



SCHAEFF

A **YANMAR** BRAND

COMPACT WHEEL LOADER



TL120

COMPACT WHEEL LOADER TL120

ALL-ROUNDER AND SAVINGS SPECIALIST

Particularly when it counts the most ...

The Schaeff TL120 is a specialist for efficient work and a multitalent for diverse applications.

Thanks to the new engine technology and an ultramodern operating concept, the compact wheel loader guarantees success on the construction site: productive, efficient and reliable.

It is an indestructible workhorse: From horticulture and landscaping to building construction and civil engineering through to municipal use.

Made in Germany

The development and manufacture of compact construction machines is the core competence of Schaeff Compact Germany. And has been for over 75 years – more than 30 years of which at the site in Crailsheim.



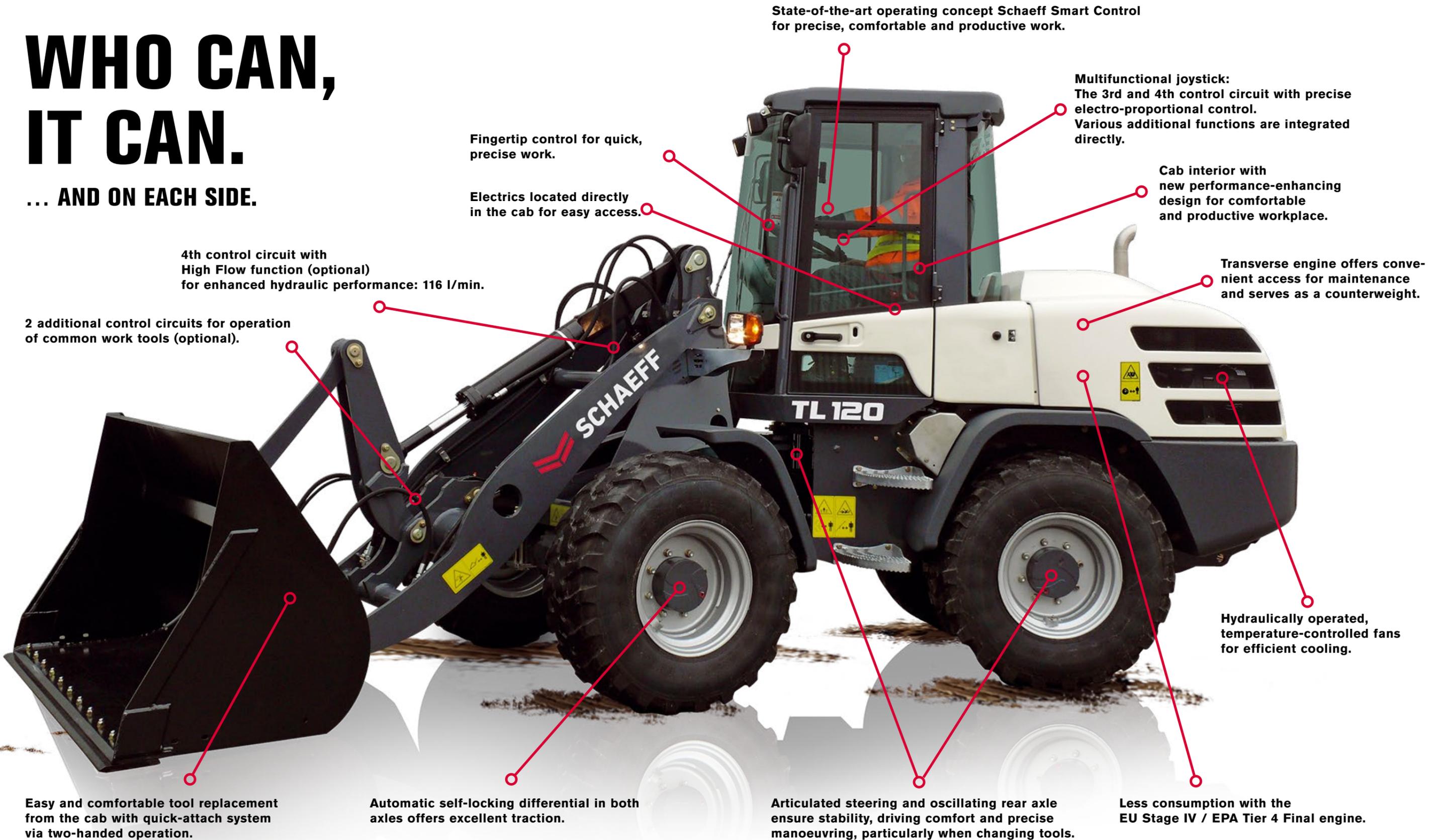
Technical data *

Operating weight	7000 kg
Engine power	74.4 kW (101 hp)
Bucket capacity	1.2-1.8 m ³
Steering	Articulated steering

Subject to change without notice

WHO CAN, IT CAN.

... AND ON EACH SIDE.



State-of-the-art operating concept Schaeff Smart Control for precise, comfortable and productive work.

Multifunctional joystick: The 3rd and 4th control circuit with precise electro-proportional control. Various additional functions are integrated directly.

Fingertip control for quick, precise work.

Cab interior with new performance-enhancing design for comfortable and productive workplace.

Electrics located directly in the cab for easy access.

Transverse engine offers convenient access for maintenance and serves as a counterweight.

4th control circuit with High Flow function (optional) for enhanced hydraulic performance: 116 l/min.

2 additional control circuits for operation of common work tools (optional).

Hydraulically operated, temperature-controlled fans for efficient cooling.

Easy and comfortable tool replacement from the cab with quick-attach system via two-handed operation.

Automatic self-locking differential in both axles offers excellent traction.

Articulated steering and oscillating rear axle ensure stability, driving comfort and precise manoeuvring, particularly when changing tools.

Less consumption with the EU Stage IV / EPA Tier 4 Final engine.

EFFICIENT WORK

THE ENGINE

The Schaeff TL120 wheel loader is powered by an engine which conforms with EU Stage IV / EPA Tier 4 Final. 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 catalyst (DOC). The engine manages without a particulate filter. A diesel particulate filter (DPF) can be ordered as an option.



THE REVERSIBLE FAN (OPTIONAL)

The hydraulically operated reversible fan is temperature-controlled. The cooling capacity is automatically adapted to the cooling requirement. The fan only runs when necessary. This saves fuel and protects the material. The driver can manually switch on the fan if required. The cleaning by reversing is effected either automatically or manually.

AUTOMATIC ENGINE SHUTDOWN

The shutdown time can be freely selected by the operator (optional).



MODERN WORKSTATION

INCREASES PRODUCTIVITY AND SATISFACTION.

THE CAB

Even when conditions are harsh outside – the cab is a very pleasant workstation thanks to the numerous equipment features. The machine is controlled using innovative technology. The machine has good ergonomics even in the toughest applications. This way operator and machine achieve high productivity.



COMFORTABLE AND FUNCTIONAL

The cab which is designed for operating comfort and productivity has noise and vibration damping, as well as ROPS and FOPS certifications.

SECOND DOOR

- ▶ Optimal cab ventilation
- ▶ Communication possible on both sides
- ▶ Simple cleaning of cab
- ▶ Improved visibility, even at ground level

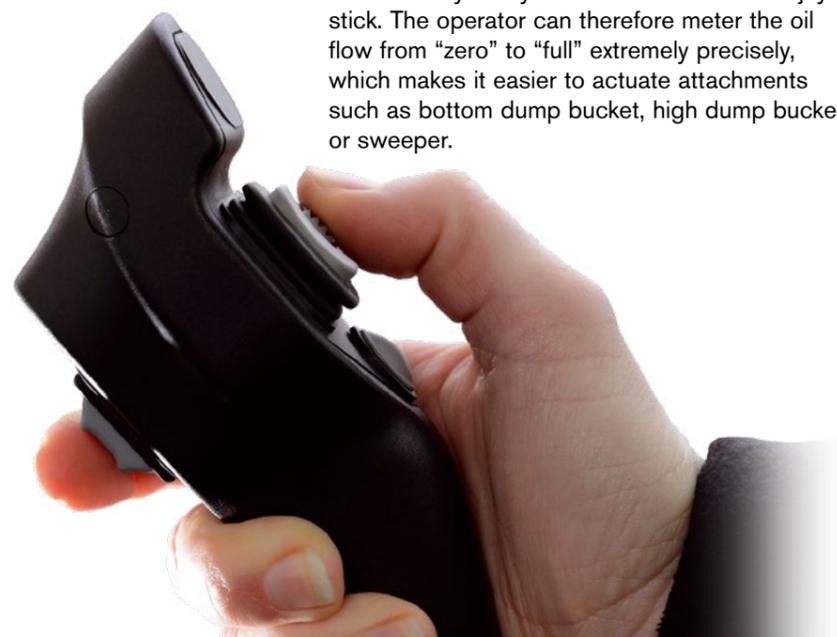


DISPLAY AND INSTRUMENTS

The central control unit for exact adjustment of machine to application and driver. The 3.5" display shows machine and engine data. The modern menu guidance resembles popular smartphones. The curved screen minimises mirror effects.

PRECISE FINGERTIP CONTROL

With the fingertip control the electrical proportional actuation of the hydraulic functions is effected very easily via a thumbwheel at 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 bottom dump bucket, high dump bucket or sweeper.



SCHAEFF SMART CONTROL

Schaeff Smart Control is an operating concept for compact wheel loader engines which conforms with EU Stage IV / EPA Tier 4 Final. Never before was it so easy to coordinate the construction machine precisely to operator and application. Furthermore, the operating elements are designed and arranged for faster operation and a better overview.

For you this means:

- ▶ Intuitive operation, can be easily adjusted to the operator
- ▶ 3rd and 4th hydraulic control circuit (optional) with electro-proportional control for operation of common work tools
- ▶ New display design for optimal overview
- ▶ Keypad with extra-large buttons for easy operation



COMPACT WHEEL LOADER TL120

EFFICIENT DRIVE

ON THE RIGHT TRACK.

Responsive, demand-driven and intuitive:
The wheel loader uses its power purposefully – fast work cycles, low fuel consumption and minimal wear are the result.

ECONOMIC HYDROSTATIC DRIVE

The hydrostatic travel drive in the closed circuit delivers top performance with low consumption. On the road the TL120 reaches up to 20 km/h. The optional sprinter version reaches up to 36 km/h.



ARTICULATED STEERING WITH OSCILLATING REAR AXLE

For applications in built-up areas or on restricted construction sites, the articulated steering enables excellent manoeuvrability with a turning angle of 40°. Furthermore, the articulated steering permits straight movement of the bucket to the load even at full turning angle. This gives the operator increased flexibility when picking up pallets or setting down loads. The oscillating rear axle has a large swivel angle of 8°. All four wheels always have ground contact also when working on uneven terrain. In addition, the operator sits parallel to the working device at all times. With a Schaeff wheel loader, only the rear axle oscillates, whereas with other manufacturers the entire rear vehicle oscillates. This means the weight of our machines always moves in the same direction as the bucket, which in turn ensures more ground pressure when reversing.



AUTOMATIC SELF-LOCKING DIFFERENTIAL

All compact Schaeff wheel loaders are equipped with a permanent all-wheel drive, as well as automatic self-locking differential in the front and rear axles (45% blocking effect). Both ensure optimal traction when driving straight and cornering – perfect for loading the bucket. The differential locks are automatically activated if needed.

ROAD APPROVAL

Schaeff wheel loaders have road approval. The TL120 can also be used with an optional trailer hitch as a tractor unit.*

BRAKE/INCH PEDAL

Schaeff wheel loaders have a brake/inch pedal for precise control commands and fast working cycles. This function allows the operator to redirect the engine power from the travel drive to the working hydraulics in order to be able to lift and set down loads quickly.



* Depending on national regulations

COMPACT WHEEL LOADER TL120

POWERFUL WORK EQUIPMENT

STANDS OUT IN TERMS OF RANGE AND POWER.

LIFTING PLATFORM WITH PARALLEL KINEMATICS

With the Schaeff parallel kinematics which is standard in all machines, you lift a load quickly and precisely to the height without having to constantly adapt the loading angle. While the kinematics looks after the lifting angle, the operator can concentrate completely on the exact placement of the load. The Schaeff parallel kinematics optimises working cycles when loading and unloading in the second row of a truck. The clever design prevents the rocker arm colliding with the truck superstructure.

FORK CARRIER

In conjunction with the quick-change mechanism, the fork carrier offers an excellent field of vision.

HYDRAULICS WITH HIGH EFFICIENCY

The working hydraulics work completely independent of the hydraulics for the drive.



SIMPLE SERVICE

AND FAST TOO.

So that your Schaeff is up and running again quickly, all service and maintenance work on your machine is kept as simple as possible. Daily work can be performed from the ground which saves time.



For you this means:

- ▶ Refuelling is simple and time-saving thanks to the easily accessible service flap.
- ▶ The engine hood can be opened easily thanks to large pneumatic springs. Starter motor, alternator, battery, injection pump, as well as fuel and air filters, are easily accessible.



Battery isolator switch
Beside the cab, can be accessed when standing.

External start
Simple bridging of machine, by free access under the engine hood.

Cab wiring
Simple disconnection of all electrical lines when dismantling the cab.



EXCELLENT STANDARD

WITH OPTIMALLY ADAPTED ADDITIONAL EQUIPMENT.

So that the wheel loader is adapted precisely to the application, Schaeff offers numerous equipment packages and additional equipment. This increases productivity, minimises wear or protects the machine against damage.

PROTECTION PACKAGE FOR HARSH ENVIRONMENTS

This includes:

- ▶ Special coating with 2K paint
- ▶ Piston rods of lifting, tilt and steering cylinders with chromium/nickel coating (instead of standard chromium coating)

LIFTING PLATFORM

- ▶ Hose rupture valves for lifting and tilt cylinders

HYDRAULICS

- ▶ Fourth hydraulics control circuit
- ▶ Hydraulic vibration damping
- ▶ Biodegradable hydraulic fluid

CAB

- ▶ FOPS retrofit kit (protection against falling objects)
- ▶ Heated exterior mirror
- ▶ Engine-independent diesel heating
- ▶ Sash window on the right
- ▶ Air-conditioning system

MAINTENANCE

- ▶ Central lubrication
- ▶ Electric fuel pump

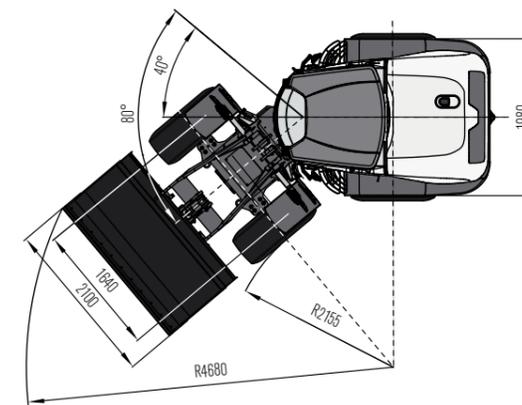
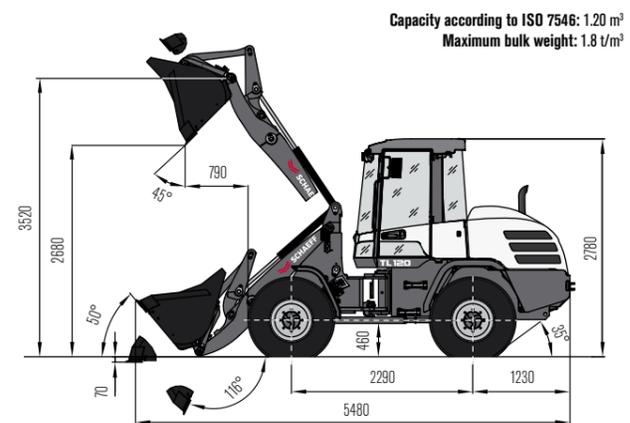
OPERATION

- ▶ Automatic bucket repositioning
- ▶ Reversing signal
- ▶ Electronic immobiliser
- ▶ Crawling speed

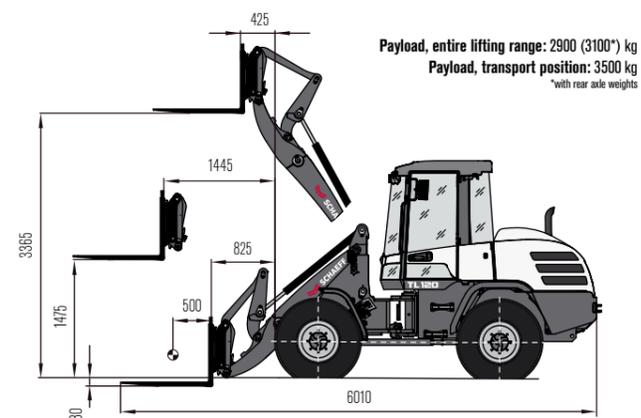


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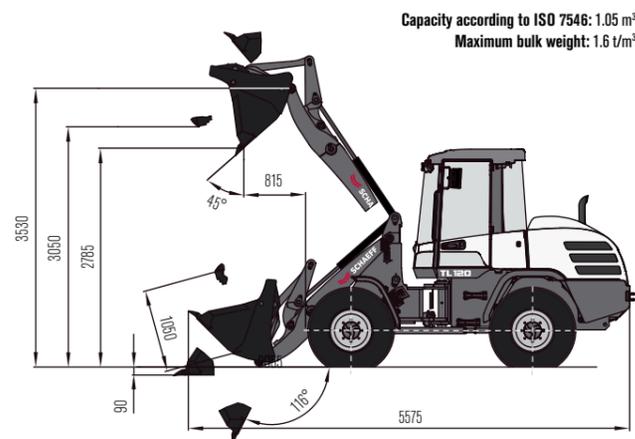
LOADING BUCKET



STACKER



UNIVERSAL BUCKET



BUCKET TYPE

	Capacity	Bulk weight	Width	Dumping height
Loading bucket, quick-attach system (QAS), ripping teeth	1.20 m ³	1.8 t/m ³	2100 mm	2750 mm
Loading bucket, QAS, bolt-on cutting edge	1.20 m ³	1.8 t/m ³	2100 mm	2710 mm
Earth bucket, QAS, ripping teeth	1.35 m ³	1.6 t/m ³	2100 mm	2700 mm
Earth bucket, QAS, bolt-on cutting edge	1.35 m ³	1.6 t/m ³	2100 mm	2660 mm
Light material bucket, bolt-on cutting edge	1.55 m ³	1.2 t/m ³	2100 mm	2610 mm
Light material bucket, bolt-on cutting edge	1.80 m ³	0.8 t/m ³	2200 mm	2550 mm
Universal bucket, QAS	1.05 m ³	1.6 t/m ³	2100 mm	2785 mm
Side dump bucket, QAS, without teeth	0.85 m ³	1.8 t/m ³	2100 mm	2665 mm
High dump bucket, QAS, without teeth	1.20 m ³	1.2 t/m ³	2100 mm	3970 mm
High dump bucket, QAS, without teeth	1.80 m ³	0.6 t/m ³	2200 mm	4030 mm
Rock loading bucket, QAS	0.95 m ³	2.15 t/m ³	2100 mm	2780 mm
Loading bucket with 4 closers	1.20 m ³	1.2 t/m ³	2100 mm	2750 mm

BULK WEIGHT EXAMPLES

Granite, basalt, sand (wet), gravel (wet), slate:	1.8 - 2.2 t/m ³	Topsoil, clay, coal:	1.1 - 1.6 t/m ³
Sandstone, plaster, limestone, soil (wet), sand (dry), gravel (dry):	1.5 - 1.8 t/m ³	Wood chippings (dry), compost, coke:	0.2 - 1.0 t/m ³

TECHNICAL DESCRIPTION

ENGINE

Manufacturer, model	Deutz, TCD3.6 L4
Type	4-cylinder, turbo diesel engine with charge air cooling, EU Stage IV / Tier 4 Final
Working method	4-stroke, Common Rail injection
Displacement	3600 cm ³
Power output according to ISO 9249 at 2200 rpm	74.4 kW (101 hp)
Cooling system	Water

ELECTRICAL SYSTEM

Supply voltage	12 V
Lighting according to StVZO and European standard	

POWER TRANSMISSION

Hydrostatic travel drive, in closed circuit, independent of loader hydraulics. Sophisticated automatic drive, automatic optimisation of traction and speed. Two speed ranges can be selected with powershift adjustment at hydro motor. Infinitely variable speed control forward and reverse. All-wheel drive from reduction gear at the rear axle via drive shaft to front axle. Brake/Inch pedal.

2 travel ranges:	
“Speed range I”	0-6 km/h
“Speed range II”	0-20 km/h
4 travel ranges (optional sprinter version):	
“Speed range I”	0-6 / 0-19 km/h
“Speed range I”	0-11 / 0-36 km/h

AXLES

Front axle: Planetary drive axle, with integrated drum central brake, rigid. Self-locking differential 45%.	
Rear axle: Planetary drive axle with integrated reduction gear, oscillating, damped by rubber pads. Self-locking differential 45%.	
Swing angle	±8°

TYRES

Standard size	405/70 R 20 SPT 9 Dunlop
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BRAKES

Service brake:	Hydraulically operated drum central brake, works via the all-wheel drive to all four wheels.
Additional brake:	Hydrostatic by closed circuit of travel drive.
Parking brake:	Mechanically operated drum brake at front axle.

STEERING

Articulated steering, 2 steering cylinders with end position damping on both sides, fully hydraulic via load sensing priority valve, fast and simple steering also at engine idling speed.	
Total steering angle	80°

FILLING QUANTITIES

Diesel tank capacity	110 l
Ad Blue tank	10 l
Hydraulic system (incl. tank)	93 l

OPERATING DATA, STANDARD EQUIPMENT

Operating weight (ISO 6016)	7000 kg
Tipping load, straight (ISO 14397-1)	5000 kg
Tipping load, articulated (ISO 14397-1)	4400 kg
Overall length, bucket on ground	5480 mm
Overall width	2100 mm
Turning radius, over outer edge of standard bucket	4680 mm
Wheelbase	2290 mm
Height above cab	2780 mm

HYDRAULICS

Pump delivery volume	78 l/min
Operating pressure	250 bar
Control unit: Proportional hydraulic valve with 3 control circuits, supplies the operating functions “Lift and Lower”, “Dump and Feed”, as well as “3rd control circuit (1st additional control circuit)”. All movements can be controlled at the same time and independently.	

Hydraulic cylinder: 1 lifting cylinder, 1 tilt cylinder, all double-acting.
Thermostatic controlled oil circuit guarantees the oil temperature is reached quickly and protects against overheating. Return filter installed in the hydraulic tank, i.e. environmentally friendly replacement of filter elements.

Schaeff ‘Fingertip’ control for 3rd control circuit, electro-proportional actuation, fluid flow limiter via machine function display, continuous operation circuit. Installation at loading facility incl. plug-in connectors.

Hydraulically switchable floating position by overriding “Lower” pressure point on joystick, non-stop operation function can be activated electrically.

Single, four-way control level (joystick) with integrated travel direction selector switch and switch for additional control circuit.

LOADING FACILITY

Loading facility with parallel kinematics and integrated mechanical (optional hydraulic) quick-change mechanism.	
Loading bucket (ISO 7546)	1.20 m ³
Lifting force on ground (ISO 14397-2)	71,000 N
Ripping force (ISO 14397-2)	59,000 N

STACKER

Payload (total lifting and steering range)	2900 (3100*) kg
Payload (transport position), approx. 300 mm above the ground, total steering range	3500 kg
Fork carrier width	1240 mm
Length of fork arms (140x50 mm)	1120 mm
Stability factor	1.25
Payload calculation on even terrain = 80% of tipping load articulated	

CAB

Flexibly mounted steel cab with all-round view, ROPS (EN ISO 3471 ROPS) and FOPS** (EN ISO 3449 FOPS) certified.

The cab is equipped with two doors, electric windshield wipers with interval switching and washer at front and back, tinted panorama safety glazing, sash window on the left.

Driver’s seat MSG85 (basic) with hydraulic damping, weight setting and lap belt according to ISO 7096 and ISO 6683.

Cab heating with 3-stage fan heater (can be switched from fresh air to air recirculation) and front and rear window defrosting.

Ready for air-conditioning system and radio installation.

Inclination and height of steering wheel can be adjusted.

2 working headlights at the front.	
Sound power level L _{WA}	101 dB (A)
Sound pressure level L _{PA}	74 dB (A)
Sound level values measured according to directive 2000/14/EU and EN474.	

Effective values of acceleration for entire body	below 0.5 m/s ²
Effective values of acceleration for hand-arm	below 2.5 m/s ²

Vibration values according to directive 2006/42/EU and EN474.

*with rear axle weights

**FOPS only with protective grid on roof (option)



ADDITIONAL EQUIPMENT

TYRES

405/70 R 20 EM 01 Mitas
400/70 R 20 IT530 Goodyear
380/75 R 20 XZSL Michelin
16/70-20 EM E 91-2 Dunlop
420/75 R 20 XMCL Michelin
405/70 R 20 MPT E-70 Conti
Special tyres on request

FRONT ATTACHMENTS

Loading bucket*	1.20 m ³
Earth bucket*	1.35m ³
Light material bucket*	1.55 m ³
Light material bucket*	1.80 m ³
Side dump bucket*	0.85 m ³
High dump bucket*	1.20 m ³ / 1.80 m ³
Universal bucket*	1.05 m ³
Rock loading bucket	0.95 m ³
Loading bucket with 4 closers	1.20 m ³
Front ripper, 4 tines	
Stacker: Fork carrier 1240 mm wide	
Forks, 1120 mm long, 140 mm wide, 50 mm high	
Load hook, can be moved onto fork arms	
Load hook, in quick-change mechanism	
Crane boom with fixed arm	
Crane boom, mechanical telescoping	
Snow plough	
*optional with bolt-on cutting edge	

DRIVER’S PLATFORM

Driver’s seat MSG 85 (comfort) with hydraulic damping, high backrest, weight division and lap belt	
Driver’s seat MSG 95 (premium) with air suspension, orthopaedic lumbar support, high backrest, adjustable armrests, seat and backrest heating	

HYDRAULICS

4th control circuit, Schaeff ‘Fingertip’ control, (electro-proportional actuation) and installation at lift frame, incl. plug-in connectors and non-stop operation, e.g. for attachments with 2 hydr. functions	4th control circuit “High Flow” 116 l/min, 180 bar, (electro-proportional actuation) and installation at lift frame, incl. plug-in connectors
4th control circuit, single-acting, Schaeff ‘Fingertip’ control, (electro-proportional actuation) pressure-free return flow and installation at rear vehicle	Connection for hydraulic hand hammer, with flow divider
Pressure-free return flow, at lift frame	Load vibration damping system (LSD)

DRIVER’S CAB

FOPS roof window grid	Yellow rotating beacon
Right door with sash window	Diesel heating with timer
Working headlights, rear	Air-conditioning system

OTHER EQUIPMENT

Sprinter model (with road approval package)	Hand throttle, travel drive switched off 36 km/h
Filled with biodegradable hydraulic fluid / ester-based	Anti-theft system, immobiliser
BIO-E-HYD-HEES	
Electric fuel pump	Rear axle weights
Pre-controlled hose rupture valves for lifting and tilt cylinders	Central lubrication system
Reverse warning system (backup alarm)	Battery isolator switch
Other additional equipment available on request	



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