

WALKAROUND

Operating weight **1,855 kg**
Yanmar engine **10.5 kW**
Digging force **1,640 daN**



KATO

V FIVE HD18



KATO HD18V5



The HD18V5 enriches Kato's range of mini-excavators under 2 t of operating weight. Completely new, it is a true zero-tail swing, built to last and with low running costs. Perfect for rental



1

A true zero tail swing mini-excavator, it has the most compact rear overhang in its class. When the undercarriage is widened, it carries out flush-to-wall excavations to perfection

2

The basic structure of the turret is completely cast and, together with the "vertical" ballast, forms a non-deformable shell. Low operating centre of gravity

3

Traditional hydraulic system, without any electronic control, supplied by two variable displacement pumps. High-quality, well-assembled components

4

Aux line 1 with proportional control as standard, flow rate can be set on two levels and the possibility of blocking the flow to work with equipment

5

Very efficient Stage V engine, without electronic control, well tested in earthmoving applications. High torque available at low rpm

6

Large operator seat. You work without feeling constrained, with well-gripping joysticks, good foot room and a cushioned seat with a high backrest

7

Undercarriage extendable from 990 to 1,300 mm, made with cylindrical extensions. A refined solution that increases reliability over time: the extensions do not retain soil or stones

8

The HD18V5's long arm set-up includes the additional (simply removable) 100 kg ballast. Once mounted, the rear overhang increases by 70 mm

9

In addition to the standard 985 mm long forearm, the new Kato HD18V5 mini excavator is also available with a 1,235 mm long indenter

10

New generation machine, Stage V, but mechanically simple and with reduced total management costs. Easily accessible hydraulic components

KATO HD18V5



Compact comfort

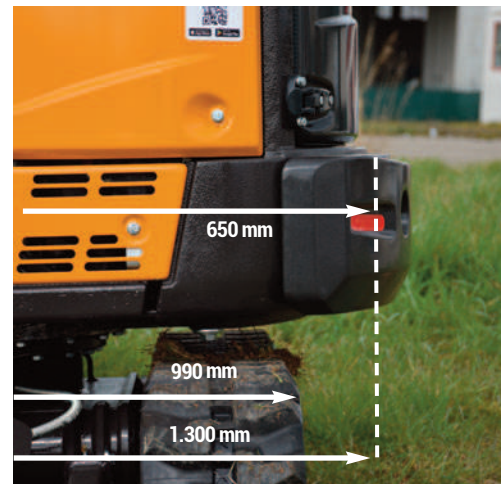
Between 17VXE and HD20N5, Kato introduces the new HD18V5 with an operating weight of 1,855 kg

OPERATOR AT THE CENTRE In Europe, the Kato 17VXE is the best-selling mini-excavator in the range and is appreciated for its ratio between performance and minimum operating dimensions. With the new HD18V5, the designers wanted to offer more, especially in terms of roominess for the operator, therefore operating comfort and when getting on and off the machine.



MORE BALLAST WITH LONG ARM

By choosing the long arm, an additional 100 kg bolt-on ballast is standard, bringing the overhang to 720 mm. Once this is disassembled, the rear overhang of the turret is only 650 mm and the mini-excavator becomes a perfect zero tail swing. The ballast can be requested separately.



985 MM FOREARM

The standard forearm measures 985 mm, but on request you can have the 1,235 mm long version that increases the maximum digging depth from 2,190 to 2,440 mm.

THE UNDERCARRIAGE CAN BE HYDRAULICALLY EXTENDED FROM 990 TO 1,300 MM





IT'S A REAL ZERO TAIL SWING The new Kato HD18V5 combines compact dimensions with roominess suitable for customers all over Europe. In terms of operation, the new 1.8 t mini-excavator offers remarkable stability and allows you to carry out flush-to-wall excavations to perfection. The canopy never exceeds the gauge of the turret. If you choose

the long forearm version, an extra weight is provided as standard. In this case, you pay for a small overhang in addition to the track extended to 1,300 mm (in the photos above the narrow undercarriage at 990 mm). The additional ballast is perfect for working with equipment at the tip of the arm, bringing the operating weight from 1,855 kg to 1,955 kg.

WITHOUT THE EXTRA BALLAST, THE MINIMUM ROTATION CONE IS ONLY 2,130 MM



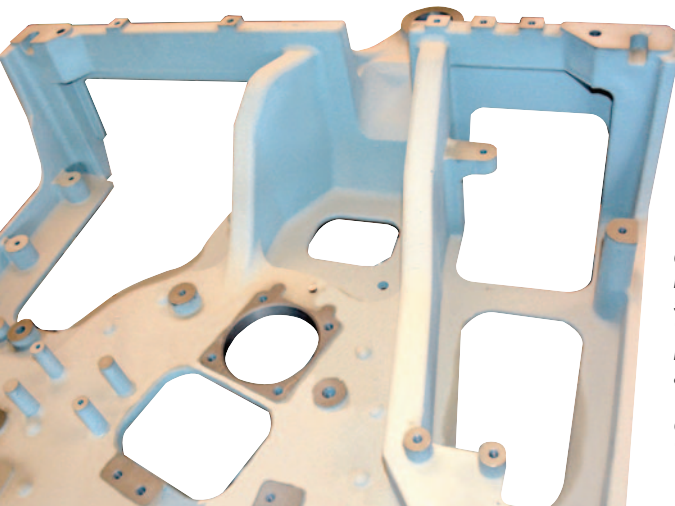


TOP QUALITY Like the best zero tail swings in the lower operating class, the HD18V5 relies on robust cast structural parts to optimize weight distribution. It is a refined technical solution thanks to which the Kato stands out from the crowd. The design of the castings is made in such a way as not to penalize accessibility to the mechanics.

100% cast frame structure

The frame is a cast shell to which the "vertical" rear ballast is joined.

The canopy bolted to them closes a safety cell



STILL UNFINISHED
On the left, the base of the cast frame, finished with primer, which comes to Kato Imer from Japan. You can see the cast cross-members that support the nose to which the swing block is attached, also in casting. This is extremely excellent workmanship.



WEIGHT WHERE YOU NEED It over the years we have seen end customers weld plates under frame to give more weight at the bottom to their mini-excavator. Here you won't have to... Engine accessibility preserved



LINEAR DESIGN
On the left, you can see the turret base that houses all the components. On the front you can see the nose that supports the swing block and above it the passage designed for the passage of hydraulic pipes.



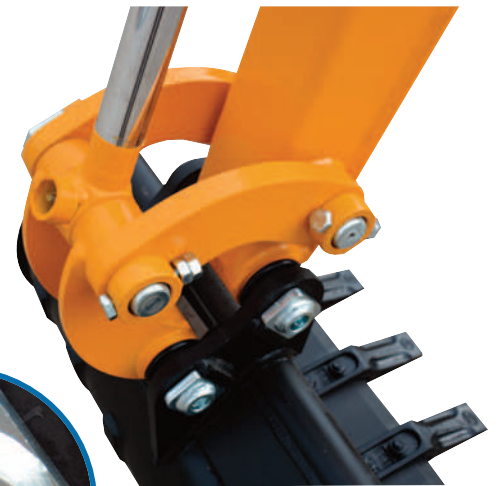
WELDED BY FRICTION
 The three hydraulic cylinders have friction-welded rods to ensure strength and perfect alignment, thus preventing future oil leakage.

LED headlight with 2,800 lumens power

Grease points in protected position



LIKE GROWN-UPS
 The arm and forearm are carefully built and feature progressive bracing ears.

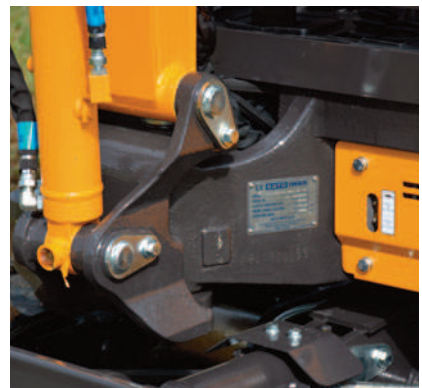


BUILT TO LAST
 The connecting rods are very thick and the bucket control "plate" has a radial shape. The two bushings have perfectly protected grease nipples. Even if you work in the presence of boulders, you don't risk anything.

COMPACT AND WELL-KEPT The excavation unit is well made. The arm return and forearm opening are remarkable and with the standard configuration you can reach a maximum digging height of 3,610 mm, a maximum depth of 2,190 mm and a maximum plinth depth of 1,730 mm. The passage of the auxiliary hydraulic lines is very well done.



ALWAYS PROTECTED
 The lifting cylinder has a well-made protection, which allows to grease the bushing at the end.



Variable flow rate

The hydraulic system is traditional, with no electronic controls whatsoever. A variable displacement double pump and a gear pump feed the directional valve

CLASSIC RELIABILITY All hydraulic components are manufactured in Japan. The variable displacement double pump with a rate of 17.2 litres per minute is manufactured by Shimadzu, as is the P3 gear pump. The P1 controls bucket arm, right drive engine, while the P2 forearm, Aux 1 and left drive engine. The P3, 12 litres/min, feeds swing or rotation and extendable blade or undercarriage.



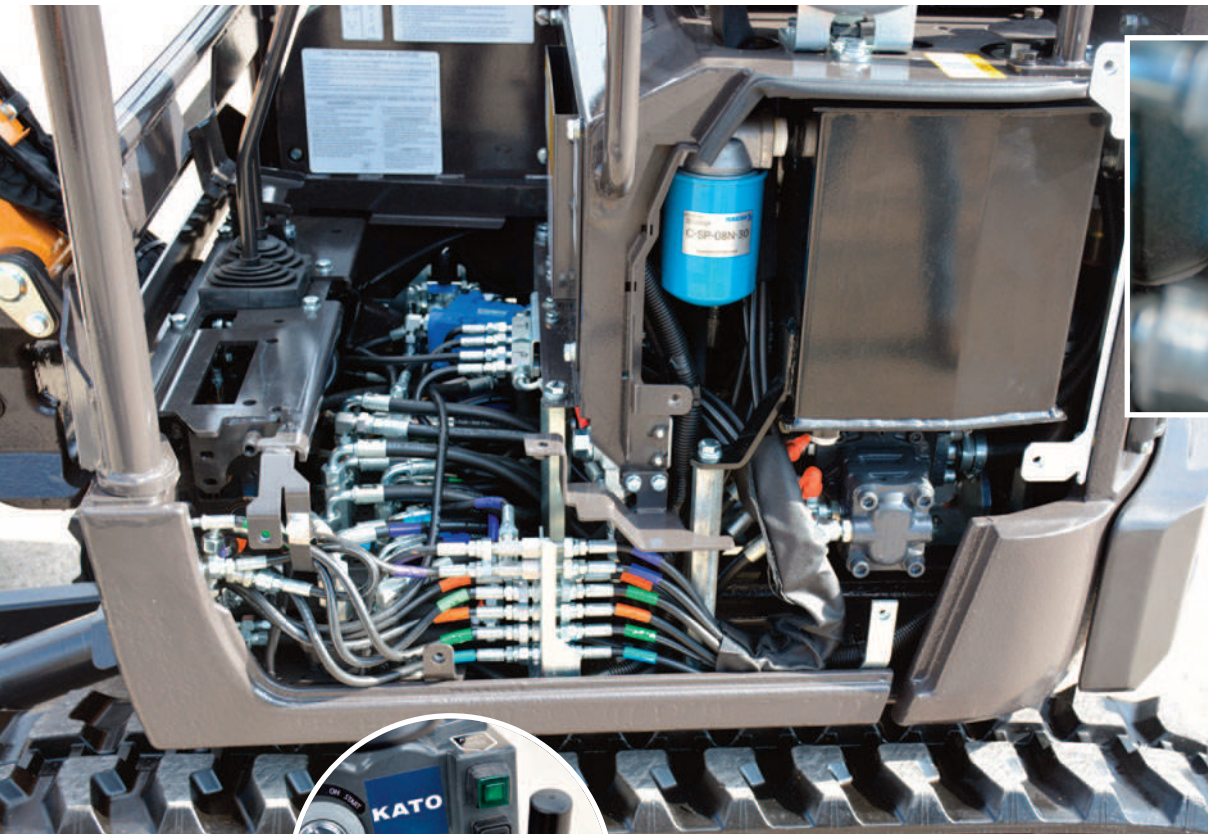
Optical tank level



PEDAL SWING The operator manages the swing of the arm with the right foot. The control rocker arm is protected by a safety cover that serves as a footrest. The control also serves the Aux 2 functions.



Metal oil tank (16 litres)



OPEN CENTRE

The hydraulic 9-spool open centre directional valve is manufactured by Nabtesco. Placed under the operator's feet, it is easily accessible.

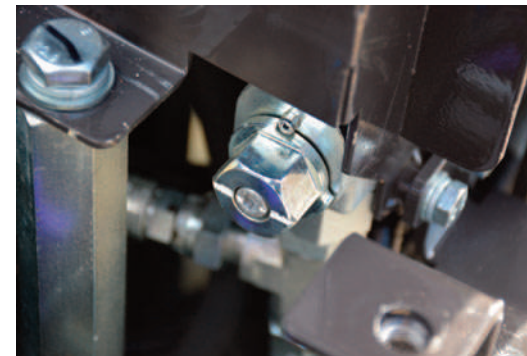


FLOW BLOCKING

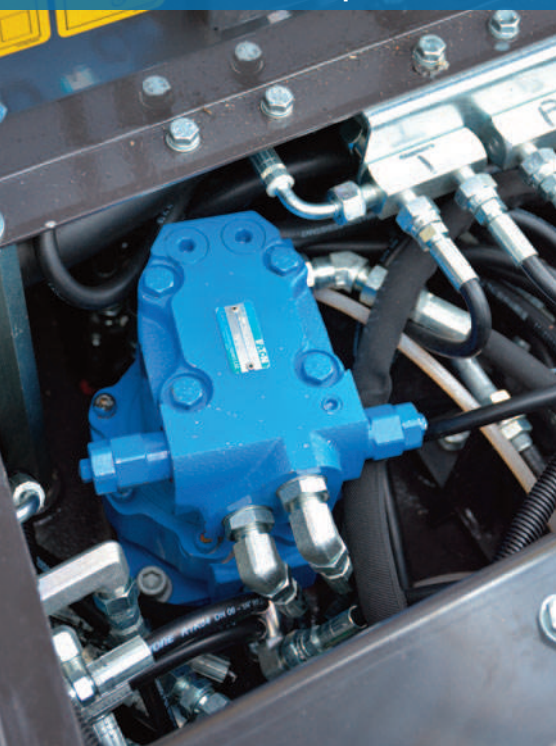
The flow rate of Aux 1 can be low or high. Once chosen, it is possible to block the flow to constantly operate a hydraulic attachment such as a cutter head. The Aux 2 line is optional and it can be switched on/off.

SINGLE OR DOUBLE ACTING

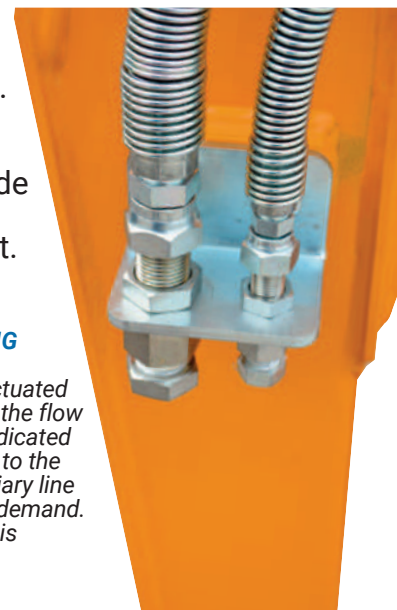
To switch to control hydraulic attachments from single (hammer) to double acting (handling & demolition grapple) all you need is a wrench.



Rotation motor
Eaton made in Japan



SIMPLE AND ACCESSIBLE The choice to adopt a metal tank allows a constancy of performance at any operating temperature. The open-centre directional valve is easily accessible and the system is made with minimal joints (metal extensions with a wide curve) so as not to overheat the oil. The shifting motors have variable displacement.

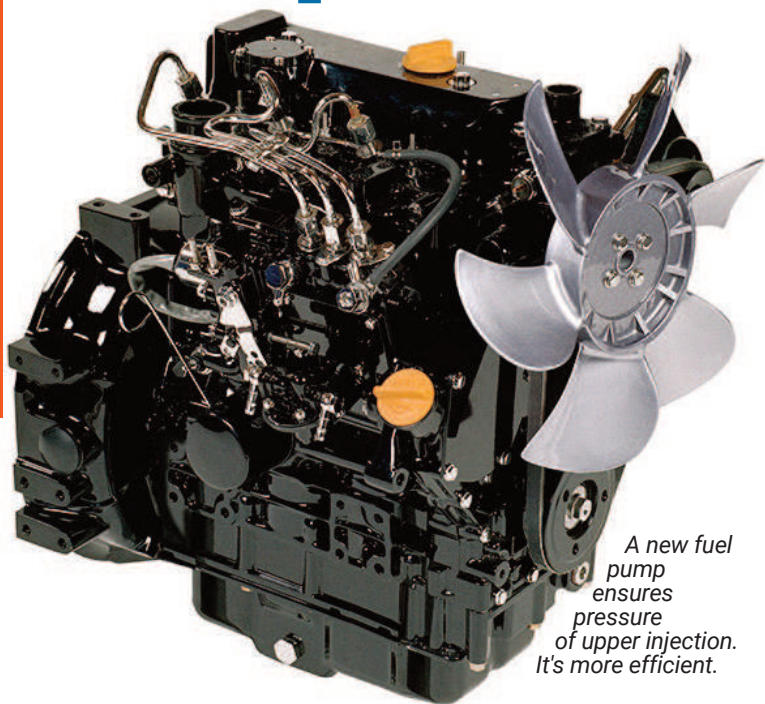


FROM SWING TO AUX 2

An electro-actuated valve diverts the flow of the P3, dedicated to the swing, to the second auxiliary line available on-demand. The first line is proportional.

Simple Stage V

KATO HD18V5



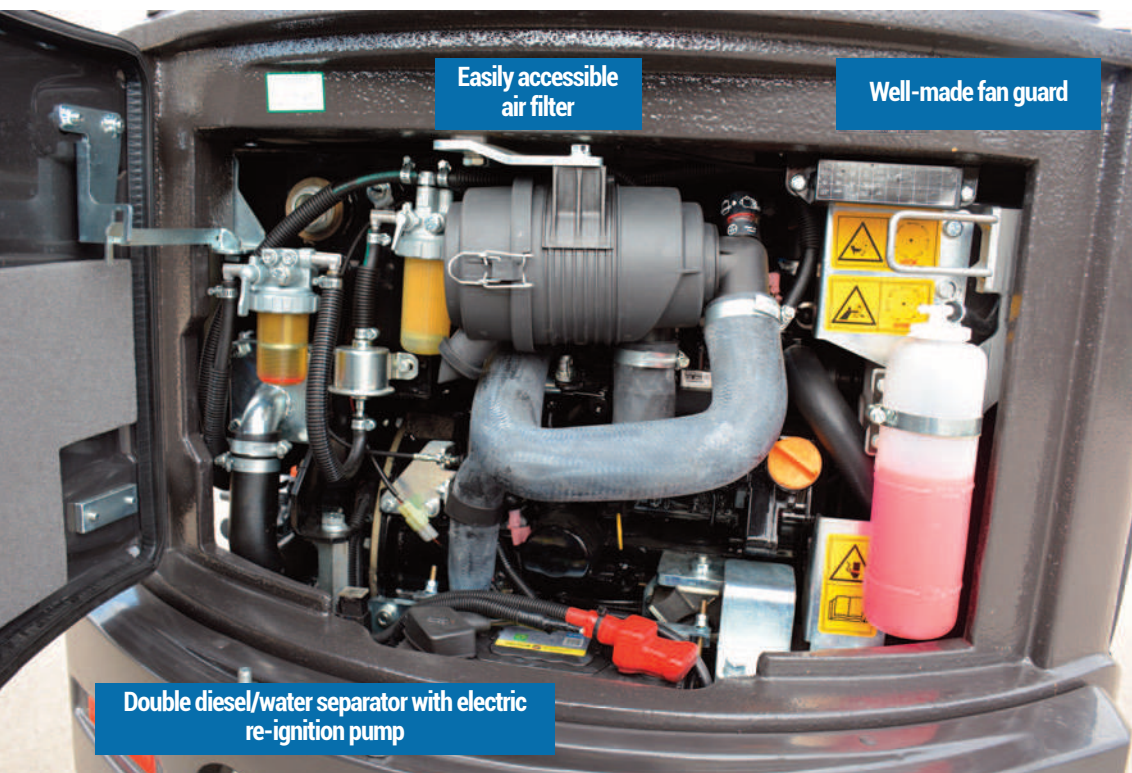
A new fuel pump ensures pressure of upper injection. It's more efficient.

The 0.993 litre Yanmar 3TNV74E is a 3-cylinder engine used also by competitor machines. In this case, we have the Stage V version with 10.5 kW net power at 2,300 rpm

- 1 STAGE V FORMULA** The injection is always direct, but thanks to injectors that work at higher pressure and optimized chamber design, combustion is better. Emissions into the atmosphere are decreasing, but so are noise emissions.
- 2 IT'S THE TORQUE THAT COUNTS** The maximum torque of 52 Nm is already achieved at 1,800 rpm. The average piston speed of only 5.90 m/s makes this engine eternal (obviously if maintenance is carried out).
- 3 REDUCED MANAGEMENT COSTS** It is a Stage V engine but without electronic control. Management costs remain low. In addition to the first 50 hours of operation, the oil change is carried out every 250 working hours.



Dual-stage air filter



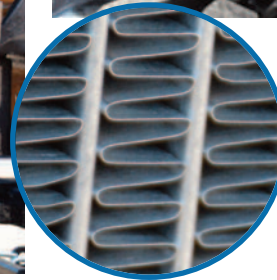
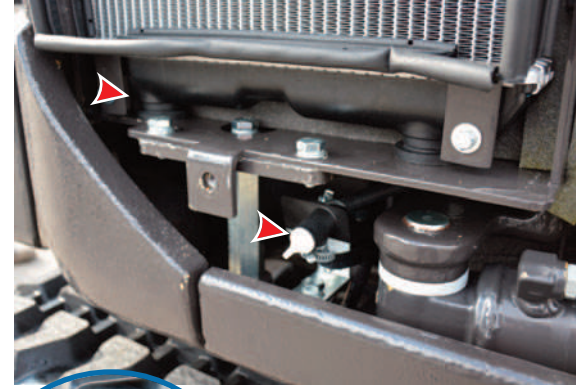
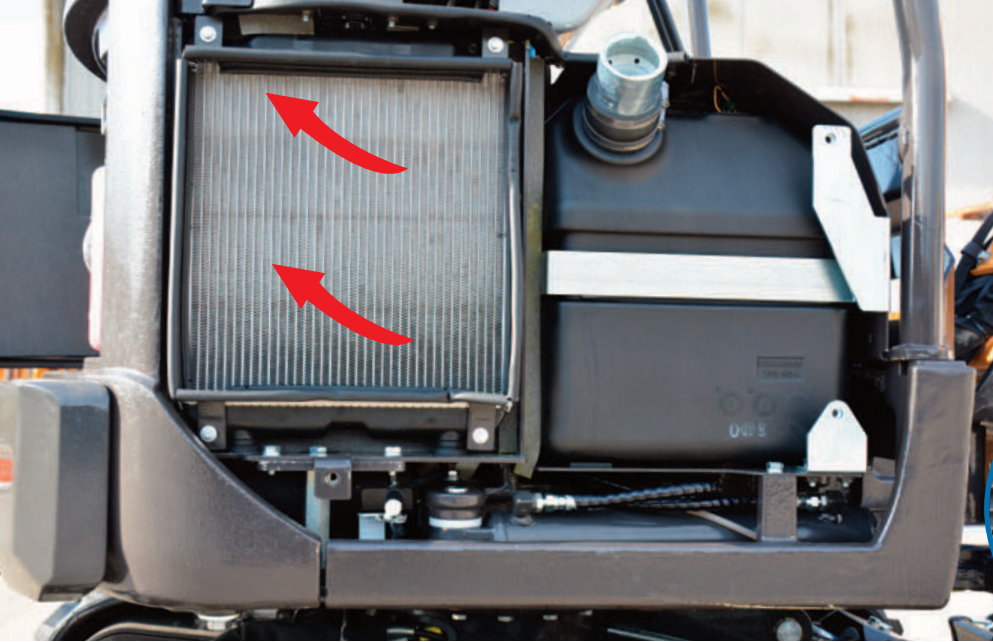
Easily accessible air filter

Well-made fan guard

Double diesel/water separator with electric re-ignition pump



AT YOUR FINGERTIPS
In HD18V5 engine compartment there are two easily accessible water/diesel separators. The electric refill pump for diesel is standard.



Heat exchangers with "S" mesh retain fewer impurities. The coolant and hydraulic oil heat exchangers are mounted in series.

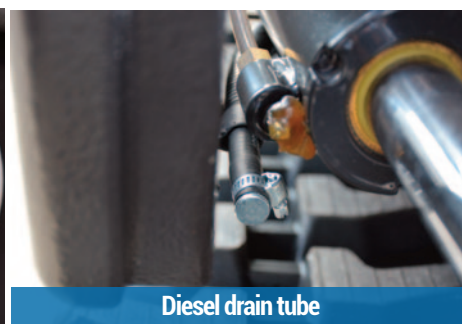


ATTENTION TO DETAIL

The heat exchanger group has a perimeter gasket to prevent air from re-entering and extract it 100%. The compensation tank has the highest maximum level of the motor head and the plastic fan is very well protected.

Blower fan

PLASTIC/ALUMINIUM MODULES The Kato HD18V5 cooling system takes fresh air from the lower frame plate and dissipates it via the two extractors on the right side. The heat exchangers are made of aluminium, with composite material heads, and joined to the frame by elastic supports to prevent cracks from thermal expansion. As on large excavators, the coolant can be drained from the radiator thanks to a tap connected to a pipe that runs under the turret. Carefully built system.



Diesel drain tube

The diesel tank is made of plastic and at 22 litres it has a capacity above the category average. The cap opens with the ignition key, there is a removable impurity retainer grid.



There's no shortage of space

Kato's designers aimed to create an ultra-compact mini-excavator, but suitable for the average build of European and North American customers: neat ergonomics and a seat with adjustable suspension

Adjustable suspension seat



FOR ALL SIZES On board the HD18V5 you don't feel constrained and you don't get tired gripping small joysticks.

The operator's seat could easily be that of a mini-excavator with an operating weight of 3.5 t.

There is no shortage of legroom and footroom and it is favoured by the absence of shifting pedals, while the distance between the YEC joysticks (Kawasaki valves) and the high backrest of the Grammer seat, with adjustable mechanical suspension, allow you to assume a natural and relaxed posture.



KATO IMER
PROTECTIVE STRUCTURE
 IDENTIFICATION N° 3035100000 ROPS
 TOPS EN 13531
 FOPS ISO 10262 LEVEL 1
 ROPS ISO 3471
 MACHINES MODEL: 18V5
 MAX MACHINE MASS kg. 2075
 KATO IMER S.p.A. LOC. CUSONA 53037-SAN GIMIGNANO (SI)
 ITALY 2000007932

The ROPS, FOPS Level 1, TOPS canopy is certified to withstand machine tipping over, weighing up to 2,075 kg.



Adjustable arm rests

The arm rests can be adjusted in height: 20 mm stroke.

LIFTING
 Arm and blade are the anchor points for lifting the HD18V5.



Starting/diesel single key



WELL-PROTECTED HEADLIGHT
 The Nordic Lights work light is in the middle of the arm, very well protected. It doesn't reduce visibility and you don't risk ruining it.



Self-winding belt



12 V socket



The cup holder also accommodates a smartphone.



10% more space than the 17VXE





Like its competitors, the HD18V5 has a variable width undercarriage. This enhances global performances as well as lifting forces

Remarkable stability

SOLID BASES The variable-width undercarriage, together with the low centre of gravity of this mini-excavator and the swing block connected to the machine by a single 250 mm pin, are the basis of the stability of the HD18V5. The declared digging force is 1,640 daN, slightly higher than the category average, while the penetration force is 960 daN. When the undercarriage is extended, this mini-excavator rotated sideways and 2 m from the slewing ring centre lifts 400 kg off the ground, which becomes 500 if it is fitted with the additional ballast. Under the same conditions, but from the front and with the blade lowered, it lifts 900 kg.

ISPEZIONE GIORNALIERA AL MOTORE

1. Prima di mettere in moto il motore, controllare il livello dell'olio con l'asta livello olio. Il livello dell'olio normale è tra i segni Max. e Min.
2. Prima di mettere in moto il motore, controllare il livello di liquido di raffreddamento nel serbatoio secondario. Usare acqua morbida pulita come liquido di raffreddamento.
3. Usare carburante pulito ed evitare la penetrazione di impurità nel serbatoio.
4. In caso di penetrazione di aria all'interno dell'impianto carburante, il motore potrebbe non mettersi in moto. Fare attenzione a non rimanere senza carburante.

AVVIAMENTO, FUNZIONAMENTO E ARRESTO DEL MOTORE

<AVVIAMENTO>

1. Portare la leva di spegnimento comando sulla posizione LOCKED.
2. Assicurarsi che le leve di azionamento siano in posizione neutra.
3. Portare la leva dell'acceleratore sulla posizione intermedia.
4. Girare la chiave sulla posizione HEAT. Quando la spia delle candele sul monitor OK si spegne, girare la chiave sulla posizione START per avviare il motore.
5. Appena il motore si avvia, lasciare la chiave. La chiave torna automaticamente alla posizione ON. Non tenere acceso il motorino di avviamento per più di 15 secondi. Se il motore non si avvia, ripetere l'operazione dopo un intervallo di oltre 30 secondi.
6. Portare la leva dell'acceleratore sulla posizione bassa. Eseguire l'operazione di riscaldamento per circa 5 minuti.

<FUNZIONAMENTO>

1. Controllare che il termometro dell'acqua indichi un range normale.
2. Controllare che tutte le spie di controllo sul monitor OK siano spente.
3. Quando si accende una spia di controllo sul monitor OK, arrestare immediatamente il motore e controllare il guido.

<ARRESTO>

1. Portare la leva dell'acceleratore sulla posizione bassa. Eseguire l'operazione di raffreddamento per circa 5 minuti.
2. Portare la chiave sulla posizione OFF per arrestare il motore.



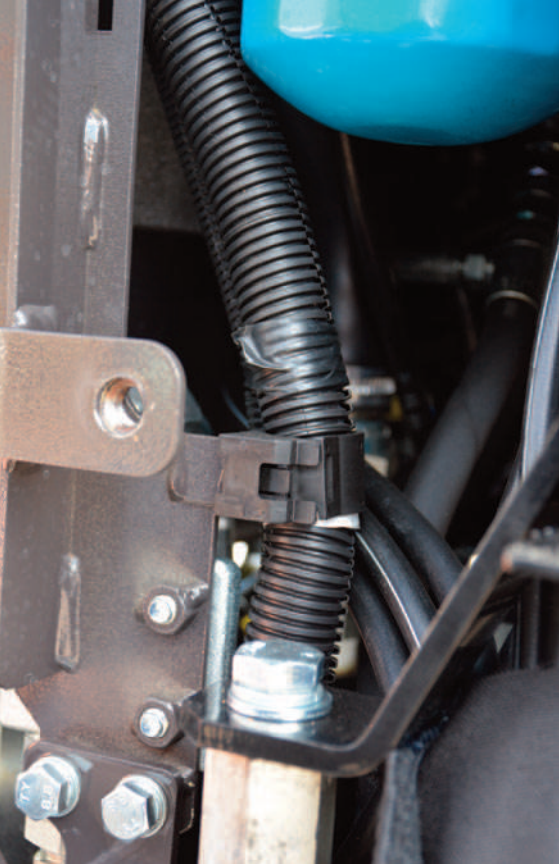
Variable displacement...



...Nachi Motors



Protected grease nipple



ATTENTION TO DETAIL Like the hydraulic one, the electrical system of the Kato HD18V5 is assembled with care, like the hydraulic one. The wiring is all protected by plastic sheaths "guided" by open/close supports to facilitate maintenance. Positioned behind the rear ballast, the battery is easily accessible.

Fuses with key



Protected cylinder rod



Protected grease nipple

Reinforcement ears



Widened blade



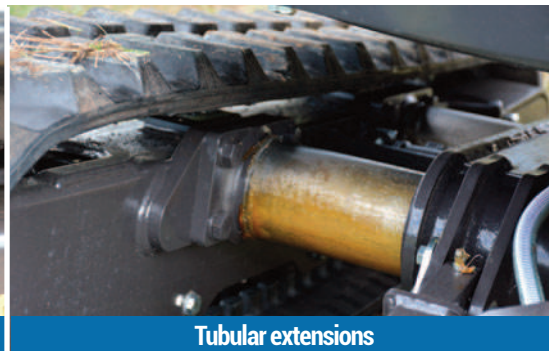
Undercarriage at 1,300 mm



Teflon top slider

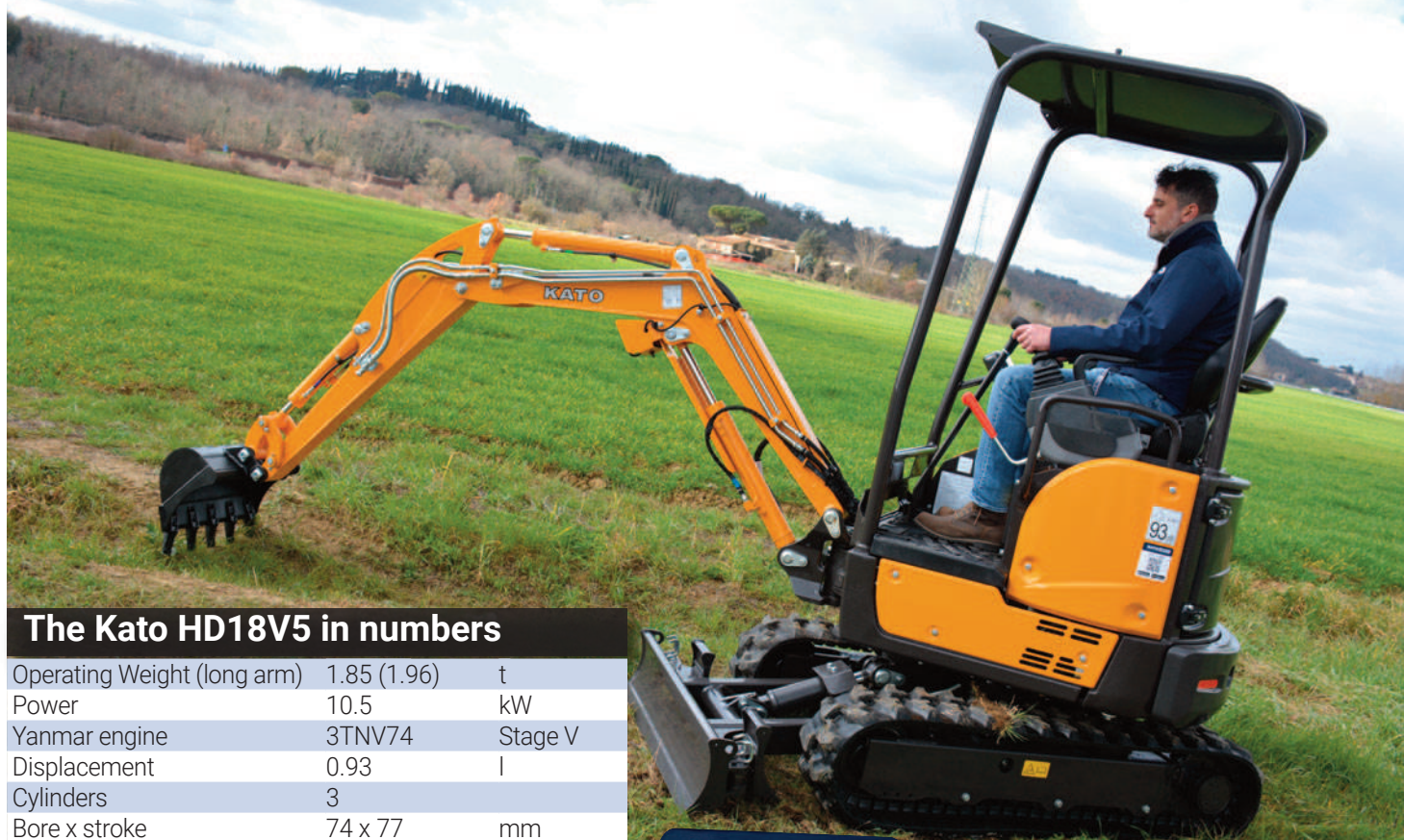


Tubular extensions



The blade is built with care. The extensions can be removed and reassembled with a double pin.

The extendable undercarriage is made with tubular extensions that do not retain soil or stones. More reliability over time.



The Kato HD18V5 in numbers

Operating Weight (long arm)	1.85 (1.96)	t
Power	10.5	kW
Yanmar engine	3TNV74	Stage V
Displacement	0.93	l
Cylinders	3	
Bore x stroke	74 x 77	mm
Calibration speed	2300	giri/min
Piston speed	5.67	m/s
Valves per cylinder	2	
Distribution	conv.	
Injection	conv.	
Injection steps	1	
Egr	no	
TExhaust gas treatment	n.d.	
Air supply	natural	
Pumps	var + fix	
Flow Rate (aux)	2 x 17.2 + 12	l/min
Pump adjustment	conv./no	
Directional spool valve	conv.	
Maximum hydraulic pressure	20.6	MPa
Excavation depth (1,235 mm)	2,190	mm
Plinth depth (1,235mm)	1,730	mm
Ground excavation dist.	3,820	mm
Loading height	2,570	mm
Digging force	1640	daN
Penetration force	960	daN
Shifting speed	2,1-4	km/h
Turret slewing speed	8.5	giri/min
Undercarriage wheelbase/leght	n.d./1.57	mm
Support rollers	3	
Undercarriage lenght	990 var 1.300	mm
Track width	230	mm
Rear overhang	0,65	mm
Offset excavation (left-right)	260-705	mm
Trasport lenght	3,450	mm
Trasport height	2.39	mm
Blade (W-H)	990-1.300	mm
Blade lift-lower	n.d.	mm
Blade overhang	n.d.	mm
Battery	1 x 45	Ah
Alternator	20	A
Diesel tank	22	l
Hydraulic system/tank	16/21	l



Competitive TCO

NOTHING CHANGES The adoption of a Stage V engine does not change the maintenance intervals required by the manufacturer. The choice is to focus on a top quality motor oil, but not on an expensive long life and maintain service every 250 working hours (the first is carried out after the first 50 hours of use). The ISO VG46 hydraulic oil is changed after 1,000 hours or, if the machine work regularly with a hydraulic hammer, 600 hours.

MAINTENANCE INTERVALS

- **MOTOR OIL 250 HOURS**
- **MOTOR OIL FILTER 250 HOURS**
- **DIESEL FILTER 500 HOURS**
- **AIR FILTER 500 HOURS**
- **HYDRAULIC OIL FILTER 1,000 HOURS**
- **HYDRAULIC OIL 1,000 HOURS**
- **COOLANT 1,000 HOURS**
- **BUSHING GREASING 50 HOURS**