

# NK-300E-v

## FULLY HYDRAULIC TRUCK CRANE

### [SPECIFICATION]

#### ■ CRANE

Description	Truck crane with maximum lifting capacity 30 ton
Model	NK-300E-v

#### ● Specification

Maximum rated lifting capacity	10.5 m Boom	30,000 kg × 3.0 m (Parts of line : 10)
	14.2 m Boom	20,000 kg × 4.5 m (Parts of line : 8)
	18.0 m Boom	16,000 kg × 5.0 m (Parts of line : 8)
	21.7 m Boom	12,000 kg × 6.0 m (Parts of line : 4)
	25.5 m Boom	11,500 kg × 6.0 m (Parts of line : 4)
	29.2 m Boom	9,000 kg × 7.0 m (Parts of line : 4)
	33.0 m Boom	7,000 kg × 8.0 m (Parts of line : 4)
	8.7 m Jib	3,000 kg × 76° (Parts of line : 1)
14.5 m Jib	2,000 kg × 77.7° (Parts of line : 1)	
Rooster	3,000 kg (Parts of line : 1)	
Boom length	10.5 m — 33.0 m (4 section)	
Fly jib length	8.7 m — 14.5 m (2 section)	
Maximum lifting height	33.0 m (Boom) 47.5 m (jib)	
Hoisting line speed (winch up)	Main winch	110 m / min. (at 4th layer)
	Auxiliary winch	95 m / min. (at 2nd layer)
Hoisting hook speed (winch up)	Main winch	(Parts of line; 10) : 11.0 m / min. (at 4th layer)
	Auxiliary winch	(Parts of line; 1) : 95.0 m / min. (at 2nd layer)
Boom derricking angle	-3° — 80°	
Boom derricking time	53 s / -3° — 80°	
Boom extending time	110 s (10.5 m — 33.0 m)	
Slewing speed	2.6 min <sup>-1</sup>	
Tail slewing radius	3,395 mm	

#### ● Equipment and structure

Boom type	Box-shaped, 4-section hydraulically telescopic type (Boom sections 3 / 4 simultaneously operated)	
Jib type	2 sections (2nd section of draw-out type, 3-step inclination type (offset angles 5°, 17° and 30°))	
Boom extension/retraction equipment	Two hydraulic cylinders and wire ropes used together	
Boom derricking/lowering equipment	One hydraulic cylinder of direct acting type with pressure-compensated flow control valve	
Winch system Main & Auxiliary winches	Driven by axial plunger type hoisting motor through built-in gear reduction. Controlled independently by respective operating lever. Equipped with automatic brake.	
Slewing equipment	Ball bearing type	
Wire rope for hoisting	Main winch	Diameter: 16 mm × Length: 180 m
	Auxiliary winch	Diameter: 16 mm × Length: 105 m

#### ● Hydraulic system

Oil pump	4 section gear type	
Hydraulic motor	Hoisting motor	Axial plunger type
	Slewing motor	Axial plunger type
Control valve	3 position 4 way double acting with integral check and relief valves	
Cylinder	Double acting type	
Oil reservoir capacity	420 L	

#### ● Safety devices

ACS (Automatic crane stopper with voice alarm), Boom falling prevention device, Overhoist prevention device, Drum lock device, Automatic winch brake, Hydraulic safety valve, Outrigger lock device

#### ● Standard equipment

Fly jib, Rooster sheave, Independent two winches control system, Irregular winding prevention device, Winch automatic brake, Hooks (30 ton, 3 ton), Full size fender, Large size steps, 3 working lights, Moment limiter with voice alarm, Winch drum turning indicator, Outrigger sheet, Cigar lighter, Ashtray, Cab floor mat, Tool kit

#### ● Optional equipment

Winch over-unwinding device, Front jack, Hydraulic oil cooler, Cab heater, Cab cooler, Fan, Radio AM FM, Fire extinguisher

#### ■ CARRIER

Maker and model	FAW CA5320JQZ
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#### ● Specification

Maximum traveling speed	70 km/h
Gradeability (tan $\theta$ )	29 % (computed at G.V.W. = 30900 kg)
Minimum turning radius (center of extreme outer tire)	11.0 m

#### ● General dimensions

Overall length	approx. 12,580 mm	
Overall width	approx. 2,500 mm	
Overall height	approx. 3,880 mm	
Wheel base	5,825 mm (4,475 mm+1,350 mm)	
Treads	Front	2,071 mm
	Rear	1,847 mm
Outriggers	Type	Hydraulic H-beam type (with float and vertical cylinder in single unit)
	Extended outriggers	6,100 mm (Fully extended) 4,100 mm (Intermediately extended)
Gross machine weight	Gross weight	approx. 30,900 kg
	Front weight	approx. 6,950 kg
	Rear weight	approx. 23,950 kg

#### ● Engine

Model	CA6DL1-28 (EURO-II)
Type	4 cycle, turbo charged, direct injection water cooled, diesel
Piston displacement	7.7 L
Max. power	206 kW / 2,300 min <sup>-1</sup>
Max. torque	1,100 N·m / 1,600 min <sup>-1</sup>

#### ● Equipment and structure

Drive system	6 × 4	
Clutch	Single dry plate, hydraulic control with air booster	
Transmission	Manual transmission type	
Number of speeds	8 forward & 1 reverse speed	
Axles	Front	Reverse "ELLIOT" type
	Rear	Full floating type with hub reduction
Suspension	Front	Leaf springs with shock absorber
	Rear	Equalizer beams and torque rods with leaf springs (with lockout device)
Brakes	Service	2 circuit air brake, 6 wheels internal expanding type
	Parking Emergency	Spring loaded brake 4 rear wheels, variable air operated
	Auxiliary	Exhaust brake
Steering	Type	Ball nut type with power booster
	Tire size	Front
Rear (dual tire)		11.00R20-16 PR
Fuel tank capacity	300 L	
Seating capacity	2 persons	
Battery	(12 V — 6-QAW-180) × 2	

#### ● Standard equipment

Towing hook (front and rear, eye type), Spare tire & wheel, Air dryer, Radio AM FM with cassette deck, Cigar lighter, Ashtray, Cab cooler, Cab heater

- Stow the hooks in place before traveling.
- Before you use this machine, read the precautions in the instruction manual thoroughly to operate it correctly.
- KATO products and specifications are subject to improvements and changes without notice.

**10.5 m — 33.0 m Boom**

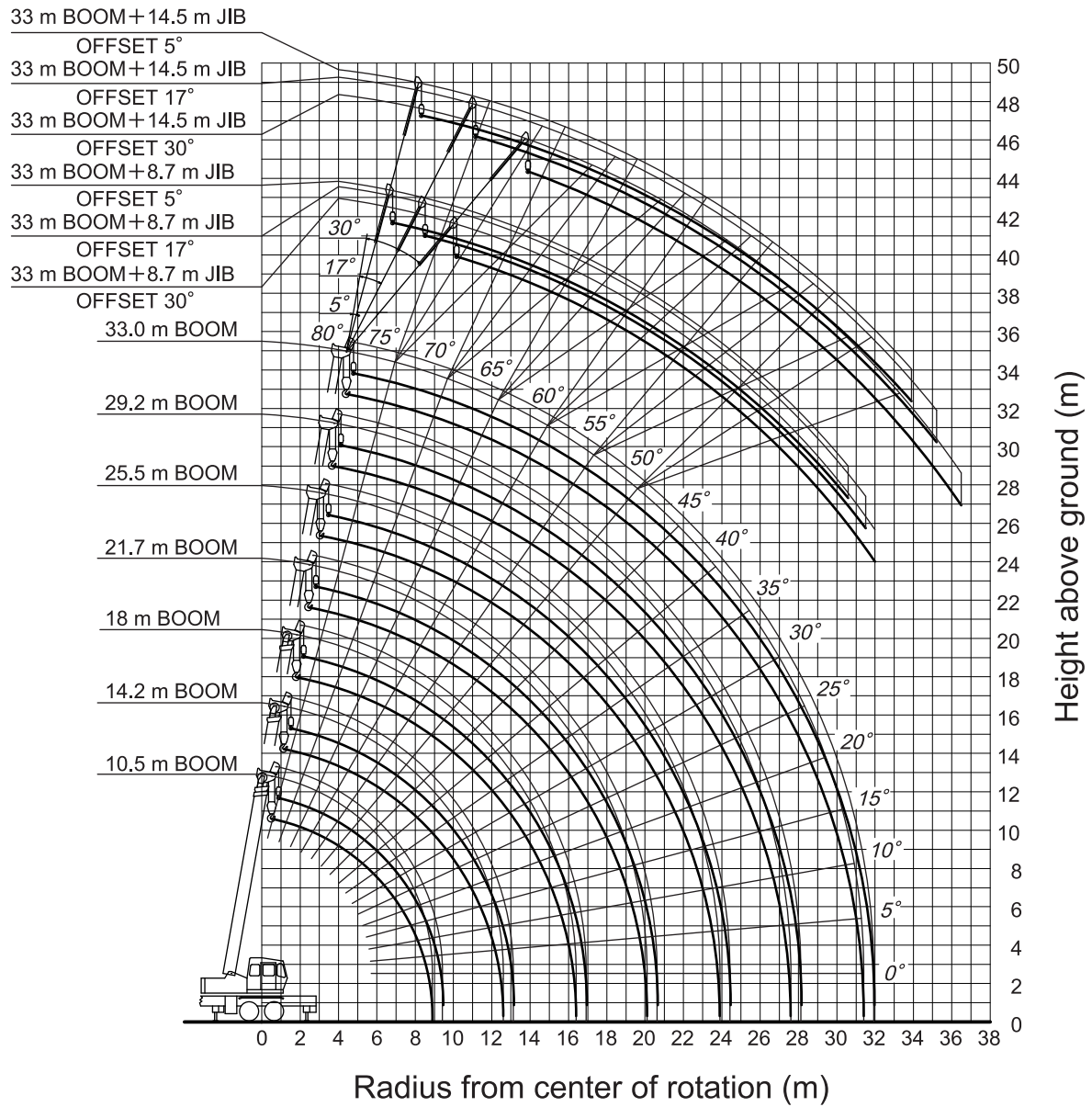
(Unit : Metric ton)

Outriggers fully extended with front jack - 360° full range Outriggers fully extended without front jack - over side and over rear							
Working radius(m)	10.5 m Boom	14.2 m Boom	18 m Boom	21.7 m Boom	25.5 m Boom	29.2 m Boom	33 m Boom
2.5	30.00	20.00	16.00				
3.0	30.00	20.00	16.00				
3.5	25.40	20.00	16.00	12.00			
4.0	22.90	20.00	16.00	12.00	11.50		
4.5	21.00	20.00	16.00	12.00	11.50		
5.0	19.40	18.40	16.00	12.00	11.50	9.00	
6.0	16.20	15.30	13.70	12.00	11.50	9.00	7.00
7.0	13.70	12.65	11.95	11.00	10.00	9.00	7.00
8.0	11.15	10.65	10.55	10.20	8.90	8.20	7.00
8.5	10.25	9.70	9.65	9.65	8.45	7.80	6.60
9.0		8.80	8.80	9.20	8.05	7.45	6.25
10.0		7.30	7.15	7.65	7.30	6.75	5.70
12.0		5.10	4.95	5.40	5.65	5.65	4.80
12.5		4.70	4.55	5.05	5.25	5.45	4.55
13.0			4.20	4.65	4.90	5.05	4.45
14.0			3.55	4.00	4.25	4.40	4.10
16.0			2.55	2.95	3.20	3.40	3.50
18.0				2.20	2.45	2.65	2.80
20.0				1.65	1.85	2.05	2.20
22.0					1.40	1.60	1.70
24.0						1.20	1.35
26.0						0.90	1.00
27.5						0.70	0.85
29.0							0.65
31.0							0.45
Standard hook	for 30 ton						
Hook mass	300 kg						
Parts of line	10	8		4			
Critical boom angle	—	—	—	—	—	—	—

(Unit : Metric ton)

Outriggers intermediately extended without front jack - 360° full range Outriggers fully extended without front jack - over front							
Working radius(m)	10.5 m Boom	14.2 m Boom	18 m Boom	21.7 m Boom	25.5 m Boom	29.2 m Boom	33 m Boom
2.5	25.00	20.00	16.00				
3.0	25.00	20.00	16.00				
3.5	25.00	20.00	16.00	12.00			
4.0	22.90	20.00	16.00	12.00	11.50		
4.5	17.35	16.20	16.00	12.00	11.50		
5.0	14.00	13.60	13.45	12.00	11.50	9.00	
5.5	11.60	11.40	11.20	12.00	11.50	9.00	
6.0	10.00	9.80	9.60	10.20	10.10	9.00	7.00
6.5	8.50	8.50	8.15	8.95	9.10	9.00	7.00
7.0	7.55	7.25	7.15	7.80	8.10	8.30	7.00
7.5	6.50	6.40	6.20	6.85	7.25	7.35	7.00
8.5	5.00	4.95	4.85	5.40	5.75	5.85	5.80
9.0		4.35	4.30	4.80	5.10	5.25	5.30
10.0		3.45	3.35	3.85	4.10	4.30	4.40
12.0		2.10	1.95	2.45	2.70	2.90	3.05
12.5		1.70	1.70	2.15	2.40	2.65	2.80
13.0			1.40	1.90	2.15	2.40	2.55
14.0			0.95	1.40	1.70	1.95	2.10
15.0			0.55	1.05	1.30	1.55	1.75
16.0				0.70	1.00	1.20	1.40
17.0				0.40	0.70	0.95	1.10
18.0					0.45	0.70	0.85
19.0						0.45	0.60
20.0							0.40
Standard hook	for 30 ton						
Hook mass	300 kg						
Parts of line	10	8		4			
Critical boom angle	—	—	—	25°	35°	42°	47°

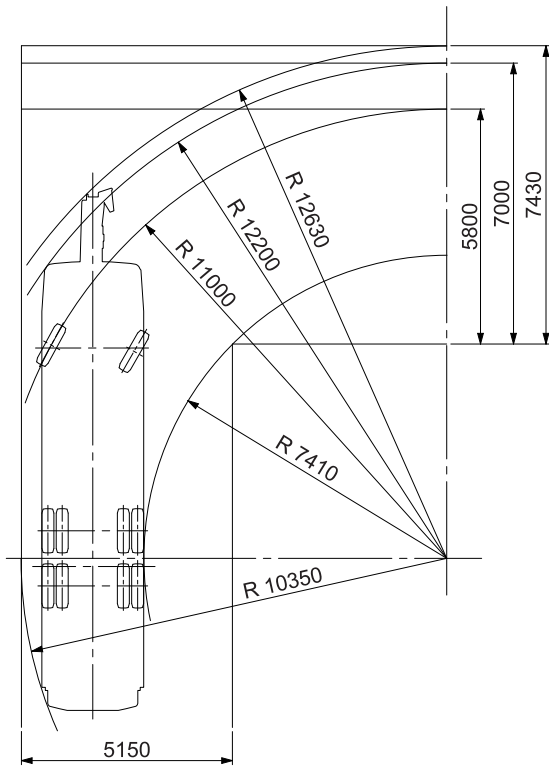
# WORKING RANGE



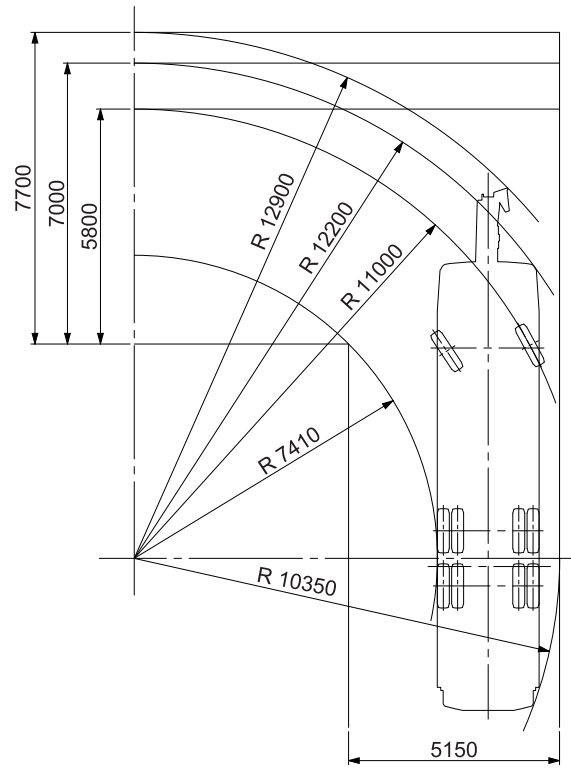
Note: Deflection of boom and jib excluded

# Minimum path width

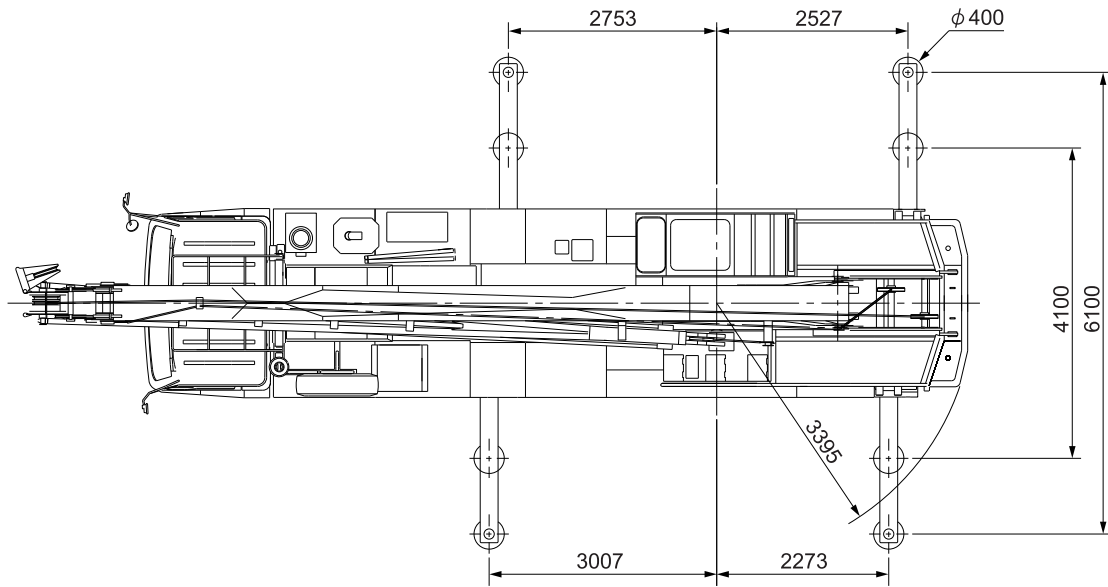
● Right turn



● Left turn

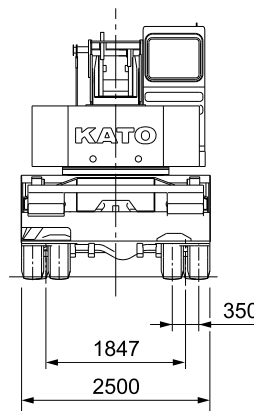
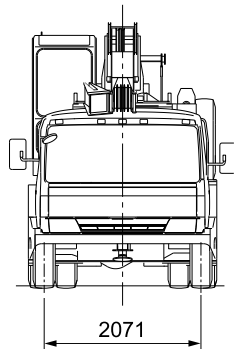
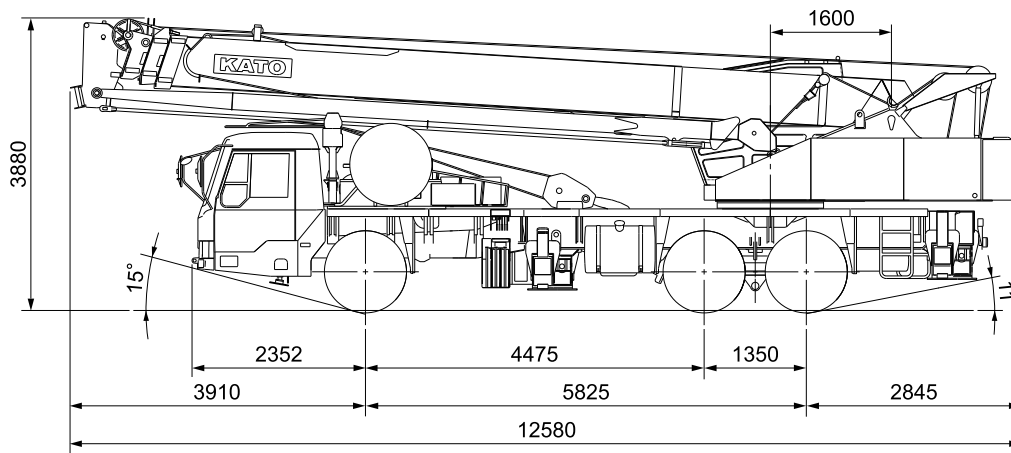


Overall view



Reduced scale: 1/100 Unit (mm)

## Overall view



Reduced scale: 1/100 Unit (mm)

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ISO 9001  
 BUREAU VERITAS  
 Certification



We acquired the "ISO 9001" certification which is an international standard for quality assurance.