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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating weight</td>
<td>7000 kg</td>
</tr>
<tr>
<td>Engine power</td>
<td>74.4 kW (101 hp)</td>
</tr>
<tr>
<td>Bucket capacity</td>
<td>1.2-1.8 m³</td>
</tr>
<tr>
<td>Steering</td>
<td>Articulated steering</td>
</tr>
</tbody>
</table>
WHO CAN, IT CAN.

... AND ON EACH SIDE.

Compact Wheel Loader TL120

- 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.
- Multifunctional joystick: The 3rd and 4th control circuit with precise electro-proportional control. Various additional functions are integrated directly.
- State-of-the-art operating concept Schaeff Smart Control for precise, comfortable and productive work.
- Transverse engine offers convenient access for maintenance and serves as a counterweight.
- 2 additional control circuits for operation of common work tools (optional).
- 4th control circuit with High Flow function (optional) for enhanced hydraulic performance: 116 l/min.
- Fingertip control for quick, precise work.
- Easy and comfortable tool replacement from the cab with quick-attach system via two-handed operation.
- Articulated steering and oscillating rear axle ensure stability, driving comfort and precise manoeuvring, particularly when changing tools.
- Electrics located directly in the cab for easy access.
- Cab interior with new performance-enhancing design for comfortable and productive workplace.
- Hydraulically operated, temperature-controlled fans for efficient cooling.
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- 4th control circuit with High Flow function (optional) for enhanced hydraulic performance: 116 l/min.
- Fingertip control for quick, precise work.
- Easy and comfortable tool replacement from the cab with quick-attach system via two-handed operation.
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.

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.

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.

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.

ROAD APPROVAL

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

* Depending on national regulations
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.

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.

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.
- Central lubrication
- Electric fuel pump
- Automatic bucket repositioning
- Reversing signal
- Electronic immobiliser
- Crawling speed

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
DIMENSIONS

LOADING BUCKET

<table>
<thead>
<tr>
<th>Bucket Type</th>
<th>Capacity (m³)</th>
<th>Bulk weight (t/m³)</th>
<th>Width (mm)</th>
<th>Dumping height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loading bucket, quick-attach system (QAS), ripping teeth</td>
<td>1.20</td>
<td>1.8</td>
<td>2100</td>
<td>2750</td>
</tr>
<tr>
<td>Loading bucket, QAS, bolt-on cutting edge</td>
<td>1.20</td>
<td>1.8</td>
<td>2100</td>
<td>2710</td>
</tr>
<tr>
<td>Earth bucket, QAS, ripping teeth</td>
<td>1.35</td>
<td>1.6</td>
<td>2100</td>
<td>2700</td>
</tr>
<tr>
<td>Earth bucket, QAS, bolt-on cutting edge</td>
<td>1.35</td>
<td>1.6</td>
<td>2100</td>
<td>2660</td>
</tr>
<tr>
<td>Light material bucket, bolt-on cutting edge</td>
<td>1.80</td>
<td>0.8</td>
<td>2100</td>
<td>2610</td>
</tr>
<tr>
<td>Universal bucket, QAS</td>
<td>1.05</td>
<td>1.6</td>
<td>2100</td>
<td>2785</td>
</tr>
<tr>
<td>Side dump bucket, QAS, without teeth</td>
<td>0.85</td>
<td>1.2</td>
<td>2100</td>
<td>2665</td>
</tr>
<tr>
<td>High dump bucket, QAS, without teeth</td>
<td>1.30</td>
<td>0.6</td>
<td>2200</td>
<td>4030</td>
</tr>
<tr>
<td>Rock loading bucket, QAS</td>
<td>0.85</td>
<td>2.15</td>
<td>2100</td>
<td>2780</td>
</tr>
<tr>
<td>Loading bucket with 4 closers</td>
<td>1.30</td>
<td>1.2</td>
<td>2100</td>
<td>2750</td>
</tr>
</tbody>
</table>

BUCKET TYPE

Capacity according to ISO 7546:
- Capacity: 1.05 m³
- Maximum bulk weight: 1.6 t/m³

Payload, entire lifting range: 2900 (3100*) kg
Payload, transport position: 3500 kg
*with rear axle weights

BULK WEIGHT EXAMPLES

- Granite, basalt, sand (wet), gravel (wet), slate:
- Sandstone, plaster, brickstone, soil (wet), sand (dry), gravel (dry):
- Top soil, clay, soil:
- Wood chips (dry), compact, coke:

- Capacity: 1.8 - 2.2 t/m³
- Bulk weight: 1.1 - 1.8 t/m³
- Width: 35°
- Dumping height: 40°
TECHNICAL DESCRIPTION

ENGINE
Manufacturer, model
Deutz, TCD3.6 L4
Engine
4-cylinder, turbo diesel engine with charge air cooling, EU Stage IIIB / Tier 4 Final
Working method
4-stroke, Common Rail injection
Displacement
3600 cm³
Power output according to ISO 8178 at 2200 rpm
74 kW (101 hp)
Casing variant
Water

ELECTRICAL SYSTEM
Supply voltage
12 V
Lighting according to ECE-R and European standard

POWER TRANSMISSION
Hydrostatic travel drive, closed circuit, independent of loader hydraulics. Saturated cam-driven drive, automatic optimization of traction and speed. Two speed ranges can be selected with power-shift adjustment of hydraulic motor. Infinitely variable speed control forward and reverse. All wheels from reduction gear at the rear axle via drive shaft to front axle. Brake/Throttle pedal.
2 travel ranges:
“Speed range 1” 0-6 km/h
“Speed range II” 0-36 km/h
4 travel ranges (optional operator version):
“Speed range 1” 0-6 / 19 km/h
“Speed range II” 0-36 km/h
“Speed range III” 0-20 km/h
“Speed range IV” 0-36 km/h

HYDRAULICS
Pump delivery volume
70 liters
Operating pressure
250 bar
Control unit: Proportional hydraulic valve with 3 control circuits, supplies the operating functions “Lift and Lower”, “Shove and Fixed”, as well as “3rd control circuit (Optional add-on circuit)”. All movements can be controlled at the same time and independently.
Hydraulic option: 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.
Hydraulically switchable flapping position by actuating “Lean” pressure point on joystick, non-stop operation function can be activated electrically.
Double, four-way control lever (joystick) with integrated travel direction selector switch and switch for additional control circuit.

LOADING FACILITY
Loading facility with parallel kinematics and integrated mechanical (optional) quick-change mechanism.

FORK CARriers:
Forks, 1120 mm long, 140 mm wide, 50 mm high
Stacker: Fork carrier 1240 mm wide

SPECIAL FEATURES:

CAB
Driver’s seat MSG 85 (comfort) with hydraulic damping, high backrest, weight setting and lap belt according to ISO 7096. Front and back, tinted panorama safety glazing, sash window on the left.
The cab is equipped with two doors, electric windshield wipers with interval switching and washer at the front and rear, door, pyro sensor safety glazing, each window on the left.

OTHER EQUIPMENT

ACTIVE STEERING
Articulated steering, 3 steering cylinders with ± position changing on both sides, fully hydraulic side load steering priority value, fast and simple steering at engine idling speed.

FILLING QUANTITIES
Diesel tank capacity
150 l
Air filter box
10 l
Hydraulic system (front, back)
93 l

OPERATING DATA, STANDARD EQUIPMENT
Operating weight (ISO 3834)
2300 kg
Tipping load, straight (ISO 14397-1)
5000 kg
Tipping load, articulated (ISO 14397-1)
4600 kg
Overall length, bucket on ground
5400 mm
Overall width
2100 mm
Turning radius, outer edge of standard bucket
4600 mm
Wheelbase
2250 mm
Height above cab
2700 mm

ADDITIONAL EQUIPMENT

TYRES
405/70 R 20 MPT E-70 Michelin
380/75 R 20 XZSL Michelin
400/70 R 20 IT530 Goodyear

DRIVER’S PLATFORM
Driver’s seat MSG 85 (comfort) with hydraulic damping, high backrest, weight division and lap belt
Driver’s seat MSG 85 (premium) with air suspension, orthopedic lumbar support, high backrest, adjustable contours, seat and backrest heating

HYDRAULICS
6th control circuit ("High Flow") 116 l/min, 180 bar, electro-proportional actuation and installation at lift frame, incl. plug-in connectors and non-stop operation, e.g. for attachments with 3-hydr. functions
4th control circuit, single-setting, Schaeff ‘Fingertip’ control, electro-proportional actuation) pressure-free return flow and installation at rear vehicle
Pressure-free return flow, at lift frame

FRONT ATTACHMENTS
Loading bucket
1.20 m³
Earth bucket
1.30 m³
Light material bucket
1.80 m³
Light material bucket
2.00 m³
Side dump bucket
2.30 m³
High dump bucket
1.20 m³ / 1.80 m³
Universal bucket
1.85 m³
Push bucket
0.55 m³
Loading bucket with 4 clasps
1.25 m³
Front ripper, 4 tines

DRIVER’S CAB
FOPS rear window grid
Yellow rubberized

OTHER EQUIPMENT
Sprinkler system (with rear approach package)
Hand throttle, travel device switched off
Fitted with biodiesel-compatible hydraulic fluid / ester-based
Anti-drift system, immovable
800 W HYD-HECS
Electric fuel pump
Rear axle weights
Pre-controlled rear ripper for lifting and 4th cylinders
Reverse warning system (hook-up lines)
Battery isolator switch

3600 cm³
74kW (101 hp)