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Manual # 99906087

12/86

Technical

Specifications

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12/86SL Technical Specifications

Section - 1

12/86SL Specifications

Performance	Unit	K1	K2	K3	K4	K5
Loading group (EN12999)		HC1 / HD5	HC1 / HD5	HC1 / HD5	HC1 / HD5	HC1 / HD5
Load moment	ft-lb	89505	87340	84452	82287	80843
Hydraulic reach	ft	20'0"	26'11"	34'5"	41'7"	49'2"
Hydraulic telescopic movement	ft	6'	12'	20'	27'2"	34'4"
Lifting capacity, hydraulic	lb-ft	6657 - 13'5"	6349 - 13'9"	6041 - 14'1"	5776 - 14'5"	5556 - 14'5"
		4607 - 19'8"	4321 - 19'8"	4079 - 20'1"	3836 - 20'4"	3660 - 20'8"
			3197 - 26'10"	2954 - 26'10"	2734 - 27'3"	2557 - 27'7"
				2293 - 34'1"	2094 - 34'5"	1940 - 34'5"
					1720 - 41'4"	1543 - 41'7"
						1301 - 48'10"
Lifting capacity, manual extensions	lb-ft		2403 - 33'9"	1785 - 41'8"	1388 - 48'10"	1058 - 56'9"
Slewing torque, gross	lbft	9662.06	9662.06	9662.06	9662.06	9662.06
Slewing angle	°	420	420	420	420	420
Max. heel at max. load moment	°	5	5	5	5	5
Slewing speed	°/s	24	24	24	24	24

Dimensions	Unit	K1	K2	K3	K4	K5
Height above chassis	in	84	84	84	84	84
Width	in	98	98	98	98	98
Length, no extra valves	in	29	29	29	29	29
Length, with extra valves (hose guides)	in	34	34	34	34	34
Length, with extra valves (int. hose routing)	in	29	29	29	29	29
Stabilizer spread, S1 (standard)	ft	15'1"	15'1"	15'1"	15'1"	15'1"
Stabilizer spread, S2	ft	18'4"	18'4"	18'4"	18'4"	18'4"
Stabilizer spread, D	ft	21'2"	21'2"	21'2"	21'2"	21'2"

Minimum Chassis Specs	
Front Axle Rating (GAWR)	8,000 lbs (3630 kg)
Rear Axle Rating (GAWR)	16,000 lbs (7260 kg)
Resistance to Bending Moment	1,290,000-in-lbs (178,350 kg-m)

12/86SL Specifications - Continued

Weights, basic loader	Unit	K1	K2	K3	K4	K5
Standard loader 1, excl. stabilizers	lbs	2381	2657	2899	3109	3296
Stabilizers, S1 fixed	lbs	375	375	375	375	375
Stabilizers, S1 swing-up	lbs	386	386	386	386	386
Stabilizers, S2 fixed	lbs	430	430	430	430	430
Stabilizers, S2 swing-up	lbs	441	441	441	441	441
Mounting kit, 4 bolts	lbs	121	121	121	121	121
Mounting kit, 8 bolts	lbs	132	132	132	132	132
Tank, excl. oil (fitted on loader)	lbs	88	88	88	88	88
Manual extensions	lbs		143	110	88	77
	lbs					
	lbs					
Oil in loader (stowing position)	lbs	44	53	62	71	79

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

1) Weights \pm 5% because of tolerances for plate thickness

Max. Load on stabilizers (per stabilizer cylinder)	Unit	K1	K2	K3	K4	K5
S1, fixed	Lbf	16.86	16.86	16.86	16.86	16.86
S1, swing-up	Lbf	16.86	16.86	16.86	16.86	16.86
S2, fixed	Lbf	16.86	16.86	16.86	16.86	16.86
S2, swing-up	Lbf	16.86	16.86	16.86	16.86	16.86

Power consumption / oil capacity	Unit	K1	K2	K3	K4	K5
Working pressure	PSI	5004	5004	5004	5004	5004
Tank capacity (fitted on loader)	gal	17	17	17	17	17
Max. pump performance, Hydrocontrol, 1-circuit	gpm	11	11	11	11	11
Max. pump performance, Danfoss fixed flow	gpm	18	18	18	18	18
Max. pump performance, Danfoss variable	gpm	26	26	26	26	26

12/86SL Metric Specifications

Performance	Unit	K1	K2	K3	K4	K5
Loading group (EN12999)		HC1 / HD5	HC1 / HD5	HC1 / HD5	HC1 / HD5	HC1 / HD5
Load moment	tm	12.4	12.1	11.7	11.4	11.2
Hydraulic reach	m	6.1	8.2	10.5	12.7	15
Hydraulic telescopic movement	mm	1849	3929	6116	8292	10479
Lifting capacity, hydraulic	kg-m	3020 - 4.1	2880 - 4.2	2740 - 4.3	2620 - 4.4	2520 - 4.4
Lifting capacity, hydraulic		2090 - 6.0	1960 - 6.0	1850 - 6.1	1740 - 6.2	1660 - 6.3
Lifting capacity, hydraulic			1450 - 8.2	1340 - 8.2	1240 - 8.3	1160 - 8.4
Lifting capacity, hydraulic				1040 - 10.4	950 - 10.5	880 - 10.5
Lifting capacity, hydraulic					780 - 12.6	700 - 12.7
Lifting capacity, hydraulic						590 - 14.9
Lifting capacity, manual extensions	kg-m		1090 - 10.3	810 - 12.7	630 - 14.9	480 - 17.3
Slewing torque, gross	kNm	13.1	13.1	13.1	13.1	13.1
Slewing angle	°	420	420	420	420	420
Max. heel at max. load moment	°	5	5	5	5	5
Slewing speed	°/s	24	24	24	24	24

Dimensions	Unit	K1	K2	K3	K4	K5
Height above chassis	mm	2135	2135	2135	2135	2135
Width	mm	2500	2500	2500	2500	2500
Length, no extra valves	mm	747	747	747	747	747
Length, with extra valves (hose guides)	mm	868	868	868	868	868
Length, with extra valves (int. hose routing)	mm	757	757	757	757	757
Stabilizer spread, S1 (standard)	mm	4615	4615	4615	4615	4615
Stabilizer spread, S2	mm	5590	5590	5590	5590	5590

12/86SL Metric Specifications - Continued

Weights, basic loader	Unit	K1	K2	K3	K4	K5
Standard loader 1, excl. stabilizers	kg	1080	1205	1315	1410	1495
Stabilizers, S1 fixed	kg	170	170	170	170	170
Stabilizers, S1 swing-up	kg	175	175	175	175	175
Stabilizers, S2 fixed	kg	195	195	195	195	195
Stabilizers, S2 swing-up	kg	200	200	200	200	200
Mounting kit, 4 bolts	kg	55	55	55	55	55
Mounting kit, 8 bolts	kg	60	60	60	60	60
Tank, excl. oil (fitted on loader)	kg	40	40	40	40	40
Manual extensions	kg		65	50	40	35
	kg					
	kg					
Oil in loader (stowing position)	kg	20	24	28	32	36

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	75	75
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 filter	kg	7	7	7	7	7
Oil cooler	kg	25	25	25	25	25

1) Weights \pm 5% because of tolerances for plate thickness

Max. Load on stabilizers (per stabilizer cylinder)	Unit	K1	K2	K3	K4	K5
S1, fixed	kN	75	75	75	75	75
S1, swing-up	kN	75	75	75	75	75
S2, fixed	kN	75	75	75	75	75
S2, swing-up	kN	75	75	75	75	75

Power consumption / oil capacity	Unit	K1	K2	K3	K4	K5
Working pressure	Bar	345	345	345	345	345
Tank capacity (fitted on loader)	L	65	65	65	65	65
Max. pump performance, Hydrocontrol, 1-circuit	L/min	40	40	40	40	40
Max. pump performance, Danfoss fixed flow	L/min	70	70	70	70	70
Max. pump performance, Danfoss variable	L/min	100	100	100	100	100

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12/86SL Load Capacity Charts

Section - 2

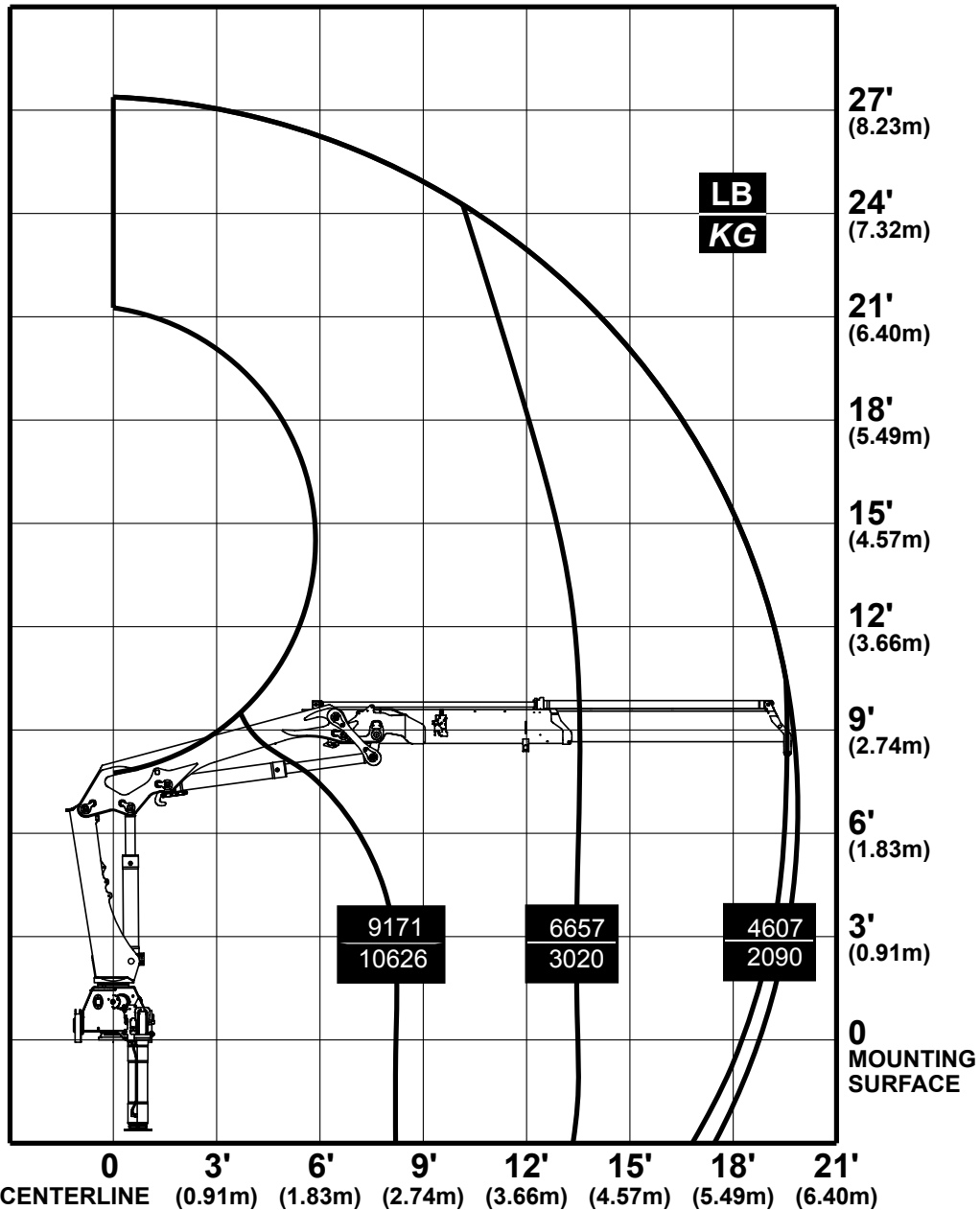
12/86SL Lifting Capacity Chart, K1

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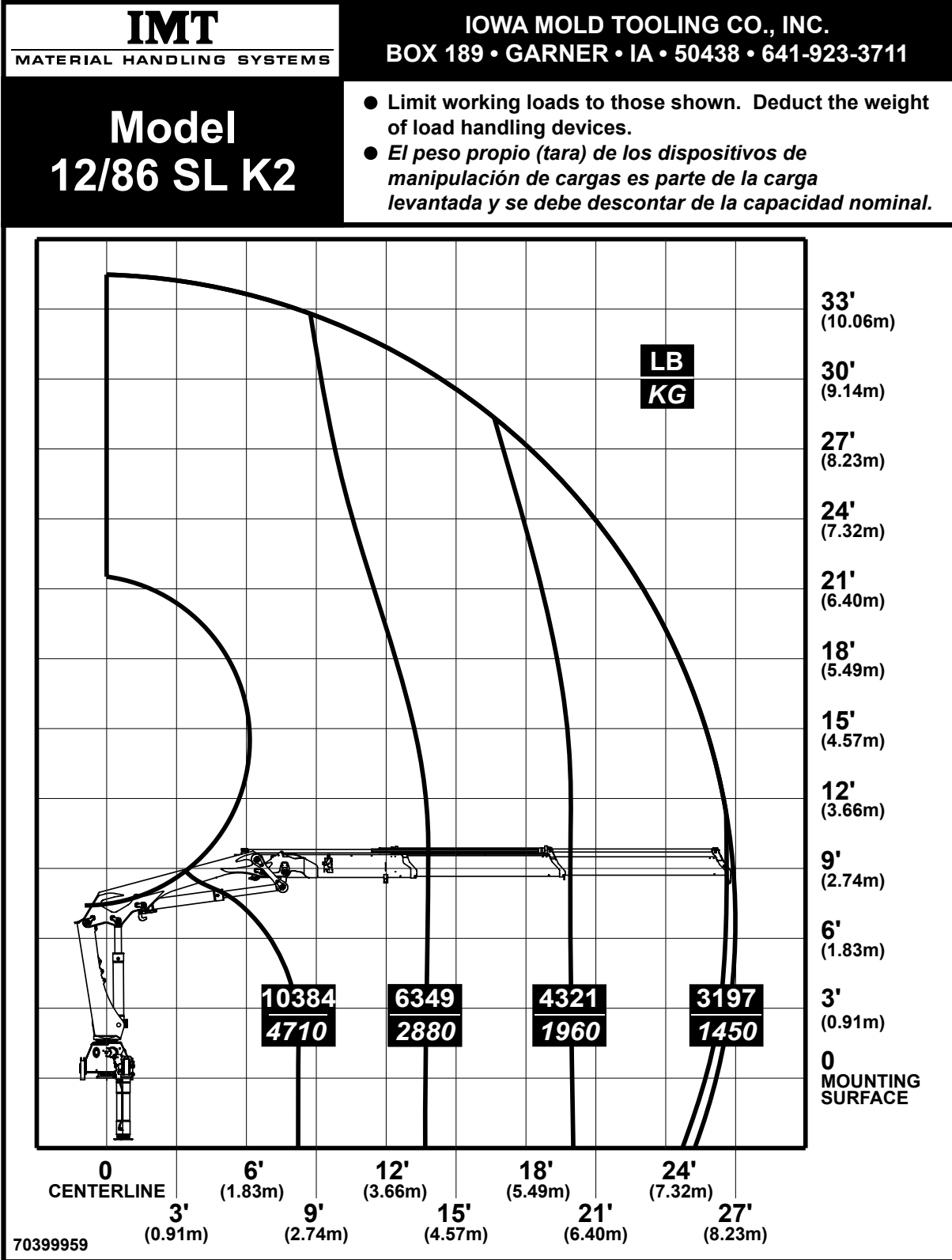
Model 12/86 SL K1

- 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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12/86SL Lifting Capacity Chart, K2



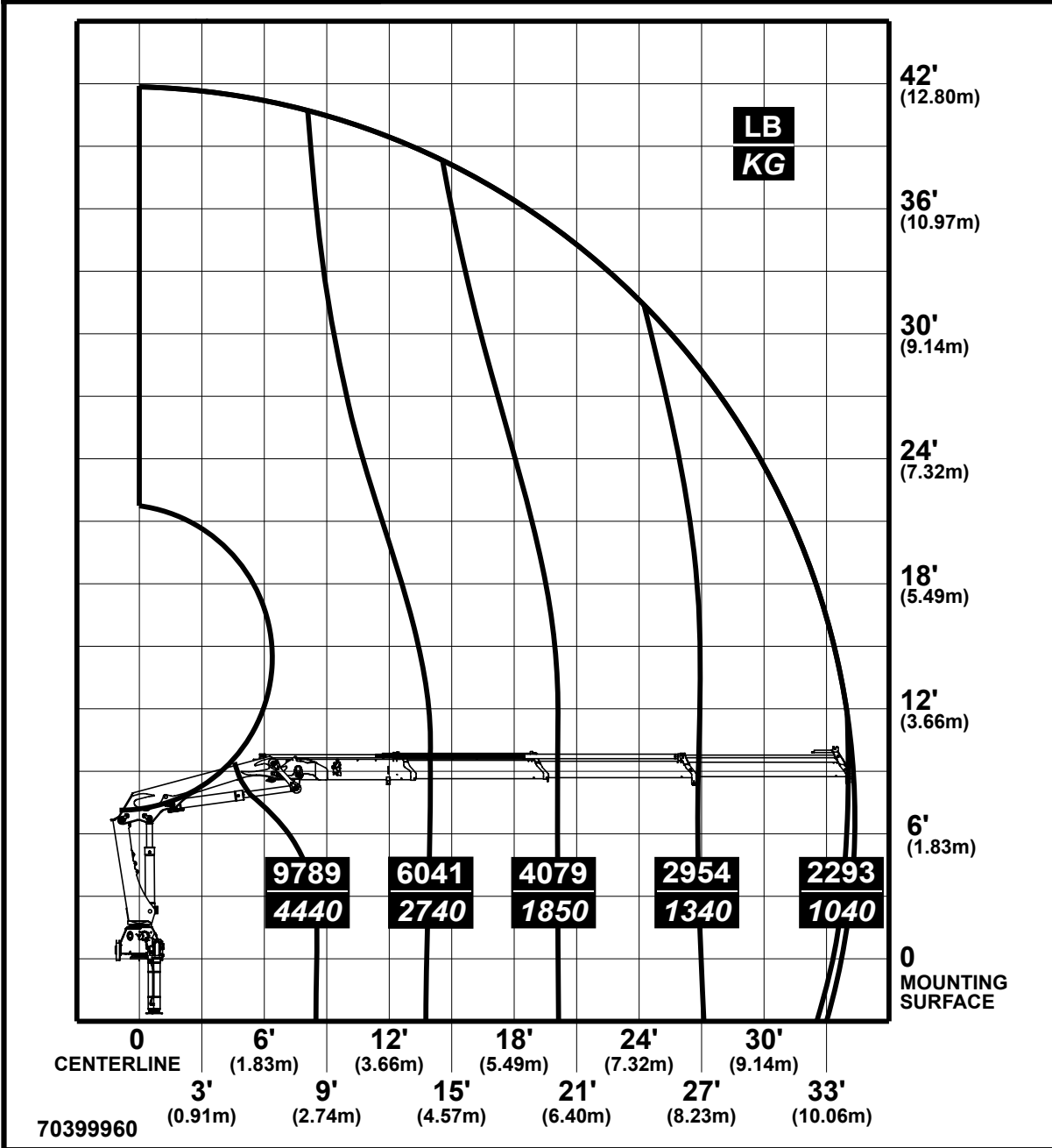
12/86SL Lifting Capacity Chart, K3

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Model 12/86 SL 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.*



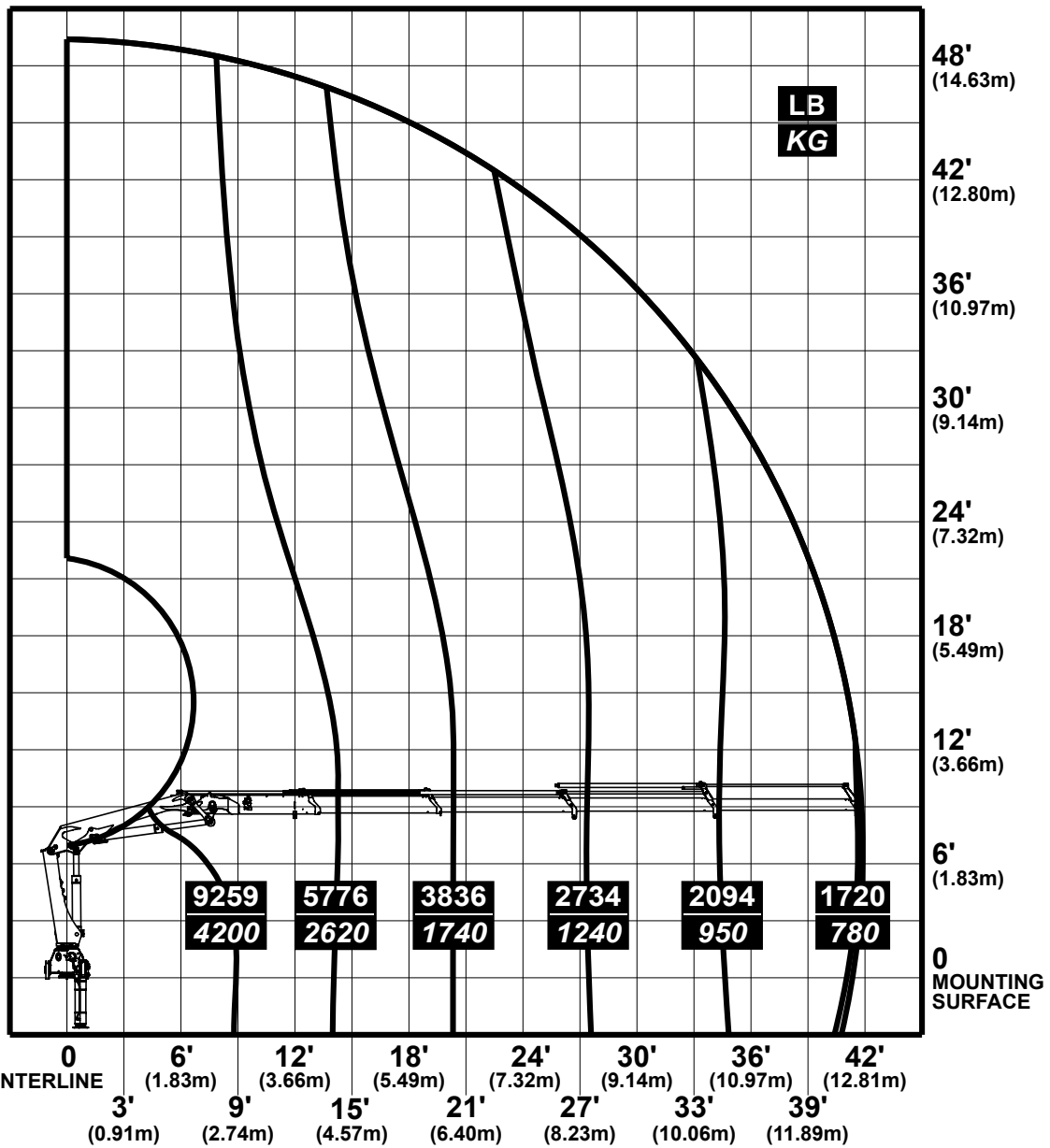
12/86SL Lifting Capacity Chart, K4

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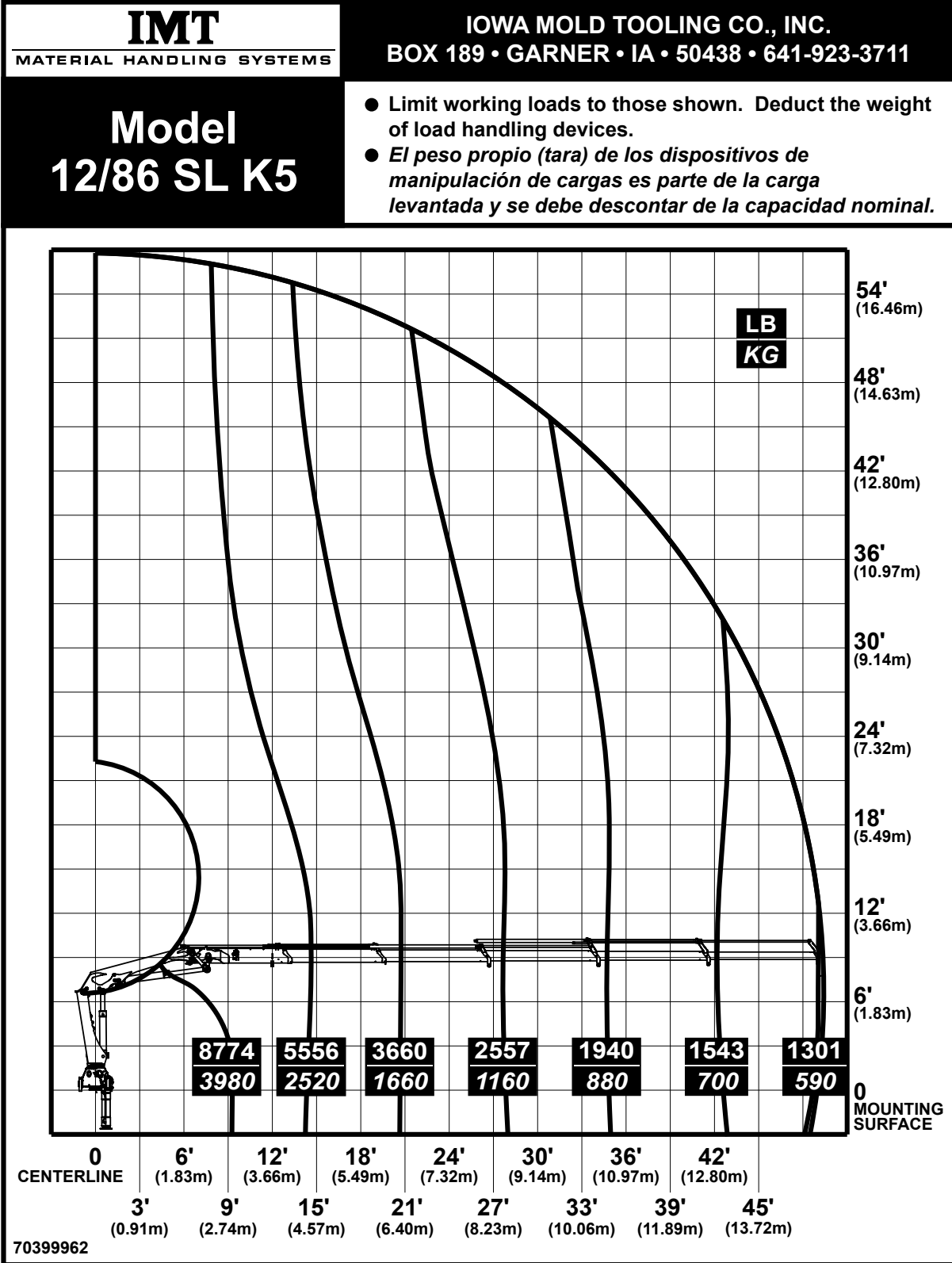
Model 12/86 SL K4

- 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.*



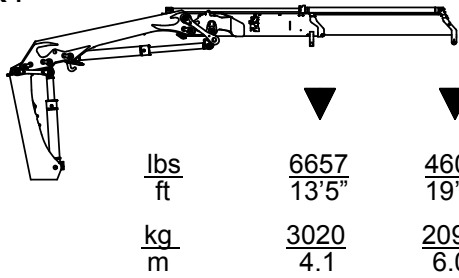
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12/86SL Lifting Capacity Chart, K5



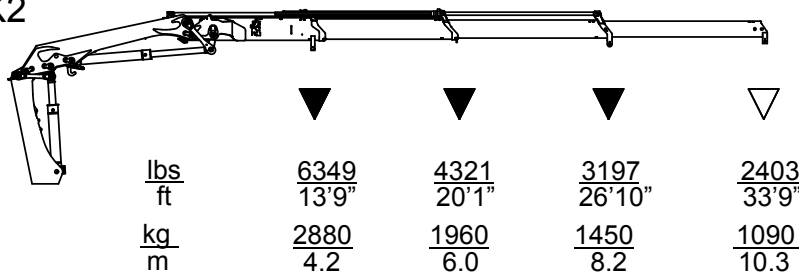
12/86SL Lifting Capacity, K1-K5

K1

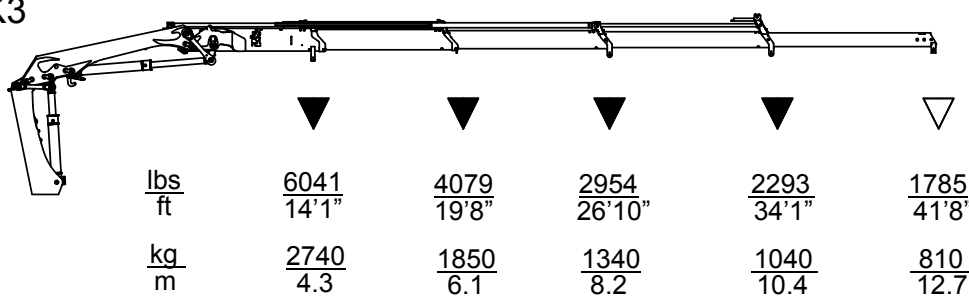


▽ Lifting capacity with manual extensions
 ▼ Lifting capacity without manual extensions

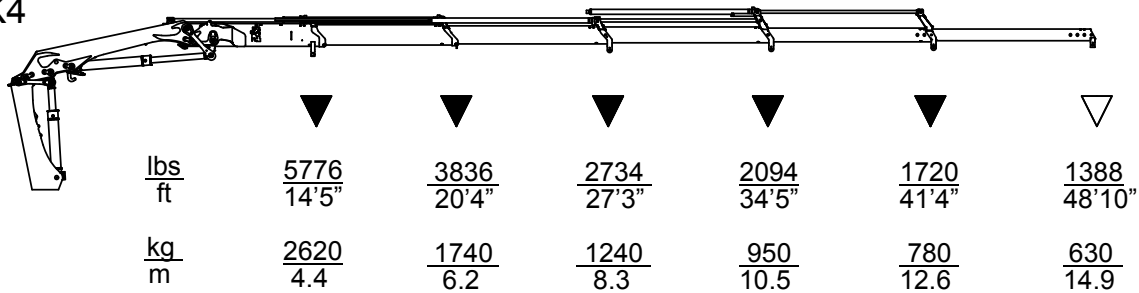
K2



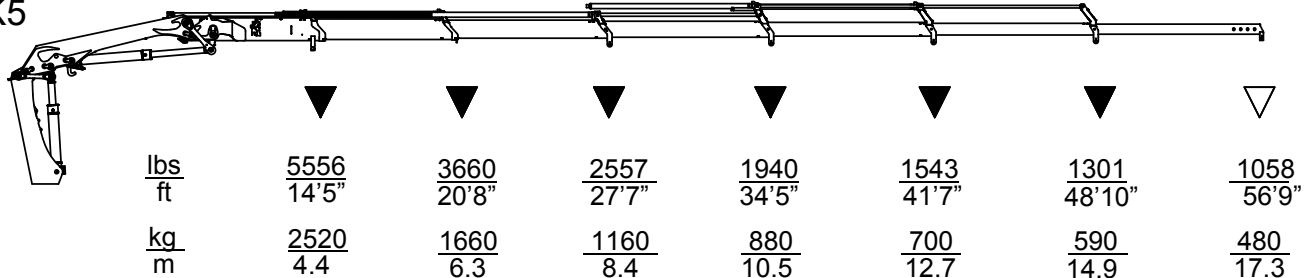
K3



K4



K5



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12/86SL Hydraulic Specifications **Section - 3**

12/86SL - Pressure Setting Diagram, Hydrocontrol HC-D4

Working Pressure on Main-Relief Valve & Port-Relief Valves		12/86SL		
Function	Direction	Port	(HDL) PSI	
Main-relief valve			4786	
Slewing system	Right	A	P	
	Left	B	P	
Boom cylinder	Down	A	1450	
	Up	B	4931	
Jib cylinder	Up	A	4931	
	Down	B	2901	
Extension cylinders	Extend	A	P	
	Retract	B	P	
Rotator	Right	A	2901	
	Left	B	2901	
Grab	Open	A	2901	
	Close	B	2901	
Separate stabilizer valve		All	2176	

Working Pressure on Load-holding Valves			
Function	Direction	Port	Opening Pressure [PSI]
Boom cylinder			5076
Jib cylinder	Up	A	5076
	Down	B	4351
Slewing system			3046
Extension cylinders	Extend	A	3046
	Retract	B	6237

Pressure setting for Load Moment Limitation (LMB)		
Load moment limitation (LMB)	PSI	4641

Pressure setting for HDL valve		
HDL	PSI	4206

Max. pump performance		
Pump performance	gpm	10.6

IMT reserves the right to introduce improvements and modifications

12/86SL - Pressure setting diagram, fixed flow pump & Danfoss RC

Working Pressure on Main-Relief Valve & Port-Relief Valves			12/86SL	
Function	Direction	Port	Port-relief valves [PSI]	LS-pressure adjustment [PSI]
Main-relief valve			5004	
Slewing system	Right	A	P	2611
	Left	B	P	2611
Boom cylinder	Down	A	1813	1450
	Up	B	5076	5511
Jib cylinder	Up	A	5076	5511
	Down	B	3626	3336
Extension cylinders	Extend	A	P	-
	Retract	B	P	-
Rotator	Right	A	P	725-4351
	Left	B	P	725-4351
Grab	Open	A	P	725-4351
	Close	B	P	725-4351
Winch 1,5T	Lift	A	P	2321
	Lower	B	P	2321
Winch 2,5T	Lift	A	P	2683
	Lower	B	P	2683
Separate stabilizer valve		All	2176	

Working Pressure on Load-holding Valves		
Function	Direction	Opening pressure [PSI]
Slewing system	Right	2683
	Left	2683
Boom cylinder	Up	5294
	Down	-
Jib cylinder	Up	5511
	Down	4351
Extension cylinders	Retract	6237
	Extend	3046

Pressure setting for Load Moment Limitation (LMB)		
Load moment limitation (LMB)	PSI	4786
HDL	PSI	4134

Max. pump performance		
Choice of pump		1 x fixed
Pump performance	gpm	18.5

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12/86SL - Pressure setting diagram, variable flow pump & Danfoss RC

Working Pressure on Main-Relief Valve & Port-Relief Valves			12/86SL	
Function	Direction	Port	Port-relief valves [PSI]	LS-pressure adjustment [PSI]
Main-relief valve			5004	
Slewing system	Right	A	P	2611
	Left	B	P	2611
Boom cylinder	Down	A	1813	1450
	Up	B	5076	5511
Jib cylinder	Up	A	5076	5511
	Down	B	3626	3336
Extension cylinders	Extend	A	P	-
	Retract	B	P	-
Rotator	Right	A	P	725-4351
	Left	B	P	725-4351
Grab	Open	A	P	725-4351
	Close	B	P	725-4351
Winch 1,5T	Lift	A	P	2321
	Lower	B	P	2321
Winch 2,5T	Lift	A	P	2683
	Lower	B	P	2683
Separate stabilizer valve		All	2176	

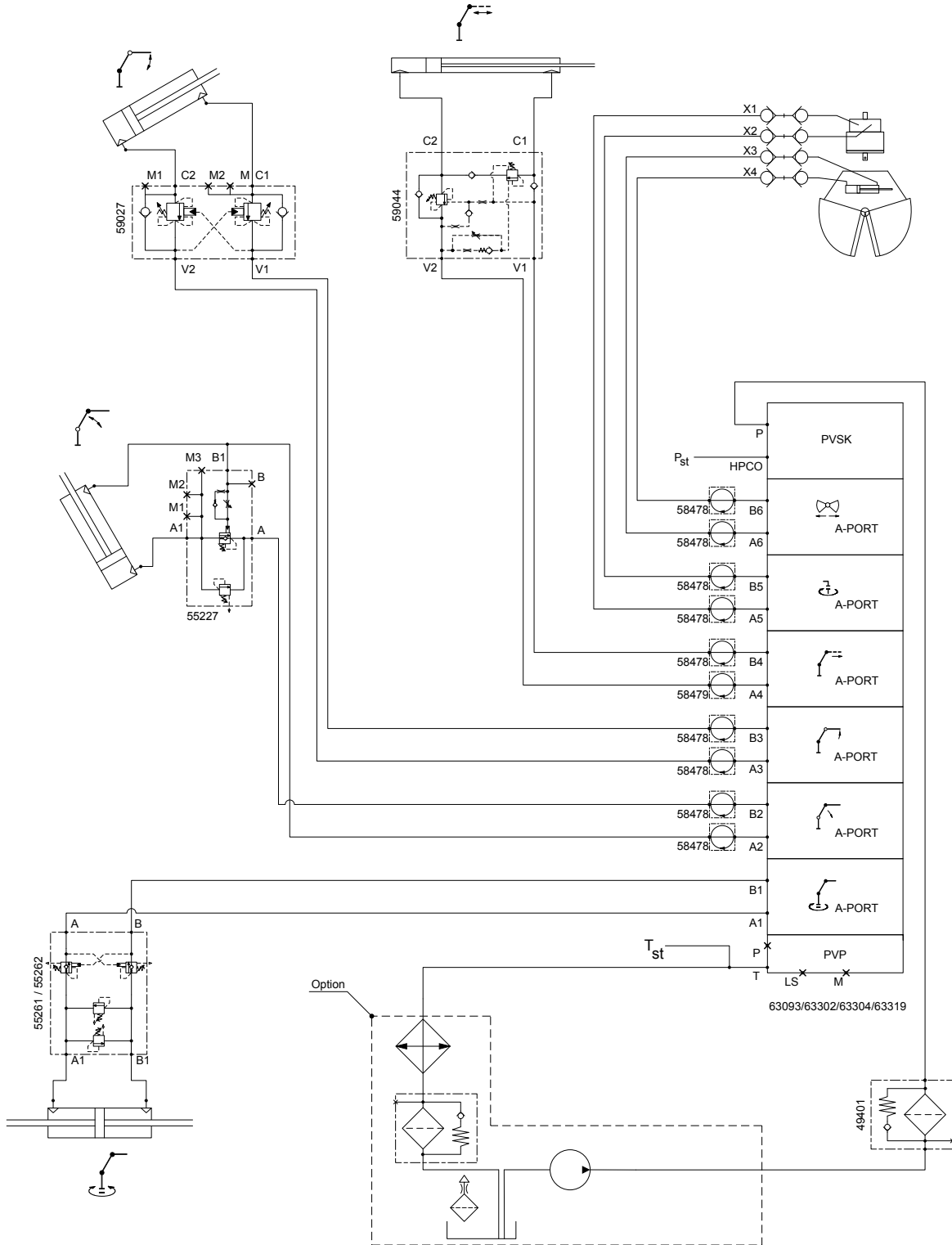
Working Pressure on Load-holding Valves		
Function	Direction	Opening pressure [PSI]
Slewing system	Right	2683
	Left	2683
Boom cylinder	Up	5294
	Down	-
Jib cylinder	Up	5511
	Down	4351
Extension cylinders	Retract	6237
	Extend	3046

Pressure setting for Load Moment Limitation (LMB)		
Load moment limitation (LMB)	PSI	4786
HDL	PSI	4134

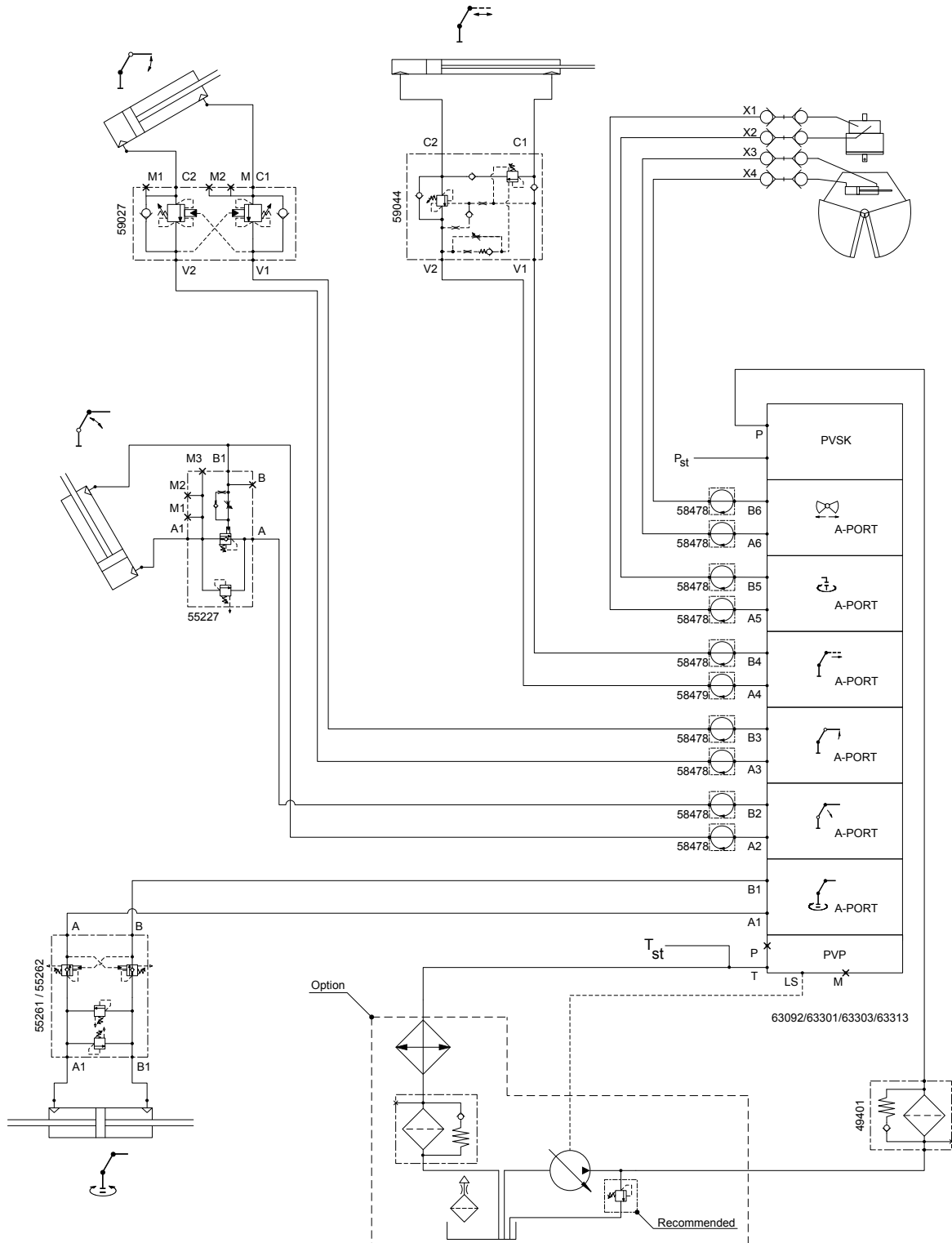
Max. pump performance		
Choice of pump		1 x Variable
Pump performance	gpm	18.5

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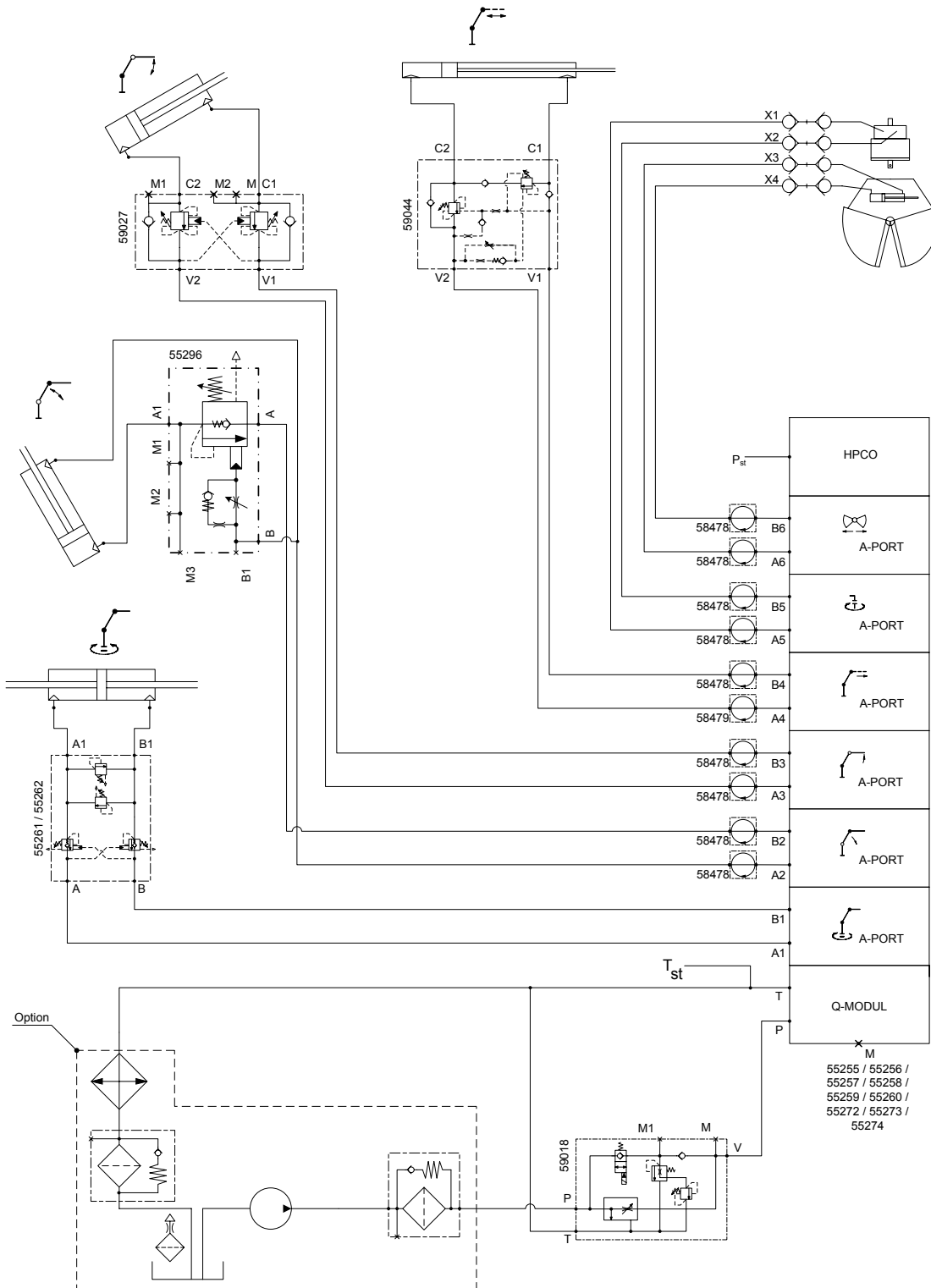
Hydraulic Diagram - Danfoss, single-circuit fixed 6 fcts. RC (2 EXV: Grab + Rotator)



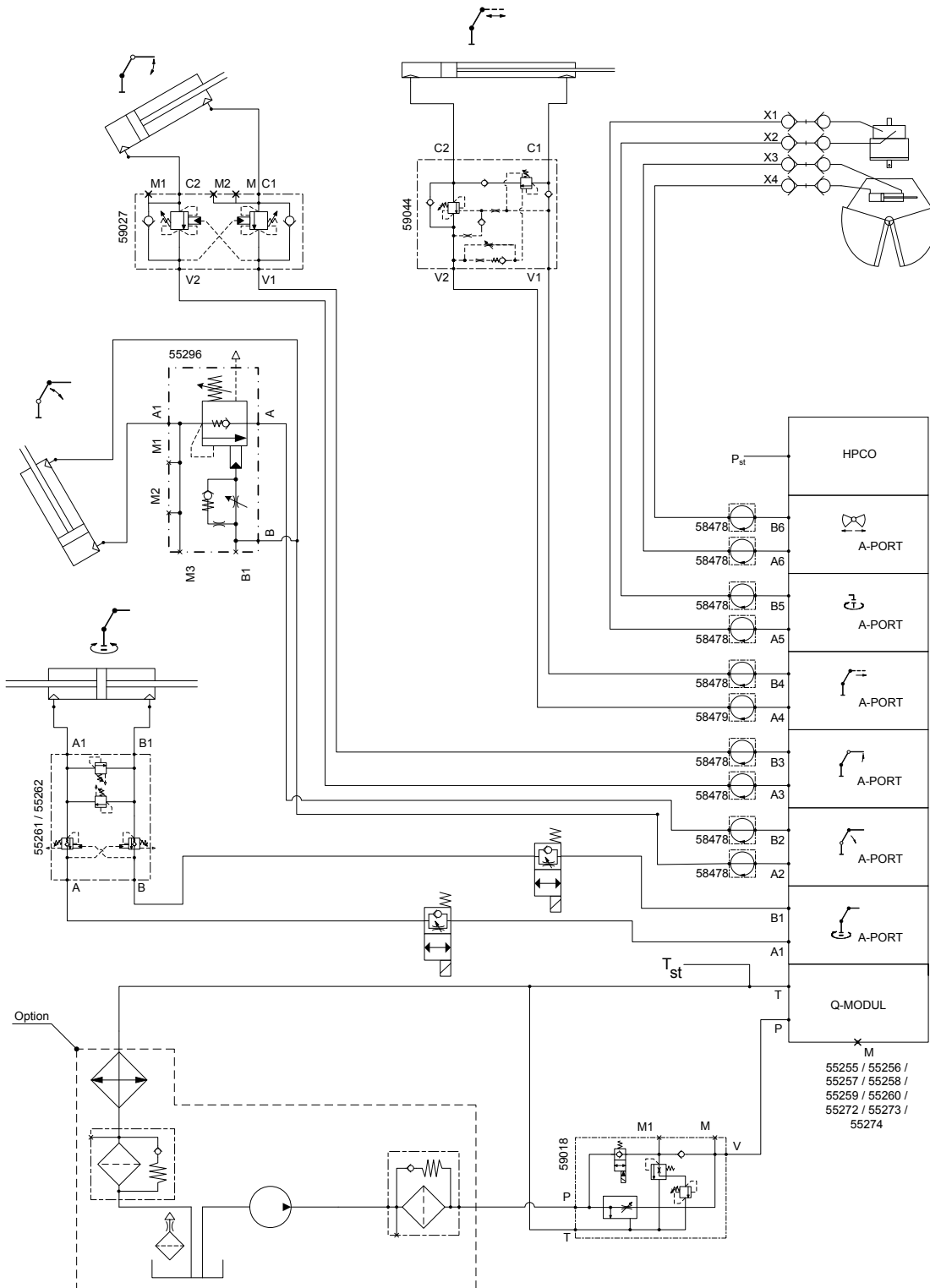
Hydraulic Diagram - Danfoss, single-circuit variable 6 fcts. RC (2 EXV: Grab + Rotator)



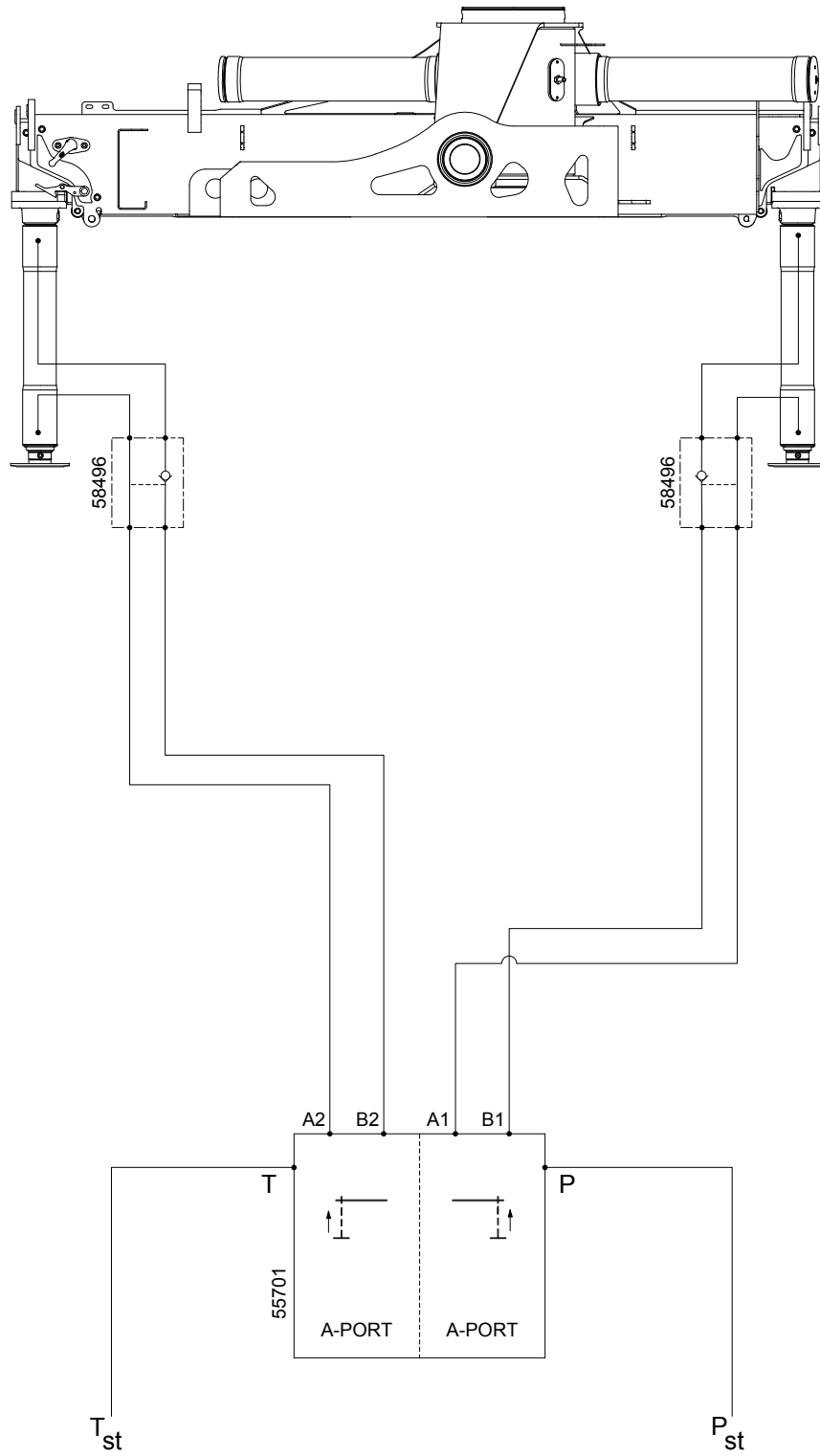
Hydraulic Diagram - Hydrocontrol, single-circuit fixed 6 fcts. Std./HS, std. HDL (2 EXV: Grab + Rotator)



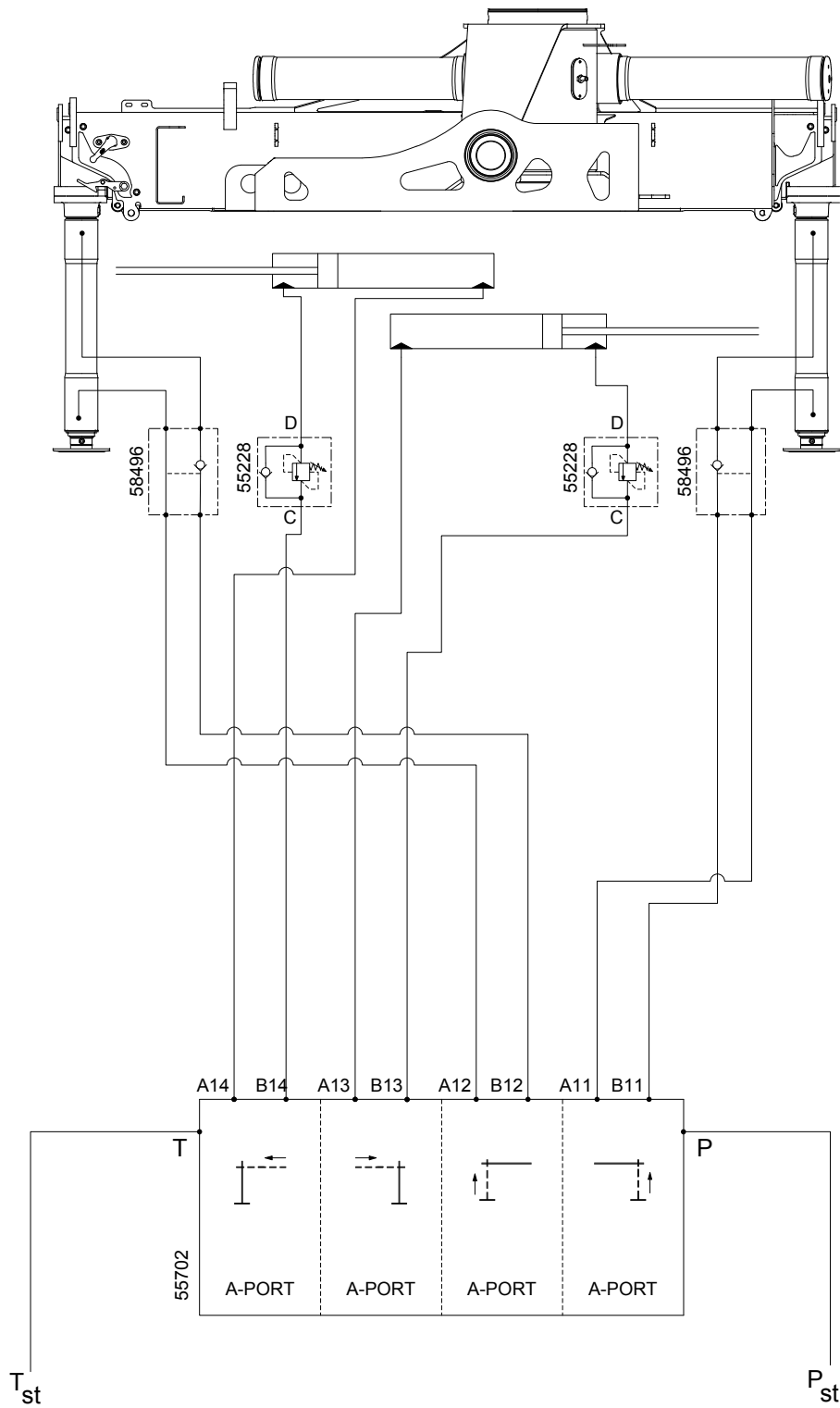
Hydraulic Diagram - EVS-h Hydrocontrol, single-circuit fixed 6 fcts. Std./HS, std. HDL (2 EXV: Grab + Rotator)



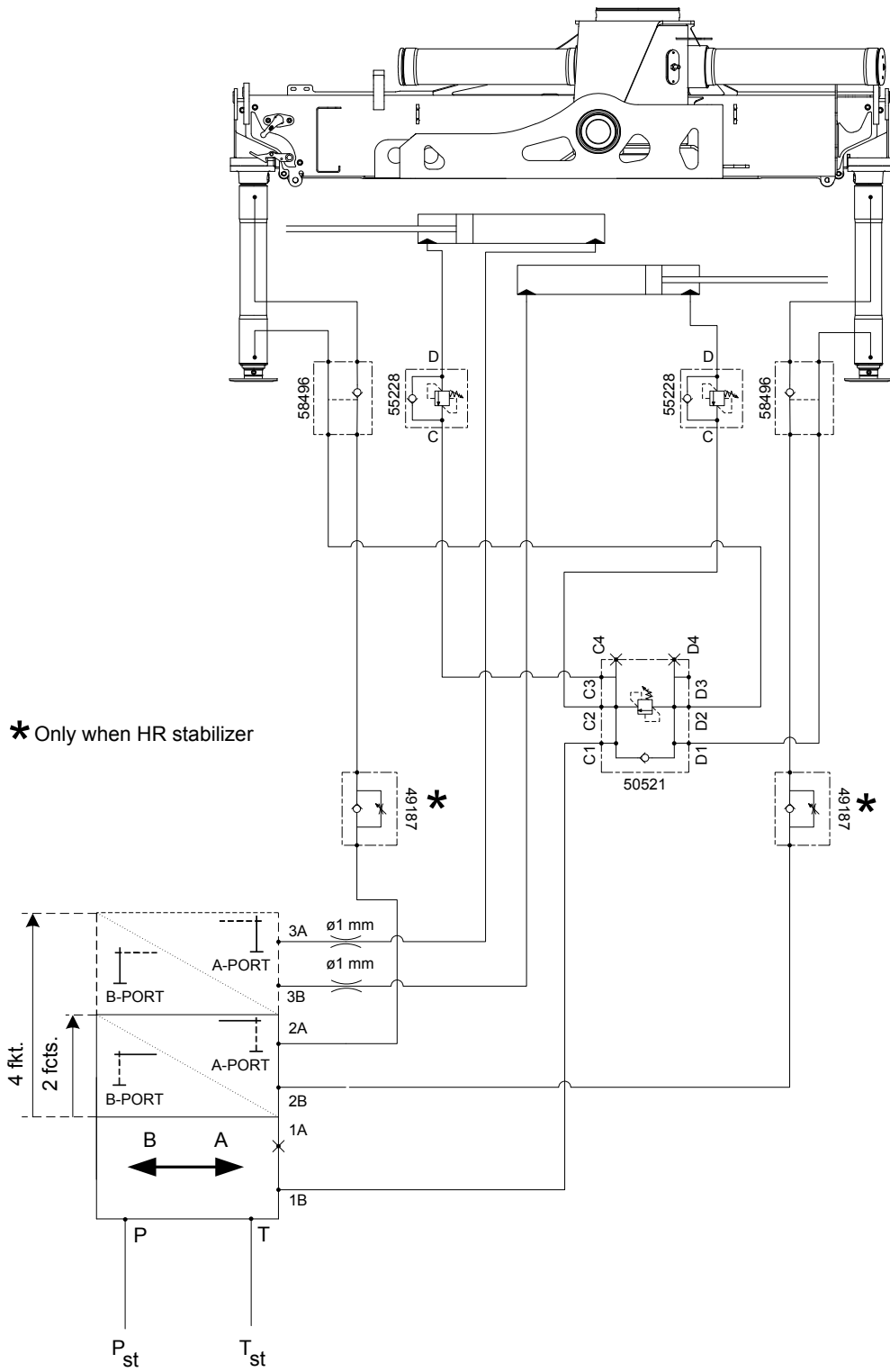
Hydraulic Diagram - Stabilizer circuit – 2 fcts.



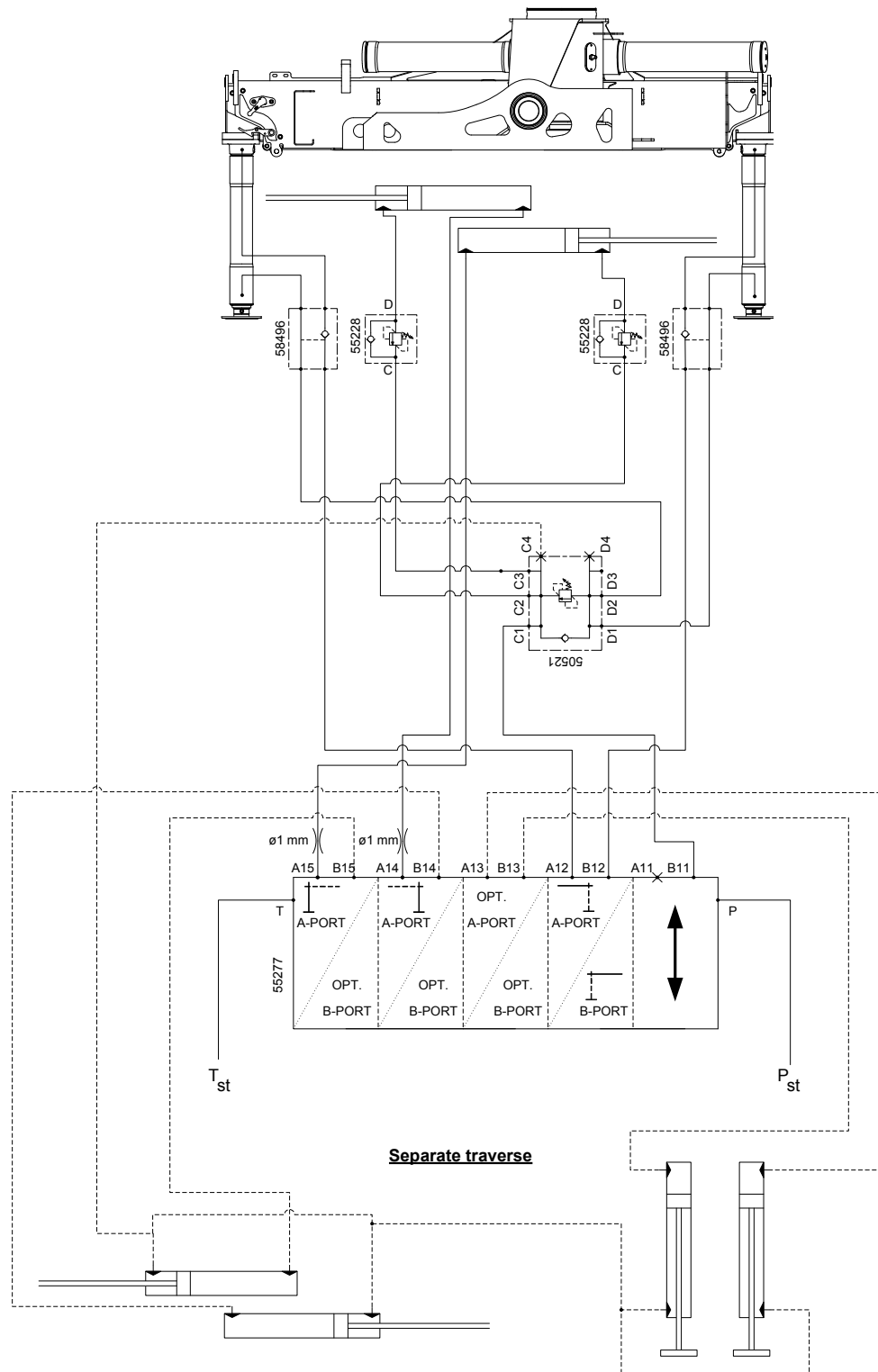
Hydraulic Diagram - Stabilizer circuit – 4 fcts.



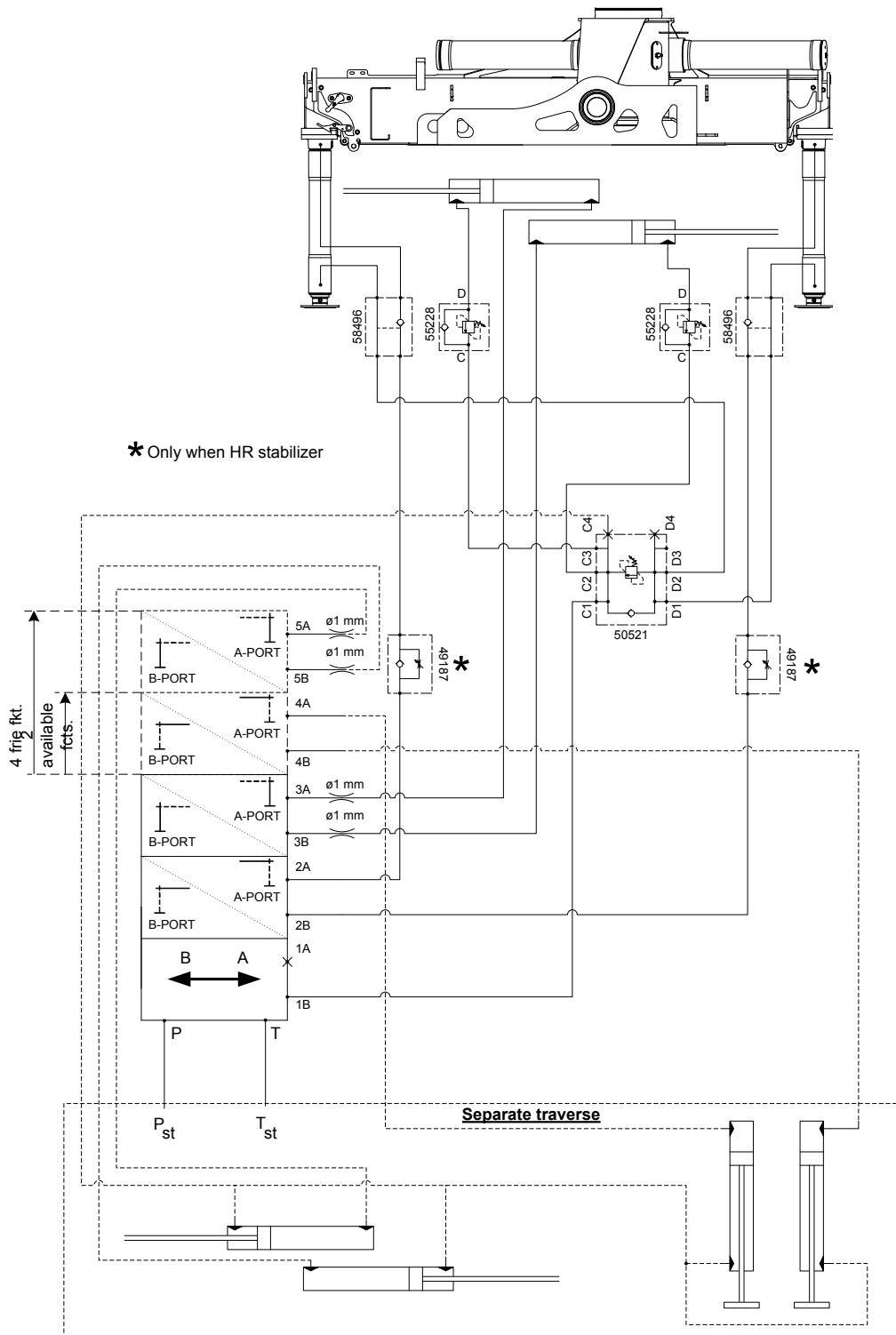
Hydraulic Diagram - Stabilizer circuit – 4 fcts. RC



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



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



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12/86DL Technical Specifications

Section - 4

12/86DL Specifications

Performance	Unit	K1	K2	K3	K4	K5
Loading group (EN12999)		HC1 / HD5	HC1 / HD5	HC1 / HD5	HC1 / HD5	HC1 / HD5
Load moment	ft-lb	88953	86060	83891	81721	79552
Hydraulic reach	ft	20'0"	26'11"	34'5"	41'7"	49'2"
Hydraulic telescopic movement	ft	6'	12'10"	20'	27'2"	34'4"
Lifting capacity, hydraulic	lb-ft	6548 - 13'5"	6239 - 13'9"	5930 - 14'1"	5688 - 14'5"	5446 - 14'8"
		4542 - 19'8"	4255 - 19'8"	3990 - 20'1"	3792 - 20'4"	3594 - 20'8"
			3153 - 26'10"	2910 - 26'10"	2690 - 27'2"	2513 - 27'7"
				2271 - 34'1"	2072 - 34'5"	1896 - 34'5"
					1676 - 41'4"	1499 - 41'8"
						1279 - 48'10"
Lifting capacity, manual extensions	lb-ft		2400 - 33'9"	1763 - 41'8"	1344 - 48'10"	1036 - 56'9"
Stewing torque, gross	lbft	9662.06	9662.06	9662.06	9662.06	9662.06
Stewing angle	°	420	420	420	420	420
Max. heel at max. load moment	°	5	5	5	5	5
Stewing speed	°/s	24	24	24	24	24

Dimensions	Unit	K1	K2	K3	K4	K5
Height above chassis	in	84	84	84	84	84
Width	in	98	98	98	98	98
Length, no extra valves	in	29	29	29	29	29
Length, with extra valves (hose guides)	in	34	34	34	34	34
Length, with extra valves (int. hose routing)	in	29	29	29	29	29
Stabilizer spread, S1 (standard)	ft	15'1"	15'1"	15'1"	15'1"	15'1"
Stabilizer spread, S2	ft	18'4"	18'4"	18'4"	18'4"	18'4"
Stabilizer spread, D	ft					

Minimum Chassis Specs

Front Axle Rating (GAWR)	8,000 lbs (3630 kg)
Rear Axle Rating (GAWR)	16,000 lbs (7260 kg)
Resistance to Bending Moment	1,290,000-in-lbs (178,350 kg-m)

12/86DL Specifications - Continued

Weights, basic loader	Unit	K1	K2	K3	K4	K5
Standard loader 1), excl. stabilizers	lbs	2458	2734	2976	3186	3373
Stabilizers, S1 fixed	lbs	375	375	375	375	375
Stabilizers, S1 swing-up	lbs	386	386	386	386	386
Stabilizers, S2 fixed	lbs	430	430	430	430	430
Stabilizers, S2 swing-up	lbs	441	441	441	441	441
Mounting kit, 4 bolts	lbs	121	121	121	121	121
Mounting kit, 8 bolts	lbs	132	132	132	132	132
Tank, excl. oil (fitted on loader)	lbs	88	88	88	88	88
Manual extensions	lbs		143	110	88	77
	lbs					
	lbs					
Oil in loader (stowing position)	lbs	44	53	62	71	79

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

Max. Load on stabilizers (per stabilizer cylinder)	Unit	K1	K2	K3	K4	K5
S1, fixed	Lbf	16.86	16.86	16.86	16.86	16.86
S1, swing-up	Lbf	16.86	16.86	16.86	16.86	16.86
S2, fixed	Lbf	16.86	16.86	16.86	16.86	16.86
S2, swing-up	Lbf	16.86	16.86	16.86	16.86	16.86

Power consumption / oil capacity	Unit	K1	K2	K3	K4	K5
Working pressure	PSI	5004	5004	5004	5004	5004
Tank capacity (fitted on loader)	gal	17	17	17	17	17
Max. pump performance, Hydrocontrol, 1-circuit	gpm	11	11	11	11	11
Max. pump performance, Danfoss fixed flow	gpm	16	16	16	16	16
Max. pump performance, Danfoss variable	gpm	21	21	21	21	21

12/86DL Metric Specifications

Performance	Unit	K1	K2	K3	K4	K5
Loading group (EN12999)		HC1 / HD5	HC1 / HD5	HC1 / HD5	HC1 / HD5	HC1 / HD5
Load moment	tm	12.3	11.9	11.6	11.3	11
Hydraulic reach	m	6.1	8.2	10.5	12.7	15
Hydraulic telescopic movement	mm	1849	3929	6116	8292	10479
Lifting capacity, hydraulic	kg-m	2970 - 4.1	2830 - 4.2	2690 - 4.3	2580 - 4.4	2470 - 4.5
		2060 - 6.0	1930 - 6.1	1810 - 6.2	1720 - 6.2	1630 - 6.3
			1430 - 8.2	1320 - 8.2	1220 - 8.3	1140 - 8.4
				1030 - 10.4	940 - 10.5	860 - 10.6
					760 - 12.7	680 - 12.8
						580 - 14.9
Lifting capacity, manual extensions	kg-m		1070 - 10.4	800 - 12.7	610 - 14.9	470 - 17.3
Slewing torque, gross	kNm	13.1	13.1	13.1	13.1	13.1
Slewing angle	°	420	420	420	420	420
Max. heel at max. load moment	°	5	5	5	5	5
Slewing speed	°/s	24	24	24	24	24

Dimensions	Unit	K1	K2	K3	K4	K5
Height above chassis	mm	2135	2135	2135	2135	2135
Width	mm	2500	2500	2500	2500	2500
Length, no extra valves	mm	747	747	747	747	747
Length, with extra valves (hose guides)	mm	868	868	868	868	868
Length, with extra valves (int. hose routing)	mm	757	757	757	757	757
Stabilizer spread, S1 (standard)	mm	4615	4615	4615	4615	4615
Stabilizer spread, S2	mm	5590	5590	5590	5590	5590
Stabilizer spread, D	mm					

12/86DL Metric Specifications - Continued

Weights, basic loader	Unit	K1	K2	K3	K4	K5
Standard loader 1), excl. stabilizers	kg	1115	1240	1350	1445	1530
Stabilizers, S1 fixed	kg	170	170	170	170	170
Stabilizers, S1 swing-up	kg	175	175	175	175	175
Stabilizers, S2 fixed	kg	195	195	195	195	195
Stabilizers, S2 swing-up	kg	200	200	200	200	200
Mounting kit, 4 bolts	kg	55	55	55	55	55
Mounting kit, 8 bolts	kg	60	60	60	60	60
Tank, excl. oil (fitted on loader)	kg	40	40	40	40	40
Manual extensions	kg		65	50	40	35
	kg					
	kg					
Oil in loader (stowing position)	kg	20	24	28	32	36

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	75	75
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 filter	kg	7	7	7	7	7
Oil cooler	kg	25	25	25	25	25

Max. Load on stabilizers (per stabilizer cylinder)	Unit	K1	K2	K3	K4	K5
S1, fixed	kN	75	75	75	75	75
S1, swing-up	kN	75	75	75	75	75
S2, fixed	kN	75	75	75	75	75
S2, swing-up	kN	75	75	75	75	75

Power consumption / oil capacity	Unit	K1	K2	K3	K4	K5
Working pressure	Bar	345	345	345	345	345
Tank capacity (fitted on loader)	L	65	65	65	65	65
Max. pump performance, Hydrocontrol, 1-circuit	L/min	40	40	40	40	40
Max. pump performance, Danfoss fixed flow	L/min	60	60	60	60	60
Max. pump performance, Danfoss variable	L/min	80	80	80	80	80

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12/86DL Load Capacity Charts **Section - 5**

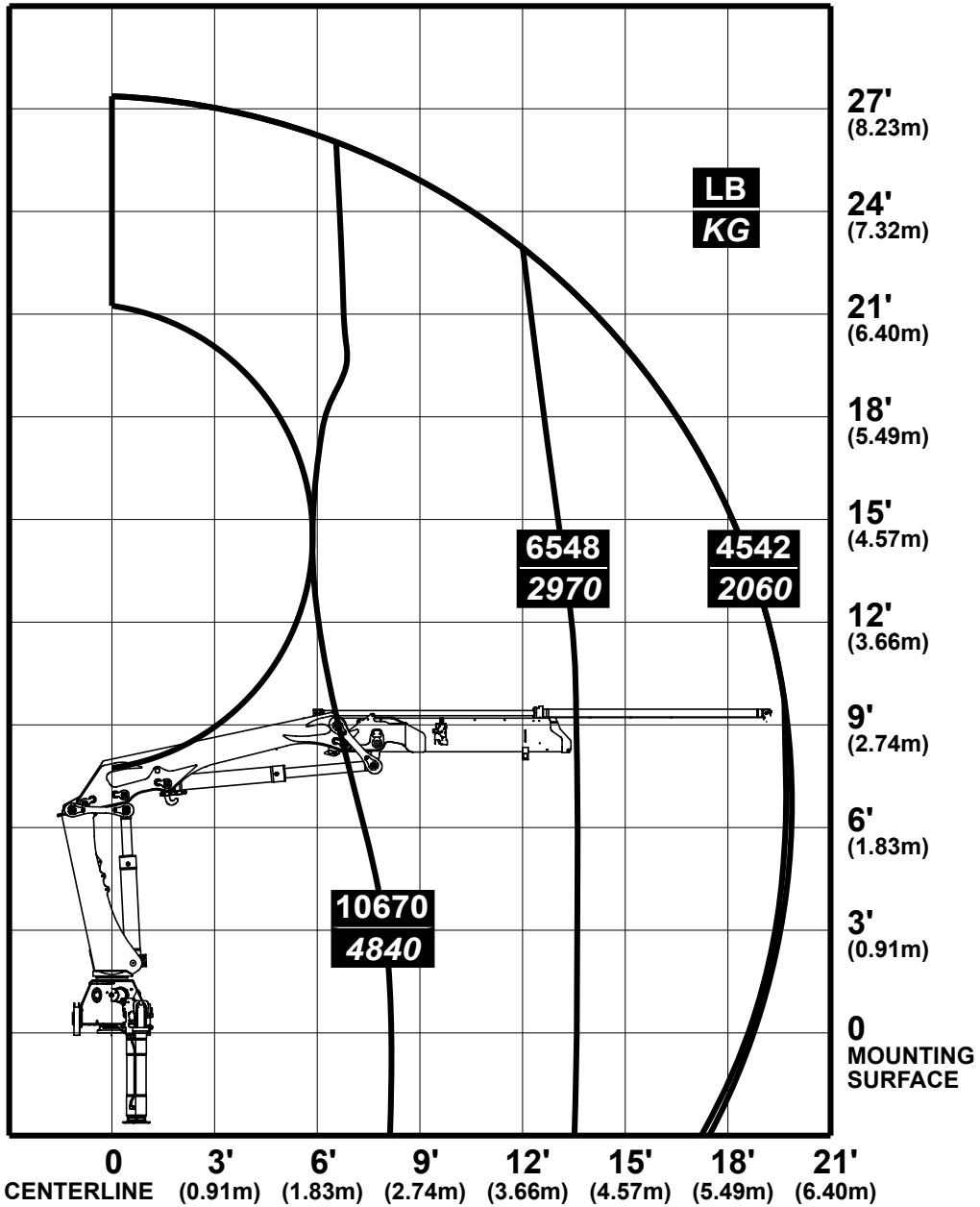
12/86DL Lifting Capacity Chart, K1

IMT
MATERIAL HANDLING SYSTEMS

IOWA MOLD TOOLING CO., INC.
BOX 189 • GARNER • IA • 50438 • 641-923-3711

Model 12/86 DL 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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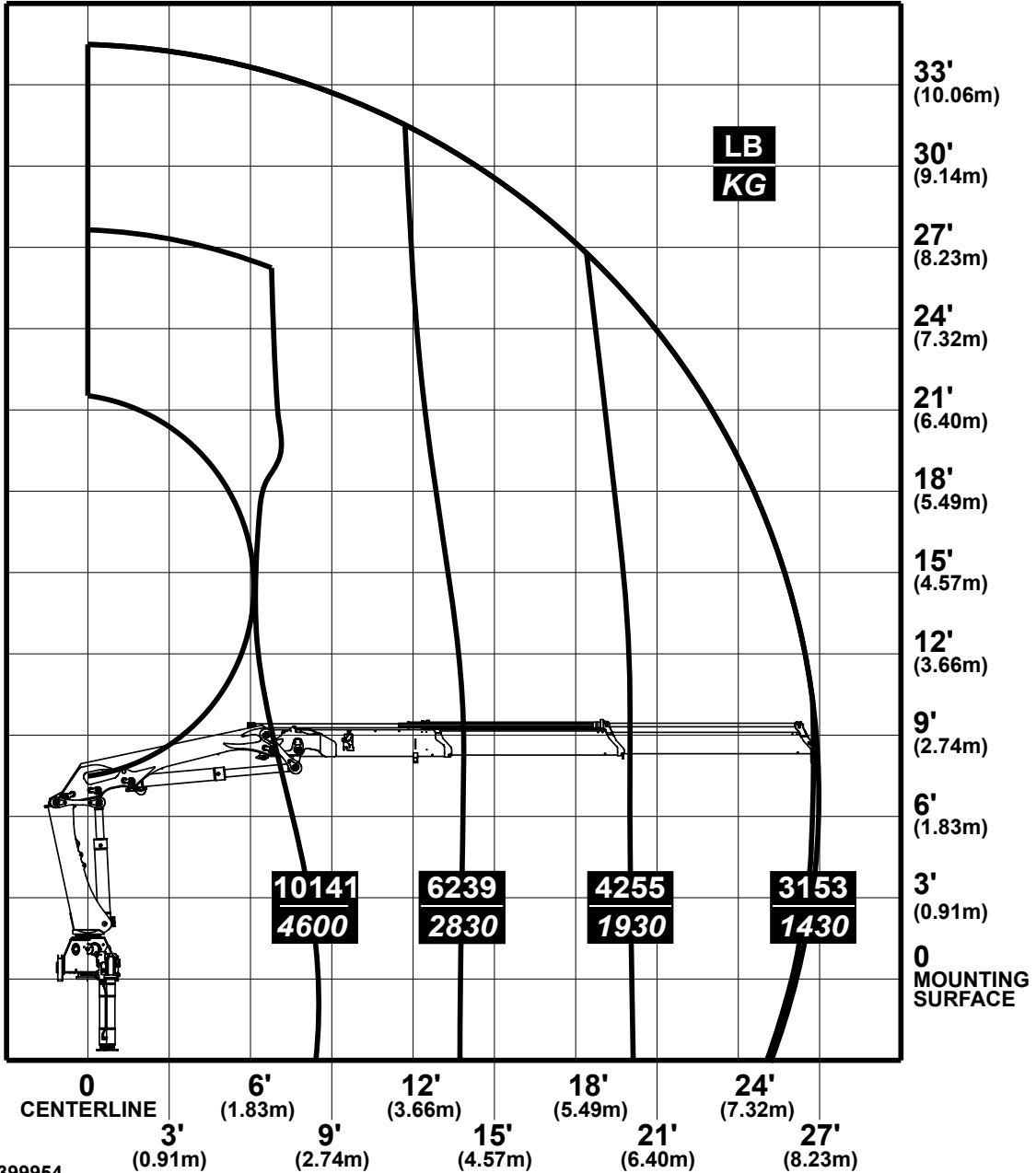
12/86DL Lifting Capacity Chart, K2

IMT
MATERIAL HANDLING SYSTEMS

IOWA MOLD TOOLING CO., INC.
BOX 189 • GARNER • IA • 50438 • 641-923-3711

Model 12/86 DL K2

- 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.*



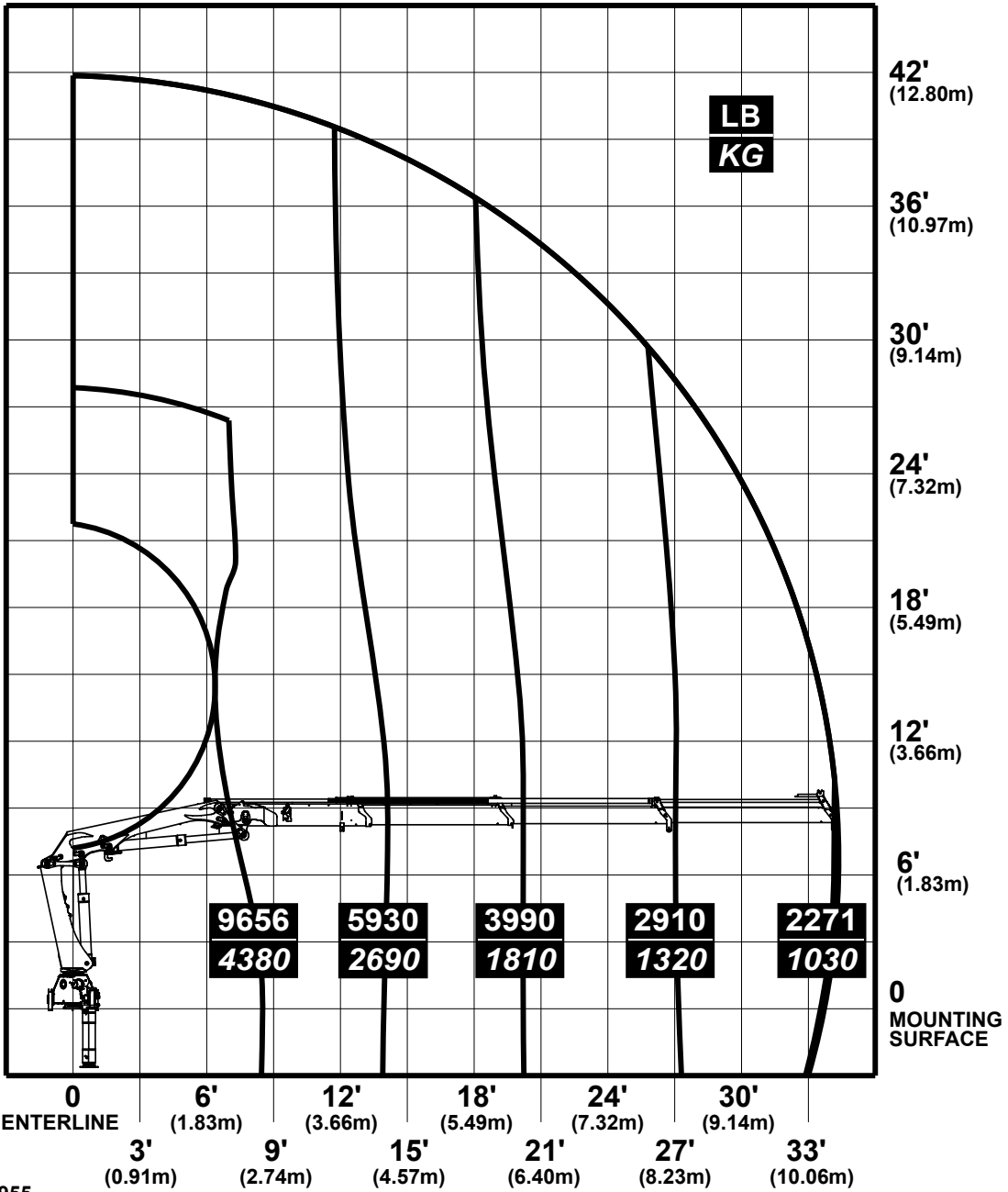
12/86DL Lifting Capacity Chart, K3

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MATERIAL HANDLING SYSTEMS

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Model 12/86 DL 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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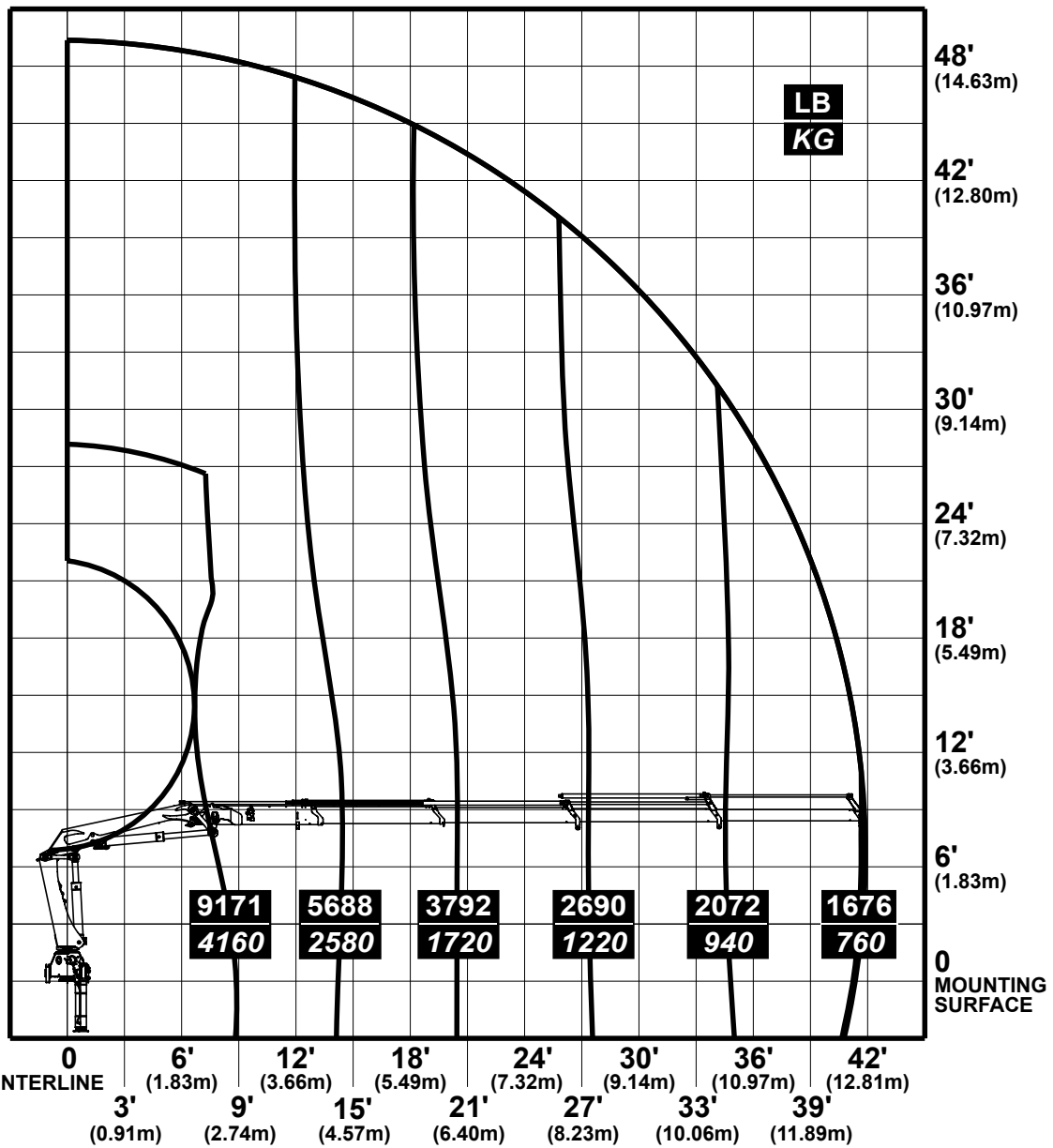
12/86DL Lifting Capacity Chart, K4

IMT
MATERIAL HANDLING SYSTEMS

IOWA MOLD TOOLING CO., INC.
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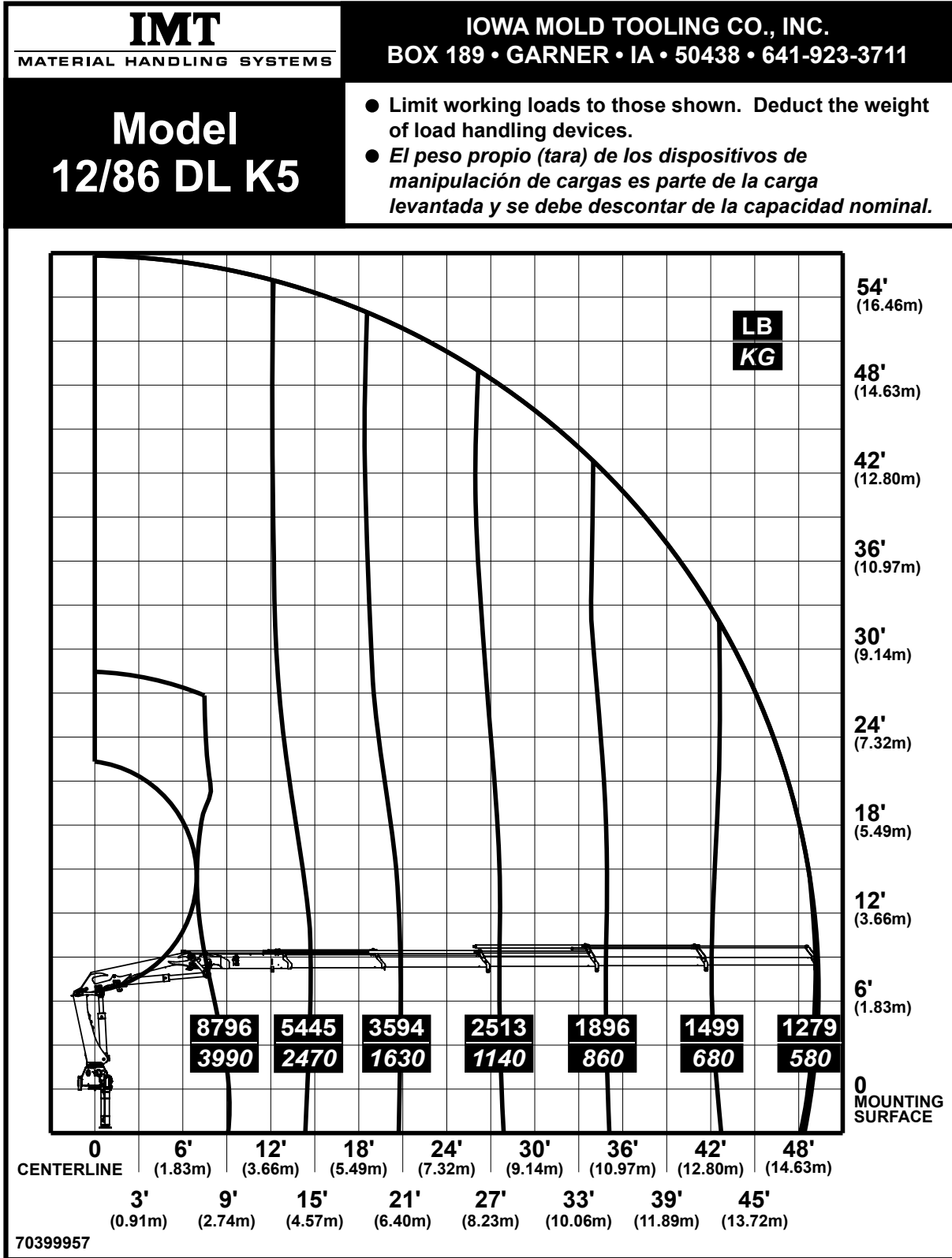
Model 12/86 DL K4

- 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.*



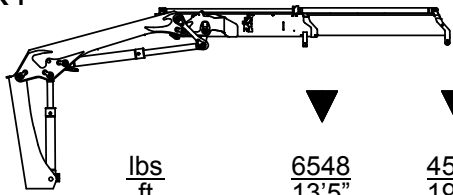
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12/86DL Lifting Capacity Chart, K5



12/86DL Lifting Capacity, K1-K5

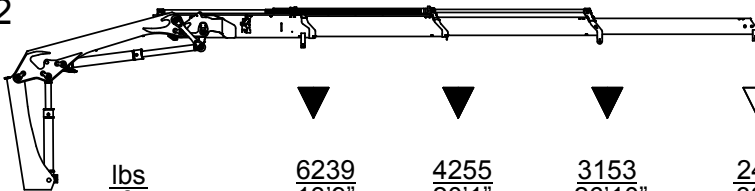
K1



▽ Lifting capacity with manual extensions
 ▼ Lifting capacity without manual extensions

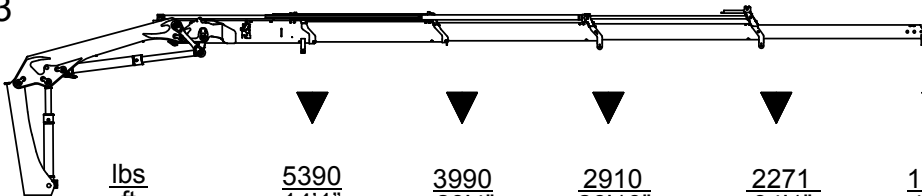
	▼	▼
lbs	6548	4542
ft	13'5"	19'8"
kg	2970	2060
m	4.1	6.0

K2



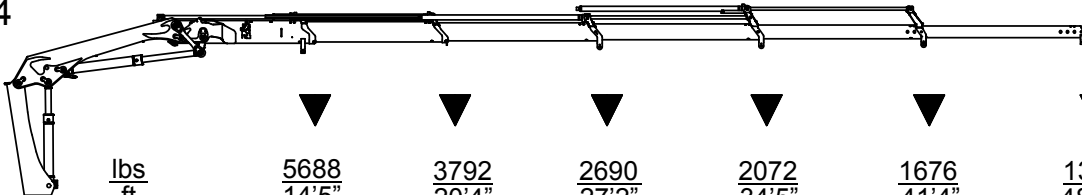
	▼	▼	▼	▽
lbs	6239	4255	3153	2400
ft	13'9"	20'1"	26'10"	33'9"
kg	2830	1930	1430	1070
m	4.2	6.1	8.2	10.4

K3



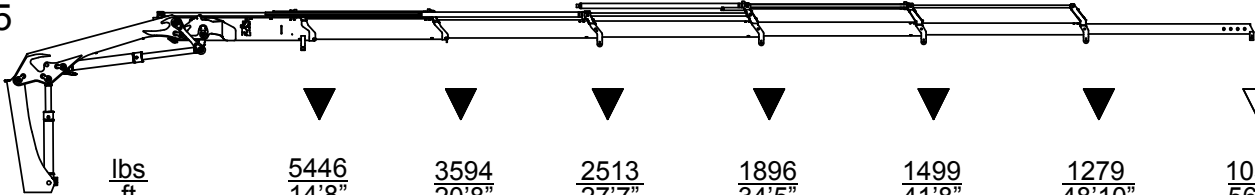
	▼	▼	▼	▼	▽
lbs	5390	3990	2910	2271	1763
ft	14'1"	20'4"	26'10"	34'1"	41'8"
kg	2690	1810	1320	1030	800
m	4.3	6.2	8.2	10.4	12.7

K4



	▼	▼	▼	▼	▼	▽
lbs	5688	3792	2690	2072	1676	1344
ft	14'5"	20'4"	27'2"	34'5"	41'4"	48'10"
kg	2580	1720	1220	940	760	610
m	4.4	6.2	8.3	10.5	12.7	14.9

K5



	▼	▼	▼	▼	▼	▼	▽
lbs	5446	3594	2513	1896	1499	1279	1036
ft	14'8"	20'8"	27'7"	34'5"	41'8"	48'10"	56'9"
kg	2470	1630	1140	860	680	580	470
m	4.5	6.3	8.4	10.6	12.8	14.9	17.3

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12/86DL Hydraulic Specifications

Section - 6

12/86DL - Pressure Setting Diagram, Hydrocontrol HC-D4

Working Pressure on Main-Relief Valve & Port-Relief Valves		12/86DL		
Function	Direction	Port	(HDL) PSI	
Main-relief valve			4786	
Slewing system	Right	A	P	
	Left	B	P	
Boom cylinder	Down	A	1450	
	Up	B	4931	
Jib cylinder	Up	A	4931	
	Down	B	2901	
Extension cylinders	Extend	A	P	
	Retract	B	P	
Rotator	Right	A	2901	
	Left	B	2901	
Grab	Open	A	2901	
	Close	B	2901	
Separate stabilizer valve		All	2176	

Working Pressure on Load-holding Valves			
Function	Direction	Port	Opening Pressure [PSI]
Boom cylinder			5076
Jib cylinder	Up	A	5076
	Down	B	4351
Slewing system			3046
Extension cylinders	Extend	A	3046
	Retract	B	6237

Pressure setting for Load Moment Limitation (LMB)		
Load moment limitation (LMB)	PSI	4641

Pressure setting for HDL valve		
HDL	PSI	4206

Max. pump performance		
Pump performance	gpm	10.6

IMT reserves the right to introduce improvements and modifications

12/86DL - Pressure setting diagram, fixed flow pump & Danfoss RC

Working Pressure on Main-Relief Valve & Port-Relief Valves			12/86DL	
Function	Direction	Port	Port-relief valves [PSI]	LS-pressure adjustment [PSI]
Main-relief valve			4786	
Slewing system	Right	A	P	2611
	Left	B	P	2611
Boom cylinder	Down	A	1813	1450
	Up	B	5076	5511
Jib cylinder	Up	A	5076	5511
	Down	B	3626	3336
Extension cylinders	Extend	A	P	-
	Retract	B	P	-
Rotator	Right	A	P	725-4351
	Left	B	P	725-4351
Grab	Open	A	P	725-4351
	Close	B	P	725-4351
Winch 1,5T	Lift	A	P	2321
	Lower	B	P	2321
Winch 2,5T	Lift	A	P	2683
	Lower	B	P	2683
Separate stabilizer valve		All	2176	

Working Pressure on Load-holding Valves		
Function	Direction	Opening pressure [PSI]
Slewing system	Right	2683
	Left	2683
Boom cylinder	Up	5294
	Down	-
Jib cylinder	Up	5511
	Down	4351
Extension cylinders	Retract	6237
	Extend	3046

Pressure setting for Load Moment Limitation (LMB)		
Load moment limitation (LMB)	PSI	4786
HDL	PSI	4134

Max. pump performance		
Choice of pump		1 x fixed
Pump performance	gpm	18.5

IMT reserves the right to introduce improvements and modifications

12/86DL - Pressure setting diagram, variable flow pump & Danfoss RC

Working Pressure on Main-Relief Valve & Port-Relief Valves			12/86DL	
Function	Direction	Port	Port-relief valves [PSI]	LS-pressure adjustment [PSI]
Main-relief valve			5004	
Slewing system	Right	A	P	2611
	Left	B	P	2611
Boom cylinder	Down	A	1813	1450
	Up	B	5076	5511
Jib cylinder	Up	A	5076	5511
	Down	B	3626	3336
Extension cylinders	Extend	A	P	-
	Retract	B	P	-
Rotator	Right	A	P	725-4351
	Left	B	P	725-4351
Grab	Open	A	P	725-4351
	Close	B	P	725-4351
Winch 1,5T	Lift	A	P	2321
	Lower	B	P	2321
Winch 2,5T	Lift	A	P	2683
	Lower	B	P	2683
Separate stabilizer valve		All	2176	

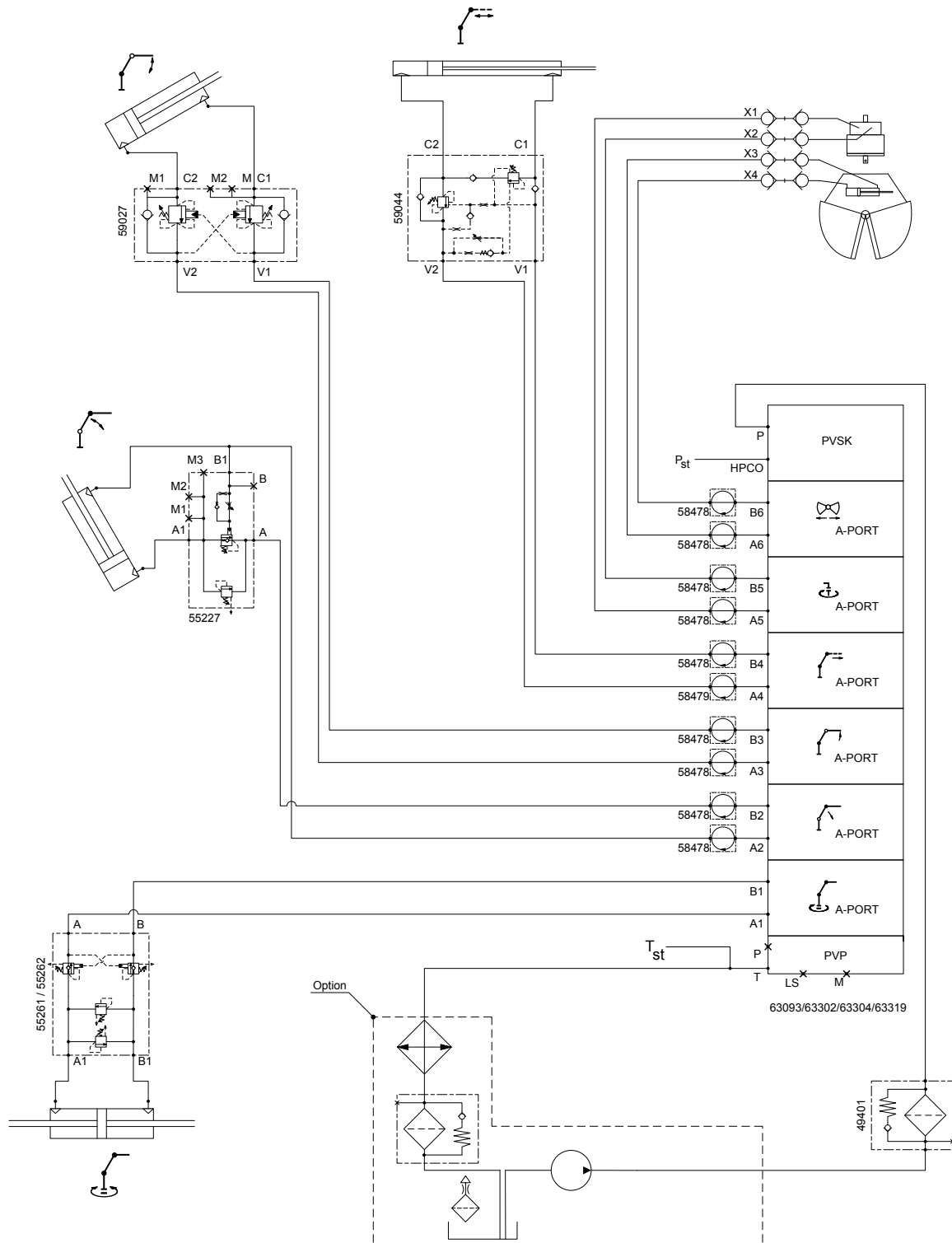
Working Pressure on Load-holding Valves		
Function	Direction	Opening pressure [PSI]
Slewing system	Right	2683
	Left	2683
Boom cylinder	Up	5294
	Down	-
Jib cylinder	Up	5511
	Down	4351
Extension cylinders	Retract	6237
	Extend	3046

Pressure setting for Load Moment Limitation (LMB)		
Load moment limitation (LMB)	PSI	4786
HDL	PSI	4134

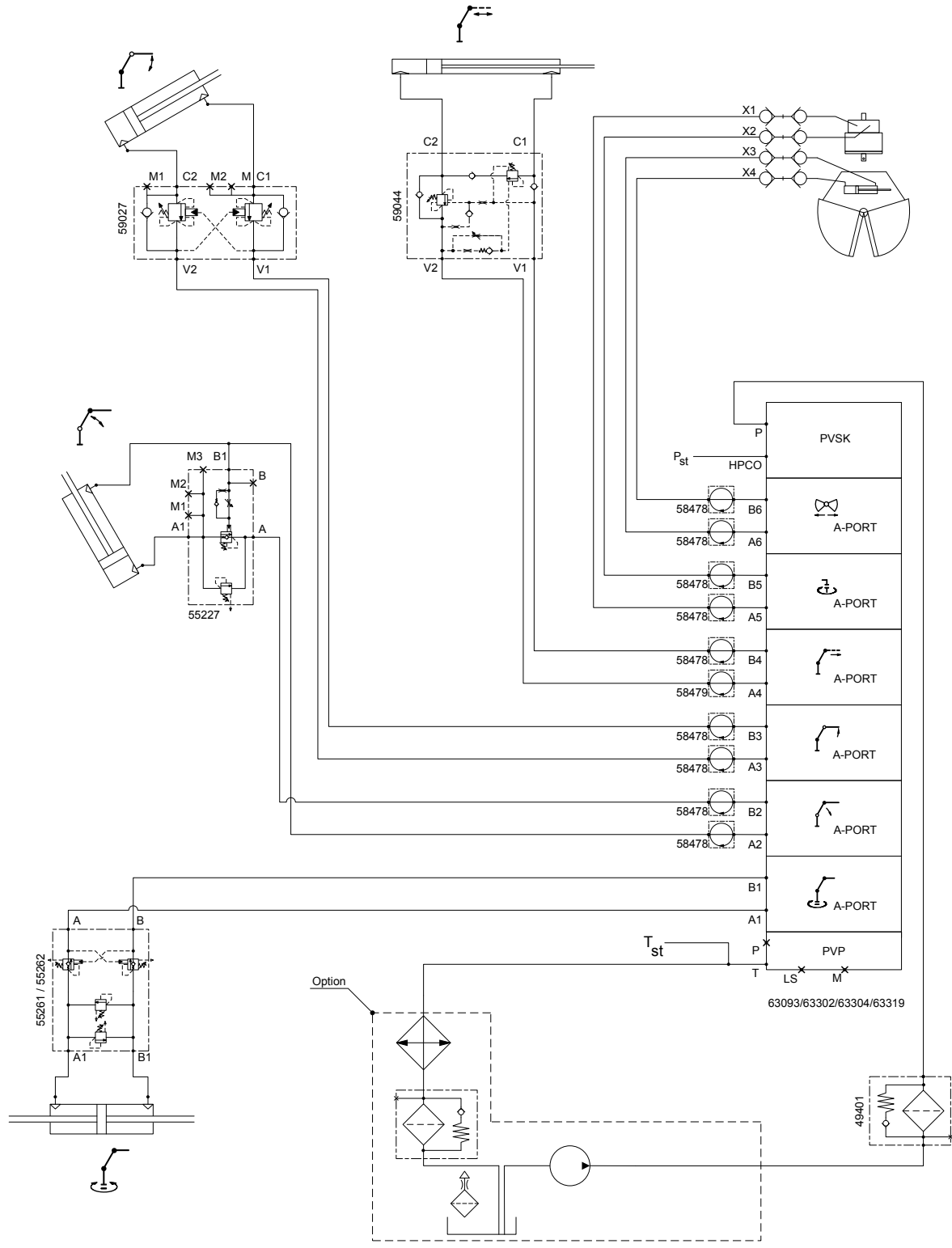
Max. pump performance		
Choice of pump		1 x Variable
Pump performance	gpm	18.5

IMT reserves the right to introduce improvements and modifications

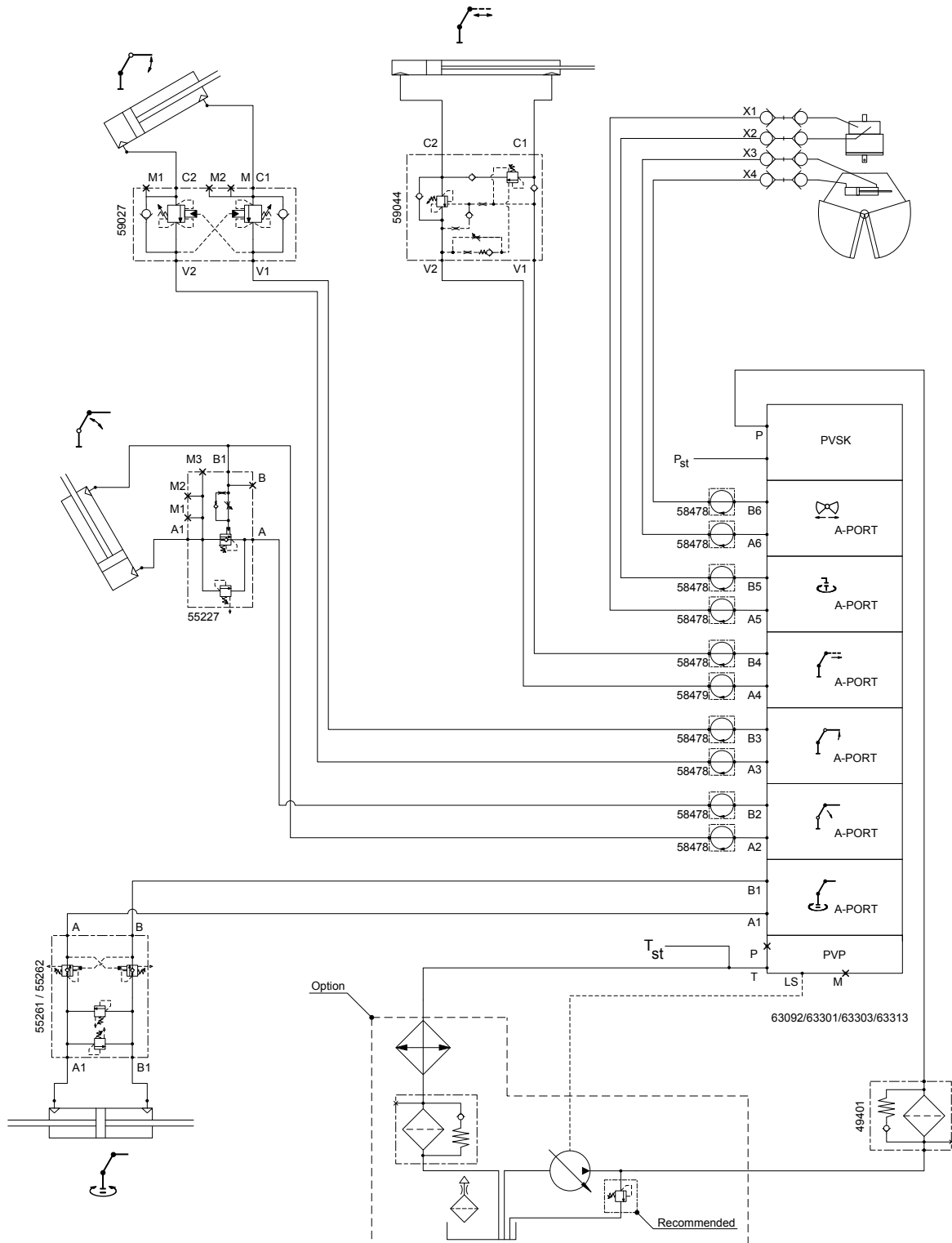
Hydraulic Diagram - Danfoss, single-circuit fixed 6 fcts. RC (2 EXV: Grab + Rotator)



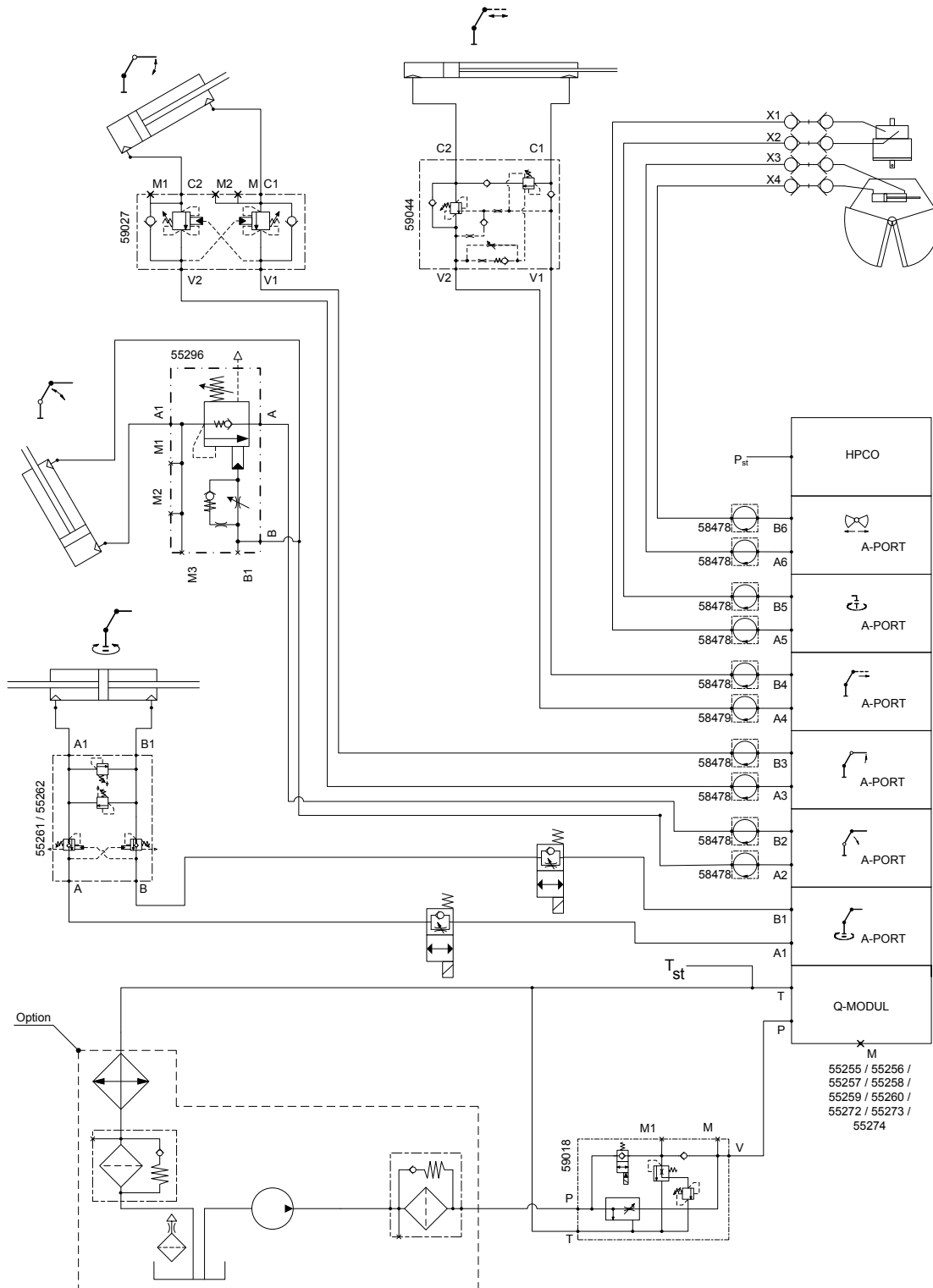
Hydraulic Diagram - Danfoss, single-circuit variable 6 fcts. RC (2 EXV: Grab + Rotator)



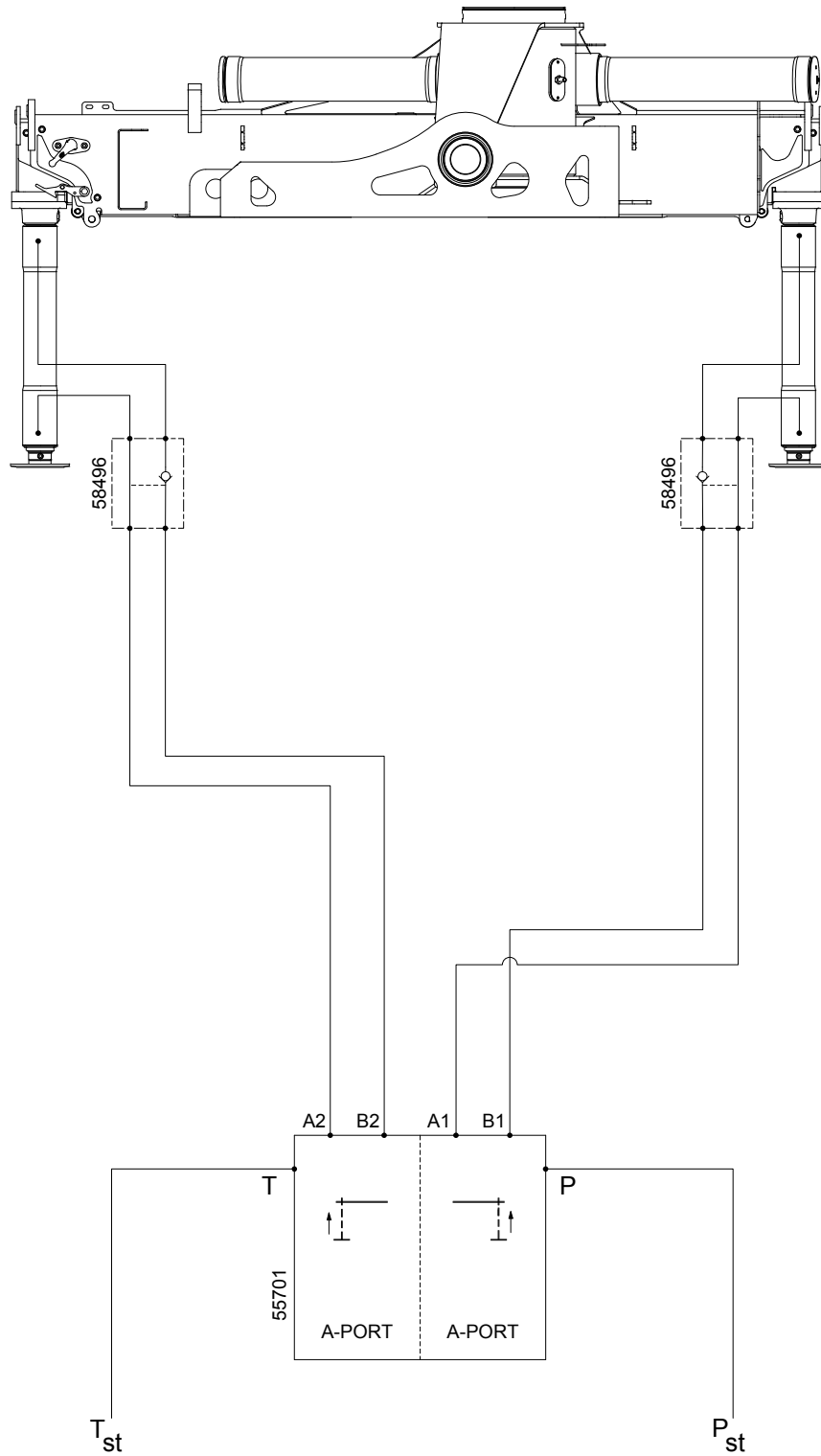
Hydraulic Diagram - Hydrocontrol, single-circuit fixed 6 fcts. Std./HS, std. HDL (2 EXV: Grab + Rotator)



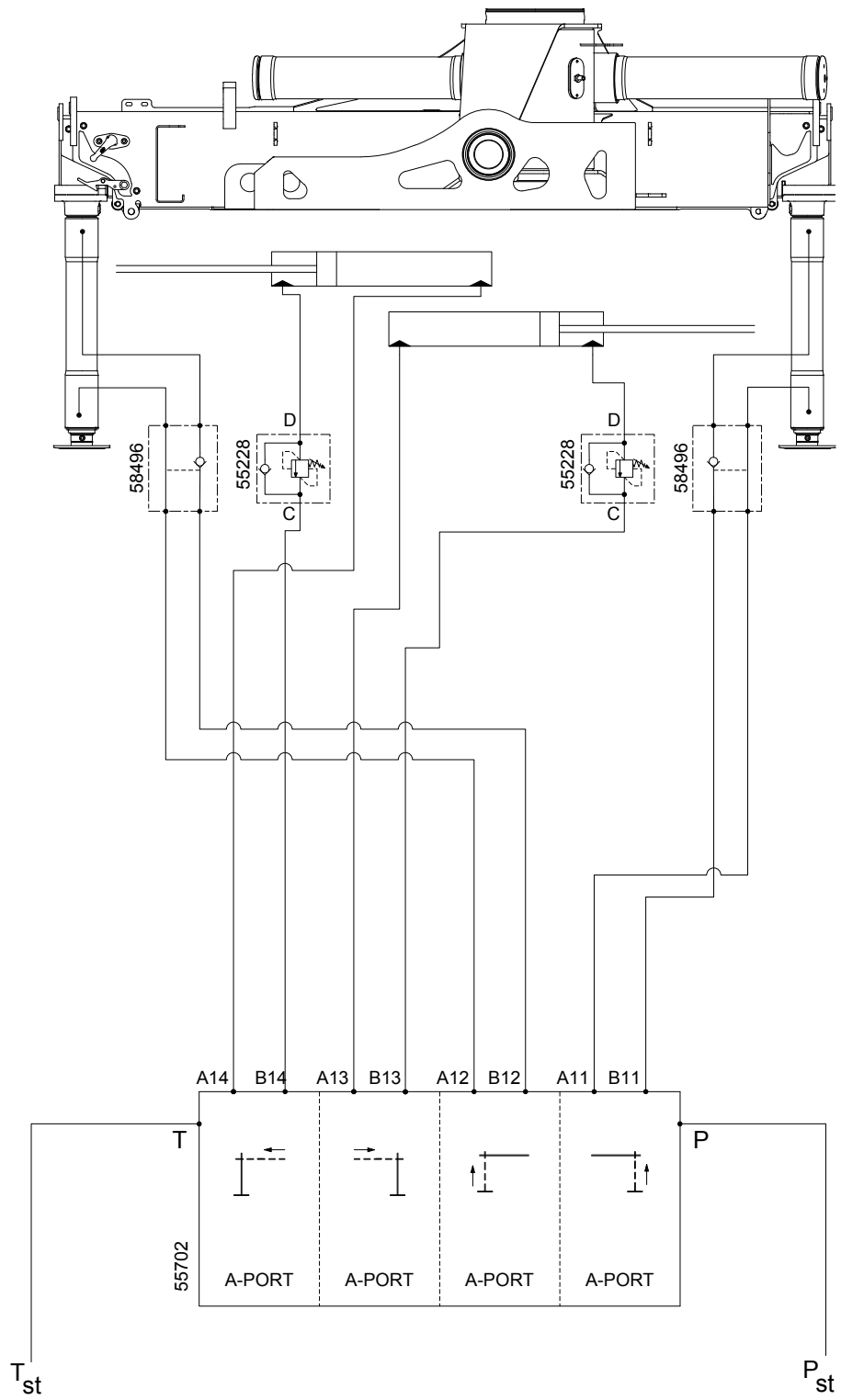
Hydraulic Diagram - EVS-h Hydrocontrol, single-circuit fixed 6 fcts. Std./HS, std. HDL (2 EXV: Grab + Rotator)



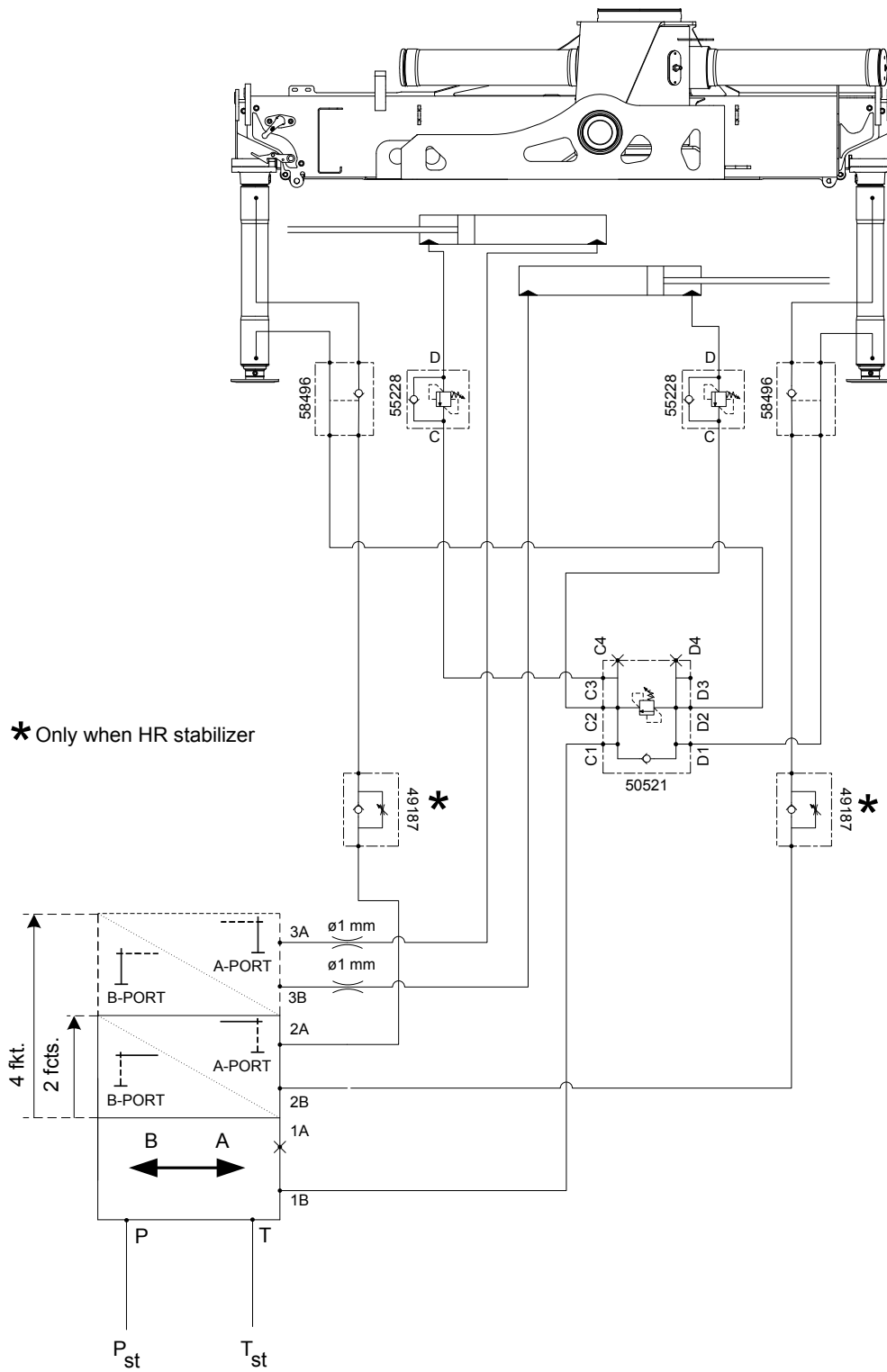
Hydraulic Diagram - Stabilizer circuit – 2 fcts.



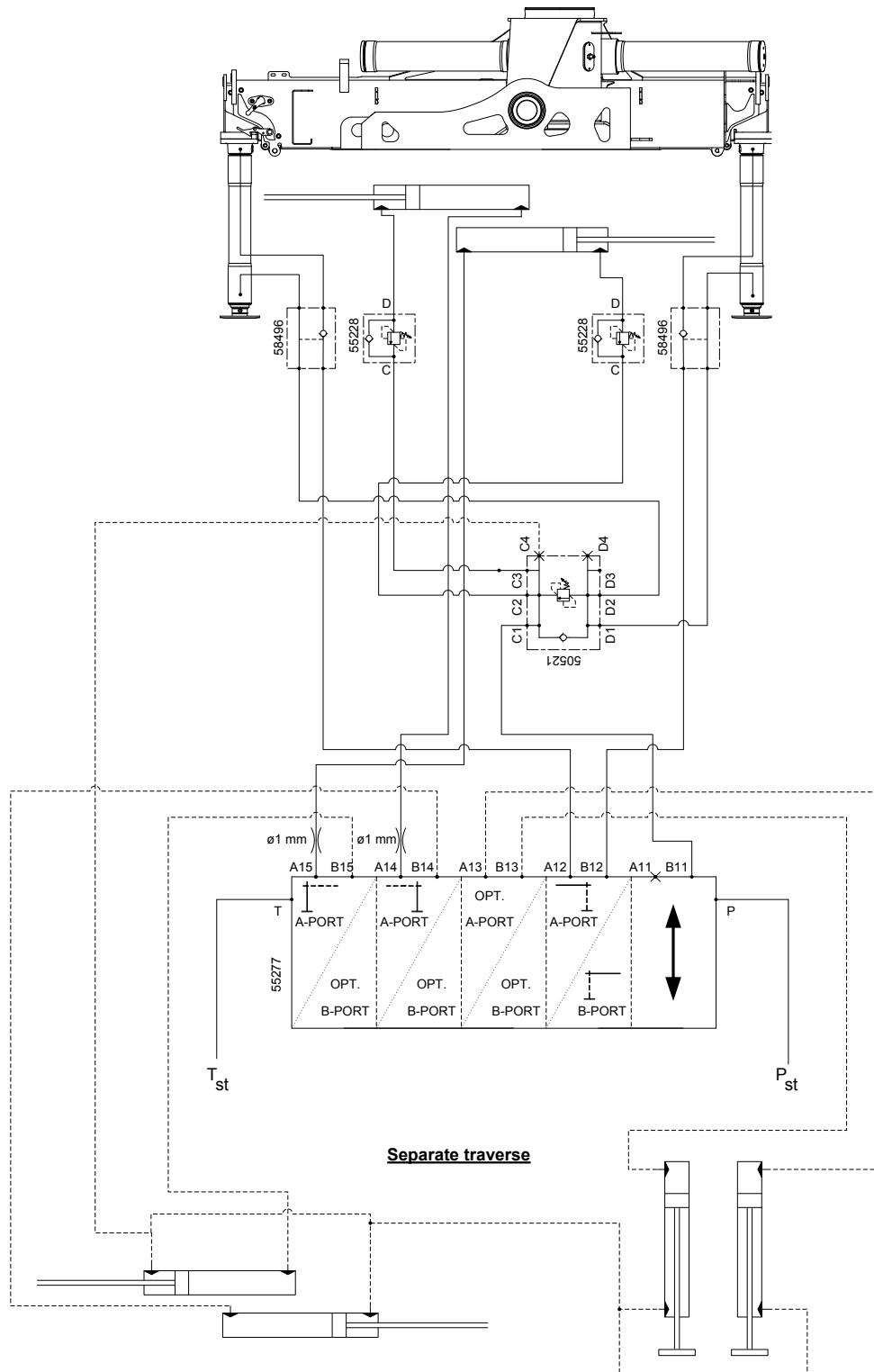
Hydraulic Diagram - Stabilizer circuit – 4 fcts.



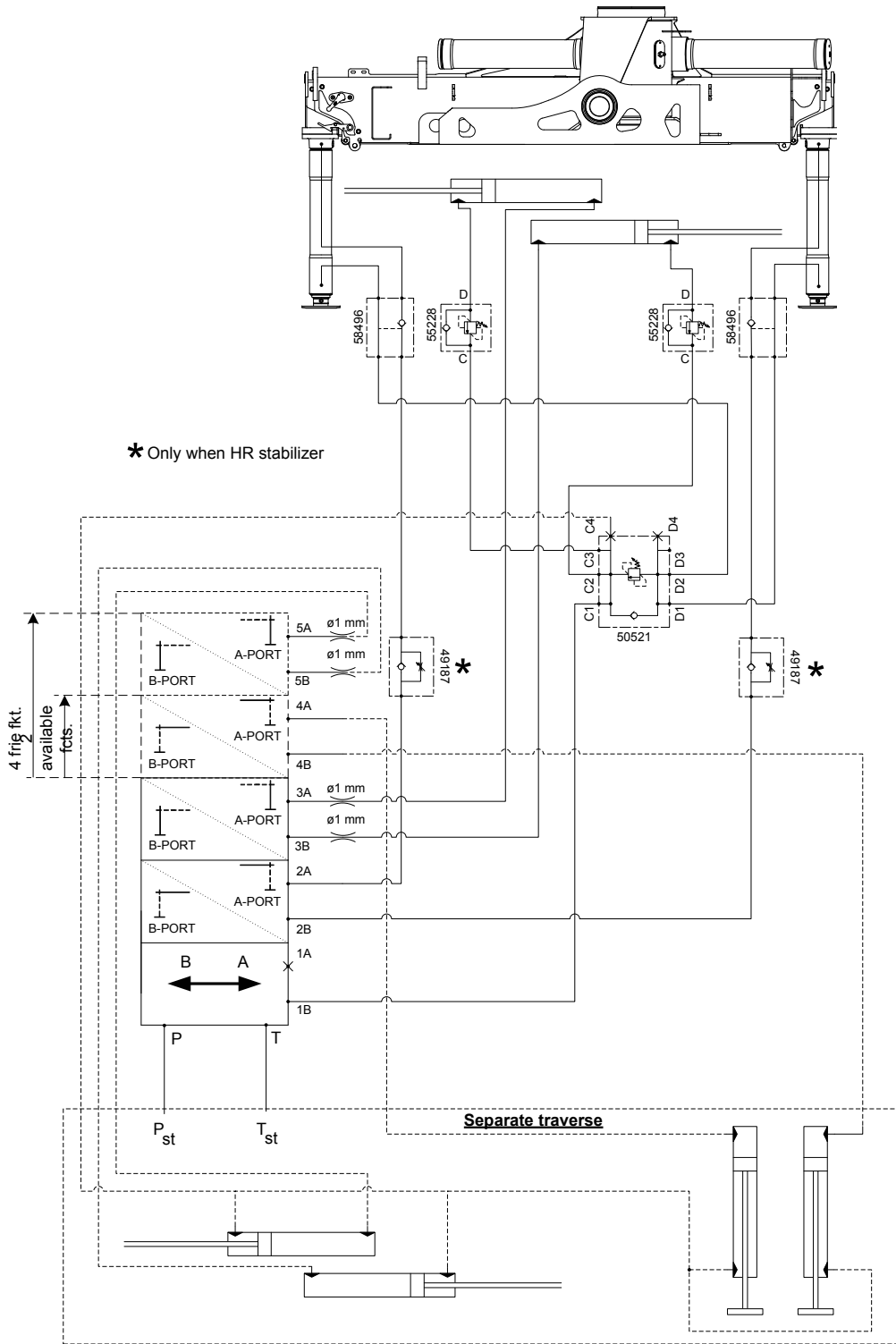
Hydraulic Diagram - Stabilizer circuit – 4 fcts. RC



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



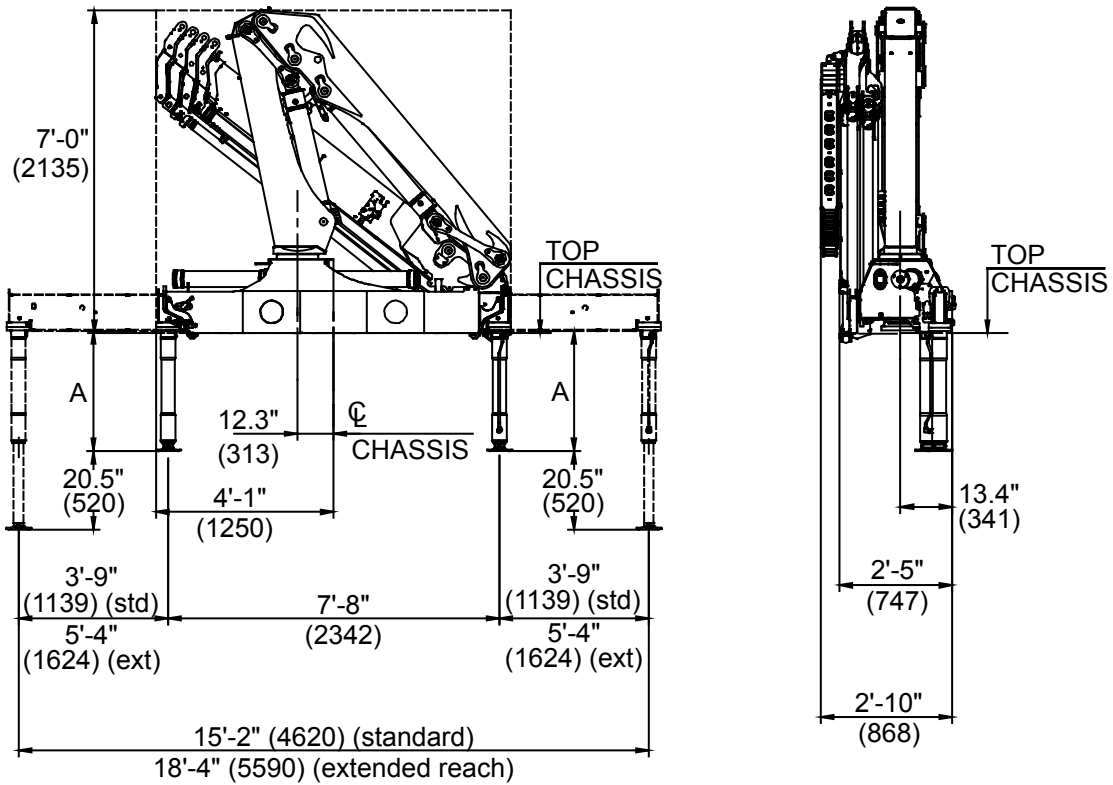
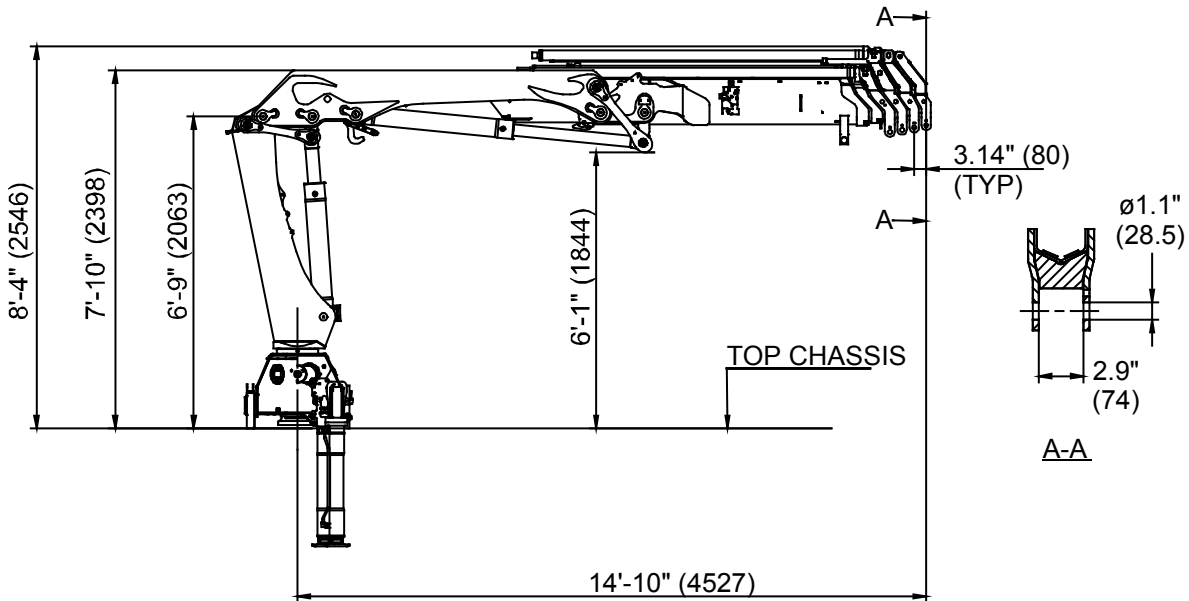
Hydraulic Diagram - Stabilizer circuit – 4 fcts. + 4 available fcts. RC



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12/86SL - 12/86DL Dimension Drawings **Section - 7**

Dimension Sketch

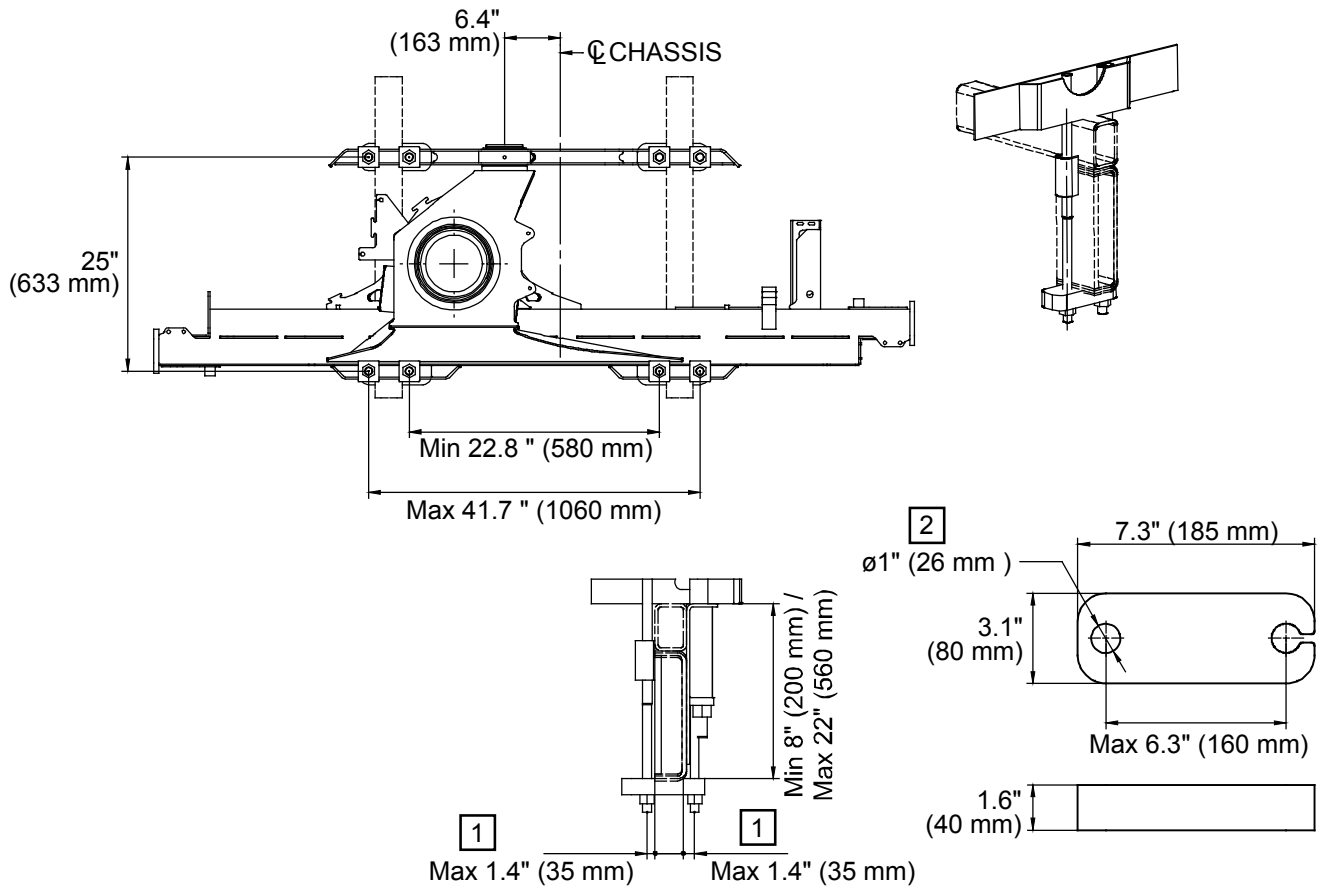


Double link crane shown. Single link dimensions are the same.

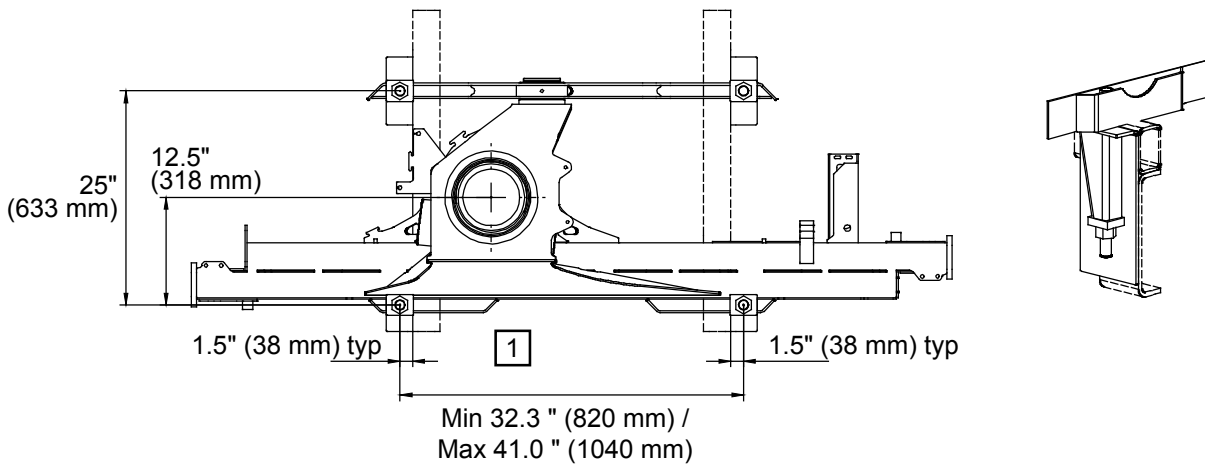
Dimensions shown in ft-in (mm).

Mounting Dimensions

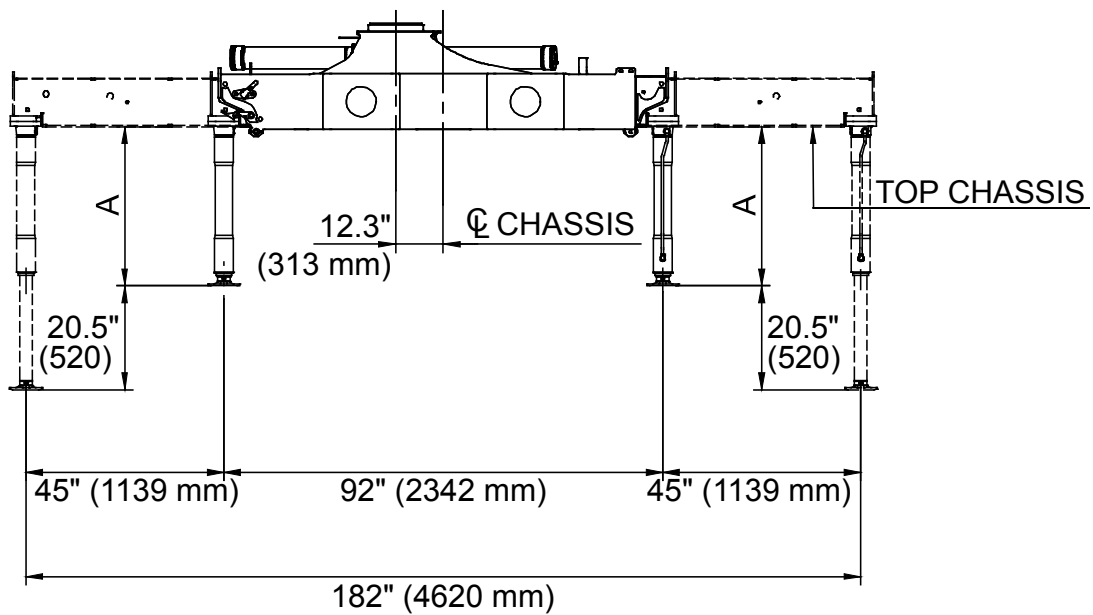
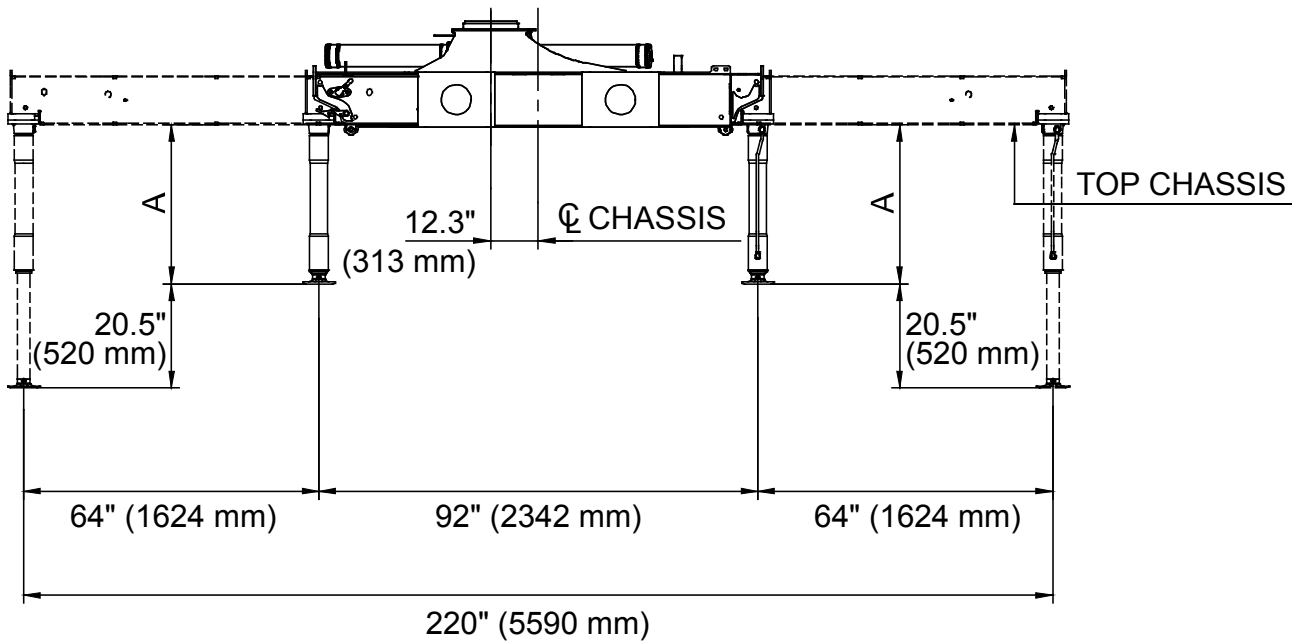
8 mounting holes - M24 x 2 bolt



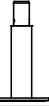


4 mounting holes - M30 x 2 bolt

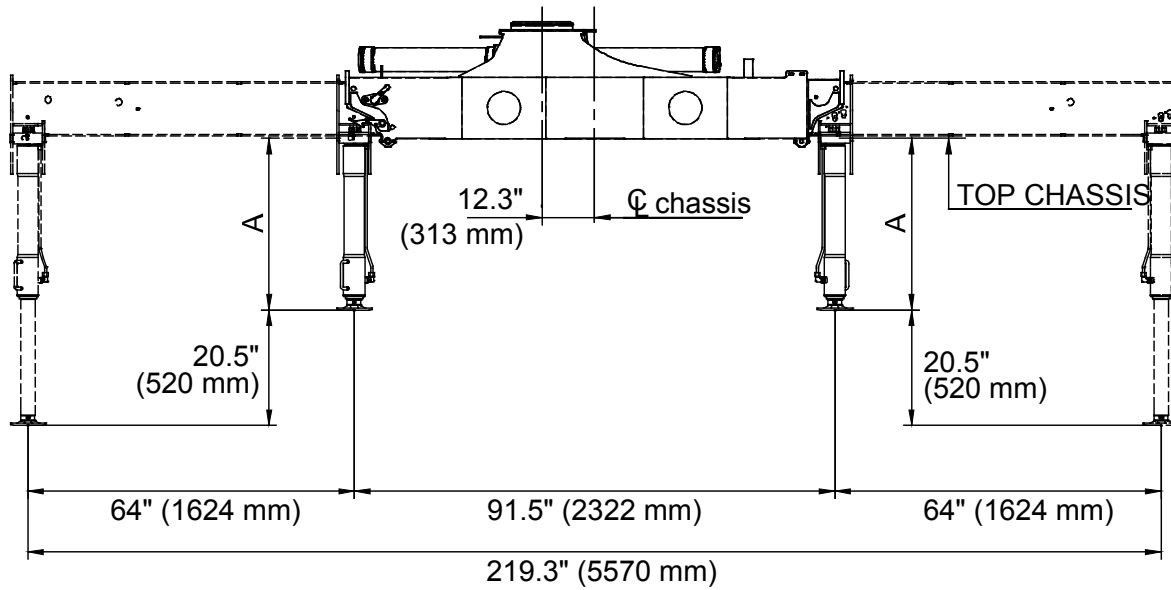
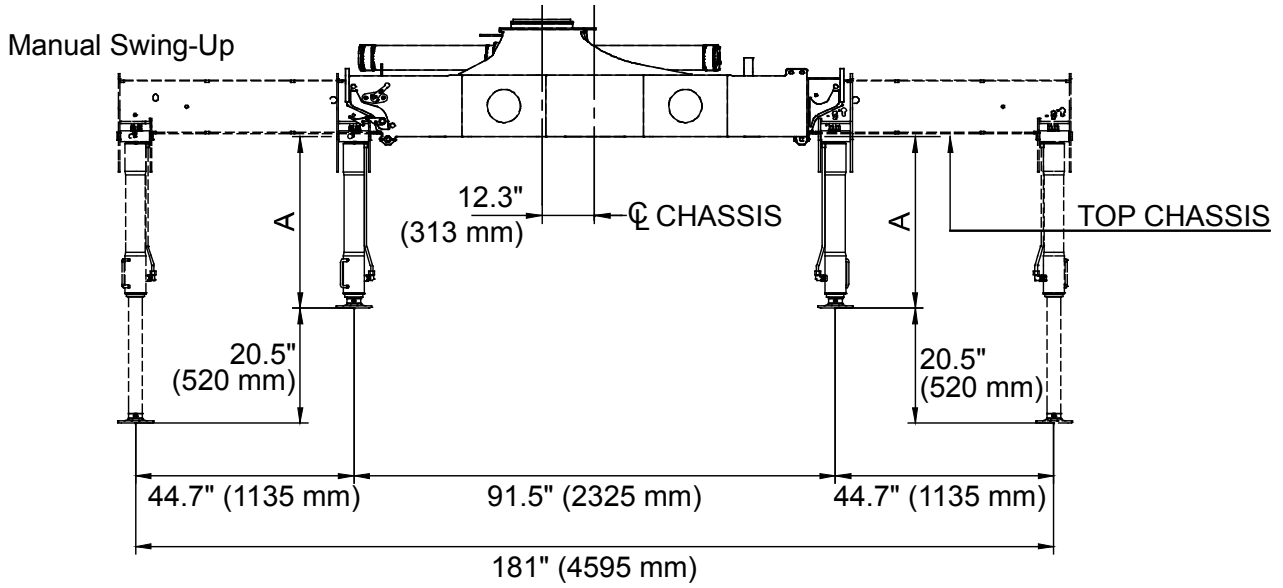


Dimensions, Fixed Stabilizer Legs



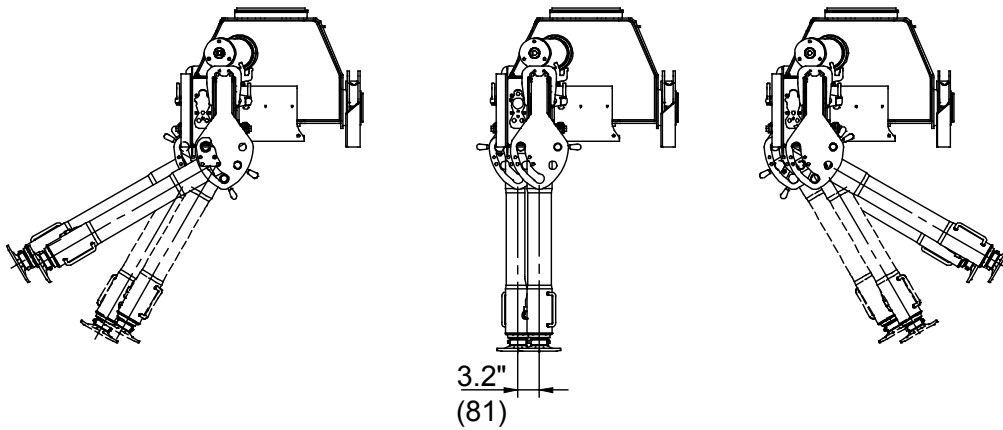
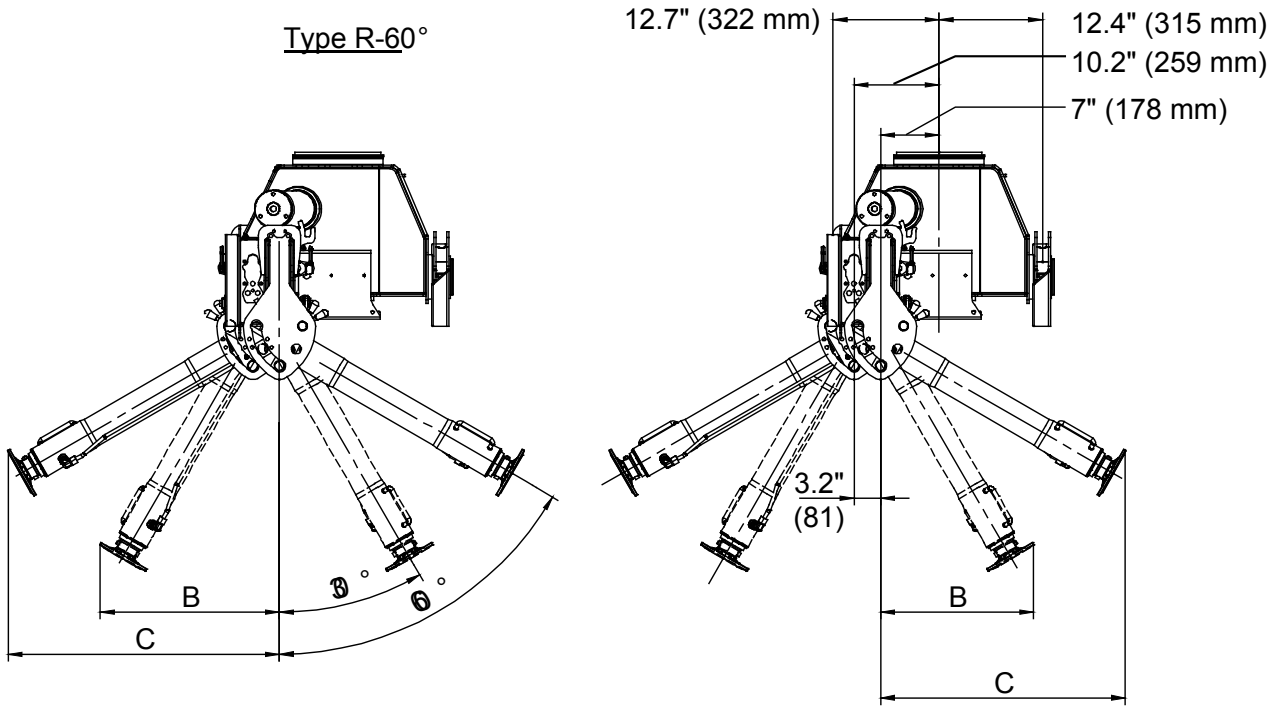
			
A	30.6" (777)	34.5" (877)	38.5" (977)




Swing-Up Stabilizer Legs



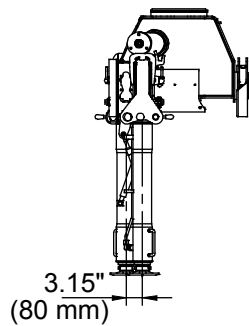
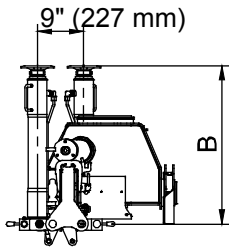
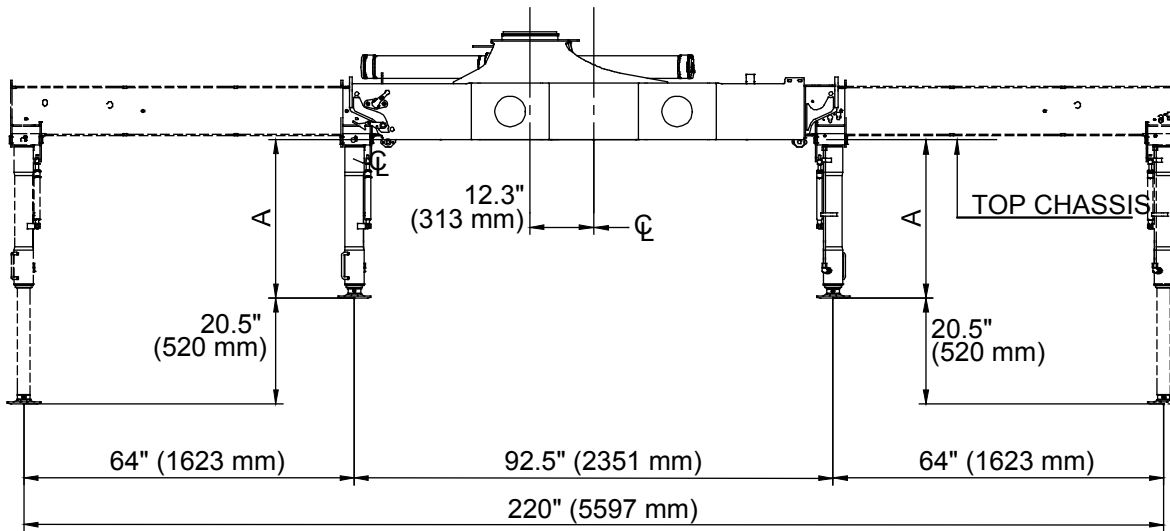
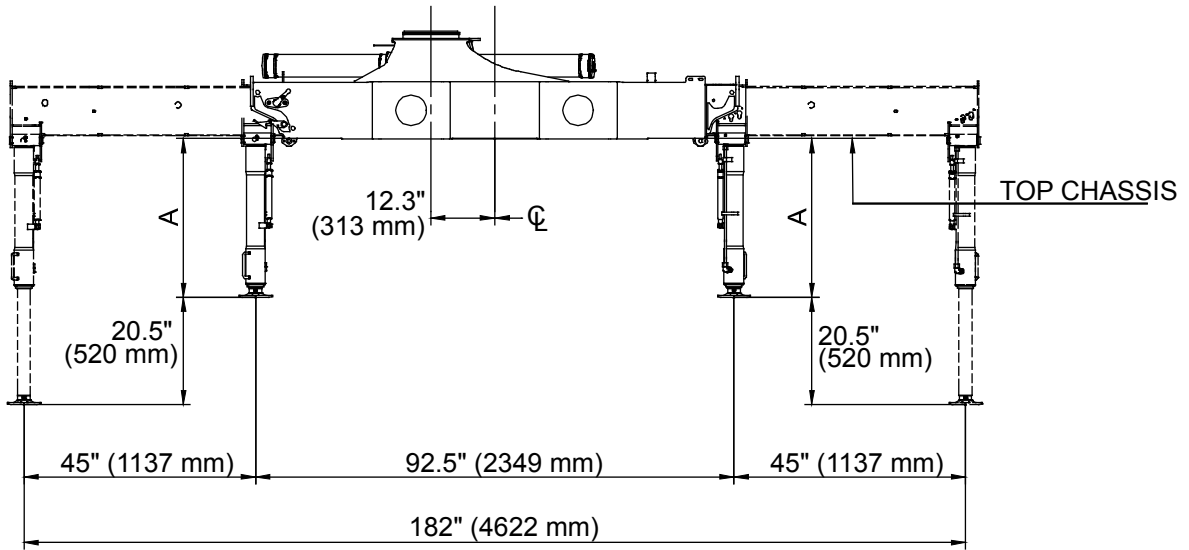
A	30.6" 775	34.5" 875	38.5" 975




Swing-Up Stabilizer Legs - Continued



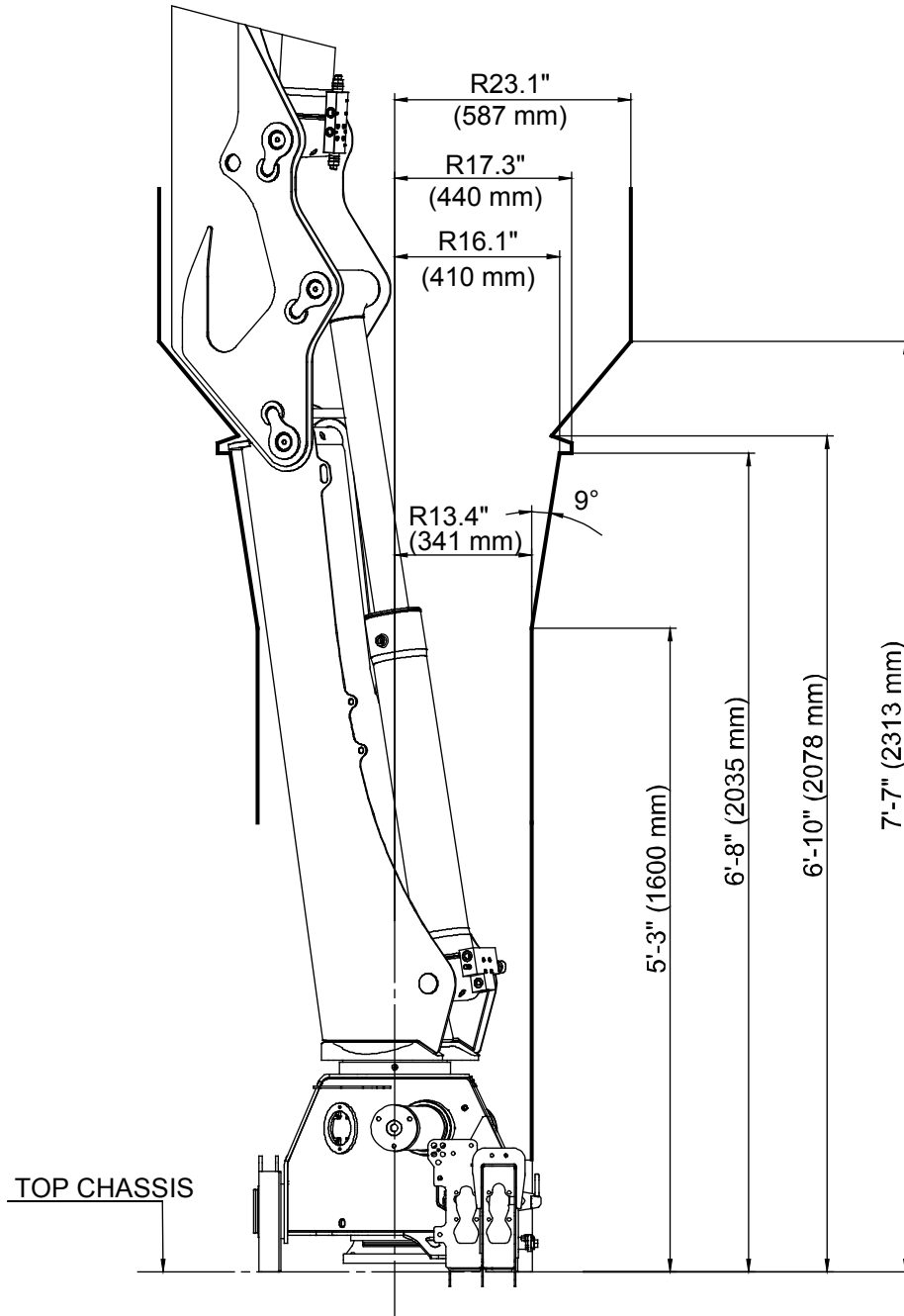
			
B	18.3" (465)	20.3" (515)	22.2" (565)
C	29.3" (745)	32.7" (831)	36.1" (918)

Swing-Up Stabilizer Legs - Continued

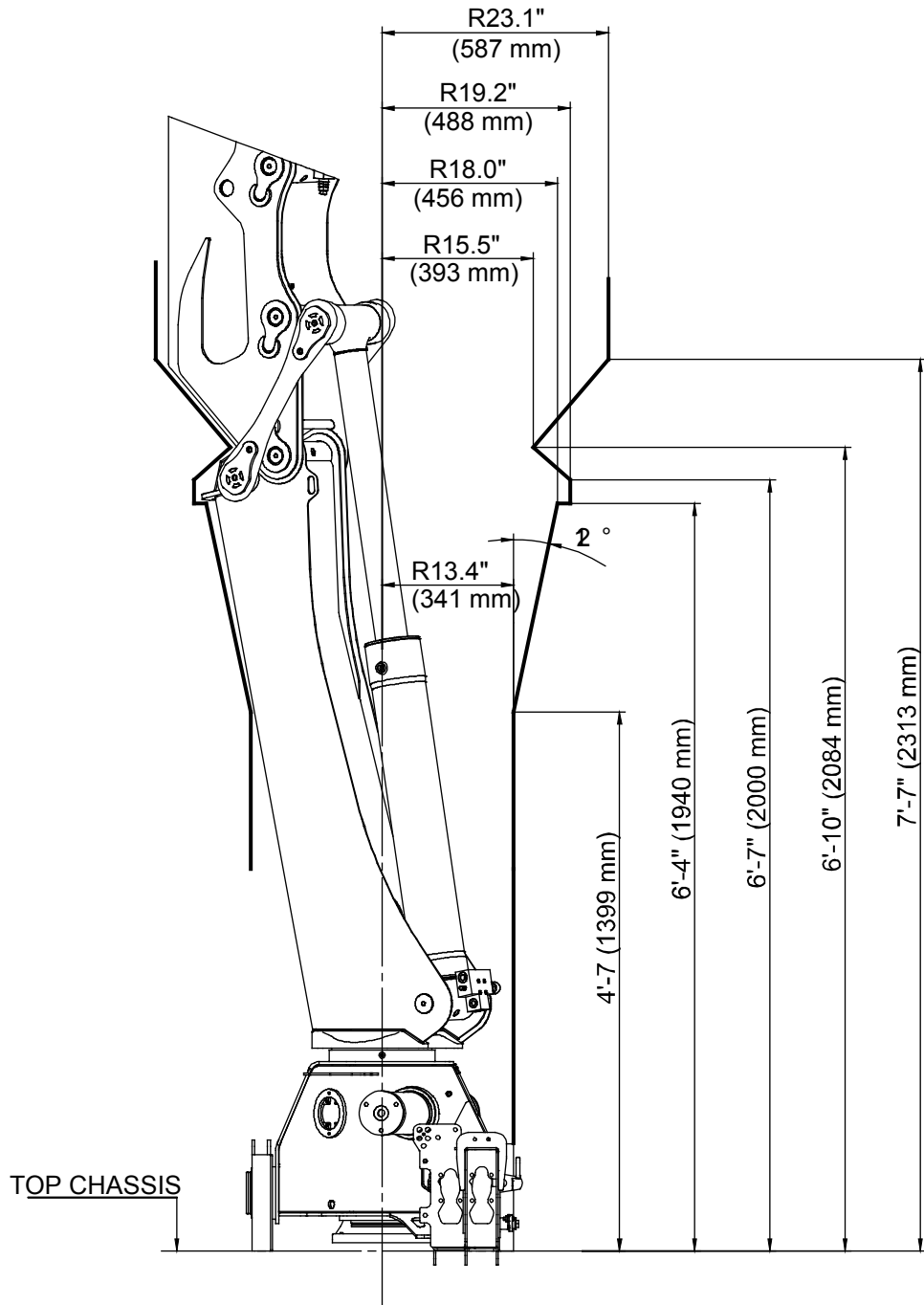


			
A	30.9" (785)	34.8" (885)	38.8" (985)
B	30.6" (775)	34.5" (875)	38.5" (975)

Single Link Swing Clearance

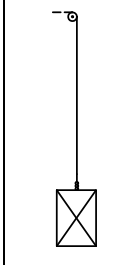
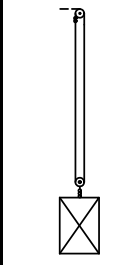


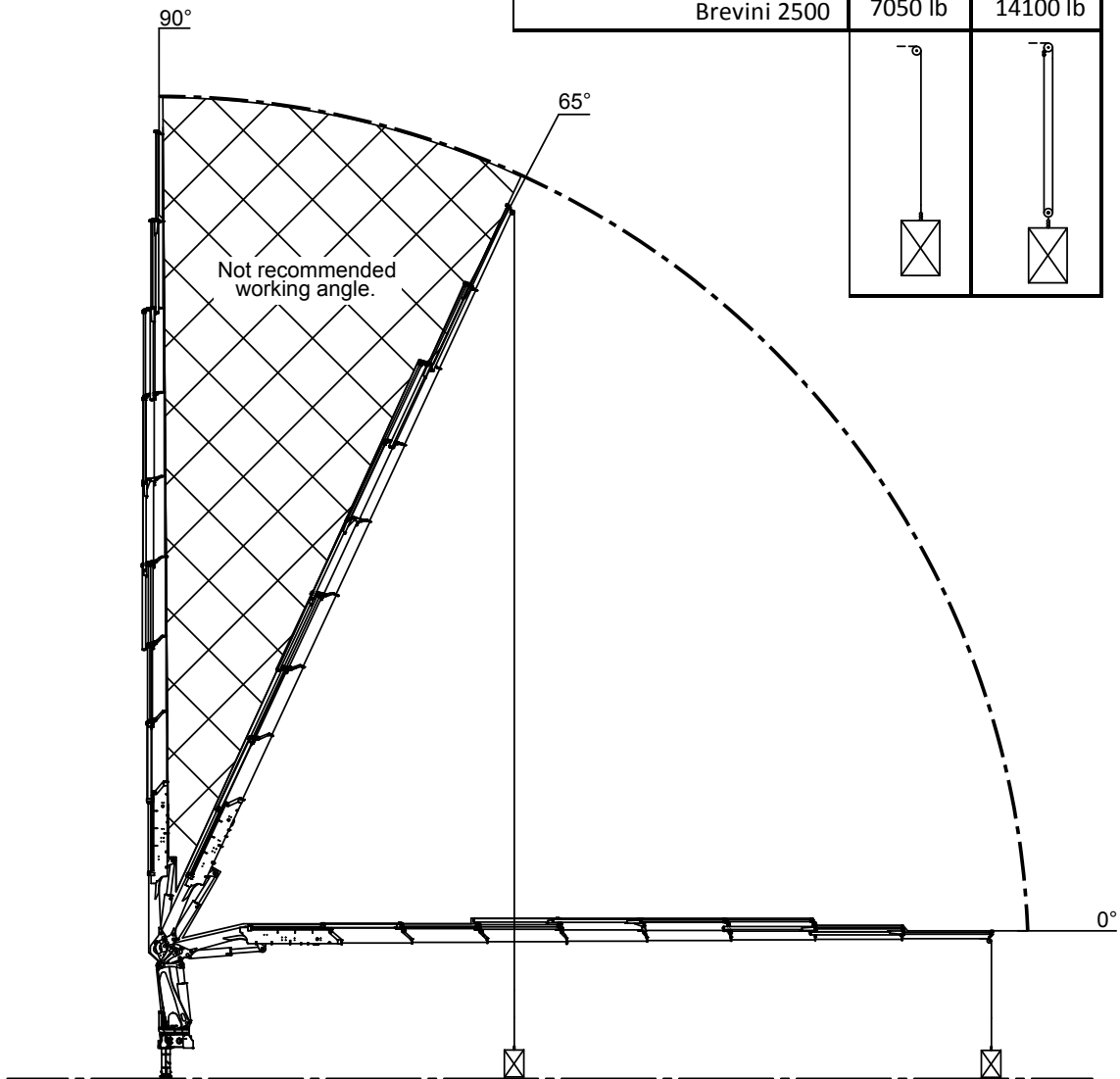
Double Link Swing Clearance



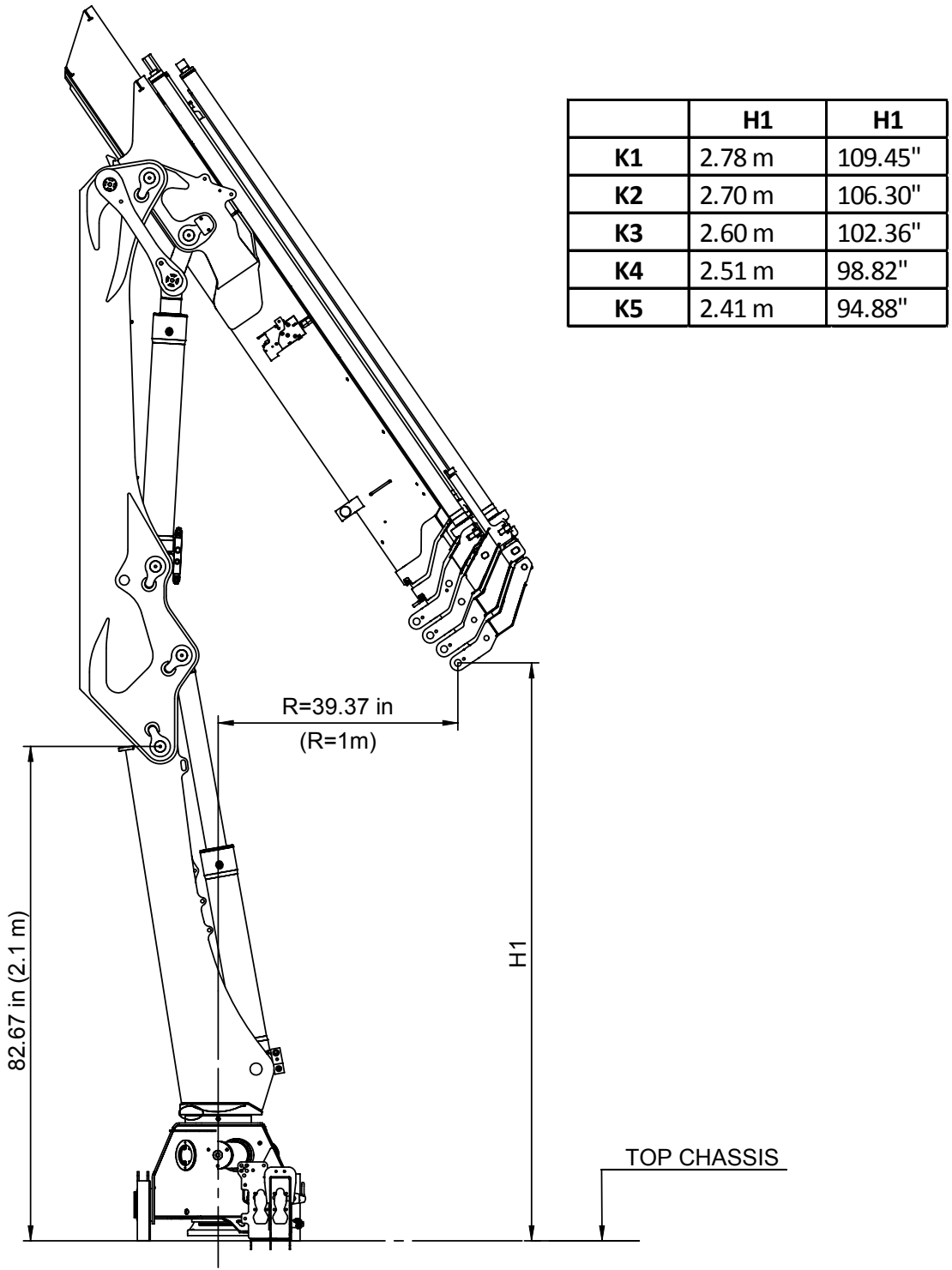
Lifting Capacity with Winch

Hydraulic hoist type	MAXW	MAXWD
Dinamic P9E	1500 kg 3305 lb	3000 kg 6610 lb
Dinamic P15E	2500 kg 5510 lb	5000 kg 11020 lb
Dinamic S 25 Brevini 2500	3200 kg 7050 lb	6400 kg 14100 lb

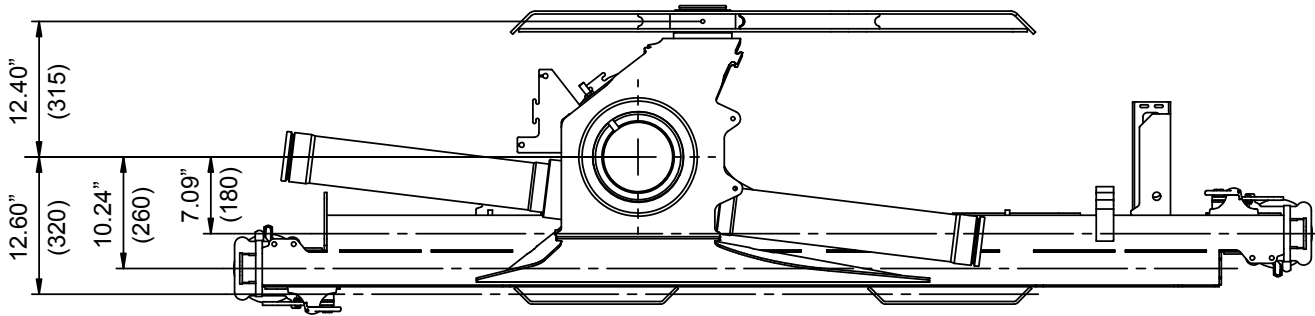
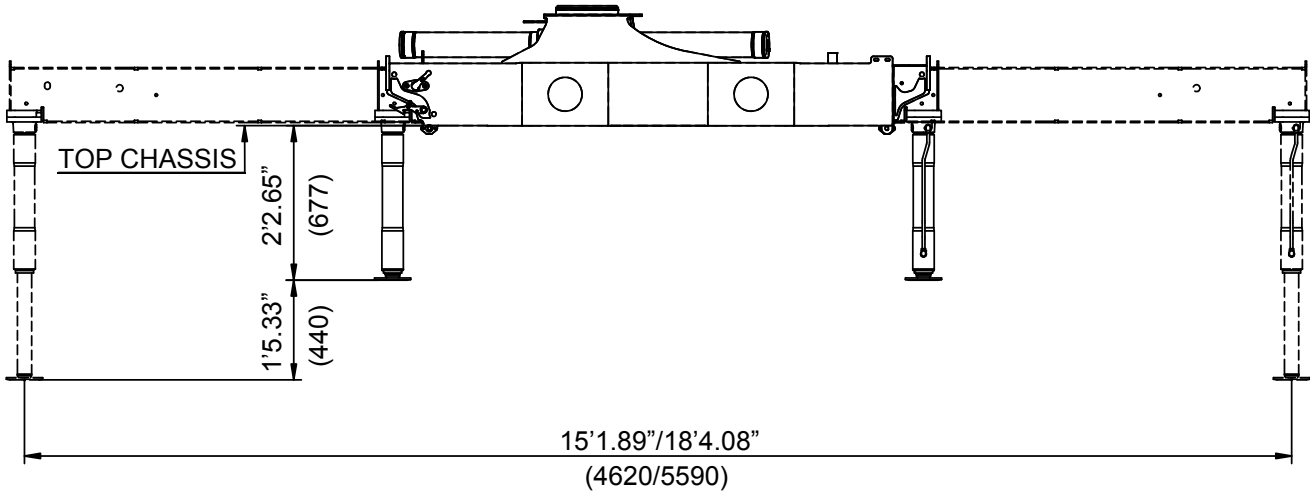


Lifting Height at Column

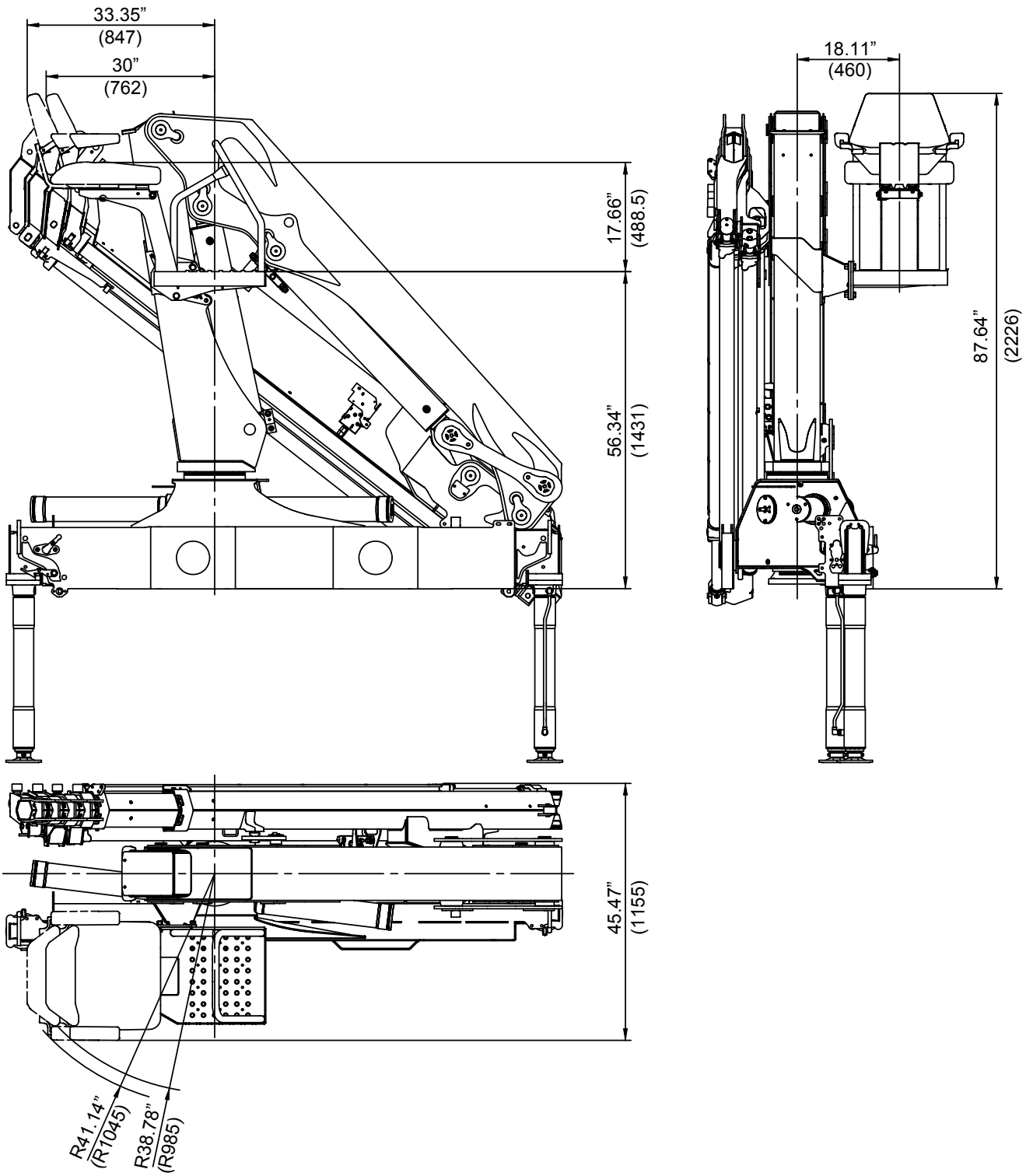


Dimension Sketch, Fixed Stabilizer Legs

Stabilizer cylinder, C80-440



Dimension Sketch, TS



Technical Data, Winch

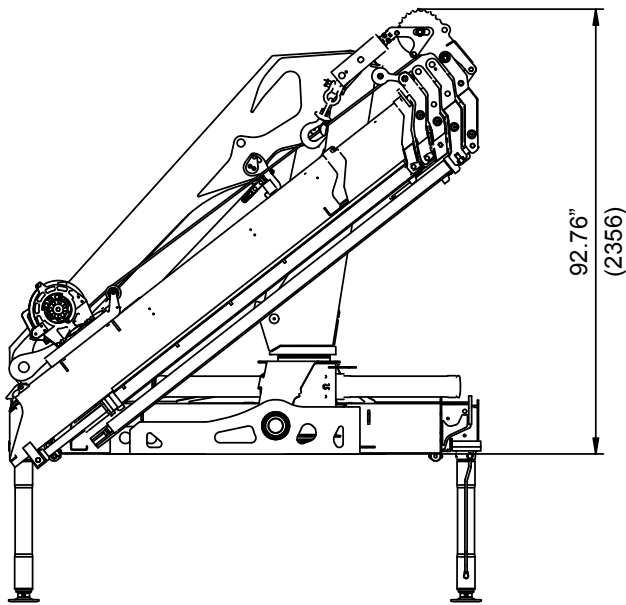
Performance (at 150 bar):	1.5T winch	1.5T winch
Max. wire pull – 1st layer	1500 kg	3307 lb
Max. wire pull – 2nd layer	1370 kg	3020 lb
Max. wire pull – 3rd layer	1260 kg	2778 lb
Max. wire pull – 4th layer	1170 kg	2579 lb

Wire speed (at 40 l/min.):	1.5T winch	1.5T winch
Max. wire speed – 1st layer	22 m/min	72'2"/min
Max. wire speed – 2nd layer	24 m/min	78'9"/min
Max. wire speed – 3rd layer	26 m/min	85'4"/min
Max. wire speed – 4th layer	28 m/min	91'10"/min

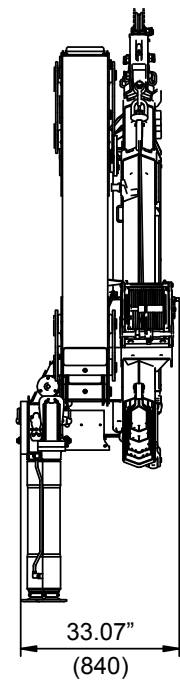
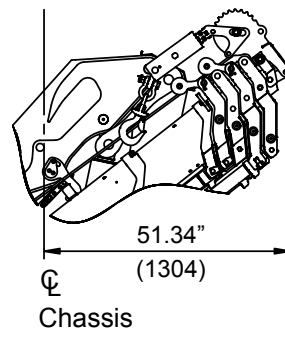
Weights:	1.5T winch	1.5T winch
Tare weight, winch (CE)	65 kg	143 lb
Fixed parts (valve section, brackets, hoses etc)	50 kg	110 lb
Wire \varnothing 10 x 50 m	30 kg	66 lb
Spare parts, single snatch block	30 kg	66 lb
Spare parts, double snatch block	40 kg	88 lb

Dimension Sketch, Winch

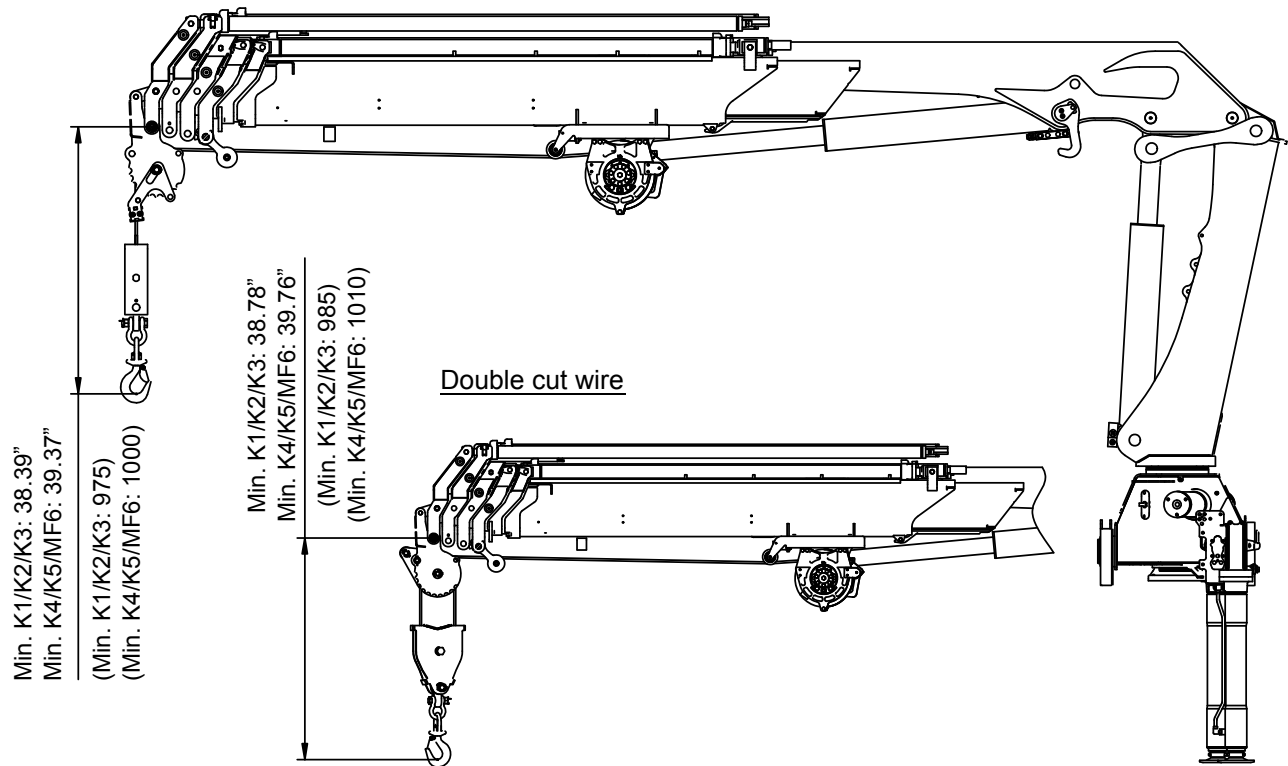
K5 boom.



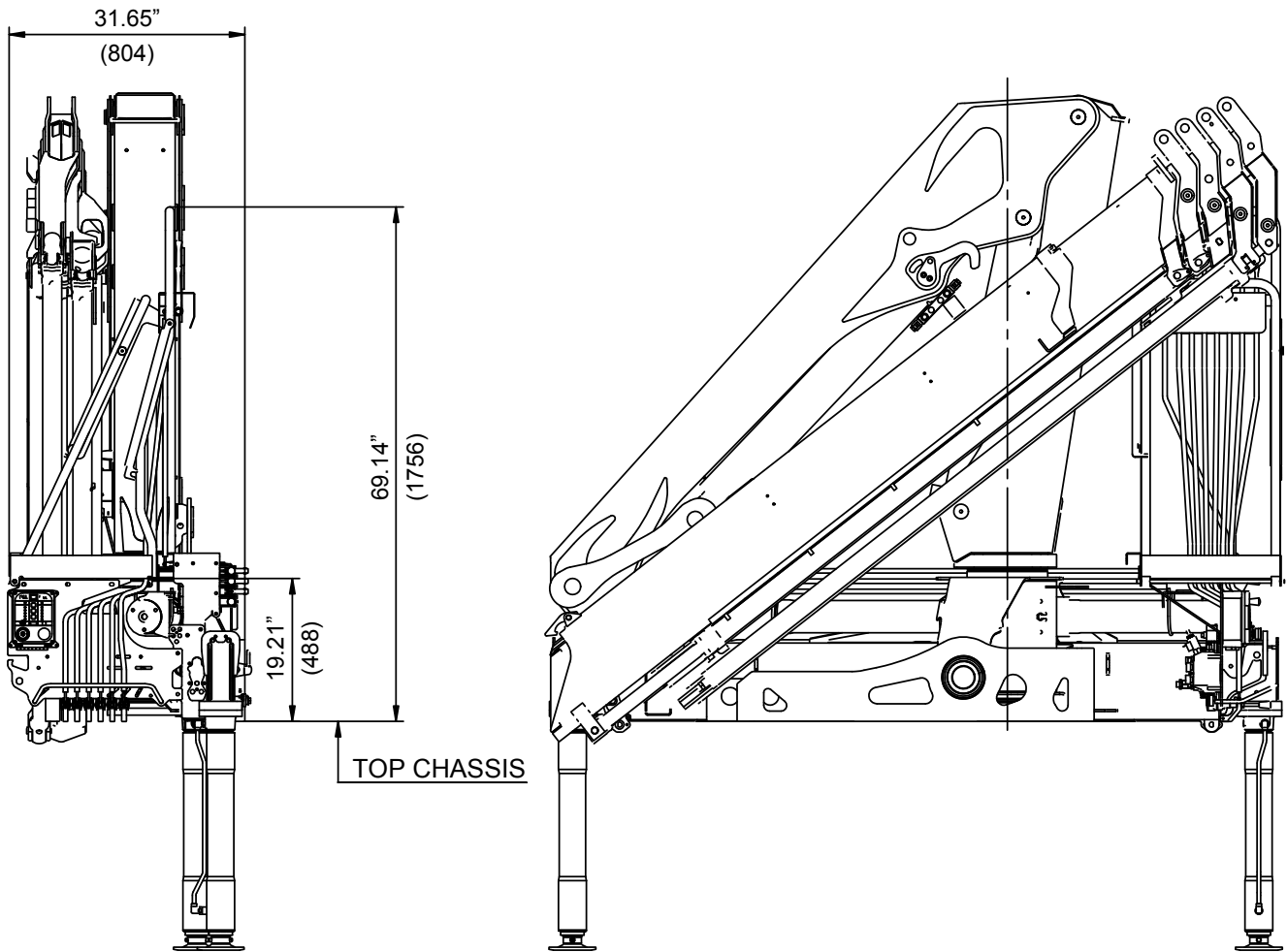
K5/MF6 boom.



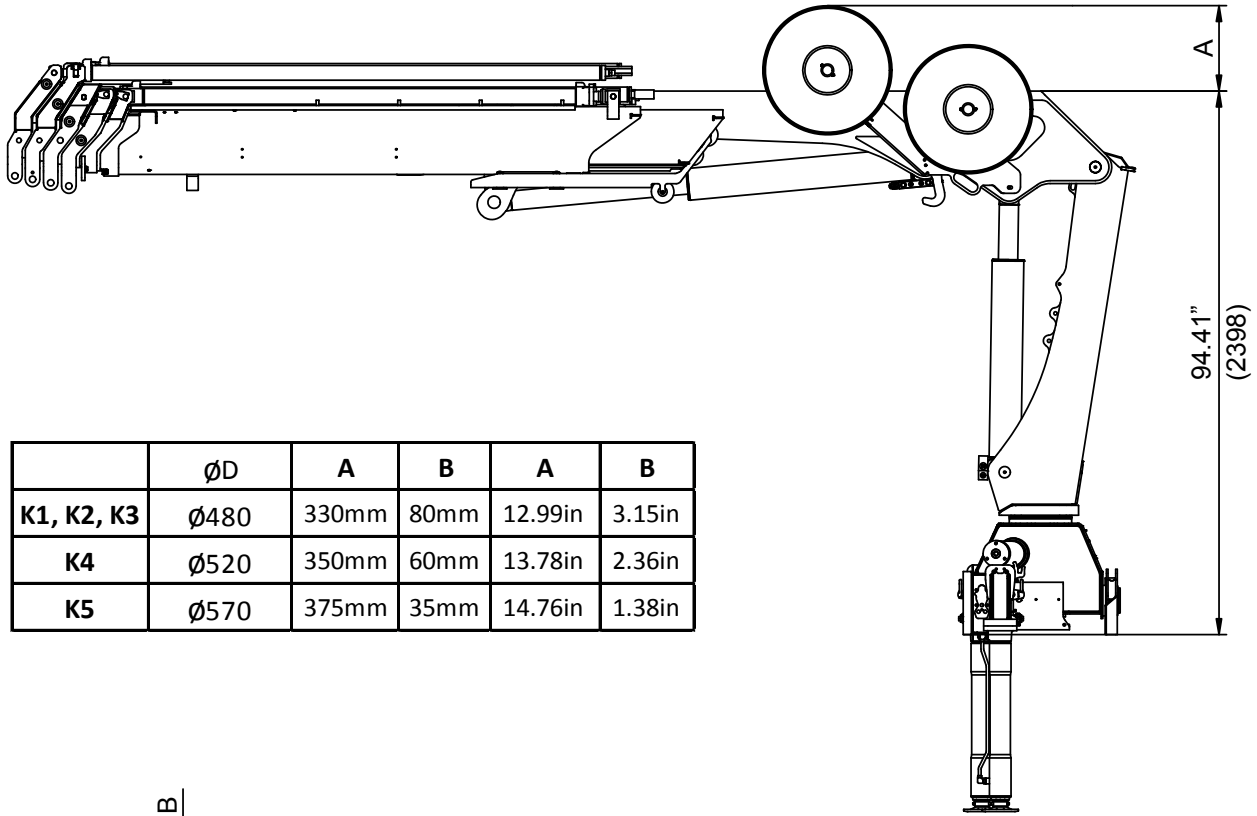
Single cut wire



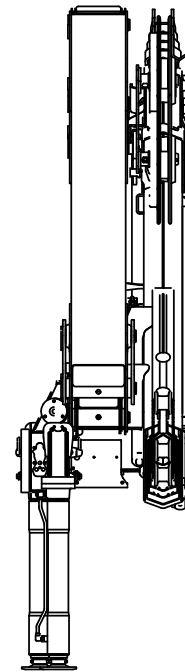
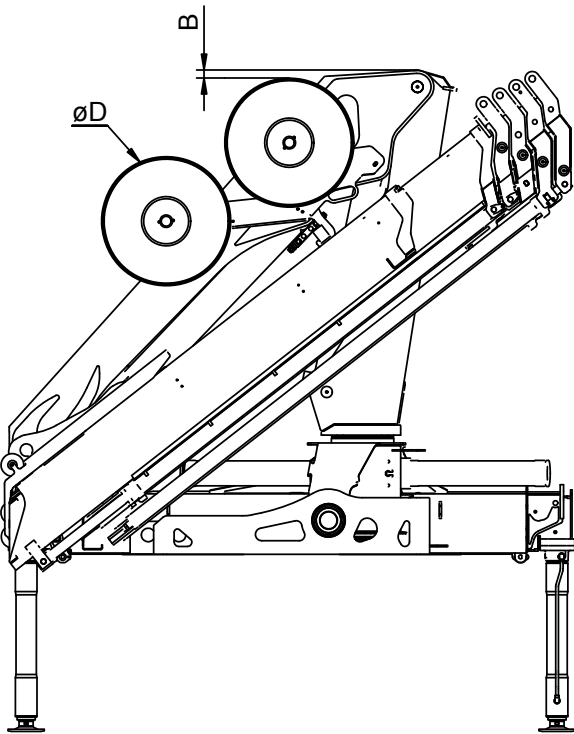
Dimension Sketch, Stand-Up Platform (Std.)



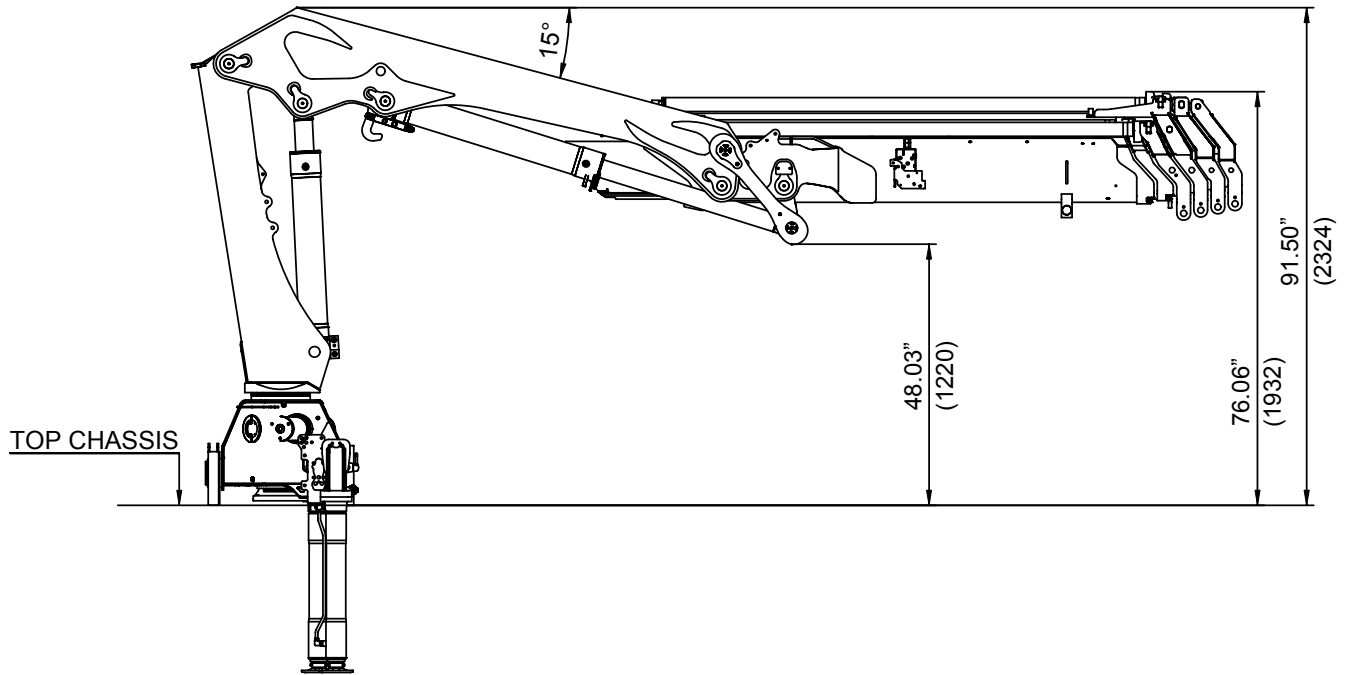
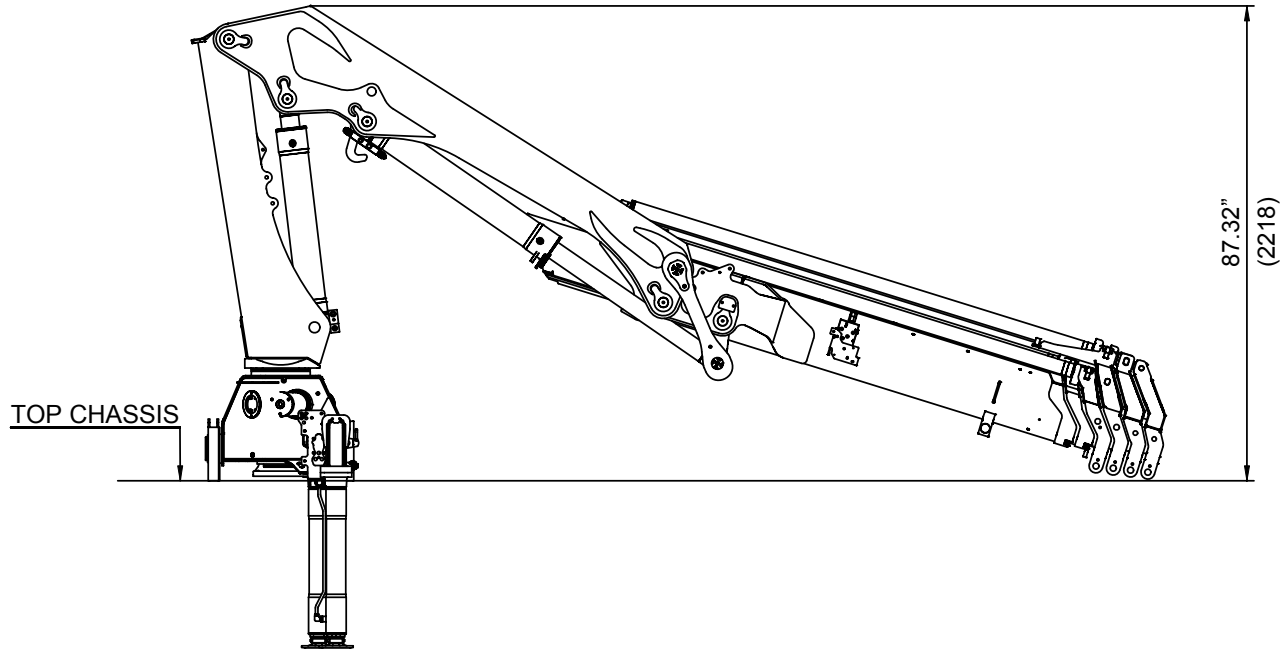
Dimension Sketch, Internal Hose Routing



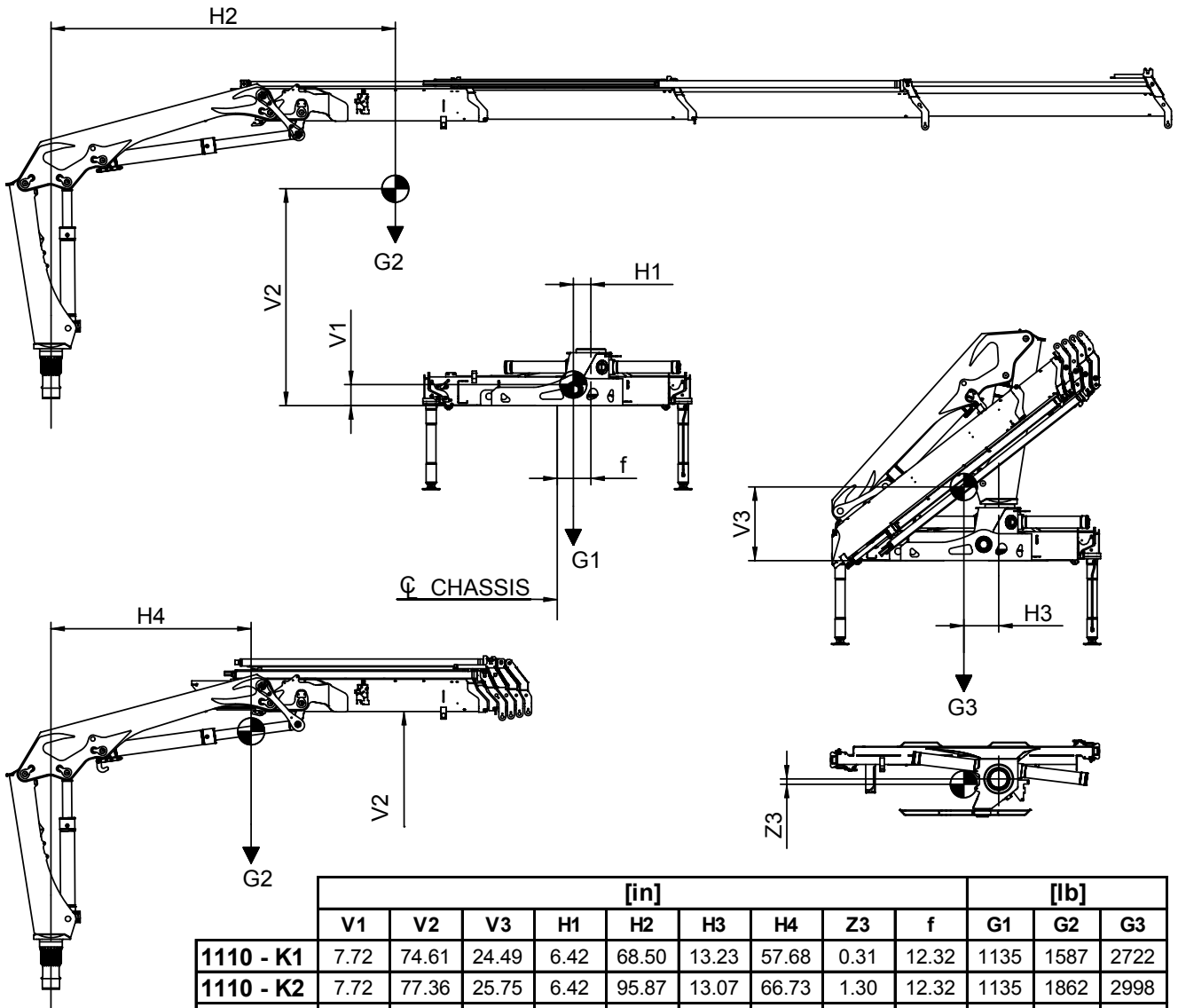
	$\varnothing D$	A	B	A	B
K1, K2, K3	$\varnothing 480$	330mm	80mm	12.99in	3.15in
K4	$\varnothing 520$	350mm	60mm	13.78in	2.36in
K5	$\varnothing 570$	375mm	35mm	14.76in	1.38in



Stowed in Truck Body



Center of Gravity



	[in]									[lb]		
	V1	V2	V3	H1	H2	H3	H4	Z3	f	G1	G2	G3
1110 - K1	7.72	74.61	24.49	6.42	68.50	13.23	57.68	0.31	12.32	1135	1587	2722
1110 - K2	7.72	77.36	25.75	6.42	95.87	13.07	66.73	1.30	12.32	1135	1862	2998
1110 - K3	7.72	79.33	26.93	6.42	125.98	12.76	73.23	1.93	12.32	1135	2116	3251
1110 - K4	7.72	80.51	27.80	6.42	153.54	12.24	78.15	2.44	12.32	1135	2325	3461
1110 - K5	7.72	81.50	28.54	6.42	180.71	11.73	81.69	2.91	12.32	1135	2513	3648

	[mm]									[Kg]		
	V1	V2	V3	H1	H2	H3	H4	Z3	f	G1	G2	G3
1110 - K1	196	1895	622	163	1740	336	1465	8	313	515	720	1235
1110 - K2	196	1965	654	163	2435	332	1695	33	313	515	845	1360
1110 - K3	196	2015	684	163	3200	324	1860	49	313	515	960	1475
1110 - K4	196	2045	706	163	3900	311	1985	62	313	515	1055	1570
1110 - K5	196	2070	725	163	4590	298	2075	74	313	515	1140	1655



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