

# SIMPLY OPTIMAL



**ROADMASTER** **G90**

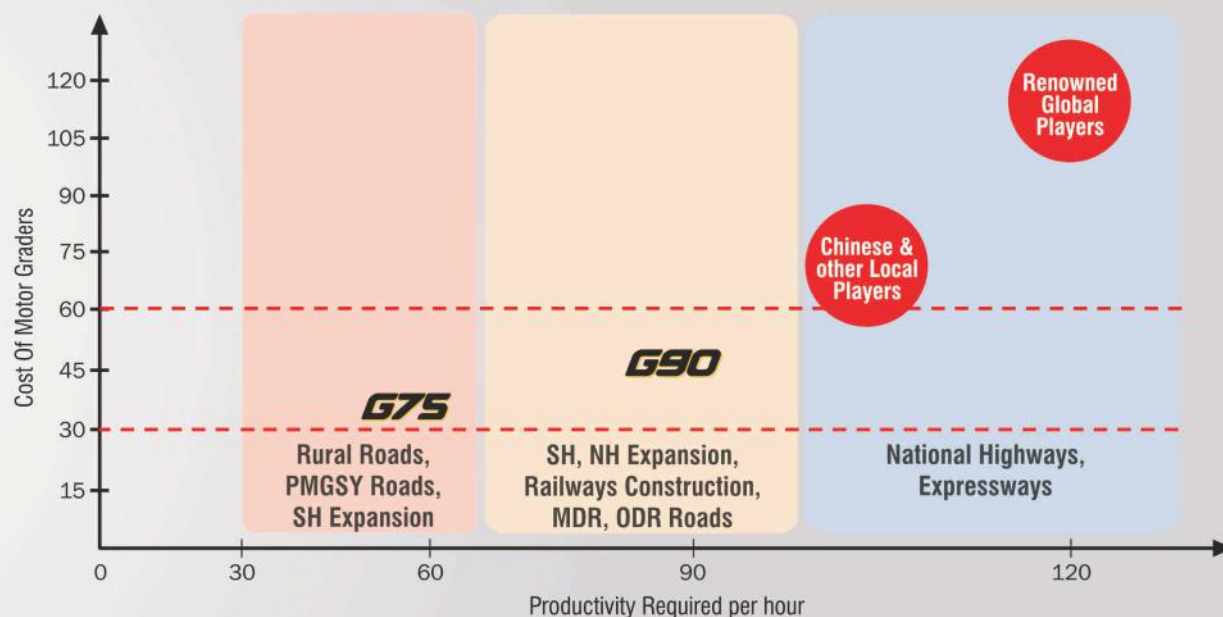


# Need for G90

## Underutilization of Motor Graders

Equipment	Avg. Daily Working (Hrs./day)
Backhoe Loader	8 - 10 Hrs.
Excavator	8 - 12 Hrs.
Motor Graders	4 - 6 Hrs.

- Most motor graders in the developing countries are used 4-6 Hours per day
- There is a prominent underutilization of the motor graders in the developing countries because:
  - The motor graders are not purpose designed specifically for these market
  - The supporting conditions like material availability at site, etc. are also not optimal

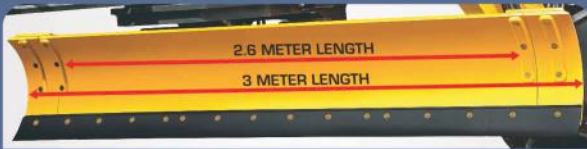


## G90 Application Suitability

Applications	National Highway, Expressways	SH, NH Expansion, MDR, ODR roads	Railways Construction
No. of 10 tyre Tippers/Day* Material	>100	70 - 80	Upto 100
Conventional Grader Suitability	😊	😊	😊
G90 Suitability	😊	😊	😊
G90 Recommendation	Secondary	Best Suited	Best Suited

- Around 94% projects in India are of small and medium roads
- Many of these roads will be upgraded to SH and NHs in the coming years
- G90 is an optimal solution for many such intermediary applications

# G90 - The Optimal Solution



3m (10 ft) blade which can be reduced to 2.6m (8.5 ft)



X 7  
10 Tyre Tipper  
Material spread  
and graded  
per hour



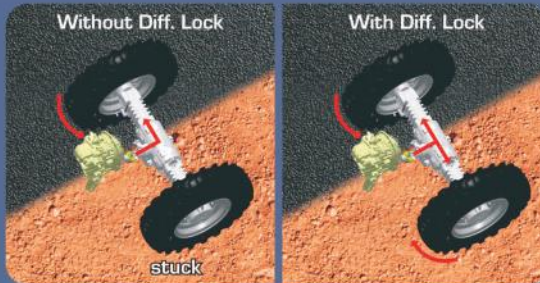
Blade rotation 50 Deg.  
Blade Tilt: 25.6 Deg./54\* Deg.  
Blade Side Shift: 1.1m  
Blade Pitch Angle:  
Forward: 40 Deg.  
Backwards: 5 Deg.



Powerful DOZER and 5-Tyre ripper



Powerful 91 HP DiTEC Engine



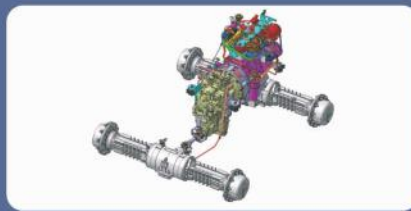
Mechanical 4WD with diff. lock

- Ideal for contractors who are renting big graders
- Optimal product for contractors having medium & big projects

## Simple Rugged Design



Advanced active hydraulics center pin damping for precise finish in lesser passes



Simple power-shuttle transmission and mechanical 4WD axles



50 Degree blade rotation with hydraulic cylinder mechanism

- Maintenance free hydraulics design with 80% routing through steel tubes
- Easy to transport either by road or by truck.



# Key Specifications

## Mahindra DiTEC BSIII Engine

- 91 HP Power @ 2200 rpm
- Max. Speed: 36.5kmph
- Fuel Efficiency: 8 to 9 lt/hr\*
- Productivity: 90 cum/hr\*

## Operator Comfort

- Spacious canopy
- Lockable storage
- Mobile charging
- Ergonomic Controls

## Vehicle Weight

- GVW: 8350 kgs
- FAW: 2800 kgs
- RAW: 5500 kgs

## Carraro Power Shuttle Transmission

- 4WD Transmission (4 speed)
- Steering mounted F/R switch
- Torque Converter Type Clutch

## Precision Hydraulics

- 2 X 26 cc tandem gear pump
- 54 lpm, 200 bar pressure
- 10 micron return line filter
- Load holding check valve

## Wheels

- All 6 wheels of equal size
- Tyres: 13 X 24 12 PR
- G2 Grader Duty Tyres

## Moldboard Dimensions (mm)

- 3000 + (2 X 200 mm Reduction) (W) X 516 (H) X 16 (T)
- Max. Blade Cutting Angle: 25.6°
- Max. Blade Rotation Angle: 50°
- Blade Side Shift: 1.1 mm
- Cutting Edge: 16 mm (T), 4 Parts
- Material: High Strength Steel

## Major Dimensions

- Turning Radius: 10 meter
- Overall Length: 8.578 meter
- Overall Height: 3.40 meter

## Optional Fitments

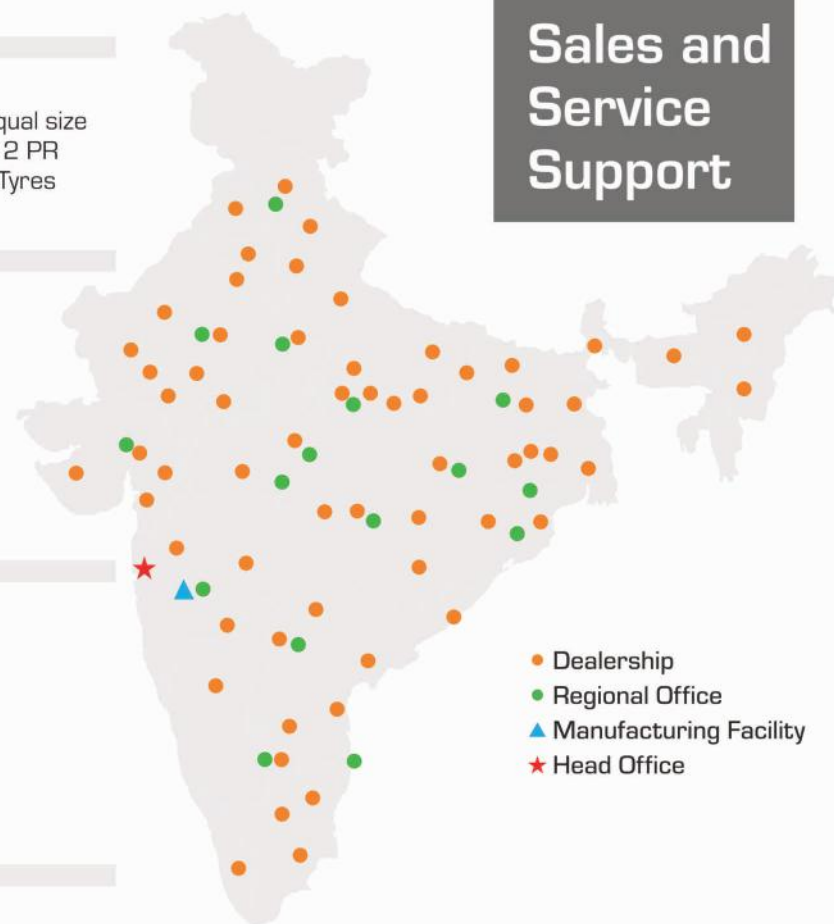
- 5 tyne Ripper
- Safe start kit

## Refill Capacities

- Hydraulic Tank: 50 Liters @ 2000 hr
- Fuel Tank: 85 Liters
- Engine Coolant: 17 Liters @ 1000 hr
- Engine Oil: 13.5 Liters @ 500 hr
- Transmission : 16 Liters @ 1000 hr
- Middle Axle / Rear Axle (Differential): 14.5 Liters @ 1500 hr
- Middle Axle / Rear Axle (Final Drive): 1.5 Liters (on each side) @ 1500 hr

Note: \* Depending on site condition and operator skill

## Sales and Service Support



**Mahindra**  
Construction Equipment  
GENUINE SERVICE



**Mahindra**  
Construction Equipment  
LUBRICANTS



**Mahindra**  
Construction Equipment  
ATTACHMENTS



**Mahindra**  
Construction Equipment  
GENUINE PARTS

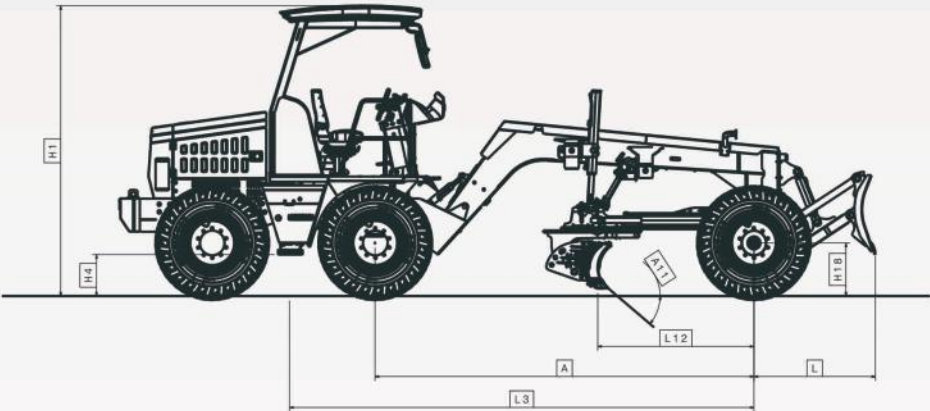
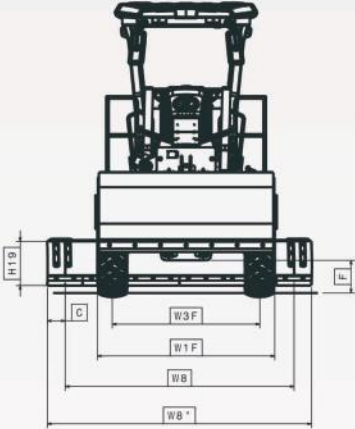
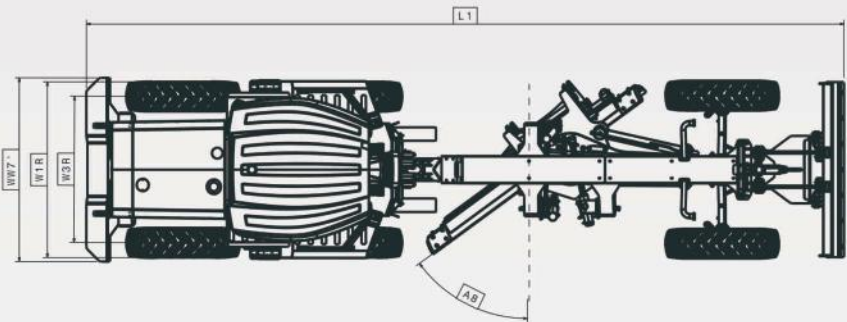


Dimensions Drawing

RIPPER ATTACHMENT



ROADMASTER G90





## Technical Specifications

Engine			
Model	Mahindra DiTec 4915 IA BSIII CEV		
Form of air aspiration	Turbocharged		
No of cylinders	4		
Bore	96 mm.		
Stroke	122 mm.		
Displacement	353cc		
High idle rpm	2400+/- 50 rpm		
Low ideal rpm	850+/- 50 rpm		
Cooling system	Water cooled		
Type of fuel	Diesel		
Gross horse power	66.9 kW [91 HP] @ 2200 ± 50 rpm		
Peak gross torque	345 Nm @ 1400 - 1600 rpm		
Electrical system voltage	12 V		

Operating Specification			
Gross vehicle weight	8350±167 kg.		
FAW	2800±56 kg.		
RAW	5500±110 kg.		
Speed @ gear (kmph)	Forward	Reverse	
1st	4.5 to 6.0	5.5 to 7	
2nd	7.5 to 9.0	9.0 to 10.5	
3rd	16.5 to 18.5		
4th	33.0 to 36.5		
Turning radius outside tyres	10 m		
Steering angle inner wheel	45°		
Steering angle outer wheel	32°		

Moldboard (in mm)			
Base length of M	3000+/-15		
Thickness of Moldboard	16+/- 0.5		
Blade height	H19	516+/-3	

Cutting Edge (blade) (in mm)		
Length of cutting edge w/o side extension (optional)	W8	2600+/-15 (3 Piece cutting edge) (1100 + 1100 + 400)
Standard length of cutting edge	W8"	3000+/-15 (4 Piece cutting edge) (1100+1100+400+400)
Width of Cutting Edge		152+/-2
Thickness of Cutting Edge		16+/-0.5

Note: Technical specifications, features are subject to change without prior notice. Images used are for representative purposes only. Accessories shown may not be a part of the standard product. Actual colors may vary E & O.E. All dimensions are variable within +/- 5%. For details on the warranty, please contact your dealer.

End Bit		
Width (mm)	C	200+/-1
Thickness (mm)		16+/-0.5
Blade pull force [kN]		27
Blade down force [kN]		27

Dimensions (in mm)			
Distance-between middle & rear axle	L9	1850	
Distance-between front & middle axle	A	4300	
Wheel base	L3	5225	
Distance - Front axle to moldboard - Blade base	L12	1691	
Transport length	L1	8578	
Ground clearance below front axle beam	H18	528	
Minimum ground clearance	H4	467	
Max vehicle height	H1	3290	
Track width - Front	W3F	1674	
Track width - Rear	W3R	1654	
Width- Outside front tires	W1F	2021	
Width- Outside rear tires	W1R	2001	
Width - Transport (Over rear counter weight)	WW7	2080	

Blade Range			
Circle rotation angle	A8	50°+/-1.5° from transverse of vehicle	
Circle drive	Hydraulic cylinders with no end mechanical stoppers		
Blade side shift (LH/RH)	513+/-2.6 mm		
Blade tilt angle/Bank cut angle (LH/RH) at ground level measured on drawbar	(25.6°/20°)+/-2		
Blade pitch angle at ground line	A11	Forward 40°+/-2 Backward 5°+/-2	
Blade lift at normal blade pitch angle	395+/-25 *		
Max Blade cut depth below ground at nominal blade angle	300+/-25 *		
Attachment oscillation angle	Upward 10°+/-2 Downward 15°+/-2		

Transmission	
Model Name	Carraro 4WD Transmission
Gear Ratios	Forward / Reverse
1st	5.603 / 4.643
2nd	3.481 / 2.884
3rd	1.585 / 1.313
4th	0.793 / 0.657
Torque converter ratio	2.64

Front Axle	
Type	Non Driven, Steerable, Central Pivoted
Loading Capacity (TON)	8

Middle Axle	
Type	Driven, Non-Steerable, Rigid
Reduction ratio, Differential	2.75
Reduction wheel end	6.932
Total reduction ratio	19.04

Rear Axle	
Type	Driven, Non-Steerable, Central Pivoted, ±5° Oscillation angle
Reduction ratio, Differential	2.75
Reduction wheel end	6.932
Total reduction ratio	19.04

Tyres & Wheels	
Tyre Spec	13 X 24 - 12 PR
SLR	600+/-10
DLR	603+/-10
Wheel Rim size	9 X 24

Tyre Pressure	
Front / Middle / Rear	44±2 psi

Brakes	
Service brake type	Foot operated hydraulically actuated oil immersed disc in middle axle
Parking brake type	Hand operated, mechanically actuated oil immersed disc in middle axle

Steering	
Type	Power Steering
Steering valve	Load sensing with priority valve 200 cc
Other feature	Emergency steering in case of pump failure

Electrical	
System voltage	12 V
Battery rating	12 V, 100 AH
Alternator type	12 V, 90 Amp

Hydraulics	
System	Open centre
Pump type	Fixed displacement Tandem Gear Pump, 26 cc + 26 cc
Max pump flow rate	54 Liters @ 2200 rpm
Max working pressure	200+/-5 bar
Refill qty	50 liters
System capacity	60 liters
Other feature	Load holding with pressure relief valves for lift and sensing cylinder

Service Capacities	
Hydraulic tank	50 Liters @ 2000 hrs
Fuel tank	85 Liters
Engine coolant	17 Liters @ 1000 hrs
Engine oil	13.5 Liters @ 500 hrs
Transmission	16 Liters @ 1000 hrs
Middle Axle or Rear Axle (Differential)	14.5 Liters @ 1500 hrs for each axle
Middle Axle or Rear Axle (Final Drive)	1.5 Liters (on each side) @ 1500 hrs

Optional Fitment	
Ripper	5 Tyre

Dozer Dimensions (in mm)		
Dozer Height Above Ground	585	
Dozer Blade Height	769	
Dozer Blade Width	1980	
Dozer length from Front L	1500	
Tyres in transport condition		

Ripper Dimensions (in mm)		
Ripper Height Above Ground	B	561
Ripper Digging Depth	240	
Number of Ripper Shank Module	5	
Ripper Length from Tyre in transport condition	1730	

## Mahindra Construction Equipment

Mahindra & Mahindra Ltd. | CE Business |  
 Gate No.2 | 1st Floor | Powerol Building | Akurli Road | Kandivali (E) | Mumbai - 400 101.  
 Toll Free Helpline: 1800 209 6006 | Website: [www.mahindraconstructionequipment.com](http://www.mahindraconstructionequipment.com)  
 E-mail: [mce.marketing@mahindra.com](mailto:mce.marketing@mahindra.com)

