

CONSTRUCTION EQUIPMENT

SUNWARD
INNOVATION LEADS TO VALUE

MEDIUM EXCAVATOR **SWE 155F**

Engine Power: **93 kW**

Machine Weight: **15 600 kg**



MASTERFUL DESIGN FOR BEST AVAILABLE DIGGING FORCE

Presenting the SWE 155F

I take great pride in introducing the **SWE 155F medium excavator** – specifically designed and certified for European market requirements. This 15.6t medium excavator is the perfect fit for large construction – be it roads or buildings, quarrying, demolition or forestry. It is designed to be versatile and durable, with a long lifetime. The SWE 155F's masterful design, EU Stage V engine, and enhanced hydraulics system deliver smooth operation and high productivity.

This top-of-the-line medium excavator offers excellent performance, comfortable and safe operation, and convenient maintenance. A product of our company's innovative DNA, the SWE 155F creates value for our customers and improves the quality of life.

In just 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

Professor He

Main features

RELIABLE, POWERFUL AND DURABLE

We never compromise on reliability. And the 15.6t SWE 155F is no exception – we know it will be used by professional construction companies that expect the best. So, just like our other machines, all key components come from the world's top premium brands. From the Cummins EU Stage V engine to the Japanese-made hydraulic system, all is set for reliability, durability and enhanced performance. Sunward's unique hydraulic system enhances this machine's performance by providing one of the most powerful bucket break-outs on the market.

VERSATILE AND OPTIMIZED

Because a 15t machine is essentially a multiple large job site machine, it must be versatile. The SWE 155F has 3 major working modes and 3 extra working modes for the attachments – making this machine's versatility second to none. So, Sunward provides the highest flexibility on the market as standard, accommodating any working requirement and tool (including tiltrotators).

SAFE AND COMFORTABLE

Because we know that safety and comfort should go hand-in-hand, the SWE 155F keeps you safe and provides every comfort in all working conditions. The fully EU-certified cab features FOPS, TOPS and ROPS requirements, from the reinforced undercarriage to the reinforced frames for the boom and arm. And thanks to the full visibility provided by 3 perfectly positioned LED lights as a standard feature, you stay safe, day and night.

EASY TO MAINTAIN AND SERVICE

All Sunward machines are designed, prototyped and then disassembled – in the spirit of reverse engineering – simply to test how easy they are to be serviced and maintained. And they are! From ground-level access to service components, to the availability of parts – maintaining the SWE 155F is easy and simple. So, it's no surprise that an operator only needs to try out our machines to be thoroughly convinced!



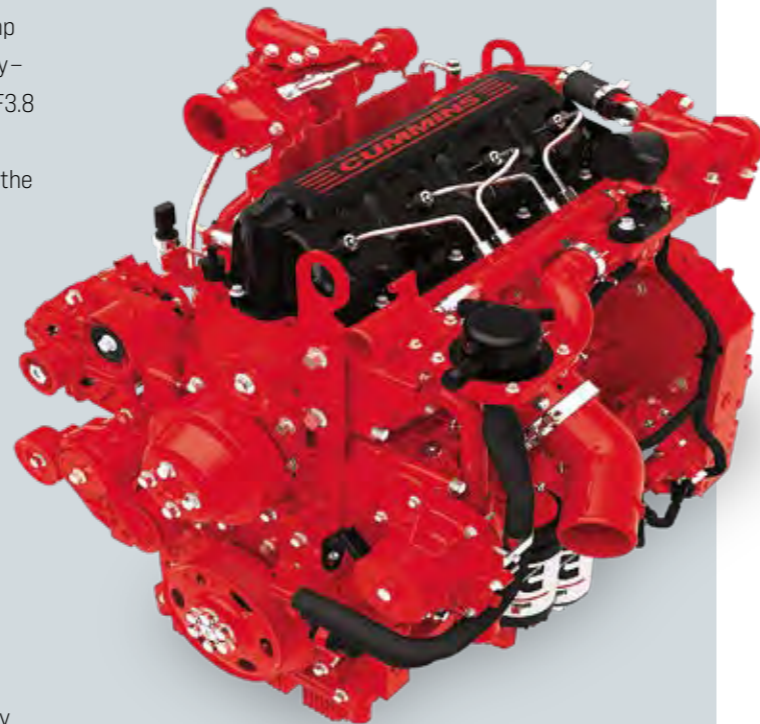
Reliable, Powerful and Durable

All key components are carefully selected

Achieving near-zero emission levels, while delivering from 74,8 hp to 133 hp (55–98 kW) without compromising power, performance, or fuel economy – that's the challenge fully met by the compact and powerful Cummins QSF3.8 engine. This engine enjoys wide popularity in the market, and so it has an extensive service network. It's the engine Sunward required to power the SWE 155F – and the fact that it complies with the European Union's Stage V and EPA Tier 4 emission requirements goes without saying.

The hydraulics are often regarded as the heart of the machine. That's why Sunward sources exclusively from the highest references in the market. For the SWE 155F, we selected Japanese premium brands KPM for the hydraulic pump and swing motor and KYB to be our main supplier for the Main Control Valve (MCV). Both highly reliable brands are known for their high efficiency and long-life components, designing them specifically to meet the demands of hydraulic excavators.

To provide the best value to the user, we apply our 'Innovation Leads to Value' motto to every single element of the machine – even to externally sourced components and the way we integrate them.



Premium brand critical components

KPM
Main Pump



With this new premium-quality pump, and our innovative thinking, we increased the machine's displacement by 7%, power by 4%, and volume efficiency by 6% – making the entire excavator more energy-efficient.

KYB
Main Control Valve (MCV)



A large port size MCV provides more flow capability and less flow resistance – generating less heat and energy consumption, while still allowing a faster working speed. Our professional and dedicated calibration provides the operator with a better operating experience.

KPM
Swing Drive Motor



Our large displacement and big torque motor features multiple functions, such as self-lock, anti-rebounding, and hydraulic and mechanical duplicate brake system to ensure smooth operations.

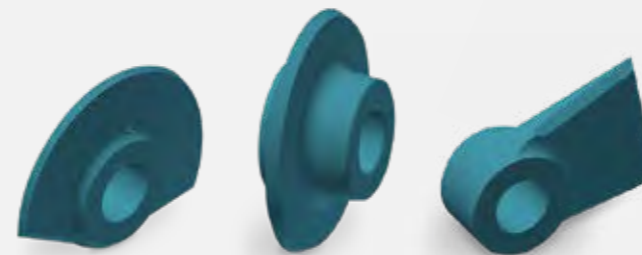
NABTESCO
Travelling motor



Each track is driven by a 2-speed automatic shifting travel motor equipped with multiple discs and spring-locked and hydraulic-released brake. The unchallengeable traveling speed can reach up to 5.3 km/h.

A manufacturing process designed for reliable operations

The key parts of the SWE 155F, such as the boom and the arm, are designed with an increased sheet material thickness. All supporting elements are made of high-strength, high-ductility and structural steel die-forged pieces. This has the great advantage of providing elements with both high wear-resistance and structural strength. This process delivers a massive increase in reliability operating under heavy-duty work.



Forged supporting elements

STRESS RELIEF PROCESS FOR STRENGTH AND DURABILITY

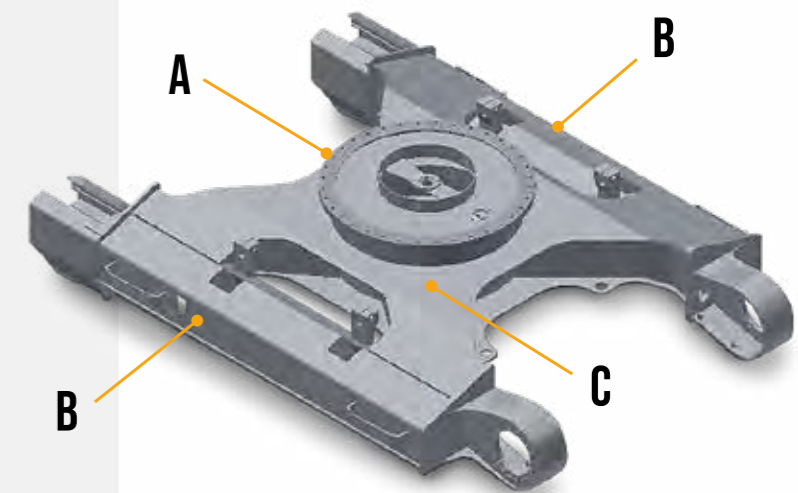
The SWE 155F is meant to handle normal construction work as well as it handles the heavy-duty work. That's why it's important to integrate that requirement in the initial stage of the machine's production. The SWE 155F's heavy-duty implements are delicately annealed, which completely eliminates the residue stress in weld seams and increases the machine's reliability significantly.

THE ANNEALING PROCESS

After welding, the natural cooling process (with the risk of uneven cooling) is prevented by heating the metal in an isolated chamber to 600–800°C and then cooled down slowly. This controlled cooling process – which usually takes 5–8 hours – permeates the texture of the steel with much better uniformity and compactness, while avoiding residual stress and defects. Therefore, it increases the durability of the machine. This kind of cooling process is usually not adopted by manufacturers who want to save time and money. But at Sunward, we do not compromise on quality – we strive to provide machines of the highest reliability and durability.



The swing arm and bucket rod are designed with the reliability standard of 20 000 hours.



REINFORCED X CHASSIS WITH EXCELLENT RESISTANCE TO DISTORTION

- A. The seat of the slewing bearing is made of one ring-forged piece to reduce welding.
- B. A track frame with a larger cross-sectional side box and a thickened bottom plate are used to improve the overall strength.
- C. Both the cross-section area of the X-shaped frame and the plate thickness are increased to improve the overall strength.

Versatile and Optimized

Designed for versatility

In the spirit of Sunward's motto – 'Innovation Leads to Value' – the design and engineering of the SWE 155F is focused on generating optimal value for the machine's owner, while offering optimum versatility to the machine's operator. The SWE 155F can be used in a large variety of working conditions and applications. And thanks to the 3 separate auxiliary lines, the 3 bucket working modes, and the 3 attachment work modes, an operator needs only a few minutes to fully appreciate the possibilities offered.



The highest auxiliary lines standard set-up available on the market

The SWE 155F can adapt to any job site, thanks to the complete auxiliary settings that are built-in as standard – providing fully adjustable pressure and flow monitoring for all types of attachments, including a tiltrotator.

This results in no less than 3 separate auxiliary lines as standard (while the market provides 1 or 2 lines as standard), which are distributed as follows:

- 1 line at the boom of the arm (AUX1), which is used primarily for the hydraulic quick-hitch
- 1 line for greater flow to fulfill the requirements of a flow-demanding attachment, such as a breaker (AUX2)
- 1 line with lesser flow as an extra line for attachments that are equipped with 2 actuators (AUX3)

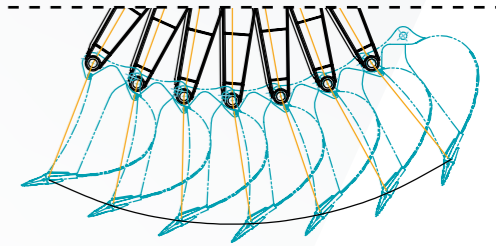
2 of these auxiliary lines are equipped with a shut-off valve, making the attachment installation easy and oil leakage-free.

Designed for optimization

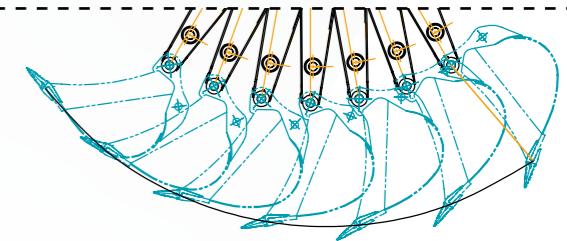
The Hyperbolic Curve and super Wear-Resistant New Style Bucket provides incredible operating efficiency. Both bottom and side plates of the bucket are made of high-strength wear-resistant steels from a premium brand, which makes the machine suitable for highly abrasive jobs. With this innovative design, the digging resistance is reduced significantly. So, digging is much smoother, and fuel consumption is significantly lower.

COMPARISON OF BUCKET DIGGING TRAJECTORIES

Simple curve design



Hyperbolic curve Sunward optimized design



Best digging force available leading to low consumption

The SWE 155F's low 345-bar pressure generates the highest digging force – 76 kN – in the market. Sunward's machine also has the highest hydraulic efficiency, which results in low fuel consumption. Remember: with Sunward, Innovation Leads to Value!



Additional protection for hoses



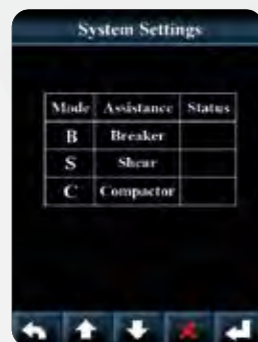
AUX 2 lines

THE SWE 155F IS SYNONYMOUS WITH EASY CONNECTION AND EASY OPERATION.

The machine accepts several attachments to perform all desired jobs.

3 attachment work modes

Operators enjoy both versatility and fuel consumption optimization thanks to each dedicated mode:



B
HYDRAULIC
BREAKER

The SWE 155F can accurately match the different requirements of a wide variety of attachments – and under each attachment work mode, the auxiliary circuit flow can be set on the simple and clear monitor screen. So, you don't need to adjust the flow mechanically.

S
HYDRAULIC
SHEAR JAWS

C
HYDRAULIC
COMPACTOR

3 bucket working modes

The operator can choose the proper working mode to fulfill different types of jobs.

LIGHT MODE

for light duty job

STANDARD MODE

to get the job done with greater fuel-efficiency

HEAVY MODE

for hard digging or to get the job done more efficiently



3 auxiliary lines as standard make working with tiltrotators easy

Safe and Comfortable

On top of their EU certification, all Sunward machines on the European market are designed to meet European customer needs. And that includes no compromise between comfort and safety.



Robust undercarriage for stability

The large undercarriage provides robust stability enhanced by 7 lower rollers and 2 top rollers. This concept ensures safety, comfort and maintainability.



Engine STOP protection for extra safety

The SWE 155F's engine protection system helps prevent progressive engine damage by proactively warning the operator of potentially damaging engine conditions and by derating or shutting down. Sunward's engine start & stop protection technology reduces engine wear due to improper operation, prolonging the engine's service life.



Large windows
for full visibility and thus safe work

Fully equipped and spacious cab

The high-strength SWE 155F cab meets FOPS, TOPS and ROPS requirements, which are standard and among the first features to ensure a safe and comfortable job in all application environments. The easy access to the roomy cab welcomes operators of all sizes from everywhere in Europe. Thanks to the large windows and the well-organized cab, all is designed to keep operators comfortable and productive as well as safe.

The large suspension seat provides 6 degrees of freedom and a safety belt that is friendly to operators of all sizes. The air conditioning has larger vents, which regulate the interior temperature automatically, providing a better cooling or heating experience. With the adjustable arm rest and the radio with USB ports, the cab's features promote efficiency and comfort. Finally, the safety pack – including fire extinguisher, safety hammer, and safety belt – contributes to overall peace of mind.



360° view and full parameters at a glance

Thanks to the large cab and roof windows, operators work as if they are immersed in a clear glass bubble. Visibility and safety accompany them each step of the way. And the easy-to-read 5.7" color monitoring screen – with centralized functions and simple interface for easy operation – makes all key information readily accessible: machine status, engine rpm and temperature, coolant temperature, fuel level, error code, throttle gear, menu and switches and loading counter. The simple layout of the controls and the LCD display add to the great ease of operation.

Easy Maintenance and Service

Centralized service points

To reduce maintenance time and cost, the covers at the rear and on the side open fully to provide direct access to the service points. With very easy access to the fuel tank and centralized grease fittings, the SWE 155F is as easy to maintain as it is to operate.



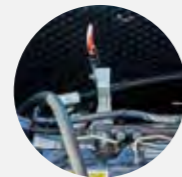
01 RADIATOR & AIR FILTER COMPARTMENT

Easy check of air filter, windshield washer fluid level & coolant level



02 ENGINE COMPARTMENT

An easy and quick look at the engine oil level check and refill



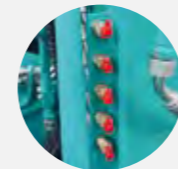
03 HYDRAULIC PUMP COMPARTMENT

Easy check and replacement of oil filter, fuel filter, fuel/water separator, and pilot filter



04 INTEGRATED GREASE FITTINGS

For almost zero maintenance routine



UP TO **3 YEARS** OF WARRANTY
STANDARD FOR ALL SUNWARD PRODUCTS

Best Value for Money from A to Z

The SWE 155F's expert design includes a well-thought-out selection of components that streamline operation and maintenance. Our design choices result in a machine that provides so many standard features, premium-brand key components, and capabilities at the right price. And furthermore, Sunward's own genuine spare parts are economical as well – and all of this best value for money is crowned by a 3-year standard warranty.



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.

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.



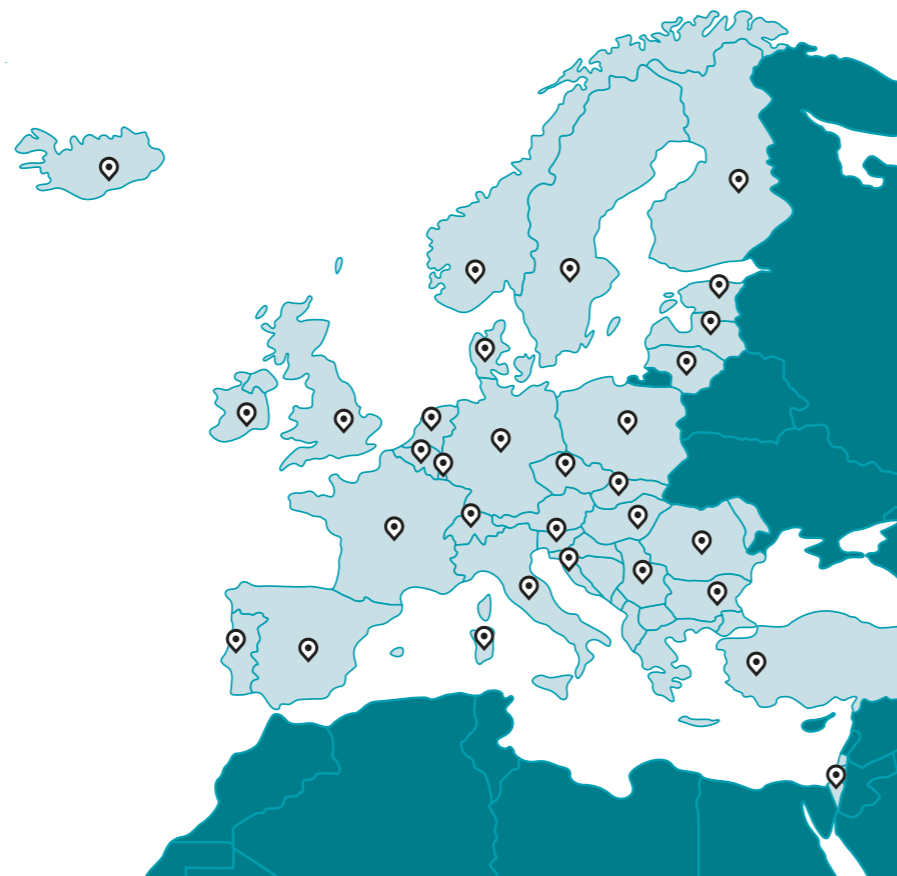
PARTS CAN BE DELIVERED WITHIN 24 HOURS



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

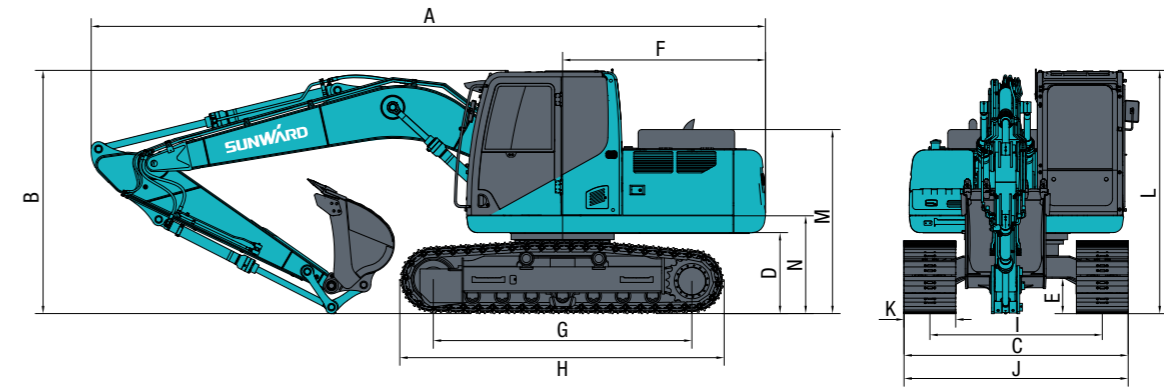
The standard and optional equipment varies from country to country. For more information, please contact us.

		STANDARD EQUIPMENT	OPTIONAL EQUIPMENT	
ENGINE	Turbocharging, 4-stroke, water-cooling, direct injection, diesel engine	●		
	Air filter with indicator	●		
	Multi-stage fuel filtering system	●		
	Emergency engine shutdown device	●		
	Oil filtering system	●		
	Cooling unit easy for cleaning	●		
HYDRAULIC SYSTEM	Automatic pressure-boosting hydraulic system	●		
	Boom and arm regeneration valve	●		
	Swing relief & cushion valve	●		
	Auxiliary hydraulic valve	●		
	Combined flow system, boom priority, arm priority, and swing priority	●		
	Boom and arm holding valve	●		
	Multi-stage filtering system	●		
	1st Auxiliary hydraulic circuit line to arm end (2 pipes)	●		
	2nd Auxiliary hydraulic circuit line to arm end (2 pipes)	●		
	3rd hydraulic quick hitch line to arm end (2 pipes)	●		
ELECTRONIC/ELECTRICAL CONTROL SYSTEM	Oil return pipe (1 pipe)	●		
	Hydraulic quick hitch		●	
	ELAC system	●		
	Self-diagnosable system	●		
	Automatic idling system	●		
	Adjustable LCD color monitor	●		
	Restarting-prevention circuit for engine	●		
	Battery (2x12 V/120 Ah)	●		
	Advanced mode control system	●		
	Engine speed sensor-based power control system	●		
CAB AND INTERNAL DEVICES	Safe shutdown/startup function	●		
	Main electrical disconnecter	●		
	2x High-performance LED work lights on both sides of the boom	●		
	1x High-performance LED work light on right side of turntable	●		
	Starting motor	●		
	Auto-lubrication system		●	
	Electric refuelling pump		●	
	Smart fleet system		●	
	ATTACHMENTS	TOPS / FOPS / ROPS cab	●	
		Spring aided silicone oil shock absorber	●	
Radio (equipped with MP3 player and USB interface)		●		
All-weather soundproof cab		●		
Left and right control levers and control handles		●		
Dual proportional Joysticks		●		
Multi-directional adjustable seat		●		
Fire extinguisher		●		
Safety hammer		●		
Cup holder		●		
BOOM	Fully-automatic air conditioner	●		
	Pilot cut-off lever	●		
	Windscreen wiper	●		
	Openable roof-top and left windows, turn-over front wind shield	●		
	Rearview mirror	●		
ARM	Cigar lighter	●		
	Sunshade curtain	●		
	Beacon light	●		
TRACK	Travel alarm	●		
	Rear camera		●	
	Cab headlight	●		
	Cab back light	●		
	Quick coupler		●	
OTHERS	One bucket standard	●		
	600 mm bucket		●	
	900 mm bucket		●	
	1800 mm bucket		●	
TRACK	Dozer blade		●	
	4600 mm boom	●		
	Boom safety valve	●		
TRACK	2500 mm arm	●		
	Arm safety valve	●		
	Steel tracks 600 mm	●		
TRACK	Steel tracks 700 mm		●	
	Steel tracks 800 mm		●	
	Rubber pads for steel tracks		●	
OTHERS	Hand rail	●		

TECHNICAL PARAMETERS

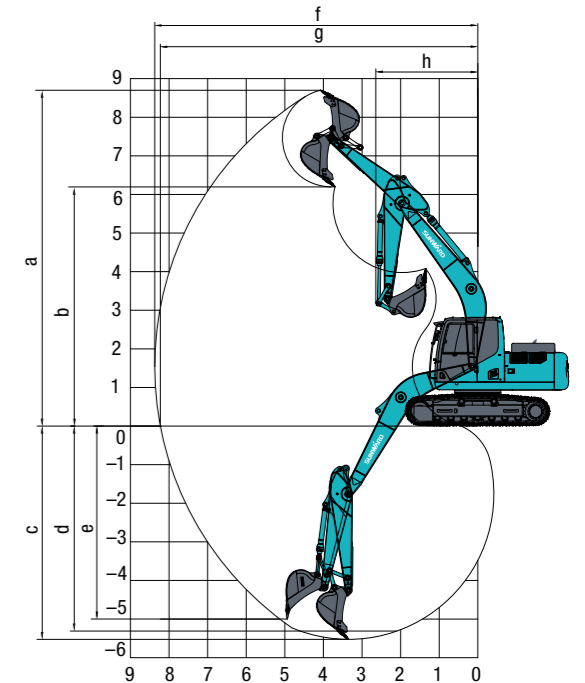
DIMENSIONS	Boom Length	4600 mm
	Arm Length	2500 mm
	A Total Length	7825 mm
	B Total Height	2825 mm
	C Total Width	2600 mm
	D Counterweight ground clearance	940 mm
	E Mini ground clearance	410 mm
	F Tail swing radius	2355 mm
	G Length to center of rollers	3000 mm
	H Track Length	3765 mm
	I Track Width	2000 mm
	J Undercarriage Width	2600 mm
	K Trackshoe width	600 mm
	L Cab height	2825 mm
M Engine Cover Height	2145 mm	
N Turntable height	1135 mm	
SPECIFICATION	Operating weight	15 600 kg
	Bucket capacity	0.61 m ³
	Brand	Cummins
ENGINE	Emmission Rating	EU Stage V
	Model	QSF3.8
	Type	4 Stroke, Turbo Charged, Air cooled, Direct In
	Power	93 kw/2200 rpm
	Max Output Torque	500 Nm/1500 rpm
	Displacement	3.8 L
	Type of pump	Variable Piston Pump (KpM)
HYDRAULIC SYSTEM	Max Pump Displacement	2×126.4 L/min
	System Pressure	31.4/34.3 MPa
	Type of pilot pump	Variable Piston Pump (KPM)
	Max Pilot Flow	20 L/min
	Pilot Pressure	3.9 MPa
PERFORMANCE	Swing speed	11 rpm
	Travel Speed	5.3-3.2 km/h
	Gradeability	35°
	Ground Pressure	36.8 kPa
TANK CAPACITY	Diesel tank capacity	245 L
	Hydraulic tank capacity	150 L
CAB	TOPS / FOPS / ROPS cab	
	A/C	
	Heating	
ATTACHMENT HOSE	Auxiliary pipelines for attachments (rotation)	
	Auxiliary pipelines for hammer attachment	
	Quick hitch (w/constant pressure valve)	
	RH+LH Hydraulic Joysticks with Thumb Controlled Proportional Switch	
TRACK	600 mm steel track	600 mm
	700 mm steel track	700 mm
	800 mm steel track	800 mm
BUCKET	37" bucket	940-0.61
ARM	2500 mm arm	2500 mm
BOOM	4600 mm boom	4600 mm
SAFETY VALVE	boom & arm safety valve	
GPS PORT	GPS Port for location	GPS
BLADE	Fixed blade	
LIGHT	Normal light	LED
ALARM	Travel alarm	

DIMENSIONS



WORKING RANGE

WORKING RANGES	Boom Length	4600 mm
	Arm Length	2500 mm
	a Max digging height	8700 mm
	b Max dumping height	6200 mm
	c Max digging depth	5525 mm
	d Max digging depth at 2.44 m radius	5310 mm
	e Max vertical digging depth	5000 mm
	f Max reach	8370 mm
	g Max reach at ground level	8225 mm
	h Min. front swing radius	2645 mm
	Max digging force (bucket)	100 kN
	Max digging force (arm)	76 kN



LIFTING CAPACITY

Load point height	Load radius at	MAX reach			6.0 m		5.0 m		4.0 m		3.0 m	
		Over-front (kg)	Over-side (kg)	A (m)	Over-front (kg)	Over-side (kg)	Over-front (kg)	Over-side (kg)	Over-front (kg)	Over-side (kg)	Over-front (kg)	Over-side (kg)
6.0 m		3279.9*	3292.95*	5.28			3314.7*	3327.75*				
5.0 m		3297.3*	2512.5	6.00	3297.3*	2512.5	3284.25*	3292.95*				
4.0 m		3162.45*	2163.75	6.68	3353.85*	2490	3553.95*	3462.6*				
3.0 m		3219*	1961.25	6.92	3497.4*	2460	3941.1*	3225	4558.8*	4519.65*	5689.8*	5694.15*
2.0 m		3336.45*	1848.75	7.08	3736.65*		4367.4*	3082.5	5267.85*	4125	7003.5*	7060.05*
1.0 m		2778.75	1867.5	7.10	3936.75*	1987.5	4750.2*	2523.75	5889.9*	3236.25		
0.0 m		2823.75	1890	6.88	2745	1968.75	4854.6*	2445	6551.1*	3082.5		

Note: The value with * symbol is the rated lifting capacity; (calculated in accordance with 87% of the test data)
The value without * symbol is the anti-tipping capacity; (calculated in accordance with 75% of the test data)

