

# R85A **SMART PLUS**

**OPERATING WEIGHT: 8100 kgs**

**GROSS POWER: 76 HP @ 2200 rpm**

**BUCKET CAPACITY: 0.32 - 0.70m<sup>3</sup>**



# R85A **SMART PLUS**

## BEST-IN CLASS PERFORMANCE

- Advanced CAPO system
- Hydraulic flow summation
- Excellent digging forces
- 3 Power Mode (Power/Standard/Economy)
- Shockless Valve for smooth Boom operation



## OPERATOR COMFORT

- Spacious cabin
- Multi Adjustable Premium seat
- Enhanced visibility
- 7" Smart display cluster



## IMPROVED FUEL EFFICIENCY

- Electro mechanical control system
- One touch deceleration
- Auto deceleration system
- Breaker mode for enhanced efficiency



# DESIGNED FOR SMART WORK



## ENHANCED MACHINE DURABILITY

- Heavier Counterweight for better stability
- Heavy duty undercarriage
- HD reinforced front attachment
- Improved engine hood for better service life
- Improved tool box for better service life



## SIMPLIFIED MAINTENANCE

- Easy serviceability
- Extended maintenance interval
- Large capacity fluid tank
- Low life cycle cost



## PARTS & SUPPORT

- Hyundai genuine parts
- Max parts availability
- On-site product support
- Remote management system (Hi-Track)

# > PERFORMANCE

## PRIDE AT WORK

Hyundai construction equipment strives to build state-of-the-art earthmoving equipment to give every operator maximum performance, more precision, versatile machine performance, and proven quality.

New technologies designed to improve performance and precision, make the Hyundai excavator smooth, fast and easy to control. Take pride in your work with Hyundai!

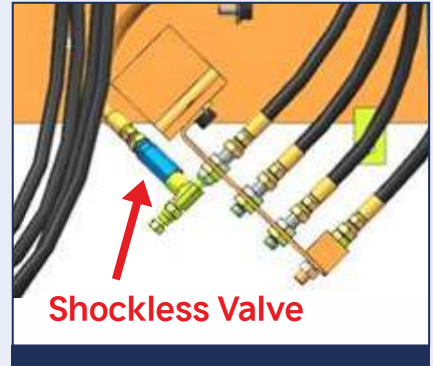


## ENGINE

The 76 HP, Kirloskar 4R1040NA engine is built for power, reliability, efficiency to deliver high performance with low fuel consumption.



# R85A **SMART PLUS**



## ADVANCED HYDRAULIC SYSTEM

Hydraulic pressure sensing system provides wide range of flow at various workloads. Open center Main Control Valve (MCV) ensures faster response and maximum efficiency. Travel & swing motor provides excellent mobility and faster cycle time. New Shock less valve for smooth Boom down operation

## POWER MODE

Working Mode	Advantage
<b>P Mode</b>	<ul style="list-style-type: none"> <li>• Maximum Power</li> <li>• Fast Cycle time</li> </ul>
<b>S Mode</b>	<ul style="list-style-type: none"> <li>• Balance between power and fuel efficiency</li> </ul>
<b>Eco Mode</b>	<ul style="list-style-type: none"> <li>• Better fuel efficiency</li> </ul>
<b>Breaker Mode</b>	<ul style="list-style-type: none"> <li>• Sets pump flow to optimal level and boosts efficiency</li> </ul>

## IMPROVED SWING TORQUE & DUAL TRAVEL SPEED

10% increase in swing torque & efficient travel system improves overall cycle time.



## BEST IN CLASS DIGGING FORCES

Higher output even in tough working condition

- Bucket - 5250 kgf
- Arm - 3943 kgf



## AUTO KICK DOWN FUNCTION & MAX TRACTION FORCE

Results in excellent maneuverability and climbing performance

- Drawbar Pull - 5900 kgf

# FUEL EFFICIENCY



## IMPROVED FUEL EFFICIENCY

- New CMCU with auto deceleration function
- Advanced hydraulics
- Increased return line diameter by 3/4"



## INSTRUMENT PANEL

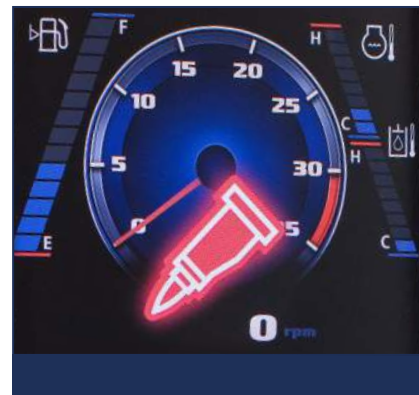
The user-friendly multi language option cluster making it easy to check all critical systems like

- Hydraulic oil temperature,
  - Coolant temperature
  - Fuel level
  - Self diagnostic checks
  - Maintenance management
- to optimizing productivity needs ensuring fuel efficiency



## ONE TOUCH IDLE & AUTO DECELERATION

Prevents fuel losses by reducing engine rpm during no-load condition



## EXCLUSIVE BREAKER MODE

Excellent fuel saving due to exclusive power for breaker operation



## LARGE DIAMETER RETURN HOSES

Improve hydraulic performance for smooth loading operation & improved cycle time

# OPERATOR COMFORT



## OPERATOR SEAT

Easily adjustable Full suspension seat with adjustable arm rest

## SMOOTH LEVER CONTROLS

Ergonomically placed lever controls reduces fatigue over long working hours.

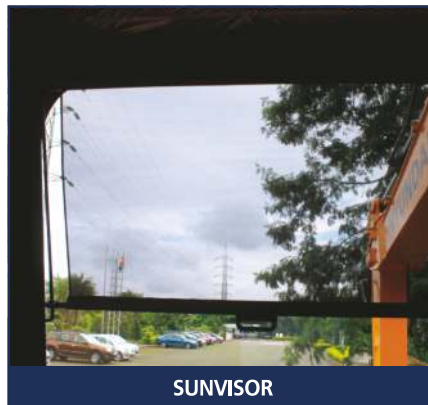
## SPACIOUS CABIN

More head room, large space, large door for easy entry and exit

360 degree allround visibility, fully open sunroof, added side lamp & mirror ensure comfortable, safe working environment, Rubber coated travel pedal, added foot rest.



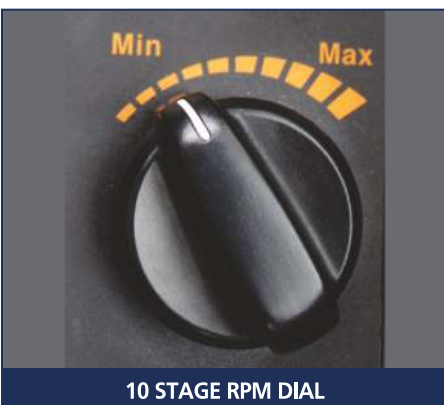
CABIN FAN



SUNVISOR

## IMPROVED COMFORT & CONVENIENCE

- Mobile Holder
- 24 V Charger
- Front side AC vent
- Standardized Hour Meter



10 STAGE RPM DIAL



SUNROOF



## AIR CONDITIONER (OPTIONAL)

- High cooling performance
- Improved AC ducting
- Water bottle cooling system

# > RELIABILITY



## DURABLE FRONT STRUCTURE

Use of specialized steel plates and reinforced design for higher strength and durability

Bucket pin direction change for operator visibility.



## HEAVIER COUNTERWEIGHT

Counterweight increased to 550 kg for improved stability.



## RUGGED UNDERCARRIAGE

Reinforced Lower & Upper frame for higher durability & service life. Excellent resistance to torsional bending to enhance structural life.



## BALANCED SWING SYSTEM

Swing gear uses a ball bearing to absorb radial and thrust load



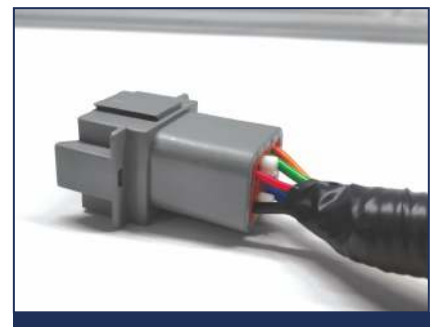
## CASTED IDLER & THICKER TRACK LINK

Casted idler built to withstand high shock & impact load. Thicker track link for longer life.



## BELLY GUARD

Additional protection from external damage



## RELIABLE ELECTRICALS

- Dust and water proof connectors
- Longer component life



# SERVICEABILITY

## EXTENDED MAINTENANCE INTERVAL

Enhanced filtration system extends hydraulic life upto 5000 hrs and Engine oil life upto 500 hrs, which reduces the maintenance cost

### CHANGE INTERVAL

Hydraulic oil	5000 hrs
Hydraulic filter	1000 hrs
Engine oil	500 hrs
Engine Filter	500 hrs

## MAINTENANCE MANAGEMENT



Items	INTVL	Rest
Engine oil	500	444
Engine oil filter	500	444
Air Cleaner el...	500	444
Prefilter	500	444
Fuel filter ele...	500	444

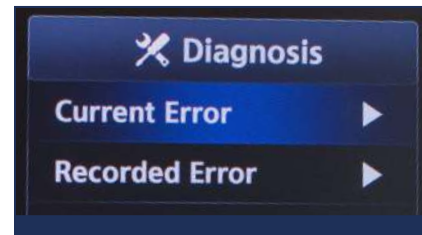


## LARGE LCD MONITOR

Operator can check the machine's vital signs without any difficulties

- **Maintenance Management**  
Proactive maintenance
- **Self Diagnostic**  
Reduces down time
- **Warning Indicator**  
Ensures safe working

## SELF DIAGNOSTIC SYSTEM



## EASY ACCESSIBILITY

Hyundai's SMART PLUS machines feature easy service access to increase machine uptime and reduce maintenance cost

## NEW DESIGN ENGINE HOOD

Fully openable engine hood makes daily service checks easier even from ground. New hood with steel mesh design provides extra protection & longer service life.



# > SAFETY

## SAFETY - MORE THAN A PEACE OF MIND AND OPERATOR CONFIDENCE

Cabin is integrally welded using high strength steel to provide enhanced protection. Handrails and steps are provided for easy operation. Anti-slip pads provide safety against skidding while climbing machine.

- New fabricated tool box is more user friendly and provides better service life.
- New design counterweight increases tail swing & safeguard engine hood.



### COUNTER BALANCE VALVE

Works as a hydrostatic brake and prevents machine against accidental roll down in steep gradients.



### BOOM & ARM HOLDING SYSTEM

Prevent attachments from drifting against gravity due to prolonged overhanging.



### ANTI RESTART FUNCTION

Prevents starter from damage during engine operation



### BATTERY DISCONNECT SWITCH

Cut off power during maintenance and protect batteries from excessive drain



### AUTO ENGINE OVERHEAT PREVENTION

Auto Deceleration with activation of engine overheat warning to avoid catastrophic failure

# > PARTS & SUPPORT

## HYUNDAI GENUINE PARTS

Developed in synergy with our machines, Hyundai parts and lubricants ensure that you get the high levels of performance, reliability and safety that come with the complete Hyundai experience. Enjoy the confidence and assurance of the most stringent testing procedures and the high quality manufacturing processes safeguarding your machine's health. Experience the versatility of our 200+ strong outlet network across India

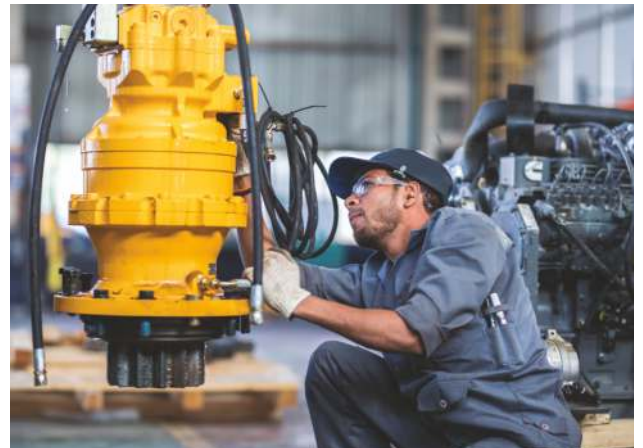
## WHY RISK IT?

Maximize profits and extend your machine's life.

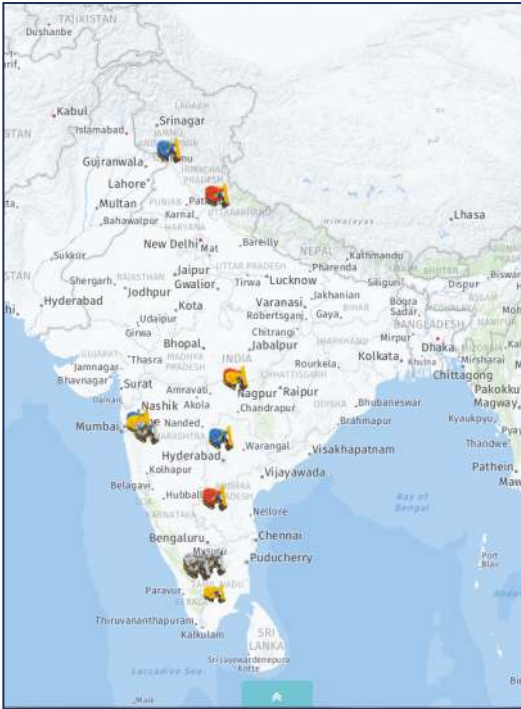


## BENEFITS OF USING GENUINE HYUNDAI PARTS AND LUBRICANTS

- Genuine Hyundai Parts meet strict specifications and standards in Chemistry, Microstructure and Tensile Strength.
- Benefit from the continuous improvements and advancements made by Hyundai's technical team
- Improved performance of hydraulics and engine components
- Enjoy greater productivity with higher uptime
- Higher resale values
- Reduced oil consumption and unexpected breakdowns
- Enhanced component life



Our unique remote management system allows customers to access machine operating information & obtain service & maintenance alerts at the touch of a button

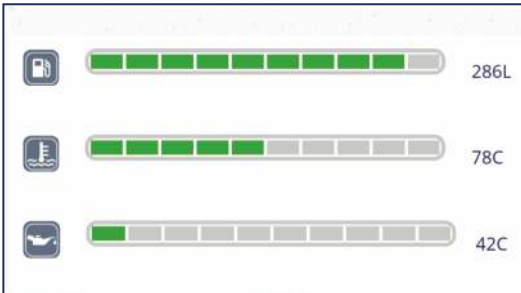


## INCREASED PRODUCTIVITY

Remote management system empowers you to enhance the efficiency of your operations. Make better decision by comparing the machine's operating time with its travelling idling & breaker use duration.

## CONVENIENT & EASY MONITORING

Enjoy round the clock and on the move access to your machine information through the website or mobile app.



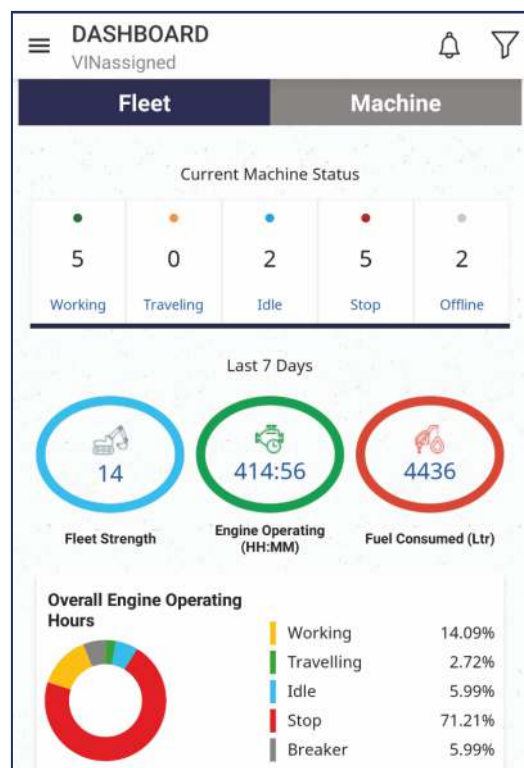
## PROACTIVE MAINTENANCE

Access your machines service & maintenance history with the utmost convenience. Plan your service schedules intelligently with our regular reminders.

SELECT REPORTS	
Geo Zone In/Out Detail	<input checked="" type="radio"/>
Fault Code	<input type="radio"/>
Vehicle Usage Summary	<input type="radio"/>
Temperature Record	<input type="radio"/>

## ALARMS

Get notified of system alarms & protect your machine from critical faults & experience repairs.



## SECURITY & FLEET MONITORING

Protect your machine from theft or unauthorized use. GPS features allows you to create a geo-fence & alerts you if the machine moves out of the defined boundary.

# SPECIFICATIONS

## Engine

<b>Maker/Model</b>		<b>KIRLOSKAR 4R1040NA</b>	
Rated flywheel horse power	SAE	J1995 (Gross)	76 HP (56.7 kW) @ 2200 rpm
		J1349 (Net)	73 HP (54.4 kW) @ 2200 rpm
Max Torque		6271/1 (Gross)	77 PS (56.7 kW) @ 2200 rpm
		6271/1 (Net)	74 PS (54.4 kW) @ 2000 rpm

## Hydraulic System

<b>Main pump</b>	
Type	Two variable displacement piston pumps
Max. flow	2 x 75.6 lpm
Sub-pump for pilot circuit	Gear pump
Cross-sensing & fuel saving pump system	

## Hydraulic Motors

Travel	Two speed axial piston motor with counter balance valve and pairing brake
Swing	Axial piston motor with automatic brake

## Relief Valve Settings

Implement circuits	280 kgf/cm <sup>2</sup>
Travel	280 kgf/cm <sup>2</sup>
Swing Circuit	210 kgf/cm <sup>2</sup>
Pilot Circuit	35 kgf/cm <sup>2</sup>
Service valve	Installed

## Coolant & Lubricant Capacity

REFILLING	LITRE
Fuel tank	135
Engine coolant	10.8
Engine oil	11.5
Swing device-gear oil	1.5
Final drive (each)	1.2
Hydraulic system / Hydraulic tank	130 / 75

## Drives & Brakes

Drive method	Fully hydrostatic type
Drive motor	Axial piston motor in-shoe design
Reduction system	Planetary reduction gear
Max. drawbar pull	5900 kgf (13,000 lbf)
Max. travel speed (high/low)	4.8 kmph (3 mph) / 3.0 kmph (1.9 mph)
Gradeability	35 Degree (70%)
Parking brake	Multi wet disc

## Undercarriage

The X-leg type center frame is integrally welded with reinforced box-section track frames. The undercarriage includes lubricated rollers, idlers, track adjusters with shock absorbing spring and sprockets and track chain with triple grouser shoes.

Centre frame	X-leg type
Track frame	Pentagonal box type
No. of shoes on each side	38
No. of carrier rollers each side	1
No. of track rollers. each side	5
No. of rail guard each side	1

## Swing System

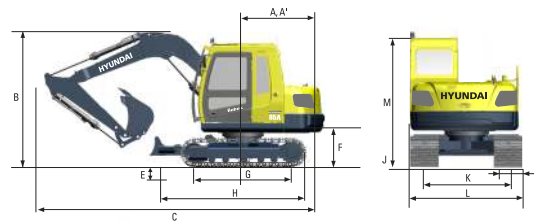
Swing motor	Axial piston motor
Swing reduction	Planetary gear reduction
Swing bearing lubrication	Grease bathed
Swing brake	Multi wet disc
Swing speed	12.0 rpm

## Operating Weight

Shoe Width mm (in)	Operating weight kg (lb)	Ground pressure kgf/cm <sup>2</sup> (psi)
450 mm (18")	8,100 (17,857)	0.38 (5.46)

## Dimensions

(mm)



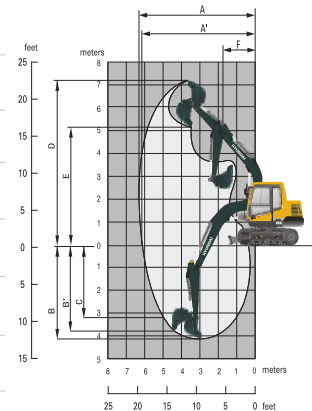
A	Tail swing radius	1780
A'	Rear-end length	1727
B	Overall height of boom	2750
C	Overall length	6110
D	Ground clearance of blade up	400
E	Depth of blade down	280
F	Ground clearance of counterweight	760
G	Tumbler distance	2130
H	Length of lower blade with dozer blade	3340
I	Min. ground clearance	360
J	Track shoe width	450
K	Track gauge	1750
L	Overall width of upperstructure	2250
M	Overall height of cabin	2640

## Working Ranges

(mm)

<b>Boom length (std.)</b>	<b>3,700</b>
<b>Arm length (std.)</b>	<b>1,670</b>

A	Maximum Digging Reach	6,287
A'	Digging Reach on Ground	6,151
B	Max Digging Depth	4,205
B'	Max- Digging Depth (8' level)	3,842
C	Vertical Digging Depth	3,312
D	Maximum Digging Height	7,121
E	Maximum Dumping Height	5,096
F	Minimum Swing Radius	1,786



# LIFTING CAPACITIES

## LIFTING CAPACITIES R85A SMART



Rating over-front



Rating over-side

- Boom: 3.7m (12'2") • Arm: 1.67m (5' 6") • Bucket :0.35m<sup>3</sup> SAE Heaped
- 450mm Triple Grouser Shoe Dozer Blade with 550kg CWT

Load point height m (ft)		Load radius						At max. reach		
		1.5m (4.9ft)		3.0m (9.8ft)		4.5m (14.8ft)		Capacity		Reach
										m (ft)
6.0m (19.7ft)	kg							*1630	*1630	2.43 (8.0)
	lb							*3590	*3590	
4.5m (14.8ft)	kg			*1770	*1770			*1310	*1310	4.25 (13.9)
	lb			*3900	*3900			*2890	*2890	
3.0m (9.8ft)	kg	*3740	*3740	*2310	*2310	1810	1530	*1310	1250	5.05 (16.6)
	lb	*8250	*8250	*5090	*5090	3990	3370	*2890	2760	
1.5m (4.9ft)	kg			*3250	2710	1710	1440	1290	1090	5.33 (17.5)
	lb			*7170	5970	3770	3170	2840	2400	
0m (0ft)	kg			3100	2510	1630	1360	1310	1100	5.18 (17.0)
	lb			6830	5530	3590	3000	2890	2430	
-1.5m (-4.9ft)	kg	*4270	*4270	3060	2480	1610	1340	1590	1330	4.54 (14.9)
	lb	*9410	*9410	6750	5470	3550	2950	3510	2930	
-3.0m (-9.8ft)	kg	*3960	*3960	*2330	*2330			*2220	*2220	3.12 (10.2)
	lb	*8730	*8730	*5140	*5140			*4890	*4890	

1. Lifting capacity is based on SAE J1097, ISO 10567.
2. Lifting capacity of the Robex Series does not exceed 75% of the tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
3. The load point is a hook (standard equipment) located on the back of the bucket.
4. (\*) indicates the load limited by hydraulic capacity.



# SPECIFICATIONS

## BUCKETS

All buckets are welded with high-strength steel.

### GENERAL PURPOSE



SAE heaped \*0.35m<sup>3</sup>(0.42 yd<sup>3</sup>)

### HEAVY DUTY



SAE heaped ● 0.32m<sup>3</sup>(0.38 yd<sup>3</sup>)

Capacity m <sup>3</sup> (yd <sup>3</sup> )		Width mm (in)		Weight. kg (lb)	Recommendation mm (ft -in)
SAE heaped	CECE heaped	Without side cutters	With side cutters		3.70m (12' 2") Boom
* 0.32m <sup>3</sup> (0.42yd <sup>3</sup> )GP	0.27m <sup>3</sup> (0.35yd <sup>3</sup> )	725	820	305 (672)	■
● 0.32m <sup>3</sup> (0.38yd <sup>3</sup> )HD	0.27m <sup>3</sup> (0.35yd <sup>3</sup> )	746		292 (644)	■
* 0.35m <sup>3</sup> (0.42yd <sup>3</sup> )GP	0.29m <sup>3</sup> (0.38yd <sup>3</sup> )	868	962	330 (728)	▲

\* : Standard backhoe bucket

● : Heavy Duty bucket

■ Applicable for materials with density of 1,600 kg/m<sup>3</sup> (2,700lb yd<sup>3</sup>) or less

▲ Applicable for materials with density of 1,100 kg/m<sup>3</sup> (1,850 lb/yd<sup>3</sup>) or less

## ATTACHMENT

Boom and arm are of all-welded with a low-stress, full-box section design. 3.70m (12'2") mono boom and 1.67m (5'6") Arm is available. Buckets are all-welded, high-strength steel implements.

Arm	Length Weight	mm (ft.in) kg (lb)	*1,670 (5' 6") 310 (680)
Bucket digging force	SAE	kN	45.3
		kgf	4,620
		lbf	10,185
	ISO	kN	51.4
		kgf	5250
		lbf	11,574
Arm crowd force	SAE	kN	38
		kgf	3874
		lbf	8540
	ISO	kN	38.6
		kgf	3943
		lbf	8692

\*: Standard arm weight including cylinder and linkage

# > STANDARD / OPTIONAL LIST

## Standard Equipment

### ISO standard cabin

All-weather steel cab with all-around visibility  
 Safety glass windows  
 Sliding fold-in front window  
 Sliding side window  
 Rear open window  
 Lockable door  
 Accessory box & Ashtray  
 Door and Cab locks, One key  
 Operators seat  
 Slidable joystick, pilot operated  
 Self diagnostic system  
 Centralized monitoring  
 Engine coolant temperature gauge  
 Hydraulic oil temperature gauge  
 Sun visor for cabin inside

### Warning

Engine coolant & fuel level  
 Engine oil pressure  
 Engine coolant temperature  
 Hyd. oil temperature  
 Low battery  
 Air cleaner clogging  
 Fan  
 Radio/USB Player  
 Two front working lights  
 Electric horn  
 Batteries (2x12v x 68AH)  
 Battery master switch  
 Removable clean out screen for oil cooler  
 Automatic swing brake  
 Removable reservoir tank  
 Water separator, fuel line  
 Boom holding system  
 Arm holding system  
 24V Power Socket

Counterweight (550kgs, 1212 lb)  
 Mono boom (3.7m, 12'2")  
 Arm (1.67m, 5' 6")  
 Standard bucket (0.35m<sup>3</sup>, 0.42yd<sup>3</sup>)  
 Track shoes (450m, 18")  
 Track rail guard  
 Lower frame under cover  
 Operator kit  
 Tool kit  
 Remote management system (Hi-Track)

## Optional Equipment

Travel alarm  
 Operator seat belt  
 Fire extinguisher  
 Track shoes (600mm, 24")  
 HD bucket (0.32m<sup>3</sup>, 0.38yd<sup>3</sup>)  
 General purpose bucket (0.32m<sup>3</sup>, 0.42yd<sup>3</sup>)  
 Salt bucket (0.70m<sup>3</sup>, 0.84yd<sup>3</sup>)  
 Air Conditioner  
 Rock Breaker  
 LED Work lamp



## HD Hyundai Construction Equipment India Pvt. Ltd.

### Factory Location

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