YANMAR

ViO38-7

MINI-EXCAVATOR

Operating weight	3 585/3 710 kg (canopy/cabin)
Engine gross power	18,9 kW at 2 200 rpm
Digging force (short arm/long arm)	20,8/18,9 kN
Digging force (bucket)	32,8 kN

DELIVERING PERFORMANCE AND PRECISION IN CONFINED AREAS

COMPACT SOLUTION

The ViO38-7 mini-excavator features a true Zero Tail Swing design, allowing complete rotation within its crawler width for maximum safety. Its compact length enhances maneuverability and improves transportability, perfect for narrow environments.

OPERATOR COMFORT

Control levers are ideally positioned for exceptional precision and complemented by new travel pedals for intuitive maneuvering. The ViO38-7 features great visibility thanks to increased glass surface, a rear-view camera, and a 4,3-inch color display for enhanced operational ease.

LATEST TECHNOLOGY

For efficient and powerful working, the ViO38-7 has the VIPPS hydraulic system and is equipped with hydraulic quick hitch supply lines. This concept is supported by a floating blade enabling precise leveling work. Both standard auto deceleration and Eco modes ensure fuel saving & carbon footprint reduction over the operation time.

HIGH PERFORMANCE

The ViO38-7 delivers powerful performance with faster workgroup movements under load, higher dumping height and increased boom swing amplitude. The floating blade further enhances functionality in compact spaces.

ENHANCED SAFETY FEATURES

The ViO38-7 ensures operator safety with ROPS and FOPS Level 1 certification. It features durable boom, blade and arm cylinder protection, advanced LED lighting for low-light conditions, superior visibility with large glass areas and a rear-view camera. The 4,3-inch color display provides real-time machine status, while safety is enhanced with an orange seatbelt, optional seatbelt sensor, green beacon, and a front polycarbonate shield.

EASE OF MAINTENANCE

Easily removable side panels and cabin floor allow straightforward access to hydraulic components.
Wide opening access doors allow fast daily checks and servicing, with further efficiency gains supported by Smart Assist Remote control as option.

A SMART AND COMPACT JOBSITE SOLUTION

COMPACT AND VERSATILE DESIGN

The ViO38-7 mini-excavator stands out with Yanmar's ViO design, ensuring that the standard counterweight doesn't extend beyond the track width. This results in an exceptionally small rear turning radius, making it ideal for confined spaces. The improved boom swing amplitude enhances both versatility and compactness, allowing for a better working range. This unique design philosophy maximizes maneuverability without compromising stability, ensuring superior performance in tight spaces.

ENHANCED SAFETY

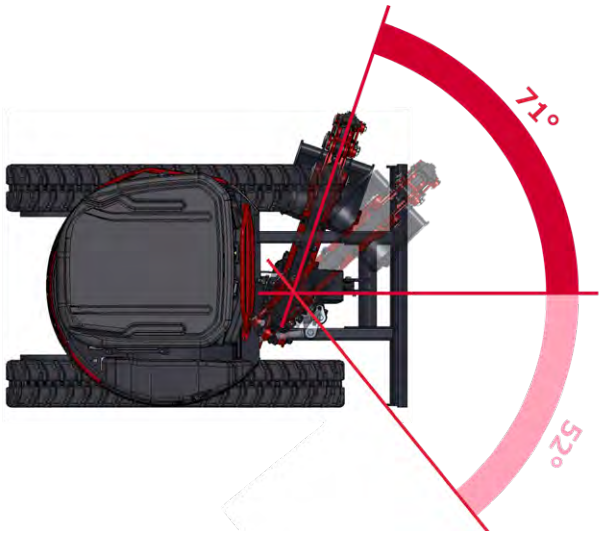
The compact design of the ViO38-7 significantly improves safety on job sites. With the zero tail swing, the risk of accidents is greatly reduced. This ensures a safer environment for both the operator and surrounding workers. The ViO design is focused on creating machines that offer maximum safety through minimal protrusion and enhanced visibility.

EXCELLENT TRANSPORTABILITY

Transporting the ViO38-7 is effortless thanks to its compact overall length of only 4 755/4805 mm (short arm/long arm) and the inclusion of six tiedown points. With a transport weight of 3 530 kg (cabin)/3 405 kg (canopy), these features ensure secure and convenient transportation, making the ViO38-7 easy to move between jobsites. The combination of its compact size and lightweight structure ensures that the ViO38-7 can be transported quickly and efficiently, reducing downtime and increasing productivity.

OPTIMIZED WORKING RANGE AND BOOM SWING

The ViO38-7 is designed for exceptional working range, versatility and improved visibility for the operator. It offers a boom swing of 71 degrees to the left and 52 degrees to the right, allowing for effective and productive work in various positions. The increased power for backfill work and improved swing usability on slopes further enhances its performance, making it highly capable for demanding tasks.



ULTIMATE OPERATOR COMFORT

SPACIOUS AND ERGONOMIC CABIN

The Vi038-7 mini excavator is designed with the operator at its core to ensure unmatched ease and productivity. The roomy cabin provides exceptional visibility, increased legroom and an ergonomic layout, ensuring that operating controls and switches are within easy reach, enhancing both convenience and safety for the operator.

INNOVATIVE CONTROL FEATURES

The Vi038-7 features a brand new 4,3-inch color display, including auxiliary circuits settings for up to five attachments, providing easy and intuitive control. The handy joystick and button area, which includes a high-speed travel switch on the blade lever, are designed for ease of use and enhanced operational efficiency. More ergonomic travel pedals further improve the ease of maneuvering the machine.

ADVANCED CLIMATE CONTROL

To maintain a pleasant working environment in all weather conditions, the Vi038-7 can be equipped with an optional air conditioning system. Strategically placed vents ensure a consistent temperature throughout the cabin and provide efficient window demisting, ensuring clear visibility and a comfortable atmosphere.

PREMIUM SEATING FOR OPTIMAL SUPPORT

The Vi038-7 comes standard with an air suspension seat, fully adjustable and equipped with a headrest. This seat minimizes body tension and fatigue, offering superior support for a machine of this weight class, allowing operators to work longer hours with less strain.

ADVANCED TECHNOLOGY FOR IMPROVED PERFORMANCES

EFFICIENT ENGINE PERFORMANCE

The ViO38-7 is powered by Yanmar's 3TNV88-ESBV2 engine, delivering 18,5 kW at 2 200 rpm. This advanced engine combines fuel efficiency and low emissions, reflecting Yanmar's commitment to environmental sustainability. Key features include an ECU that optimizes RPM based on torque for fuel savings, an Auto-Deceleration system that reduces engine speed when hydraulic system idle for 4 seconds, and an Eco-Mode that lowers engine speed by 300 rpm to further enhance fuel efficiency.

VIPPS HYDRAULIC SYSTEM

The ViO38-7 is equipped with the ViPPS (ViO Progressive 3 Pumps System) hydraulic system, featuring three hydraulic pumps: two variable displacement pumps and one gear pump.
This setup provides a total maximum flow of 102.5 l/min.
The ViPPS system integrates these pumps via a control valve to ensure smooth, simultaneous operation of all functions, even while traveling, for optimal speed, power, and balance.

ENHANCED CYCLE TIME

With a travel speed of 4,5 km/h, the ViO38-7 reduces travel time and boosts efficiency for earth removal tasks while enabling faster movement on slopes. The digging cycle time has been improved by increasing the workgroup speed under load by 7%.
The ViO38-7 additionally integrates the floating blade, as standard feature, for efficient leveling at the jobsite.

IMPROVED ATTACHMENT USABILITY

Simultaneous operation of the first auxiliary circuit and the arm allows for efficient use of attachments, broadening the machine's functionality and performance. This feature makes the ViO38-7 compatible with a wide range of hydraulic tools, enhancing its versatility on the job site. An auxiliary circuit priority section has been added to the main control valve, upstream of AUX1 line, supporting attachments that are characterized by a continuous load request. An optional independant hydraulic line (deviation from AUX1 and routed on the digging arm) is available to operate a tilting function on a quick hitch, leaving AUX1 & AUX2 lines available for work tool hoses connection.

SAFETY

ROBUST CABIN PROTECTION

The ViO38-7 cabin is engineered with safety in mind, meeting ROPS (Roll-Over Protective Structure) certification and FOPS (Falling Object Protective Structure) Level 1 standards. This ensures that the operator is well-protected in various operating conditions, enhancing safety on the job site.

COMPREHENSIVE BOOM AND ARM PROTECTION

The ViO38-7 offers exceptional protection for its blade, boom and arm cylinders. Each cylinder tube and rod is safeguarded by a durable spring-type steel plate, significantly reducing maintenance costs and extending the lifespan of the machine.

ADVANCED LED LIGHTING

For safe and precise operation in low-light conditions, the ViO38-7 comes standard with LED lighting. The strategically placed LED light on the inner part of the boom ensures efficient illumination and enhances visibility during nighttime or dimly lit tasks.

UPGRADED DIGITAL INTERFACE

The ViO38-7 features a 4,3-inch color display that provides clear, realtime information about the machine's status. The updated digital interface includes optional passcode engine security and offers userfriendly error indications in plain language.

SUPERIOR VISIBILITY

The ViO38-7 is designed with large glass areas to maximize visibility of the blade, boom, and arm. Additionally, the rear-view camera, which comes standard (cabin version), provides enhanced rear visibility, further ensuring safe operation in all directions.

SAFETY ENHANCEMENTS

The ViO38-7 is equipped with an orange seatbelt for increased safety and features optional enhancements like a seatbelt sensor and a green beacon for added visibility. A front polycarbonate protection shield is available as an option for the canopy, providing additional safety against debris and impact.

SIMPLE MAINTENANCE ACCESS

The 4,3-inch color display integrates key information about maintenance, such as fuel consumption, fuel gauge, and coolant temperature, while also aiding maintenance scheduling and diagnostics with clear error messages and icons.

The machine is designed for effortless maintenance. The engine bonnet and right-hand side cover open easily, providing wide access to essential components like the air filter, compressor, radiator, battery, and fuel tank. Removable side panels and cabin floor offer convenient access to hydraulic parts. A flat floor mat simplifies cleaning.

EQUIPMENT

[STANDARD EQUIPMENT]

PERFORMANCE

Engine 3TNV88-ESBV2 Yanmar diesel | Direct injection | Engine Control Unit (ECU) | Eco-Mode | Auto-Deceleration System | VIPPS Hydraulic system (ViO Progressive 3 Pump System) | AUX1 hydraulic line with proportional control and extension to arm end | Auto kickdown travel motors | 1 LED work light integrated under the boom | Long arm (1620 mm) | Floating blade.

COMFORT AND EASE OF USE

4.3 inch. color LCD interface | Up to 5 work tool hydraulic flow presettings | Adjustable and reclining seat with fabric or vinyl cover, pneumatic suspension and headrest | Adjustable wrist support | Foot rests | Wide travel pedals | Windshield with 2 fully retractable parts | Sliding double right-side window | Transparent front roof window | Wiper | Windshield washer | Automatic ceiling lamp | Storage space in right console | Plastic & sealable document storage box | Coat hanger.

SAFETY AND DURABILITY

ROPS & FOPS on cabin and canopy | Handrails | Safety lever | Orange seatbelt with retractor | Rear view camera on cabin version | 3 safety valves (arm, boom & blade) + overload warning | Evacuation hammer | 4 tie down points on track frames | 3 mirrors | Horn | Blade cylinder supply hose into two parts | Quick connector on battery terminal | Hoses protected by abrasion resistant sleeves | Lockable covers.

MISCELLANEOUS

External hydraulic oil & fuel gauges | Toolkit | Grease gun | External hydraulic oil gauge.

[OPTIONAL EQUIPMENT]

EQUIPMENT AND PERFORMANCE

Engine programmable auto shutdown | Fuel/water separator sensor with warning in operator space | Steel crawlers | Rubber pads for steel crawlers | Independant tilt function hydraulic supply line (deviation from AUX1) | Drain line | Short arm (1370 mm) | AUX1 & AUX2 hydraulic lines with proportional control and extension to arm end | Clamshell bucket circuit | Hydraulic quick hitch supply line (150 bar) | Quick connectors | Additional counterweight (+160 kg) - 85 mm rear overhang | Bio oil | 2 front LED working lights (cabin and canopy) | 1 rear LED work light + 1 plugable LED flashing beacon (cabin and canopy) | 1 plugable LED flashing beacon (cabin and canopy) | Beacon light with magnetic base.

COMFORT AND EASE OF USE

Air conditioning | Yanmar seat cover | Radio | Central greasing | Grease gun support bracket (cabin & canopy).

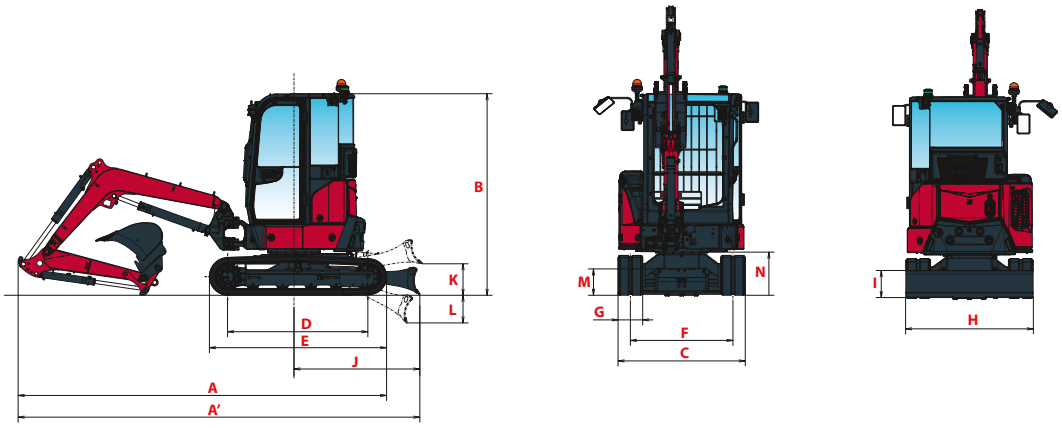
SECURITY AND DURABILITY

Seatbelt sensor with operator warning with or without green beacon | FOPS I front protection (cabin and canopy) | Removable battery cut-off switch | Yanmar anti-theft solutions : engine start pin code in LCD panel or coded engine start key | Various other anti-theft solutions | SA-R3 telematics solution | Travel alarm (beep or white noise).

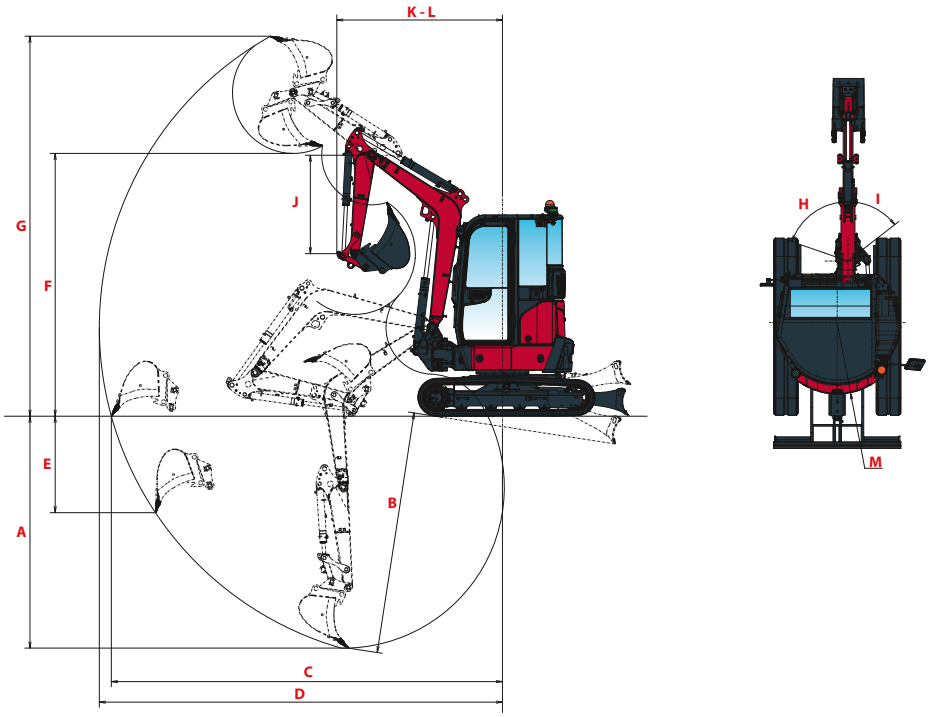
[ATTACHMENTS]

Yanmar gives you the attachment that fit your needs and match the safety standards in force in your country: mechanical quick coupler, hydraulic quick coupler, ditching bucket, swinging bucket, backhoe bucket, hydraulic breaker...

DIMENSIONS



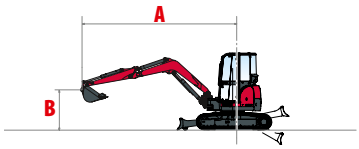
A	Overall length	4755/4805* mm	**H**	Overall blade width	1740 mm
A'	Overall length with blade at the back	5310/5360* mm	**I**	Overall blade height	385mm
B	Overall height	2460 mm	**J**	Blade distance	1685 mm
C	Overall width	1740 mm	**K**	Max. lifting height above the ground	435 mm
D	Length of track on ground	1710 mm	**L**	Max. lowering depth from the ground	370 mm
E	Undercarriage length	2160 mm	**M**	Minimum ground clearance	325 mm
F	Lane	1440 mm	**N**	Minimum ground clearance under upper frame	550 mm
G	Track width	300 mm			



A	Max. digging depth - Blade lifted	3125/3375* mm	**H**	Boom swinging base to left	71°
B	Max. digging depth - Blade lowered	3290/3535* mm	**I**	Boom swinging base to right	52°
C	Max. digging reach on ground	5150/5395* mm	**J**	Arm length	1370/1620* mm
D	Max. digging reach	5285/5525* mm	**K**	Front turning radius	1985/2055* mm
E	Max. vertical wall	1325/1565* mm	**L**	Front turning radius with boom swing	1130/1150* mm
F	Max. unloading height	3600/3775* mm	**M**	Rear turning radius	870 mm
G	Max. cutting height	5025/5215* mm	**M'**	Rear turning radius with additional counterweight	955 mm

*With long arm.

LIFTING CAPACITY



Tipping load, rating over front

Tipping load, rating over side 90

Short arm, standard counterweight

Cabin

Blade on ground/Blade above ground

A	Max.		4 m		3,5 m		3 m		2,5	
B										
4 m	800*/800	810*/810*	-	-	-	-	670/780*	795*/795*	-	-
3 m	515/505	780*/580	510/510	775*/585	645/640	760*/770*	755*/755*	760*/750*	-	-
2 m	420/420	790*/485	500/500	820*/575	620/620	885*/720	810/800	1005*/1010	1190*/1185*	1195*/1190*
1 m	395/390	820*/445	490/480	925*/540	585/580	1070*/665	725/720	1310*/830	935/925	1725*/1105
0 m	410/410	860*/475	470/460	985*/530	555/555	1175*/640	685/675	1440*/790	870/870	1845*/1030
-1 m	490/485	890*/550	-	-	565/555	1085*/640	680/680	1320*/790	885/870	1655*/1035
- 2 m	835*/725	815*/810*	-	-	-	-	-	-	1040*/890	1035*/930*

Canopy

Blade on ground/Blade above ground

A	Max.		4 m		3,5 m		3 m		2,5	
B										
4 m	800*/800*	800*/790*	-	-	-	-	635/555	680*/645*	-	-
3 m	485/485	770*/560*	490/-	765*/560	620/610	750*/740*	-	-	-	-
2 m	405/405	790*/465	475/470	810*/535	585/580	870*/670	770/775	970*/945	1005/1000	1140*/1115*
1 m	385/385	820*/435	465/465	920*/520	565/565	1060*/635	705/700	1295*/800	895/895	1685*/1040
0 m	395/395	865*/450	445/445	970*/500	525/525	1160*/600	640/645	1425*/745	815/815	1795*/955
-1 m	455/455	905*/520	-	-	520/520	1080*/595	630/630	1330*/730	810/810	1635*/945
- 2 m	690/695	875*/760	-	-	-	-	-	-	835/835	1085*/1095

Short arm, additional counterweight

Cabin

Blade on ground/Blade above ground

A	Max.		4 m		3,5 m		3 m		2,5	
B										
4 m	800*/800*	810*/810*	-	-	-	-	780*/780*	795*/795*	-	-
3 m	580/570	780*/640	580/605	775*/675	720/725	760*/865	755*/755*	760*/750*	-	-
2 m	485/485	790*/545	570/595	820*/665	695/705	885*/815	920/915	1005*/1140	1190*/1190*	1195*/1195*
1 m	460/455	820*/505	560/560	925*/630	660/665	1070*/760	835/835	1310*/960	1060/1050	1725*/1255
0 m	475/475	860*/535	540/550	985*/620	630/640	1175*/735	795/790	1440*/920	995/995	1845*/1180
-1 m	555/550	890*/610	-	-	640/640	1085*/735	790/795	1320*/920	1010/995	1655*/1185
- 2 m	835*/790	815*/815*	-	-	-	-	-	-	1040*/1015	1035*/1035*

Canopy

Blade on ground/Blade above ground

A	Max.		4 m		3,5 m		3 m		2,5	
B										
4 m	800*/800*	800*/790*	-	-	-	-	690/600	680*/645	-	-
3 m	530/525	770*/600	535/-	765*/605	860/660	750*/740*	-	-	-	-
2 m	440/435	790*/495	515/505	810*/580	810/630	870*/725	840/840	970*/945*	1095/1085	1140*/1115*
1 m	420/420	820*/465	505/505	910*/565	785/610	1060*/690	765/760	1295*/865	975/970	1685*/1115
0 m	430/425	865*/480	480/480	970*/540	735/570	1160*/650	700/695	1425*/805*	890/885	1795*/1025
-1 m	495/490	905*/560	-	-	720/560	1080*/640	685/685	1330*/790	880/875	1635*/1015
- 2 m	750/750	875*/820	-	-	-	-	-	-	910/905	1085*/1095

Long arm, standard counterweight

Cabin

Blade on ground/Blade above ground

A	Max.		4 m		3,5 m		3 m		2,5	
B										
3 m	435/430	725/490	515/505	695*/665*	675*/670*	675*/660*	-	-	-	-
2 m	370/365	740/410	505/500	790*/565	635/620	855*/820	920*/915*	955*/930	1095/1100*	1100*/1065*
1 m	350/350	770/390	485/480	935*/540	600/595	1085*/675	775/765	1340*/875	1020/1000	1785*/1160
0 m	360/355	815/400	465/460	1025*/515	570/560	1225*/635	705/695	1540*/805	910/895	2005*/1045
-1 m	415/410	850/465	455/445	955*/510	555/550	1190*/625	705/690	1470*/770	915/900	1905*/1045
- 2 m	580/575	830/670	-	-	-	-	685/685	1060*/810	950/940	1395*/1055

Canopy

Blade on ground/Blade above ground

A	Max.		4 m		3,5 m		3 m		2,5	
B										
3 m	405/400	715*/450	485/480	695*/535	670*/665*	670*/655*	-	-	-	-
2 m	345/340	735*/380	475/465	780*/525	600/585	835*/670	895*/890*	920*/895*	1100*/1095*	1070*/1060*
1 m	320/320	775*/355	445/440	930*/500	560/550	1090*/625	715/705	1330*/815	950/935	1780*/1105
0 m	335/325	815*/370	430/420	1025*/480	525/515	1230*/590	655/650	1545*/750	860/840	1980*/960
-1 m	385/380	855*/435	420/415	965*/475	510/505	1200*/585	640/630	1495*/735	840/820	1915*/980
- 2 m	535/535	830*/630	-	-	-	-	635/620	1055*/750	830/820	1395*/985

Long arm, additional counterweight

Cabin

Blade on ground/Blade above ground

A	Max.		4 m		3,5 m		3 m		2,5	
B										
3 m	490/485	725*/540	660*/655*	695*/665	675*/670*	675*/660*	-	-	-	-
2 m	415/415	740*/465	570/565	790*/635	810*/805*	855*/820*	920*/915*	955*/930*	1095*/1100*	1100*/1065*
1 m	395/390	770*/445	540/535	935*/605	665/660	1085*/760	855/850	1340*/980	1340*/1110	1785*/1310
0 m	410/405	815*/460	520/515	1025*/590	635/630	1225*/730	800/785	1540*/925	1540*/1000	2005*/1170
-1 m	470/470	850*/535	515/510	955*/585	610/610	1190*/715	755/750	1470*/905	1470*/955	1905*/1175
- 2 m	660/655	830*/830*	-	-	-	-	765/755	1060*/1050*	1060*/970	1395*/1320*

Canopy

Blade on ground/Blade above ground

A	Max.		4 m		3,5 m		3 m		2,5	
B										
3 m	465/460	715*/510	535/545	695*/680*	670*/665*	670*/655*	-	-	-	-
2 m	400/395	735*/430	545/535	780*/585	675/670	835*/830	895*/890*	920*/895*	1100*/1095*	1070*/1060*
1 m	380/375	775*/410	525/515	930*/570	650/640	1090*/715	820/810	1330*/920	1085/1065	1780*/1240
0 m	395/385	815*/425	505/495	1025*/550	615/600	1230*/680	765/750	1545*/860	1000/975	1980*/1135
-1 m	440/445	855*/495	485/480	965*/535	595/590	1200*/660	735/720	1495*/830	960/930	1915*/1080
- 2 m	635/620	830*/710	-	-	-	-	750/735	1055*/840	950/940	1395*/1105

[The data in this table represents the lifting capacity in accordance with IOS 10567. They do not include the weight of the bucket and correspond to 75% of the maximum static tipping load of the 87% of the hydraulic lifting capacity. Data marked with * are the hydraulic limits of the lifting force.]

TECHNICAL SPECIFICATIONS

[WEIGHT +/- 2% (EN STANDARDS)]

	Transport weight	Operating weight	Ground pressure (operating weight)
Canopy version/Rubber crawlers	3 405 kg	3 585 kg	0,330 kgf/cm²
Canopy version/Steel crawlers	3 500 kg	3 680 kg	0,330 kgf/cm²
Cabin version/Rubber crawlers	3 530 kg	3 710 kg	0,340 kgf/cm²
Cabin version/Steel crawlers	3 625 kg	3 805 kg	0,350 kgf/cm²
With additional counterweight	+ 160 kg		-

[ENGINE]

Type	Yanmar Stage V 3TNV88-ESBV2
Fuel	Diesel
Net Power	18,5 kW/24,8 HP at 2200 rpm
Gross Power	18,9 kW/25,3 HP at 2200 rpm
Displacement	1,642 liters
Maximum torque	85,5 – 94,5 N.m at 1320 rpm
Cooling	Water-cooling
Starter	12 V - 1,7 kW
Battery	12 V – 55 Ah
Alternator	12 V – 55 A

[HYDRAULIC SYSTEM]

Maximum pressure	221 bar
1 double variable displacement piston pump	2 x 37,9 l/min
1 gear pump	26,7 l/min
1 gear pump for pilot line	10,04 l/min

AUX	Measured data at max engine speed	
	Pressure	Flow
1	0 – 160 bar	65,2 - 42,7 l/min
2	0 – 170 bar	38,4 - 32,5 l/min
Hammer	120 bar	55 l/min

⚠ Oil flow decreases as the pressure increases.

[PERFORMANCE]

Travel speed (low/high)	2,6/4,5 km/h
Rotation speed	9,2 rpm
Digging force (short arm / long arm)	20,8 kN/18,9 kN
Digging force (bucket)	32,8 kN
Gradability	30°
Noise Level(2000/14/CE&2005/88/CE)	LwA: 93 dBA/LPA: 79 dBA

[UNDERCARRIAGE]

Number of top rollers	1
Number of bottom rollers	4
Track tensioning system	Grease adjuster

[CAPACITIES]

Fuel tank	44 l
Coolant	4,2 l
Engine oil	6,7 l
Hydraulic circuit	53,9 l
Hydraulic tank	30,2 l

MAINTENANCE FREQUENCY

[Change engine oil and filter: **50 hours (1st)/500 hours (2nd)**] [Change fuel filter: **250 hours**] [Change hydraulic oil filter: **500 hours**]
[Change hydraulic oil return filter: **50 hours (1st)/500 hours (2nd)**] [Change cooling fluid: **2000 hours**]

Yanmar Compact Equipment EMEA

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