

**Innovations  
For The Future**

**Eco & Tough**



**KATO**

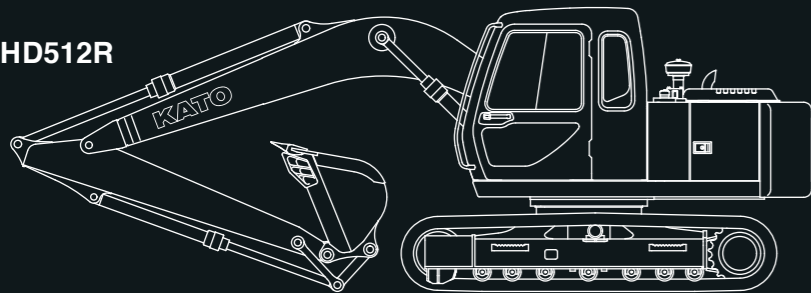
**REGZM**

**FULLY HYDRAULIC EXCAVATOR**

**HD512R**

Bucket capacity : 0.4m<sup>3</sup>-0.6m<sup>3</sup>(ISO)  
Engine output : 68kW / 2,050min<sup>-1</sup>(ISO Net)  
Operating weight : 12,100kg

HD512R



Address inquiries to :

NOTE : Illustrations may include optional equipment. KATO products and specifications are subject to improvements and changes without notice.



**KATO**

**QUALITY & EXPERIENCE  
SINCE 1895**

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# **REGZAM**

## **HD512R**

**REGZAM means "ACTIVE MACHINE" with 5 essential design features**

- User friendly design
- Reliable Mitsubishi Engine (4D34-TLE2A)
- New APC Control
- Fatigue Free & Comfortable Cabin
- Powerful Operation



# Equipment



## New APC System

- Easily selectable 3 working modes with one-touch switches.

- Advanced TFT color monitor liquid crystal display.
- Back-light at touch switches
- 14 maintenance information available



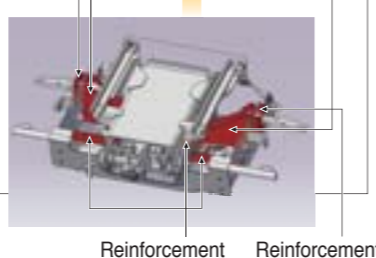
**P: Professional Mode**  
for heavy duty application

**A: All-around Multi Purpose Mode**  
for all application

**E: ECO Mode**  
for economical works

## Durable Seat Suspension

- Less rolling motion of lever-consol & seat assures powerful & precise operations.



Reinforcement Reinforcement

## Less rolling seat

# Technical Specifications

## ENGINE

|                     |   |
|---------------------|---|
| Model               | Mitsubishi 4D34-TLE2A, 4 cycle turbo charged diesel engine                        |
| Number of cylinders | 4   |
| Bore & Stroke       | 104mm×115mm   |
| Total displacement  | 3.91L   |
| Rated output        | 68kW/2,050min <sup>-1</sup> (ISO Net)   |
| Max. torque         | 360N·m/1,600min <sup>-1</sup> (ISO Net)   |
| Compression ratio   | 16.5:1  |
| Combustion system   | Direct injection  |
| Cooling system      | Pressurized water circulated by a centrifugal pump with thermostat                |
| Lubrication system  | Pressurized oil fed by a gear pump through full-flow and by-pass cartridge filter |
| Starter             | Electric, 24V-5kW   |
| Generator           | Alternator, 24V-50A   |
| Governor            | Mechanical  |
| Air cleaner         | Dry type filter   |

## HYDRAULIC SYSTEM

|   |   |
|---|---|
| Pumps   | Double variable piston pump and gear pump   |
| Max. discharge flow                           | 2×121L/min  |
| Max. discharge pressure                       | 29.4MPa   |
| Max. discharge pressure (travel circuit only) | 32.9MPa   |
| Oil filtration                                | Full-flow filter with replaceable element, a drain cartridge filter, a pilot line filter and a suction strainer |
| Control valve                                 | 3+4 section multiple control valve (with one free service circuit)  |
| Pilot pump                                    | Gear type   |
| Oil cooler                                    | Finned tube, forced ventilation   |
| Pressure relief valves                        | Primary and secondary on each circuit   |

## CAB & CONTROLS

|  |   |
|--|---|
| Type                                     | All weather & sound suppressed, 1,000mm wide pressed steel cab mounted on 6 point viscous mounting. |
| Right hand lever                         | Controls the boom & bucket  |
| Inner right hand lever (with foot pedal) | Controls the right hand track   |

|   |   |
|---|---|
| Inner left hand lever (with foot pedal) | Controls the left hand track                            |
| Left hand lever                         | Controls the arm & swing                                |
| Pilot control                           | Travel, boom, arm, bucket and swing                     |
| Engine throttle                         | Electric "Accel dial"                                   |
| Meter & gauges                          | Hour meter, water temperature and fuel level            |
| Working lights                          | Provided on the boom left side and mounted on the frame |
| Lubrication chart                       | Inside the tool box                                     |

## APC150

- Quick Selection of Working Modes
- P:** Professional Mode for heavy duty application (H Mode)
- A:** All-around Multi Purpose Mode for all application from precision work to heavy duty work by stroke of operation levers
- E:** ECO Mode for economical works
- Color monitor display with back up light
- Engine oil pressure
- Engine oil filter
- Hydraulic oil filter
- Engine Preheater
- Hydraulic oil temperature
- Water temperature
- Water level
- Fuel level
- Battery charge
- APC monitor and air cleaner
- Calendar

## BOOM, ARM AND BUCKET

|                                   |   |
|-----------------------------------|---|
| Boom cylinders                    | Two, double acting  |
| Bore & Stroke                     | 105mm×1,080mm   |
| Arm cylinder                      | One, double acting  |
| Bore & Stroke                     | 120mm×1,215mm   |
| Bucket cylinder                   | One, double acting  |
| Bore & Stroke                     | 95mm×995mm  |
| Lubrication                       | Grease nipples, and/or centralized greasing for remote points |
| Bucket digging force (High power) | 88kN  |
| Arm digging force (High power)    | 98kN  |
| Bucket digging force (High power) | 64kN  |
| Arm digging force (High power)    | 71kN (High power can be used with STD arm )                   |

## SWING SYSTEM

|                         |  |
|-------------------------|--|
| Drive                   | Axial piston motor with shock-less valve and reduction gear.   |
| Brake                   | A hydraulic brake that locks automatically when the swing control lever is in the neutral position and a mechanical parking brake which is applied when the safety lock lever is pulled backwards, the engine is turned off or the swing control lever is in the neutral position. |
| Lubrication             | Completely housed and grease bathed  |
| Max. swing speed        | 12.5min <sup>-1</sup>  |
| Tail swing radius       | 2,120mm  |
| Min. front swing radius | 2,390mm  |

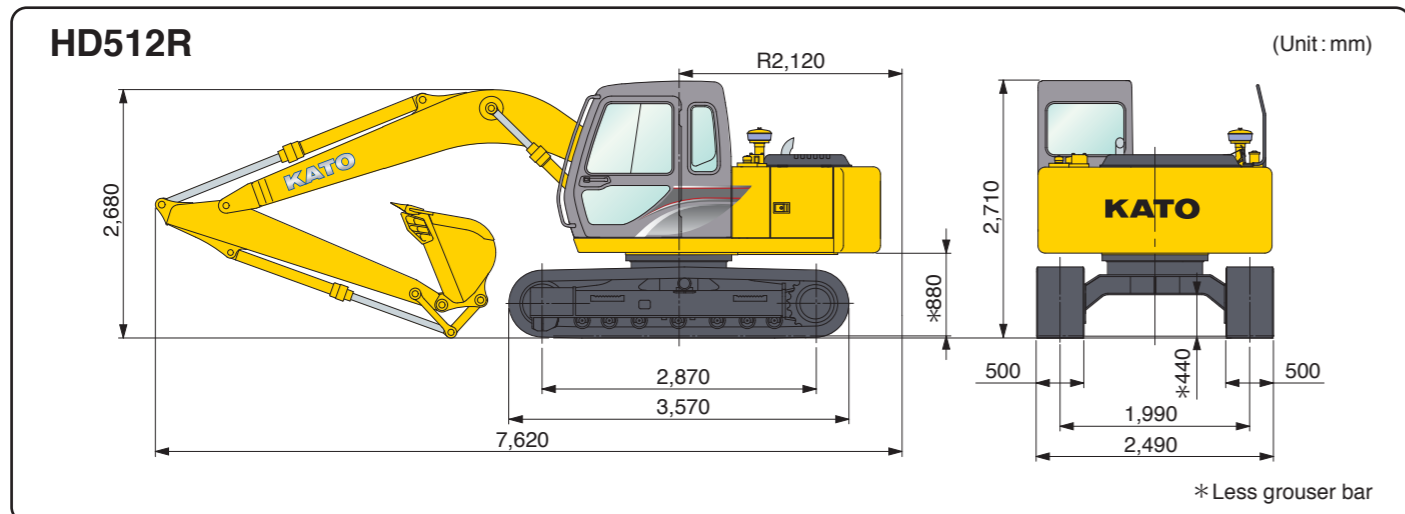
## TRAVEL SYSTEM

|                                     |   |
|-------------------------------------|---|
| Drive                               | Independent axial piston motor with reduction for each side   |
| Brakes                              | Independent disk parking brake for each side, applied automatically when the travel levers are in the neutral position. |
| Track shoes                         | 44 each side  |
| Track adjustment                    | Grease cylinders with recoil springs  |
| Lubrication                         | Sealed-for-life rollers and front idlers with floating seals  |
| Travel speed                        | High 0~5.5km/h<br>Low 0~3.1km/h   |
| Gradeability                        | 70% (35°)   |
| Max. drawbar pull                   | 100kN   |
| Ground clearance (less grouser bar) | 440mm   |
| Track length                        | 3,570mm   |

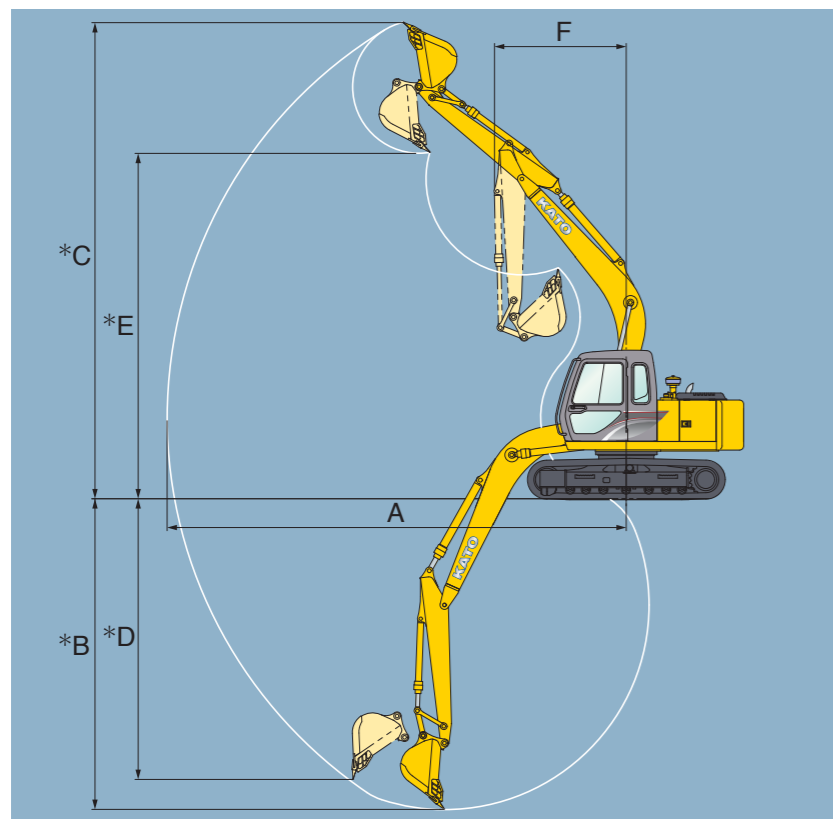
## SERVICE DATA

|   |          |
|---|----------|
| Fuel tank   | 275L     |
| Cooling system  | 18L      |
| Engine oil  | 17L      |
| Track drives  | 2×2.1L   |
| Swing drive   | 2.5L     |
| Hydraulic oil tank (level)  | 74L      |
| (system)  | 155L     |
| In standard figure, with the 2.5m arm, 500mm grouser shoes and 0.50m <sup>3</sup> (ISO) bucket. |          |
| Operating weight  | 12,100kg |
| Ground pressure   | 38kPa    |

# Dimensions



# Working Ranges



Unit : mm

| Range                    | Arm | STD Arm 2.5m | Long Arm 3.0m |
|--------------------------|-----|--------------|---------------|
| A : Max. digging radius  |     | 8,300        | 8,760         |
| *B : Max. digging depth  |     | 5,620        | 6,130         |
| *C : Max. digging height |     | 8,610        | 8,870         |
| *D : Max. vertical wall  |     | 5,070        | 5,470         |
| *E : Max. dumping height |     | 6,240        | 6,520         |
| F : Min. swing radius    |     | 2,390        | 2,470         |

\* Less grouser bar

## Bucket

| Type of bucket         |                       | Backhoe bucket |      |       |       |
|------------------------|-----------------------|----------------|------|-------|-------|
| Bucket capacity        | m <sup>3</sup> , ISO  | 0.40           | 0.45 | 0.50  | 0.60  |
| Bucket width           | W/O side cutters, mm  | 785            | 875  | 910   | 1,090 |
|                        | with side cutters, mm | 875            | 965  | 1,000 | 1,180 |
| Bucket weight          | kg                    | 380            | 400  | 415   | 470   |
| Number of bucket teeth |                       | 4              | 4    | 5     | 5     |
| Standard boom +        | Standard arm          | ●              | ●    | ●     | □     |
|                        | Long arm              | ●              | ▲    | *▲    | ×     |

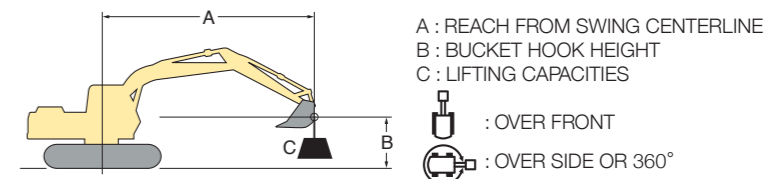
● General purpose ▲ Light work □ Loading × Unusable  
 ○ Yellow colored area means standard. \* Usable only when 700mm shoe is fitted on.

## Track Shoes

| Type of shoes          | Grouser shoe |       |       |
|------------------------|--------------|-------|-------|
| Shoe width (mm)        | 500          | 600   | 700   |
| Overall width (mm)     | 2,490        | 2,590 | 2,690 |
| Ground pressure (kPa)  | 38           | 32    | 28    |
| Net weight change (kg) | S.T.D        | +180  | +480  |

○ Yellow colored area means standard.

# Lifting Capacities



**HD512R** SHOE WIDTH: 500mm, BOOM: 4.65m, ARM: 2.50m, BUCKET: 0.50m<sup>3</sup> (415kg), COUNTERWEIGHT: 2,300kg Unit: 1,000kg

| LIFT POINT HEIGHT B (m) | LIFT POINT RADIUS A (m) |       |       |       |       |       |       |       |       |      | AT MAXIMUM LIFT POINT RADIUS |      |            |      |
|-------------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|------------------------------|------|------------|------|
|                         | 2.00                    |       | 3.00  |       | 4.00  |       | 5.00  |       | 6.00  |      | 7.00                         |      | RADIUS (m) |      |
| 5.00                    | ○                       | ○     |       |       |       |       | *2.16 | *2.16 | *2.35 | 1.94 |                              |      |            |      |
| 4.00                    |                         |       |       |       |       |       | *2.42 | *2.42 | *2.45 | 1.91 |                              |      | *1.47      | 1.45 |
| 3.00                    |                         |       | *3.75 | *3.75 | *3.15 | *3.15 | *2.84 | 2.55  | *2.68 | 1.85 | 2.04                         | 1.38 | *1.49      | 1.31 |
| 2.00                    |                         |       | *5.53 | 5.50  | *4.05 | 3.46  | *3.36 | 2.42  | 2.61  | 1.78 | 2.00                         | 1.35 | *1.55      | 1.23 |
| 1.00                    |                         |       | *5.12 | 5.07  | *4.91 | 3.25  | 3.41  | 2.30  | 2.53  | 1.71 | 1.96                         | 1.31 | *1.66      | 1.20 |
| 0.00                    | *2.99                   | *2.99 | *4.86 | 4.84  | 4.76  | 3.09  | 3.31  | 2.20  | 2.47  | 1.65 | 1.93                         | 1.28 | *1.82      | 1.22 |
| -1.00                   | *4.55                   | *4.55 | *4.83 | 4.76  | 4.66  | 3.01  | 3.24  | 2.14  | 2.43  | 1.61 |                              |      | 1.95       | 1.29 |
| -2.00                   | *4.83                   | *4.83 | *4.88 | 4.76  | 4.64  | 2.98  | 3.22  | 2.12  | 2.42  | 1.60 |                              |      | 2.17       | 1.44 |
| -3.00                   | *4.77                   | *4.77 | *5.05 | 4.82  | 4.67  | 3.01  | 3.24  | 2.14  |       |      |                              |      | 2.60       | 1.73 |
| -4.00                   | *4.90                   | *4.90 | *5.51 | 4.96  | 4.77  | 3.10  |       |       |       |      |                              |      | 3.52       | 2.34 |

**HD512R** SHOE WIDTH: 600mm, BOOM: 4.65m, ARM: 2.50m, BUCKET: 0.50m<sup>3</sup> (415kg), COUNTERWEIGHT: 2,300kg Unit: 1,000kg

| LIFT POINT HEIGHT B (m) | LIFT POINT RADIUS A (m) |       |       |       |       |       |       |       |       |      | AT MAXIMUM LIFT POINT RADIUS |      |            |      |
|-------------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|------------------------------|------|------------|------|
|                         | 2.00                    |       | 3.00  |       | 4.00  |       | 5.00  |       | 6.00  |      | 7.00                         |      | RADIUS (m) |      |
| 5.00                    | ○                       | ○     |       |       |       |       | *2.16 | *2.16 | *2.35 | 1.97 |                              |      |            |      |
| 4.00                    |                         |       |       |       |       |       | *2.42 | *2.42 | *2.45 | 1.94 |                              |      | *1.47      | 1.47 |
| 3.00                    |                         |       | *3.75 | *3.75 | *3.15 | *3.15 | *2.84 | 2.58  | *2.68 | 1.88 | 2.07                         | 1.40 | *1.49      | 1.33 |
| 2.00                    |                         |       | *5.53 | *5.53 | *4.05 | 3.51  | *3.36 | 2.46  | 2.65  | 1.81 | 2.03                         | 1.37 | *1.55      | 1.25 |
| 1.00                    |                         |       | *5.12 | *5.12 | *4.91 | 3.29  | 3.46  | 2.33  | 2.57  | 1.74 | 1.99                         | 1.33 | *1.66      | 1.22 |
| 0.00                    | *2.99                   | *2.99 | *4.86 | *4.86 | 4.83  | 3.14  | 3.36  | 2.24  | 2.51  | 1.68 | 1.96                         | 1.30 | *1.82      | 1.24 |
| -1.00                   | *4.55                   | *4.55 | *4.83 | *4.83 | 4.73  | 3.06  | 3.29  | 2.17  | 2.47  | 1.64 |                              |      | 1.99       | 1.32 |
| -2.00                   | *4.83                   | *4.83 | *4.88 | 4.83  | 4.70  | 3.03  | 3.27  | 2.15  | 2.46  | 1.63 |                              |      | 2.21       | 1.47 |
| -3.00                   | *4.77                   | *4.77 | *5.05 | 4.90  | 4.74  | 3.06  | 3.29  | 2.18  |       |      |                              |      | 2.64       | 1.76 |
| -4.00                   | *4.90                   | *4.90 | *5.51 | 5.03  | 4.84  | 3.15  |       |       |       |      |                              |      | 3.57       | 2.38 |

NOTE : 1. Lifting capacities are based on ISO 10567.  
 2. Lifting capacities shown do not exceed 87% of machine hydraulic capacity or 75% of minimum tipping load.  
 3. Capacities marked with an asterisk (\*) are limited by hydraulic capacities.  
 4. Lifting capacities are based on machine standing on firm, uniform supporting surface. User must make allowances for job conditions such as soft or uneven ground.  
 5. Lifting capacities shown should not be exceeded. Weight of all lifting accessories must be deducted from the above lifting capacities.  
 6. Capacities apply only to the machine as originally manufactured and equipped by KATO WORKS CO., LTD.  
 7. The operator should be fully acquainted with the operation manual before operating the machine.

## Standard Equipment

- COLOR MONITOR DISPLAY (APC150)
- AUTOMATIC AIR CONDITIONER (PRESSURIZED)
- HOT & COOL BOX
- INTERMITTENT WINDSHIELD WIPER
- EMERGENCY EXIT REAR WINDOW
- AM/FM RADIO (2 SPEAKERS)
- 13 CM DUAL CORN SPEAKER X2
- CABIN LIGHT
- 3 STD WORKING LIGHTS (SLEWING TABLE-R, BOOM-L, CAB-L)
- REAR VIEW MIRROR-R
- WORKING MODE SELECTOR (APC150)
- AUTO-SLOW, ONE TOUCH SLOW
- BOOM/ARM ANTI-DRIFT VALVE
- SLEWING ANTI-COUNTER ACTION
- AUTOMATIC PARKING BRAKE (SLEWING TABLE)
- AUTOMATIC PARKING BRAKE (TRAVELING)
- SERVICE PORT (1 SPOOL)

## Optional Equipment

- OPTIONAL WORKING LIGHT (BOOM-R)
- OPTIONAL WORKING LIGHT (CAB-R)
- 2 WAY OPTION PIPING (FOR CRUSHER & BREAKER)
- OPTION PIPING (FOR BREAKER)
- ROOM FAN
- ELECTRIC REFUELING PUMP
- HIGH PERFORMANCE FUEL FILTER
- SEAT-BELT
- TRACK GUARD (1 PD EACH SIDE)
- AIR CLEANER DOUBLE ELEMENT
- PRE-CLEANER
- COVER ON THE BOTTOM FACE OF TRAVELING FRAME