







SV120



Operating weight	11 300 - 12 500 kg
Engine power	85 kW
Bucket capacity	149 - 477 l
Digging force (arm)	61,0 kN
Digging force (bucket)	81,5 kN
Reach	7.99 - 8.65 m

The partner to your success



COMPACTNESS

Yanmar midi-excavators close the gap between mini and large excavators. As an 11,3 - 12,5-ton machine, the SV120 is just as capable, easy to control and comfortably equipped as a large excavator. It also boasts all of the advantages of a compact design with short rear end - whether you are working on a construction site in the city, building roads or handling materials.



ENGINE



QUALITY OF COMPONENTS

Components developed in Europe and renowned for their excellent quality. The design and performance of the components make it possible to carry out heavy construction tasks and ensure a long service life.



SMART CONTROL



LUDV HYDRAULIC SYSTEM





HIGH PERFORMANCE



EASY MAINTENANCE



CABINE



EASY TO USE

POWER AND EFFICIENCY

IMPROVED POWERLINE

THE ENGINE

The SV120 midi excavator is powered by an engine which conforms with EU Stage IV / EPA Tier 4 Final. Regulations exhaust gas aftertreatment reduces pollutants by up to 90%, as well as nitrogen oxide (NOx), hydrocarbons (HC) and particulate matter. We achieve this with an improved combustion and injection system and a diesel oxidation catalytic converter (DOC). The engine manages without a particulate filter.

THE REVERSIBLE FAN

The hydraucally driven reversible fan is temperature controlled. The cooling output changes automatically to the cooling required. The fan only runs when necessary which saves fuel and protects the machine. The driver can manually switch on the fan if required. It can be cleaned by reversing the fan either automatically or manually.

AUTO-DECELERATION SYSTEM

The auto deceleration system (optional) saves fuel. In the event of inactivity, the engine switches to idle speed, thus reducing emissions and operating costs.





HYDRAULICS SYSTEMWITH FOUR INDEPENDENT CIRCUITS

Thanks to the four independent hydraulic circuits, the SV120 midi excavator increases its capacity with attachment tools. The driver controls a tilt-rotator with hydraulic quick-hitch system plus a hydraulically powered tool such as a sorting grab, asphalt cutter or rotary cutter. The control circuits do not influence each other. All working cycles and functions can be operated simultaneously and independently of each other. Due to the servo-assisted controls working cycles are smooth and comfortable.

OPERATION OF WORK ATTACHMENT

The hydraulic pump provides a delivery rate of approx. 120 l/min to power work attachments. The machine achieves faster working cycles for more productivity.

CYLINDERS

All cylinders are equipped with end position damping for vibration-free working. To protect against damage, the boom cylinders are top-mounted.

KNICKMATIK®

The ability to tilt the boom to the side makes it possible to work even on extremely cramped construction sites. The total articulation angle is 108° .

+ It is possible to work across the entire track width on both sides without having to reposition the machine. The Knickmatik® cylinders are protected against collision damage.

UNDERCARRIAGE

A well designed undercarriage forms the foundation for good work. The SV120 undercarriage is characterized by its extremely robust design, high level of stability, powerful driving characteristics and individual configurations to match the task at hand.



TRACKS AND DRIVING CHARACTERISTICS

The rubber tracks installed as standard are the right solution for your construction site. The large contact area resulting from their design ensures comfortable driving behavior. Steel tracks are available optionnaly for special purposes. Independent and individually controllable track motors ensure precise manoeuvring.

AUTOMATIC GEARSHIFT

The autoshift transmission performs automatic, pressure controlled shifting between the speed ranges – particularly helpful for grading work.

DOZER BLADE

The rounded form of the blade provides excellent material movement during levelling work. The optional float position provides additional support. Furthermore, Yanmar offers an extra wide dozer blade, which is perfectly matched to the track width. To clean the construction site, for example, work with the bucket can thus be done directly against the blade.



EASE OF USE

Clear presentation for optimal machine control: simple and effective dashboard allows every operator to control the machine productively and reliably. All controls are intuitive to operate and precisely matched to the different working cycles.

SMART CONTROL

Smart Control gives the operator maximum control over the excavator. A large number of excavator functions can be adjusted precisely to suit the operator and construction site. This makes operation of the excavator more efficient and productive.



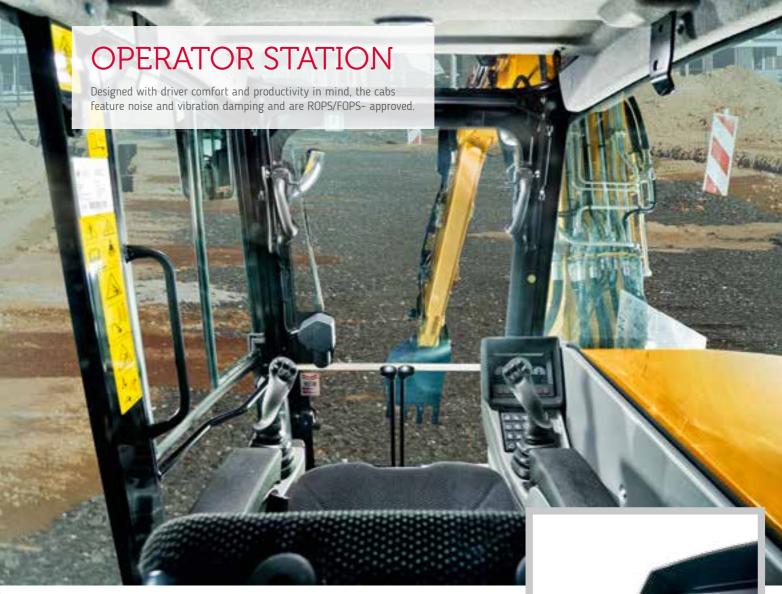
- + Hydraulic control circuits can be operated quickly. The delivery rates of the control circuits are adjusted on a percentage basis via the bar graph depending on the application and work attachment, even during continuous
- + Eco Mode is activated at the touch of a button
- + Climate control

The heating and defrosting functions can be adjusted precisely to the desired conditions, automatic air conditioning optional.



PRECISE FINGERTIP CONTROL

With the Fingertip control system, electro-proportional operation of the hydraulic functions is particularly simple thanks to a thumbwheel on the joystick. The operator can therefore meter the oil flow from « zero » to « full » extremely precisely, which makes it easier to actuate attachments such as a clamshell bucket, swing bucket or



DISPLAY AND INSTRUMENTS

For a better overview and more comfort - Working functions and machine information are arranged centrally and visible at a glance. Data is displayed with smartphone style. The antireflective 7" display screen is very clearly arranged and is also used as the monitor for the optional reversing camera.

THE KEYPAD

Extra-wide button surfaces allow reliable operation even when wearing gloves. Can be used to operate the optional immobiliser.

THE SIDE WINDOW

In option, the side window with manual sliding mechanism and special ventilation position ensures highly pleasant ventilation of the interior. The ventilation position is a clever solution which doesn't allow any water into the cab even in rainy and windy conditions.

CABIN PREMIUM UPGRADE

You can customise your midi-excavator exactly to your needs with a wide variety of comfort-related premium options such as an operator's seat with air suspension.

REAR VIEW CAMERA

The SV120 is equiped in standard with a rear view camera. This not only allows to reverse more safely, but also gives an enhanced view of the situation when rotating the machine.

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MAINTENANCE

EASY ACCESS





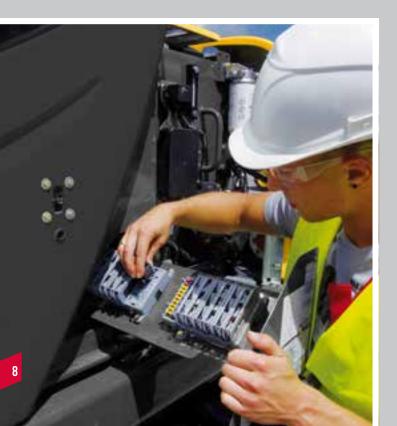
Everything associated with servicing your machine has been designed to be as simple as possible to get your SV120 back to work quickly.

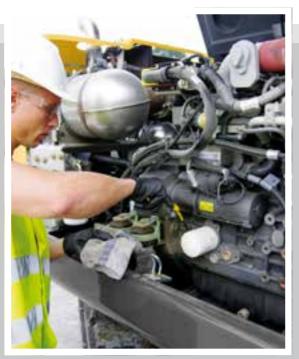
- + The machine can be fueled easily and quickly via the easily accessible service flap.
- + The engine cover can be opened effortlessy thanks to generously sized gas assist springs. Starter, alternator, battery, injection pump and both fuel and air filter are easily accessible.
- + A service strip with the central electrical system is integrated into the service ladder: all relays and fuses are therefore easily accessible from the ground. The flap can be opened tool-free.
- + No hydraulic main components are mounted under the cabine. The cabine does not have to be tipped over through it can be tipped if necessary.

TRACK MAINTENANCE

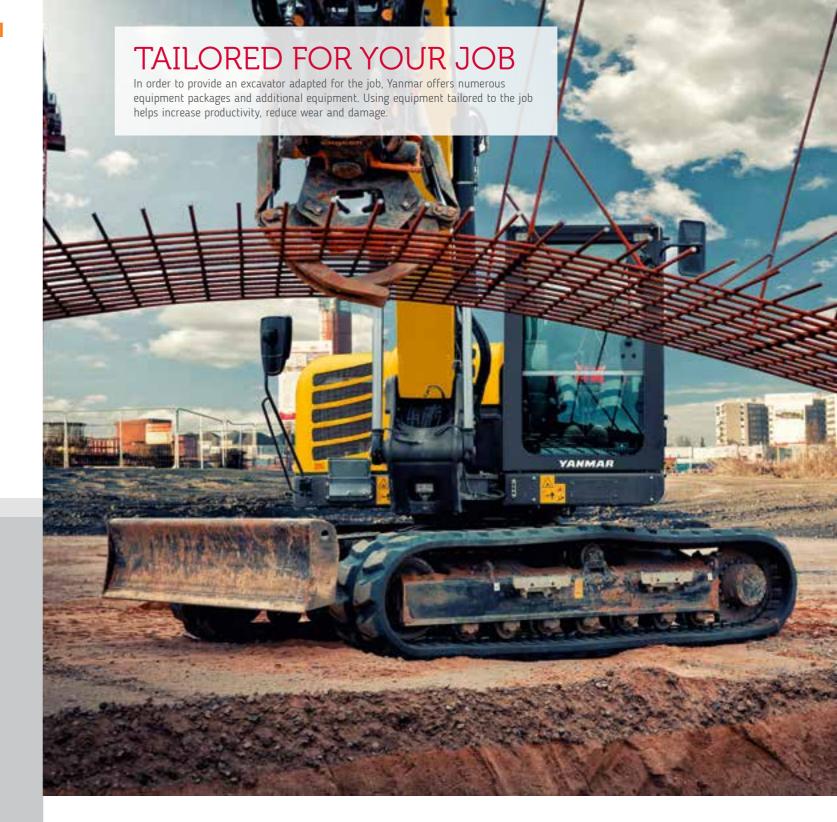
DIAGNOSTIC CONNECTOR

The diagnostic connector for engine and machine data speeds up maintenance and servicing thanks to better communication between man and machine. «Can bus» data is shown on the display.









BOOM OPTIONS

MONOBLOC BOOMS

The monobloc boom achieves particularly fast operating cycles. Its robust design means it can also handle heavy loads. The SV120 midi-excavator can be delivered with a dipperstick to achieve a greater reach.

- + Monobloc boom, with dipperstick 2,000 mm
- + Monobloc boom, with dipperstick 2,350 mm

TWO PIECES ARTICULATED BOOMS

With outstanding vertical digging depth, long reach and considerable discharge heights, the articulating boom suits a wide range of different requirements.

- + TPA boom, with dipperstick 2,000 mm
- + TPA boom, with dipperstick 2,350 mm

UNDERCARRIAGE

TRACK OPTIONS

- Depending on the terrain and application: + Rubber tracks for asphalt and soft ground.
- + Standard steel tracks robust on rough terrain.
- + Wide steel tracks lower ground pressure when working on softer ground.
- + Combined "Roadliner" track has proven its worth on very different types of terrain.

To minimize costs, only the rubber-coated steel plates have to be changed when worm - not the entire track.

BLADE OPTIONS

Float position Extra wide dozer blade: 2,800 mm



THE ATTACHMENTS

HIGH LEVEL OF VERSATILITY THANKS TO NUMEROUS OPTIONS AND ATTACHMENTS

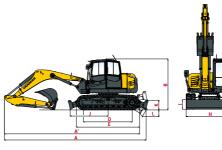
Tried and tested in real-world applications:

- + Light-material bucket
- + Standard bucket
- + Ditch-cleaning bucket
- + Swing bucket
- + Hydraulic cutting units
- + Ripper tooth
- + Adapter for rock beaker
- + Loading hook
- + Screw-on loading hook + Mechanical quick-hitch system
- + Hydraulic quick-hitch system
- + Pallet forks

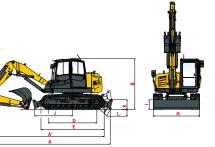
DIMENSIONS

WORKING RANGES & DIMENSIONS: MONOBLOC BOOM & TPA BOOM

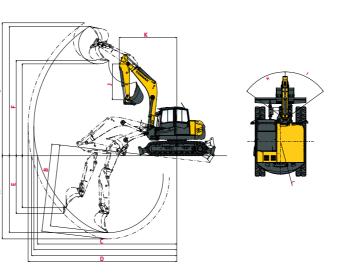


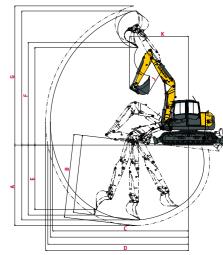






	Monobloc Boom	TPA Boom		Monobloc Boom	TPA Boom
A Overall length	7 640 mm	7 070 mm	H Overall blade width	2 500 mm	2 500 mm
A' Overall length with blade at the back	7 290 mm	6 730 mm	I Overall blade height	515 mm	515 mm
B Overall height	2 750 mm	2 750 mm	J Blade distance	2 050 mm	2 050 mm
C Overall width	2 500 mm	2 500 mm	K Max. blade height above the ground	525 mm	525 mm
D Length of track on ground	2 630 mm	2 630 mm	L Max. blade depth	365 mm	365 mm
E Undercarriage length	3 410 mm	3 410 mm	M Minimum ground clearance	435 mm	435 mm
F Lane	2 000 mm	2 000 mm	N Ground clearance under counterweight	925 mm	925 mm
G Track width	500 mm	500 mm			





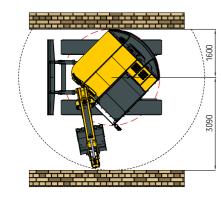
		Monobloc Boom	TPA Boom			Monobloc Boom	TPA Boom
A	Max. digging depth - Blade lifted	4 300 / *4 640 mm	4 550 / *4 900 mm	G	Max. cutting height	7 230 / *7 430 mm	8 000 / *8 300 mm
В	Max. digging depth - Blade lowered	4 560 / *4 910 mm	4 700 / *5 050 mm	Н	Boom swinging base to left	54°	54°
С	Max. digging reach on ground	7 780 / *8 110 mm	8 210 / *8 510 mm	1	Boom swinging base to right	54°	54°
D	Max. digging reach	7 990 / *8 310 mm	8 300 / *8 650 mm	J	Arm length	2 000 / *2 350 mm	2 000 / *2 350 mm
Ε	Max vertical wall	2 900 / *3 230 mm	3 910 / *4 230 mm	K	Front turning radius	3 215 mm	3 560 mm
F	Max. dumping height	5 130 / *5 330 mm	5 800 / *6 100 mm	L	Rear turning radius	1 600 mm	1 600 mm

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DIMENSIONS & LIFTING CAPACITIES

SPECIFICATIONS

Fig. 1: Working envelope



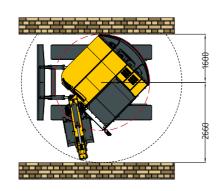
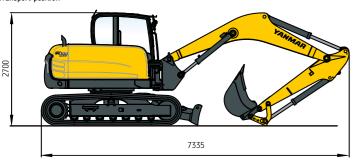
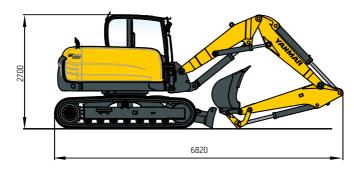


Fig. 2: Transport position







Blade down





Tipping load, rating over front



Tipping load, rating over side 90°

Monobloc boom with dipperstick 2 000 mm

	4111			Load radius from center of ring gear								
			3 m 4 i		m 5 m			6	m	7 m		
	796 304		J	=[D	J	=[D	J	=[D	J	≓ĴÛ	b	
7.0	1				3,20 / *2,40	3,00 / *2,40	2,60 / *2,10	1,90 / *2,00	2,40 / *2,00	1,40 / *1,50	2,20 / *1,90	1,10 / *1,20
3,0 m		A			2,90 / *2,20	2,50 / *2,40	2,10 / *1,90	1,80 / *2,00	1,70 / *1,70	1,30 / *1,50	1,30 / *1,40	1,00 / *1,10
1,5 m	1				5,40 / *4,30	2,40 / *2,60	3,50 / *3,00	1,80 / *1,90	2,80 / *2,40	1,30 / *1,40	2,50 / *2,10	1,00 / *1,10
1,5 111		A			3,00 / *3,20	2,20 / *2,50	2,10 / *2,30	1,60 / *1,80	1,60 / *1,70	1,20 / *1,40	1,20 / *1,30	1,00 / *1,10
0,0 m	1		4.20 / *4,50	3.70 / *3,80	5,60 / *5,10	2,30 / *2,40	4,00 / *3,60	1,60 / *1,80	2,70 / *2,80	1,30 / *1,40	2,70 / *2,10	1,10 / *1,10
0,0 111		A	3.90 / *4,20	3.30 / *3,60	2,80 / *3,00	2,10 / *2,30	2,00 / *2,10	1,50 / *1,70	1,50 / *1,60	1,10 / *1,30	1,20 / *1,30	1,00 / *1,10
0.6	1		*5,60	*3,80	5,80 / *5,10	2,30 / *2,40	4,00 / *3,60	1,60 / *1,80	3,10 / *2,80	1,30 / *1,40	2,90	1,20
- 0,6 m		A	*4,90	*3,70	2,90 / *3,00	2,10 / *2,40	2,00 / *2,10	1,50 / *1,70	1,50 / *1,60	1,20 / *1,30	1,40	1,10

TPA boom with dipperstick 2 000 mm

* dipperstick 2 350 mm

	-					Load	radius from (center of ring	gear			
		3	m	4 m 5 m		m	n 6 m		7 m			
			J		b	=(0)	J	=[Ô	J	=(i)	H	= [ĵ
7.0	12				3,40 / *3,00	3,30 / *3,30	2,70 / *2,40	2,40 / *2,20	2,30 / *2,00	1,60 / *1,80	2,10 / *2,00	1,10 / *1,00
3,0 m		A			3,20 / *2,90	3,20 / *3,30	2,60 / *2,40	2,00 / *1,80	2,00 / *1,80	1,50 / *1,80	2,00 / *1,20	1,10 / *1,00
4.5	12		5,00 / *5,20	5,00 / *4,30	4,50 / *2,80	2,60 / *2,80	3,20 / *2,10	2,30 / *1,90	2,60 / *2,20	1,50 / *1,50	2,00 / *1,90	1,10 / *0,90
1,5 m		A	4,60 / *5,00	5,00 / *4,20	3,40 / *2,80	2,50 / *2,70	2,80 / *1,90	2,30 / *1,90	1,90 / *2,00	1,50 / *1,50	1,40 / *1,10	1,10 / *0,90
0.0	100		7,40 / *6,70	4,10 / *4,20	4,40 / 3,90	2,60 / *2,70	3,50 / *3,00	1,90 / *1,90	2,80 / *2,60	1,40 / *1,40	2,00 / *1,80	1,00 / *0,90
0,0 m		A	5,70 / *5,70	4,00 / *4,10	3,40 / *3,70	2,60 / *2,60	2,40 / *2,80	1,80 / *1,90	1,80 / *1,70	1,30 / *1,40	1,30 / *1,20	1,00 / *0,90
0.6	100		8,00 / *7,40	4,00 / *4,10	4,90 / *4,50	2,60 / *2,60	3,60 / *3,40	1,90 / *1,90	2,70 / *2,80	1,40 / *1,40	*1,80	*1,00
- 0,6 m		A	5,50 / *5,40	3,90 / *4,00	3,40 / *3,30	2,50 / *2,60	2,40 / *2,30	1,80 / *1,90	1,70 / *1,80	1,30 / *1,40	*1,20	*1,00

* dipperstick 2 350 mm

Operating weight (Monobloc boom) acc. to ISO 6016	11 500 kg
Operating weight (TPA boom) acc. to ISO 6016	11 300 kg
Undercarriage (steel crawlers 500 mm)	+ 310 kg
Working envelope 180° (Monobloc boom)	4 260 mm
Working envelope 180° (TPA boom)	4 690 mm
Working envelope 360° (Monobloc boom)	5 320 mm
Working envelope 360° (TPA boom)	6 180 mm
Digging force (bucket) acc. to ISO 6015	81,5 kN
Digging force (arm) acc. to ISO 6015	61 kN
Specific ground pressure, rubber crawlers (Monobloc boom)	0,36 daN / cm²
Specific ground pressure, steel crawlers (Monobloc boom)	0,37 daN / cm²
Specific ground pressure, rubber crawlers (TPA boom)	0,35 daN / cm²
Specific ground pressure, steel crawlers (TPA boom)	0,36 daN / cm²

ENGINE

WEIGHT

Manufacturer, model,	Deutz, TCD 3.6 L4
Туре	4-cylinder Turbo diesel engine with intercooler - EU Stage IV / TIER 4 final
Combustion	4-stroke cycle, Common Rail injection
Displacement	3 600 cm³
Net power rating at 2000 rpm (ISO 9249)	85 kW (116 HP)
Torque	400 Nm at 1600 rpm
Cooling system	Water

HYDRAULIC SYSTEM

Axial-piston variable displacement pump with load sensing, coupled with a load independent flow distribution (LUDV). Simultaneous, independent control of all movements. Sensitive maneuvers irrespective of loads.

Pump capacity, max.	190 l/min
	-
Working pressure, max.	350 bar

The thermostatically controlled oil circuit ensures that the oil temperature is promptly reached and avoids overheating Hydraulically actuated reversible fan. Return filter installed in oil tank allows for eco-friendly replacement of filter elements.

Triple gear pump for all positioning movements, pivoting of uppercarriage and for hydrostatic fanfunction. Return filter installed in oil tank allows for eco-friendly replacement of filter elements.

Pump capacity, max.	38 + 38 + 38 l/min
Working pressure, max.	250 bar
Control circuit for work attachments (proportionally operated):	
Pump capacity, adjustable up to max.	0 - 120 l / min
Working pressure, max.	300 bar
Two servo-assisted invstick controls (ISO) for excavator operations	

TRANSMISSION

Hydrostatic travel drive with planetary reduction gears on sprocket drives.

Multi-disc brake acting as parking brake, automatically bled. 2-stage variable displacement motor, full power shift.

2 speed ranges :

"Forward"	0 - 2,7 km/h
"Reverse"	5,4 km/h
Gradability	60°
Drawbar pull 1st / 2nd speed range	8 358 / 4 253 daN
Drawbar pull 1st / 2nd speed range	6 816 / 3 282 daN

MAINTENANCE FREQUENCY

Change engine oil and filter	every 500 hours but minimum 1 x per year
Change fuel filter	every 1000 hours but minium 1 x year final
Change hydraulic oil	check at 100 + 500 hours ; every 1000 hours but minium every 2 year
Change hydraulic oil filter	first after 100 hours ; then follow the instructions at display which shows next maintenance frequency
Change cooling fluid	if needed : but minimum every 2 year

All values in tons (t) were determined acc. to ISO 10567 and include a stability factor of 1.33 or 87% of the hydraulic lifting capacity. All values were determined with quick-attach system but without bucket. In case of mounted-on work attachments, the deadweights of the work attachments, the deadweights of the work attachments must be deducted from the permissible operating loads. must be deducted from the permissible operating loads. Working equipment: Rubber crawlers.



[STANDARD EQUIPMENT]

CABINE

Spacious, sound-insulated full-vision steel cab (ROPS certified). Sliding window in cab door.

Safety glass windows, thermo windows tinted in green. Skylight thermos window, bronze tinted.

Panoramic rear window

Front window supported by pneumatic springs, lockable for ventilation and slidable under cab roof.

Windshield washer system

Preparation for radio installation. Left-hand outside rear-view mirror.

Cab heating with front window defroster by coolant heat exchanger with stepless fan.

Fresh air and recirculating air filters.

Operator's seat MSG 85 (comfort version), hydraulic damping, extra-high backrest, tilt-adjustable armrests, longitudinal-horizontal suspension, mechanical lumbar support.

Lap belt. Instrument panel on the right-hand side of the operator's seat with visual & acoustic warning device, hour-meter and safety module.

Working floodlights Halogen H-3

Sound power level (LWA) 99 dB (A)

Sound pressure level (LpA) 74 dB (A)

Sound level values measured in compliance with Directive 2000/14/EC an EN474

Effective values of acceleration for whole body less than 0.5 m/s²

Effective values of acceleration for hand-arm less than 2.5 m/s².

Vibration values in compliance with Directive 2006/42/EC and EN474.

STEERING

Independent individual control of crawler chains, also counterwise. Sensitive control provided by pilot operated hand levers combined with foot pedals. Full drawbar pull even at shifts in direction.

SWING SYSTEM

Hydrostatic drive with 2-stage planetary gear and axial piston fixed displacement motor, also acts as wear-resistant brake. In addition, spring-loaded multi-disc brake acting as parking brake

Swing speed 0-10 min¹

KNICKMATIK®

Lateral parallel adjustment of boom arrangement at full dig depth

Angle of articulation / lateral adjustment left

Angle of articulation / lateral adjustment right

54° / 1030 mm mm

ELECTRICAL SYSTEM

Nominal voltage	12V
Battery	12V / 135 Ah
Generator	14V / 95 Ah
Starter	12V / 4,0 kW

FLUID CAPACITIES

Fuel tank	185 l
Hydraulic system (incl. Tank)	230 l
AdBlue Tank	10 l

BRAKES

Service brake: Hydraulic pump accumulator two-circuit brake, acting on oil-immersed multi-disc brakes of front and rear axle.

Excavator brake: Acting on front and rear axle due to lockable service brake.

Auxiliary brake: Hydrostatic travel drive in closed circuit acting as non-wearing auxiliary brake

Parking brake: Hydraulic spring-loaded brake, electrically actuated

[OPTIONAL EQUIPMENT]

BOOM OPTIONS

Monobloc boom, with dipperstick 2000 mm | Monobloc boom, with dipperstick 2350 mm | TPA boom, with dipperstick 2 000 mm | TPA boom, with dipperstick 2350 mm.

HYDRAULIC SYSTEM

Second control circuit (e.g for sorting grab) | Biodegradable hydraulic oil / ester-based HLP 68 (Panolin) | Open return | Float position dozer blade | Fingertip control incl. second additional control circuit on left joystick | Fingertip control incl. third additional control circuit on left joystick | Conversion kit ISO controls | Excavator control changeover.

OPERATOR'S STAND

Operator's seat MSG 95 (premium version), air damping, extra-high backrest and tilt-adjustable armrest, longitudinal-horizontal suspension, seat and backrest heating, pneumatic lumbar support | Klimatronic | Thermoelectric cooler.

ENGINE

Diesel particulate filter | Automatic idle

CABINE

Lighting package: 1 double beam working floodlight - cab mounted rear center, 1 working floodlight cab mounted - front right.

FOPS - skylight guard | Additional boom-mounted working floodlight | Radio set installation kit | Yellow beacon. | Sliding window on righthand side.

CRAWLER CHAIN OPTIONS

Rubber crawler track 500 mm wide | Steel crawler track up to 800 mm wide | Rubber-coated steel crawler chain « Roadliner », 500 mm wide.

OPTIONAL SUPPORT / DOZER SYSTEMS

Front dozer blade, width 2 400mm, 2 500mm, 2 700 mm and 2 800 mm.

OTHER OPTIONAL EQUIPMENT

Quick-hitch system, mechanical, type MS08 | Quick-hitch system, hydraulic, type HS08 | Hydraulic installation for quick-hitch system | Antidevice (immobilizer) | Additional rear weight, 480 kg | Electrical refueling pump | Engine independent diesel heater with fresh air circulation and timer | Working floodlight, boom-mounted | Further optional equipment available on request.

BUCKETS

Bucket, QAS 400 mm wide, capacity 1491 Bucket, QAS 500 mm wide, capacity 2001 Bucket, QAS 600 mm wide, capacity 2541 Bucket, QAS 700 mm wide, capacity 3081 Bucket QAS 800 mm wide, capacity 3641 Bucket QAS 900 mm wide, capacity 4211 Bucket 1,000 mm wide, capacity 4771 Ditch-cleaning bucket, QAS 1,500 mm wide, capacity 3711 Swing bucket, QAS 1,500 mm wide, capacity 4301.

GRABS

Clamshell grab GS 3325, grab swing brake set of shells 325 mm wide, capacity 150l | Clamshell grab GS 3400, grab swing brake set of shells 400 mm wide, capacity 200l | Clamshell grab GS 3500, grab swing brake set of shells 500 mm wide, capacity 250l | Clamshell grab GS 3600, grab swing brake set of shells 600 mm wide, capacity 325l | Ejector.

OTHER WORK ATTACHMENTS

Ripper tooth / QAS (1 tooth) | Rototilt RT30 | Cutting unit | Hydraulic hammer | Quick-hitch adapter for hydraulic hammer |

Augers | Bolt-on loading hook for bucket rod | Loading hook integrated in quick-hitch system | Further work attachments available on request.





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