AC20-142 Articulating Crane

Specifications

Number of Extensions	1-Hydraulic	2-Hydraulic	3-Hydraulic	4-Hydraulic	5-Hydraulic	6-Hydraulic
Crane Rating*	141,900 ft-lb (19.6 tm)	141,900 ft-lb (19.6 tm)	141,900 ft-lb (19.6 tm)	141,900 ft-lb (19.6 tm)	141,900 ft-lb (19.6 tm)	141,900 ft-lb (19.6 tm)
Max. Horizontal Reach	20' 5" (6.23 m)	26' 7" (8.10 m)	33' 0" (10.05 m)	40' (12 m)	46'3" (14.1 m)	53'2" (16.2 m)
Max Vertical Reach Hydraulic	32' 6" (9.9 m)	38' 9" (11.8 m)	45' 2" (13.8 m)	51'6" (15.7 m)	58'5" (17.8 m)	65' (19.8 m)
Max. Capacity	19,840 lb (9,000 kg)	19,510 lb (8,850 kg)	18,850 lb (8,550 kg)	18,500 lb (8380 kg)	18,000 lb (8180 kg)	17,600 lb (8000 kg)
Max Capacity @ Max Reach	6,940 lb (3,150 kg)	5,070 lb (2,300 kg)	3,800 lb (1,725 kg)	2,893 lb (1315 kg)	2,200 lb (1000 kg)	1,700 lb (770 kg)
Crane Weight**	4,240 lb (1,920 kg)	4,570 lb (2,070 kg)	4,880 lb (2,210 kg)	6,000 lb (2,700 kg)	6,160 lb (2,800 kg)	6,400 lb (2,900 kg)

*Crane rating (ft-lb) is the rated load (lb) x the respective distance (ft) from centerline of rotation with all extensions retracted and the inner and outer booms in a horizontal position, per ANSI B30.22.

**Crane weight does not include outrigger

Specifications

Outrigger Foot Diameter	7.09" (180 mm)	Optimum Pump Capacity	11 GPM (40 L/min)
Crane Storage Height	91" (2,295 mm)	System Pressure	4,351 PSI (300 BAR)
Mounting Space***	44" (1100 mm)	Outrigger Extension Span	
Rotational Torque	15,856 ft-lb (2150 daNm)	Standard (manual out, hydraulic down)	18' (5.5 m)
Rotation	387°		
Oil Reserve Capacity	34.3 gal (130 L)		

***Allow an additional 10" between the cab and crane base for swing clearance.

Minimum Chassis Specifications

Gross Vehicle Weight Rating (GVWR)	41,876 in-lb
Resistance to Bending Moment (RBM)	1,154,925 in-lb

Notes

A. Weight distribution calculations are required to determine final axle loading. The use of service bodies, diesel engines, or longer wheelbase, can increase the minimum chassis requirements. Please contact Auto Crane for details.

B. GAWR (Gross Axle Weight Rating) is the total weight of the vehicle including the (chassis, driveline, occupants, cargo, etc.) that is allowed by the manufacturer requirements, for the vehicle to go down the road safely. This is a critical factor in purchasing a truck for the crane application. All chassis and crane applications must be tested by engineering and the final assembler to ensure stability per ANSI B30.22.

System Characteristics

Rotation System

Our Articulating Cranes utilize a rack and pinion rotation system which provides high torque for demanding applications. The column turns on bushings made of an advanced composite material for long service life. The rotation cylinders are protected by a load holding valve and flow controls to ensure safe and precise operation.

Cylinder Holding Valves

Flanged load holding valves on hydraulic cylinders provide smooth load control and load holding. In the event of a hose failure, they lock the cylinder in place to prevent uncontrolled crane movement or falling loads.

Hydraulic Overload System

Providing the Hydraulic Overload protection are main relief and port relief valves, as well as counterbalance valves.

Hydraulic System

The hydraulic system is open-center as standard. Included on the crane is a hydraulic oil reservoir, return line filter, high-pressure filter(1), and control valve with dual-side controls(2). An optional closed-center valve is available on request.

Exceptions

(1) Cranes with manual controls do not have high pressure filter
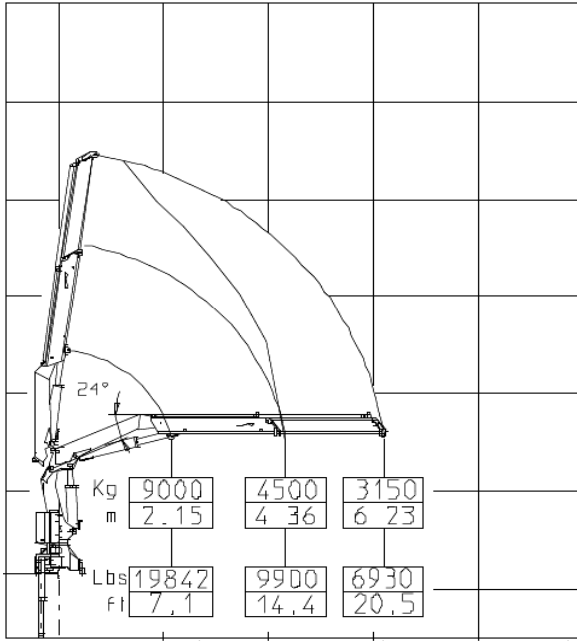(2) Cranes with radio controls do not have dual-side controls

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Capacity Charts

AC20-142 1 Hydraulic Extension

Kg	9000	4500	3150
m	2.15	4.36	6.23
Lbs	19842	9900	6930
ft	7.1	14.4	20.5

AC20-142 2 Hydraulic Extension

Kg	8850	4400	3050	2300
m	2.15	4.36	6.23	8.10
Lbs	18960	9680	6710	5060
ft	7.1	14.4	20.5	26.7
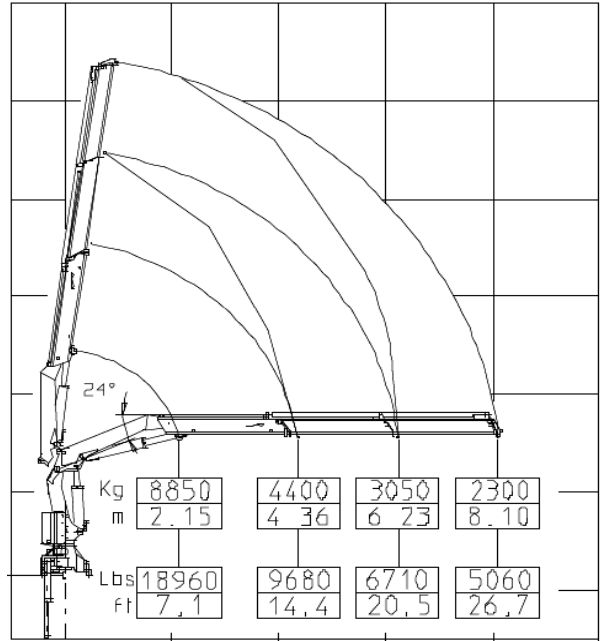
AC20-142 3 Hydraulic Extension
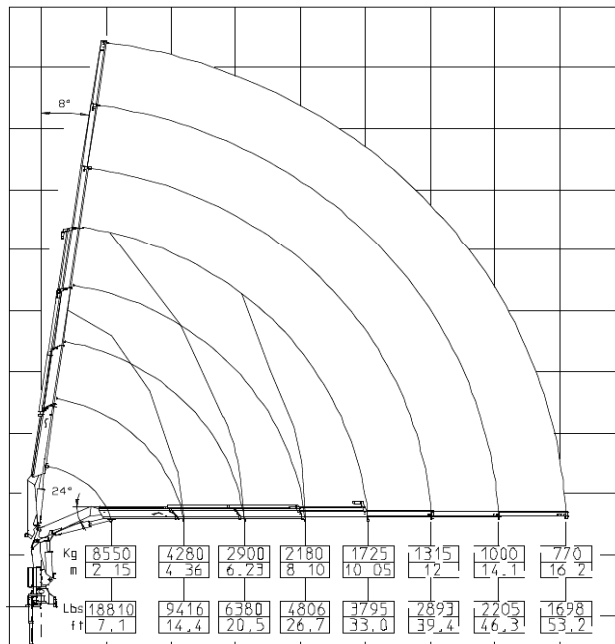
Kg	8550	4280	2900	2180	1725	1315	1000	770
m	2.15	4.36	6.23	8.10	10.05	12	14.1	16.2
Lbs	18810	9416	6380	4806	3795	2893	2205	1698
ft	7.1	14.4	20.5	26.7	33.0	39.4	46.3	53.2

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Capacity Charts

AC20-142 4 Hydraulic Extension

Kg m	8380 2.15	4180 4.36	2800 6.23	2060 8.10	1590 10.05	1315 12	1000 14.1	770 16.2	550 18.4
Lbs ft	18475 7.1	9196 14.4	6160 20.5	4532 26.7	3505 33.0	2893 39.4	2205 46.3	1698 53.2	1213 60.4
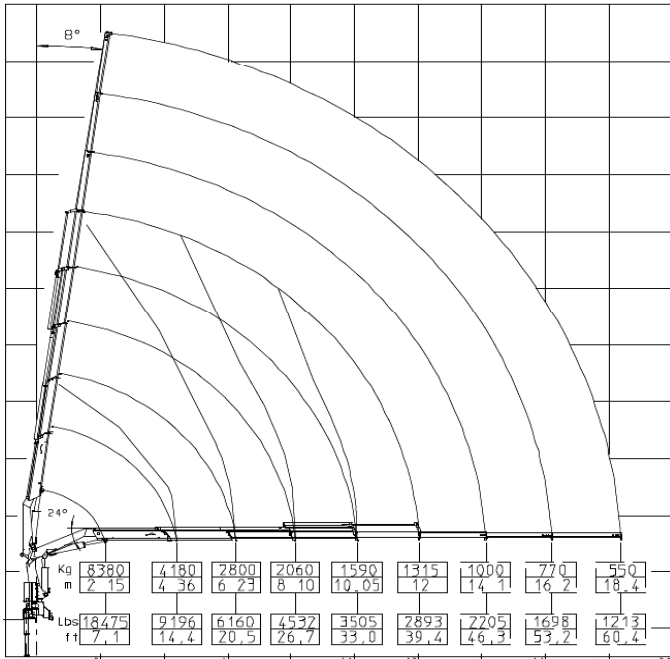
AC20-142 5 Hydraulic Extension
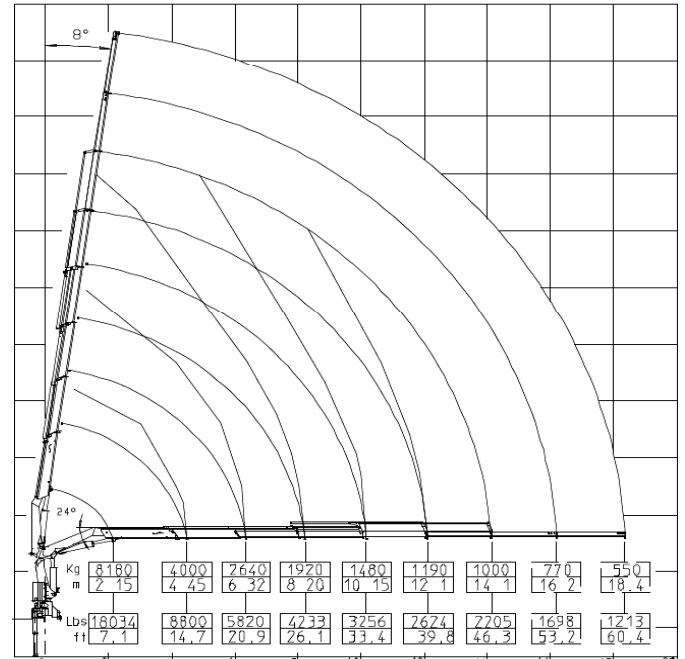
Kg m	8180 2.15	4000 4.45	2640 6.32	1920 8.20	1480 10.15	1190 12.1	1000 14.1	770 16.2	550 18.4
Lbs ft	18034 7.1	8800 14.7	5820 20.9	4233 26.1	3256 33.4	2624 39.8	2205 46.3	1698 53.2	1213 60.4

AC20-142 6 Hydraulic Extension

Kg m	8000 2.15	3850 4.52	2530 6.40	1820 8.26	1385 10.2	1100 12.2	910 14.2	770 16.2	550 18.4
Lbs ft	17637 7.1	8470 14.1	5578 21	4004 27.1	3047 33.6	2425 40	2006 46.7	1698 53.2	1213 60.4
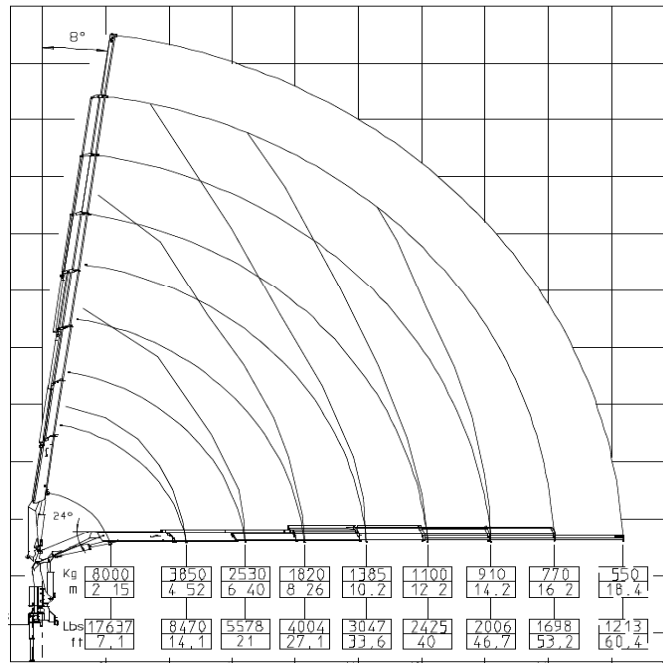
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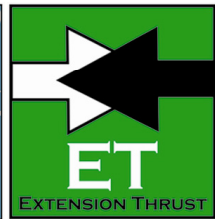# AC20-142 Articulating Crane

Geometric Configurations (Dimensions)

AC20-142 6 Hydraulic Extension (mm)
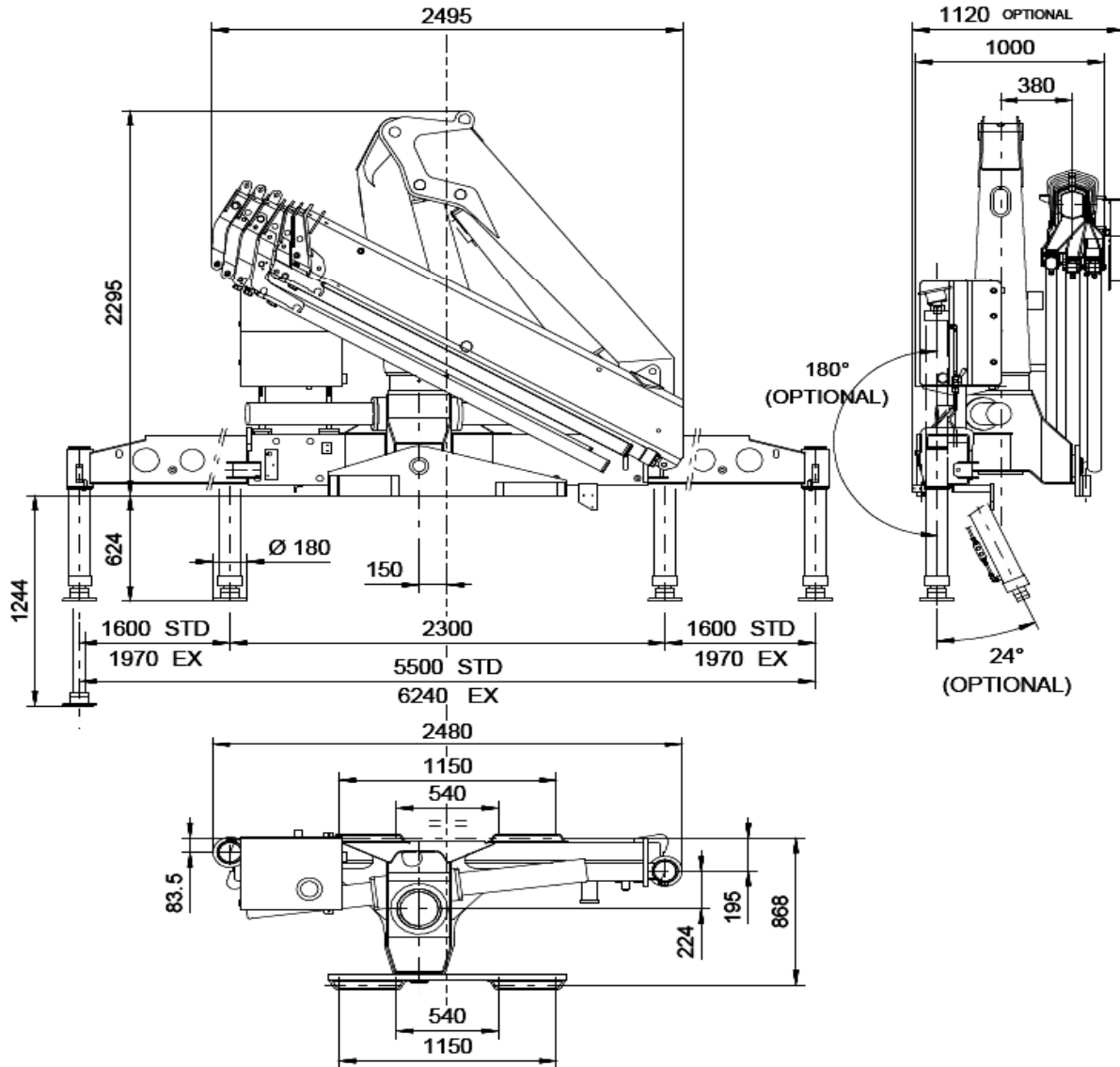
Special Features (on select models)

WRC *Wireless Remote Control*

CCI **CRANE CONTROL** *Information*

ET **EXTENSION THRUST**

SD **Smooth**Decent