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QY20B.5

Max. lifting capacity (t)20Max. lifting torque (kN.m)860Boom length (m)33Engine ModelSC8DK260Q3Rated Engine Power (kW)192

QY20G.5/QY20B.5

TRUCK CRANE



# Advanced in performance and reliable in quality with 5 highlights in the technology

Better performance, more reliable quality, and easier operation and maintenance, more energy-saving and better environmental protection.

#### **Highlight I: Better performance**

With the optimized machine layout and more reasonable stress on major load-bearing components, the lifting operation performance oversteps products with the same tonnage.

The mature boom technology is used for the inserted integration boom head, inserted boom block, special telescopic mechanism makes the telescoping of lifting beam more smooth and highly reliable.

The boom length covers the products of same tonnage in the market and increased 6% of the working condition coverage.

Through the optimized stress design, it uses the brand-new box-outriggers, and offers bigger span, stronger rigidity and better stability. Operation efficiency improved by 6%.

#### Highlight II: More reliable

Use of classic K-series telescopic jib technology makes operations safer and more reliable.

Carefully elaborated and the most complete safety device system in the industry ensures that lifting operations are safer and more reliable.

Braking safety of the vehicle is ensured by the comprehensively upgraded braking system, dual-loop pneumatic design and multiple systems.

The brand-new power steering mechanism enables vehicles to turn more lightweight, flexible and accurate with the use of the hydraulic assistant design and always safeguards the safety of vehicle.

The turntable with high rigidity and frame structure offers complete coordination between the strength and rigidity.

Fully automated welding and higher reliability have been achieved by the perfect fusion of the design and structural process.

#### Highlight III: Easier operation and control

The highly efficient and energy-saving load sensitive hydraulic system offers sensitive, comfortable operation and precision control, and possesses good micro-motion resistance.

The optimized push-pull operating device allows for easier operations.

The cab uses a front windscreen with large arc and creates wider vision for control.

Multi-stage adjustable swing reducer ensures that the swing system is more stable and reliable and offers higher efficiency.

#### Highlight IV: Easier maintenance

The pipeline of the brand-new optimized design provides a more scientific and reasonable layout, dramatically shortens time for the pipeline assembly and removal, reduces maintenance cost.

The comprehensively upgraded electrical system uses anti-creep plug-ins and has significantly extended the service life of the components.

With the use of K series rope anti-disorder technique, the lifting efficiency has been increased, the labor intensity reduced and the service life of rope extended.

The well designed telescopic wire rope guide and protection device prevented the wire rope from falling and being broken by crushing.

Full coverage aluminum alloy table provided the vehicle maintenance with a platform and efficiently protect vehicle components.

#### Highlight V: Energy-saving and better environment protection

It uses double control modular engine and and has a powerful dynamic, is economic and energy saving.

Under the economic mode, it can meet the demands using conventional lifting operation on the engine power, and effectively satisfy the requirements by the highly challenged and high efficient hoisting operations in high-power mode.

The powerful cooling device is used to avoid bad cooling of the system, settle the problem of oil overheating and extend the service time of hydraulic oil

The advanced technology of machine matching and a more scientific design is used to reduce, to reduce the consumption of mechanism, extend the service life of machine and offer the higher residual value rate of equipment.



<b>Sechnical Specific</b>	eations	QY20G.5	QY20B.5	
Item				Unit
	Overall length	12400	12400	mm
Dimensions	Overall width	2500	2500	
	Overall height	3320	3300	mm
	Operation mass in travel state	26020	26020	
Weight	Front axle load	6900	6900	kg
	Rear axle load	19120	19120	
	Engine model	WD615.92E / WD615.92A	SC8DK260Q3 / WD615.327 / SC8DK260Q3	
Power	Engine rated output	196/2200 198/2200	192/2200 198/2200 192/2200	
	Engine max torque	1000/1100~1600 1150/1100~1600	1000/1400 1150/1100~1600 1000/1400	N.m/(r/min)
	Max.travel speed	75	75	
Travel	Min.turning diameter	20	20	m
	Min.ground clearance	270	272	
	Approach angle	16	21	٥
	Departure angle	13	11	
	Max.gradeability	30	35	%
	Fuel consumption per 100km	35	35	
	Max.total rated lifting load	20	20	t
	Min.rated working radius	3	3	
	Turning radius at turntable tail	3.385	3.385	m
Lifting performance	Max.load moment of base boom	860	860	
	Lifting height of base boom	10.06	10.06	m
	Lifting height of full-extended boom	32.76	32.76	
	Lifting height of full-extended boom+jib	42.12	42.12	m
	Outrigger longitudinal span	4.97	4.97	
	Outrigger lateral span	5.4	5.4	m
	Boom luffing time	75	75	
Working speed	Boom full luffing time	95	95	s
	Max.slewing speed	3	3	
	Max. speed of main hoist mechanism with full load/empty load(sing	gle rope) 65/100	65/100	m/min
	Max. speed of auxiliary hoist mechanism with full load/empty load(	(single rope) 65/100	65/100	

## QY20G.5/QY20B.5 **Truck Crane**

## **QY20G.5 Total Rated Lifting Load**

Total	rated l	ifting lo	ad for boo	om								
		Wi	thout the 5th	outrigge	r,boom at th	e side or	the rear,or v	with the 5t	h outrigger	,360°Glob	al change	
Working radiu	S						Boom lengtl	h				
( m )	10.	5m	15.	.0m	19.	5m	24	.0m	28	.5m	33	.0m
	Lifting Load I	Lifting Height ( m )	Lifting Load I ( kg )	Lifting Height ( m )	Lifting Load I ( kg )	Lifting Height ( m )	Lifting Load (	Lifting Height ( m )	Lifting Load ( kg )	Lifting Height ( m )	Lifting Load ( kg )	Lifting Height ( m )
3.0	20000	10.06	14600	14.92	12200	19.59						
3.5	20000	9.79	14600	14.74	12200	19.46						
4.0	19300	9.49	14600	14.55	12200	19.32	10800	23.98				
4.5	18700	9.15	14600	14.33	12200	19.16	10800	23.86				
5.0	17200	8.76	14200	14.09	12200	18.98	10500	23.71	8200	28.37		
5.5	15400	8.32	13600	13.83	12000	18.79	10200	23.56	8100	28.25		
6.0	13300	7.81	13200	13.54	11500	18.58	9800	23.40	8000	28.11	6500	32.76
6.5	11800	7.23	12200	13.23	11000	18.36	9200	23.23	7600	27.96	6500	32.63
7.0	10500	6.55	10800	12.89	10500	18.12	8700	23.04	7200	27.81	6200	32.50
8.0	8500	4.70	8700	12.11	8800	17.59	8000	22.62	6700	27.47	5700	32.21
9.0			7000	11.18	7200	16.97	7200	22.15	6200	27.08	5200	31.89
10.0			5900	10.06	6100	16.27	6200	21.63	5700	26.66	4700	31.52
12.0			4200	6.78	4400	14.54	4400	20.37	4500	25.66	4000	30.69
14.0					3500	12.23	3400	18.82	3500	24.46	3400	29.70
16.0					2500	8.86	2600	16.88	2700	23.00	2700	28.52
18.0							2000	14.38	2100	21.27	2100	27.14
20.0									1600	19.15	1700	25.53
22.0									1300	16.50	1300	23.63
24.0									900	12.99	1000	21.37
26.0											700	19.61
Parts of line		7		6		6		4		3	;	3
Weight of he	ook block					230kg						

	Boor
je	
0m	

Maria de la companione			Boom le			
Working radius ( m )		alf-extend		00 /		•
( 111 )	10.5m	15.0m	19.5m	24.0m	28.5m	33.0m
3.0	16000	11000	8500			
3.5	16000	11000	8500			
4.0	15000	11000	8500	7500		
4.5	13000	10000	8500	7500		
5.0	11000	10000	8000	7500	6000	
5.5	9500	8000	7500	7500	6000	
6.0	8000	6500	6500	6700	6000	5000
6.5	6000	5400	5300	5400	5300	5000
7.0	5500	4500	4400	4400	4200	4000
8.0	4000	3400	3300	3300	3200	3000
9.0		2500	2500	2500	2400	2300
10.0		1800	1900	1900	1900	1800
12.0		1200	1300	1300	1200	1200
14.0			800	800	800	700

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80	3000	2000	1550	
78	2850	2000	1550	
76	2750	1850	1450	
74	2650	1800	1400	
72	2550	1750	1350	
70	2400	1600	1300	
68	2300	1550	1250	
66	2150	1450	1200	
64	2000	1350	1150	
62	1850	1250	1100	
60	1700	1150	1050	
58	1600	1050	1000	
56	1450	1000	950	
54	1250	950	900	
52	1100	900	850	
50	980	850	700	
45	700	550	500	
40	500	450	400	

Without the 5th outrigger, boom at the side or the rear, Boom at the side or the rear, or with the 5th outrigger, 360° Global change Boom 33.0m+Jib 8.3m

Jib offset 15°

300

Jib offset 30

250

Total rated lifting load for jib

Jib offset 0°

350

35

### **QY20B.5 Total Rated Lifting Load**

	Fully ex	tended o	utrigger -	Global	change.			Out	trigger fully	extend, from	nt	
Vorking radius		Boon	n length						В	oom length		
( m )	10.5m	15.0m	19.5m	24.0m	28.5m	33.0m	10.5m	15.0m	19.5m	24.0m	28.5m	33.0r
3.0	20000	14600	12200				20000	14600	12200			
3.5	20000	14600	12200				20000	14600	12200			
4.0	19300	14600	12200	10800			19300	14600	12200	10800		
4.5	18700	14600	12200	10800			18700	14600	12200	10800		
5.0	17200	14200	12200	10500	8200		15200	14200	12200	10500	8200	
5.5	15400	13600	12000	10200	8100		12200	12600	12200	10200	8100	
6.0	13300	13200	11500	9800	8000	6500	9600	10200	10500	9800	8000	650
6.5	11800	12200	11000	9200	7600	6500	7800	8700	8800	9000	7600	650
7.0	10500	10800	10500	8700	7200	6200	6800	7300	7600	7600	7200	620
8.0	8500	8700	8800	8000	6700	5700	5000	5600	5600	5800	5800	570
9.0		7000	7200	7200	6200	5200		4200	4500	4600	4700	480
10.0		5900	6100	6200	5700	4700		3500	3500	3600	3800	380
12.0		4200	4400	4400	4500	4000		2100	2500	2700	2600	260
14.0			3500	3400	3500	3400			1500	1600	1800	170
16.0			2500	2600	2700	2700			1000	1200	1300	130
18.0				2000	2100	2100				750	800	80
20.0					1600	1700					500	55
22.0					1300	1300						
24.0					900	1000						
26.0						700						

Working radius		Half	-extended o	utrigger, sl	lewing	
( m )	10.5m	15.0m	19.5m	24.0m	28.5m	33.0m
3.0	16000	11000	8500			
3.5	16000	11000	8500			
4.0	15000	11000	8500	7500		
4.5	13000	10000	8500	7500		
5.0	11000	10000	8000	7500	6000	
5.5	9500	8000	7500	7500	6000	
6.0	8000	6500	6500	6700	6000	5000
6.5	6000	5400	5300	5400	5300	5000
7.0	5500	4500	4400	4400	4200	4000
8.0	4000	3400	3300	3300	3200	3000
9.0		2500	2500	2500	2400	2300
10.0		1800	1900	1900	1900	1800
12.0		1200	1300	1300	1200	1200
14.0			800	800	800	700
Override	7	6	6	4	3	3
Weight of hook b	olock		230kg			

Total rated lifting load for jib									
Full-extended outrigger, with boom at the side or the rear									
Boom angle Boom 33.0m+Jib 8.3m									
(°)	Jib o	offset 0°	Jib offs	et 15°	Jib o	ffset 30°			
	侧后方	前方	侧后方	前方	侧后方	前方			
80	3000	3000	2000	2000	1550	1550			
78	2850	2850	2000	2000	1550	1550			
76	2750	2750	1850	1850	1450	1450			
74	2650	2650	1800	1750	1400	1400			
72	2550	2550	1750	1650	1350	1350			
70	2400	2400	1600	1500	1300	1300			
68	2300	1950	1550	1300	1250	1250			
66	2150	1550	1450	1250	1200	1200			
64	2000	1250	1350	1050	1150	1000			
62	1850	1050	1250	900	1100	850			
60	1700	850	1150	800	1050	650			
58	1600	650	1050	650	1000	500			
56	1450	500	1000	500	950	400			
54	1250	400	950	400	900	300			
52	1100	300	900	300	850	250			
50	980	200	850	200	700	200			
45	700		550		500				
40	500		450		400				
35	350		300		250				
30	200								
Override			1						
Weight of hook	block		59kg						

- The rated lifting load listed in the table is max. allowable value (including the weight of hook block and other slings); working radius is the actual value including boom deformation; the operations can only be performed when wind speed is below 5 level (14.1m/s).
  The tatol rated load is the max.lifting capacity for the boom head without jib,when jib is attached on boom head, the weight of jib should be reduced from the total rated load for boom.
- Take the above tables as reference only, see the product operation manual for details.