



# P&H® 430A-TC

## 35 ton Truck Crane



### BOOM

Two piece 30' (9.1 m) long, open throat lattice type tubular boom consisting of 15' (4.6 m) long tapered base section and a 15' long standard tapered tip section. All boom sections are pin connected, have a 42" x 42" (1067 mm x 1067 mm) cross section and complete with suspension cable assemblies. Sections are fabricated from tubular T-1 steel and reinforced with contour-cut tubular lacings for strongest welded joints.

**STANDARD TIP:** 15' (4.6 m) long section has 3 offset boom point sheaves 18.5" (470 mm) P.D. with roller bearings. Boom extendible to 170' (51.8 m).

**BOOM INSERT SECTION:** 10' (3.1 m) Boom insert with suspension cable assemblies, pin connections .....optional  
20' (6.1 m) insert .....optional  
30' (9.1 m) insert .....optional

**JIB:** 20' (6.1 m) long jib, open throat lattice type, two equal tapered sections, pin connected, having a 16" x 20" (406 mm x 508 mm) cross section and with single 17.25" (438 mm) P.D. jib point sheave, compression strut and guy cable assemblies. Extendible to 40' (12.2 m). Extends reach to 193' (58.8 m). For lifts not exceeding 10,000 lb. (4536 kg) Optional.

#### JIB INSERT SECTIONS:

10' (3.1 m) jib insert with cable assemblies .....optional

**MID-POINT SUSPENSION:** Required when boom length is 150' (45.7 m) or longer.

**BOOM HOIST REEVING:** 12 parts of 1/2" (13 mm) wire rope standard.

**BOOM BACKSTOPS:** Spring loaded type.

**WIRE ROPE GUIDE ROLLERS:** Use as required to eliminate cable interference.

#### HOOK BLOCKS:

Block Capacity	Number Sheaves	Wire Rope Size	Weight	Wire Rope to Sheave Ratio	Part No.
36,000 lbs. (16329.6 kg)	1	3/4"	350 lbs. (158.8 kg)	16.66 to 1	8U7-D6 (Standard)
60,000 lbs. (27216 kg)	2	3/4"	400 lbs. (181.4 kg)	16.66 to 1	8U7-D9 (Opt.)
70,000 lbs. (31752 kg)	3	3/4"	490 lbs. (222.3 kg)	16.66 to 1	8U7-D12 (Opt.)
10,000 lb. (4536 kg)	Weighted Hook		215 lb. (97.5 kg)	-----	8U7-D502 (Jib-Opt.)

#### SHEAVE AND DRUM TO WIRE ROPE RATIOS:

	Boom Hoist	Left Crane	Left Dragline	Left Clamshell
Sheave to Wire Rope	15 to 1	24.66 to 1	-----	24.66 to 1
Drum to Wire Rope	19 to 1	18.66 to 1	18.66 to 1	18.66 to 1
	Third	Right Crane	Right Dragline	Right Clamshell
Sheave to Wire Rope	-----	23 to 1	24.66 to 1	24.66 to 1
Drum to Wire Rope	17 to 1	18.66 to 1	18.66 to 1	18.66 to 1

### UPPERSTRUCTURE

**FRAME:** All welded frame and power box constructed of heavy steel plate. Shaft mountings are line bored to insure precise alignment of all parts. Gearing (except swing) is sealed and splash lubricated. Involute splined shafts are used, turn in roller and ball bearings. Gears and roller chains are hardened, sealed in oil bath for long, trouble free operation.

**MACHINERY CAB:** All steel construction, access panels on both sides and roof. Removable panels for main drum brake access. No lines pass through cab. Low profile, recessed center roof. Deck covered with non-skid floor plate. Deck machinery is in compact arrangement, easy to maintain and repair.

**GANTRY:** Two position folding gantry. Power raise and lowering 6 sheaves - 7.5" (191 mm) P.D.

**COUNTERWEIGHTS:** 3000 lb. (1360.8 kg) punchings. 10,000 lb. (4536 kg) cast, removable using 2 hydraulic jacks set in carrier frame.

**OPERATORS CAB:** Totally enclosed from weather. Full vision cab has safety glass throughout, sliding front window and door. Operators four-way adjustable seat, signal horn, L.H. drum turn indicator, boom angle indicator and boom hoist kick-out limit switch are standard.



### CONTROLS:

In front of operator are foot pedals for left and right drum brakes, hand levers for swing control, left and right drum controls, boom hoist control, swing brake and engine speed control. At operators left are console mounted switches for right and left drum pawls and brake locks, master switch, engine start, starting aid and lights. Included are gauges for fuel level, engine coolant temperature, oil pressure, voltmeter, hourmeter, engine clutch pedal, trouble light receptacle and drum turn indicators (optional).

**HYDRAULIC SYSTEM:** Direct acting hydraulic system to right and left drums and boom hoist brakes and clutches. Response is instant, positive and smooth to operators touch. Fluid is stored in 1.06 quart (1 liter) reservoir.



### POWER PLANT:

#### ENGINE:

	STANDARD	OPTIONAL
Make	Detroit Diesel	Cummins
Model	4-53N	V-378
Type	Diesel	Diesel
No. of Cylinders	4	6
Bore x Stroke, In.	3.875 x 4.5	4.625 x 3.75
	(98.4 x 114.3)	(213.9 x 95.25)
Displacement, In.	212	378
	liters	6.194
Cycles	2	4
Air Induction	Roots Blower	Nat. Aspirated
Cooling	Liquid	Liquid
Starter	12 V	12 V
Alternator	12 V. - 42 A.	12 V. - 58 A.

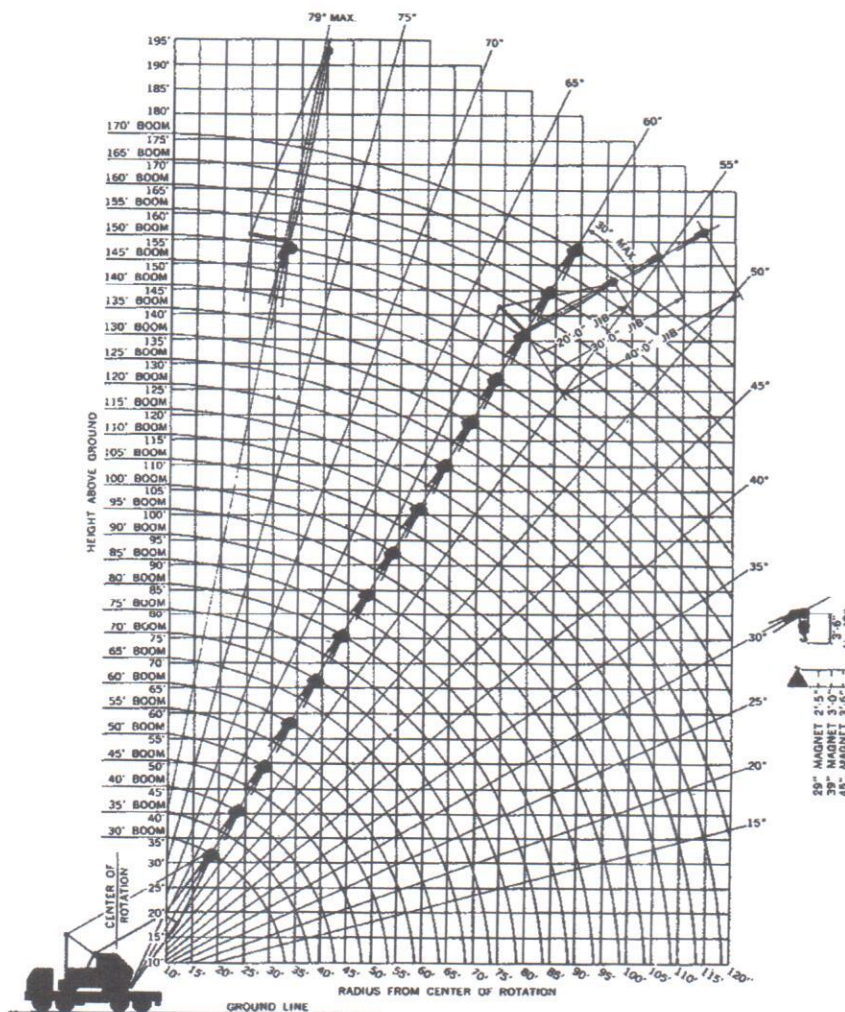
# Specifications





# P&H® 430A-TC

## 35-ton Truck Crane 150' Boom plus 40' Jib 170' Boom



Your versatile P & H 430A-TC adapts readily to your special operating needs. This brochure contains these crane rating charts:

### Standard Boom:

- 1 • 10,100 lbs. counterweight
  - on outriggers
  - 30 to 170 foot booms
- 2 • 10,100 lbs. counterweight
  - on rubber
  - 30 to 100 foot booms

### Jib Ratings

This P&H Model 430A-TC meets the requirements of ANSI B30.5 1968. Boom structure has been tested per SAE J 987. Machine stability has been tested per SAE J 765.

**Standard  
42" wide x 42" deep  
Boom**

**crane**

**lifting capacities  
working ranges**



**.100 lbs. counterweight****Side and over rear work areas with outriggers fully extended and set**

100 Ft. Boom			110 Ft. Boom			120 Ft. Boom			130 Ft. Boom			140 Ft. Boom			150 Ft. Boom			160 Ft. Boom			170 Ft. Boom			Oper. Rad. Ft.
Angle	Boom Pt. El.	Rating Lbs.	Angle	Boom Pt. El.	Rating Lbs.	Angle	Boom Pt. El.	Rating Lbs.	Angle	Boom Pt. El.	Rating Lbs.	Angle	Boom Pt. El.	Rating Lbs.	Angle	Boom Pt. El.	Rating Lbs.	Angle	Boom Pt. El.	Rating Lbs.	Angle	Boom Pt. El.	Rating Lbs.	
																								10
			NOT MORE THAN ONE 10 FT. INSERT PERMITTED IN BOOMS OVER 100 FT. LONG.										MIDPOINT SUSPENSION (CENTER HITCH) REQUIRED ATTACH 55 FT. UP BOOM FROM BOOM FOOT PIN.											12
																								15
																								20
78	105.1	35,600																						25
75	103.9	26,700	77	114.2	26,600	78	124.5	26,400	79	134.7	23,600													30
72	102.4	21,200	74	112.9	21,100	75	123.3	20,900	76	133.6	20,700													35
69	100.7	17,400	71	111.3	17,200	73	121.8	17,100	74	132.3	16,900	75	142.6	16,700	76	152.9	16,400	77	163.2	14,000	78	173.4	12,100	40
66	98.6	14,600	68	109.5	14,500	70	120.4	14,300	72	130.7	14,100	73	141.2	14,000	74	151.6	13,800	75	162.0	13,500	76	172.3	11,100	45
63	96.2	12,500	65	107.4	12,400	68	118.3	12,200	69	129.0	12,000	71	139.6	11,900	72	150.1	11,700	74	160.8	11,700	75	171.2	10,700	50
57	90.8	9,850	60	102.6	9,700	63	114.0	9,550	65	125.1	9,400	67	136.1	9,200	69	146.9	9,050	70	157.6	8,900	71	168.2	8,650	60
49	83.3	7,800	54	96.1	7,650	57	108.2	7,450	60	119.9	7,300	62	131.3	7,150	64	142.5	7,000	66	153.5	6,800	68	164.4	6,600	70
41	73.3	6,350	47	87.7	6,150	51	101.0	6,000	55	113.5	5,850	58	125.5	5,650	60	137.2	5,500	62	148.7	5,350	64	159.9	5,100	80
32	59.5	5,200	39	76.9	5,050	45	91.9	4,900	49	105.6	4,700	53	118.5	4,550	56	130.9	4,400	58	142.9	4,200	60	154.6	4,000	90
18	37.1	4,450	30	62.3	4,200	38	80.4	4,050	43	95.9	3,850	47	110.1	3,700	51	123.4	3,500	54	136.1	3,350	56	148.3	3,100	100
			17	38.6	3,600	29	64.8	3,350	36	83.7	3,150	41	99.8	3,000	46	114.3	2,800	49	128.0	2,650	52	141.0	2,400	110
						16	40.0	2,850	28	67.3	2,600	35	86.8	2,450	40	103.4	2,250	44	118.4	2,100	47	132.4	1,850	120

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**operating instructions printed throughout this brochure  
are for your safety and will contribute to the long life of  
your P&H 430A-TC**

Operating radius is the horizontal distance from center-line of rotation to a vertical line through the center of gravity of the load.

Ratings shown are only for combination of P & H manufactured upper, boom, jib, counterweights, carrier and outriggers. Boom backstops are required for all boom lengths. Boom inserts must be arranged as shown in the Boom Make-Up Chart. Standard boom hoist reeving is 12 part line. Gantry must be in raised position for all operating conditions. When boom is equipped with jib, main hook ratings must be reduced by 1000 lbs. for 20 ft. or 30 ft. jib; 1500 lbs. for 40 ft. jib. Refer to diagrams for applicable working area.

Ratings shown are based on freely suspended loads and make no allowance for such factors as wind effect on lifted loads, ground conditions, out-of-level, operating speeds or any other condition that could be detrimental to the safe operation of this equipment. The operator, therefore, has the responsibility to judge the existing conditions and reduce lifted loads and operating speeds accordingly. Ratings do not exceed 85% of tipping load as determined by SAE J 765. Deduct weight of hook block(s), slings, cement bucket, and all other load handling accessories from main boom or jib rating shown. Ratings based on 10,100 lb. counterweight.

**WARNING:** The wind effect on the lifted load can cause sufficient side load to overstress boom or jib structure. When suspended load will not remain in line with boom, derate chart 25%. We recommend stopping operation when wind is above 30 m.p.h. and tying off or lowering boom when wind is above 50 m.p.h. When continued operation under windy conditions is necessary, consult factory for special derated-load rating chart.

Maximum approved travel speed with 4,100 lb. front bumper counterweight installed is 5 m.p.h. All tires must be evenly inflated to 100 P.S.I. Maximum approved boom length for travel is 100 ft. or 80 ft. boom and 20 ft. jib. Boom must be positioned over rear of carrier. Gantry must be in raised position to travel with boom attached.

**WARNING:** When 5/8 inch diameter P & H type 11 wire rope (18 x 7 non-rotating preformed plow steel wire rope fiber core) is used for jib line maximum lifted load including hook must not exceed 6,120 lbs. Do not use dead-end swivels with non-rotating wire rope.

P & H type 4 wire rope: 6 x 25 with filler wire, preformed improved plow steel wire rope 7 x 7 I.W.R.C.

**WARNING:** When assembling boom inserts, do not cantilever more than 50 ft. of inserts past point of pendant rope attachment to boom. Relocate point of attachment out on boom as additional inserts are added.

**WARNING**

Using this equipment in excess of rated loads, in areas of chart not rated, or with disregard of instructions will result in unsafe operating conditions and is a violation of the U.S. Dept. of Labor Safety and Health Regulations for Construction.

Oper. Rad. Ft.
10
12
15
20
25
30
35
40
45
50
60
90
100



**PCSA CLASS 10-182****with 10,100****1. rated crane loads in pounds — main boom (42" w. x 42" d.) in over side**

Oper. Rad. Ft.	Angle	30 Ft. Boom		Angle	40 Ft. Boom		Angle	50 Ft. Boom		Angle	60 Ft. Boom		Angle	70 Ft. Boom		Angle	80 Ft. Boom		Angle	90 Ft. Boom		Angle	100 Ft. Boom	
		Boom Pt. El.	Rating Lbs.		Boom Pt. El.	Rating Lbs.		Boom Pt. El.	Rating Lbs.		Boom Pt. El.	Rating Lbs.		Boom Pt. El.	Rating Lbs.		Boom Pt. El.	Rating Lbs.		Boom Pt. El.	Rating Lbs.		Boom Pt. El.	Rating Lbs.
10	79	36.7	70,000																					
12	75	36.2	66,600	79	46.5	66,300																		
15	69	35.3	61,600	75	45.8	61,300	78	56.1	61,000															
20	58	32.8	53,300	67	44.1	53,200	72	54.7	53,100	75	65.2	53,000	77	75.5	52,200									
25	46	28.9	36,600	59	41.5	36,500	66	52.8	36,400	70	63.6	36,300	73	74.1	36,100	75	84.5	35,900	77	94.8	35,700	78	105.1	
30	30	22.2	28,000	50	37.9	27,600	59	50.2	27,500	65	61.5	27,400	69	72.4	27,200	71	83.0	27,000	73	93.5	26,800	75	103.9	
35				40	32.7	22,100	52	46.7	22,000	59	58.8	21,800	64	70.2	21,700	67	81.2	21,500	70	91.9	21,300	72	102.4	
40				26	24.5	18,500	44	42.1	18,200	53	55.5	18,100	59	67.5	17,900	64	78.9	17,700	67	89.9	17,500	69	100.7	
45							35	35.9	15,500	47	51.3	15,300	54	64.2	15,100	59	76.2	14,900	63	87.6	14,800	66	98.6	
50							23	26.5	13,500	40	45.9	13,200	49	60.2	13,000	55	72.9	12,900	59	84.8	12,700	63	96.2	
60										23	30.4	10,600	38	50.4	10,300	47	65.3	10,200	52	78.5	9,950	57	90.8	
70													21	32.3	8,350	36	53.6	8,100	44	69.4	7,900	49	83.3	
80																20	34.0	6,700	33	56.7	6,450	41	73.3	
90																			19	35.6	5,400	32	59.5	
100																						18	37.1	
110																								
120																								

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**WARNING:** When operating crane "without outriggers" loads lifted over rear and swung over side, will increase in radius due to tire deflection. This increase in radius must be compensated for by raising boom, or machine may tip over.

**WARNING:** Welding or other repair to tubular steel booms may weaken the structure. See your P & H dealer for authorized boom repair service. Unauthorized repair will void all warranties.

**2. rated crane loads in pounds — main boom — without outriggers**  
**— tires at 85 p.s.i.**

Oper. Rad. Ft.	Angle	30 Ft. Boom		Angle	40 Ft. Boom		Angle	50 Ft. Boom		Angle	60 Ft. Boom		Angle	70 Ft. Boom		Angle	80 Ft. Boom		Angle	90 Ft. Boom		Angle	100 Ft. Boom		Oper. Rad. Ft.
		Over Side	Over Rear		Over Side	Over Rear		Over Side	Over Rear		Over Side	Over Rear		Over Side	Over Rear		Over Side	Over Rear		Over Side	Over Rear		Over Side	Over Rear	
10	79	34,900	42,700																						10
12	75	30,700	38,500	79	30,000	38,300																			12
15	69	25,000	32,600	75	24,900	32,500	78	24,300	32,300																15
20	58	18,600	22,600	67	18,400	22,500	72	18,300	22,300	75	18,100	22,100	77	17,900	21,900										20
25	46	14,000	17,100	59	13,800	17,000	66	13,600	16,800	70	13,400	16,600	73	13,200	16,400	75	13,000	16,200	77	12,800	16,000	78	12,700	15,900	25
30	30	11,700	13,900	50	11,300	13,500	59	11,200	13,400	65	11,000	13,200	69	10,800	13,000	71	10,600	12,800	73	10,400	12,600	75	10,300	12,400	30
35				40	9,250	11,500	52	9,050	11,400	59	8,900	11,200	64	8,700	11,000	67	8,500	10,800	70	8,300	10,600	72	8,200	10,500	35
40				26	7,700	9,700	44	7,550	9,550	53	7,400	9,350	59	7,200	9,200	64	7,000	9,000	67	6,800	8,800	69	6,700	8,650	40
45							35	6,400	8,150	47	6,250	8,000	54	6,050	7,800	59	5,850	7,600	63	5,650	7,400	66	5,550	7,300	45
50							23	5,500	7,100	40	5,350	6,900	49	5,150	6,750	55	4,950	6,550	59	4,750	6,350	63	4,650	6,200	50
60										23	4,150	5,450	38	3,850	5,150	47	3,650	4,950	52	3,450	4,750	57	3,350	4,650	60
70													21	3,050	4,150	36	2,750	3,850	44	2,550	3,650	49	2,450	3,550	70
80																20	2,200	3,150	33	1,900	2,850	41	1,750	2,750	80
90																			19	1,450	2,300	32	1,250	2,100	90
100																						18	950	1,700	100

**NOTE: OPERATION OF THIS EQUIPMENT IN EXCESS OF LOAD RATINGS AND DISREGARD OF INSTRUCTIONS VOIDS THE WARRANTY.**