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Starlifter



STARLIFTER CRANES

CX-3T CX-8T

Compact Crawler Cranes

**COMPACT AND TOUGH
IDEAL FOR RESTRICTED WORKING AREAS
SUITS ALL TYPES OF TERRAIN
HIGHLY MANOEUVRABLE
SUPER EFFICIENT**



Rugged, Versatile, Compact

Tight spots and rough terrain pose no problems for the CX-3T & CX-8T Starlifters. With 360° slew and telescopic boom providing accurate and safe load positioning, the compact and tough Starlifters excel in industry, mining and tunnelling, civil engineering, shipping and in military operations. Highly manoeuvrable, Starlifters provide unique lifting solutions, above or below ground... even afloat.

Starlifter CX-3T

Operating Weight:

Canopy, rubber tracks 3310kg(7300lbs)
Cabin, rubber tracks - 3480kg(7670lbs)

Engine:

Kubota V1305 water cooled 20kW
@ 2500rpm (26 bhp)

Electrics:

12 Volt system

Hydraulic System:

Pump - Tandem gear type.

29 +29 l/min @ 210 bar (7.6 + 7.6 US
galls/min @ 3090 psi)

Track Motors - Axial piston motor /
gearbox + motion control valve &
automatic fail to safe brake

Slew Motor - Axial piston motor /
gearbox + cross line relief valve

Winch Motor - Axial piston motor /
gearbox + overcentre valve + automatic
fail to safe brake

Derricking ram - 100mm (4") double
acting, built-in overcentre valve

Telescoping ram - (2 stage boom) -
60mm (2.5") double acting, built-in dual
overcentre valves

Hydraulic Power Take Off (PTO) -
(Optional) - 29 l/min @ 140 bar
(7.6 US galls/min @ 2060 psi)

Filtration - 10 microns absolute return
line filter

Controls:

Proportional double acting circuits.
2-4 way joystick control for derrick,
telescope, winch and slew
Hand lever control for tracks
Single lever control for PTO
Hand or foot operated engine
revolution accelerator

Sound Levels:

LWA 99.5 LPA 86

Safety Devices:

Mechanical boom angle/load indicator.
Warning alarm for tracking mode.
Mechanical anti-slew lock
Hydraulics' cut out lever on operators
entry/exit.
Hydraulic pressure relief valves throughout.

Automatic Safe Load Indicator or Moment
Limiter

Overcentre valves on winch and boom
- derrick and telescope.

Fail to safe brake on winch, slew & tracks.

Performance Data:

See full load chart in operators manual
for complete range of duties.

Boom:

Retracted - 3970mm (13' 0")

Extended - 6055mm (19' 9")

Boom angle - 0-58 degrees

Derricking time - 14 seconds (0-58°)

Telescoping time - 17 seconds

Hoisting speed - 27 metres/minute
(88' 7" / min)

Wire rope - 48M x ø10mm

36M drop on single fall

18M drop on 2 falls

12M drop on 3 falls

Machine Overall Dimensions:

Width 1890mm, Length 4520mm,
Height 2310mm,
Tail Rad. 1400mm, Legs deployed
footprint 1890 x 2400mm

Slew:

Continuous 360 degrees at 1.5 RPM

Gradability:

32 degrees - (58%)

Travel speed:

0 - 2.3 k/h (0-1.4mph)

Track Equipment:

Standard specification is for rubber
track with 100mm (4") pitch

Width - 320mm (12.5")

Ground Length - 1650mm (65")

Ground pressure (Canopy) -
0.31kg/cm² (4.5lbs/ins²)

Ground pressure (Cabin) -
0.33kg/cm² (4.7lbs/ins²)

Instruments:

Warning lights for ignition, engine temp.
& oil pressure, hours metre, machine
levelling indicator

Fuel Tank Capacity:

75 litres (19.8 US galls) Sight gauge for
level check

Hydraulic Reservoir:

120 litres (31.7 US galls) Sight gauge for
level check

Optional Equipment:

Hydraulic Power Take Off (PTO)

All weather cabin with "up & over"
opening front screen, polycarbonate
roof light, tinted glass, screen
wiper/wash, heater/blower

Air conditioned cabin

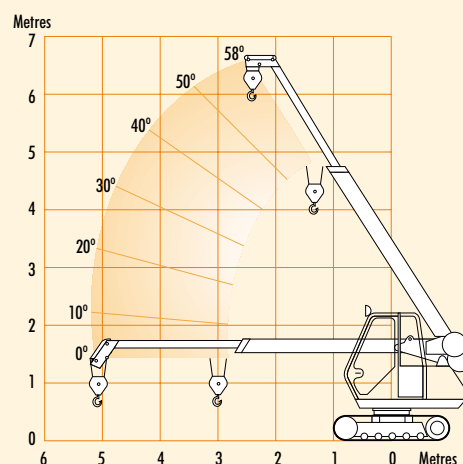
Steel track undercarriage - double bar
grouser 300mm (12") wide.

100mm (4") pitch

Dual fail to safe brake for winch

Overhoist limiter - anti-two (block to
block type)

Fly Jib - 2.4m (7' 10")



For operational interpretation of the chart depicted above,
refer to the table shown below.

CX-3T - TONNES SAFE WORKING LOAD

Boom angle	Boom min. extension			Boom max. extension		
	S.W.L. Kgs	Radius metres	No. of falls	S.W.L. Kgs	Radius metres	No. of falls
58°	3000	1.07	3	1300	2.30	2
50°	2380	1.35	3	1030	2.90	2
40°	1820	1.80	2	790	3.65	1
30°	1560	2.25	2	675	4.30	1
20°	1347	2.60	2	584	4.75	1
10°	1084	2.99	2	469	5.10	1
0°	1079	3.00	2	467	5.11	1

All Non-metric dimensions, volumes and weights are approximations.

Tight Spots and Rough

Cranes of Unique Capability

Starlifter CX-8T

Operating Weight:

Cabin, steel tracks/rubber shoes - 9030kg

Engine:

Kubota V2003T turbocharged water cooled engine 41.8kW @ 2800 rpm (56bhp)

Electrics:

12 Volt system

Hydraulic System:

Pump - Load sensing variable displacement, max. flow 140 litres/min, max. pressure 280 bar.

Track Motors - Two speed axial piston motor gearbox + cross line relief + fail to safe park brake

Slew Motor - Axial piston motor/gearbox + cross line relief + fail to safe park brake

Winch Motor - Gear motor/gearbox + overcentre + automatic fail to safe brake

Derricking ram - 125mm (5") double acting + built-in overcentre valve

Telescoping ram - 2 x 80mm (3.14") Double acting and built in overcentre valves

Stabilisers - 4 x 100mm (4")

Rams - Double acting + dual Pilot operated checks

Filtration - 10 microns absolute return line filter

Controls:

Electro-hydraulic proportional
Double acting circuits
2 x 4 way joystick control for derrick, telescope, winch and slew
Hand lever control for tracks
Interchanging with boom and winch control 4 x switch control for stabiliser legs

Cab:

All weather cabin, designed to ROPS & FOPS criteria
Tinted glass, up and over front
Front wiper and interior light
Opening window and protecting roof window
Full suspension and armchair control seat
Cab heater/blower, demist facility

Safety Devices:

Full safe load indicator, A2B block to block cutout
Winch wire out cutout
Armchair lever control cutout on

operator entry/exit

Mechanical slew lock pin (operated from within cab)

Total moment cutout limiter available (optional)

Safety valves throughout all lift functions and fail to safe brakes

Performance Data:

See full load chart in operators manual for complete range of duties.

Boom:

Retracted - 4350mm (14' 3")

Extended - 12600mm (41' 4")

4 stage boom,

2 stages - hydraulic cylinder operated

1 stage - wire rope operated

Maximum height under hook

12.5 metres

Boom Angle - 0-73°

Derricking time - 15 seconds (0-73°)

Up: 20 seconds, Down: 19 seconds

Telescoping time - Out: 37secs, In: 34secs

Hoisting speed - 40 metres/minute

Wire rope - 110M x ø13mm

48M drop on 2 falls

24M drop on 4 falls

Machine Overall Dimensions:

Width 2235mm, Length 5680mm,

Height 2550mm,

Tail Rad. 1560mm, Legs deployed

footprint 3480 x 3480mm

Slew:

Continuous 360° - at 3.0 RPM

Gradability:

32 degrees - (58%)

Travel speed:

0 - 4 k/h

Track Equipment:

Standard specification -

Steel tracks with bonded rubber shoes 135mm pitch

12 bottom rollers (6 per side)

2 top rollers (1 per side)

Shoe width 400mm (16")

Ground length 1925mm (6'4")

Ground pressure 0.58 KG/CM² (8.35lbs/in²)

Instruments:

Gauges for water temperature, engine oil pressure, warning lights for hydraulic filter bypass, hourmeter, machine levelling indicator, safe load indicator

Fuel Tank Capacity:

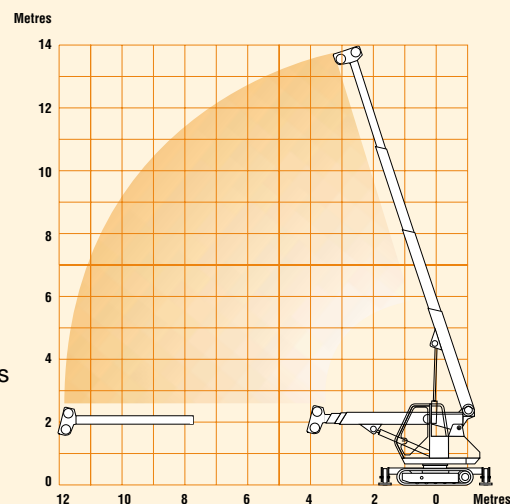
95 litres (25.0 US galls)

Hydraulic Reservoir:

160 litres (42.3 US galls)

Optional Equipment:

Cab air conditioning, steel track undercarriage, all rubber track, dual fail to safe on winch, fly jib 5.0m (16' 4")



For operational interpretation of the chart depicted above, refer to the table shown below.

CX-8T - RATED LIFTING LOADS IN TONNES

Working Radius Metres	Boom Length 4.5 metre Static Travel	Boom Length 7.2 metre Static Travel	Boom Length 9.9 metre Static Travel	Boom Length 12.6 metre Static Travel
2.0	8.0 2.7	6.0 1.7	- -	- -
3.0	5.0 1.3	5.0 1.4	5.0 1.1	- -
4.0	4.2 1.1	3.5 1.0	3.75 1.0	3.0 0.7
5.0	- -	2.5 0.7	2.5 0.7	2.4 0.67
6.0	- -	1.75 0.55	2.0 0.6	2.0 0.6
7.0	- -	- -	1.4 0.5	1.6 0.5
8.0	- -	- -	1.0 0.28	1.0 0.39
9.0	- -	- -	0.75 0.2	0.8 0.3
10.0	- -	- -	- -	0.55 0.15
11.0	- -	- -	- -	0.45 0.1
12.0	- -	- -	- -	0.36 0.08

CX-8T - RATED LIFTING LOADS IN TONNES (With 5m Fly Jib)

Working Radius Metres	Boom Length 9.5 metre Static*	Boom Length 12.2 metre Static*	Boom Length 14.9 metre Static*	Boom Length 17.6 metre Static*
2.2	1.2	-	-	-
4.5	1.2	1.2	1.2	1.2
6.0	1.12	1.12	1.12	1.12
8.0	0.83	0.83	0.83	0.83
11.0	-	0.61	0.61	0.61
13.0	-	-	0.38	0.38
15.5	-	-	-	0.14

* Static duties given in the above tables are with legs deployed.

Starlifter Cranes have a policy of continuous improvement and therefore reserve the right to change the specification without prior notice.

n Terrain... No Problem

OVERGROUND, UNDERGROUND, EVEN AFLOAT... STARLIFTERS PROVIDE UNIQUE LIFTING SOLUTIONS



CX-3T ▲
Air-lifted onto sluice gate headings for Shuttering & Formwork duties at Cardiff Barrage

CX-8T ▲
Operating in confined area on London's Dockland Light Railway - cut and cover tunnel ▶

CX-3T ▲
Riverbank piling duties along narrow canal banks with site accessed under low bridges ▼



▲
Afloat on the River Avon, a CX-8T works installing Interlocking sheet piling under the low headroom of a mainline London/East Coast railway bridge.

◀
A CX-8T being lifted into the underground access shaft for construction work on London's Jubilee Line extension.



A CX-8T operating underground at London's Westminster tube station with only 3.5 metres of working headroom. Three proximity cut-out switches wired to rubber faced nudge bars were fitted to the crane's boom to avoid damage to finished concrete.



CX-8T – Working under low headroom in Savile Row, London ▲



◀
Two CX-3T Starlifters manoeuvred 3.5 tonne acrylic panels into position providing safe viewing windows for tourists visiting new aquaria in the basement at London's old County Hall



CX-8T – Underground on the Heathrow Express project lifting 1 Tonne tunnel segments into position at a radius of 6.5m with boom at 10m, from adjacent rail position. ▲

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