



Operating Weight	15,000 kg
Rated Power	132 kW (177 hp / 180 ps) @ 2,200 rpm
Draw Bar Pull	77 kN
Blade Width	3,660 mm

4165D MOTOR GRADER

TOUGH WORLD. TOUGH EQUIPMENT.

The construction world is your reality, you live it every day and you know how hard it can be to make your business pay. Rising costs, increasing legislation and greater competition all combine to put the pressure on. We understand and we've put that understanding into action with a game changing new motor grader that is inspired by you.

THE NEW 4165D WHERE WE LEAD, OTHERS FOLLOW

We don't follow the expensive trend towards over-engineered products. We know where real customer value lies. With the new 4165D we've used our deep customer insight to re-think the traditional grader to create an award-winning, class leading machine.

WRITING A NEW STORY

With the new 4165D, we've written a new chapter in the motor grader story with a machine that delivers unparalleled visibility, control sensitivity and job-site performance. A machine which has been globally recognised for its innovative design and technical excellence with a Red Dot Award.

YOU WANTED A HARD-WORKING MOTOR GRADER THAT DELIVERS ON 4 ESSENTIAL NEEDS



**BEST IN CLASS
VISIBILITY**



**ULTIMATE
GRADING POWER**



**ENHANCED
OPERATOR PERFORMANCE**



**SIMPLE & COST-
EFFECTIVE MAINTENANCE**





With the new 4165D, we've risen to your challenge and given you a machine designed to exceed your expectations.

TOUGH TALK? Judge for yourself.

INSIGHT DRIVES OUR AWARD-WINNING DESIGN

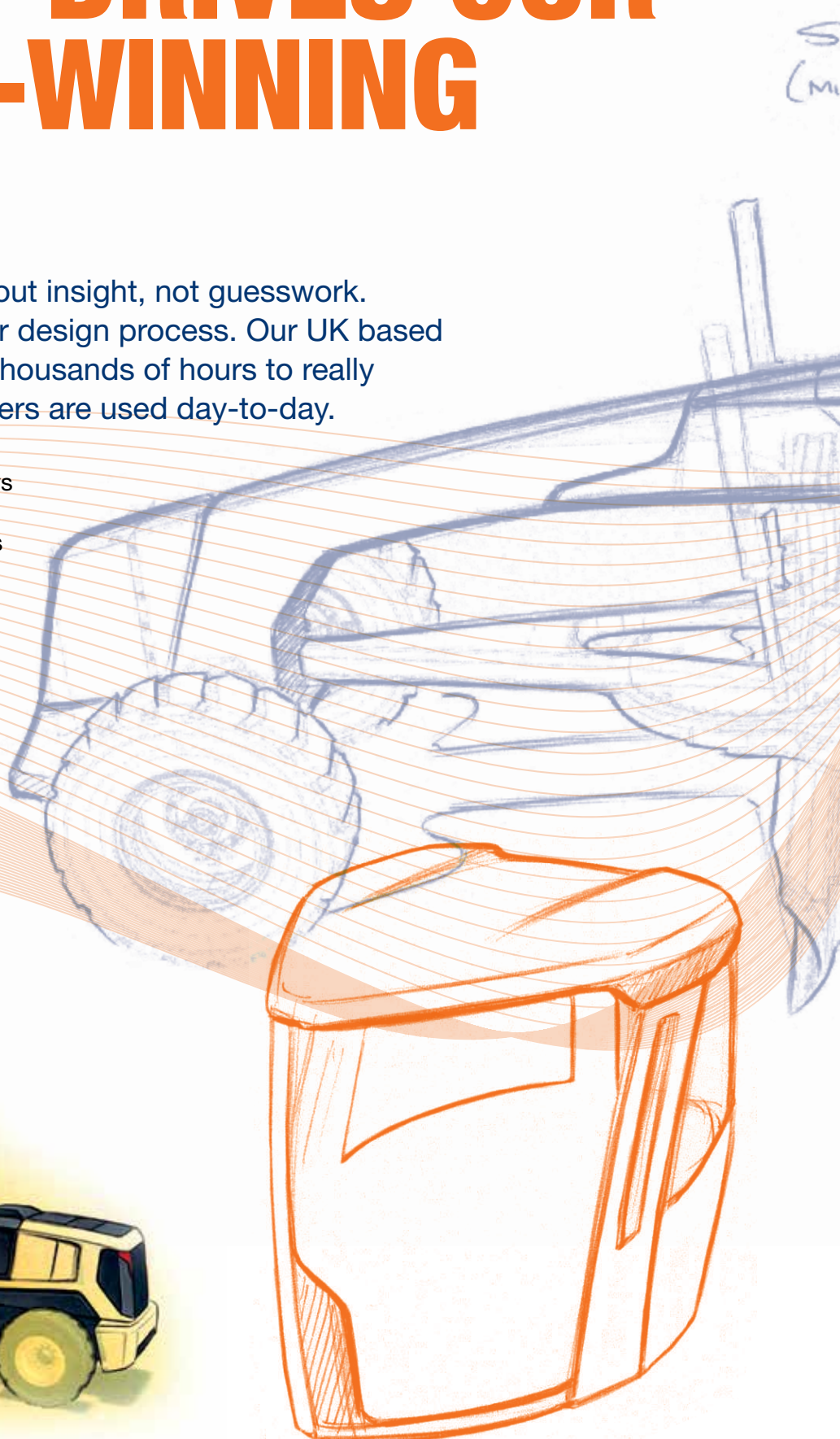
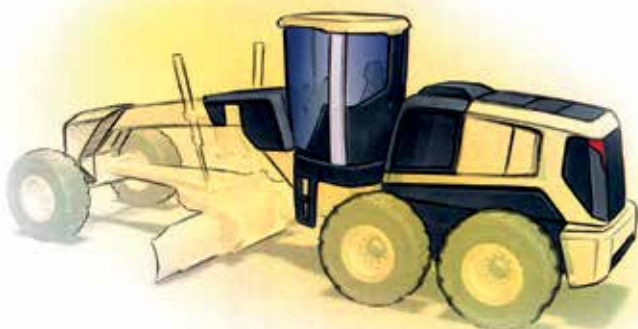
Award-winning design is about insight, not guesswork. There are no shortcuts in our design process. Our UK based design team have invested thousands of hours to really understand how motor graders are used day-to-day.

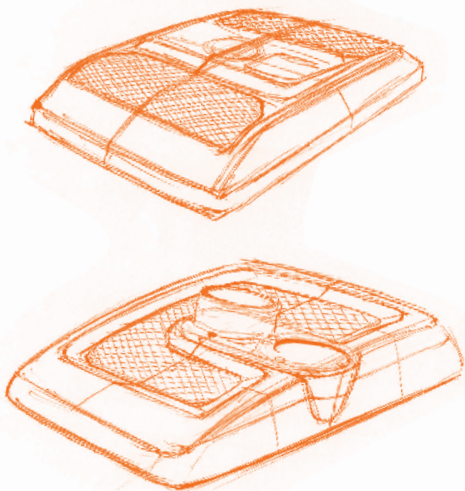
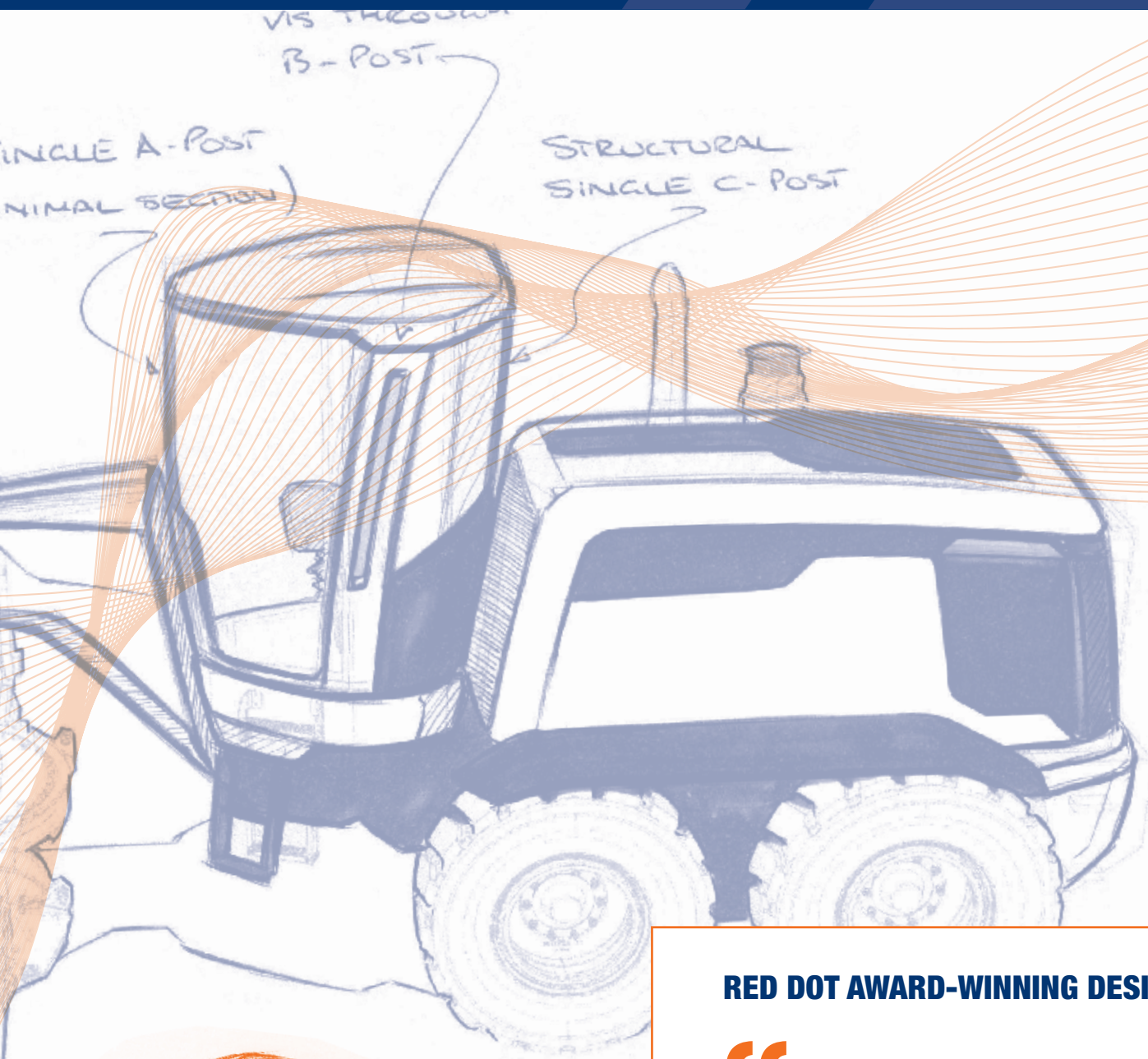
In award-winning design, form always follows function, so the distinctive visual styling of the new 4165D goes way beyond the cosmetic.

It looks different because it has a cohesive design which considers every angle from the operator's perspective.

It performs better because operational performance lies at the heart of the design concept.

Red Dot Awards are not won by accident, they are the result of genuine innovation and that innovation is fundamental to our design DNA.





RED DOT AWARD-WINNING DESIGN



Our UK design team were recently recognised with a prestigious Red Dot Award for our new 4165D motor grader recognising its innovation and excellence in product design.



reddot design award

DESIGN IN ACTION

Our design DNA is clear in the bold lines and distinctive appearance of our new 4165D. It was designed as a cohesive form – not simply a collection of components – giving it a dynamic and purposeful stance. As you would expect, its performance is matched to its looks.

1 ULTIMATE VISIBILITY

| When it comes to visibility, our 4165D rewrites the rule book with 324° panoramic view.

2 IMPROVED OPERATOR ENVIRONMENT

| New ergonomic design creates the ultimate operating environment for getting the job done in safety and comfort.

3 POWERFUL AND RELIABLE ENGINE

| Our award-winning grader is powered by a proven Cummins Tier 2/Stage II approved engine with turbocharger and air-to-air intercooler.

4 LONGER LASTING TRANSMISSION

| Our ZF 6-speed powershift transmission is designed to get the job done, again and again.

5 DRIVE AXLE

| Our maintenance-free limited slip differential axle transfers all of the torque to the tyres, improving traction and grading capability.

6 EVEN TOUGHER

| We've reinforced the moldboard with heat-treatment to create a tough, longer-lasting cutting edge.

7 GREATER STABILITY

| The A-shape drawbar has been designed to deliver outstanding stability, whatever the grading environment. Its high-strength construction significantly reduces component wear and downtime.

8 WEAR RESISTANT GEARS

| With a one piece, wear resistant design our reinforced worm gearbox works harder for longer.



9 MAINTENANCE-FREE BEARINGS

The slewing ring bearing has been designed for high loads and rigidity and is completely maintenance-free.

10 HIGHER GROUND CLEARANCE

The pendulum mechanism has been upgraded to achieve 602 mm ground clearance making the grader safer to load onto a trailer or move onsite.





BEST-IN-CLASS VISIBILITY

Our UK design team really understand the operator's world. Thousands of hours of insight have allowed them to gain a unique understanding of motor graders and their limitations. This insight has enabled them to redesign our new 4165D with the operator at the heart.



324° VISIBILITY

Clear visibility is key to operator performance, satisfaction and safety on the job site. Our team rose to the challenge with a cohesive design that radically improved visibility to create a 324° panoramic view.

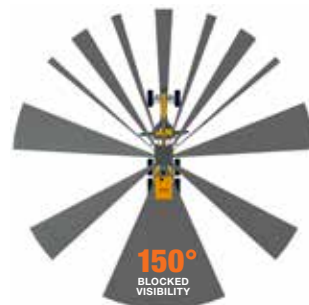
THE NEW 5 PILLAR CAB IS PERFECTLY ALIGNED

It sounds obvious, but to increase visibility you have to remove obstructions from the operator's view. Our innovative 5 pillar cab benefits from a slimline, A-pillar which is perfectly aligned with the lifting cylinder. This clever alignment reduces obstructions by 45% and significantly improves the operator's forward view.



FORWARD VIEW IMPROVED BY 115%

OTHERS



4165D

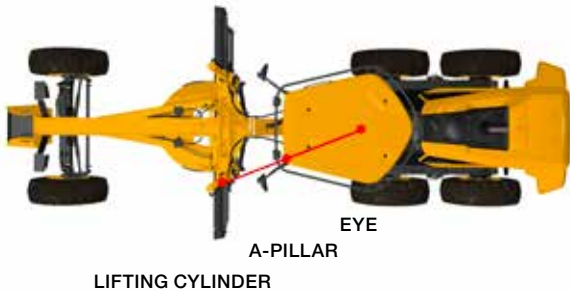


This diagram graphically illustrates how obstructions have been reduced to increase visibility from every angle

CLEAR REAR VIEW

The rear view has also been radically improved thanks to the intelligent positioning of the C-pillar directly behind the operator. The pre-cleaner and exhaust are aligned along the tapered, "wasp waisted" hood to reduce obstructions and improve sightlines by 149% to the rear.

FRONT VIEW

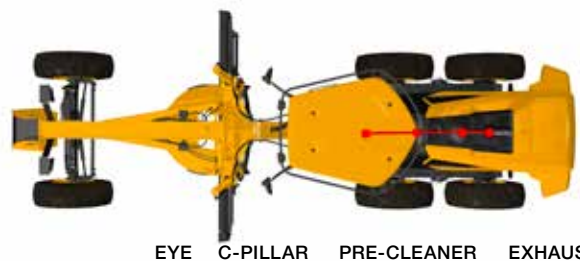


OTHERS



4165D

REAR VIEW



OTHERS



4165D



SEEING IS BELIEVING

With the 4165D, we have revolutionised motor grader visibility. Climb into the cab, take a look for yourself, your eyes will give you all the proof you need.



149%
IMPROVEMENT
TO REAR VIEW



ULTIMATE GRADING POWER

A motor grader is a tool and its real value lies in its ability to help the operator move the maximum amount of material in the most efficient way. It's all about blade control, power and maneuverability.

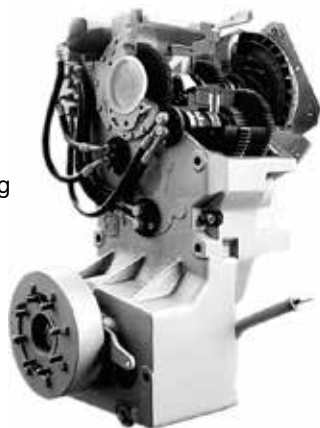
THE POWER IN YOUR HANDS

At the heart of our award-winning 4165D beats world leading engine technology, powering a high performance driveline. The Cummins engine has been carefully chosen to deliver operational performance and economy to meet Stage II legislation standards.



PRECISION TRANSMISSION

ZF's 6-speed powershift transmission gives the operator a simple, precise and light gear changing capability allowing him to fully concentrate on doing the very best job in the fastest possible time. Fully equipped with heavy duty rolling chains (140% stronger than the average) our transmission promises to keep on working harder, for longer.



 **ROLLING CHAINS 140% STRONGER THAN AVERAGE**

HIGH-TORQUE AXLE

Our NoSPIN, limited slip differential axles deliver all of the torque to the tires, giving traction and confidence the operator can really feel. The strengthened rear axle is perfect for light or heavy duty conditions and its integral structure makes it maintenance-free.

KLEANAIRE AIR PRE-CLEANER

Improving engine performance and fuel economy, and reducing downtime, our pre-cleaner neutralises the negative effects of the toughest, dustiest environments.

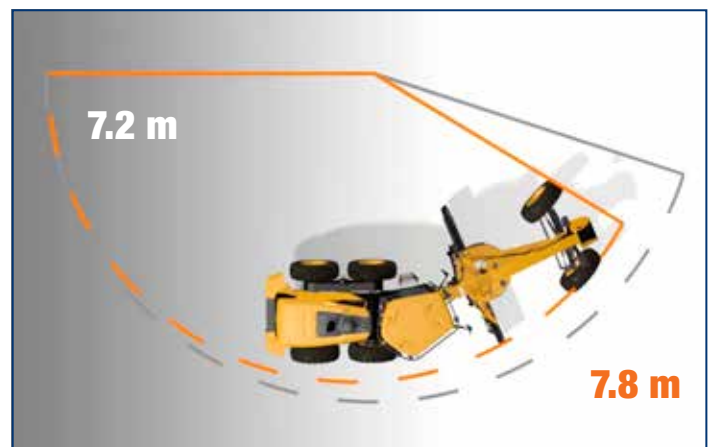


GREATER MANEUVERABILITY

On job sites turning space can be very limited, so we've reduced the turning radius of the 4165D down to 7.2 m, one of the narrowest in the industry.



7.2 M TURNING RADIUS





PATENTED SWING SYSTEM

To further enable a precision cut, our new 4165D is equipped with our patented swing system. Here the pitch cylinders are cleverly positioned to allow the blade to cut directly into the ground at a depth of 60-270 mm, with greater stability and control. In addition, the patented swing system allows the blade to be lifted higher, achieving a ground clearance of over 600 mm, making it safer and easier to transport or move it over rough ground.



**Over 600 mm
GROUND CLEARANCE**

GRADING POWER WHERE YOU NEED IT.



**HIGH
EFFICIENCY**



ENHANCED OPERATOR PERFORMANCE

High performance at its best. We've used our insight to not only improve visibility, but to create a high performance working environment. Comfortable, flexible and with a range of smart options that actually help the operator do more – every shift.

NEW ERGONOMICS

Slope grading and finish grading are demanding tasks requiring skill and precision. We've given the operator the ultimate control. Our redesigned control cluster brings the action closer to the operator.



ONE-HAND OPERATION

In addition, subtle design changes allow the operator to manipulate multiple levers with one hand, helping them to enjoy the finest, most sensitive control.



LOW VIBRATION – HIGH PERFORMANCE

Improved damping cab mounts significantly reduce vibrations even during the toughest tasks, helping to keep the operator comfortable and focused.

Our new, improved, suspended seat also helps keep the operator comfortable no matter how rough the terrain, This combined with sophisticated temperature control and air-conditioning and fully pressurised cab, help the operator stay warm in the snow and cool in the sun.

SMOOTHER RIDE

Ripping and rock spreading can be tough jobs but we've protected the operator by creating a quieter cab, with in-cab noise reduced by up to 10%.



UP TO 10% QUIETER

AUTOMATIC GRADE CONTROL

When precision is everything, our laser guidance and cross slope system helps your operator to grade faster, more accurately and with fewer passes.

The laser transmitter accurately and automatically guides and controls the blade, ensuring a top quality finish. Real-time information is relayed to the operator via the in-cab monitor.

HIGH PERFORMANCE OPTIONS

No grading job is too tough to handle with our range of performance enhancing options.

ONE GRADER – MULTIPLE APPLICATIONS

We give you the widest choice of tools to tackle any surface.

3 optional moldboards from 28 to 74 degrees



Scarifier for light soil preparation



5-tooth ripper for tough soil and roots



Front blade for dozing applications





**WE HELP THE OPERATOR DO MORE,
EVERY SHIFT.**



**30%
REDUCTION IN
OPERATOR FATIGUE**



SIMPLE & COST-EFFECTIVE MAINTENANCE

You challenged us to make maintenance checks even faster and easier. We listened, understood and responded by creating a “one-stop” maintenance concept for all key components such as; fuel and oil filters, hydraulics and electronics system. Our centralised system saves on downtime and makes routine maintenance simple.

EASY SERVICE ACCESS

We can save you time and stress with improved service access. Here are just some of our improvements.

Remotely activated oil drain



Wide opening spread hitch improves service access to the gearbox and hydraulics



Transmission refuelling can be completed at the distal end



Disconnect switch is located close to the cab for added convenience



Easy maintenance modulated wiring harness



Battery and fuel tank filler are safely positioned within the rear hood



EXTENDED SERVICE INTERVALS

In order to reduce downtime and operating costs our 4165D benefits from longer service intervals for oil, lubricant and coolant.

MORE FUEL – LESS DOWNTIME

The intelligently positioned, super-sized 348 L fuel tank holds more fuel and reduces downtime without creating visual obstructions for the operator.



NEW 348 L FUEL TANK

REAL-TIME INFORMATION

In-cab displays allow the operator and service technician to constantly monitor the machine’s performance, improving diagnostic accuracy and reducing maintenance time.

MORE SPACE TO WORK

To further improve service access, all service points are centralised on the left of the machine. The one-piece hood opens to a 50° angle, improving visibility and giving plenty of space to work.



HOOD OPENS TO 50° ANGLE





**WITH OUR NEW 4165D WE'VE WORKED
HARD TO MAKE MAINTENANCE EASY –
SO YOU DON'T HAVE TO.**



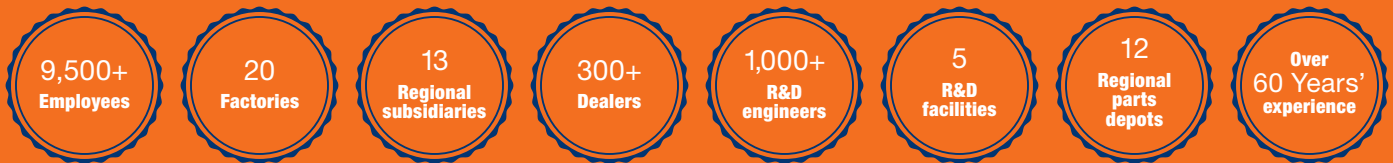
**LONGER
SERVICE
INTERVALS**

BACKING YOU ALL THE WAY

You challenged us to make maintenance checks even faster and easier. We listened, understood and responded by creating a “one-stop” maintenance concept for all key components.



WE ARE LIUGONG. WORKING HARD TO KEEP OUR GLOBAL CUSTOMERS EARNING



LIUGONG SERVICE PROMISE



Highly trained technicians utilizing the latest diagnostic equipment



15,000+ genuine Liugong parts available within 24hrs from our European Parts Distribution Center



Multi-lingual service helpline and online support



Transparent estimates and invoicing



Clear communications through electronic parts catalogue

MAINTENANCE AND SUPPORT PACKAGES

From genuine LiuGong parts, to full repair and maintenance contracts, LiuGong has the flexibility to offer the level of support and response to suit your business and applications. Whatever level of support you choose you can be confident that it is backed up by LiuGong's service promise.



“ONE-STOP” MAINTENANCE CONCEPT

COMMUNICATION IS KEY

We always aim to keep you informed on service and maintenance work and provide you with clear and accurate estimates, invoices and information in a timely manner. These may be small things, but your feedback tells us that these basics really matter – so we aim to get them right.

**Right parts.
Right price.
Right service.**



**Above all,
we get it right
the first time.**

1st



**PARTS AVAILABILITY IS HIGH ON OUR AGENDA.
WE'RE WORKING HARD TO GET YOU THE
PARTS YOU NEED WHEN YOU NEED THEM.**



HIGH PARTS AVAILABILITY



TOTAL COST OF OWNERSHIP

High visibility, grading power and operator performance are two key motor grader purchasing criteria, but ultimately, the machine's earning potential, its overall life cost and its trade-in value really matter too.

When it comes to total cost of ownership, LiuGong has a strong story to tell.

PROFESSIONAL ADVICE

We are committed to reducing your total cost of ownership and increasing your profits. Our experts will provide targeted advice on everything, from choosing the right machine to maximizing its efficiency on-site.

MACHINE AVAILABILITY

Our extensive manufacturing operation right in the heart of Europe, enables us to offer significantly shorter lead times on a range of models, compared with some manufacturers.

In fact, we can deliver selected machines in as little as 4 weeks. The faster you can get a machine, the faster you can get working and earning.

TICKET PRICE

At LiuGong, our aim is to give you everything you need and nothing you don't.

For example, we choose high quality, proven components such as Cummins engines and Permco hydraulic pumps.

These proven components, combined with LiuGong design and manufacturing quality, result in a high quality, competitive machine.

RESIDUAL VALUE

With the combination of LiuGong design and manufacturing excellence, world-class components and comprehensive uptime support, our quality holds its value.





IT ALL ADDS UP

With our new 4165D we've listened to operators and given you everything you need and nothing you don't. We've given you a choice of tough motor graders all backed up by LiuGong's service promise.

When it comes to performance, we've got it covered, on the job site and on the balance sheet. Add up the benefits and you'll see that our new 4165D has the formula for success.



BEST-IN-CLASS VISIBILITY

+

ULTIMATE GRADING POWER

+

ENHANCED OPERATOR PERFORMANCE

+

SIMPLE & COST-EFFECTIVE MAINTENANCE

CUSTOMER SATISFACTION

SPECIFICATIONS

OPERATING WEIGHT 15,000 KG

Operating weight includes the machine weight with standard work device (no additional equipment or accessories), full fuel tank, all fluids at required level and an operator 75 kg.

DRAW BAR PULL 77 KN

ENGINE

Description

Cummins Tier 2/Stage II approved, 5.9 liter, 6-cylinder straight turbocharged diesel engine with mechanical direct fuel injection system.

Cummins turbocharged system, high transient response.

Cummins fuel filtration system, high filtration efficiency.

Air cleaning: Whirlwind pre filter, two stage air filter.

Cooling system: Air-to-air intercooler, single radiator layout.

Emission Rating	Tier 2/Stage II
Engine Manufacturer	Cummins
Engine Model	6BTAA5.9-C180
Rated Power	132 kW (177 hp / 180 ps) @ 2,200 rpm
Peak Torque	800 N·m @ 900-1,600 rpm
Torque Rise	17.5%
Displacement	5.9 L
Number of Cylinders	6
Bore x Stroke	102 x 120 mm
Aspiration	Turbocharged, air-to-air inter-cooled
Derating Altitude	3,500 m

AXLE

Differential	Limited slip
Rear Axle Tandem Oscillation	±15°
Front Axle Type	All welded steel frame
Front Axle, wheel Lean Angle	Left/right 18°

HYDRAULIC SYSTEM

Description

System supply: Two gear pumps with fix displacement.

Multi- spool valves distribute the oil independently for controlling the position of a grader blade: lift, hold, lower, shift, roll-over and rotation.

Tilt function: With a tilt cylinder, the front wheel lean angle can be up to a maximum of 18°.

Pump Type	Gear
System Pressure	20±0.5 MPa
Pump Flow	122 L/min

TRANSMISSION

Description

Torque converter: three - member single turbine.

Transmission: powershift, electronic shift change control.

Gear shifting system: Number of speeds, forward-6, reverse-3. Compact, high efficiency, low noise, easy to operation.

Drive	4 Wheel Drive
Forward	
1st	5.6 km/h
2nd	9.4 km/h
3rd	11.3 km/h
4th	18.6 km/h
5th	26.5 km/h
6th	42 km/h
Reverse	
1st	5.6 km/h
2nd	11.3 km/h
3rd	26.5 km/h

SERVICE CAPACITY

Fuel Tank	348 L
Engine Oil	18 L
Cooling System	35 L
Hydraulic Reservoir	165 L
Transmission & Torque Converter	33 L
Axle Oil	98 L

STEERING

Description

Steering system: Load-sensing hydraulic steering.

System supply: The steering system has priority feed from a gear pump with fix displacement.

Steering cylinders: Two double-acting cylinders.

Steering Configuration	Front wheel steering
Steering Relief Pressure	16.7±0.5 MPa
Minimum Turning Radius	7,200 mm
Steering Angle	±50°
Frame Articulation Angle	±27°

BRAKES

Description

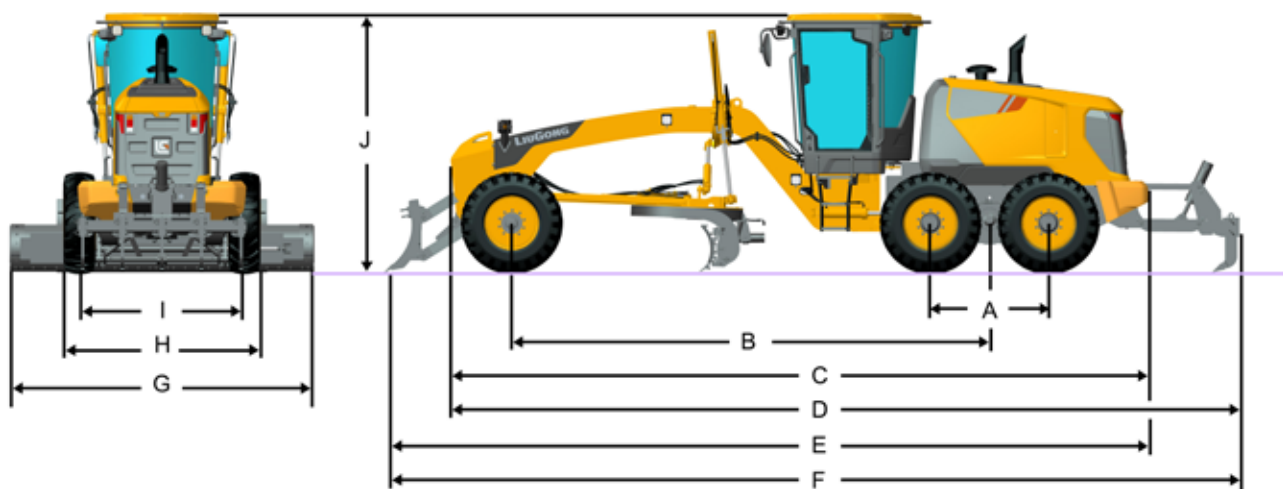
Single brake circuit, accurate control with the brake valve & gear pump.

Service Brake Type	Fully hydraulic, shoe type
Parking Brake Type	Manual

TIRES

Standard Tire Size	17.5-25 PR12
Inflation Pressure	0.26~0.30 MPa

DIMENSIONS



CAB

Description

Instrumentation: All important information is centrally located in the central instrument panel and operator's field of vision.

Adjustable steering column, high back seat and A/C with all-around air outlets.

SOUND & ENVIRONMENT

Sound Level in Cab
According to ISO 6396-2008 81 dB(A)

External Sound Level
According to ISO 6394-2008 111 dB(A)

Heating Capacity 5 kW

Air Conditioning 4.6 kW

BLADE RANGE

Blade Width 610 mm

Blade Length 3,960 mm

Maximum Lift Above Ground 600 mm

Maximum Depth of Cut 680 mm

Blade Tilt Angle 90°

Circle Rotation 360°

Cutting Angle 28°-74°

Blade Ground Pressure $\geq 7,300$ kg

DIMENSIONS

A Length – Between Tandem Axles 1,538 mm

B Length – Front Axle to Mid Tandem 6,230 mm

C Length – Counterweight to Rear of Machine 9,090 mm

D Length – Counterweight to Ripper 10,280 mm

E Length – Dozer to Rear of Machine 10,080 mm

F Length – Dozer to Ripper 11,270 mm

G Width – Blade 3,960 mm

H Width – Outside Tires 2,600 mm

I Width – Tire Center Lines 2,150 mm

J Height – Top of Cab 3,380 mm

ATTACHMENTS

Dozer option 1 option 2

Width 2,740 mm 2,500 mm

Depth Below Ground 215 mm 215 mm

Lift Above Ground 850 mm 850 mm

Weight 1,051 kg 1,012 kg

Ripper

Width 2,200 mm

Ripping Depth – Maximum 445 mm

Lifting Height 716 mm

Ripper Shank Holders, Quantity 5

Weight 1,147 kg

Scarifier

Working Width 1,655 mm

Scarifying Depth – Maximum 165 mm

Lifting Height 221 mm

Scarifier Shank Holders, Quantity 11

Weight 849 kg

Counterweight

Front 400 kg

Rear 660 kg

STANDARD EQUIPMENT

ENGINE

- Air filter dust valve
- Cummins 6BTAA5.9-C180 Engine, EPA Tier 2/EU Stage II Engine, rated power 132 kW (177 hp / 180 ps), air- to-air intercooled, 6 cylinders, 4 stroke
- High pressure common rail, electronically controlled injection
- Pre-filter with water separator
- Fuel filter
- Electrical stopping engine
- Engine intake preheating
- Foot throttle
- Hand pump
- Fuel-tank fill strainer
- Fuel-tank set washport
- Engine oil filter
- Dipstick
- Fuel-tank with respiratory function
- Fuel-tank drain port
- Fuel moisture alarm
- Intake resistance indicator
- Air filter dust valve

TRANSMISSION

- ZF 6WG158 automatic power shift transmission
- F6/R3
- Transmission oil level sight gauge
- Transmission oil filler

AXLE

- Front axle - LiuGong
- Oscillating front axle
- Front axle tilt
- Front axle steering
- Front axle locking device
- Rear axle - Meritor dry axle with limited slip differentials
- Drum service brake system
- Tandem oscillation
- Tandem chain drive

HYDRAULIC SYSTEM

- Two gear pumps with fix displacement hydraulic system
- Lift cylinder with hydraulic lock
- Articulated steering with hydraulic lock
- Hydraulic oil tank with filter
- Hydraulic oil tank with visual level gauge
- Hydraulic oil tank breathing port
- Hydraulic oil tank with oil return filter
- Swing arm hydraulic latch

STEERING SYSTEM

- Load sensing system with steering in priority

TIRE & RIM

- 17.5 – 25 PR12 bias tire

WORK DEVICE

- A-shape drawbar structure
- Large sectional boxed frame
- Circle bearing
- Worm gearbox

ELECTRIC SYSTEM

- Headlights on top of cab, 2 front, 2 rear
- Two headlights
- Two front combination lights
- Two rear combination lights
- Four lights on front frame
- Batteries, free of maintenance
- Cigarette lighter, 24 V power outlet
- Electric horn
- Front windshield wiper
- Back-up alarm
- Radio/player with USB port

BRAKE SYSTEM

- Emergency brake
- Hydraulic brake system
- Single circuit brake

INDICATOR GROUP

- Intake air filter alert
- Battery charging
- Parking brake applied
- Power cut-off
- Turning lights
- Transmission oil pressure alarm
- Beam of front light
- Intake heating indication
- Headlight high beam indicator
- Low engine oil pressure
- Engine coolant temperature
- Transmission oil temperature
- Fuel level
- Hour meter
- Voltage
- Service brake low pressure alarm protection
- Parking brake low pressure alarm protection
- Travelling speed

CAB

- 2-way adjustable steering column
- Air conditioner
- Coat hook
- Document pocket
- ROPS & FOPS
- Front sunshade
- Mechanical suspension seat with 2 inch seat belt
- One interior & dual exterior rear-view mirrors
- Rubber cab mounts

COOLING SYSTEM

- Aluminum radiator with grille
- Coolant level sight gauge
- Direct drive fan

OPTIONAL EQUIPMENT

ENGINE

- Engine coolant heating
- Oil bath air filter
- Silencer heat shield

CAB

- Rear windshield wiper
- Fire extinguisher
- Rear-view camera display
- Rotating beacon
- Rear glass washer
- Cab activity window
- Cab fan
- Driving shed (awning)
- Rear glass electric defrosting

CANOPY

- Fire extinguisher
- Rotating beacon

HYDRAULIC SYSTEM

- Blade floating function
- Blade lifting buffer
- Variable hydraulic system

BRAKE SYSTEM

- Brake double circuits

ELECTRIC SYSTEM

- Arrow light
- LED
- License plate light
- Strip warning light

STEERING SYSTEM

- Emergency steering

ATTACHMENTS

- Blades
 - 3,660 mm x 550 mm x 19 mm
 - 3,660 mm x 585 mm x 25 mm
 - 3,660 mm x 610 mm x 19 mm
 - 3,660 mm x 635 mm x 25 mm
 - 3,960 mm x 635 mm x 25 mm
- Dozer (2,740 mm)
- Dozer (2,500 mm)
- Ripper
- Scarifier
- Side snow removal device

COOLING SYSTEM

- Hydraulic motor driving fan
- Intelligent system fan speed control thermostat
- Manual multi-speed fan system
- Reversible fan system

TIRE & RIM

- Front fender
- Rear fender
- Snow chain
- Tire protection chain

REAR AXLE

- Wet axle

OTHERS

- Ultrasonic leveling system
- Laser leveling system
- Liugong Telematics
- Centralized lubrication
- Friction plate gearbox





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