



SCHAEFF

A **YANMAR** BRAND

MINI EXCAVATOR



TC37₂



**HOW DO YOU START
WITH A MINI AND
MAKE A...**





XL MINI EXCAVATORS

WHAT DOES A GOOD MINI EXCAVATOR MEAN TODAY?

Very simple: the ability to reliably do more.

With these new models, you mini-excavate in XL format: High digging forces, functional design, more room. Schaeff offers two models in the 3.5 ton segment. You have a choice between a machine width of only 1500 mm, which allows for a wide range of potential transport options, or a minimum tail overhang of only 60 mm. Both equipped with high performance genes.

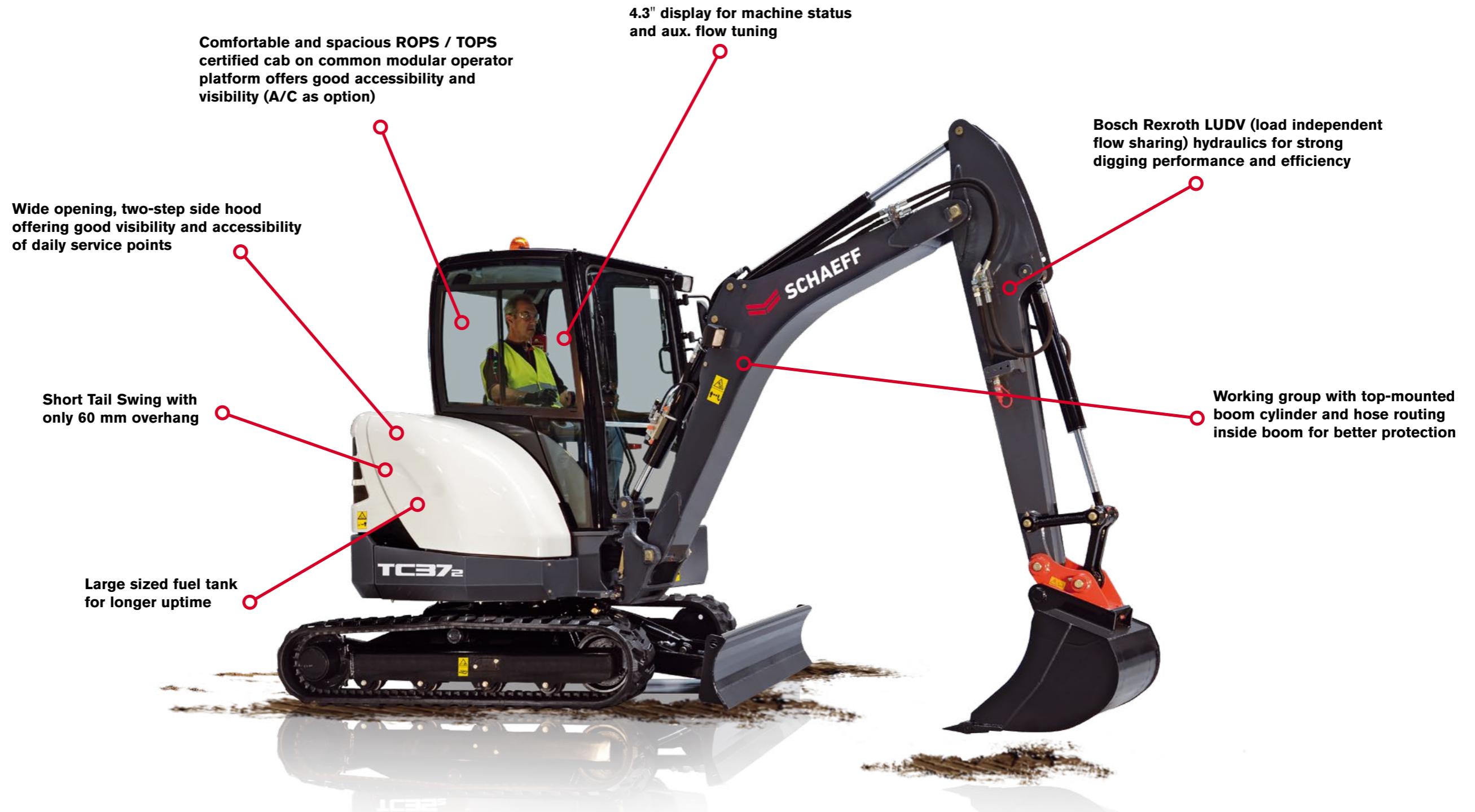
TRADITION MEETS PROGRESS

The Schaeff philosophy – conventional construction, Knickmatik™ cylinder and top-mounted cylinder – was retained. A completely new machine was constructed around these elements, from high performance brand components to the new driver's cab.

"MADE IN GERMANY"

Machine Engineering Made in Germany – this is our claim: The XL mini excavators are completely designed and constructed in our plant in Crailsheim, Germany.





Comfortable and spacious ROPS / TOPS certified cab on common modular operator platform offers good accessibility and visibility (A/C as option)

4.3" display for machine status and aux. flow tuning

Bosch Rexroth LUDV (load independent flow sharing) hydraulics for strong digging performance and efficiency

Wide opening, two-step side hood offering good visibility and accessibility of daily service points

Short Tail Swing with only 60 mm overhang

Working group with top-mounted boom cylinder and hose routing inside boom for better protection

Large sized fuel tank for longer uptime



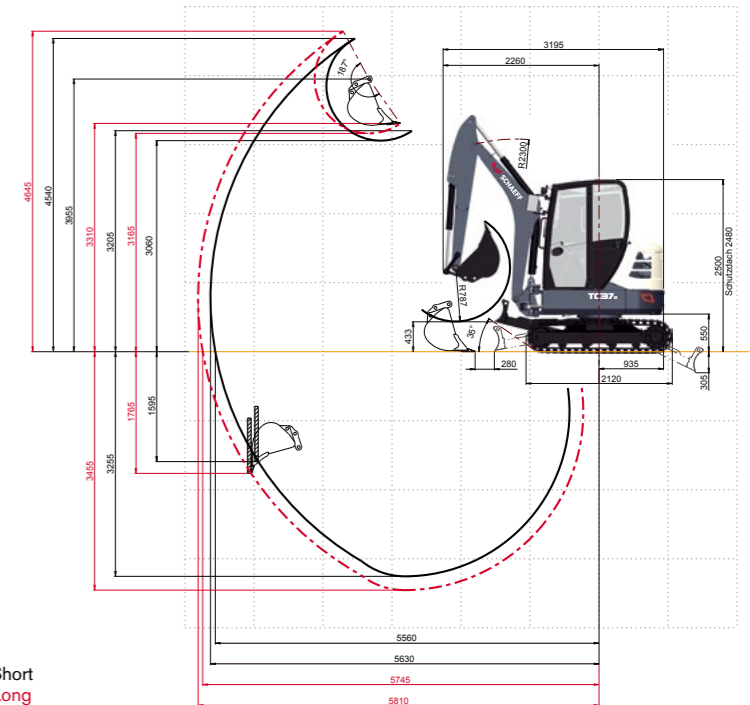
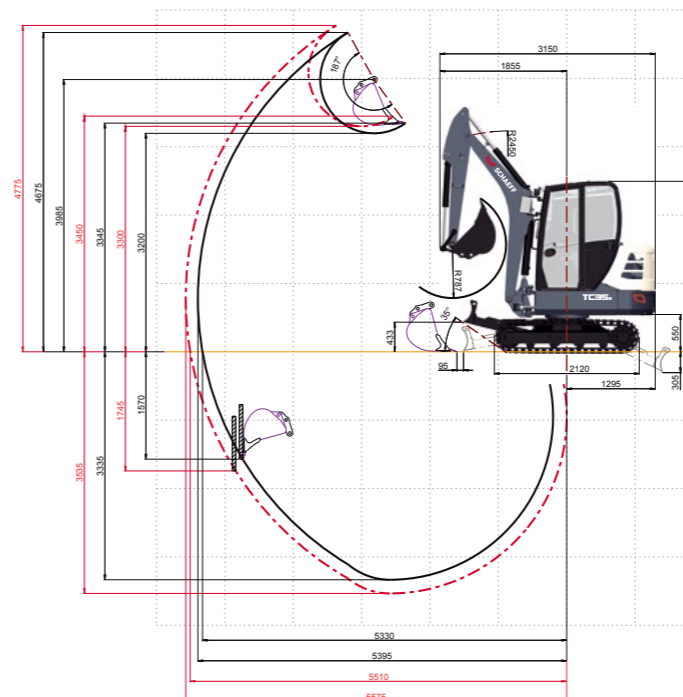
Operating weight kg		
Cab	3570	3550
Canopy	3490	3470
Engine power kW (hp)	22.8 (31.0)	22.8 (31.0)
Engine manufacturer	Kubota D1803 M-DI, EU Stage IIIA	Kubota D1803 M-DI, EU Stage IIIA
Max. digging depth m		
Standard dipperstick	3.33	3.25
Long dipperstick	3.53	3.45

EQUIPMENT

- Machine width 1500 mm
- Digging equipment:
Dipperstick 1600 mm standard
Dipperstick 1800 mm optional
- Axial piston variable displacement pump:
Pump capacity 103 l/min
Working pressure 250 bar
- LUDV hydraulics
- Schaeff Fingertip Control
- 2 travel speeds (Auto 2-Speed)

EQUIPMENT

- Machine width 1750 mm
- Tail overhang 60 mm
- Digging equipment:
Dipperstick 1600 mm standard
Dipperstick 1800 mm optional
- Axial piston variable displacement pump:
Pump capacity 103 l/min
Working pressure 250 bar
- LUDV hydraulics
- Schaeff Fingertip Control
- 2 travel speeds (Auto 2-Speed)



Short
Long

XL DIGGING PERFORMANCE

HOW DOES A PRODUCTIVE MACHINE COME INTO BEING?

Very simple: combine high-performance components with good ideas.

ENGINE AND HYDRAULIC SYSTEM

Compared to current competitors' models, the mini excavator offers an average 20 % more work capacity, for example, when quickly digging trenches. The LUDV (load independent flow sharing) hydraulics is offered by only a few models in this class. Even for extreme grounds, the bucket digs in powerfully and is completely filled.

ADDITIONAL CONTROL CIRCUIT WITH SCHAEFF FINGERTIP CONTROL

For precise operation of attachment tools, the first electrically proportional additional control circuit comes as standard. With the Schaeff Fingertip Control, the actuation of the hydraulic functions is extremely simple with a thumb wheel on the joystick. With it, the operator can precisely regulate the oil flow from "min." to "max.", an advantage when controlling the attachment devices such as clamshell buckets or swing buckets. Also available for second control circuit on left joystick.

SCHAEFF KNICKMATIK®

The Schaeff Knickmatik® with adjustable articulated boom system is ideal for working along walls or embankments. The total articulation angle is an impressive 120°. The swing cylinder does not project over the track and so is protected from damage.

CRAWLER UNIT

Rubber track 300 mm with 4 track rollers at the bottom and 1 support roller on top. Two-stage automatically switching travel drive (Auto 2-Speed).





XL WORKSTATION

HOW CAN PERFORMANCE BE INCREASED SEPARATELY FROM TECHNOLOGY?

Very simple: with a workplace that makes the driver better.

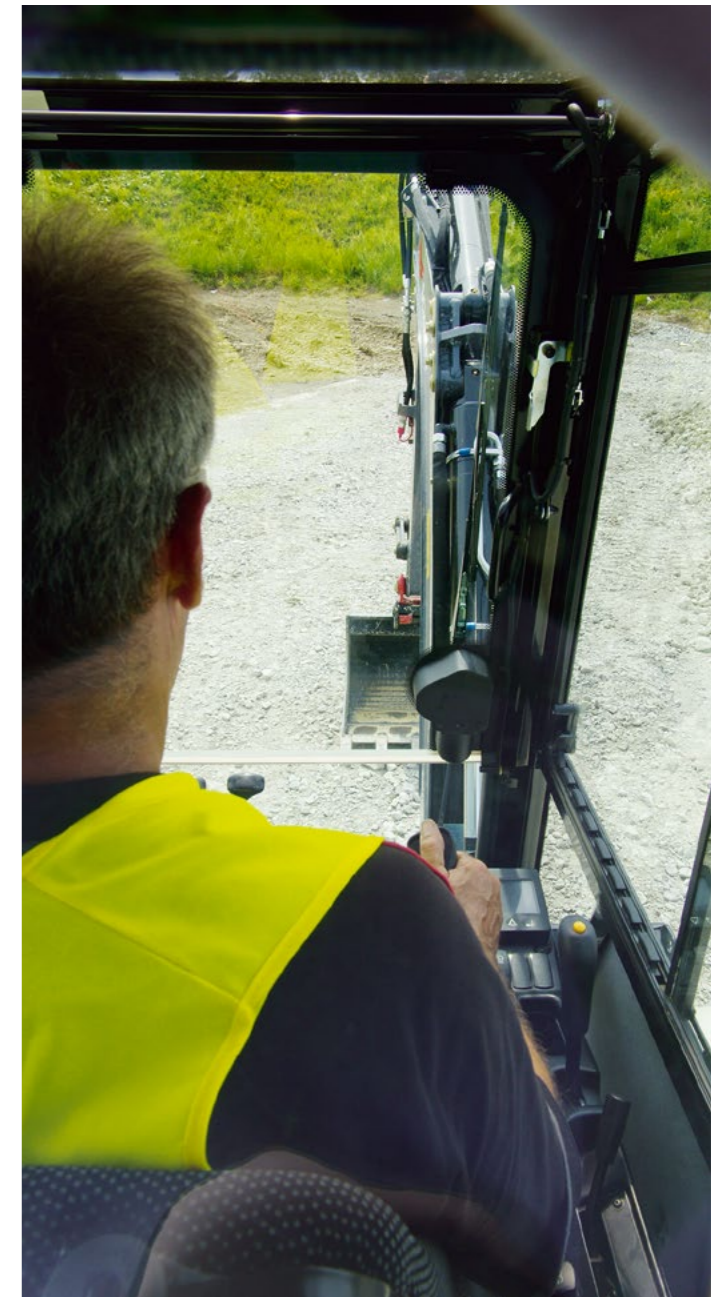
ROOMY CAB

The new XL cab (ROPS/TOPS-certified) offers room and comfort like the "big ones". For quick entry, the console can be raised for more space to get in the cab. The footwell offers place enough – even for shoe sizes 15 and larger. In general, the workplace can be individually arranged to the size of the driver. The generous glass surfaces allow optimal visibility of the attachment tools and the work environment. Quick change of cab to canopy.



Canopy version

The machines are also available in canopy versions. With safety equipment such as the lockable storage compartment.



XL EASE OF USE

WHAT DOES USER-FRIENDLY MEAN?

Very simple: the combination of intuitive control and safe working.

WELL PROTECTED

With Schaeff-specific construction features, damage is avoided right from the start: Because of the upper position of the top-mounted cylinder, no damage will occur, for example, if there is contact with the bucket or between the piston rod and the loading edge when loading trucks. The Knickmatik™ cylinder was deliberately placed on the left so it is protected from damage in case of a collision. The boom can be swiveled to both sides at full digging depth.

HYDRAULIC HOSES

The hydraulics on the working device are well protected by the boom, or are located very closely along the boom.

TRANSPORT

Because of the automatic swing brake, locking the upper carriage for transport is impossible to forget.

ERGONOMICS

Particular focus was placed on ergonomics in all models; for example, the blade lever offers an integrated travel speed controller (regardless of this, the travel speed is automatically controlled – Auto 2-speed). This feature makes leveling and digging much easier.

DISPLAY

4.3" display with tank level, operating hour counter, temperature display and hydraulic pressure setting. An optical signal for faulty functions.





XL SERVICE

WHAT DOES DAILY SERVICE COME DOWN TO?

Very simple: minimizing time and effort.

Downtimes and service costs are reduced overall.

To save time during daily service, easy access and combined service points are key elements.

The two-piece engine hood opens upward widely so daily inspection points are directly accessible or can be monitored through gauge glasses or, on most models, are already visible from outside. Direct fueling from canisters is easily possible at working height. The fuel tank has an ample capacity of 68 l. All locks (including the ignition) can be operated with just one central key.



HIGH STANDARD

RIGHT FROM THE START, INSIDE AND OUT

ENGINE / FUEL SYSTEM

- Efficient direct injection diesel engine
- Hydromounts for diesel engine for optimum sound and vibration insulation
- Air filter with safety cartridge
- Fuel filling ports at working height

UNDERCARRIAGE

- Auto 2-Speed
- Rubber track 300 mm
4 track rollers at the bottom, 1 support roller on top

HYDRAULIC SYSTEM

- LUDV (load independent flow sharing)
- Pressure accumulator for emergency lowering
- Straight-ahead driving function
- Automatic swing brake (transport security)

SAFETY SYSTEM

- Engine safe-start device in left control console

WORK EQUIPMENT

- Additional control circuit up to end of dipperstick
- Cab/canopy-mounted working floodlight
- LUDV (load independent flow sharing) hydraulics

SAFETY CAB

- ROPS (Roll-Over Protective Structure)
- TOPS (TIP-Over Protective Structure)
- Weight-dependent adjustable comfort seat
- Safety belt
- Hydraulic pilot control with adjustable handrests
- Cab heating with windshield defroster
- Front windshield opening system with gas-dampened support
- Battery main switch
- 12 V connection
- Cabling for loudspeakers and antenna, radio plug-in compartment
- Side mirror
- Accelerator pedals
- Stow and store possibilities for tools, mobile phone and beverages

CANOPY

- ROPS (Roll-Over Protective Structure)
- TOPS (TIP-Over Protective Structure)
- FOPS as standard
- Weight-dependent adjustable comfort seat
- Safety belt
- Hydraulic pilot control with adjustable handrests
- 12 V connection
- Accelerator pedals
- Lockable storage compartment under the operator's seat
- Stow and store possibilities for tools, mobile phone and beverages



GOOD OPTIONS

OPTIMIZE YOUR MINI EXCAVATOR FOR USE

- Crane loading wire-rope harness
- Weatherproof roof
- Prepared installation for radio plug-in module (radio plug-in compartment, antenna, 2 loudspeakers)
- Theft prevention system
- Switches and cabling for rotating beacon
- Additional work headlight and rotating beacon
- Load hook
- Load-retaining valve
- Bio-degradable hydraulic oil
- FOPS and front guard
- Fire extinguisher
- Travel motion alarm
- Auto idle
- Float position dozer blade
- DPF (diesel particle filter) – only TC 35-2
- Air-conditioning
- Electric refueling pump
- Control circuit, hydraulic quick-attach system
- 2nd additional control circuit, electrically proportional
- Comfort seats
- Overload warning device
- Large range of buckets and quick-attach systems
- Special color options
- Brand-It labeling service

... further optional equipment available on request.

THE SCHAEFF ADVANTAGE

HOW DOES A MINI EXCAVATOR FIND ITS PLACE AT YOUR COMPANY?

Very simple:
with our additional services.

PAINTING SERVICE – STATE YOUR COLORS

So one matches the other: we paint with exactly your company colors.



BrandIt® – THE SERVICE FOR YOUR LOGO ON THE MACHINE.

At Schaeff, your company takes a prominent place. Our engine hoods offer plenty of room for your logo and therefore, your market entry. As desired, with our support.

Talk about our BrandIt® service with your Schaeff partner.





COMPACT PORTFOLIO

MADE IN CRAILSHEIM

FACTORY-TESTED SPARE PARTS

WHAT KEEPS YOUR SCHAEFF MINI EXCAVATOR READY TO OPERATE OVER THE LONG TERM?

Very simple: the original.

Schaeff spare parts ensure sustainable performance and efficiency for your machine. Order processing and service are fast: Schaeff dealers can order over 100,000 parts, from safety belts and control components to axles and filter elements. More than 95 % of the parts are shipped within 24 hours.

Contact your local Schaeff partner. There you will find further information and can order factory-tested spare parts.



Manufacturing compact construction machines is our competence and our great passion.

We have dedicated ourselves to this task for over 75 years – over 30 of them at our Crailsheim, Germany, location.

Our ideas have written the history of construction machines; for instance, the Knickmatik® or the top-mounted cylinder. And still today, our expertise determines the market. Our great skill also pays off for our customers: through extremely productive and reliable construction machines.

Mini crawler excavators

15 models. Operating weights from 1.5 to 5.0 tons

Midi crawler excavators

4 models. Operating weights from 5.65 to 12.5 tons

Compact wheeled excavators

3 models. Operating weights from 7.4 to 11.0 tons

Compact wheel loaders

5 models, bucket capacities from 0.5 to 1.8 cubic meters

SPECIFICATIONS

ENGINE

Manufacturer, model	Kubota, D1803 M-DI, EU Stage IIIA
Type	3-cylinder diesel engine
Combustion	4-stroke cycle with direct fuel injection (DI)
Bore x stroke	87 x 102 mm
Displacement	1826 cm ³
Power rating acc. to ISO 14396 @ 2200 rpm	22.8 kW (31.0 HP)
Torque max. @ 1400 rpm	114 Nm
Air filter with safety cartridge and maintenance switch	
Cold-starting aid	Glow plugs

ELECTRICAL SYSTEM

Nominal voltage	12 V
Battery	12 V / 71 Ah
Generator	12 V / 40 A
Starter	2.0 kW
Lighting system:	1 work light front left on the cab / canopy (auxiliary headlamps optional)

TRANSMISSION

Two-stage hydrostatic travel drive with axial piston variable displacement motor and reduction gear, fully enclosed. Automatic change-over between speed range I and II. "Straight-Travel" function. Brake valve for downhill drive. Manual switching via button on dozer lever

Travel speed, forward and reverse	0 – 2.4/4.2 kph
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UNDERCARRIAGE

Torsion-proof welded design. Crawler unit carriers in sloped design for dirt outlet. Maintenance-free crawler-type undercarriage. Idler suspension with hydraulic crawler-chain tensioning. Support roller at the top

Width rubber tracks	300 mm
Total length (undercarriage)	2090 mm
Number of rollers per side	4 at the bottom, 1 on top
Track width	1450 mm
Gradeability	max. 60%
Drawbar pull 1 st / 2 nd speed range	3560 / 2110 daN

STEERING

Independent individual control of crawler chains, also counterwise. Sensitive actuation via manual levers, combined with pedals, foot rest on pedal console

DOZER BLADE

Independent of drive train, sensitive control via separate hand lever	
Width x height	1750 x 360 mm
Dozer cut below ground	300 mm
Dozer lift above ground	430 mm
Slope angle	35°

SWING SYSTEM

Internally toothed ring gear	
Swing speed	0 – 9 rpm

SWING BRAKE

Hydrostatic drive, also acts as wear-resistant brake. Additional spring-loaded multi-disc brake. Considered as transport securit<



FLUID CAPACITIES

Fuel tank	68 l
Hydraulic system (incl. tank 28 l)	45 l

KNICKMATIK®

Lateral parallel adjustment of boom arrangement at full dig depth	
Angle of articulation / lateral adjustment left	57° / 710 mm
Angle of articulation / lateral adjustment right	60° / 870 mm

OPERATING DATA, STANDARD EQUIPMENT

Operating weight according to ISO 6016: Cab with 400 mm bucket, quick-attach system, rubber tracks, including driver, full fuel tank	3550 kg
Operating weight according to ISO 6016: Canopy with 400 mm bucket, quick-attach system, rubber tracks, including driver, full fuel tank	3470 kg
Transport weight: Cab, tank half full, with quick-attach system, w/out bucket	3340 kg
Transport weight: Canopy, tank half full, with quick-attach system, w/out bucket	3260 kg
Total length (travel position)	3195 mm
Total length (trailer transport position)	4843 mm
Total height (top of canopy/cab)	2480 / 2500 mm
Total height (travel position)	3420 mm
Total width (undercarriage)	1750 mm
Total width of uppercarriage	1500 mm
Uppercarriage tail swing	935 mm
Uppercarriage front swing	1955 mm

Working envelope, bucket heaped (also with 600 mm bucket):	
180°	2890 mm
360°	3900 mm
Ground clearance	200 mm
Swing clearance	550 mm
Reach max.**	5630 / 5810* mm
Digging depth max.**	3255 / 3455* mm
Loading height approx.**	3060 / 3165* mm
Highest reachable height**	4540 / 4645* mm
Bucket rotation angle	187°
Bucket digging force acc. to ISO 6015	25,700 N
Stick digging force acc. to ISO 6015	15,700 N

Specific ground pressure:	
Excavator cpl. with rubber crawlers	0.29 daN/cm ²

* with dipperstick 1800 mm (optional)

** Dimensions apply to machine standing on level ground, but can be increased by tilting the machine using the blade.

SPECIFICATIONS

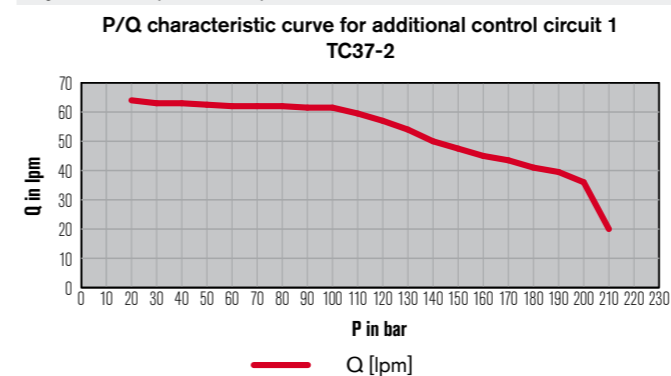
HYDRAULIC SYSTEM

Pump capacity, max.	103 l/min
Working pressure	250 bar
Single-stage, load-sensing controlled variable displacement axial piston pump	
LS-control and load independent flow distribution (LIFD) for all working movements and travel drive	
Simultaneous independent control of all functions	
All excavator movements servo-controlled, ISO	
All functions are proportionally controllable	
Powerful hydraulic oil cooler	
Full flow filtration through return filter	
Cylinders for boom, dipper arm and articulation with end position damping at both ends	
Bucket retract function with end-position damping	
Safety shutdown activated by exit barrier	
Additional control circuit as standard: Schaeff 'Fingertip' control (electro proportional) for additional control circuit for work attachments on right joystick, including holding function for continuous operation, actuation via rollers	
Additional control circuit with bypass for pressure-reduced return quantity	

Hydraulic power to the couplings (additional control circuit 1):

Pump capacity (pressure-controlled)	
up to approx. 100 bar	62 lpm
@ 210 bar	20 lpm
Max. working pressure	210 bar

Diagram shows P/Q provided on couplers:



CAB (STANDARD)

Spacious, sound-insulated full-vision steel cab, FOPS*** (acc. to ISO 3449), ROPS and TOPS (acc. to ISO 12117) certified
Very good all-round visibility, lean vertical support members
Safety glass
Front window supported by pneumatic springs, slidable under cab roof
Fixed window part without frame which obstructs the forward view
Door with large access on left hand side
Foldable console on left hand side for large entry access
Sliding window on right-hand side
Matching locks of hood and ignition
Central connector for electrical cable
Wiper washer with wiper for windscreen
Sun visor, interior light, coat hook
Operator's seat (standard version), imitation leather: Longitudinal and back tilt adjustment
Continuous weight adjustment as per operators weight
Safety belt
Armrests height adjustable without tools
Preparation for antenna, loudspeakers and radio
Large storage compartment under the operator's seat
Heating (water) with 2-speed fan and 4 adjustable exhaust nozzles
Temperature controller in cab
Storage pocket behind the operator's seat
Storage compartment for mobile phone (near 12V outlet)
1 left-hand outside rear-view mirror, foldable in front of windshield
1 working floodlight front left as standard
Display, fuel gauge, hour meter and warning lights
Fuse box easily accessible from outside of the cab
Very good ergonomics
Ergonomically arranged dozer blade lever
Fast / slow switch on dozer blade lever
Yellow beacon, radio, immobilizer (anti-theft device), working floodlights prepared for optional installation
*** FOPS-approved only with skylight guard (optional)

CANOPY

Robust steel pipe construction. 4 support members for the best all-round visibility	
1 working floodlight front left	
FOPS (acc. to ISO 3449), ROPS and TOPS (acc. to ISO 12117) certified	
Operator's seat (standard version):	
Safety belt	
Large storage compartment under the operator's seat	
Storage pocket behind the operator's seat	
Display, fuel gauge, hour meter and warning lights	
Easy and quick change of cab to canopy and vice-versa	
Yellow beacon, immobilizer (anti-theft device), working floodlights prepared for optional installation	
Reduction weight canopy	80 kg

CRANE TRANSPORT

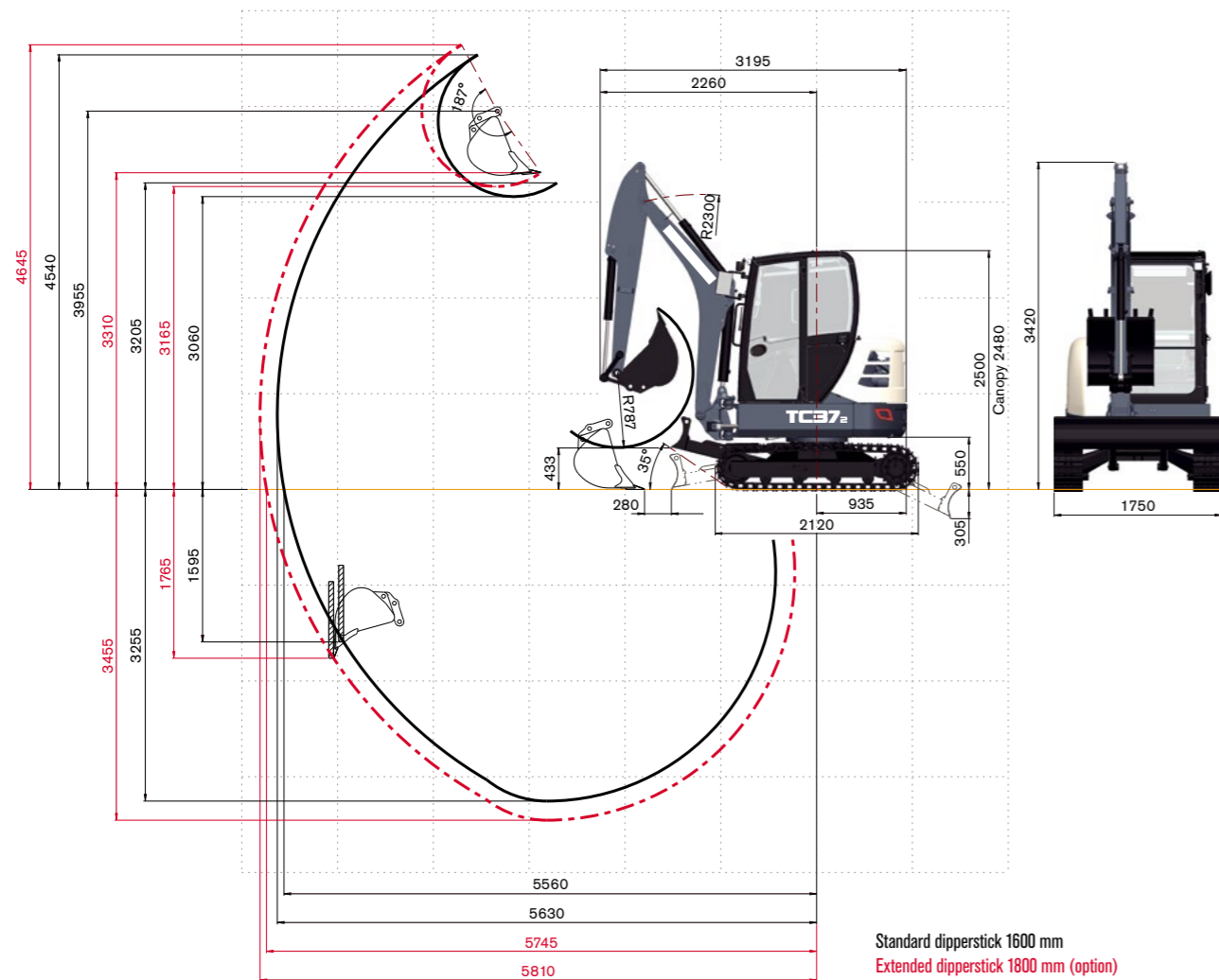
Crane lifting beam for cab and canopy

SOUND LEVEL VALUES

Noise emission ambience L _{wa} cab / canopy	95 / 95 dB (A)
Noise emission cab L _{pa} cab / canopy	78 / 79 dB (A)
Sound level values measured in compliance with Directive 2000/14/EC and EN474.	

VIBRATION VALUES

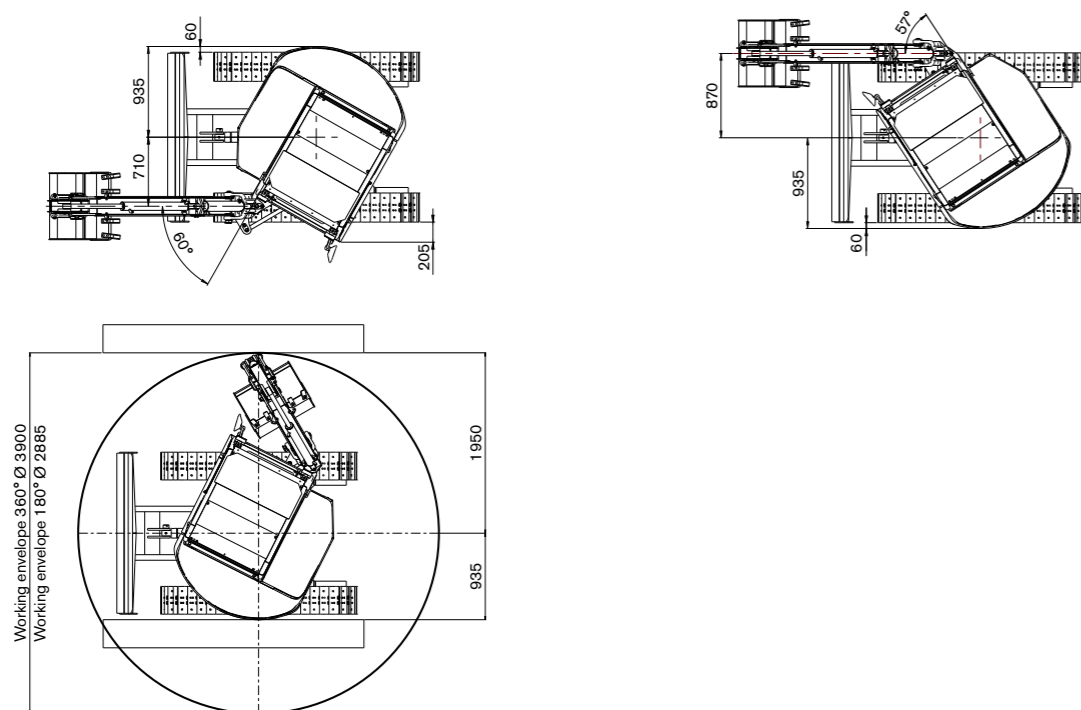
Effective values of acceleration for whole body	less than 0.5 m/s ²
Effective values of acceleration for hand-arm	less than 2.5 m/s ²
Vibration values in compliance with Directive 2006/42/EC and EN474.	



DIMENSIONS

Fig. 1.2: Excavation within the entire width of the machine

Fig. 3: Working envelope



LIFTING CAPACITIES

Bucket hinge height	Dipperstick 1600 mm	Load radius from center of ring gear									
		2.5 m		3.0 m		3.5 m		4.0 m		4.5 m	
2.0 m		-	-	-	-	0.96	0.57	0.91	0.45	0.86	0.38
1.0 m		2.11	0.88	1.54	0.67	1.23	0.52	1.03	0.42	0.87	0.35
0.0 m		2.33	0.80	1.67	0.61	1.29	0.49	1.05	0.40	0.84	0.34
		1.15	0.79	0.76	0.60	0.60	0.48	0.46	0.39	0.40	0.33

Bucket hinge height	Dipperstick 1800 mm	Load radius from center of ring gear									
		2.5 m		3.0 m		3.5 m		4.0 m		4.5 m	
2.0 m		-	-	-	-	0.89	0.60	0.85	0.46	0.81	0.38
1.0 m		1.94	0.92	1.41	0.69	1.16	0.52	0.99	0.44	0.85	0.35
0.0 m		2.26	0.81	1.61	0.63	1.27	0.51	1.03	0.42	0.84	0.35
		1.03	0.80	0.76	0.62	0.60	0.50	0.49	0.41	0.40	0.34

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 tracks

WORK ATTACHMENTS

BUCKETS

Bucket, QAS	300 mm wide, capacity 54 l, 67 kg
Bucket, QAS	400 mm wide, capacity 78 l, 78 kg
Bucket, QAS	500 mm wide, capacity 103 l, 89 kg
Bucket, QAS	600 mm wide, capacity 129 l, 98 kg
Bucket, QAS	700 mm wide, capacity 155 l, 109 kg
Ditch-cleaning bucket, QAS	1000 mm wide, capacity 145 l, 135 kg
Ditch-cleaning bucket, QAS	1300 mm wide, capacity 191 l, 164 kg
Swing bucket, QAS	1000 mm wide, capacity 145 l, 194 kg
Swing bucket, QAS	1300 mm wide, capacity 191 l, 228 kg

GRABS

Clamshell grab GL 1250, grab swing brake	set of shells 250 mm wide, capacity 45 l
Clamshell grab GL 1350, grab swing brake	set of shells 350 mm wide, capacity 65 l
Clamshell grab GL 1450, grab swing brake	set of shells 450 mm wide, capacity 85 l
Clamshell grab GL 1600, grab swing brake	set of shells 600 mm wide, capacity 115 l
Ejector	

OTHER WORK ATTACHMENTS

Ripper tooth / QAS (1 tooth)	Cutting unit
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

Monobloc boom, with extended dipperstick 1800 mm

HYDRAULIC SYSTEM

Schaeff 'Fingertip' control (electro proportional) for 2nd additional control circuit for work attachments on left joystick, actuation via rollers (boom with standard dipperstick)

Float position - front dozer blade

Quick couplings for work attachments

Supplementary set "Clamshell grab opening / closing", for standard dipperstick

Quick couplings for supplementary set "Clamshell grab opening/closing"

Biodegradable hydraulic oil / ester-based HLP 68 (Panolin)

Hose-rupture / load-retaining valve for boom

Hose-rupture / load-retaining valve for dipperstick

OPERATOR'S STAND

Operator's seat (comfort version), hydraulic damping, extra-high backrest, longitudinal-horizontal suspension, mechanical lumbar support

Operator's seat (premium version), air damping, extra-high backrest, longitudinal-horizontal suspension, seat and backrest heating, mechanical lumbar support

CAB

Rain guard

FOPS - skylight guard

Lighting package: Cab-mounted working floodlight front right and rear right, boom-mounted working floodlight, yellow beacon

Air-conditioning

Fire extinguisher, ABC powder 2 kg

Radio set installation kit

Back-up alarm, signal-horn (can be switched off)

Guard for front window

OTHER OPTIONAL EQUIPMENT

Mechanical quick-attach system

Special colour options

Quick-attach system, mechanical (genuine Lehnhoff system), type MS03

Canopy with working floodlight (weight reduction: 80 kg)

Crane loading wire-rope harness

Immobilizer

Electric refueling pump

Safety package: hose-rupture / load-retaining valves for boom and dipperstick cylinders, fire extinguisher, immobilizer, motion alarm

Battery master switch

Further optional equipment available on request



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