

CONSTRUCTION EQUIPMENT

SUNWARD
INNOVATION LEADS TO VALUE

COMPACT EXCAVATOR **SWE 90UF**

Engine Power: **46.2 kW**

Machine Weight: **8 750 – 8 900 kg**



OUR STANDARD FEATURES

Presenting the SWE 90UF

It gives me great pleasure to introduce to you our new **SWE 90UF compact excavator**.

The SWE 90UF – Sunward's first short-tail 9-ton excavator – has been developed especially for a European market, where contractors, from demolition to rental market, will appreciate a compact machine that delivers heavy-duty performance.

This modern excavator features excellent performance, comfortable and safe operation, and convenient maintenance. It is a product of our company's innovative DNA, which creates value for our customers and improves the quality of life. In just over 20 years, Sunward has grown to become one of the world's top 50 construction machinery manufacturers and top 20 excavator companies. Today, our products are exported to more than 100 countries worldwide.

Thank you for sharing our pride!

Professor He

SUNWARD Founder

Main features

RELIABILITY AND PERFORMANCE

We never compromise on reliability. So, all key components come from the world's top-notch premium brands. From the Yanmar Stage V engine to the German-made hydraulic system, all is set for reliability and enhanced performance. Sunward augments the performance by providing the shortest swing radius on the market.

VERSATILITY AND OPTIMIZED OPERATIONS

Because operators need the utmost flexibility while fully concentrating on their task, the SWE 90UF has 3 working modes, proportional joysticks, and 7 lines as standard to accommodate any working requirement and tool.

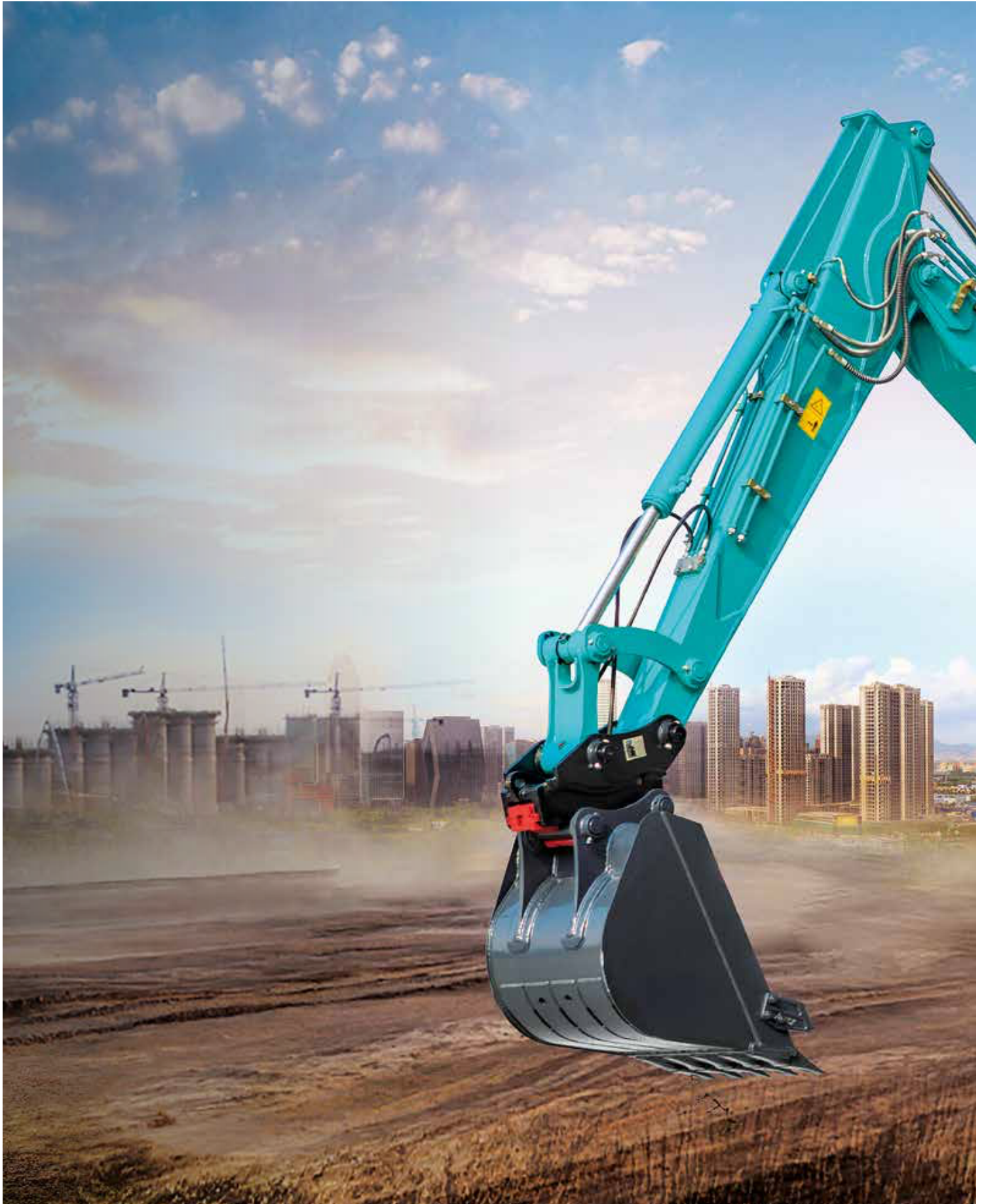
SAFETY AND COMFORT

Peace of mind is key to focusing on the job. The SWE 90UF keeps you safe and provides every comfort in all working conditions. The fully certified cab features ROPS, FOPS and TOPS, from reinforced undercarriage to boom and arm reinforced frames. And you stay safe day and night, thanks to the full visibility provided by 4 perfectly positioned LED lights as a standard feature.

EASY MAINTENANCE AND SERVICE

All Sunward machines are designed, prototyped and then disassembled – in the spirit of reverse engineering – to test how easy they are to be serviced and maintained. And the SWE 90UF is no exception. So, it's not surprising that trying out our machines is all an operator needs to do to be convinced. From ground-level access, to service components, to the availability of parts – maintaining the SWE 90UF is easy and simple.

ARE OPTIONS FOR OTHERS



Reliability and Performance

All key components are carefully selected

The Yanmar 4TNV98C engine complies with the European Union's latest Stage V emission requirements and the EPA Tier 4 final emission requirements of North America. Common rail direct-injection assures more precise fuel delivery and control, increased fuel economy, superior exhaust treatment, reduced emissions, and improved performances.

Bosch Rexroth is the market leader in hydraulic pump innovation, design, and manufacture. So, it was natural for Sunward to select this premium brand to be our main pump supplier. Our Bosch Rexroth hydraulic pumps deliver greater precision and reliability – which naturally reflects on the reliability of the SWE 90UF.

Rexroth is known for setting the highest standards in engineering excellence. And their experience in the construction sector made them Sunward's natural partner for the valves and the joysticks.



Premium brand critical components

YANMAR

Stage V engine

BOSCH REXROTH

Main pump

BOSCH REXROTH

Mechanical Cartridge
Valves and joystick

FLUTEK

Travelling motor

KYB

Swing motor



Safety valves

Safety valves prevent uncontrolled movement of the cylinder, especially during the load lifting work. Moreover, the SWE 90UF is equipped with safety valves as a standard feature. Reliability and performance are definitely part of the package.

High-level configuration, safe and reliable

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Max. 7 445 mm



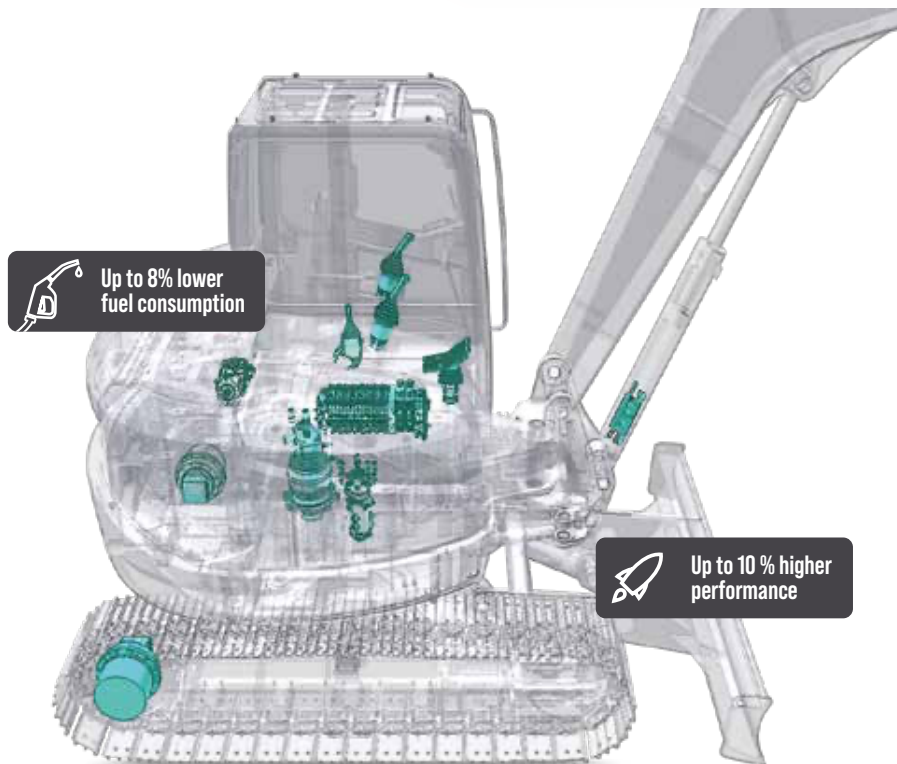
Max. 4 749 kg

Powerful digging force & long reach

With a digging force of 38 kN (arm) and almost 63.5 kN (bucket), the SWE 90UF is certainly equal to – and even better than – the 9-ton references available on the market. And when it comes to its long-reach digging capacity, the SWE 90UF is again very well positioned with its almost 7.5 m long reach.

Real lifting capacity

The SWE90UF has exceptional lifting capacities up to 4 749 kg (max.) and stretched reach up to 7 445 mm (max.) that easily rival the long-established 9-ton excavators on the market.



Up to 8% lower fuel consumption



Up to 10% higher performance

Precise control

The SWE 90UF enjoys very precise control thanks to the LUDV System (load independent flow control). The compact excavator flow-sharing system fully exploits the excavator's potential, enhancing fine control and precision performance.

The individual functions are assigned different speeds and directions of movement, improving workflows as a result. Moreover, with just one variable displacement pump, the number of components can be reduced, leading to: higher performance (up to 10% higher than that of a comparable machine), and lower fuel consumption (up to 8% lower).

Protection plates for boom cylinders

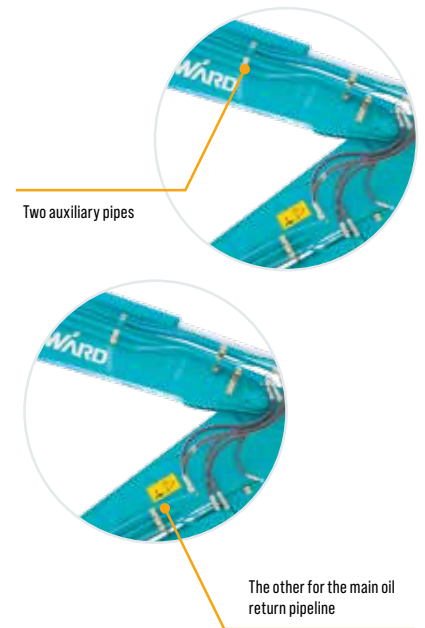
Several excavator components – especially the boom cylinders – are at risk of damage caused by flying stones when working in the field. Special care is taken to protect the boom cylinders with covering plates, so that the operator can focus fully on his job and not be over-cautious concerning the machine components.



Versatility and Optimized Operations

Engineering and design produce versatile and optimized machines

In the spirit of Sunward's motto – 'Innovation Leads to Value' – all engineering and design are focused on generating optimal value for the machine buyer or owner. So, our machines can be used in a large variety of working conditions and applications.



Complete auxiliary lines as standard

The SWE 90UF can adapt to any job site, thanks to the complete auxiliary settings built-in as a standard feature – providing fully adjustable pressure and flow monitoring for all types of attachments.

This results in no less than 7 lines (while the market provides 5 lines at best). The SWE 90UF's 7 standard auxiliary lines are distributed as follows:

- 2 lines at the front of the arm (AUX1), which is mainly used for the hydraulic quick-hitch
- 2 lines for greater flow to satisfy requirements of attachments (AUX2)
- 2 lines with lower flow for breaker or other attachments (AUX3)
- 1 larger pipeline for hydraulic return with uni-flow-direction attachment such as a breaker

3 working modes

To balance between fuel consumption and the desired productivity, the SWE 90UF offers 3 working modes:

HEAVY WORK MODE

Dedicated to hard digging operations – where engine rpm and pump pressure are at the highest possible capacities, providing the optimal output for getting the job done.

STANDARD WORK MODE

Saves fuel by lowering the engine's speed – rpm is as low as possible, while maintaining controllability.

ATTACHMENT MODE

With this mode, the operator can set the flow rate according to the attachment, adapting to different types of working conditions and optimizing fuel-efficiency.



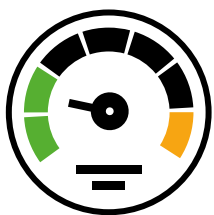


Compactness within a 1 430 mm swing radius

The SWE 90UF's unique design augments the performance of its premium components, as this extremely compact 9-ton excavator is the shortest short-tail excavator (by almost 20 cm) available in the market. These precious centimeters of its swing radius make all the difference between being transported on a regular truck rather than a specialized one. Then, on the job, the SWE 90UF provides the stability required for long-reach digging and heavy-lifting duty.

Load sensing system for optimized operations

One of the most important requirements for the hydraulic system in construction machinery is the engine's stable combustion, which optimizes fuel consumption and efficiency. The load sensing system is a Load Limiting Control (LLC) software solution for smart power management in hydraulic systems. The dynamic LLC ensures that the hydraulic pump output corresponds with the available engine output to prevent the diesel engine from being overloaded while making optimum use of the engine's power.



Low consumption

The SWE 90UF's optimized design enables exceptionally low fuel consumption.

Safety and Comfort

Precise control, comfortable and safe

Safety is the first priority. So, the SWE 90UF's design ensures the operator's safety from the very first operation. No rear camera is needed, as the very short tail swing allows ideal positioning even in the tightest spaces.

ROPS, FOPS and optional FOPS II cab tops make work safe and comfortable – again in all application environments. The undercarriage, boom and arm are carefully protected with plates to prevent any inconvenience when working around rock projections.

The cab provides optimized comfort in all applications: ranging from the suspension seat and joystick drives to the USB radio and air-conditioning as standard equipment.



Robust undercarriage for stability

The large undercarriage frame provides robust stability enhanced by 5 lower rollers and 1 top roller. This concept ensures safety, comfort and maintainability.





Protected with ROPS, FOPS structure and more

Operators are well-protected with the ROPS FOPS standard structure, or with a ROPS FOPS II option for applications in the demolition or forestry environments. Fire extinguisher, safety hammer, and safety belt are in the standard configuration.



All-around visibility

The cab's wide view and slim frame, enhanced by mirrors on both sides, make it easy to operate in full awareness (all-around visibility) of the machine's surrounding environment. Plus, for utmost comfort, the cab is sealed to prevent dust from entering.



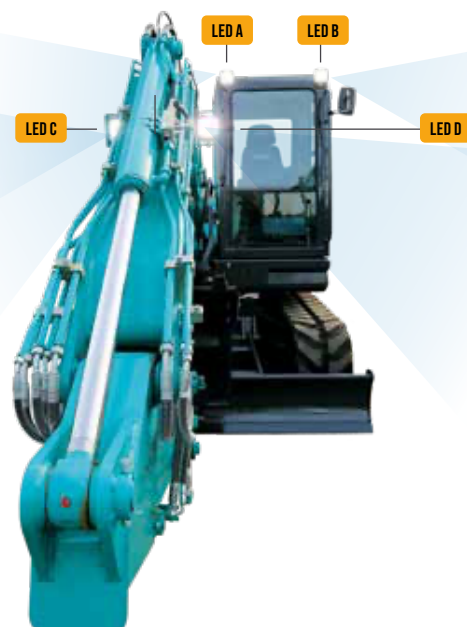
Daylight conditions 24/7

Short winter days and dark environments are no problem for the SWE 90UF, thanks to the powerful LED lights mounted on 4 places: 2 on the boom and 2 on the front of the cab. Providing full visibility and keeping work safe.



Digital monitoring screen

The easy-to-read 5.7" digital monitoring color screen, with centralized functions and simple interface for easy operation, displays machine status and operations, attachment modes, and diagnostic readings or routine maintenance alerts. All key information – such as engine rpm, engine temperature, fuel level, and machine hours – is readily accessible.



Easy Maintenance and Service

Easy access to covers

Full-opening cover, detachable platform enclosures – all maintenance parts can be easily accessed from the ground for convenient maintenance and replacement (without removing excessive or irrelevant parts).

01 FIXED CENTRAL COVER

Inspection and maintenance of main valve, swivel joint, swing motor



02 FLAT-OPENING RIGHT TAIL HOOD

Maintenance of main pump, pilot filter



03 UP-TURNING MIDDLE TAIL HOOD

Maintenance of engine, compressor, air filter, oil filter, fuel filter



Did you know?

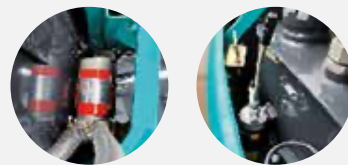
Operators and maintenance teams can enjoy a machine that has been designed, prototyped and then disassembled – in the spirit of **reverse engineering** – to facilitate all service and maintenance operations

04 LATERAL-OPENING RIGHT UPPER COVER

Refueling, maintenance of filter element of hydraulic oil tank, battery disconnect switch

**05 FIXED RIGHT FRONT WALL**

Refueling pump, grease gun

**06 FLAT-OPENING LEFT TAIL HOOD**

Maintenance of expansion tank, electric devices, radiator condenser, drier

**Cab monitoring**

Double electro-hydraulic proportional joysticks as standard configuration – to operate various attachments flexibly, conveniently and quickly.

Direct Support within Europe

SUNWARD's European headquarters are strategically located in Beringen, Belgium, in the heart of Europe: 45 minutes from Brussels International Airport and 60 minutes from the port of Antwerp.



Machines & Parts – Readily available

From its Beringen headquarters, SUNWARD Europe can ensure rapid delivery of machines and spare-parts everywhere in Europe. Sunward machines and parts enjoy exceptional availability. Machines can be delivered very quickly from local dealers, and Sunward machine operators benefit from quick and easy access to a large parts distribution center in Beringen. SUNWARD Europe guarantees an availability rate of 95% for its spare parts.



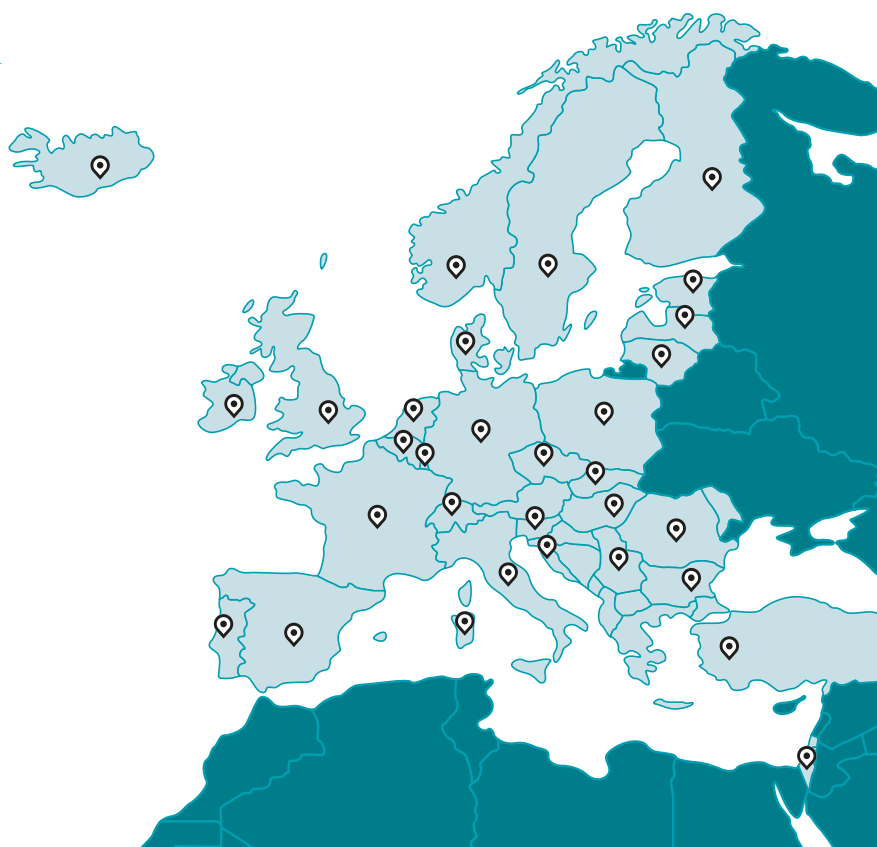
**PARTS CAN BE DELIVERED
WITHIN 24 HOURS**



Dealers all over Europe, UK and Middle-East

Dealers are at the heart of SUNWARD's passion for continuous improvement. Our dealers' knowledge is a real asset – their feedback from serving local market needs enhances our engineering and design innovations. Sunward's innovations create value – for machine operators and, ultimately, for our dealers.

Sunward provides Best Value for Money products to dealers and operators in a number of ways, especially through our Dealers' Parts Warehouse (DPW).



EQUIPMENT

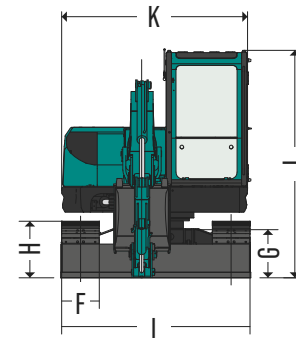
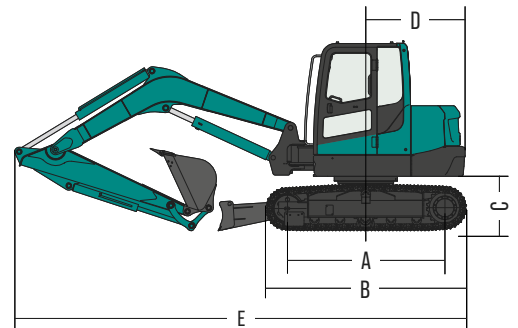
The standard and optional equipment varies from country to country. For more information, please contact us.

		STANDARD EQUIPMENT	OPTIONAL EQUIPMENT
CAB	AM/FM radio	●	
	Cup holder	●	
	Seat with shock absorber.	●	
	Air conditioner	●	
	Engine meso-position start system	●	
	Retractable harness	●	
	FOPS/TOPS cab	●	
	Windscreen washer and wiper	●	
	Rearview mirror	●	
	Cigar lighter		●
	Safety device of front windscreen		●
FRONT WORKING DEVICES	680 mm bucket	●	
	1 680 mm arm		●
	2 100 mm arm	●	
	Crushing piping	●	
	Attachment piping	●	
	Hydraulic quick hitch		●
TRACK	450 mm rubber track	●	
	450 mm steel track		●
ENGINE	Oil filter	●	
	Fuel filter	●	
	Fuel-water separator	●	
	Air filter	●	
	Radiator	●	
	Alternator	●	
	Expansion tank	●	
	Electronic fuel pump	●	
	Muffler	●	
HYDRAULIC SYSTEM	Hydraulic pilot control	●	
	Parking-upon-swing brake	●	
	Parking-upon-traveling brake	●	
	Dual-speed traveling system	●	
	Automated gear shift system	●	
	Left and right electro-hydraulic proportional joystick	●	
	Boom safety valve	●	
	Arm safety valve	●	
	Dozer blade safety valve		●
	Operating mode switching valve		●
	7 auxiliary lines	●	
LIGHTS	Boom light	●	
	Front cab light	●	
	Warning light		●

TECHNICAL PARAMETERS

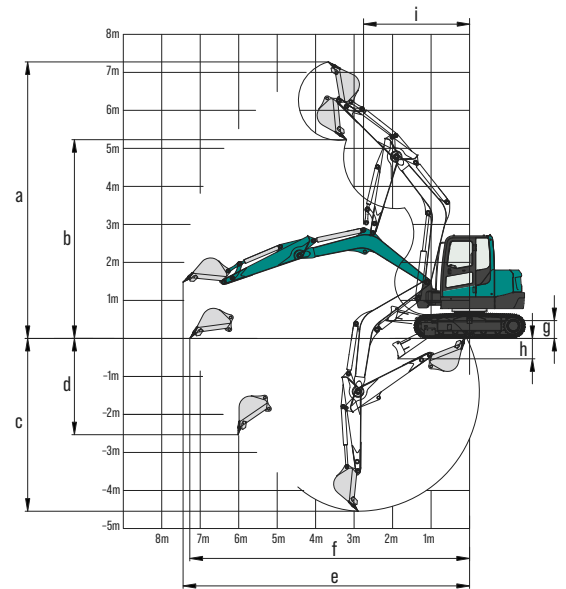
DIMENSIONS	Overall dimension (L × W × H)	6 494 × 2 250 × 2 735 mm
	A Length to center of rollers	2 270 mm
	B Total track length	2 900 mm
	C Ground clearance of platform	800 mm
	D Platform tail slewing radius	1 430 mm
	E Shipping length	6 494 mm
	F Track width	450 mm
	G Chassis clearance from the ground	380 mm
	H Track height	678 mm
	I Shipping width	2 250 mm
	J Cab roof height	2 735 mm
K Upper-carriage width	2 220 mm	
MACHINE WEIGHT	with rubber track	8 750 kg
	with steel track	8 900 kg
PERFORMANCE	Standard bucket capacity	0.26 m ³
	Digging force (bucket) (ISO)	63.5 kN
	Digging force (arm) (ISO)	38 kN
	Maximum traction force	60 kN
	Slew angle (boom)	R60/L62 °
	Traveling speed (Max/Min)	4.7/2.7 km/h
	Gradeability	35 °
	Ground pressure	35.4 kPa
ENGINE	Brand	YANMAR
	Model	4TNV98C
	Type	4-cylinder, 4-stroke, water cooling
	Displacement	3.319 L
	Power/speed (gross/net)	46.2/2200 kW/rpm
	Fuel tank capacity	125 L
HYDRAULIC	Type	1 variable piston pump
	Displacement	160 L/min
	Pressure of main relief valve	28 MPa
	Hydraulic tank capacity	80 L

DIMENSIONS



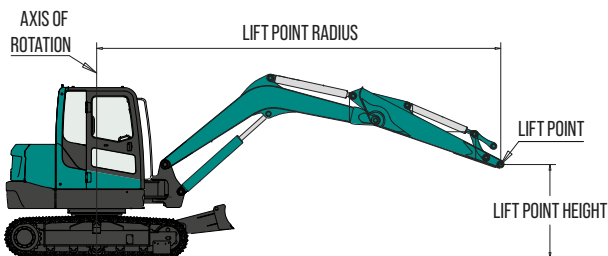
WORKING RANGE

WORKING RANGE	a	Max. cutting height	7 290 mm
	b	Max. unloading height	5 245 mm
	c	Max. digging depth	4 545 mm
	d	Max. vertical digging depth	3 485 mm
	e	Max. digging reach	7 445 mm
	f	Max. digging reach at ground level	7 270 mm
	g	Max. lift height of the dozer blade	415 mm
	h	Max. digging depth of the dozer blade	515 mm
	i	Swing radius (min.)	2 765 mm
		Dozer blade length × width	



LIFTING CAPACITY

Lift Point Height	Lift Point radius (MIN)		Lift Point radius (3.0m)		Lift Point radius (4.0m)		Lift Point radius (5.0m)		Lift Point radius (MAX)	
	Over-front (kg)	Over-side (kg)	Over-front (kg)	Over-side (kg)	Over-front (kg)	Over-side (kg)	Over-front (kg)	Over-side (kg)	Over-front (kg)	Over-side (kg)
5.0	–	–	–	–	2 219*	1 492	–	–	–	–
4.0	–	–	–	–	2 299*	1 508	–	–	–	–
3.0	–	–	–	–	1 873*	1 477	1 740*	1 102	–	–
2.0	–	–	3 631*	2 242	2 313*	1 603	2 002*	1 037	1 789*	723
1.0	4 749*	2 158	3 134*	2 013	2 326*	1 435	1 953*	991	1 895*	693
0.0	–	–	3 737*	1 829	2 637*	1 343	2 113*	945	1 971*	700
-1.0	–	–	3 595*	1 768	2 734*	1 313	2 068*	903	2 064*	788



Notes:

1. Load with * is limited by hydraulic capacity and based on ISO 10567. Rated loads do not exceed 87% of hydraulic capacity.
2. Load without * is limited by tipping load and based on ISO 10567. Rated loads do not exceed 75% of tipping capacity.
3. A: distance from center of rotation to perpendicular of weight; B: distance between bucket hinge pin and ground level.