

KAMA TYRES

ТОРГОВЫЙ ДОМ

GmbH

каталог
шинной продукции

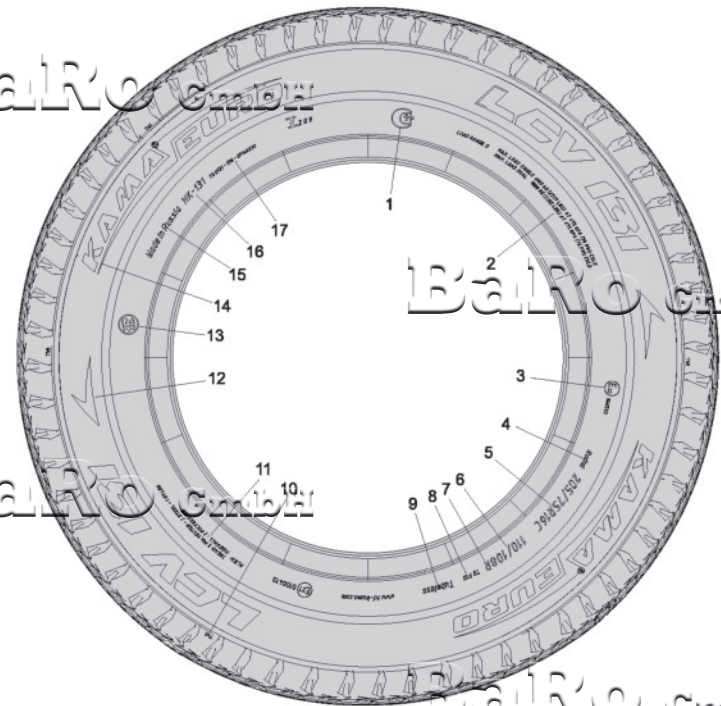
tyres catalogue

GmbH

2018



Легкогрузовые шины



- 1 Знак соответствия продукции техническому регламенту.
- 2 **MAX. LOAD SINGLE 1654LBS (750 kg); AT 54PSI (375 kPa) MAX. LOAD DUAL 1565LBS (710 kg) AT 54PSI (375 kPa)** – максимальная нагрузка в фунтах (кгс) при максимальном давлении в шине в фунтах/кв. дюйм (кПа) (для одинарной/двухконтной шин).
- 3 Знак официального утверждения с номером страны, выдавшей сертификат и соответствующим номером сертификата.
- 4 **RADIAL** – обозначение радиальной конструкции шины.
- 5 **205/75R16C** – обозначение типоразмера шины.
- 6 **110/108** – индекс нагрузки – цифровой код, обозначающий максимальную нагрузку на шину (для одинарной/двухконтной шин).
- 7 **R** – категория скорости – буквенный код, обозначающий максимальную скорость шины.
- 8 **70PSI** – Индекс испытательного давления.
- 9 **TUBELESS** – обозначение бескамерной шины.
- 10 Для камерной шины обозначение **TUBE TYPE** (может не указываться).
- 11 **TWI** – место расположения индикатора износа.
- 12 **TREAD: 4 NYLON + 2 STEEL SIDEWALL: 3 NYLON** – применяемые материалы и число слоев в каркасе и брекете.
- 13 Направление вращения (только для шин с направленным рисунком протектора), пиктограмма может дублироваться надписью «Rotation».
- 14 Логотип производителя.
- 15 **KAMA EURO** – торговая марка.
- 16 **MADE IN RUSSIA** – название страны-изготовителя.
- 17 **HK-131** – модель шины.
- 18 **ГОСТ или ТУ** – обозначение нормативного документа, по которому изготавливается шина.

Light truck tyre lettering

- 1 Conformity mark.
- 2 **MAX. LOAD SINGLE 1654LBS (750 kg); AT 54PSI (375 kPa) MAX. LOAD DUAL 1565LBS (710 kg) AT 54PSI (375 kPa)** – maximum load in lbs (kgf) at maximum tyre inflation pressure in psi (kPa) (for single/dual tyres).
- 3 Approval mark with number of the country issuing the certificate and corresponding number of the certificate.
- 4 **RADIAL** – designation of radial construction of the tyre.
- 5 **205/75R16C** – tyre size designation.
- 6 **110/108** – load index – digital code designating maximum tyre load (for single/dual tyres).
- 7 **R** – speed rating – letter code designating maximum tyre speed.
- 8 **70PSI** – test pressure index.
- 9 **TUBELESS** – designation of the tubeless tyre.
- 10 **TUBE TYPE** designation in case of tube application (may not be indicated).
- 11 **TWI** – location of tread wear indicator.
- 12 **TREAD: 4 NYLON + 2 STEEL SIDEWALL: 3 NYLON** – used materials and ply rating of carcass and belt. Direction of rotation (for unidirectional tyres only), the pictogram may overlap with a "Rotation" inscription.
- 13 Logotype of the manufacturer.
- 14 **KAMA EURO** – brand name.
- 15 **MADE IN RUSSIA** – name of the country of origin.
- 16 **HK-131** – tyre model.
- 17 **ГОСТ and ТУ** – regulatory document according to which the tyre is produced.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
13"	185/75R13C	29 KAMA-231		96	N	54	Рад.	ТЛ	Комб.	Всесезонный	140	608±6	186	277±3	8,6	710		3,8	4 1/2 J; 5 J; 5 1/2 J; 6 J	ЛБ	УК-13М	ЛК-35-11,7			ТУ 2521-066-00148990	
	32 KAMA-365 LT		99/97	N	54	Рад.	ТЛ	Комб.	Зимний		140	608±6	184	273±3		775	730	3,8	5 J	ЛБ		M+S			ТУ 22.11.13-035-98358561	
14"	185R14C	33 Viatti Vettore Inverno	102/100	Q	65	Рад.	ТЛ	Комб.	Зимний		160	650±9	188	293±4	10,2	850	800	4,6	5 J	ЛБ		M+S, 3PMSF	120	ТУ 2521-213-98358561		
	34 Viatti Vettore Brina	102/100	Q	65	Рад.	ТЛ	Комб.	Зимний		160	650±9	188	293±4	10,0	850	800	4,6	5 J	ЛБ		M+S, 3PMSF		ТУ 2521-214-98358561			
15"	195R14C	33 Viatti Vettore Inverno	106/104	R	65	Рад.	ТЛ	Комб.	Зимний		170	666±10	198	306±5	11,3	950	900	4,6	5 1/2 J	ЛБ		M+S, 3PMSF	112	ТУ 2521-097-98358561		
	34 Viatti Vettore Brina	106/104	R	65	Рад.	ТЛ	Комб.	Зимний		170	666±10	198	305±5	11,0	950	900	4,6	5 1/2 J	ЛБ		M+S, 3PMSF		ТУ 2521-096-98358561			
16"	195/70R15C	33 Viatti Vettore Inverno	104/102	R	65	Рад.	ТЛ	Комб.	Зимний		170	657±10	201	298±4	11,5	900	850	4,6	6 J	ЛБ		M+S, 3PMSF	120	ТУ 2521-148-98358561		
	34 Viatti Vettore Brina	104/102	R	65	Рад.	ТЛ	Комб.	Зимний		170	657±10	201	298±4	11,2	900	850	4,6	6 J	ЛБ		M+S, 3PMSF		ТУ 2521-149-98358561			
	205/70R15C	33 Viatti Vettore Inverno	106/104	R	65	Рад.	ТЛ	Комб.	Зимний		170	669±10	209	310±5	12,7	950	900	4,6	6 J	ЛБ		M+S, 3PMSF	112	ТУ 2521-020-98358561		
	34 Viatti Vettore Brina	106/104	R	65	Рад.	ТЛ	Комб.	Зимний		170	669±10	209	310±5	12,4	950	900	4,6	6 J	ЛБ		M+S, 3PMSF		ТУ 2521-027-98358561			
	215/65R15C	33 Viatti Vettore Inverno	104/102	R	54	Рад.	ТЛ	Комб.	Зимний		170	661±10	221	304±5	12,9	900	850	3,7	6 1/2 J	ЛБ		M+S, 3PMSF	120	ТУ 2521-125-98358561		
	34 Viatti Vettore Brina	104/102	R	54	Рад.	ТЛ	Комб.	Зимний		170	661±10	221	302±5	12,6	900	850	3,7	6 1/2 J	ЛБ		M+S, 3PMSF		ТУ 2521-126-98358561			
	215/90-15C	30 Я-245-1		99	K	38	Диag.	ТТ	Текст.	Универсальн.	110	777±12	218	362±5	18,6	775		2,6	6 L		8,40-15	ЛК-35-16,5	M+S		ТУ 38.104108	
	225/70R15C	33 Viatti Vettore Inverno	112/110	R	65	Рад.	ТЛ	Комб.	Зимний		170	699±10	230	320±5	13,2	1120	1060	4,6	6 1/2 J	ЛБ		M+S, 3PMSF	130	ТУ 2521-252-98358561		
	34 Viatti Vettore Brina	112/110	R	65	Рад.	ТЛ	Комб.	Зимний		170	699±10	230	320±5	13,2	1120	1060	4,6	6 1/2 J	ЛБ		M+S, 3PMSF		ТУ 2521-253-98358561			
	225/85R15C	30 И-502		106	P	60	Рад.	ТТ	Комб.	Универсальн.	150	768±12	240	355±5	18,6	950		4,1	6 1/2 J		8,40-15	ЛК-35-16,5	M+S		ТУ 38.604-11-36	
	175R16C	29 KAMA-218		98/96	M	54	Рад.	ТТ	Комб.	Всесезонный	130	684±7	178	314±3	12,3	750	710	3,8	5 J	ЛБ		175-16	ЛК-35-11,7	M+S	144	ТУ 2521-048-00148990
	32 KAMA-365 LT		98/96	M	54	Рад.	ТЛ	Комб.	Зимний		130	684±7	175	311±3		750	710	3,8	5 J	ЛБ		M+S			ТУ 22.11.13-034-98358561	
185/75R16C	34 Viatti Vettore Brina	104/102	R	70	Рад.	ТЛ	Комб.	Зимний		170	684±10	184	311±4	11,6	900	850	4,8	5 J	ЛБ		175-16	ЛК-35-11,7	M+S, 3PMSF		ТУ 2521-205-98358561	
31 KAMA-301		104/102	N	69	Рад.	ТЛ	Комб.	Всесезонный		140	684±7	184	316±3	11,0	900	850	4,8	5 J	ЛБ		M+S			ТУ 2521-010-00148990		
195/75R16C	33 Viatti Vettore Inverno	107/105	R	70	Рад.	ТЛ	Комб.	Зимний		170	699±10	196	325±5	12,3	975	925	4,8	5 1/2 J	ЛБ		M+S, 3PMSF	112	ТУ 2521-024-98358561			
34 Viatti Vettore Brina	107/105	R	70	Рад.	ТЛ	Комб.	Зимний		170	699±10	196	325±5	12,0	975	925	4,8	5 1/2 J	ЛБ		M+S, 3PMSF		ТУ 2521-026-98358561				
205/65R16C	33 Viatti Vettore Inverno	107/105	R	69	Рад.	ТЛ	Комб.	Зимний		170	672±10	209	311±5	12,1	975	925	4,8	6 J	ЛБ		M+S, 3PMSF	122	ТУ 2521-255-98358561			
34 Viatti Vettore Brina	107/106	R	69	Рад.	ТЛ	Комб.	Зимний		170	672±10	209	312±5	12,1	975	925	4,8	6 J	ЛБ		M+S, 3PMSF		ТУ 2521-256-98358561				
205/75R16C	34 Viatti Vettore Brina	110/108	R	70	Рад.	ТЛ	Комб.	Зимний		170	714±11	203	323±5	13,3	1060	1000	4,8	5 1/2 J	ЛБ		M+S, 3PMSF		ТУ 2521-201-98358561			
215/65R16C	33 Viatti Vettore Inverno	109/107	R	69	Рад.	ТЛ	Комб.	Зимний		170	686±10	221	318±5	12,9	1030	975	4,8	6 1/2 J	ЛБ		M+S, 3PMSF	128	ТУ 2521-070-98358561			
34 Viatti Vettore Brina	109/107	R	69	Рад.	ТЛ	Комб.	Зимний		170	686±10	221	318±5	12,6	1030	975	4,8	6 1/2 J	ЛБ		M+S, 3PMSF		ТУ 2521-074-98358561				
215/75R16C	33 Viatti Vettore Inverno	116/114	R	77	Рад.	ТЛ	Комб.	Зимний		170	730±11	216	329±5	14,8	1250	1180	5,4	6 J	ЛБ		M+S, 3PMSF	120	ТУ 2521-199-98358561			
34 Viatti Vettore Brina	116/114	R	77	Рад.	ТЛ	Комб.	Зимний		170	730±11	216	329±5	14,5	1250	1180	5,4	6 J	ЛБ		M+S, 3PMSF		ТУ 2521-200-98358561				
225/75R16C	29 KAMA-218		121/120	N	83	Рад.	ТЛ	Комб.	Всесезонный	140	744±7	228	341±3	16,8	1450	1400	5,85	6 1/2 J	ЛБ	6,50-16	ЛК-35-11,7	M+S	128	ТУ 2521-054-00148990		
31 И-359		121/120	N	83	Рад.	ТЛ	Комб.	Универсальн.		140	744±11	228	343±5	17,4	1450	1400	5,85	6 1/2 J	ЛБ, БП-11.3, АБ-35	6,50-16	ЛК-35-11,7	M+S	114	ТУ 38.604-11-30		
235/65R16C	33 Viatti Vettore Inverno	115/113	R	69	Рад.	ТЛ	Комб.	Зимний		170	712±11	240	328±5	15,7	1215	1150	4,8	7 J	ЛБ		M+S, 3PMSF	130	ТУ 2521-146-98358561			
34 Viatti Vettore Brina	115/113	R	69	Рад.	ТЛ	Комб.	Зимний		170	712±11	240	328±5	15,4	1215	1150	4,8	7 J	ЛБ		M+S, 3PMSF		ТУ 2521-147-98358561				
7.50R16	32 KAMA-312		124/122	L	105	Рад.	ТТ	Комб.	Универсальн.	120	802±12	199	341±5		1600	1500	7,4	6,00-16		7,50-16		M+S		ТУ 2521-247-98358561		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	

1	Типоразмер
2	№ Страницы
3	Модель
4	Индекс несущей способности для максимально допустимой нагрузки на одинарную/сдвоенную шину
5	Индекс категории скорости
6	Индекс давления PSI
7	Тип конструкции
8	Исполнение (ТЛ-бескамерное, ТТ-камерное)
9	Конструкция каркаса и брекера
10	Тип рисунка протектора
11	Максимальная скорость, км/ч*
12	Наружный диаметр, мм
13	Ширина профиля, мм (не более)

14	Статический радиус, мм
15	Масса шины, кг. (± 5%)**
16	Максимальная нагрузка для одинарных колес, кг
17	Максимальная нагрузка для сдвоенных колес, кг
18	Внутреннее давление, соответствующее максимальной нагрузке, кгс/см²
19	Обод рекомендуемый
20	Тип вентиля бескамерной шины
21	Ездовая камера
22	Тип вентиля ездовой камеры
23	Дополнительная маркировка
24	Количество шипов, шт. ***
25	Нормативный документ

1	Size
2	Page No.
3	Model
4	Load index of a single/dual tyre maximum weight capability
5	Speed rating
6	Pressure index PSI
7	Type of construction
8	Execution (TL-tubeless, TT-tube type)
9	Carcass and belt construction
10	Tread pattern
11	Maximum speed, km/h *
12	Outer diameter, mm

13	Section width, mm (max)
14	Static radius, mm
15	Tyre weight, kg (± 5%)
16	Single tyre maximum load, kg
17	Dual tyre maximum load, kg
18	Inflation pressure corresponding to maximum load, kgf/cm2
19	Recommended rim
20	Tubeless tyre valve type
21	Inner tube
22	Inner tube valve type
23	Additional marking
24	Stud quantity, pcs ***
25	Regulatory document

* Максимальная допустимая скорость для шины с шипами противоскольжения 130 км/ч
** Масса камерных шин указана с учетом веса камер
*** Ошиповка шин с универсальным и всесезонным рисунком протектора осуществляется по заявке потребителя

* Maximum permissible speed for a studded tyre is 130 km/h
** Indicated tube tyres weight includes tube weight
*** Tyres with universal and all-season tread pattern shall be studded at the customer's request

Balko GmbH

Balko GmbH



KAMA-218

Рисунок протектора:
дорожный

Tread pattern:
road



175R16C 98 96 M
225/75R16C 121 120 N

KAMA-218



KAMA-231

Рисунок протектора:
дорожный

Tread pattern:
road



185/75R13C 96 N

KAMA-231

Я-245-1



Я-245-1

Рисунок протектора:
универсальный

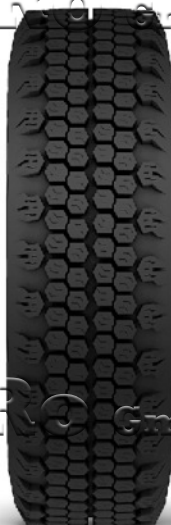
Tread pattern:
universal



215/90-15C

99 K

И-502



И-502

Рисунок протектора:
универсальный

Tread pattern:
universal



225/85R15C

106 P



KAMA-301

Рисунок протектора:
всесезонный

Tread pattern:
all season



185/75R16C 104, 102 N

KAMA-301



И-359

Рисунок протектора:
универсальный

Tread pattern:
universal



225/75R16C 121, 120 N

И-359

KAMA-365 LT



KAMA-365 LT

Рисунок протектора:
зимний

Tread pattern:
winter

Новинка / New



175R16C	98	96	M
185/75/R13C	99	97	N

KAMA-312



KAMA-312

Рисунок протектора:
универсальный

Tread pattern:
universal



7.50R16	124	122	L
---------	-----	-----	---

BAIRO GmbH



Viatti Vettore Inverno

BAIRO GmbH

Рисунок протектора:
зимний

Tread pattern:
winter

BAIRO GmbH

Viatti Vettore Inverno

BAIRO GmbH



185R14C 102 100 Q

195/75R16C 107 105 R

195R14C 106 104 R

205/65R16C 107 105 R

195/70R15C 104 102 R

215/65R16C 109 107 R

205/70R15C 106 104 R

215/75R16C 116 114 R

215/65R15C 104 102 R

235/65R16C 115 113 R

225/70R15C 112 110 R

BAIRO GmbH

BAIRO GmbH

BAIRO GmbH



**Viatti Vettore
Brina**

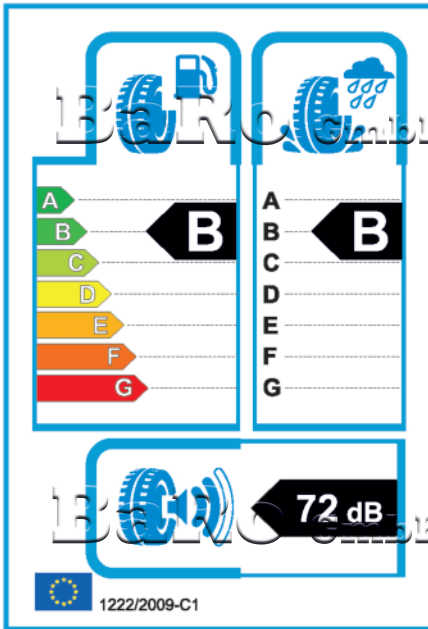
Рисунок протектора:
зимний нешипуемый

Tread pattern:
winter studless



185R14C	102	100	Q
195R14C	106	104	R
195/70R15C	104	102	R
205/70R15C	106	104	R
215/65R15C	104	102	R
225/70R15C	112	110	R
185/75R16C	104	102	R

195/75R16C	107	105	R
205/65R16C	107	106	R
205/75R16C	110	108	R
215/65R16C	109	107	R
215/75R16C	116	114	R
235/65R16C	115	113	R



European tyre labelling is new EU requirements entering standard form of tyre execution providing consumers with important information regarding tyre's key features.

- Rolling resistance (directly related to fuel consumption and ecological environment impact).
- Wet grip (key tyre safety indicator, giving an indication of braking distance on wet surface).
- External Noise (besides acoustic comfort, it is also a source of influence on environment).



This indicator shows coefficient of rolling resistance. Low tyre rolling resistance means less fuel consumption and lower CO₂ emission respectively. Evaluation marking starts from A (the highest efficiency) to G (the lowest, but accepted by Regulation).



This parameter is in charge of wet surface grip. The higher these values are, the shorter braking distance is in treacherous driving conditions. Evaluation markings are from A to G, where A is the best grip and G is the worst one.



The indicator of acoustic comfort shows the noise level during the tyre contact with road surface in the form of one, two or three graphic waves. New requirements apply to the following tyre types: C1 (passenger cars), C2 (light duty trucks) and C3 (heavy-duty trucks).

The following tyre types do not fall within the scope of the new document:

- Retreaded tyres;
- Specific off-road tyres;
- Racing tyres;
- Studded tyres (or tyres designed for studding);
- Spare tyres for periodic application;
- Tyres made for vehicles, which were registered for the first time before 01.10.1990;
- Tyres with speed index below 80km/h;
- Tyres with wheel diameter below 10 inches (254mm) and above 25 inches (635 mm);
- Motorcycle tyres.

Легкогрузовые шины КАМА

Light truck tyres KAMA

Baiko GmbH



Типоразмер / Size	Модель / Model				
185/75R13C	KAMA-231	F	B	)>)	73 dB
215/90R15C	Я-245-1	F	E	)>)	77 dB
225/85R15C	И-502	F	B	)>)	78 dB
175R16C	KAMA-218	F	C	)>)	74 dB
185/75R16C	KAMA-301	F	C	)>)	76 dB
225/75R16C	И-359	E	B	)>)	75 dB
225/75R16C	KAMA-218	F	B	)>)	76 dB

Baiko GmbH



Типоразмер / Size	Модель / Model				
205/70R15C	KAMA EURO LCV-131	E	A	)>)	74 dB
185/75R16C	KAMA EURO LCV-131	F	B	)>)	75 dB
195/75R16C	KAMA EURO LCV-131	F	B	)>)	76 dB
205/75R16C	KAMA EURO LCV-131	E	C	)>)	75 dB
215/75R16C	KAMA EURO LCV-131	E	A	)>)	75 dB

Baiko GmbH

Baiko GmbH

Baiko GmbH

Baiko GmbH



REFERENCE INFORMATION

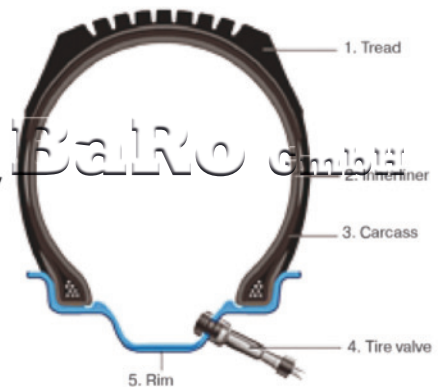
During their operation tyres should ensure comfortable and safe driving, vehicle stability and handling at high speeds, on wet and snow covered roads, as well as stipulated load carrying capacity.

TYRE PARTS CHARACTERISTICS

Pneumatic tyre set includes:

- tyre casing
- inner tube with valve (for inner tube tyres);
- rim strip (for combined truck tyres).

TUBELESS TYRE CONSTRUCTION



Tyre casing looks like a toroid-shape resilient shell that takes force during vehicle driving. It ensures tyre grip on the road.

Tyre Casing includes carcass, breaker, tread, sidewalls and beads.

Carcass it is a load-bearing part of pneumatic tyre, which consists of one or more layers of rubberized cord fixed on bead rings.

Breaker is an inner part of pneumatic tyre, which consists of rubberized textile of steelcord layers and is located between tread and carcass. Breaker is designed to cushion impact loads during driving.

Tread is an external part of pneumatic tyre with raised pattern, ensuring road grip and carcass protection from damages.

Sidewall is an external rubber part of tyre located at the lateral surface. It protects carcass from lateral external damages.

Bead is a rigid part of tyre ensuring its fixing on the wheel rim.

Cap strip is a protection layer between steel breaker and tread that protects breaker from mechanical damages and prevents from rubber separation.

Inner tube (riding tube) is a ring-shaped elastic rubber tube with valve for air inflation. It provides for tyre stiffness and secure tyre fixing on the rim.

Bead strip is a profiled flexible ring located between tyre and bead, inner tube and wheel rim, It protects tyre from wear during vehicle driving.

Depending on cross section profile configuration and considering aspect ratio of tyres they distinguish ordinary section tyres, wide section tyres, low section tyres and ultra-low section tyres.

Based on differences in tyre carcass design two essentially different groups may be distinguished:

- Bias tyres
- Radial tyres

BIAS TYRES

Bias PC tyres are basically tyres of old models.

Among others the advantages of bias tyres are a higher load carrying capacity and bigger intervals of tyre pressure control. Main disadvantages are unstable tyre behavior during driving (due to contact spot dynamically varying during vehicle driving), lower allowable speed, shorter tyre life. Bias tyre is more likely to slip at breaking, and its resistance to aquaplaning is low. At present time bias design is used for some truck tyres (having high load carrying capacity) and for special vehicles tyres. As a rule bias tyre has four carcass plies.

RADIAL TYRES

Basically all modern PC and truck tyres are radial.

Positive aspect of radial tyres is obvious improvement of handling and higher tyre life. Negative aspect is lower load carrying capacity (in comparison with bias tyres).

Depending on way of production tyres can be with tube type (special inner tube of suitable size is used to ensure tyre air tightness) and tubeless (tyre air tightness is ensured by inner air proof ply and design elements of wheel disk - humps). The advantage of tubeless tyres is evident - in case of tyre blowout there is no burst-like airdrain through loose tyre-disk fixing and there is possibility to rich the place of repair without loosing car control. Moreover, tubeless tyres has lower rolling resistance, lower weight and better balancing.

TYRE LETTERING

There is some lettering on tyre sidewalls indicating its basic parameters:

PC TYRE LETTERING

Example: 175/70 R13 82T, where:

175 – tyre section width (mm);

70 – tyre sidewall height, % of section width;

R – radial design;

13 - rim seat diameter in inches;

82 – load index (there are special tables for index recalculation to kilograms);

T – Speed index, i.e. max allowed speed for that tyre model (there is a table of speed index correspondence to speed in km/h).

SEASON APPLICABILITY OF TYRES

Pursuant to season applicability tyres are divided into three main groups: summer, winter and all season tyres. Main differences of tyre application according to season depend on rubber compounds characteristics/tread cap material, and on tread pattern. Generally, good winter tyre tread is softer, which helps to maintain elasticity of tyre material at low temperatures (below zero) and results in good tyre grip on snow covered and icy surfaces. This can be achieved by the addition of high quantity of silica in rubber.

Visually you can notice the differences between summer and winter tyre in their tread pattern design. Winter tyre tread has more partitioned pattern which helps tyre to clean itself during motion. Better tyre grip with road surface is also achieved due to large quantity of sipes (special thin grooves cutting the surface of tread blocks). Modern winter tyre has about 1500 sipes. Modern high speed winter tyre has clear directional or assymetric tread pattern that ensures better water, snow and mud diversion from tyre-road contact patch.

WINTER TYRES

Winter tyres can be produced as studded and studless tyres. In Russia studless winter tyres are erroneously considered as all season tyres. This is a glaring fault. All season tyre is a separate tyre group having special design and characteristics.

Studded tyres have both clear advantages and disadvantages. Studs fully function only on smooth icy surface and on compact pressed snow, where they reduce vehicle breaking distance by 70% in comparison with studless tyres. But on wet or dry asphalt contact spot decreases due to protruded studs, which brings to adverse effect lower tyre road grip, worse handling and longer breaking distance. Therefore the choice between studded and studless tyre should be made depending on specific operation conditions. Viatti winter tyres have assymetric tread pattern.

SUMMER TYRES

Summer tyre tread pattern consists of large blocks splitted with minimum number of lamellae, which helps to improve significantly vehicle behaviour stability at high speeds, common for summer period. Special feature of summer tyre tread is a balanced system of longitudinal and lateral diversion grooves that considerably reduce the risk of aquaplaning effect. Most of modern high speed summer tyres have directional tread pattern that improves vehicle handling and stability.

WARRANTY LIABILITIES

Manufacturer guarantees:

Tyres conformance to standards requirements while operating, transportation and storage rules are observed. Lack of workmanship defects and tyres normal operation till tread pattern limiting wear according to wear indicator height within warranty shelf life and service life Tyres warranty shelf life and service life is 5 years from the date of production.

RECOMMENDATIONS ON TYRE OPERATION

1. Selection of tyres

During tyres selection to eliminate its overload it is necessary to take into account load index and speed index as well as pay attention to tyre design (tube type, tubeless etc.)

2. Tyre mounting and dismounting.

Tyres mounting and dismounting should be performed by qualified personnel with application of special equipment.

3. Factors influencing to tyres durability:

- Strict compliance to rules of tyre operation and maintenance contributes to maximum usage of tyre resource.
- When fitting tyre to vehicle check conformance of tyre to vehicle in terms of design, section shape, wear degree, pattern type. Fit identical tyres to double wheels and axes.
- Follow the norms of tyre inflation pressure

including spare tyre. Adequate inflation pressure is a major factor for tyre operation.

Check pressure in all tyres minimum once a week. Pressure must be checked only, when tyre is cold. Reduction of tyre inflation pressure by 10% results in increase of fuel consumption increase 1.5% and considerable reduction of tyre service life. It is not allowed to use tyres with residual tread pattern height below:

1.6 mm for PC tyres;

1.0 mm for truck tyres;

2.0 mm for bus and trolleybus tyres.

It is necessary to retread tyres in time, it helps to increase their efficiency up to 50%.

It is recommended to keep pressure in spare tyre 0.3 bar more than the standard and reduce it just before tyre operation.

Increase inflation pressure on rear axle tyres by 0.5-0.8 bar if trailer is used. Use valve caps.

TABLE OF INFLATION PRESSURE CONVERSION

Very often standard pressure on tyre is indicated in PSI unit. It is also recommended for tyre manufacturers for American and British vehicles. PSI is abbreviation for pound per square inch. For your information we prepared the following table of PSI conversion to more widely used unit BAR, which is also called as "atmosphere", 1 BAR = 1 technical atmosphere, which though does not correspond to 1 atmosphere, but for common application is put equal to it.

BAR	PSI	BAR	PSI	BAR	PSI
1.0	14	2.6	38	4.2	61
1.1	16	2.7	39	4.3	62
1.2	17	2.8	41	4.4	64
1.3	19	2.9	42	4.5	65
1.4	20	3.0	44	4.6	67
1.5	22	3.1	45	4.7	68
1.6	23	3.2	46	4.8	70
1.7	25	3.3	48	4.9	71
1.8	26	3.4	49	5.0	72
1.9	28	3.5	51	5.1	74
2.0	29	3.6	52	5.2	75
2.1	30	3.7	54	5.3	77
2.2	32	3.8	55	5.4	78
2.3	33	3.9	57	5.5	80
2.4	35	4.0	58	5.6	81
2.5	36	4.1	59	5.7	83

TABLE OF TYRE LOAD CARRYING CAPACITY

One of vehicle tyre property is load carrying index. It indicates maximum acceptable load on the wheel during vehicle driving. Please note, that dividing the weight of vehicle by the quantity of wheels is a mistake. Not all the vehicles have ideal weight distribution between axis (50:50) and during freight transportation the deviation can be even more. We recommend selecting tyres with larger load carrying index.

When changing tyres on vehicle you have to pay attention to the size, standard number of plies and max. load carrying capacity (at the set maximum speed) of tyres, which were mounted on vehicle by its manufacturer. Before mounting wider tyres to a vehicle ensure that tyres do not touch the wheel arch or the parts of suspension at full load or at wheel turning till the end position. For better vehicle operation it is necessary to install on all wheels tyres of the same manufacturer, size and model.

Load carrying index	Max load to the tyre (kg)	Load carrying index	Max load to the tyre (kg)	Load carrying index	Max load to the tyre (kg)	Load carrying index	Max load to the tyre (kg)	Load carrying index	Max load to the tyre (kg)	Load carrying index	Max load to the tyre (kg)
19	77,5	50	190	81	462	112	1120	143	2725	174	6700
20	80	51	195	82	475	113	1150	144	2800	175	6900
21	82,5	52	200	83	487	114	1180	145	2900	176	7100
22	85	53	206	84	500	115	1215	146	3000	177	7300
23	87,5	54	212	85	515	116	1250	147	3075	178	7500
24	90	55	218	86	530	117	1285	148	3150	179	7750
25	92,5	56	224	87	545	118	1320	149	3250	180	8000
26	95	57	230	88	560	119	1360	150	3350	181	8250
27	97,5	58	236	89	580	120	1400	151	3450	182	8500
28	100	59	243	90	600	121	1450	152	3550	183	8750
29	103	60	250	91	615	122	1500	153	3650	184	9000
30	106	61	257	92	630	123	1550	154	3750	185	9250
31	109	62	265	93	650	124	1600	155	3875	186	9500
32	112	63	272	94	670	125	1650	156	4000	187	9750
33	115	64	280	95	690	126	1700	157	4125	188	10000
34	118	65	290	96	710	127	1750	158	4250	189	10300
35	121	66	300	97	730	128	1800	159	4375	190	10600
36	125	67	307	98	750	129	1850	160	4500	191	10900
37	128	68	315	99	775	130	1900	161	4625	192	11200
38	132	69	325	100	800	131	1950	162	4750	193	11500
39	136	70	335	101	825	132	2000	163	4875	194	11800
40	140	71	345	102	850	133	2060	164	5000	195	12150
41	145	72	355	103	875	134	2120	165	5150	196	12500
42	150	73	365	104	900	135	2180	166	5300	197	12850
43	155	74	375	105	925	136	2240	167	5450	198	13200
44	160	75	387	106	950	137	2300	168	5600	199	13600
45	165	76	400	107	975	138	2360	169	5800	200	14000
46	170	77	412	108	1000	139	2430	170	6000	201	14500
47	175	78	425	109	1030	140	2500	171	6150	202	15000
48	180	79	437	110	1060	141	2575	172	6300	203	15500
49	185	80	450	111	1090	142	2650	173	6500	204	16000

TABLE OF TYRE SPEED INDEXES

Besides load carrying capacity there is another important tyre parameter, which is max. allowable driving speed. Max speed is expressed as letters. Sometimes speed index is called speed category. Some explanation for better understanding of that indication:

1. Speed index indicates max. allowable speed at normal load (specified load carrying index) for long distance driving, i.e. if you drive using tires with maximum speed of 190 km/h at the speed of 210

km/h within 15 minutes, nothing will happen. But longer driving can lead to tyre deformation and even destruction due to overheating.

2. When a vehicle load is very close to maximum, standard recommendations of manufacturers can differ. To a greater extent this concerns truck and light truck tyres. E.g.: when the load is 90%, the speed should not exceed 90% of maximum speed, when the load is 100%, the speed should be 80% maximum. You can find detailed instructions in tire specifications.

Speed index	J	K	L	M	N	P	Q	R	S	T	U	H	V	W	Y	ZR
Max Speed (km/h)	100	110	120	130	140	150	160	170	180	190	200	210	240	270	300	>240

FITTING AND DISMOUNTING OF TYRE

Usually we dismount (bead) and subsequently fit tyre, when it is necessary to replace it with a new one or with a tyre, which is more suitable to driving conditions, and also when a tyre is damaged. Before tyre dismounting from the rim it is necessary to mark its position in relation to the wheel in order not to break balancing during subsequent tyre fitting. Dismounting of tubeless tyre from a wheel can be difficult. When rubber quality is high and the rim setting surface is smooth and even, as well as after long operation tyre sticks hard to the metal. Mounting such tyre to a wheel is even more difficult. If air supplied with motor car pump or house hold compressor the air will get out through the wheel hump. To fit such tyre you need to ensure massive air supply with special compressor. Therefore it is better to repair tubeless tyres in specialized tyre fitting stations. If damage occurred on the way you may fit the inner tube of suitable size to get a tyre fitting station. In case of assymetric tread pattern OUTSIDE and INSIDE of tyre should be considered during mounting. In case of directional tread pattern the direction of tyre rotation (and indication of rotation arrow on tyre sidewall) shall be the same as its actual rotation direction.

difficult to maintain original fitting accuracy, balancing is violated, wear advances. It is recommended to purchase two sets of wheels.

2. In case you use one wheels set for all seasons, we recommend to put the fitting mark on each tyre and also note the rotation direction, if the tread pattern is not directional. Dismounted tyres should be stored standing, do not hang or pile tyres. However, tyres mounted on wheels can not be stored standing, it is better to hang them up on metal hooks or pile them.

3. Tyres should be kept at the temperature of 15-25°C, without close heating and direct ultraviolet radiation, including sunlight. The tyre's contact with oil, greases, fuel and other similar substances and sweating is not allowed. Storage room should be ventilated.

4. Minimum once per month it is necessary to check air pressure in tyres and and inflate them to standard tyre pressure.

5. Standing tyres should be turned every four months. In case of long term vehicle parking (e.g., during the whole season) it is necessary to dismount the wheels, clean rims and wheels from dirt on both sides, wash them and cover their surfaces with a thin layer of preserving lubricant, threads of fixing bolts or pins also should be covered with the grease.

6. The place of vehicle parking must be flat and clean, wheels must not get in puddle, freeze in ice or be exposed to intensive sun light and heat.

TYRE STORAGE

1. It is not recommended to reposition the sets of tyres every season to one and the same wheel set: bead ring gets stretched, rubber damages occur, it is

BARO GmbH

Обозначения и сокращения



Индекс несущей способности



Индекс несущей способности на сдвоенную шину



Индекс категории скорости

TL – (TUBELESS) – бескамерное исполнение шины.

TT – (TUBE TYPE) – камерное исполнение шины.

M+S – «Грязь и снег» – маркировка на боковине шин, используемых в условиях слякоти или тающего снега.

3PMSF – символ «альпийская горка» (3PMSF - Three Peak Mountain Snow Flake) для всех шин, которые классифицируются в категории эксплуатации «зимняя».

Symbols and abbreviations



Load index



Load index for dual tyre



Speed rating

TL – (TUBELESS) – tubeless tyre.

TT – (TUBE TYPE) – tube type tyre.

M+S – «Mud and Snow» – lettering on the sidewall of tyre used in mud and melting snow conditions.

3PMSF – Three Peak Mountain Snow Flake symbol for all tyres that are classified as winter.

BARO GMBH

REIFENHANDEL AUS LEIDENSCHAFT

Hans-Duncker-Straße 9
21035 Hamburg
Tel.: +49 (0) 40 / 21 90 12 90
www.baro-reifen.de