

VECTRA 175

SKID STEER LOADER

ONE MAN ARMY



HEMAN 175 SKID STEER LOADER



THE HEMAN 175 SKID STEER LOADER is an engineering marvel in the earth moving equipment industry, complete with compactness, maneuverability and versatility. The finest quality of the machine is its dexterity, which is made possible by the four-wheel drive system. Each side is independent of the other maximising the mobility in a very small radius.

The drive system is hydrostatic and has each set of wheels on either side connected to an independent drive motor, through a gear train which provides slip free drive to the wheels. The forged gears are hardened for a longer life and are immersed in an oil bath providing continuous lubrication.

This machine is built on the foundation of providing operator safety, reliability, easy maintenance and low total cost of ownership. When it comes to the test of strength, endurance and surviving the tough Indian conditions, the HEMAN 175 Skid Steer Loader, has it all more than any other machine.

INNOVATION • SERVICE • EXCELLENCE

ICAT
INTERNATIONAL CENTRE FOR AUTOMOTIVE TECHNOLOGY
(A Division of NATRIP Implementation Society (NATIS), Govt of India)

Date: 12th December 2011

C A G N 2113

CERTIFICATE
FOR COMPLIANCE TO THE CENTRAL MOTOR VEHICLES RULES
(CONSTRUCTION EQUIPMENT VEHICLES)

Based on the application of documents and data submitted for the above model "Heman 175 Skid Steer Loader" manufactured by M/s. VECTRA Advanced Engineering (P) Ltd., Plot No. 28, Udyog Vihar, Greater Noida, UP-201 305, India. It is certified that this machine complies with the Central Motor Vehicles Rules, 1989 and shall be valid for the period of 10 years from the date of issue of this certificate.

BASE MODEL:	Heman 175 Skid Steer Loader	SEATING CAPACITY:	1 Person
TYPE:	Skid Steer Loader	SEATING CAPACITY:	1 Person
Model, Engine Power:	44.1 kW @ 2000 rpm	SEATING CAPACITY:	1 Person

The above certificate is issued for the model "Heman 175 Skid Steer Loader" manufactured by M/s. VECTRA Advanced Engineering (P) Ltd., Plot No. 28, Udyog Vihar, Greater Noida, UP-201 305, India. It is certified that this machine complies with the Central Motor Vehicles Rules, 1989 and shall be valid for the period of 10 years from the date of issue of this certificate.

Compliance Requirement	Effective Date	Compliance No.	Date
Applicability for the respective CMC Rules	27.02.2011	CMC 175/11	12.12.2011
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AUTHORIZED SIGNATURES:

S. K. KALIA
GENERAL MANAGER

DNESH TYAGI
DIRECTOR

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ANNEXURE - I
TO CMV CERTIFICATE No. (CONSTRUCTION EQUIPMENT VEHICLES)

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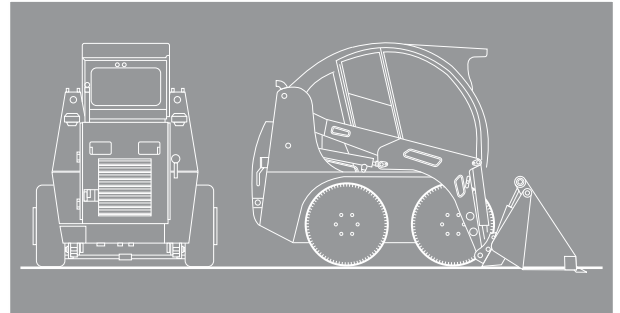
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THE 10 COMMANDMENTS OF HEMAN SKID STEER LOADER

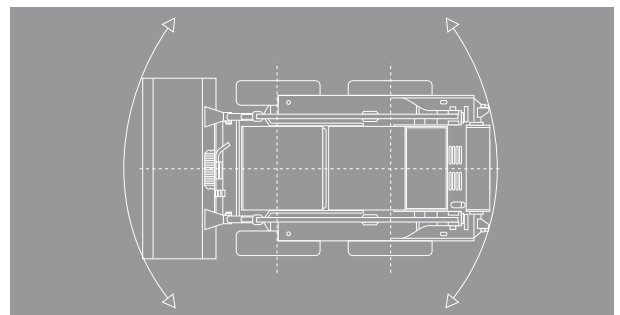
1. MANEUVERABILITY

The perfect geometry and proper weight distribution enables the HEMAN 175 to maneuver quickly and efficiently in confined areas.



2. COMPACTNESS

The HEMAN 175 is narrow and built low which allows it to work in congested areas. Low height helps in easy Mobility through small doors and passages.



3. AGILITY

To negotiate steep gradients, four-wheel drive, low centre of gravity, correct balance and ground clearance are a must. The HEMAN 175 possesses all these qualities, which also ensure a smooth operation on all surfaces from clay, marsh and gravel to rocky ground.



4. POWER & ECONOMY

Having matched engine and drive units an efficient delivery of correct torque to wheels is achieved. Moreover, matched hydraulics provide an excellent digging power and breakout force with economical fuel consumption.



5. VERSATILITY

The HEMAN 175 turns into a multi-purpose tool with a host of attachments to suit different applications. The standard Quick Hitch makes changing from one attachment to the other, easy and slick.



6. SIMPLE OPERATION

The HEMAN 175 is ergonomically designed with precise and smooth controls for ease of operation and minimum physical effort. Even the inexperienced operators become familiar and competent with the HEMAN 175 in a very short time.



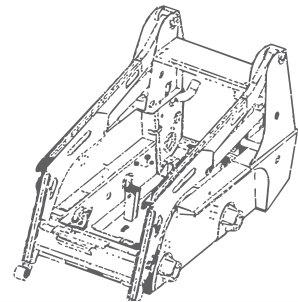
7. OPERATOR SAFETY AND COMFORT

HEMAN 175 has an optimal visibility in all directions. It comes loaded with a full rollover protective structure, comfortable adjustable seat, safety seat belt. The machine starts only when the operator is sitting on the seat and the safety belt is in place. As soon as the operator lifts the restraint bar, the parking brakes and locks for hydraulic control are automatically applied, the release of which only takes place when the operator is in place and the restraint bar is pulled down.



8. RELIABILITY

The HEMAN 175 comes with a robust construction and fewer working parts highlighting its strength and ease. The hoses are tucked away and the engine and drive units are fully enclosed and protected.



9. EASY MAINTENANCE

The routine maintenance is reduced to the minimum and comfort factor is given importance. Other features that add up to easy maintenance are use of single oil, self-indicating warning lights along with audible warning. Access is made easy with a tilt-up cab without use of any tool, thus saving time and effort. HEMAN 175 has been designed and tested in India to International standard.



10. LOW TOTAL COST OF OWNERSHIP

HEMAN 175 is the first-ever indigenously manufactured machine with an engine by Cummins/Simpsons. The machine is highly fuel efficient and maximises productivity. Together with major components from the world's largest manufacturers, this advanced design provides the best in its class.

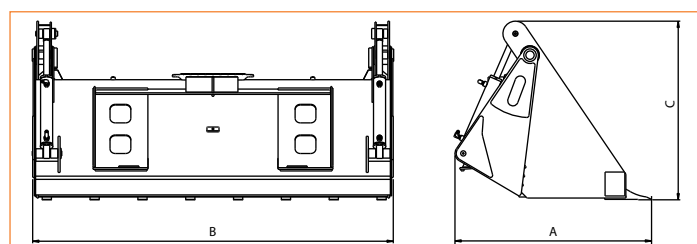


COMBINATION BUCKET



TECHNICAL SPECIFICATIONS

No. of Teeth	8 (Bolt on)
Capacity (SAE Heaped)	0.46 Cu m
Jaw Opening (mm)	900
Operating Weight (Kg)	290
Overall Length (mm)	1020
Overall Width (mm)	1738
Overall Height (mm)	868



Note : All dimensions are variable within $\pm 1.5\%$. VAEPL reserves the right to change specifications without prior notice

APPLICATIONS

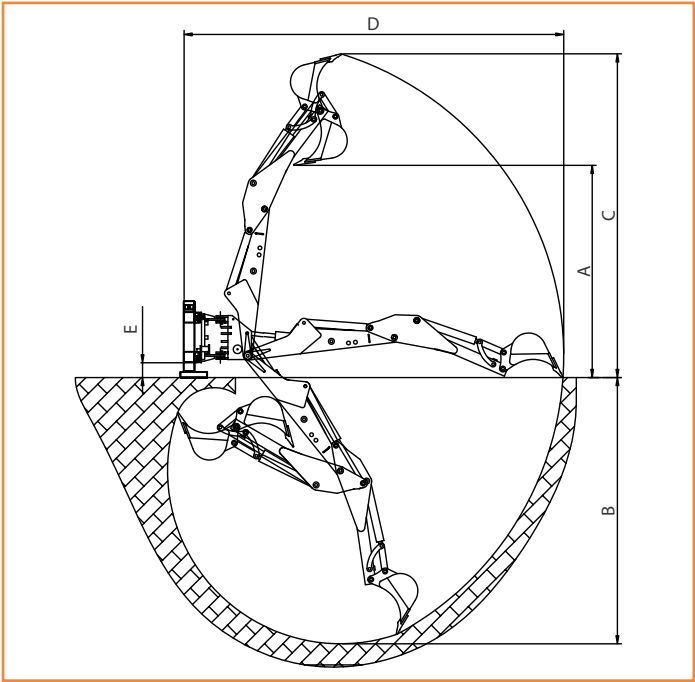
- Construction • Demolition
- Landscaping • Renovation



HEMAN 175 SKID STEER LOADER



BACKHOE



TECHNICAL SPECIFICATION

Hydraulic backhoe with transeatable frame and mechanical block, hydraulic and independent stabilize feet, main joints with pins and bushes in hardened and rectified steel, linkage kit for skid-steer loader and backhoe loader.

Digging depth (mm)	2600
Weight (Kg.)	600
Frame largeness (mm)	1400
Swing each side	90°
Oil flow (LPM)	80
Pressure (Bar)	175
Bucket Breakout Force (KN)	23



A (mm)	1950
B (mm)	2600
C (mm)	2965

D (mm)	3545
E (mm)	200

Bucket size available 300mm, 450mm, 600mm Ditch Cleaning
Bucket 600 mm
Side Shift feature is also available

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SWEeper COLLECTOR



TECHNICAL SPECIFICATION

Sweep Collector with bucket and polypropylene brushes, universal linkage kit for skid steer loader, front and lateral protections with rubber bands. Working through the hydraulic circuit of Skid Steer Loader. Caster wheels for better and smooth operation and bolted blade.

Width (mm)	1670
Working Width (mm)	1545
Weight (Kg)	385
Brush (mm/hr)	560/32
Capacity Bucket (Lt.)	430
Continuos - Intermittent Oil Flow (Lpm)	57-68
Continuos - Intermittent Pressure (Bar)	115-124

Note : All dimensions are variable within $\pm 1.5\%$. VAEPL reserves the right to change specifications without prior notice

OPTION

Sweeper Collector is available with suction features

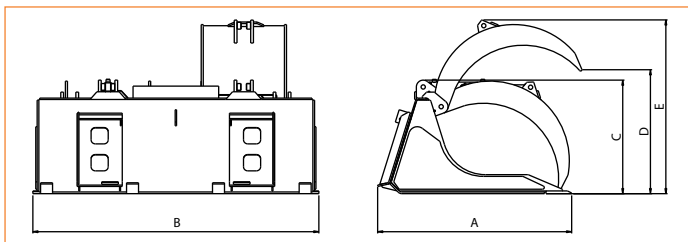


INDUSTRIAL GRAPPLER



TECHNICAL SPECIFICATIONS

No. of Grappler x Teeth	2 x 2
Max Height with Grappler Raised (mm)	1111
Jaw Opening at Max. Open Height (mm)	952
Operating Weight (Kg)	415
Overall Length (mm)	1133
Overall Width (mm)	1670
Overall Height (mm)	662



APPLICATIONS

• Construction • Recycling • Landscaping

MAIN FEATURES

- Move hard to handle material easily.
- Hydraulically controlled grapple is easy to operate.
- Handles bulky, uneven loads securely.



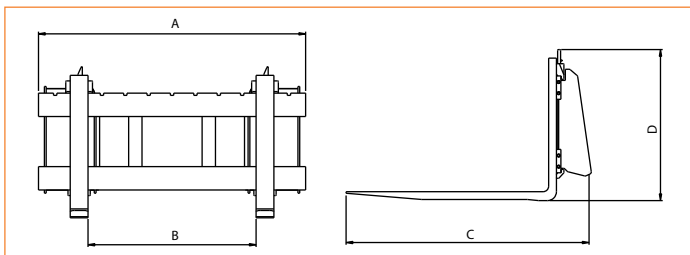
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PALLET FORK



APPLICATIONS

- Move bulky or palletized material with ease
- Ideal for construction sites, farm chores, fertilizer handling, industrial plants etc.



TECHNICAL SPECIFICATIONS

A (mm)	1155
B (mm)	753
C (mm)	1095
D (mm)	638
Capacity (Kg.)	600
Approx. Weight (Kg)	138



Note : All dimensions are variable within $\pm 1.5\%$. VAEPL reserves the right to change specifications without prior notice

EARTH AUGER



TECHNICAL SPECIFICATIONS

Operating Weight (Kg)	70
Max. Drilling Depth (m)	1.55
Max. Auger Torque (Nm)	3500
Max. Hydraulic Pressure (Bar)	230
Max. Hydraulic Flow (Lpm)	50-80
Available Auger Bits Dia (mm)	D = 150, 300 & 450

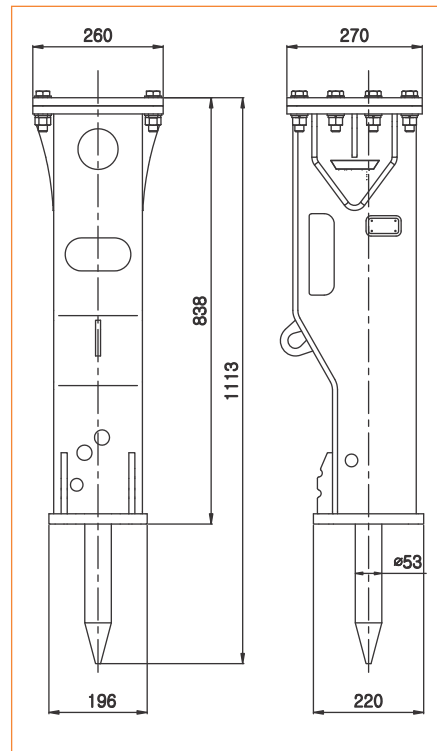
APPLICATIONS

Dig holes for posts, piers, poles or trees.



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ROCK BREAKER



TECHNICAL SPECIFICATIONS

Working Weight (Kg)	225 kg
Impact Frequency (BPM)	600 ~ 950
Operating Pressure (Bar)	90 ~ 120
Relief Pressure (Bar)	140 ~ 160
Oil Flow (l/min)	25 ~ 40
Back Pressure (Bar)	10
Tool Diameter (mm)	53
Oil Temperature (°C)	-20 ~ +80
Hydraulic Oil Viscosity (cSt)	1000 ~ 15
Pressure Line Size (mm)	12
Return Line Size (mm)	12
Backhead Pressure (Bar)	16
Carrier Weight (Ton)	1.2 ~ 3.5

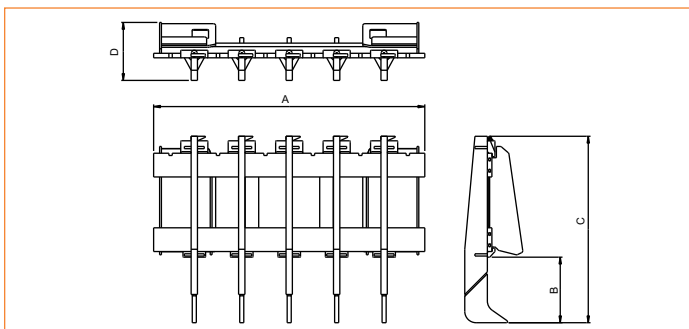
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RIPPER TOOTH



APPLICATIONS

Enables the operator to break up frozen or compacted earth surfaces and concrete or tarmac.



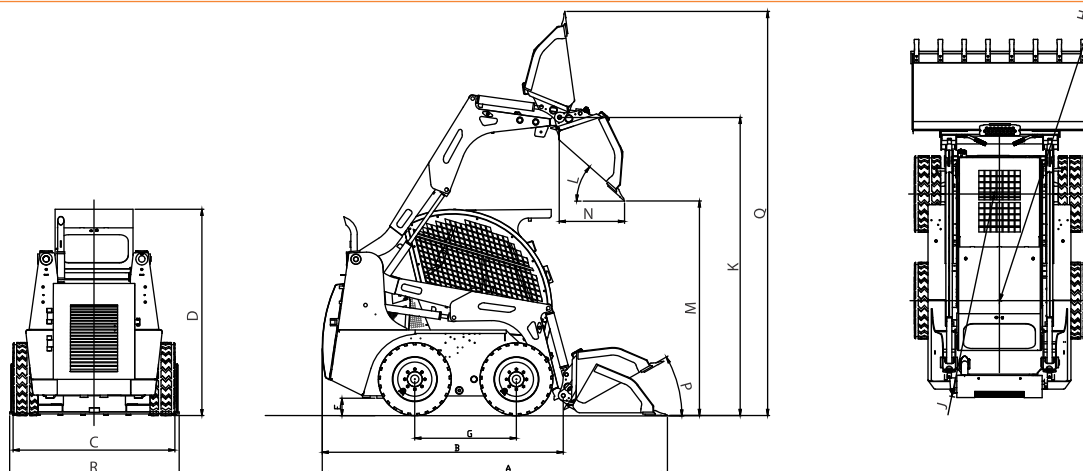
TECHNICAL SPECIFICATIONS

A (mm)	1200
B (mm)	310
C (mm)	850
D (mm)	256.4
Approx. Weight (Kg)	160

Note : All dimensions are variable within $\pm 1.5\%$. VAEPL reserves the right to change specifications without prior notice

**VECTRA**

HEMAN 175 SKID STEER LOADER



DIMENSIONS

	mm/deg
A - Length with bucket	3475 / 3621
B - Length without bucket	2570
C - Width with tyres	1650
D - Overall Height	2100
E - Ground clearance	190
F - Departure angle rear	26
G - Wheelbase	1023
H - Turning radius rear corner	2000 / 2134
J - Turning radius bucket corner	2680
K - Pin height	3022
L - Dump angle	40
M - Dump Height	2210
N - Reach at dump height	642
P - Roll back angle at ground	28
Q - Max reach at full height	4000
R - Bucket width (Standard)	1708

FEATURES

Multi-disc parking brakes
 Gear drive
 Front cab access
 Fuel water trap
 Hydraulic parallel lift
 Adjustable seat
 Instruments audio/visual
 Instruments
 Dual element air cleaner
 Chassis-rigid fully welded high tensile steel structure
 Roof window for enhanced operating visibility.
 Rear window for emergency exit.
 Heavy duty gear boxes with slip-free gears.
 Axles of high ductile forgings, self lubricating.

Mechanical hitch for quick change of attachments.

Ergonomically designed seat, user friendly controls.
 Visual and audio warning to prevent system failures.
 Adequate inbuilt safety measures for operator/machine.
 Hydraulic tilt back cabin for maintenance ease.
 Easy to maintain and service with normal tools.

TRANSMISSION

Hydrostatic 4X4 independent drive through
 Tandem variable displacement axial pumps
 Fixed displacement low speed high torque gerola motors

Final drive through positive gear boxes

TYRES

Front/ rear	10X16.5-10/8PR
Max. travel speed	13 kmph

SPECIFICATION

SAE Operating weight	2990/2965Kgs
Standard bucket capacity	0.40 / 0.46 cum
Maximum lift height	2955 mm
Time to raise lift arms fully	3-5 Sec.
Breakout force-bucket	1885Nm
Breakout force-lift arm	1445Nm

STANDARD FEATURES

Auxiliary hydraulics
 Cab - swing up
 Tubeless tyres
 Key stop
 Lift arm stop
 Lifting eyes
 Working light
 Quick hitch
 Roof window
 Safety Seat belt
 Air Cleaner clog warning indicator
 Battery charge
 Charge pump pressure
 Coolant temperature gauge
 Engine oil pressure
 Fuel level gauge
 Hour counter
 Hydraulic oil temperature gauge
 Cabin light
 Rear window for emergency exit
 Hydraulic clog indicator
 Fuel clog indicator
 Cab with front door lock
 Rear view mirrors
 Wiper motor with wiper blade
 Cabin fan
 Head lights with side indicators
 Tool kit
 4 chamber tail lamps

HYDRAULICS

Engine driven gear pump with valve block, twin arms lift cylinder with end cushion and bucket cylinders.	
Flow (Liters per min)	80
Working pressure (bar)	175

ELECTRICALS

12 volts negative earth system with battery isolator	
Battery	130AH/150 AH
Low maintenance alternator	35 / 65Amp
Starter motor	12 V

BRAKES

Service brake: Hydraulically activated and released
 multi plate Fade free breaks from integral part of drive motors.
 Parking Brake: Electrically activated

CAPACITIES

Fuel system	62 Liters
Engine lub oil	8 / 9.5 Liters
Engine coolant	16 Liters
Transmission	14 Liters
Hydraulic system	70 Liters

PERFORMANCE

Rated operating capacity	600-750 Kgs
Tipping load	1200-1500 Kgs

ENGINE

BS III Model

Simpson S433 Industrial BS III, 35.79kW/ 48HP/ 48.67PS @2200rpm 4 Cylinder, Liquid Cooled, Diesel Engine, Naturally Aspirated

BS IV Model

Simpson SJV436 Industrial BS IV, 54kW/72.42HP/ 73.42PS @2200rpm, 4 Cylinder, Liquid Cooled, Diesel Engine, Turbo Charged

ATTACHMENTS

6 IN 1 Bucket
 Sweeper collector
 Ripper tooth
 Backhoe
 Excavator Bucket: 300mm,450mm,600mm & Ditch Cleaning bucket.
 Pallet Forks
 Industrial grappler
 Rock breaker
 Snow blower
 Steel tracks(Track over tyres)
 Rubber tracks (Track over tyres)
 Post hole borer/ Auger
 Shredder
 Snow Blade
 Stump Grinder
 Trencher
 Side Tip Bucket
 High Tip Bucket

OPTIONAL

Heavy duty tyres/ Solid tyres -Tubeless
 Buckets: Varying capacities upto 0.65 cum limited to machine rating operating capacity.
 Servo Variant also available

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The spirit of great nations, success of great enterprises and power of great brands is built on the founding principle of Working Together. The guts to face everyday challenges and emerging victorious each time, evolves from this belief. The people and resources involved in the process walk together, inspiring each other to attain new heights.

Marching forward on this philosophy, Vectra has mustered the finest technology and infrastructure with the best talent in the industry, to constantly work together for delivering nothing other than the best. This belief comes from our inherent values of integrity, commitment, innovation, the passion to succeed and most of all teamwork. Standing on this platform emerges our strength of becoming a force to reckon with a force the world knows as Vectra.

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Dealers Stamp

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