SCHAEFF
A YANMAR BRAND

COMPACT
MIDI EXCAVATOR

TC125

SUPPORTING YOUR SUCCESS

Top performance in a compact package

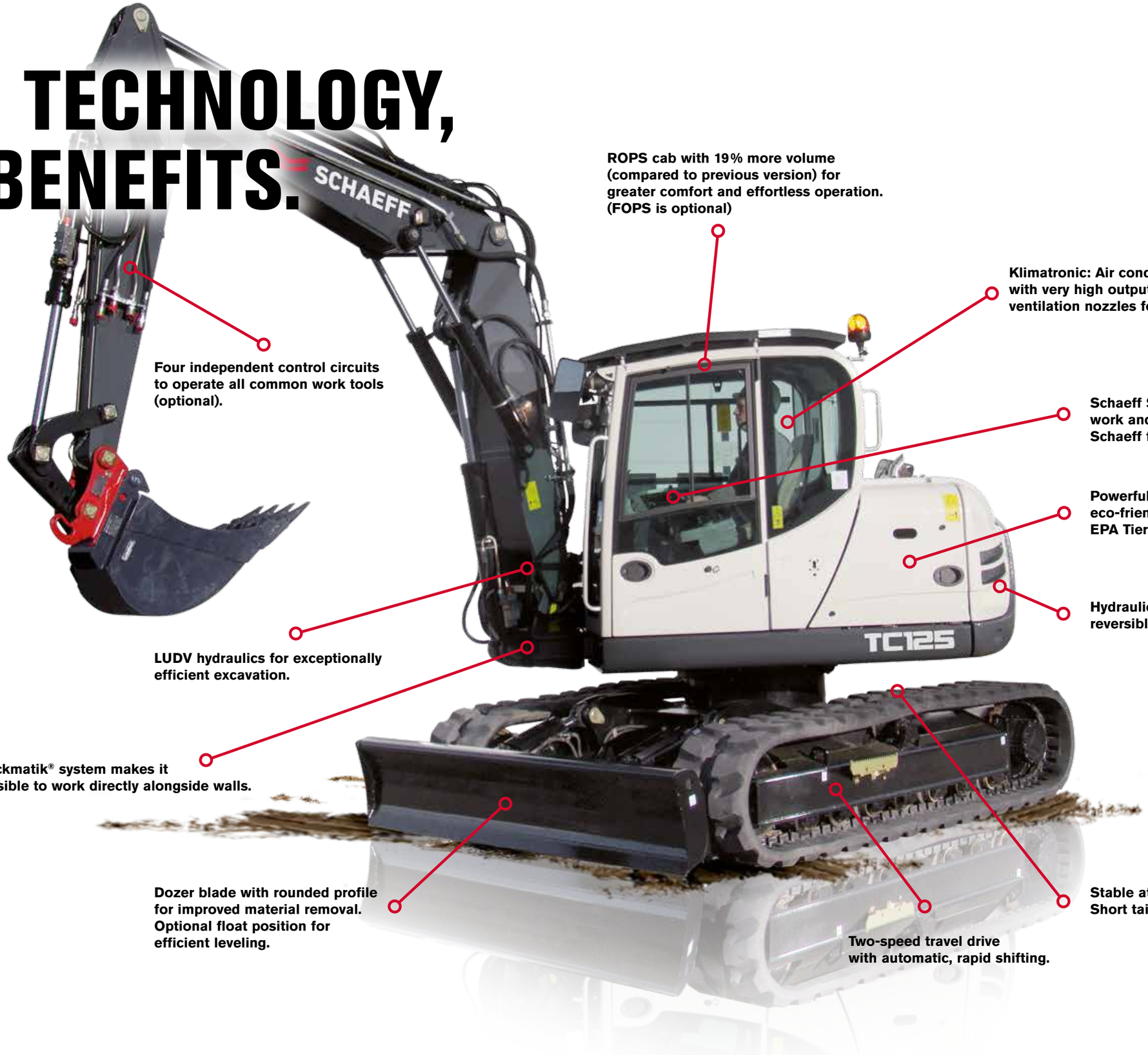
Schaeff midi excavators close the gap between mini and large excavators. The TC125, as a 12.5-ton machine, is as powerful, accurate to control and comfortably equipped as a large excavator. It also comes with all the advantages of compact dimensions with short tail – perfect for inner city construction sites, for road construction or for material handling.

A Schaeff midi excavator comes with 50 years of expertise and development. That experience is clearly demonstrated in our product design: the result is a productive machine that is intuitive to operate and performs efficiently in even the most diverse working environments.

Technical data

Operating weight	11.3 - 12.5 t
Engine power	85kW (116HP)
Bucket capacity	149 - 477 l
Max. digging depth	4.91 m
Reach	7.99 - 8.65 m

LATEST TECHNOLOGY, MORE BENEFITS.



ROPS cab with 19% more volume (compared to previous version) for greater comfort and effortless operation. (FOPS is optional)

Klimatronic: Air conditioning system (optional) with very high output and optimally distributed ventilation nozzles for comfortable operation.

Four independent control circuits to operate all common work tools (optional).

Schaeff Smart Control for efficient work and operation, including Schaeff fingertip control.

Powerful, low-consumption and eco-friendly engine EU Stage IIIB / EPA Tier 4 Interim.

Hydraulic, temperature-controlled reversible fan for efficient cooling.

LUDV hydraulics for exceptionally efficient excavation.

Knickmatik® system makes it possible to work directly alongside walls.

Dozer blade with rounded profile for improved material removal. Optional float position for efficient leveling.

Stable at high carrying capacities. Short tail – ideal on small sites.

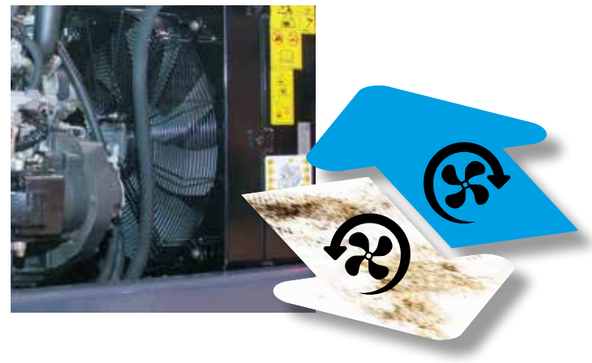
Two-speed travel drive with automatic, rapid shifting.

EFFICIENT ENGINE AND ECONOMICAL OPERATION

The engine

The power for the Schaeff midi excavator TC125 is supplied by an EU Stage IIIB / EPA Tier 4 Interim class engine. After-treatment of the exhaust gases reduces pollutants by up to 90%, as well as nitrous oxides (NOx), hydrocarbons (HC) and fine particulate matter. This is all the result of an improved combustion and fuel injection system, and a diesel oxidation catalyst (DOC). The engine does not require a particulate filter.

- 13% more power.* 85 kW (previously 74.9 kW) gives the crawler excavator appreciable extra power for these operating cycles.
- 10% reduction in fuel consumption.*

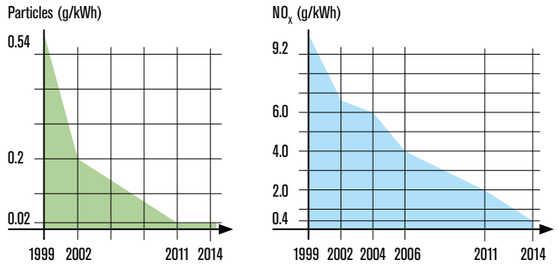


THE REVERSIBLE FAN

The hydraulically 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-IDLING SYSTEM

The auto-idling system (optional) saves fuel.
When inactive, the engine switches to neutral –
and thereby reduces emissions and operating costs.



Graphics show the legal requirements

** Compared to previous version*

EXTRA COMFORT FOR HIGH PRODUCTIVITY

The Cab

Excellent cab conditions: The Schaeff high-performance cab delivers superb visibility, lots of space and simple instruments. So the driver can concentrate on working, even on a tough day.

DISPLAY AND INSTRUMENTS

Work functions and machine information are in a central location and can be understood at a glance for a better overview and more comfort. The data is tiled as on a smartphone. The anti-glare 7" screen has very good visibility and is also used as a monitor for the optional rear view camera.

THE KEYPAD

Extra-wide keys make the keypad easy to use, even with gloves. The optional immobiliser can also be operated.

THE SIDE WINDOW

The side window with opening mechanism and special ventilation position brings very comfortable ventilation to the interior. The ventilation position is cleverly designed so that no water enters the cab, even in wind and rain.

PREMIUM UPGRADE

- You can adapt your Schaeff midi excavator exactly to your needs with a large number of available comfort premium options, such as air-cushioned driver's seat.

ACCURATE OPERATION AND FULL CONTROL

**Clever ideas for optimal machine controls:
Designed to be simple and effective so that every operator can control the machine efficiently and reliably. Operation is completely intuitive and tuned specifically to the different operating cycles.**

Schaeff Smart Control

Schaeff Smart Control is developed exclusively by Schaeff and gives the operator maximum control of the excavator. A large number of excavator functions can be adjusted precisely to the operator and site, making the excavator more efficient and productive.

EXAMPLE OF MACHINE CONTROLS

- The litre quantity of the control circuits is also adjusted during continuous operation as a percentage via the bar graph according to the operation and the attachment.
- **Eco-mode** can be switched on at the touch of a button.
- **Climate control**
  Automatic air conditioning (optional), heating, and defrosting can be set exactly to the desired conditions.

Schaeff fingertip control

Schaeff fingertip control allows electro-proportional actuation of the hydraulic functions very simply via a thumbwheel on the joystick. The operator can therefore adjust the oil flow very accurately from Zero to Full, which helps to actuate attachments such as clamshell grab, swing buckets and sweepers in particular.

DESIGNED FOR PERFORMANCE.

Undercarriage and power transmission

A well designed undercarriage provides the foundations for great work. Schaeff undercarriages stand out from the crowd thanks to their extremely robust design, high stability, powerful handling and custom configurations for the application.

AUTOMATIC SHIFTING

The autoshift drive travel gear delivers automatic, pressure-controlled shifting between travel speed – particularly helpful for leveling work.

DOZER BLADE

The rounded shape of the blade guarantees excellent material transport during leveling work. The optional float position provides additional support.
Schaeff also supplies an extra-wide dozer blade that is perfectly adapted to the track width. It is therefore possible, for example, to use the dipper directly against the blade when clearing the site.

TRACKS AND DRIVE PERFORMANCE

The steel tracks mounted as standard are the perfect solution for rough terrain. By design, their large contact area delivers a comfortable drive. Rubber tracks are optionally available for special applications. Track motors operated independently and individually enable accurate maneuvering.

RANGE OF CHAIN TYPES

Depending on terrain and application:
- **Rubber tracks** – for asphalt and soft surfaces.
- **Standard steel tracks** – robust on rough terrain.
- **Wide steel tracks** – with low ground pressure when working on softer surfaces.
- **The "Roadliner" combi track** is tried and tested on a range of different surfaces. Only the rubber coated steel plates have to be replaced when worn – not the entire chain – which minimizes costs.

SERVICING TRACKS

The tracks are alternately flanged on the inside and outside to minimise wear. The rollers are lifetime-lubricated and encapsulated to keep maintenance to a minimum. Travel motor, transmission, pipes and hoses are protected against damage by the floor plate. The plate can be opened if necessary to access the components from the ground.

FLEXIBLE PRODUCTIVITY

Strong boom and hydraulics

The Schaeff boom systems manage three things perfectly: reach, dig depth and all common attachments.

BOOM SYSTEMS

The TC125 can be custom-configured to the application using various boom systems and extendable dippersticks.

- **Monobloc boom:**
  The monobloc boom achieves particularly fast operating cycles. Its robust design means it can also handle heavy loads.
- **Three-piece articulated boom:**
  The three-piece articulated boom can be adapted to a broad range of different requirements thanks to superb vertical dig depth, large reach and impressive dump heights.

CYLINDERS

All cylinders are fitted with end-position damping to operate vibration-free. The articulated cylinders are installed in the uppercarriage to avoid damage.

DIPPERSTICK

The longer dipperstick (optional) extends reach and dig depth and is supplied with a standard or long design.

KNICKMATIK®

It is possible to work even on the smallest sites thanks to the laterally adjustable boom. The angle of articulation is 120°.
The special benefit: You can work over the entire track width on both sides without relocating the machine. The Knickmatik® cylinders are protected against damage from collision.

HYDRAULICS

The four independent control circuits increase the performance of the TC125 midi excavator when used with attachments. The operator controls a tilt rotator with hydraulic quick change system plus a hydraulically driven tool such as sorting grabs, asphalt cutters or cutting units. The control circuits do not interact.
All cycles and functions can be operated simultaneously and independently. The operating cycles are jolt-free and comfortable thanks to pilot control of the controls.

OPERATING ATTACHMENTS

The hydraulic pump delivers approx. 190 l/min to operate attachments. The machine achieves faster operating cycles for greater productivity.

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**
- **Hammer adapter**
- **Load hook**
- **Load hook, screw-attached**
- **Mechanical quick-attach system**
- **Hydraulic quick-attach system**
- **Pallet fork**

MINIMISE DOWNTIME

Service

Everything associated with servicing your machine has been designed to be as simple as possible to get your Schaeff TC125 back to work quickly.

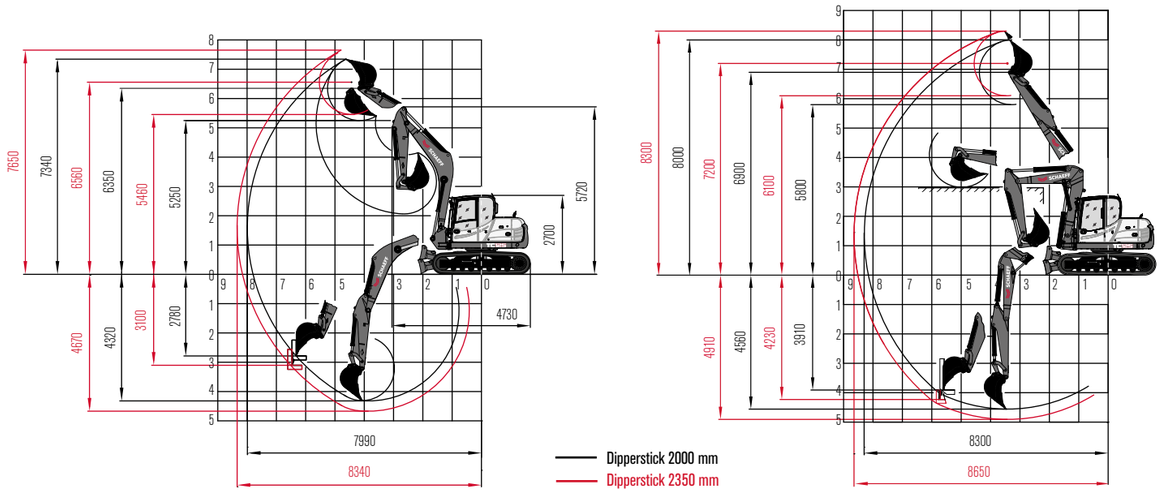
- The machine can be fueled easily and quickly via the readily accessible service flap.
- The engine cover can be opened effortlessly thanks to generously sized gas assist springs. Starter, alternator, battery, injection pump and both fuel and air filter are easily accessible.
- A service strip with 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 cab. The cab does not have to be tipped over – though it can be tipped if necessary.

DIAGNOSTIC CONNECTOR
The diagnostic connector for engine and machine data facilitates maintenance and service thanks to improved communication between operator and machine. CanBus data is output on the display.

ONE FURTHER ADVANTAGE

- We supply every Schaeff original part quickly to your distributor – across the world.

WORKING RANGES & DIMENSIONS: MONOBLOC BOOM / TPA BOOM



LIFTING CAPACITIES

Bucket hinge height		Load radius from center of ring gear									
Dipperstick 2000 mm		3.0 m		4.0 m		5.0 m		6.0 m		6.6 m	
Monobloc boom		End	Side	End	Side	End	Side	End	Side	End	Side
3.0 m	S	–	–	3.20	3.00	2.60	1.90	2.40	1.40	2.20	1.10
	T	–	–	2.90	2.50	2.10	1.80	1.70	1.30	1.30	1.00
1.5 m	S	–	–	5.40	2.40	3.50	1.80	2.80	1.30	2.50	1.00
	T	–	–	3.00	2.20	2.10	1.60	1.60	1.20	1.20	1.00
0 m	S	7.40	4.10	5.60	2.30	4.00	1.60	2.70	1.30	2.70	1.10
	T	5.70	4.00	2.80	2.10	2.00	1.50	1.50	1.10	1.20	1.00
- 0.9 m	S	–	–	5.80	2.30	4.00	1.60	3.10	1.30	2.90	1.20
	T	–	–	2.90	2.10	2.00	1.50	1.50	1.20	1.40	1.10

Bucket hinge height		Load radius from center of ring gear									
Dipperstick 2000 mm		3.0 m		4.0 m		5.0 m		6.0 m		7 m	
Two-piece articulated boom		End	Side	End	Side	End	Side	End	Side	End	Side
3.0 m	S	–	–	3.40	3.30	2.70	2.40	2.30	1.60	2.10	1.10
	T	–	–	3.20	3.20	2.60	2.00	2.00	1.50	2.00	1.10
1.5 m	S	5.00	5.00	4.50	2.60	3.20	2.30	2.60	1.50	2.00	1.10
	T	4.60	5.00	3.40	2.50	2.80	2.30	1.90	1.50	1.40	1.10
0 m	S	7.40	4.10	4.40	2.60	3.50	1.90	2.80	1.40	2.00	1.00
	T	5.70	4.00	3.40	2.60	2.40	1.80	1.80	1.30	1.30	1.00
- 0.6 m	S	8.00	4.00	4.90	2.60	3.60	1.90	2.70	1.40	–	–
	T	5.50	3.90	3.40	2.50	2.40	1.80	1.70	1.30	–	–

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 must be deducted from the permissible operating loads.
Working equipment: Rubber crawlers.
Abbreviations: S = Supported by blade, T = Traveling

DIMENSIONS

Fig. 1:
Working envelope

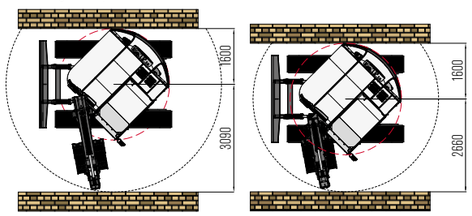
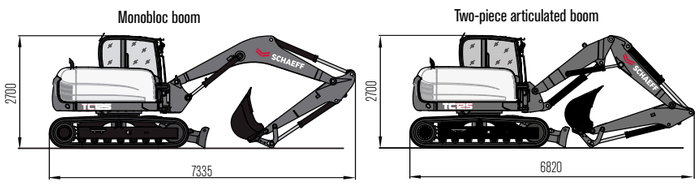


Fig. 3:
Transport position



SPECIFICATIONS

TC125

ENGINE

Manufacturer, model	Deutz, TCD3.6 L4
Type	4-cylinder turbo diesel engine with intercooler, EU Stage III B / Tier4i
Combustion	4-stroke cycle, Common Rail injection
Displacement	3600 cm^3
Net power rating at 2000 rpm (ISO 9249)	85 kW (116 hp)
Torque	400 Nm at 1600 rpm
Cooling system	Water

ELECTRICAL SYSTEM

Nominal voltage	12 V
Battery	12 V / 135 Ah
Generator	14 V / 95 Ah
Starter	12 V / 4.0 kW

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:

Travel speed, forward and reverse	0-2.7 / 5.4 kph
Gradeability	> 60 %
Drawbar pull 1st/2nd speed range	8358 / 4253 daN

UNDERCARRIAGE

Maintenance-friendly B4 track-type undercarriage with triple grouser plates or rubber crawlers. Idler suspension with hydraulic crawler-chain tensioning.

Width rubber crawlers / steel crawlers	500 / max. 800 mm
Total length (sprocket - idler)	2628 / 2608 mm
Total length (undercarriage)	3345 mm

DOZER BLADE

Independent of drive train, sensitive control via separate hand lever.

Width x height	2500 x 510 mm
Dozer cut below ground	400 mm
Dozer lift above ground	500 mm
Slope angle	35°

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 rpm

KNICKMATIK®

Lateral parallel adjustment of boom arrangement at full dig depth.

Angle of articulation / lateral adjustment left	65° / 855 mm
Angle of articulation / lateral adjustment right	56° / 995 mm

FLUID CAPACITIES

Fuel tank	240 l
Hydraulic system (incl. tank)	230 l

OPERATING DATA, STANDARD EQUIPMENT

Operating weight (monobloc boom) acc. to ISO 6016	11,500 kg
Operating weight (two-piece articulated boom “TPA”) acc. to ISO 6016	11,300 kg
Undercarriage (steel crawlers) 500 mm	+310 kg
Transport dimensions: Monobloc boom / TPA boom (L x H)	7350 x 2700 / 6820 x 2700 mm
Total width with dozer blade	2500 mm
Total height (top of cab)	2870 mm
Ground clearance	420 mm
Uppercarriage tailswing	1600 mm
Uppercarriage frontswing (monobloc boom)	2660 mm
Working envelope 180° (monobloc boom)	4260 mm
Working envelope 360° (monobloc boom)	5320 mm
Bucket digging force acc. to ISO 6015 (monobloc boom)	81,500 N
Ripping force acc. to ISO 6015 (monobloc boom / TPA boom)	61,000 N
Ground pressure (rubber crawlers)	0.40 daN/cm^2
Ground pressure (steel crawlers)	0.41 daN/cm^2

HYDRAULIC SYSTEM

Working hydraulics: 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.

Max. pump capacity	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.

Dual gear pump for all positioning movements, pivoting of uppercarriage and for hydrostatic fan.

Pump capacity, max.	76 + 38 l/min
Working pressure, max.	230 bar

Control circuit for work attachments (proportionally operated):

Pump capacity, adjustable up to max.	20 – 100 l/min
Working pressure, max.	350 bar

Two servo-assisted joystick controls (ISO) for excavator operations.

CAB

Spacious, sound-insulated full-vision steel cab (ROPS certified). Sliding window in cab door. Safety glass windows, thermo windows tinted in green. Skylight thermo window, bronze tinted. Panoramic rear window. Front window supported by pneumatic springs, lockable for ventilation and slidable under cab roof. Windshield washer system. Storage compartment. 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 level values in compliance with EC-directives.

WORK ATTACHMENTS

BUCKETS

Bucket, QAS	400 mm wide, capacity 149 l
Bucket, QAS	500 mm wide, capacity 200 l
Bucket, QAS	600 mm wide, capacity 254 l
Bucket, QAS	700 mm wide, capacity 308 l
Bucket, QAS	800 mm wide, capacity 364 l
Bucket, QAS	900 mm wide, capacity 421 l
Bucket, QAS	1000 mm wide, capacity 477 l
Ditch-cleaning bucket, QAS	1500 mm wide, capacity 371 l
Swing bucket, QAS	1500 mm wide, capacity 371 l
Swing bucket, QAS	1800 mm wide, capacity 430 l

GRABS

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

OTHER WORK ATTACHMENTS

Ripper tooth / QAS (1 tooth)	Rototilt RT30
Hydraulic hammer	Quick-change adapter for hydraulic hammer
Augers	Bolt-on load hook for bucket rod
Load hook integrated in quick-attach system	
Further work attachments available on request	

OPTIONAL EQUIPMENT

BOOM OPTIONS

TPA boom, with dipperstick 1850 mm
TPA boom, with dipperstick 2350 mm
Monobloc boom, with extended dipperstick 2000 mm

CRAWLER CHAIN OPTIONS

Rubber crawler track, 500 mm wide
Rubber-coated steel crawler chain 'Roadliner', 500 mm wide.
Steel crawlers up to 800 mm wide

OPTIONAL SUPPORT/DOZER SYSTEMS

Front dozer blade, extra-long version

HYDRAULIC SYSTEM

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

CAB

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 right-hand side

DRIVER'S STAND

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

OTHER OPTIONAL EQUIPMENT

Additional rear weight 480 kg	Anti-theft device (immobilizer)
Quick-attach system, mechanical (genuine Lehnhoff system), type MS08	Quick-attach system, hydraulical (genuine Lehnhoff system), type HS08
Hydraulic installation for quick-attach system	Electrical refueling pump
Engine-independent diesel heater with fresh air circulation and timer	Working floodlight, boom-mounted
Special coating / adhesive films	Further optional equipment available on request

SCHAEFF
A YANMAR BRAND

Yanmar Compact Germany GmbH
Kraftwerkstrasse 4
74564 Crailsheim, Germany

www.schaeff-yanmar.com