

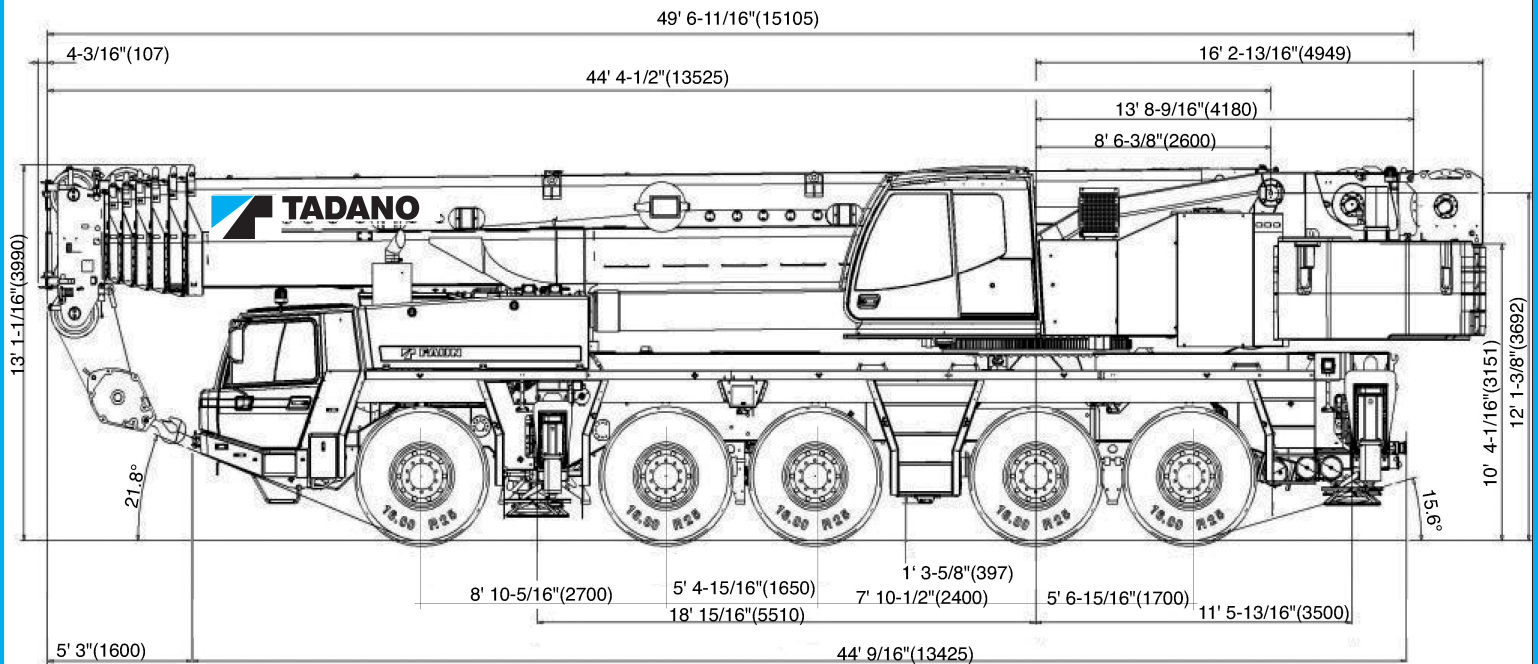


ATF220G-5

250 Ton Capacity (223.2 Metric Tons)

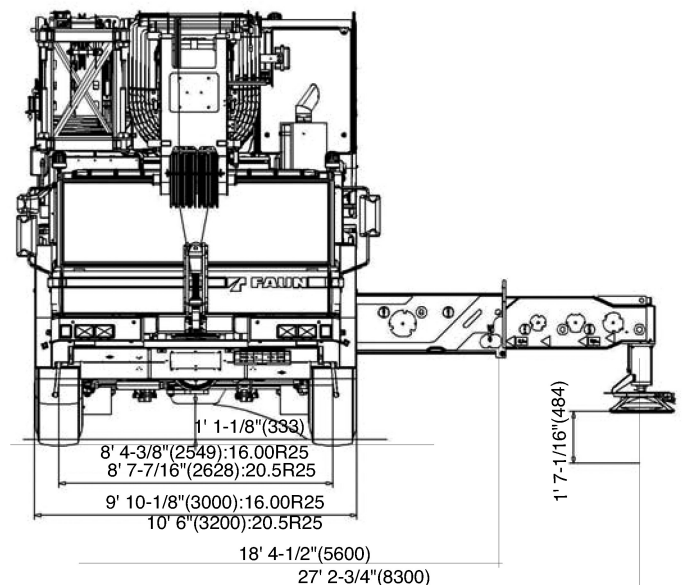
ALL TERRAIN CRANE

DIMENSIONS



TURNING RADIUS

Steering	All wheel (10x8)
Carrier inside	17' 4-11/16" (5.30m)
Over carrier	35' 9-1/8" (10.90m)
Over boom	38' 11/16" (11.60m)
Over boom extension	40' 4-1/4" (12.30m)



Specifications are subject to change without notice.

1. CRANE CARRIER

1.1 FRAME

FAUN purpose built, 5 axle, box type, torsion resistant, welded construction made of high tensile steel with integrated outrigger housings. Equipped with front and rear fenders, front and rear towing and tie-down lugs and access ladders.

1.2 OUTRIGGERS

Four point, fully hydraulic, horizontal and vertical motions controlled by electro-magnetic valves. Push button controls with level gauges from both sides of the carrier and from superstructure cab. Vertical cylinders with integral holding valves. Large sized floats can be stored on vertical cylinders or on carrier for road travel.
Outrigger base: length 29' 6-3/4" (9.01m), width 27' 2-3/4" (8.30m)
Mid. extension 18' 4-1/4" (5.60m)
Outrigger floats : 1' 11-5/8" (600mm) x 1' 11-5/8" (600mm)

1.3 CARRIER ENGINE

Mercedes Benz 8 cylinder water cooled diesel engine, model OM 502 LA (Euromoto 3/ EPA 3), with hydrostatically driven fan and thermostatically controlled cooler.
Displacement 972 in³ (15,928 cc), Rating 517 HP (380 KW) at 1,800 rpm
Torque 1,770 ft-lbf (2,400 Nm) at 1,300 rpm.

1.4 TRANSMISSION

ZF AS-Tronic 16AS2602 mechanical transmission with integrated interarder.
Fully automatic gear control. 16 forward gears and 2 reverse gears.
Gear ratios: Forward: 14.12 / 11.68 / 9.54 / 7.89 / 6.52 / 5.39 / 4.57 / 3.78 / 3.09 / 2.56 / 2.09 / 1.73 / 1.43 / 1.18 / 1.00 / 0.83
Reverse: 13.07 / 10.81

1.5 TRANSFER CASE

Two stage transfer case, type VG3750, is flange mounted to 4th axle.
Reduction ratios: on road 0.8/ off road 1.836

1.6 DRIVE

10x8: for on road: 1st, 2nd, 4th and 5th axles are driven
for off road: Inter-axle and inter-wheel differentials locked.
10x6 (OPTIONAL) : 2nd, 4th and 5th axles are driven

1.7 AXLES

1st axle : steered, driven with Inter-wheel lock
reduction : 8.47
steered, non driven (OPTION)
2nd axle steered, driven with inter-wheel lock
reduction : 8.47
3rd axle : Non driven, non steered, can be lifted for diagonal steering
4th axle : steered, driven with inter-wheel lock
reduction : 8.47
with lockable inter-axle differential
5th axle : steered, driven with inter-wheel lock
reduction : 8.47
All steering knuckle bearings designed for minimum maintenance (yearly inspection).

1.8 SUSPENSION

Hydro-pneumatic, lockable with level adjustment. All axles have longitudinal and transverse trailing arms. With leveling adjustment and locked cylinders, the chassis can be tilted laterally and longitudinally from the control panel in the carrier cab or from the outrigger control boxes, which adjust the stroke of each individual suspension cylinder.
Cylinder stroke: +6-1/4" (+158mm) , -4-1/2" (-118mm)

1.9 BRAKE SYSTEM

Service : Dual circuit compressed air system with air-dryer
Parking : Spring loaded type, acting on 2nd, 4th and 5th axles.
Auxiliary : Interarder, engine exhaust brake and constant throttle engine brake system.

1.10 WHEELS

(10) 11.00-25 steel disc wheels with 16.00R25 (445/95R25) on / off-road profile tires and mud flaps.

1.11 STEERING SYSTEM

ZF Servocom dual circuit hydraulic steering. Mechanical steering of front two axles with hydraulic booster.
An emergency steering pump is flange mounted to the transfer case.
In on road mode at speeds up to 15.5 mph (25 km/h), 4th and 5th axles are steered electronically along with the front two axles. When exceeding 15.5 mph (25 km/h), 4th axle is locked in centered position. When exceeding 31.1 mph (50 km/h), 5th axle is locked in centered position.
In off road mode, four steering modes are available in 1st, 2nd and 3rd gear with 3rd axle lifted; 8 wheel coordinated, 8 wheel crab, manual steering of the rear two axles and automatic steering of the rear two axles.

1.12 POWER TRAIN

Drive shafts with cross geared flanges designed for minimum maintenance. Centralized lubrication system.

1.13 FUEL TANK CAPACITY

140 gal (530 l) capacity with One-Key System, lockable fuel cap.

1.14 CARRIER CAB

Two man full width cab of composite structure (steel sheet metal and fiber glass), windshield of laminated safety glass with windshield wiper and washer, sliding side windows of hardened glass. Driver and co-driver seats adjustable and air-suspended with integrated 3 point safety belts and headrests. 2 rear-view mirrors (electrically adjustable), 1 wide angle mirror and additional curb mirror, all mirrors heated. Radio with CD player and connections for wireless. Engine dependent warm-water heater with defroster nozzles for windshield and cab floor.
Instrumentation includes speedometer, odometer, tachograph, rpm counter with hour meter, fuel level gauge, warning light for engine temperature, CMV color display for further warning signals and operating functions, malfunction and diagnosis via the transmission display.
Control panel for electronic rear axle steering.
Air conditioning (OPTIONAL)

1.15 ELECTRICAL SYSTEM

24 volt DC system with 100 ampere 3-phase generator, and two 12 volt 170 Ah batteries.
Front lighting includes 2 low beam head lights, 2 high beam head lights, 2 directional indicators, 2 fog lights.
Rear lighting includes 2 rear combination panels each with directional indicator, brake light, fog light, reversing light and license plate light.
Side lighting includes 2 front directional indicators and reflectors on carrier.
Other equipment includes hazard warning lights, cab light, instrument panel light, signal horn and amber rotating beacon on cab roof and 4 working lights for outrigger extension area.
Lighting according to EEC regulations.

1.16 TOOLS AND ACCESSORIES

Special tool set, hazard warning light, hazard warning triangle, fire extinguisher and first aid kit.

1.17 PAINTING

Standard TADANO colors

2. SUPERSTRUCTURE

1.18 DIMENSIONS

Overall width : 9' 10-1/8" (3.00m) with 16.00R25 tires
 10' 6" (3.20m) with 20.5R25 tires (OPTIONAL)
 Overall height : 13' 1-1/16" (3.99m) with 16.00/20.5R25 tires
 in travel condition. The overall height can be
 adjusted by +6-1/4" (+158mm), -4-1/2" (-118mm).
 Overall length : 49' 6-11/16" (15.105m)
 Carrier length : 44' 9/16" (13.425m)
 Wheel base : 8'10-1/4" + 5'4-15/16" + 8'1/16" + 5'6-15/16"
 (2.7m + 1.65m + 2.44m + 1.7m)
 Track: 8' 4-3/8" (2.549m) with 16.00R25 tires
 8' 7-7/16" (2.628m) with 20.5R25 tires (OPTIONAL)

1.19 TRAVEL PERFORMANCE (according to DIN 70020)

Max. travel speed : 52.8 mph(85 km/h)
 Min. travel speed at 800 rpm : 0.6 mph with the clutch closed
 Max. gradeability : 61 %

Tires 16.00/20.5R25, Total GVW 132,275 lbs				
Gear	Travel speeds (mph) * max. engine revs		Gradeability (%)	
	off-road	on-road	off-road	on-road
1st	1.9	3.7	61	47
2nd	1.9	4.3	47	39
3rd	2.5	5.0	37	31
4th	2.5	6.2	30	25
5th	3.1	7.5	24	20
6th	4.3	9.3	19	16
7th	5.0	11.2	16	14
8th	5.6	13.0	13	11
9th	6.8	16.2	11	9
10th	8.7	19.3	8	7
11th	10.6	23.6	7	6
12th	12.4	28.6	5	4
13th	14.9	34.8	4	3
14th	18.6	42.3	3	3
15th	21.7	49.7	3	2
16th	26.0	52.8	2	1
1st reverse	1.9	3.7	55	45
2nd reverse	1.9	4.3	43	36

The gradeability is based on theoretical values and depends on ground conditions and the coefficient of friction.

1.20 CARRIER OPTIONAL EQUIPMENT

- 10 x6 drive (10x8 drive Std.)
- Eddy-current retarder brake
- ABS
- 14.00R25 on/off road profile tires-overall width 9' 10-1/8" (3.00m)
- 20.5R25 on/off road profile tires-overall width 10' 6" (3.20m)
- Spare wheel
- Towing coupling (D value 190 kN) with light and brake connection
- Air and electrical lines to rear bumper with quick connectors for boom dolly
- Free swing and boom elevation circuits for boom dolly
- Rear tool box
- Spark arrester
- Charging plug box for remote engine starting
- Additional hot water heater with engine pre-heat and window defroster (Webasto Thermo 90S)
- Additional hot air cab heater (Webasto Airtop 3500)
- Air conditioning
- Reversing video camera (image in CMV display)

2.1 SUPERSTRUCTURE FRAME

Torsion resistant, all welded structure of high tensile steel.
 Connected to carrier by single race ball bearing slewing ring with external gearing providing 360° continuous rotation.
 Central lubrication system for ball bearing slewing ring, boom elevation cylinder, boom pivot and winch.

2.2 CRANE ENGINE

Mercedes Benz 6 cylinder water cooled diesel engine, model OM 906 LA(EUROMOT 3A/EPA 3) with stepless control of engine rpm by foot pedal.

Displacement 389 in³(6,370cc) , Rating 188 hp at 1,800 rpm
 Torque 553 ft-lbf(750 Nm) at 1,200-1,600 rpm
 Fuel tank capacity : 66.0 gal(250 l)

2.3 HYDRAULIC SYSTEM

Three circuit diesel hydraulic system with 1 double axial piston variable displacement pump(hydraulically controlled) with cumulative control for telescoping, derricking and hoisting. 1 axial piston pump for slewing and 1 gear pump for pilot control.

2.4 HYDRAULIC CONTROLS

Two joy stick levers with 4 three-way electrically operated valves for independent simultaneous operation of all crane motions with infinite speed control.

2.5 TELESCOPIC BOOM

Seven section box type construction of high tensile steel, consisting of 1 base section and 6 telescopic sections.
 The boom is extended by means of 1 double acting single stage hydraulic cylinder.

All boom telescope sections can be extended and retracted fully automatically and locked in the selected working position.

All telescope sections are extendable under partial load.

Total retracted length : 43' 7-5/8" (13.30m)

Total extended length : 223' 1-3/16" (68.0m)

Max. sheave height : 229' 7-7/8" (70.0m)

Telescoping speed out : 430 sec.

2.6 BOOM EXTENSION

17.7 ft (5.4m) - 43.3 ft (13.2m) double folding swing around lattice type boom extension offsetable at 0°/20°/40°.

4 intermediate section (19.7ft each), increase the boom extension length to 122.0ft (37.2m).

Equipped with anti-two block system.

2.7 AUXILIARY LIFTING SHEAVE (SINGLE TOP) - OPTIONAL

Single sheave mounted to main boom head for single line operation (stowable). Equipped with anti-two block system .

2.8 BOOM HOIST

1 double acting hydraulic cylinder with integral holding valve.

Boom elevation : -1.5° to +84°

Boom elevation speed : 95 sec. normal speed

50 sec. high speed (only derricking up)

2.9 MAIN WINCH

Axial piston constant displacement motor, grooved hoist drum with integral planetary gear, automatic hydraulically controlled spring loaded multiple disc brake and integral free wheeling (no sagging of load by hoisting). Winch drive assembly connected to open hydraulic system. Wire rope with "Superstop" easy reeving. Lower limit switch and drum turn indicator.

Drum diameter : 17.87" (450 mm)
Rope diameter : 0.83' (21 mm)
Rope length : 1,148.5' (350 m)
Max. line pull : 24,504 lbf (109 kN)
Max. line speed 4th layer : 420 ft/min (128m/min)

2.10 AUXILIARY WINCH - OPTIONAL

Axial piston constant displacement motor, grooved hoist drum with integral planetary gear, automatic hydraulically controlled spring loaded multiple disc brake and integral free wheeling (no sagging of load by hoisting). Winch drive assembly connected to open hydraulic system. Wire rope with "Superstop" easy reeving. Lower limit switch and drum turn indicator.

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2.11 SLEWING GEAR

Constant displacement motor with three stage planetary gear, foot actuated service brake and a parking brake. Slewing speed infinitely variable: 0 - 1.8 rpm

2.12 COUNTERWEIGHT

Total 156,525 lb divisible counterweight, assembled and disassembled by hydraulic cylinders controlled from crane cab. Tail swing : 16.34' (4.98m)

2.13 SUPERSTRUCTURE CAB

Spacious and ergonomic panoramic cab with sliding door and extra large tinted glass windows, electrically controlled fold out front window with windshield washer and wiper, fixed cab roof window with armoured glass and fold out rear cab window, sun visor, cab light, 20° tiltable cockpit, adjustable hydraulically cushioned seat with headrest, signal horn, radio with CD player, and connection for wireless (12 volt). Engine independent hot water heater with defroster nozzles for windshield and cab floor (Webasto Thermo 90S). Ergonomically positioned control elements and instrumentation for crane operation including fuel level gauge, engine cooling temperature, hour meter and combined engine warning lamp. Outrigger and chassis engine functions control from superstructure cab. One-key system for the both carrier and crane cabs. Air conditioning (OPTIONAL)

2.14 ELECTRICAL SYSTEM

24 volt system with 30 A 3-phase alternator, 2 batteries each 12 V and 110 Ah, 1 rotating beacon on left hand side of main winch, 2 working lights on cab front flap, 1 working light on base boom section and 2 side lights on boom head.

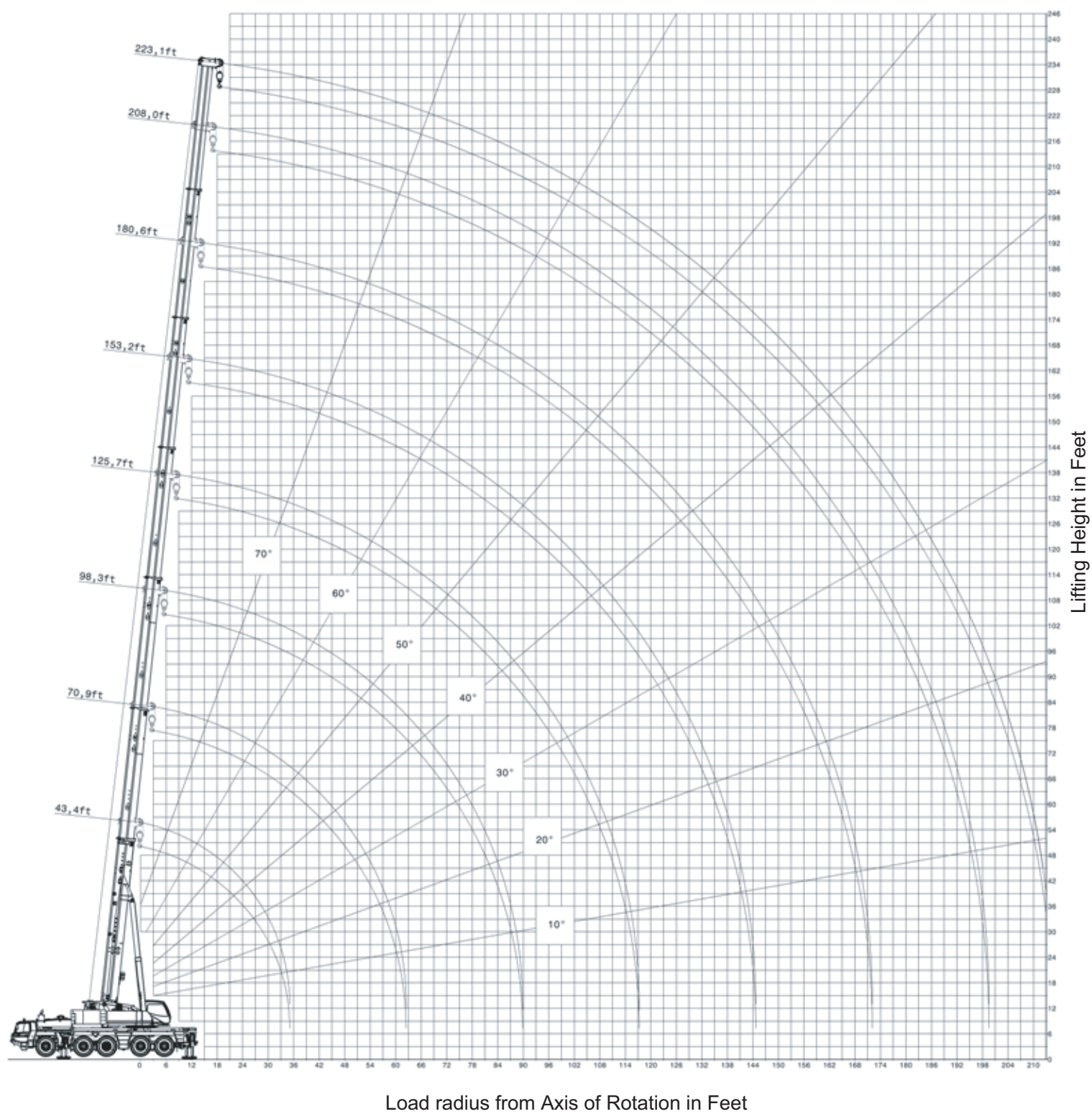
2.15 SAFETY DEVICES

Electronic load moment device (AML) with interpolation and automatic overload shut off, hoist limit switch with shut off, overload warning and load moment indicator. Digital display of boom angle, boom length, sheave height, working radius, hook load and further information. Working area limitation for boom angle, sheave height and working radius with automatic shut off. Lift Adjuster function, Anti-two block system, anemometer on the main boom head or on the jib head. Safety valves against pipe and hose rupture, holding valves on hydraulic cylinders.

2.16 SUPERSTRUCTURE OPTIONAL EQUIPMENT

1. 11 ton headache ball
2. 27.6 ton single sheave hook block
3. 69.5 ton three sheave hook block
4. 88.2 ton five sheave hook block
5. 137.8 ton seven sheave hook block
6. 176.3 ton nine sheave hook block
7. Additional boom sheaves for more than 120 ton lift
8. Auxiliary winch with 0.83" (21mm) cable
9. Auxiliary lifting sheave (Single Top)
10. Additional hydraulic oil cooler
11. Spark arrester
12. 33' (10m) cable for battery recharge and remote start connections
13. 360° positive swing lock for NYC
14. Lockable tool box behind crane cab
15. Aircraft warning light
16. Two electrically movable working lights on base boom (Not in combination with Boom Dolly)
17. Outrigger load display
18. Electric fan
19. Air conditioning
20. Boom dismounting device

ATF220G-5 WORKING RANGE CHART



NOTE: Boom and jib geometry shown are for unloaded condition and machine standing level on firm supporting surface. Boom deflection and subsequent radius and boom angle change must be accounted for when applying load to hook.

Counterweight 0 lbs

Lifting capacities in 1,000 lbs according per SAE J765 on telescopic boom On outriggers, 360° working area Outrigger base 27.23 ft														Working Radius (ft)				
Working Radius (ft)	Boom length (ft)																	
	139.4 °	139.4 °	139.4 °	139.4 °	153.2 °	153.2 °	153.2 °	167.0 °	167.0 °	167.0 °								
8														8				
9														9				
10														10				
12														12				
14														14				
16														16				
18														18				
20	82	83.0	82	81.8	82	69.4	82	56.2						20				
25	79	59.4	79	63.1	79	65.8	79	56.2	80	58.8	80	55.8	80	47.2	25			
30	78	44.1	78	47.4	78	52.2	78	54.8	79	44.4	79	51.4	79	47.2	30			
35	76	33.7	76	37.0	76	41.5	76	46.9	77	34.7	77	41.1	77	43.9	35			
40	74	26.6	74	29.5	74	33.9	74	39.1	76	27.7	76	33.9	76	36.7	40			
45	71	22.4	71	25.4	71	29.9	71	34.8	73	23.9	73	30.0	73	32.7	45			
50	69	17.8	69	20.9	69	25.1	69	30.1	72	19.5	72	25.6	72	28.3	50			
55	67	13.7	67	16.8	67	21.0	67	25.9	70	15.4	70	21.6	70	24.3	55			
60	65	10.5	65	13.3	65	17.7	65	22.4	68	12.1	68	18.2	68	21.0	60			
65	62	7.6		62	10.3	62	14.7	62	19.3	66	9.4	66	15.1	66	18.0	65		
70			60	8.0	60	12.1	60	16.3	64	7.1	64	12.9	64	15.6		70		
75					58	9.7	58	13.8			62	10.8	62	13.3		75		
80					55	7.5	55	11.7			59	8.8	59	11.2		80		
85					52	5.6	52	10.0			57	6.9	57	9.4		85		
90					49	4.4	49	8.5			55	5.4	55	7.8		90		
95							46	7.2			52	4.0	52	6.4		95		
100							43	6.0			49	2.7	49	5.2		100		
110							36	4.0					44	3.2		110		
120																120		
130																130		
140																140		
150																150		
160																160		
170																170		
180																180		
190																190		
200																200		
210																210		
Telescoping sequence %																		
Tel. 1	92		92		46		0		92		46		0		92		0	Tel. 1
Tel. 2	92		46		46		0		92		46		0		92		46	Tel. 2
Tel. 3	46		46		46		46		46		46		92		92		46	Tel. 3
Tel. 4	46		46		46		92		46		46		92		46		46	Tel. 4
Tel. 5	46		46		46		92		46		92		92		46		92	Tel. 5
Tel. 6	0		46		92		92		46		92		92		46		92	Tel. 6

Working Radius (ft)	Lifting capacities in 1,000 lbs according per SAE J765 on telescopic boom On outriggers, 360° working area Outrigger base 27.23 ft												Working Radius (ft)
	Boom length (ft)												
	180.4 °		180.4 °		180.4 °		194.2 °		194.2 °		°	°	
8													8
9													9
10													10
12													12
14													14
16													16
18													18
20													20
25													25
30	81	41.7	81	41.9	81	37.3							30
35	79	33.0	79	35.9	79	37.1	80	32.7	80	33.1			35
40	79	26.3	79	29.3	79	32.0	79	26.5	79	29.6			40
45	77	21.2	77	24.1	77	26.8	77	21.6	77	24.5			45
50	76	17.7	76	20.7	76	23.2	76	18.3	76	21.1			50
55	74	14.7	74	17.7	74	20.3	75	15.5	75	18.4			55
60	73	12.1	73	15.0	73	17.8	74	12.9	74	15.8			60
65	71	9.6	71	12.4	71	15.1	72	10.3	72	13.1			65
70	69	7.5	69	10.2	69	12.9	71	8.2	71	11.0			70
75			67	8.2	67	10.9			69	9.1			75
80			66	6.5	66	9.1			68	7.3			80
85			64	4.9	64	7.6			66	5.8			85
90					62	6.1							90
95					60	4.8							95
100					59	3.6							100
110													110
120													120
130													130
140													140
150													150
160													160
170													170
180													180
190													190
200													200
210													210
Telescoping sequence %													
Tel. 1	92	46	0	92	46								Tel. 1
Tel. 2	92	92	92	92	92								Tel. 2
Tel. 3	92	92	92	92	92								Tel. 3
Tel. 4	92	92	92	92	92								Tel. 4
Tel. 5	46	92	92	92	92								Tel. 5
Tel. 6	46	46	92	46	92								Tel. 6

Counterweight 51,808 lbs

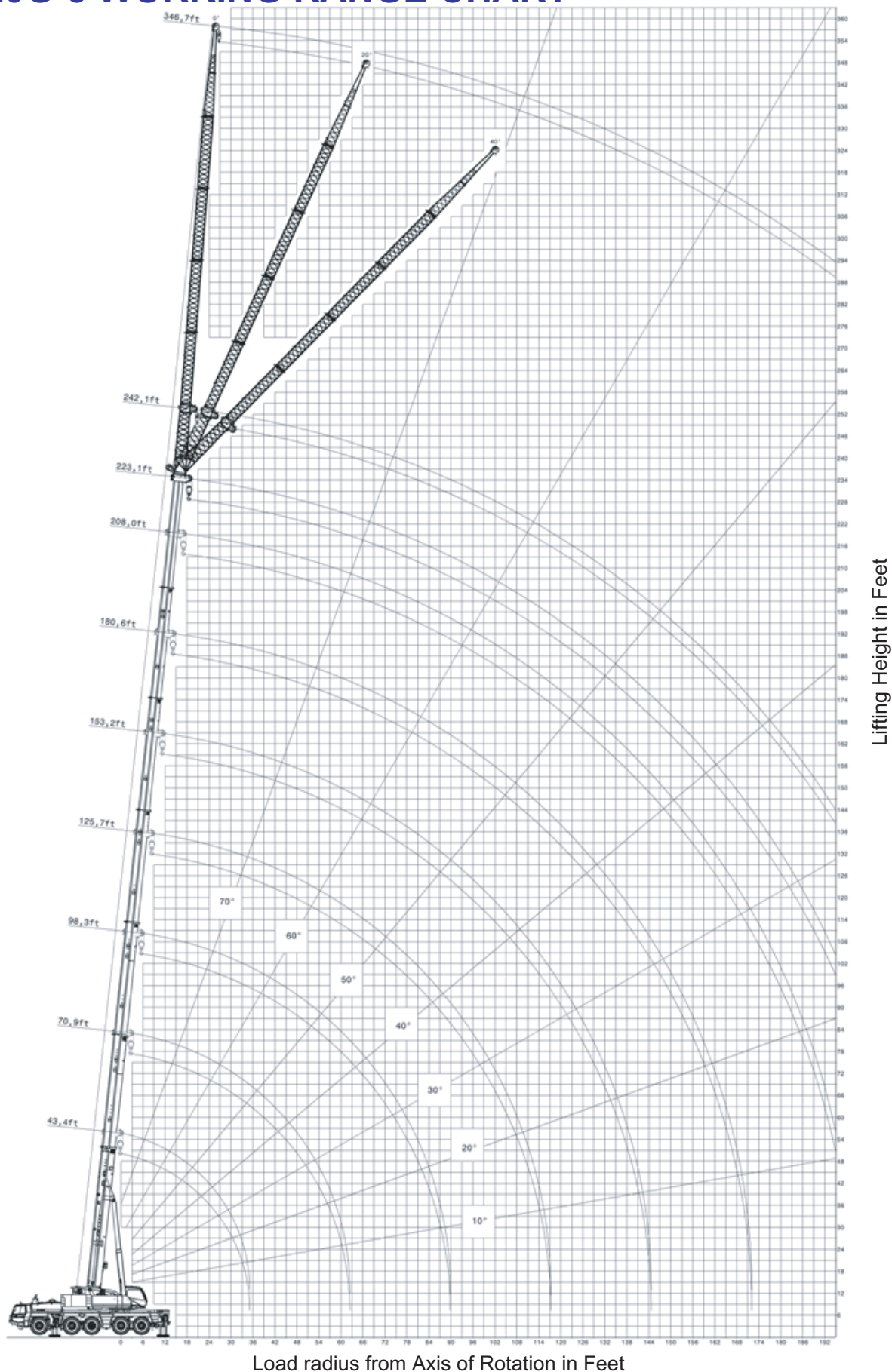
Working Radius (ft)	Lifting capacities in 1,000 lbs according per SAE J765 on telescopic boom On outriggers, 360° working area Outrigger base 18.37 ft														Working Radius (ft)						
	Boom length (ft)																				
	139.4 °		139.4 °		139.4 °		139.4 °		153.2 °		153.2 °		153.2 °			167.0 °		167.0 °		167.0 °	
8	↙		↙		↙		↙		↙		↙		↙		↙		↙		↙	8	
9																				9	
10																				10	
12																				12	
14																				14	
16																				16	
18																				18	
20	82	89.8	82	82.6	82	69.4	82	56.2												20	
25	79	69.0	79	72.1	79	69.4	79	56.2	80	68.1	80	55.8	80	47.2						25	
30	78	54.3	78	57.3	78	61.5	78	55.1	79	54.3	79	55.6	79	47.2	80	52.6	80	49.8	80	41.7	30
35	76	43.9	76	46.8	76	50.8	76	52.5	77	44.5	77	50.1	77	47.2	78	43.1	78	46.3	78	41.7	35
40	74	36.0	74	38.7	74	42.6	74	47.3	76	36.7	76	42.4	76	45.1	77	35.9	77	39.0	77	41.1	40
45	71	29.8	71	32.5	71	36.2	71	40.9	73	30.9	73	36.2	73	38.9	75	30.2	75	33.3	75	36.7	45
50	69	24.6	69	27.1	69	30.5	69	34.8	72	26.1	72	31.2	72	33.7	74	25.5	74	28.5	74	32.2	50
55	67	19.9	67	22.3	67	25.6	67	29.5	70	21.7	70	26.7	70	29.0	72	21.6	72	24.4	72	28.0	55
60	65	15.9	65	18.1	65	21.4	65	25.2	68	17.7	68	22.5	68	24.7	71	18.1	71	20.7	71	24.3	60
65	62	12.5	62	14.9	62	18.1	62	21.8	66	14.3	66	19.2	66	21.4	68	14.7	68	17.4	68	20.9	65
70	60	9.9	60	12.2	60	15.3	60	19.0	64	11.7	64	16.4	64	18.6	67	12.1	67	14.6	67	18.1	70
75	58	7.7	58	9.9	58	13.0	58	16.6	62	9.3	62	14.0	62	16.2	65	9.8	65	12.3	65	15.6	75
80	55	5.7	55	7.9	55	11.0	55	14.5	59	7.3	59	11.9	59	14.1	63	7.7	63	10.3	63	13.5	80
85	52	3.9	52	6.1	52	9.2	52	12.7	57	5.6	57	10.0	57	12.2	61	6.1	61	8.5	61	11.8	85
90			49	4.7	49	7.6	49	11.1	55	4.1	55	8.5	55	10.7	59	4.5	59	7.0	59	10.3	90
95			46	3.3	46	6.3	46	9.8			52	7.2	52	9.3	57	3.2	57	5.7	57	8.9	95
100					43	5.1	43	8.7			49	6.0	49	8.1			54	4.5	54	7.6	100
110					36	3.1	36	6.7			44	4.0	44	6.0			50	2.5	50	5.6	110
120							27	5.0			38	2.3	38	4.4					45	3.9	120
130													29	3.0					39	2.4	130
140																					140
150																					150
160																					160
170																					170
180																					180
190																					190
200																					200
210																					210
Telescoping sequence %																					
Tel. 1	92		92		46		0		92		46		0		92		92		0	Tel. 1	
Tel. 2	92		46		46		0		92		46		0		92		46		46	Tel. 2	
Tel. 3	46		46		46		46		46		46		92		92		46		92	Tel. 3	
Tel. 4	46		46		46		92		46		46		92		46		46		92	Tel. 4	
Tel. 5	46		46		46		92		46		92		92		46		92		92	Tel. 5	
Tel. 6	0		46		92		92		46		92		92		46		92		92	Tel. 5	

Working Radius (ft)	Lifting capacities in 1,000 lbs according per SAE J765 on telescopic boom On outriggers, 360° working area Outrigger base 18.37 ft												Working Radius (ft)	
	Boom length (ft)													
	180.4 °		180.4 °		180.4 °		194.2 °		194.2 °		208.0 °			208.0 °
8														8
9														9
10														10
12														12
14														14
16														16
18														18
20														20
25														25
30	81	50.0	81	42.3	81	37.3								30
35	79	42.3	79	42.3	79	37.3	80	40.7	80	33.1				35
40	79	35.5	79	38.1	79	36.9	79	35.3	79	32.9	80	32.7		40
45	77	29.9	77	32.6	77	34.4	77	30.1	77	31.9	79	29.9		45
50	76	25.5	76	28.0	76	30.4	76	25.7	76	28.3	78	26.0		50
55	74	21.7	74	24.1	74	26.5	75	22.0	75	24.6	77	22.4		55
60	73	18.4	73	20.8	73	23.0	74	18.9	74	21.3	76	19.4		60
65	71	15.6	71	17.8	71	19.8	72	16.2	72	18.6	74	16.8		65
70	69	12.9	69	15.1	69	17.0	71	13.7	71	15.9	73	14.6		70
75	67	10.5	67	12.7	67	14.6	69	11.3	69	13.5	72	12.4		75
80	66	8.6	66	10.6	66	12.5	68	9.3	68	11.5	71	10.3		80
85	64	6.7	64	8.9	64	10.7	66	7.6	66	9.8	69	8.5		85
90	62	5.2	62	7.4	62	9.2	65	6.1	65	8.3	68	7.0		90
95	60	3.9	60	6.0	60	7.9	63	4.7	63	6.9	66	5.7		95
100	59	2.7	59	4.8	59	6.7	62	3.4	62	5.6	65	4.5		100
110			55	2.7	55	4.5			58	3.6				110
120					50	2.8								120
130														130
140														140
150														150
160														160
170														170
180														180
190														190
200														200
210														210
Telescoping sequence %														
Tel. 1	92		46		0		92		46		92			Tel. 1
Tel. 2	92		92		92		92		92		92			Tel. 2
Tel. 3	92		92		92		92		92		92			Tel. 3
Tel. 4	92		92		92		92		92		92			Tel. 4
Tel. 5	46		92		92		92		92		92			Tel. 5
Tel. 6	46		46		92		46		92		92			Tel. 6

Counterweight 26,455 lbs

Working Radius (ft)	Lifting capacities in 1,000 lbs according per SAE J765 on telescopic boom On outriggers, 360° working area Outrigger base 18.37 ft														Working Radius (ft)	
	Boom length (ft)															
	139.4 °	139.4 °	139.4 °	139.4 °	153.2 °	153.2 °	153.2 °	167.0 °	167.0 °	167.0 °						
8															8	
9															9	
10															10	
12															12	
14															14	
16															16	
18															18	
20	82	64.6	82	67.9	82	68.7	82	56.2							20	
25	79	48.4	79	51.4	79	55.9	79	56.2	80	48.2	80	52.9	80	47.2	25	
30	78	37.1	78	40.0	78	44.1	78	49.2	79	37.6	79	43.5	79	46.4	30	
35	76	28.9	76	31.8	76	35.8	76	40.5	77	29.9	77	35.5	77	38.4	35	
40	74	22.8	74	25.6	74	29.4	74	34.0	76	23.9	76	29.4	76	32.2	40	
45	71	18.1	71	20.7	71	24.5	71	28.7	73	19.4	73	24.7	73	27.4	45	
50	69	13.9	69	16.4	69	19.9	69	24.0	72	15.6	72	20.7	72	23.2	50	
55	67	10.3	67	12.6	67	16.0	67	19.8	70	12.2	70	17.1	70	19.4	55	
60	65	7.2	65	9.4	65	12.8	65	16.5	68	9.0	68	13.8	68	16.0	60	
65	62	4.7	62	6.9	62	10.2	62	14.0	66	6.5	66	11.1	66	13.3	65	
70			60	4.8	60	8.2	60	11.8			64	9.0	64	11.2	70	
75					58	6.3	58	9.9			62	7.2	62	9.4	75	
80					55	4.7	55	8.3			59	5.6	59	7.8	80	
85					52	3.4	52	6.9			57	4.3	57	6.5	85	
90							49	5.7			55	3.1	55	5.3	90	
95							46	4.7					52	4.2	95	
100							43	3.7					49	3.3	100	
110															110	
120															120	
130															130	
140															140	
150															150	
160															160	
170															170	
180															180	
190															190	
200															200	
210															210	
Telescoping sequence %																
Tel. 1	92		92		46		0		92		46		0		92	Tel. 1
Tel. 2	92		46		46		0		92		46		0		92	Tel. 2
Tel. 3	46		46		46		46		46		46		92		46	Tel. 3
Tel. 4	46		46		46		92		46		46		92		46	Tel. 4
Tel. 5	46		46		46		92		46		92		92		46	Tel. 5
Tel. 6	0		46		92		92		46		92		92		92	Tel. 6

ATF220G-5 WORKING RANGE CHART



NOTE: Boom and jib geometry shown are for unloaded condition and machine standing level on firm supporting surface. Boom deflection and subsequent radius and boom angle change must be accounted for when applying load to hook.

Working Radius (ft)		Lifting capacities in 1,000 lbs according per SAE J765 on fly jib 17.7 ft																								Working Radius (ft)					
		On outriggers, 360° working area																													
		Outrigger base 27.23 ft																													
		Boom length 43.3 ft						Boom length 43.3 ft to 111.9 ft						Boom length 43.3 ft to 208.0 ft						Boom length 43.3 ft to 223.1 ft											
Fly jib 17.7 ft offset						Fly jib 17.7 ft offset						Fly jib 17.7 ft offset						Fly jib 17.7 ft offset													
°		0°		20°		40°		°		0°		20°		40°		°		0°		20°		40°		°		0°		20°		40°	
L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R		
10	76	104.2																													10
12	74	97.5	79	66.3																											12
14	72	91.6	77	63.8																											14
16	70	86.4	75	61.3																											16
18	68	81.9	73	59.2	78	48.1																									18
20	66	77.7	71	57.3	76	47.0	80	85.3																							20
25	61	69.2	66	53.2	70	44.8	78	85.3																							25
30	55	62.3	60	49.8	63	43.1	76	85.2	78	60.8	80	47.3																			30
35	49	56.7	54	47.0	57	41.7	74	81.7	76	58.5	78	46.3																			35
40	42	51.6	47	44.0	50	40.2	72	75.4	74	56.2	76	45.3																			40
45	34	46.6	39	41.3			69	69.8	71	54.4	73	44.5																			45
50	22	42.1					67	64.8	69	52.6	71	43.6	79	23.2										80	20.3						50
55							65	60.4	67	51.1	68	42.9	78	22.3	79	20.7	80	19.9	79	20.0				80	19.1						55
60							62	56.4	64	49.6	66	42.2	77	21.4	78	19.9	79	19.3	78	19.5	79	18.4	80	17.7	60						60
65							59	52.9	61	48.2	63	41.7	75	20.6	76	19.3	78	18.6	76	18.8	78	17.7	79	17.1	65						65
70							57	49.8	59	47.0	60	41.1	74	19.9	75	18.6	77	18.1	75	18.2	77	17.2	78	16.5	70						70
75							54	47.0	56	45.6	57	40.4	73	19.2	74	18.0	75	17.5	75	17.6	76	16.7	77	16.0	75						75
80							51	44.3	53	43.8	54	39.8	72	18.6	73	17.5	74	16.8	74	17.1	75	16.2	76	15.6	80						80
85							48	41.4	50	41.6	51</																				

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WARNING AND OPERATING INSTRUCTIONS FOR LIFTING CAPACITIES ATF220G-5

GENERAL

- Total rated loads shown on the TADANO LOAD RATING CHART apply only to the machine as originally manufactured and normally equipped by TADANO. Modifications to the machine or use of optional equipment other than that specified can result in a reduction of capacity.
- Hydraulic cranes can be hazardous if improperly operated or maintained. Operation and maintenance of this machine must be in compliance with the information in the **Operation and Maintenance Manual** supplied with the machine. If this manual is missing, order a replacement through the distributor.
- The operator and other personnel associated with this machine shall fully acquaint themselves with the latest applicable American National Standards Institute (ANSI) safety standards for cranes.

SET UP

- Total rated loads shown on the TADANO LOAD RATING CHART are the maximum allowable crane capacities. They are based on the machine standing level on firm supporting surface under ideal job conditions. Depending on the nature of the supporting surface, it may be necessary to have structural supports under the outrigger floats to spread the load to a larger _ surface.
- For on outrigger operation, outriggers shall be extended to the dimension according to the TADANO LOAD RATING CHART and secured by pins with tires free of supporting surface, before operating crane.

OPERATION

- Total rated loads with outriggers fully extended do not exceed 85% of the tipping loads. Total rated loads with outriggers half extended are determined by this formula:
total rated load = (tipping load - 0,1 tip reaction) / 1.25.
- The crane's structural steelwork is in accordance with DIN 15018, part 3. Design and construction of the crane comply with DIN 15018, part 2 and with F.E.M. regulations.
- Total rated loads include the weight of the main hook block, auxiliary hook ball, sling and other auxiliary lifting devices and all their weight shall be subtracted from the listed capacities to obtain the net load to be lifted.

Hookball / Hookblock (ton)	11.0	27.6	69.5				88.2				137.8			
No. of parts of line	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Max. lifting capacity (ton)	10.4	20.8	27.6	38.7	47.6	56.9	65.4	74.3	82.3	88.2	104.2	113.1	120.7	129.3
Weight (lbs)	661	992	1,874				2,535				2,976			

- Total rated loads are based on freely suspended loads and make no allowance for such factors as the effect of wind, sudden stopping of loads, supporting surface conditions, operating speeds, side loads, etc. Side pull on the boom or jib is extremely dangerous.
- Total rated loads do not account for wind on lifted load or boom. Total rated loads and boom length shall be appropriately reduced, when wind velocity is above 18 mph (26 ft/sec.) for boom operation. and above 11 mph (16ft/sec.) for jib operation.
- Total rated loads at load radius shall not be exceeded. Do not tip the crane to determine allowable loads.
- Do not operate at boom lengths beyond radius or boom angles where no capacities are shown. Crane may overturn without any load on the hook.
- Slewing of the superstructure is admissible only when the crane is supported on half or fully extended outriggers.
- The lifting capacity ratings specified in the TADANO load rating chart apply to the telescopic boom without fly jib fixed in transport position or working position.
If the fly jib is secured to the telescopic boom in transport position or working position, the lifting capacities of the telescopic boom are reduced by the values specified below. The weight of the fly jib is detected in terms of a load, and the load moment limiter will shut off earlier.

Load rating reduction (tons)														
Jib status		Boom length (ft)												
		43.3	57.1	79.9	98.4	126	153.2	180.4	194.2	223.1				
17.7ft/43.3ft fly jib, mounted in transport position		0.50	0.32	0.23	0.15	0.11	0.10	0.09	0.08	0.07				
17.7ft fly jib, mounted to the boom head		3.00	2.49	2.19	1.84	1.35	1.10	1.04	1.01	1.00				
43.3ft fly jib, mounted to the boom head		6.31	5.10	4.38	3.52	2.32	1.75	1.58	1.54	1.49				
63.0ft fly jib, mounted to the boom head		11.27	8.98	7.57	5.94	3.64	2.57	2.24	2.16	2.05				
82.7ft fly jib, mounted to the boom head		18.09	14.26	11.92	9.19	5.34	3.54	2.99	2.86	2.69				
102.4ft fly jib, mounted to the boom head		26.78	20.97	17.39	13.26	7.41	4.69	3.84	3.64	3.37				
122.0ft fly jib, mounted to the boom head		37.30	29.06	24.01	18.14	9.84	5.99	4.78	4.50	4.13				

- When making lifts at a load radius not shown, use the next longer radius to determine allowable capacity.
- Load per part line should not exceed 20,950 lbf for the main winch and for the auxiliary winch.
- Loaded boom angles are approximate. The boom angle before loading should be greater to account for deflection.
- The 43.3 ft boom length capacities are based on the telescopic boom being fully retracted. If not fully retracted (less than 57.1 ft boom length), use the total rated loads for 57.1ft boom length according to the telescoping sequence.
- Extension or retraction of the telescopic boom with loads may be attempted within the limits of the TADANO LOAD RATING CHART. The ability to telescope loads is limited by hydraulic pressure, boom angle, boom length, crane maintenance, etc.
- When erecting or stowing the extendible fly jib, be sure to retain it by hand or by other means to prevent its free movement.
- Use the Anti-Two Block (OVERWIND CUTOUT) disable switch When erecting or stowing the extendible fly jib and stowing the hook block. While the switch is pushed, the hoist will not stop, even when an overwind condition occurs.
- The working radius specified in the TADANO LOAD RATING CHARTS for the extendible fly jib apply only if the telescopic boom is extended according to the TADANO LOAD RATING CHARTS. If one or more elements of the telescopic boom are retracted partially or completely, the specified boom angles will be decisive in determining total rated lifting capacities.
- When lifting a load by using the extendible fly jib (auxiliary hoist) and telescopic boom (main hoist) simultaneously, do the following:
 - Select the correct program for the load moment device in accordance with jib length, jib offset angle, counterweight and outrigger base.
 - Before starting the operation, make sure that the weight of the load is within the total rated load for the fly jib.
- Working with Single Top

Operation with the single top is allowed with the main winch and the auxiliary winch (2nd winch). The maximum allowed capacity is limited by the selected S.L.I. code for main boom operation according to existing counterweight and outrigger base at one side and by the single line pull which is limited by hydraulic pressure at the other side.
For operations with the single top mounted, use the TADANO LOAD RATING CHART for the telescopic boom in accordance with existing counterweight and outrigger base to find the total rated lifting capacity and also select the correct S.L.I. code for the telescopic boom in accordance with the existing counterweight and outrigger base. Find the total rated lifting capacity based on boom length and working radius. From that value, subtract 1,100 lbs and the weights of all lifting equipment used including hook block, sling and other auxiliary lifting devices. The result (<total rated lifting capacity> - <1,100 lbs> - <lifting equipment>) is the total rated lifting capacity for a single top lift.

Definitions

- Load Radius:**
Horizontal distance from a projection of the axis of rotation to supporting surface before loading to the center of the vertical hoist line or tackle with load applied. The deflection of the boom due to its deadweight and the rated load are taken into account.
- Loaded Boom Angle:**
The angle between the boom base section and the horizontal, after lifting the total rated load at the working radius.
- Working Area:**
Area measured in a circular arc about the centerline of rotation.
- Freely Suspended Load:**
Load hanging free with no direct external force applied except by the hoist line.
- Side Load:**
Horizontal side force applied to the lifted load either on the ground or in the air.

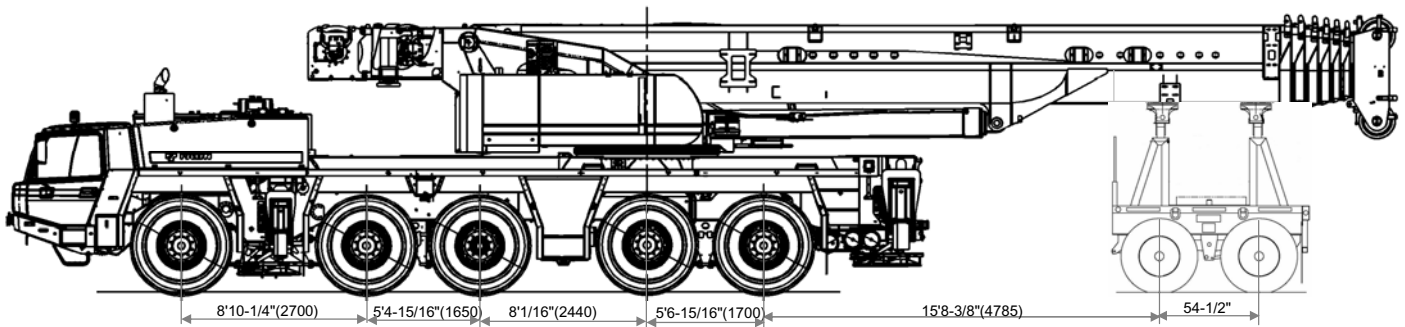
Safe Load Indicator

The Safe Load Indicator is intended as an aid to the operator. Under no condition should it be relied upon to replace use of Load Rating Charts and Operating Instructions. Sole reliance upon the Safe Load Indicator Aids in place of good operating practice can cause an accident. The operator must exercise caution to assure safety.

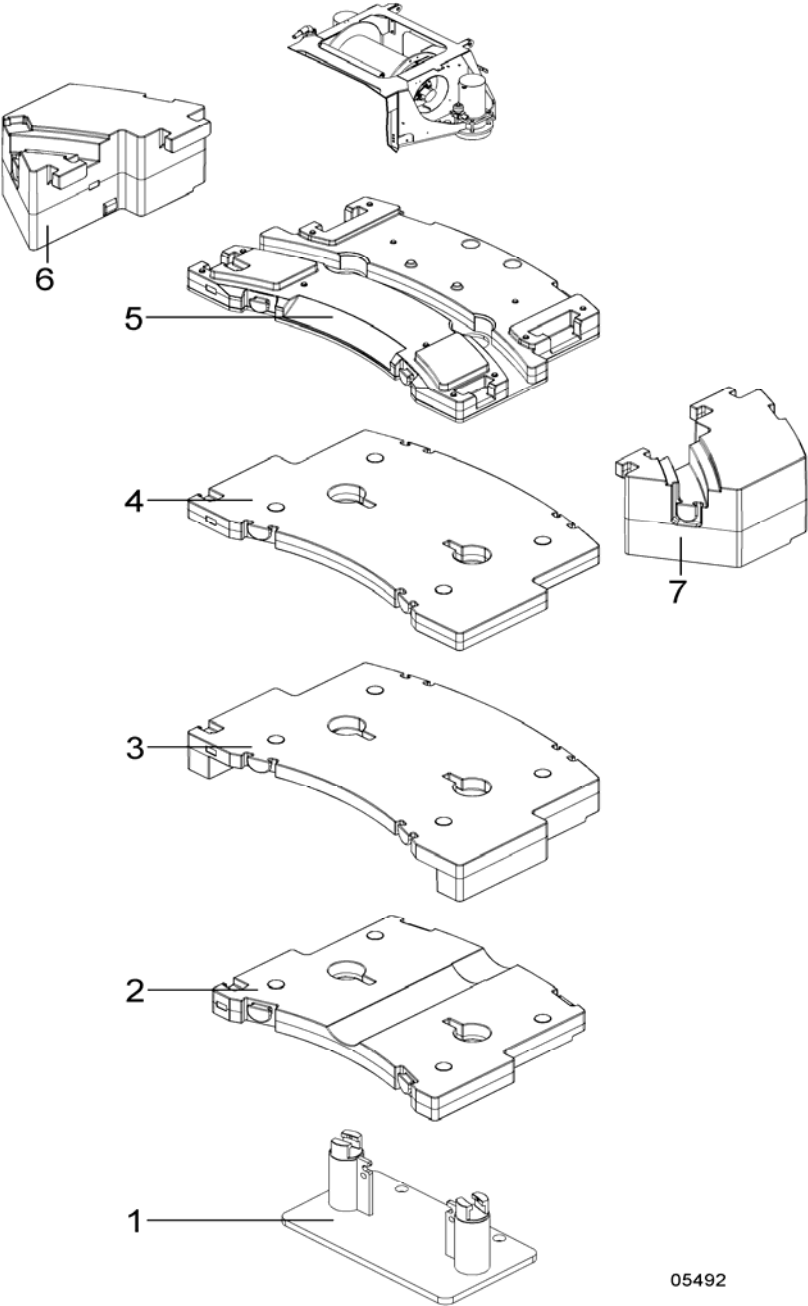
ATF220G-5 Axle weight distribution chart

1) Traveling with boom dolly

	GVW	Axle 1	Axle 2	Axle 3	Axle 4	Axle 5	Dolly
Base machine with 16.00R25 tires, 10x8 drive, no counterweight, 100% fuel	132,328	17,013	18,109	21,981	23,074	22,913	29,238
Add:	661	-53	-53	-42	-42	-42	893
1. 11 ton hook ball at boom head	992	-79	-80	-64	-63	-63	1,341
2. 27.6 ton hook block at boom head	1,874	-150	-150	-120	-120	-120	2,534
3. 69.5 ton hook ball at boom head	2,535	-202	-203	-163	-162	-162	3,427
4. 88.2 ton hook ball at boom head	3,375	100	100	81	81	81	2,932
5. 17.7 ft/ 43.3 ft fly jib	3,646	1,505	1,505	212	212	212	0
6. Auxiliary winch with cable	205	-17	-17	-13	-13	-13	278
7. Auxiliary boom point sheave (single top)	88	6	6	26	26	26	0
8. Additional oil cooler	106	-1	-1	36	36	36	0
9. Air conditioning at crane cab	661	106	106	149	150	150	0
10. Boom dismounting device	1,100	220	220	220	220	220	0
11.20.5R25 tyres in lieu of 16.00R25	101	74	74	-16	-16	-15	0
12.Air conditioning at carrier cab	176	-72	-72	107	107	107	0
13.Towing attachment	106	-5	-5	38	39	39	0
14.Air and electric linesto rear bumper and free swing and boom elevation circuits	4,409	1,146	1,146	473	473	473	0
1. Counterweight at carrier (2.0t)	22,046	7,479	7,479	2,363	2,363	2,363	0
2. Counterweight at carrier (10.0t)	25,353	8,600	8,600	2,718	2,718	2,718	0
3. Counterweight at carrier (11.5t)	25,353	8,600	8,600	2,718	2,718	2,718	0
4. Counterweight at carrier (11.5t)	25,353	8,600	8,600	2,718	2,718	2,718	0



Mounting the 156,527 lbs (71 t) counterweight



05492

	1) 2.0t	2) 10.0t	3) 11.5t	4) 11.5t	5) 12.0t	6) 12.0t	7) 12.0t
0 lb							
26,455 lb	x	x					
51,808 lb	x	x	x				
77,161 lb	x	x	x	x			
103,616 lb	x	x	x	x	x		
156,527 lb	x	x	x	x	x	x	x

NOTES: _____

This image shows a single page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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