S2	ft	18'4"	18'4"	18'4"	18'4"	18'4"	18'4"
Stabilizer spread, D	ft	21'2"	21'2"	21'2"	21'2"	21'2"	21'2"

MINIMUM CHASSIS SPECS	
FRONT AXLE RATING (GAWR)	12,000 LB (5,450 KG)
REAR AXLE RATING (GAWR)	21,000 LB (9,530 KG)
RESISTANCE TO BENDING MOMENT	1,470,000 IN-LB (203,240 KG-M)

1610 - RCS K1-K6 SPECIFICATIONS - CONTINUED

Weights, basic loader	Unit	K1	K2	K3	K4	K5	K6
Standard loader 1), excl. stabilizers	lb	2889	3197	3506	3804	4068	4278
Stabilizers, S1 fixed	lb	441	441	441	441	441	441
Stabilizers, S1 swing-up	lb	452	452	452	452	452	452
Stabilizers, S1 hydr. swing-up	lb	474	474	474	474	474	474
Stabilizers, S2 fixed	lb	518	518	518	518	518	518
Stabilizers, S2 swing-up	lb	529	529	529	529	529	529
Stabilizers, S2 hydr. swing-up	lb	551	551	551	551	551	551
Stabilizers, D fixed	lb	662	662	662	662	662	662
Stabilizers, D swing-up	lb	662	662	662	662	662	662
Stabilizers, D hydr. swing-up	lb	695	695	695	695	695	695
Mounting kit, 4 bolts	lb	121	121	121	121	121	121
Mounting kit, 8 bolts	lb	132	132	132	132	132	132
Tank, excl. oil (fitted on loader)	lb	99	99	99	99	99	99
Manual extensions	lb		187	165	143	99	88
Oil in loader (stowing position)	lb	55	66	77	88	99	99

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

Weights, equipment	Unit	K1	K2	K3	K4	K5	K6
Stand-up controls (HS), std.	lb	132	132	132	132	132	132
Stand-up controls (HS), direct valve control	lb	154	154	154	154	154	154
Top seat (TS)	lb	198	198	198	198	198	198
Top seat, ladder	lb	44	44	44	44	44	44
1 extra valve, hose guides	lb	88	121	143	165	187	209
1 extra valve, int. hose routing	lb	165	165	165	176	176	187
2 extra valves, hose guides	lb	132	165	198	232	265	298
2 extra valves, int. hose routing	lb	287	287	287	309	320	331
Winch (1.5 t), single snatch block	lb	386	386	386	386	386	397
Winch (1.5 t), double snatch block	lb	375	375	375	375	375	386
Winch (2.5 t), single snatch block	lb	441	441	441	441	441	452
Winch (2.5 t), double snatch block	lb	430	430	430	430	430	441
High-pressure filter	lb	15	15	15	15	15	15
Oil cooler	lb	55	55	55	55	55	55

1610 - RCS K1-K6 SPECIFICATIONS - CONTINUED

Max. Load on stabilizers (per stabilizer cylinder)	Unit	K1	K2	K3	K4	K5	K6
S1, fixed	Lbf	19	19	19	19	19	19
S1, swing-up	Lbf	19	19	19	19	19	19
S1, hydr. swing-up	Lbf	19	19	19	19	19	19
S2, fixed	Lbf	19	19	19	19	19	19
S2, swing-up	Lbf	19	19	19	19	19	19
S2, hydr. swing-up	Lbf	19	19	19	19	19	19
D, fixed	Lbf	15	15	15	15	15	15
D, swing-up	Lbf	15	15	15	15	15	15
D, hydr. swing-up	Lbf	15	15	15	15	15	15

Power consumption (oil capacity)	Unit	K1	K2	K3	K4	K5	K6
Working pressure	PSI	5294	5294	5294	5294	5294	5294
Tank capacity (fitted on loader)	gal	24	24	24	24	24	24
Max. pump performance, Hydrocontrol, 1-circuit	gpm	11	11	11	11	11	11
Max. pump performance, Danfoss fixed flow	gpm	18	18	18	18	18	18
Max. pump performance, Danfoss variable	gpm	26	26	26	26	26	26

1610 RCS K1-K2, Metric Specifications

Performance	Unit	K1	K2	K3	K4	K5	K6
Loading group (EN12999)		H1/B3	H1/B3	H1/B3	H1/B3	H1/B3	H1/B3
Load moment	tm	15.3	14.8	14.3	13.9	13.6	13.2
Hydraulic reach	m	6.3	8.4	10.5	12.8	15	17.3
Hydraulic telescopic movement	mm	1930	3940	6040	8230	10390	12580
Lifting capacity, hydraulic	kg-m	3550 - 4.3	3420 - 4.3	3260 - 4.4	3110 - 4.5	2980 - 4.6	2860 - 4.6
	kg-m	2460 - 6.2	2320 - 6.3	2190 - 6.3	2050 - 6.4	1940 - 6.5	1840 - 6.6
	kg-m		1750 - 8.3	1620 - 8.3	1490 - 8.4	1380 - 8.5	1280 - 8.6
	kg-m			1280 - 10.4	1150 - 10.5	1050 - 10.6	950 - 10.7
	kg-m				940 - 12.7	830 - 12.8	740 - 12.9
	kg-m					700 - 14.9	610 - 15.0
	kg-m						530 - 17.2
Lifting capacity, manual extensions	kg-m		1330 - 10.4	990 - 12.7	740 - 15.1	570 - 17.2	430 - 19.6
Slewing torque, gross	kNm	17.6	17.6	17.6	17.6	17.6	17.6
Slewing angle	°	400	400	400	400	400	400
Max. heel at max. load moment	°	5	5	5	5	5	5
Slewing speed	°/s	24	24	24	24	24	24

Dimensions	Unit	K1	K2	K3	K4	K5	K6
Height above chassis	mm	2250	2250	2250	2250	2250	2250
Width	mm	2500	2500	2500	2500	2500	2500
Width with extra valves (int. hose routing)	mm	2535	2535	2535	2535	2535	2535
Length, no extra valves	mm	830	830	830	830	830	830
Length, with extra valves (hose guides)	mm	950	950	950	950	950	950
Length, with extra valves (int. hose routing)	mm	830	830	830	830	830	830
Stabilizer spread, S1 (standard)	mm	4615	4615	4615	4615	4615	4615
Stabilizer spread, S2	mm	5590	5590	5590	5590	5590	5590
Stabilizer spread, D	mm	6470	6470	6470	6470	6470	6470

1610 - RCS K1-K6 METRIC SPECIFICATIONS - CONTINUED

Weights, basic loader	Unit	K1	K2	K3	K4	K5	K6
Standard loader 1), excl. stabilizers	kg	1310	1450	1590	1725	1845	1940
Stabilizers, S1 fixed	kg	200	200	200	200	200	200
Stabilizers, S1 swing-up	kg	205	205	205	205	205	205
Stabilizers, S1 hydr. swing-up	kg	215	215	215	215	215	215
Stabilizers, S2 fixed	kg	235	235	235	235	235	235
Stabilizers, S2 swing-up	kg	240	240	240	240	240	240
Stabilizers, S2 hydr. swing-up	kg	250	250	250	250	250	250
Stabilizers, D fixed	kg	300	300	300	300	300	300
Stabilizers, D swing-up	kg	300	300	300	300	300	300
Stabilizers, D hydr. swing-up	kg	315	315	315	315	315	315
Mounting kit, 4 bolts	kg	55	55	55	55	55	55
Mounting kit, 8 bolts	kg	60	60	60	60	60	60
Tank, excl. oil (fitted on loader)	kg	45	45	45	45	45	45
Manual extensions	kg		85	75	65	45	40
Oil in loader (stowing position)	kg	25	30	35	40	45	45

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

Weights, equipment	Unit	K1	K2	K3	K4	K5	K6
Stand-up controls (HS), std.	kg	60	60	60	60	60	60
Stand-up controls (HS), direct valve control	kg	70	70	70	70	70	70
Top seat (TS)	kg	90	90	90	90	90	90
Top seat, ladder	kg	20	20	20	20	20	20
1 extra valve, hose guides	kg	40	55	65	75	85	95
1 extra valve, int. hose routing	kg	75	75	75	80	80	85
2 extra valves, hose guides	kg	60	75	90	105	120	135
2 extra valves, int. hose routing	kg	130	130	130	140	145	150
Winch (1.5 t), single snatch block	kg	175	175	175	175	175	180
Winch (1.5 t), double snatch block	kg	170	170	170	170	170	175
Winch (2.5 t), single snatch block	kg	200	200	200	200	200	205
Winch (2.5 t), double snatch block	kg	195	195	195	195	195	200
High-pressure filter	kg	7	7	7	7	7	7
Oil cooler	kg	25	25	25	25	25	25

1610 - RCS K1-K6 METRIC SPECIFICATIONS - CONTINUED

Max. Load on stabilizers (per stabilizer cylinder)	Unit	K1	K2	K3	K4	K5	K6
S1, fixed	kN	85	85	85	85	85	85
S1, swing-up	kN	85	85	85	85	85	85
S1, hydr. swing-up	kN	85	85	85	85	85	85
S2, fixed	kN	85	85	85	85	85	85
S2, swing-up	kN	85	85	85	85	85	85
S2, hydr. swing-up	kN	85	85	85	85	85	85
D, fixed	kN	68	68	68	68	68	68
D, swing-up	kN	68	68	68	68	68	68
D, hydr. swing-up	kN	68	68	68	68	68	68

Power consumption (oil capacity)	Unit	K1	K2	K3	K4	K5	K6
Working pressure	Bar	365	365	365	365	365	365
Tank capacity (fitted on loader)	L	90	90	90	90	90	90
Max. pump performance, Hydrocontrol, 1-circuit	L/min	45	45	45	45	45	45
Max. pump performance, Danfoss fixed flow	L/min	70	70	70	70	70	70
Max. pump performance, Danfoss variable	L/min	100	100	100	100	100	100

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1610 - RCS - Load Capacity Charts

Section - 2

1610 - RCS, Lifting Capacity Chart, K1

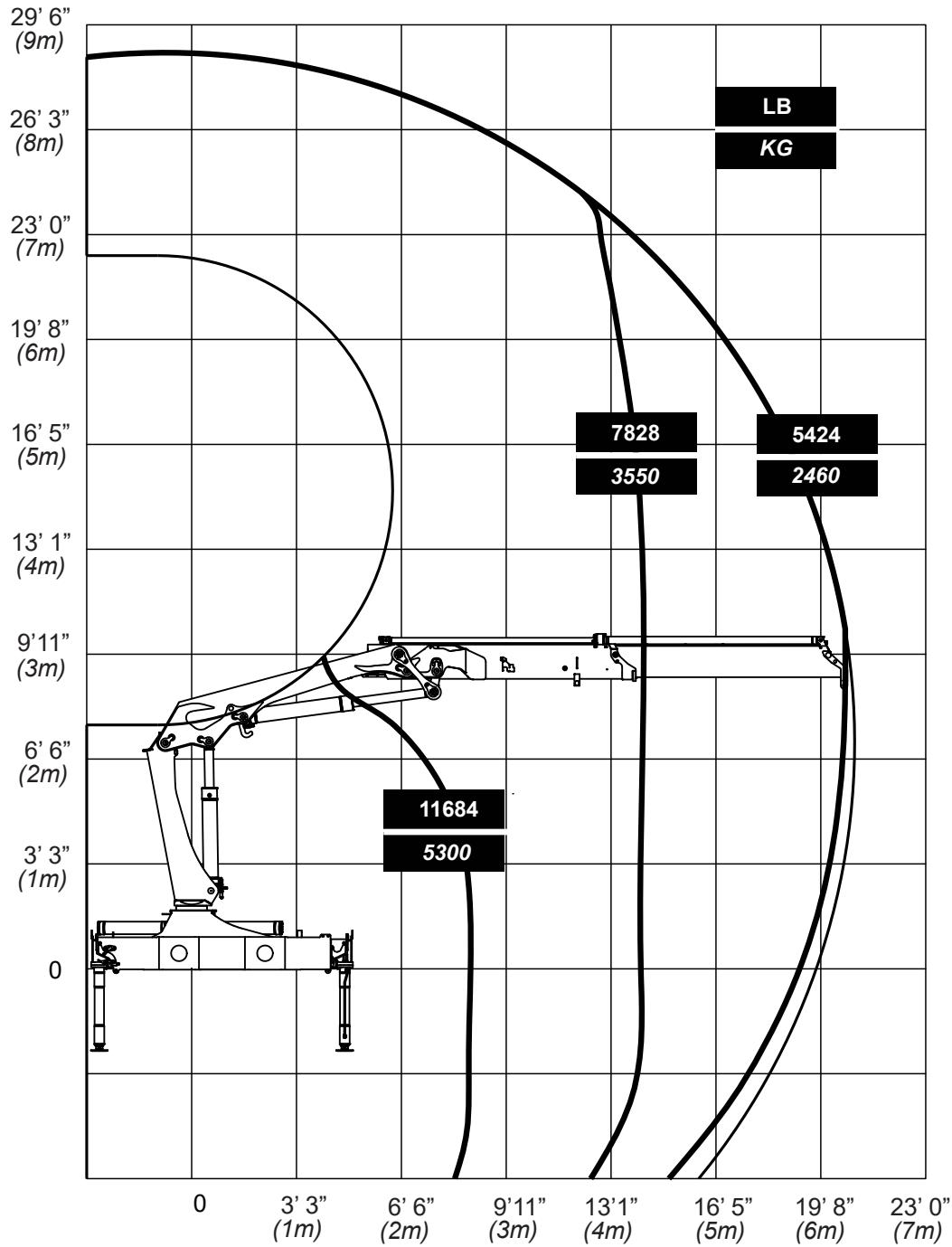
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MATERIAL HANDLING SYSTEMS

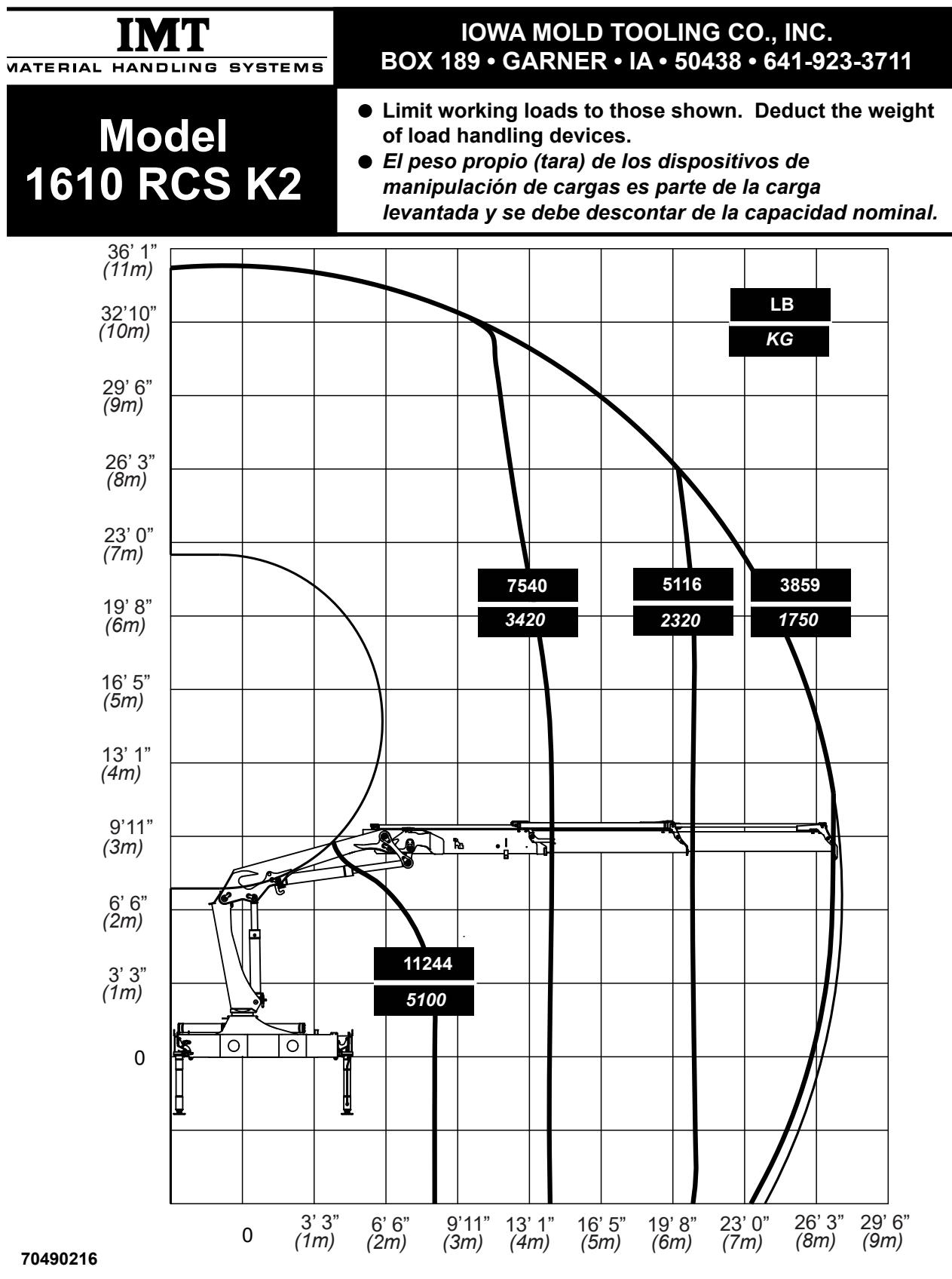
Model 1610 RCS K1

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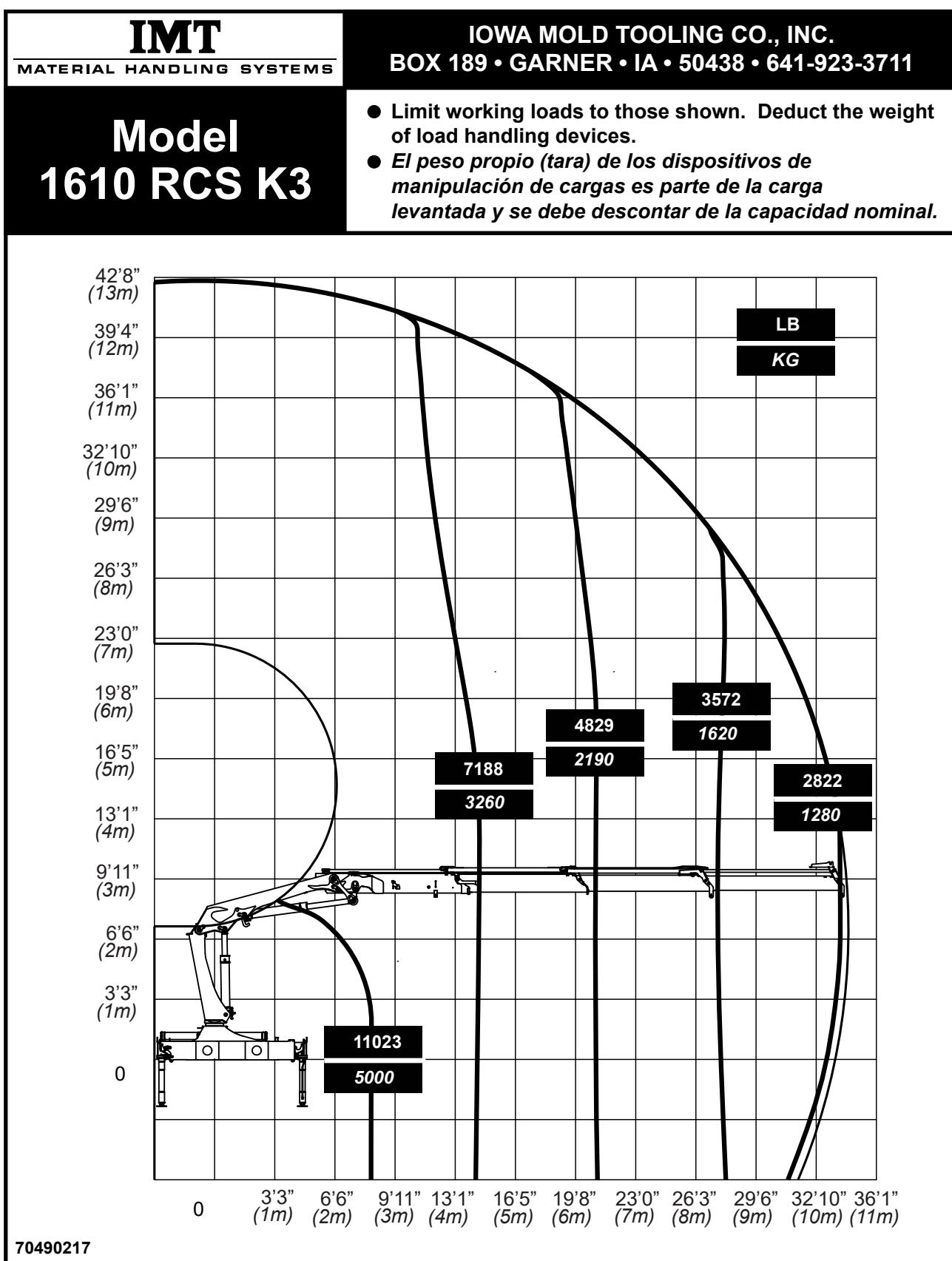
- Limit working loads to those shown. Deduct the weight of load handling devices.
- *El peso propio (tara) de los dispositivos de manipulación de cargas es parte de la carga levantada y se debe descontar de la capacidad nominal.*



1610 - RCS, Lifting Capacity Chart, K2



1610 - RCS, Lifting Capacity Chart, K3



1610 - RCS, Lifting Capacity Chart, K4

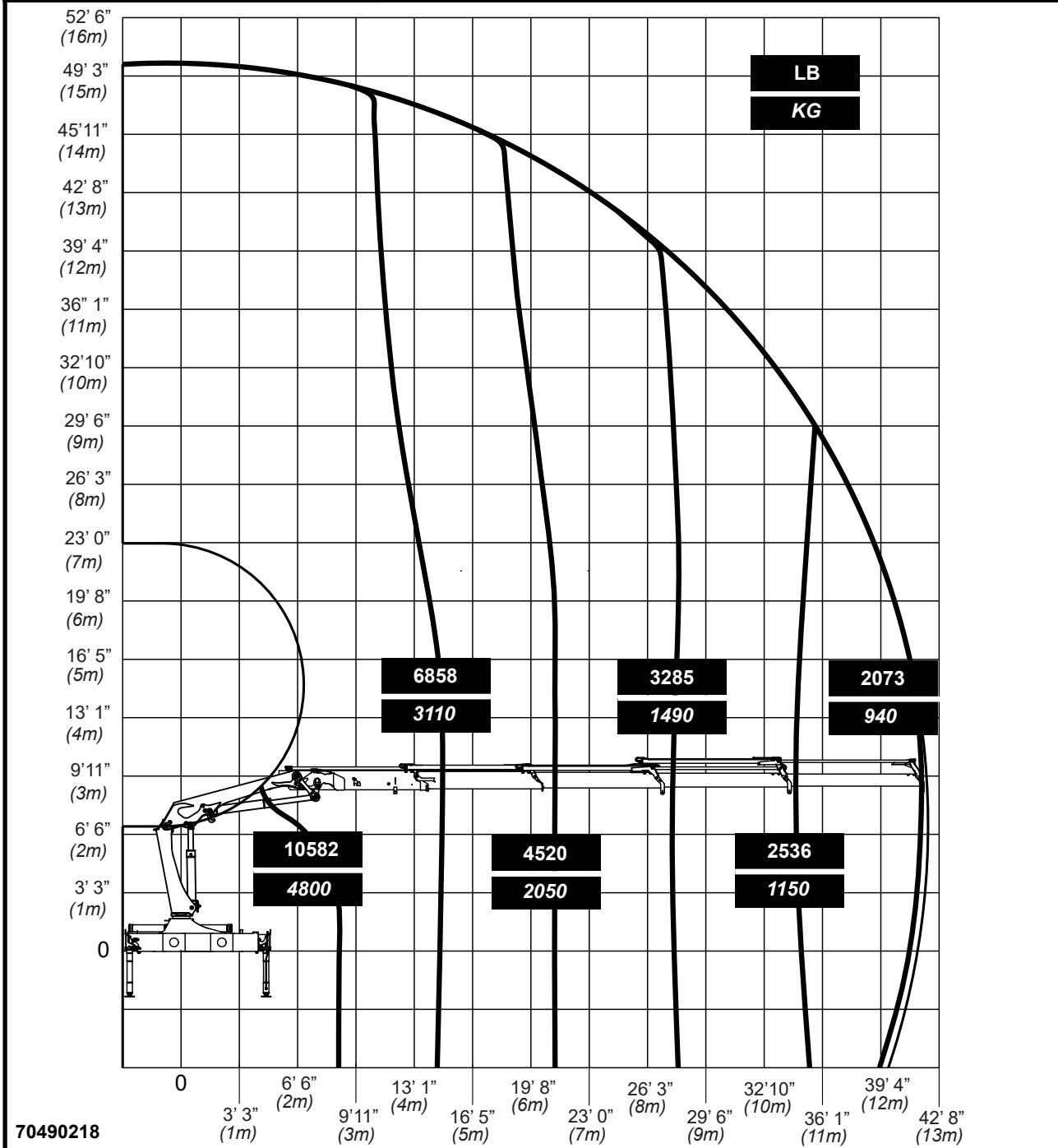


MATERIAL HANDLING SYSTEMS

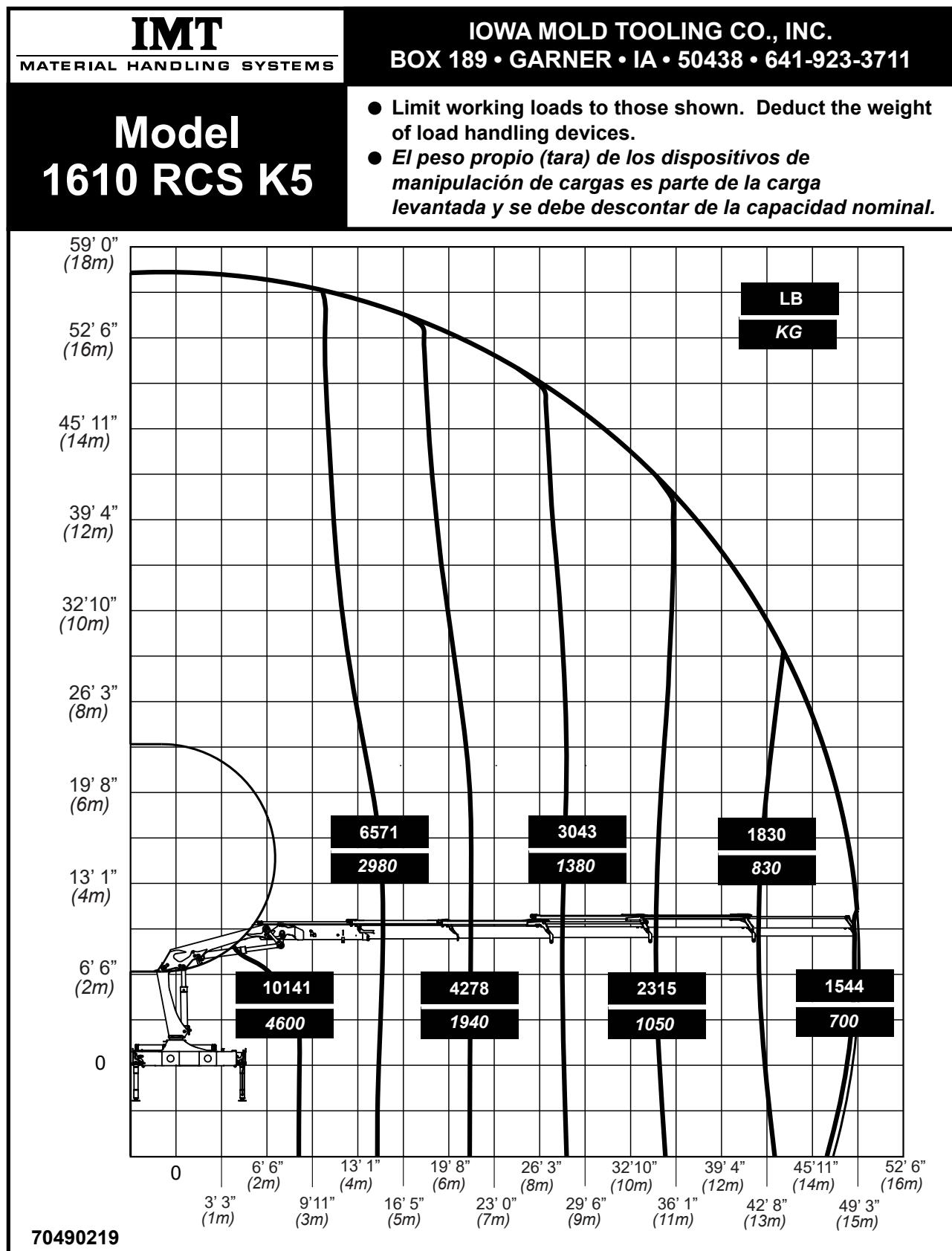
Model 1610 RCS K4

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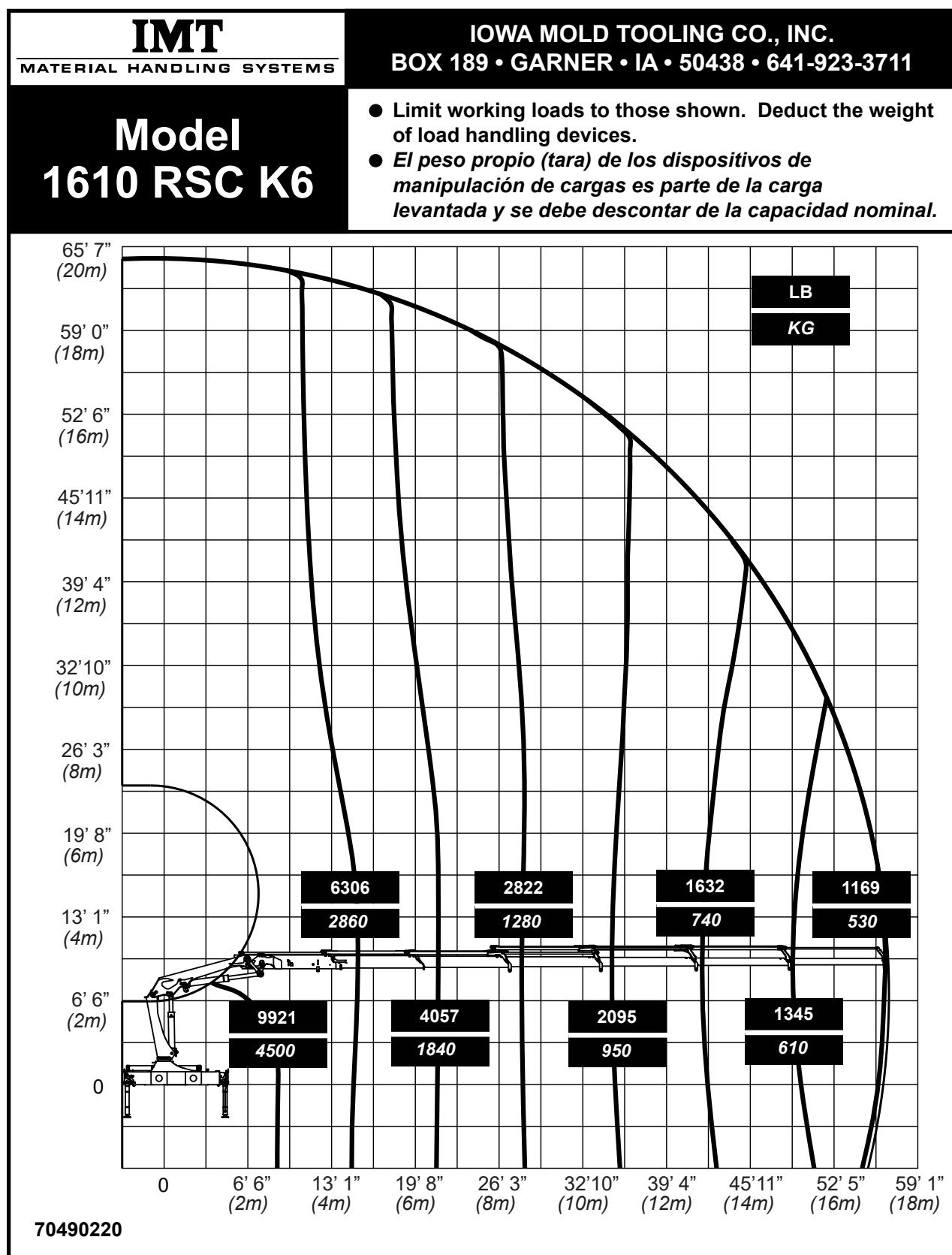
- Limit working loads to those shown. Deduct the weight of load handling devices.
- *El peso propio (tara) de los dispositivos de manipulación de cargas es parte de la carga levantada y se debe descontar de la capacidad nominal.*



1610 - RCS, Lifting Capacity Chart, K5

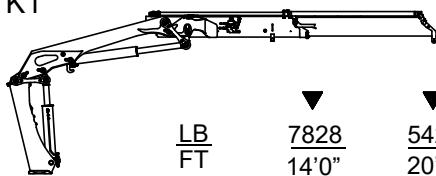


1610 - RCS, Lifting Capacity Chart, K6



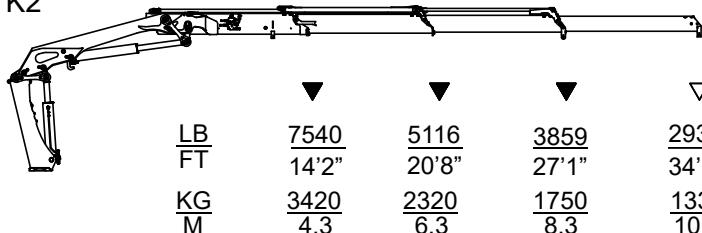
1610 - RCS, Lifting Capacity, K1-K6

K1



	<u>LB</u>	<u>FT</u>	<u>KG</u>	<u>M</u>
	7828	14'0"	3550	4,3
		5424		20'4"

K2



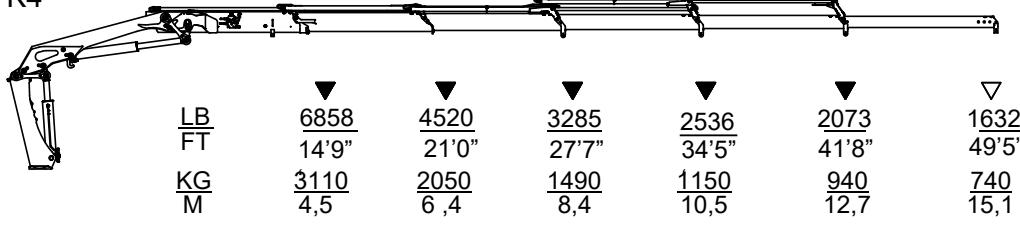
	<u>LB</u>	<u>FT</u>	<u>KG</u>	<u>M</u>
	7540	14'2"	3420	4,3
		5116		20'8"
		3859		27'1"
		2933		34'1"

K3



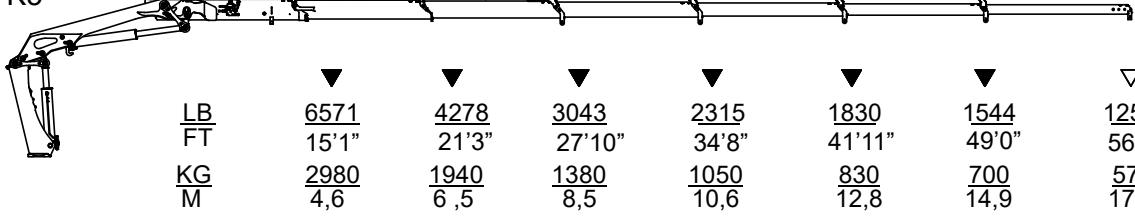
	<u>LB</u>	<u>FT</u>	<u>KG</u>	<u>M</u>
	7188	14'5"	3260	4,4
		4829		20'9"
		3572		27'4"
		2822		34'3"
		2183		41'6"

K4



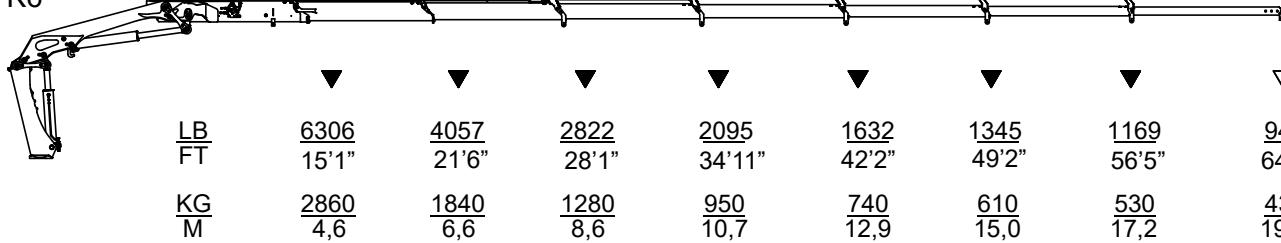
	<u>LB</u>	<u>FT</u>	<u>KG</u>	<u>M</u>
	6858	14'9"	3110	4,5
		4520		21'0"
		3285		27'7"
		2536		34'5"
		2073		41'8"
		1632		49'5"

K5



	<u>LB</u>	<u>FT</u>	<u>KG</u>	<u>M</u>
	6571	15'1"	2980	4,6
		4278		21'3"
		3043		27'10"
		2315		34'8"
		1830		41'11"
		1544		49'0"
		1257		56'5"

K6



	<u>LB</u>	<u>FT</u>	<u>KG</u>	<u>M</u>
	6306	15'1"	2860	4,6
		4057		21'6"
		2822		28'1"
		2095		34'11"
		1632		42'2"
		1345		49'2"
		1169		56'5"
		948		64'2"

▼ With Manual Extensions

▼ Without Manual Extensions

1610 RCS Hydraulics

Section - 3

1610 - RCS, Pressure setting diagram, fixed flow pump & RC

Working Pressure on Main-Relief Valve & Port- Relief Valves						
Function	Direction	Port	Port-relief valves [bar]	LS-pressure adjustment [bar]	Port-relief valves [psi]	LS-pressure adjustment [psi]
Main-relief valve			385		5584	
Slewing system	Right	A	P	180	P	2611
	Left	B	P	180	P	2611
Boom cylinder	Down	A	125	100	1813	1450
	Up	B	380	365	5511	5294
Jib cylinder	Up	A	380	365	5515	5294
	Down	B	250	200	3626	2901
Extension cylinders	Extend	A	P	300	P	4351
	Retract	B	P	300	P	4351
Rotator	Right	A	P	200	P	2901
	Left	B	P	200	P	2901
Grab	Open	A	P	250	P	3626
	Close	B	P	250	P	3626
Winch 1,5T	Lift	A	P	160	P	2321
	Lower	B	P	160	P	2321
Winch 2,5T	Lift	A	P	185	P	2683
	Lower	B	P	185	P	2683
Separate stabilizer valve		All	150		2176	

Working Pressure on Load-holding Valves			
Function	Direction	Opening pressure [bar]	Opening pressure [psi]
Slewing system	Right	185	2683
	Left	185	2683
Boom cylinder	Up	390	5656
	Down	-	-
Jib cylinder	Up	405	5874
	Down	300	4351
Extension cylinders	Retract	430	6237
	Extend	210	3046

Pressure setting for Load Moment Limitation (LMB)		
Load moment limitation (LMB)	350 [bar]	5076 [psi]
HDL	300 [bar]	4351 [psi]

Max. pump performance		
Choice of pump	1 x Fixed	1 x Fixed
Pump performance	70 L/min	18.5 gpm

1610 - RCS, Pressure setting diagram, fixed flow pump & Danfoss RC

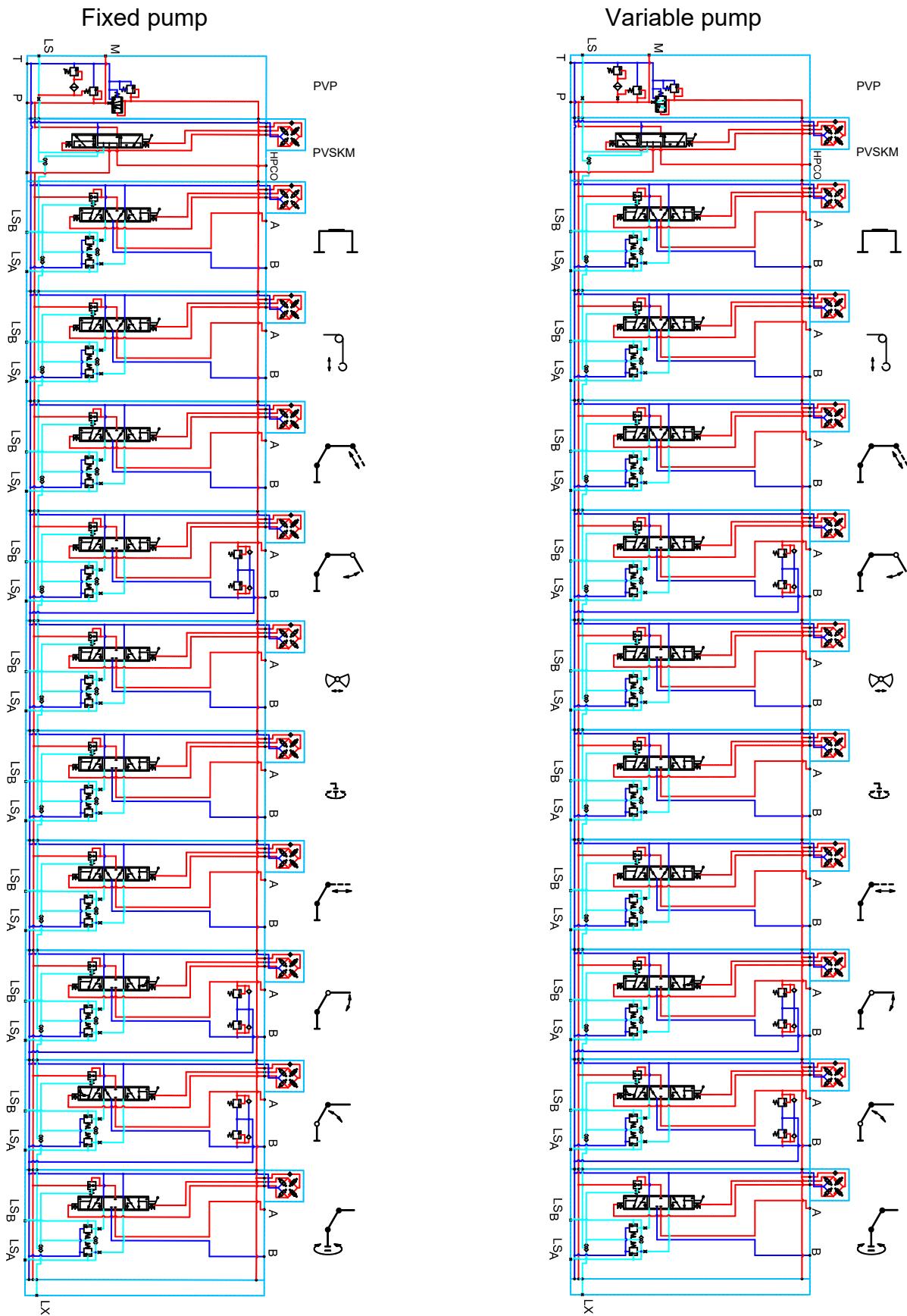
Working Pressure on Main-Relief Valve & Port- Relief Valves						
Function	Direction	Port	Port-relief valves [bar]	LS-pressure adjustment [bar]	Port-relief valves [psi]	LS-pressure adjustment [psi]
Main-relief valve			385		5584	
Slewing system	Right	A	P	180	P	2611
	Left	B	P	180	P	2611
Boom cylinder	Down	A	125	100	1813	1450
	Up	B	380	380	5076	5511
Jib cylinder	Up	A	380	380	5076	5511
	Down	B	250	230	3626	3336
Extension cylinders	Extend	A	P	300	P	4351
	Retract	B	P	300	P	4351
Rotator	Right	A	P	50-300	P	725-4351
	Left	B	P	50-300	P	725-4351
Grab	Open	A	P	50-300	P	725-4351
	Close	B	P	50-300	P	725-4351
Winch 1,5T	Lift	A	P	160	P	2321
	Lower	B	P	160	P	2321
Winch 2,5T	Lift	A	P	185	P	2683
	Lower	B	P	185	P	2683
Separate stabilizer valve		All	150		2176	

Working Pressure on Load-holding Valves			
Function	Direction	Opening pressure [bar]	Opening pressure (psi)
Slewing system	Right	185	2683
	Left	185	2683
Boom cylinder	Up	390	5656
	Down	-	-
Jib cylinder	Up	405	5874
	Down	300	4351
Extension cylinders	Retract	430	6237
	Extend	210	3046

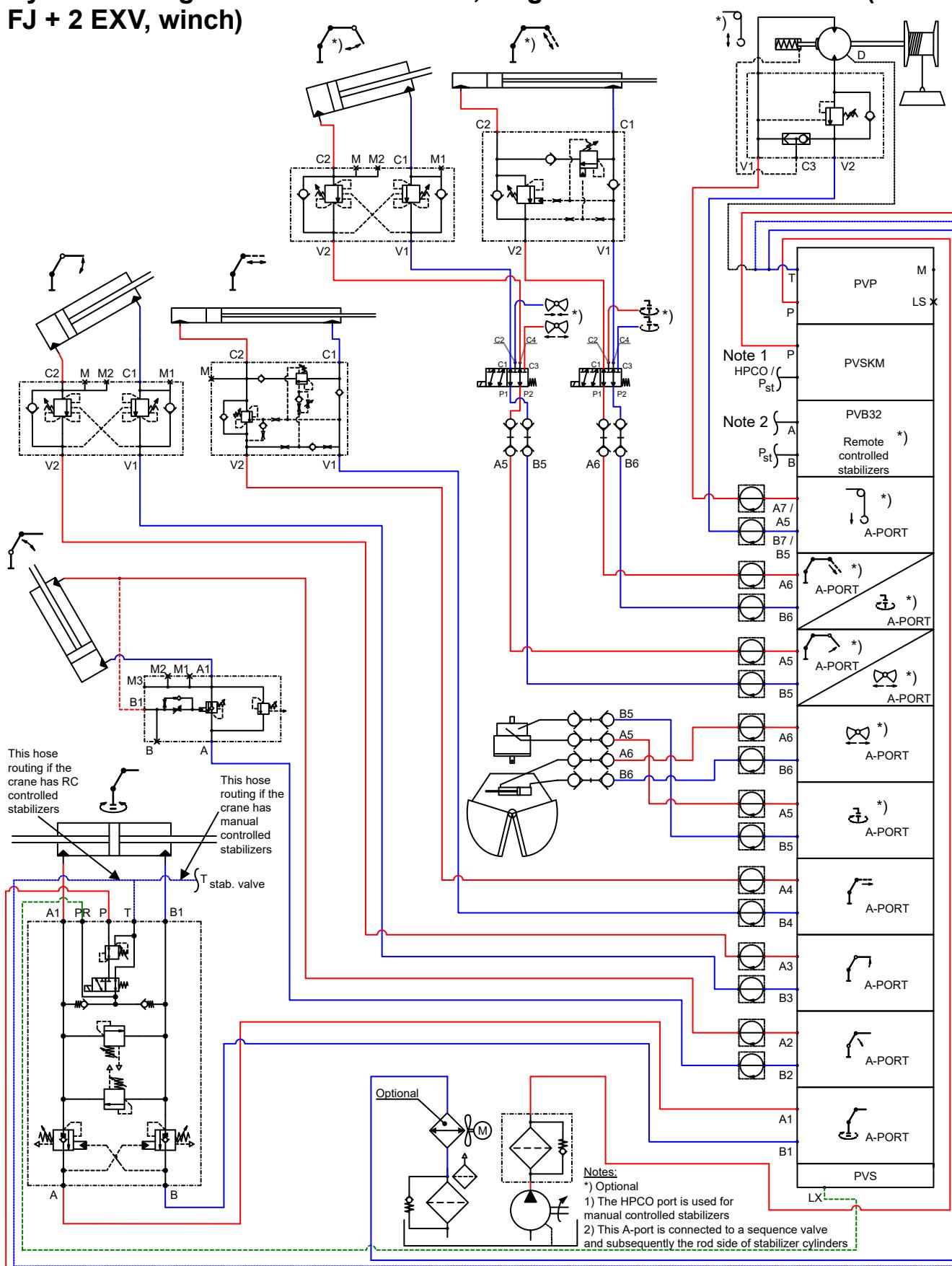
Pressure setting for Load Moment Limitation (LMB)		
Load moment limitation (LMB)	350 [bar]	5076 [psi]
HDL	300 [bar]	4351 [psi]

Max. pump performance		
Choice of pump	1 x Variable	1 x Variable
Pump performance	100 L/min	26.4 gpm

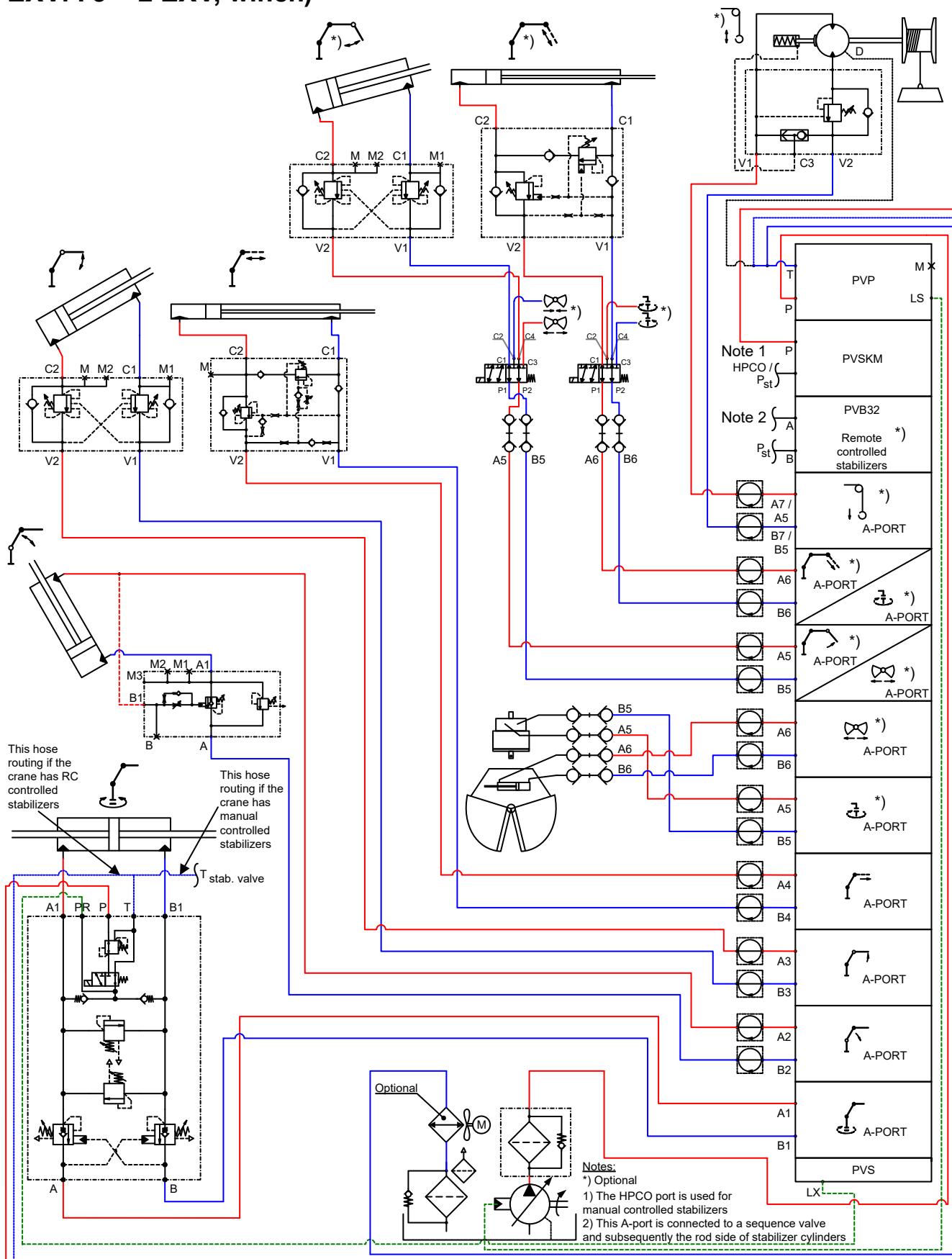
Hydraulic Diagram PVG32 - Crane Functions, Control Valve Fixed and Variable Flow Pump



Hydraulic Diagram – Danfoss PVG32, single-circuit fixed 7 fcts. RC (3 EXV: FJ + 2 EXV, winch)

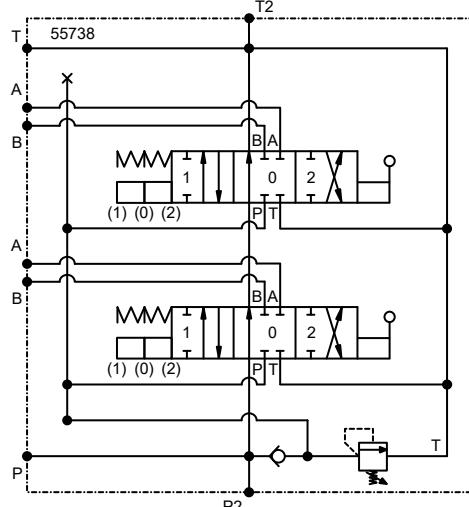


Hydraulic Diagram – Danfoss PVG32, single-circuit variable 7 fcts. RC (3 EXV: FJ + 2 EXV, winch)

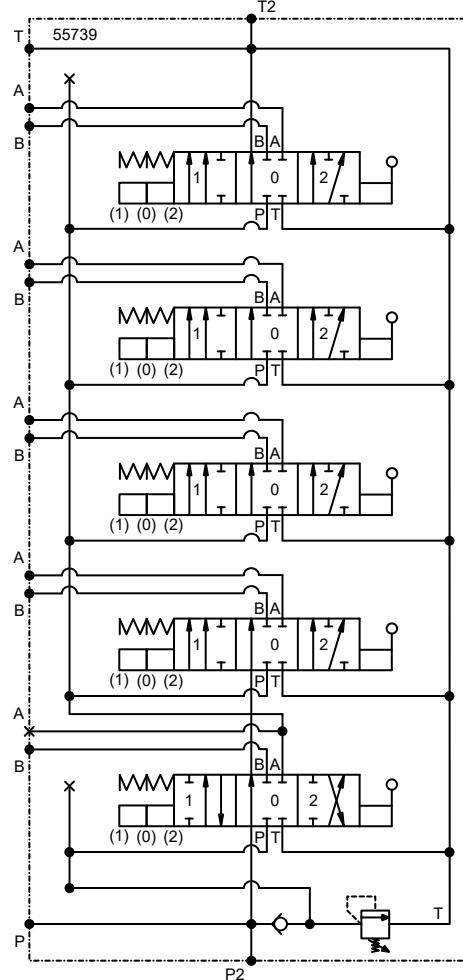


Hydraulic Diagram - Stabilizer circuit – Overview

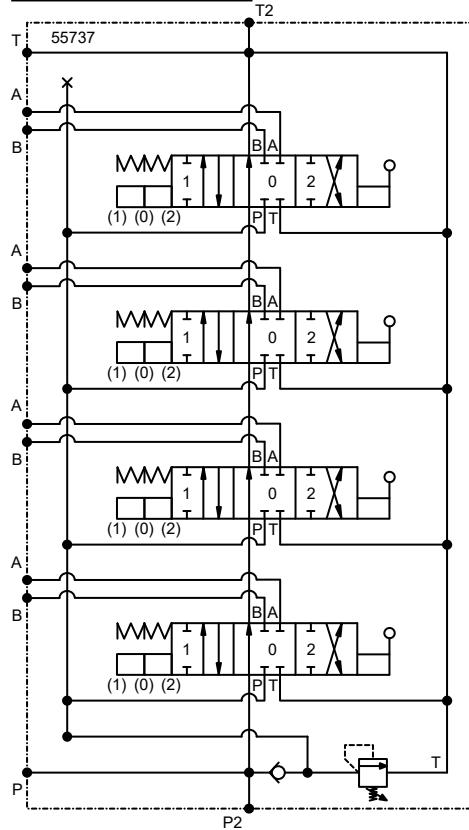
2 functions:



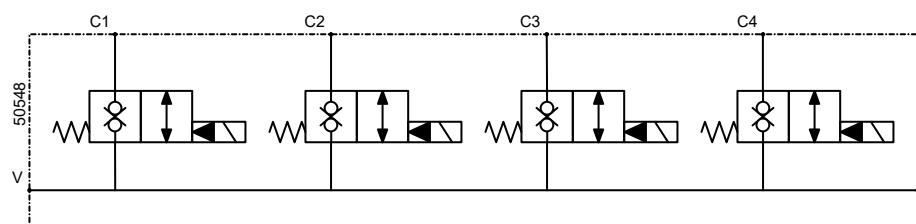
4 + 4 extra functions:



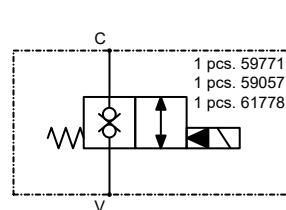
4 or 2 + 2 extra functions:



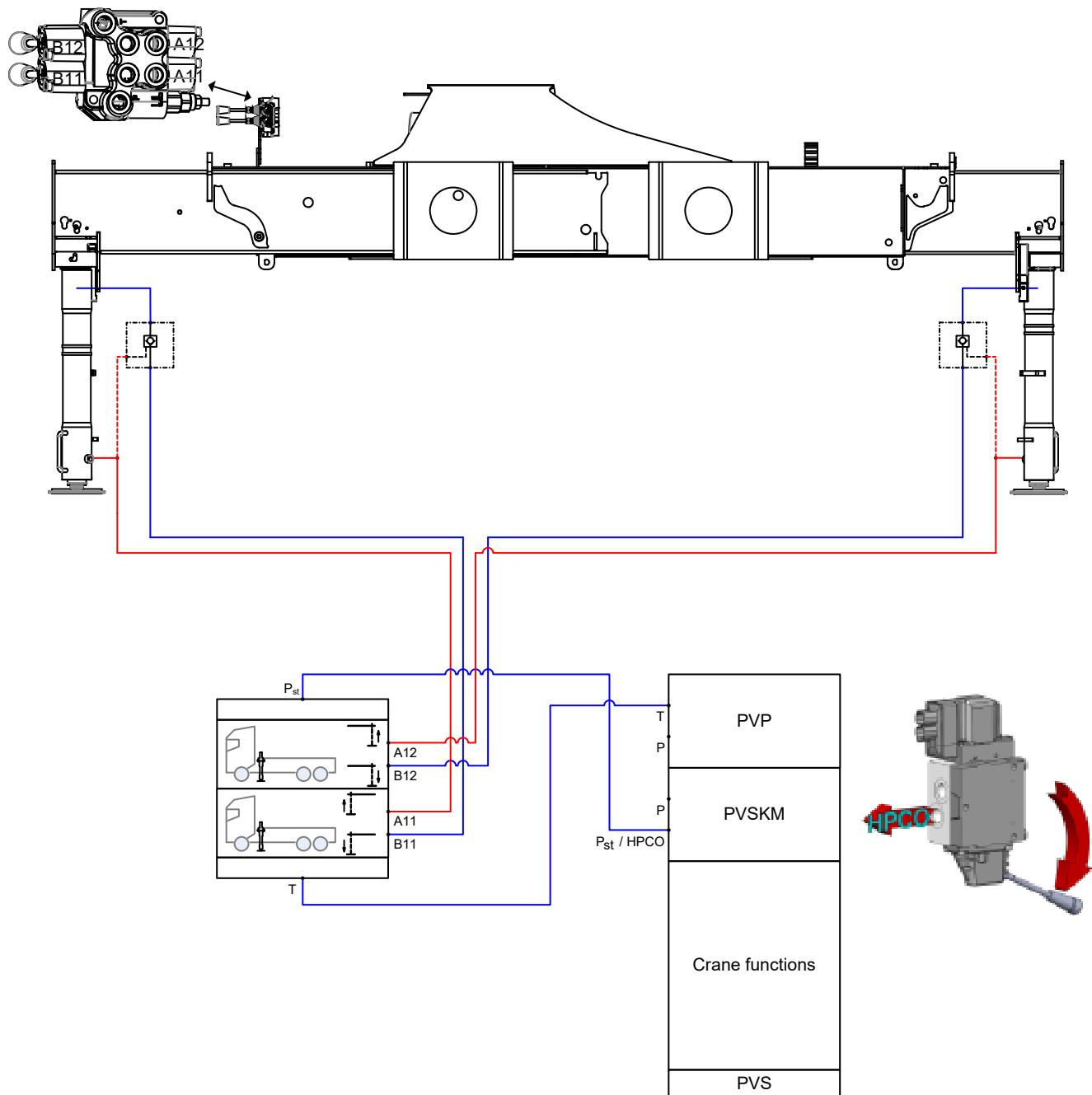
4 remote controlled functions:



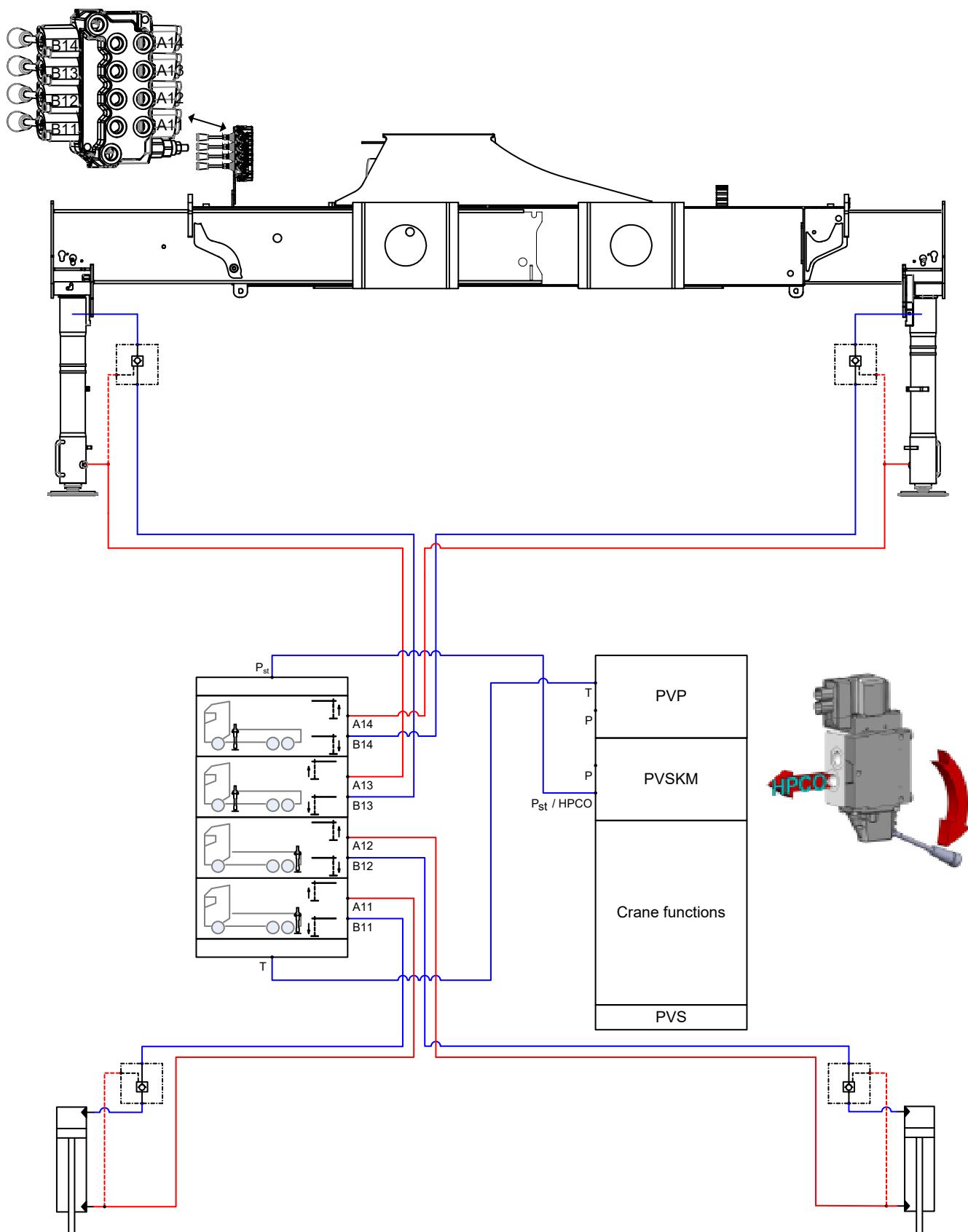
Extra remote controlled functions



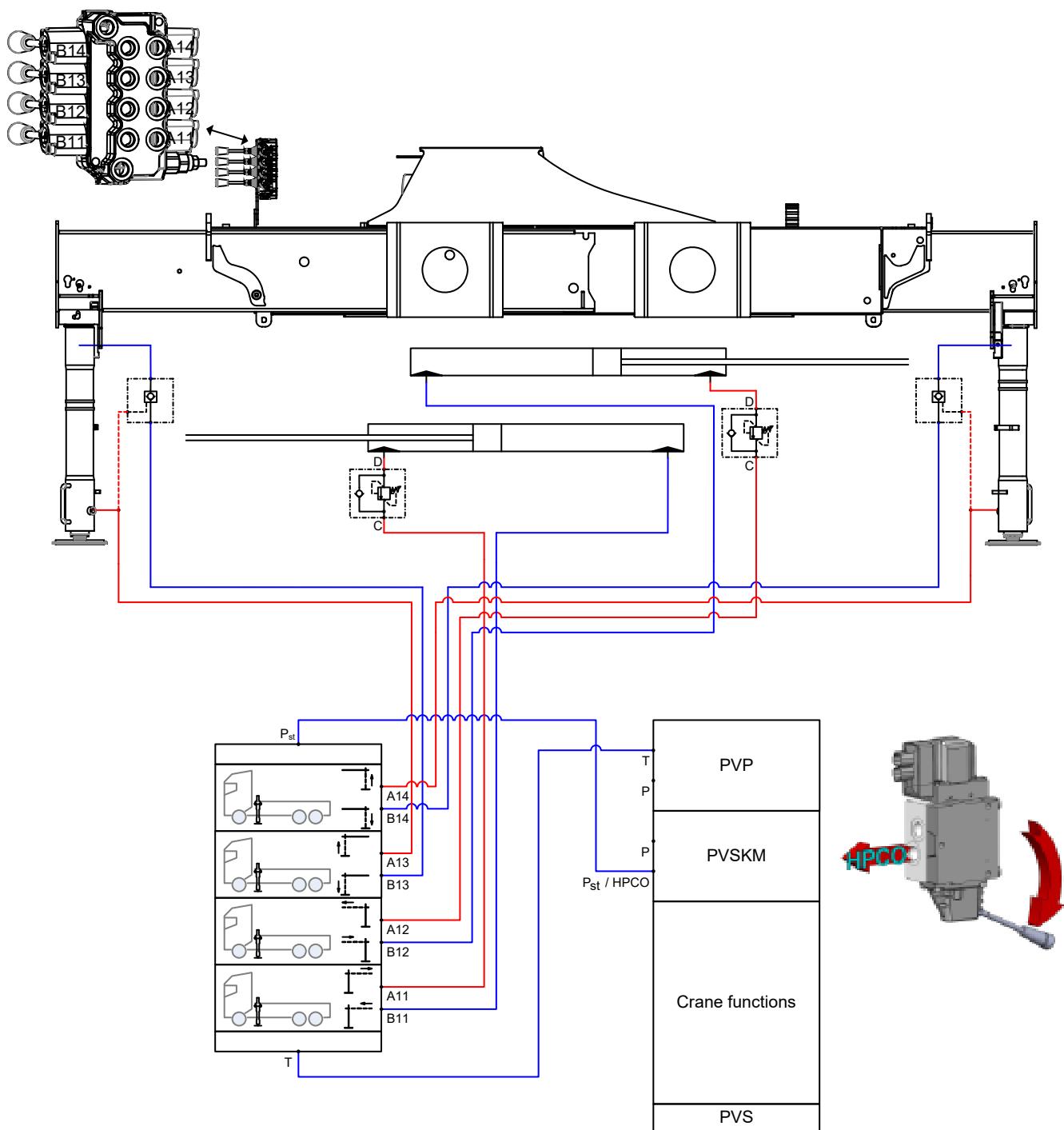
Hydraulic Diagram - Stabilizer circuit – 2 fcts.



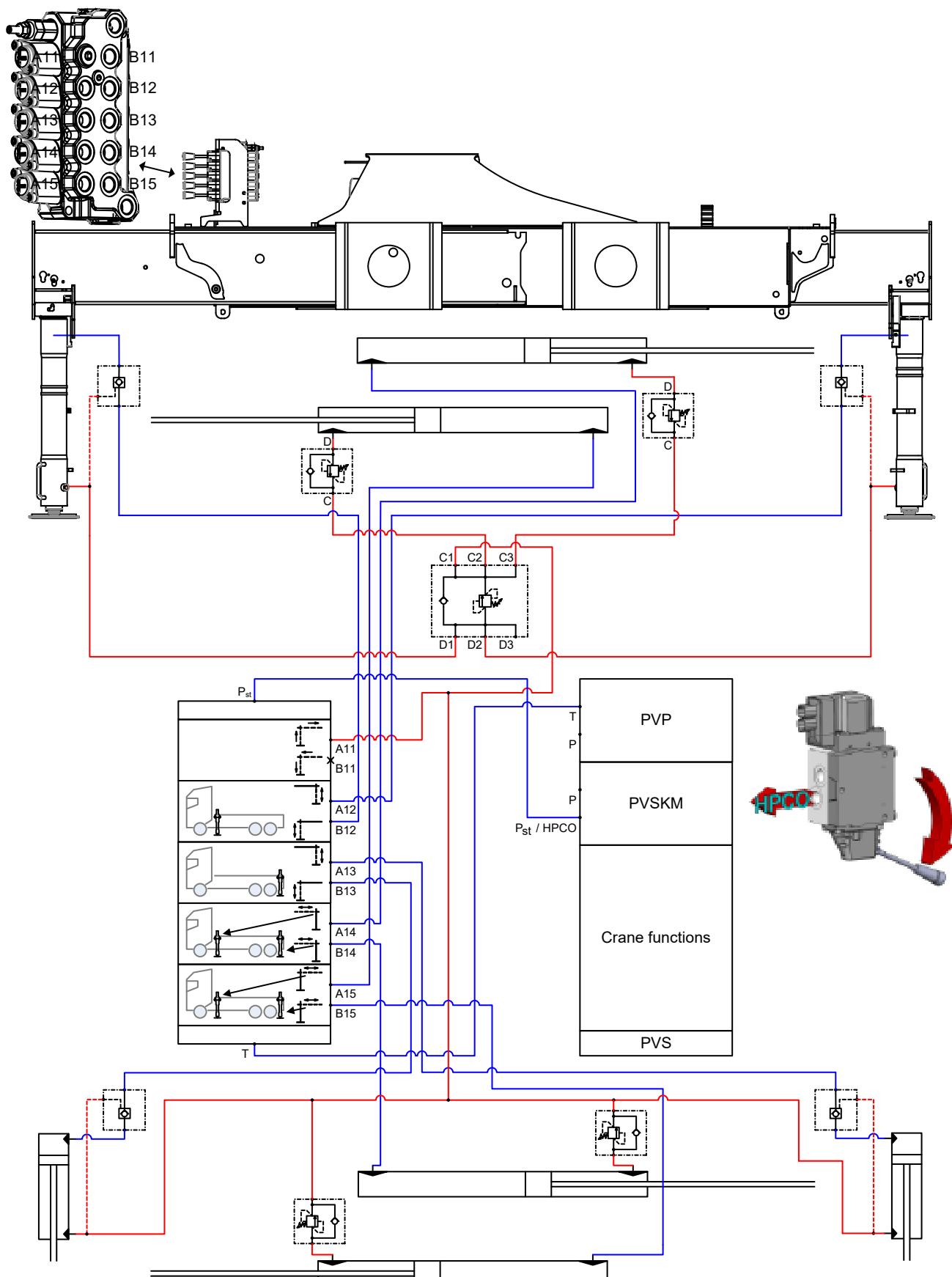
Hydraulic Diagram - Stabilizer circuit – 2 fcts. + 2 available fcts.



Hydraulic Diagram - Stabilizer circuit – 4 fcts. + 4 available fcts.



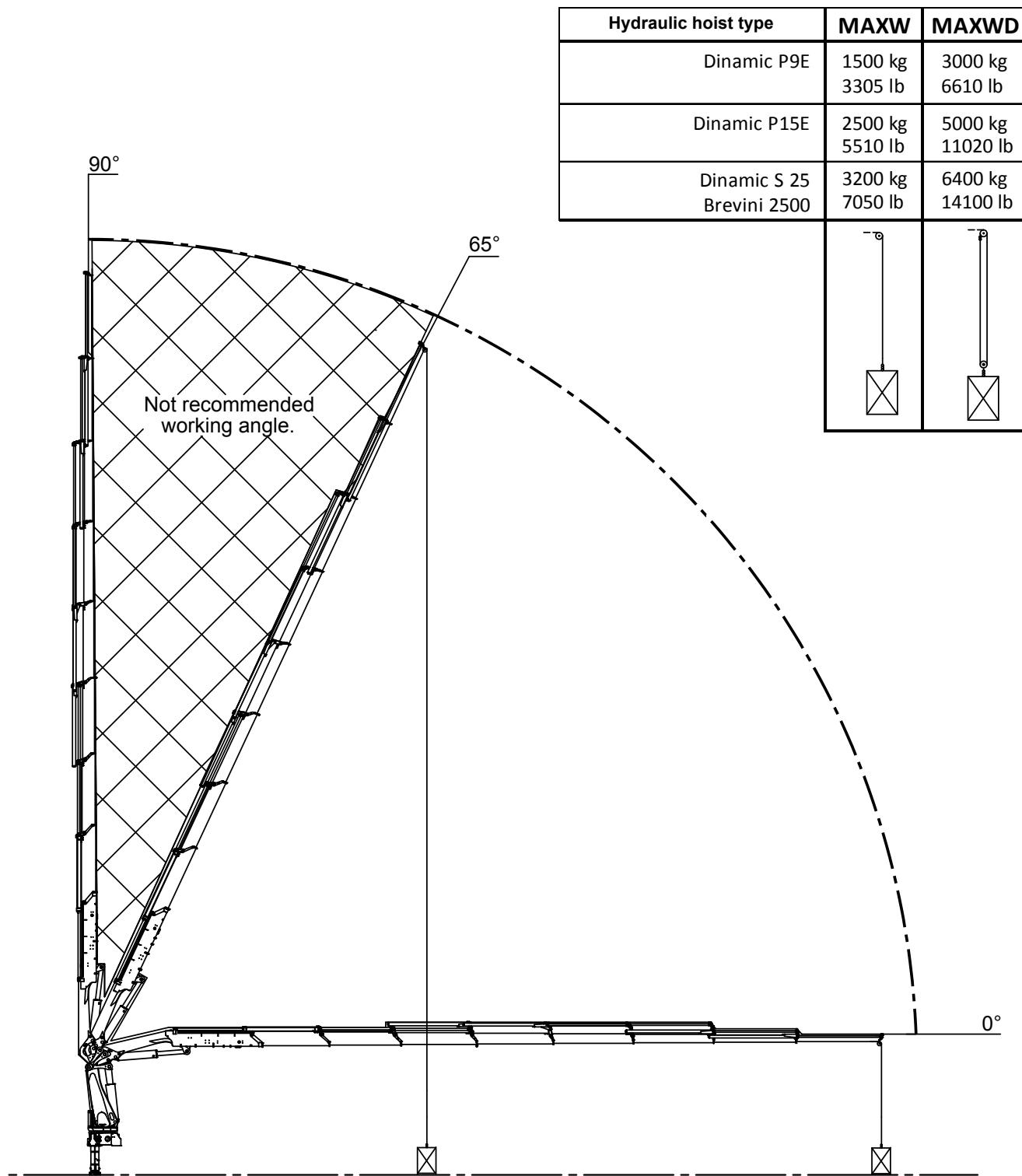
Hydraulic Diagram - Stabilizer circuit – 4 fcts. + 4 available fcts. RC



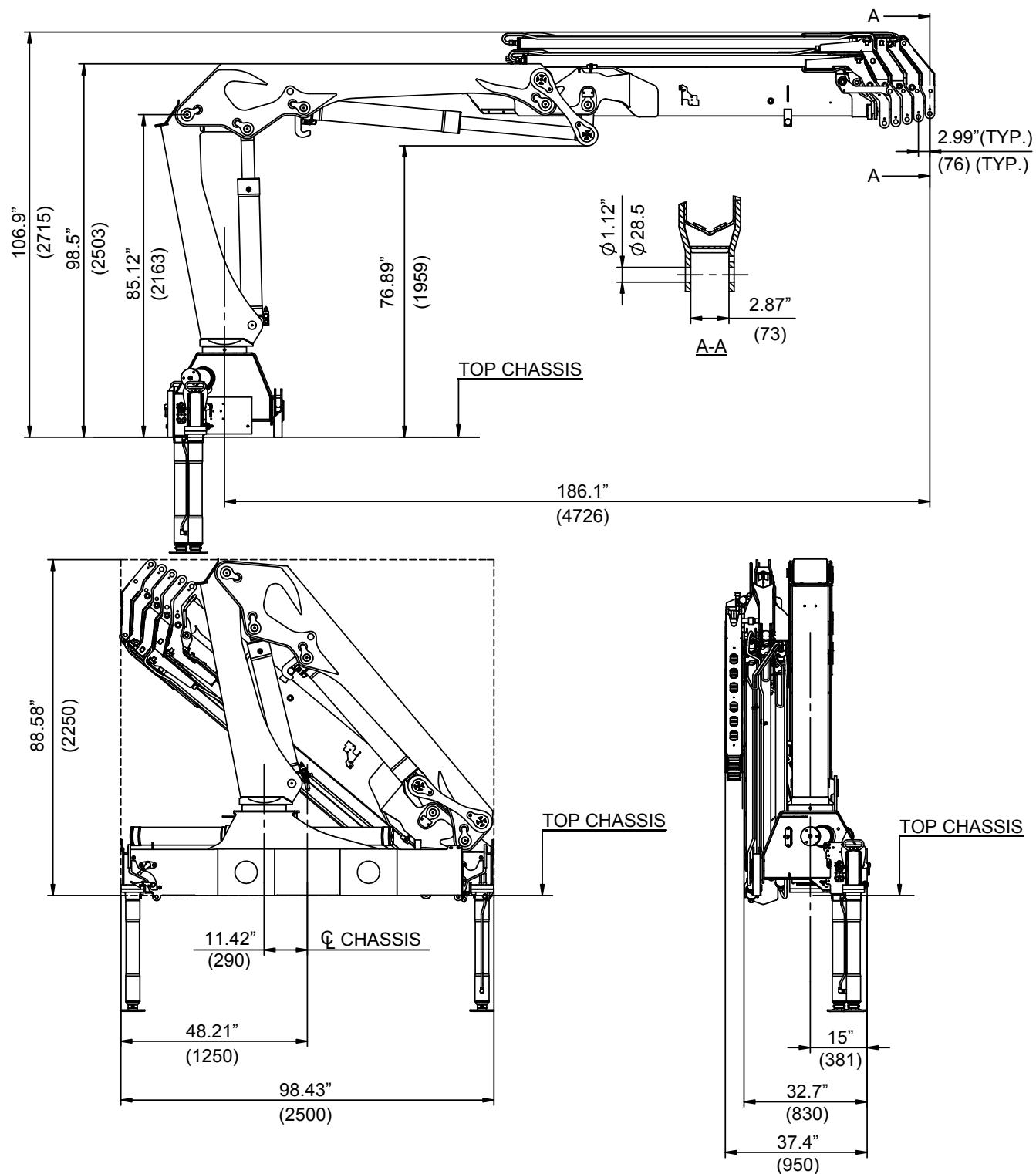
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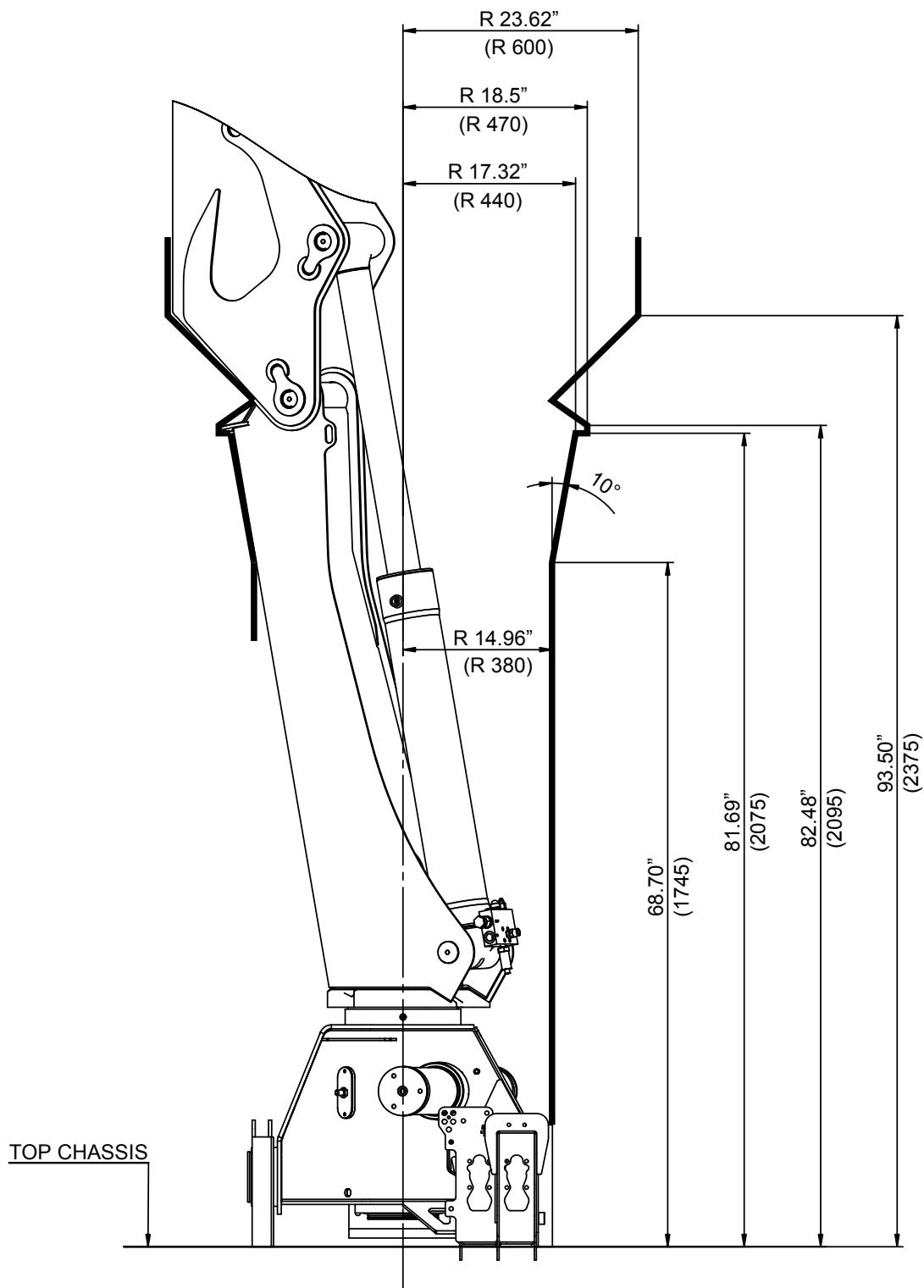
1610 RCS Dimension Drawings

Section - 4

1610 - RCS, Lifting capacity with winch

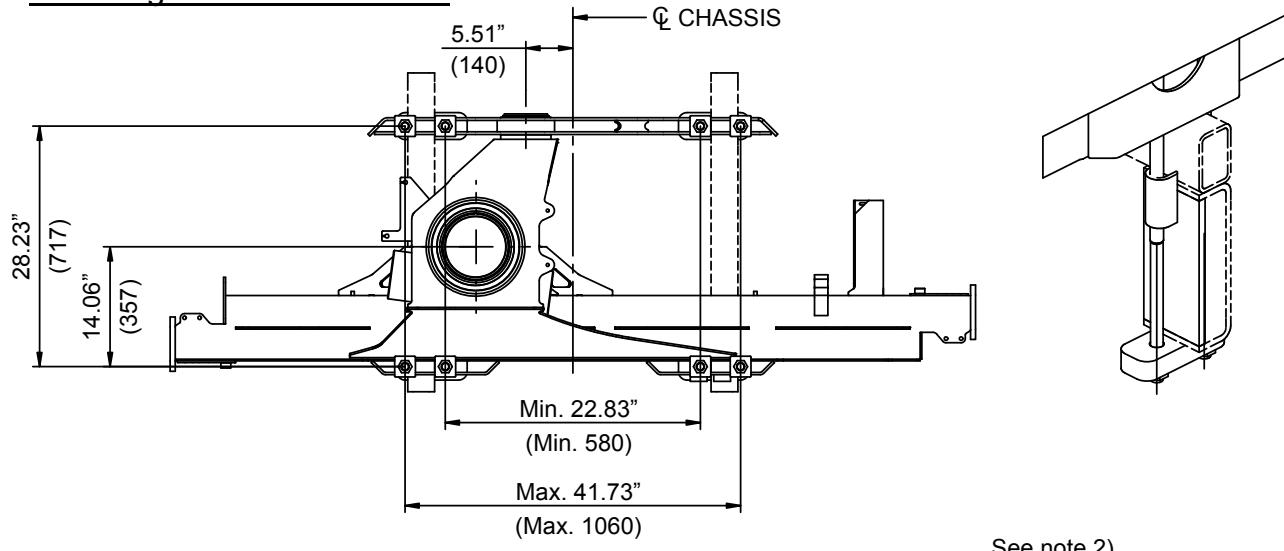
1610 - RCS, Dimension Sketch



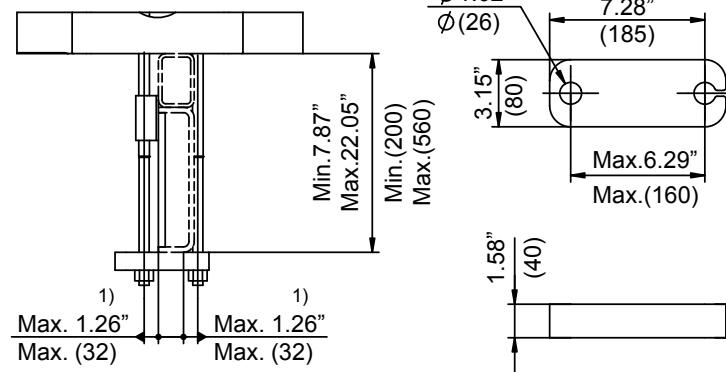
1610 - RCS, Slewing Radius

1610 - RCS, Dimension Sketch for Truck-Mounted Loader

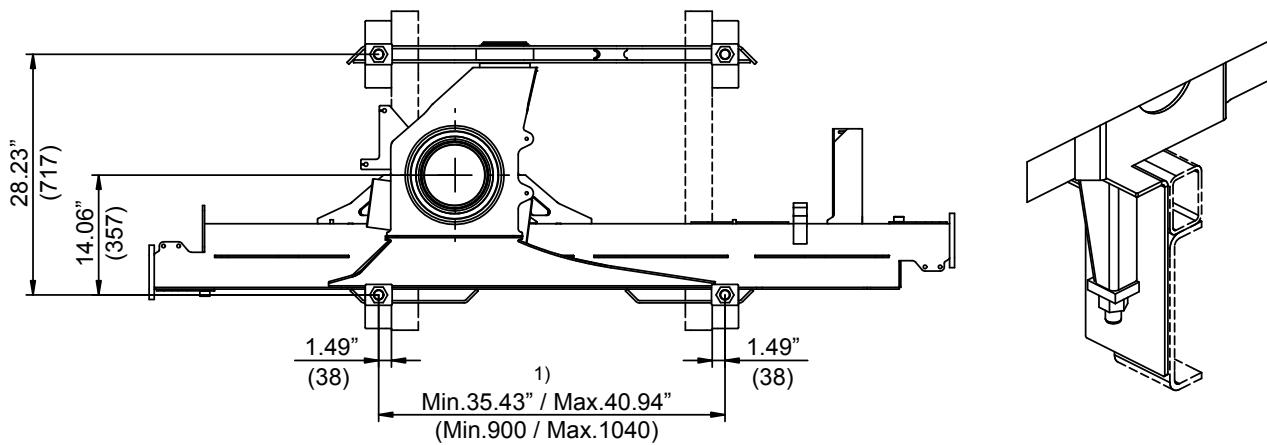
Mounting kit 8 x M24x2 bolts

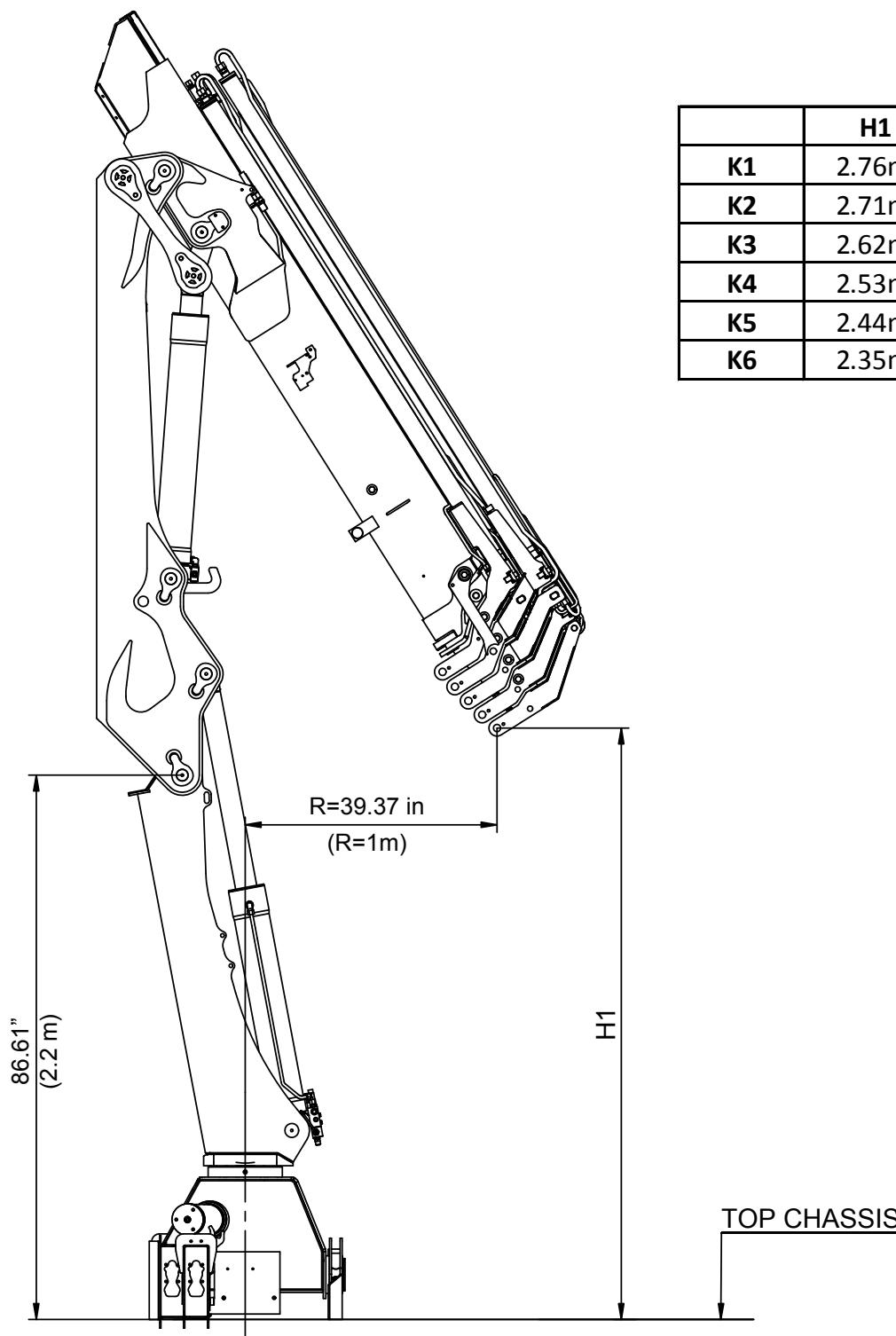


See note 2)



Mounting kit 4 x M30x2 bolts



1610 - RCS, Lifting Height at Column

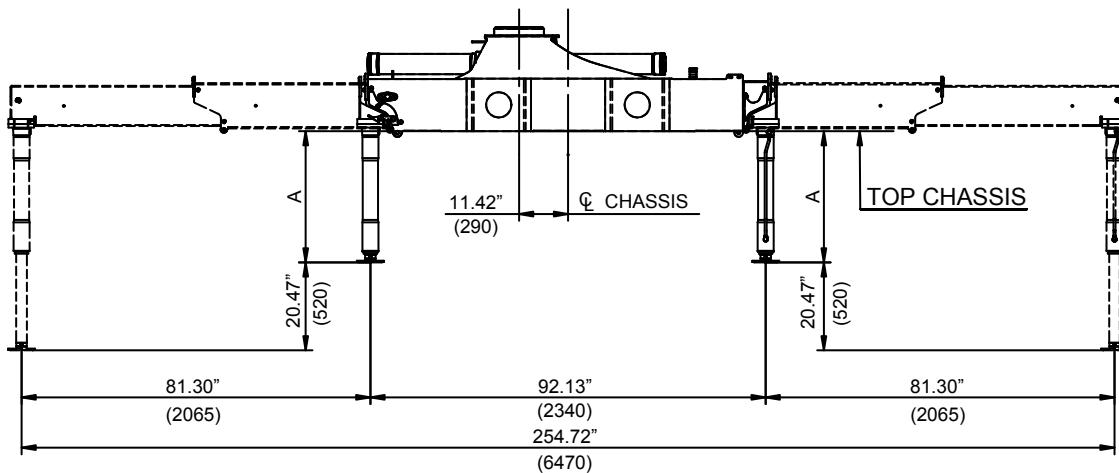
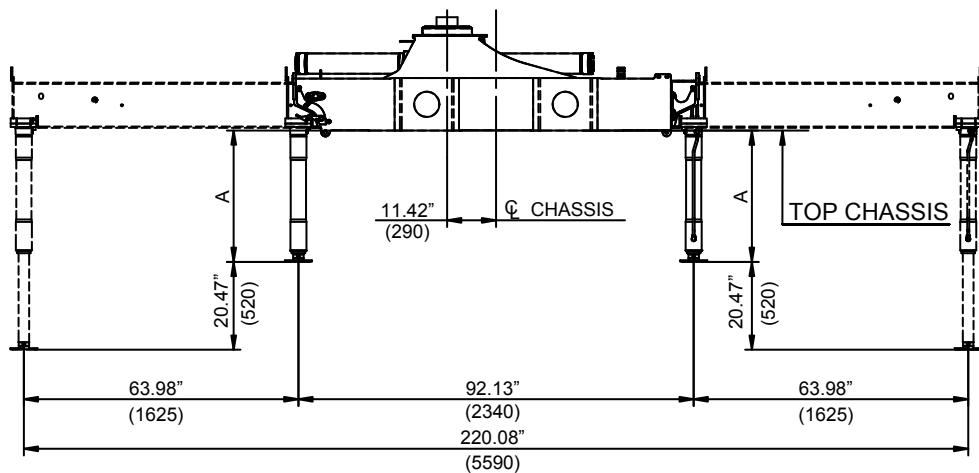
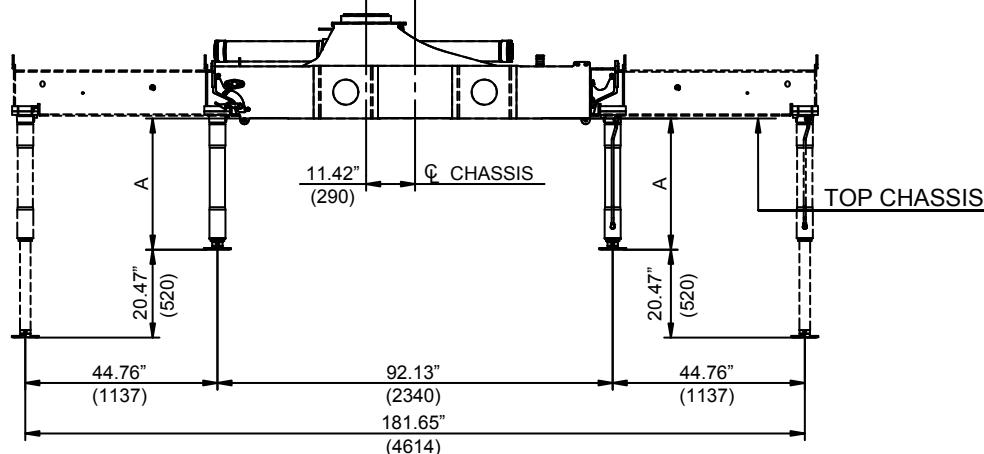
	H1	H1
K1	2.76m	115.75"
K2	2.71m	111.81"
K3	2.62m	107.87"
K4	2.53m	103.94"
K5	2.44m	100"
K6	2.35m	92.52"

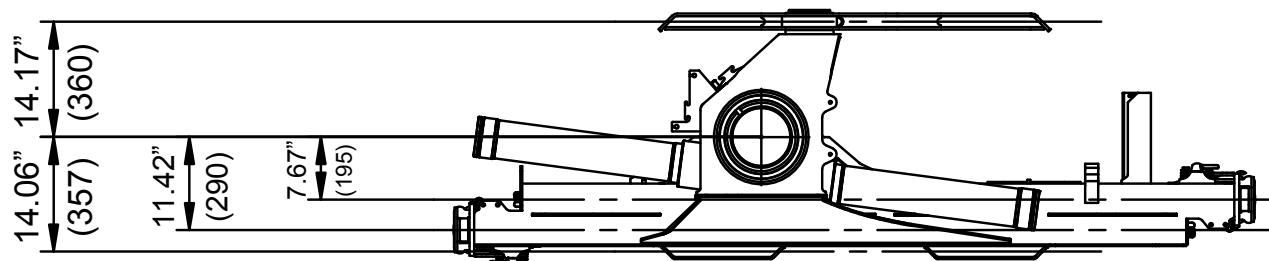
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1610 - RCS, Dimension Sketch - Fixed Stabilizer Legs

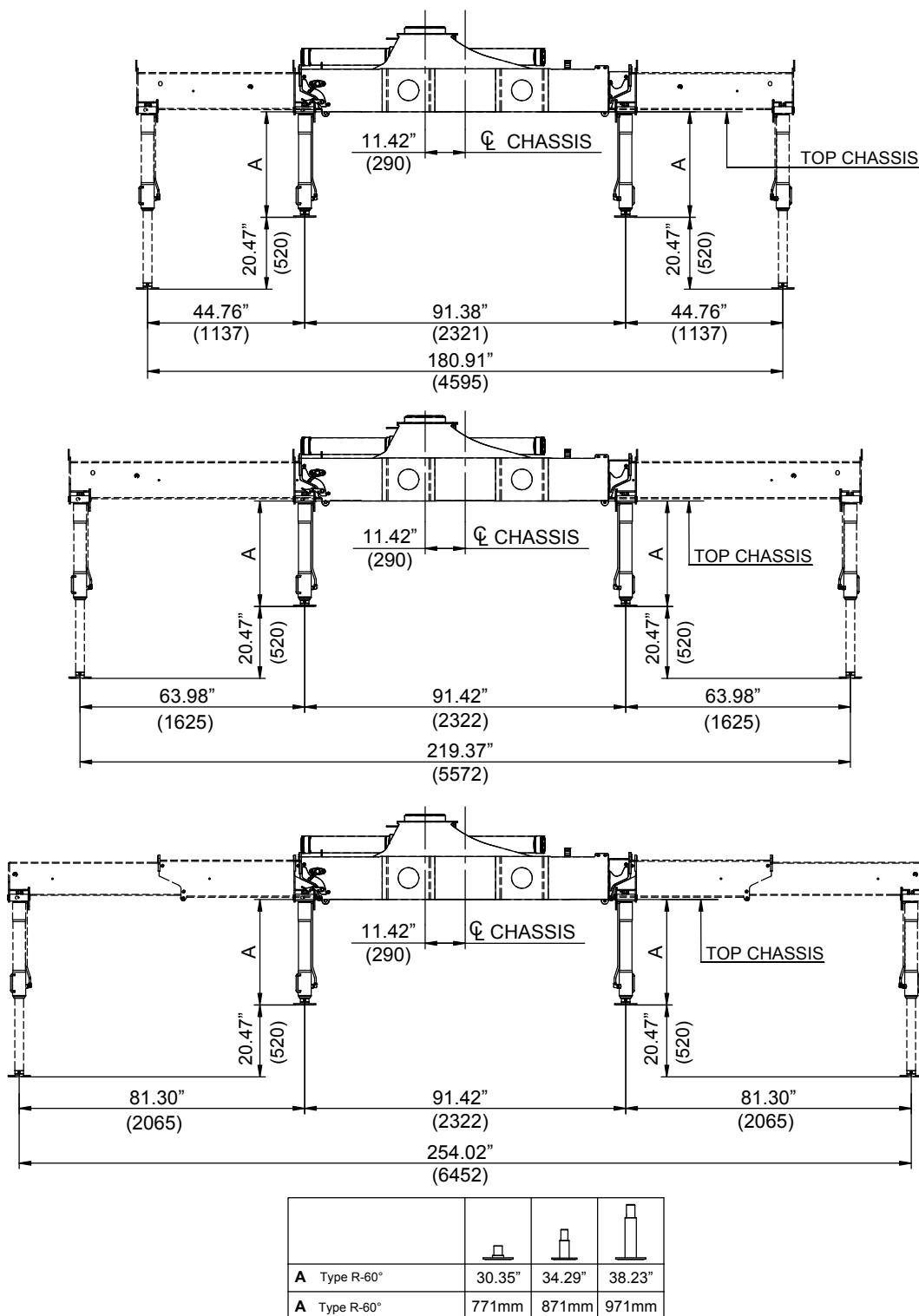
B			
22.8"	A	27.8"	30.4"
26.8	A	31.7"	34.3"
METRIC (mm)			
580	A	705	772
680	A	805	872

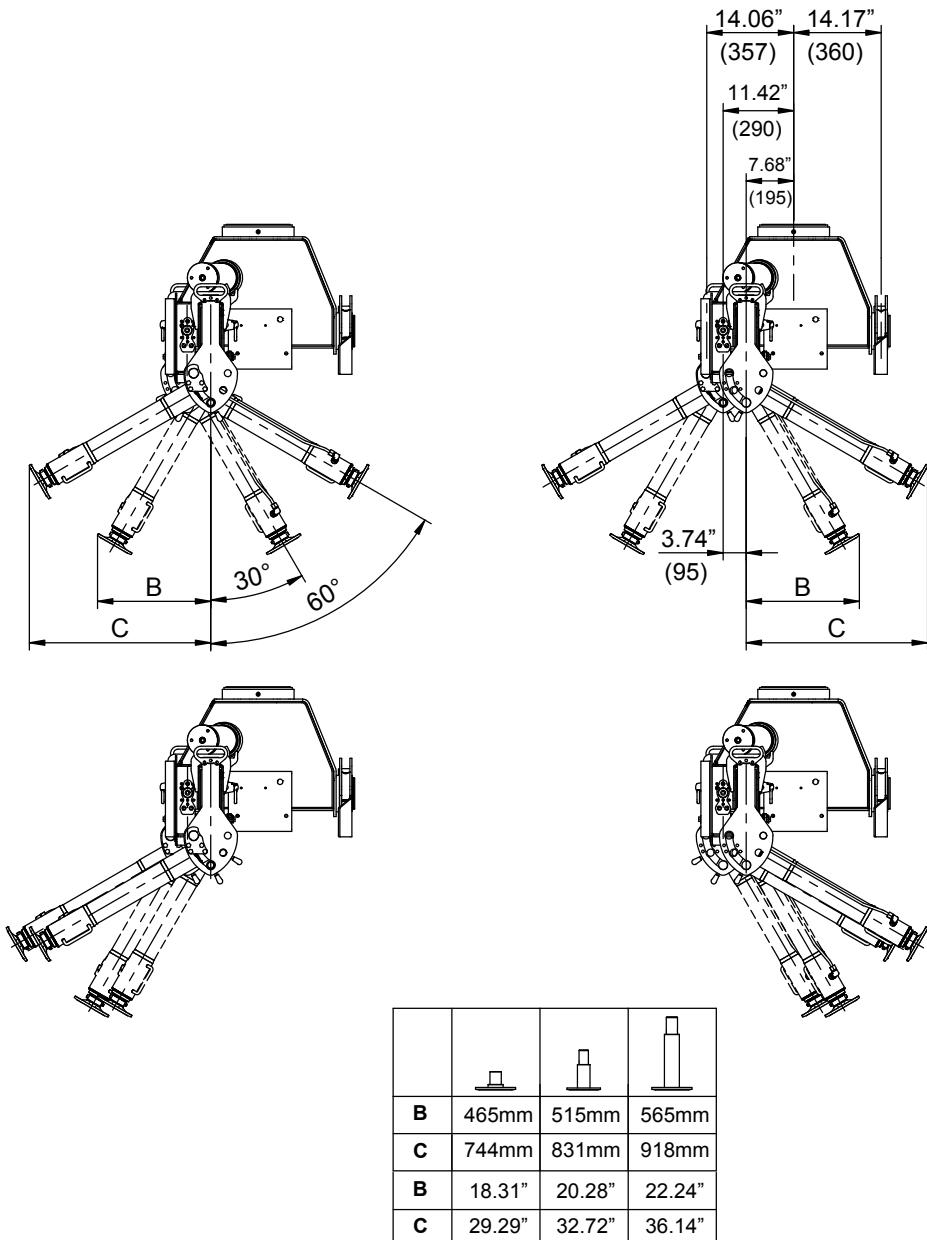
B			
22.8"	A	30.4"	32.9"
26.8"	A	34.4"	36.8"
METRIC (mm)			
580	A	773	835
680	A	873	935



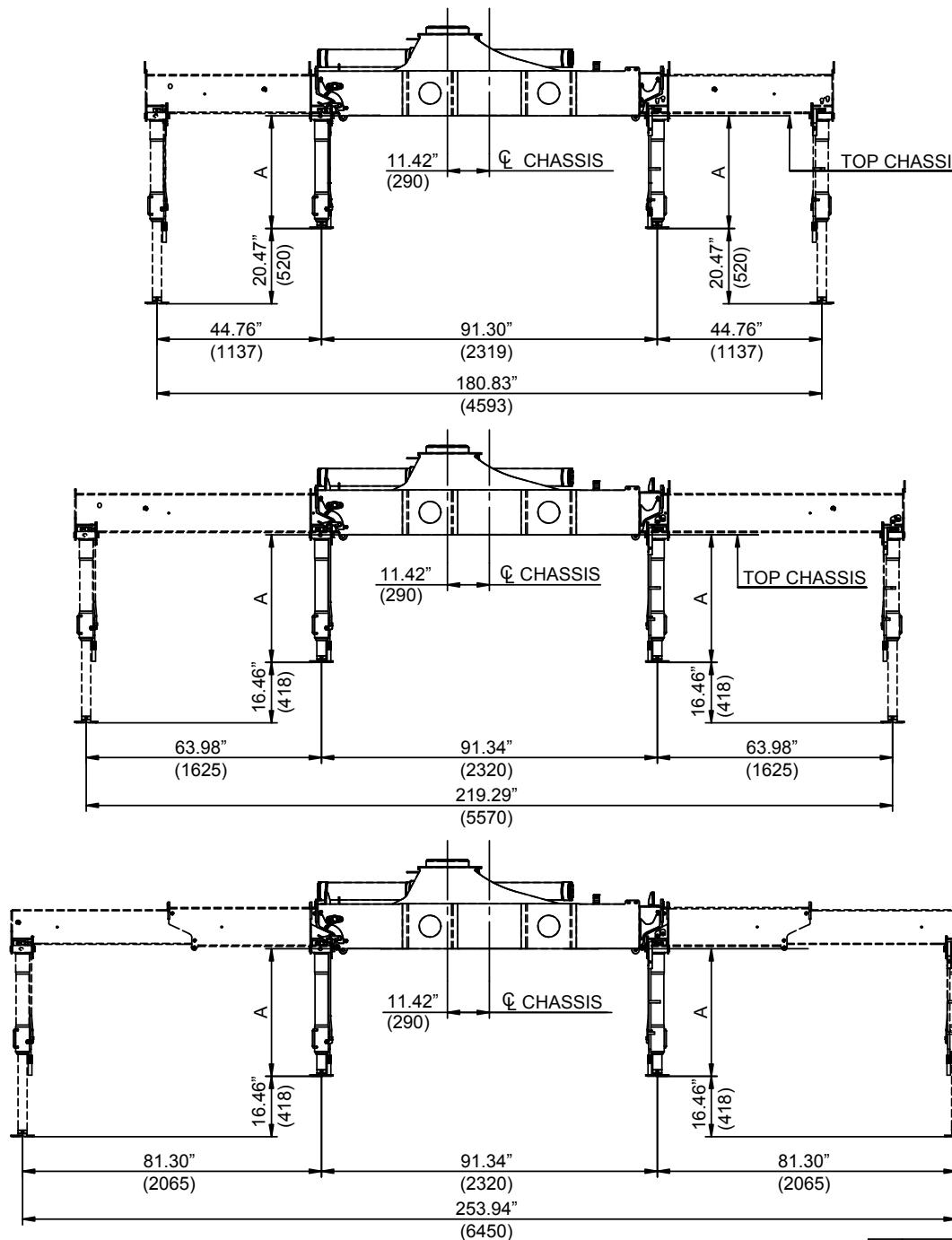
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1610 - RCS, Dimension Sketch - Swing-Up Stabilizer Legs 30° - 60°

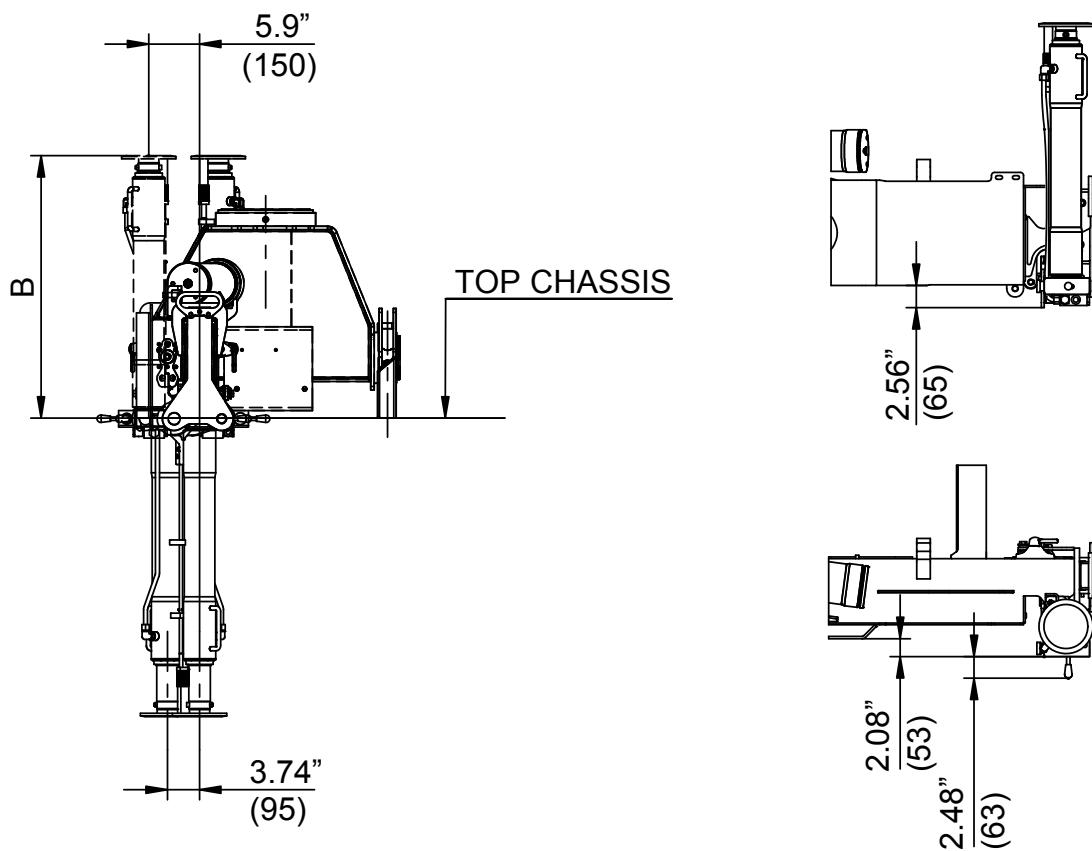


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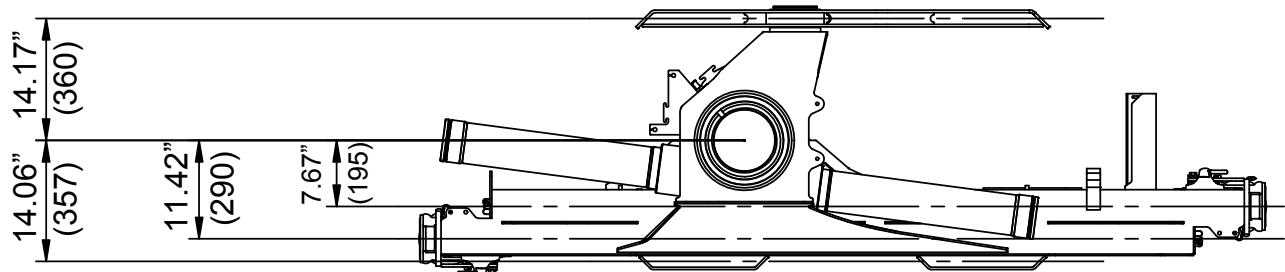
1610 - RCS, Dimension Sketch - Swing-Up Stabilizer Legs, 180°



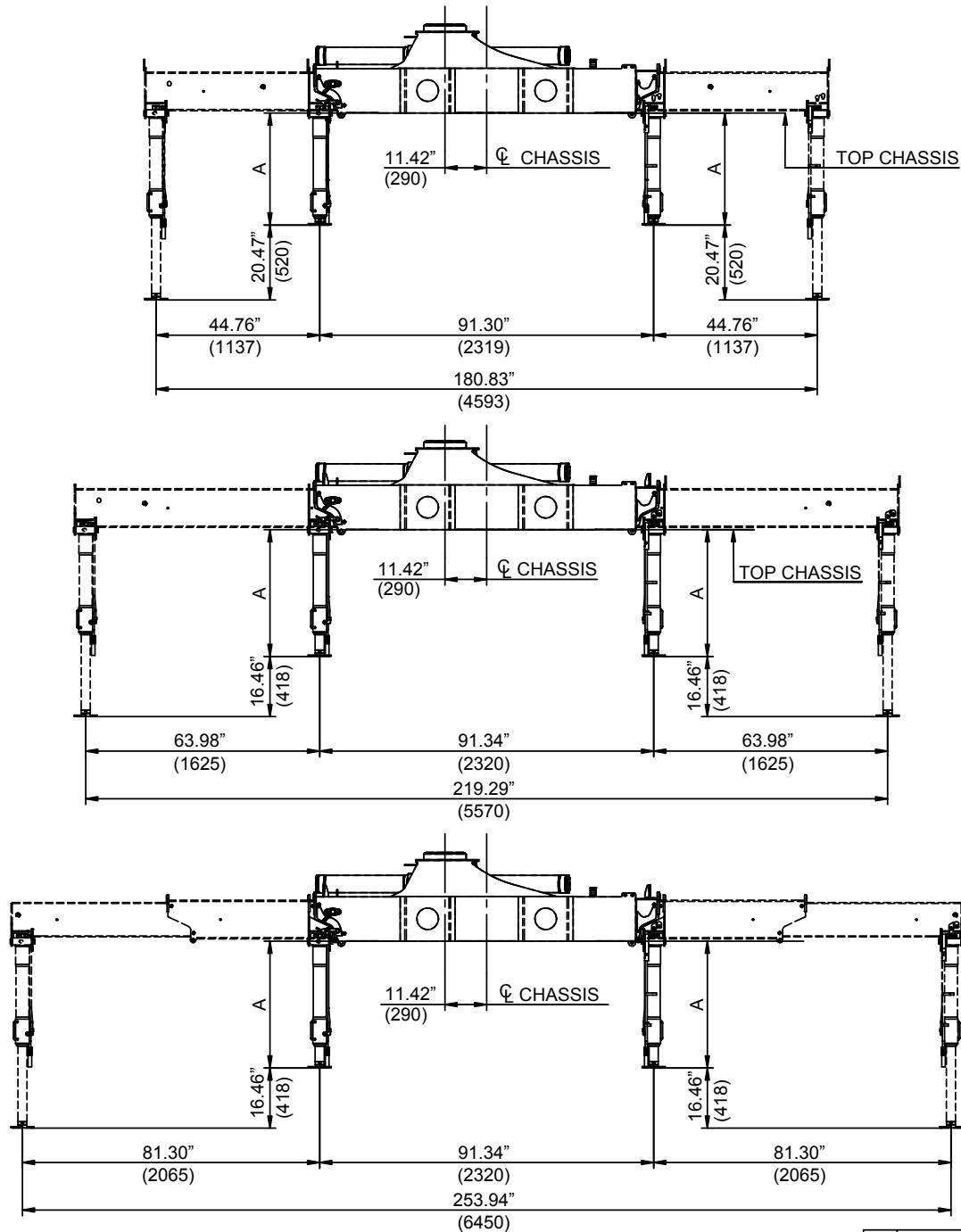
A	881mm	981mm	1081mm
A	34.69"	38.62"	42.56"

CONTINUED

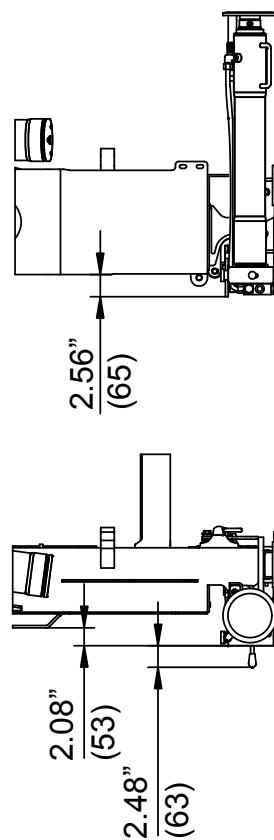
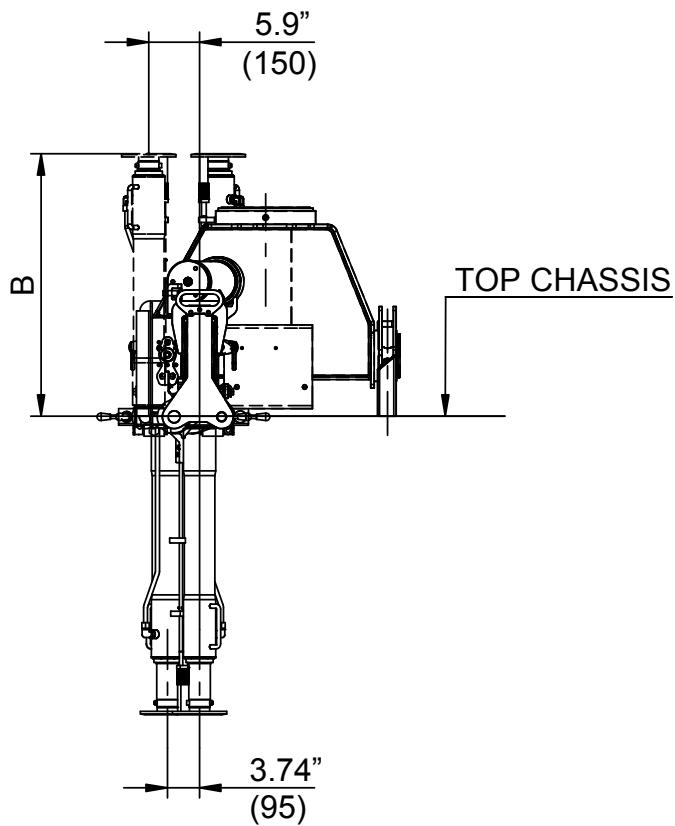
B	775mm	875mm	975mm
B	30.51"	34.45"	38.39"



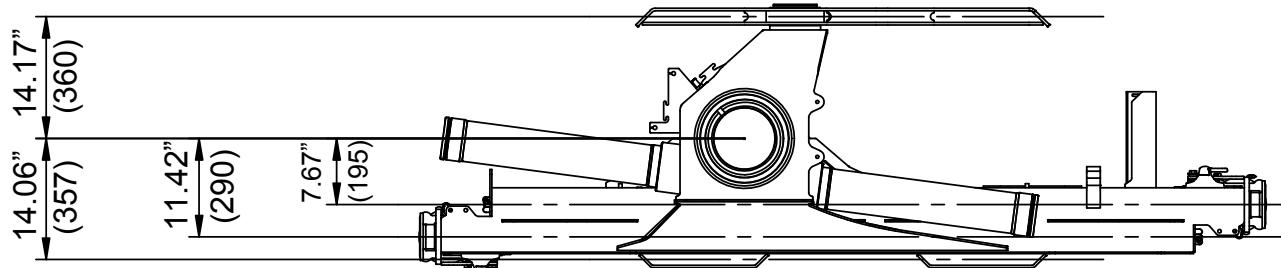
1610 - RCS, Dimension Sketch, Swing-Up Stabilizer Legs 180° (Manual + Hydraulic)

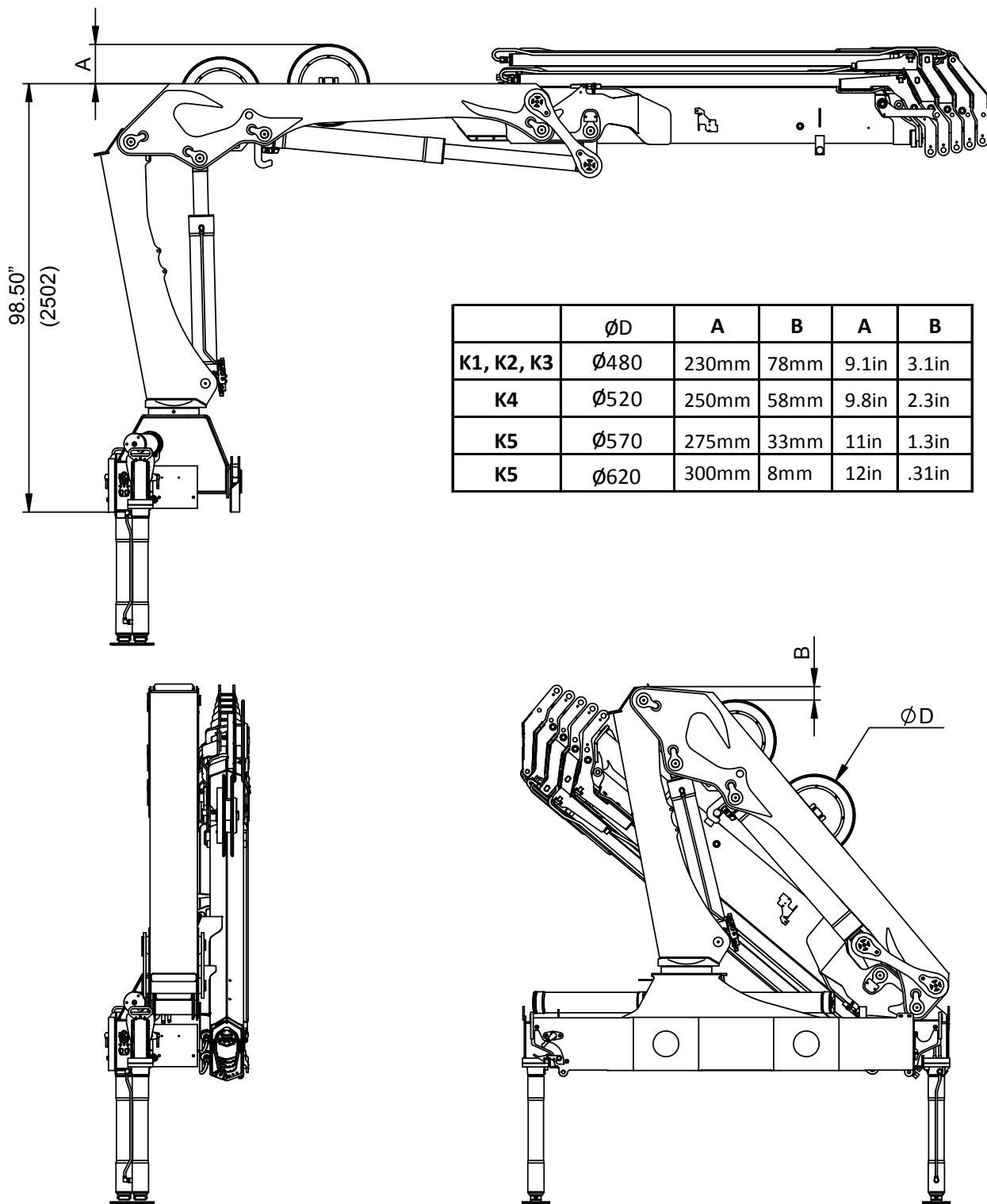


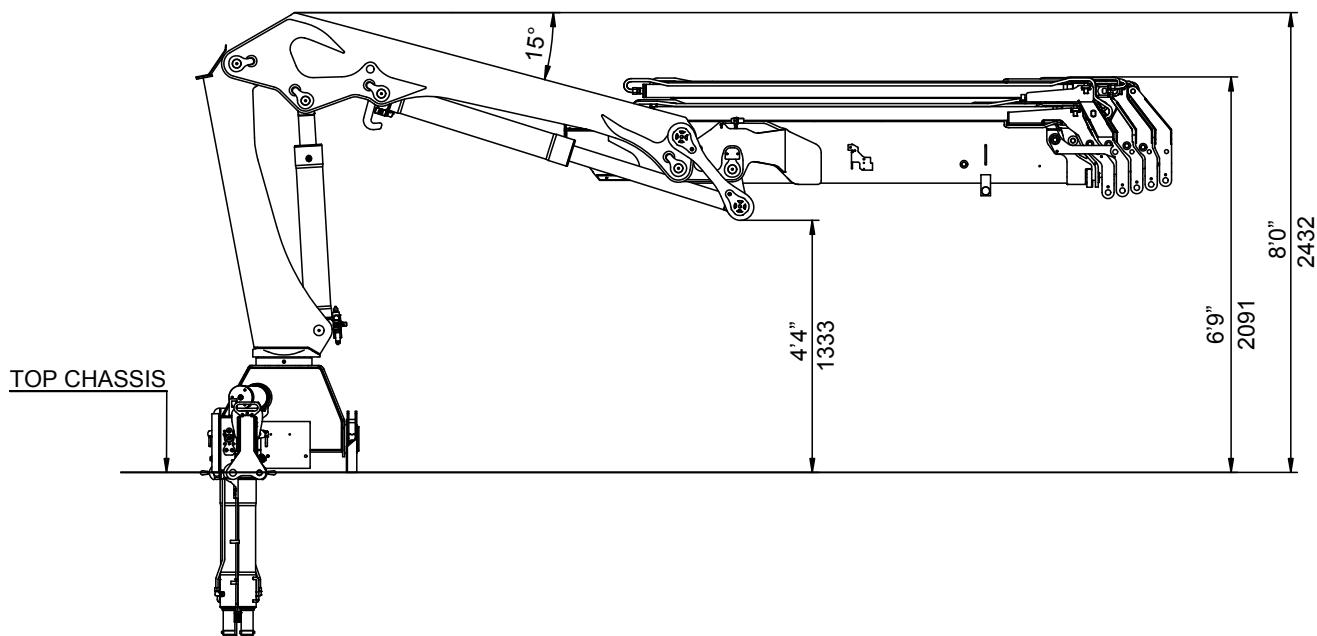
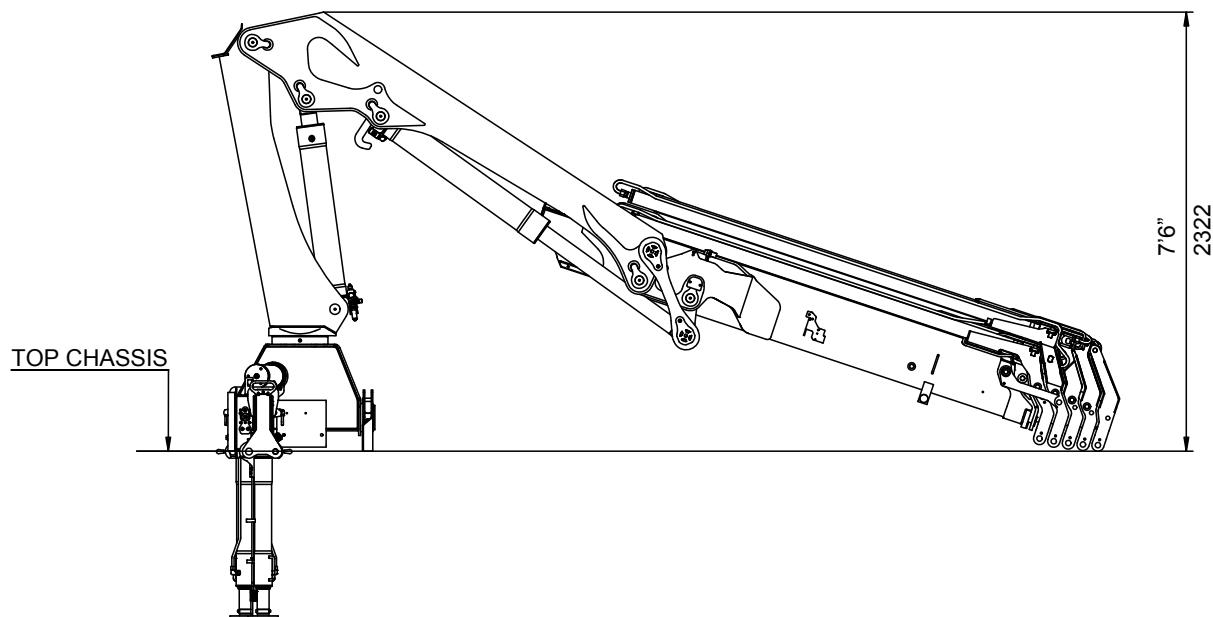
A	881mm	981mm	1081mm
A	34.69"	38.62"	42.56"

CONTINUED:

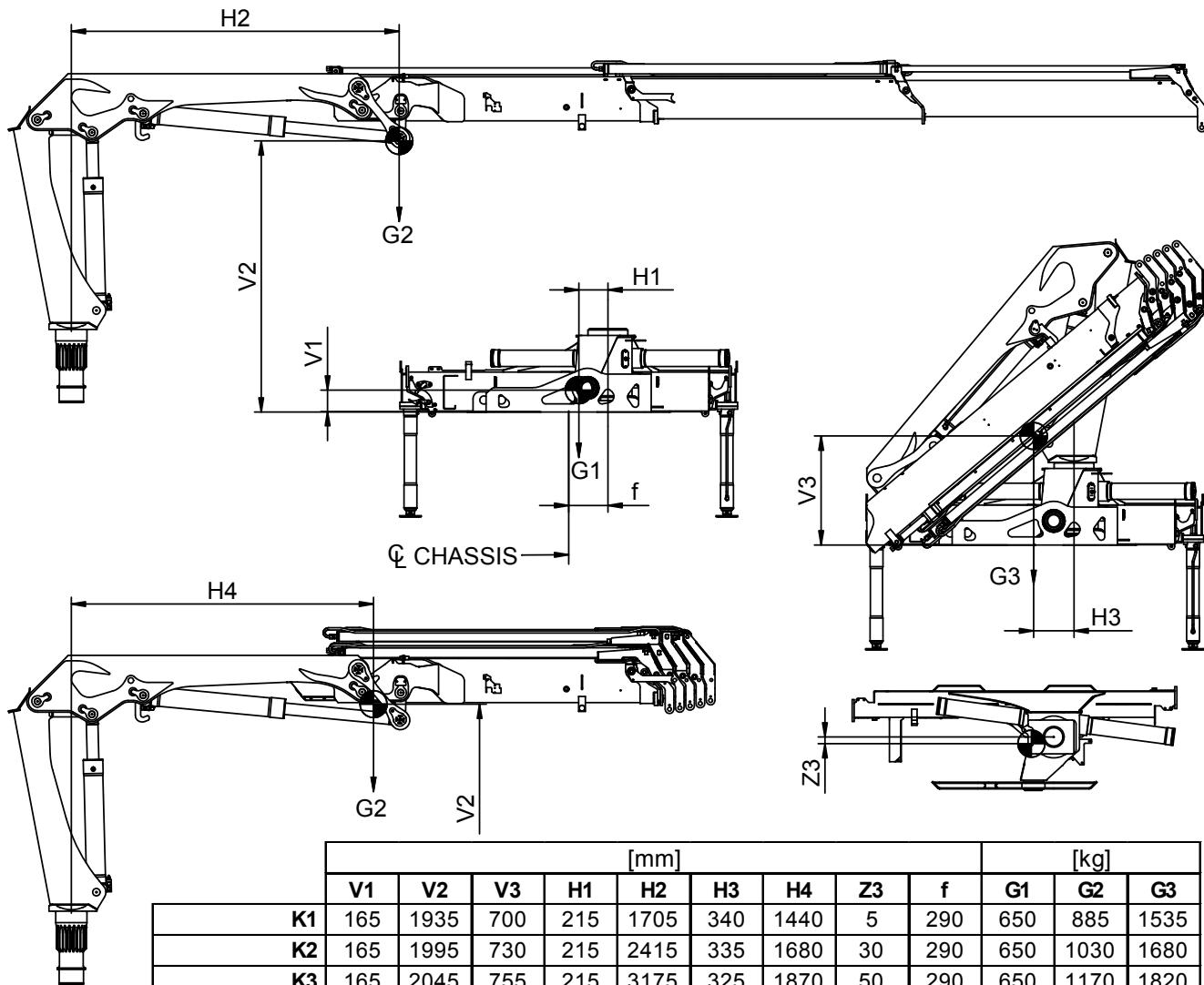
B	775mm	875mm	975mm
B	30.51"	34.45"	38.39"



1610 - RCS, Dimension Sketch, Internal Hose Routing

1610 - RCS, Stowed In Truck Body

1610 - RCS, Center Of Gravity

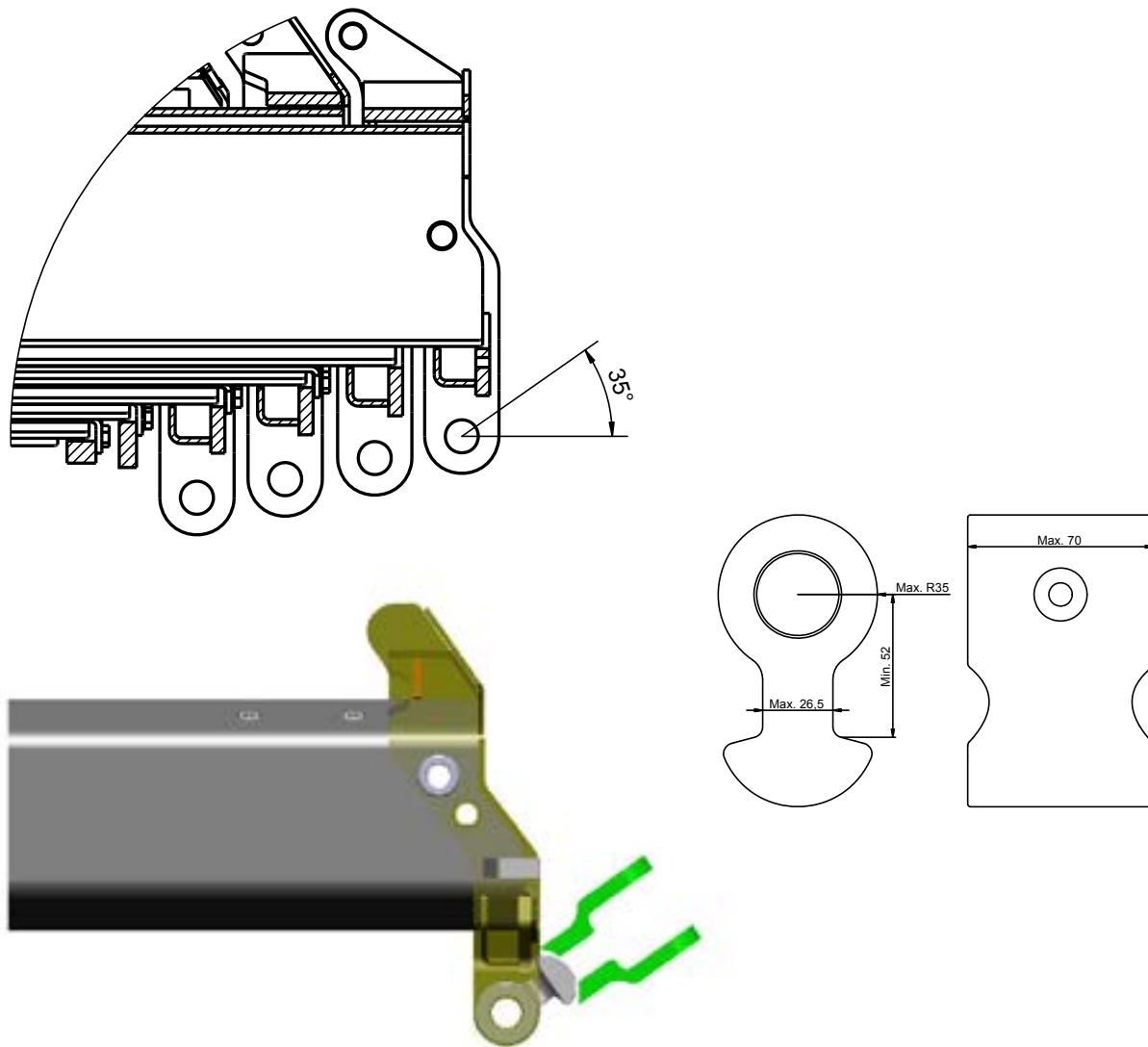


	[mm]										[kg]		
	V1	V2	V3	H1	H2	H3	H4	Z3	f	G1	G2	G3	
K1	165	1935	700	215	1705	340	1440	5	290	650	885	1535	
K2	165	1995	730	215	2415	335	1680	30	290	650	1030	1680	
K3	165	2045	755	215	3175	325	1870	50	290	650	1170	1820	
K4	165	2075	785	215	3970	305	2015	65	290	650	1300	1950	
K5	165	2100	805	215	4730	290	2130	80	290	650	1410	2060	
K6	165	2120	820	215	5375	280	2215	90	290	650	1515	2165	

	[in]										[lbs]		
	V1	V2	V3	H1	H2	H3	H4	Z3	f	G1	G2	G3	
K1	6.50	76.18	27.56	8.46	67.13	13.39	56.69	0.20	11.42	1433	1951	3384	
K2	6.50	78.54	28.74	8.46	95.08	13.19	66.14	1.18	11.42	1433	2271	3704	
K3	6.50	80.51	29.72	8.46	125.00	12.80	73.62	1.97	11.42	1433	2579	4012	
K4	6.50	81.69	30.91	8.46	156.30	12.01	79.33	2.56	11.42	1433	2866	4299	
K5	6.50	82.68	31.69	8.46	186.22	11.42	83.86	3.15	11.42	1433	3109	2542	
K6	6.50	83.46	32.28	8.46	211.61	11.02	87.20	3.54	11.42	1433	3340	4773	

1610 & 1620 - RCS, Dimension Sketch For Connecting Link

The connection link must be able to move freely at an angle of 35° (minimum) 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.



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1620 RCS Technical Specifications

Section - 5

1620 - RCS, Specifications K1-K6

Performance	Unit	K1	K2	K3	K4	K5	K6
Loading group (EN12999)		H1/B3	H1/B3	H1/B3	H1/B3	H1/B3	H1/B3
Load moment	ft-lb	109942	106325	103432	100539	97646	95476
Hydraulic reach	ft	20'8"	27'5"	34'6"	42'0"	49'3"	56'9"
Hydraulic telescopic movement	ft	6'3"	12'11"	19'9"	27'0"	34'1"	41'3"
Lifting capacity, hydraulic	lb-ft	7804 - 14'1"	7518 - 14'1"	7165 - 14'5"	6834 - 14'8"	6548 - 15'1"	6283 - 15'1"
	lb-ft	5401 - 20'3"	5115 - 20'8"	4806 - 20'8"	4519 - 21'0"	4255 - 21'3"	4034 - 21'2"
	lb-ft		3858 - 27'2"	3549 - 27'2"	3285 - 27'6"	3042 - 27'9"	2822 - 28'2"
	lb-ft			2800 - 34'1"	2535 - 34'5"	2293 - 34'8"	2094 - 35'1"
	lb-ft				2072 - 41'8"	1830 - 42'0"	1631 - 42'3"
	lb-ft					1543 - 49'10"	1345 - 49'3"
	lb-ft						1146 - 56'5"
Lifting capacity, manual extensions	lb-ft		2932 - 34'1"	2183 - 41'6"	1631 - 49'5"	1257 - 56'5"	948 - 64'2"
Slewing torque, gross	°/s	12989	12989	12989	12989	12989	12989
Slewing angle	°	400	400	400	400	400	400
Max. heel at max. load moment	°	5	5	5	5	5	5
Slewing speed	°/s	24	24	24	24	24	24

Dimensions	Unit	K1	K2	K3	K4	K5	K6
Height above chassis	ft	7'4"	7'4"	7'4"	7'4"	7'4"	7'4"
Width	ft	8'2"	8'2"	8'2"	8'2"	8'2"	8'2"
Width with extra valves (int. hose routing)	ft	8'3"	8'3"	8'3"	8'3"	8'3"	8'3"
Length, no extra valves	ft	2'8"	2'8"	2'8"	2'8"	2'8"	2'8"
Length, with extra valves (hose guides)	ft	3'1"	3'1"	3'1"	3'1"	3'1"	3'1"
Length, with extra valves (int. hose routing)	ft	2'8"	2'8"	2'8"	2'8"	2'8"	2'8"
Stabilizer spread, S1 (standard)	ft	15'1"	15'1"	15'1"	15'1"	15'1"	15'1"
Stabilizer spread, S2	ft	18'4"	18'4"	18'4"	18'4"	18'4"	18'4"
Stabilizer spread, D	ft	21'2"	21'2"	21'2"	21'2"	21'2"	21'2"

1620 - RCS SPECIFICATIONS - CONTINUED

Weights, basic loader	Unit	K1	K2	K3	K4	K5	K6
Standard loader 1), excl. stabilizers	lb	2999	3308	3616	3914	4178	4388
Stabilizers, S1 fixed	lb	441	441	441	441	441	441
Stabilizers, S1 swing-up	lb	452	452	452	452	452	452
Stabilizers, S1 hydr. swing-up	lb	474	474	474	474	474	474
Stabilizers, S2 fixed	lb	518	518	518	518	518	518
Stabilizers, S2 swing-up	lb	529	529	529	529	529	529
Stabilizers, S2 hydr. swing-up	lb	551	551	551	551	551	551
Stabilizers, D fixed	lb	662	662	662	662	662	662
Stabilizers, D swing-up	lb	662	662	662	662	662	662
Stabilizers, D hydr. swing-up	lb	695	695	695	695	695	695
Mounting kit, 4 bolts	lb	121	121	121	121	121	121
Mounting kit, 8 bolts	lb	132	132	132	132	132	132
Tank, excl. oil (fitted on loader)	lb	99	99	99	99	99	99
Manual extensions	lb		187	165	143	99	88
	lb		165	143	99	88	
	lb		143	99	88		
Oil in loader (stowing position)	lb	55	66	77	88	99	110

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

Weights, equipment	Unit	K1	K2	K3	K4	K5	K6
Stand-up controls (HS), std.	lb	132	132	132	132	132	132
Stand-up controls (HS), direct valve control	lb	154	154	154	154	154	154
Top seat (TS)	lb	198	198	198	198	198	198
Top seat, ladder	lb	44	44	44	44	44	44
1 extra valve, hose guides	lb	88	121	143	165	187	209
1 extra valve, int. hose routing	lb	165	165	165	176	176	187
2 extra valves, hose guides	lb	132	165	198	232	265	298
2 extra valves, int. hose routing	lb	287	287	287	309	320	331
Winch (1.5 t), single snatch block	lb	386	386	386	386	386	397
Winch (1.5 t), double snatch block	lb	375	375	375	375	375	386
Winch (2.5 t), single snatch block	lb	441	441	441	441	441	452
Winch (2.5 t), double snatch block	lb	430	430	430	430	430	441
High-pressure filter	lb	15	15	15	15	15	15
Oil cooler	lb	55	55	55	55	55	55

1620 - RCS SPECIFICATIONS - CONTINUED

Max. Load on stabilizers (per stabilizer cylinder)	Unit	K1	K2	K3	K4	K5	K6
S1, fixed	Lbf	19	19	19	19	19	19
S1, swing-up	Lbf	19	19	19	19	19	19
S1, hydr. swing-up	Lbf	19	19	19	19	19	19
S2, fixed	Lbf	19	19	19	19	19	19
S2, swing-up	Lbf	19	19	19	19	19	19
S2, hydr. swing-up	Lbf	19	19	19	19	19	19
D, fixed	Lbf	15	15	15	15	15	15
D, swing-up	Lbf	15	15	15	15	15	15
D, hydr. swing-up	Lbf	15	15	15	15	15	15

Power consumption (oil capacity)	Unit	K1	K2	K3	K4	K5	K6
Working pressure	PSI	5294	5294	5294	5294	5294	5294
Tank capacity (fitted on loader)	gal	24	24	24	24	24	24
Max. pump performance, Danfoss fixed flow	gpm	18	18	18	18	18	18
Max. pump performance, Danfoss variable	gpm	26	26	26	26	26	26

MINIMUM CHASSIS SPECS	
FRONT AXLE RATING (GAWR)	12,000 LB (5,450 KG)
REAR AXLE RATING (GAWR)	21,000 LB (9,530 KG)
RESISTANCE TO BENDING MOMENT	1,470,000 IN-LB (203,240 KG-M)

1620 - RCS, Metric Specifications

Performance	Unit	K1	K2	K3	K4	K5	K6
Loading group (EN12999)		H1/B3	H1/B3	H1/B3	H1/B3	H1/B3	H1/B3
Load moment	tm	15.2	14.7	14.3	13.9	13.5	13.2
Hydraulic reach	m	6.3	8.4	10.5	12.8	15	17.3
Hydraulic telescopic movement	mm	1930	3940	6040	8230	10390	12580
Lifting capacity, hydraulic	kg-m	3540 - 4.3	3410 - 4.3	3250 - 4.4	3100 - 4.5	2970 - 4.6	2850 - 4.6
	kg-m	2450 - 6.2	2320 - 6.3	2180 - 6.3	2050 - 6.4	1930 - 6.5	1830 - 6.6
	kg-m		1750 - 8.3	1610 - 8.3	1490 - 8.4	1380 - 8.5	1280 - 8.6
	kg-m			1270 - 10.4	1150 - 10.5	1040 - 10.6	950 - 10.7
	kg-m				940 - 12.7	750 - 12.8	740 - 12.9
	kg-m					700 - 14.9	610 - 15.0
	kg-m						520 - 17.2
Lifting capacity, manual extensions	kg-m		1330 - 10.4	990 - 12.7	740 - 15.1	570 - 17.2	430 - 19.6
Slewing torque, gross	kNm	17.6	17.6	17.6	17.6	17.6	17.6
Slewing angle	°	400	400	400	400	400	400
Max. heel at max. load moment	°	5	5	5	5	5	5
Slewing speed	°/s	24	24	24	24	24	24

Dimensions	Unit	K1	K2	K3	K4	K5	K6
Height above chassis	mm	2250	2250	2250	2250	2250	2250
Width	mm	2500	2500	2500	2500	2500	2500
Width with extra valves (int. hose routing)	mm	2535	2535	2535	2535	2535	2535
Length, no extra valves	mm	830	830	830	830	830	830
Length, with extra valves (hose guides)	mm	950	950	950	950	950	950
Length, with extra valves (int. hose routing)	mm	830	830	830	830	830	830
Stabilizer spread, S1 (standard)	mm	4615	4615	4615	4615	4615	4615
Stabilizer spread, S2	mm	5590	5590	5590	5590	5590	5590
Stabilizer spread, D	mm	6470	6470	6470	6470	6470	6470

1620 - RCS METRIC SPECIFICATIONS - CONTINUED

Weights, basic loader	Unit	K1	K2	K3	K4	K5	K6
Standard loader 1), excl. stabilizers	kg	1360	1500	1640	1775	1895	1990
Stabilizers, S1 fixed	kg	200	200	200	200	200	200
Stabilizers, S1 swing-up	kg	205	205	205	205	205	205
Stabilizers, S1 hydr. swing-up	kg	215	215	215	215	215	215
Stabilizers, S2 fixed	kg	235	235	235	235	235	235
Stabilizers, S2 swing-up	kg	240	240	240	240	240	240
Stabilizers, S2 hydr. swing-up	kg	250	250	250	250	250	250
Stabilizers, D fixed	kg	300	300	300	300	300	300
Stabilizers, D swing-up	kg	300	300	300	300	300	300
Stabilizers, D hydr. swing-up	kg	315	315	315	315	315	315
Mounting kit, 4 bolts	kg	55	55	55	55	55	55
Mounting kit, 8 bolts	kg	60	60	60	60	60	60
Tank, excl. oil (fitted on loader)	kg	45	45	45	45	45	45
Manual extensions	kg		85	75	65	45	40
Oil in loader (stowing position)	kg	25	30	35	40	45	50

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

Weights, equipment	Unit	K1	K2	K3	K4	K5	K6
Stand-up controls (HS), std.	kg	60	60	60	60	60	60
Stand-up controls (HS), direct valve control	kg	70	70	70	70	70	70
Top seat (TS)	kg	90	90	90	90	90	90
Top seat, ladder	kg	20	20	20	20	20	20
1 extra valve, hose guides	kg	40	55	65	75	85	95
1 extra valve, int. hose routing	kg	75	75	75	80	80	85
2 extra valves, hose guides	kg	60	75	90	105	120	135
2 extra valves, int. hose routing	kg	130	130	130	140	145	150
Winch (1.5 t), single snatch block	kg	175	175	175	175	175	180
Winch (1.5 t), double snatch block	kg	170	170	170	170	170	175
Winch (2.5 t), single snatch block	kg	200	200	200	200	200	205
Winch (2.5 t), double snatch block	kg	195	195	195	195	195	200
High-pressure filter	kg	7	7	7	7	7	7
Oil cooler	kg	25	25	25	25	25	25

1620 - RCS METRIC SPECIFICATIONS - CONTINUED

Max. Load on stabilizers (per stabilizer cylinder)	Unit	K1	K2	K3	K4	K5	K6
S1, fixed	kN	85	85	85	85	85	85
S1, swing-up	kN	85	85	85	85	85	85
S1, hydr. swing-up	kN	85	85	85	85	85	85
S2, fixed	kN	85	85	85	85	85	85
S2, swing-up	kN	85	85	85	85	85	85
S2, hydr. swing-up	kN	85	85	85	85	85	85
D, fixed	kN	68	68	68	68	68	68
D, swing-up	kN	68	68	68	68	68	68
D, hydr. swing-up	kN	68	68	68	68	68	68

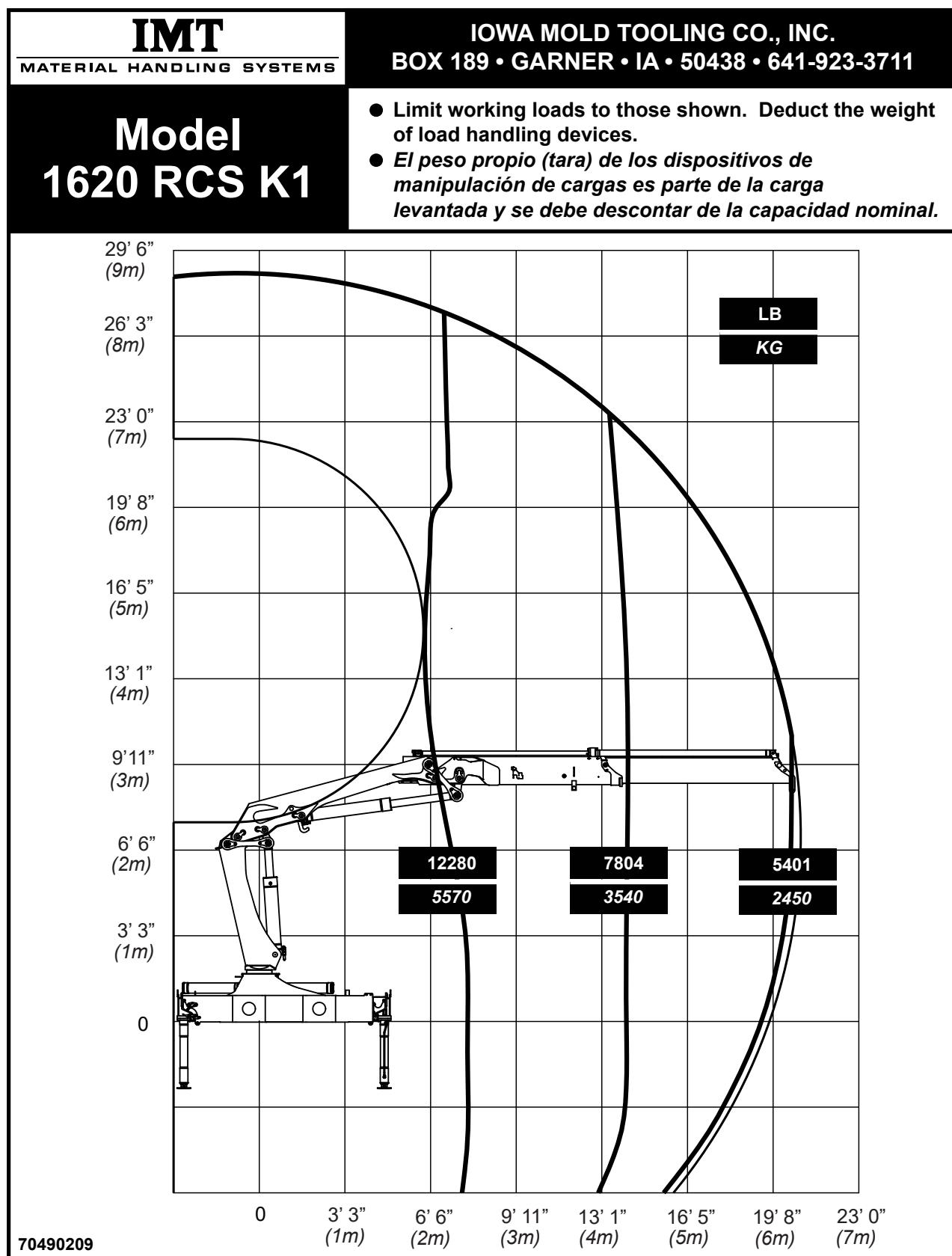
Power consumption (oil capacity)	Unit	K1	K2	K3	K4	K5	K6
Working pressure	Bar	345	345	345	345	345	345
Tank capacity (fitted on loader)	L	90	90	90	90	90	90
Max. pump performance, Hydrocontrol, 1-circuit	L/min	45	45	45	45	45	45
Max. pump performance, Danfoss fixed flow	L/min	70	70	70	70	70	70
Max. pump performance, Danfoss variable	L/min	100	100	100	100	100	100

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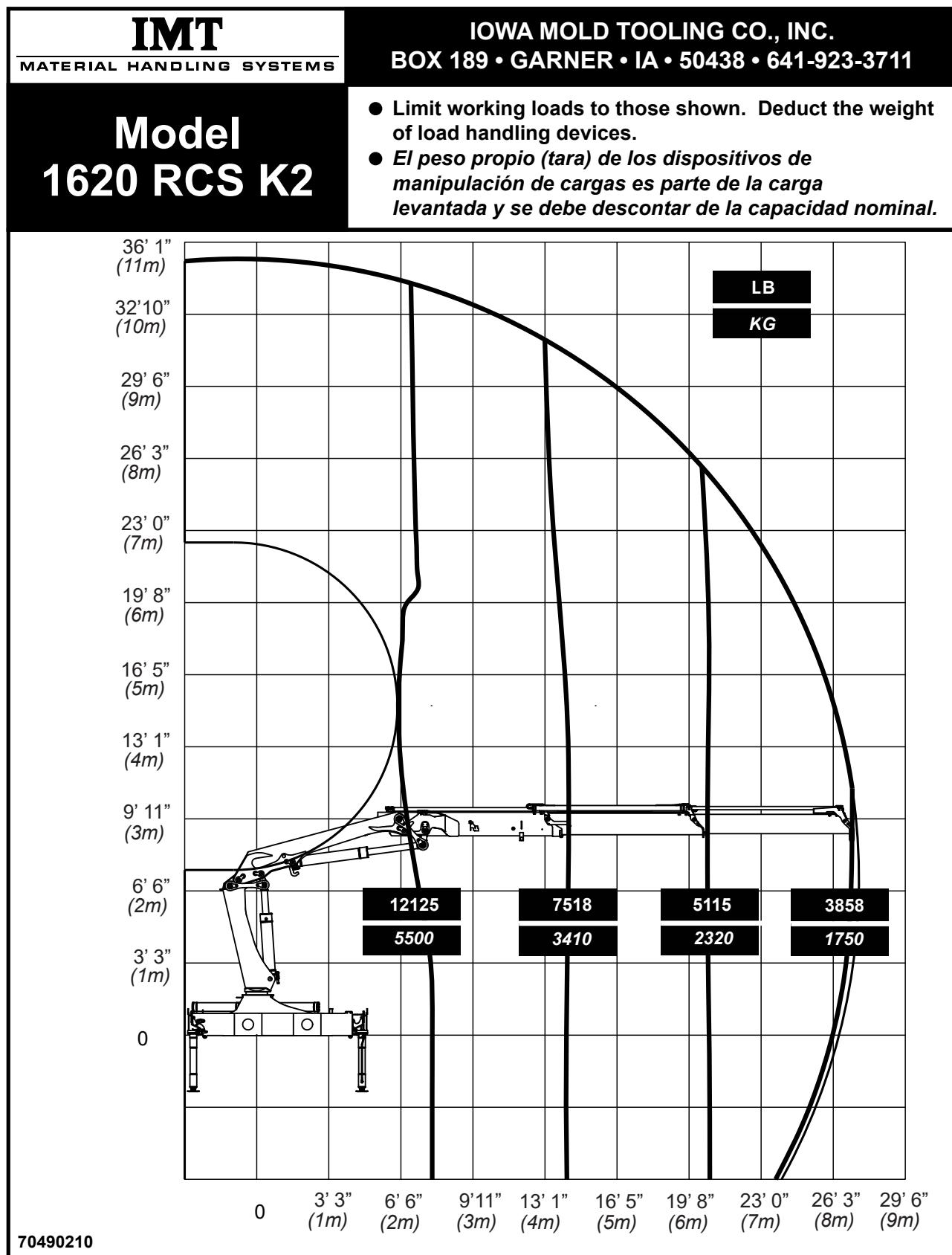
1620 - RCS K1-K6 Load Capacity Charts

Section - 6

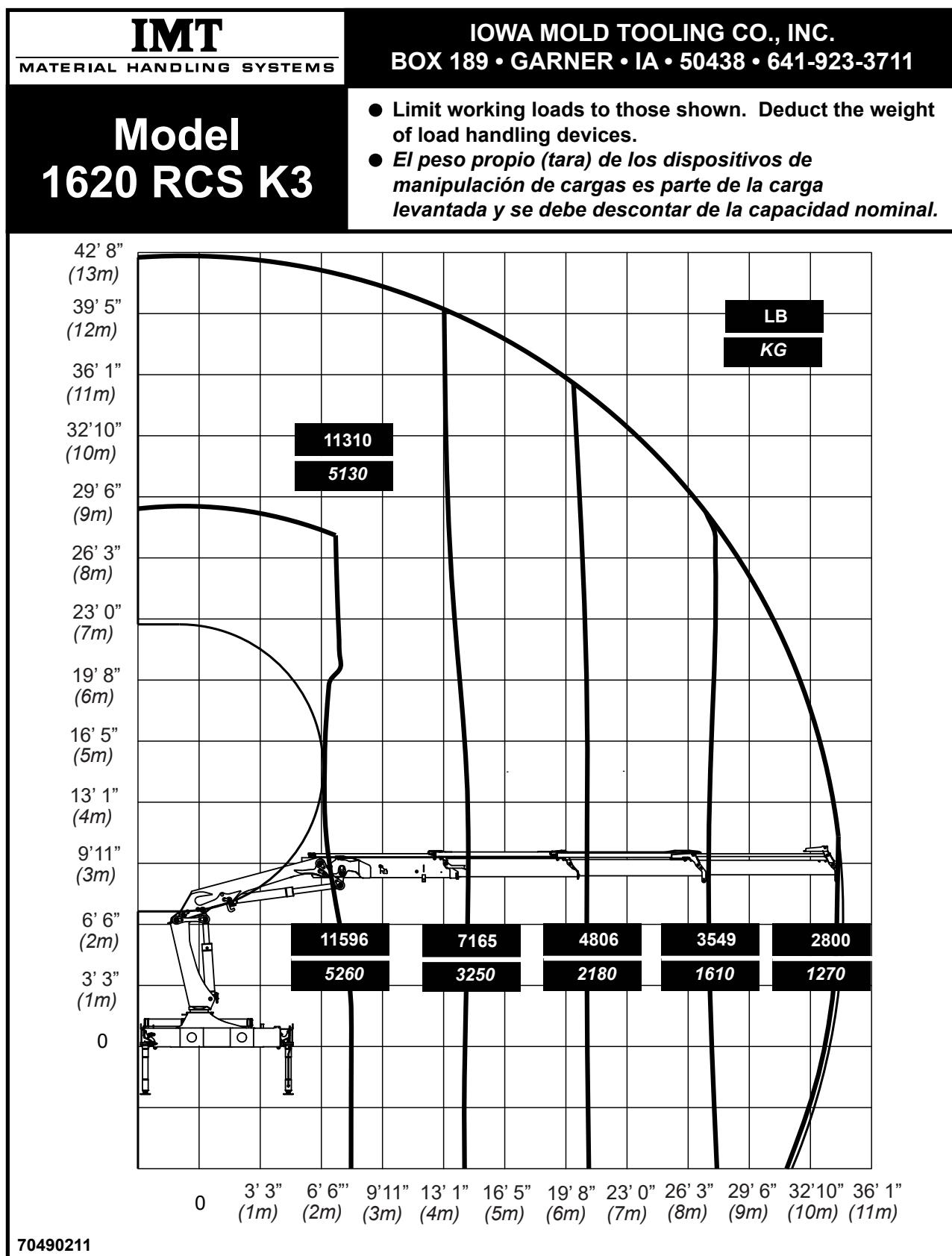
1620 - RCS, Lifting Capacity Chart, K1



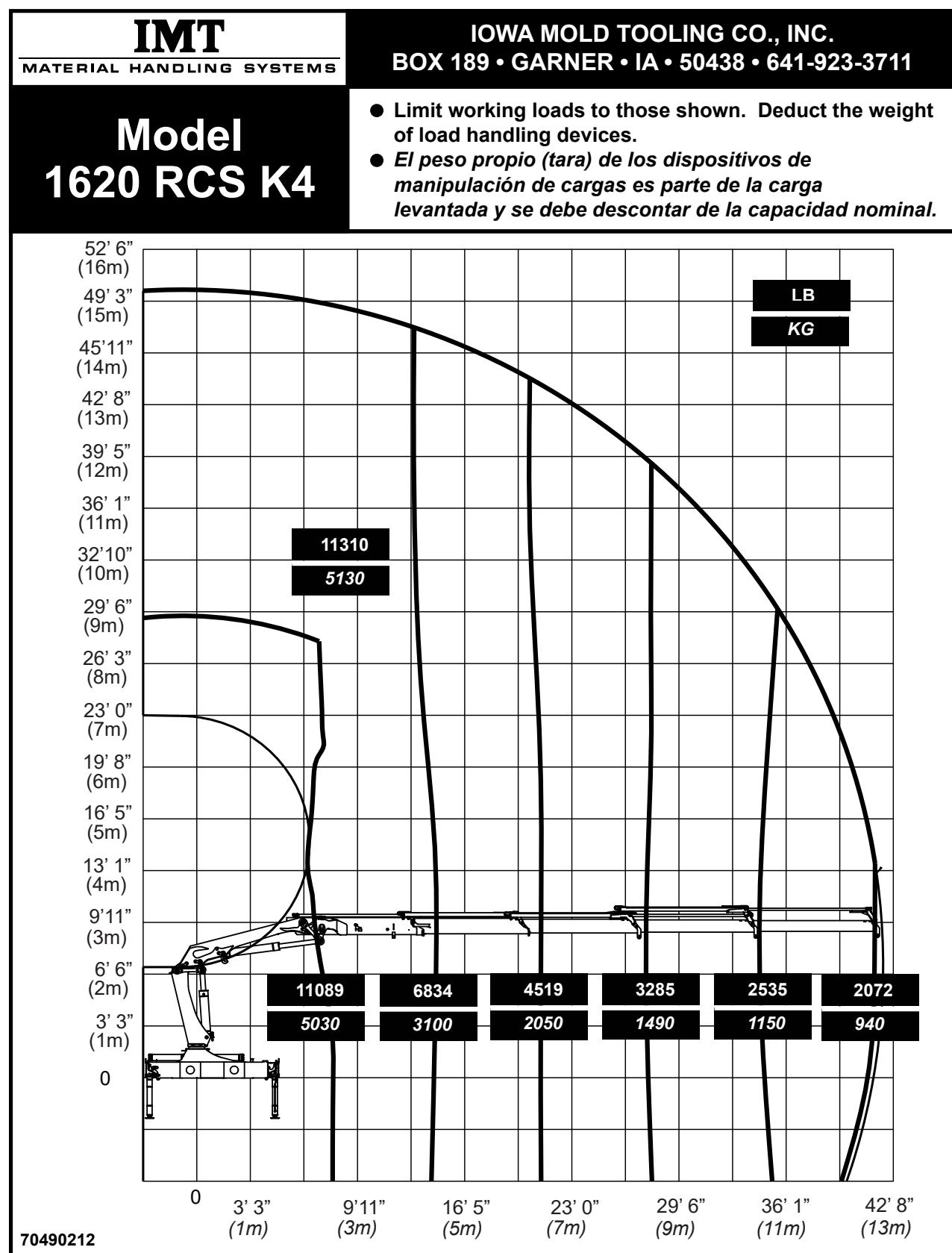
1620 - RCS, Lifting Capacity Chart, K2



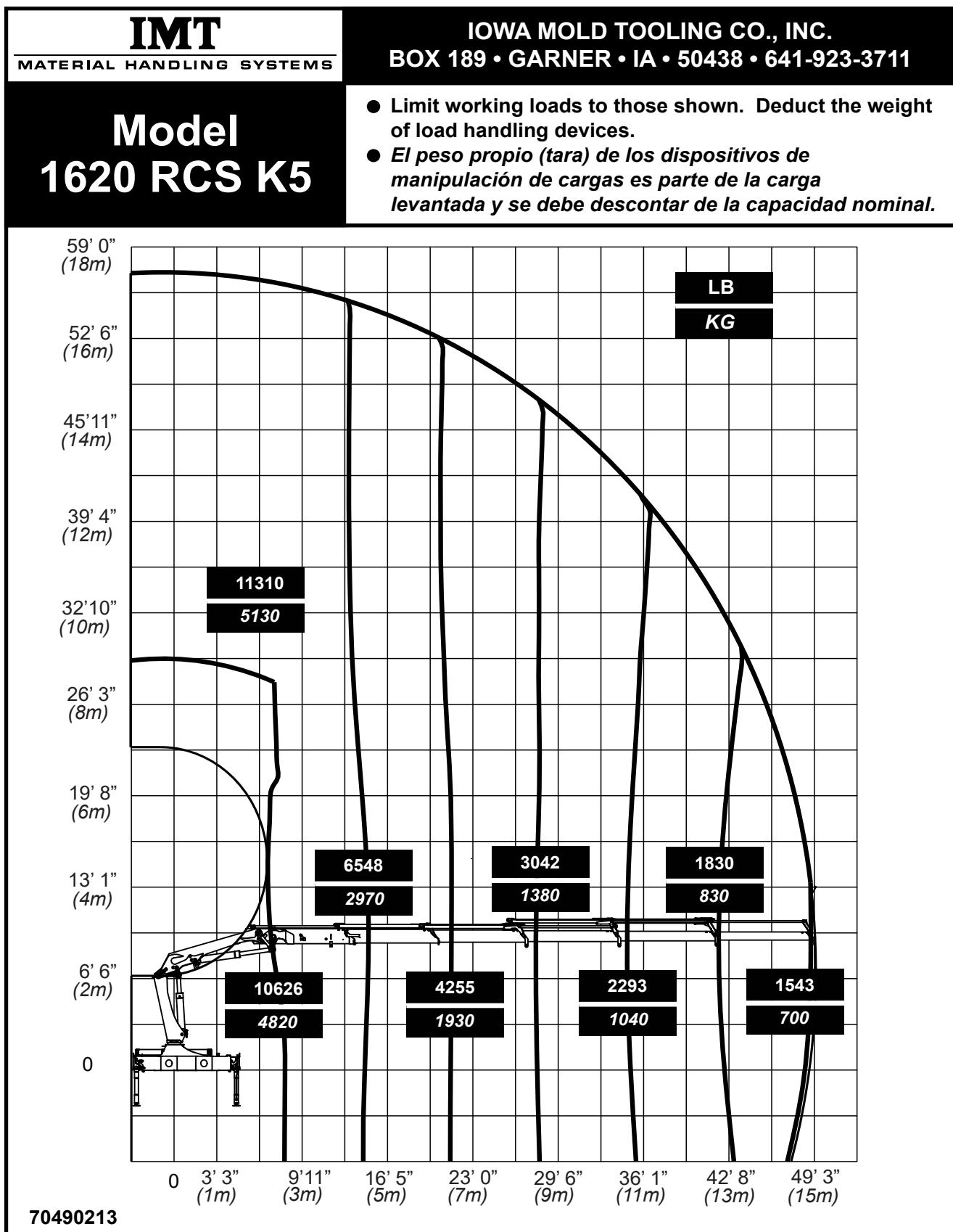
1620 - RCS, Lifting Capacity Chart, K3



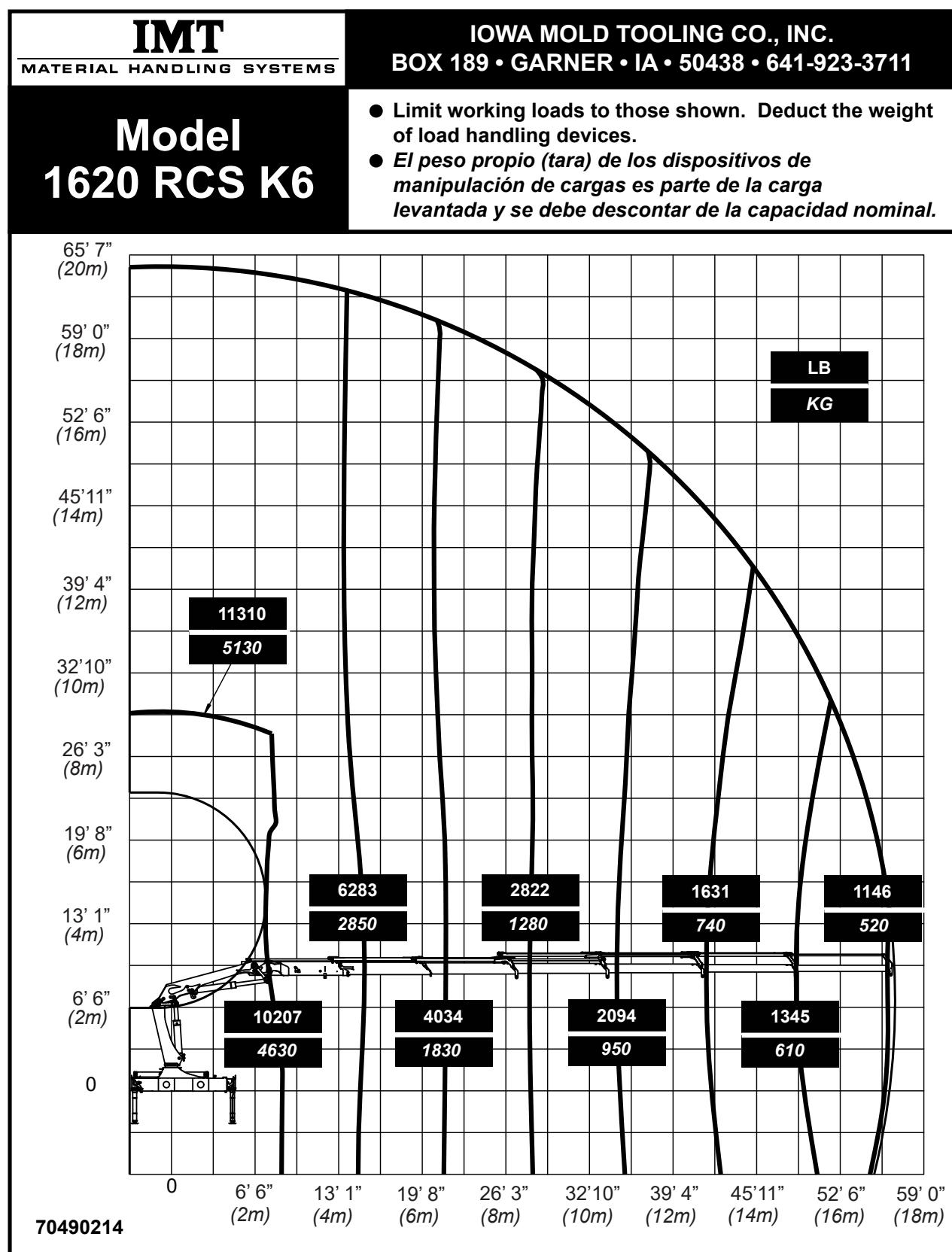
1620 - RCS, Lifting Capacity Chart, K4



1620 - RCS, Lifting Capacity Chart, K5

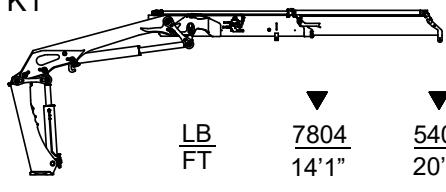


1620 - RCS, Lifting Capacity Chart, K6



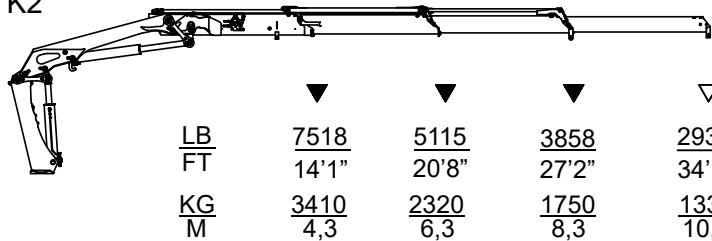
1620 - RCS, Lifting Capacity Chart, K1 - K6

K1



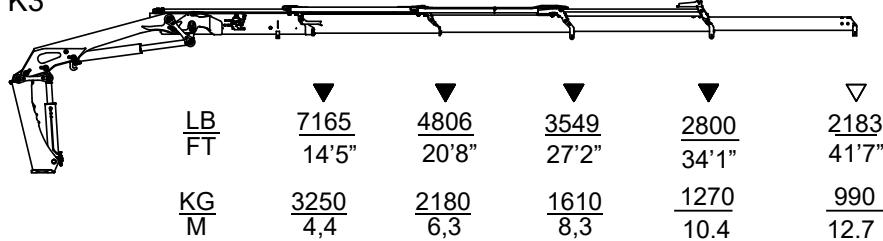
	LB FT	7804 14'1"	5401 20'3"
	KG M	3540 4,3	2450 6,2

K2



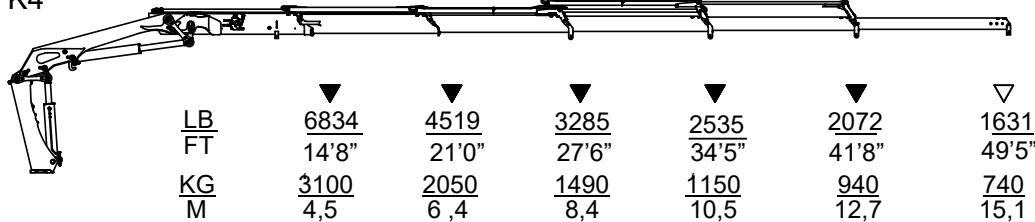
	LB FT	7518 14'1"	5115 20'8"	3858 27'2"	2932 34'1"
	KG M	3410 4,3	2320 6,3	1750 8,3	1330 10,4

K3



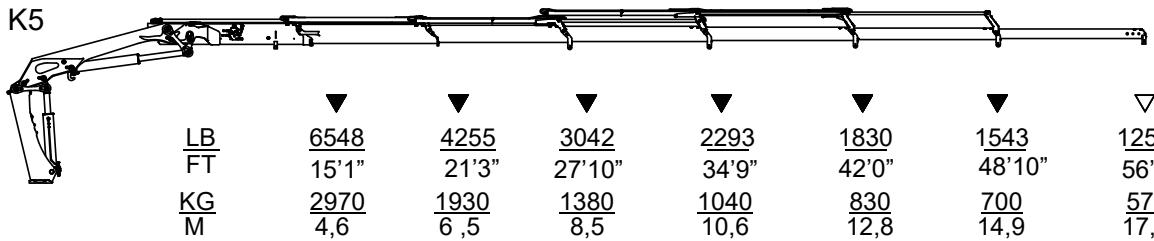
	LB FT	7165 14'5"	4806 20'8"	3549 27'2"	2800 34'1"	2183 41'7"
	KG M	3250 4,4	2180 6,3	1610 8,3	1270 10,4	990 12,7

K4



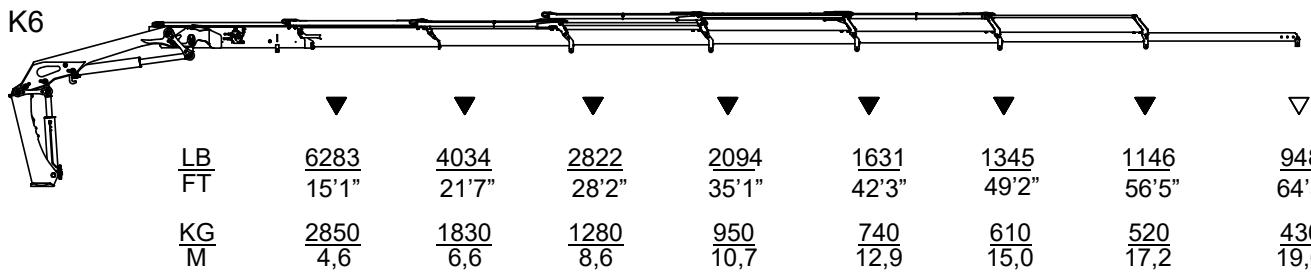
	LB FT	6834 14'8"	4519 21'0"	3285 27'6"	2535 34'5"	2072 41'8"	1631 49'5"
	KG M	3100 4,5	2050 6,4	1490 8,4	1150 10,5	940 12,7	740 15,1

K5



	LB FT	6548 15'1"	4255 21'3"	3042 27'10"	2293 34'9"	1830 42'0"	1543 48'10"	1257 56'4"
	KG M	2970 4,6	1930 6,5	1380 8,5	1040 10,6	830 12,8	700 14,9	570 17,2

K6



	LB FT	6283 15'1"	4034 21'7"	2822 28'2"	2094 35'1"	1631 42'3"	1345 49'2"	1146 56'5"	948 64'3"
	KG M	2850 4,6	1830 6,6	1280 8,6	950 10,7	740 12,9	610 15,0	520 17,2	430 19,6

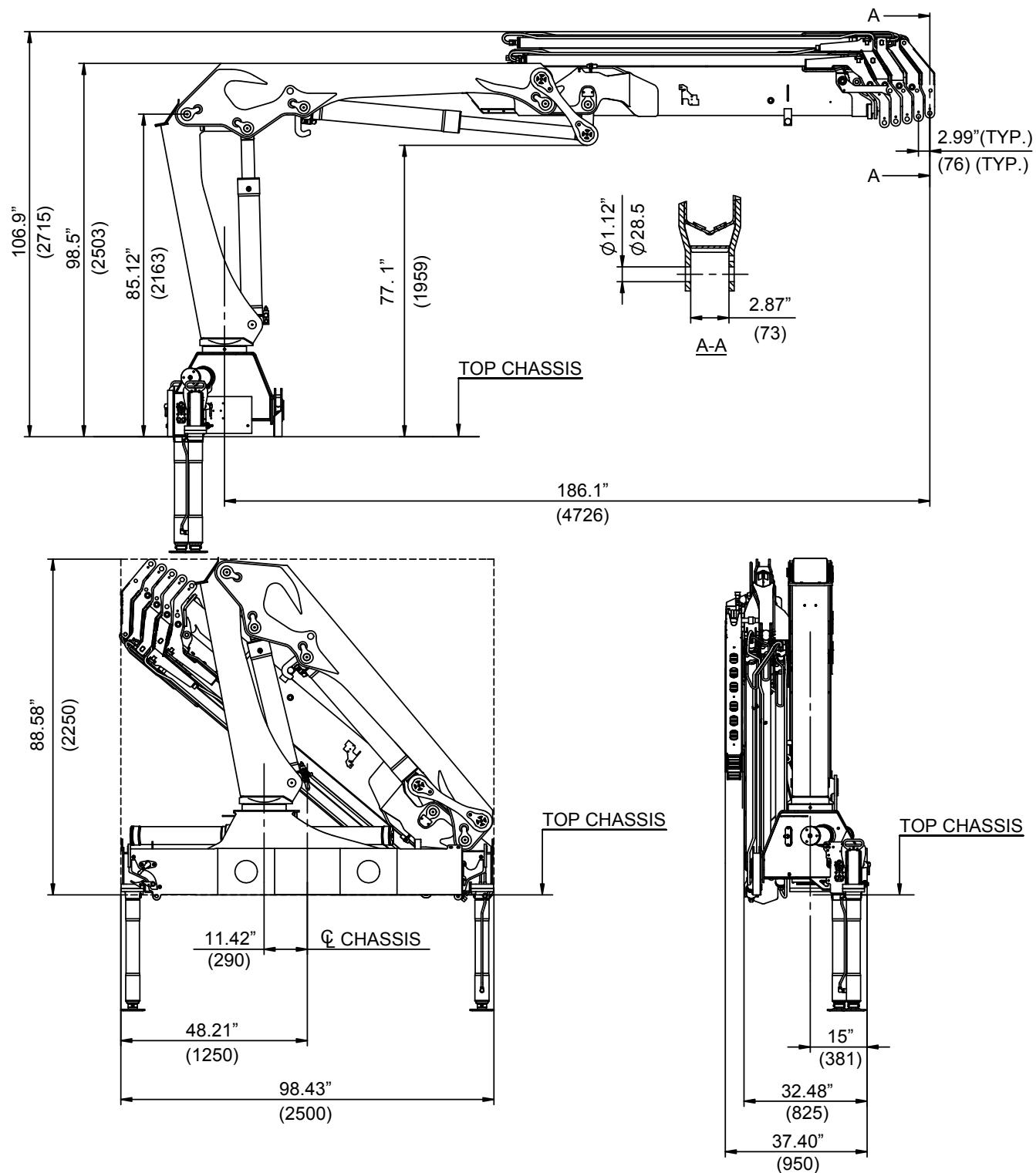
▼ With Manual Extensions

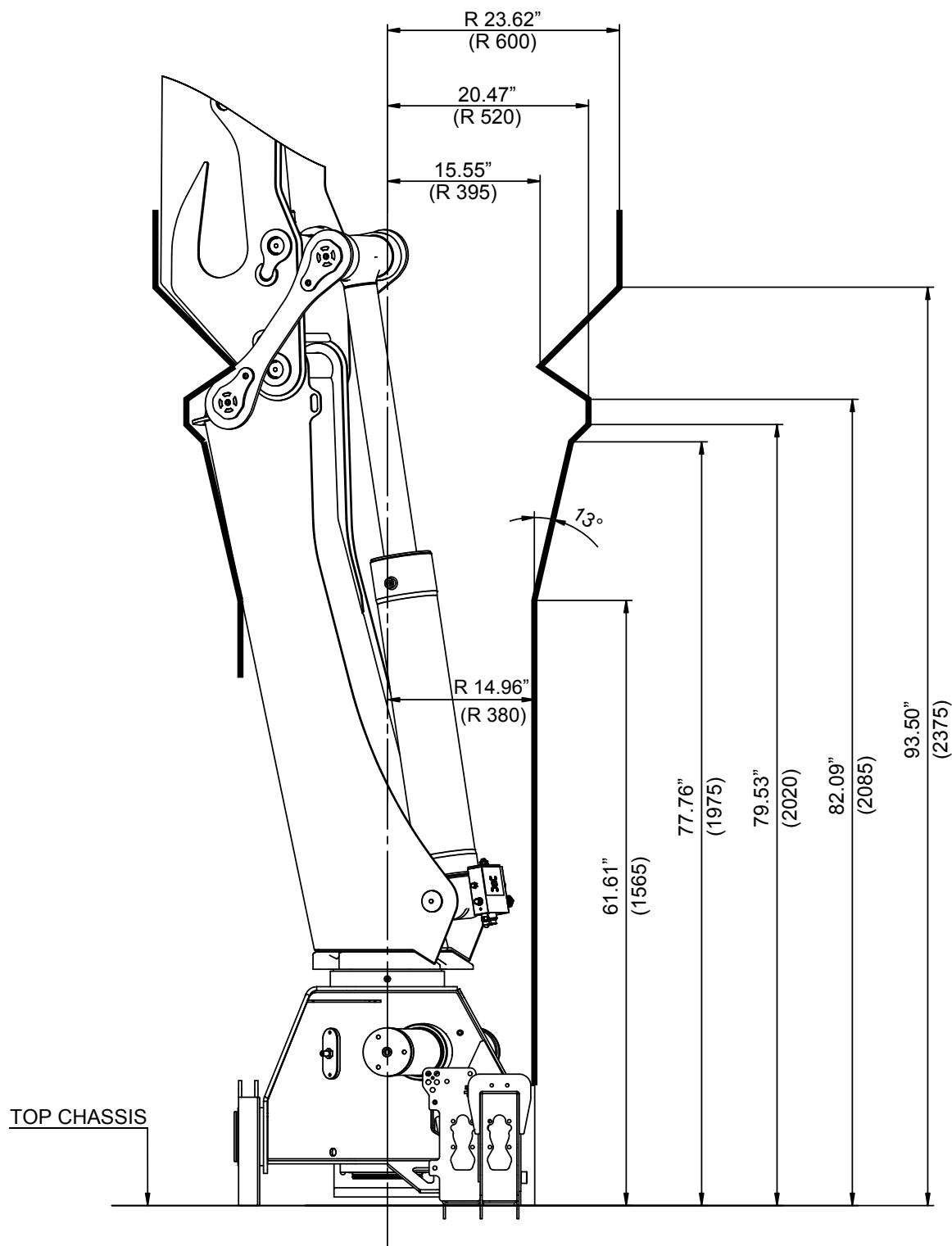
■ Without Manual Extensions

1620 - RCS Dimension Drawings

Section - 7

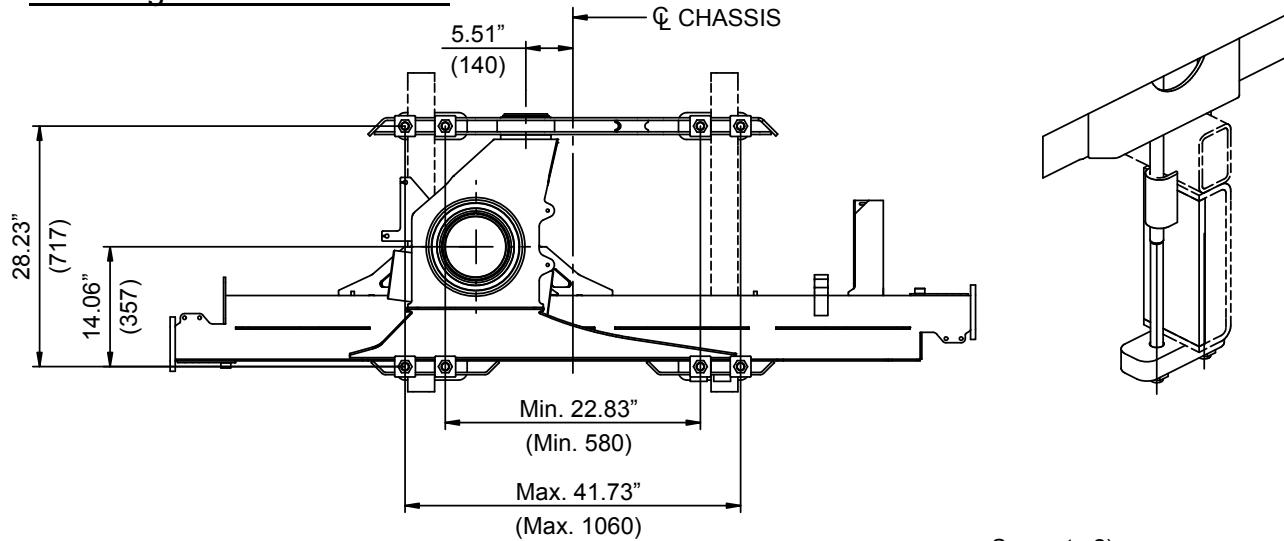
1620 - RCS, Dimension Sketch



1620 - RCS, Slewing Radius

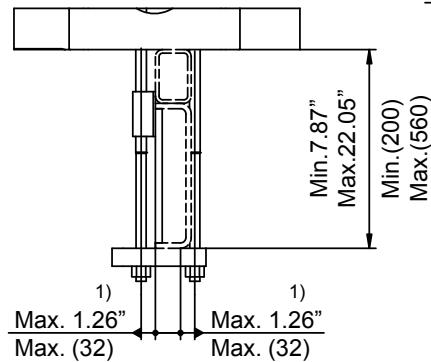
1620 - RCS, Dimension Sketch For Truck-Mounted Loader

Mounting kit 8 x M24x2 bolts

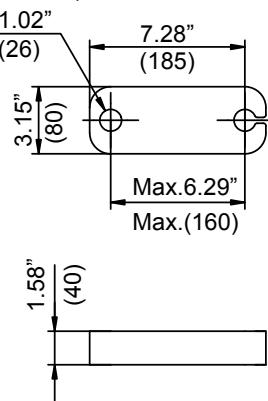


Notes:

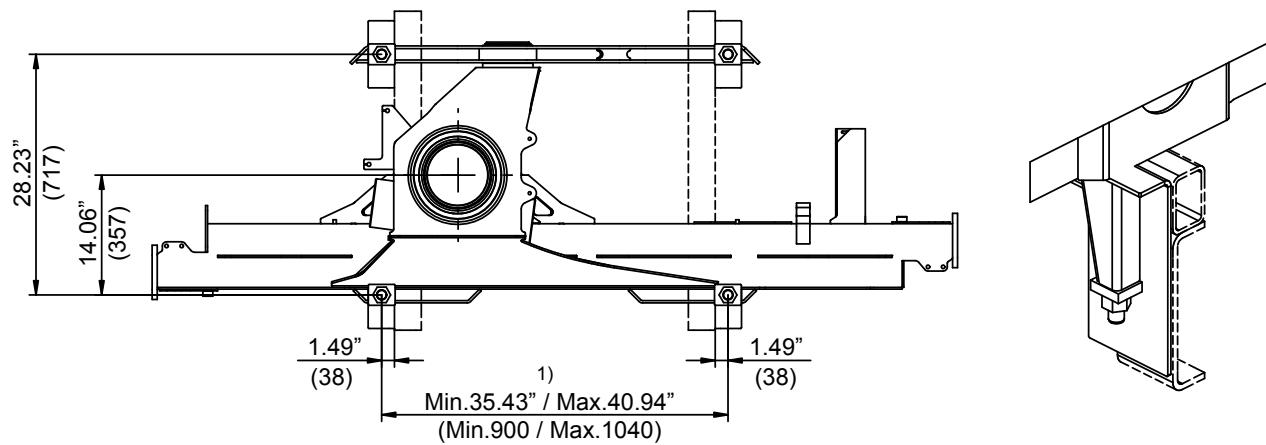
- 1) Values dictated by strength considerations.
- 2) Drill hole when assembling
- 3) As regards installation - please see HMF Installation Manual
- 4) Mounting kits or spare parts - please see the Spare Parts Catalogue of the individual loader



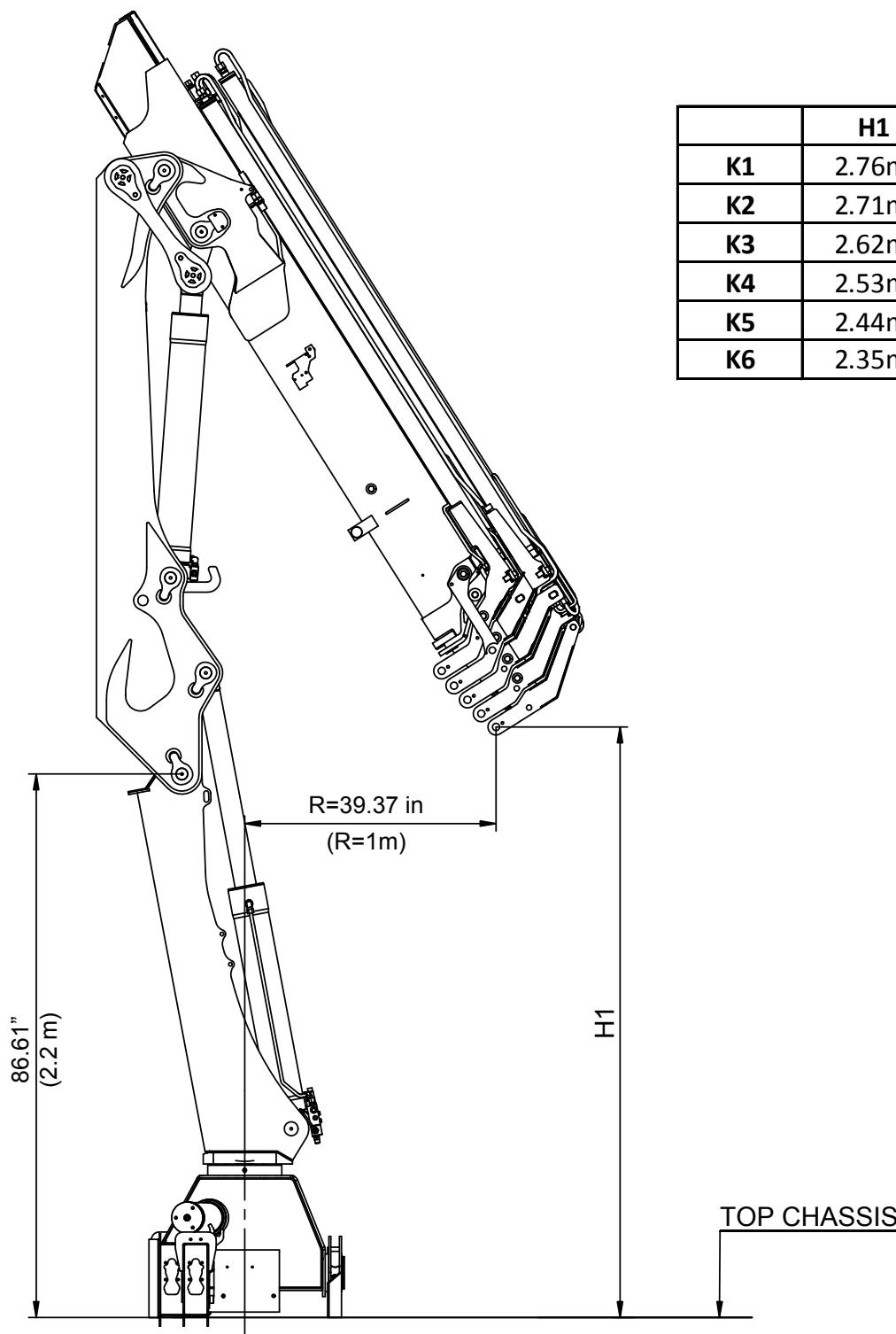
See note 2)



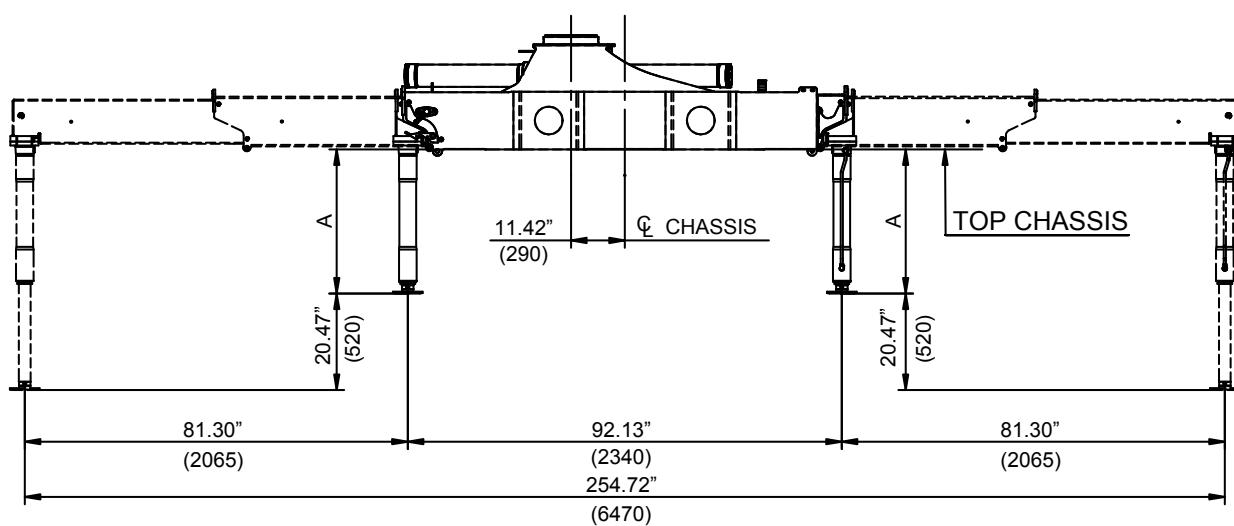
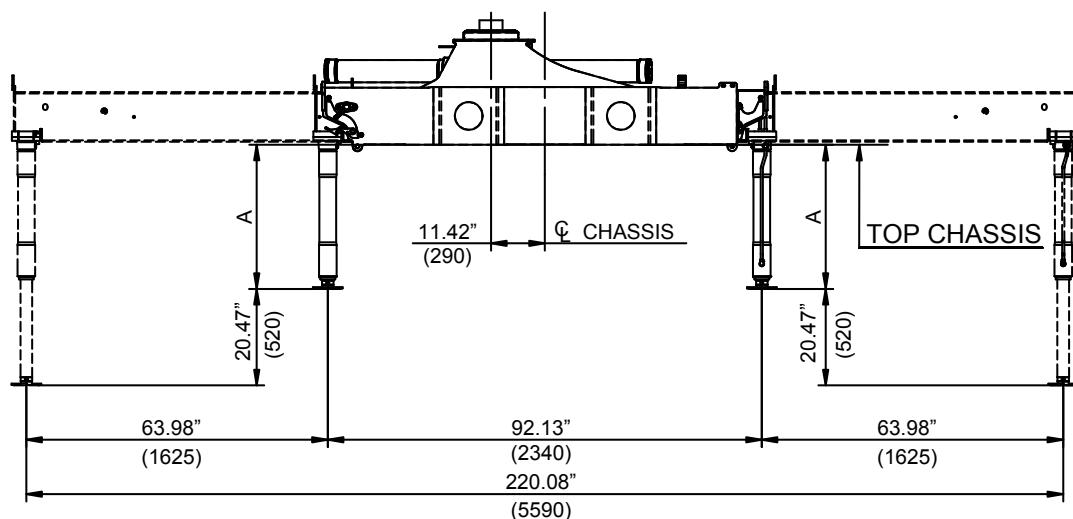
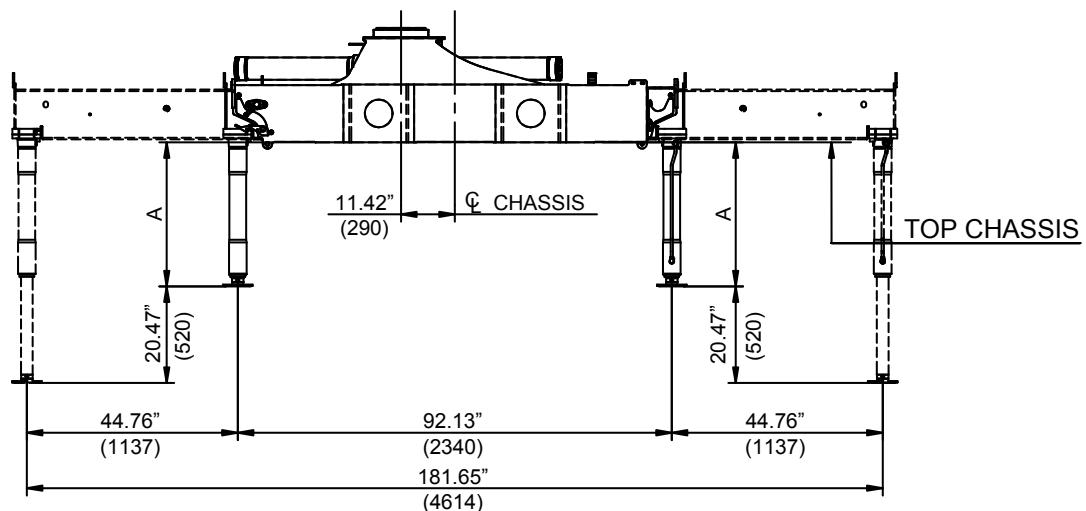
Mounting kit 4 x M30x2 bolts

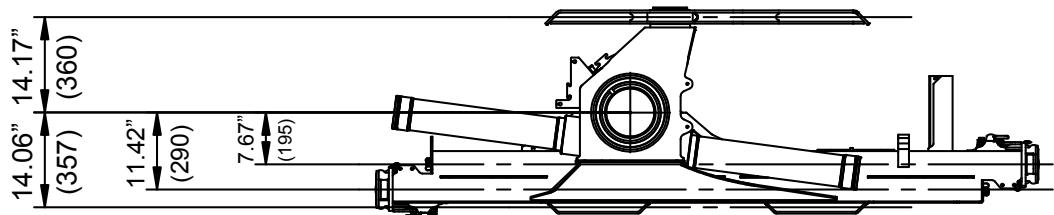


1620 - RCS, Lifting Height At Column



	H1	H1
K1	2.76m	115.75"
K2	2.71m	111.81"
K3	2.62m	107.87"
K4	2.53m	103.94"
K5	2.44m	100"
K6	2.35m	92.52"

1620 - RCS, Dimensions, Fixed Stabilizer Legs

CONTINUED

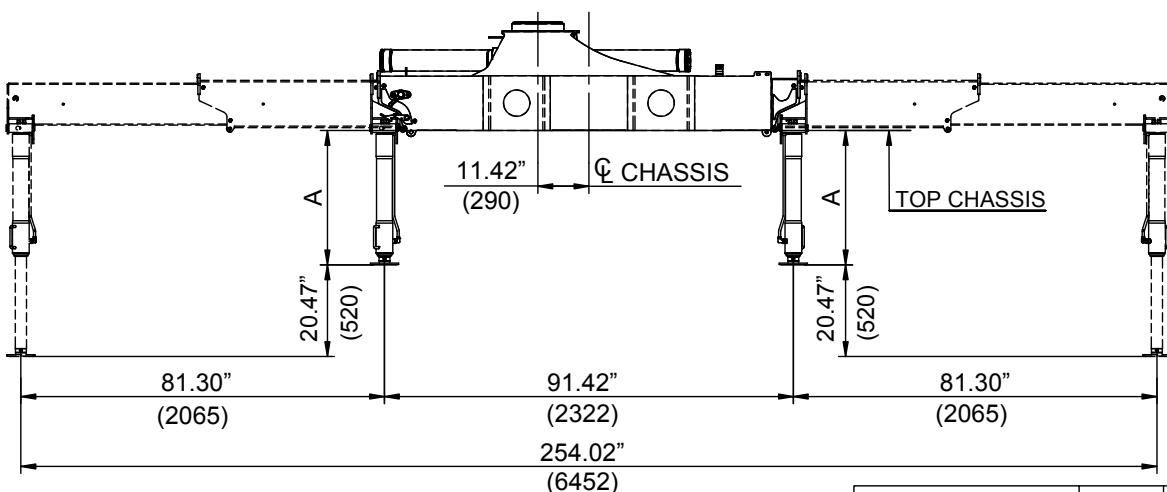
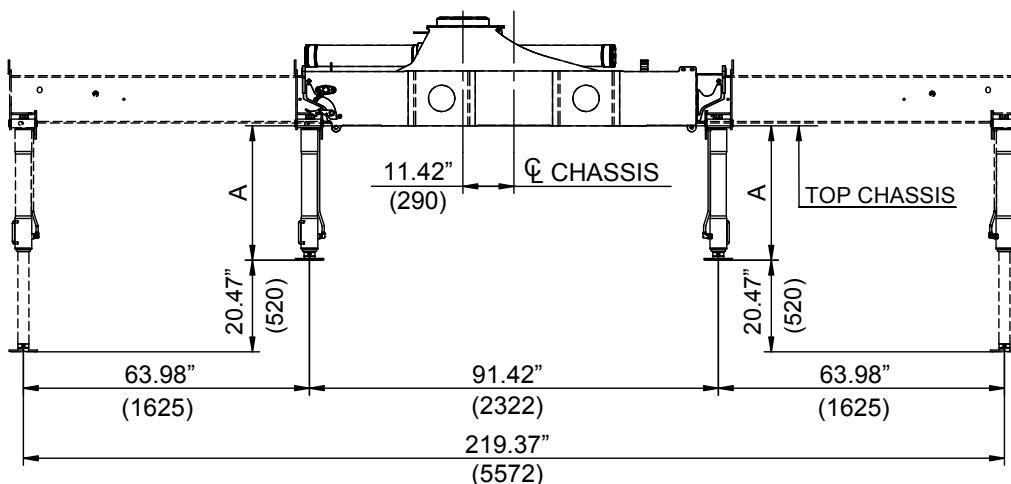
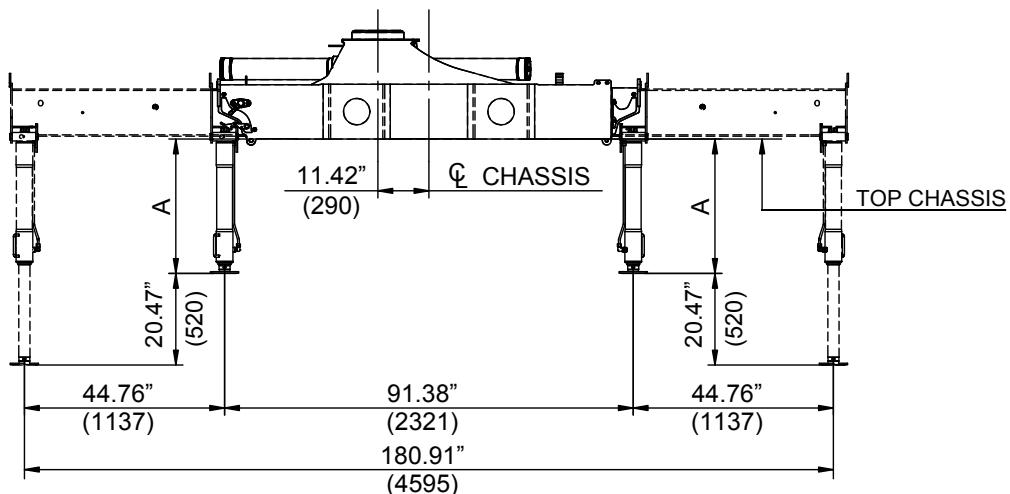
B			
22.8"	A	27.8"	30.4"
26.8"	A	31.7"	34.3"

B			
22.8"	A	30.4"	32.9"
26.8"	A	34.4"	36.8"

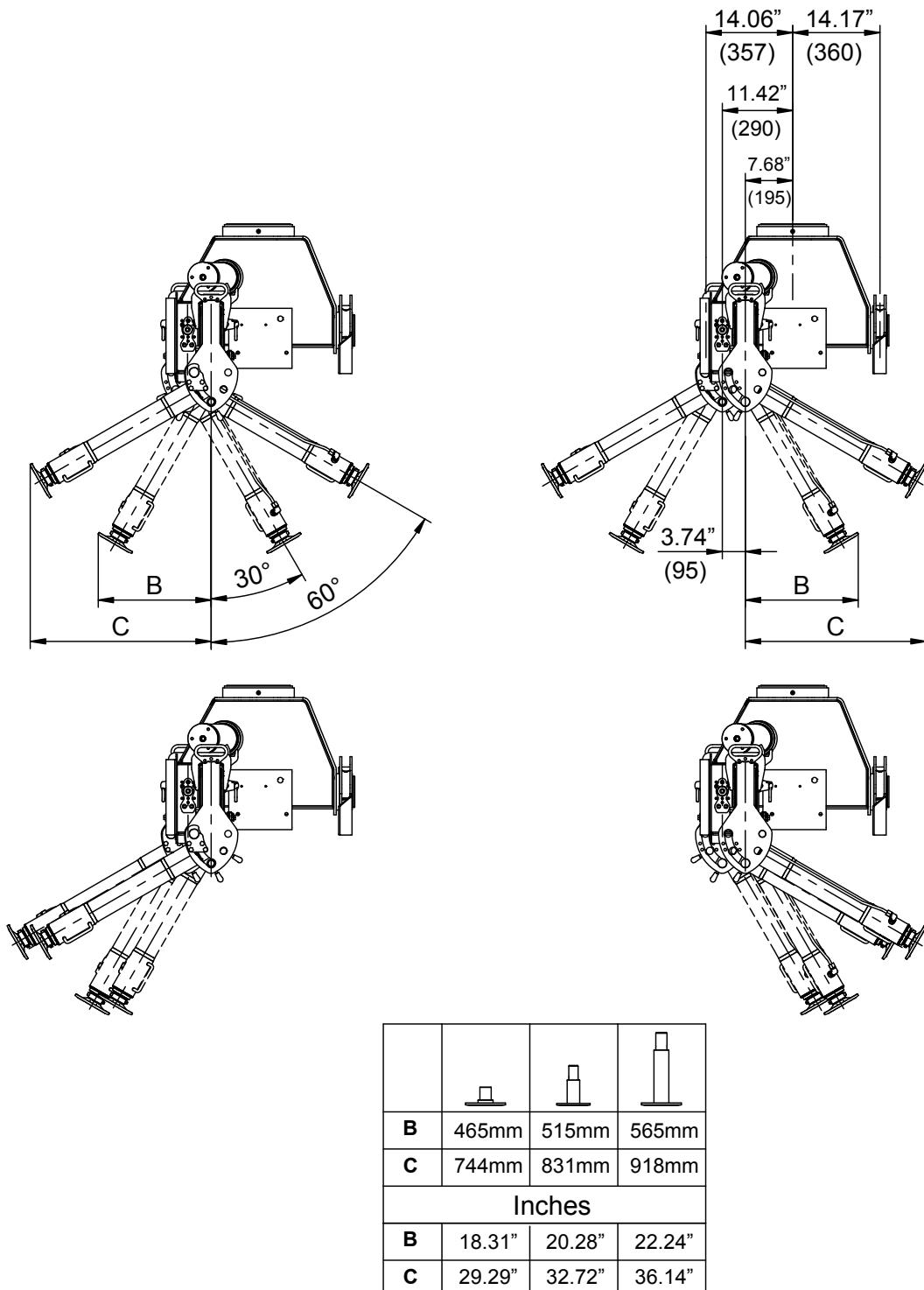
B			
580	A	705	772
680	A	805	872

B			
580	A	773	835
680	A	873	935

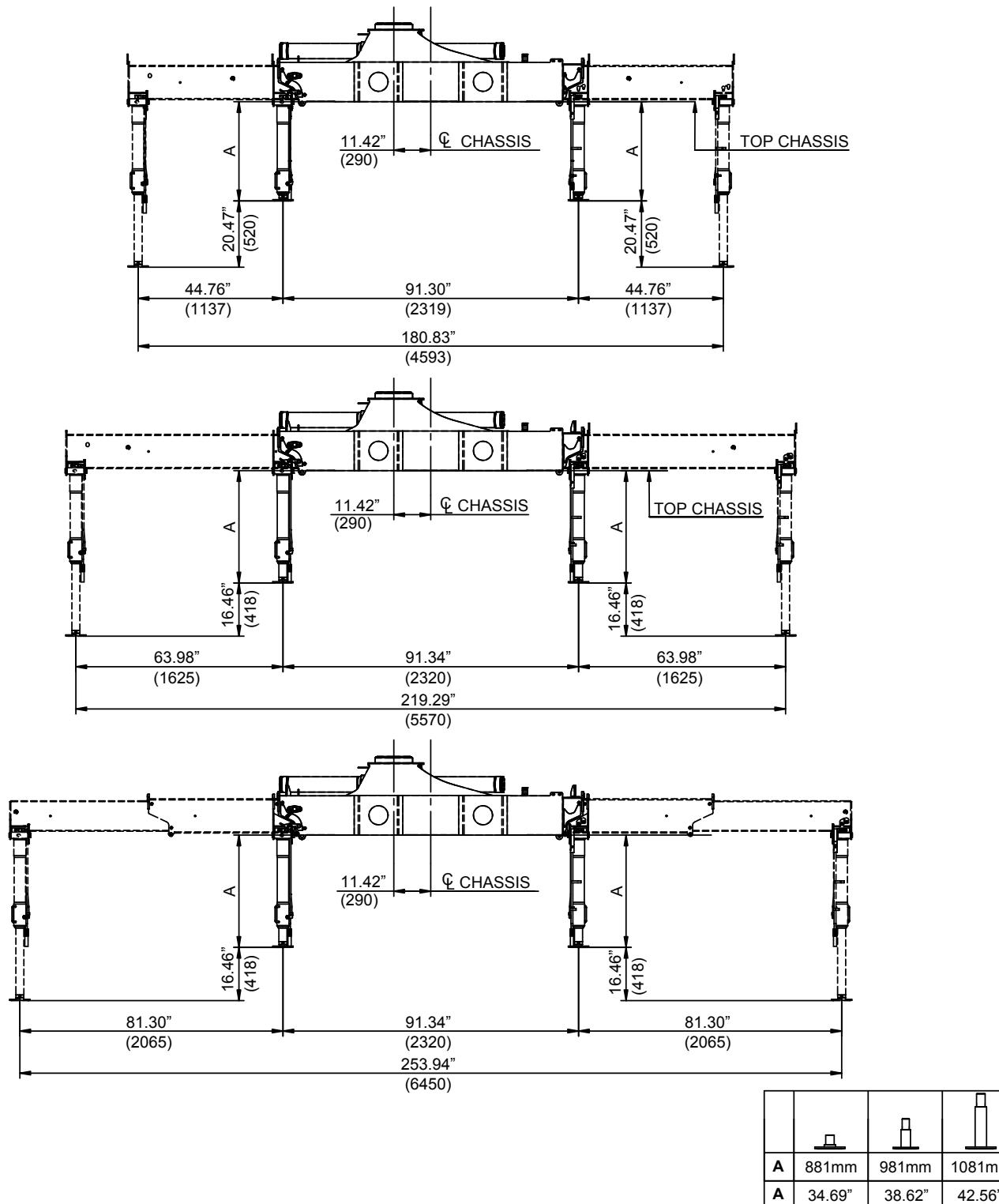
1620 - RCS, Dimension Sketch, Swing-Up Stabilizer Legs 30°- 60° (Manual)

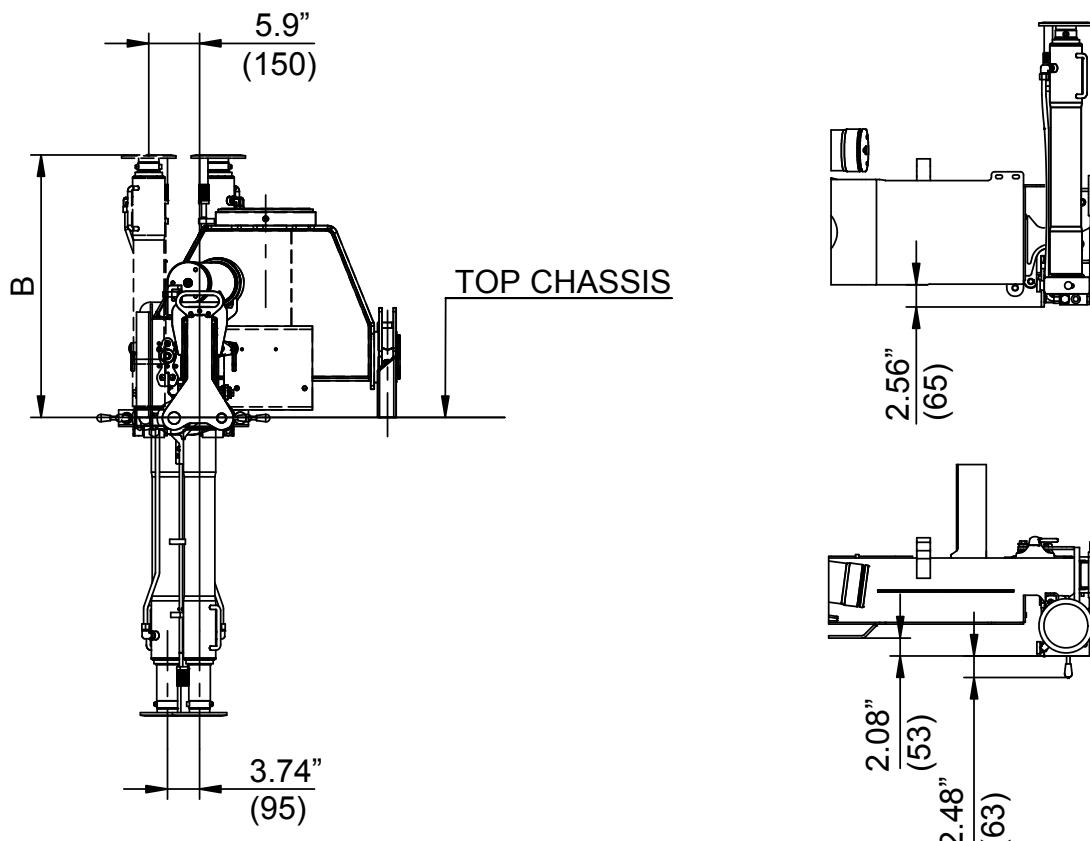


A Type R-60°	30.35"	34.29"	38.23"
A Type R-20° (Obsolete)	31.22"	33.98"	37.91"
A Type R-60°	771mm	871mm	971mm
A Type R-20° (Obsolete)	763mm	863mm	963mm

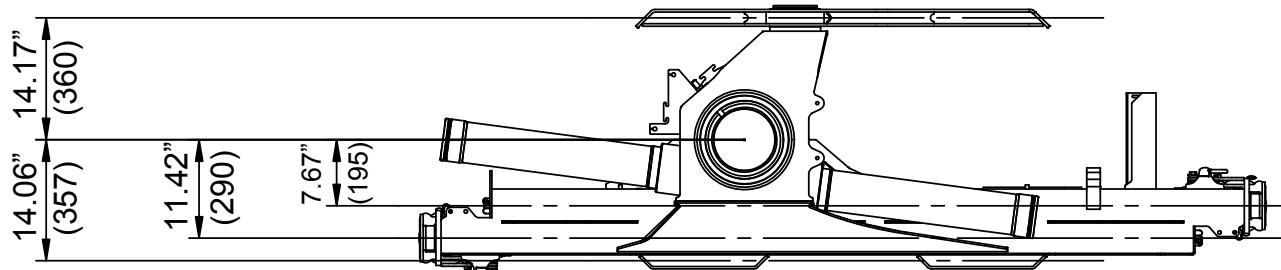
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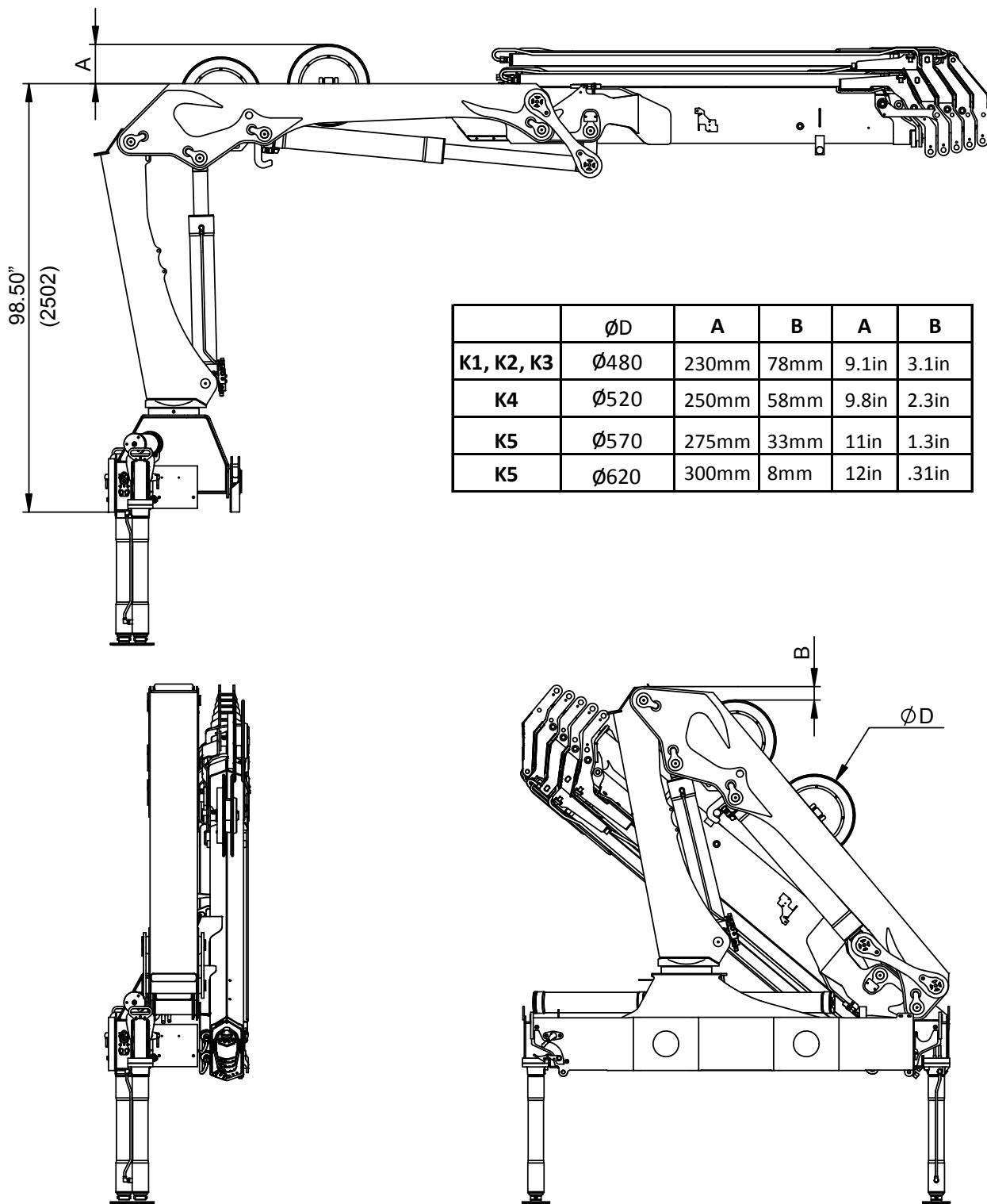
1620 - RCS, Dimension Sketch, Swing-Up Stabilizer Legs 180° (Manual + Hydraulic)



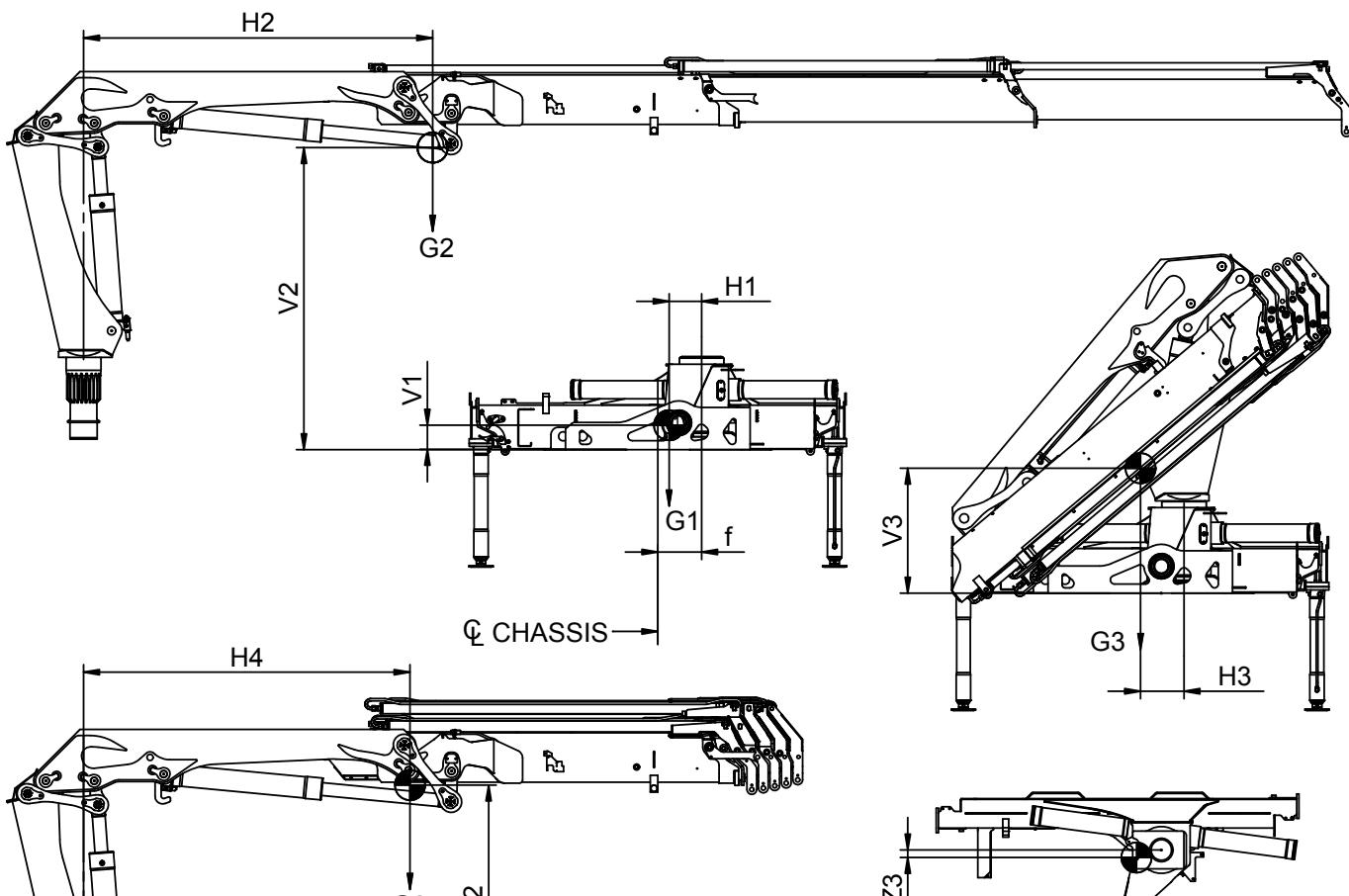
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B	775mm	875mm	975mm
B	30.51"	34.45"	38.39"



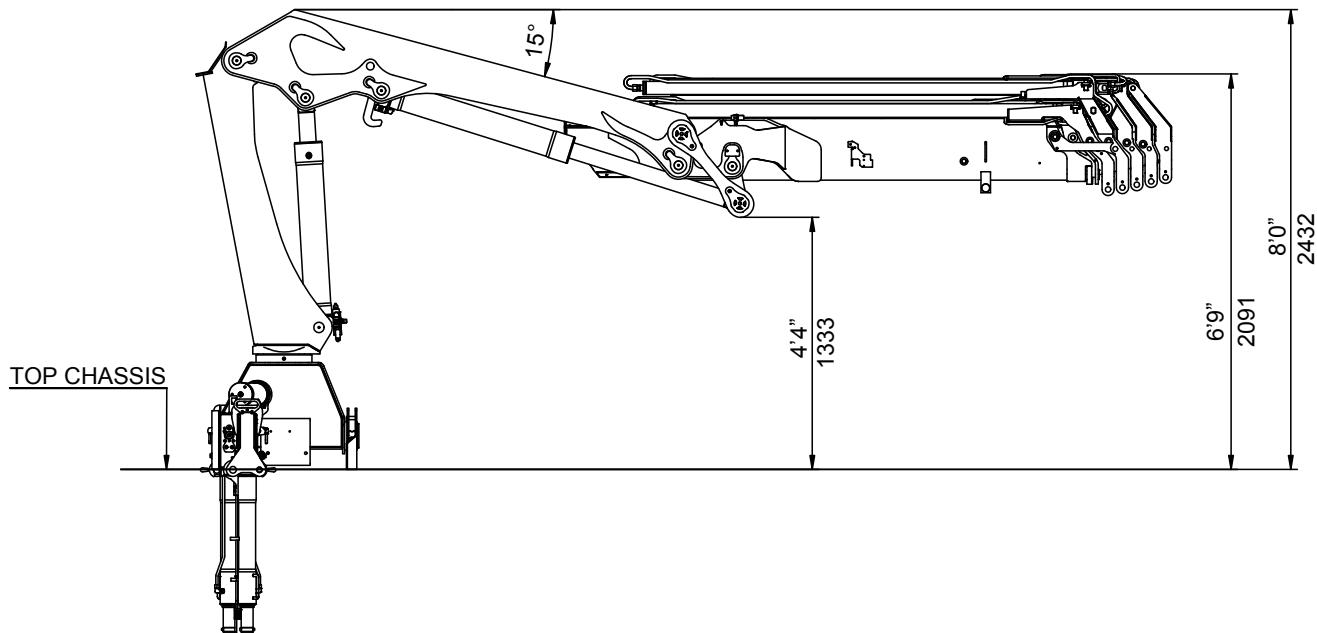
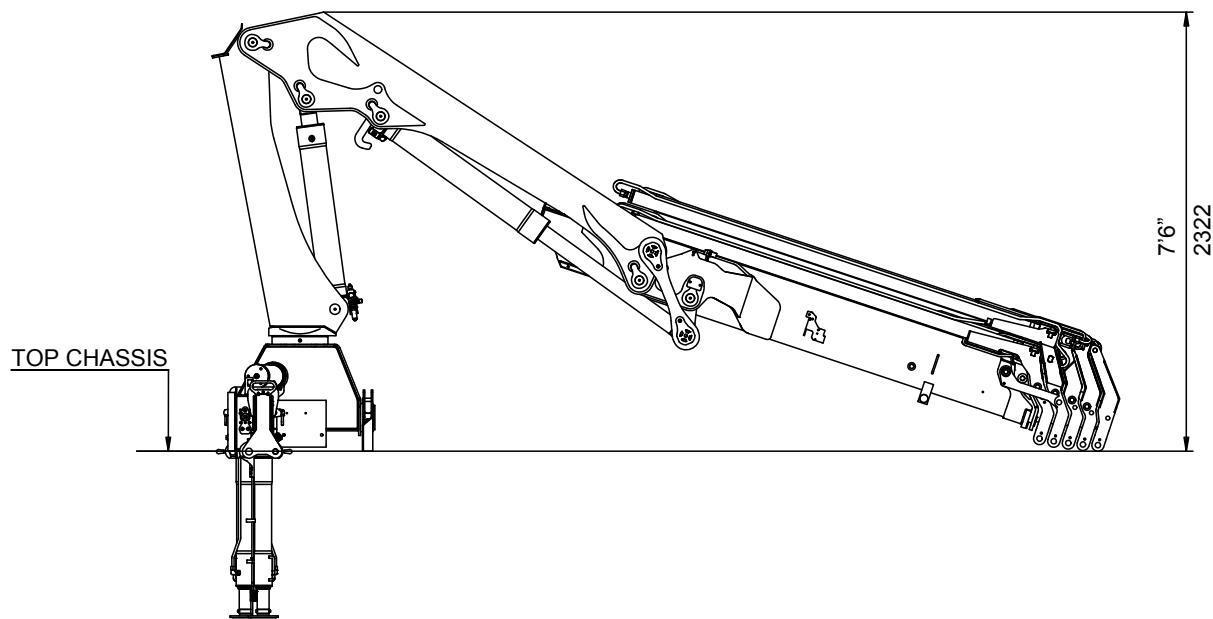
1620 - RCS, Dimension Sketch, Internal Hose Routing

1620 - RCS, Centers Of Gravity



	[mm]										[kg]		
	V1	V2	V3	H1	H2	H3	H4	Z3	f	G1	G2	G3	
14/98DL - K1	165	1930	710	215	1615	310	1360	5	290	650	925	1575	
14/98DL - K2	165	1990	735	215	2310	305	1605	20	290	650	1070	1720	
14/98DL - K3	165	2035	760	215	3055	300	1795	35	290	650	1210	1860	
14/98DL - K4	165	2070	785	215	3840	285	1945	50	290	650	1340	1990	
14/98DL - K5	165	2095	805	215	4590	270	2060	70	290	650	1450	2100	
14/98DL - K6	165	2115	820	215	5230	260	2150	75	290	650	1555	2205	

	[in]										[lbs]		
	V1	V2	V3	H1	H2	H3	H4	Z3	f	G1	G2	G3	
14/98DL - K1	6.50	75.98	27.95	8.46	63.58	12.20	53.54	0.20	11.42	1433	2039	3472	
14/98DL - K2	6.50	78.35	28.94	8.46	90.94	12.01	63.19	0.79	11.42	1433	2359	3792	
14/98DL - K3	6.50	80.12	29.92	8.46	120.28	11.81	70.67	1.38	11.42	1433	2668	4101	
14/98DL - K4	6.50	81.50	30.91	8.46	151.18	11.22	76.57	1.97	11.42	1433	2954	4387	
14/98DL - K5	6.50	82.48	31.69	8.46	180.71	10.63	81.10	2.76	11.42	1433	3197	4630	
14/98DL - K6	6.50	83.27	32.28	8.46	205.91	10.24	84.65	2.95	11.42	1433	3428	4861	

1620 - RCS, Stowed in Truck Body

1620 - RCS Hydraulics

Section - 8

1620 - RCS, Pressure setting diagram, fixed flow pump & Danfoss RC

Working Pressure on Main-Relief Valve & Port- Relief Valves						
Function	Direction	Port	Port-relief valves [bar]	LS-pressure adjustment [bar]	Port-relief valves [psi]	LS-pressure adjustment [psi]
Main-relief valve			385		5584	
Slewing system	Right	A	P	180	P	2611
	Left	B	P	180	P	2611
Boom cylinder	Down	A	125	100	1813	1450
	Up	B	380	365	5511	5294
Jib cylinder	Up	A	380	365	5515	5294
	Down	B	250	200	3626	2901
Extension cylinders	Extend	A	P	300	P	4351
	Retract	B	P	300	P	4351
Rotator	Right	A	P	200	P	2901
	Left	B	P	200	P	2901
Grab	Open	A	P	250	P	3626
	Close	B	P	250	P	3626
Winch 1,5T	Lift	A	P	160	P	2321
	Lower	B	P	160	P	2321
Winch 2,5T	Lift	A	P	185	P	2683
	Lower	B	P	185	P	2683
Separate stabilizer valve		All	150		2176	

Working Pressure on Load-holding Valves			
Function	Direction	Opening pressure [bar]	Opening pressure [psi]
Slewing system	Right	185	2683
	Left	185	2683
Boom cylinder	Up	390	5656
	Down	-	-
Jib cylinder	Up	405	5874
	Down	300	4351
Extension cylinders	Retract	430	6237
	Extend	210	3046

Pressure setting for Load Moment Limitation (LMB)		
Load moment limitation (LMB)	350 [bar]	5076 [psi]
HDL	300 [bar]	4351 [psi]

Max. pump performance		
Choice of pump	1 x Fixed	1 x Fixed
Pump performance	70 L/min	18.5 gpm

1620 - RCS, Pressure setting diagram, variable flow pump & Danfoss RC

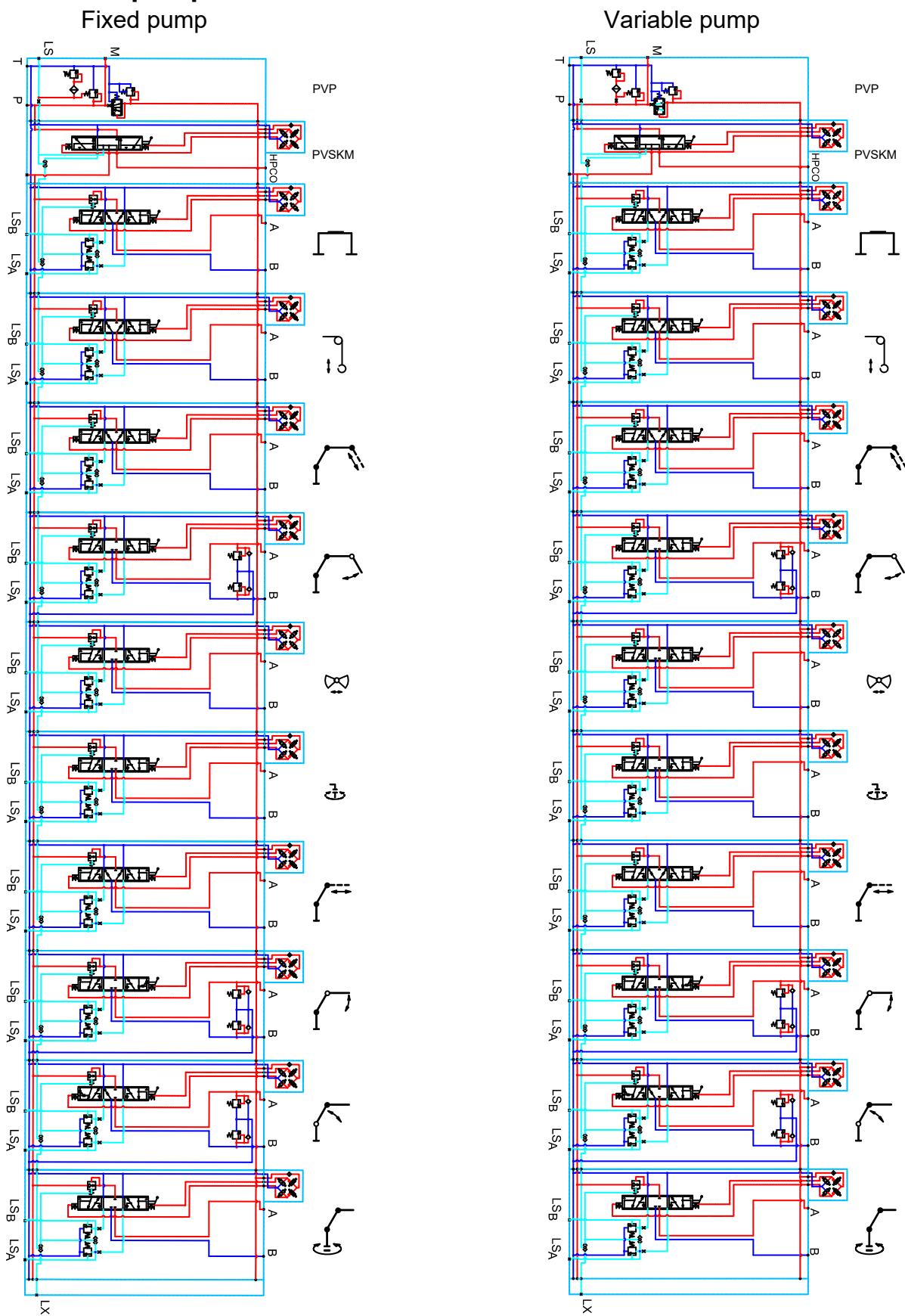
Working Pressure on Main-Relief Valve & Port- Relief Valves						
Function	Direction	Port	Port-relief valves [bar]	LS-pressure adjustment [bar]	Port-relief valves [psi]	LS-pressure adjustment [psi]
Main-relief valve			385		5584	
Slewing system	Right	A	P	180	P	2611
	Left	B	P	180	P	2611
Boom cylinder	Down	A	125	100	1813	1450
	Up	B	380	365	5076	5511
Jib cylinder	Up	A	380	365	5076	5294
	Down	B	250	200	3626	2901
Extension cylinders	Extend	A	P	300	P	4351
	Retract	B	P	300	P	4351
Rotator	Right	A	P	50-300	P	725-4351
	Left	B	P	50-300	P	725-4351
Grab	Open	A	P	50-300	P	725-4351
	Close	B	P	50-300	P	725-4351
Winch 1,5T	Lift	A	P	160	P	2321
	Lower	B	P	160	P	2321
Winch 2,5T	Lift	A	P	185	P	2683
	Lower	B	P	185	P	2683
Separate stabilizer valve		All	150		2176	

Working Pressure on Load-holding Valves			
Function	Direction	Opening pressure [bar]	Opening pressure (psi)
Slewing system	Right	185	2683
	Left	185	2683
Boom cylinder	Up	390	5656
	Down	-	-
Jib cylinder	Up	405	5874
	Down	300	4351
Extension cylinders	Retract	430	6237
	Extend	210	3046

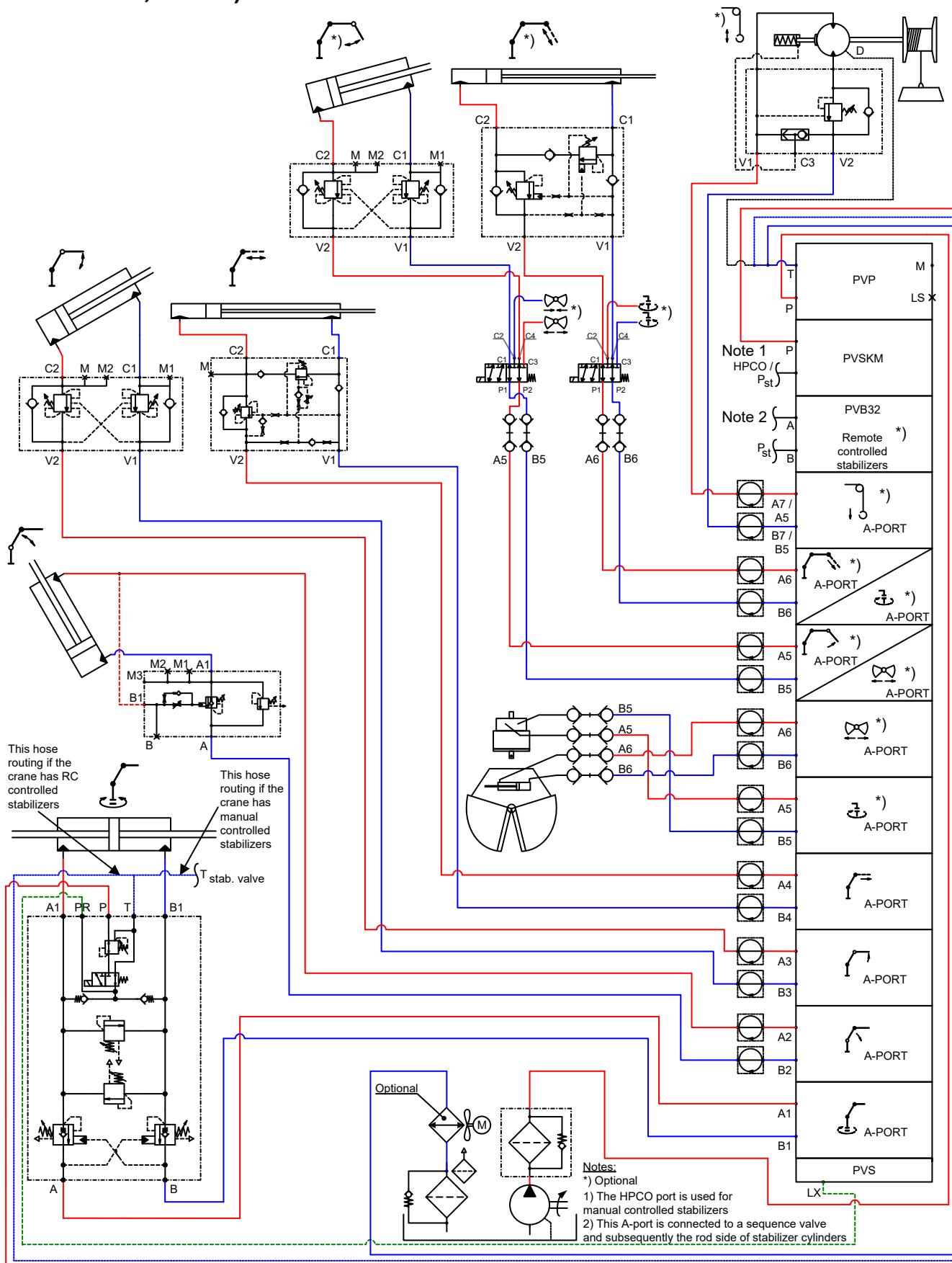
Pressure setting for Load Moment Limitation (LMB)		
Load moment limitation (LMB)	350 [bar]	5076 [PSI]
HDL	300 [bar]	4351 [PSI]

Max. pump performance		
Choice of pump	1 x Variable	1 x Variable
Pump performance	100 L/min	26.4 gpm

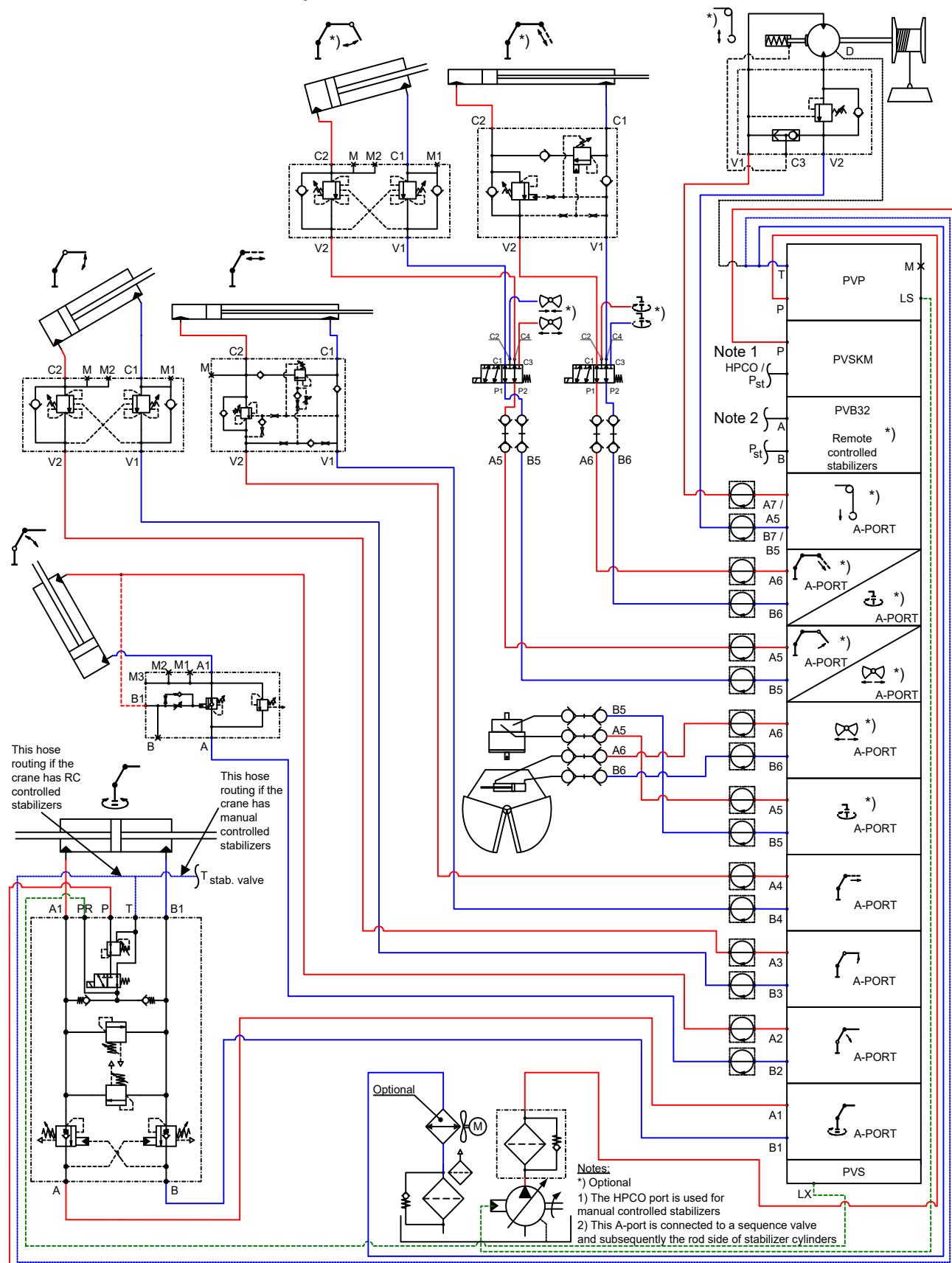
Hydraulic Diagram PVG32 - Crane functions, control valvefixed and variable flow pump



Hydraulic Diagram – Danfoss PVG32, single-circuit fixed 7 fcts. RC (3 EXV: FJ + 2 EXV, winch)

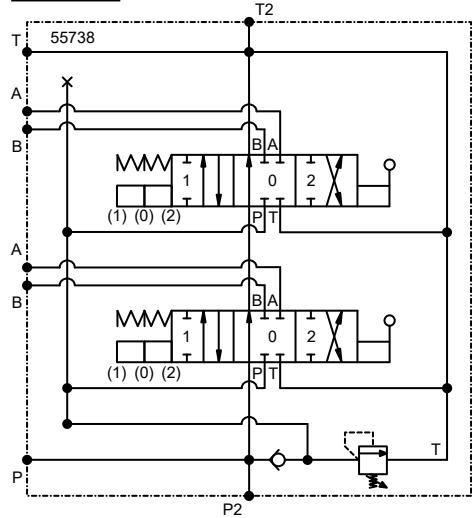


Hydraulic Diagram – Danfoss PVG32, single-circuit variable 7 fcts. RC (3 EXV: FJ + 2 EXV, winch)

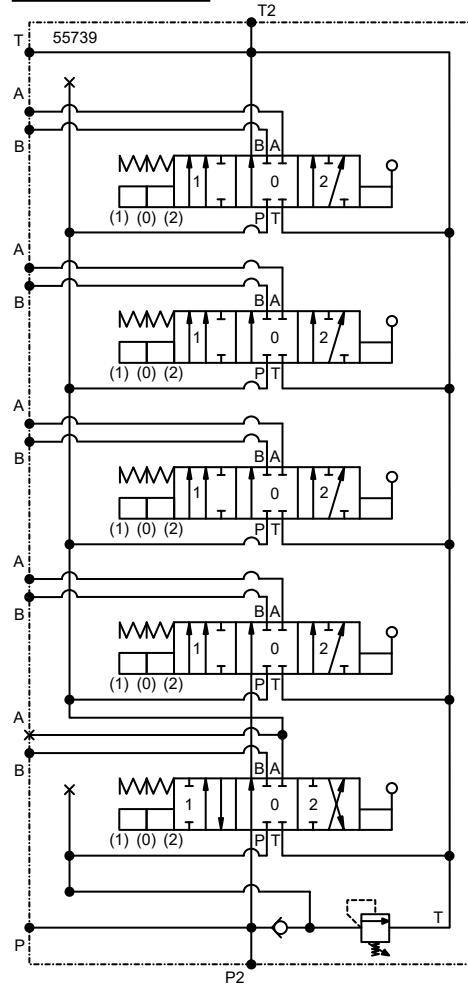


Hydraulic Diagram - Stabilizer circuit – Overview

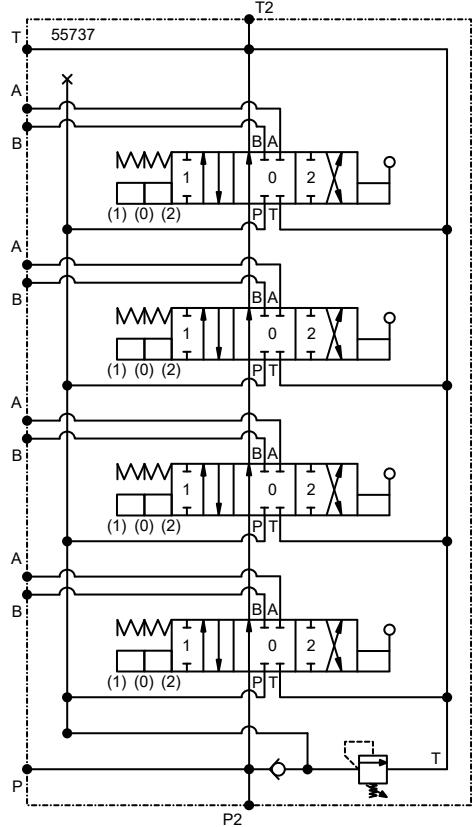
2 functions:



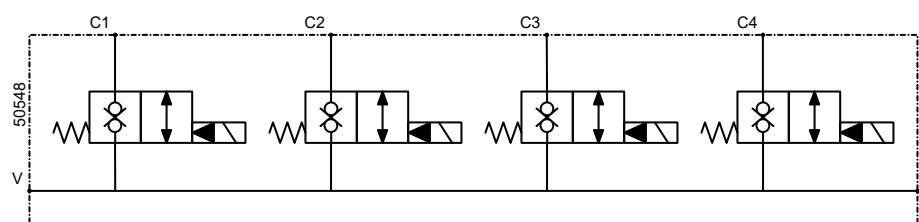
4 + 4 extra functions:



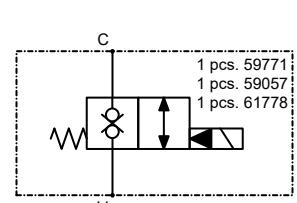
4 or 2 + 2 extra functions:



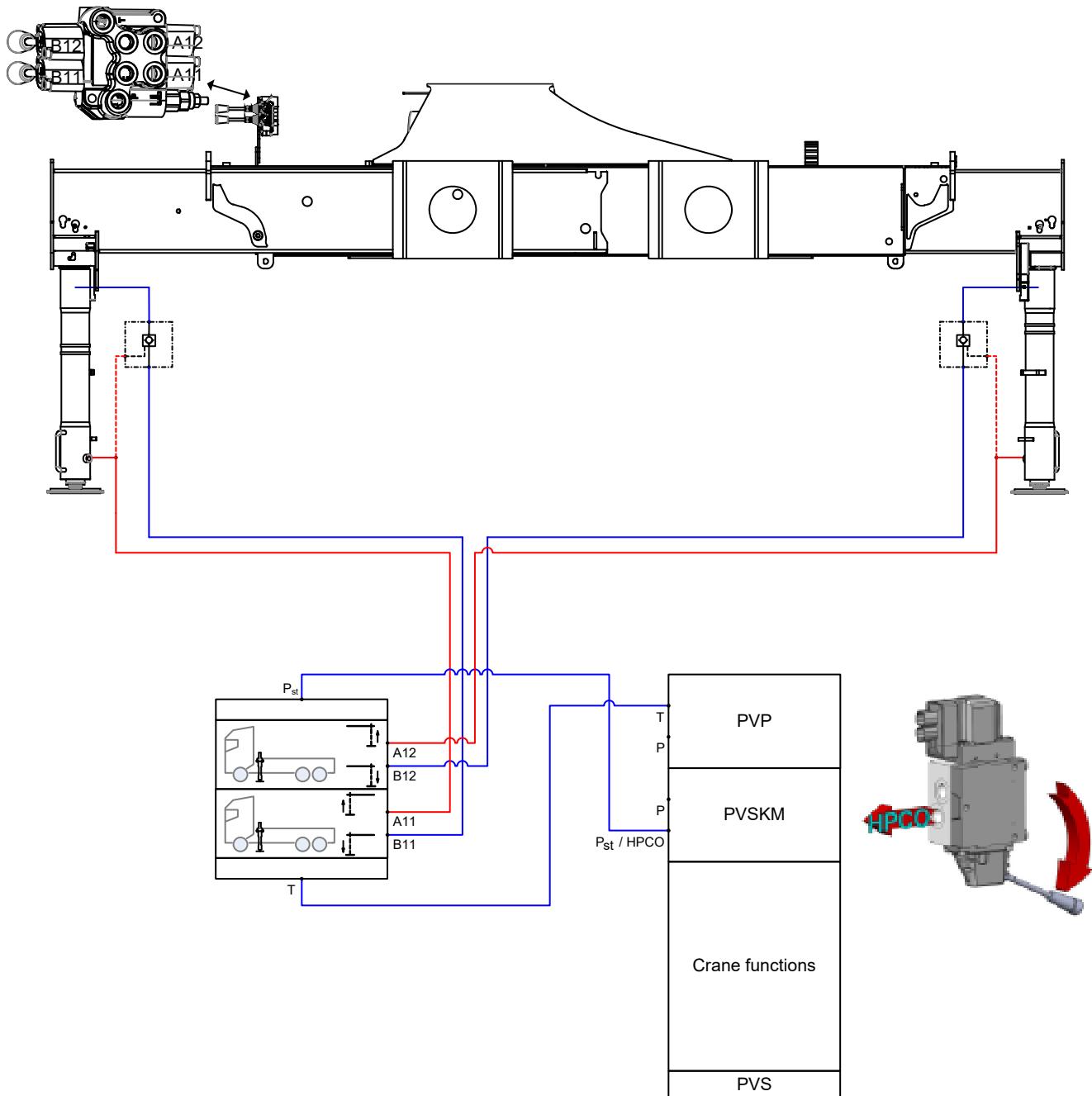
4 remote controlled functions:



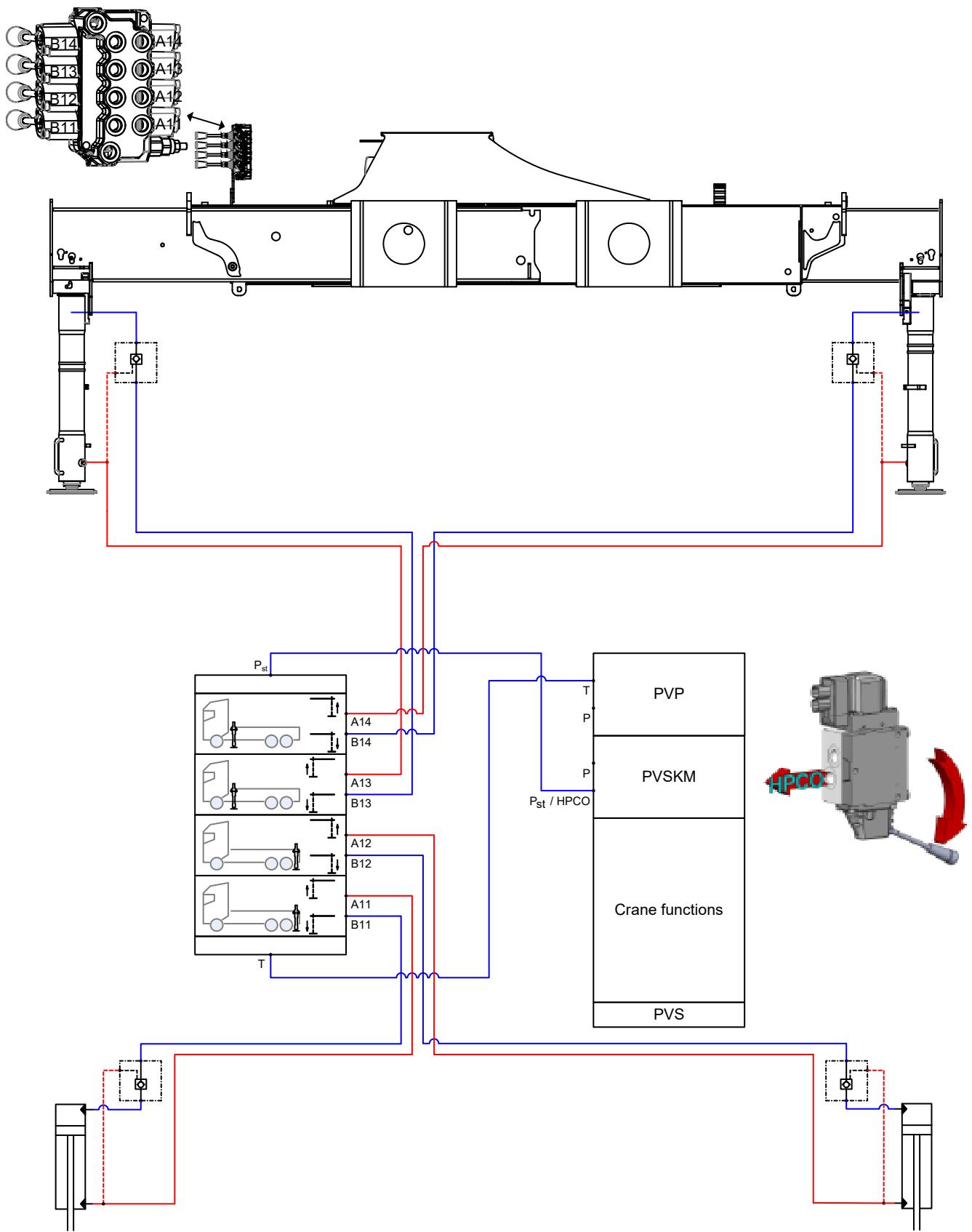
Extra remote controlled functions:



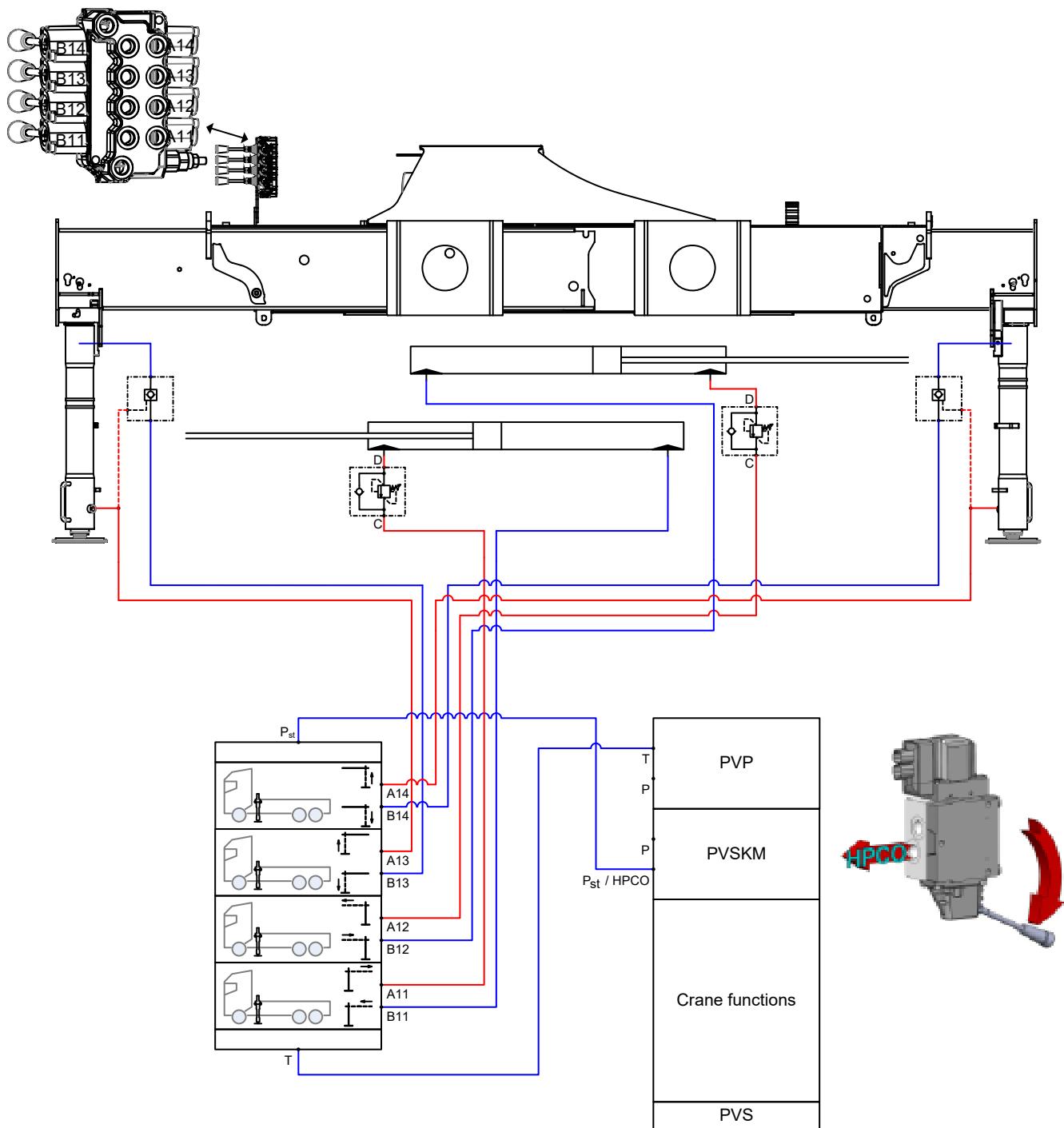
Hydraulic Diagram - Stabilizer circuit – 2 fcts.



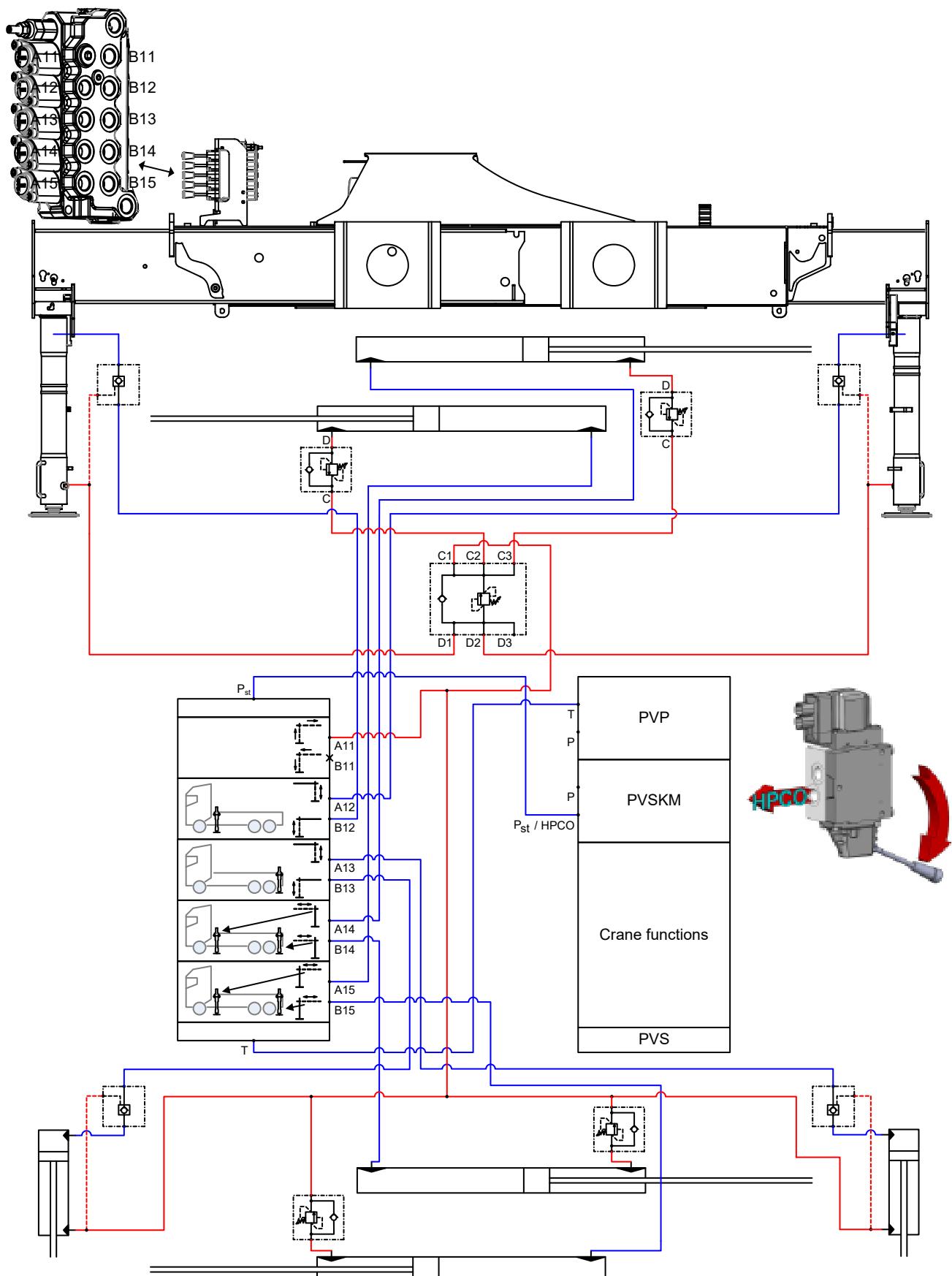
Hydraulic Diagram - Stabilizer circuit – 2 fcts. + 2 available fcts.



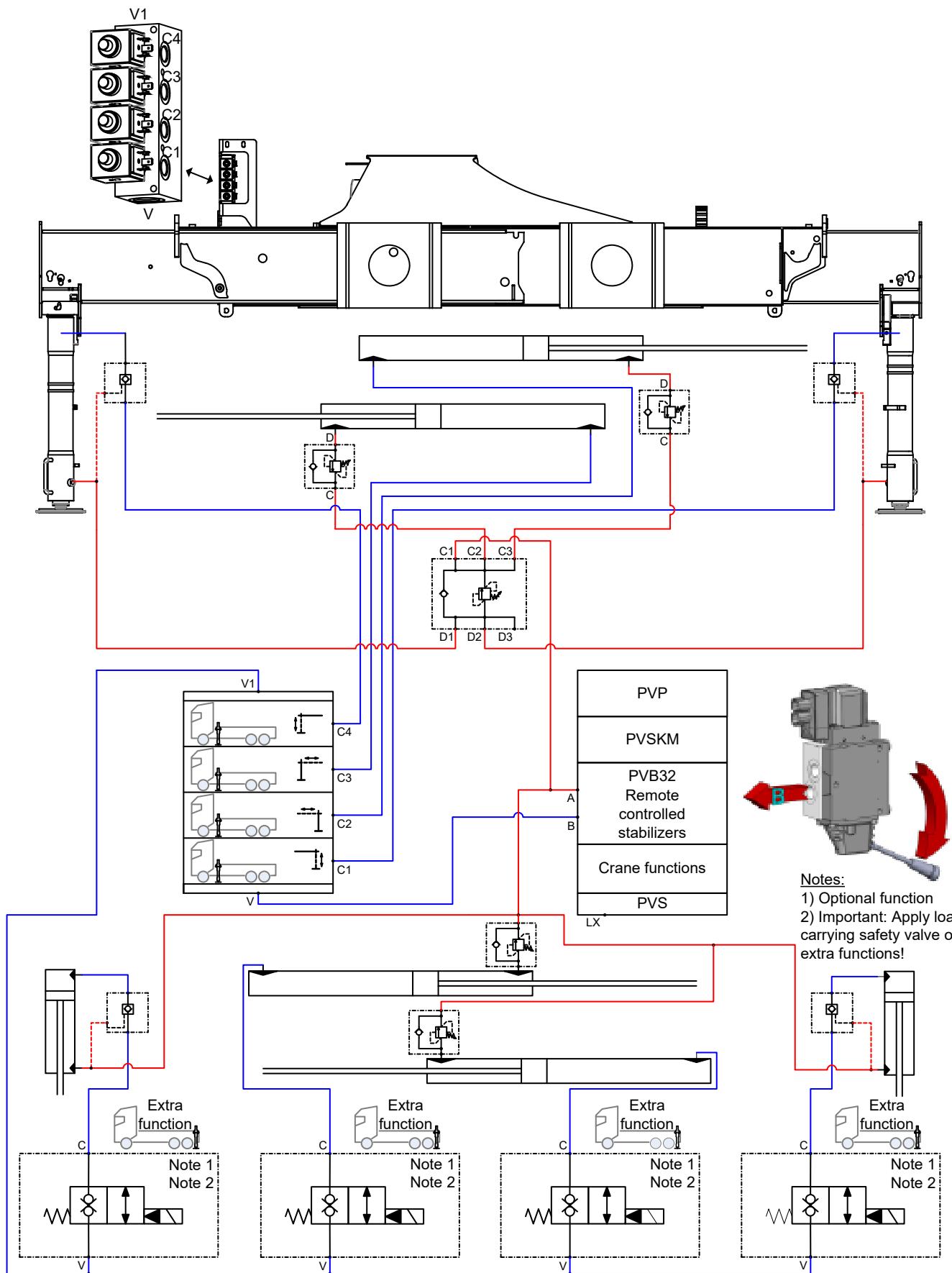
Hydraulic Diagram - Stabilizer circuit – 4 fcts.



Hydraulic Diagram - Stabilizer circuit – 4 fcts. + 4 available fcts.



Hydraulic Diagram - Stabilizer circuit – 4 fcts. + 4 available fcts. RC





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