

### Truck and Bus Product Guide

2015 - 2016



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# **Corporate Social Responsibility**

### We take responsibility for our environment with:

- Conservation programmes to offset carbon emissions and promote sustainable development
- Commitment to the development of environmentally friendly products
- ISO 14001 environmental management system certification
- Partnership with Conservation International

#### Cutting-edge products for the most demanding market in the world.

- There are more than 600 internationally experienced engineers in research and development that achieve peak performance and develop top quality products that are specially "Made for Europe."
- Support is received from Test Engineers at the European Technical Centre, based in the UK, to ensure the optimisation of the tyres for demanding European requirements.



#### WHY BUY GT RADIAL?

**GT RADIAL** takes pride in being at the forefront of new technology, constantly seeking new ways to improve the driving experience. These advances are made while always keeping the needs of various types of drivers in mind. Only after thorough research, analysis, and testing, the tires are developed for local markets depending on their specific conditions and requirements.

**GT RADIAL** is fully committed to maintaining the very highest standard of quality control procedures and has obtained ISO9001:2000 and ISO/TS16949:2009 accreditation for all manufacturing plants. In addition, the facilities have also obtained ISO14001-2004 Environmental Management System Accreditation.

All tires produced by **GT RADIAL** are designed to meet or exceed the standards for all legal directives, regulations and standards. E-mark Safety and Noise Certification tests are performed and accredited by top level global and local organizations.

**GT RADIAL**'s research and development efforts have enabled the development of high quality global tires, and have also helped improve product design and production technology in maintaining a leading market position. In addition to in-house research and development capabilities, **GT RADIAL** also collaborates with various leading universities and top research institutions, including the National Quality Examination Centre for Rubber Tire, Smithers Research Laboratories in the USA, and TUV Automotive GmbH Tire/Wheel Test Centre in Germany.

**GT RADIAL** has also made a significant investment in its own tire testing facility, the European Technical Centre (ETC), which is located at the internationally acclaimed MIRA Ltd. (Motor Industry Research Association). The ETC provides development and evaluation capacity to **GT RADIAL**'s Research and Development Centre. The facility focuses on the development of quality tire products for worldwide applications in both the replacement and original equipment markets.





- China
- Indonesia
- European Technical Centre in UK
- European R&D Centre in Hannover

Employees: Close to 600

Apart from conducting our own research and development, we also collaborate with leading universities and research institutes around the world.

## Strong R&D Capabilities

Our higher purpose: To make world-class quality tyres.

We are constantly looking for new ways in every sense to make your journey delightful, to get you there from design to development.

Our mission is much more than the products we make. It is what defines us, unites us and inspires us to make a difference every day, in our company, our community and our world.



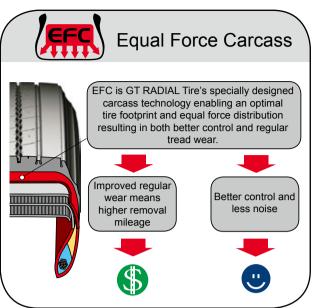
### **TECHNOLOGIES**

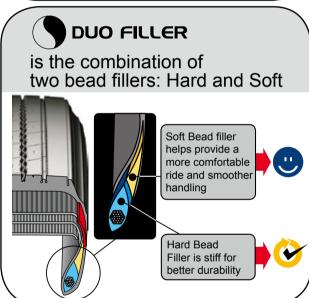




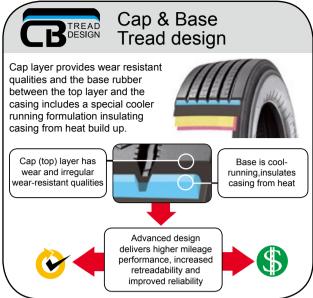


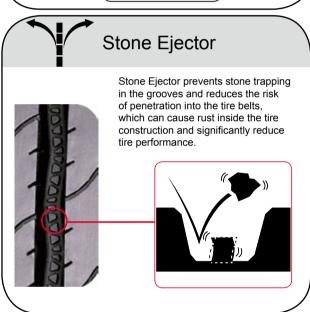
Featu	res	\$	<b>•</b>	<b>(3)</b>	Application	Found on
Equal Force Carcass	EFC is GT RADIAL Tire's specially designed carcass technology enabling an optimal tire footprint and equal force distribution resulting in both better control and regular tread wear	*	*	*		ALL
DUO FILLER	Duo Filler is the combination of two different bead fillers: Hard and Soft to produce both comfort and robustness.	*	*	*		ALL
SPR	Sidewall Protector Ribs protect the casing from curbing & sidewall damage	*		*		ALL
TREAD	Cap & Base Tread design Cap layer provides wear resistant qualities and Base insulates the casing against heat for cooler running.	*		*		ALL
	Stone Ejector prevents stone penetration inside the belt.	*	*	*		GT279 GT269 GT988+ GT979 GT876
EX-Depth SOLID SHOULDER	Ex-Depth Solid Shoulder increased volume on the shoulder area resulting in more even wear especially on long haul applications.	*	*			GT279 GT269 GT268 GT276 GT988+ GT888 GT979 GT867
OPEN SHOULDER	Ex-Depth Open Shoulder allows greater traction and improved resistance to heel and toe wear.	*	*		<b>₹</b>	GT876 GT688 GT676 GT679 GT629 GT659+ GT678 GT686









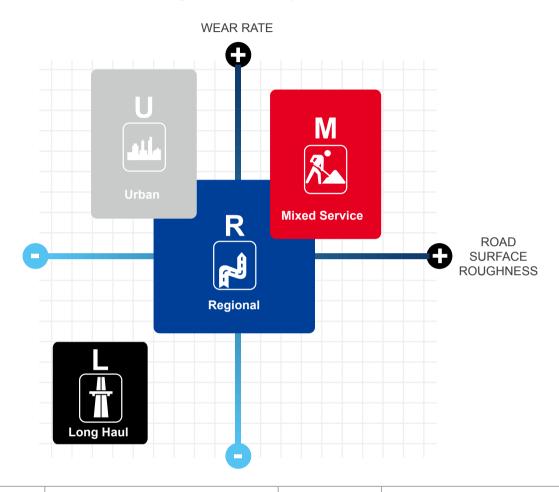




#### TIRE APPLICATIONS

Tires designed and developed for specific application requirements

Using the latest design and manufacturing technology GT RADIAL Tire has developed a range of Mission Matched tires to meet the ever increasing demands of today's transport operations.





#### **Long Haul Operation:**

- Interstate and Highway
- · Long distance routes
- Constant speeds with minimal braking and accelerating
- Well paved road conditions



#### **Mixed Service Operation:**

- Frequent use both on and off road
- Heavy Loads
- Construction



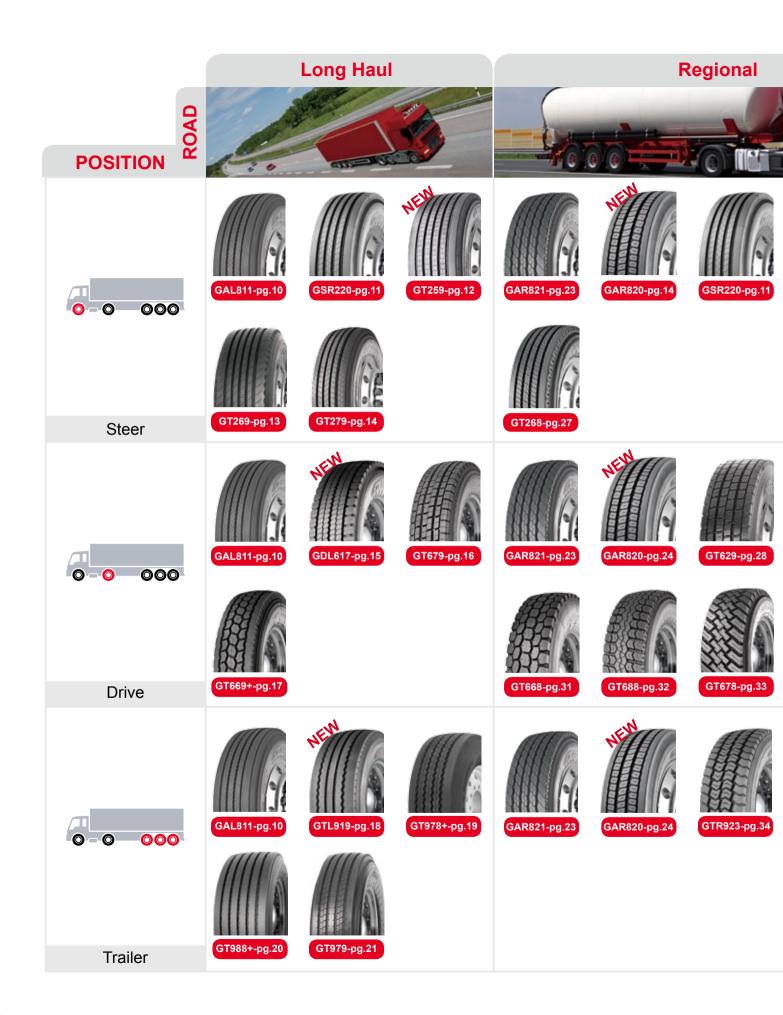
#### **Regional Operation:**

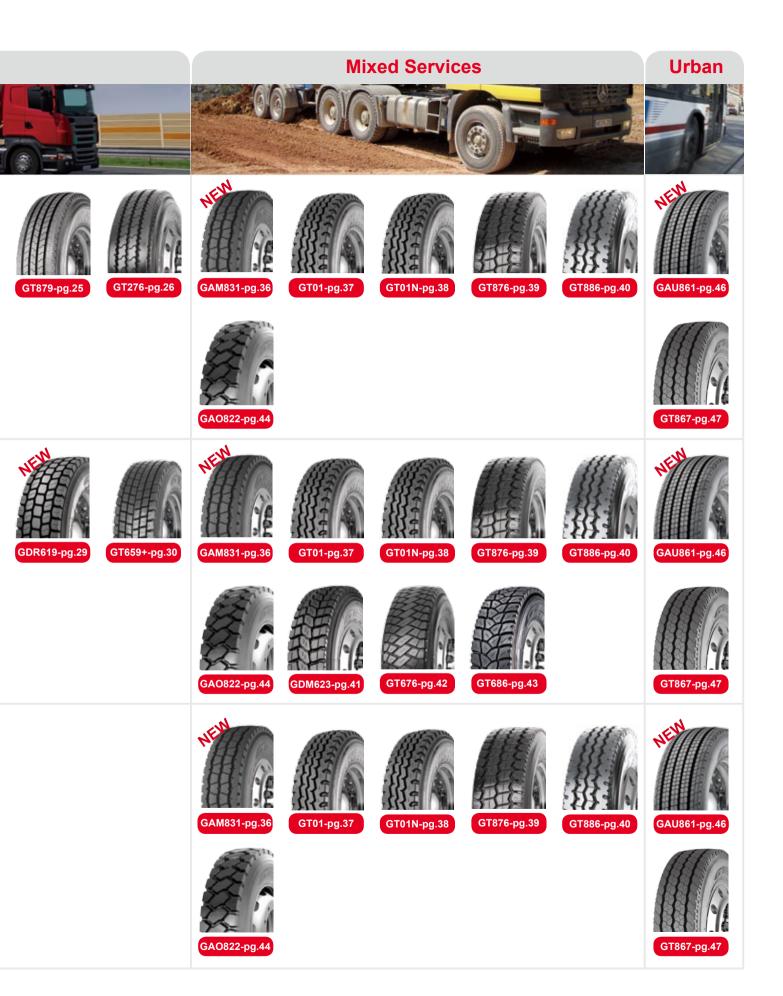
- · Regional highways and city streets
- Flexible in a variety of applications
- Frequent braking, acceleration and turning
- Mainly on paved road, occasional use on unpaved road conditions



#### **Urban Operation:**

- Constant stop and go operating conditions
- Frequent speed changes and turning
- Increased risk of damage from curbing impacts







### **Long Haul**





#### **Long Haul Operation:**

- Interstate and Highway
- Long distance routes
- Constant speeds with minimal braking and accelerating
- · Well paved road conditions

### **GAL811 COACH**

#### All Position Long Haul





#### **Features**

Advanced compound for long haul cool running application

#### **Benefits**

Superior wear resistance and low heat generation design to generate high mileage and lower fuel consumption

Defensive groove in shoulder design

Better resistance to irregular wear.

Equal force carcass design

For the optimal tyre footprint and equal force distribution resulting in improved control and more even wear

Four wide longitudinal groove begin

Four wide longitudinal groove design.

Direct circumferential groove bdesign

Better stability, suited for all position application and long haul service

TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
295/80R22.5	16PR	152/148	M	9.0	1044	3550/3150	850/850	15.0



### **GSR220**

Steer Long Haul / Regional













#### **Features**

Extra-wide tread design

**Benefits** 

Increases contact area with excellent wear resistance

Micro edge with deep groove design

Uniform traction and minimize irregular wear

New low heat build up formula Cooler running for higher durability

Four straight circumferential grooves.

Improves driving stability and minimize skidding for superior handling.

zag grooves in cneter rib

Circumferential and lateral zig > Effectively disperses water with excellent grip performance

Stone ejection technologyc

Reduce stone retention and tire damage



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
315/70R22.5	18PR	154/150(152/148)	L(M)	9.0	1014	3750/3350	900/900	15.0
295/80R22.5	18PR	152/149	М	9.0	1044	3550/3250	900/900	14.8
315/80R22.5	18PR	156/150(154/150)	L(M)	9.0	1076	4000/3350	850/850	16.8

Steer **Long Haul** 





#### **Features**

Wide tread width and wear resistant compound

#### **Benefits**

Long wear life

Optimized width ratio of shoulder block and center block

▶ Resistance sgoulder irregular wear

Adoption of variable angle design along the inner edge of each groove

▶ Improve wear and provide self cleanning capability

Sipes of s-type on block & those ▶ Improve wet gripping and on the shoulder edge

lateral forces



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
385/55R22.5	18PR	158/-(160/-)	L(K)	12.25	996	4250	850	14.5
385/65R22.5	18PR	158/-(160/-)	L(K)	11.75	1072	4250	850	15.0

### **GTZ69**

Steer Long Haul





#### **Features**

Optimised foot print, advanced five groove pattern with stone ejectors and Cab and Base technology

#### **Benefits**

► Improved resistance to irregular wear, excellent grip, extra protection against stone drilling into the belt package



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
385/65R22.5	18PR	158/-(160/-)	L(K)	11.75	1072	4250	850	14.0

Steer **Long Haul** 









#### **Benefits**

Deeper tread depth 

Longer original tread life

Stabilizer ribs

▶ Prevents initiation and spread of irregular wear

Multiple sipes in five ▶ Optimum traction and braking

ribs



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
225/70R19.5	14PR	128/126	J	6.8	811	1800/1700	760/760	13.0
245/70R19.5	18PR	141/140	J	7.5	839	2575/2500	860/860	13.8
245/70R19.5	16PR	136/134	М	7.5	839	2240/2120	830/830	13.8
285/70R19.5	16PR	146/144(144/142)	L(M)	8.3	895	3000/2800	900/900	13.4
10R22.5	14PR	141/139	М	7.5	1019	2575/2430	790/790	13.8
11R22.5	16PR	148/145	М	8.3	1054	3150/2900	830/830	16.8
11R22.5	14PR	144/142	М	8.3	1054	2800/2650	740/740	16.8
11R24.5	16PR	149/146	М	8.3	1104	3250/3000	830/830	15.3
11R24.5	14PR	146/143	М	8.3	1104	3000/2730	740/740	15.3
255/70R22.5	16PR	140/137(140/140)	M(L)	7.5	930	2500/2300	830/830	13.8
275/70R22.5	16PR	148/145(152/148)	M(J)	8.3	958	3150/2900	900/900	14.8
315/70R22.5	18PR	154/150(152/148)	L(M)	9.0	1014	3750/3350	900/900	14.3
295/75R22.5	14PR	144/141	М	9.0	1014	2800/2575	760/760	15.5
295/80R22.5	16PR	152/148	М	9.0	1044	3550/3150	850/850	16.8
315/80R22.5	18PR	154/151(156/151)	M(L)	9.0	1076	3750/3450	830/830	16.8
285/75R24.5	14PR	144/141	М	8.3	1050	2800/2575	760/760	15.3
10.00R20	16PR	146/143	K	7.5	1054	3000/2725	830/830	15.0
11.00R20	16PR	150/147	K	8.0	1085	3350/3075	830/830	15.0

### **GDL617**

**Drive Long Haul** 







M+S Marked



Snow

#### **Features**

sipe

Optimal pattern and rib distribution

Wider Tread & Unique Compound Design

Reinforced shoulder

Stone ejector features in the Prevent and eject stone trap grooves

#### **Benefits**

- Deep transversal and zigzag ▶ Excellent traction & anti-irregular wear
  - Excellent footprint and delivery good wear pattern for longer tire life
  - ► Enhance mileage performance
  - Anti shoulder irregular wear



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
315/60R22.5	18PR	152/148	L	9.8	950	3550/3150	900/900	18.2
315/70R22.5	18PR	154/150(152/148)	L(M)	9.0	1014	3750/3350	900/900	17.5
295/80R22.5	16PR	152/148	M	9.0	1044	3550/3150	850/850	17.5
315/80R22.5	18PR	156/150(154/150)	L(M)	9.0	1076	4000/3350	850/850	18.5

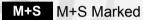
Drive **Long Haul** 











#### **Features**

Deeper groove depth

Interlocking sipes

Wide footprint with square shoulders

#### **Benefits**

- Extend tire life
- Specific shoulder design > Provide excellent water-evacuation and heat dispersion
  - ► Help provide exceptional longitudinal traction

► Help provide enhanced stability



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
215/75R17.5	12PR	126/124	M	6.0	767	1700/1600	724/724	14.5
235/75R17.5	14PR	132/130	M	6.8	797	2000/1900	760/760	15.0
265/70R19.5	16PR	140/138	M	7.5	867	2500/2360	790/790	15.8
285/70R19.5	16PR	144/142(145/143)	M(L)	8.3	895	2800/2650	830/830	15.8
11R22.5	16PR	148/144	L	8.3	1054	3150/2800	830/830	20.2
12R22.5	16PR	152/148	L	9.0	1085	3550/3150	850/850	20.2
315/70R22.5	18PR	154/150(152/148)	L(M)	9.0	1014	3750/3350	900/900	20.2
295/80R22.5	16PR	152/148	M	9.0	1044	3550/3150	850/850	20.2
315/80R22.5	18PR	154/151(156/151)	M(L)	9.0	1076	3750/3450	830/830	20.2
11.00R22	18PR	154/151	L	8.0	1147	3750/3450	930/930	20.2

### **GT669+**

Drive Long Haul





#### **Features**

Deep tread depth

Wide tread and balanced distribution of tread blocks

Closed shoulder ribs

Enhanced tapered external grooves

#### **Benefits**

- Maximum mileage
- Excellent traction and optimum distribution of load and torque
- Prevents irregular wear
- Prevents stone drilling



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
11R22.5	16PR	148/145	L	8.25	1054	3150/2900	830/830	21.6
10.00R20	16PR	146/143	K	7.50	1037-1067	3000/2725	830/830	17.5
11.00R20	16PR	150/147	K	8.00	1085	3350/3075	830/830	17.5
12.00R20	18PR	154/151	K	8.50	1125	3750/3450	830/830	17.5

### **GTL919**

#### Trailer **Long Haul**





#### **Features**

close shoulder

Straight groove on center, zigzag on shoulder

Platform on middle groove bottom

Special compound

#### **Benefits**

- Adoption of wide pattern & 

  Better for shoulder strength improve irregular wear, resistant and for better mileage performance
  - Straight groove for water evacuation and straight line stability, zigzag for grip and wet resistance
  - ▶ Effective prevent clamping stones for better protection of tire casing
    - Improve tread anti-puncturing & tearing



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
385/65R22.5	18PR	160/-(158/-)	K(L)	11.75	1072	4500	900	15.5

### GT978+

#### Trailer Long Haul





#### **Features**

Design

Circumferential Zig Zag Groove

Unique Shoulder Design

#### **Benefits**

Four Zig Zag Groove 
Superior Water Dispersion, Skid Resistance, and Wear Resistance

> ▶ Provides Reliable Grip with Better Self-Cleaning Properties

Wider Tread Design 
Improves Tire Life

▶ Resistance to Uneven Shoulder Wear



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
385/65R22.5	18PR	158/-(160/-)	L(K)	11.75	1072	4250	850	15.5
425/65R22.5	20PR	165/-	K	12.25	1124	5150	830	15.5

### **GT988+**

Trailer Long Haul





#### **Features**

Optimize tread width and tread pressure distribution

Specific tread compound

New enhance shoulder design

#### **Benefits**

- Contribute to optimization of wear profile and therefore achieve longer mileage
- ► Low heat generation and strong resistance to abrasion for better mileage performance and damage/ impact resistant.

► Reduce irregular wear



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
215/75R17.5	16PR	135/133	J	6.00	767	2180/2060	860/860	14.0
235/75R17.5	16PR	143/141(144/144)	J(F)	6.75	797	2725/2575	860/860	13.5
245/70R17.5	16PR	143/141(144/144)	J(F)	7.50	789	2725/2575	875/875	13.5
285/70R19.5	18PR	150/148	J	8.25	895	3350/3150	900/900	13.4
385/55R22.5	20PR	160/-(158/-)	K(L)	12.25	996	4500	900	15.0
385/65R22.5	18PR	158/-(160/-)	L(K)	11.75	1072	4250	850	14.0

Trailer **Long Haul** 





#### **Features**

design

Circumferential shallow groove design

Strong resistance to sideslip

#### **Benefits**

- Four see-through groove 

  Equate pressure and abrasion on tread
  - ▶ Reduce rolling resistance effectively
  - ► High speed performance

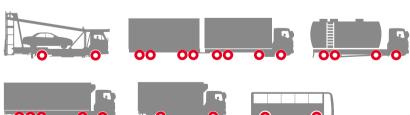


TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
215/75R17.5	16PR	135/133	L	6.00	767	2180/2060	860/860	10.0
11R22.5	16PR	148/144	L	8.25	1054	3150/2800	830/830	10.5
11R22.5	14PR	144/142	L	8.25	1054	2800/2650	740/740	10.5
11R24.5	14PR	146/143	L	8.25	1104	3000/2730	740/740	10.5
255/70R22.5	16PR	140/137	L	7.50	930	2500/2300	830/830	10.5



### Regional





#### **Regional Operation:**

- Regional highways and city streets
- Flexible in a variety of applications
- · Frequent braking, acceleration and turning
- Mainly on paved road, occasional use on unpaved road conditions

### GAR821

#### **All Position** Regional









M+S M+S Marked



#### **Features**

Specific wear resistance compound with wide and deeper tread

Four wide longtitudinal groove 

Ensures efficient water design

Solid shoulder design

#### **Benefits**

- Provide higher mileage performance in regional application
- evacuation for improve grip and braking in wet condition Exhance handling and cornering stability



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
295/80R22.5	16PR	152/148	L	9.00	1044	3550/3150	850/850	18.7

### **GAR820**

All Position Regional











M+S Marked



#### **Features**

Responds to the fast development of modern medium sized trucks

Unique tread compound and adoption of wider tread pattern and solid shoulder design

New casing and footprint ▶ design

#### **Benefits**

- Meets the increasing requirements of transport fleets who demand comfort, low noise, good wet and dry handling and excellent wear
  - Provide tread wearing and tearing resistance and better shoulder strength that improve resistant to irregular wear
  - Enhance the regularity of wear pattern and thereby delivers better mileage performance
- New bead construction Facilitate mounting of tire to rim and improved the general uniformity and noise generation



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
205/75R17.5	14PR	124/122	M	6.00	753	1600/1500	750/750	12.5
215/75R17.5	14PR	126/124	М	6.00	767	1700/1600	724/724	13.0
225/75R17.5	14PR	129/127	М	6.75	783	1850/1750	725/725	13.0
235/75R17.5	14PR	132/130	М	6.75	797	2000/1900	760/760	13.5
245/70R17.5	14PR	136/134	М	7.50	789	2240/2120	850/850	13.5

Steer Regional









#### **Benefits**

Five rib design

Excellent handling and maneuverability

Wide straight grooves > Exceptional water evacuation for wet traction

Crossing sips in intermediate ribs ▶ Enhanced traction and longer life

Equal rib distribution > Tread scrubbing resistance



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
215/75R17.5	16PR	135/133	J	6.00	767	2180/2060	860/860	12.7
215/75R17.5	12PR	126/124	М	6.00	767	1700/1600	724/724	12.7
235/75R17.5	16PR	143/141(144/144)	J(F)	6.75	797	2725/2575	860/860	12.7
235/75R17.5	14PR	132/130	М	6.75	797	2000/1900	760/760	12.7
265/70R19.5	18PR	143/141	J	7.50	867	2725/2575	850/850	14.3
265/70R19.5	16PR	140/138	М	7.50	867	2500/2360	790/790	14.3
11R22.5	14PR	144/142	М	8.25	1054	2800/2650	740/740	16.8
11R22.5	16PR	148/145	М	8.25	1054	3150/2900	830/830	16.8
11R24.5	16PR	149/146	М	8.25	1104	3250/3000	830/830	16.8
11R24.5	14PR	146/143	М	8.25	1104	3000/2730	740/740	16.8
12R22.5	16PR	152/148	М	9.00	1085	3550/3150	850/850	17.2
295/75R22.5	14PR	144/141	М	9.00	1014	2800/2575	760/760	17.0
295/80R22.5	16PR	152/148	М	9.00	1044	3550/3150	850/850	16.8
315/80R22.5	18PR	154/151(156/151)	M(L)	9.00	1076	3750/3450	830/830	16.8
285/75R24.5	14PR	144/141	М	8.25	1050	2800/2575	760/760	16.8
10.00R20	16PR	146/143	K	7.50	1054	3000/2725	830/830	14.5
10.00R20	16PR	146/143	K	7.50	1037-1067	3000/2725	830/830	14.5
11.00R20	16PR	150/147	K	8.00	1085	3350/3075	830/830	14.5
12.00R20	18PR	154/151	K	8.50	1125	3750/3450	830/830	14.5
12.00R24	18PR	156/153	K	8.50	1225	4000/3650	790/790	14.5

#### Steer Regional







**Benefits** 

#### **Features**

Big block pattern

Provide superb resistance to abrasion

Reinforced bead construction > Excellent casing endurance and extend tire life

Solid shoulder design

► Provide superb anti-skid and anti-abrasion performance

Circumferential rib design

Provide reliable directional handling



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
11R22.5	16PR	148/145	M	8.25	1054	3150/2900	830/830	17.2
12R22.5	16PR	152/148	L	9.00	1085	3550/3150	850/850	17.2
13R22.5	18PR	154/150(156/150)	L(K)	9.75	1124	3750/3350	850/850	17.2
275/70R22.5	16PR	148/145	K	8.25	958	3150/2900	900/900	18.5
295/80R22.5	16PR	152/148	K	9.00	1044	3550/3150	850/850	17.2
315/80R22.5	18PR	154/151(156/151)	K(J)	9.00	1076	3750/3450	830/830	18.5
12.00R24	18PR	156/153	K	8.50	1225	4000/3650	790/790	17.0

#### Steer Regional









#### **Features**

design

Four circumferential grooves

#### **Benefits**

- Specific tread compound ▶ Low heat generation and superb resistance to abrasion
  - ▶ Better resistance to wet-sliding with even tread wear, and comfortable drive-handling

Anti-stone-biting design 
Low rolling resistance, riding comfort, and low fuel consumption



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
235/75R17.5	16PR	143/141	J	6.75	797	2725/2575	860/860	13.5
245/70R19.5	16PR	136/134	М	7.50	839	2240/2120	830/830	14.1
9R22.5	14PR	136/134	М	6.75	974	2240/2120	830/830	13.8
255/70R22.5	16PR	140/137(140/140)	M(L)	7.50	930	2500/2300	830/830	14.1

#### Drive Regional









M+S M+S Marked



Snow

#### **Features**

Wider tread, deeper groove and special compound

Special sipe on pattern

Widen crown and enhanced ▶ Resistance of shoulder rib-reinforcement

Variable pitch design

#### **Benefits**

- ► Improved longer tire life
- ▶ 30% of snow tire performance in the early stage
- irregular wear
- ▶ Reduce noise

Vertical and horizontal groove ► For long haul on drive position



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
295/80R22.5	16PR	152/148	М	9.00	1044	3550/3150	850/850	17.2

### GDR619

#### Drive Regional











M+S M+S Marked



#### **Features**

Pattern design with 4 > Provides good traction and braking longitudinal grooves and solid blocks

properties in all weather conditions. Improved vehicle stability for high driver comfort

**Benefits** 

New casing and footprint design

▶ Improved the mileage and the regularity of the wear pattern

New bead construction ► Facilitate mounting of tire to rim and improved the general uniformity and noise generation



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
205/75R17.5	14PR	124/122	М	6.00	753	1600/1500	750/750	14.0
215/75R17.5	14PR	126/124	М	6.00	767	1700/1600	724/724	14.5
225/75R17.5	14PR	129/127	М	6.75	783	1850/1750	725/725	15.0

### GT659+

#### Drive Regional









M+S Marked





Directional

#### **Features**

### wear resistance compound

Special angle block tread design

Unique groove and bottom design

Uniform block & lug design

#### **Benefits**

- Deep tread depth and special > Extended tread mileage in regional application
  - Optimize gripping and traction
  - ► Minimize stone trapping and self cleaning capability
- Special tread pattern design 

  Reduce irregular wear and therefore deliver smooth and consistent wear

▶ Efficient traction on wet and dry roads



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
12R22.5	16PR	152/148	L	9.0	1096	3550/3150	850/850	23.1
315/70R22.5	18PR	154/150(152/148)	L(M)	9.0	1014	3750/3350	900/900	23.1
275/80R22.5	16PR	149/146	L	8.3	1018	3000/2725	830/830	23.1
295/80R22.5	16PR	152/148	М	9.0	1044	3550/3150	850/850	23.1
315/80R22.5	18PR	156/150(154/150)	L(M)	9.0	1076	4000/3350	850/850	23.1

#### Drive Regional







#### **Features**

#### **Benefits**

Deep tread depth

Long tread life

Integrated block pattern 
Provide excellent drive and brake force

pattern

Aggressive block traction Delivers solid traction and grip



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
11R22.5	16PR	148/145	L	8.25	1054	3150/2900	830/830	21.9
11R22.5	14PR	144/142	L	8.25	1054	2800/2650	740/740	21.9
11R24.5	16PR	149/146	L	8.25	1104	3250/3000	830/830	21.9
11R24.5	14PR	146/143	L	8.25	1104	3000/2730	740/740	21.9
295/75R22.5	14PR	144/141	L	9.00	1020	2800/2575	760/760	21.9
285/75R24.5	14PR	144/141	L	8.25	1050	2800/2575	760/760	21.9
12.00R20	18PR	154/151	K	8.50	1125	3750/3450	830/830	17.5

#### Drive Regional









M+S Marked

#### **Features**

#### **Benefits**

Deep lug design

Excellent traction on wet and dry roads

Optimum tread design > Long tread life

elements

Central dual serrated Provides exceptional stability and additional traction



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
10R22.5	14PR	141/139	М	7.5	1019	2575/2430	790/790	15.8
11R22.5	16PR	148/144	М	8.3	1054	3150/2800	830/830	17.2
11R22.5	14PR	144/142	М	8.3	1054	2800/2650	740/740	17.2
12R22.5	16PR	152/148	М	9.0	1085	3550/3150	850/850	17.2
11R24.5	16PR	149/146	М	8.3	1104	3250/3000	830/830	17.2
11R24.5	14PR	146/143	М	8.3	1104	3000/2730	740/740	17.2
295/75R22.5	14PR	144/141	М	9.0	1014	2800/2575	760/760	17.5
295/80R22.5	16PR	152/148	М	9.0	1044	3550/3150	850/850	16.3
315/80R22.5	18PR	154/151(156/151)	M(L)	9.0	1076	3750/3450	830/830	17.5
285/75R24.5	14PR	144/141	М	8.3	1050	2800/2575	760/760	17.7

#### **Drive** Regional









M+S M+S Marked

#### **Features**

Wide and deep tread pattern > Provides long tread life

Aggressive diagonal block and lug pattern

Tapered grooves and open shoulder

Special tread compound

#### **Benefits**

- ▶ Highly effective traction and braking performance
- Prevent stone retention and provide self-cleaning capability
- Prevent tread cutting, chipping and chunking



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
7.50R16LT	14PR	122/118	K	6.00G	805	1500/1320	770/770	12.5
8.25R16LT	14PR	126/122	K	6.50H	855	1700/1500	670/670	13.0
225/70R19.5	12PR	125/123	L	6.75	811	1650/1550	660/660	15.0
225/70R19.5	14PR	128/126	J	6.75	811	1800/1700	760/760	15.0
245/70R19.5	16PR	136/134	M	7.50	839	2240/2120	830/830	14.8
265/70R19.5	16PR	140/138	M	7.50	867	2500/2360	790/790	14.8
285/70R19.5	16PR	144/142(145/143)	M(L)	8.25	895	2800/2650	830/830	14.8

### **GTR923**

### Trailer Regional









M+S Marked



### **Features**

Wide tread design and regular pressur on contact patch

An optimal balance in highway application and anti-chip/cut compound

The convexity block design at the 
Better resistance to stone groove bottom

Unique pattern block and sipe design

### **Benefits**

- ► Excellent mileage and grip performance
- Delivers excellent anti-cut and chip and good mileage on highway type of application
- trapping and reduce tyre puncturing risk
- Good grip performance on highway as well as mild on/off road condition

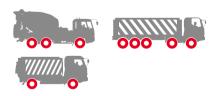


TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
265/70R19.5	18PR	143/141	J	7.50	867	2725/2575	850/850	14.5



# **Mixed Services**





### **Mixed Service Operation:**

- Frequent use both on and off road
- · Heavy Loads
- Construction

## **GAM83I**

**All Position Mixed Services** 









M+S Marked

#### **Features**

Solid shoulder with combined rib and lug design in centre of tyre

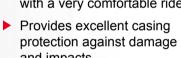
Featuring an enhanced tread profile with good self cleaning proprieties

With mixed road compound

Special solid shoulder design and deeper tread groove

- Provide excellent traction, braking, protection combined with a very comfortable ride
- and impacts
- Good performance for anti-
- ► For better mileage performance

### **Benefits**



tearing and cutting

TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
13R22.5	18PR	156/150(154/150)	K(L)	9.75	1124	4000/3350	875/875	18.2
295/80R22.5	16PR	152/148	K	9.00	1044	3550/3150	850/850	17.5
315/80R22.5	18PR	156/150(154/150)	K(L)	9.00	1076	4000/3350	850/850	18.2



**All Position Mixed Services** 











M+S M+S Marked

### **Features**

Three wide open zig-zag groove design

and cut and chip resistance compound

Special groove angle design

### **Benefits**

- Provides excellent acceleration and traction force. It is suitable for most kinds of road conditions.aribility
- Adoption of wear resistance > Provide long mileage & resistance to damages
- Open edge shoulder design > Provides effective heat dispersion for cooler running. Provides necessary gripping force.

▶ Effective stone ejection capability and lower the risk of tire damages due to stone trapping



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
11R22.5	16PR	148/144	M	8.25	1054	3150/2800	830/830	15.8
11R24.5	16PR	149/146	M	8.25	1104	3250/3000	830/830	15.8
13R22.5	18PR	154/150(156/150)	L(K)	9.75	1124	3750/3350	790/790	16.8
315/80R22.5	18PR	154/151(156/151)	L(K)	9.00	1076	3750/3450	830/830	16.8
315/80R22.5	22PR	161/157	J	9.00	1076	4625/4125	900/900	16.8
9.00R20	16PR	144/142	K	7.00	1019	2800/2650	900/900	15.0
10.00R20	16PR	146/143	K	7.50	1054	3000/2725	830/830	16.0
11.00R20	16PR	150/147	K	8.00	1085	3350/3075	830/830	16.5
11.00R20	16PR	150/147	K	8.00	1068~1093	3350/3075	830/830	16.5
12.00R20	18PR	154/151	K	8.50	1125	3750/3450	830/830	17.0
12.00R24	20PR	160/156	K	8.50	1225	4500/4000	900/900	17.0
12.00R24	18PR	156/153	K	8.50	1225	4000/3650	790/790	17.0
12.00R24	20PR	160/156	K	8.50	1210~1250	4500/4000	900/900	17.0

# GTO1N

All Position
Mixed Services









### **Features**

Three wide open zig-zag groove design

Nylon bead construction

Adoption of wear resistance and cut and chip resistance compound

Special groove angle design

Open edge shoulder design

### **Benefits**

- Provides excellent acceleration and traction force. It is suitable for most kinds of road conditions.
- Delivers robust and durable bead and casing for heavy duty operation
- Provides long mileage and resistance to damages
- Effective stone ejection capability and lower the risk of tire damages due to stone trapping
- Provides effective heat dispersion for cooler running. Provides necessary gripping force.

TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
12R22.5	18PR	152/149	K	9.00	1085	3550/3250	930/930	16.3

**All Position Mixed Services** 











M+S Marked

#### **Features**

Aggressive tread pattern designed in specific angle

compound

Deep tread depth

Strong shoulder design

Wide footprint

### **Benefits**

Superior traction

- Special cut & chip resistance > High resistance to cutting and tearing and hence extend tire life
  - Extended tread life
  - Protect sidewall and minimize impact damage

Maximum floatation



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
385/65R22.5	18PR	158/-(160/-)	L(K)	11.75	1072	4250	850	17.9
425/65R22.5	20PR	165/-	K	12.25	1124	5150	830	18.4
445/65R22.5	20PR	169/-	K	13.00	1150	5800	900	18.4

**All Position Mixed Services** 











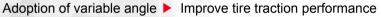
Special pattern design on shoulder to optimize stress distribution on road contacted areas

on groove edge

Wider tread design

### **Benefits**

Promote longer tire life



Enhance tire life



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
7.50R16LT	14PR	122/118	М	6.00G	805	1500/1320	770/770	12.5
8.25R16LT	14PR	126/122	М	6.50H	855	1700/1500	670/670	12.5
8.25R20	14PR	135/131	М	6.50	971	2205/1940	840/770	15.0
9.00R20	16PR	144/142	K	7.00	1019	2800/2650	900/900	16.5
11.00R20	16PR	149/145	K	8.00	1085	3270/2870	790/790	16.5

### **GDM623**

**Drive Mixed Services** 







Interveined pattern and deeper > Provide excellent traction, groove and special wear resistance compound

Nylon chafer bead construction ▶ Deliver robust and durable

Special design on sidewall and ▶ Increase durability and tire shoulder component

Stone ejection design on the tread and thicker groove bottom

#### **Benefits**

brake force and long mileage

bead and casing for heavy duty operations

robustness of tyre casing

Prevent and remove stone trapping and protect tyre from damages and hence entend tyre life



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
11.00R20	18PR	152/149	K	8.0	1096	3550/3250	930/930	20.0
12.00R20	20PR	156/153	J	8.5	1136	4000/3650	900/900	20.2

Drive **Mixed Services** 









M+S Marked

### **Features**

### Big block tread

Interveined pattern and deeper Provide excellent drive force depth design

Specific tread compound (with silica)

### **Benefits**

- ► Help to resist puncturing and tearing
- Provide resistance to cutting



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
13R22.5	18PR	154/150(156/150)	K(G)	9.75	1124	3750/3350	790/790	20.2
275/70R22.5	16PR	148/145	K	8.25	958	3150/2900	900/900	20.6
315/80R22.5	18PR	156/150	K	9.00	1076	4000/3350	830/830	20.2
12.00R24	18PR	156/153	K	8.5	1225	4000/3650	790/790	20.2
12.00R24	20PR	160/156	K	8.5	1225	4500/4000	900/900	20.2

Drive **Mixed Services** 









M+S M+S Marked

### **Features**

Wider tread, deeper groove and Improved longer tire life special compound

Big block and widen lug groove ▶ With better traction

Directional and gradually open 

With better self-clean lug pattern

### **Benefits**

performance

performance



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
11R22.5	16PR	148/145	J	8.25	1054	3150/2900	850/850	22.6
12R22.5	16PR	152/148	K	9.00	1085	3550/3150	850/850	23.1
13R22.5	18PR	154/150(156/150)	K(G)	9.75	1124	3750/3350	790/790	23.1
295/80R22.5	18PR	152/149	K	9.00	1050	3550/3250	900/900	22.6
315/80R22.5	18PR	156/150	K	9.00	1076	4000/3350	830/830	23.1

## **GA0822**

**All Position Off Road** 









Special compound for adverse > Super excellent anti-cut, antiroad and thicken base rubber

Rough pattern transverse grooves

Special deepening pattern

Extra Deep tread

Strong rib design

### **Benefits**

- puncture characteristics which increase service life of tire
- Provide high traction, self cleaning performance
- Improve tire life effectively
- Improve tire life effectively
- Prevent pattern block tearing effectively

Wide angle pattern wall design ▶ Good for anti-stone biting



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
12R22.5	18PR	152/149	F	9.0	1090	3550/3250	930/930	23.5
9.00R20	16PR	144/142	F	7.0	1030	2800/2650	900/900	21.6
10.00R20	18PR	149/146	F	7.5	1065	3250/3000	930/930	22.6
11.00R20	18PR	152/149	F	8.0	1068~1093	3550/3250	930/930	23.5
11.00R20	18PR	152/149	F	8.0	1096	3550/3250	930/930	23.5
12.00R20	20PR	156/153	F	8.5	1136	4000/3650	900/900	24.5







### **Urban Operation:**

- Constant stop and go operating conditions
- Frequent speed changes and turning
- Increased risk of damage from curbing impacts

## **GAU861**

**All Position** Urban







M+S Marked



### **Features**

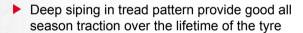
Specially designed for driving in urban condition with frequent stops and changes in speed and direction

M+S marking as well as snowflake marking

Solid reinforced sidewalls with asymmetric wear indicators

### **Benefits**

Resistant to damages with good mileage performance combined with comfort and reduced noise



Protects casings from curbing damages and wear, and wear indicators show when correct time to rotate the tyre



TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
275/70R22.5	16PR	148/145(152/148)	J(E)	8.25	958	3150/2900	900/900	20.2



**All Position** Urban









M+S M+S Marked



#### **Features**

compound and four ribs pattern design

**Benefits** 

Specific wear resistance 
The anti-wearing compound increases tire wear resistance in urban bus operating condition. The four rib pattern mean higher wearable areas on the tire footprint, thereby increases tread life for the tough stop and go urban bus operating condition.

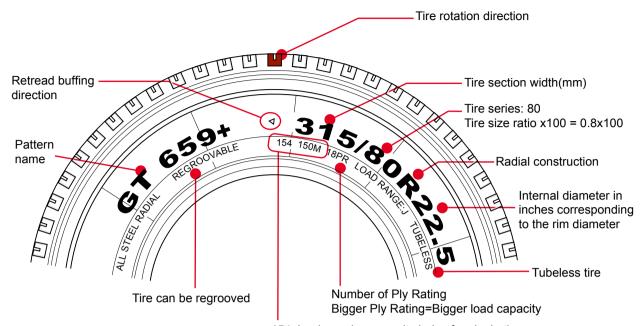
Three groove pattern designed in specific groove angle and couple with the sipe design

Deliver effortless acceleration and traction. Its also delivers anti-skidding on wet condition

TIRE SIZE	PR	LOAD INDEX	SPEED RATING	APPROVED RIM	OUTER DIAMETER (mm)	MAX. LOAD (KG)	MAX. PRESSURE (KPA)	TREAD DEPTH (mm)
11R22.5	16PR	148/145	J	8.25	1054	3150/2900	830/830	18.7
275/70R22.5	16PR	148/145(152/148)	J(E)	8.25	958	3150/2900	900/900	18.7
295/80R22.5	16PR	152/148	J	9.00	1050	3550/3150	850/850	18.7



### Designations, Load and Speed index



154: load carrying capacity index for single tire 150: load carrying capacity index for dual tire

M : Speed symbol

Refer to the Speed Symbols and Load Capacity Index tables below



Before fitting, it is essential to check the different markings to ensure that the tires meets the maximum load and speed possibilities and/or the regulations in force.

### Speed symbols

SI	km/h
В	50
С	60
D	65
Е	70
F	80
G	90
J	100
K	110
L	120
М	130
N	140
Р	150
Q	160
R	170

### **Load Capacity Index**

LI	KG	LI	KG	LI	KG
115	1215	136	2240	157	4125
116	1250	137	2300	158	4250
117	1285	138	2360	159	4375
118	1320	139	2430	160	4500
119	1360	140	2500	161	4625
120	1400	141	2575	162	4750
121	1450	142	2650	163	4875
122	1500	143	2725	164	5000
123	1550	144	2800	165	5150
124	1600	145	2900	166	5300
125	1650	146	3000	167	5450
126	1700	147	3075	168	5600
127	1750	148	3150	169	5800
128	1800	149	3250	170	6000
129	1850	150	3350	171	6150
130	1900	151	3450	172	6300
131	1950	152	3550	173	6500
132	2000	153	3650	174	6700
133	2060	154	3750	175	6900
134	2120	155	3875	176	7100
135	2180	156	4000	177	7300

### PRODUCT RANGE

Long Haul												
	GAL811 Coach	GSR220	GT259	GT269	GT279	GDL617	GT679	GT669+	GTL919	GT978+	GT988+	GT979
215/75R17.5							126/124M				135/133J	135/133L
235/75R17.5							132/130M				143/141 (144/144)J(F)	
245/70R17.5											143/141 (144/144)J(F)	
225/70R19.5					128/126J							
245/70R19.5					136/134M 141/140J							
265/70R19.5							140/138M					
285/70R19.5					146/144 (144/142)L(M)		144/142( 145/143)M(L)				150/148J	
10R22.5					141/139M							
11R22.5					144/142M 148/145M		148/144L	148/145L				144/142L 148/144L
11R24.5					146/143M 149/146M							146/143L
12R22.5							152/148L					
255/70R22.5					140/137 (140/140)M(L)							140/137L
275/70R22.5					148/145 (152/148)M(J)							
295/75R22.5					144/141M							
295/80R22.5	152/148M	152/149M			152/148M	152/148M	152/148M					
315/60R22.5						152/148L						
315/70R22.5		154/150 (152/148)L(M)			154/150 (152/148)L(M)	154/150 (152/148)L(M)	154/150 (152/148)L(M)					
315/80R22.5		156/150 (154/150)L(M)			154/151 (156/151)M(L)	156/150 (154/150)L(M)	154/151 (156/151)M(L)					
285/75R24.5					144/141M							
385/55R22.5			158/-(160/-) L(K)								160/ - (158/ - ) K(L)	
385/65R22.5			158/-(160/-) L(K)	158/-(160/ - ) L(K)					160/ - (158/ - ) K(L)	158/-(160/-) L(K)	158/ - (160/ - ) L(K)	
425/65R22.5										165/ - K		
10.00R20					146/143K			146/143K				
11.00R20					150/147K			150/147K				
12.00R20								154/151K				
11.00R22							154/151L					

Regional													
	GAR821	GAR820	GSR220	GT879	GT276	GT268	GT629	GDR619	GT659+	GT668	GT688	GT678	GTR923
9R22.5						136/134M							
10R22.5											141/139M		
11R22.5				144/142M 148/145M	148/145M					144/142L 148/145L	144/142M 148/144M		
11R24.5				146/143M 149/146M						146/143L 149/146L	146/143M 149/146M		
12R22.5				152/148M	152/148L				152/148L		152/148M		
13R22.5					154/150 (156/150)L(K)								
255/70R22.5						140/137 (140/140)M(L)							
275/70R22.5					148/145K								
295/75R22.5				144/141M						144/141L	144/141M		
275/80R22.5									149/146L				
295/80R22.5	152/148L		152/149M	152/148M	152/148K		152/148M		152/148M		152/148M		
315/70R22.5			154/150( 152/148)L(M)						154/150 (152/148)L(M)				
315/80R22.5			156/150	154/151 (156/151)M(L)	154/151 (156/151)K(J)				156/150 (154/150)L(M)		154/151 (156/151)M(L)		
285/75R24.5			, , ,	144/141M					, , ,	144/141L	144/141M		
10.00R20				146/143K									
11.00R20				150/147K									
11.00R22.5					148/145M								
12.00R20				154/151K						154/151K			
12.00R24				156/153K	156/153K								

### PRODUCT RANGE

				Mixed S	Gervices				Off Road	Urk	oan
	The state of the s	量渡		The state of the s				The Contract of the Contract o			
	GAM831	GDM623	GT01	GT01N	GT676	GT686	GT876	GT886	GAO822	GAU861	GT867
7.50R16LT								122/118M			
8.25R16LT								126/122M			
11R22.5			148/144M			148/145J					148/145J
11R24.5			149/146M								
12R22.5				152/149K		152/148K			152/149F		
13R22.5	156/150 (154/150)K(L)		154/150 (156/150)L(K)		154/150 (156/150)K(G)	154/150 (156/150)K(G)					
275/70R22.5					148/145K					148/145 (152/148)J(E)	148/145 (152/148)J(E)
295/80R22.5	152/148K					152/149K					152/1481
315/80R22.5	156/150 (154/150)K(L)		154/151 (156/151)L(K) 161/157J		156/150K	156/150K					
385/65R22.5							158/-(160/-)L(K)				
425/65R22.5							165/-K				
445/65R22.5							169/- K				
8.25R20								135/131M			
9.00R20			144/142K					144/142K	144/142F		
10.00R20			146/143K						149/146F		
11.00R20		152/149K	150/147K					149/145K	152/149F		
12.00R20		156/153J	154/151K						156/153F		
12.00R24			156/153K 160/156K		156/153K 160/156K						

Recommendations for the use of GT Radial Truck Tires

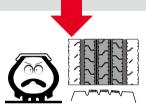


### SAFFTY

Important instructions for safe inflation

#### **Over-inflation reduces:**

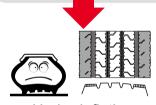
- Comfort
- Grip
- · Braking distance
- Tire life span, particularly on drive axle tires.
- Safety



Over-inflation

#### **Under-inflation leads to:**

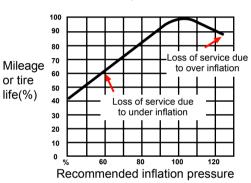
- Reduced vehicle handling and safety
- A reduction in casing retreadability
- An increase of rolling resistance consequently of fuel consumption.



Under-inflation



Effect of inflation pressure on tire life



#### **ADVICE BEFORE INFLATION**

each service.

Weigh your vehicle and its load, axle by axle, to determine tire pressure.

Measure the pressure when cold (when the vehicle has been stationary for several hours): Pressures must be checked at regular intervals and during

- Important safety instruction: Pressure increases when the vehicle is in motion, never reduce the pressure of a hot tire.
- Pressure gauges:must be accurate, handled with care and calibrated regularly

### **INFLATION METHOD**



#### With inflation cage

- Place the tire vertically in the inflation cage.
- · Read the cage user manual.





# Inflate up to the appropriate pressure. 3m During inflation, stand in line with the tire tread three

meters away

### A

#### Caution:

Driving with insufficient pressure can damage your tires. After having driven with an underinflated tire, do not re-inflate tires: have your tires fully checked by an expert.

### Servicing of Tube type tires on Multi piece rims

- Firstly, it is important to understand that the various tasks involved in the stripping and rebuilding of multi-piece wheels are far more hazardous than those on single piece wheels. To eliminate potentially fatal incidents when working with multi-piece rims, be sure to understand and follow all procedures and safety instructions according to the wheel manufacturer.
- There are several different types of multi-piece rim and it is ESSENTIAL that component parts are NOT mixed between the different types. When demounting a tire from a multi-piece rim, always keep loose flanges and locking rings together with the rim base from which they were removed.
- Good mounting practises and procedures are also important in order to obtain optimum tire performance and operating efficiency.

### Scope.

These guidelines apply to the servicing of vehicle wheels mounted with tube-type tires fitted to multi-piece rims.

### Definition.

'Multi piece rim' (sometimes referred to as 'split rim') means a vehicle commercial wheel rim consisting of two or more parts, one of which is a locking ring designed to hold the tire on the rim by tension on interlocking components when the tire is inflated.



Do not mount or demount a multi piece wheel/rim without fully understanding sections 1 - 13 (explain on the next page), or before receiving proper training.

### Servicing of Tube type tires on Multi piece rims

- 1 Before demounting from the rim base, tires MUST be completely deflated by removal of the valve core.
- 2 Before the wheel is removed from the vehicle's axle, the valve core must be removed and the tire fully deflated when either condition 'a' or 'b' below is noted:
  - A. The tire has been operated underinflated at 80% or less, of its recommended pressure, OR
  - B. There is discernible or suspected damage to the tire or wheel components.
- 3 Before assembly, wheel components should be inspected, and damaged rim components must not be reused. Mating surfaces must be free of dirt, surface rust, scale and rubber buildup before mounting a tube type tire to a rim base. Use a de-scaling hammer or similar to remove rust build up, finishing with a hand held wire brush. NOTE ALWAYS wear P.P.E. (Personal Protective Equipment) especially eye protection and ear protection during this task.
- **4** Using a vacuum cleaner, ensure the tire is completely clean inside and free from all debris and dust
- 5 Using talcum powder or similar, lightly powder the tube and flap before assembling into tire. This assists in the "rounding out" of the tube and avoids chafing when in service. Do not allow the tube or flap to lay on a dirty ground surface as this will cause contamination and potential failure in service!
- 6 Apply a non water based rubber lubricant to bead area of the tire and rim base mating surfaces upon wheel assembly. This assists in correct seating of tire when inflating.
- **7** Air pressure must not exceed 1 bar (15 p.s.i) whilst seating the flange and locking ring when a tire is being partially inflated without a restraining device.
- Once all components are seated correctly with pressure not exceeding one bar pressure, the built up tire / wheel assembly should be placed vertically into a restraining device such as a suitable safety cage, with the locking ring facing the wall. Once in position, final inflation to the recommended operating pressure can take place. See image right. Always check the cage manufactures recommendations.



**9** The tire inflation gauge should have a minimum 3 meters of hose between the valve connector and the hand held gauge, and the operator should stand this distance away from the tire in line with the tread – see image right.



10 Whilst the tire is pressurized, components must not be struck or forced to correct the seating of flanges or locking rings.

- 11 There should be no contact between the person performing the task or unit of equipment and a restraining device during tire inflation.
- **12** After inflation, tires, rims and locking rings should be visually inspected while within the restraining device to ensure correct seating and locking. If adjustment is necessary the tire must first be deflated by valve core removal and the process restarted again.
- Once finally inflated to the correct operating pressure, the tire should be left in the restraining device for a minimum of five minutes before re-checking final pressure. NOTE there is often a settling down in tube type tires that produces some pressure loss. This is mainly caused by trapped air between the tube and tire during assembly. After final pressurization fit a high pressure valve cap.



- Rims, flanges and locking rings should never be repaired by heating or welding.
- Never inflate a tire beyond the maximum pressure recommended by the manufacture.
- Never work on an inflated tire.
- If a tire has been run flat or grossly underinflated, it must be removed from the rim and examined by a qualified person before re-inflating.
- Remember, if the tire or any of the components show any signs of damage that might cause failure on inflation or failure when back in service, do not attempt to rebuild the assembly.
- Never try to adjust incorrectly seated components by hammering whilst the tire is inflated.
- If there is any doubt over the integrity of component parts always deflate the assembly and remove the tire.

### **TECHNICAL SPECIFICATIONS**

S Tire section.



H Tire height.



R Unloaded free diameter.



R' Loaded deflected radius.



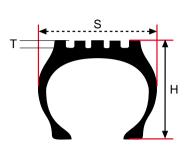
**D** Rolling Circumference

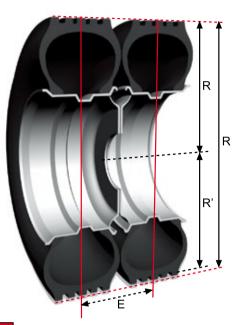


Min. distance tire sidewalls in twin fitment



T Tread depth





Load capacity variations according to speed

Speed (km/h)		Pressure						
Speed Symbol Speed (km/h)	F	G	J	К	L	M	Balance(%)	
0	+150	+150	+150	+150	+150	+150	40	
5	+110	+110	+110	+110	+110	+110	40	
10	+80	+80	+80	+80	+80	+80	30	
15	+65	+65	+65	+65	+65	+65	25	
20	+50	+50	+50	+50	+50	+50	21	
25	+35	+35	+35	+35	+35	+35	17	
30	+25	+25	+25	+25	+25	+25	13	
35	+19	+19	+19	+19	+19	+19	11	
40	+15	+15	+15	+15	+15	+15	10	
45	+13	+13	+13	+13	+13	+13	9	
50	+12	+12	+12	+12	+12	+12	8	
55	+11	+11	+11	+11	+11	+11	7	
60	+10	+10	+10	+10	+10	+10	6	
65	+7.5	+8.5	+8.5	+8.5	+8.5	+8.5	4	
70	+5.0	+7.0	+7.0	+7.0	+7.0	+7.0	2	
75	+2.5	+5.5	+5.5	+5.5	+5.5	+5.5	1	
80	[0]	4.0	+4.0	+4.0	+4.0	+4.0	0	
85		2.0	+3.0	+3.0	+3.0	+3.0	0	
90		[0]	+2.0	+2.0	+2.0	+2.0	0	
95			+1.0	+1.0	+1.0	+1.0	0	
100			[0]	0	0	0	0	
110				[0]	0	0	0	
120					[0]	0	0	
130						[0]	0	

The coefficients in this table are those of the ETRTO standard and are given for information only.

Contact us for all load capacities greater than the basic load limits given by tire markings and used in this brochure. When the coefficients in these tables lead to pressure greater than 10 bars, you must reduce the maximum load capacity to an amount which corresponds to a maximum pressure of 10 bars.

If you wish to use pressure greater than10 bars, consult us for the tires, check the maximum resistance of rims with your rim manufacturer and comply with regulations in force for fitting and use.

The coefficients indicated in this table are taken from the ETRTO.

### In urban and suburban traffic (M3 – class I): + 15%, when the average speed is under 40 km/h.

### In intercity traffic

(M3 – class II): + 10%, when speed is limited to 60 km/h.

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