

Tyres for industrial technique

BORN UP NORTH

There is no eternal. There is reliable.

Formula for success is not to stop upon the achieved result. The tyres of the plant NORTEC pass successfully thousands kilometers of roads, off-road. The new direction of the plant is exploration of severe road conditions. Creating tyres for industrial technique is not only big and labor-consuming work, but no less responsibility. The responsibility for making the final product approve itself as reliable, efficient, secure.

PARO

GmbH

Content

Tyres for industrial technique		82
NorTec IND-247	23.5-25	83
NorTec ER-205	23.5-25 20.5-25 17.5-25	84
NorTec ER-106	20.5-25 17.5-25	85
NorTec IND-76	18.00-25	86
NorTec TC-107	16.9-28 18.4-26	87
NorTec TC-108	16.9-24	88
NorTec TC-106	16.0-70-20	89
FI 140	16.00-24	90
NorTec GD-106	14.00-24	91
NorTec GD-113	14.00-20	92
NorTec TC-106	12.5/80-18	93
NorTec ER-112	12.00-20	94
NorTec IND-02	10.00-16.5 12.00-16.5	95
NorTec CT-311	11.00-20	96
NorTec ER 117/Φ-201	10.0/75-15.3	97
NorTec ER-109	10.00-20	98
NorTec FT-216 /ЛΦ-268	8.25-15	99
NorTec FT-210	8.15-15	100
NorTec FT214 10PR TT	6.50-10 7.00-12	101
NorTec FT215 8PR TT	6.50-10 7.00-12	102

Special modifications of tyres

The tyres supplied for the needs of the Ministry of Defense of the Russian Federation and other military authorities, according to GOST 13298, GOST 5513, GOST 4754, have the following indexes:

- Guaranteed life;
- Guaranteed storage life.

A number of models produced for the needs of the Ministry of Defense of the Russian Federation and other military authorities can also differ from other types of tyres produced in series by other technical characteristics.

For example:

- Load indexes;
- Speed indexes.

Production of the indicated tyres requires readjustment of the equipment. The order for production can be accepted not less than 30 days before the date of the beginning of production.

Tyres produced in tropic and arctic version can also have technical characteristics different from those produced in series. Due to the readjustment of the equipment, the order for production can be accepted not less than 30 days before the date of the beginning of production.

Hot line telephone number:
BaRo GmbH - 040/21 90 12 90

BORN UP NORTH

Tyres for industrial technique

NORTEC

NorTec IND 247



Tyre size	23.5-25	
Standard description	TS 38.304-133	
Tyre pattern	Cross country	
Ply rating	20	24
Tyre weight, not more, kg	226.7	260.9
Load bearing capacity index	177	180
Recommended rim	19.5-25/2.5	
Exterior diameter, mm	1617±1.5%	
Section width, mm, not more	620	
Static radius, mm	720±1.5%	
Q_{max} kgf	7300	8000
P_o , kPa	300	350
V_{max} km/h	50	
Design	TT	
Use	Construction, road-building, carrying and lifting machinery.	

For industrial
technique

Tyres for industrial technique

NORTEC

NorTec ER-205



Tyre size	23.5-25	20.5-25	17.6-25
Standard description	TS 38.304-185	TS 38.304-191	TS 38.304-167
Tyre pattern	Mining L-3, E-3, G-3		
Ply rating	16/18/20	16/20	12/16/20
Tyre weight, not more, kg	226.7	168.4	117.7/117.2
Load bearing capacity index	171/174/177	167/170	153/158/164
Recommended rim	19.0-25/2.5	17.00-25/2.5	14.00-25/2.5
Exterior diameter, mm	1615±22	1492±22	1350±1.5%
Section width, mm, not more	595	520	445
Static radius, mm	719±11	677±11	611±1.5%
Q_{max} kgf	6150/6700 /7300	5450/6000	3650/4250 /5000
P_o , kPa	225/275/300	275/325	225/300/164
V_{max} km/h	50	50	50
Design	TT/TL	TT/TL	TT/TL
Use	Construction, road-building, carrying and lifting machinery, land graders, dumpers with the lifting capacity of 23 t, loaders.		

Tyres for industrial technique

NORTEC

NorTec ER-106



Tyre size	20.5-25	17.5-25
Standard description	TS 38.304-161	TS 38.304-167
Tyre pattern	Cross country G-2 type	
Ply rating	16/20/28	12/16/20
Tyre weight, not more, kg	108.4/170.8	117.7/117.2/ tubeless 113
Load bearing capacity index	167/170/179	153/158/164
Recommended rim	17.00-25/2.0	14.00-25/1.5
Exterior diameter, mm	1492±22	1350±1.5%
Section width, mm, not more	520	445
Static radius, mm	677±11	611±1.5%
Q_{max} kgf	5450/6000/7750	3650/4250/5000
P_o at Q_{max} kgf/sm ² / P at Q_{ec}	275/325/500	225/300/164
V_{max} km/h	50	
Design	TL	
Use	17.5-25 Construction, road-building, carrying and lifting machinery, land graders, dumpers with the lifting capacity of 23 t, loaders.	

For industrial
technique

Tyres for industrial technique

NORTEC

NorTec IND 76



Tyre size	18.00-25
Standard description	TS 38.304-132
Tyre pattern	Mining (E-3)
Ply rating	32
Tyre weight, not more, kg	243.1
Load bearing capacity index	183
Recommended rim	13.00-25/2.5
Exterior diameter, mm	1615±25
Section width, mm, not more	498±15
Static radius, mm	745±13
$Q_{\max}$ kgf	8750
P_o , at $Q_{\max}$, kgf/sm ²	6.50±0.25
$V_{\max}$ km/h	50
Design	TT
Use	BelAZ-7540, 7541, 79202, -74212. MoAZ-7508, -4055, -7405.

Tyres for industrial technique

NORTEC

NorTec TC-107



Tyre size	16.9-28	18.4-26
Standard description	TS 38.304-165	TS 38.304-190
Tyre pattern	Cross country	
Ply rating	12	
Tyre weight, not more, kg	90.1	92.9
Load bearing capacity index	152	156
Recommended rim	W15L (W14L)	W16Lx2 W15Lx26
Exterior diameter, mm	1410±20	1425±1.5%
Section width, mm, not more	429	467
Static radius, mm	660±10	665±1.5%
$Q_{\max}$ kgf	3550	4000
P_o , at $Q_{\max}$ kgf/sm ²	2.6	250 kPa
$V_{\max}$ km/h	40	
Design	TL	
Use	Rubber-tyre mounted excavators, construction and carrying and lifting machinery, front-end loaders, land graders, excavator-loaders.	

For industrial
technique

Tyres for industrial technique

NORTEC

NorTec TC-108



Tyre size	16.9-24
Standard description	TS 38.304-176
Tyre pattern	Cross country
Ply rating	12
Tyre weight, not more, kg	71.6
Load bearing capacity index	149
Recommended rim	W15L W14L
Exterior diameter, mm	1310±1.5%
Section width, mm, not more	429
Static radius, mm	610±2.5%
Q_{max} kgf	3250
P_o , at Q_{max} , kPa	260
V_{max} km/h	40
Design	TL
Use	Rubber-tyre mounted industrial excavators, loaders, carrying and lifting and agricultural machinery.

Tyres for industrial technique

NORTEC

NorTec TC-106



Tyre size	16.0-70-20	
Standard description	TS 38.304-163	
Tyre pattern	Cross country	
Ply rating	10	14
Tyre weight, not more, kg	61	68
Load bearing capacity index	leading wheel 143/ guide wheel 131	leading wheel 150/ guide wheel 138
Recommended rim	13 SDC-20	
Exterior diameter, mm	1095	
Section width, mm, not more	408	
Static radius, mm	504	
$Q_{\max}$ kgf / Q_{ec}	leading wheel 2725/ guide wheel 1950	leading wheel 3350/ guide wheel 2360
P_o at $Q_{\max}$ kgf/sm ² / P at Q_{ec}	2.5	3,5
$V_{\max}$ km/h	A8(40)	
Design	TL	
Use	Pneumatic tyres for construction, road-building, carrying and lifting and mining machinery.	

For industrial
technique

Tyres for industrial technique

Forward Industrial 140



Tyre size	16.0-24	
Standard description	TS 38.304-109	
Tyre pattern	Cross country	
Ply rating	12	24
Tyre weight, not more, kg	116.6	158.7
Load bearing capacity index	157	171
Recommended rim	11.25; (11.50)	
Exterior diameter, mm	1475±23	
Section width, mm, not more	432±14	
Static radius, mm	663±12	
$Q_{\max}$ kgf	4125	6150
P_o , at $Q_{\max}$ kPa±25	250	500
$V_{\max}$ km/h	50	
Design	TT	
Use	Lifting cranes K-631, K-631M, K-1001, KP-100, KP-63, loaders TO-18 and land graders DZ-98, D-736, D-395A, D-359B.	

Tyres for industrial technique

NORTEC

NorTec GD-106



Tyre size	14.00-24
Standard description	TS 38.304-169
Tyre pattern	Cross country
Ply rating	16
Tyre weight, not more, kg	82.8
Load bearing capacity index	153
Recommended rim	8.00TGx24SDG (10.00 VAX24SDG)
Exterior diameter, mm	1348±1.5%
Section width, mm, not more	362
Static radius, mm	608±1.5%
Q_{max} kgf	3650
$P_{o, at Q_{max}}$ kPa	376
V_{max} km/h	40
Design	TL
Use	For land graders and rollers.

For industrial
technique

Tyres for industrial technique

NORTEC

NorTec GD-113



Tyre size	14.00-20	
Standard description	TS 38.304-200	
Tyre pattern	Cross country	
Ply rating	10	16/18/20
Tyre weight, not more, kg	88.2	95.2
Load bearing capacity index	139/145	155/158/159
Recommended rim	8.5(10.0G)	10.0(8.5)
Exterior diameter, mm	1220±18	1220±18
Section width, mm, not more	360/375.5	375
Static radius, mm	555±9	555±9
$Q_{\max}$ kgf	2450/2900	3875/4250/4375
P_o , at $Q_{\max}$ kPa	250/330	425/500/530
$V_{\max}$ km/h	85/50	50/50/50
Design	TT	
Use	Road-building machines, land graders, front-end loaders, truck cranes, trailers (semi-trailers), heavy trucks and other machines.	

Tyres for industrial technique

NORTEC

NorTec TC-106



Tyre size	12.5/80-18
Standard description	TS 38.304-145
Tyre pattern	Cross country
Ply rating	12
Tyre weight, not more, kg	47.3
Load bearing capacity index	138/125
Recommended rim	11x18 (9x18)
Exterior diameter, mm	987±1.5%
Section width, mm, not more	308
Static radius, mm	465±1.5%
Q_{max} kgf	2360/1650
P_o , at Q_{max} , kPa	370
V_{max} km/h	40
Design	TL
Use	For tractors used in construction and road industry.

Tyres for industrial technique

NORTEC

NorTec ER-112



Tyre size	12.00-20
Standard description	TS 38.304-197
Tyre pattern	Cross country (L-2)
Ply rating	20
Tyre weight, not more, kg	69.8
Load bearing capacity index	151
Recommended rim	8.5-20
Exterior diameter, mm	1133±18
Section width, mm, not more	315
Static radius, mm	532±10
$Q_{\max}$ kgf	3500
P_o , at $Q_{\max}$	640+25 kPa
$V_{\max}$ km/h	50
Design	TT
Use	Excavating machines including utility bucket excavators of type EO-3323 and their modifications.

Tyres for industrial technique

NORTEC

NorTec IND 02



Tyre size	10.00-16.5	12.00-16.5
Standard description	TS 38.304-200	
Tyre pattern	Cross country	
Ply rating	8	10
Tyre weight, not more, kg	24.7	28.3
Load bearing capacity index	131	140
Recommended rim	8.25-16.5	9.75-16.5
Exterior diameter, mm	773±1.5%	825±1.5%
Section width, mm, not more	264	310
Static radius, mm	384±1.5%	388±1.5%
Q_{max} kgf	1950	2500
P_o , at Q_{max} kPa	375	450
V_{max} km/h	85/50	50/50/50
Design	TT	
Use	Construction, road-building and carrying and lifting machines (skidsteers).	

For industrial
technique

Tyres for industrial technique

NORTEC

NorTec CT-311



Tyre size	11.00-20
Standard description	TS 38.304-193
Tyre pattern	Smooth tread (L-35)
Ply rating	12
Tyre weight, not more, kg	69.8
Load bearing capacity index	155
Recommended rim	8.0-20
Exterior diameter, mm	1080±16
Section width, mm, not more	304
Static radius, mm	500±8
$Q_{\max}$ kgf	3865
P_o , at $Q_{\max}$ kgf/sm ²	3.0-6.0
$V_{\max}$ km/h	16
Design	TT
Use	For rollers.

Tyres for industrial technique

NORTEC

NorTec ER 117

Φ-201



Tyre size	10.0/75-15.3		
Standard description	TS 38.304-177		
Tyre pattern	Cross country Check		
Ply rating	6	10	12
Tyre weight, not more, kg	25.5	25.6	25.4
Load bearing capacity index	112	123	126
Recommended rim	9.00-15.3		
Exterior diameter, mm	785±12		
Section width, mm, not more	267		
Static radius, mm	355±8		
Q_{max} kgf	1120	1525	1695
P_o at Q_{max} kgf/sm ²	2.4	4.0	4.8
V_{max} km/h	30		
Design	TT		
Use	Road-building and carrying and lifting machines, as well as low-loading trailers.		

Tyres for industrial technique

NORTEC

NorTec ER-109



Tyre size	10.00-20
Standard description	TS 38.304-146
Tyre pattern	Cross country
Ply rating	16
Tyre weight, not more, kg	49.8
Load bearing capacity index	146
Recommended rim	7.5-20 (7.0-20, 8.0-20)
Exterior diameter, mm	1050±1.5%
Section width, mm, not more	275
Static radius, mm	498±1.5%
$Q_{\max}$ kgf	3000
P_o at $Q_{\max}$ kH	750 kPa
$V_{\max}$ km/h	50
Design	TT
Use	For rubber-tyre mounted excavators.

Tyres for industrial technique

NORTEC

NorTec FT-216

ЛФ-268



Tyre size	8.25-15	
Standard description	TS 38.304-120	
Tyre pattern	Road with lengthwise grooves	
Ply rating	12	14
Tyre weight, not more, kg	31.8	32.1
Load bearing capacity index	146	143
Recommended rim	6.5 (5.00S)	
Exterior diameter, mm	836±12%	
Section width, mm, not more	228±7	
Static radius, mm	384±6	388±6
$Q_{\max}$ kgf to leading wheel/ to guide wheel	3900/3000	2725
P_o , at $Q_{\max}$ kgf/sm ²	7.1	8.2
$V_{\max}$ km/h	25	50
Design	TT	
Use	Carrying and lifting machines type of truck loader PV-502, loaders UMZ AP, trailers UMZ AP.	

Tyres for industrial technique

NORTEC

NorTec FT-210



Tyre size	8.15-15	
Standard description	TS 38.304-152	
Tyre pattern	Special with wide lateral ribs	
Ply rating	10	14
Tyre weight, not more, kg	20.6	20.7
Load bearing capacity index	146	156
Recommended rim	7.0-15	
Exterior diameter, mm	678±10	
Section width, mm, not more	210	
Static radius, mm	305±5	
$Q_{\max}$ kgf	3000	3950
P_o , at $Q_{\max}$ kgf/sm ²	8.16	8.97
$V_{\max}$ km/h	25	
Design	TT	
Use	For fork loaders DZ 2792 BALKAN-CAR and others with the lifting capacity up to 3 t.	

Tyres for industrial technique

NORTEC

FT-214



Tyre size	6.50-10			7.00-12		
Standard description	TS 38.304-149			TS 38.304-215		
Tyre pattern	Universal			Universal		
Ply rating	10	12	14	12	14	16
Tyre weight, not more, kg	12.25	14.35	18	19	19	
Load bearing capacity index	122	125	128	133	134	136
Recommended rim (admission)	5.00F-10			5.00S-12		
Exterior diameter, mm	588+9			672+9		
Section width, mm, not more	177			192		
Static radius, mm	266+5			295+5		
Q_{max} , kgf to leading wheel/ to guide wheel	1500	1650	1800	2060	2120	2240
P_o at Q_{max} , kgf/sm ²	7.9	9.2	10.2	8.7	9.2	10.2
Vmax, km/h	25					
Design	TT			TT/TL		
Use	For fork loaders with the lifting capacity up to 2 t and electric trucks.			Pneumatic tyres for construction, road-building, carrying and lifting and mining machines.		

Tyres for industrial technique

NORTEC

FT215



Tyre size	6.50-10			7.00-12		
Standard description	TS 38.304-149			TS 38.304-215		
Tyre pattern	Universal			Universal		
Ply rating	10	12	14	12	14	16
Tyre weight, not more, kg	13.25	14.35		19.05	20.10	
Load bearing capacity index	122	125	128	133	134	136
Recommended rim (admission)	5.00F-10			5.00S-12		
Exterior diameter, mm	588+9			672+9		
Section width, mm, not more	177			192		
Static radius, mm	266+5			295+5		
Q_{max} , kgf to leading wheel/ to guide wheel	1500	1650	1800	2060	2120	2240
P_o at Q_{max} , kgf/sm ²	7.9	9.2	10.2	8.7	9.2	10.2
Vmax, km/h	25					
Design	TT			TT/TL		
Use	For fork loaders with the lifting capacity up to 2 t and electric trucks.			Pneumatic tyres for construction, road-building, carrying and lifting and mining machines.		

Supernumerary automobile tubes

Designation of tube	Designation of tyres, including tubeless related to tube type	Double thickness of tube wall, mm, not less
Truck		
1200*400-533	1200*400-533 425/85R21	7.0(tread) 8.0 (band)
1200*500-508	500/70-508	7.0(tread) 8.5(band)
14.00-20	14.00-20	6.0(tread) 7.0(band)
12.00-20	12.00R20 12.00-20	6.0
11.00-20	11.00R20	6.0
10.00-20	10.00R20	6.0
9.00-20	9.00R20	4.5
8.25-20	8.25R20	4.0
16.00-24	16.00-24 mod. F1 140	5.0

Agricultural and for special technique		
28.1-26	28.1-26 mod. ФД-12Д	4.5
21.3-24	21.3-24 mod. ИЯВ-79 18.4-24	4.5
13.6-38	13.6-38 mod. Я-166 15.5-38 mod.Ф-2АД	4.5
9.5-32	9.5-32 mod. В-110	4.5
11.2-20	11.2-20 mod.Ф-35	3.5
8.3-20	8.3-20 mod. В-105А	3.8
7.50-20	7.50-20 mod. В-103 9.00-20 Altaishina 45	3.8
16.5-18	16.5-18 mod. КФ-97	5.0
12-16	12-16 mod. Л-163 12.4L- 16 mm Nortec TS-07; 13.0/75- 16 mm Nortec IM-06	4.0
9.00-16	260/95-16 (9.00-16) mod. Я-324А, F AC-8	4.5
6.50-16	6.50-16 mod. Я-275А	3.0
5.00-10	5.00-10 mod. В -19А	2.5
6-12	6L-12 Altaishina 421	3.2
9.5-42	9.5-42 Altaishina 183	4.5
15.5-18/ 16.5-18	16.5/70-18 КФ-97 15.5/16.5-18 КФ-105А	5.0

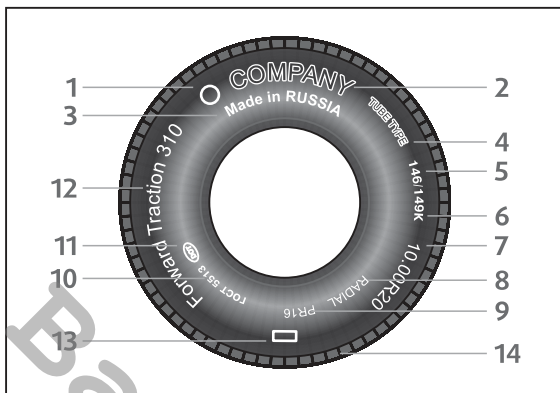
Supernumerary automobile tubes

Designation of tube	Designation of tyres, including tubeless related to tube type	Double thickness of tube wall, mm, not less
Passenger, light truck		
6.95-16	195R16C 175/80R16C 185/75R16C 225/75R16 175/80R16 175/80-16C 175R16C	3.0
6.50-16	225/75R16C 225/75R16 195R16C 175R16C	3.0
8.40-15	225/75R16C 225/75R16 235/75R15 225/85R15C 31*10.5-15LT 215/90-15C	3.0
7.35-14	205/70R15 205/65R15 195/65R15 205/70R14	3.0
YK-13M	175-13/6.95-13 175/70R13 165-13/6.45-13 155-13/6.15-13 6.40-13C	2.0

Rim strips

Designation of rim strip	Designation of tyre	Designation of legal requirements	Dimensions of rim strip
300-508	14.00-20	GOST 13298 TS 38.304-108	Dimensions get determined by a press form
7.7-20	12.00-20, 10.00R20, 11.00R20, 12.00R20	TS 38.304-092 TS 38.304-091 GOST 5513 TS 38.304-097 TS 38.304-068	
6.7-20	8.25R20, 9.00R20	GOST 5513	
9.00-16	260/95-16 (9.00-16)	GOST 7463, TS 38.10497 with changes 1-9	
12-16	12-16	TS 104144-89	
16.5-18	16.5/70-18	TS 38.304-089	
16.5-18	15.5/65-18	TS 38.304-110	
205-457	12.00-18	GOST 13298	

Marking of automobile tyres



- | | |
|-----------------------------------|---------------------------------------|
| 1 – Trademark, logotype | 8 – indication of construction |
| 2 – commercial name | 9 – ply rating |
| 3 – country of manufacture | 10 – indication of legal requirements |
| 4 – tube type | 11 – sign of official statement |
| 5 – load bearing capacity index | 12 – designation of tyre model |
| 6 – speed index | 13 – date of manufacture |
| 7 – designation of tyre dimension | 14 – indicator of wear-out (twi or Δ) |

Figures in marking of diagonal tyre
(for example, 6.15-13/155-13) mean:

- 6.15** – nominal section width in inches;
- 13** – diameter at rim seat in inches;
- 155** – nominal section width in mm;

Figures and letters in marking of radial tyre (for example, Forward Traction 310.10.00R20 146/143K Radial Tube type) mean:

- 10.00** – section width (in inches);
- Forward Traction 310** – model;
- 20** – nominal diameter at rim seat (in inches);
- Tube type** – tube design of tyre;
- 146/143** – load bearing capacity index for single and dual wheels;
- K** – index of speed category of tyre (max admissible speed of automobile run in km/h).

Radial – radial tyre;

All seasons – all-season tyre;

Maximum load – maximum load;

Maximum pressure – maximum pressure corresponding to maximum load. Load is indicated in pounds (LBS), and pressure – in pounds upon square inch (PSI) for tyre in “cold” state (1 LBS=0.4536 kg, 1PSI= 0.0069 MPa).

TUBE TYPE or TT – (in German MIT SCHLAUCH) – designation for tube type tyres;

TUBELESS or TL – designation for tubeless tyres;

PR (PLY RATING) – endurance (load bearing capacity) of carcass is estimated conventionally by so called ply rating. For passenger cars, they use tyres with ply rating 4PR, and sometimes 6PR, in this case the latter have an inscription “Reinforced”, i.e. “reinforced” tyre of elevated load bearing capacity.

BARO^{GMBH}
REIFENHANDEL AUS LEIDENSCHAFT

21035 Hamburg, Germany
Hans-Duncker Straße 9

Tel.: 040/ 21 90 12 90

Fax: 040/ 21 90 12 915

E-mail: info@baro-reifen.de