

MIDI EXCAVATOR | 8085 ZTS



A Product of Hard Work





**All the power and control of a larger excavator  
In a kingpost and compact zero-tailswing design**

Safe, rugged, productive and reliable, the new 8-tonne excavator from JCB is designed to meet today's exacting demands. A tool for all trades, the 8085 ZTS provides the power and performance, with the comfort and control of a large A-frame excavator; but in a compact, versatile, kingpost design that lets you work up against walls and in confined areas where other A-frame excavators can't go. With its new Tier 3 Isuzu engine, repositioned valve block, updated service points, cab refresh and



## RAISING THE STANDARD IN COMPACT EXCAVATORS



the robust build of a JCB compact excavator the new 8085 ZTS is a true work horse. Furthermore, versatility is ensured by the wide range of buckets and new electronic proportional auxiliary control option – enabling operators to use a wide range of hydraulic attachments to suit the increasing demands of the compact excavator market.

The 8085 ZTS is also a class leader in its weight category when it comes to comfort, with significant

improvements made to bring the machine in line with the rest of the JCB compact range. We have also made control enhancements, making the 8085 ZTS an ideal machine for material handling or tool carrying, as well as digging. Add to all of this a sleek internal and external design, fantastic service access and 360° visibility – the 8085 ZTS is designed and built to give you the power and performance you need for the toughest applications.

## Productivity, controllability and versatility

A machine you can rely on  
in a host of applications



The 8085 ZTS packs a huge punch. The new Isuzu 2.2-litre, 43kw (57.6hp) water-cooled, 4-stroke, direct-injected turbo engine makes this the most powerful compact excavator in the range. Not only that, this new engine is more fuel efficient for lower cost of ownership: in addition to the Advanced Management System (AMS) digging modes, auto return to idle and electronic throttle controls, it is designed to use the power you need, only when you need it, saving you money.

Moving onto the hydraulics, the 8085 ZTS features a new valve block position. This still provides an impressive 300-bars of operating pressure, optimising bucket and dipper tearouts of 36kN and 50kN respectively, for all types of ground conditions. A choice of 9 or 10 spool hydraulic block is fed by a load-sensed, flow-on-demand hydraulic pump system, which matches flow to pressure and enhances productivity and fuel efficiency even further.

The 8085 ZTS also features two speed track motors and various track options to give maximum dozing, spin-turn and straight line tracking performance around the site and in changing ground conditions..

All of this power and performance comes in an incredibly versatile package. The kingpost design is ideal for operating in confined environments and close to objects, while zero tailswing enhances safety in tight spaces, opening up machine use to a wider range and more varied applications and locations.

The 8085 ZTS is now available with optional thumb-operated electronic proportional auxiliary controls. These - when used in conjunction with the double-acting or low-flow circuits and bucket to grab changeover valves - provide real precision control and machine dexterity, allowing you to specify the 8085 ZTS for numerous attachments and configurations for a more versatile machine and tool carrier.









## **Consummate reliability, easy access and serviceability**

**For your total peace of mind**



From the ground up, the 8085 ZTS is built to last. That means a strong, stable, reliable platform designed around operator needs.

So the undercarriage has a fabricated X-frame cross section for maximum strength, while the hydrostatic two-speed track motors and hoses are fully enclosed for protection against damage. Plus, both track legs are designed to allow any material to roll off, minimising wear on the tracks and running gear. All designed to maximise component life and reduce downtime.

Staying close to the ground, the 8085 ZTS comes fitted with a patented heavy-duty dozer for optimum strength, power and performance, to ensure material keeps rolling and moving in front of the machine.

Inside the side-engine service bay, the new engine and repositioned valve block are longitudinally positioned for ease of access and visibility to all major parts, all from ground level. Within the rear service bay, the 8085 ZTS features improved fuel and hydraulic fill locations with improved remote service points for daily checks and routine maintenance. Inside the cab a floor plate and side panel provide access to components below the cab and rear access to the valve block.

All hydraulics now use ORFS hoses, hose runs are kept to a minimum with the new valve block position to the dig end and all dig-end hydraulics are fabricated from steel pipes and run across the top of the boom to protect from site damage





## Stylish, spacious and safe

The 8085 ZTS cab combines space comfort and function of a large excavator into a compact design



The JCB 8085 ZTS features a spacious, stylish and updated cab that offers outstanding all-day comfort for the operator, with all the essential machine functions at your fingertips.

The improvements start with new wrist rests on the control pods which provide better access to the electronic throttle dial and a more ergonomic operating position. We have also introduced new short-travel joysticks, along with a new dozer lever with two-speed tracking button and improved positioning, for precise metering of controls. The tracking levers and pedals have been redesigned for more comfortable operation, while the boom offset and auxiliary pedals are combined onto a single rocking pedal for greater floor space.

The 8085 ZTS comes as standard with the JCB Advanced Management System (AMS) which gives instant access to machine functions through three power modes - Light, Standard and Heavy - in addition to providing machine diagnostics and maintenance modes.

Additional standard features include a courtesy light, three-point hand rail, cool box, cup holder, front and top sunblind, 12v power socket, coat hook, tinted glass, left and right mirrors, and double element air filtration. We also offer optional, air-conditioning, a radio, three seat options and a choice of ISO or SAE changeover patterns.

The up-and-over front screen has a smooth, easy-to-use action gas strut assisted to minimise effort. To prevent damage and improve 'down the trench' visibility, the lower front screen can be stored behind the upper front screen before sliding and securing both above the operator's head.

Finally, visibility. The 8085 ZTS does not disappoint, with its curved styling and large glass areas providing class-leading 360 degree visibility for safer working and reduced machine damage.











### Engine

43kW Direct Injected Tier 3 compliant Isuzu turbo engine.  
103 litre diesel tank for all-day-long productivity.  
Efficient 2179 cc engine improves fuel economies.  
One-touch and auto idle function for added fuel efficiencies.

### Dig end

Outstanding dig end geometries.  
Supplied with single acting auxiliary pipe work as standard.  
Impressive bucket and dipper tear outs for the toughest of ground conditions.  
Huge range of buckets and attachments for all applications.  
Two piece fabricated dipper using a pressed U-shaped section and closing plate for strength.

### Hydraulics

Repositioned valve block improves service access and functionality.  
Additional double acting and low flow circuits available for excellent machine versatility.  
New ORFS hose connections with colour coded hoses and shorter runs for improved serviceability.  
Hydraulic system running at 170 litres per minutes@ 300 bar.  
Bucket to grab changeover.

### Undercarriage

X-frame undercarriage designed for ease of maintenance.  
Fully protected hydrostatic track motors and belly plate preventing site damage.  
Sealed-for-life track rollers.  
Two-speed track motors.  
Sloped track leg and top roller relief hole prevent the build up of debris and provide lower wear on parts.

### Tracks and dozer

Patented JCB dozer design for effective material movement and dozing performance.  
Continuous rubber, steel and Bridgestone "Geogrip" track options from 450mm to 600mm options.  
Narrow, standard and wide dozer options available.

### Service access

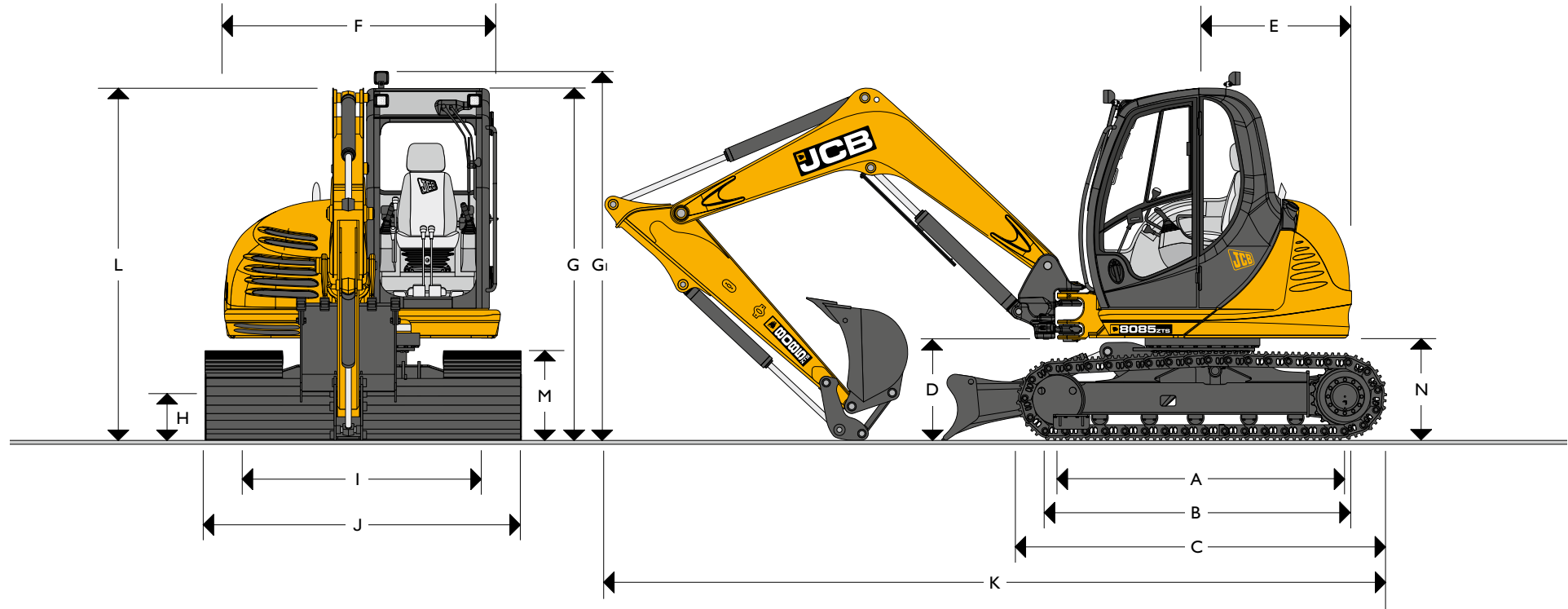
Grouped service points and improved rear service bay.  
500-hour service intervals.  
"Gull-wing" side and rear bonnets for clear and open access to service bays.  
Cab access plates in floor and side bulkhead for service access.

### Cab and controls

Updated class-leading cab providing space and comfort expected from larger excavators.  
Superb all-round visibility, providing a safe and clear view of all operations especially to the dozer blade.  
Off-set kingpost and two piece dipper provides excellent visibility to the bucket.  
Electronic proportional auxiliary control options for precise control and versatility.



OPERATING WEIGHT: 8026 kg (17694 lbs) NETT ENGINE POWER: 41 kW (53.7 hp)



STATIC DIMENSIONS

Machine model	8085 ZTS
	mm (ft-in)
A Sprocket idler centres	2280 (7-6)
B Track length on ground	2200 (7-3)
C Undercarriage overall length – rubber	2830 (9-3)
Undercarriage overall length – steel	2830 (9-3)
D Kingpost clearance	741 (2-5)
E Tailswing radius	1160 (3-10)
F Overall width of superstructure	2135 (7-0)
G Height over cab	2719 (8-11)

Machine model	8085 ZTS
	mm (ft-in)
G1 Height over cab - work lights	2830 (9-3)
H Ground clearance	363 (1-2)
I Track gauge	1850 (6-1)
J Width over tracks (450 shoes)	2300 (7-7)
K Transport length with standard dipper	6060 (19-11)
L Transport height with standard dipper	2840 (9-4)
M Track height	665 (2-2)
N Counter weight clearance	767 (2-6)





**ENGINE**

Model	Tier 3 4LE2X	
Fuel	Diesel	
Cooling	Water cooled	
Gross Power	kW(HP) @ 2200 rpm	41kW (53.7 hp) @2200 rev/min
Net Power	kW(HP) @ 2200 rpm	43kW (57.6hp) at 2200 rev/min
Gross Torque	Nm (lbf ft) @ 1600 rpm	220 Nm
Displacement	cc	2179
Gradability	degrees	35
Starter Motor	kW(HP)	2.2 (3)
Battery	volt/amps	12 V/680 amp
Alternator	amps	12 V, 80 amp

**UNDERCARRIAGE**

Machine model	8085 ZTS	
No of top rollers	1	
No of bottom rollers	5	
Track Width	mm (in)	2300
Ground Clearance	mm (in)	363
Track Tensioning	Grease	
Travel speed - Low	kph (mph)	3.6
Travel speed - High	kph (mph)	4.2
Tractive effort	kN (lbf)	52.9

**HYDRAULIC SYSTEM**

Machine Model	8085 ZTS	
Nominal output (@ rated)	lpm	170
Nominal output	US gal/min	37.4
Excavator/track main relief	bar (psi)	300
Slew main relief	bar (psi)	226
Auxiliary low flow	lpm	25
Auxiliary high flow	lpm	80

Hydraulic systems - A variable flow load sensing system with flow on demand and servo operated, multi-function open centre control. With A nine spool control valve with auxiliary service spool as standard (2nd auxiliary optional with 10 spool black). The hydraulic components are protected by a high standard of filtration to ensure long hydraulic fluid and component life.

**MACHINE WEIGHTS**

Machine model	8085 ZTS Weights kg (lb)	8085 ZTS Bearing Pressure kg/cm <sup>2</sup> (lb/sq in)
Operating weight* (450mm Rubber tracks)	8026 (17694.0)	0.40 (5.67)
Transport weight (450mm Rubber tracks)	7951 (17529)	0.40 (5.67)
With FOGS guard – Stage 1	+ 48 (106)	0.41 (5.83)
With FOGS guard – Stage 2	+ 56 (124)	0.41 (5.83)
With Steel Tracks (450mm)	+ 136 (300)	0.41 (5.83)
With Steel Tracks (600mm)	+ 342 (754)	0.31 (4.41)
With Offset Steel Tracks (450mm)	+ 136 (300)	0.41 (5.83)
With Bridgestone Geogrips	+ 108 (238)	0.41 (5.83)
With wide Dozer (2450mm)	+ 10 (22)	0.31 (4.41)
With offset Dozer (2150mm)	-6 (13)	0.41 (5.83)

\*Operating weight to ISO 6016 including cab, rubber tracks, standard dipper, 460mm (18in) bucket, full tanks and a 75kg (165lb) operator.

**OPERATOR ENVIRONMENT**

		External	Internal
Cab/canopy height	mm (ft-in)	2729	2729
Cab/canopy height with FOGS guard LEVEL 1	mm (ft-in)	2798	2798
Cab/canopy height with FOGS guard LEVEL 2	mm (ft-in)	2830	2830
Cab/canopy length	mm (ft-in)	1510	1405
Cab/canopy width	mm (ft-in)	960	945
Distance from seat base to roof	mm (ft-in)	1130	1130
Door aperture width	mm (ft-in)	735	735

**SERVICE CAPACITIES**

Machine model	8085 ZTS	
Fuel tank	litres (US Gal)	103 (27.3)
Engine coolant	litres (US Gal)	14.2 (3.8)
Engine oil	litres (US Gal)	6.8 (1.49)
Hydraulic system	litres (US Gal)	105 (27.7)
Hydraulic tank	litres (US Gal)	59.9 (15.8)

## WORKING RANGE

Machine model		8085 ZTS*
Boom length	mm (ft-in)	2875 (9-5)
Dipper length	mm (ft-in)	2000 (6-7)
A Max digging reach	mm (ft-in)	6887 (22-7)
B Max digging reach on ground	mm (ft-in)	6729 (22-1)
C Max digging depth – dozer up	mm (ft-in)	4195 (13-9)
C Max digging depth – dozer down	mm (ft-in)	4345 (14-3)
D Max digging height	mm (ft-in)	6312 (20-9)
E Max dump height	mm (ft-in)	4580 (15-0)
F Max height to dipper nose pivot pin	mm (ft-in)	5391 (17-8)
G Max vertical wallcut depth	mm (ft-in)	2668 (8-9)
H Min. front swing radius (no offset)	mm (ft-in)	2862 (9-5)
H Min. front swing radius (fully offset)	mm (ft-in)	2358 (7-9)
I Boom swing left	degrees	60
J Boom swing right	degrees	57
Bucket rotation	degrees	197
Dipper rotation	degrees	119
Bucket tearout	kN (lbf)	50 (11240)
Dipper tearout	kN (lbf)	36 (8093)
Slew speed	rpm	9

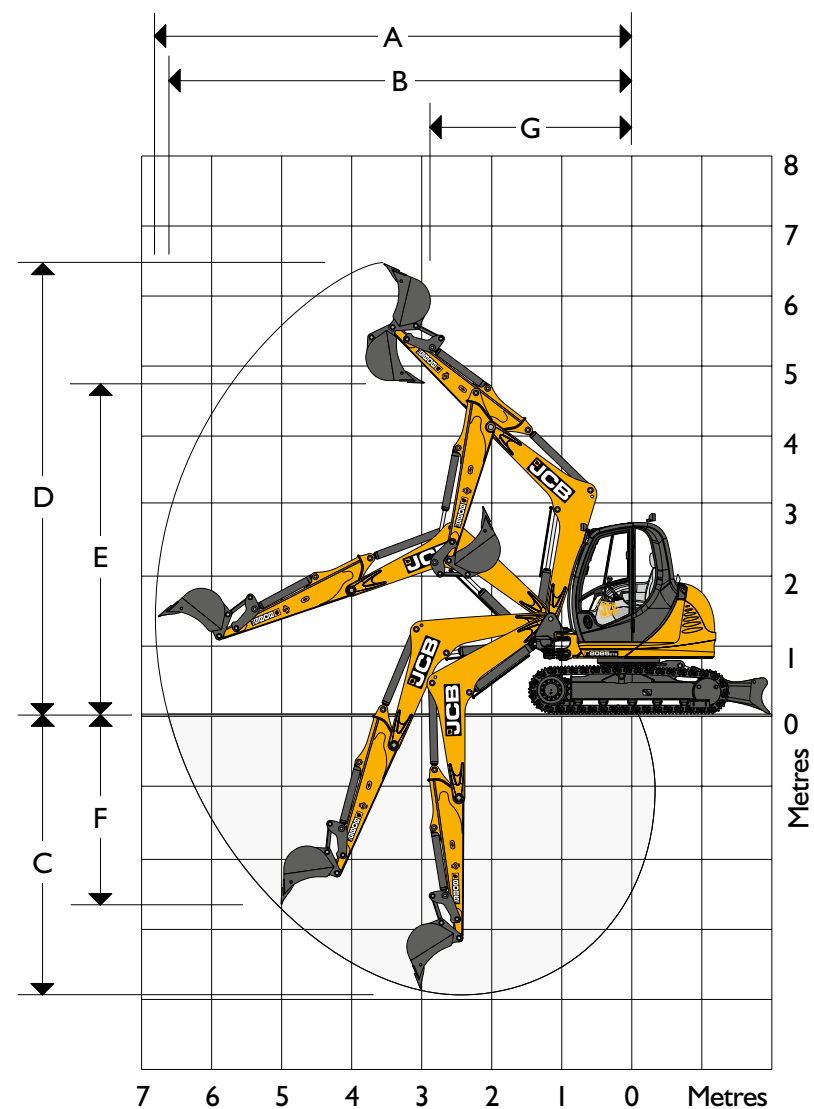
\* Standard machine, measurements without quickhitch.

## STANDARD EQUIPMENT

Fully glazed cab with laminated front up-and-over opening window with integral lower window storage (conforms to EN474);, speakers and aerial; intermittent wiper; courtesy light; automatic idle; electronic throttle control; single acting hi flow auxiliary; cab and boom worklights; coolbox; cup holder; auto shift/down track motors; joystick mounted hammer switch; suspension seat; undercarriage belly guards; cab handrail; quickhitch electrics; cold start pre-heat; double element air cleaner; heavy-duty alternator; heavy-duty battery; cab and engine soundproofing; cab heater and screen demister; tinted glass; coat hook; **12v accessory socket**; removable floor mat with floor access plate below; cab side service access into valve block; windscreen wash wipe; plug in power socket; one-touch engine speed control; dozer blade and two speed tracking.

## OPTIONAL EQUIPMENT

FOPS guard stage 1 or 2; air-conditioned cab; track and dozer options; fan guard; battery isolator (standard for EU); radio with aux line in; low flow auxiliary; electronic proportional auxiliary controls; bucket-to-grab change over valves; double acting hi flow auxiliary; mechanical quickhitch; hydraulic quickhitch; tipping link mounted lifting point; general purpose buckets; ditch/grading buckets; hydraulic hammers; rotating beacon; electric refuelling pump; hose burst check valves (either 1 x boom and 1 x dozer or 1 x boom, 1 x dozer and 1 x dipper); headrest; deluxe high backed seat and deluxe high backed air-suspension seat options; special paint options.







**DOZER BLADE – 450mm**

Dozer length	mm (ft-in)	1360 (4-6)
Max height (above ground)	mm (ft-in)	463 (18-23)
Dig depth (below ground)	mm (ft-in)	403 (15-87)
Approach angle	degrees	23
Width	mm (ft-in)	2320 (91-34)
Height	mm (ft-in)	514 (20-24)
Reach in front of tracks	mm (ft-in)	632 (2-1)

**OPTIONAL NARROW DOZER BLADE – OFFSET TRACKS**

Dozer length	mm (ft-in)	1360 (4-6)
Max height (above ground)	mm (ft-in)	463 (18-23)
Dig depth (below ground)	mm (ft-in)	403 (15-87)
Approach angle	degrees	23
Width	mm (ft-in)	2220 (87-40)
Height	mm (ft-in)	514 (20-24)
Reach in front of tracks	mm (ft-in)	632 (2-1)

**OPTIONAL WIDE DOZER BLADE – 600mm TRACKS**

Dozer length	mm (ft-in)	1400 (4-7)
Max height (above ground)	mm (ft-in)	463 (18-23)
Dig depth (below ground)	mm (ft-in)	403 (15-87)
Approach angle	degrees	23
Width	mm (ft-in)	2470 (97-24)
Height	mm (ft-in)	514 (20-24)
Reach in front of tracks	mm (ft-in)	632 (2-1)

**EEC NOISE LEVELS (95/27/EC DYNAMIC)**

<b>Machine model</b>		<b>8085 ZTS</b>
Cab / canopy external	dB (LwA)	98
Cab internal	dB (LwA)	73

**LIFT CAPACITIES – 8085 ZTS 2875 mm Boom – 2000 mm Dipper**

Load Point	2.5m (8ft 2in)			3.0m (9ft 10in)			3.5m (11ft 6 in)			4m (13ft 1 in)			4.5m (14ft 9in)			5m (16ft 5in)			5.5m (18ft 1in)			Capacity at max. reach					
Height	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	m (ft-in)		
3.5 (11-6)															1262	1331	1392	1340	1436	1125*				1110*	1523	1005*	5.3 m
3 (9-10)										1331	1375	1383	1392	1488	1444	1208*	1505	1058*	990*	1575	915*	990*	1575	915*	5.5 m		
2.5 (8-2)							1044	1557	1601	1514	1601	1566	1496	1601	1462	1170*	1636	1073*	1028*	1636	923*	990*	1679	863*	5.6 m		
2 (6-7)				2540	2297	2393	1931	2036	2062	1705	1853	1508*	1549	1757	1275*	1170*	1697	1043*	990*	1688	900*	945*	1688	840*	5.75 m		
1.5 (4-11)				2784	2984	2085*	2262	2462	1635*	1590*	2158	1403*	1343*	1958	1178*	1170*	1853	1005*	983*	1792	863*	900*	1766	795*	5.75 m		
1 (3-3)				2340*	3611	1898*	1883*	2871	1620*	1560*	2419	1365*	1320*	2158	1133*	1148*	2001	983*	960*	1897	848*	900	1836	818*	5.75 m		
0.5 (1-8)	1700*	4968	2325*	2295*	4176	1875*	1830*	3341	1605*	1538*	2706	1298*	1268*	2349	1088*	1103*	2166	945*	960*	1975	833*	908*	1905	803*	5.75 m		
Ground Level	2730*	5203	2250*	2288*	4489	1853*	1770*	3497	1515*	1545*	2993	1293*	1268*	2540	1103*	1095*	2262	953*	953*	2027	833*	923*	1992	810*	5.6 m		
-0.5 -(1-8)	2678*	5481	2325*	2213*	5407	1860*	1748*	3698	1508*	1455*	3071	1268*	1268*	2636	1080*	1095*	2366	953*				998*	2071	855*	5.4 m		
-1 -(3-3)	2873*	5742	2348*	2258*	5681	1883*	1755*	3680	1500*	1485*	3106	1275*	1230*	2680	1095*	1080*	2262	953*				1035*	2123	930*	5.2 m		



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