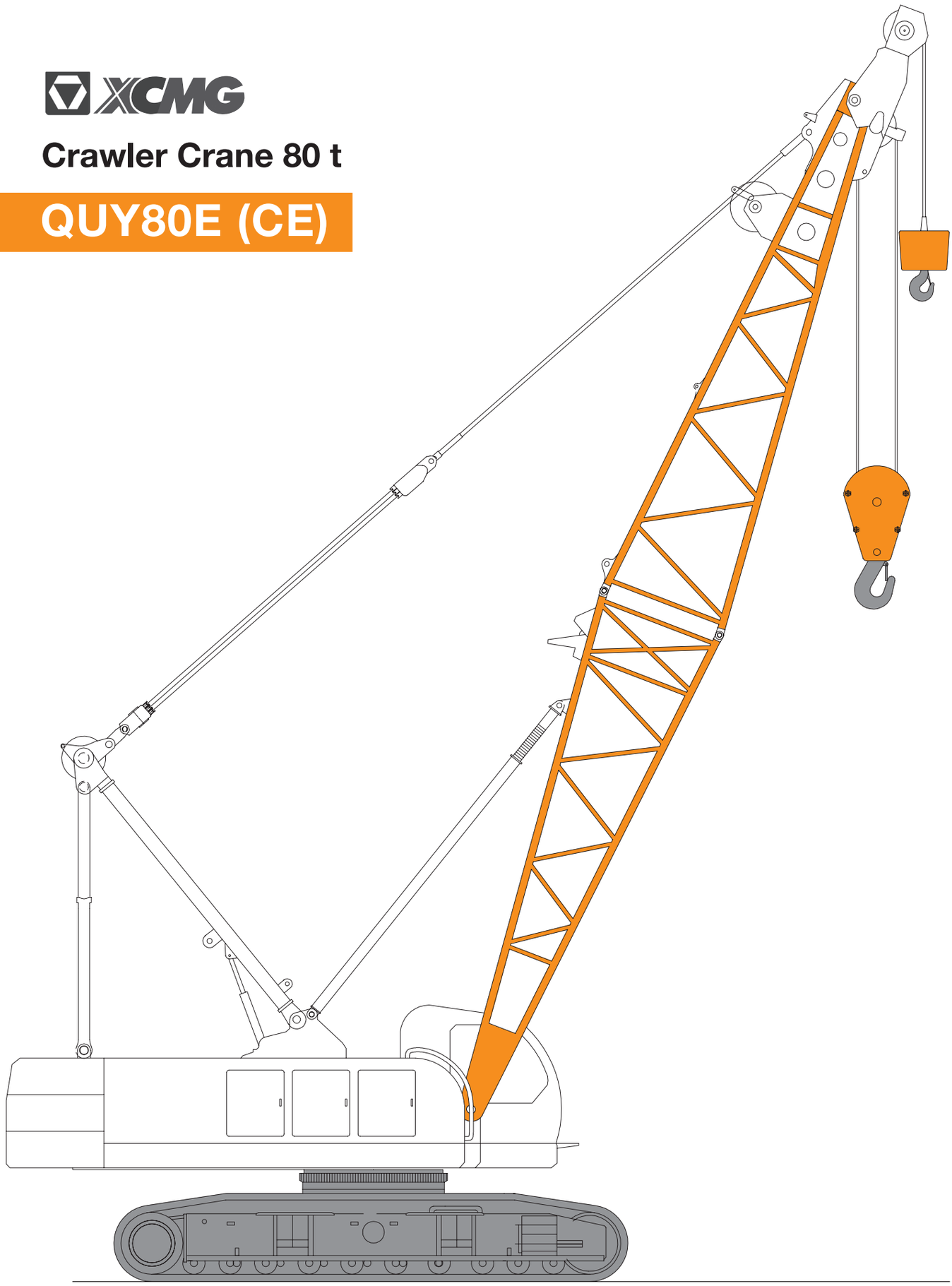
XCMG

Crawler Crane 80 t

QUY80E (CE)



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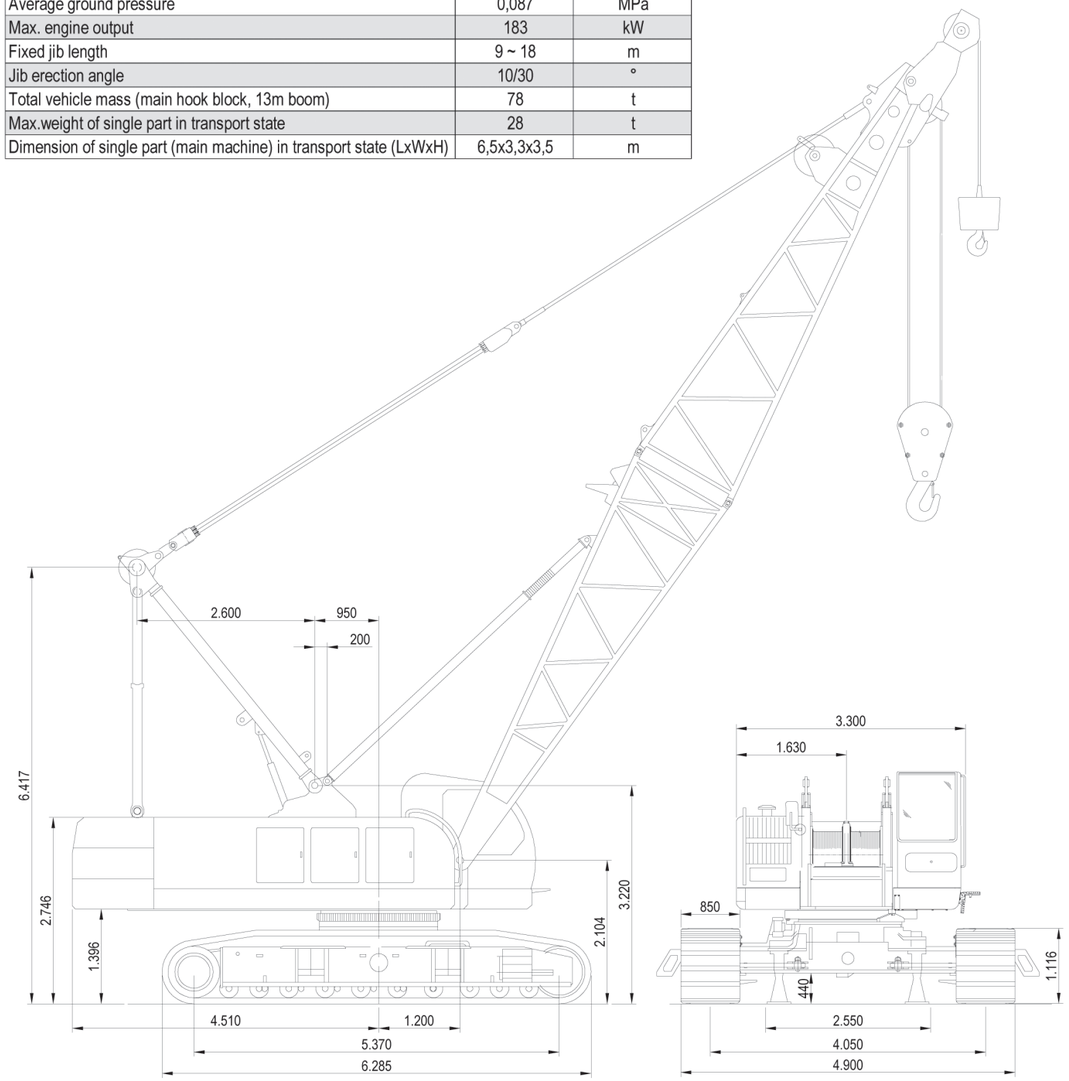
SALES • SERVICE • SPARE PARTS

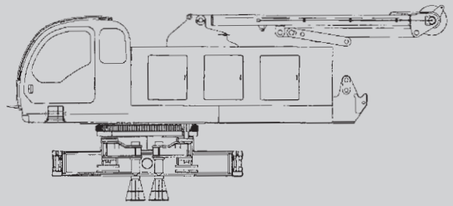
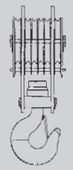
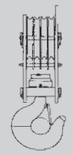
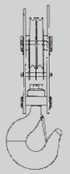
CLASS 80 t

CRAWLER CRANE QUY80E CE

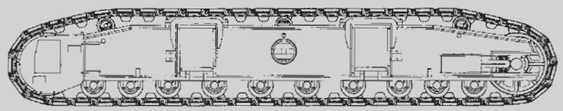
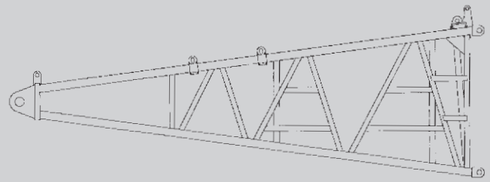
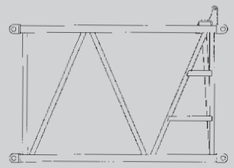
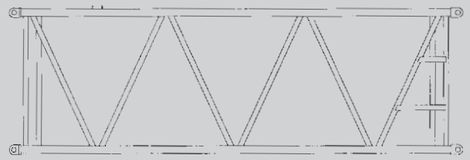
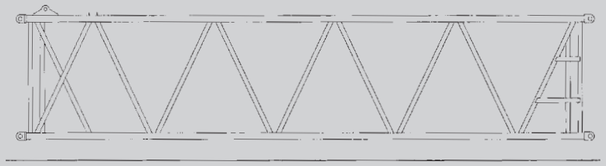
Main Technical Specifications		
Item	**Data**	**Unit**
Max. lifting capacity	80	t
Max. Load moment	3375	kN/m
Main boom length	13 ~ 58	m
Main boom angle	30 ~ 80	°
Single line speed main winch system	0 ~120	m/min
Single line speed aux. Winch system	0 ~120	m/min
Single line speed elevating system	0 ~ 57	m/min
Grade-ability	30	%
Swing speed	0 ~ 2	r/min
Travel speed	0 ~1,2	km/h
Average ground pressure	0,087	MPa
Max. engine output	183	kW
Fixed jib length	9 ~ 18	m
Jib erection angle	10/30	°
Total vehicle mass (main hook block, 13m boom)	78	t
Max.weight of single part in transport state	28	t
Dimension of single part (main machine) in transport state (LxWxH)	6,5x3,3x3,5	m

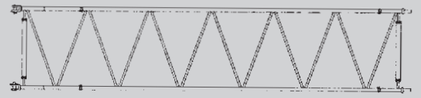


Main Parts

	Main Unit	x 1
	L	7800mm
	W	3400mm
	H	3350mm
	Weight	28000kg
	80t - 6 sheaves Capacity Hook Block	x 1
	L	1800mm
	W	800mm
	H	700mm
	Weight	890kg
	50t - 4 sheaves Capacity Hook Block	x 1
	L	1720mm
	W	800mm
	H	600mm
	Weight	725kg
	26t - 2 sheaves Capacity Hook Block	x 1
	L	1650mm
	W	800mm
	H	600mm
	Weight	434kg
	8t Capacity Hook Block	x 1
	L	700mm
	W	400mm
	H	400mm
	Weight	235kg
	Superstructure counterweight	x 1
	L	3300mm
	W	1200mm
	H	460mm
	Weight	9100kg
	Superstructure counterweight	x 1
	L	3300mm
	W	1200mm
	H	430mm
	Weight	9000kg

Main Parts

	Superstructure counterweight III	x 1
	L	3300mm
	W	1200mm
	H	440mm
	Weight	8900kg
	Track Frame	x 2
	L	6300mm
	W	1100mm
	H	1100mm
	Weight	9500kg
	6.5 Boom Butt	x 1
	L	6705mm
	W	1630mm
	H	2000mm
	Weight	1200kg
	3 Boom Insert	x 1
	L	3130mm
	W	1630mm
	H	1780mm
	Weight	400kg
	6 Boom Insert	x 1
	L	6130mm
	W	1630mm
	H	1780mm
	Weight	700kg
	9 Boom Insert	x 1
	L	9130mm
	W	1630mm
	H	1780mm
	Weight	1000kg
	6.5 Boom top	x 1
	L	6975mm
	W	1630mm
	H	1780mm
	Weight	1500kg

	4.5 Fixed Jib Butt	x 1
	L	4700mm
	W	900mm
	H	900mm
	Weight	420kg
	4.5 Fixed Jib Insert	x 1
	L	4610mm
	W	900mm
	H	900mm
	Weight	350kg
	4.5 Fixed Jib top	x 1
	L	4960mm
	W	900mm
	H	900mm
	Weight	280kg

Notes

- The above part figures are only sketch maps, which are not drawn on actual sizes. The dimensions shown are design values and don't include package.
- The weight is design value, may have sl ight difference due to error in manufacture.

Detailed Introduction

Engine

QUY8OE: a Cummins original 6-cylinder, water-cooled, supercharging and intercooled electric jet QSC engine with rated output power 183kW, rated speed 2000 rpm and maximum output torque 1268N.m. Its emission complies with the Euro III standard.

Control System

Intelligent computer integrated programmable control system is the key technology of the crane. PLC programmable controller is used, in combination with conventional electrics, to realize the logic and the hydraulic proportional control functions of the system, and to improve safety, reliability and efficiency of the crane operation. Crane operation can be shown by a large computer display, which is convenient for man-machine interaction.

Hydraulic System

It takes hydraulic proportional control, close/open type circuit, constant power and variable displacement pump system.
Hydraulic system: winch system, elevating system, slewing system, propel system, auxiliary assembly system.
Features: winch, elevating and propel systems use open type system; main pump is a constant power and variable displacement pump, wherein, variable displacement is controlled by hydraulic pilot, with the function of power limit and pressure cut-off. Main pump may satisfy the requirement of multiple actuator movement. Slewing system takes close type system, with the advantages of quick response, accurate control, stable starting, braking and direction changing, no impact, can satisfy the operation of frequent direction changing and fine motion.

Winch System

The main and auxiliary winch system of QUY80E are driven independently. This model takes disc type constant closed brake and Rexroth built-in speed reducer. The main/auxiliary winches are connected with turntable by pin shafts, easy for assembly. The driving motor and balance valve are both Germany imported. The maximum speed is 120m/min, with good fine speed performance. The winch system also features easy oil replacement, low noise, high efficiency and long service life.

Elevating System

QUY8OE: Boom elevating is driven separately and has built-in speed reducer (Rexroth), and disc-type constant closed brake; winch drum has a ratchet locking device to realize safely and reliably mechanical braking. Driving motor and balance valve are both imported from Germany.

Slewing System

QUY8OE: Slewing system is arranged at the left of the turntable. The planetary reducer (Rexroth) is internal meshed with the slewing ring. It has the function of hydraulic buffering and free sliding. Controllable constant -closed disc brake of the planetary reducer works reliably and is easy for maintenance.

Slewing Bearing

Slewing bearing is made by Rothe Erde, with stable and reliable quality.

Superstructure Counterweight

Superstructure Counterweight I: 1 slab
Superstructure Counterweight II: 1 slab
Superstructure Counterweight III: 1 slab

Operator's Cabin

Operator's cabin is steel frame structure. Its front windshield is provided with overall sandwich glass, other glass is all hardened glass. Equipped with adjustable seat, a set of ergonomic designed instruments and control devices, air-conditioner, CD player, fire extinguisher, etc.

Turntable

Turntable is a mixed structure of box type and single web plate, with good overall stability. Turntable is a key structural part linking crane superstructure with and crane carrier for load bearing. It connects with the carrier through slewing bearing. Operator's cabin, winch system, elevating system, engine, gantry, mast, boom and counterweight etc. respectively connect with the turntable at different positions.

Lower structure

Lower structure comprises car-body, track frame, and propel unit.
Car-body and track frame take insert-type connection. Track frame has the function of telescoping.

Car-body

Car-body uses high strength steel box-shape structure. With cross panel installed in the middle to strengthen its stiffness against torsion, it features simple structure, high loading capacity and well rigidity.

Track Frame

Track frame consists of track beam, drive sprocket, idler wheel, upper roller, lower roller and track. Crawler beam takes box-shape structure. Its connection position with frame is strengthened partially, and cross panel is installed in the middle of it. Two track frames are symmetrically arranged, with track blocks of 0.76m width.

Propel Unit

Propel unit has Germany imported built-in planetary gear reducer and hydraulic release service brake; can be operated synchronously or independently to realize straight traveling and turning around. Each reducer is driven by German imported axial piston motor.

Traveling Speed

Variable displacement pump can realize infinite variable speed whose maximum value is 1.2 km/h.

Lifting Operation Parts

Lifting boom comprises main boom and fixed jib, both of which are lattice structure of four tubular chords with intermediate equal section and two end variable section, wherein, main boom chord use imported high strength tube and web rod use domestic high quality tube.

Boom

Main boom is the lattice structure of intermediate equal section and two end variable section and welded by steel tubes. Boom top and boom foot are reinforced by steel plates for load transfer and boom is equipped with single top, boom length: 13m - 58m. Construction: boom butt 6.5m, boom insert 3m x 1 , boom insert 6m x 1, boom insert 9m x 4, boom top 6.5m.

Fixed Jib

Fixed jib is the lattice structure of intermediate equal section and two end variable section and welded by steel tubes. Jib top and jib foot are reinforced by steel plates for load transfer.
Fixed jib can be operated within the range of boom length 37 -52m, and lifting operation length is 9- 18m, with two offset angles of 10" and 30".
Fixed jib is connected with boom by supporting strut and front and rear guy cables, and reach its working radius with raising and lowering of boom elevating system.
Construction: jib butt 4.5m, jib insert 4.5m x 2, jib top 4.5m.

Gantry

Gantry is one of the important structural parts, its front part is box-type structure of twin tubular chord and equipped with oil cylinder for lifting and lowering gantry and the rear part is folded pendant.

Hook Block

Standard configuration: 80t capacity hook block, 50t capacity hook block, 26t capacity hook block and 8t capacity hook block.

Safety Devices

Safety devices comprise: load moment limiter Krueger Mark 4K, turntable lock pin, boom backstop, height limiter, anemometer, level gauge, hydraulic overflow valve, balance valve, two-way hydraulic lock, slewing warning, travel warning, monitor, etc.

Load Moment Limiter: Krueger Mark 4K

Detection function: automatically detect boom angle and lifting load.
Display function: real time display current actual load, working radius and boom angle.
Warning function: automatically send out warning signal and stop crane operation when detecting actual load exceeding rated load and boom out of limit angle.

Main/Auxiliary Winch Over-Wind Protection Device

When main/auxiliary winch hoists up to a certain lifting height, an over-wind warning lamp on instrument panel lights on, at the same time, load moment limiter stops crane operation.

Main/Auxiliary Winch Over-Release Protection Device

When access switch in winch drum detects only three turns of wire rope left on the drum, an over-release warning lamp on instrument panel lights on, at the same time, load moment limiter stops crane operation.

Winch Ratchet Locking Device

Winch drum has a ratchet locking device which must be turned on when lowering boom, otherwise boom cannot be lowered. The device is used to stow the boom for safety.

Boom Angle Limit

When boom angle is more than 80°, load moment limiter and hoist limit switch stop boom rising. When boom angle is less than 30°, load moment limiter stops boom lowering.

Audio/Video Warning

When crawler crane is moving and stewing, there is light and sound for warning.

LMI Tricolor Warning Lamp

The lamp comprises 3 colors, when crane loading is below 90% of total rated lifting load, "Green Lamp" lights on to indicate that crane is running in safety; when crane loading is in 90%- 100% of total rated lifting load, "Yellow Lamp" lights on to indicate that crane is close to total rated lifting load; when crane loading is above 100%- 105% of total rated lifting load, both "Red Lamp" and "Yellow Lamp" light on to indicate that crane is overloaded. In dangerous area, control system can automatically cut off crane movement to dangerous direction.

Illumination Lamp

There are illumination lamps at the front of turntable, on boom and inside operator's cabin for night operation.

Height Mark Lamp

Boom tip has a height mark lamp for high-level operation warning.

Anemometer

Anemometer at boom head can detect current wind speed and send wind signal to a monitor in operator's cabin to alert operator for safety.

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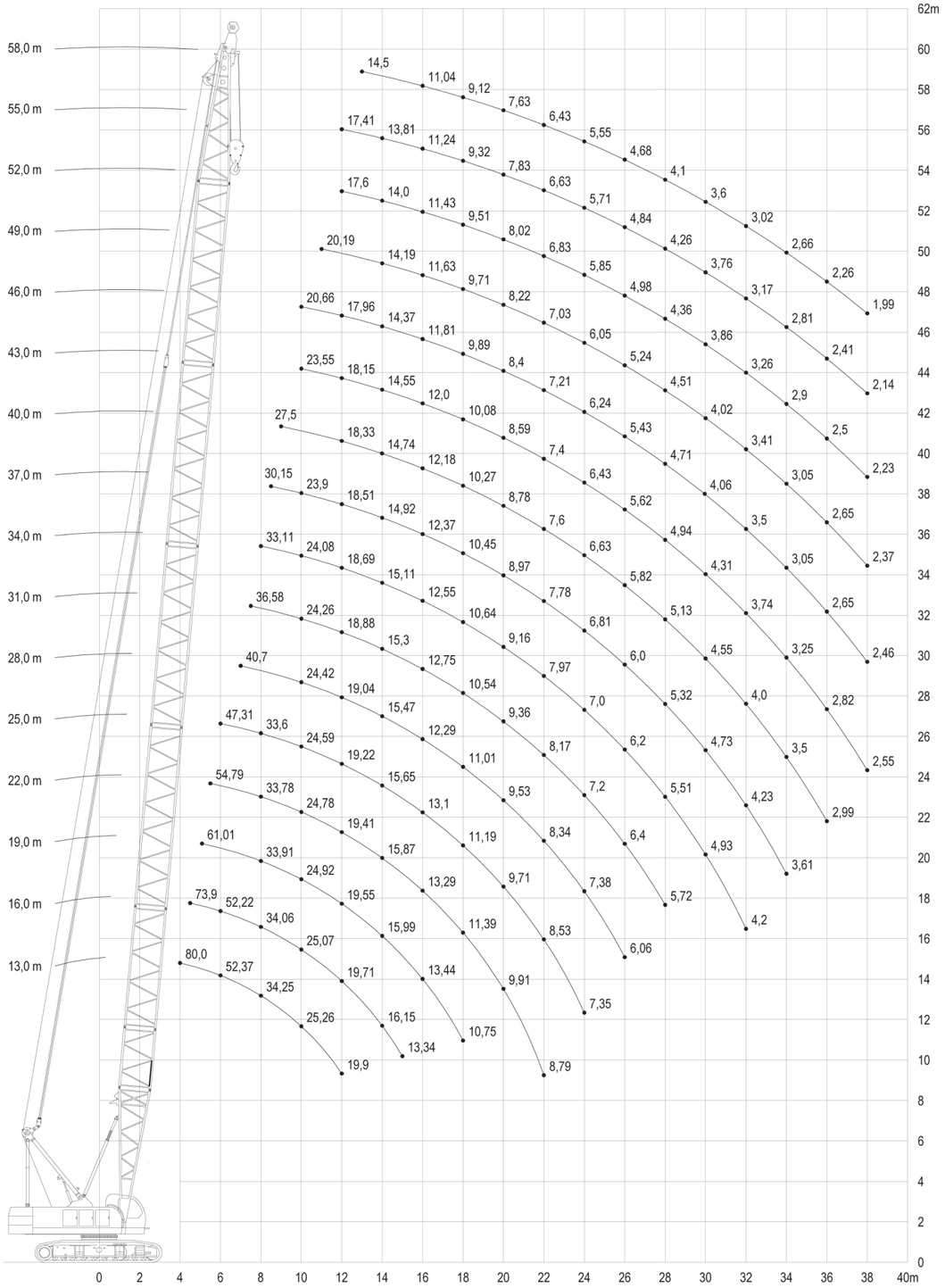

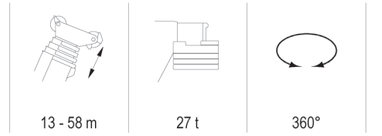

Mainboom

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	4,0	4,3	4,5	5,0	5,5	6,0	6,5	7,0	7,5	8,0	8,5	9,0	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32	34	36	38
13	80,0	80,0	76,0	64,5	60,2	52,3	46,3	41,4	37,5	34,2	31,4	29,1	25,2	22,3	19,9															
16			73,9	64,4	60,1	52,2	46,1	41,3	37,3	34,0	31,3	28,9	25,1	22,1	19,7	17,7	16,1	13,3												
19				61,0	60,0	52,1	46,0	41,1	37,2	33,9	31,1	28,7	24,9	21,9	19,5	17,6	16,0	14,6	13,4	10,7										
22					54,8	52,0	45,9	41,0	37,0	33,8	31,0	28,6	24,8	21,8	19,4	17,4	15,9	14,5	13,3	11,4	9,9	8,8								
25						47,3	45,7	40,8	36,0	33,6	30,8	28,4	24,6	21,6	19,2	17,3	15,6	14,3	13,1	11,2	9,7	8,5	7,3							
28								40,7	36,7	33,4	30,6	28,3	24,4	21,4	19,0	17,1	15,5	14,1	12,3	11,0	9,5	8,3	7,4	6,0						
31									36,6	33,3	30,5	28,1	24,2	21,3	18,9	16,9	15,3	13,9	12,7	10,5	9,3	8,2	7,2	6,4	5,7					
34										33,1	30,3	27,9	24,1	21,1	18,7	16,7	15,1	13,7	12,5	10,6	9,1	7,8	7,0	6,2	5,5	4,9	4,2			
37											30,1	27,8	23,9	20,9	18,5	16,5	14,9	13,5	12,4	10,4	9,0	7,8	6,8	6,0	5,3	4,7	4,2	3,6		
40												27,5	23,7	20,7	18,3	16,4	14,7	13,3	12,2	10,3	8,8	7,6	6,6	5,8	5,1	4,5	4,0	3,5	3,0	
43													23,5	20,5	18,1	16,2	14,5	13,2	12,0	10,1	8,6	7,4	6,4	5,6	4,9	4,3	3,7	3,2	2,8	2,5
46													20,6	20,3	17,9	16,0	14,4	13,0	11,8	9,9	8,4	7,2	6,2	5,4	4,7	4,1	3,5	3,1	2,7	2,4
49														20,2	17,8	15,8	14,2	12,8	11,6	9,7	8,2	7,0	6,0	5,2	4,5	4,0	3,4	3,0	2,6	2,4
52															17,6	15,6	14,0	12,6	11,4	9,5	8,0	6,8	5,8	5,0	4,3	3,8	3,2	2,9	2,5	2,2
55															17,4	15,4	13,8	12,4	11,2	9,3	7,8	6,6	5,7	4,8	4,2	3,7	3,2	2,8	2,4	2,1
58																14,5	13,6	12,2	11,0	9,1	7,6	6,4	5,5	4,7	4,1	3,6	3,0	2,6	2,2	2,0

Boom length in m	13	16	16	19	22	25	28	31	34	37	40	43	46	49	52	55	58
Parts of line	12	11	10	9	8	7	6	5	5	4	3	3	3	3	3	3	2

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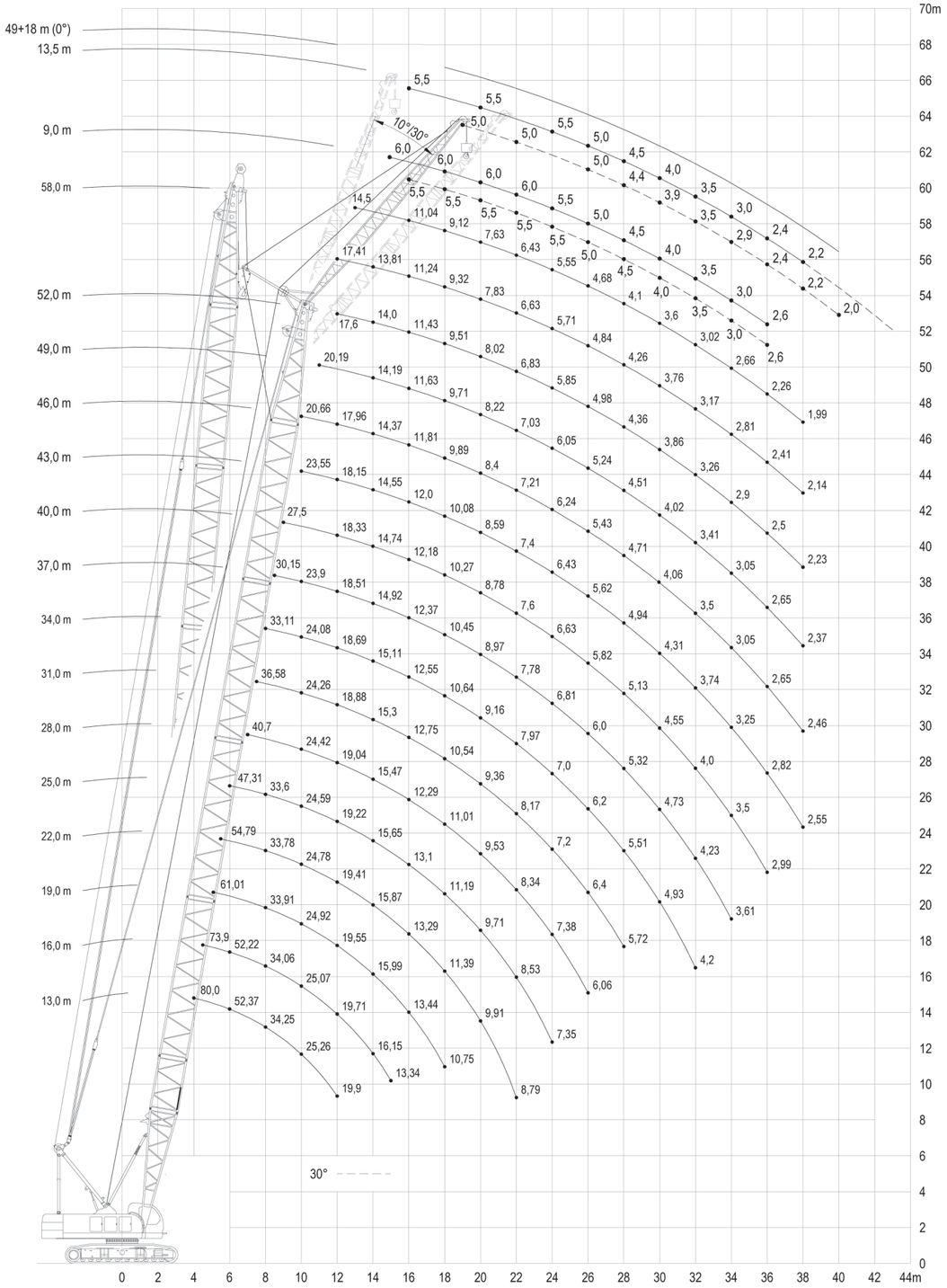

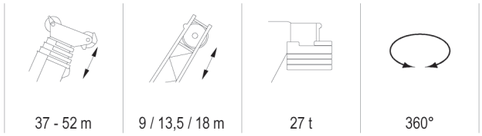

Mainboom with fixed jib

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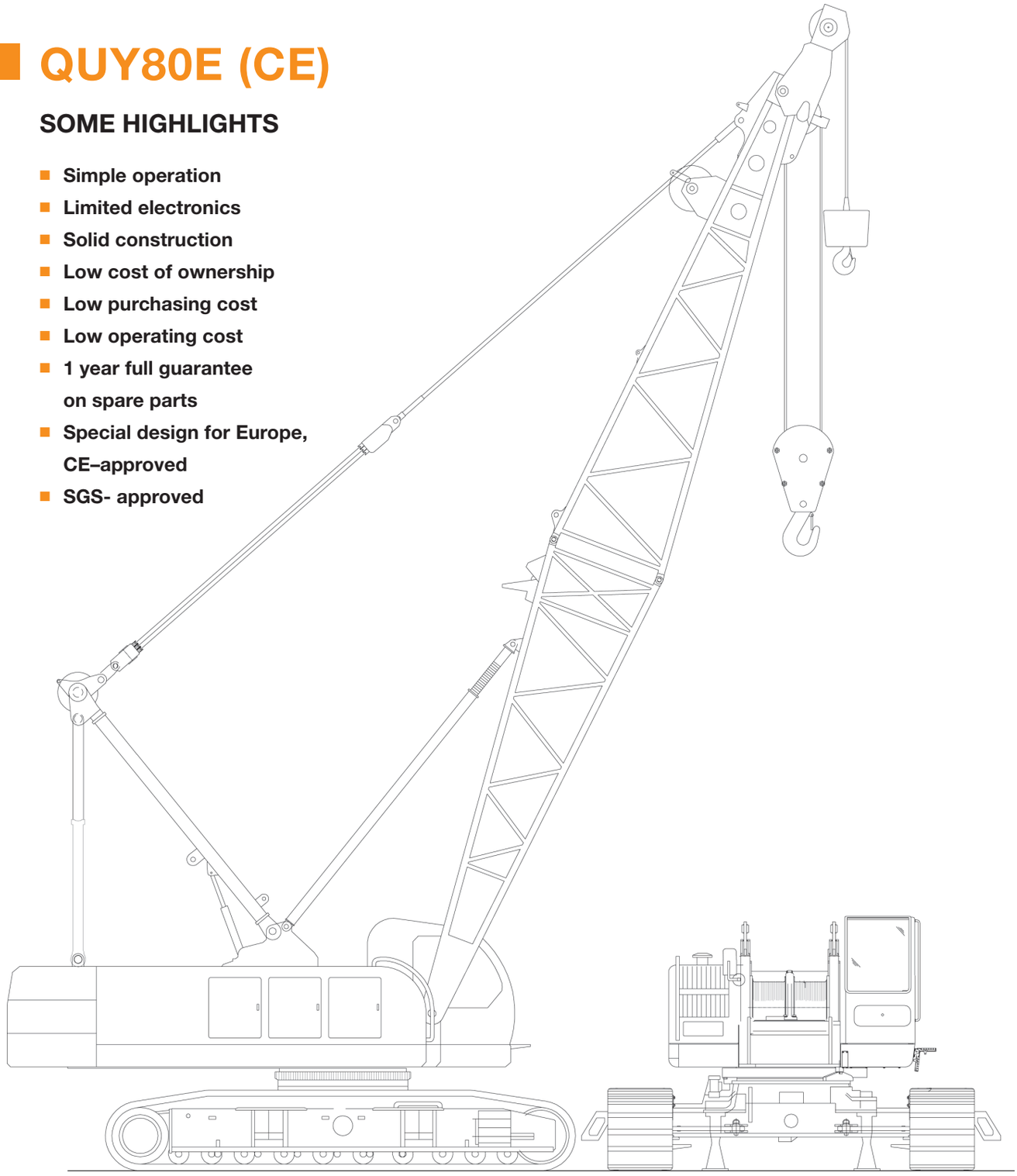
			15	16	17	18	19	20	22	24	26	28	30	32	34	36	38	40	42	43
37	9	10	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,3	5,6	5,0								
		30	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,0	5,5	5,0	4,6							
	13,5	10	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,3	5,5	5,0	4,5	4,2						
		30		6,5	6,5	6,5	6,5	6,5	6,5	6,0	5,5	4,8	4,4	4,0	3,7					
	18	10	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	5,5	4,8	4,4	4,0	3,6					
		30					5,0	5,0	5,0	5,0	5,0	4,8	4,4	4,0	3,5	3,2				
40	9	10	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,3	5,6	4,9	4,5							
		30	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,0	5,5	4,9	4,5							
	13,5	10	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,3	5,5	4,9	4,5	4,2						
		30			6,5	6,5	6,5	6,5	6,5	6,0	5,0	4,8	4,3	3,8	3,5					
	18	10	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	5,5	4,8	4,3	3,8	3,5					
		30						5,0	5,0	5,0	5,0	4,6	4,1	3,7	3,3	3,0	2,8			
43	9	10	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,3	5,6	4,9	4,5							
		30	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,0	5,5	4,8	4,3	3,8						
	13,5	10	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,2	5,5	4,9	4,5	4,1	3,8					
		30				6,5	6,5	6,5	6,5	6,0	5,4	4,8	4,2	3,8	3,4	3,0				
	18	10		5,5	5,5	5,5	5,5	5,5	5,5	5,4	4,8	4,2	3,8	3,4	3,0					
		30						5,0	5,0	5,0	5,0	4,5	4,0	3,6	3,2	2,9	2,6	2,4		
46	9	10	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,0	5,2	4,6	4,1	3,6						
		30	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,0	5,2	4,6	4,1	3,6	3,2					
	13,5	10	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,0	5,2	4,6	4,1	3,6	3,2	2,9				
		30				5,0	5,0	5,0	5,0	5,0	5,0	4,6	4,1	3,6	3,2	2,9	2,6			
	18	10		5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	4,6	4,1	3,6	3,2	2,9	2,6			
		30							3,8	3,8	3,8	3,8	3,8	3,6	3,2	2,9	2,6	2,4	2,2	
49	9	10	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,0	5,2	4,6	4,1	3,6	3,2					
		30	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,0	5,2	4,6	4,1	3,6	3,2	2,9				
	13,5	10	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,0	5,2	4,6	4,1	3,6	3,2	2,9	2,6			
		30					5,0	5,0	5,0	5,0	5,0	4,6	4,1	3,6	3,2	2,9	2,6	2,4		
	18	10				4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	3,6	3,2	2,9	2,6	2,4		
		30							3,5	3,5	3,5	3,5	3,5	3,2	2,9	2,6	2,4	2,2	2,0	1,8
52	9	10	6,0	6,0	6,0	6,0	6,0	6,0	6,0	5,5	5,0	4,5	4,0	3,5	3,0	2,6				
		30		5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,0	4,5	4,0	3,5	3,0	2,6				
	13,5	10		5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,0	4,5	4,0	3,5	3,0	2,4	2,2			
		30					5,0	5,0	5,0	5,0	5,0	4,4	3,9	3,5	2,9	2,4	2,2	2,0		

QUY80E (CE)

SOME HIGHLIGHTS

- Simple operation
- Limited electronics
- Solid construction
- Low cost of ownership
- Low purchasing cost
- Low operating cost
- 1 year full guarantee on spare parts
- Special design for Europe, CE–approved
- SGS- approved



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