## LIUGONG



Engine **Net Power** 

**Operating Weight Bucket Capacity** 

Cummins HM8.3 186 kW (249 hp / 253 ps) @ 1,900 rpm 31,800-32,900 kg 1.4-1.6 m<sup>3</sup>

936E

Cummins 6LTAA8.9-C325 233 kW (312 hp / 317 ps) @ 2,000 rpm 37,000 kg 1.6 – 1.9 m<sup>3</sup>

## 933E/936E EXCAVATOR

TOUGH WORLD. TOUGH EQUIPMENT.

# **TOUGH WORLD. TOUGH EQUIPMENT.**

You don't need to be told it's a tough world. It's your reality, you live it every day and vou know how hard it can be on your people and your machines. It's getting tougher to make your business pay too, with rising costs, increasing legislation and greater competition. We understand and we've put that understanding into action with our new 933E/936E.

## 933E/936E. NO TOUGH COMPROMISES, JUST **EVERYTHING YOU NEED AND NOTHING YOU DON'T**

The construction equipment industry has seen an expensive trend towards over-engineered products. Some manufacturers genuinely believe that adding cost, adds perceived value in customers' eyes.

## **BUT YOU TOLD US A DIFFERENT STORY**

You asked for a tough, well-engineered excavator, which can do the job. Any job.

## YOU WANTED A LARGE-SIZED EXCAVATOR THAT DELIVERS ON 3 ESSENTIAL NEEDS:



**FIT FOR PURPOSE** 



**UPTIME AND SUPPORT** 



**TOTAL COST OF OWNERSHIP** 



With the 933E/936E, we've met your challenge and given you everything you want - without compromise.



## **TOUGH QUALITY STANDARDS**

When it comes to quality, we let our actions to speak for themselves.

We are following a rigorous Six Sigma methodology and consistently achieve ISO 9001 standards.

## **TOUGH RESEARCH** AND TESTING

Finding tougher, smarter, safer and more cost-effective ways of working matters to you. It matters to us too. Our new Global Research & Development Centre in Liuzhou China, is a great example of this customer focused approach. We've established an international team of industry experts, backed up with the latest world-class technology, all focused on delivering greater value to you.



## **TOUGH PARTNERS**

LiuGong has teamed up with some of the industry's best known names. Here's just a few of our valued joint venture partners;

- German drivetrain components manufacturer ZF Friedrichshafen AG
- Finnish mining and aggregates processing equipment manufacturer Metso
- North American diesel engine manufacturer Cummins

## **TOUGH TALK?** Judge for yourself. <sup>3</sup>

# **FIT FOR** PURPOSE

Firstly, you need to know that your machine is up to the job; breaking, digging, lifting, working hard anytime - anywhere. Excavators have got to be tough and they've got to perform.

## **OUR NEW 933E/936E** HIGH PERFORMANCE FROM THE GROUND UP

## **TOUGHER UNDERCARRIAGE**

With X-shaped frame built from high strength tensile steel, the 933E/936E's undercarriage is designed to withstand the toughest conditions. Continuous digging, lifting and loading can put excessive stress on machines. The 933E/936E has a long track beam and crawler system that guarantees greater stability. The structure also helps protect key components such as the travel motor from undue stress

## **TOUGHER COMPONENTS**

The undercarriage components are tougher too. Heavy duty rollers, reinforced idler frame and optional full track guard guarantee the integrity of our undercarriage. It's this core strength that enables our customers to keep working and earning - around the clock.

## **TOUGHER UPPER STRUCTURE**

The upper structure of the 933E/936E is built around a reinforced and well-engineered H-beam, allowing the boom to be mounted exactly in the center of the machine. This central positioning helps the boom cope with more stress on the attachment group. It also means better distribution of weight and tension along the entire machine.

## SAFER CAB

Our cabs are designed to protect your most important asset. Your operator. ROPS (Roll Over Protection System) and FOPS (Falling Object Protection System) safeguard your most important asset: your operator in the toughest environment. Visibility is key to protecting your operator and workers on site. The large glass surface area, increased by 15% on the E-series cab compared with our previous model, combined with the rear-view camera, provides an extraordinary view of the 933E/936E's surroundings.

### **TOUGHER BOOM AND ARM**

The 933E/936E features a tougher, reinforced heavy duty boom and arm built from high-strength tensile steel, with castings and forgings in high stress areas for heavy-duty performance and maximum uptime.

We also use over-sized pins to allow the 933E/936E, not just to work harder, but to work harder for longer. Our confidence in our machines is underlined by one of the most comprehensive warranties in the industry.

## SIMPLY MULTIFUNCTIONAL

Switching attachments like buckets, breakers and shears can be time consuming and hazardous. We've made it fast, safe and simple with LiuGong's guick coupler and powerlatch tilt coupler. These are perfectly matched to a range of genuine LiuGong attachments including; buckets and breakers which can be changed from the seat of the cab in less than a minute, quick, safe and easy.



Powe

0

LIUGONG

## SIMPLER TO DO THE JOB RIGHT

Six selectable work modes equip even the newest operator with the skills of an expert, allowing them to perfectly match machine performance with the job, whatever that job may be.





Attachmen

## **JOBSITE FACT: ANYTIME**



6000 hours registered and still working hard. Tapegyseg Co. Hungary

"We use our LiuGong excavator for breaking down large stone and concrete sections. In two years we have not had a problem and our machines are working 10-11 hours a day, six days a week."

## **JOBSITE FACT: ANYWHERE!**



Temperatures drop but the work rate stavs high.

LiuGong Excavators played a key part in supporting China's Polar Exploration team. Extreme temperatures, high altitudes. strong winds and intense ultraviolet light made the Antarctic an extremely tough test environment.

## **TOUGH JUDGES**

-49°C

Operators are tough judges. They know what they like and what they don't. We've talked, we've listened and we've delivered a no-nonsense excavator that will do everything the operator wants and needs it to do. Job done? Judge for yourself.



## **FASTER CYCLE TIMES**

Greater hydraulic flow and higher swing speeds combine to improve cycle times by 12% on tasks such as truck loading, digging, trenching and backfilling compared with our previous model.





**TOUGH EQUIPMENT 100,000** Excavators currently in the field. Over 1/2 BILLION productive hours worked.

# **POWER TO GET THE TOUGHEST JOBS DONE RIGHT**

Fit for purpose is about giving your operators efficient and intelligent power when they need it, with control and precision. That's what we do.

## **POWER WITHOUT COMPROMISE.**

The 933E/936E is powered by the latest Cummins 6C-8.3 engine with a rated net power of 152 kW (207 hp) / 174 kW (236 hp) @ 1,900 rpm in compliance with EU Stage II emission standards.

The compact 6C-8.3 delivers unmatched and dependable power in its class yet it produces virtually zero emissions.

The engine utilizes turbo charger and air-to-air intercooler along with electronic engine controls to optimize machine performance. It's powerful. It's responsive. It tackles the toughest jobs without being thirsty for fuel, but above all, it's a joy to operate.



## **INTELLIGENT POWER CONTROL**

The 933E/936E's advanced Intelligent Power Control (IPC) system intelligently delivers the power you need – when you need it.

This new generation computer-aided IPC system allows the 933E/936E's mechanical, electrical and hydraulic systems to work together in perfect harmony and helps even novice operators get more from the machine. An improved pump system delivers efficient oil output under lower engine speeds, resulting in fuel efficiency and reduced noise levels.

## **ADVANCED HYDRAULIC SYSTEM**

LiuGong's advanced hydraulic system, regenerates oil in the cylinders more efficiently reducing heat, increasing fuel efficiency and improving cycle times.

The hydraulic system is highly effective in delivering power and precise control to where the operator really needs it, making even the toughest job simple.



## **SMART FUEL ECONOMY**

The intelligent combination of powerful digging force, swing torque and lifting performance make the most of every drop of fuel. The 945E/950E maximizes fuel economy by intelligently regulating its idle speed by the second.



**1 second:** If no hydraulic request signal detected from the joystick, the engine speed is automatically dropped by 100 rpm.



**3 seconds:** If no activity is detected over three

seconds the engine speed will decrease to idle. In each case, as soon as the system detects the hydraulic signal once more, the engine will immediately return to the previous throttle speed setting.

# DAILY CHECKS AND MAINTENANCE SHOULDN'T BE TOUGH

LiuGong excavators have been **specifically designed** for easy service and maintenance in even the most remote and harsh environments. If servicing is easy, it gets done.

## PRACTICAL SERVICING

Smart and effective design makes service and maintenance fast and simple – that's good news for operators who work in some of the toughest places on the planet. Handrails are fitted as standard, enabling safe and easy access to the upper structure for easy engine service and maintenance.

## **ON BOARD MONITORING**

With onboard monitoring, the operator can check the machine's vital signs without leaving his seat. Using the LCD display, the operator can easily check oil temperatures and pressure levels, receive service interval alerts and access other information that contributes to simple maintenance and servicing of the machine.







## EASILY ACCESSIBLE SERVICE POINTS MAKE DAILY CHECKS FAST AND EFFECTIVE

- Easily visible hydraulic oil level gauge
- Accessible, grouped filters
- Easy to replace A/C filter next to the cab door
- Maintenance free air filter

# DESIGNED TO MAKE TOUGH WORK EASY ON THE OPERATOR

Climb into the cab of the 933E/936E and you can see that it has been designed by someone who has operated a machine in really tough conditions.

For a start, it's safe and easy to get in and out of.

Trips and slips account for the majority of accidents onsite. Well-placed door handles, safety rails and anti-slip tape on the upper part of the machine make it easier and safer for operators to enter and exit the cab in all weathers and conditions.

Inside, the cab is secure and protected with space to work and excellent 360 degree views of the site.

The controls are where the operator needs them to be. They are easy to see, easy to reach and easy to handle.

The multi-adjustable air-suspension seats are comfortable and designed to keep the operator fresh and alert.

The cab is sound proofed, vibration protected and well ventilated. It has advanced climate control to handle the changing seasons and is completely sealed to prevent dust contamination.



## **WE PUT OPERATORS FIRST**

It makes good business sense to give operators the very best working environment – a comfortable operator is a productive operator. The 933E/936E keeps operators safer, more alert and more productive.

Smart additions such as; rear view camera, heated seats, refrigerator or personal belonging compartment and an iPod/AUX connection combine to create the best environment– for the best operators.







## ADVANCED CLIMATE CONTROL

An advanced climate control system creates the right environment in any weather.

## LARGE LCD MONITOR

The easy-to-read, full-color LCD monitor displays all the critical information your operator needs, including working mode, hydraulic oil temperature, hydraulic pressure and service intervals.



Fit for purpose might convince you to buy your first machine, but it's uptime and support and total cost of ownership which will keep you coming back to buy more machines. Having confidence in the machine's back up and support network is a vital part of the purchasing decision. How do we at LiuGong measure up?

## FAST RESPONDING GLOBAL NETWORK

We have an extensive dealer network of over 300 dealers in more than 100 countries.

All supported by 13 regional subsidiaries and 12 regional parts depots offering expert training, parts and service support.



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



## WHERE YOU NEED US WHEN YOU NEED US

Reliability is built into our machines but all machines have some planned downtime. Our aim is to reduce even planned down time to the minimum by getting it right. Technician training and parts availability are also high on our agenda, as is keeping you

informed on service and maintenance work and providing clear and accurate estimates, invoices and communication.

These may be small things, but customer feedback tells us that these basics really matter - so we aim to get them right.





## LIUGONG SERVICE PROMISE





ng the latest diagnosti

parts available within 24hrs from our European Parts **Distribution Center** 

and online support



## **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 vou choose vou can be confident that it is backed up by LiuGong's service promise.

## Above all. we get it right the first time.





and invoicing



electronic parts catalogue

# TOTAL COST OF OWNERSHIP

Fit for purpose and uptime and support are two key excavator purchasing criteria but ultimately, the machines 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. As part of this, LiuGong's experts will provide targeted advice on everything, from choosing the right machine for your needs to maximizing its efficiency on site.

## **MACHINE AVAILABILITY**

Our machines deliver everything you need and nothing you don't. They are expertly engineered NOT over engineered. As a result of having an extensive manufacturing operation right in the heart of Europe, we can 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. Our aim is to get you on to the jobsite fast.

## **TICKET PRICE**

At LiuGong, our aim is to provide you with real, measurable value by giving you everything you need and nothing you don't. For example, we choose high quality, proven components such as Cummins engines and Kawasaki hydraulic pumps. These proven components, combined with LiuGong design and manufacturing quality, result in a high quality, competitive machine that is totally fit for purpose.

## **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 the 933E/936E we've risen to the challenge and given you everything you need and nothing you don't.

It's an excavator which can handle any job, anywhere, backed up by LiuGong's service promise and designed to perform on the jobsite and on the balance sheet. Add up the benefits and you'll see that 933E/936E represents the formula for success.





## FIT FOR PURPOSE + UPTIME AND SUPPORT + TOTAL COST OF OWNERSHIP

**CUSTOMER SATISFACTION** 

# **SPECIFICATIONS**



#### 933E 31,800-32,900 kg OPERATING WEIGHT 936E 37,000 kg

### SWING SYSTEM Description

Operating weight includes coolant, lubricants, full fuel tank, cab, standard shoes, boom, arm, bucket and operator 75 kg.

BUCKET CAPACITY	933E 1.4 - 1.6 m³ 936E 1.6 - 1.9 m³
ENGINE	

#### Cummins EPA Tier 2 / EU Stage II, inline 6-cylinder, turbocharged, mechanically controlled direct injection. Air cleaner: Cummins direct flow air filter. Cooling system: Charge air cooling. EPA Tier 2 / Emission rating EU Stage II Engine manufacturer Cummins 933E 6C-8.3 Engine model 936E 6LTAA8.9-C325 Wastegate Turbo Aspiration (WGT) Charged air cooling After cooler Cooling fan drive Direct 933E 8.3 L Displacement 936E 8.9 L 933E 186 kW (249 hp / 253 ps) @ 1,900 Engine output - net rpm (SAE J1349 / ISO 9249) **936E** 233 kW (312 hp / 317 ps) @ 2,000 rpm 933E 194 kW (260 hp / 264 ps) @ 2,200 Engine output - gross rpm (SAE J1995 / ISO 14396) **936E** 241 kW (323 hp / 328 ps) @ 2,000 rpm 933E 1,150 N·m @ 1,300 rpm Maximum torque 936E 1.400 N·m @ 1,400 rpm **933E** 114 × 135 mm Bore × Stroke **936E** 114 × 145 mm

torque axial piston brake. Swing parkir	iction driven by high motor, with oil disk ng brake resets within five g pilot controls return to
Swing speed	933E 10.3 rpm 936E 10.0 rpm
Swing torque	933E 105,000 N·m 936E 111,000 N·m

## HYDRAULIC SYSTEM

Main pump						
Туре	Two variable displacement piston pumps					
Maximum flow	933E 2 x 266 L/min 936E 2 × 300 L/min					
Pilot pump						
Туре	Gear pump					
Maximum flow	933E 19 L/min					
	936E 28.5 L/min					
Relief valve settin	g					
Implement	34.3 MPa					
Travel circuit	34.3 MPa					
Slew circuit	26.2 MPa					
Pilot circuit	3.9 MPa					
Hydraulic cylinder	S					
Boom Cylinder – Bore × Stroke	<b>933E</b> Φ140 × 1,342 mm <b>936E</b> Φ140 × 1,505 mm					
Arm Cylinder – Bore × Stroke	<b>933E</b> Φ150 × 1,755 mm <b>936E</b> Φ170 × 1,785 mm					
Bucket Cylinder – Bore × Stroke	<b>933E</b> Φ140 × 1,135 mm <b>936E</b> Φ145 × 1,220 mm					

UNDERCARRIAGE	
Track shoe each side	4
Link pitch	2
Shoe width, triple grouser	6
Bottom rollers each side	9
Top rollers each side	2



ELECTRIC SYSTEM	
System Voltage	24 V
Batteries	2 x 12 V
Alternator	24 V - 70 A
Start motor	24 V - 7.8 kW
SERVICE CAPACITIES	
Fuel tank	933E 520 L 936E 620 L
Engine oil	933E 26.5 L 936E 27.3 L
Final drive (each)	9.5 L
Swing drive	10.5 L
Cooling system	35 L
Hydraulic reservoir	<b>933E</b> 195 L <b>936E</b> 240 L
Hydraulic system total	<b>933E</b> 360 L <b>936E</b> 450 L

SOUND PERFORMANCE	
Interior Sound Power	<b>933E</b> 75 dB(A)
Level (ISO 6396)	<b>936E</b> 76 dB(A)
Exterior Sound Power	<b>933E</b> 107 dB(A)
Level (ISO 6395)	<b>936E</b> 106 dB(A)

### DRIVE AND BRAKES

#### Description

2-speed axial piston motors with oil disk brakes. Steering controlled by two hand levers with pedals.

Max. travel speed	High: 5.5 km/h 933E Low: 3.0 km/h 936E Low: 3.4 km/h
Gradeability	35°/70%
Max. drawbar pull	933E 300 kN 936E 320 kN

216 mm

600/700/800/900 mm



DIMENSIONS							
	933E						
Boom	6,200	mm		6,400 mm		10,350 mm	
Arm Options	3,050 mm	2,600 mm	3,200 mm	2,600 mm	2,900 mm	7,800 mm	
A Shipping Length	10,650	) mm	11,167 mm	11,350 mm	11,350 mm	15,180 mm	
B Shipping Height – Top of Boom	3,525 mm	3,645 mm	3,530 mm	3,800 mm 3,800 mm		3,730 mm	
C Track Gauge	2,590	mm		2,590 mm	2,590 mm		
D Undercarriage Width – with 600 mm Shoes	3,190	mm	3,190 mm			-	
700 mm Shoes	3,290 mm		3,290 mm				
800 mm Shoes	3,390 mm		3,390 mm			3,390 mm	
900 mm Shoes	3,490 mm		3,490 mm			-	
E Length to Center of Rollers	4,050 mm		4,050 mm			4,050 mm	
F Track Length	4,980 mm		4,944 mm			4,944 mm	
G Overall Width of Upper Structure	3,163 mm (including protective side beam)		3,163 mm (including protective side beam)			3,163 mm (including protective side beam)	
H Tail Swing Radius	3,300	mm	3,550 mm			3,610 mm	
I Counterweight Ground Clearance	1,215	mm	1,172 mm			1,172 mm	
J Overall Height of Cab	3,175 mm (with protective equipment)		3,175 mm (with protective equipment)			3,175 mm (with protective equipment	
K Min. Ground Clearance	500	mm	532 mm			532 mm	
L Track Shoe Width	600	mm		600 mm		80 mm	

BOOM DIMENSIONS				ARM DIMENSIONS						
933E 936E					933E			936E		
Boom	6,200 mm	6,400 mm	10,350 mm	Arm	3,050 mm	2,600 mm	3,200 mm	2,600 mm	2,900 mm	7,800 mm
Length	6,420 mm	6,692 mm	10,590 mm	Length	4,222 mm	3,800 mm	4,376 mm	3,873 mm	3,873 mm	9,055 mm
Height	1,788 mm	1,980 mm	1,732 mm	Height	1,046 mm	1,052 mm	1,055 mm	1,155 mm	1,155 mm	1,151 mm
Width	942 mm	813 mm	813 mm	Width	542 mm	542 mm	652 mm	655 mm	655 mm	413.5 mm
Weight	2,740 kg	3,250 kg	3,460 kg	Weight	1,700 kg	1,650 kg	1,880 kg	1,730 kg	1,730 kg	1,944 kg
Cylinder, piping and pir Boom cylinder pin excl				Cylinder, I	inkage and pin	included.				

### **BUCKET SELECTION - 933E**

					6,200 m	m boom
Bucket type	Capacity	Cutting width	Weight	Teeth pcs	3,050 mm arm	2,600 mm arm
Light Duty Digging Bucket	1.6 m <sup>3</sup>	1,605 mm	1,417 kg	5	A,B	NA
General Purpose	1.6 m <sup>3</sup>	1,560 mm	1,488 kg	5	С	В

The recommendations are given as a guide only, based on typical operation conditions. Bucket capacity based on ISO 7451, heaped material with a 1:1 angle of repose.

Maximum material density: A 1,000 - 1,200 kg/m<sup>3</sup> : Sand and sandy loam, Humus, Planting soil, Stony loam B 1,200 - 1,500 kg/m<sup>3</sup> : Building soil, Cemented backfill, Ice clay, Natural small gravel A,B 1,000-1,500 kg/m<sup>3</sup> : Refer to A&B description C 1,600 - 2,000 kg/m<sup>3</sup> : Building soil, Cemented backfill, Ice clay D 2,000 - 2,200 kg/m<sup>3</sup> : Gravel, Pebbles E 2,200 - 2,500 kg/m<sup>3</sup> : Coal seam, Shale

BUCKET SELECTION - 936E											
Canaaitu	Cutting width	W/aiabt	Taath pag		6,400 mm boom	1	10,350 mm boom				
Bucket type Capacity	Cutting width	weight	reem pcs	3,200 mm arm	2,600 mm arm	2,900 mm arm	7,800 mm arm				
1.6 m <sup>3</sup>	1,540 mm	1,583 kg	5	С	NA	С	NA				
1.9 m <sup>3</sup>	1,540 mm	1,696 kg	5	NA	С	NA	NA				
0.5 m³	870 mm	440 kg	4	NA	NA	NA	А				
	Capacity 1.6 m <sup>3</sup> 1.9 m <sup>3</sup>	CapacityCutting width1.6 m³1,540 mm1.9 m³1,540 mm	Capacity Cutting width Weight   1.6 m³ 1,540 mm 1,583 kg   1.9 m³ 1,540 mm 1,696 kg	Capacity Cutting width Weight Teeth pcs   1.6 m³ 1,540 mm 1,583 kg 5   1.9 m³ 1,540 mm 1,696 kg 5	Capacity Cutting width Weight Teeth pcs 3,200 mm arm   1.6 m³ 1,540 mm 1,583 kg 5 C   1.9 m³ 1,540 mm 1,696 kg 5 NA	Capacity Cutting width Weight Teeth pcs 6,400 mm boom   3,200 mm arm 2,600 mm arm   1.6 m³ 1,540 mm 1,583 kg 5 C NA   1.9 m³ 1,540 mm 1,696 kg 5 NA C	Capacity Cutting width Weight Teeth pcs 6,400 mm boom   3,200 mm arm 2,600 mm arm 2,900 mm arm   1.6 m³ 1,540 mm 1,583 kg 5 C NA C   1.9 m³ 1,540 mm 1,696 kg 5 NA C NA				

Maximum material density: A 1,000 - 1,200 kg/m<sup>3</sup>: Sand and sandy loam, Humus, Planting soil, Stony loam B 1,200 - 1,500 kg/m<sup>3</sup>: Building soil, Cemented backfill, Ice clay, Natural small gravel A,B 1,000-1,500 kg/m<sup>3</sup>: Refer to A&B description C 1,600 - 2,000 kg/m<sup>3</sup>: Building soil, Cemented backfill, Ice clay D 2,000 - 2,200 kg/m<sup>3</sup>: Gravel, Pebbles E 2,200 - 2,500 kg/m<sup>3</sup>: Coal seam, Shale

MACHINE WEIGHT	IS AND GROUND PRESSURE	- 933E				
Shoe width	Operating weight	Ground pressure	Overall width	Operating weight	Ground pressure	Overall width
Shoe width	6.2 m boom, 3.05 m	arm, 1.6 m³ bucket, 5,50	00 kg counterweight	6.2 m boom, 2.6 m a	ırm, 1.6 m³, bucket, 5,50	0 kg counterweight
600 mm	31,800 kg	60 kPa	3,190 mm	31,850 kg	60 kPa	3,190 mm
700 mm	32,100 kg	51.5 kPa	3,290 mm	32,150 kg	51.6 kPa	3,290 mm
800 mm	32,500 kg	45.6 kPa	3,390 mm	32,550 kg	45.7 kPa	3,390 mm
900 mm	32,900 kg	41 kPa	3,490 mm	32,950 kg	41.1 kPa	3,490 mm

MACHINE WEI	GHTS AND GROUI	ND PRESSURE ·	936E						
Shoe width	Operating weight	Ground pressure	Overall width	Operating weight	Ground pressure	Overall width	Operating weight	Ground pressure	Overall width
Shoe width		n, 3.2 m arm, 1. 10 kg counterw			n, 2.6 m arm, 1. 10 kg counterw	,		m, 7.8 m arm, 0 0 kg counterw	0.5 m <sup>3</sup> bucket, reight
600 mm	35,000 kg	65.3 kPa	3,190 mm	35,000 kg	65.3 kPa	3,190 mm	38,200 kg	69 kPa	3,190 mm
700 mm	35,200 kg	56.3 kPa	3,290 mm	35,200 kg	56.3 kPa	3,290 mm	38,400 kg	59.7 kPa	3,290 mm
800 mm	35,400 kg	49.5 kPa	3,390 mm	35,400 kg	49.5 kPa	3,390 mm	38,603 kg	52.7 kPa	3,390 mm
900 mm	35,585 kg	44.2 kPa	3,490 mm	35,585 kg	44.2 kPa	3,490 mm	38,785 kg	47.2 kPa	3,490 mm



The recommendations are given as a guide only, based on typical operation conditions. Bucket capacity based on ISO 7451, heaped material with a 1:1 angle of repose.



#### WORKING RANGE

		93	3E		9	36E	
Boom Length		6,200	) mm		6,400 mm		10,350 mm
Arm Length		3,050 mm	2,600 mm	3,200 mm	2,600 mm	2,900 mm	7,850 mm
A. Max. Digging Reach		10,653 mm	10,250 mm	11,100 mm	10,560 mm	10,728 mm	18,726 mm
B. Max. Digging Reach on Ground		10,453 mm	10,032 mm	10,900 mm	10,350 mm	10,527 mm	18,606 mm
C. Max. Digging Depth		7,300 mm	6,825 mm	7,340 mm	6,730 mm	6,890 mm	14,590 mm
D. Max. Digging Depth, 2.44 m (8') level		7,096 mm	6,590 mm	7,180 mm	6,530 mm	6,710 mm	14,480 mm
E. Max. Vertical Wall Digging Depth		6,216 mm	5,460 mm	6,460 mm	4,430 mm	5,085 mm	11,215 mm
F. Max. Cutting Height		10,300 mm	10,007 mm	10,240 mm	9,830 mm	9,818 mm	14,150 mm
G. Max. Dumping Height		7,265 mm	7,086 mm	7,160 mm	6,900 mm	6,655 mm	11,745 mm
H. Min. Front Swing Radius		4,040 mm	4,040 mm	4,465 mm	4,700 mm	4,385 mm	4,465 mm
Rughat Digging Fares (ISO)	Normal	187 kN	187 kN	232 kN	232 kN	232 kN	/
Bucket Digging Force (ISO)	Power Boost	203 kN	203 kN	252 kN	252 kN	252 kN	71 kN
Arm Dissing Force (ISO)	Normal	137 kN	152 kN	170 kN	210 kN	210 kN	/
Arm Digging Force (ISO)	Power Boost	149 kN	165 kN	185 kN	228 kN	228 kN	90 kN
Bucket Capacity		1.4 m <sup>3</sup>	1.6 m <sup>3</sup>	1.6 m <sup>3</sup>	1.9 m <sup>3</sup>	1.9 m <sup>3</sup>	0.5 m <sup>3</sup>
Bucket Tip Radius		1,606 mm	1,606 mm	1,687 mm	1,687 mm	1,687 mm	1,372 mm

Lifting capacity at the arm end without bucket. For lifting capacity including bucket, weight of the bucket or the bucket with quick coupler must be deducted from the lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface.

- Do not attempt to lift or hold any load that is greater than these rated values at their specified load radius and height. Weight of all accessories must be deducted from the above lifting capacities. 2. The rated loads are in compliance with ISO
- 10567 Hydraulic Excavator Lift Capacity Rating Standard. They do not exceed 87% of hydraulic lifting capacity or 75% tipping load. 3. Ratings at bucket lift hook.

GP-÷ტ Rating over - front (Cf) Rating over - side (Cs)

### LIFTING CAPACITY (METRIC)

933E with 600 mm shoes, 3,050 mm arm

# A: Load radius B: Load point height C: Lifting capacity rating Cf: Rating loads over front Cs: Rating loads over side

						A (Unit: r	n)						
<b>D</b> ()	3.0		4.5		6.0		7.	.5	9.	.0	MAX REACH		н
B (m)	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	A (m)
7.5											*6,270	*6,270	7.2
6.0					*6,360	*6,360	*6,220	*6,220			*6,290	6,180	8.1
4.5			*8,750	*8,750	*7,300	*7,300	*6,610	*6,610			*6,420	5,510	8.7
3.0			*11,350	*11,350	*8,530	*8,530	*7,230	6,650	*6,610	5,170	*6,610	5,170	9.0
1.5			*13,410	12,720	*9,670	8,660	*7,860	6,480	*6,860	5,100	*6,860	5,100	9.0
GROUND LEVEL			*14,310	12,450	*10,420	8,460	*8,310	6,360			*7,130	5,210	8.8
- 1.5	*20,490	*20,490	*14,270	12,420	*10,630	8,390	*8,400	6,320			*7,460	5,600	8.3
- 3.0	*18,760	*18,760	*13,430	12,550	*10,150	8,450	*7,750	6,410			*7,750	6,410	7.5
- 4.5	*15,670	*15,670	*11,470	*11,470	*8,420	*8,420					*8,000	*8,000	6.2

933E with 700	mm shoes	s, 3,050 m	nm arm			Conditio	ons				123	A	2
A: Load radius B: Load point heig C: Lifting capacity Cf: Rating loads o Cs: Rating loads o	v rating ver front					Arm lengt	gth: 6,200 m n: 3,050 mm one 0 mm triple	ו			G		5
						A (Unit: r	n)						
P (m)	3	.0	4	.5	6	.0	7	.5	9	.0	M	AX REAC	н
B (m)	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	A (m)
7.5											*6,270	*6,270	7.2
6.0					*6,360	*6,360	*6,220	*6,220			*6,290	6,270	8.1
4.5			*8,750	*8,750	*7,300	*7,300	*6,610	*6,610			*6,420	5,580	8.7
3.0			*11,350	*11,350	*8,530	*8,530	*7,230	6,740	*6,610	5,250	*6,610	5,250	9.0
1.5			*13,410	12,890	*9,670	8,780	*7,860	6,570	*6,860	5,170	*6,860	5,180	9.0
GROUND LEVEL			*14,310	12,630	*10,420	8,580	*8,310	6,450			*7,130	5,280	8.8
- 1.5	*20,490	*20,490	*14,270	12,600	*10,630	8,510	*8,400	6,410			*7,460	5,680	8.3
- 3.0	*18,760	*18,760	*13,430	12,720	*10,150	8,570	*7,750	6,500			*7,750	6,500	7.5
- 4.5	*15,670	*15,670	*11,470	*11,470	*8,420	*8,420					*8,000	*8,000	6.2



- 4. Lifting capacities are based on machine standing on level, firm and uniform ground.
- 5. \*Indicates the load is limited by hydraulic capacity rather than tipping capacity.
- 6. Operator should be fully acquainted with the Operator's and Maintenance Instructions before operating this machine and rules for the safe operation of equipment should be adhered to at all times.

#### Conditions

Boom length: 6,200 mm Arm length: 3,050 mm Bucket: None Counterweight: 5,500 kg Shoes: 600 mm triple grouser Unit: kg





### 933E/936E EXCAVATOR

### LIFTING CAPACITY (METRIC)

#### 933E with 600 mm, 2,600 mm arm

A: Load radius B: Load point height C: Lifting capacity rating Cf: Rating loads over front Cs: Rating loads over side

Conditions Boom length: 6,200 mm Arm length: 2,600 mm Bucket: None Counterweight: 5,500 kg Shoes: 600 mm triple grouser Unit: kg



A (Unit: m)													
P. (m)	3.0		4.5		6.	0	7.	5		MAX REACH			
B (m)	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	A (m		
7.5					*6,620	*6,620			*6,760	*6,760	6.6		
6.0					*6,920	*6,920	*6,740	*6,740	*6,760	*6,760	7.6		
4.5			*9,600	*9,600	*7,820	*7,820	*7,020	6,810	*6,880	5,990	8.2		
3.0			*12,140	*12,140	*8,970	8,930	*7,570	6,640	*7,050	5,520	8.6		
1.5			*13,890	12,580	*10,000	8,630	*8,110	6,490	*7,300	5,450	8.6		
GROUND LEVEL			*14,400	12,420	*10,590	8,460	*8,460	6,390	*7,650	5,570	8.4		
- 1.5	*19,230	*19,230	*14,080	12,460	*10,610	8,430	*8,370	6,390	*7,970	6,110	7.8		
- 3.0	*17,490	*17,490	*12,960	12,640	*9,880	8,540			*8,330	7,200	6.9		
- 4.5	*14,040	*14,040	*10,530	*10,530					*8,430	*8,430	5.5		

#### 933E with 700 mm shoes, 2,600 mm arm

A: Load radius A: Load radius B: Load point height C: Lifting capacity rating Cf: Rating loads over front Cs: Rating loads over side

## Conditions Boom length: 6,200 mm Arm length: 2,600 mm Bucket: None Shoes: 700 mm triple grouser Unit: kg



					A (Unit:	m)					
<b>D</b> ()	3.0		4.5		6.	0	7.	5		MAX REACH	
B (m)	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	A (m)
7.5					*6,620	*6,620			*6,760	*6,760	6.6
6.0					*6,920	*6,920	*6,740	*6,740	*6,760	*6,760	7.6
4.5			*9,600	*9,600	*7,820	*7,820	*7,020	6,900	*6,880	6,070	8.2
3.0			*12,140	*12,140	*8,970	*8,970	*7,570	6,730	*7,050	5,600	8.6
1.5			*13,890	12,760	*10,000	8,750	*8,110	6,580	*7,300	5,520	8.6
GROUND LEVEL			*14,400	12,590	*10,590	8,580	*8,460	6,480	*7,560	5,650	8.4
- 1.5	*19,230	*19,230	*14,080	12,630	*10,610	8,550	*8,370	6,480	*7,970	6,190	7.8
- 3.0	*17,490	*17,490	*12,960	12,810	*9,880	8,660			*8,330	7,300	6.9
- 4.5	*14,040	*14,040	*10,530	10,530					*8,430	*8,430	5.5

#### LIFTING CAPACITY (METRIC)

#### 936E with 600 mm shoes, 3,200 mm arm

A: Load radius B: Load point height C: Lifting capacity rating Cf: Rating loads over front Cs: Rating loads over side

						A (Unit: r	m)						
B (m)	3.0		4.5		6.0		7.5		9.0		MAX REACH		
B (III)													A (m)
6.0							*7,900	6,654			*7,822	5,874	8.2
4.5					*9,491	8,983	*8,368	6,472			*7,889	5,153	8.8
3.0			*14,550	12,598	*10,846	8,481	*9,043	6,224	7,870	4,784	7,870	4,784	9.1
1.5			*16,691	11,757	*12,045	8,038	*9,689	5,987	7,752	4,677	7,752	4,677	9.1
GROUND LEVEL			*17,386	11,404	*12,725	7,760	9,881	5,820	7,678	4,610	7,678	4,610	9.1
- 1.5	*23,538	21,866	*16,950	11,356	*12,716	7,659	9,810	5,757			8,414	5,014	8.5
- 3.0	*20,982	*20,982	*15,528	11,501	*11,861	7,720	*9,086	5,837			*9,086	5,837	7.6
- 4.5	*16,690	*16,690	*12,745	11,843	*9,560	7,985					*8,900	7,516	6.4

### 936E with 800 mm shoes, 3,200 mm arm

# A: Load radius B: Load point height C: Lifting capacity rating Cf: Rating loads over front Cs: Rating loads over side

						A (Unit:	m)						
P (m)	3.0		4.5		6.	0	7.5		9.0		MAX REACH		н
B (m)	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	A (m)
6.0							*7,949	7,053			*7,828	6,120	8.2
4.5					*9,658	9,483	*8,469	6,853			*7,912	5,382	8.8
3.0			*14,925	13,302	*11,056	8,964	*9,178	6,593	*8,128	5,086	*8,078	5,004	9.1
1.5			*17,052	12,461	*12,273	8,514	*9,845	6,348	8,209	4,970	7,717	4,895	9.1
GROUND LEVEL			*17,697	12,120	*12,952	8,234	*10,255*	6,177	8,124	4,893	7,888	4,826	9.1
- 1.5	*23,817	*23,817	*17,231	12,079	*12,942	8,133	*10,206	6,109			8,628	5,240	8.5
- 3.0	*21,312	*21,312	*15,813	12,225	*12,110	8,191	*9,363	6,178			*9,186	6,082	7.6
- 4.5	*17,116	*17,116	*13,100	12,559	*9,940	8,440					*9,102	7,783	6.4



#### Conditions

Boom length: 6,400 mm Arm length: 3,200 mm Bucket: None Counterweight: 6,500 kg Shoes: 600 mm triple grouser Unit: kg



#### Conditions

Boom length: 6,400 mm Arm length: 3,200 mm Bucket: None Counterweight: 6,500 kg Shoes:800 mm triple grouser Unit: kg



### 933E/936E FXCAVATOR

#### LIFTING CAPACITY (METRIC)

936E with 600 mm shoes, 2,600 mm arm

A: Load radius B: Load point height C: Lifting capacity rating Cf: Rating loads over front Cs: Rating loads over side

#### Conditions Boom length: 6,400 mm Arm length: 2.600 mm Bucket: None Counterweight: 6,500 kg Shoes: 600 mm triple grouser

Unit: kg



				A (Uni	t: m)					
B (m) –	4	.5	6.	.0	7.	5	MAX REACH			
D (III) -	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	A (m)	
6.0			*9,319	*9,319	*8,627	6,724	*8,577	6,128	7.9	
4.5	*13,273	*13,273	*10,410	9,031	*9,029	6,558	*8,553	5,400	8.5	
3.0			*11,712	8,546	*9,643	6,327	8,279	5,031	8.8	
1.5			*12,739	8,161	*10,186	6,119	8,139	4,918	8.9	
GROUND LEVEL	*17,677	11,726	*13,154	7,955	10,155	5,990	8,383	5,037	8.6	
- 1.5	*16,749	11,784	*12,835	7,919	*10,096	5,975	*9,084	5,453	8.1	
- 3.0	*14,900	11,994	*11,580	8,044			*9,076	6,378	7.3	
- 4.5	*11,474	*11474					*8,535	*8,535	5.9	

#### 936E with 800 mm shoes, 2,600 mm arm

A: Load radius B: Load point height C: Lifting capacity rating Cf: Rating loads over front Cs: Rating loads over side

#### Boom length: 6,400 mm Arm length: 2,600 mm Bucket: None Counterweight: 6,500 kg Shoes: 800 mm triple grouser Unit: kg

Conditions



# **STANDARD EQUIPMENT**

#### **ENGINE SYSTEM**

- · Cummins diesel engine, turbocharged, inline 6-cylinder, 4 stroke, water cooled
- Air filter with pre-cleaner
- Pre-filter with water separator
- Auto-idle speed control
- Aspiration, Wastegate Turbo (WGT)
- IPC (Intelligent Power Control) System • Radiator, oil cooler, and charge air cooling; direct
- drive cooling fan Engine overheat prevention system
- Engine oil filter

#### DRIVETRAIN

- Hydraulic motor, one-piece two-gear piston and reducer
- 2-speed travel system with automatic shift

### SWING SYSTEM

- High-torque piston swing motor with integral spring set and automatic hydraulic release
- swing brake

#### HYDRAULIC SYSTEM

- Main pump: two variable displacement piston pumps, ready for PTO
- Pilot pump: gear
- Cylinders: boom, arm, bucket Power boost function
- Swing with anti-reverse function
- · Boom and arm regeneration circuits
- Pilot oil filter
- Pilot control shut-off lever

# **OPTIONAL EQUIPMENT**

#### **ENGINE SYSTEM**

- Electrical fuel refilling pump
- Hose burst safety valves, prevention of boom or arm supply dropped when the lines split.
- Quick coupler lines (low and high pressure)

#### **OPERATOR STATION**

- and top guard, bar)
- Roll-Over Protective System (ROPS)
- Mechanic heated suspension seat
- Air suspension seat

 6-working mode selection system: Power Mode, Economy Mode, Fine Mode, Lifting Mode, Breaker Mode, Attachment Mode

### **DIGGING EQUIPMENT**

- 933E • 6.200 mm boom
- 3.050 mm arm
- 1.4 m<sup>3</sup> (SAE, heaped) bucket
- 936E
- 6,400 mm boom
- 3.200 mm arm
- 1.6 m<sup>3</sup> (SAE, heaped) bucket

#### **OPERATOR STATION**

- Pressurized and sealed cab with all-around visibility, large roof window with slide sliding sun visor, front window wiper and removable
- lower window · Air conditioner, heater, defroster Mechanical suspension seat
- AM/FM radio with MP3 audio jack
- Glass-breaking hammer

### Cigarette lighter

- Cup holder
- Floor mat
- Storage box
- Fire extinguisher
- One key for all locks

• Bucket cylinder guard **HYDRAULIC SYSTEM** • 8,500 kg counterweight (936E) Over loading warning

#### UNDERCARRIAGE

**UPPER STRUCTURE** 

- - grousers

### **DIGGING EQUIPMENT**

- 1.6 m<sup>3</sup> (SAE, heaped) bucket
  - - 10,350 mm boom

    - 0.5/1.9 m<sup>3</sup> (SAE, heaped) bucket





#### INSTRUMENTATION

- Color LCD monitor with alarms, filter/fluid change, fuel rate, water temperature, work mode, fault code, working hour, etc.
- Fuel gauge
- Hydraulic oil level gauge

#### **ELECTRICAL**

- Alternator 70 A
- Dual batteries 12 V
- Working lights, 1 frame mounted, 2 boom mounted
- Starting, 24 V

#### UNDERCARRIAGE

- 600 mm track-shoes with triple grousers
- Rollers, bottom 9 each side, top 2 each side
- 2 piece track-quards (each side)
- Towing eye on base frame

#### **GUARDS**

- Belly guards, 2 mm
- Cover plate under travel frame

#### **OTHER STANDARD EQUIPMENT**

- 5.500 ka counterweight (933E)
- 6,500 kg counterweight (936E)
- Maintenance tool kit
- Maintenance parts package



#### **ELECTRICAL**

- LED working lights on cab, 4 front and 2 rear
- Rear view camera
- Travel alarm
- Rotating beacon

• 700 mm, 800 mm , 900 mm track-shoes with triple



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