



 **MAUS 5**

ROPA

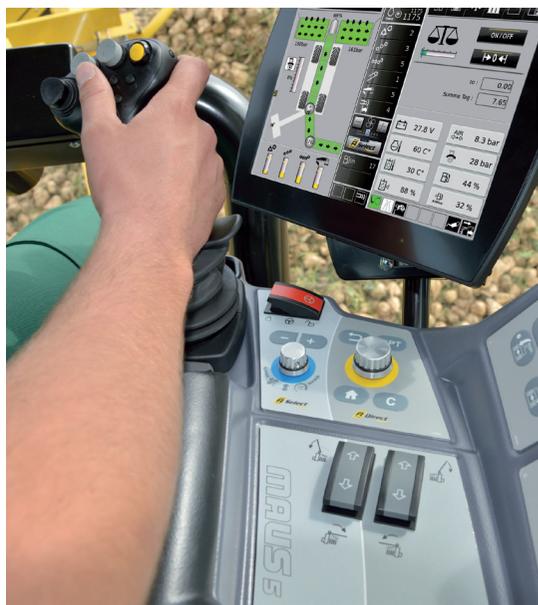
Superior class.



Transfer

Wi-Fi Connect

ROPA Concept



New cabin and operating concept

An improved cabin R-Cab provides the machine operator with a first-class workplace and an unsurpassed overall view. Wipers on all side windows and the door provide a clear view even in rainy weather. A pleasant and gorgeous interior of the new cabin in combination with excellent sound insulation guarantees a most comfortable operation. Extremely powerful fully LED working lights turn night into day.





R-Concept

ROPA combines under the name **R-Concept** its new intuitive operating philosophy. A large 12.1 inch touch screen performs as the information and command centre of the machine. From here the operator monitors the entire machine, receiving information about operating conditions and performance data and is able to adjust functions and, thus, improving machine performance. The operation is able to be performed either with finger touch on the touch screen or with turning and pressing the rotate buttons „R-Select“ and „R-Direct“. They are situated in the ergonomically perfect position at the newly designed control panel on the handle of the multifunctional joystick (with integrated mini joystick). The heated operator’s seat has numerous possible adjustments for the ideal seating position resulting in a premium class workplace.

R-Select

Select important working functions

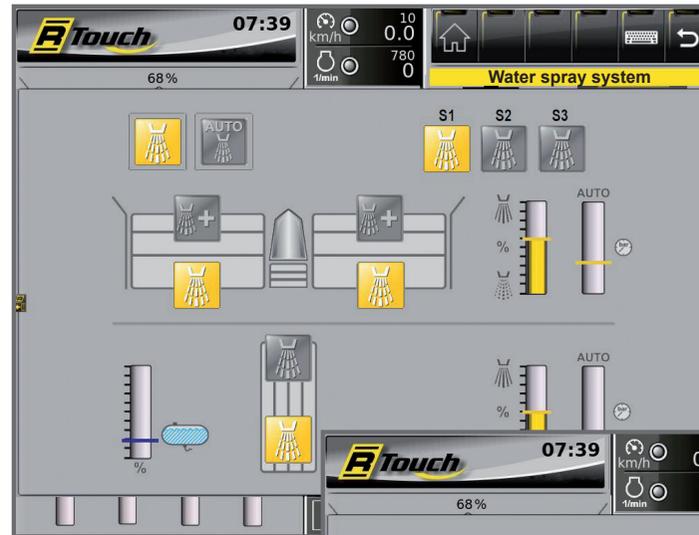
-> Functional group for intuitive selection and adjustment of all important functions during operation removes the guess work!





Directly in the terminal menu

-> Direct access to the main menu, as well as detailed machine settings and data request in submenus.

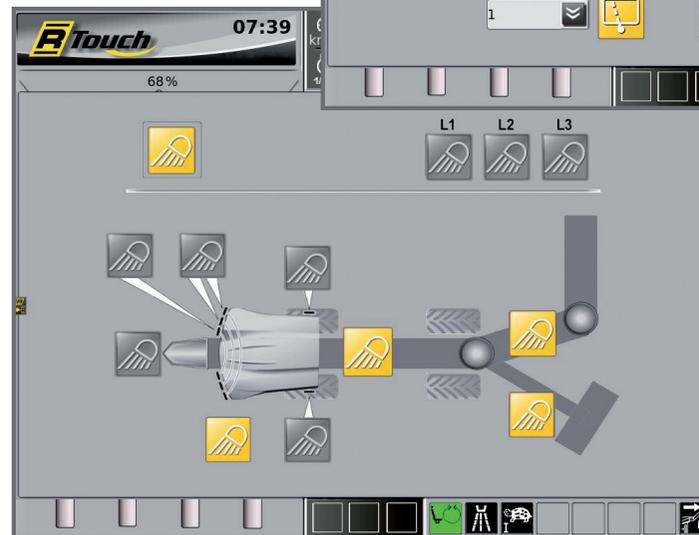
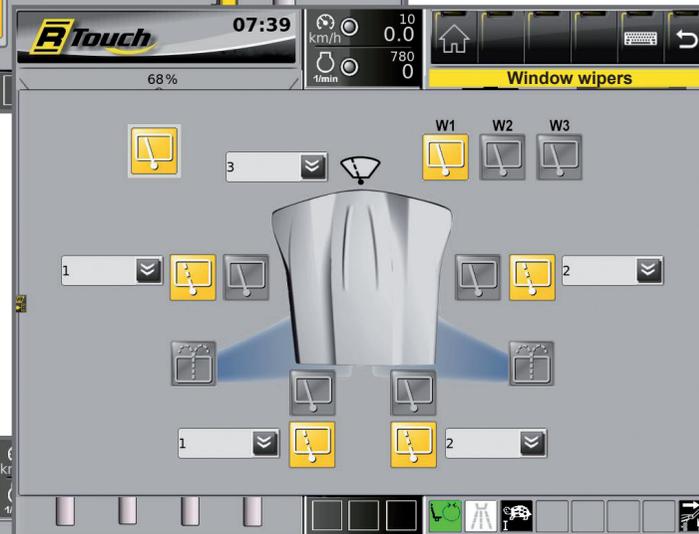


Water spray system

Individual adjustment of the different spray zones with automatic pressure regulation and automatic timer. A fingertip is enough to back up and recall three different spray programs.

Window wipers

One or all window wipers can be switched on or their working intervals can be adjusted just with a fingertip on the touch terminal.



Lights menu

One or all working lights can be switched on only with a touch of the touch-terminal. Three different lighting programs are able to be accessed with ease.

Automatic folding

A button touch is enough to "unfold" automatically ROPA Maus 5 from the road drive mode to the operating mode. The both pickup parts are folded out, the cabin is raised and the overloading and counterweight arms are swung out. The entire folding process is performed by simultaneous activation of all functions in just a minute.



Pickup system with 10.2 m wide individually adjustable cleaning intensity

This extremely rugged ROPA pickup system is the widest on the market. There are a total of 18 cleaning rollers with standard hard surface welding to ensure gentle beet pickup, soil and weed removal, as well long life of the roller. Increased space under the pickup results in better debris and soil elimination. Because of the wide pickup capacity, wider piles are able to be made resulting in significantly less field space needed and better frost protection for the pile. In some cases piles may contain up to 50% more beets.



Separate drives for 3 groups of rollers with individual rotational speed adjustment and automatic reversing for stone protection



Sturdy residual beet pickup with angled corners, proportionally controlled

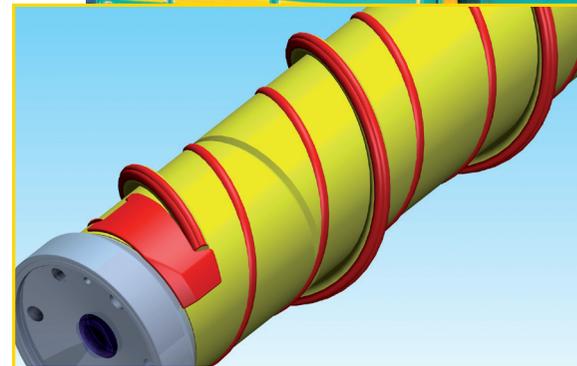


Made for permanent use - significantly less wear and tear

The annual operating capability of loaders is constantly increasing. Many machines operate in 24 hours shifts, and time for maintenance and parts replacement is limited and expensive.

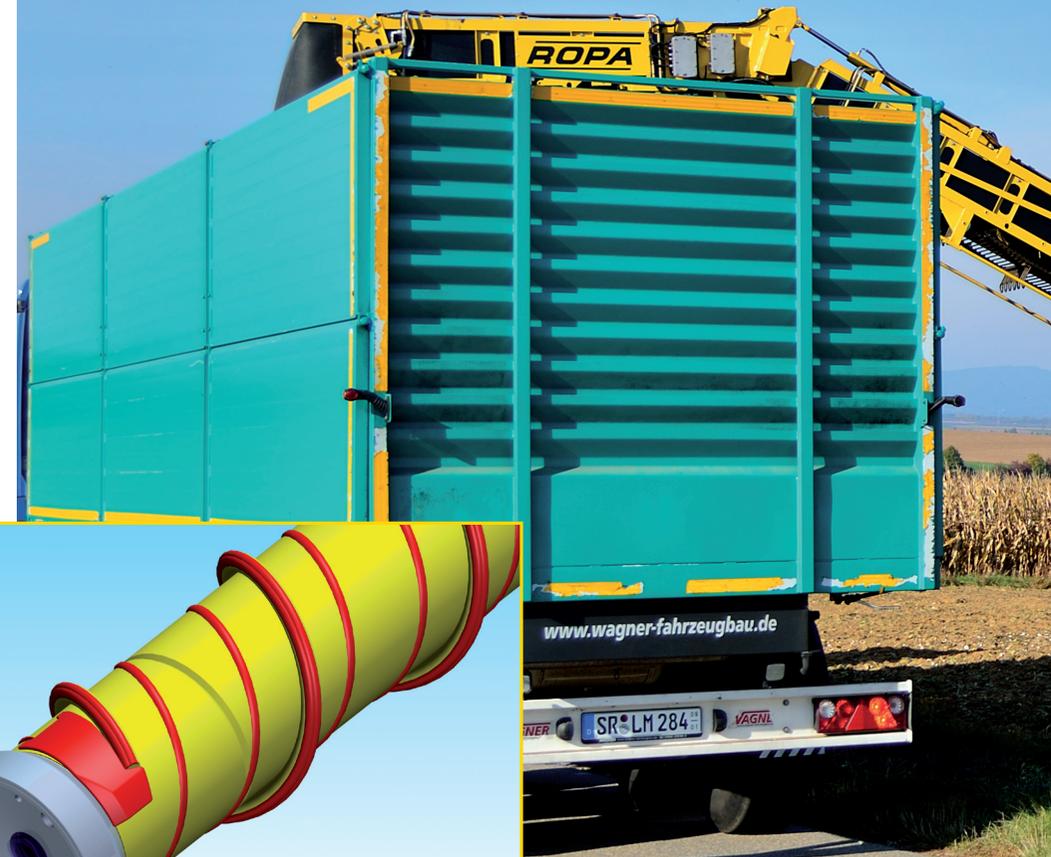
ROPA has once again improved the heavy duty parts by developing this new pickup system, using extra durable components. The central mark with its replaceable cone and a split cap offers a free-of-play drive designed with conical bearing and automatic lubrication. Pickup rollers with removable carbide metal plates, cleaning and pinch rollers (3-seam) are hard-welded as standard. All pinch rollers are made of seamless cold-drawn, extremely rigid special pipe, with a diameter of 138.5 mm and 8 mm wall strength.

The conveyor rollers are threaded on the outside to convey the beets to the inside, and have conveyor wedges to transfer gently the beet to the pinch rollers. Dropping wedges are situated at point of transfer from pinch rollers to the infeed conveyor to protect the beet and reduce the wear and tear at the roller ends. The residual beet pickup with a telescopic arm (180 mm x 180 mm x 5 mm) is equipped with a plate with reinforced rubber lip and angled corners.



A fully integrated weighing system (optional)

SP 6 scales with 6 weighing cells - 4 weighing cells for beet flow, 2 weighing cells in return flow provide an automatic dynamic correction of dirt adhesion during loading



MAUS 5



Best all-round vision – flexible comfort cabin

The comfort cabin can be raised up to 5.1 m providing the operator with a workplace of superior class with an all-round vision never known before. Developed specially by ROPA, R-Cab with unobstructed view provides first class vision and excellent sound-proofing, creating the most comfortable workplace. The evenly curved front windscreen with an unusually low horizon grants an excellent, undistorted view. The operator has a view over the truck conveyor, the entire width of pickup and infeed conveyor without having to get up from the ergonomically arranged seating position. This means tireless operation even on long working days – the basis for high performance during beet loading.

Full-tinted glazing, adjustable steering column, air sprung-mounted comfort seat with seat heating and rotating seat brake, MP3-CD radio and audio system, video-controlled depth operation as well as electrically adjustable and heated wing mirrors offer a workplace satisfying all operator needs. To make the last wishes come true, the loader has as standard equipment, automatic climate control with stepless fan rotational speed regulation and optionally, a park heating, which also heats the hydraulic oil tank.

The logo for MAUS 5 features a stylized mouse head profile on the left, with the word "MAUS" in a bold, italicized sans-serif font, and a large "5" in a similar font to the right.







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MAUS 5

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ROPA
Superior class.

Optimal balance – unique counterweight concept

Without leaving the cabin and with only one operating component the operator can transform the ROPA Maus 5 from road drive into operating position in as little as a minute.

A newly designed and clearly laid-out operating console with logically grouped operating units, a rotary switch as well as two ergonomically arranged multifunctional joysticks in the armrests provide a highly user-friendly machine when loading.

The counterweight arm, specially developed by the company's founder Hermann Paintner, is made of special 700 fine grain steel and contributes to the impressive performance of the ROPA Maus 5 during loading while maintaining utmost stability. The counterweight arm is up to 9 m long and 4 m high and can be swung out together with the fuel tank, which serves as a counterweight to the truck conveyor, thus ensuring optimal balancing of the machine even at full 15 m overloading width.

The weight of the loader is taken up by the counterweight arm at the machine centre, leaving the frame unstressed. An absolutely safe and horizontal position and optimal traction on all 4 wheels are essential features of the ROPA counterweight concept.





Sieving conveyors cleaner



Pinch rollers cleaner with beet brake (optional)



Stone remover (optional)



Loading without any compromise - Machine construction in perfection

The main frame consists of laser-welded, angled profile tubes of 700 fine grained steel and offers very high stability. All components are functional, transparent and maintenance-friendly. The various detailed solutions, e.g. the automatic folding/unfolding mechanism, video-system at the rotating seat with 2 cameras in series (4 cameras optionally), automatic stone protection, reversible and swung up cooling fan, fuel filter monitoring, all contribute to the highest possible performance at lowest maintenance needs. Electronic data recording, fuel consumption gauging, air-conditioning, rear view camera and central lubricating system are part of the ROPA Maus 5 very comprehensive standard equipment. Data export is possible via USB stick or with R-Transfer via Wi-Fi and ROPA app. The new completely adjustable water spray system with pressure-dependent or interval control considerably simplifies loading in difficult conditions as well as provides more careful beet treatment in extremely dry loading conditions.

The superior class ascent

The driver enters comfortably and safely the liftable to 5.1 m cabin. It offers the best all-round visibility and view of the truck and pickup. The coming-home function provides for the safe entry and exiting of the cab at night.





Concept

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Compact on the road – minimum time for preparation

For road travel the complete Maus folds in automatically to a road width of 3.00 m and a total length of only 14.97 m with just one operating element in the cabin - unique between all the loaders! The wheel base of 5.5 m combined with two hydraulically sprung additional axles guarantees safe handling of the approx. 31 t loader while maintaining the best driving comfort even at the speed of 40 km/h.





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Fahrzeug schert aus
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Mercedes-Benz engine OM936

The extremely economical Mercedes Benz OM936 engine of 260 kW/354 hp, exhaust gas category 4 final with AdBlue and SCR-Cat, with 7.7 l volume capacity, 2-stage turbocharging, 1,400 Nm max. torque at 1,200 rpm is integrated in the most efficient drive concept. The engine automatically maintains a reduced engine rpm during loading (as low as 1,150 rpm), while at the same time enough power is preserved for extreme conditions.

Efficient hydraulics enables rotational speed reduction

The hydraulic system with an improved gear transmission provides efficient power transfer while combining high throughput with low fuel consumption at a very quiet 1,200 loading rpm. Powerful load-sensing hydraulics ensures the highest possible hydraulic fluid capacity and a prompt response of the entire operating hydraulics even at idling speed. Pump distributor gear unit with a load-switching multiple disc clutch ensures reliable cold-start and minimized fuel consumption for all drives.

Service and maintenance friendly

All components are conveniently and safely accessible. The fully integrated operating terminal diagnostic system enables fast and optimal service.





TRANS-FLUX
4B140 DN 38
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WP-14 B7
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Technical Data of ROPA Maus 5

Diesel engine:

Mercedes Benz 6 cylinder inline engine OM 936 LA, exhaust level 4 final with AdBlue and SCR-Cat, 7.7 l volume capacity, 2-stage turbocharging, 1,400 Nm max. torque at 1,200 rpm, fully electronic steering with fuel consumption assessment shown at the colour terminal, temperature-dependent controlled and automatically reversible hydrostatic fan drive, one flat belt drive with automatic belt tightening, wear-free constant throttle brake prevents over-revving of the diesel engine, automatic engine shut-down when damage may occur, engine diagnostics integrated into the colour terminal, fuel tank of 1,225 l, AdBlue tank of 95 l, ball cock for 8 l fuel reserve when tank is empty, electronic pump for fully automatic ventilation of the fuel system

Traction drive:

Continuous hydrostatic (Bosch-Rexroth) 4-gear OMSI drive for 2 OMSI planetary steering drive axles, traction drive pump alone can easily transfer more than the complete diesel engine performance, 2 separately adjustable differential locks with automatic function, automatic all wheel switch, cruise control, automatic driving at reduced rpm, load control via highly sensitive steering in crawl gear, front axle with drum brake 500x180 Duplex, rear axle with drum brake 500x120 Simplex, 4 spring-loaded actuator brake cylinders for operation and parking brake, driving speed 32 km/h, 40 km/h optionally with 2 drive motors

Cabin:

Adjustable in height up to 5.1 m, sound-proof, clear view cabin with all-round tinted glazing and low horizon, R-Concept control panel panel at swivel seat, 12.1 inch R-Touch colour

terminal with R-Select und R-Direct operating system, 2 multi-functional joysticks with integrated mini-joysticks, air conditioning, air-cushioned swivel seat with brake, R-Touch colour terminal with clearly laid-out display of beet flow, fail indicator, MP3 radio with audio system, base console for telephone, storage locker of 60 l capacity integrated in the cabin rear wall, five windscreen wipers on front/side windows and door, all wipers with interval adjustment and washing system, 2 LED internal lights, video system at swivel seat with split function and standard 2 cameras (optionally up to 4 cameras)

Operating drives and hydraulic system:

OMSI pump distributor gears, pressure circulating lubrication, with gear oil cooler; adjustable transmission ratio for reduced engine revolutions by loading from 1,150 rpm, power-shift multiple disc clutch to switch 6 hydraulic pumps of the operating drives -> thus, easier start of diesel engine also at very low outside temperature;

- 4 axial-piston pumps (Bosch-Rexroth) for continuous and separate rotating speed adjustment and reversing of rollers drives (pickup, out and in flow, additional cleaning)
- 2 axial-piston pumps (Bosch-Rexroth) for continuous drive of infeed and truck conveyors
- 1 Load-Sensing axial-piston pump (Bosch-Rexroth) to feed all hydraulic cylinders -> all the movements are performed at the same time thanks to LVS directional valves with flow dividing principle.
- 1 axial-piston pump (Bosch-Rexroth) for reversible fan drive (hydraulic oil, water, charge air coolers)
- Hydraulic motors from Danfoss

Steering: Front axle steering, rear axle steering, all-wheels steering, automatic mid-positioning of rear axle

Turning radius: 9.90 m inside

Cleaning and loading capacity: up to more than 560 tons per loading hour

Pickup system:

Maximal pickup width 10.2 m, ROPA roller-pickup with 18 rollers, split into 3 separately driven units (each drive has a continuous revs. control and automatic reversing for all rollers (patented pickup system)

1. Pickup:

2 carbide tipped finger rollers operate up to a depth of 7 cm, 2 hard-coated cleaning rollers

2. Outward flow:

6 hard-coated conveyor rollers transport outward, divide the beet flow

3. Inward flow:

8 counter-rotating hard-coated pinch rollers guide inward => doubled cleaning path; all pinch rollers made of seamless cold-drawn, extremely rigid special pipe, Ø 138.5 mm, 8 mm wall strength

Central mark with new, free-of-play drive; automatically adjustable rotational speed matching conveyor rollers, slow running for low wear and tear of the central mark cap; protection valve against safety chains tearing off, when not hanged off; telescopic and proportionally controlled residual beet pickup (external telescopic tube 180x180x5mm), colour camera and LCD colour monitor for camera depth control, de-icer in pickup centre and side parts



Infeed conveyor:

80 cm wide, 50 mm pitch with specially designed PU fingers and soil deflectors, double profile belts, with rotational speed control and quick motion switch (doubles the belt speed) for sieve conveyor self-cleaning in case of heavily sticky soil, 15 mm steel wear-resistant side walls

Recleaning:

Standard: sieve conveyor, 90 cm wide, 40 mm pitch
Optional: pinch rollers cleaning with 8 counter-rotating rollers, 1,150 mm inner width, 1,300 outer width, rollers are constructively identical to pinch rollers of pickup

Truck conveyor:

80 cm wide, 40 mm-pitch, with rotational speed control and quick motion switch, reversible and interchangeable side walls made of wear-resistant 15 mm thick PU plates, backstop

Overloading height: up to 6.0 m

Overloading width: 15.0 m

Counterweight arm:

9.02 m length, 6 m up to articulation point, bottom plate in fuel tank of 15 mm steel

Total cleaning area: 35.4 m²

Maximum cleaning path: 31.7 m

Electrics:

24 Volt, generator of 150 amps, electronic battery main switch

with automatic cut out after 5 days ignition off, 3 x 12 Volt sockets, 3 x 24 Volt sockets, diagnostics mechanism for the entire sensing and operational system integrated in the R-Touch colour terminal, warning signals are shown as symbols with text in the appropriate native language, software updating via standard supplied USB ports, long-life, water and corrosion protected construction of on-board electrics, use of exclusive, individually protected plugs (AMP, German), wiring of central electric system with WAGO-spring tightening clips (vibration proof), 3 identical ESR computers and 5 identical Hydac-TTC modules (exchangeable!) each, cable looms with heavy-duty thread protection

Driving on roads and operating mode:

With a single operating component you can switch automatically from road drive mode into operating mode in a good minute

Dimensions during road driving:

Length: 14.97 m; width: 3.00 m; height: 4.00 m
Empty weight with full fuel tank from 30,400 to 31,600 kg depending on equipment, permitted total weight: 32,000 kg, 4-axle

Tyres:

Front and rear axles with Michelin Mega X Bib 710/75 R34, optionally, Michelin CerexBib 800/70 R32 (Note: extra wide: 3.26 m!)

Two hydraulically sprung liftable support axles as standard with tyres 235/75 R17.5

Standard equipment: back run camera, depth-control camera, central lubrication system, automatic climate control, seat heating, Bluetooth radio, USB interface, operating lights and rear lights Hella LED, electrically adjustable mirrors, on-board tools, all rollers are hard-coated, pickup rollers with Widia pickup fingers

Additional equipment:

Recleaning with 8 counter-rotating hard-coated pinch rollers, park heating, water spray system (with individual sections controlled from R-Touch) with 400 l water tank, truck conveyor camera, recleaner camera, 40 km/h traction drive, operating lights on cabin roof left and right 1 LED each, storage compartment 1,000 x 600 x 600 mm behind the rear axle, R-Transfer with Wi-Fi Connect interface, weighing device Pfreundt with two weighing cells, SP 6 scales Pfreundt with six weighing cells



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