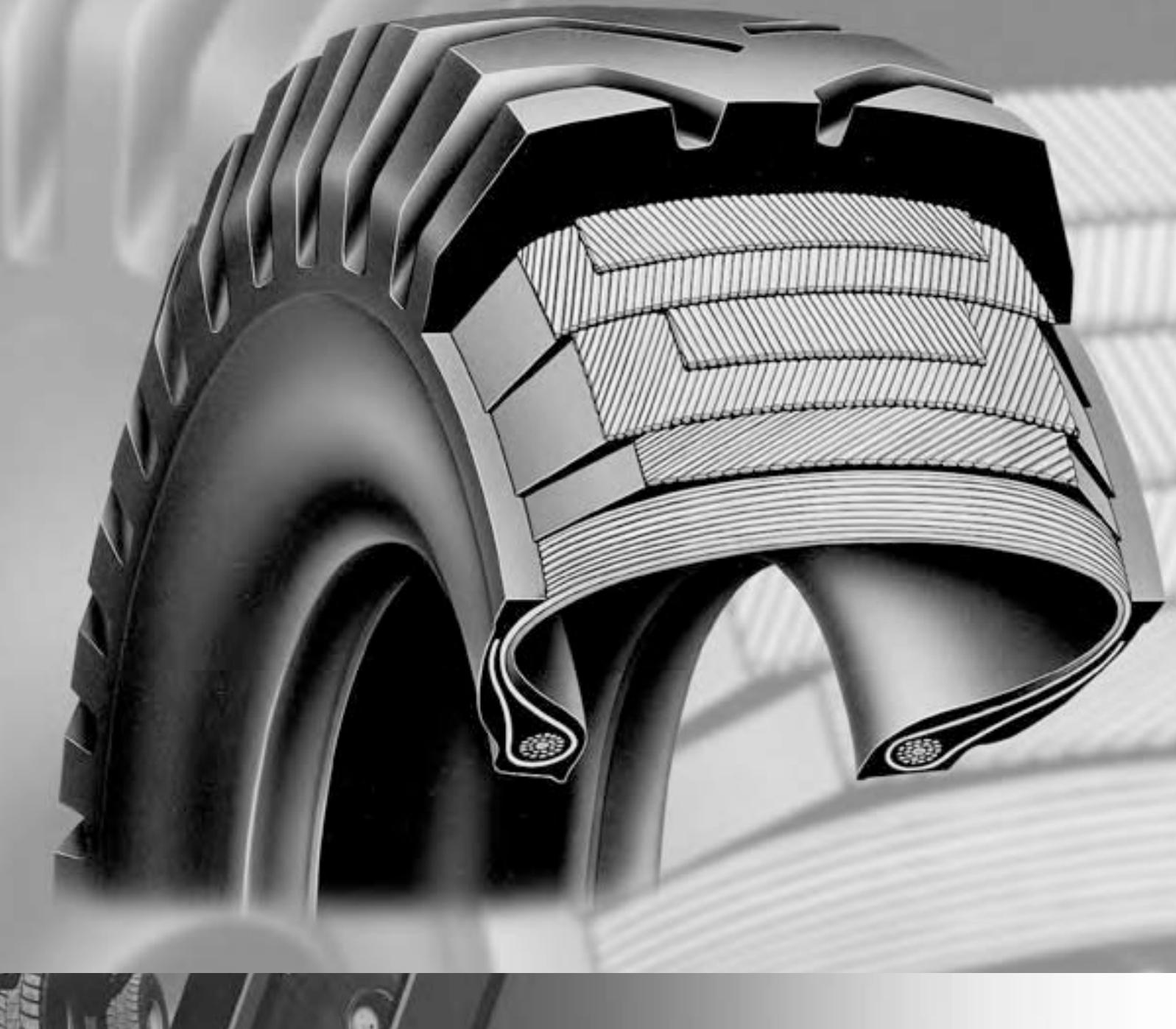


UPDATED AUGUST 2010
NORTH AMERICAN EDITION

TECHNICAL DATABOOK

EARTHMOVER & INDUSTRIAL TIRES





Michelin® has specific recommended conditions for the storage, selection, mounting, inflation, pressure, use, monitoring and maintenance of its tires. The conditions stated by Michelin®, shall be adhered to by the Customer. The Customer shall be under a duty to inform users and its own Customers of said conditions.

Our Customers should also train their employees, who are involved in placing our products with the end users, about Michelin's tire recommendations and prohibit all repairs without first demounting the tire. If in doubt, we invite you to consult our technical documentation or one of our technicians, or ultimately, our website at:
www.michelinearthmover.com

FOOTNOTES

TECHNICAL DATA EARTHMOVER TIRES

- 1)** See page **24 to 27**: Explanations about TKPH (T MPH)
- 2)** See page **9**: Explanations of the different characteristics
- 3)** Explanation about rim reading
Example: 44.00/5.0 [6.0]
the 1st value indicates rim width (in inch)
(in this example: 44 inches)
the 2nd value indicates the height of the rim flange
(in this example: 5 inches)
the 3rd value indicates the width of the rim flange
(in this example: 6 inches)
- 4)** See pages **122 to 134**: Information and explanation about earthmover tire components
- 5)** Increase pressure by 0.5 bar (7.25 PSI) on the loader front axle
- 6)** See page **133** and in the Maintenance guide for earthmover tires page **169** explanation about TG rim
- 7)** Tire under development
- 8)** To be discontinued
- 9)** See page **6**: Standardized identification codes
- 10)** See pages **15 to 44**: Explanation of the various tables of load according to the use and to the tire position and how to determine pressures. It is imperative to follow the explanation given. Not to respect these instructions will result in a forfeiture of the tire.
- 11)** Use only OEM front laden and rear unladen weights to determine proper inflation pressure. For underground machines (mine transport) use the front laden chart matching the machine speed to the Underground mining machines table on page **10** and apply the variation in load carrying capacity.

TECHNICAL DATA INDUSTRIAL TIRES

- 1)** See page **7**: Explanations of the different characteristics
- 2)** See pages **162-164**: Rim characteristics
- 3)** See pages **160-161**: Tubeless Bead Seal's characteristic
- 4)** See pages **165**: Tube, flap and ring's characteristic
- 7)** Tire under development
- 8)** To be discontinued

CAUTION

- 10)** All machines fitted with XZM tires to 12.00 R 24 must not exceed 15 km (9 miles) in one hour, and peak speed is limited to 35 km/h (55 mph)
- 11)** All machines fitted with 20" XZM tires must not exceed 15 km (9 miles) in one hour, and peak speed is limited to:
35 km/h (55 mph) peak speed for Forklift truck
40 km/h (55 mph) peak speed for Terminal tractors and RORO tractors
- 12)** Terminal tractors fitted with X TERMINAL-T tires must not exceed 20 km (12 miles) in one hour in cyclic use, and peak speed is limited to 40 km/h (65 mph)
- 13)** All machines fitted with XZM2 tires must not exceed 10 km (6 miles) in one hour in cyclic use, and peak speed is limited to 25 km/h (15 mph)
- 14)** All machines fitted with XZM tires > 12.00 R 24 must not exceed 15 km (25 miles) in one hour and are limited to 25 km/h (15 mph) peak speed
- 15)** Straddle carriers fitted with X-STRADDLE must not exceed 12 km (6 miles) in one hour, and peak speed is limited to 30 km/h (50 mph)
- 16)** All machines fitted with X STACKER must not exceed 5 km (3 miles) in one hour in cyclic use and are limited to 25 km/h (15 mph) peak speed
- 17)** Unless specific authorization given by Michelin, 18.00R25 XZM2 is not homologated on rear axles of Reach Stackers

All MICHELIN® industrial tubeless tires marked "MAY BE USED WITH A TUBE" can be fitted with tube and flap.

All values shown in these tables are maximum, and should not be exceeded.

EARTMOVER TIRES

PLEASE NOTE

Tire load and pressure tables (pages 46 to 121)

These tables are arranged according to the various applications of earthmoving machines.

Please note that loads and pressures have been extended beyond the standardized values in the shaded boxes. These figures are given for guidance and reflect service conditions which may affect performance of MICHELIN® tires (behavior, wear...).

Note: MICHELIN® XM27™, XM47™, XCM1™, XZSL® tires and those designed for special vehicles (cranes, mechanical handling equipment for instance) have their own load and pressure tables.

NOTE: This book represents Michelin's North American offering of earthmover and industrial tires. Contact Michelin® to determine if a specific tire is available.

Our recommended conditions of storage, tire selection, mounting, inflation, pressure, tire use and its limits, tire monitoring, repairs or similar interventions, and tire maintenance, as stipulated by Michelin®, must be followed and respected by our clients who in turn are held to inform the end users.

Our clients should train their employees who are involved in placing our products with the end users and prohibit all repairs (tire punctures, rim welding) without first deflating the tire, then demounting it. If in doubt, we invite you to consult our technical documentation or one of our technicians.

Please refer to the MICHELIN® B2B Portal (www.michelinb2b.com) or contact your local Michelin representative for the most up to date information.



The information given in this publication is subject to modification without notice.

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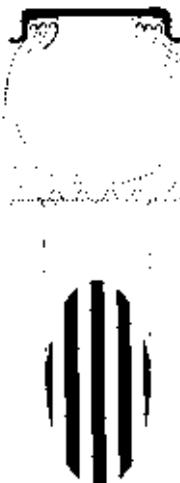
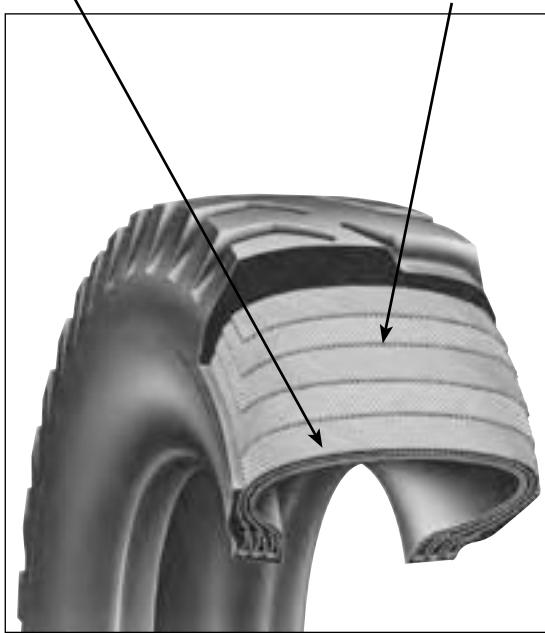
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TIRE CONSTRUCTION

BIAS OR DIAGONAL PLY CONSTRUCTION

The casing
is made up of several
criss-crossed fabric plies.

The crown
is not stabilized.



The crown and sidewalls are formed by the same ply structure. The tread is affected by flexing of the sidewalls, resulting in,

- deformation of the tire contact area on the ground
- movement in the tread contact area.

The casing plies tend to "scissor" in relation to each other.

Disadvantages:

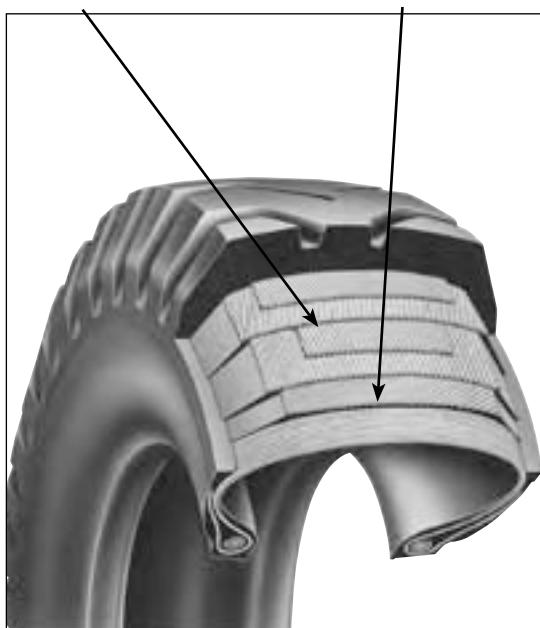
- accelerated wear.
- less grip.
- increased fuel consumption.



THE MICHELIN® X® RADIAL CONSTRUCTION

The crown
is stabilized by
several steel plies.

The casing has
**one steel radial
ply.**



The sidewall and tread function separately.
The tread is unaffected by the flexing of the sidewalls, so there is:

- less deformation of the tire contact area on the ground.
- less movement in tread contact area.
- no movement between casing plies.

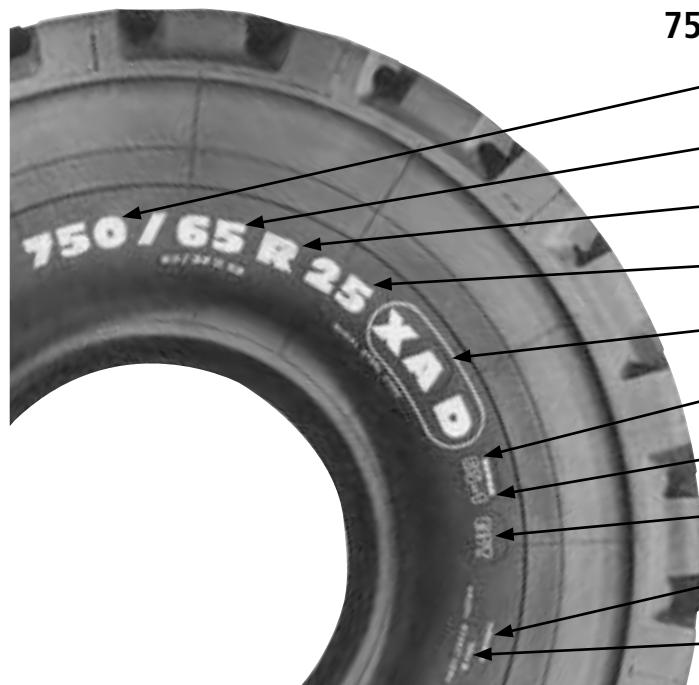


Radial Advantages:

- longer tire life.
- better traction on all types of surface.
- lower fuel consumption due to lower rolling resistance.
- improved comfort.
- increased resistance to punctures / flats.
- increased resistance to heating.

IDENTIFICATION OF MICHELIN® EARTMOVER TIRES

EXAMPLE OF TIRE MARKINGS:



750/65 R 25 XAD 65-1 SUPER E3T TL 190B

- | | |
|-----------|---|
| 750: | Nominal section width in mm (or in inches) |
| 65: | Aspect ratio (H/S = 0.65) |
| R: | Radial construction |
| 25: | Nominal rim diameter in inches |
| XAD: | Tire's name |
| 65: | 65 series (H/S = 0.65) |
| 1: | 1 st development of the tire |
| E3 T: | Standardized identification code (see p. 8) |
| Tubeless: | Tire without tube |
| 190: | Tire's load index (see p. 7) |
| B: | Tire's speed symbol (see p. 7) |

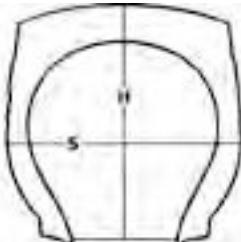
MICHELIN® Earthmover tires may have one or more stars instead of Load Index/Speed Symbol.

The type of tread rubber (A, A4, B, B4, C, C4) and the tread depth (SUPER, D1, D2) may also be shown.

DIFFERENT EARTMOVER TIRE FAMILIES

There are 3 major earthmover tire families categorized by the aspect ratio **H/S**:
(The ratio between the sidewall height and the tire section width).

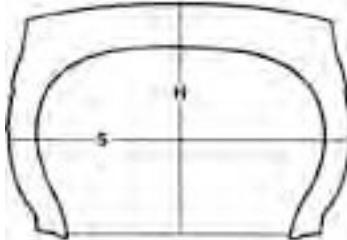
H/S = 1.0



Standard Profile

The H/S aspect ratio is approximately equal to **1.0**.
The section width, given in inches, is to 2 decimal places.
e.g.: 18.00 R 33
 7.50 R 15

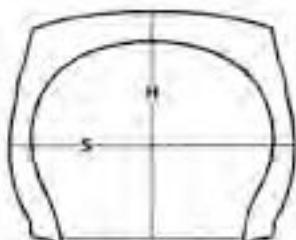
H/S = 0.80



Wide Base

The H/S aspect ratio is approximately equal to **0.80**.
The section width, given in inches, is a whole number followed by **0.5 or 0.25**.
e.g.: 20.5 R 25
 59/80 R 63

H/S = 0.65



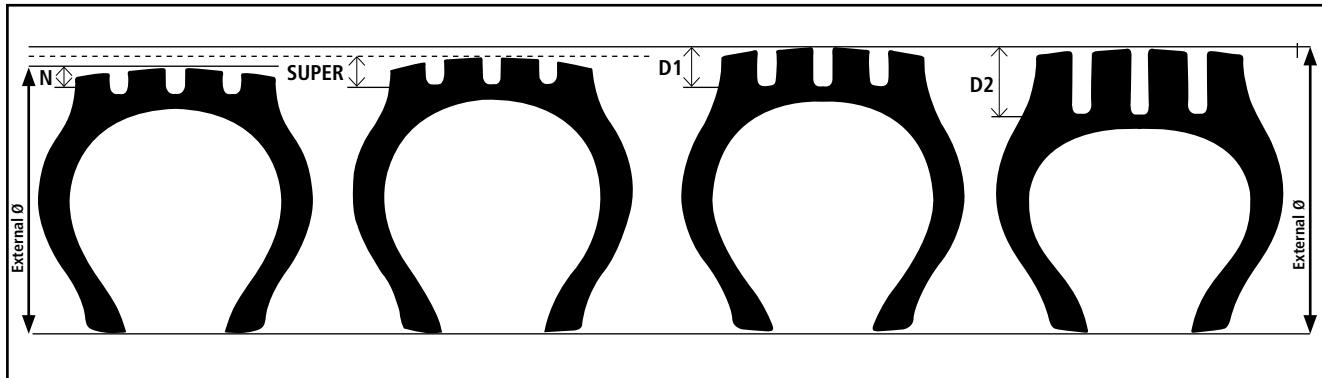
65 series

The H/S aspect ratio is approximately equal to **0.65**.
The section width is given in inches or in millimeters followed by the number 65.
e.g.: 35/65 R 33
 750/65 R 25

IDENTIFICATION OF MICHELIN® EARTMOVER TIRES

DIFFERENT TREAD DEPTHS

Earthmover tires can be classified by their different tread depths, usage and service conditions.



(E2 - E3 - L2 -L3 -
G2 - G3)

Traction, rock
Michelin® designation:
N (Normal)
e.g.: XADN®

(SUPER E3, SUPER L3)

Traction, rock
Michelin® designation:
SUPER
(N < SUPER < D1)

(E4 - L4 - G4)

Rock,
deep tread
Michelin® designation:
D1 \cong **N** x 1.5

(L5)

Rock,
extra deep tread
Michelin® designation:
D2 \cong **N** x 2.5

CLASSIFICATION OF EARTMOVER TIRES

USE CODE: **C** : Compactor
E : Earthmover
G : Grader
L : Loader and Dozer

INDEX: **S** : Smooth (Mine, Hard Ground)
1 : Ribbed (Smooth Surfaces)
2 : Traction (Regular)
3 : Rock (Regular)

4 : Rock (Deep Tread)
5 : Rock (Extra-Deep Tread)

STANDARDIZED IDENTIFICATION CODE

CODE	TREAD PATTERN	APPLICATION	THE MICHELIN® TIRE THAT ENSURES EQUIVALENT SERVICE
C1	Smooth	Compactor	X LISSE COMPACTEUR
E2	Traction	Transport	XVC, XMH S, X SNOPLUS 170E, XGC, X-CRANE AT
E3	Rock	Transport	XADN, XAD 65-1 SUPER E3, XTS, XK A, XDC, XDR S, XMS, X-TRACTION S, X-STRADDLE
E4	Rock (Deep Tread)	Transport	XHD1, X SUPER TERRAIN AD, XKD1, X-HAUL, X-HAUL S, XDT, X-QUARRY S, XDR, XRS, X-TRACTION
G2	Traction	Grader	XGLA2, X SNOPLUS M&S, XTLA
L2	Traction	Loader/Dozer	XGLA2, X SNOPLUS M&S, XTLA, XF
L3	Rock	Loader/Dozer	XHA, XHA 2, XLD L3, XRDN A, XZSL, XK A
L4	Rock (Deep Tread)	Loader/Dozer	XLD D1
L5	Rock (Extra-Deep Tread)	Loader/Dozer	XLD D2, X MINE D2
L5S	Smooth (Extra-Deep Tread)	Loader/Dozer	XSM D2+

MICHELIN® complementary identification: T = Traction, R = Rock, V = Speed, F = Flotation, P = Multi-purpose, S/R = Smooth/Rock.
e.g.: L4T Rock tire (L4; Standardized identification code) where traction is needed (T; Michelin® code).

LOAD INDEX – SPEED SYMBOL

Some tires have a load index and a speed symbol.

LOAD INDEX (LI) AND MAXIMUM LOAD (KG/LB)

The LOAD INDEX is a numerical code which indicates the maximum load a tire can carry at the speed corresponding to its speed symbol, under specified conditions.

LI	maximum load		LI	maximum load		LI	maximum load		LI	maximum load		LI	maximum load	
	lb	kg		lb	kg		lb	kg		lb	kg		lb	kg
120	3,090	1,400	150	7,390	3,350	180	17,640	8,000	210	41,890	19,000	240	99,210	45,000
121	3,200	1,450	151	7,610	3,450	181	18,190	8,250	211	43,000	19,500	241	101,960	46,250
122	3,310	1,500	152	7,830	3,550	182	18,740	8,500	212	44,100	20,000	242	104,720	47,500
123	3,420	1,550	153	8,050	3,650	183	19,290	8,750	213	45,420	20,600	243	107,470	48,750
124	3,530	1,600	154	8,270	3,750	184	19,840	9,000	214	46,750	21,200	244	110,250	50,000
125	3,640	1,650	155	8,540	3,875	185	20,390	9,250	215	48,070	21,800	245	113,540	51,500
126	3,750	1,700	156	8,820	4,000	186	20,940	9,500	216	49,390	22,400	246	117,950	53,000
127	3,860	1,750	157	9,090	4,125	187	21,500	9,750	217	50,700	23,000	247	120,150	54,500
128	3,970	1,800	158	9,370	4,250	188	22,050	10,000	218	52,040	23,600	248	123,480	56,000
129	4,080	1,850	159	9,650	4,375	189	22,710	10,300	219	53,580	24,300	249	127,890	58,000
130	4,190	1,900	160	9,920	4,500	190	23,370	10,600	220	55,120	25,000	250	132,300	60,000
131	4,300	1,950	161	10,200	4,625	191	24,030	10,900	221	56,780	25,750	251	135,580	61,500
132	4,410	2,000	162	10,470	4,750	192	24,690	11,200	222	58,430	26,500	252	138,890	63,000
133	4,540	2,060	163	10,750	4,875	193	25,360	11,500	223	60,070	27,250	253	143,300	65,000
134	4,670	2,120	164	11,020	5,000	194	26,020	11,800	224	61,740	28,000	254	147,710	67,000
135	4,810	2,180	165	11,350	5,150	195	26,790	12,150	225	63,940	29,000	255	152,120	69,000
136	4,940	2,240	166	11,690	5,300	196	27,560	12,500	226	66,150	30,000	256	156,530	71,000
137	5,070	2,300	167	12,020	5,450	197	28,330	12,850	227	67,790	30,750	257	160,930	73,000
138	5,200	2,360	168	12,350	5,600	198	29,100	13,200	228	69,460	31,500	258	165,340	75,000
139	5,360	2,430	169	12,790	5,800	199	29,990	13,600	229	71,660	32,500	259	170,660	77,500
140	5,510	2,500	170	13,230	6,000	200	30,870	14,000	230	73,870	33,500	260	176,400	80,000
141	5,680	2,575	171	13,560	6,150	201	31,970	14,500	231	76,070	34,500	261	181,880	82,500
142	5,840	2,650	172	13,890	6,300	202	33,070	15,000	232	78,280	35,500	262	187,390	85,000
143	6,010	2,725	173	14,330	6,500	203	34,180	15,500	233	80,480	36,500	263	192,900	87,500
144	6,170	2,800	174	14,770	6,700	204	35,280	16,000	234	82,690	37,500	264	198,450	90,000
145	6,390	2,900	175	15,210	6,900	205	36,380	16,500	235	85,430	38,750	265	203,920	92,500
146	6,610	3,000	176	15,650	7,100	206	37,480	17,000	236	88,200	40,000	266	209,440	95,000
147	6,780	3,075	177	16,090	7,300	207	38,590	17,500	237	90,940	41,250	267	214,950	97,500
148	6,950	3,150	178	16,530	7,500	208	39,690	18,000	238	93,710	42,500	268	220,500	100,000
149	7,170	3,250	179	17,090	7,750	209	40,790	18,500	239	96,470	43,750	269	227,370	103,000

SPEED SYMBOLS

The SPEED SYMBOL indicates the maximum speed at which a tire can carry a load corresponding to its load index, under specified conditions.

Symbol	A2	A3	A4	A5	A6	A8	B	C	D	E	F	G
speed (km/h)	10	15	20	25	30	40	50	60	65	70	80	90
speed (mph)	6	9	12	15	19	25	31	37	40	43	50	56

Examples of tire marking:

23.5 R 25 X-SUPER TERRAIN AD TL 185 B; this tire is able to carry 9250 kg at a speed of 50 km/h (20390 lb at 30 mph)
445/95 R 25 TL 177E; this tire is able to carry 7000 kg at a maximum speed of 70 km/h (16097 lb at 45 mph)

It is imperative:

- do not exceed the maximum permitted speed of the tire.
- do not exceed the maximum permitted distances in one hour indicated in the tables of tires' characteristics.
- At the time of fitting, it is vital that the various markings be verified, in order to be certain that the tire is suitable for operation at the maximum allowed vehicle speed and load.

IDENTIFICATION OF MICHELIN® EARTMOVER TIRES

MAXIMUM PLY RATING (PR) AND CORRESPONDING STAR (*) MARKING

Sizes and Markings	Work machines PR	Transport machines PR	Sizes and Markings	Work machines PR	Transport machines PR	Sizes and Markings	Work machines PR	Transport machines PR
7.50 R 15	12		15.5 R 25 *	16		35/65 R 33 **		
8.25 R 15	12		16.00 R 25 **		36	37.5 R 33 **		48
27x8.50 R 15			17.5 R 25 *	16		21.00 R 35 **		44
10.00 R 15			17.5 R 25 **	20	24	24.00 R 35 **		48
350/65 R 15 (1)			18.00 R 25 *	24		29.5 R 35 **		40
14.5 R 15			18.00 R 25 **		36	33.25 R 35 **		44
400/80 R 15 (1)			20.5 R 25 *	24		37.25 R 35 **		48
10 R 16.5			20.5 R 25 **		28	37.5 R 39 **		52
12 R 16.5			550/65 R 25 * (1)			40/65 R 39 *	42	
18 R 19.5 *	16		21.00 R 25 **		40	40.5/75 R 39 **		54
9.00 R 20	16		23.5 R 25 *	28		45/65 R 39 * (1)		
10.00 R 20	16		23.5 R 25 **		32	45/65 R 45 *	50	
C20 Pil (11/80 R 20) (1)			600/65 R 25 * (1)			24.00 R 49 **		48
12.00 R 20	18		25/65 R 25 **		32	27.00 R 49 **		54
E20 (13/80 R 20) (1)			650/65 R 25 (1)			31/80 R 49 *** (1)		
14.00 R 20 (1)			26.5 R 25 *	32		30.00 R 51 **		64
16.00 R 20			26.5 R 25 **		32	33.00 R 51 **		68
525/70 R 20.5			750/65 R 25 (1)			36.00 R 51 **		74
24 R 20.5			29.5 R 25 *	34		27.00 R 56.5 ** (1)		
24 R 21			29.5 R 25 **		34	37.00 R 57 ** (1)		
15 R 22.5 *	16		850/65 R 25 (1)			40.00 R 57 **		78
18 R 22.5 *	16		26.5 R 29 **		34	44/80 R 57 ** (1)		
12.00 R 24 ***	24	24	775/65 R 29 (1)			50/80 R 57 ** (1)		
13.00 R 24 TG *	14		29.5 R 29 *	34		55/80 R 57 * (1)		
14.00 R 24 TG *	16		29.5 R 29 **		40	50/90 R 57 ** (1)		
14.00 R 24*	24		30/65 R 29 *	28		60/80 R 57 (1)		
14.00 R 24 ***	28	32	33.25 R 29 **		44	53/80 R 63 ** (1)		
15.00 R 24 (17/80 R 24) (1)			800/65 R 29 * (1)			55/80 R 63 ** (1)		
16.00 R 24 TG *	16		875/65 R 29 (1)			58/80 R 63 ** (1)		
16.00 R 24 **		36	18.00 R 33 **		40	56/80 R 63 ** (1)		
555/70 R 24 TG * (1)			21.00 R 33 **		32	59/80 R 63 ** (1)		
13.00 R 25 ***		28	33.5 R 33 **		44			
14.00 R 25 ***		32	35/65 R 33 *	36				

(1) no corresponding PR in these sizes which are only made in radial construction.

DIFFERENT TREAD COMPOUNDS

Type A4: Exceptionally resistant to cuts, tread tearing and abrasion on very rough surfaces.

Type A: Highly resistant to cuts, tread tearing and abrasion at average speeds which are higher than those for A4.

Type B4: Blended solution between abrasion resistance and average speed on rough surfaces.

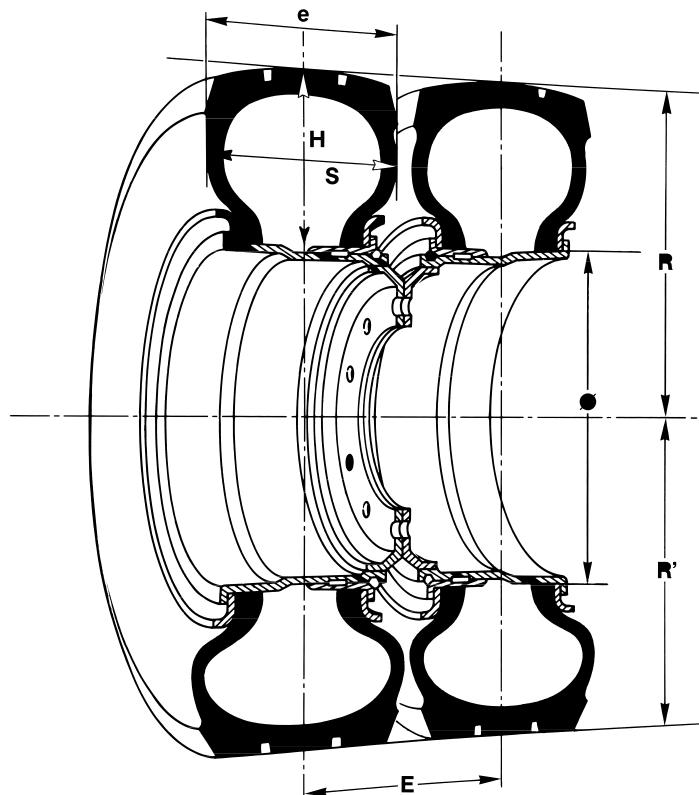
Type B: Higher resistance to internal heat generation on surfaces which are not particularly rough.

Type C4: Developed for running on long cycles at high speeds on well maintained roads.

Type C: Designed for the most heat resistance on long cycles and well maintained roads.

CHARACTERISTICS OF MICHELIN® EARTMOVER TIRES

EXPLANATION OF DIFFERENT MEASUREMENTS



- e** = maximum overall section width
- D** = external tire diameter ($R \times 2$)
- Ø** = Nominal bead seat diameter or rim diameter
- S** = section width on measuring rim
(this rim is indicated in bold)
- E** = minimum dual spacing (on measuring rim)
- H** = section height
- R** = free radius ($2R = D$)
- R'** = static laden radius*
- RC** = rolling circumference*
- Tread depth** = tire tread depth in mm (rubber depth that is possible to use without risk)
- Cap** = Interior capacity of the tire
(to calculate the nitrogen quantity when inflated with nitrogen, or the liquid quantity when filled)

* The values of R' and rolling circumference given for MICHELIN® tires on the characteristic pages apply to nominal conditions of load and pressure (shown in the shaded boxes of the load data).

The dimensions shown in this documentation correspond with that indicated above and follow the existing standards (ETRTO, ...). The standardized dimensions shown are the "maximum in service".
The dimensional data is given for information purposes only and may change. It cannot be used for any legal purposes.

How to read the load / pressure table

Remember: the correct pressure of the machine (on a site and for a job) depends on the working conditions and use.

In order to obtain the optimal performance from tires, it is advised that:

- the machine be weighed under working loads
- the maximum distance allowed per hour for the tire is not exceeded

Maximum distance limit

This is the result of the combination load /pressure which allows an economic use of the tire.

There is:
- a limit on the load to obtain the best wear performance
- a limit on the pressure to obtain the best damage resistance (cuts, shocks, wear, etc)

The economic load and pressure limits are shown in shaded boxes in the load/pressure table.
Generally, these are the nominal conditions for the tire as defined in International Standards.

**It is possible to use our tires outside of the economic limits,
so long as the maximum values indicated in the load/pressure tables are not exceeded.
However, using the tires beyond their economic load values is likely to result in a reduction of the life
and damage resistance of the tire.**

CHARACTERISTICS OF MICHELIN® EARTHMOVER TIRES

EXPLANATION OF THE SERVICE CONDITIONS

Loaders:

- Front Tipping This table is used when the only information available is that of the operating weight and tipping load of the loader.
- Front Laden This is the primary table to be used. The loads come from weighing the loader or axle weight given by the manufacturer.
The load/pressure table, using "10 km/h (6 mph) loaders" as a reference, is given in international standards.
- Rear Unladen This table is used when the weight of the rear axle of the unladen loader is known or when the rear axle weight is given by the manufacturer.

Compactor:

- 10 and 15 km/h These tables are given according to the maximum work speeds of the compactors. In all cases, the specifications and instructions provided by the manufacturer must be used. (Table indicating the pressure according to the work to be performed).
- 6 and 9 mph

Underground Mining Machines:

- All axles Loaders: use the tables. The loads come from the weighing of the loader or the axle weight given by the manufacturer.
The load/pressure table, using "10 km/h (6 mph) loaders" as a reference, is given in international standards.

Transport machines: For underground transport machines, the table corresponds to a maximum speed of 10 km/h (6 mph). For different speeds, the load capacity is adapted by applying the coefficients defined by the international standards (see table below).

Maximum loaded speed (km/h / mph)	Variation in load capacity (%)
static	+ 60
Creep 60m (197 ft) in 30 minutes	+ 30
4 / 3	+ 15
10 / 6	0
15 / 9	- 13
25 / 15	- 20
> 25 / > 15	Consult Michelin®

Skid Steer:

- All axles This table is used when the axle weight has been determined (by weighing or with the manufacturer's data).

Backhoes:

- Cyclic This table is used for repeated cycles over short distances (600 m / 1969 ft maximum) at a maximum speed of 10 km/h (6 mph).
- 10 km/h / 6 mph This table is used when the machine has been weighed with a full front axle bucket.
- 20, 30, 40 km/h This table is used when the machine has been weighed with an empty rear axle bucket at the maximum speed of the machine.
- 12, 18, 24 mph

Excavators:

- 10 20, 30, 40 km/h This table is used when the axle weights have been determined (by weighing or with the manufacturer's data).
- 6, 12, 18, 24 mph

Graders:

- All axles This table is used when the axle weight has been determined (by weighing or with the manufacturer's data).
- (maximum speed of 40 to 65 km/h)
24 to 40 mph For different speeds, the load capacity will be adapted by applying the coefficients defined by the international standards. (see table TRA 2008 4-15).

Maximum loaded speed (km/h / mph)	Variation in load capacity (%)
40 / 24	0
50 / 30	- 9
60 / 37	-18
65 / 40	- 27

CHARACTERISTICS OF MICHELIN® EARTMOVER TIRES

EXPLANATION OF THE SERVICE CONDITIONS

Transport, Rigid Dump Trucks, Articulated Dump Trucks, Scrapers (Trucks, etc.):

Standard

This table is used when the work is performed at loaded speeds up to 50 km/h (30 mph).

This is standardized under the name "Transport 50 km/h (30 mph)" (pages 46-121).

For different speeds, the load capacity will be adjusted by using the table below. (International standards ETRTO 2008 E.7).

The gray box indicates the nominal conditions for the tire.

Maximum loaded speed (km/h / mph)	Variation in load capacity (%)
< 15 / <9	Consult Michelin®
15 / 9	+ 12
20 / 12	+ 10
25 / 15	+ 8
30 / 18	+ 6
35 / 22	+ 4
40 / 24	+ 3
45 / 28	+ 2
50 / 30	0
55 / 34	- 2
60 / 37	- 6
65 / 40	- 12
> 65 / > 40	Consult Michelin®

Quarry

This table is used when maximum speed does not exceed 30 km/h / 19 mph.

Crane (Highway service):

Speed Symbol E (70 km/h / 43 mph), Speed Symbol F (80 km/h / 50 mph).

All earthmover tires fitted on vehicles with a predominant road usage (all terrain vehicles, cranes, intervention vehicles, etc.) that are driven on roads for long distances at the speed of reference and under constant load. The Loads / Speeds / Pressures table makes it possible to adapt the pressure to the wanted load according to principal speeds of use.

43 mph (70 km/h)

This table is used for the vehicles at speeds of up to 43 mph / 70 km/h, (tires of index speed E). As an example, see the E speed rated tires on page 44.

Desert conditions 80 km/h (50 mph):

See page 15 for more information on inflation pressure

Depending on whether the vehicle is fitted single or dual, the corresponding load table will be adopted. Road (Road in single / Road in dual): These pressures are to be applied when the vehicle runs on good roads (This means asphalt or compacted surfaces). For these conditions the pressures have been calculated for a maximum speed of 80 km/h (50 mph).

Track (Track in single / Track in dual): These pressures are recommended for driving on bad roads, washboard (corrugated) and gravel or desert surfaces. For these conditions the pressures have been calculated for a maximum speed of 65 km/h (40 mph).

Sand (Sand in single / sand in dual): These pressures are used to allow the vehicle to cross without difficulty the difficult areas where the problem of adherence or depression can be important. To avoid premature depletion of the kilometric performance, the speed must be limited to 20 km/h (12.5 mph).

After "sand" use, the pressure must be readjusted for subsequent conditions of use (road or track).

Desert conditions 65 km/h (40 mph):

See page 15 for more information on inflation pressure

Depending on whether the vehicle is fitted single or dual, the corresponding load table will be adopted. Road (Road in single / Road in dual): These pressures are to be applied when the vehicle runs on good roads (This means asphalt or compacted surfaces). For these conditions the pressures have been calculated for a maximum speed of 65 km/h (40 mph).

Track (Track in single / Track in dual): These pressures are recommended for driving on bad roads, washboard (corrugated) and gravel or desert surfaces. For these conditions the pressures have been calculated for a maximum speed of 50 km/h (30 mph).

Sand (Sand in single / sand in dual): These pressures are used to allow the vehicle to cross without difficulty the difficult areas where the problem of adherence or depression can be important. To avoid premature depletion of the kilometric performance, the speed must be limited to 15 km/h (9 mph).

After "sand" use, the pressure must be readjusted for subsequent conditions of use (road or track).

MICHELIN® EARTMOVER TIRE RANGE



MICHELIN® XGLA2™

The L2/G2 MICHELIN® radial tire designed with aggressive, non-directional tread to give graders maximum traction.



MICHELIN® X SNOPLUS® M&S

The all-season MICHELIN® radial tire designed for use on graders and loaders where exceptional traction on snow and ice is required.



MICHELIN® XTLA™

The MICHELIN® L2/G2 radial tire designed to provide exceptional traction and long, even treadwear on loaders and graders.



MICHELIN® XHA™

The versatile MICHELIN® L3 radial tire designed for loaders, graders and other equipment used in construction, stockpile and truck-loading applications.



MICHELIN® XHA™ 2

The all-new MICHELIN® radial loader tire with reinforced sidewall construction and deeper, patented tread design provides excellent damage resistance, enhanced traction and reduced vibration for construction and quarry applications.



MICHELIN® XLD® L3

The technologically advanced, low-profile MICHELIN® radial tire for small and medium loaders engineered to substantially increase productivity in moderately abrasive conditions.



MICHELIN® XRDN™ A

The MICHELIN® radial tire designed to deliver extra protection and a high level of performance on wheel loaders.



MICHELIN® XLD® D1/D2

The directional MICHELIN® L4/L5 radial tire for wheel loaders designed to provide high levels of stability, traction and protection combined with a cushioned ride for operator comfort.



MICHELIN® X MINE® D2

The rugged MICHELIN® super L5 traction radial designed to give maximum protection in severe hard rock quarries, underground mines, scrap and solid waste applications.



MICHELIN® XSM® D2+

The super deep, smooth MICHELIN® radial tire designed for maximum wear and reliability on wheel loaders and haulers working in severe mining, quarry and waste-handling conditions.



MICHELIN® XMCL™

The MICHELIN® radial designed to optimize performance on high usage Compact Line construction and utility equipment ranging from backhoe loaders, telescopic handlers, skid-steer loaders and other material handling machines.



MICHELIN® XM27™

The rugged MICHELIN® R4 radial tire for backhoes and loaders designed to provide excellent traction both on- and off-road.



MICHELIN® XM47™

The MICHELIN® R4 radial high-speed tire designed to operate at elevated speeds and loads with excellent traction and mobility.



MICHELIN® XZSL®

The MICHELIN® radial tire designed to provide superior performance on small construction and skid-steer equipment.



MICHELIN® XVC™

The MICHELIN® E2 radial tire designed especially for high-speed applications on well-maintained site roads.



MICHELIN® XHD1™

The MICHELIN® E4 radial tire designed for transport applications.



MICHELIN® XADN®

The MICHELIN® E3 radial tire for articulated trucks designed to deliver exceptional reliability in a variety of applications.



MICHELIN® X® SUPER TERRAIN AD

The MICHELIN® E4 radial tire for articulated dump trucks engineered to deliver long life, maximized protection and excellent traction in a variety of demanding applications.



MICHELIN® XAD™ 65-1 SUPER E3

The MICHELIN® Super E3 low-profile, low-pressure radial tire designed to deliver excellent flotation, lateral stability and traction for articulated dump trucks.



MICHELIN® XTS®

The MICHELIN® E3T radial tire for mid-size scrapers engineered to provide exceptionally long life, excellent resistance to damage and enhanced traction.

* Indicates tires for compact line equipment

MICHELIN® EARTMOVER TIRE RANGE



MICHELIN® XK®

The MICHELIN® radial tire designed to deliver maximum protection in severe transport and abrasive underground mining conditions.



MICHELIN® XKD1™

The MICHELIN® radial E4 tire for use on haul trucks in the most demanding mine and quarry conditions.



MICHELIN® X-HAUL®

The MICHELIN® E4 radial tire for haul trucks designed to provide excellent protection and long wear in harsh conditions.



MICHELIN® X-HAUL® S

The MICHELIN® E4 radial tire for haul trucks operating at high speeds designed to provide excellent protection and long wear in harsh conditions.



MICHELIN® XDT™

The MICHELIN® E4 radial tire for haul trucks designed to provide excellent adhesion and traction in severe conditions.



MICHELIN® X-QUARRY® S

The extremely durable MICHELIN® E4 radial tire designed for use on haul trucks running at average speeds in the most damaging quarry conditions.



MICHELIN® XDR™

The MICHELIN® radial E4 tire for haul trucks designed to deliver long life, maximum protection and excellent traction in the most severe mine and quarry conditions.



MICHELIN® XDR™ S

The MICHELIN® radial tire for haul trucks designed to deliver long life and excellent traction in long-haul, high-speed applications.



MICHELIN® XDM™

The MICHELIN® radial tire for haul trucks designed to deliver low operating costs in applications requiring a unique combination of traction, speed and protection.



MICHELIN® XMS™

The MICHELIN® E3 radial tire for large scrapers designed to deliver excellent traction, superior damage resistance and a smooth ride.



MICHELIN® XRS™

The non-directional MICHELIN® radial tire for large scrapers designed to provide excellent longitudinal/lateral traction and exceptional tread and sidewall cut protection.



MICHELIN® X-TRACTION™

The MICHELIN® radial tire engineered to deliver excellent traction on soft surfaces.



MICHELIN® X-TRACTION™ S

The MICHELIN® radial tire engineered to deliver excellent traction on soft surfaces.



MICHELIN® STABIL'X® X STACKER™

The long-lasting MICHELIN® radial tire designed to increase the productivity of reach stackers in difficult to extremely severe working conditions.



MICHELIN® X-STRADDLE®

The long-lasting MICHELIN® radial tire for straddle carriers designed to deliver even treadwear and low operating costs in demanding port and terminal conditions.



MICHELIN® X-TERMINAL T™

The long-lasting MICHELIN® radial tire for terminal tractors designed to deliver even treadwear and low operating costs in demanding port and terminal conditions.



MICHELIN® STABIL'X® XZM™

The rugged pneumatic MICHELIN® radial tire designed for forklift trucks, terminal tractors and other industrial equipment used in heavy-duty applications.



MICHELIN® STABIL'X® XZM™ 2

The rugged MICHELIN® industrial tire designed for high-load capacity material handling equipment.



MICHELIN® XF™

The MICHELIN® radial tire with aggressive directional tread designed to deliver exceptional traction and performance for rough-terrain forklifts and excavators.



MICHELIN® X® LISSE COMPACTEUR™

The smooth MICHELIN® radial tire designed for compactors used in paving and asphalt applications.



MICHELIN® XMH™ S

The MICHELIN® radial tire for logging & transport operations designed to deliver excellent wear resistance and cooler operating temperatures in high-speed applications.



MICHELIN® X SNOPLUS® 170E

The MICHELIN® radial tire for logging operations and mobile cranes where excellent traction on snow and ice is required.



MICHELIN® XGC®

The MICHELIN® radial tire for logging operations and mobile cranes where excellent traction on snow and ice is required.



MICHELIN® X-CRANE AT™

The non-directional MICHELIN® radial tire designed to deliver exceptional operator comfort and durability in high-speed and demanding on- and off-road applications.



MICHELIN® XZR

The MICHELIN® XZR radial tire for airport support equipment, sweepers, and forklifts with an exceptional total cost of ownership.

MICHELIN® EARTHMOVER TECHNICAL DATA BOOK



®

TIRES FOR USE IN DESERTS AND SIMILAR CONDITIONS

These tires are used on machines that are operated in special conditions, such as sand, desert regions, etc.

THE TREAD

The tire tread is exceptionally broad and has been designed for use in sand. With its track-laying action, free from unwanted movement within the tire's contact area with the ground, the top layer of sand or soil is not broken up. As a result the grip is improved and digging in of the tire is minimized.

THE RADIAL CASING

The casing has been designed to withstand heavy loads at the relatively low pressure required for work **on yielding surfaces**. Low pressures are needed to obtain the largest possible area of tire contact with the ground and the lowest possible ground contact pressure.

The flexible casing minimizes vibration and the damage which might be caused by driving **on washboard (corrugated) surfaces** or **bad tracks** and is particularly resistant to this type of stress. This type of casing allows relatively high speeds on roads.

TIRE LOADS GIVEN FOR MICHELIN® XS AND MICHELIN® X "RIB"

These tires have two maximum loads which depend upon service conditions:

- First, there is a load limit shown in bold type for tough-going sand and track conditions (**in the load/pressure table**).

Numerous tests in desert conditions have confirmed that these loads must not be exceeded if optimum tire performance is to be maintained. However, should there be no obstacles to be overcome on rough terrain, this limit can be increased to the maximum "Road" load, provided that the inflation pressure is raised at the same time, even though track speed conditions remain the same.

- Second, there is a higher load limit for road service where flotation is not an issue.

INFLATION PRESSURE

Three different pressures are indicated. They depend upon the load per axle and working conditions:

ROAD:

These pressures are to be applied when the vehicle runs on good roads. This means asphalt or compacted surfaces. For these conditions the pressures have been calculated for a maximum speed of:

- **65 km/h (40 mph)** for the sizes 18.00 R 25 XS TL, 21.00 R 25 XS TL, 21.00 R 25 X RIB TL and 29.5 R 25 XS
- **80 km/h (50 mph)** for the sizes 525/65 R 20.5 XS TL, 24 R 20.5 XS TL, 24 R 21 X RIB TL and 14.00 R 24 XS.

TRACK:

These pressures are recommended for driving on bad roads, washboard (corrugated surfaces) and gravel or desert surfaces.

For these conditions the pressures have been calculated for a maximum speed of:

- **50 km/h (30 mph)** for sizes 18.00 R 25 XS TL, 21.00 R 25 XS TL, 21.00 R 25 X RIB TL and 29.5 R 25 XS
- **65 km/h (40 mph)** for sizes 525/65 R 20.5 XS TL, 24 R 20.5 XS TL, 24 R 21 X RIB TL, 14.00 R 24 XS.

SAND:

At these pressures the XS or X RIB are able to traverse the majority of sand banks.

For these conditions the pressures have been calculated for a maximum speed of:

- **15 km/h (9.3 mph)** for sizes 18.00 R 25 XS TL, 21.00 R 25 XS TL, 21.00 R 25 X RIB TL and 29.5 R 25 XS
- **20 km/h (12.5 mph)** for sizes 525/65 R 20.5 XS TL, 24 R 20.5 XS TL, 24 R 21 X RIB TL, 14.00 R 24 XS.

After using "sand" pressures, they must be adjusted to the correct pressure for subsequent conditions of use (road or track).

TIRES FOR TRANSPORT MACHINES

RIGID DUMP TRUCKS

I. RIGID DUMP TRUCKS

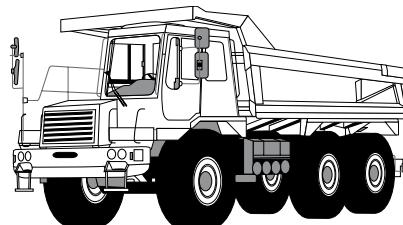
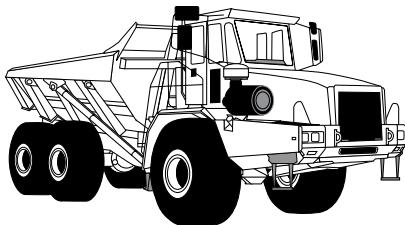
The following data needs to be established:

- The Gross Vehicle Weight (total machine weight in the laden condition).
- The percentage load distribution by axle.

The load per axle is calculated and divided by the number of tires to give the tire load.



II. ARTICULATED DUMP TRUCKS, BOTTOM DUMPS



The following data needs to be established:

- The Gross Vehicle Weight (total machine weight in the laden condition).
- The percentage load distribution by axle.

The load per axle is calculated and divided by the number of tires to give the tire load.

III. SIDE DUMP TRUCKS

The following data needs to be established:

- The Gross Vehicle Weight (total machine weight in the laden condition).
- The percentage load distribution by axle.

The load per axle is calculated and divided by the number of tires to give the tire load.

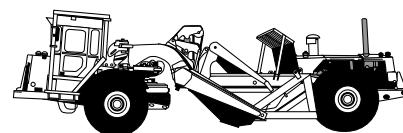


IV. MOTOR SCRAPERS

The following data needs to be established:

- The Gross Vehicle Weight (total machine weight in the laden condition).
- The percentage load distribution by axle

Calculate the load per axle then determine the tire weight by dividing the axle load by the number of tires per axle.



TIRES FOR TRANSPORT MACHINES

PROCEDURE FOR DETERMINING INFLATION PRESSURES

Determine the maximum load on each tire by weighing.



This is the only way that tire pressures can be set accurately for optimum performance.

Use the tables "Tire loads and pressures" for TRANSPORT in the earthmover data book.

Quarry: for machines with a maximum speed between 30 and 60 km/h (19 and 37 mph).

MICHELIN® X-QUARRY®: When fitted with 16.00 R 25 MICHELIN® X QUARRY Tire, the distance run must not exceed 16 km (10 miles) in one hour.

When fitted with 18.00 R 33, 21.00 R 35 or 24.00 R 35 MICHELIN® X QUARRY, the distance run must not exceed 14 km (9 mph) in one hour.

If the machines are to be used under different speeds or conditions, apply the appropriate load/pressure table.

- Specific use In the case of slow speed use (< 29 km/h / < 18 mph), or where the cycle length is short (< 3 km/h / 2 miles), cold tire pressures may be reduced by up to 10% for the given load in order to improve tire life and damage resistance.

In the case of increased dynamic load (downhill laden, heavy braking, tight bends, etc), it is recommended that front cold tire pressures on rigid dump trucks and scrapers be increased by 10% so long as the maximum pressure indicated in the tables is not exceeded.

When the tire is then subjected to important dynamic loading (for example for displacements on site at maximum speeds higher than 50 km/h / 30 mph), the load will be gradually reduced according to the maximum speed reached by the vehicle in any point of the operating cycle without change of pressure. Exceeding this value is likely to result in reduction in tire life and damage resistance.

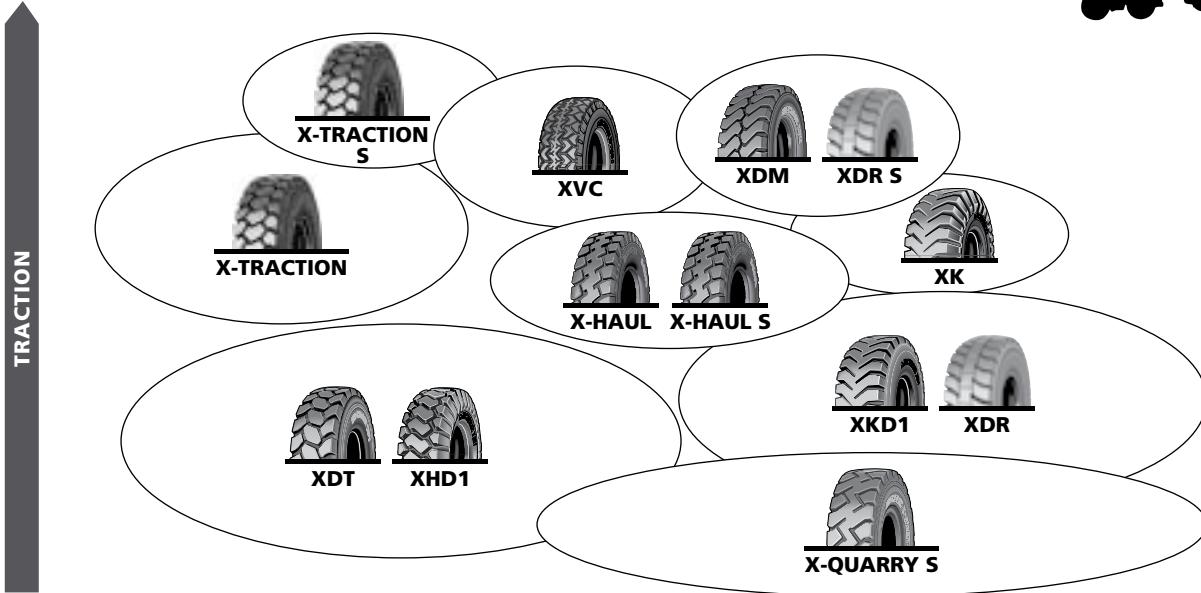
Example : For the 27.00 R 49, the nominal condition for standard use is 27,250 kg at 6.5 bar (60,086 lb at 94 PSI). For travel speed on site of 65 km/h (40 mph), the optimal performance would be 23,980 kg (52,875 lb) (that accounts for 12% of reduction) at 6.5 bar (94 PSI). See table on page 11 for the % load reduction.

If it is not possible to weigh the machine, determine the maximum load per tire on each axle by calculation or by using the machine manufacturer's data.

TIRES FOR TRANSPORT MACHINES

RIGID DUMP TRUCKS, BOTTOM DUMPS

TREAD PATTERNS AND TIRES



TYPE OF SURFACE

High level of traction required. Operating surface is yielding and muddy.

Excellent operating conditions, with good roads and tracks.

Very good operating conditions. Maintained tracks but presence of stones and gravel.

Difficult operating conditions. Track conditions vary from dry to wet. Presence of stones, rocks, debris.

Very difficult operating conditions. Wet surface with presence of stones and sharp rocks.

MAIN SIZES (For characteristics see pages 46 to 121). Non Tubeless sizes are marked TT (Tube Type).

• Available

Tire Type	XVC	XK**	XDT**				X-HAUL	XHD1**	XKD1**	XDR**				XDR S	X-QUARRY S**	XDM	X-TRACTION S	X-TRACTION			X-TRACTION						
TREAD COMPOUND	**	A	C4	A4	A	B	C4		A	A	C4	A	B4	B	C4	C	B	C4	B	C4	A	B	A4	B4	B		
TRA CODE	E2	E3R	E3R	E3T	E3T	E3T	E4	E4	E4R	E4R	E4R	E4R	E4R	E4R	E4R	E3	E3	E4R	E4	E3	E3	E3T	E4T	E4			
Max. dist. miles in 1 h	30	20	20	11	14	19	22		14	11	17	11	14	16	17	9											
Max. dist. km in 1 h	50	32	32	18	22	30	35		22	18	27	18	22	26	27	14											
12.00 R 24	•																										
14.00 R 24	•									• (1)																	
16.00 R 24																											
14.00 R 25										•																	
16.00 R 25										•																	
18.00 R 25										•																	
21.00 R 25	•																										
18.00 R 33				•		•		•																			
21.00 R 33						•																					
24.00 R 35				•		•	•	•	•																		
27.00 R 49	•		•	•	•	•				•	•	•	•									•	•	•	•	•	
30.00 R 51																											
33.00 R 51		•		•						• (3)	• (4)	• (5)	•														
36.00 R 51										• (3)	• (4)	• (5)															
37.00 R 57										• (3)	• (4)	• (5)	•									•					
40.00 R 57										• (3)	• (4)	• (5)	•	•	•							•					
50/80 R 57													• (5)														
50/90 R 57										• (4)	• (5)	•															
53/80 R 63				•						• (2)	• (4)	• (5)	•														
56/80 R 63											• (4)	• (5)	•														
58/80 R 63											• (3)	• (4)	• (5)	•				•	•	•							
59/80 R 63																											

(1) These tires are in *** (2) 28 km/18 miles in one hour (3) 16 km/10 miles in one hour (4) 20 km/18 miles in one hour (5) 24 km/15 miles in one hour

TIRES FOR TRANSPORT MACHINES

RIGID DUMP TRUCKS, BOTTOM DUMPS

TIRE SELECTION



1 - As a function of the surface (type, condition, etc.).

The chart opposite shows which type of tire should be selected according to the conditions of use.

The range is composed of six main tread compounds (see page 8 for an explanation of the different tread compounds). These are available in tread patterns XHD1™, XDT™, XKD1™ and XDR™ to meet the specific requirements of different site conditions.

2 - As a function of the service conditions (distances, speeds, loads).

CYCLES less than 5 km (3 miles) and ambient temperature between 59 and 100 °F (15 and 38 °C).

Maximum number of kilometers / miles allowed in one hour for tires on dump trucks and bottom dumps									
TIRE TYPE	Tread Compound	All wheel diameters	24 to 33 inch	35 inch	49 inch	51 inch	57 inch	57 inch (80 Series)	63 inch (80 Series)
XV	C	50 / 31							
XK	A		32 / 20						
	C4**								32 / 20
X-HAUL	A**		30 / 19						
XHD1 XDT E4T	A4**		18 / 11	18 / 11	18 / 11	18 / 11			
	A**		22 / 14			22 / 14			
	B**		30 / 19	30 / 19	30 / 19	30 / 19			
	C4**			35 / 22					
XKD1 XDR E4R	A**		18 / 11		18 / 11	16 / 10	16 / 10	16 / 10	16 / 10
	B4**				22 / 14	20 / 12	20 / 12	20 / 12	20 / 12
	B**				26 / 16	24 / 15	24 / 15	24 / 15	24 / 15
	C4**						27 / 17	28 / 18	28 / 18
	C						14 / 9		
XDM E3	B4						22 / 14		
	B						26 / 16		
	C4						30 / 19		
	C						33 / 21		
XDM E4	A						16 / 10		
	B4						20 / 12		
	B						24 / 15		
XDC E3 33.00 R 51	B4					34 / 21			
	B					39 / 24			
	C					45 / 28			
XDC E3 36.00 R 51	B4					34 / 21			
	B					37 / 23			
	C					40 / 25			
X TRACTION S	A				27 / 17				
	B				35 / 22				
X TRACTION	A4				18 / 11				
	B				30 / 19				
X-QUARRY S	**		12 / 8	14 / 9					

CYCLES greater than 5 km (3 miles) and ambient temperature greater than 100 °F (38 °C).

When the cycle length is greater than 3 miles (5 km) or the ambient temperature greater than 100 °F (38 °C), use the method specified to calculate the TMPH (TKPH) to select the tire best suited to the application.

TMPH (TKPH) is an expression of the working capacity of a tire and is a function of the maximum allowed internal operating temperature of a tire. (For method of determining TMPH (TKPH) see page 24).

For XVCTM type, in the size 27.00 R 49, use the average permissible speed to determine the most appropriate tire.

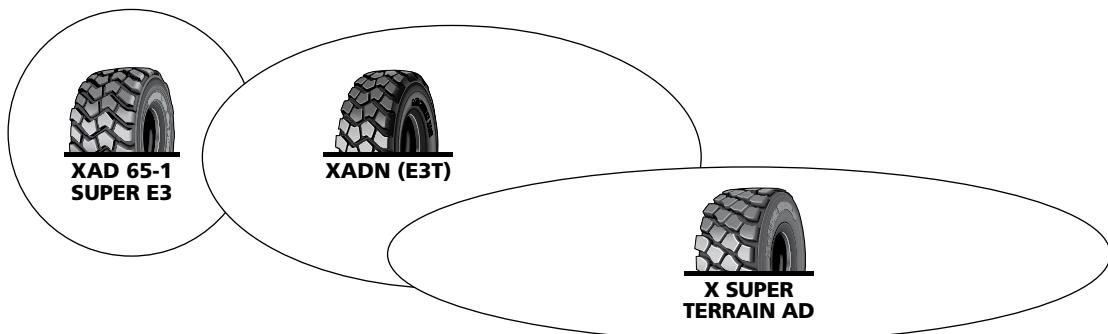
TIRES FOR TRANSPORT MACHINES

ARTICULATED DUMP TRUCKS

TREAD PATTERNS AND TIRES



TRACTION



TYPE OF SURFACE

High level of traction and flotation required. Operating surface covered in deep mud.	High level of traction required. Operating surface is yielding and muddy.	Excellent operating conditions, with good roads and tracks.	Very good operating conditions. Maintained tracks but presence of stones and gravel.	Difficult operating conditions. Track conditions vary from dry to wet. Presence of stones rocks, debris.	Very difficult operating conditions. Wet surface with presence of stones and sharp rocks.
---	---	---	--	--	---

MAIN SIZES (For characteristics see pages 46 to 121).

Tire Type	XAD 65-1 SUPER E3	XADN	X SUPER TERRAIN AD
TRA CODE	E3T	E3T	E4
Max. dist. miles in 1 h	18	18	18
Max. dist. km in 1 h	28	28	28
23.5 R 25		185 B	185B
650/65 R 25	180 B		
26.5 R 25		193 B	193 B
750/65 R 25	190 B		
29.5 R 25		200 B	200 B
850/65 R 25	196 B		
775/65 R 29	195 B		
875/65 R 29	203 B		

TIRES FOR TRANSPORT MACHINES

ARTICULATED DUMP TRUCKS

TIRE SELECTION



1 - As a function of the surface (type, condition, etc.).

The chart on the preceding page shows which type of tire should be selected according to the conditions of use.

2 - As a function of the service conditions (distances, speeds, loads).

Maximum number of kilometers (miles) allowed in one hour for tires on dump trucks and bottom dumps

Use the average speeds shown in the table below, without restriction on the number of cycles, provided that the standard method of operating the truck loaded one way only, empty the other, is employed.

The average speeds shown below may be exceeded for short periods, provided that the total distance covered by the truck in one hour does not exceed the value shown.

TREAD PATTERN AND TYPE	Number of kilometers / miles allowed in one hour	
	kilometers	miles
XAD 65	28	18
XADN speed E	28	18
X Super Terrain AD		
23.5 R 25	26	16
26.5 R 25	24	15
29.5 R 25	22	14

Number of km (miles) permitted in one hour for 29 inch XRB** tires.

CYCLES less than 5 km (3 miles) and ambient temperature between 59° and 100 °F (15° and 38 °C).

Number of miles (km) allowed in one hour = 22 (35).

CYCLES greater than 5 km (3 miles) and ambient temperature greater than 100 °F (38 °C).

When the cycle length is greater than 5 km (3 miles), use the method specified to calculate the TMPH (TKPH) to select the tire best suited to the application.

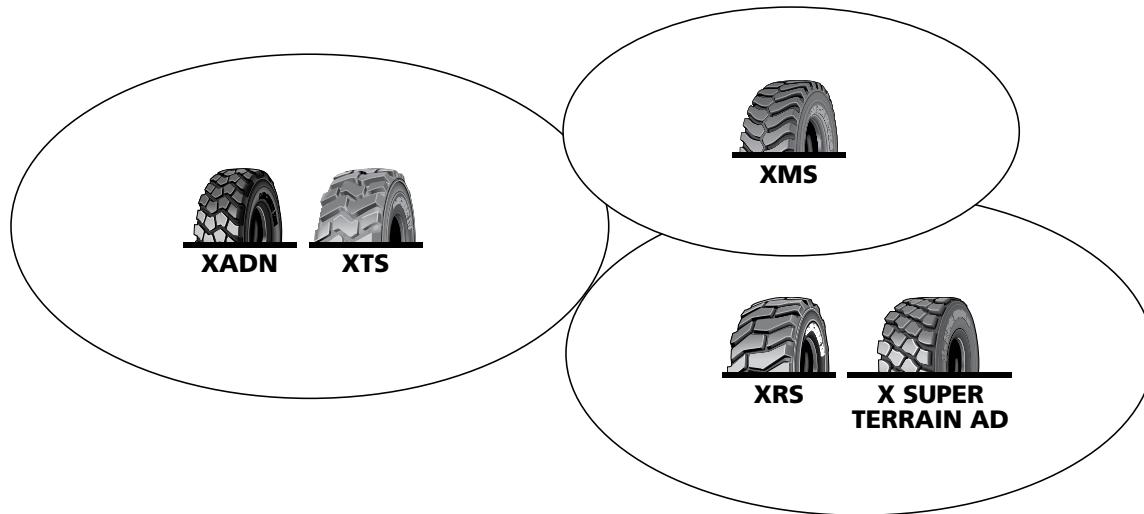
TMPH (TKPH) is an expression of the working capacity of a tire and is a function of the maximum allowed internal operating temperature of a tire (to calculate TMPH (TKPH) see page 24).

TIRES FOR TRANSPORT MACHINES

SCRAPERS

TREAD PATTERNS AND TIRES

TRACTION



TYPE OF SURFACE

High level of traction and flotation required. Loading, haul roads and discharge points covered in deep yielding mud.	High level of traction required. Loading, haul roads and discharge points are yielding and muddy.	Excellent operating conditions. Easy loading and discharge areas with good roads and tracks.	Very good operating conditions. Loading and discharge areas stony. Maintained tracks but presence of stones and gravel.	Difficult loading conditions. Track conditions vary from dry to wet. Presence of stones rocks, debris.	Very difficult loading conditions. Wet surface with presence of stones and sharp rocks.
---	---	--	---	--	---

MAIN SIZES (For characteristics see pages 46 to 121).

Tire Type	XADN	X SUPER TERRAIN AD	XTS	XMS	XRS
Tread Compounds			B**	A / B4**	B**
TRA CODE	E3T	E4	E3T	E3R	E4R
Max. dist. miles in 1 h	18	18	18	20	14
Max. dist. km in 1 h	28	28	28	33	22
18.00 R 25					
23.5 R 25	185 B	185 B			
26.5 R 25	193 B	193 B			
29.5 R 25	200 B	200 B			
29.5 R 29			•		
33.25 R 29			•		
33.5 R 33					
37.5 R 33					
29.5 R 35			•		
33.25 R 35					
37.25 R 35			•		•
37.5 R 39					•
40.5/75 R 39				•	

• Available

TIRES FOR TRANSPORT MACHINES

SCRAPERS

TIRE SELECTION

1 - As a function of the surface (type, condition, etc.).

The chart on the preceding page shows which type of tire should be selected according to the conditions of use.



- Tread compound type A is resistant to cutting and tearing.
- Tread compound type B can be operated at higher speeds.

2 - As a function of the service conditions (distances, speeds, loads).

Maximum number of kilometers (miles) allowed in one hour for 25 inch tires.

Use the average permissible speeds regardless of the number of round trips and under normal working conditions (laden and unladen trips).

TREAD PATTERN AND TYPE	Number of kilometers / miles allowed in one hour	
	kilometers	miles
XADN	28	18
X Super Terrain AD		
23.5 R 25	26	16
26.5 R 25	24	15
29.5 R 25	22	14

Maximum number of kilometers (miles) allowed in one hour for tires of 29 inch diameter and greater.

CYCLES less than 5 km (3 miles) and ambient temperature between 59° and 100 °F (15° and 38 °C).

TREAD PATTERN AND TYPE	Number of kilometers / miles allowed in one hour	
	kilometers	miles
XTS type B**	28	18
XMS type B**	33	20
XRS type B**	22	14

CYCLES greater than 5 km (3 miles) and ambient temperature greater than 100 °F (38 °C).

When the cycle length is greater than 5 km (3 miles), use the method specified to calculate the TMPH (TKPH) to select the tire best suited to the application.

TMPH (TKPH) is an expression of the working capacity of a tire and is a function of the maximum allowed internal operating temperature of a tire (to calculate TMPH (TKPH) see page 24).

TIRES FOR TRANSPORT MACHINES

TKPH/TMPH METHOD

FACTORS TO BE CONSIDERED WHEN SELECTING THE MOST APPROPRIATE TIRE:



The machine	- the tire sizes - the loads the tires have to carry (laden and unladen)
The site	- type of surface, condition and profile of haul-roads - type and condition of loading and tipping areas
Machine operation on the site	- length of the cycle (laden trip / unladen trip) - maximum number of cycles during a working period or shift - duration of the working period or shift
Problems that may arise	- how does the machine / tire combination behave? (for example, traction)
Tire behavior	- how are the tires wearing? - what are the main reasons for removing a tire from service? - are there sidewall or tread problems?
Choosing the ideal tire	This will depend on: - the fitment possibilities offered by the machine manufacturer - the service conditions on the site. Factors such as load, speed, surface conditions, etc. must be considered

TKPH (TMPH) definition:

The TKPH (Metric Ton Kilometer Per Hour) or TMPH (Ton Mile Per Hour) is an expression of the working capacity of a tire.
The TKPH (TMPH) is a function of the maximum allowed internal operating temperature of a tire.

1 - TIRE TKPH OR TIRE TMPH

A tire's TKPH (TMPH) depends on its design and varies according to size and type.

TKPH (TMPH) values are given along with other Michelin® tire characteristics.

It is a function of load and the number of kilometers (miles) covered per hour at an ambient temperature of 38° C (100° F).

The formula to convert a TKPH rating to a TMPH rating is: **TMPh = TKPh x 0.685**

TMPh calculation is based on the "short ton" which corresponds to 907 kg or 2000 lbs.

2 - BASIC SITE TKPH OR TMPH

This value reflects the specific requirements of a site and can be obtained by using the following formula:

Basic site TKPH (basic site TMPH) = Qm x Vm where Qm = average load per tire

Vm = average cycle speed, in km (or miles) per hour

a) - Average load per tire (Qm)

Average load per tire (Qm):
$$Qm = \frac{Qc + Qv}{2}$$

where Qc = is the load per tire in metric ton (TKPH), or in short ton (TMPH), on a laden vehicle.

Qv = is the load per tire in metric ton (TKPH), or in short ton (TMPH), on an unladen vehicle.

The Qm calculation should theoretically be made for each tire. However, in practice, specific tire loads are not normally available and therefore this leads to the assumption that each tire on the same axle carries an equal load. When calculating the average load per tire on the front and the rear axles, the greatest value of Qm shall be used in TKPH (TMPH) calculation.

In most cases, on two-axle dump trucks, the distribution of the total load of the loaded vehicle (unladen weight + payload) corresponds to 33.3 % on the front axle (single tires) and 66.7 % on the rear axle (dual tires).

When unladen, the front axle is almost always the heaviest.

Thus, the maximum Qm, will nearly always be on the front axle.

Caution: ensure that load distribution Front/Rear is even

Of course, the analysis of the site (or at least, the collected information), weighings and machine characteristics, will provide the information to define and check the load per tire.

TIRES FOR TRANSPORT MACHINES

TKPH/TMPH METHOD

b) - The number of km (or number of miles) covered on the reference cycle:

This is obtained by using the relationship: $V_m = \frac{L}{H}$

where L = is the cycle length in kilometers (TKPH), or in miles (TMPH).



The reference cycle must be the one with the highest average speed.

H = is the duration of cycle in hour.

3 - REAL SITE TKPH OR REAL SITE TMPH

The $Q_m \times V_m$ formula is used to calculate the basic site TKPH (or TMPH).

To obtain the real site TKPH (or TMPH), two more factors must be taken into account:

- the length of cycles exceeding 5 kilometres (or 3 miles)
- the ambient temperature.

a) - Cycle length - K1 coefficient

For cycle lengths exceeding 5 kilometres (or 3 miles) apply to the basic site TKPH (or basic site TMPH) the K1 coefficient, the values of which are given on page 27.

b) - Site ambient temperature (TA) - K2 coefficient

The standard ambient temperature is 38° C (100° F). For a given speed, a site temperature higher than 38° C increases the real site TKPH (or TMPH). Conversely, a temperature lower than 38° C decreases the real site TKPH (or TMPH).

The K2 coefficient to apply to the basic site TKPH (basic site TMPH) comes from:

$$K_2 = \frac{V_m + [0.25 \times (T_A - T_R)]}{V_m} \quad \text{where} \quad V_m \text{ is the reference cycle average speed}$$

T_A is the ambient temperature

T_R is the reference temperature (38° C or 100° F)

(*: use 0.086 instead of 0.25 when calculating basic site TMPH)

The ambient temperature of the site (TA) to be taken into account is "the maximum temperature in the shade" during the hottest period.

For temperatures TA greater than 15° C (59° F), use the K2 coefficients shown on page 27.

For temperatures TA lower than 15° C (59° F), use the K2 coefficients shown in the shaded area of the table on page 27.

To sum up, for the real site TKPH (TMPH) calculation, proceed as follows:

- calculate the basic site TKPH (TMPH).
- calculate the correct for cycle length exceeding 5 kilometers (3 miles) by applying the K1 coefficient.
- calculate the correct for ambient temperatures not equal to 38° C (100° F) by applying the K2 coefficient.

Real site TKPH (or TMPH) = Basic site TKPH (or basic site TMPH) x K1 x K2

4 - COMPARISON OF THE TIRE TKPH (TMPH) AND REAL SITE TKPH (TMPH)

On the basis that the choice of tread pattern is made to meet the needs of traction, protection and speed there are 2 possibilities:

a) the TIRE's TKPH (TMPH) is greater than the real site TKPH (TMPH): the tire is suitable for the application.

b) the TIRE's TKPH (TMPH) is below the real site TKPH (TMPH): the tire is not suitable for the application.

In case b:

- Check if another tread pattern or type may be used.
- See if a modification of operating conditions is possible.
(reduction of load and/or reduction of speed, reduced number of cycles in the same time period, etc.).

TIRES FOR TRANSPORT MACHINES

TKPH/TMPH METHOD

Example of a site TKPH (TMPH) calculation

The data to calculate the real site TKPH (TMPH) is as follows:

- well kept but abrasive haul roads
- reference cycle: 12 km (7.5 miles)
- duration of cycle: 45 minutes ; $H = 45 / 60 = 0.75$
- ambient temperature: $36^\circ C$ ($96.8^\circ F$)
- average payload: 180 tons (198.5 short ton); mine value
- unladen weight Front: 64 tons (70.6 short ton)
- unladen weight Rear: 57 tons (62.8 short ton)
- distribution of total laden weight: Front = 33.3 % Rear = 66.7 %



a) Calculation of Qm (average tire load)

- Gross vehicle weight (GVW)	(TKPH) $180 + 64 + 57 = 301$ tons	(TMPH) $198.5 + 70.6 + 62.8 = 332$ short tons
- Unladen weight per tire - Front; Qv:	$\frac{64}{2} = 32$ tons	$\frac{70.6}{2} = 35$ short tons
- Laden weight per tire - Front; Qc: (33.3 % of GW on front axle).	$\frac{301 \times 33.3}{2 \times 100} \sim 50$ tons	$\frac{332 \times 33.3}{2 \times 100} = 55$ short tons
- Average tire load, Qm Front:	$\frac{32 + 50}{2} = 41$ tons	$\frac{35 + 55}{2} = 45$ short tons
- Unladen weight per tire - Rear; Qv:	$\frac{57}{4} = 14$ tons	$\frac{62.8}{4} = 15.5$ short tons
- Laden weight per tire Rear; Qc: (66.7 % of Gross Vehicle weight on rear axle).	$\frac{301 \times 66.7}{4 \times 100} \sim 50$ tons	$\frac{332 \times 66.7}{4 \times 100} = 55$ short tons
- Average tire load, Qm Rear:	$\frac{14 + 50}{2} = 32$ tons	$\frac{15.5 + 55}{2} = 35$ short tons
Thus, the value for Qm to be used will be:	41 tons	45 short tons

b) Calculation of Vm (distance covered per hour)

$$Vm = \frac{L}{H}$$

$$12 = 16 \text{ km in one hour}$$

$$0.75$$

$$7.5 = 10 \text{ miles in one hour}$$

$$0.75$$

c) Basic site TKPH (TMPH)

$$TKPH (\text{TMPH}) = Qm \times Vm$$

$$41 \times 16 = \mathbf{656}$$

$$45 \times 10 = \mathbf{450}$$

d) Calculation of K1 coefficient

The round-trip being longer than 5 kilometres (3 miles), the K1 coefficient is 1.14 (as given in the table on page 110).

e) Calculation of K2 coefficient

The ambient temperature being different from $38^\circ C$ ($100^\circ F$), the K2 coefficient is:

$$K2 = \frac{Vm + [0.25 \times (TA - TR)]}{Vm}$$

$$\frac{16 + [0.25 (36 - 38)]}{16} = \mathbf{0.969}$$

$$\frac{10 + [0.086 (96.8 - 100)]}{10} = \mathbf{0.972}$$

(*: use 0.086 instead of 0.25 for TMPH)

f) Real site TKPH (TMPH)

Applying the K1 and K2 coefficients to the basic site TKPH (TMPH) gives the real site TKPH (TMPH).

$$656 \times 1.14 \times 0.969 = \mathbf{725}$$

$$450 \times 1.14 \times 0.972 = \mathbf{499}$$

g) Tire TKPH (TMPH) / Real site TKPH (TMPH) comparison

In the 37.00 R 57 XDR size

the different tire TKPH values are:	the different tire TMPH values are:
A = 678	A = 464
B4 = 848	B4 = 581
B = 1018	B = 698

The choice of tire available for this site would be between **B4** and **B** types.

Taking into account the abrasive haul roads, the recommendation would be the **B4** type (see type definitions on page 8).

SELECTING THE IDEAL TIRE FOR TRANSPORT MACHINES

MAIN FACTORS TO BE CONSIDERED AND THE TKPH (TMPH) METHOD

K 1 Coefficients														
L (km)	L (ml)	K 1	L (km)	L (ml)	K 1	L (km)	L (ml)	K 1	L (km)	L (ml)	K 1	L (km)	L (ml)	K 1
		11	6.8	1.13	21	13	1.19	31	19.3	1.21	41	25.5	1.23	
		12	7.4	1.14	22	13.7	1.19	32	19.9	1.21	42	26.1	1.23	
		13	8	1.15	23	14.3	1.20	33	20.5	1.22	43	26.7	1.23	
		14	8.7	1.16	24	14.9	1.20	34	21.1	1.22	44	27.3	1.23	
5	3.1	1.00	15	9.3	1.16	25	15.5	1.20	35	21.7	1.22	45	28	1.23
6	3.7	1.04	16	9.9	1.17	26	16.2	1.20	36	22.4	1.22	46	28.6	1.23
7	4.3	1.06	17	10.6	1.17	27	16.8	1.21	37	23	1.22	47	29.2	1.23
8	5	1.09	18	11.2	1.18	28	17.4	1.21	38	23.6	1.22	48	29.8	1.23
9	5.6	1.10	19	11.8	1.18	29	18	1.21	39	24.2	1.22	49	30.4	1.23
10	6.2	1.12	20	12.4	1.19	30	18.6	1.21	40	25	1.22	50	31	1.23

L = Cycle length in kilometers and in miles.

K 2 Coefficients															
Vm Km (miles)	Ambient temperature														
	<15 °C <59 °F	15 °C 59 °F	17.5 °C 63.5 °F	20 °C 68 °F	22.5 °C 72.5 °F	25 °C 77 °F	27.5 °C 81.5 °F	30 °C 86 °F	32.5 °C 90.5 °F	35 °C 95 °F	37.5 °C 99.5 °F	40 °C 104 °F	42.5 °C 108.5 °F	45 °C 113 °F	
10 (6)	0.400	0.425	0.488	0.550	0.613	0.675	0.738	0.800	0.863	0.925	0.988	1.050	1.113	1.175	
12 (7)	0.500	0.521	0.573	0.625	0.677	0.729	0.781	0.833	0.885	0.938	0.990	1.042	1.094	1.148	
14 (9)	0.571	0.589	0.634	0.679	0.723	0.766	0.813	0.857	0.902	0.946	0.991	1.036	1.080	1.125	
16 (10)	0.625	0.641	0.680	0.719	0.758	0.797	0.836	0.875	0.914	0.953	0.992	1.031	1.070	1.109	
18 (11)	0.666	0.681	0.715	0.750	0.785	0.819	0.854	0.889	0.924	0.958	0.993	1.028	1.063	1.097	
20 (12.5)	0.700	0.713	0.744	0.775	0.806	0.838	0.869	0.900	0.931	0.963	0.994	1.025	1.056	1.088	
22 (14)	0.727	0.739	0.767	0.795	0.824	0.852	0.881	0.909	0.938	0.966	0.994	1.023	1.051	1.080	
24 (15)	0.750	0.760	0.786	0.813	0.839	0.865	0.891	0.917	0.943	0.969	0.995	1.021	1.047	1.073	
26 (16)	0.769	0.779	0.803	0.827	0.851	0.875	0.899	0.923	0.947	0.971	0.995	1.019	1.043	1.067	
28 (17)	0.785	0.795	0.817	0.839	0.862	0.884	0.906	0.929	0.951	0.973	0.996	1.018	1.040	1.063	
30 (19)	0.800	0.808	0.829	0.850	0.871	0.892	0.913	0.933	0.954	0.975	0.996	1.017	1.038	1.058	
32 (20)	0.812	0.820	0.840	0.859	0.879	0.898	0.918	0.938	0.957	0.977	0.996	1.016	1.035	1.055	
34 (21)	0.823	0.831	0.849	0.868	0.886	0.904	0.923	0.941	0.960	0.978	0.996	1.015	1.033	1.051	
36 (22)	0.833	0.840	0.858	0.875	0.892	0.910	0.927	0.944	0.962	0.979	0.997	1.014	1.031	1.049	
38 (24)	0.842	0.849	0.865	0.882	0.898	0.914	0.931	0.947	0.964	0.980	0.997	1.013	1.030	1.046	
40 (25)	0.850	0.856	0.872	0.888	0.903	0.919	0.934	0.950	0.966	0.981	0.997	1.013	1.028	1.044	
42 (26)	0.857	0.863	0.878	0.893	0.908	0.923	0.938	0.952	0.967	0.982	0.997	1.012	1.027	1.042	
44 (27)	0.864	0.869	0.884	0.898	0.912	0.926	0.940	0.955	0.969	0.983	0.997	1.011	1.026	1.040	
46 (28)	0.869	0.875	0.889	0.902	0.916	0.929	0.943	0.957	0.970	0.984	0.997	1.011	1.024	1.038	
48 (29)	0.875	0.880	0.893	0.906	0.919	0.932	0.945	0.958	0.971	0.984	0.997	1.010	1.023	1.036	
50 (31)	0.880	0.885	0.898	0.910	0.923	0.935	0.948	0.960	0.973	0.985	0.998	1.010	1.023	1.035	

Vm = number of km (miles) covered per hour.

Interpolation is allowed between the temperatures shown in the column headings.

TIRES FOR WORK MACHINES

SKID STEER LOADERS, LOADERS, DOZERS OR BULLDOZERS

In order to maximize the productivity of these machines, they are not designed to be run over very long distances. As such, their travel speeds are relatively low.

There are several types of work machines. Each with its own specialized application.

I. SKID STEER LOADERS

These compact machines have a cabin that is integral with the chassis and from which the machine is driven and operated. The bucket is mounted on two arms that can articulate. They are equipped with 4 single, equal-sized, wheels which are all driven.



II. LOADERS

These machines have 4 single tires of equal size and are fitted with a bucket at the front of the machine. Their function is transfer material from a quarry face, stockpile, etc. to a neighboring point. For example, into a truck, crusher, conveyor, etc.

There are two families of loaders.

1) Loaders for stock rehandling



Often referred to as "small loaders", they are employed on a multitude of tasks in a large variety of applications (quarries, stock rehandling, incineration plants, etc.).

These machines are often articulated and may be either two or four wheel drive. They are usually equipped with the same size of tire all the way around, but sometimes smaller tires are fitted to the front.

In stock rehandling, the use of larger loaders is becoming more common.

2) Loaders in production

Termed "large loaders", they play an active role in the production process of mines, quarries and some industrial applications.

The high mobility of wheeled loaders is put to good use in applications of "load and carry." Material is loaded at the quarry face and carried to the crusher by the loader, without the intermediate use of a truck.

When used in this way, the one-way travel distance could be of the order of several tens of yards.



The bigger size of these loaders (bucket size of up to 30 cubic meters or 39 cubic yards) and larger engine sizes (1400 kW) requires ever more complex transmission systems (limited slip differentials, torque converters, etc.). Such loaders are fitted with four equal sized wheels which are all driven.

III. DOZERS or BULLDOZERS



Wheeled dozers, as the name suggests, are used to displace material by pushing it by means of a front mounted blade.

They are also used to assist in the loading and unloading of scrapers in construction sites and for the maintenance of haul roads and loading zones in opencast mines. Smaller dozers are being replaced by larger ones which are often equipped with 45 inch wheels.

Dozers have four equal sized wheels which are all driven.

TIRES FOR WORK MACHINES

BACKHOE LOADERS, WHEELED EXCAVATORS, TELESCOPIC HANDLERS AND GRADERS

IV. BACKHOE LOADERS



These machines which are configured as 4x2 or 4x4, are fitted with a bucket at the front and an excavator bucket at the rear.

The front tires are generally of a smaller size than the rears, though equal sized machines also exist. These are very versatile machine. The front end with the bucket serves as a loader, while the rear is used for excavation of trenches, etc. They are to be found in most types of construction applications and maintenance of public utilities.

V. WHEELED EXCAVATORS

These machines have a cabin integral with the chassis from which the machine is driven and operated.

They are fitted with a single articulated arm that may be fitted with a bucket, excavator or other accessory.

They are to be found fitted with steel tracks, or single or dualled tires.

With dualled cross-ply (bias) tires, a rubber ring is often fitted between the two tires. Such a ring is not compatible with radial tires and should not be used when radials are fitted. Machines on tires are fitted with stabilizers which are used when operating the machine for work.



VI. TELESCOPIC HANDLERS



These work machines consist of a chassis, a telescopic arm and a cabin from which the machine is driven and operated. The telescopic arm may be equipped with different work tools, for example, forks, buckets, etc.

The machines have four equal wheels which are all driven and steered and are usually fitted with stabilizers which are used when operating with the arm raised to a high position. The capacity of these machines is dependent on the operating height of the telescopic arm and the speed of travel of the machine. This information is provided in the form of load charts by the machine manufacturer.

VII. GRADERS

These work machines have a blade in the center and sometimes at the front as well.

They generally have 3 axles, all with single tires; the front is **usually** steer only, but it may have a front wheel drive axle also, while one, or both, of the rear axles may be driven and have a small degree of steer through articulation. In opencast mines and quarries, graders are used for the maintenance of haul roads on which other machines, such as rigid dump trucks, are operated.

They are a valuable earthmoving tool and can significantly reduce travel times for all other machines.

Graders are used to perform several different tasks.



1) Earthmoving:

Used for maintaining the general profile of the land, creating embankments, and maintenance of haul roads for dumpers and scrapers.

2) Mines and Quarries:

Used for maintenance of haul roads for other machines.

3) Construction and Public Works:

Used to form contoured base layers and fine finished surfaces (working by laser, etc.).

TIRES FOR WORK MACHINES

SURFACE LOADERS IN REHANDLING, PRODUCTION, EXTRACTION AND FACE WORK

DETERMINING INFLATION PRESSURE



There are two ways of determining tire pressures on loaders but the method of weighing each axle under actual work conditions is the most accurate.

1 - BY WEIGHING THE MACHINE AXLES

- **determine** the maximum load on each tire by weighing.
This is the only way that tire pressures can be set accurately for optimum performance.
- **use** the tables "Tire loads and pressures" for LOADERS to determine the pressure.
Front laden: for the laden front axle. (bucket full)
Rear unladen: for the unladen rear axle. (bucket empty)

2 - BY CALCULATION, USING THE MACHINE MANUFACTURER'S DATA

Front Axle (bucket full)

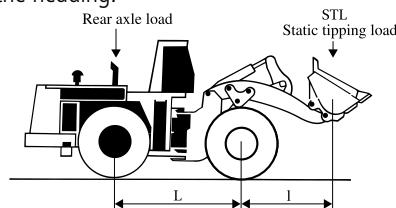
- **use** the laden front axle load given by the machine manufacturer.

- **use** the tables "Tire loads and pressures" for LOADERS in the earthmover data book under the heading:
Front Laden

Rear Axle (bucket empty)

- **use** either the unladen rear axle load given by the machine manufacturer, or
- take 60% of the unladen weight of the machine (to have a margin of safety).
By calculation: Rear Axle Load = $\frac{STL \times l}{L}$

- **use** the tables "Tire loads and pressures" for LOADERS in the earthmover data book under the heading:
REAR unladen:



TIRES FOR WORK MACHINES

SURFACE LOADERS IN REHANDLING, PRODUCTION, EXTRACTION AND FACE WORK

DETERMINING INFLATION PRESSURE

IMPORTANT

The rule to determine pressures by calculation applies to loaders of standard specification and which have not been modified for special use. The calculated pressures are the minimum for the loads and may be increased to obtain a desired level of handling, or for particular applications, (but must remain within the published load/pressure table for the tire size and type).

For a given load, it can be necessary to modify the pressure of the tire in order to optimize the behavior of the loader (need of more stability for example).

example for improved flotation, decrease front pressure by 0.5 bar (7 psi) (while not decreasing the pressure below 2.5 bar / 36 psi) for improved stability, increase front pressure by 0.5 bar (7 psi) (without exceeding the authorized maximum pressure)

In case of long travel distances (ex: delivery of new machine, transfer from one site to another, etc.), specific precautions need to be taken.

Please contact Michelin® Earthmover Department for advice in such cases.

TIRES FOR WHEEL MACHINES DOZERS



DETERMINING INFLATION PRESSURE

Depending on the type of work, tires on a dozer are subjected to different types of loading.

- the load on the Front Axle is at the maximum when loading (pushing) a scraper.
- the load on the Rear axle is at the maximum when dozing or while stockpiling.

From a practical point of view, the maximum load on either of the two axles is approximately equal to 2/3 of the machine weight.

Using this method to determine the load on each tire

Use the tables "Tire loads and pressures" for LOADERS for the Rear unladen.

COMPACT LOADERS, BACKHOE LOADERS AND TELESCOPIC HANDLERS



DETERMINING INFLATION PRESSURE

COMPACT LOADERS: By weighing the machine axles

This is the only way whereby tire pressures can be set accurately for optimum performance.

- **determine** the maximum load on each tire on the front and rear axles.

Front axle – The front axle should be weighed with the bucket full and in the transport position.

- **use** the tables "Tire loads and pressures" for LOADER or BACKHOE LOADERS in the data book.

- use the 10 km/h (6 mph) table for the front axle laden (BACKHOE LOADERS)
- use the front laden table for the front axle laden (LOADER)

Rear axle (bucket empty) – The rear axle should be weighed with the bucket empty and in the transport position.

- **use** the tables "Tire loads and pressures" for LOADER or BACKHOE LOADERS in the data book.

- use the load table that corresponds to the maximum speed for the rear axle unladen (from 10 to 65 km/h / 6 to 40 mph according to the cases) (BACKHOE LOADERS)
- use the Rear unladen schedule for the rear axle laden (LOADER)

TIRES FOR WORK MACHINES

SURFACE LOADERS IN STOCK REHANDLING AND GENERAL SERVICE

TREAD PATTERNS AND TIRES



TYPE OF SURFACE

Working conditions

- snow
- very muddy

Working conditions requiring traction

- very muddy

Easy working conditions

- clay
- sand
- silt
- earth

MAIN SIZES

(For characteristics see pages 46 to 121). Non Tubeless sizes are marked TT (Tube Type).

Tire Type	XGLA2	X SNOPLUS*	XTLA*	XRDN A*	XHA*	XHA 2*	XLD* low profile
TRA CODE	L2 / G2	L2T (1)	L2 / G2	L3 (2)	L3	L3	L3T
Max. dist. miles in 1 h	9.9	9.9	9.9	9.9	9.9		9.9
Max. dist. km in 1 h	16	16	16	16	16		16
9.00 R 20 TT							
12.00 R 20							
14.00 R 20							
12.00 R 24							
13.00 R 24							
14.00 R 24	•	•					
16.00 R 24	•						
20 R 24							
555/70 R 24							
15.5 R 25				•	•		
16.00 R 25					•		
17.5 R 25		•	•		•		
18.00 R 25							
550/65 R 25							•
555/70 R 25							
20.5 R 25		•			•	•	
600/65 R 25							•
625/70 R 25							
650/65 R 25							•
23.5 R 25		•	•		•	•	
705/70 R 25							
750/65 R 25							•
26.5 R 25					•	•	
29.5 R 25					•	•	
755/70 R 25							
800/65 R 29							•
26.5 R 29							
29.5 R 29							
30/65 R 29							
35/65 R 33				•			
40/65 R 39							
45/65 R 39							
45/65 R 45							
55/80 R 57							
60/80 R 57							

(1) Winter use and all seasons

(2) XRDN A* has similar performance to XHA*

• Available

TIRES FOR WORK MACHINES

SURFACE LOADERS IN PRODUCTION, EXTRACTION AND FACE WORK

TREAD PATTERNS AND TIRES



TYPE OF SURFACE

Moderately difficult working conditions

- gravel - marl - earth with stones

Difficult working conditions

- mudstone, limestone - shale - minerals
- recycling - public waste rehandling

Very difficult working conditions

- abrasive rock - hard blasted rock
- sharp damaging rock - silica clay

MAIN SIZES (For characteristics see pages 46 to 121). Non Tubeless sizes are marked TT (Tube Type).

XLD D1 A*	XLD D2 A*	X MINE D2	XSM D2+	Tire Type
L4R	L5T	L5R	L5S	TRA CODE
8.7	6.2	3.8	3.8	Max. dist. miles in 1 h
14	10	6	6	Max. dist. km in 1 h
		•		9.00 R 20 TT
		•		12.00 R 20 TT
		•		14.00 R 20
		•	•	12.00 R 24
			•	13.00 R 24
			•	14.00 R 24
				16.00 R 24
				20 R 24
				555/70 R 24
		•		15.5 R 25
		•		16.00 R 25
	•	•	•	17.5 R 25
		•	•	18.00 R 25
				550/65 R 25
				555/70 R 25
	•	•		20.5 R 25
		•	•	600/65 R 25
		•	•	625/70 R 25
		•	•	650/65 R 25
		•	•	23.5 R 25
		•	•	705/70 R 25
		•	•	750/65 R 25
•	•	•	•	26.5 R 25
•	•	•	•	29.5 R 25
				755/70 R 25
				800/65 R 29
				26.5 R 29
				29.5 R 29
				30/65 R 29
•	•	•	•	35/65 R 33
				40/65 R 39
				45/65 R 39
•	•	•	•	45/65 R 45
				55/80 R 57
				60/80 R 57

• Available

TIRE SELECTION

1 - As a function of the surface (type, conditions, etc.).

The preceding tables give an idea of the relative merits of each type of tire as a function of the application required, for example, the nature of the surface, the working environment, etc.

2 - As a function of service conditions (distances, speeds).

In the case of loaders used in load and carry operation, the restrictions shown below must be observed.

Type of tire	Maximum length of cycle permissible (laden one way, unladen the other) in yards (meters)	Maximum number of miles (kilometers) allowed in one hour
XTLA / XGLA2	1968 (1800)	16 (9.9)
XHA / XHA 2 / XRDNA XKA / XLD L3	1968 (1800)	16 (9.9)
XLD D1	1968 (1800)	14 (8.7)
XLD D2	1640 (1500)	10 (6.2)
X MINE D2 / XSM D2+	1312 (1200)	6 (3.8)

TIRES FOR WORK MACHINES

COMPACT LOADERS, BACKHOE LOADERS AND TELESCOPIC HANDLERS FITTED WITH INDUSTRIAL TIRES

DETERMINING INFLATION PRESSURE

BACKHOE LOADERS

Determine the maximum load on each tire on the front and rear axles.
This is the only way whereby tire pressures can be set accurately for optimum performance.



Front axle - the front axle should be weighed with the bucket full and in the transport position.

Use the tables "Tire loads and pressures" for LOADER or BACKHOE LOADERS.

- use the 10 km/h (6 mph) schedule for the front axle laden (BACKHOE LOADERS)
- use the front laden schedule for the front axle laden (LOADER)

Rear axle (bucket empty) - the rear axle should be weighed with the bucket empty and in the transport position.

Use the tables "Tire loads and pressures" for LOADER or BACKHOE LOADERS.

- use the load schedule that corresponds to the maximum speed for the rear axle unladen (from 10 to 65 km/h / 6 to 40 mph according to the cases) (BACKHOE LOADERS)
- use the Rear unladen schedule for the rear axle laden (LOADER)

Note: There are two types of Backhoe loaders.

- "SIDE-SHIFT"

- the backhoe can be slid along the transversal axis on which it is mounted.
- in the transport position, the load across the rear axle is well distributed.



- "CENTRE POST"

- the backhoe is fixed at the center, between the two rear wheels;
 - in the transport position the center of gravity of the rear axle is offset.
- This results in one of the rear tires being more heavily loaded and the pressure in it should be adjusted to correspond to the load.



TELESCOPIC HANDLERS

In the case of telescopic handlers the pressures recommended by the machine manufacturer should be used.
These pressures are determined by the machine manufacturer after conducting "Tilt Tests" for stability.
In the absence of machine manufacturer's recommendation, apply the following pressures.

For earthmover tires:

- **use** the pressure corresponding to the maximum normalized load (highlighted) as shown in the tables "Tire loads and pressures" for LOADERS front laden for both front and rear tires.

For agricultural tires:

- **use** the pressure corresponding to the maximum load at 10 km/h (6 mph) as shown in the tables "Tire loads and pressures" for BACKHOE LOADERS for both front and rear tires.

TIRES FOR WORK MACHINES

BACKHOES, COMPACT LOADERS AND TELESCOPIC HANDLERS

TREAD PATTERNS AND TIRES



TYPE OF SURFACE

Working conditions	Easy working conditions	Moderately difficult working conditions	Difficult working conditions
- very muddy	- hard surfaces, asphalt - clay - silt	- sand - earth	- construction/demolition - gravel / stones

MAIN SIZES

(For characteristics see pages 46 to 121). Non Tubeless sizes are marked TT (Tube Type).

Tread Pattern	XZSL	XM47	XMCL
TRA CODE			L2 / G2
Max. dist. miles in 1 h	16	5 - 30	9.9
Max. dist. km in 1 h	25	10 - 50	16
11 LR 16		122 A8 •	
280/80 R 18	•		132 A8/B
335/80 R 18 (12.5/80 R18)	•		
340/80 R 18	•		143 A8/B
280/80 R 20	•		133 A8/B
335/80 R 20 (12.5/80 R20)	•		
340/80 R 20	•		144 A8/B
375/75 R 20	•		
380/75 R 20	•		148 A8/B
400/70 R 20 (14.5 R 20)			149 A8/B
405/70 R 20 (14.5 R 20)	•	136 G	154 A8/B

Tread Pattern	XZSL	XM47	XMCL	XGLA2
TRA CODE			L2 / G2	L2 / G2
Max. dist. miles in 1 h	16	5 - 30	9.9	9.9
Max. dist. km in 1 h	25	10 - 50	16	16
420/75 R 20	•			154 A8/B
425/75 R 20 (16.5/75 R 20)	•		167 A2/155 B - 148 G	
14.00 R 24				•
16.00 R 24				•
440/80 R 24	•			161 A8/B
445/70 R 24				151 G
460/70 R 24	•			159 A8/B
495/70 R 24				155 G
500/70 R 24 (19.5 LR 24)				164 A8/B
480/80 R 26 (18.4 R 26)	•			160 A8/B
440/80 R 28	•			156 A8/B

• Available

TIRE SELECTION

1 - As a function of the surface (type, conditions, etc.).

The preceding tables give an idea of the relative merits of each type of tire as a function of the application required, for example, the nature of the surface, the working environment, etc.

2 - As a function of service conditions (distances, speeds).

In the case of loaders used in load and carry operation, the restrictions shown below must be observed.

Type of tire	XM27	XZSL	XTLA
Maximum length of cycle permissible, round trip yards (meters)	No limit	No limit	1968 (1800)
Maximum number of miles (kilometers) allowed in one hour	5 to 30 (10 to 50)	15.5 (25)	9.9 (16)

TIRES FOR WORK MACHINES

GRADERS

DETERMINING INFLATION PRESSURE

As a general rule, the inflation pressure must never be lower than 2 bar (29 psi)

Should there be an obvious overload or a special need for flotation, or if in doubt:

- **weigh** the machine to find out the load on each axle or use the loads given by the machine manufacturer.
- **use** the tables "Tire loads and pressure" for GRADERS.

For special work (example: sloping embankments), the inflation pressure should never be lower than 2.5 bar (36 psi).



SKID STEERS (STABILX® XZSL® TL)

DETERMINING INFLATION PRESSURE

- **determine** the maximum load on each tire by weighing.

This is the only way that tire pressures can be set accurately for optimum performance.



If it is not possible to weigh the machine, calculate the load on each axle as follows:

- 1) Calculating the Rear axle load (unladen)
Rear axle load = Static Tipping Load x (l/L)

- 2) Calculating the Front axle load (laden)
Front axle load = Payload + Total machine weight (shipping weight) - 1/2 Rear axle load



- **use** the tables "Tire loads and pressures for" SKID STEER MACHINES AND COMPACT LOADERS and apply the "load and carry table".
- All tires are inflated to the same pressure, corresponding to the most heavily laden tire, to ensure good handling.

WHEELED EXCAVATORS (XF™ TL)

DETERMINING INFLATION PRESSURE



- **determine** the maximum load on each tire. This is the only way that tire pressures can be set accurately for optimum performance.

- **use** the tables "Tire loads and pressures" for WHEELED EXCAVATORS - 30 km/h (18 mph) for site and for highway service.

At 10 km/h (6 mph) rough terrain pressures can be used where flotation/traction is required.
However, the tire pressures must be raised when the machine travels on the highway.

Note: Michelin® can also offer fitments for machines fitted with truck size tires in addition to tires used in singles.
(Example: 8.25 R 20, 9.00 R 20, 10.00 R 20, 11.00 R 20, 12.00 R 20, etc.)

Please consult us for a recommendation.

TIRES FOR WORK MACHINES

GRADERS

TREAD PATTERNS AND TIRES



TYPE OF SURFACE							
Winter type working conditions	Working conditions requiring traction	Easy working conditions	Moderately difficult working conditions	Difficult working conditions			
- snow - very muddy	- very muddy	- clay - silt	- earth - sand	- gravel - marl - earth with stones			

MAIN SIZES

(For characteristics see pages 46 to 121). Non Tubeless sizes are marked TT (Tube Type).

Tire Type	X SNOPLUS	XGLA2	XTLA	XHA	XHA 2	XLD low profile	XLD D2
TRA CODE	G2/L2T	G2	L2	L3	L3	L3T	L5T
Max. dist. miles in 1 h	9.9	9.9	9.9	9.9	9.9	9.9	6.2
Max. dist. km in 1 h	16	16	16	16	16	16	10
14.00 R 24	• (2)	•					
16.00 R 24	•	•					
15.5 R 25			•	•			
17.5 R 25	• (2)		•	•			•
20.5 R 25	• (2)			•	•		•
550/65 R 25						•	
23.5 R 25	• (2)		•	•	•		•
600/65 R 25						•	
650/65 R 25						•	
750/65 R 25						•	
26.5 R 25					•		•
29.5 R 25				•	•		•
800/65 R 29						•	

(2) Winter use and all seasons • Available

TIRE SELECTION

The chart above shows which type of tire should be selected according to the conditions of use. Where extreme protection is needed, MICHELIN® XLD® D2 and X Mine® D2 tires may be necessary (see available sizes on pages 32 and 33), which may only be fitted to 3 or 5-piece rims.

DETERMINING INFLATION PRESSURE

ROADBUILDING MACHINERY (PLANERS, STABILIZER MIXERS, PAVERS)

HOW TO PROCEED

There are no tires made specifically for this type of machinery.

Tires should be chosen according to their average speed capabilities in relation to those of the machine and their load capacity.

All these machines operate at 2 speeds: a "transport" or "traveling" speed and a "work" speed.

When moving at their "transport" speed, (up to 25 km/h / 15 mph), the weight carried by the tires is that of the machine alone. Once the load per tire has been determined, refer to the load/pressure table which corresponds best to the speed at which the selected tire is to be used.

example:

- for a 14.00 R 24 XGLA2™,
at a speed of 25 km/h (15 mph), use the load/pressure table for "Graders",
at a speed of 10 km/h (6 mph), use the load/pressure table for "Loaders, front laden".
- for a 18.00 R 25 XVC™, use the load/pressure table for "Cranes" at the speed required.

When traveling at their "work" speed (between 1 to 3km/h / 1 to 2 mph), the total weight carried by the tires includes that of the load as well as the machine itself. Once the load per tire has been determined, refer to the load/pressure table which corresponds best to the speed at which the selected tire is to be used.

example:

- for a 14.00 R 24 XGLA2™,
use the load/pressure table for "Loaders front laden".
- for a 18.00 R 25 XVC™,
load/pressure table for "Cranes" at 2 or 5 km/h (1 to 3 mph).

In each case, once the load per tire has been determined, apply the higher pressure.

In most cases this will be the pressure recommended at "transport" speed.

CALCULATING THE LOAD PER TIRE

If the load per axle is not known (no machine manufacturer's information available and no possibility of a physical weighing), follow the instructions below.

TRAVELING MACHINES:

For cold Planers and Stabilizer Mixers: load per axle on pneumatic tires = 50% of machine weight.

For Pavers: load per axle on pneumatic tires = 80% of machine weight / number of axles.

LOADED/WORKING MACHINES:

For cold Planers and Stabilizer Mixers: load per axle = 50% of machine weight + payload.

For Pavers: load per axle on pneumatic tires = 30% machine weight + maximum load of the container bin / number of axles.

TIRES FOR UNDERGROUND MACHINES

UNDERGROUND MACHINES

These special machines are to be found in use in underground mines and tunnels. They are designed for loading and carrying material over short distances and at low speed.



They are restricted in length, width and height because of the tight spaces they have to operate in. They often operate in very demanding conditions and the risk of damage to tires (crown abrasion, tread tearing and hacking, sidewall cuts, shock impacts, etc.) can be very high.

There are different types of machines:

I. - TRANSPORT MACHINES

These machines have a very low height, a tipping body (often side tip), and generally 2 axles fitted with single tires.



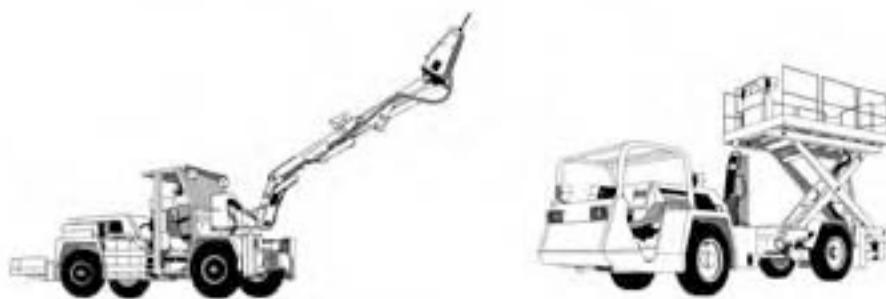
II. - LOADERS



These are very low in height, two axle articulated machines, with mechanical or electrical drive and single tires. They are equipped with a bucket operated by one or two articulated arms.

III. SERVICE MACHINES

These are very low in height, articulated machines, with two axles fitted with single tires. They are used in underground mines for a variety of applications, such as, drilling, maintenance of ceilings, transporting personnel, etc.



TIRES FOR UNDERGROUND MINE MACHINES

UNDERGROUND MINE MACHINES

TREAD PATTERNS AND TIRES

TRACTION



TYPE OF SURFACE

Moderate working conditions

- gravel
- marl
- earth with stones

Difficult working conditions

- mudstone
- limestone
- minerals

Very difficult working conditions

- abrasive rocky surface
- sharp damaging rocks
- hard blasted rock

MAIN SIZES

(For characteristics see pages 46 to 121). Non Tubeless sizes are marked TT (Tube Type).

Tire Type	XK (A or B) **	XKD1 A**	XLD D1*	XLD D2*	X MINE D2	XSM D2+
TRA CODE	L3/E3	L4	L4R	L5T	L5R	L5S
Max. dist. miles in 1 h	8.7	11.2	8.7	6.2	3.8	3.8
Max. dist. km in 1 h	14	18	14	10	6	6
7.50 R 15 TT					•	
8.25 R 15 TT					•	
10.00 R 15 TT					•	
14.5 R 15					•	
9.00 R 20 TT					•	
12.00 R 20					•	
14.00 R 20					•	
12.00 R 24	A TT (***) E3 •				•	•
14.00 R 24 TT	A (***) E3 •					
15.5 R 25					•	
17.5 R 25				•	•	•
18.00 R 25		•			•	•
20.5 R 25				•	•	
21.00 R 25	A L3 •					
23.5 R 25				•	•	
26.5 R 25			•	•	•	•
29.5 R 25		•		•	•	
29.5 R 29				•		
35/65 R 33			•	•	•	
45/65 R 39				•	•	
45/65 R 45			•	•	•	

(1) available in XRD1A*

(***) 3 star tire; maximum distance allowed in one hour = 11 miles (18km)

• Available

TIRES FOR UNDERGROUND MACHINES

UNDERGROUND LOADERS & UNDERGROUND TRUCKS

TIRE SELECTION



1 - As a function of the surface (type, state, etc.).

The chart opposite shows which type of tire should be selected according to the conditions of use.

2 - The choice of tire also depends on service conditions (distances and speeds).

Type of tire	XKD1 A	XKA XLD D1	XLD D2	X MINE D2/ XSM D2+
Maximum length of cycle permissible, round trip yards / meters (1)	2296 2100	1968 1800	1640 1500	1312 1200
Maximum number of kilometers/ miles allowed in one hour (2)	11 18	8.7 14	6.2 10	3.8 6

(1) This applies only to Load-Haul Dumpers (LHDs).

(2) The maximum speed may exceed the stated value for short periods, but the total number of kilometers (miles) covered in one hour must not exceed this value in one hour during a working shift.

DETERMINING INFLATION PRESSURE

I. - TRANSPORT MACHINES

Determine the maximum load on each tire of each axle, with the machine loaded

- by calculation, using the machine manufacturer's data, or
- by weighing each tire position with the machine loaded.

Use the tables "Tire loads and pressures" for MINE TRANSPORT.

II. - LOADERS

There are two methods of determining pressures for a loader.

1 - by weighing the axles

- **determine** the maximum load on each tire of each axle by weighing.
This is the only way whereby tire pressures can be set accurately for optimum performance.

- **use** the tables "Tire loads and pressures" for LOADERS.

Front laden for the Front axle (bucket full)

Rear unladen for the Rear axle (bucket empty)

2 - by calculation, using the machine manufacturer's data:

The load distribution on the front axle of an underground loader is different from that of a surface loader.

The rules for calculating pressures for surface loaders are not applicable.

- **determine** the maximum load per tire for each axle.

Front axle (bucket loaded)

Use the loads for the Front axle given by the machine manufacturer.

- **use** the tables "Tire loads and pressures" for LOADERS

Front laden.

Rear axle (unladen)

Use the rear axle loads given by the machine manufacturer.

- **use** the tables "Tire loads and pressures" for LOADERS

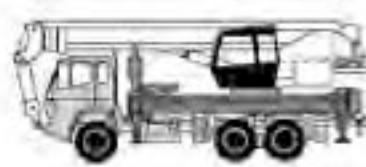
Rear unladen.

TIRES FOR SPECIAL APPLICATIONS

MILITARY AND RAPID INTERVENTION VEHICLES, FIRE ENGINES, CRANES

I. - MOBILE CRANES (TRUCK CRANES)

In general, such cranes are mounted on a standard road-going truck chassis and are also known as Truck Cranes. Fitted with truck tires, they are designed for use only on highways. Very practical and maneuverable, they offer excellent performance on hard surfaces. Their maximum lift capacity is 55 short tons.



II. - ROUGH TERRAIN CRANES



These cranes are not designed for highway use or for running over long distances. They have a single cab which serves a dual purpose - driving the vehicle and operating the crane mechanism when stationary. They are equipped with earthmover tires which gives them a capability to overcome various obstacles and to traverse rough ground. Rough Terrain cranes normally have 2 or 3 axles that may be driven and/or steered, giving them their good maneuverability. Maximum lift capacity of such cranes is 221 tons. A new generation of cranes, which retain a single cabin but have reduced vehicle dimensions, are authorized to run on some public highways.

III. - ALL TERRAIN MOBILE CRANES

These cranes, sometimes termed road-going cranes, are operated mainly on highways (up to 50 mph) but can run on prepared sites as well. They are fitted with general purpose earthmover tires which are capable of the speeds required and have good adhesion and traction properties. Such cranes have two cabs - one from which the vehicle is driven on the road and the other from which the crane is operated with the vehicle stationary. The number of axles varies, ranging from 2 to 10, with tires fitted as singles and capable of carrying up to 12 metric tons or 13 tons per axle.



Several of the axles are driven and steered, which gives such cranes a high degree of maneuverability and flexibility. Their maximum lift capacity is 1000 metric tons or 1103 tons.

IV. - INDUSTRIAL CRANES

These are small machines, with a single cabin, normally fitted with 4 industrial tires, and are mainly used in industrial applications (warehouses, workshops, factories, etc.). Such machines are not used on public highways.

V. - RAPID INTERVENTION VEHICLES



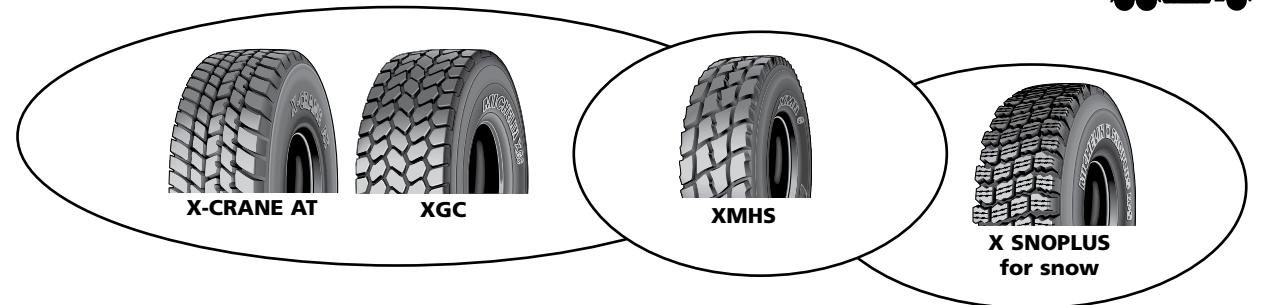
Such vehicles are generally fitted with 3 axles which may all be driven and/or steered. Fitted with earthmover all terrain tires, they are capable of achieving high travel speeds. They have very good off-road capability and excellent maneuverability.

TIRES FOR SPECIAL APPLICATIONS

MILITARY AND RAPID INTERVENTION VEHICLES, FIRE ENGINES, CRANES

TREAD PATTERNS AND TIRES

SPEED CAPABILITY



TYPE OF SURFACE

Road

All Terrain

Yielding Terrain

MAIN SIZES

(For characteristics see pages 46 to 121). Non Tubeless sizes are marked TT (Tube Type).

Tread Pattern	X SNOPLUS	XGC	XMHS	X CRANE AT
Tread Compound		C		
TRA CODE	E2	E2		E2
Max. dist. miles in 1 h	44	44	44	
Max. dist. km in 1 h	70	70	70	
385/95 R 24 (14.00 R 24) TT 170E	•		•	• 170 F
385/95 R 25 (14.00 R 25) 170E	•			• 170 F
445/95 R 25 (16.00 R 25) 177 E				• 174 F
445/80 R 25 (17.5 R 25) 170 E		•		
525/80 R 25 (20.5 R 25) 179E		•		

• Available

TIRES FOR SPECIAL APPLICATIONS, RAPID INTERVENTION VEHICLES, FIRE ENGINES, CRANES

DETERMINATION OF INFLATION PRESSURES

- **determine** the total weight of the machine,
- by using the machine manufacturer's data, or
- by weighing each axle.



- **calculate** the load per tire (in the case of a crane, divide the total weight by the number of axles, and divide by the number of tire per axle). Take into account any axle overload (for example: for cranes, overload due to counterweights).

- **use** the tables "Tire loads and pressures" for CRANES to determine the tire pressures.
- in the case of vehicles used at high speeds over short distances or on yielding terrain, it may be possible to use lower pressures. (please consult us)

TIRES FOR COMPACTORS

COMPACTORS

Compactors are primarily used in public works applications. They are used for compacting the earth after preparing the land for further use and for finishing the construction of public highways.



Compactors may have different configurations:

- two axles with a steel roller front or rear, with slick tires on the other axle,
- front axle with steel roller, rear axle with patterned tires,
- 2 axles, both with 2, 3 or 4 slick tires on each axle.

X® LISSE



These tires are designed for use on compactors that use slick tires.

- They offer excellent performance on hot road surfaces (virtually eliminates material sticking to the tread),
- They have tread wear indicators.

Note:

Michelin® can supply tires with tread patterns for applications not requiring smooth-tread tires. Please consult Michelin® Earthmover.

Main sizes (see characteristics on pages 46 to 121):

- 7.50 R 15 X L C
- 8.25 R 15 X L C
- 10.00 R 20 X L C
- C 20 Pilot X L C Tubeless (11/80 R 20)
- E 20 Pilot X L C (13/80 R 20)
- 14.00 R 24 X L C
- 15.00 R 24 Pilot X L C (17/80 R 24)

DETERMINING INFLATION PRESSURE

The choice of tire and its working pressure depends on the material to be compacted, the type of work to be carried out and the operating speed.

Please refer to the information and operating guidelines supplied by the machine manufacturer and use the tables "Tire loads and pressures" for COMPACTORS.



NOTES

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)						
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. I gallon									
15"																				
7.50 R 15 TubeType																				
XLC C1 123461			218 8.6	780 30.7	254 10	198 7.8	770 30.3	338 13.3	2324 91.5	9 11.3	40 11	5.5 6.0 6.00S 6.5 B6.5	-	15/16 J						
															15x6.00					
X MINE D2 L5 123342	6 3.7					230 9.1	840 33.1	385 15.2	2550 100.4	46 58	39 10	5.5 6.0 6.00S 6.5 B6.5	-	15/16 J						
															15x6.00					
8.25 R 15 TubeType																				
X MINE D2 L5 123352	6 3.7					250 9.8	882 34.7	402 15.8	2680 105.5	48 60.5	47 12	6.0 6.5 B6.5 7.0	-	15 K						
															15x7.50 15x6.00 15x6.00					
10.00 R 15 TubeType																				
X MINE D2 L5 123372	6 3.7					295 11.6	910 35.8	411 16.2	2748 108.2	48 60.5	70 18	7.0 7.5	-	15 P						
															15x7.50					
350/65 R 15 Tubeless (32x14.5 R 15)																				
X MINE D2 L5 826683	6 3.7					348 13.7	844 33.2	379 14.9	2543 100.1	36 45.4	91 24	10.50 11.50	-	-						
14.5 R 15 Tubeless																				
X MINE D2 L5 123101	6 3.7					380 15	894 35.2	408 16.1	2711 106.7	48 60.5	90 24	10.50 11.00BD 11.0 11.50	-	-						
400/80 R 15 Tubeless (38x16 R 15)																				
X MINE D2 L5 735466	6 3.7					385 15.2	996 39.2	445 17.5	2996 118	34 42.8	128 34	11.50	-	-						

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)											Size
--------------	-------------------------	---	--	--	--	--	--	--	--	--	--	--	------

15"

			APPLICATION	bar	3	3.5	3.75	4	4.5	5	5.5	6	7	8	
				psi	44	51	54	58	65	73	80	87	102	116	
XLC C1	C1	Compactors	10 km/h	1250	1400	1470	1540	1680	1830	1970	2120	2420	2725	7.50 R 15	
			6mph	2756	3087	3241	3396	3704	4035	4344	4675	5336	6009		
			15 km/h	1020	1135	1190	1250	1375	1500	1600	1700	1980	2180		
			9 mph	2249	2503	2624	2756	3032	3308	3528	3749	4366	4807		
X MINE D2 L5	L5	Loaders	Front laden	1850	2000	2075	2150	2250	2400	2500	2650	2900	3150	8.25 R 15	
			4079	4410	4575	4741	4961	5292	5513	5843	6395	6946			
			Rear unladen	1475	1600	1650	1725	1800	1925	2000	2125	2325	2525		
X MINE D2 L5	L5	Underground machines*	3252	3528	3638	3804	3969	4245	4410	4686	5127	5568			
			Front and Rear	1675	1800	1875	1925	2025	2150	2250	2375	2600	2825		
X MINE D2 L5	L5	Loaders	3693	3969	4134	4245	4465	4741	4961	5237	5733	6229			
X MINE D2 L5	L5		Front laden	2000	2200	2300	2400	2550	2700	2850	3000	3300	3600	10.00 R 15	
			4410	4851	5072	5292	5623	5954	6284	6615	7277	7938			
X MINE D2 L5	L5	Underground machines*	1600	1750	1850	1925	2050	2150	2275	2400	2650	2875			
			3528	3859	4079	4245	4520	4741	5016	5292	5843	6339			
			APPLICATION	bar	3	3.5	4	4.5	5	5.5	6	6.5	7	8	
			psi	44	51	54	58	65	73	80	87	94	102	116	
X MINE D2 L5	L5	Loaders	Front laden	2400	2600	2800	3000	3200	3350	3500	3700	3900	4300	10.00 R 15	
			5292	5733	6174	6615	7056	7387	7718	8159	8600	9482			
			Rear unladen	1925	2075	2250	2400	2550	2675	2800	2965	3125	3450		
X MINE D2 L5	L5	Underground machines*	Front and Rear	2150	2350	2525	2700	2875	3025	3150	3325	3500	3875		
			4741	5182	5568	5954	6339	6670	6946	7332	7718	8544			
			APPLICATION	bar	3	3.5	3.75	4	4.5	5	5.5	6	7	8	
			psi	44	51	54	58	65	73	80	87	102	116	14.5 R 15 (32x14.5R15)	
X MINE D2 L5	L5	Loaders	Front laden	2400	2660	2790	2920	3150	3400	3570	3750	4200	4600		
			5292	5865	6152	6439	6946	7497	7872	8269	9261	10143			
			Rear unladen	1920	2128	2232	2336	2520	2720	2856	3000	3360	3680		
X MINE D2 L5	L5	Underground machines*	Front and Rear	2160	2394	2511	2628	2835	3060	3213	3375	3780	4140	14.5 R 15 (32x14.5R15)	
			4763	5279	5537	5795	6251	6747	7085	7442	8335	9129			
X MINE D2 L5	L5	Loaders	Front laden	2550	2850	2975	3100	3350	3600	3850	4100	4600	5100	14.5 R 15 (32x14.5R15)	
			5623	6284	6560	6836	7387	7938	8489	9041	10143	11246			
			Rear unladen	2050	2275	2375	2475	2675	2875	3075	3275	3675	4075		
X MINE D2 L5	L5	Underground machines*	Front and Rear	2300	2575	2675	2800	3025	3250	3475	3700	4150	4600		
			5072	5678	5898	6174	6670	7166	7662	8159	9151	10143			
X MINE D2 L5	L5	Loaders	Front laden	3300	3650	3825	400	4350	4700	5050	5400	6100	6600	100/80 R 15 (38x16 R 15)	
			7277	8048	8434	882	9592	10364	11135	11907	13451	14553			
			Rear unladen	2650	2925	3050	3200	3475	3750	4050	4325	4875	5275		
X MINE D2 L5	L5	Underground machines*	Front and Rear	2975	3275	3450	3600	3900	4225	4550	4850	5500	5950		
			6560	7221	7607	7938	8600	9316	10033	10694	12128	13120			

*See page 39-41

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)						
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm 32nd gallon									
15"																				
27x8.50 R 15 Tubeless																				
STABIL'X XZSL L3 117A5 123855	25 15.5					237 9.3	680 26.8	313 12.3	2068 81.4	15 18.9	35 9	7J 7.00	-	-						
16"																				
11 L R 16 Tubeless																				
XM27 122A8 123207			304 12	872 34.3		291 11.5	850 33.5	375 14.8	2515 99	23 29	80 21	W8 W10L	-	16 P15						
16.5"																				
10 R 16.5 Tubeless																				
STABIL'X XZSL L3 128A5 110546	25 15.5					267 10.5	773 30.4	350 13.8	2335 91.9	20 25.2	60 16	8.25	-	-						
12 R 16.5 Tubeless																				
STABIL'X XZSL L3 141A5 110820	25 15.5					312 12.3	831 32.7	370 14.6	2495 98.2	23 29	86 23	9.75	-	-						
18"																				
280/80 R 18 Tubeless																				
XMCL 132A8 130B 779803			282 11.1	905 35.6	389 15.3	290 11.4	908 35.7	415 16.3	2708 106.6	28 35.3	90 24	W8 W9 W10	-	KLEBER 438						
335/80 R 18 Tubeless (12.5 R 18)																				
XZSL 151A2 139B 122999			356 14	1015 40		345 13.6	995 39.2	445 17.5	2995 117.9	26 32.8	123 32	DW10 W10 W10L W11 DW11	-	KLEBER 444						

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)										Size										
15"																						
APPLICATION			bar	1.5	2	2.5	3	3.5	3.75													
			psi	22	29	36	44	51	54													
STABIL'X XZSL L3	L3	Skid Steers	Front and Rear	540	830	920	1100	1225	1285													
				1191	1830	2029	2426	2701	2833													
16"																						
APPLICATION			bar	0.6	1	1.4	1.6	1.9	2	2.4	2.7											
			psi	9	15	20	23	28	29	35	39											
XM27		Backhoe loaders	10 km/h	870	1130	1390	1530	1720	1790	2050	2250											
			6mph	1918	2492	3065	3374	3793	3947	4520	4961											
			30 km/h	610	830	1050	1160	1330	1380	1610												
			19mph	1345	1830	2315	2558	2933	3043	3550												
			40 km/h	570	780	990	1090	1240	1290	1500												
			25mph	1257	1720	2183	2403	2734	2844	3308												
16.5"																						
APPLICATION			bar	1.5	2	2.5	3	3.5	3.75													
			psi	22	29	36	44	51	54													
STABIL'X XZSL L3	L3	Skid Steers	Front and Rear	980	1170	1380	1570	1725	1800													
				2161	2580	3043	3462	3804	3969													
STABIL'X XZSL L3	L3	Skid Steers	Front and Rear	1425	1675	1875	2200	2450	2575													
				3142	3693	4134	4851	5402	5678													
18"																						
APPLICATION			bar	1.6	2	2.4	2.8	3.2	3.6	4	4.4											
			psi	23	29	35	41	46	52	58	64											
XMCL		Backhoe loaders	Static	1800	2200	2600	3000	3400	3800	4200	4600											
				3969	4851	5733	6615	7497	8379	9261	10143											
			Cyclic	1170	1430	1700	1960	2220	2480	2740	3000											
				2580	3153	3749	4322	4895	5468	6042	6615											
			30 km/h	1020	1210	1400	1580	1770	1950	2140												
			19mph	2249	2668	3087	3484	3903	4300	4719												
			40 km/h	950	1120	1300	1475	1650	1825	2000												
			25mph	2095	2470	2867	3252	3638	4024	4410												
APPLICATION			bar	1	1.6	1.9	2.7	3	3.2	3.5	3.8											
			psi	15	23	28	39	44	46	51	55											
XZSL		Backhoe loaders	10 km/h	1510	1930	2130	2690	2900	3030	3240	3450											
			6mph	3330	4256	4697	5931	6395	6681	7144	7607											
			30 km/h	1210	1540	1710	2150	2320	2430	2590	2760											
			19mph	2668	3396	3771	4741	5116	5358	5711	6086											
			40 km/h	1100	1410	1560	1960	2110	2220	2370	2520											
			25mph	2426	3109	3440	4322	4653	4895	5226	5557											
			50 km/h	1060	1360	1500	1890	2040	2140	2280	2430											
			31mph	2337	2999	3308	4167	4498	4719	5027	5358											

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)						
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm gallon									
18"																				
340/80 R 18 Tubeless																				
XMCL 143A8 143B 100054			343 13.5	1001 39.4	462 18.2	351 13.8	996 39.2	448 17.6	2959 116.5	30 37.8	141 37	W10 11 SDC 11.00 W11 12 SDC 12	-	K057866						
19.5"																				
18 R 19.5 Tubeless																				
XF* 255201			507 20	1149 45.2		449 17.7	1114 43.9	493 19.4	3339 137.5	18 22.7	220 58	14.00	-	19.5/20.5 UD						
20"																				
9.00 R 20 TubeType																				
X MINE D2 LSR * 123382	6 3.7					277 10.9	1054 41.5	484 19.1	3203 126.1	51 64.3	98 26	6.5 - B6.5 7.0 7.0T B 7.0 7.33V B7.5 7.5	-	20 M A20 553004						
10.00 R 20 TubeType																				
XLC C1 240600 (8)			297 11.7	1060 41.7	330 13	271 10.7	1044 41.1	472 18.6	3154 124.2	12 15.1	110 29	7.0 - B 7.0 7.0T - 7.33V B 7.5 7.5 8.00V B 8.0 8.0 - 8.0V	-	20 M A20 553004						
C20 Pilote TubeType (11/80 R 20)																				
XLC C1 240550 (8)			304 12	974 38.3	338 13.3	280 11	964 38	439 17.3	2919 114.9	12 15.1	120 32	7.33V 8.0V 8.0	-	20 M A20 553004						

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)											Size											
18"																								
APPLICATION			bar	1.6	2	2.4	2.8	3.2	3.6	4	4.4													
			psi	23	29	35	41	46	52	58	64													
XMCL	Backhoe loaders	Static	2450	3000	3540	4090	4630	5180	5720	6270			340/80 R 18											
			5402	6615	7806	9018	10209	11422	12613	13825														
		Cyclic	1600	1950	2310	2670	3020	3380	3730	4090														
			3528	4300	5094	5887	6659	7453	8225	9018														
		30 km/h	1390	1650	1900	2160	2410	2660	2920															
		19mph	3065	3638	4190	4763	5314	5865	6439															
		40 km/h	1320	1550	1780	2010	2240	2580	2725															
		25mph	2911	3418	3925	4432	4939	5689	6009															
19.5"																								
APPLICATION			bar	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5											
			psi	44	51	58	65	73	80	87	94	102	109											
XF*	Wheeled Excavators	10 km/h	3875	4170	4465	4760	5055	5345	5640	5935	6230	6525	18 R 19.5											
		6mph	8544	9195	9845	10496	11146	11786	12436	13087	13737	14388												
		20 km/h	3285	3570	3855	4140	4425	4710	4995	5280	5565	5850												
		12mph	7243	7872	8500	9129	9757	10386	11014	11642	12271	12899												
		30 km/h	2835	3120	3405	3690	3975	4260	4545	4830	5115	5400												
		19mph	6251	6880	7508	8136	8765	9393	10022	10650	11279	11907												
		40 km/h	2115	2380	2645	2910	3175	3440	3705	3970	4235	4500												
		25mph	4664	5248	5832	6417	7001	7585	8170	8754	9338	9923												
20"																								
APPLICATION			bar	3	4	5	6	7	8															
			psi	44	58	73	87	102	116															
X MINE D2 * L5R	L5R	Loaders	Front laden	3000	3400	3800	4200	4600	5000				9.00 R 20											
				6615	7497	8379	9261	10143	11025															
			Rear unladen	2400	2700	3050	3350	3700	4000															
				5292	5954	6725	7387	8159	8820															
X MINE D2 * L5R	L5R	Underground machines (see page 39-41)	Front and Rear	2700	3050	3400	3800	4150	4500				10.00 R 20											
				5954	6725	7497	8379	9151	9923															
APPLICATION			bar	3	4	5	6	7	8	8.5	9	9.5												
			psi	44	58	73	87	102	116	123	131	138												
XLC C1	C1	Compactors	10 km/h	2080	2570	3060	3550	4040	4530	4770	5020	5260	10.00 R 20											
			6mph	4586	5667	6747	7828	8908	9989	10518	11069	11598												
			15 km/h	1830	2260	2690	3120	3560	3990	4210														
			9 mph	4035	4983	5931	6880	7850	8798	9283														
APPLICATION			bar	3	4	5	6	7	8	8.5	9	9.5	10											
			psi	44	58	73	87	102	116	123	131	138	145											
XLC C1	C1	Compactors	10 km/h	1860	2240	2630	3010	3400	3780	3970	4170	4360	4550	C20 Pilot										
			6mph	4101	4939	5799	6637	7497	8335	8754	9195	9614	10033											
			15 km/h	1660	1990	2340	2680	3030	3360	3530	3675													
			9 mph	3660	4388	5160	5909	6681	7409	7784	8103													

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)						
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. l									
										32nd	gallon									
20"																				
280/80 R 20 Tubeless																				
XMCL 133A8 133B 747442			282 11.1	956 37.6	389 15.3	292 11.5	958 37.7	439 17.3	2860 112.6	29 36.5	97 26	W8 W9 W10	-	K171111	-					
12.00 R 20 TubeType																				
X MINE D2 L5R 123392	6 3.7					323 12.7	1174 46.2	535 21.1	3558 140.1	57 71.8	146 39	8.0 8.5V 8.5 B 8.5 8.50V 9.00V 9.0	-	20 Q 20x8.50						
E20 Pilote TubeType (13/80 R 20)																				
XLC C1 240750			352 13.9	1069 42.1	391 15.4	322 12.7	1050 41.3	470 18.5	3160 124.4	12 15.1	140 37	7.33V - 7.5 B 7.5 - 8.0 B8.0 - 8.0V 8.00V - 8.5 B B8.5 - 8.50V 9.00V - 10.0 - 10.00V 9.0	-	20 P 20x8.50						
335/80 R 20 Tubeless																				
XZSL 153A2 141B 792581			356 14	1066 42		337 13.3	1068 42	476 18.7	3209 126.3	25 31.5		W10 11DC 11 SDC	OR 6.6-20 (R1681) 553215	KLEBER 444 -						
340/80 R 20 Tubeless																				
XMCL 144A8 144B 948730			343 13.5	1052 41.4	462 18.2	353 13.9	1047 41.2	476 18.7	3119 122.8	29 36.5	152 40	W10 11 SDC 11.00 W11 12 SDC 12	-	KLEBER 664 -						

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)										Size										
20"																						
APPLICATION			bar	1.6	2	2.4	2.8	3.2	3.6	4	4.4											
			psi	23	29	35	41	46	52	58	64											
XMCL	Backhoe loaders	Static	1850	2260	2675	3090	3500	3910	4330	4740		280/80 R 20										
			4079	4983	5898	6813	7718	8622	9548	10452												
		Cyclic	1210	1480	1745	2020	2280	2550	2820	3090												
			2668	3263	3848	4454	5027	5623	6218	6813												
		30 km/h	1050	1240	1435	1630	1820	2010	2200													
			19mph	2315	2734	3164	3594	4013	4432	4851												
		40 km/h	975	1155	1340	1520	1700	1880	2060													
			25mph	2150	2547	2955	3352	3749	4145	4542												
APPLICATION			bar	3	4	5	6	7	8													
			psi	44	58	73	87	102	116													
X MINE D2 L5R	L5R	Loaders	Front laden	3400	4000	4600	5200	5800	6400			12.00 R 20										
				7497	8820	10143	11466	12789	14112													
			Rear unladen	2700	3200	3700	4150	4650	5100													
				5954	7056	8159	9151	10253	11246													
X MINE D2 L5R	L5R	Underground machines (see page 39-41)	Front and Rear	3050	3600	4150	4700	5200	5750			E20 Pilote										
				6725	7938	9151	10364	11466	12679													
APPLICATION			bar	3	4	5	6	7	8	8.5	9											
			psi	44	58	73	87	102	116	123	131											
XLC C1	C1	Compactors	10 km/h	2520	3100	3660	4260	4840	5420	5710	6000	E20 Pilote										
				6mph	5557	6836	8070	9393	10672	11951	12591											
			15 km/h	2240	2760	3260	3790	4310	4820	5000												
				9 mph	4939	6086	7188	8357	9504	10628	11025											
APPLICATION			bar	1	1.6	1.9	2.7	3	3.2	3.5	3.8											
			psi	15	23	28	39	44	46	51	55											
XZSL	Backhoe loaders	10 km/h	1600	2040	2260	2840	3060	3210	3430	3650		335/80 R 20										
			6mph	3528	4498	4983	6262	6747	7078	7563	8048											
		30 km/h	1280	1630	1810	2280	2450	2570	2740	2920												
			19mph	2822	3594	3991	5027	5402	5667	6042	6439											
		40 km/h	1170	1490	1650	2080	2240	2340	2500	2660												
			25mph	2580	3285	3638	4586	4939	5160	5513	5865											
		50 km/h	1130	1440	1590	2010	2160	2260	2420	2575												
			31mph	2492	3175	3506	4432	4763	4983	5336	5678											
APPLICATION			bar	1.6	2	2.4	2.8	3.2	3.6	4	4.4											
			psi	23	29	35	41	46	52	58	64											
XMCL	Backhoe loaders	Static	2520	3080	3640	4200	4760	5320	5880	6440		340/80 R 20										
			5557	6791	8026	9261	10496	11731	12965	14200												
		Cyclic	1640	2005	2370	2740	3105	3470	3835	4200												
			3616	4421	5226	6042	6847	7651	8456	9261												
		30 km/h	1430	1690	1950	2210	2470	2735	3000													
			19mph	3153	3726	4300	4873	5446	6031	6615												
		40 km/h	1360	1595	1830	2065	2300	2550	2800													
			25mph	2999	3517	4035	4553	5072	5623	6174												

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)					
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm 32nd								
20"																			
14.00 R 20 Tubeless																			
X MINE D2 L5R 372138	6 3.7					368 14.5	1236 48.7	557 21.9	3745 147.4	48 60.5	175 46	10.00W 10.00	-	20 Q 20x10.00					
375/75 R 20 Tubeless																			
XZSL 155A2 143B 122989			396 15.6	1092 43		395 15.6	1067 42	481 18.9	3219 126.7	29 36.5	162 43	W10 11DC 11 SDC	OR 6.6-20 (R1681) 553215	KLEBER 664 -					
380/75 R 20 Tubeless																			
XMCL 148A8 148B 187752			380 15	1078 42.4	507 20	384 15.1	1072 42.2	481 18.9	3199 125.9	33 41.6	181 48	11.0 W11 W12 12	-	KLEBER 664 -					
400/70 R 20 Tubeless																			
XMCL 149A8 149B 474495			404 15.9	1068 42	536 21.1	412 16.2	1069 42.1	481 18.9	3177 125.1	33 41.6	187 49	12 SDC 12 13SDC 13.00 14	-	KLEBER 664 -					
405/70 R 20 Tubeless																			
XZSL 155A2 143B 753584			452 17.8	1121 44.1		409 16.1	1102 43.4	492 19.4	3314 130.5	30 37.8	202 53	W10 11DC 11 SDC 12 DC 13 SDC 13 DC	OR 6.6-20 (R1681) 553215	KLEBER 664 -					

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)										Size										
20"																						
APPLICATION			bar	3	4	5	5.5	6	6.5	7	8	8.5										
			psi	44	58	73	80	87	94	102	116	123										
X MINE D2 L5R	L5R	Loaders	Front laden	4140	4920	5690	6070	6460	6850	7230	8010											
			Rear unladen	9129	10849	12546	13384	14244	15104	15942	17662											
X MINE D2 L5R	L5R	Underground machines (see page 39-41)	Front and Rear	2430	3100	3770	4100	4430	4770	5100	5770											
				5358	6836	8313	9041	9768	10518	11246	12723											
				3480	4200	4920	5280	5640	6000	6360	7070	7793										
				7673	9261	10849	11642	12436	13230	14024	15589	17184										
APPLICATION			bar	1	1.6	1.9	2.7	3	3.2	3.5	3.8											
			psi	15	23	28	39	44	46	51	55											
XZSL		Backhoe loaders	10 km/h	1700	2160	2400	3020	3250	3410	3640	3880											
			6mph	3749	4763	5292	6659	7166	7519	8026	8555											
			30 km/h	1360	1730	1920	2420	2600	2730	2910	3100											
			19mph	2999	3815	4234	5336	5733	6020	6417	6836											
			40 km/h	1240	1580	1750	2200	2370	2490	2660	2830											
			25mph	2734	3484	3859	4851	5226	5490	5865	6240											
			50 km/h	1190	1520	1690	2120	2290	2400	2560	2725											
			31mph	2624	3352	3726	4675	5049	5292	5645	6009											
APPLICATION			bar	1.6	2	2.4	2.8	3.2	3.6	4	4.4											
			psi	23	29	35	41	46	52	58	64											
XMCL		Backhoe loaders	Static	2840	3470	4100	4730	5360	5990	6620	7250											
				6262	7651	9041	10430	11819	13208	14597	15986											
			Cyclic	1850	2260	2670	3080	3490	3900	4310	4730											
				4079	4983	5887	6791	7695	8600	9504	10430											
			30 km/h	1610	1900	2200	2490	2780	3080	3370												
			19mph	3550	4190	4851	5490	6130	6791	7431												
			40 km/h	1500	1770	2040	2300	2575	2860	3150												
			25mph	3308	3903	4498	5072	5678	6306	6946												
APPLICATION			bar	1.6	2	2.4	2.8	3.2	3.6	3.8	4	4.4										
			psi	23	29	35	41	46	52	55	58	64										
XMCL		Backhoe loaders	Static	2930	3580	4230	4880	5530	6180	6505	6830	7480										
				6461	7894	9327	10760	12194	13627	14344	15060	16493										
			Cyclic	1910	2330	2760	3180	3600	4030	4240	4450	4880										
				4212	5138	6086	7012	7938	8886	9349	9812	10760										
			30 km/h	1660	1960	2270	2570	2870	3180	3330	3480											
			19mph	3660	4322	5005	5667	6328	7012	7343	7673											
			40 km/h	1550	1825	2100	2375	2650	2950	3100	3250											
			25mph	3418	4024	4631	5237	5843	6505	6836	7166											
APPLICATION			bar	1	1.6	1.9	2.7	3	3.2	3.5	3.8											
			psi	15	23	28	39	44	46	51	55											
XZSL		Backhoe loaders	10 km/h	1700	2160	2400	3020	3250	3410	3640	3880											
			6mph	3749	4763	5292	6659	7166	7519	8026	8555											
			30 km/h	1360	1730	1920	2420	2600	2730	2910	3100											
			19mph	2999	3815	4234	5336	5733	6020	6417	6836											
			40 km/h	1240	1580	1750	2200	2370	2490	2660	2830											
			25mph	2734	3484	3859	4851	5226	5490	5865	6240											
			50 km/h	1190	1520	1690	2120	2290	2400	2560	2725											
			31mph	2624	3352	3726	4675	5049	5292	5645	6009											

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)							Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)	
				Michelin® dimensions										
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon		

20"

16.00 R 20 Tubeless

XZL E2 173G 123357	70 43.5		466 18.3	1381 54.4		438 17.2	1343 52.9	615 24.2	4080 160.6	27 34	315 83	10.00W 11.25 (b)	- A20 553004	20V 20x10.00
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420/75 R 20 Tubeless

XMCL 154A8 154B 967201			418 16.5	1138 44.8	552 21.7	428 16.9	1138 44.8	509 20	3378 133	33 41.6	229 61	12 SDC 12 13 SDC 13.00 14	- -	KLEBER 829 -
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425/75 R 20 Tubeless

XZSL 167A2 155B 122979			442 17.4	1172 46.1		434 17.1	1142 45	488 19.2	3390 133.5	29 36.5	240 63	11DC 11SDC W11 DW11 13SDC 13 DC W13	- OR 6.6-20 (R1681) 553215	KLEBER 829 -
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TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)	Size
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20"

APPLICATION			bar	2	3	4	5	6	7	8	8.5	9	10		
			psi	29	44	58	73	87	102	116	123	131	145		
(a)															
XZL E2	E2	Cranes	0 km/h	3580	4830	6125	7390	8660	9900	11200	12075	12950	14700		
			0mph	7894	10650	13506	16295	19095	21830	24696	26625	28555	32414		
			5 km/h	2850	3950	5000	6100	7200	8100	9250	9825	10400	11550		
			3mph	6284	8710	11025	13451	15876	17861	20396	21664	22932	25468		
			10 km/h	2750	3750	4750	5750	6700	7600	8700	9125	9550	10600		
			6mph	6064	8269	10474	12679	14774	16758	19184	20121	21058	23373		
			20 km/h	2500	3250	4250	5000	6000	6860	7600	8075	8550	9500		
			12mph	5513	7166	9371	11025	13230	15126	16758	17805	18853	20948		
			30 km/h	2250	3000	3750	4500	5250	6000	6860	7225	7590			
			19mph	4961	6615	8269	9923	11576	13230	15126	15931	16736			
			40 km/h	2000	2750	3550	4250	5000	5750	6500	6830	7160			
			25mph	4410	6064	7828	9371	11025	12679	14333	15060	15788			
			50 km/h	1950	2700	3500	4200	4900	5700	6350	6725	7100			
			31mph	4300	5954	7718	9261	10805	12569	14002	14829	15656			
			65 km/h	1850	2650	3400	4150	4850	5550	6300	6650	7000			
			40mph	4079	5843	7497	9151	10694	12238	13892	14663	15435			
			80 km/h	1800	2600	3350	4100	4800	5500	6250	6550	6850			
			50mph	3969	5733	7387	9041	10584	12128	13781	14443	15104			
			90 km/h	1750	2550	3300	4050	4750	5450	6200	6500				
			56 mph	3859	5623	7277	8930	10474	12017	13671	14333				
APPLICATION			bar	1.6	2	2.4	2.8	3.2	3.6	4	4.4				
			psi	23	29	35	41	46	52	58	64				
XMCL	Backhoe loaders	Static	3380	4130	4880	5630	6380	7130	7880	8630					
			7453	9107	10760	12414	14068	15722	17375	19029					
		Cyclic	2200	2690	3180	3670	4160	4650	5140	5630					
			4851	5931	7012	8092	9173	10253	11334	12414					
		30 km/h	1920	2270	2620	2960	3310	3660	4010						
			19mph	4234	5005	5777	6527	7299	8070	8842					
		40 km/h	1800	2120	2440	2755	3075	3410	3750						
			25mph	3969	4675	5380	6075	6780	7519	8269					
APPLICATION			bar	1	1.6	1.9	2.7	3	3.2	3.5	3.8				
			psi	15	23	28	39	44	46	51	55				
XZSL	Backhoe loaders	10 km/h	2390	3040	3370	4250	4570	4790	5120	5450					
			6mph	5270	6703	7431	9371	10077	10562	11290	12017				
		30 km/h	1910	2430	2700	3400	3660	3830	4100	4360					
			19mph	4212	5358	5954	7497	8070	8445	9041	9614				
		40 km/h	1740	2220	2460	3100	3340	3500	3740	3980					
			25mph	3837	4895	5424	6836	7365	7718	8247	8776				
		50 km/h	1700	2160	2400	3020	3250	3410	3640	3875					
			31mph	3749	4763	5292	6659	7166	7519	8026	8544				

16.00 R 20

420/75 R 20

425/75 R 20

(a) The speeds stipulated are average speeds per hour of travel. A maximum speed of 20 km/h (12.5 mph) above the average speed is tolerated provided that the maximum never exceeds 100 km/h (62 mph).

(b) Special wheel for cranes.

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)						
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm gallon									
20.5"																				
525/65 R 20.5 Tubeless																				
XS E7 173F 109421			551 21.7	1243 48.9		521 20.5	1200 47.2	548 21.6	3640 143.3	17 21.4	337 89	16.00	-	19.5/20.5 UD	-					
24 R 20.5 Tubeless																				
XS E7 176F 109174						602 23.7	1374 54.1	620 24.4	4150 163.4	17 21.4	538 142	18.00	-	20.5 WAMD	-					
21"																				
24 R 21 Tubeless																				
XRIB E7 176F 109248						590 23.2	1390 54.7	628 24.7	4200 165.4	10 12.6	525 139	18.00/1.5	-	21 WAM						
XZL E2 176G 110257						608 23.9	1388 54.6	631 24.8				OR 6.6-21 553213		17-20						
22.5"																				
15 R 22.5 Tubeless																				
XF* 255205 (8)			430 16.9	1132 44.6		387 15.2	1108 43.6	503 19.8	3353 132	25 31.5	200 53	11.75	-	20 S	-					
18 R 22.5 Tubeless																				
XF* 255300			507 20	1224 48.2		453 17.8	1188 46.8	543 21.4	3604 141.9	25 31.5	255 67	14.00	-	22.5 TAMD 22.5 TD	-					

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)										Size
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20.5"

			APPLICATION		bar	1	2	3	4	5	6	7	8				
					psi	15	29	44	58	73	87	102	116				
XS E7	E7	Desert conditions (see page 15)	80 km/h	Road in single	1450	2150	2850	3600	4300	5000	5750	6500					
			50 mph		3197	4741	6284	7938	9482	11025	12679	14333					
			65 km/h	Track in single	1700	2600	3500	4450	5250								
			40 mph		3749	5733	7718	9812	11576								
			20 km/h	Sand in single	2300	3850	5250										
			12.5 mph		5072	8489	11576										
			APPLICATION		bar	1	2	2.5	3	3.5	4	4.5	5	5.5	6		
					psi	15	29	36	44	51	58	65	73	80	87		

21"

			APPLICATION		bar	1	2	2.5	3	3.5	4	4.5	5	5.5	6		
					psi	15	29	36	44	51	58	65	73	80	87		
XRB E7 XZL E2	E7 E2	Desert conditions (see page 15)	80 km/h	Road in single	1950	2950	3450	4000	4500	5010	5520	6050	6575	7100			
			50 mph		4300	6505	7607	8820	9923	11047	12172	13340	14498	15656			
			65 km/h	Track in single	2550	3650	4250	4750	5300	5850	6400	6750	7100				
			40 mph		5623	8048	9371	10474	11687	12899	14112	14884	15656				
			20 km/h	Sand in single	3500	5350	6400	7100									
			12.5 mph		7718	11797	14112	15656									
			APPLICATION		bar	1	2	2.5	3	3.5	4	4.5	5	5.5	6		
					psi	15	29	36	44	51	58	65	73	80	87		

22.5"

			APPLICATION		bar	3	3.5	4	4.5	5	5.5	6	6.5				
					psi	44	51	58	65	73	80	87	94				
XF*		Wheeled Excavators	10 km/h		3660	3875	4085	4290	4510	4720	4935	5150					
			6mph	Road in single	8070	8544	9007	9459	9945	10408	10882	11356					
			20 km/h		3130	3350	3560	3770	3990	4200	4410	4620					
			12mph	Track in single	6902	7387	7850	8313	8798	9261	9724	10187					
			30 km/h		2755	2970	3190	3400	3620	3830	4050	4265					
			19mph		6075	6549	7034	7497	7982	8445	8930	9404					
			40 km/h		2055	2270	2480	2695	2910	3125	3335	3550					
			25mph		4531	5005	5468	5942	6417	6891	7354	7828					
			APPLICATION		bar	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5		
					psi	44	51	58	65	73	80	87	94	102	109		
XF*		Wheeled Excavators	10 km/h		4290	4575	4860	5150	5440	5725	6015	6300	6590	6875			
			6mph	Road in single	9459	10088	10716	11356	11995	12624	13263	13892	14531	15159			
			20 km/h		3485	3770	4055	4340	4625	4910	5195	5480	5765	6050			
			12mph	Track in single	7684	8313	8941	9570	10198	10827	11455	12083	12712	13340			
			30 km/h		3035	3320	3605	3890	4175	4460	4745	5030	5315	5600			
			19mph		6692	7321	7949	8577	9206	9834	10463	11091	11720	12348			
			40 km/h		2045	2330	2620	2905	3190	3480	3765	4050	4340	4625			
			25mph		4509	5138	5777	6406	7034	7673	8302	8930	9570	10198			

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)						
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm gallon									
24"																				
12.00 R 24 TubeType																				
XR B E3 *** 242043 (8)	35 21.7	119	340 13.4	1285 50.6	378 14.9	308 12.1	1250 49.2	574 22.6	3798 149.5	20 25.2	180 48	7.33V 8.00V 8.0	-	24 Q						
XZH E3 *** 123369	35 21.7	82				321 12.6	1258 49.5	591 23.3	3857 151.9	30 37.8	171 45	8.5 8.50V		24/25x8.50						
12.00 R 24 TubeType																				
XKA L3 *** 242110	14 8.7		340 13.4	1285 50.6	378 14.9	330 13	1244 49	569 22.4	3775 148.6	21 26.5	155 41	7.33V 7.5 8.00V 8.0	-	24 Q						
XKA L3 *** 242110	14 8.7											8.5 8.50V	G25 (R1237) 553012	24/25x8.50						
12.00 R 24 Tubeless																				
X MINE D2 L5R 242046	6 3.7			1315 51.8		330 13	1280 50.4	594 23.4	3906 153.8		138 36	7.33V 7.5 8.00V 8.0	-	24 Q						
XSM D2+ L5S 123647	6 3.7		340 13.4	1285 50.6		325 12.8	1264 49.8	580 22.8	3840 151.2		57 71.8	8.0 8.5 8.50V	G25 (R1237) 553012	24/25x8.50						
13.00 R 24 Tubeless																				
XR A L3 * TG 123480 (6.8)	16 9.9			360 14.2	1318 51.9		329 13	1290 50.8	575 22.6	3880 152.8	22 27.7	200 53	8.00 TG SDC 9.00/1.5 DC 10.00 VA SDC	-	KLEBER 703					
XGLA2 L2 * TG 123386 (6)	16 9.9						335 13.2	1296 51	570 22.4	3875 152.6	25 31.5	215 57	OR 2-25 HEUPO 553201	13-24 DR						

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)											Size
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24"

			APPLICATION	bar	4	4.5	5	5.5	6	6.5	7	8	8.5			
				psi	58	65	73	80	87	94	102	116	123			
XR B *** E3 XZH *** E3	E3 E3	Transport	Standard	2700	2950	3200	3475	3750	4000	4250	4500	4650		12.00 R 24		
				5954	6505	7056	7662	8269	8820	9371	9923	10253				
			APPLICATION	bar	2	2.5	3	3.5	4	4.5	5	5.5	6	7		
				psi	29	36	44	51	58	65	73	80	87	102		
XK A *** L3	L3	Underground machines (see page 39-41)	Front and Rear	2050	2450	2750	3100	3450	3800	4150	4475	4800	5500	12.00 R 24		
				4520	5402	6064	6836	7607	8379	9151	9867	10584	12128			
			APPLICATION	bar	2	2.5	3	3.5	4	4.5	5	5.5	6	7		
				psi	29	36	44	51	58	65	73					
X MINE D2 L5R XSM D2+ L5S	L5R L5S	Loaders	Front laden	2300	2700	3050	3450	3850	4200	4600	4975	5350	6100	12.00 R 24		
				5072	5954	6725	7607	8489	9261	10143	10970	11797	13451			
X MINE D2 L5R XSM D2+ L5S	L5R L5S	Underground machines (see page 39-41)	Rear unladen	1850	2150	2450	2750	3100	3350	3700	4000	4300	4900	12.00 R 24		
				4079	4741	5402	6064	6836	7387	8159	8820	9482	10805			
			APPLICATION	bar	2	2.5	3	3.5	4	4.5	5					
				psi	29	36	44	51	58	65	73					
XR A * TG L3 XGLA2 * TG L2	L3 L2	Loaders	Front laden	2650	3100	3600	4050	4500	4950	5400				13.00 R 24		
				5843	6836	7938	8930	9923	10915	11907						
XR A * TG L3 XGLA2 * TG L2	L3 L2	Graders	Rear unladen	2100	2500	2900	3250	3600	3950	4300				13.00 R 24		
				4631	5513	6395	7166	7938	8710	9482						
			Front and Rear	1900	2225	2550	2900									
				4190	4906	5623	6395									

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm gallon			

24"

14.00 R 24 TubeType

XKA E3 *** 251590	14 8.7		405 15.9	1414 55.7	450 17.7	401 15.8	1380 54.3	638 25.1	4205 165.6	24 30.2	270 71	9.00V 9.0 10.0/2.0 10.00W	-	24/25 T 13-24/25
XMH E2T *** 199005 (7)	50 31.1					389 15.3	1361 53.6	633 24.9	4155 163.6		284 75			
XKD1 A E4 *** 251592	18 11.2	84 58				401 15.8	1412 55.6	657 25.9	4313 169.8		37 46.6	270 71		

14.00 R 24 TubeType

XKA E3 *** 251590	14 8.7		405 15.9	1414 55.7	450 17.7	1380 54.3	638 25.1	4205 165.6	24 30.2	270 71	9.00V 9.0 10.0/2.0 10.00W	-	24/25 T 13-24/25
XKD1 A E4 *** 251592	18 11.2	84 58				1412 55.6	657 25.9	4313 169.8	37 46.6				

14.00 R 24 Tubeless

XSM D2+ L5S 123597	6 3.7		405 15.9	1467 57.8		401 15.8	1395 54.9	636 25	4227 166.4	58 73.1	266 70	9.00V 9.0 10.0/2.0 10.00W	-	24/25 TAM 24/25 T 13-24/25 13-24/25 S
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14.00 R 24 Tubeless TG

XRA L3 * TG 123032 (6.8)	16 9.9		391 15.4	1392 54.8		348 13.7	1366 53.8	602 23.7	4060 159.8	22 27.7	240 63	8.00 TG SDC 9.00/1.5 DC 10.00VA SDC	OR 2-25 HEUPO 553201	24 ST 24 TD 13-24 DR
XMPG G2 * TG 123376 (6.8)	16 9.9					359 14.1	1356 53.4	595 23.4	4051 159.5	24 30.2	255 67			
X SNOPLUS L2 * TG 123861 (6)	16 9.9					372 14.6	1364 53.7	545 21.5	3941 155.2		264 70			
XGLA2 L2 * TG 123395 (6)	16 9.9					371 14.6	1360 53.5	592 23.3	4051 159.5	25 31.5	310 82			

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identifi-cation code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)										Size
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24"

				APPLICATION	bar	4	5	5.5	6	6.5	7	8					
					psi	58	73	80	87	94	102	116					
XKA *** E3 XMH *** E2T XKD1 A *** E4	E3 E2T E4	Transport	Standard	3750	4500	4850	5600	5700	5800	6150					14.00 R 24		
				8269	9923	10694	12348	12569	12789	13561							
				APPLICATION	bar	2	2.5	3	3.5	4	4.5	5	5.5	6	7		
					psi	29	36	44	51	58	65	73	80	87	102		
XKA *** E3 XKD1 A *** E4	E3 E4	Underground machines (see page 39-41)	Front and Rear	2950	3400	3850	4300	4800	5300	5750	6200	6550	7250		14.00 R 24		
				6505	7497	8489	9482	10584	11687	12679	13671	14443	15986				
XSM D2+ L5S	L5S	Loaders	Front laden	3250	3750	4300	4800	5350	5900	6400	6900				14.00 R 24		
				7166	8269	9482	10584	11797	13010	14112	15215						
			Rear unladen	2600	3000	3450	3850	4300	4700	5100	5500						
XSM D2+ L5S	L5S	Underground machines (see page 39-41)	Front and Rear	2950	3400	3850	4300	4800	5300	5750	6200	6550	7250		14.00 R 24		
				6505	7497	8489	9482	10584	11687	12679	13671	14443	15986				
XR A * TG L3 XMPS * TG G2 X SNOPLUS * TG L2 XGLA2 * TG L2	L3 G2 L2 L2	Loaders	Front laden	3250	3750	4300	4800	5350	5900	6400	6900				14.00 R 24		
				7166	8269	9482	10584	11797	13010	14112	15215						
			Rear unladen	2600	3000	3450	3850	4300	4700	5100	5500						
XR A * TG L3 XMPS * TG G2 X SNOPLUS * TG L2 XGLA2 * TG L2	L3 G2 L2 L2	Graders	Front and Rear	2300	2725	3125	3550								14.00 R 24		
				5072	6009	6891	7828										

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)							Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)		
				Michelin® dimensions											
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon			

24"

385/95 R 24 TubeType

X-CRANE AT E2 170F 778245	80 49.7		409 16.1	1415 55.7	455 17.9	376 14.8	1361 53.6	632 24.9	4153 163.5	23 29	284 75	10.00W 10.0 11.25/1.3 (b)	-	24/25 T 13-24/25
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385/95 R 24 TubeType

XMH S E2T 170E 957157	70 43.5		409 16.1	1415 55.7	455 17.9	389 15.3	1361 53.6		4155 163.6		284 75	9.0 9.00V 10.00/2.0 10.00W 10.0 (b)	-	24/25 T 13-24/25
X SNOPLUS E2 170E 432272	70 43.5					386 15.2	1358 53.5		4150 163.4		283 75	10.00W 10.0 (b)		

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identifi-cation code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)	Size
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24"

APPLICATION	bar	5	6	7	8	9					
	psi	73	87	102	116	131					
(a)											
X-CRANE AT E2	E2	Cranes	0 km/h	10250	11900	13500	15200	16200			
			0mph	22601	26240	29768	33516	35721			
			5 km/h	7980	9135	10290	11445	12600			
			3mph	17596	20143	22689	25236	27783			
			10 km/h	6840	7830	8820	9810	10800			
			6mph	15082	17265	19448	21631	23814			
			15 km/h	6270	7180	8085	8995	9900			
			9 mph	13825	15832	17827	19834	21830			
			20 km/h	5700	6525	7350	8175	9000			
			12mph	12569	14388	16207	18026	19845			
			25 km/h	5130	5875	6615	7360	8100			
			15 mph	11312	12954	14586	16229	17861			
			30 km/h	4750	5440	6125	6815	7500			
			19mph	10474	11995	13506	15027	16538			
			35 km/h	4520	5175	5830	6485	7140			
			22 mph	9967	11411	12855	14299	15744			
			40 km/h	4370	5005	5635	6270	6900			
			25mph	9636	11036	12425	13825	15215			
			45 km/h	4295	4915	5535	6160	6780			
			28mph	9470	10838	12205	13583	14950			
			50 km/h	4255	4870	5490	6105	6720			
			31mph	9382	10738	12105	13462	14818			
			55 km/h	4220	4830	5440	6050	6660			
			34 mph	9305	10650	11995	13340	14685			
			60 km/h	4180	4785	5390	5995	6600			
			37mph	9217	10551	11885	13219	14553			
			65 km/h	4085	4675	5270	5860	6450			
			40mph	9007	10308	11620	12921	14222			
			70 km/h	3990	4570	5145	5725	6300			
			43mph	8798	10077	11345	12624	13892			
			75 km/h	3895	4460	5025	5585	6150			
			47 mph	8588	9834	11080	12315	13561			
			80 km/h	3800	4350	4900	5450	6000			
			50mph	8379	9592	10805	12017	13230			

APPLICATION	bar	5	6	7	8	9					
	psi	73	87	102	116	131					
(a)											
XMH S E2T E2 X SNOPLUS E2	E2T E2	Cranes	30 km/h	4860	5880	6460	7000	7800			
			19mph	10716	12965	14244	15435	17199			
			40 km/h	4635	5610	6165	6675	7450			
			25mph	10220	12370	13594	14718	16427			
			50 km/h	4410	5340	5865	6355	7100			
			31mph	9724	11775	12932	14013	15656			
			65 km/h	4020	4865	5345	5790	6450			
			40mph	8864	10727	11786	12767	14222			
			70 km/h	3740	4525	4970	538	6000			
			43mph	8247	9978	10959	1186	13230			
			80 km/h	3086	3735	4100	4445	4950			
			50mph	6805	8236	9041	9801	10915			
			90 km/h	2620	3170	3480	3770	4200			
			56 mph	5777	6990	7673	8313	9261			
			100 km/h	2245	2715	2980	3230	3600			
			62 mph	4950	5987	6571	7122	7938			

(a) The speeds stipulated are average speeds per hour of travel. A maximum speed of 20 km/h (12.5 mph) above the average speed is tolerated provided that the maximum never exceeds 100 km/h (62 mph).

(b) Special wheel for cranes.

385/95 R 24

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)						
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm gallon									
24"																				
15.00 R 24 Pil TubeType (17/80 R 24)																				
XLC C1 252211			445 17.5	1365 53.7		415 16.3	1334 52.5	592 23.3	4002 157.6	21 26.5	320 85	9.00V 9.0 10.0 10.0W	-	24/25 TAM 13-24/25 S						
16.00 R 24 Tubeless																				
XR B E3 260436 (8)	35 21.7	204 140	480 18.9	1561 61.5	513 20.2	426 16.8	1482 58.3	672 26.5	4482 176.5	26 32.8	380 100	11.25/2.5	-	24/25 VAM 14-24/25						
16.00 R 24 Tubeless																				
XRA L3 * TG 123062 (6.8)	16 9.9		474 18.7	1527 60.1		419 16.5	1480 58.3	644 25.4	4410 173.6	26 32.8	380 100	10.00 VA SDC	-	24/25 VD						
XGLA2 L2 * TG 123903 (6)	16 9.9					435 17.1	1500 59.1	651 25.6	4464 175.7	27 34	412 109		OR 2-25 HEUPO 553201	13-24 DR						
440/80 R 24 Tubeless																				
XMCL 161A8 161B 954749			441 17.4	1314 51.7	580 22.8	441 17.4	1314 51.7	592 23.3	3907 153.8	36 45.4	315 83	14.00 DW14L DW15L	-	KLEBER 710						
17.5 L R 24 Tubeless																				
XM27 145A8 123079			481 18.9	1275 50.2		458 18	1257 49.5	565 22.2	3735 147	37 46.6	280 74	W14L DW14L W15L DW15L	-	KLEBER 710						

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)											Size											
24"																								
APPLICATION			bar	3	4	5	6	6.5	7	7.5	8	8.5												
			psi	44	58	73	87	94	102	109	116	123												
XLC C1	C1	Compactors	10 km/h	5320	6540	7750	8965	9570	10180	10790	11390	12000												
			6mph	11731	14421	17089	19768	21102	22447	23792	25115	26460												
			15 km/h	4740	5820	6900	7980	8520																
			9 mph	10452	12833	15215	17596	18787																
APPLICATION			bar	4	4.5	5	5.5	6	6.5	7	8	8.5												
			psi	58	65	73	80	87	94	102	116	123												
XR B E3	E3	Transport	Standard	5000	5450	5900	6400	6850	7300	7550	8000	8250												
				11025	12017	13010	14112	15104	16097	16648	17640	18191												
APPLICATION			bar	2	2.5	3	3.5	4	4.5	5														
			psi	29	36	44	51	58	65	73														
XRA * TG L3 XGLA2 * TG L2	L3 L2	Loaders	Front laden	4500	5150	5800	6400	7050	7700	8350														
				9923	11356	12789	14112	15545	16979	18412														
			Rear unladen	3600	4100	4650	5100	5650	6150	6700														
				7938	9041	10253	11246	12458	13561	14774														
XRA * TG L3 XGLA2 * TG L2	L3 L2	Graders	Front and Rear	3150	3625	4125	4625																	
				6946	7993	9096	10198																	
APPLICATION			bar	1.6	2	2.4	2.8	3.2	3.6	4	4.4													
			psi	23	29	35	41	46	52	58	64													
XMCL		Backhoe loaders	Static	4160	5090	6010	6940	7860	8790	9710	10640													
				9173	11223	13252	15303	17331	19382	21411	23461													
			Cyclic	2710	3320	3920	4520	5130	5730	6330	6940													
				5976	7321	8644	9967	11312	12635	13958	15303													
			30 km/h	2370	2800	3230	3660	4090	4520	4950														
				19mph	5226	6174	7122	8070	9018	9967	10915													
			40 km/h	2240	2650	3060	3465	3875	4250	4625														
				25mph	4939	5843	6747	7640	8544	9371	10198													
APPLICATION			bar	0.6	1	1.6	1.9	2.7	3	3.2														
			psi	9	15	23	28	39	44	46														
XM27		Backhoe loaders	10 km/h	1820	2210	2780	3080	3860	4150	4350														
				4013	4873	6130	6791	8511	9151	9592														
			30 km/h	1430	1740	2200	2440	3100																
				3153	3837	4851	5380	6836																
			40 km/h	1340	1620	2050	2280	2900																
				25mph	2955	3572	4520	5027	6395															

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)						
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. I 32nd gallon									
24"																				
460/70 R 24 Tubeless																				
XMCL 159A8 159B 244268			455 17.9	1254 49.4	609 24	467 18.4	1248 49.1	562 22.1	3709 146	36 45.4	291 77	14.00 DW14L DW15L 16.00 DW16L	-	KLEBER 710						
500/70 R 24 Tubeless																				
XMCL 164A8 164B 542794			503 19.8	1310 51.6	654 25.7	511 20.1	1302 51.3	583 23	3866 152.2	36 45.4	355 94	DW15L 16.00 DW16L	-	KLEBER 710						
25"																				
13.00 R 25 Tubeless																				
XR B E3 *** 243320 (8)	35 21.7	137 94	379 14.9	1342 52.8	421 16.6	335 13.2	1304 51.3	603 23.7	3973 156.4	22 27.7	215 57	8.50/1.3 10.00/1.5	- OR 2-25 HEUPO 553201	24/25 T 24/25x8.50						
14.00 R 25 Tubeless																				
XMH E2T *** 235951	50 31.1	232 159	409 16.1	1415 55.7		389 15.3	1361 53.6	634 25	4158 163.7	24 30.2	278 73		-	24/25 TAM 24/25 T						
XHD1 A E4 *** 123331	22 13.7	102 70			450 17.7	380 15	1410 55.5	650 25.6	4291 168.9		38 47.9	10.00/1.5 11.25/1.3	OR 2-25 HEUPO 553201	13-24/25 13-24/25 S						
XHD1 A4 E4 *** 123545 (8)	18 11.2	84 58	405 15.9	1467 57.8				649 25.6	4288 168.8	265 70										

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)	Size
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24"

			APPLICATION	bar	1.6	2	2.4	2.8	3.2	3.6	4	4.4		
				psi	23	29	35	41	46	52	58	64		
XMCL	Backhoe loaders	Static	3940	4810	5690	6560	7440	8310	9190	10060				460/70 R 24
			8688	10606	12546	14465	16405	18324	20264	22182				
		Cyclic	2570	3140	3710	4280	4850	5420	5990	6560				
			5667	6924	8181	9437	10694	11951	13208	14465				
		30 km/h	2240	2650	3050	3460	3870	4270	4680					
		19mph	4939	5843	6725	7629	8533	9415	10319					
		40 km/h	2120	2500	2885	3270	3650	4010	4375					
		25mph	4675	5513	6361	7210	8048	8842	9647					
XMCL	Backhoe loaders	Static	4500	5500	6500	7500	8500	9500	10500	11500				500/70 R 24
			9923	12128	14333	16538	18743	20948	23153	25358				
		Cyclic	2930	3590	4240	4890	5540	6200	6850	7500				
			6461	7916	9349	10782	12216	13671	15104	16538				
		30 km/h	2560	3020	3490	3950	4420	4880	5350					
		19mph	5645	6659	7695	8710	9746	10760	11797					
		40 km/h	2360	2800	3210	3685	4125	4560	5000					
		25mph	5204	6174	7078	8125	9096	10055	11025					

25"

			APPLICATION	bar	4	4.5	5	5.5	5.75	6	7	8.5		
				psi	58	65	73	80	83	87	102	123		
XR B *** E3	E3	Transport	Standard	3150	3450	3800	4100	4300	4450	4875	5400			13.00 R 25
				6946	7607	8379	9041	9482	9812	10749	11907			
XMH *** E2T XHD1 A *** E4 XHD1 A4 *** E4	E2T E4 E4	Transport	Standard	3750	4100	4500	4850	5100	5250	5800	6350			14.00 R 25
				8269	9041	9923	10694	11246	11576	12789	14002			

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)		
				Michelin® dimensions										
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. l 32nd gallon		

25"

385/95 R 25 Tubeless

XMH S E2T 170E 254174 (7)	70 43.5					391 15.4	1361 53.6	633 24.9	4155 163.6	24 30.2	278 73	10.00/1.5 11.25/1.3 (b)	-	24/25 TAM 24/25 T	
X SNOPLUS E2 170E 705961	70 43.5			409 16.1	1415 55.7	455 17.9	388 15.3	1365 53.7	636 25	4170 164.2	25 31.5	280 74	9.50/1.7 CR 10.00/1.5 11.25/1.3 (b)	OR 3-25 SULLA 553200 OR 2-25 HEUPO 553201	13-24/25 13-24/25 S

385/95 R 25 Tubeless

X-CRANE AT E2 170F 296917	80 49.7					380 15	1365 53.7	634 25	4168 164.1	23 29	280 74	9.50/1.7 CR 10.00/1.5 11.25/1.3 (b)	-	24/25 TAM 24/25 T 13-24/25 13-24/25 S

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)	Size
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25"

		APPLICATION	bar	5	6	7	8	9					
			psi	73	87	102	116	131					
XMH S E2T X SNOPLUS E2	E2T E2	Cranes	(a)										
			30 km/h	4860	5880	6460	7000	7800					
			19mph	10716	12965	14244	15435	17199					
			40 km/h	4635	5610	6165	6675	7450					
			25mph	10220	12370	13594	14718	16427					
			50 km/h	4410	5340	5865	6355	7100					
			31mph	9724	11775	12932	14013	15656					
			65 km/h	4020	4865	5345	5790	6450					
			40mph	8864	10727	11786	12767	14222					
			70 km/h	3740	4525	4970	5385	6000					
			43mph	8247	9978	10959	11874	13230					
			80 km/h	3086	3735	4100	4445	4950					
			50mph	6805	8236	9041	9801	10915					
			90 km/h	2620	3170	3480	3770	4200					
			56 mph	5777	6990	7673	8313	9261					
			100 km/h	2245	2715	2980	3230	3600					
			62 mph	4950	5987	6571	7122	7938					
X-CRANE AT E2	E2	Cranes	(a)										
			0 km/h	10250	11900	13500	15200	16200					
			0mph	22601	26240	29768	33516	35721					
			5 km/h	7980	9135	10290	11445	12600					
			3mph	17596	20143	22689	25236	27783					
			10 km/h	6840	7830	8820	9810	10800					
			6mph	15082	17265	19448	21631	23814					
			15 km/h	6270	7180	8085	8995	9900					
			9 mph	13825	15832	17827	19834	21830					
			20 km/h	5700	6525	7350	8175	9000					
			12mph	12569	14388	16207	18026	19845					
			25 km/h	5130	5875	6615	7360	8100					
			15 mph	11312	12954	14586	16229	17861					
			30 km/h	4750	5440	6125	6815	7500					
			19mph	10474	11995	13506	15027	16538					
			35 km/h	4520	5175	5830	6485	7140					
			22 mph	9967	11411	12855	14299	15744					
			40 km/h	4370	5005	5635	6270	6900					
			25mph	9636	11036	12425	13825	15215					
			45 km/h	4295	4915	5535	6160	6780					
			28mph	9470	10838	12205	13583	14950					
			50 km/h	4255	4870	5490	6105	6720					
			31mph	9382	10738	12105	13462	14818					
			55 km/h	4220	4830	5440	6050	6660					
			34 mph	9305	10650	11995	13340	14685					
			60 km/h	4180	4785	5390	5995	6600					
			37mph	9217	10551	11885	13219	14553					
			65 km/h	4085	4575	5270	5860	6450					
			40mph	9007	10088	11620	12921	14222					
			70 km/h	3990	4570	5145	5725	6300					
			43mph	8798	10077	11345	12624	13892					
			75 km/h	3895	4460	5025	5585	6150					
			47 mph	8588	9834	11080	12315	13561					
			80 km/h	3800	4350	4900	5450	6000					
			50mph	8379	9592	10805	12017	13230					

(a) The speeds stipulated are average speeds per hour of travel. A maximum speed of 20 km/h (12.5 mph) above the average speed is tolerated provided that the maximum never exceeds 100 km/h (62 mph).

(b) Special wheel for cranes.

385/95 R 25

385/95 R 25

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)							Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)	
				Michelin® dimensions										
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm gallon		

25"

15.5 R 25 Tubeless

XTLA L2 * 123415 (5)	16 9.9				397 15.6	1272 50.1	553 21.8	3788 149.1	26 32.8		245 65		-	
XHA L3 * 123008	16 9.9		437 17.2	1328 52.3	404 15.9	1270 50	555 21.9	3789 149.2	26 32.8				12.00/1.3 12.00/1.3DC 13.00/1.3DC	25 SAM 15-24/25
X MINE D2 L5R * 252905	6 3.7			1381 54.4	418 16.5	1336 52.6	609 24	4049 159.4	60 75.6	215 57			OR 2-25 HEUPO 553201	

395/80 R 25 Tubeless

XMP E3P 165E 123409	50 31.1	180 123	434 17.1	1317 51.9	469 18.5	403 15.9	1270 50	579 22.8	3849 151.5	24 30.2	278 73	11.25/1.3 12.00/1.3	- OR 2-25 HEUPO 553201	25 SAM 15-24/25
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16.00 R 25 Tubeless

XR B E3 ** 261022	35 21.7	204 140		1561 61.5	426 16.8	1482 58.3	677 26.7	4495 177	26 32.8	350 92				
XK B E3 ** 261110	32 19.9	187 128			460 18.1	1502 59.1	688 27.1	4560 179.5	27 34					
XKD1 B E4 ** 261121 (8)	26 16.2	152 104	480 18.9	518 20.4		1534 60.4	706 27.8	4665 183.7	42 52.9			11.25/2.0 13.00/2.0	24/25 VAM OR 3-25 SULLA 553200	14-24/25
XHD1 A4 E4 ** 123489 (8)	18 11.2	105 72		1623 63.9	462 18.2	1520 59.8	687 27	4658 183.4	43 54.2					
XHD1 A E4 ** 123350	28 17.4	164 112				1540 60.6	696 27.4	4652 183.1	47 59.2					

16.00 R 25 Tubeless

KK A L3 ** 261100	14 8.7		480 18.9	1561 61.5	462 18.2	1502 59.1	681 26.8	4543 178.9	27 34	380 100		11.25/2.0 13.00/2.0	-	24/25 VAM
X MINE D2 L5R 261025	6 3.7			518 20.4	1623 63.9	457 18	1530 60.2	699 27.5	4641 182.7	73 92	320 85		OR 3-25 SULLA 553200	14-24/25

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)										Size										
25"																						
APPLICATION			bar	2	2.5	3	3.5	4	4.5													
			psi	29	36	44	51	58	65													
XTLA * L2 XHA * L3 X MINE D2 * L5R	L2 L3 L5R	Loaders	Front laden	3700	4250	4800	5350	5800	6450													
				8159	9371	10584	11797	12789	14222													
			Rear unladen	2950	3400	3850	4300	4650	5150													
				6505	7497	8489	9482	10253	11356													
X MINE D2 * L5R	L5R	Underground machines (see page 39-41)	Front and Rear	3350	3850	4300	4800	5200	5800													
				7387	8489	9482	10584	11466	12789													
XTLA * L2 XHA * L3 X MINE D2 * L5R	L2 L3 L5R	Graders	Front and Rear	2325	2650	3000																
				5127	5843	6615																
APPLICATION			bar	4	4.5	5	5.5	6	6.5	7												
			psi	58	65	73	80	87	94	102												
XMP E3P	E3P	Transport	Standard	3850	4150	4500	4650	4850	5000	5150												
				8489	9151	9923	10253	10694	11025	11356												
APPLICATION			bar	3.5	4	4.5	5	5.5	6	6.5	7	7.5										
			psi	51	58	65	73	80	87	94	102	109										
XR B ** E3 XK B ** E3 XKD1 B ** E4 XHD1 A4 ** E4 XHD1 A ** E4	E3 E3 E4 E4 E4	Transport	Standard		5000	5450	5900	6400	6850	7300	7550	7750										
					11025	12017	13010	14112	15104	16097	16648	17089										
X-QUARRY ** E4R	E4R	Quarry transport (see page 11)	30 km/h	5300	5800	6300	6800	7300	7800													
			19mph	11687	12789	13892	14994	16097	17199													
APPLICATION			bar	2	3	4	5	6	7													
			psi	29	44	58	73	87	102													
X MINE D2 L5R	L5R	Loaders	Front laden	4500	5800	7050	8350	9600	10900													
				9923	12789	15545	18412	21168	24035													
			Rear unladen	3600	4650	5650	6700	7700	8700													
				7938	10253	12458	14774	16979	19184													
XKA ** L3 X MINE D2 L5R	L3 L5R	Underground machines (see page 39-41)	Front and Rear	4050	5200	6350	7500	8650	9800													
				8930	11466	14002	16538	19073	21609													

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)							Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)		
				Michelin® dimensions											
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon			

25"

445/95 R 25 Tubeless

X-CRANE AT E2 174F 297069	80 49.7		483 19	1549 61	518 20.4	442 17.4	1485 58.5	690 27.2	4532 178.4	25 31.5	380 100	11.00/1.7 CR 11.25/2 (b)	OR 3-25 SULLA 553200	24/25 VAM 14-24/25
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17.5 R 25 Tubeless

XKA L3 ** 263251	14 8.7				481 18.9	1346 53	600 23.6	4045 159.3	25 31.5	300 79				
X SNOPLUS L2T * TG 123871	16 9.9				448 17.6	1342 52.8	580 22.8	3987 157		333 88				
XTLA L2 * 123425 (5)	16 9.9				459 18.1	1337 52.6	576 22.7	3966 156.1		332 88				
XHA L3 * 123009	16 9.9				448 17.6	1340 52.8	582 22.9	3989 157	29 36.5	328 87				
XLD D2 A L5T * 123317	10 6.2				454 17.9	1406 55.4	619 24.4	4206 165.6	63 79.4	305 81				
X MINE D2 L5R 263220	6 3.7				471 18.5	1402 55.2	636 25	4237 166.8	65 81.9	285 75				
XSM D2+ L5S 123707	6 3.7				456 18	1395 54.9	598 23.5	4131 162.6	78 98.3	272 72				

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)	Size
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25"

			APPLICATION	bar	5	6	7	8	9							
				psi	73	87	102	116	131							
X-CRANE AT E2	E2	Cranes	(a)	0 km/h	10675	12190	13700	15225	16750							
				0mph	23538	26879	30209	33571	36934							
				5 km/h	8965	10240	11510	12780	14070							
				3mph	19768	22579	25380	28180	31024							
				10 km/h	7685	8775	9665	10960	12060							
				6mph	16945	19349	21311	24167	26592							
				20 km/h	6405	7315	8220	9135	10550							
				12mph	14123	16130	18125	20143	23263							
				30 km/h	5340	6095	6850	7615	8375							
				19mph	11775	13439	15104	16791	18467							
				40 km/h	4910	5605	6300	7005	7705							
				25mph	10827	12359	13892	15446	16990							
				50 km/h	4780	5460	6140	6820	7505							
				31mph	10540	12039	13539	15038	16549							
				65 km/h	4590	5240	5890	6545	7205							
				40mph	10121	11554	12987	14432	15887							
				70 km/h	4485	5120	5755	6395	7035							
				43mph	9889	11290	12690	14101	15512							
				80 km/h	4270	4875	5480	6090	6700							
				50mph	9415	10749	12083	13428	14774							
				85 km/h	4140	4730	5315	5910	6500							
				53mph	9129	10430	11720	13032	14333							
				88 km/h	4080	4665	5245	5825	6400							
				55 mph	8996	10286	11565	12844	14112							
			APPLICATION	bar	2	2.5	3	3.5	4	4.25	4.5					
				psi	29	36	44	51	58	62	65					
XKA ** L3 X SNOPLUS * TG L2T XTLA * L2 XHA * L3 XLD D2 A * L5T X MINE D2 L5R XSM D2+ L5S	L3 L2T L2 L3 L5T L5R L5S	Loaders	Front laden	4550	5100	5700	6250	6800	7100	7350						
				10033	11246	12569	13781	14994	15656	16207						
			Rear unladen	3650	4100	4550	5000	5450	5700	5900						
				8048	9041	10033	11025	12017	12569	13010						
XKA ** L3 XLD D2 A * L5T X MINE D2 L5R XSM D2+ L5S	L3 L5T L5R L5S	Underground machines (see page 39-41)	Front and Rear	4100	4600	5150	5650	6100	6400	6600						
				9041	10143	11356	12458	13451	14112	14553						
X SNOPLUS * TG L2T XTLA * L2 XHA * L3 XLD D2 A * L5T	L2T L2 L3 L5T	Graders	Front and Rear	2800	3250	3650										
				6174	7166	8048										

445/95 R 25

17.5 R 25

(a) The speeds stipulated are average speeds per hour of travel. A maximum speed of 20 km/h (12.5 mph) above the average speed is tolerated provided that the maximum never exceeds 100 km/h (62 mph).

(b) Special wheel for cranes.

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)
				Michelin® dimensions								
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon

25"

445/80 R 25 Tubeless

XGC E2 170E 264520	70 43.5		494 19.4	1404 55.3	534 21	438 17.2	1358 53.5	622 24.5	4123 162.3	28 35.3	340 90	14.00/1.7 CR 14.00/1.5 (b)	- OR 3-25 SULLA 553200 OR 2-25 HEUPO 553201	24/25 TAM 16-24/25
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TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)	Size
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25"

APPLICATION	bar	2	3	4	5	6	7				
	psi	29	44	58	73	87	102				
(a)											
XGC E2	E2	Crane	0 km/h	7300	9100	10900	12700	14300	16000		
			0mph	16097	20066	24035	28004	31532	35280		
			5 km/h	5150	6450	7700	9000	10200	11400		
			3mph	11356	14222	16979	19845	22491	25137		
			10 km/h	4550	5700	6800	7950	9000	10050		
			6mph	10033	12569	14994	17530	19845	22160		
			20 km/h	3300	4250	5150	6100	7050	7950		
			12mph	7277	9371	11356	13451	15545	17530		
			30 km/h	2725	3650	4600	5650	6750	7800		
			19mph	6009	8048	10143	12458	14884	17199		
			40 km/h	2600	3475	4400	5400	6450	7450		
			25mph	5733	7662	9702	11907	14222	16427		
			50 km/h	2475	3300	4150	5150	6150	7100		
			31mph	5457	7277	9151	11356	13561	15656		
			65 km/h	2250	3000	3800	4650	5550	6450		
			40mph	4961	6615	8379	10253	12238	14222		
			70 km/h	2100	2800	3550	4350	5200	6000		
			43mph	4631	6174	7828	9592	11466	13230		
			80 km/h	1725	2300	2900	3600	4250	4950		
			50mph	3804	5072	6395	7938	9371	10915		
			90 km/h	1475	1975	2500	3050	3650	4200		
			56 mph	3252	4355	5513	6725	8048	9261		
			100 km/h	1250	1675	2150	2650	3150	3600		
			62 mph	2756	3693	4741	5843	6946	7938		

445/80 R 25

(a) The speeds stipulated are average speeds per hour of travel. A maximum speed of 20 km/h (12.5 mph) above the average speed is tolerated provided that the maximum never exceeds 100 km/h (62 mph).

(b) Special wheel for cranes.

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)							Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)		
				Michelin® dimensions											
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon			

25"

445/95 R 25 Tubeless

X SNOPLUS E2 177E 123857	70 43.5		483 19	1549 67	518 20.4	447 17.6	1486 58.5	690 27.2	4535 178.5	25 31.5	380 100	11.00/1.7 CR 11.25/2 (b)	- OR 3-25 SULLA 553200	24/25 VAM 14-24/25
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TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)	Size
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25"

APPLICATION	bar	2	3	4	5	6	7	8	9	10		
	psi	29	44	58	73	87	102	116	131	145		
(a)												
X SNOPLUS 177E E2	E2	Cranes	0 km/h	7200	9300	11300	13400	15400	17400	19400	20700	22600
			0mph	15876	20507	24917	29547	33957	38367	42777	45644	49833
			2 km/h	5850	7550	9150	10900	12500	14200	15800	18400	20100
			1.2mph	12899	16648	20176	20435	27563	31311	34839	40572	44321
			5 km/h	5100	6550	7950	9450	10800	12300	13700	16700	
			3mph	11246	14443	17530	20387	23814	27122	30209	36824	
			10 km/h	4500	5800	7050	8350	6900	10900	12150	13400	
			6mph	9923	12789	15766	18412	21168	24035	26791	29547	
			15 km/h	3600	4650	5650	6700	7700	8700	9700	10700	
			9.5mph	7938	10253	12548	14774	16979	18914	21389	23594	
			20 km/h	3350	4450	5400	6400	7350	8300	9300	10250	
			12mph	7386	9810	11906	14110	16024	18300	20500	22600	
			30 km/h	2925	4100	5000	5850	6750	7650	8600	9500	
			19mph	6450	9041	11025	12899	14884	10868	19863	20498	
			40 km/h	2800	3900	4775	5600	6450	7300	8200	9050	
			25mph	6174	8600	10529	12348	14222	16097	18081	19955	
			50 km/h	2650	3725	4550	5300	6150	6950	7800	8600	
			31mph	5843	8214	10033	11867	13561	25325	17199	18963	
			65 km/h	2400	3375	4125	4850	5600	6350	7150	7800	
			40mph	5292	7442	9096	10694	12348	14002	15766	17199	
			70 km/h	2250	3150	3850	4500	5200	5900	6600	7300	
			44 mph	4961	6946	8489	9923	11466	13010	14553	16100	
			80 km/h	1850	2600	3150	3700	4250	4850	5400	6000	
			50 mph	4079	5733	6946	8159	9371	10691	11907	13230	
			90 km/h	1575	2200	2700	3150	3650	4150	4600	5100	
			56 mph	3473	4851	5954	6946	8048	9151	10143	11246	
			100 km/h	1350	1900	2300	2700	3120	3550	3950	4400	
			62 mph	2977	4190	5072	5954	6880	7828	8170	9700	

445/05 R 25

(a) The speeds stipulated are average speeds per hour of travel. A maximum speed of 20 km/h (12.5 mph) above the average speed is tolerated provided that the maximum never exceeds 100 km/h (62 mph).

(b) Special wheel for cranes.

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)							Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)	
				Michelin® dimensions										
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. l		

25"

18.00 R 25 Tubeless

XR B E3 ** 270522	35 21.7	259 177	553 21.8	1693 66.7	493 19.4	1610 63.4	722 28.4	4849 190.9	28 35.3	545 144	500 132	14.00/1.5	-	OR 2-25 HEUPO 553201	24/25 TAM 16-24/25
KK B E3 ** 270630 (8)	32 19.9	237 162			533 21	1630 64.2	736 29	4921 193.7	30 37.8	500 132					
XHD1 A E4 ** 123031 (8)	22 13.7	163 112			525 20.7	1668 65.7	762 30	5058 199.1	47 59.2	495 131					
XKD1 A E4 ** 270680	18 11.2	133 91			530 20.9	1668 65.7	764 30.1	5064 199.4	47 59.2	495 131					

18.00 R 25 Tubeless

XKA L3 ** 270610	14 8.7		553 21.8	1693 66.7	1606 63.2	709 27.9	4809 189.3	30 37.8	490 129	13.00/2.5 15.00/2.5	13.00/2.5 15.00/2.5	-	OR 3-25 SULLA 553200	25 WAM 16-24/25
XKD1 A E4 ** 270680	18 11.2	133 91			1668 65.7	764 30.1	5064 199.4	47 59.2	495 131					
X MINE D2 L5R * 270641	6 3.7				528 20.8	1658 65.3	746 29.4	5000 196.9	82 103.3	460 122				
XSM D2+ L5S 123657	6 3.7				504 19.8	1653 65.1	738 29.1	4969 195.6	96 120.9	432 114				

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)											Size											
25"																								
APPLICATION			bar	2	3	3.5	4	4.25	4.5	5	6	7	7.5											
			psi	29	44	51	58	62	65	73	87	102	109											
XR B ** E3 XK B ** E3 XHD1 A ** E4 XKD1 A ** E4	E3 E3 E4 E4	Transport	Standard				6800	7100	7400	8000	9250	9850	10150											
							14994	15656	16317	17640	20396	21719	22381											
APPLICATION			bar	2	3	3.5	4	4.25	4.5	5	5.5	6	7											
			psi	29	44	51	58	62	65	73	80	87	102											
XKA ** L3 X MINE D2 * L5R XSM D2+ L5S	L3 L5R L5S	Loaders	Front laden	6200	8050	9000	9950	10400	10850	11800	12650	13500	15150											
				13671	17750	19845	21940	22932	23924	26019	27893	29768	33406											
			Rear unladen	4950	6450	7200	7950	8300	8700	9450	10100	10800	12100											
				10915	14222	15876	17530	18302	19184	20837	22271	23814	26681											
XKA ** L3 XKD1 A ** E4 X MINE D2 * L5R XSM D2+ L5S	L3 E4 L5R L5S	Underground machines (see page 39-41)	Front and Rear	5600	7250	8100	8950	9350	9750	10600	11400	12150	13650											
				12348	15986	17861	19735	20617	21499	23373	25137	26791	30098											

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions					Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. l		

25"

18.00 R 25 Tubeless

XVC E2 186E 123491	50 31.1	284 195	551 21.7	1672 65.8	598 23.5	496 19.5	1622 63.9	743 29.3	4925 193.9	26 32.8	563 149	13.00/2.5 15.00/2.5 (b)	- OR 3-25 SULLA 553200	25 WAM 16-24/25
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18.00 R 25 Tubeless

XVC E2 183E 123993 (7)	50 31.1	284 195	551 21.7	1672 65.8	598 23.5	498 19.6	1610 63.4	743 29.3	4901 193	26 32.8	576 152	13.00/2.5 15.00/2.5 (b)	- OR 3-25 SULLA 553200	25 WAM 16-24/25
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TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)										Size
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25"

			APPLICATION	bar	2	3	4	5	6	7	7.5	8	9	10
				psi	29	44	58	73	87	102	109	116	131	145
XVC E2	E2	Cranes	(a)	0 km/h	9900	12900	15900	18900	21600	24200	25250	26300	28800	31300
			0mph	21830	28445	35060	41675	47628	53361	55676	57992	63504	69017	
			5 km/h	7000	9100	11200	13300	15300	17100	18050	19000	23200		
			3mph	15435	20066	24696	29327	33737	37706	39800	41895	51156		
			10 km/h	6200	8050	9950	11800	13500	15150	16000	16850	18500		
			6mph	13671	17750	21940	26019	29768	33406	35280	37154	40793		
			20 km/h	4450	6000	7350	8650	10000	11250	11950	12600	13900		
			12mph	9812	13230	16207	19073	22050	24806	26350	27783	30650		
			30 km/h	3700	5200	6300	7400	8650	9900	10500	11100	12400		
			19mph	8159	11466	13892	16317	19073	21830	23153	24476	27342		
			40 km/h	3525	4950	6000	7050	8250	9400	10000	10600	11800		
			25mph	7773	10915	13230	15545	18191	20727	22050	23373	26019		
			50 km/h	3375	4725	5700	6750	7850	8950	9525	10100	11200		
			31mph	7442	10419	12569	14884	17309	19735	21003	22271	24696		
			65 km/h	3050	4275	5200	6100	7100	8150	8650	9150	10200		
			40mph	6725	9426	11466	13451	15656	17971	19073	20176	22491		
			70 km/h	2850	4000	4850	5700	6650	7600	8075	8550	9500		
			43mph	6284	8820	10694	12569	14663	16758	17805	18853	20948		
			80 km/h	2325	3275	3975	4675	5450	6250	6625	7000	7800		
			50mph	5127	7221	8765	10308	12017	13781	14608	15435	17199		
			90 km/h	2000	2800	3400	4000	4650	5300	5650	6000	6650		
			56 mph	4410	6174	7497	8820	10253	11687	12458	13230	14663		
			100 km/h	1700	2400	2900	3400	4000	4550	4750	5150	5700		
			62 mph	3749	5292	6395	7497	8820	10033	10474	11356	12569		
XVC E2	E2	Transport	Standard			6800	8000	9250	9850	10150				
						14994	17640	20396	21719	22381				

			(a)	0 km/h	9900	12900	15900	18900	21600	24200	25250	26300	28800	31300
XVC E2	E2	Cranes	0mph	21830	28445	35060	41675	47628	53361	55676	57992	63504	69017	
			5 km/h	7000	9100	11200	13300	15300	17100	18050	19000	23200		
			3mph	15435	20066	24696	29327	33737	37706	39800	41895	51156		
			10 km/h	6200	8050	9950	11800	13500	15150	16000	16850	18500		
			6mph	13671	17750	21940	26019	29768	33406	35280	37154	40793		
			20 km/h	4450	6000	7350	8650	10000	11250	19025	12600	13900		
			12mph	9812	13230	16207	19073	22050	24806	41950	27783	30650		
			30 km/h	2730	3965	5200	6435	7670	8900	9520	10140	11375		
			19mph	6020	8743	11466	14189	16912	19625	20992	22359	25082		
			40 km/h	2605	3782	4960	6140	7315	8500	9085	9670	10850		
			25mph	5744	8339	10937	13539	16130	18743	20032	21322	23924		
			50 km/h	2480	3600	4720	5840	6960	8085	8695	9205	10325		
			31mph	5468	7938	10408	12877	15347	17827	19172	20297	22767		
			65 km/h	2225	3235	4240	5245	6255	7260	7765	8270	9275		
			40mph	4906	7133	9349	11565	13792	16008	17122	18235	20451		
			70 km/h	2100	3050	4000	4950	5900	6850	7325	7800	8750		
			43mph	4631	6725	8820	10915	13010	15104	16152	17199	19294		
			80 km/h	1720	2500	3280	4060	4840	5615	6000	6390	7175		
			50mph	3793	5513	7232	8952	10672	12381	13230	14090	15821		
			90 km/h	1470	2135	2800	3465	4130	4795	5125	5460	6125		
			56 mph	3241	4708	6174	7640	9107	10573	11301	12039	13506		
			100 km/h	1260	1830	2400	2970	3540	4110	4395	4680	5250		
			62 mph	2778	4035	5292	6549	7806	9063	9691	10319	11576		

(a) The speeds stipulated are average speeds per hour of travel. A maximum speed of 20 km/h (12.5 mph) above the average speed is tolerated provided that the maximum never exceeds 100 km/h (62 mph).

(b) Special wheel for cranes.

18.00 R 25

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)							Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)		
				Michelin® dimensions											
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon			

25"

505/95 R 25 Tubeless
(18.00 R 25)

XVC E2 183E 565628	50 31.1	284 195	551 21.7	1672 65.8	587 23.1	498 19.6	1610 63.4	742 29.2	4922 193.8	26 32.8	576 152	13.00/2.5 15.00/2.5 (b)	- OR 3-25 SULLA 553200	25 WAM 16-24/25
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TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identifi-cation code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)	Size
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25"

APPLICATION	bar	2	3	4	5	6	7	7.5	8	9	10		
	psi	29	44	58	73	87	102	109	116	131	145		
(a)													
XVC E2	E2	Cranes	0 km/h	9900	12900	15900	18900	21600	24200		26300	28800	31300
			0mph	21830	28445	35060	41675	47628	53361		57992	63504	69017
			2 km/h	8050	10500	12900	15300	17600	19700		21900	25600	27900
			1.2mph	17750	23153	28445	33737	38808	43439		48290	56448	61520
			5 km/h	7000	9100	11200	13300	15300	17100		19000	23200	
			3mph	15435	20066	24696	29327	33737	37706		41895	51156	
			10 km/h	6200	8050	9950	11800	13500	15150		16850	18500	
			6mph	13671	17750	21940	26019	29768	33406		37154	40793	
			15 km/h	4950	6450	7950	9450	10800	12100		13500	14800	
			9 mph	10915	14222	17530	20837	23814	26681		29768	32634	
			20 km/h	4450	6000	7350	8650	10000	11250		12600	13900	
			12mph	9812	13230	16207	19073	22050	24806		27783	30650	
			30 km/h	2730	3965	5200	6435	7670	8905		10140	11375	
			19mph	6020	8743	11466	14189	16912	19636		22359	25082	
			40 km/h	2605	3782	4960	6140	7315	8495		9670	10850	
			25mph	5744	8339	10937	13539	16130	18731		21322	23924	
			50 km/h	2480	3600	4720	5840	6960	8085		9205	10325	
			31mph	5468	7938	10408	12877	15347	17827		20297	22767	
			65 km/h	2225	3235	4240	5245	6255	7260		8270	9275	
			40mph	4906	7133	9349	11565	13792	16008		18235	20451	
			70 km/h	2100	3050	4000	4950	5900	6850		7800	8750	
			43mph	4631	6725	8820	10915	13010	15104		17199	19294	
			80 km/h	1720	2500	3280	4060	4840	5615		6390	7175	
			50mph	3793	5513	7232	8952	10672	12381		14090	15821	
			90 km/h	1470	2135	2800	3465	4130	4795		5460	6125	
			56 mph	3241	4708	6174	7640	9107	10573		12039	13506	
			100 km/h	1260	1830	2400	2970	3540	4110		4680	5250	
			62 mph	2778	4035	5292	6549	7806	9063		10319	11576	
XVC E2	E2	Transport	Standard			6800	8000	9250	9850	10150			
						14994	17640	20396	21719	22381			

505/95 R 25 (18.0 R 25)

(a) The speeds stipulated are average speeds per hour of travel. A maximum speed of 20 km/h (12.5 mph) above the average speed is tolerated provided that the maximum never exceeds 100 km/h (62 mph).

(b) Special wheel for cranes.

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)							Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)	
				Michelin® dimensions										
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm 32nd gallon		

25"

20.5 R 25 Tubeless

XADN E3T ** 177B 123407	28 17.4		577 22.7	1561 61.5		528 20.8	1490 58.7	667 26.3	4484 176.5	36 45.4	474 125	17.00/2.0	-	OR 3-25 SULLA 553200	24/25 VAM 17-24/25		
XADT E4T ** 177B 123335	22 13.7					527 20.7	1492 58.7		4489 176.7	44 55.4	455 120						
XK A L3 ** 263460	14 8.7	577 22.7	1561 61.5	1621 63.8		562 22.1	1482 58.3	649 25.6	4425 174.2	28 35.3	485 128	17.00/1.7	OR 3-25 SULLA 553200 OR 2-25 HEUPO 553201	24/25 VAM 17-24/25			
XHA L3 * 263451	16 9.9					527 20.7		646 25.4	4417 173.9	31 39.1	495 131						
X SNOPLUS L2T * 123795	16 9.9					534 21	1471 57.9	633 24.9	4364 171.8		500 132						
XTLA L2 * 123435 (5)	16 9.9					532 20.9	1480 58.3	637 25.1	4391 172.9								
XR D1 A L4 * 263402 (8)	14 8.7					555 21.9	1530 60.2	677 26.7	4585 180.5	43 54.2	485 128						
XLD D2 A L5T * 123325	10 6.2					534 21		676 26.6	4582 180.4	72 90.7	427 113						
X MINE D2 L5R * 266823	6 3.7					524 20.6	1524 60	689 27.1	4616 181.7	74 93.2	430 114						
XSM D2+ L5S 123667	6 3.7					534 21		682 26.9	4587 180.6	78 98.3	410 108						

20.5 R 25 Tubeless

XHA 2 L3 TL * 186 A2 899613	16 9.9		577 22.7	1561 61.5		528 20.8	1486 58.5	644 25.4	4420 174	33 41.6	489 129	17.00/1.7 17.00/2.0	-	OR 3-25 SULLA 553200 OR 2-25 HEUPO 553201	24/25 VAM 17-24/25
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TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)										Size										
25"																						
		APPLICATION	bar	2	2.25	2.5	3	3.25	3.5	4	4.25	4.5										
			psi	29	33	36	44	47	51	58	62	65										
XADN ** E3T XADT ** E4T	E3T E4T	Articulated dumpers	Standard	4750	5000	5250	5750	6000	6250	6800	7050	7300										
				10474	11025	11576	12679	13230	13781	14994	15545	16097										
XKA ** L3 XHA * L3 XTLA * L2 X SNOPLUS * L2T XR D1 A * L4 XLD D2 A * L5T X MINE D2 * L5R XSM D2+ L5S	L3 L3 L2 L2T L4 L5T L5R L5S	Loaders	Front laden	6250	6615	6980	7700	8000	8400	9150	9500	9900										
			Front laden	13781	14586	15391	16979	17640	18522	20176	20948	21830										
			Rear unladen	5000	5300	5600	6150	6400	6700	7300	7600	7900										
			Rear unladen	11025	11687	12348	13561	14112	14774	16097	16758	17420										
XKA ** L3 XLD D2 A * L5T X MINE D2 * L5R XSM D2+ L5S	L3 L5T L5R L5S	Underground machines (see page 39-41)	Front and Rear	5650	5975	6300	6950	7200	7550	8250	8550	8900										
			Front and Rear	12458	13175	13892	15325	15876	16648	18191	18853	19625										
XHA * L3 XTLA * L2 X SNOPLUS * L2T XR D1 A * L4 XLD D2 A * L5T	L3 L2 L2T L4 L5T	Graders	Front and Rear	3600	3857	4113	4625															
			Front and Rear	7938	8505	9069	10198															
		APPLICATION	bar	2	2.25	2.5	3	3.25	3.5	4	4.25	4.5										
			psi	29	33	36	44	47	51	58	62	65										
XHA 2	L3	Loaders	Front laden	6250	6615	6980	7700	8000	8400	9150	9500	9900										
			Front laden	13781	14586	15391	16979	17640	18522	20176	20948	21830										
			Rear unladen	5000	5300	5600	6150	6400	6700	7300	7600	7900										
		Graders	Front and Rear	11025	11687	12348	13561	14112	14774	16097	16758	17420										
			Front and Rear	3600	3857	4113	4625															
				7938	8505	9069	10198															

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions					Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)	
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon			
25"														
525/80 R 25 Tubeless (20.5 R 25)														
XGC E2 179E 822796	70 43.5		588 23.1	1542 60.7	596 23.5	522 20.6	1490 58.7	684 26.9	4528 178.3	31 39.1	508 134	17.00/1.7 CR 17.00/2.0 (b)	OR 3-25 SULLA 553200	24/25 VAM 17-24/25

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identifi-cation code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)	Size
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25"

APPLICATION	bar	2	3	4	5	6	7				
	psi	29	44	58	73	87	102				
(a)											
XGC E2	E2	Cranes	0 km/h	10000	12300	14600	17100	19400	21500		
			0mph	22050	27122	32193	37706	42777	47408		
			5 km/h	7050	8700	10300	12100	13700	15200		
			3mph	15545	19184	22712	26681	30209	33516		
			10 km/h	6250	7700	9150	10700	12150	13450		
			6mph	13781	16979	20176	23594	26791	29657		
			20 km/h	4500	5700	6900	8150	9350	10550		
			12mph	9923	12569	15215	17971	20617	23263		
			30 km/h	3700	4950	6200	7500	8800	10100		
			19mph	8159	10915	13671	16538	19404	22271		
			40 km/h	3525	4700	5900	7150	8350	9600		
			25mph	7773	10364	13010	15766	18412	21168		
			50 km/h	3375	4475	5600	6800	7950	9150		
			31mph	7442	9867	12348	14994	17530	20176		
			65 km/h	3050	4075	5100	6150	7200	8300		
			40mph	6725	8985	11246	13561	15876	18302		
			70 km/h	2850	3800	4750	5750	6750	7750		
			43mph	6284	8379	10474	12679	14884	17089		
			80 km/h	2325	3125	3900	4725	5550	6350		
			50mph	5127	6891	8600	10419	12238	14002		
			90 km/h	2000	2650	3350	4050	4750	5450		
			56 mph	4410	5843	7387	8930	10474	12017		
			100 km/h	1700	2275	2850	3450	4050	4650		
			62 mph	3749	5016	6284	7607	8930	10253		

525/80 R 25

- (a) The speeds stipulated are average speeds per hour of travel. A maximum speed of 20 km/h (12.5 mph) above the average speed is tolerated provided that the maximum never exceeds 100 km/h (62 mph).
- (b) Special wheel for cranes.

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)						
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. I gallon									
25"																				
21.00 R 25 TubeType																				
XRIB E7 276640 (8)			1839 72.4	634 25		565 22.2	1726 68	769 30.3	5185 204.1	12 15.1	700 185	15.00/3.0 17.00/3.0	- OR 3-25 SULLA 553200	25 YBAM 17-24/25						
21.00 R 25 Tubeless																				
XR B E3 ** 270800 (8)	35 21.7	340 233	634 25	1839 72.4	685 27	560 22	1738 68.4	786 30.9	5251 206.7	32 40.3	700 185	15.00/3.0 17.00/3.0	- OR 3-25 SULLA 553200	25 YBAM 17-24/25						
XKA L3 ** 270850	14 8.7					609 24	1768 69.6	800 31.5	5343 210.4	33 41.6										
21.00 R 25 Tubeless																				
XKA L3 ** 270850	14 8.7		634 25	1839 72.4		609 24	1768 69.6	800 31.5	5343 210.4	33 41.6	700 185	15.00/3.0 17.00/3.0	- OR 3-25 SULLA 553200	25 YBAM 17-24/25						
550/65 R 25 Tubeless																				
XTLA L2T * 123316 (5)	16 9.9					540 21.3		603 23.7	4154 163.5	33 41.6	446 118		- OR 3-25 SULLA 553200							
XLD 65 L3 L3T * 123570	16 9.9		574 22.6	1371 54		1400 55.1		602 23.7	4152 163.5	32 40.3		17.00/1.7 17.00/2.0	24/25 VAM 17-24/25							
XLD 65 SUPER L3 SUPER L3T * 123168 (7)	14 8.7					549 21.6					450 119		OR 2-25 HEUPO 553201							
555/70 R 25 Tubeless																				
XHF L3F * 123643 (8)	16 9.9		611 24.1	1478 58.2	0 0	542 21.3	1404 55.3	595 23.4	4141 163	28 35.3	461 122	17.00/1.7 17.00/2.0	- OR 3-25 SULLA 553200 OR 2-25 HEUPO 553201	24/25 VAM 17-24/25						

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)											Size											
25"																								
APPLICATION			bar	1	1.5	2	2.5	3	3.5	4	4.5	5	6											
			psi	15	22	29	36	44	51	58	65	73	87											
XRIB E7	E7	Desert	65 km/h	Road in single	2500	3050	3750	4500	5250	6000	6650	7350	8050	9500										
			40 mph	Road in single	5513	6725	8269	9923	11576	13230	14663	16207	17750	20948										
			50 km/h	Track in single	2750	3750	4750	5800	6800	7800														
			30 mph	Track in single	6064	8269	10474	12789	14994	17199														
			15 km/h	Sand in single	4250	6000	7600																	
			9.3 mph	Sand in single	9371	13230	16758																	
			65 km/h	Road in dual	4500	5490	6750	8100	9450	10800	12870	13230	14490	17100										
			40 mph	Road in dual	9923	12105	14884	17861	20837	23814	28378	29172	31950	37706										
			50 km/h	Track in dual	4950	6750	8550	10440	12240	14040														
			30 mph	Track in dual	10915	14884	18853	23020	26989	30958														
			15 km/h	Sand in dual	7650	10800	13680																	
			9.3 mph	Sand in dual	16868	23814	30164																	
APPLICATION			bar	4	4.5	5	5.5	6	6.5	7	7.5	8												
			psi	58	65	73	80	87	94	102	109	116												
XRB ** E3 XKA ** L3	E3 L3	Transport	Standard	8350	9100	9850	10600	11400	12150	12550	12925	13300												
				18412	20066	21719	23373	25137	26791	27673	28500	29327												
APPLICATION			bar	2	3	4	5	6	7	8														
			psi	29	44	58	73	87	102	116														
XKA ** L3	L3	Underground machines (see page 39-41)	Front and Rear	6600	8500	10400	12300	14250	15650	16600														
				14553	18743	22932	27122	31421	34508	36603														
APPLICATION			bar	2	2.25	2.5	3	3.25	3.5	4	4.25	4.5	5											
			psi	29	33	36	44	47	51	58	62	65	73											
XTLA * L2T XLD 65 L3 * L3T XLD 65 SUPER L3 * SUPER L3T	L2T L3T SUPER L3T	Loaders	Front laden	4900	5350	5800	6700	7150	7600	8500	8950	9400	10300											
				10805	11797	12789	14774	15766	16758	18743	19735	20727	22712											
			Rear unladen	3925	4290	4650	5350	5720	6075	6800	7165	7525	8250											
				8655	9459	10253	11797	12613	13395	14994	15799	16593	18191											
XTLA * L2T XLD 65 L3 * L3T XLD 65 SUPER L3 * SUPER L3T	L2T L3T SUPER L3T	Underground machines (see page 39-41)	Front and Rear	2940	3210	3480	4020	4290	4560	5100														
				6483	7078	7673	8864	9459	10055	11246														
XHF * L3F	L3F	Loaders	Front laden	5450	5900	6350	7300	7750	8200															
				12017	13010	14002	16097	17089	18081															
			Rear unladen	4350	4700	5100	5850	6200	6550															
				9592	10364	11246	12899	13671	14443															
XHF * L3F	L3F	Graders	Front and Rear	3275	3550	3800	4375																	
				7221	7828	8379	9647																	

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)							Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)	
				Michelin® dimensions										
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm 32nd gallon		

25"

23.5 R 25 Tubeless

XADN E3T ** 185B 123417	28 17.4				601 23.7	1612 63.5	727 28.6	4866 191.6	38 47.9	654 173			
XADT E4T 185B 123375 (8)	22 13.7				597 23.5		718 28.3	4843 190.7	47 59.2	660 174			
X-SUPER TERRAIN AD E4T ** 185B 769360	26 16.2				603 23.7	1623 63.9	729 28.7	4900 192.9	51 64.3	650 172			

XKA L3 ** 263670	14 8.7				630 24.8	1608 63.3	696 27.4	4780 188.2	30 37.8	635 168			
X SNOPPLUS L2T * 460452	16 9.9				603 23.7	1610 63.4	683 26.9	4751 187		670 177			
XTLA L2 * 123445 (5)	16 9.9				596 23.5	1614 63.5	688 27.1	4771 187.8		680 180			
XHA L3 * 123054	16 9.9				602 23.7	1606 63.2	690 27.2	4761 187.4	35 44.1	660 174			
XHA 2 L3 TL* 195 A2 263670	14 8.7				599 23.6	1612 63.5	690 27.2	4773 187.9	36 45.4	672 178			
XR D1 A L4 * 266930 (8)	14 8.7				639 25.2	1661 65.4	722 28.4	4944 194.6	49 61.7	688 182			
XLD D2 A L5T * 123326	10 6.2				612 24.1	1662 65.4	716 28.2	4947 194.8	77 97	600 159			
X MINE D2 L5R 266931	6 3.7				637 25.1	1656 65.2	707 27.8	4898 192.8	83 104.6	590 156			
XSM D2+ L5S 123677	6 3.7				617 24.3	1653 65.1	738 29.1	4969 195.6	88 110.9	611 161			

600/65 R 25 Tubeless

XLD 65 L3 L3T * 063799	16 9.9		636 25	1438 56.6	727 28.6	622 24.5	1429 56.3	618 24.3	4246 167.2	34 42.8	484 128	17.00/1.7 17.00/2.0 19.50/2.5	OR 3-25 SULLA 553200	-
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650/65 R 25 Tubeless

XAD 65 SUPER E3T ** 180B 840573	28 17.4		672 26.5	1505 59.3		630 24.8	1494 58.8	670 26.4	4500 177.2	40 50.4	595 157	19.50/2.5 22.00/3.0	OR 3-25 SULLA 553200	-
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TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)											Size											
25"																								
APPLICATION			bar	2	2.5	3	3.25	3.5	4	4.5	5	5.5												
			psi	29	36	44	47	51	58	65	73	80												
XADN ** E3T XADT E4T X-SUPER TERRAIN AD ** E4T	E3T E4T E4T	Articulated dumpers	Standard	5650	6380	7100	7450	7800	8550	9250	9950	10350												
				12458	14068	15656	16427	17199	18853	20396	21940	22822												
XKA ** L3 X SNOPPLUS * L2T XTLA * L2 XHA * L3 XHA 2 * L3 XR D1 A * L4 XLD D2 A * L5T X MINE D2 L5R XSM D2+ L5S	L3 L2T L2 L3 L3 L4 L5T L5R L5S	Loaders	Front laden	8100	9100	10150	10650	11150	12150	13350														
				17861	20066	22381	23483	24586	26791	29437														
			Rear unladen	6500	7300	8100	8500	8900	9700	10700														
				14333	16097	17861	18743	19625	21389	23594														
XKA ** L3 XLD D2 A * L5T X MINE D2 L5R XSM D2+ L5S	L3 L5T L5R L5S	Underground machines (see page 39-41)	Front and Rear	7300	8200	9150	9600	10050	10950	12000														
				16097	18081	20176	21168	22160	24145	26460														
X SNOPPLUS * L2T XTLA * L2 XHA * L3 XHA 2 * L3 XR D1 A * L4 XLD D2 A * L5T	L2T L2 L3 L3 L4 L5T	Graders	Front and Rear	4875	5425	6000																		
				10749	11962	13230																		
APPLICATION			bar	2	2.5	3	3.5	4	4.5	5														
			psi	29	36	44	51	58	65	73														
XLD 65 L3 * L3T	L3T	Loaders	Front laden	5650	6675	7700	8725	9750	10725	11700														
				12458	14718	16979	19239	21499	23649	25799														
XLD 65 L3 * L3T	L3T	Graders	Rear unladen	4520	5340	6160	6980	7800	8580	9360														
				9967	11775	13583	15391	17199	18919	20639														
APPLICATION			bar	2.5	3	3.5	4																	
			psi	36	44	51	58																	
XAD 65 ** SUPER E3T	SUPER E3T	Articulated dumpers	Standard	5450	6300	7150	8000																	
				12017	13892	15766	17640																	

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)							Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)		
				Michelin® dimensions											
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. l			

25"

650/65 R 25 Tubeless

XLD 65 L3 L3T * 123820	16 9.9			1505 59.3		634 25	1498 59	636 25	4422 174.1	37 46.6		596 157	19.50/2.5	-	-
XLD 65 SUPER L3T * 123188 (8)	14 8.7			1563 61.5		635 25	1524 60	649 25.6	4504 177.3	48 60.5			OR 3-25 SULLA 553200		

26.5 R 25 Tubeless

XADN E3T ** 193B 123427	28 17.4			774 30.5	670 26.4	1740 68.5	775 30.5	5228 205.8	41 51.7	900 238					
XADT E4T ** 193B 123447	22 13.7			747 29.4	1839 72.4	676 26.6	1738 68.4		5221 205.6	52 65.5	910 240		22.00/3.0 22.00/3.0 IF	OR 3-25 SULLA 553200	25 YBAM 18-24/25
X-SUPER TERRAIN AD E4T ** 193B 689443 (7)	24 14.9			724 28.5	680 26.8	1740 68.5		774 30.5	5225 205.7	54 68	862 228				

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)	Size
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25"

		APPLICATION	bar	2	2.5	3	3.5	4	4.5	5				
			psi	29	36	44	51	58	65	73				
XLD 65 L3 * L3T XLD 65 SUPER L3T *	L3T SUPER L3T	Loaders	Front laden	6700	7900	9100	10300	11500	12700	13900				
				14774	17420	20066	22712	25358	28004	30650				
			Rear unladen	5400	6350	7300	8250	9200	10150	11100				
XLD 65 L3 * L3T XLD 65 SUPER L3T *	L3T SUPER L3T	Graders	Front and Rear	4100	4800	5500	6200	6900	7600	8300				
				9041	10584	12128	13671	15215	16758	18302				
		APPLICATION	bar	2	2.25	2.5	2.75	3	3.25	3.5	4	4.25	4.5	
			psi	29	33	36	40	44	47	51	58	62	65	
XADN ** E3T XADT ** E4T X-SUPER TERRAIN AD ** E4T	E3T E4T E4T	Articulated dumpers	Standard	6500	7000	7500	8000	8500	9000	9500	10500	11000	11500	
				14333	15435	16538	17640	18743	19845	20948	23153	24255	25358	

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)							Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)					
				Michelin® dimensions														
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon						
25"																		
26.5 R 25 Tubeless																		
XK A L3 ** 273360	14 8.7				714 28.1	1734 68.3	748 29.4	5148 202.7	35 44.1	855 226								
XHA L3 * 123433	16 9.9			1839 72.4	673 26.5	1736 68.3	739 29.1	5130 202	37 46.6	869 230								
XHA 2 L3 TL ** 209 A2 893825	16 9.9				681 28.8	1731 68.1	736 29	5114 201.3	41 51	879 232								
XSM DN L3S 123022	14 8.7		747 29.4		724 28.5	1726 68	770 30.3	5189 204.3	48 60.5	890 235								
XLD D1 A L4R * 123495	14 8.7				690 27.2	1803 71	781 30.7	5360 211	53 66.8	947 250								
XLD D2 A L5T * 123094	10 6.2			1891 74.4	687 27	1800 70.9	778 30.6	5348 210.6	87 109.6	825 218								
X MINE D2 L5R * 273400	6 3.7				718 28.3	1794 70.6	796 31.3	5382 211.9	91 114.6	820 217								
XSM D2+ L5S 123687	6 3.7				692 27.2	1788 70.4	799 31.5	5377 211.7	102 128.5	760 201								
29.5 R 25 Tubeless																		
XADN E E3V ** 200E 123703 (8)	50 31.1			833 32.8	1972 77.6		743 29.3	1850 72.8	817 32.2	5541 218.1	44 55.4	1180 312	25.00/3.5	- OR 3-25 SULLA 553200 25 YBAM 19-25				
29.5 R 25 Tubeless																		
XHA 2 L3 TL ** 216 A2 961307	16 9.9			833 32.8	1972 77.6		747 29.4	1860 73.2	795 31	5504 216.7	43 54	1177 310	25.00/3.5	- OR 3-25 SULLA 553200 25 YBAM 19-25				
29.5 R 25 Tubeless																		
XADN E3T ** 200B 123437	28 17.4				743 29.3	1850 72.8	817 32.2	5541 218.1	44 55.4	1180 312								
XADT E4T ** 200B 123457 (8)	22 13.7		833 32.8	1972 77.6	748 29.4	1860 73.2		5579 219.6	57 71.8	1080 285								
X-SUPER TERRAIN AD E4T ** 200B 111168 (7)	22 13.7				762 30	1858 73.1	825 32.5	5576 219.5	60 75.6	1120 296								
XK A L3 ** 273560	14 8.7			2024 79.7		793 31.2	1856 73.1	799 31.5	5507 216.8	38 47.9	1145 303							
XHA L3 * 123198	16 9.9			1972 77.6		750 29.5	1862 73.3	796 31.3	5510 216.9	40 50.4	1144 302							
XLD D1 A L4R * 123741	14 8.7		833 32.8		769 30.3	1906 75	840 33.1	5704 224.6	58 73.1	1171 309								
XLD D2 A L5T * 123278	10 6.2			2024 79.7		762 30		821 32.3	5645 222.2	95 119.7	985 260							
X MINE D2 L5R 273527	6 3.7					804 31.7	1900 74.8	838 33	5688 223.9	100 126	988 261							

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)											Size											
25"																								
APPLICATION			bar	2	2.5	3	3.25	3.5	4	4.5	5	5.5												
psi				29	36	44	47	51	58	65	73	80												
XKA ** L3 XHA * L3 XHA 2 L3 XSM DN L3S XLD D1 A * L4R XLD D2 A * L5T X MINE D2 * L5R XSM D2+ L5S	L3 L3 L3 L3S L4R L5T L5R L5S	Loaders	Front laden	9300	10267	12150	12850	13600	15000	16150	17350	18500												
				20507	22639	26791	28334	29988	33075	35611	38257	40793												
			Rear unladen	7450	8217	9700	10300	10900	12000	12900	13900	14800												
				16427	18118	21389	22712	24035	26460	28445	30650	32634												
XKA ** L3 XSM DN L3S XLD D1 A * L4R XLD D2 A * L5T X MINE D2 * L5R XSM D2+ L5S	L3 L3S L4R L5T L5R L5S	Underground machines (see page 39-41)	Front and Rear	8350	9250	10950	11550	12250	13500	14550	15600	16650												
				18412	20396	24145	25468	27011	29768	32083	34398	36713												
XHA * L3 XHA 2 L3	L3 L3		Front and Rear	5400	6400	7500																		
				11907	14112	16538																		
APPLICATION			bar	2	2.5	3	3.25	3.5	4	4.5	5	5.5												
psi				29	36	44	47	51	58	65	73	80												
XADN E ** E3V	E3V	Articulated dumpers	Standard	7800	9050	10300	10900	11500	12750	14000														
				17199	19955	22712	24035	25358	28114	30870														
			70 km/h			7800	8575	9350	10900	11500	12750	14000												
						17199	18908	20617	24035	25358	28114	30870												
XHA 2	L3	Loaders	Front laden	11150	12285	14600	15450	16300	18000	19450	20950	22400												
				24586	27088	32193	34067	35942	39690	42887	46195	49392												
			Rear unladen	8900	9833	11700	12350	13050	14400	15550	16750	17900												
				19625	21682	25799	27232	28775	31752	34288	36934	39470												
XADN ** E3T XADT ** E4T X-SUPER TERRAIN AD ** E4T	E3T E4T E4T	Articulated dumpers	Standard	7800	9050	10300	10900	11500	12750	14000														
				17199	19955	22712	24035	25358	28114	30870														
XKA ** L3 XHA * L3 XLD D1 A * L4R XLD D2 A * L5T X MINE D2 L5R	L3 L3 L4R L5T L5R	Loaders	Front laden	11150	12285	14600	15450	16300	18000	19450	20950	22400												
				24586	27088	32193	34067	35942	39690	42887	46195	49392												
			Rear unladen	8900	9833	11700	12350	13050	14400	15550	16750	17900												
				19625	21682	25799	27232	28775	31752	34288	36934	39470												
XKA ** L3 XLD D1 A * L4R XLD D2 A * L5T X MINE D2 L5R	L3 L4R L5T L5R	Underground machines (see page 39-41)	Front and Rear	10050	11050	13150	13900	14650	16200	17500	18850	20150												
				22160	24365	28996	30650	32303	35721	38588	41564	44431												

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)						
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm 32nd gallon									
25"																				
750/65 R 25 Tubeless																				
XAD 65 SUPER E3T ** 190B 123895	28 17,4		792 31,2	1639 64,5		738 29,1	1599 63	702 27,6	4777 188,1	43 54,2	810 214	22.00/3.0 24.00/3.0 25.00/3.0	- OR 3-25 SULLA 553200	-						
750/65 R 25 Tubeless																				
XLD 65 L3 L3T * 123940	16 9,9		792 31,2	1639 64,5		747 29,4	1591 62,6	683 26,9	4714 185,6	41 51,7	788 208	22.00/3.0 24.00/3.0	- OR 3-25 SULLA 553200	-						
850/65 R 25 Tubeless																				
XAD 65 SUPER E3T ** 196B 978610	28 17,4		896 35,3	1773 69,8		811 31,9	1729 68,1	753 29,6	5150 202,8	47 59,2	1115 295	25.00/3.5 27.00/3.0 27.00/3.5	- OR 3-25 SULLA 553200	-						
26"																				
480/80 R 26 Tubeless																				
XMCL 160A8 160B 719306			479 18,9	1428 56,2	626 24,6	487 19,2	1422 56	636 25	4220 166,1	36 45,4	405 107	22.00/3.0 24.00/3.0	- OR 3-25 SULLA 553200	-						
28"																				
440/80 R 28 Tubeless																				
XMCL 156A8 156B 316223			441 17,4	1415 55,7	822 32,4	459 18,1	1410 55,5	641 25,2	4200 165,4	36 45,4	347 92	DW14L DW15L	- KLEBER 822	-						

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)												Size
25"														
			APPLICATION	bar	2.5	3	3.25	3.5	4					
				psi	36	44	47	51	58					
XAD 65 ** SUPER E3T	SUPER E3T	Articulated dumpers	Standard	7350	8400	8950	9500	10600						
				16207	18522	19735	20948	23373						
			APPLICATION	bar	2	2.5	3	3.25	3.5	4	4.5	5	5.5	
				psi	29	36	44	47	51	58	65	73	80	
XLD 65 L3 * L3T	L3T	Loaders	Front laden	8400	9720	11040	11700	12360	13680	15000	16320	17640		
				18522	21433	24343	25799	27254	30164	33075	35986	38896		
			Rear unladen	6725	7775	8825	9365	9900	10950	12000	13050	14100		
XLD 65 L3 * L3T	L3T	Graders	Front and Rear	5040	5830	6620	7020	7420	8210					
				11113	12855	14597	15479	16361	18103					
			APPLICATION	bar	2.75	3	3.25	3.5	3.75	4				
				psi	40	44	47	51	54	58				
XAD 65 ** SUPER E3T	SUPER E3T	Articulated dumpers	Standard	9500	10450	11175	11900	12500	13250					
				20948	23042	24641	26240	27563	29216					
26"														
			APPLICATION	bar	1.6	2	2.4	2.8	3.2	3.6				
				psi	23	29	35	41	46	52				
XMCL		Backhoe loaders	Static	4900	5990	7080	8170	9260	10350					
				10805	13208	15611	18015	20418	22822					
			Cyclic	3200	3910	4620	5330	6040	6750					
				7056	8622	10187	11753	13318						
			30 km/h	2790	3300	3800	4310	4820						
			19mph	6152	7277	8379	9504	10628						
			40 km/h	2575	3055	3540	4020	4500						
			25mph	5678	6736	7806	8864	9923						
28"														
			APPLICATION	bar	1.6	2	2.4	2.8	3.2	3.6				
				psi	23	29	35	41	46	52				
XMCL		Backhoe loaders	Static	4360	5330	6290	7260	8230	9200					
				9614	11753	13869	16008	18147	20286					
			Cyclic	2840	3470	4110	4740	5370	6000					
				6262	7651	9063	10452	11841	13230					
			30 km/h	2480	2930	3380	3830	4280						
			19mph	5468	6461	7453	8445	9437						
			40 km/h	2300	2725	3150	3575	4000						
			25mph	5072	6009	6946	7883	8820						

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)							Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)	
				Michelin® dimensions										
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm gallon		

28"

19.5 L R 28 Tubeless

XM27 152A8 123800			535 21.1	1465 57.7		533 21	1425 56.1	645 25.4	4240 166.9	40 50.4	395 104	W15L DW15L W16L DW16L	-	KLEBER 822
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29"

26.5 R 29 Tubeless

XKA L3 ** 273860	14 8.7				714 28.1	1838 72.4	801 31.5	5478 215.7	35 44.1	855 226			
XSM DN L3S * 123661	14 8.7		747 29.4	1940 76.4	726 28.6	1830 72	806 31.7	5464 215.1	40 50.4	937 248	22.00/3.0 24.00/3.0	OR 3-29 553202	29 WAM 19-29
XSM D1 L3S 123421 (8)	10 6.2				678 26.7	1890 74.4	847 33.3	5691 224.1	53 66.8				

29.5 R 29 Tubeless

XTS E3T ** 708648	29 18	348 238	833 32.8	2126 83.7		765 30.1	1963 77.3	869 34.2	5884 231.7	43 54.2	1300 343	24.00/3.5 25.00/3.5	OR 3-29 553202	29 YEAM 19-29
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XKA L3 ** 274110	14 8.7			2074 81.7		793 31.2	1958 77.1	844 33.2	5812 228.8	38 47.9	1260 333			
XHA L3 * 123268 (8)	16 9.9				752 29.6	1954 76.9	839 33	5795 228.1	40 50.4	1245 329				
XLD D2 A L5T * 123279	10 6.2		833 32.8		772 30.4	2004 78.9	864 34	5949 234.2	95 119.7	985 260				
X MINE D2 L5R 274050	6 3.7			2126 83.7	795 31.3	2002 78.8	879 34.6	5983 235.6	100 126	990 262				
XSM D2+ L5S 123697	6 3.7				770 30.3	1993 78.5	842 33.1	5872 231.2	112 141.1	1116 295				

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)											Size											
28"																								
APPLICATION			bar	1	1.6	1.9	2.7	3	3.2	3.5	3.8													
			psi	15	23	28	39	44	46	51	55													
XM27		Backhoe loaders	10 km/h	2620	3280	3560	4300	4580	4770	5050	5330													
			6mph	5777	7232	7850	9482	10099	10518	11135	11753													
			30 km/h	2050	2610	2830	3430	3650	3800															
			19mph	4520	5755	6240	7563	8048	8379															
			40 km/h	1920	2440	2650	3200	3410	3550															
			25mph	4234	5380	5843	7056	7519	7828															
29"																								
APPLICATION			bar	2	2.5	3	3.5	4	4.25	4.5	5	5.5												
			psi	29	36	44	51	58	62	65	73	80												
XKA ** L3 XSM DN * L3S XSM D1 L3S	L3 L3S L3S	Loaders	Front laden	10750	12200	13650	15150	16600	17325	18050	19500	20900												
				23704	26901	30098	33406	36603	38202	39800	42998	46085												
			Rear unladen	8600	9750	10925	12125	13275	13850	14450	15600	16725												
				18963	21499	24090	26736	29271	30539	31862	34398	36879												
XKA ** L3 XSM DN * L3S XSM D1 L3S	L3 L3S L3S	Graders	Front and Rear	9700	11000	12300	13650	14950	15600	16250	17550	18800												
				21389	24255	27122	30098	32965	34398	35831	38698	41454												
XTS ** E3T	E3T	Scrapers	Standard	9150	10325	11500	12650	13850	14425	15000	16150	16750												
				20176	22767	25358	27893	30539	31807	33075	35611	36934												
XKA ** L3 XHA * L3 XLD D2 A * L5T X MINE D2 L5R XSM D2+ L5S	L3 L3 L5T L5R L5S	Loaders	Front laden	13100	14700	16300	17900	19500	20525	21550	23600	25200												
				28886	32414	35942	39470	42998	45258	47518	52038	55566												
			Rear unladen	10475	11750	13050	14325	15600	16425	17250	18875	20150												
				23097	25909	28775	31587	34398	36217	38036	41619	44431												
XKA ** L3 XLD D2 A * L5T X MINE D2 L5R XSM D2+ L5S	L3 L5T L5R L5S	Underground machines (see page 39-41)	Front and Rear	11800	13250	14650	16100	17550	18450	19400	21250	22700												
				26019	29216	32303	35501	38698	40682	42777	46856	50054												
XLD D2 A * L5T	L5T	Graders	Front and Rear	7850	8800	9800																		
				17309	19404	21609																		

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)						
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. I 32nd gallon									
29"																				
775/65 R 29 Tubeless																				
XAD 65 SUPER E3T ** 195B 510085	28 17.4		809 31.9	1775 69.9		785 30.9	1759 69.3	779 30.7	5272 207.6	45 56.7	1050 277	24.00/3.0 24.00/3.5 25.00/3.5	- OR 3-29 553202	-						
XLD 65 SUPER L3 SUPER L3T 206A2 816527 (7)	16 9.9		809 31.9	1824 71.8		772 30.4	1751 68.9	751 29.6	5187 204.2	54 68	962 254	24.00/3.0 24.00/3.5 25.00/3.5	- OR 3-29 553202	-						
800/65 R 29 Tubeless																				
XLD 65 L3 L3T * 123059	16 9.9		838 33	1808 71.2		793 31.2	1818 71.6	790 31.1	5412 213.1	48.5 61.1	1093 289	24.00/3.5 27.00/3.0	- OR 3-29 553202	-						
33.25 R 29 Tubeless																				
XTS E3T ** 871916	29 18	429 294	938 36.9	2198 86.5		873 34.4	2068 81.4	923 36.3	6218 244.8	45 56.7	1640 433	27.00/3.5	- OR 3-29 553202	29 YEAR 19-29						
875/65 R 29 Tubeless																				
XAD 65 SUPER E3T ** 203B 086953	28 17.4		923 36.3	1909 75.2		883 34.8	1881 74.1	827 32.6	5623 227.4	51 64.3	1376 364	27.00/3.0 27.00/3.5 28.00/3.5	- OR 3-29 553202	-						
33"																				
18.00 R 33 Tubeless																				
XR B E3 ** 271220	35 21.7	305 209		1896 74.6		490 19.3	1816 71.5	821 32.3	5486 216	28 35.3	580 153									
XKD1 A E4 ** 271305	18 11.2	157 108				497 19.6	1862 73.3	858 33.8	5666 223.1	47 59.2	600 159									
X-HAUL E4P ** 205207	30 18.6	262 179				495 19.5	1860 73.2	856 33.7	5657 222.7	49 61.7										
XDT B E4T ** 123733	30 18.6																			
XDT A E4T ** 123713 (8)	22 13.7	192 132		553 21.8	1960 77.2	598 23.5	494 19.4	1868 73.5	885 34.8	5745 226.2	54 68	605 160	13.00/2.5	OR 3-33 553203	33 VFAM 16-33					
XDT A4 E4T ** 123723	18 11.2	157 108																		
X-QUARRY E4R ** 123567 (8)	14 8.7	122 84				505 19.9	1873 73.7		852 33.5	5670 223.2	62 78.1	600 159								
X-QUARRY S E4R ** 873291	19 11.8	166 114				511 20.1	1864 73.4													

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)											Size											
29"																								
APPLICATION			bar	2	2.5	3	3.5	4	4.25	4.5	5	5.5												
			psi	29	36	44	51	58	62	65	73	80												
XAD 65 ** SUPER E3T	SUPER E3T	Articulated dumpers	Standard	6900	8100	9350	10700	12150																
				15215	17861	20617	23594	26791																
XLD 65 SUPER L3 SUPER L3T	SUPER L3T	Loaders	Front laden	9500	11000	12500	14000	15500	16250	17000	18500													
				20948	24255	27563	30870	34178	35831	37485	40793													
			Rear unladen	7600	8800	10000	11200	12400	13000	13600	14800													
				16758	19404	22050	24696	27342	28665	29988	32634													
XLD 65 L3 * L3T	L3T	Loaders	Front laden	10100	11800	13500	15200	16900	17500	18600	20300	22000												
				22271	26019	29768	33516	37265	38588	41013	44762	48510												
			Rear unladen	8100	9450	10800	12150	13500	14000	14900	16250	17600												
				17861	20837	23814	26791	29768	30870	32855	35831	38808												
APPLICATION			bar	2	2.5	3	3.5	4	4.25	4.5	5	5.5	6											
			psi	29	36	44	51	58	62	65	73	80	87											
XTS ** E3T	E3T	Scrapers	Standard	9500	11000	12500	14000	15500	16300	17000	18500	19250	20000											
				20948	24255	27563	30870	34178	35942	37485	40793	42446	44100											
XAD 65 ** SUPER E3T	SUPER E3T	Articulated dumpers	Standard	9100	10800	12500	14100	15500																
				20066	23814	27563	31091	34178																
33"																								
APPLICATION			bar	2	3	4	4.5	5	5.5	6	6.5	7	7.5											
			psi	29	44	58	65	73	80	87	94	102	109											
XR B ** E3 XKD1 A ** E4 X-HAUL ** E4P XDT B ** E4T XDT A ** E4T XDT A4 ** E4T X-QUARRY S ** E4R	E3 E4 E4P E4T E4T E4T E4R	Transport	Standard			7950	8700	9400	10150	10900	11270	11650	12000											
						17530	19184	20727	22381	24035	24850	25688	26460											
X-QUARRY ** E4R	E4R	Quarry transport (See page 11)	30 km/h	5600	7700	9350	10150	10900	11650	12400														
				19mph	12348	16979	20617	22381	24035	25688	27342													

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm gallon			

33"

21.00 R 33 Tubeless

X-HAUL S E4P ** 612785	25 15.5	280 192	629 24.8	2042 80.4	685 27	550 21.7	1966 77.4			53 66.8	820 217	15.00/3.0	- OR 3-33 553203	33 VFAM 16-33
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33.5 R 33 Tubeless

XAD 65 SUPER E3T ** 203B 086953	28 17.4		923 36.3	1909 75.2		883 34.8	1881 74.1	827 32.6	5623 227.4	51 64.3	1376 364	27.00/3.0 27.00/3.5 28.00/3.5	- OR 3-29 553202	-
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35/65 R 33 Tubeless

XR DN A L3 * 283500	16 9.9			2124 83.6		911 35.9	2010 79.1	894 35.2	6036 237.6	38 47.9	1555 411			
XSM DN L3S 123052	14 8.7					918 36.1	2012 79.2	887 34.9	6022 237.1	44 55.4	1544 408			
XLD D1 A L4R * 123084	14 8.7					914 36	2056 80.9	883 34.8	6095 240	60 75.6	1550 410			
X MINE D2 L5R * 123494	6 3.7					921 36.3	2050 80.7	904 35.6	6136 241.6	93 117.2	1350 357			
XLD D2 A L5T * 123343	10 6.2					914 36	2058 81	886 34.9	6106 240.4		1450 383			
XSM D2+ L5S 123529	6 3.7					921 36.3	2050 80.7	905 35.6	6139 241.7	97 122.2	1350 357			

35/65 R 33 Tubeless

XLD D1A ** L4R 143231 (11)	14 8.7		987 38.9	2176 85.7		914 36	2056 80.9	883 34.8	6095 240	60 75.6	1550 410	28.00/3.5	- OR 3-33 553203	-
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TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)											Size											
33"																								
APPLICATION			bar	2	3	4	4.5	5	5.5	6	6.5	7	7.5											
			psi	29	44	58	65	73	80	87	94	102	109											
X-HAUL S ** E4P	E4P	Transport	Standard			9315	10250	11185	12125	13065	14000	14470												
						20540	22601	24663	26736	28808	30870	31906												
XR B ** E3	E3	Transport	Standard			17000	18500	20000	20750	21500														
						37485	40793	44100	45754	47408														
APPLICATION			bar	2	2.5	3	3.5	4	4.25	4.5	5	5.5	6											
			psi	29	36	44	51	58	62	65	73	80	87											
XR DN A * L3 XSM DN L3S XLD D1 A * L4R X MINE D2 * L5R XLD D2 A * L5T XSM D2+ L5S	L3 L3S L4R L5R L5T L5S	Loaders	Front laden	12750	15050	17300	19600	21850	23000	23900	26150	28200	30300											
				28114	33185	38147	43218	48179	50715	52700	57661	62181	66812											
			Rear unladen	10200	12050	13850	15675	17475	18400	19125	20925	22550	24250											
				22491	26570	30539	34563	38532	40572	42171	46140	49723	53471											
XSM DN L3S XLD D1 A * L4R X MINE D2 * L5R XLD D2 A * L5T XSM D2+ L5S	L3S L4R L5R L5T L5	Underground machines (see page 39-41)	Front and Rear	11500	13550	15550	17650	19650	20700	21500	23550	25400	27250											
				25358	29878	34288	38918	43328	45644	47408	51928	56007	60086											
			Front laden	16,090	17,720	19,000	21,200	23,000	24,300	25,750	28,000	28,800	29,600											
				35,478	39,073	41,895	46,746	50,715	53,582	56,779	61,740	63,504	65,268											
XLD D1A ** L4R	L4R	Loaders	Rear unladen	12,870	14,176	15,200	16,960	18,400	19,440	20,600	22,400	23,040	23,680											
				28,378	31,258	33,516	37,397	40,572	42,865	45,423	49,392	50,803	52,214											

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)							Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)		
				Michelin® dimensions											
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm gallon			

35"

21.00 R 35 Tubeless

XDT B E4T ** 123881	30 18.6	348 238	634 25	2145 84.4	685 27	576 22.7	2062 81.2	937 36.9	6242 245.7	61 76.9	900 238	15.00/3.0 17.00/3.0	OR 3-35 553204	-
XDT A4 E4T ** 123921	18 11.2	209 143				582 22.9	2066 81.3	933 36.7	6329 249.2	68 85.7	880 232			-
X-QUARRY E4R ** 606710 (7)	14 8.7	122 84												

24.00 R 35 Tubeless

X-HAUL E4P ** 087693	24 14.9	355 243	725 28.5	2278 89.7	784 30.9	645 25.4	2155 84.8	995 39.2	6562 258.3	60 75.6	1150 304	15.00/3.5 17.00/3.5	OR 3-35 553204	33/35 YEAM 16-35
XDT C4 E4T ** 123865	35 21.7	518 355				652 25.7	2162 85.1	1001 39.4	6591 259.5	68 85.7				
XDT B E4T ** 123931	30 18.6	444 304												
XDT A E4T ** 123941	22 13.7	326 223				676 26.6	2187 86.1	983 39	6592 260	77 97				
XDT A4 E4T ** 123951	18 11.2	266 182				660 26	2156 84.9	965 38	6489 255.5	70 88.2				
X-TRACTION E4T ** 318056	25 15.5	370 253				659 25.9		976 38.4	6517 256.6	1157 306				
X-QUARRY E4R ** 123887 (8)	14 8.7	207 142												
X-QUARRY S E4R ** 412539	19 11.8	281 192												

29.5 R 35 Tubeless

XTS E3T ** 631225	29 18	371 254	833 32.8	2226 87.6		777 30.6	2116 83.3	943 37.1	6539 257.4	45 56.7	1494 395	25.00/3.5 27.00/3.5	-	33/35 YEAM 20-35
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TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)										Size
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35"

		APPLICATION	bar	4	4.5	5	5.5	6	6.5	7	7.5	8	
			psi	58	65	73	80	87	94	102			
XDT B ** E4T XDT A4 ** E4T	E4T E4T	Transport	Standard		11450	12450	13500	14500	15000	15500			
					25247	27452	29768	31973	33075	34178			
X-QUARRY ** E4R	E4R	Quarry transport (See page 11)	30 km/h	12450	13500	14500	15000						
			19mph	27452	29768	31973	33075						
		APPLICATION	bar	3	4	4.5	5	5.5	6	6.5	7	7.5	
			psi	44	58	65	73	80	87	94	102	109	
X-HAUL ** E4P XDT C4 ** E4T XDT B ** E4T XDT A ** E4T XDT A4 ** E4T X-TRACTION ** E4T X-QUARRY S ** E4R	E4P E4T E4T E4T E4T E4T E4R	Transport	Standard			13950	15050	16300	17350	18500	19050	19625	20200
						30760	33185	35942	38257	40793	42005	43273	44541
X-QUARRY ** E4R	E4R	Quarry transport (See page 11)	30 km/h	12000	14500	16000	17250	18500	20000				
			19mph	26460	31973	35280	38036	40793	44100				
		APPLICATION	bar	3.5	3.75	4	4.25	4.5	5	5.5			
			psi	51	54	58	62	65	73	80			
XTS ** E3T	E3T	Scrapers	Standard	13200	13900	14600	15300	16000	17400	18100			
				29106	30650	32193	33737	35280	38367	39911			

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm 1			
										32nd	gallon			

35"

37.25 R 35 Tubeless

XTS E3T ** 540244	29 18	540 370	1050 41.3	2509 98.8		956 37.6	2370 93.3	1067 42	7149 281.5	47 59.2	2400 634	29.00/3.5 31.00/4.0	- OR 3-35 553204	33/35 YEAM
XRS B E4R ** 123673	22 13.7	415 284		2572 101.3		947 37.3	2364 93.1	1063 41.9	7127 280.6	53 66.8	2250 594			20-35

39"

37.5 R 39 Tubeless

XRS B E4R ** 856011	22 13.7	453 310	1057 41.6	2665 104.9		976 38.4	2517 99.1	1130 44.5	7583 298.5	56 70.6	2624 693	32.00/4.5	- OR 3-39 553206	-
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40.5/75 R 39 Tubeless

XMS B E3R ** 379296	33 20.5	766 525	1142 45	2758 108.6		998 39.3	2588 101.9	1151 45.3	7770 305.9	51 64.3	2940 777	32.00/4.5	- OR 3-39 553206	-
XMS A E3R ** 224334	20 12.4	500 342												

45/65 R 39 Tubeless

XLD D2 A L5T * 123681	10 6.2		1269 50	2707 106.6		1102 43.4	2577 101.5	1086 42.8	7586 298.7	115 144.9	2760 729	32.00/4.5	- OR 3-39 553206	-
X MINE D2 L5R * 123305	6 3.7					1099 43.3	2580 101.6	1110 43.7	7653 301.3	116 146.1	2712 717	36.00/4.5		

45"

45/65 R 45 Tubeless

XLD D1 A L4R * 123671	14 8.7		1269 50	2860 112.6		1130 44.5	2700 106.3	1156 45.5	7995 314.8	71 89.4	3330 880			
XLD D2 A L5T * 123641	10 6.2					1147 45.2		1157 45.6	7997 314.8	115 144.9				
X MINE D2 L5R * 123315	6 3.7					1159 45.6	2697 106.2	1163 45.8	8009 315.3	116 146.1				
XSM D2+ L5S 123769	6 3.7					1145 45.1	2737 107.8	1223 48.1	8347 328.6	120 151.2	3250 859			

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)											Size											
35"																								
APPLICATION		bar	3.75	4	4.25	4.5	5	5.5	6	6.5														
		psi	54	58	62	65	73	80	87	94														
XTS ** E3T XRS B ** E4R	E3T E4R	Scrapers	Standard	17950	18500	19350	20200	21900	23600	24450	25300													
				39580	40793	42667	44541	48290	52038	53912	55787													
37.25 R 35																								
39"																								
APPLICATION		bar	3	3.5	4	4.25	4.5	5	5.5	6														
		psi	44	51	58	62	65	73	80	87														
XRS B ** E4R	E4R	Transport	Standard	18100	20000	21900	22900	23850	25750	26700	27650													
				39911	44100	48290	50495	52589	56779	58874	60968													
37.5 R 39																								
XMS B ** E3R XMS A ** E3R	E3R E3R	Scrapers	Standard	20200	22400	24600	25700	26800	29000	30100	31200													
				44541	49392	54243	56669	59094	63945	66371	68796													
40.5/75 R 39																								
XLD D2 A * L5T X MINE D2 * L5R	L5T L5R	Loaders	Front laden	31130	35600	38530	40000	42000	45500	49000	52550													
				68642	78498	84959	88200	92610	100328	108045	115873													
			Rear unladen	24900	28500	30800	32000	33600	36400	39200	42050													
				54905	62843	67914	70560	74088	80262	86436	92720													
45/65 R 39																								
45"																								
APPLICATION		bar	3	3.5	4	4.25	4.5	5	5.5	6	6.5													
		psi	44	51	58	62	65	73	80	87	94													
XLD D1 A * L4R XLD D2 A * L5T X MINE D2 * L5R XSM D2+ L5S	L4R L5T L5R L5S	Loaders	Front laden	31000	35600	40200	42500	45000	49550	54200	58850	63500												
				68355	78498	88641	93713	99225	109258	119511	129764	140018												
			Rear unladen	24800	28500	32150	34000	36000	39650	43350	47100	50800												
				54684	62843	70891	74970	79380	87428	95587	103856	112014												
45/65 R 45																								

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)							Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)		
				Michelin® dimensions											
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. I 32nd gallon			

49"

24.00 R 49 Tubeless

XR B E3 ** 280400	35 21.7	610 418	725 28.5	2582 101.7 2634 103.7	2582 101.7	784 30.9	644 25.4	2480 97.6	1133 44.6	7522 296.1	37 46.6	1500 396	17.00/3.5 OR 3-49 553205	-
XDR B E4R ** 123235	26 16.2	453 310					657 25.9	2509 98.8	1144 45	7603 299.3		1420 375		
XDR B4 E4R ** 123115	22 13.7	384 263									68 85.7			
XDR A E4R ** 123095	18 11.2	314 215					645 25.4	2527 99.5	1156 45.5	7667 301.9		1500 396		
XDT B E4T ** 123793	30 18.6	523 358												
XDT A E4T ** 123803	22 13.7	384 263												
XDT A4 E4T ** 123823	18 11.2	314 215												
27.00 R 49 Tubeless														

XV C E2 ** 280557	50 31.1	1090 747	818 32.2	2761 108.7 884 34.8 2819 111	745 29.3	2648 104.3	1170 46.1	7934 312.4	33 41.6	2060 544	19.50/4.0 22.00/4.0 OR 3-49 553205	-
X-TRACTION S B E3T ** 689287	35 21.7	763 523			746 29.4	2647 104.2	1191 46.9	7982 314	46 58	2045 540		
X-TRACTION S A E3T ** 504986	27 16.8	589 403										
XDT B E4T ** 123783	30 18.6	654 448			726 28.6	2696 106.1	1221 48.1	8151 320.9	74 93.2	1935 511		
XDT A E4T ** 123763	22 13.7	480 329										
XDT A4 E4T ** 123773	18 11.2	392 269			729 28.7	2694 106.1	1223 48.1	8152 320.9	76 95.7	1978 523		
XDR C4 ?? ** ??????												
XDR B E4R ** 123330	26 16.2	567 388										
XDR B4 E4R ** 123210	22 13.7	480 329										
XDR A E4R ** 123170	18 11.2	392 269										
X-TRACTION B E4T ** 470320	30 18.6	654 448										
X-TRACTION A4 E4T ** 495676	18 11.2	392 269			743 29.3	2737 107.8	1235 49	8262 325	81 102	2045 540		
X-TRACTION B4 E4T ** 166905	26 16	567 388										

* Not available at this time

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)											Size
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49"

		APPLICATION	bar	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8
			psi	51	58	65	73	80	87	94	102	109	116
XR B ** E3 XDT B ** E4T XDR B ** E4R XDR B4 ** E4R XDT A ** E4T XDR A ** E4R XDT A4 ** E4T	E3 E4T E4R E4R E4T E4R E4T	Transport	Standard	13900	15250	16550	17850	19200	20500	21800	22450	23100	23350
				30650	33626	36493	39359	42336	45203	48069	49502	50936	51487
XVC ** E2 X-TRACTION S B ** E3T X-TRACTION S A ** E3T XDT B ** E4T XDT A ** E4T XDT A4 ** E4T XDR C XDR B ** E4R XDR B4 ** E4R XDR A ** E4R X-TRACTION B ** E4T X-TRACTION A4 ** E4T X-TRACTION B ** E4T X-TRACTION A4 ** E4T X-TRACTION B4 ** E4T	E2 E3T E3T E4T E4T E4T E4R E4R E4R E4T E4T E4T E4T E4T E4T E4T E4T	Transport	Standard	16850	18550	20300	22050	24000	25500	27250	28100	29000	29850
				37154	40903	44762	48620	52920	56228	60086	61961	63945	65819

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MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)	
				Michelin® dimensions									
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm 32nd	gallon

51"

30.00 R 51 Tubeless

XDR B E4R ** 123151	24 14.9	643 440	914 36	3033 119.4	988 38.9	835 32.9	2878 113.3	1291 50.8	8671 341.4	83 104.6	2490 658	22.00/4.5	OR 4-51 553210	-
XDR B4 E4R ** 123041	20 12.4	536 367												
XDR A E4R ** 123450	16 9.9	429 294												

33.00 R 51 Tubeless

XDC C4 E3V ** 645788	45 28	1395 956	992 39.1	3202 126.1	1073 42.2	889 35	2966 116.8	1332 52.4	8938 357.9	48 60.5	24.00/5.0	OR 4-51 553210	-
XDC B E3V ** 020166	39 24.2	1209 828				911 35.9	3040 119.7	1365 53.7	9159 360.6	87 109.6			
XDC B4 E3V ** 139019	34 21.1	1054 722											
XDT B E4T ** 123961	30 18.6	930 637											
XDT B4 E4T ** 123843	26 16.2	806 552											
XDT A E4T ** 123971	22 13.7	682 467											
XDT A4 E4T ** 123981	18 11.2	558 382											
XDR C4 E4R ** 839917	27 16.8	837 573											
XDR B E4R ** 123411	24 14.9	744 510				907 35.7	3032 119.4	1353 53.3	9116 358.9	88 110.9			
XDR B4 E4R ** 123281	20 12.4	620 425											
XDR A E4R ** 123161	16 9.9	496 340											

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)										Size
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51"

		APPLICATION	bar	3.5	4	4.5	5	5.5	6	6.5	7	
			psi	51	58	65	73	80	87	94	102	
XDR B ** E4R XDR B4 ** E4R XDR A ** E4R	E4R E4R E4R	Transport	Standard	22100	24350	26650	28950	31200	33500	34650	35800	
				48731	53692	58763	63835	68796	73868	76403	78939	
XDC C4 ** E3V XDC B ** E3V XDC B4 ** E3V XDT B ** E4T XDT B4 ** E4T XDT A ** E4T XDT A4 ** E4T XDR C4 ** E4R XDR B ** E4R XDR B4 ** E4R XDR A ** E4R	E3V E3V E3V E4T E4T E4T E4T E4R E4R E4R E4R	Transport	Standard	25550	28200	30800	33450	36600	38750	40100	41400	
				56338	62181	67914	73757	80703	85444	88421	91287	

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)
				Michelin® dimensions								
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm 32nd gallon

51"

36.00 R 51 Tubeless

XDC C4 E3V ** 975610	40 24.9	1480 1014	1097 43.2	3338 131.4	1186 46.7	1008 39.7	3145 123.8	1376 54.2	9387 369.6	57 71.8	3980 1052	26.00/5.0	OR 4-51 553210
XDC B E3V ** 320300 (7)	37 23	1369 938											
XDC B4 E3V ** 448558	34 21.1	1258 862											
XDR B E4R ** 123122	24 14.9	888 608											
XDR B4 E4R ** 123002	20 12.4	740 507				1011 39.8	3215 126.6	1430 56.3	9653 380	96 120.9			
XDR A E4R ** 123042	16 9.9	592 406											

50/65 R 51 Tubeless

X MINE D2 HR L5R ** 523260	6 3.7	1410 55.5	3133 123.3	1524 60	1273 50.1	3073 121	1368 53.9	9228 363.3	116 146.1	4463 1179	40.00/4.5	OR 4-51 553210
X MINE D2 SR L5R ** 970863	6 3.7											

57"

37.00 R 57 Tubeless

XDR C4 E4R ** 123073	27 16.8	1145 784	1118 44	3597 141.6	1219 48	1040 40.9	3456 136.1	1576 62	10645 419.1	98 123.5	27.00/6.0 29.00/6.0	OR 4-57 553211
XDR B E4R ** 123482	24 14.9	1018 697										
XDR B4 E4R ** 123362	20 12.4	848 581										
XDR A E4R ** 123242	16 9.9	678 464										
XDM B E4T ** 475323	24 14.9	1018 697				1022 40.2	3453 135.9	1678 66.1	10725 422.2	99 124.7		
XDM B4 E4T ** 725325	20 12.4	848 581										
XDM A E4T ** 857733	16 9.9	678 464										

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identifi-cation code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)											Size											
51"																								
APPLICATION		bar	3.5	4	4.5	5	5.5	6	6.5	7	7.5													
		psi	51	58	65	73	80	87	94	102	109													
XDC C4 ** E3V XDC B ** E3V XDC B4 ** E3V XDR B ** E4R XDR B4 ** E4R XDR A ** E4R	E3V E3V E3V E4R E4R E4R	Transport	Standard	30450	33600	36800	39950	43100	46250	47850	49400	51000												
				67142	74088	81144	88090	95036	101981	105509	108927	112455												
APPLICATION		bar	4	4.5	5	5.5	6	6.35																
		psi	58	65	73	80	87	92																
X MINE D2 HR ** L5R X MINE D2 SR ** L5R	L5R L5R	Loaders	Front laden	46500	50500	54500	58500	62500	65000															
				102533	111353	120173	128993	137813	143325															
			Rear unladen	37200	40400	43600	46800	50000	52000															
				82026	89082	96138	103194	110250	114660															
57"																								
APPLICATION		bar	4	4.5	5	5.5	6	6.5	7	7.5														
		psi	58	65	73	80	87	94	102	109														
XDR C4 ** E4R XDR B ** E4R XDR B4 ** E4R XDR A ** E4R XDM B ** E4T XDM B4 ** E4T XDMA ** E4T	E4R E4R E4R E4R E4T E4T E4T	Transport	Standard	38550	42200	45800	49400	53000	54850	56650	58450													
				85003	93051	100989	108927	116865	120944	124913	128882													

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (2) Michelin® dimensions						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)						
			e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon									
57"																				
40.00 R 57 Tubeless																				
XDM C E3V ** 150406	33 20.5	1584 1085	1218 48	3766 148.3	1316 51.8	1106 43.5	3497 137.7	1537 60.5	10452 411.5	64 80.6	5628 1487	29.00/6.0 32.00/5.0 32.00/6.0	OR 4-57 553211	-						
XDM C4 E3V ** 816612	30 18.6	1440 986				1121 44.1	3570 140.6	1569 61.8	10673 420.2	97 122.2										
XDM B E3V ** 542825	26 16.2	1248 855																		
XDM B4 E3V ** 601458	22 13.7	1056 723																		
XDR C E4R ** 765274	30 18.6	1440 986																		
XDR C4 E4R ** 123443	27 16.8	1296 888																		
XDR B E4R ** 123323	24 14.9	1152 789																		
XDR B4 E4R ** 123193	20 12.4	960 658																		
XDR A E4R ** 123173	16 9.9	768 526				1316 51.8					5630 1487									
50/80 R 57 Tubeless																				
XKD1 B E4R ** 123609	24 14.9	1382 947	1342 52.8	3619 142.5	1562 61.5	1266 49.8	3600 141.7	1563 61.5	10714 421.8	83 104.6	34.00/5.0	OR 4-57 553211	-	-						
XKD1 B4 E4R ** 123599	20 12.4	1152 789																		
50/80 R 57 Tubeless																				
XDR C4 E4R ** 929814 (7)	26 16.2	1518 1040	1342 52.8	3619 142.5	1562 61.5	1281 50.4	3624 142.7	1562 61.5	10758 423.5	94 118.4	6589 1741	34.00/6.0	OR 4-57 553211	-						
XDR B E4R ** 966177 (7)	22 13.7	1285 880																		
XDR B4 E4R ** 310787 (7)	20 12.4	1168 800																		
50/80 R 57 Tubeless																				
XDR C4 E4R ** 929814 (7)	26 16.2	1518 1040	1342 52.8	3619 142.5	1562 61.5	1281 50.4	3624 142.7	1562 61.5	10758 423.5	94 118.4	6589 1741	32.00/6.0	OR 4-57 553211	-	-					
XDR B E4R ** 966177 (7)	22 13.7	1285 880				1281 50.4	3624 142.7	1562 61.5	10758 423.5	94 118.4	6589 1741									
XDR B4 E4R ** 310787 (7)	20 12.4	1168 800																		

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)														
57"																
			APPLICATION	bar	4	4.5	5	5.5	6	6.5	7	7.5				
				psi	58	65	73	80	87	94	102	109				
XDM C ** E3V XDM C4 ** E3V XDM B ** E3V XDM B4 ** E3V XDR C ** E4R XDR C4 ** E4R XDR B ** E4R XDR B4 ** E4R XDR A ** E4R	E3V E3V E3V E3V E4R E4R E4R E4R E4R	Transport	Standard	43650	47750	51850	55950	60000	62050	64100	66150					
				96248	105289	114329	123370	132300	136820	141341	145861					
XKD1 B ** E4R XKD1 B4 ** E4R	E4R E4R	Transport	Standard	52380	57290	62190	67100	72000	74650	77290						
				115498	126324	137129	147956	158760	164603	170424						
	APPLICATION			bar	5	5.5	6	6.5	7							
				psi	73	80	87	94	102							
XDR C4 ** E4R XDR B4 ** E4R XDR B ** E4R XDR	E4R E4R E4R	Transport	Standard	63000	68000	73000	75500	78000								
				138915	149940	160965	166478	171990								
XDR C4 ** E4R XDR B4 ** E4R XDR B ** E4R	E4R E4R E4R	Transport	Standard	54350	58670	62980	65130	67290								
				119842	129367	138871	143612	148374								

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)		
				Michelin® dimensions										
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm 1		

57"

50/90 R 57 Tubeless

XDR C4 E4R ** 388084	28 17.4	1747 1197	1397 55	3609 142.1	1575 62	1260 49.6	3840 151.2	1696 66.8	11501 452.8	107 134.8	7920 2092	32.00/6.5	OR 4-57 553211	-
XDR B E4R ** 894079	24 14.9	1498 1026												
XDR B4 E4R ** 289603	20 12.4	1248 855												
XDR A E4R ** 976879	16 9.9	998 684												

55/80 R 57 Tubeless

X MINE D2 HR L5R * 817367	6 3.7	1537 60.5	3784 149	1430 56.3	3740 147.2	1633 64.3	11154 439.1	119 149.9	7967 2105	42.00/5.0 44.00/5.0	OR 4-57 553211	-	-	-
X MINE D2 LC L5R * 594400	6 3.7													
X MINE D2 SR L5R * 635563	6 3.7													

60/80 R 57 Tubeless

X MINE D2 HR L5R * 817367	6 3.7	1520 59.9	3949 155.5	1714 63.1	11750 463	118 149	10002 2646	47.00/5.0	OR 4-57 553211	-	-	-	-	-
X MINE D2 LC L5R * 594400	6 3.7													
X MINE D2 SR L5R * 635563	6 3.7													

63"

53/80 R 63 Tubeless

XKD1 C4 E4R ** 123579	28 17.4	1837 1258	1481 58.3	3846 151.4	1669 65.7	1330 52.4	3750 147.6	1630 64.2	11168 439.7	88 110.9	36.00/5.0 38.00/5.0	OR 4-63 553056	-	-
XKD1 B E4R ** 123569	24 14.9	1574 1078												
XKD1 B4 E4R ** 123559	20 12.4	1312 899												
XKD1 A E4R ** 123539	16 9.9	1050 719												
XDR B E4R ** 026549	24 14.9	1574 1078												
XDR B4 E4R ** 881484	20 12.4	1312 899												
XDR A E4R ** 983096	16 9.9	1050 719												

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identifi-cation code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)											Size
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57"

		APPLICATION		bar	4	4.5	5	5.5	6	6.5	7	7.5	
				psi	58	65	73	80	87	94	102	109	
XDR C4 ** E4R XDR B ** E4R XDR B4 ** E4R XDR A ** E4R	E4R E4R E4R E4R	Transport	Standard	52850	57800	62750	67700	72650	75320	78000	80660		
				116534	127449	138364	149279	160193	166081	171990	177855		
X MINE D2 HR * L5R X MINE D2 LC * L5R X MINE D2 SR * L5R	L5R L5R L5R	Loaders	Front laden	75000	80000	85000	90000	95000	100000	105000			
				165375	176400	187425	198450	209475	220500	231525			
			Rear unladen	60000	64000	68000	72000	76000	80000	84000			
				132300	141120	149940	158760	167580	176400	185220			
X MINE D2 HR * L5R X MINE D2 LC * L5R X MINE D2 SR * L5R	L5R L5R L5R	Loaders	Front laden	75000	83000	91000	99000	107000	115000	123000			
				165375	183015	200655	218295	235935	253575	271215			
			Rear unladen	60000	66400	72800	79200	85600	92000	98400			
				132300	146412	160524	174636	188748	202860	216972			

63"

		APPLICATION		bar	4	4.5	5	5.5	6	6.5	6.8	7	
				psi	58	65	73	80	87	94	99	102	
XKD1 C4 ** E4R XKD1 B ** E4R XKD1 B4 ** E4R XKD1 A ** E4R XDR B ** E4R XDR B4 ** E4R XDR A ** E4R	E4R E4R E4R E4R E4R E4R E4R	Transport	Standard	59660	65240	70830	76410	82000	85010	86822	88030		
				131550	143854	156180	168484	180810	187447	191443	194106		

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION TREAD DESIGN CAI (Part Number)	Max. dist. / hour km Miles	TKPH TMPH (1)	Standardized dimensions maximum in service	DIMENSIONAL CHARACTERISTICS (2)						Measuring Rim Approved Rims (3) - (4)	Tubeless O-Ring CAI (4)	Tube Type Ref. Flap (4)		
				Michelin® dimensions										
				e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm inches	Cap. mm 32nd gallon		

63"

56/80 R 63 Tubeless

XDR C4 E4R ** 282261	28 17.4	2150 1473		1764 69.4	1425 56.1	3998 157.4	1727 68	11876 467.6	105 132.3	9547 2522	41.00/5.0 [5.5] 41.00/5.0 [6.0]	OR 4-63 553056	-
XDR B E4R ** 819341	24 14.9	1843 1262											
XDR B4 E4R ** 380744	20 12.4	1536 1052											
XDR A E4R ** 741846 (7)	16 9.9	1229 842											

59/80 R 63 Tubeless

XDR S C4 E4S ** 784092 (7)	32 19.9	2535 1736		1648 64.9	4143 163.1	1858 73.1	1501 59.1	4028 158.6	1740 68.5	11966 471.1	71 89.4	10160 2684	44.00/5.0 [5.5] 44.00/5.0 [6.0]	OR 4-63 553056	-
XDR S B E4S ** 364848 (7)	28 17.4	2218 1519													
XDR S B4 E4S ** 524264 (7)	24 14.9	1901 1302													
XDR C4 E4R ** 416440 (7)	28 17.4	2218 1519													
XDR B E4R ** 443800 (7)	24 14.9	1901 1302													
XDR B4 E4R ** 037664 (7)	20 12.4	1584 1085													
XDR A E4R ** 490159	16 9.9	1267 868													

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread Design	Identification code (9)	Explanations on how to choose the tire and to determine the inflation pressures Refer to explanations and methods allowing to determine the inflation pressures (10)										Size										
63"																						
APPLICATION			bar	6	6.5	6.7																
			<i>psi</i>	87	94	97																
XDR C4 ** E4R XDR B ** E4R XDR B4 ** E4R XDR A ** E4R	E4R E4R E4R E4R	Transport	Standard	96000 211680	98900 218075	100000 220500																
APPLICATION			bar	6	6.5	6.8																
			<i>psi</i>	87	94	99																
XDR S C4 ** E4S XDR S B ** E4S XDR S B4 ** E4S XDR C4 ** E4R XDR B ** E4R XDR B4 ** E4R XDR A ** E4R	E4S E4S E4S E4R E4R E4R E4R	Transport	Standard	99000 218295	102100 225131	104000 229320																

APPROVED RIMS FOR EARTMOVER TIRES

Rim types	Rim designation	F mm inches	H mm inches	A' mm inches	Tire sizes	O-ring
DW rim DEEP WELL	18 x DW 10	254 10.0	25.4 1.0	513 20.2	335/80 R 18	
	18 x DW 11	279.4 11.0	25.4 1.0	513 20.2	335/80 R 18	
	24 x DW 10	254 10.0	25.4 1.0	665 26.2	11.2 LR 24	
	24 x DW 12	304.8 12.0	25.4 1.0	665 26.2	14.9 R 24	
	24 x DW 13	330.2 13.0	25.4 1.0	665 26.2	14.9 R 24	
	24 x DW 14 L (#)	355.6 14.0	25.4 1.0	665 26.2	16.9 R 24 17.5 LR 24 445/70 R 24	
	24 x DW 15 L (#)	381 15.0	25.4 1.0	665 26.2	16.9 R 24 17.5 LR 24 19.5 LR 24 445/70 R 24	
	24 x DW 16 L (#)	406.4 16.0	25.4 1.0	665 26.2	19.5 LR 24 495/70 R 24	
	26 x DW 15 L (#)	381 15.0	25.4 1.0	716 28.2	18.4 R 26 480/80 R 26	
	26 x DW 16 L (#)	406.4 16.0	25.4 1.0	716 28.2	18.4 R 26 480/80 R 26	
	28 x DW 14 L (#)	355.6 14.0	25.4 1.0	767 30.2	16.9 R 28	
	28 x DW 15 L (#)	381 15.0	25.4 1.0	767 30.2	16.9 R 28 19.5 LR 28	
	28 x DW 16 L (#)	406.4 16.0	25.4 1.0	767 30.2	19.5 LR 28	
	30 x DW 14 L (#)	355.6 14.0	25.4 1.0	818 32.2	16.9 R 30	
	30 x DW 15 L (#)	381 15.0	25.4 1.0	818 32.2	16.9 R 30 18.4 R 30	
	30 x DW 16 L (#)	406.4 16.0	25.4 1.0	818 32.2	18.4 R 30	
	34 x DW 15 L (#)	381 15.0	25.4 1.0	919 36.2	18.4 R 34	
	34 x DW 16 L (#)	406.4 16.0	25.4 1.0	919 36.2	18.4 R 34	
W rim WIDE DROP CENTER	16 x W 8 L (#)	203.2 8.0	21.6 0.9	449 17.7	11 LR 16	
	16 x W 10 L (#)	254 10.0	21.6 0.9	449 17.7	11 LR 16	
	18 x W 8	203.2 8.0	22.2 0.9	506 19.9	275/80 R 18	
	18 x W 8 L (#)	203.2 8.0	21.6 0.9	505 19.9	275/80 R 18	
	18 x W 9	228.6 9.0	25.4 1.0	513 20.2	275/80 R 18	
	18 x W 10	254 10.0	25.4 1.0	513 20.2	335/80 R 18 12.5/80 R 18	
	18 x W 10L (#)	254 10.0	21.6 0.9	513 20.2	335/80 R 18	
	18 x W 11	279.4 11.0	25.4 1.0	513 20.2	335/80 R 18 12.5/80 R 18	
	20 x W 8	203.2 8.0	22.2 0.9	557 21.9	275/80 R 20	
	20 x W 8 L (#)	203.2 8.0	21.6 0.9	556 21.9	275/80 R 20	
	20 x W 9	228.6 9.0	25.4 1.0	564 22.2	275/80 R 20 10.5 R 20	
	20 x W 10	254 10.0	25.4 1.0	564 22.2	335/80 R 20 375/75 R 20 12.5/80 R 20 405/70 R 20 (14.5 R 20)	
	20 x W 10 L	254 10.0	22.5 0.9	558 22.0	12.5/80 R 20	
	20 x W 13 L	330 13.0	25.5 1.0	564 22.2	400/70 R 20	
	20 x W 14 L	355.5 14.0	25.5 1.0	564 22.2	400/70 R 20 405/70 R 20 (16/70 R 20)	
	24 x W 10	254 10.0	25.4 1.0	665 26.2	11.2 LR 24	

(#) L reduced flange height

APPROVED RIMS FOR EARTMOVER TIRES

Rim types	Rim designation	F mm inches	H mm inches	A' mm inches	Tire sizes	O-ring
W rim WIDE DROP CENTER	24 x W 10 L (#)	254 10.0	21.6 0.9	658 25.9	11.2 LR 24	none
	24 x W 12	304.8 12.0	25.4 1.0	665 26.2	14.9 R 24	
	24 x W 13	330.2 13.0	25.4 1.0	665 26.2	14.9 R 24 440/70 R 24	
	24 x W 9	228.6 9.0	25.4 1.0	665 26.2	11.2 LR 24	
	24 x W 14 L (#)	355.6 14.0	25.4 1.0	665 26.2	16.9 R 24 17.5 LR 24 440/70 R 24 445/70 R 24 500/70 R 24	
	24 x W 15 L (#)	381 15.0	25.4 1.0	665 26.2	16.9 R 24 17.5 LR 24 19.5 LR 24 440/70 R 24 445/70 R 24 500/70 R 24	
	24 x W 16 L (#)	406.4 16.0	25.4 1.0	665 26.2	19.5 LR 24 495/70 R 24 500/70 R 24	
	26 x W 15 L (#)	381 15.0	25.4 1.0	716 28.2	18.4 R 26 480/80 R 26	
	26 x W 16 L (#)	406.4 16.0	25.4 1.0	716 28.2	18.4 R 26 480/80 R 26	
	28 x W 14 L (#)	355.6 14.0	25.4 1.0	767 30.2	16.9 R 28	
	28 x W 15 L (#)	381 15.0	25.4 1.0	767 30.2	16.9 R 28 19.5 LR 28	
	28 x W 16 L (#)	406.4 16.0	25.4 1.0	767 30.2	19.5 LR 28	
	30 x W 14 L (#)	355.6 14.0	25.4 1.0	818 32.2	16.9 R 30	
	30 x W 15 L (#)	381 15.0	25.4 1.0	818 32.2	16.9 R 30 18.4 R 30	
	30 x W 16 L (#)	406.4 16.0	25.4 1.0	818 32.2	18.4 R 30	
	34 x W 15 L (#)	381 15.0	25.4 1.0	919 36.2	18.4 R 34	
	34 x W 16 L (#)	406.4 16.0	25.4 1.0	919 36.2	18.4 R 34	
Flat base rims	15 - 6.00 S	152.4 6.0	33.3 1.3	448 17.6	7.50 R 15	none
		186.2 7.3	44 1.7	596 23.5	9.00 R 20 10.00 R 20 C 20 P (11/80 R 20) E 20 P (13/80 R 20)	Tyran (A 20)
	20 - 8.00 V	203.2 8.0	44 1.7	596 23.5	10.00 R 20 E 20 P (13/80 R 20)	
	20 - 8.50 V	215.9 8.5	44 1.7	596 23.5	12.00 R 20 E 20 P (13/80 R 20)	
	20 - 9.00 V	228.6 9.0	44 1.7	596 23.5	12.00 R 20 E 20 P (13/80 R 20)	
	20 - 10.00 V	254 10.0	44 1.7	596 23.5	E 20 P (13/80 R 20)	
	20 - 10.00 W	254 10.0	51 2.0	610 24.0	16.00 R 20 14.00 R 20	
	20 - 11.25	286 11.3	51 2.0	610 24.0	16.00 R 20	
	21 - 18.00	457.2 18.0	38 1.5	609 24.0	24 R 21	
	24 - 7.33 V	186.2 7.3	44 1.7	698 27.5	12.00 R 24 ***	
	24 - 8.00 V	203.2 8.0	44 1.7	698 27.5	12.00 R 24 ***	
	24 - 8.50 V	216 8.5	44 1.7	698 27.5	12.00 R 24 ***	
	24 - 9.00 V	228.6 9.0	44 1.7	698 27.5	14.00 R 24 *** 15.00 R 24 Pil	
	24 - 10.00 W	254 10.0	51 2.0	712 28.0	14.00 R 24 *** 15.00 R 24 Pil	
	(#) L reduced flange height	285.8 11.3	63.5 2.5	737 29.0	16.00 R 24 **	

APPROVED RIMS FOR EARTMOVER TIRES

Rim types	Rim designation	F mm inches	H mm inches	A' mm inches	Tire sizes	O-ring
15° taper drop center rims (DC - Drop Center)	16.5 x 8.25	209.5 8.2	12.7 0.5	445 17.5	10 R 16.5	
	16.5 x 9.75	247.7 9.8	12.7 0.5	445 17.5	12 R 16.5	
	19.5 x 14.00	355.5 14.0	12.7 0.5	521 20.5	18 R 19.5	
	20.5 x 16.00	406.5 16.0	12.7 0.5	546 21.5	525/65 R 20.5	
	20.5 x 18.00	457 18.0	12.7 0.5	546 21.5	24 R 20.5	
	22.5 x 11.75	298.5 11.8	12.7 0.5	597 23.5	15 R 22.5	
	22.5 x 14.00	355.5 14.0	12.7 0.5	597 23.5	18 R 22.5	
5° taper drop center rims (DC - Drop Center)	15 X 7.00	178 7.0	20.5 0.8	421 16.6	27 x 8.50 R 15	
	15 x 7J	178 7.0	17.3 0.7	415 16.3	27 x 8.50 R 15	
	20 x 9.00 DC	228.6 9.0	25.4 1.0	564 22.2	335/80 R 20	none
	20 x 11.00 DC	279.4 11.0	25.4 1.0	564 22.2	335/80 R 20 375/75 R20 405/70 R 20 425/75 R 20	
	20 x 12.00 DC	304.8 12.0	25.4 1.0	564 22.2	405/70 R 20 (16/70 R 20)	
	20 x 13.00 DC	330.2 13.0	25.4 1.0	564 22.2	405/70 R 20 (16/70 R 20) 425/75 R 20	
	24 x 9.00/1.5	228 9.0	38 1.5	690 27.0	13.00 R 24 * TG 14.00 R 24 * TG	
	25 x 12.00/1.3	305 12.0	33 1.3	701 27.6	15.5 R 25 * L2 - L3	
	25 x 13.00/1.4	330 13.0	36 1.4	707 27.8	15.5 R 25 * L2 - L3 17.5 R 25 * L2 - L3	
	25 x 14.00/1.3	355 14.0	33 1.3	701 27.6	17.5 R 25 * L2 - L3	
	25 x 14.00/1.5	355 14.0	38 1.5	711 28.0	17.5 R 25 * L2 - L3	
	18 - 5.50 F SDC	139.7 5.5	22.2 0.9	462 18.2	7.50 - 18	none
	24 - 8.00 TG SDC	203 8.0	35.5 1.4	685 27.0	13.00 R 24 * TG 14.00 R 24 * TG	Heupo (OR 2-25)
	24 - 10.00 VA SDC	254 10.0	43 1.7	700 27.6	13.00 R 24 * TG 14.00 R 24 * TG 16.00 R 24 * TG	
	24 - 10.00 WA SDC	254 10.0	51 2.0	714 28.1	14.00 R 24	
	20 - 11 SDC	279.4 11.0	25.5 1.0	564 22.2	335/80 R 20 375/75 R20 405/70 R 20 (14.5 R 20) 425/75 R 20	
5° taper semi drop center rims (SDC - Semi Drop Center)	20 - 13 SDC	330.2 13.0	25.5 1.0	564 22.2	400/70 R 20 405/70 R 20 (16/70 R 20) 425/75 R 20	R 1681 (OR6.6-20)
	24 - 16.00 T SDC	406 16.0	35.5 1.4	685 27.0	555/70 R 24 * TG	
	15 - B 6.5	165.1 6.5	38.1 1.5	460 18.1	7.50 R 15 8.25 R 15	Tyran (A 20)
	15 - 10.50	267 10.5	38 1.5	460 18.1	14.5 R 15 350/65 R 15	
	20 - B 6.5	165.1 6.5	38.1 1.5	589 23.2	9.00 R 20	
	20 - B 7.0	177.8 7.0	38.1 1.5	589 23.2	9.00 R 20 10.00 R 20	
	20 - 7.0 T	177.8 7.0	38.1 1.5	589 23.2	9.00 R 20 10.00 R 20	
	20 - 8.0 V	203.0 8.0	44.4 1.7	602 23.7	10.00 R 20 C 20 P (11/80 R 20) E 20 P (13/80 R 20)	
	20 - 8.5 V	216 8.5	44.4 1.7	602 23.7	12.00 R 20 E 20 P (13/80 R 20)	
	20 - B 7.5	190.5 7.5	43.2 1.7	599 23.6	9.00 R 20 10.00 R 20	
	20 - B 8.0	203.2 8.0	43.2 1.7	599 23.6	10.00 R 20 E 20 P (13/80 R 20)	
	20 - B 8.5	216 8.5	45.7 1.8	604 23.8	10.00 R 20 12.00 R 20	

APPROVED RIMS FOR EARTMOVER TIRES

Rim types	Rim designation	F mm inches	H mm inches	A' mm inches	Tire sizes	O-ring
5° taper bead seat rims (advanced rim)	15 - 5.5	139.7 5.5	30.5 1.2	448 17.6	7.50 R 15	none
	15 - 6.0	152.4 6.0	33 1.3	453 17.8	7.50 R 15 8.25 R 15	
	15 - 6.5	165.1 6.5	35.6 1.4	459 18.1	7.50 R 15 8.25 R 15	
	15 - 7.0	177.8 7.0	38 1.5	429 16.9	10.00 R 15 8.25 R 15	
	15 - 7.5	190.5 7.5	40.6 1.6	469 18.5	10.00 R 15	
	15 - 11.0	267 10.5	38 1.5	464 18.3	14.5 R 15	
	15 - 11.00 BD	267 10.5	36 1.4	459 18.1	14.5 R 15	
	15 - 11.50	267 10.5	38 1.5	463 18.2	14.5 R 15 350/65 R 15 400/80 R 15	
	20 - 6.5	165.1 6.5	35.6 1.4	586 23.1	9.00 R 20	Tyran (A 20)
	20 - 7.0	177.8 7.0	38 1.5	556 21.9	9.00 R 20 10.00 R 20	
	20 - 7.5	190.5 7.5	40.6 1.6	596 23.5	9.00 R 20 10.00 R 20 E 20 P (13/80 R 20)	
	20 - 8.0	203.2 8.0	43.2 1.7	601 23.7	10.00 R 20 C 20 P (11/80 R 20) 12.00 R 20 E 20 P (13/80 R 20)	
	20 - 8.5	215.9 8.5	45.7 1.8	606 23.9	12.00 R 20 E 20 P (13/80 R 20)	
	20 - 9.0	228.6 9.0	48.3 1.9	611 24.1	12.00 R 20 E 20 P (13/80 R 20)	
	20 - 10.0	254 10.0	50.8 2.0	616 24.3	12.00 R 20 E 20 P (13/80 R 20)	
	24 - 8.0	203.2 8.0	43.2 1.7	702 27.6	12.00 R 24 ***	none
	24 - 8.5	215.9 8.5	45.7 1.8	707 27.8	12.00 R 24 ***	
	24 - 9.0	228.6 9.0	48.3 1.9	713 28.1	14.00 R 24 *** 15.00 R 24 Pil	
	24 - 10.0	254 10.0	50.8 2.0	718 28.3	14.00 R 24 *** 15.00 R 24 Pil	
	25 - 8.5/1.3	216 8.5	33 1.3	701 27.6	13.00 R 25	
5° taper bead seat rims (3 pieces)	25 - 10.00/1.5	254 10.0	38 1.5	711 28.0	13.00 R 25 14.00 R 25	Heupo (OR 2-25)
	25 - 11.25/1.3	286 11.3	33 1.3	701 27.6	395/80 R 25 14.00 R 25	
	25 - 12.00/1.3	305 12.0	33 1.3	701 27.6	15.5 R 25 395/80 R 25	
	25 - 14.00/1.5	355 14.0	38 1.5	711 28.0	17.5 R 25	
	25 - 17.00/1.7	432 17.0	43 1.7	721 28.4	20.5 R 25 * 550/65 R 25	
	25 - 9.50/1.7 CR	241 9.5	43 1.7	721 28.4	14.00 R 25	
"CR" rims 3 piece for cranes	25 - 11.00/1.7 CR	279 11.0	43 1.7	721 28.4	16.00 R 25	Sulla (OR 3-25)
	25 - 14.00/1.7 CR	355 14.0	43 1.7	721 28.4	17.5 R 25	
	25 - 17.00/1.7 CR	432 17.0	43 1.7	721 28.4	20.5 R 25	

APPROVED RIMS FOR EARTMOVER TIRES

Rim types	Rim designation	F mm inches	H mm inches	A' mm inches	Tire sizes	O-ring
5° taper bead seat rims (5 pieces)	25 - 11.25/2.0 (*)	284 11.2	51 2.0	737 29.0	14.00 R 25 16.00 R 25	
	25 - 13.00/2.0	330 13.0	51 2.0	737 29.0	16.00 R 25	
	25 - 13.00/2.5 (*)	330 13.0	63.5 2.5	762 30.0	18.00 R 25	
	25 - 15.00/2.5	381 15.0	63.5 2.5	762 30.0	18.00 R 25	
	25 - 15.00/3.0 (*)	381 15.0	76 3.0	787 31.0	21.00 R 25	
	25 - 17.00/2.0 (*)	432 17.0	51 2.0	737 29.0	20.5 R 25 550/65 R 25	
	25 - 17.00/3.0	432 17.0	76 3.0	787 31.0	21.00 R 25	
	25 - 19.50/2.0	495 19.5	51 2.0	737 29.0	25/65 R 25	
	25 - 19.50/2.5 (*)	495 19.5	63.5 2.5	762 30.0	23.5 R 25 600/65 R 25 650/65 R 25 660/65 R 25	Sulla (OR 3-25)
	25 - 20.00/2.0	508 20.0	51 2.0	737 29.0	25/65 R 25	
	25 - 22.00/3.0 (*)	559 22.0	76 3.0	787 31.0	26.5 R 25 650/65 R 25 660/65 R 25 750/65 R 25	
	25 - 24.00/3.0	610 24.0	76 3.0	787 31.0	750/65 R 25	
	25 - 25.00/3.0	635 25.0	76 3.0	787 31.0	750/65 R 25	
	25 - 25.00/3.5 (*)	635 25.0	89 3.5	813 32.0	29.5 R 25 850/65 R 25	
	25 - 27.00/3.5	687 27.0	89 3.5	813 32.0	850/65 R 25	
	29 - 22.00/3.0	559 22.0	76 3.0	889 35.0	26.5 R 29 30/65 R 29	
	29 - 24.00/3.0	610 24.0	76 3.0	889 35.0	30/65 R 29	
	29 - 24.00/3.5	610 24.0	89 3.5	915 36.0	29.5 R 29 800/65 R 29	
	29 - 25.00/3.5	635 25.0	89 3.5	915 36.0	29.5 R 29	
	29 - 27.00/3.0	687 27.0	76 3.0	889 35.0	800/65 R 29 875/65 R 29	
	29 - 27.00/3.5	686 27.0	89 3.5	915 36.0	33.25 R 29	
	33 - 13.00/2.5	330 13.0	63.5 2.5	965 38.0	18.00 R 33	
	33 - 15.00/3.0	381.0 15	76.2 3.0	991 39.0	21.00 R 33	
	33 - 28.00/4.0	711 28.0	101.5 4.0	1041 41.0	33.5 R 33	Strix (OR 3-33)
	33 - 28.00/3.5	711 28.0	89 3.5	1016 40.0	35/65 R 33	
	33 - 32.00/4.5	813 32.0	114.5 4.5	1067 42.0	37.5 R 33	
	35 - 15.00/3.0	381 15.0	76 3.0	1041 41.0	21.00 R 35	
	35 - 17.00/3.0	432 17.0	76 3.0	1041 41.0	21.00 R 35	
	35 - 17.00/3.5	432 17.0	89 3.5	1067 42.0	24.00 R 35	
	35 - 25.00/3.5	635 25.0	89 3.5	1067 42.0	29.5 R 35	
	35 - 27.00/3.5	686 27.0	89 3.5	1067 42.0	33.25 R 35	
	35 - 29.00/3.5	737 29.0	89 3.5	1067 42.0	37.25 R 35	
	35 - 31.00/4.0	787 31.0	101.5 4.0	1092 43.0	37.25 R 35	

(*) new rims have an additional marking "IF".

Rims with integrated flanges "IF" for use with radial tires only.

The width of the flange is larger.

APPROVED RIMS FOR EARTMOVER TIRES

Rim types	Rim designation	F mm inches	H mm inches	A' mm inches	Tire sizes	O-ring
 5° taper bead seat rims (5 pièces)	39 - 32.00/4.5	813 32.0	114.5 4.5	1220 48.0	37.5 R 39 40.5/75 R 39	Fuodi (OR 3-39) Ref. 1580 (OR 9.8-45) Heyco (OR 3-49) Ref. 1479 (OR 4-51) Ref. 1481 (OR 4-57) Ref. 2053 (OR 4-63)
	39 - 32.00/4.0	813 32.0	101.5 4.0	1194 47.0	40/65 R 39	
	45 - 36.00/4.5	914 36.0	114.5 4.5	1372 54.0	45/65 R 45	
	49 - 13.00/2.7	330 13.0	70 2.7	1384 54.5	18.00 R 49	
	49 - 15.00/3.0	381 15.0	76 3.0	1397 55.0	21.00 R 49	
	49 - 17.00/3.0	432 17.0	76 3.0	1397 55.0	21.00 R 49	
	49 - 17.00/3.5	432 17.0	89 3.5	1423 56.0	24.00 R 49	
	49 - 19.50/4.0	495 19.5	101.5 4.0	1448 57.0	27.00 R 49	
	51 - 22.00/4.5	559 22.0	114.5 4.5	1524 60.0	30.00 R 51	
	51 - 24.00/5.0	610 24.0	127 5.0	1549 61.0	33.00 R 51	
	51 - 26.00/5.0	660 26.0	127 5.0	1549 61.0	36.00 R 51	
	57 - 27.00/6.0	686 27.0	152 6.0	1752 69.0	37.00 R 57	
	57 - 29.00/6.0	736 29.0	152 6.0	1752 69.0	40.00 R 57 37.00 R 57	
	57 - 32.00/5.0	813 32.0	127 5.0	1702 67.0	40.00 R 57	
	57 - 32.00/6.0	813 32.0	152 6.0	1752 69.0	40.00 R 57	
	57 - 32.00/6.0	813 32.0	152 6.0	1752 69.0	50/80 R 57	
	57 - 32.00/6.5	813 32.0	165 6.5	1778 70.0	50/90 R 57	
	57 - 34.00/5.0	864 34.0	127 5.0	1702 67.0	50/80 R 57	
	57 - 42.00/5.0	1067 42.0	127 5.0	1702 67.0	55/80 R 57	
	57 - 44.00/5.0	1117 44.0	127 5.0	1702 67.0	55/80 R 57	
	57 - 47.00/5.0	1194 47.0	127 5.0	1702 67.0	60/80 R 57	
	63 - 36.00/5.0	914 36.0	127 5.0	1854 73.0	53/80 R 63	Ref. 2053 (OR 4-63)
	63 - 41.00/5.0	1041 41.0	127 5.0	1854 73.0	56/80 R 63	
	63 - 44.00/5.0	1117 44.0	127 5.0	1854 73.0	59/80 R 63	

Note: Depending on the vehicle fitment, there may be other size wheels that should be used.
Consult Michelin® for the proper rim by vehicle.

MICHELIN® EARTMOVER TUBES

Rim diameter	Fits tire sizes	Tube reference	Valve reference	Valve type (#)	Tube + valve CAI	Flap reference	Flap CAI
15"	7.50 R 15	15/16 J	570	SC	101106	15x6.00	511268
	8.25 R 15	15 K	1221	DC	101126	15x6.00	511268
	10.00 R 15	15 P	582	TC	510204	15x7.50	084220
16"	11 LR 16	16 P 15	611	DR	101163	-	-
18"	275/80 R 18 (10.5 R 18)	KLEBER 438	TR 218A	DR	171109	-	-
	335/80 R 18 (12.5 R 18)	KLEBER 444	TR 218A	DR	170025		
19.5"	18 R 19.5 525/65 R 20.5	19.5/20.5 UD	1964	DR	101280	-	-
20"	9.00 R 20 C 20	20 M	1157	SC	101153	20x7.50 20x8.50	818874 111005
	10.00 R 20	20 N	1158	SC	101161	20x7.50	818874
	11.00 R 20 E 20 Pilote	20 P	1158	SC	101173	20x8.50	111005
	275/80 R 20 (10.5 R 20) 335/80 R 20 (12.5 R 20)	KLEBER 444	TR 218A	DR	170025	-	-
	12.00 R 20	20 Q	1158	SC	101192	20x8.50	111005
	14.00 R 20	20 Q	1158	SC	101192	20x10.0	004489
	375/75 R 20 (14.5 R 20) 405/70 R 20 (14.5 R 20 & 16/70 R 20)	KLEBER 664	TR 218A	DR	171112	-	-
	425/75 R 20 (16.5/75 R 20)	KLEBER 829	TR 218A	DR	751070	-	-
	16.00 R 20	20 V	576	SC	511937	20x10.00	004489
20.5"	24 R 20.5	20.5 WAMD	1837 (TRJ650)	SC	101331	-	-
21"	24 R 21	21 WAM	1837 (TRJ650)	SC	101333	17-20	551436
22.5"	15 R 25.5	20 S	582	TC	101221		
	18 R 22.5	22.5 TAMD	1837 (TRJ650)	SC	101853	-	-
		22.5 TD	1964	DR	101863	-	-
24"	10.00 R 24 11.2 R 24	KLEBER 690	TR 218A	DR	170036	-	-
	12.00 R 24	24 Q	582	TC	101196	24/25x8.50	001444
	13.00 R 24 on DC and SDC rim 14.00 R 24 TG on DC and SDC rim 14.9 R 24	KLEBER 703	TR 218A	DR	171114	13-24 DR	102902
	13.00 R 24 on DC and SDC rim 14.00 R 24 TG on DC and SDC rim	24 TD	577	SC	101244	13-24 DR	102902
	14.00 R 24 on flat base rim 15.00 R 24	24/25 T	752	SC	514503	13-24/25	551600
24/25"	13.00 R 25					24/25x8.50	001444
	14.00 R 25					13-24/25	551600
	14.00 R 24 on flat base rim 15.00 R 24 14.00 R 25	24/25 T AM	1837 (TRJ650)	SC	101781	13-24/25 S	551601
	17.5 R 25					16-24/25	551608
	16.00 R 24 ** on flat base rim 16.00 R 25	24/25 V AM	1837 (TRJ650)	SC	101811	14-24/25	551604
	20.5 R 25					17-24/25	551610
	16.00 R 24* on SDC rim	24/25 VD	577	SC	101299	13-24 DR	102902
24/26"	16.9 LR 24 17.5 LR 24 19.5 LR 24 440/70 R 24 (17.5 LR 24) 500/70 R 24 (19.5 LR 24)	(710) KLEBER	TR 218A	DR	170042	-	-

(#) DR = straight valve, SC = single bend valve, DC = double bend valve, TC = triple bend valve, see pages 131 to 134.

MICHELIN® EARTMOVER TUBES

Rim diameter	Fits tire sizes	Tube reference	Valve reference	Valve type (#)	Tube + valve CAI	Flap reference	Flap CAI
25"	15.5 R 25 395/80 R 25	25 S AM	1837 (TRJ650)	SC	101771	15-24/25	551606
	18.00 R 25	25 W AM	1837 (TRJ650)	SC	101871	16-24/25	551608
	23.5 R 25					18-24/25	551612
	21.00 R 25	25 YB AM	1837 (TRJ650)	SC	101346	17-24/25	551610
	26.5 R 25					18-24/25	551612
	29.5 R 25					19-25 (8)	102610
26"	18.4 R 26	KLEBER 716	TR 218A	DR	170047	-	-
28"	16.9 R 28 19.5 LR 28	KLEBER 822	TR 218A	DR	170149	-	-
29"	26.5 R 29	29 W AM	1837 (TRJ650)	SC	101823	19-29 (8)	102620
	29.5 R 29 33.25 R 29	29 YE AM1	1837 (TRJ650)	SC	101803	19-29 (8)	102620
30"	16.9 R 30 18.4 R 30	KLEBER 754 & 757	TR 218A	DR	170058 & 170060	-	-
33"	18.00 R 33	33 VF AM	1837 (TRJ650)	SC	101321	16-33	551760
	33.5 R 33	33/35 YE AM	1837 (TRJ650)	SC	101833	20-33	551770
34"	18.4 R 34	KLEBER 823	TR 218A	DR	170150	-	-
35"	24.00 R 35	33/35 YE AM	1837 (TRJS650)	SC	101833	16-35	551800
	29.5 R 35					20-35	551808
	33.25 R 35 37.25 R 35						

(#) DR = straight valve, SC = single bend valve, DC = double bend valve, TC = triple bend valve, see pages 131 to 134.

TUBE MARKINGS

example 1: **24/25 V AM**

example 2: **25 YB AM**

The first two numbers indicate the bead seat (rim) diameter of the tire into which the tube can be fitted (in the first example, the tube may be fitted in 24 and 25 inch tires. In the second example, the tube may be fitted only in 25 inch tires).

The first letter corresponds to the section width of the tube (internal width of the tire).

This ranges from A to Z, with A being the smallest, and Z the largest.

In the examples above, V and Y indicate that the tubes are designed for fitting into tires of relatively large section width.

Sometimes, a second letter provides additional information (example 2) B, E, F and H indicate intermediate widths.

The third and fourth letters are an indication of the valve type.

AM indicates that the tube is fitted with an American valve base: R1946 (TRA SP4000) and a valve stem R1837 (TRJ 650).

D would indicate that the valve is offset. T would indicate a tractor tube fitted with an air-water valve, type TR 218A.

Explanation on valves and valve bases are given on subsequent pages.

FLAP MARKINGS

example: **14-24/25**

The first number indicates the total width of the flap when laid flat (includes height of edges), expressed in either mm or in inches. In the example above, the width of the flap is 14 inches.

The second number indicates the rim diameter, or the tire bead seat (rim) diameter in inches, with which the flap is to be used.

In this example, the flap may be used with 24 and 25 inch tires.

Additional letters may be used to provide supplementary information.

For example, the significance of different letters is as follows: L - the edges are tapered,

B - the flap has a reinforcing boss around the valve hole, S - the flap is reinforced, D - offset hole valve.

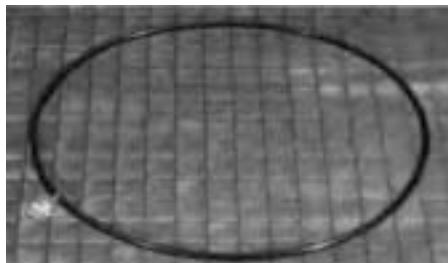
SEALS FOR MICHELIN® EARTMOVER TIRES AND RIMS

Name	Designation	Reference	CAI	Type	Remarks
-	OR 6.6 - 20	R 1681	553 215	O-ring	for fitting 335/80 R 20, 375/75 R 20 405/70 R 20 and 425/75 R 20 tyre on SDC rim
-	OR 6-6 - 21	R 1506	553 213	O-ring	
Heupo	OR 2 - 25	R 1438	553 201	O-ring	for fitting 25" rim (3 pieces) for fitting 12.00 R 24, 13.00 R 24, 14.00 R 24 and 555/70 R 24 tyres on TG and SDC rim
Sulla	OR 3 - 25	R 1437	553 200	O-ring	for 25" rim (5 pieces) and for 3 pieces CR rims (cranes)
Sulky	OR 3 - 29	R 1439	553 202	O-ring	for 29" rim
-	OR 2 - 32	R 2052	553 055	O-ring	
Strix	OR 3 - 33	R 1440	553 203	O-ring	for 33" rim
Stras	OR 3 - 35	R 1441	553 204	O-ring	for 35" rim
Fuodi	OR 3 - 39	R 1069	553 206	O-ring	for 39" rim
-	OR 9-8-45	R 1580	553 214	O-ring	for 45" rim
Heyco	OR 3 - 49	R 1442	553 205	O-ring	for 49" rim
-	OR 4 - 51	R 1479	553 210	O-ring	for 51" rim
-	OR 4 - 57	R 1481	553 211	O-ring	for 57" rim
-	OR 4 - 63	R 2053	553 056	O-ring	for 63" rim

Tyran	A 20	R 1443	553 004	Corner seal	for C20 Pil X LC
Lemmerz	-	3886-6	800 098	Corner seal	for fitting TG tyres on 24" SDC rims
-	B 24/25	R 1528	553 021	Corner seal	
Iceru	G 25	R 1237	553 012	Corner seal	for fitting 12.00 R 24 X MINE D2
Icesy	G 29	R 1238	553 013	Corner seal	Bead seal 29"
Icita	G 33	R 1239	553 014	Corner seal	Bead seal 33"
Icive	G 35	R 1240	553 015	Corner seal	Bead seal 35"
Icali	G 39	R 1233	553 011	Corner seal	Bead seal 39"
Icibi	G 49	R 1241	553 016	Corner seal	Bead seal 49"
Icico	G 51	R 1242	553 017	Corner seal	Bead seal 51"

SEALS DESCRIPTION

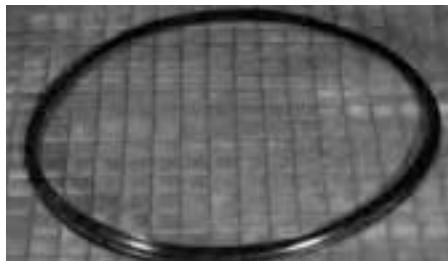
O-RING:



Explanation of the sealing ring's naming process:

- OR: Abbreviation of O Ring
- The first number is the section diameter of the seal:
 - integer number: value expressed in 1/8 of inch (3 = 3/8)
 - decimal number: value expressed in mm (6.6 = 6.6 mm)
- The second number is the nominal bead seat diameter, expressed in inches.

CORNER SEAL:



Explanation of the corner seal's naming process:

- The letter indicates the profile of the seal
- The number is the nominal rim diameter, in inches.

NOTE: APPROVAL FOR USE OF CORNER SEALS MUST BE OBTAINED FROM MICHELIN®.

VALVES AND ASSOCIATED ACCESSORIES

CAR TUBE TYPE STRAIGHT VALVE



Michelin® code	ETRTO code	Valve code	Valve hole ø in mm
611	V2-01-2	TR 15	16
746	V2-01-1	TR 13	11.5

FITTING A UNIVERSAL VALVE ON A MICHELIN® TUBE WITH A VALVE BASE



- 1 - Position the sealing ring on the valve. The sealing ring must be clean and dry.
- 2 - Hand tighten the valve until it just touches the sealing ring.
- 3 - Tighten the valve for a further two turns.
- 4 - To orientate the valve in the desired position, tighten further.

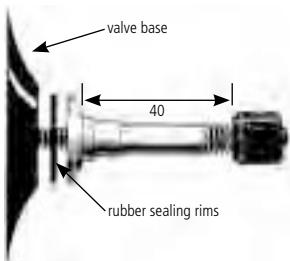


IMPORTANT: never unscrew the valve to the desired position.

Note: Do not exceed the tightening guidelines given above.

Do not forget to replace the valve cap to prevent dirt ingress and to ensure air tightness.

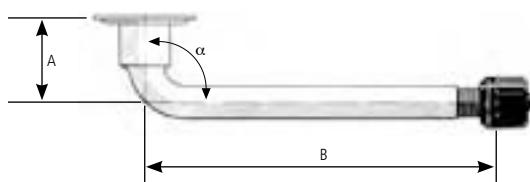
SMALL TRUCK UNIVERSAL STRAIGHT VALVE



- Fitted to MICHELIN® tubes used as replacement with 5° and 15° non U type rims.

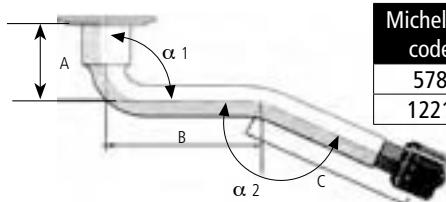
Michelin® code	ETRTO designation	Valve hole ø in mm	A mm	A inches
1964	/	9.7	40	1.57

TRUCK TYPE UNIVERSAL SINGLE BEND VALVE



Michelin® code	ETRTO designation	A mm	A inches	B mm	B inches	α°
570	V3-02-2	22.5	0.89	43	1.69	120
576	V3-02-3	33	1.30	44.5	1.75	95
577	V3-02-4	39.5	1.56	44.5	1.75	110
752	V3-02-17	20.5	0.81	156.5	6.16	90
1157	V3-02-12	20.5	0.81	132	5.2	94
1158	V3-02-14	20.5	0.81	138.5	5.45	94

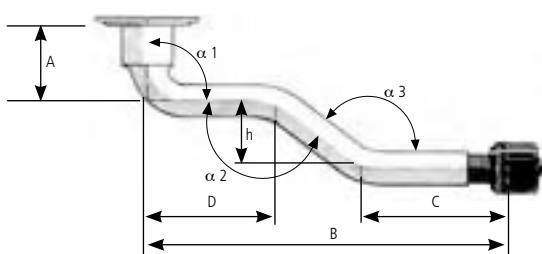
TRUCK TYPE UNIVERSAL DOUBLE BEND VALVE



Michelin® code	ETRTO designation	$\alpha 1^\circ$	$\alpha 2^\circ$
578	V3-04-1	90	140
1221	V3-05-1	90	165

A		B		C	
mm	inches	mm	inches	mm	inches
20.5	0.81	32	1.26	37	1.46
15.5	0.61	32.5	1.28	66	1.46

TRUCK TYPE UNIVERSAL DOUBLE BEND VALVE



Michelin® code	ETRTO designation	$\alpha 1^\circ$	$\alpha 2^\circ$	$\alpha 3^\circ$
582	V3-06-5	90	139	139

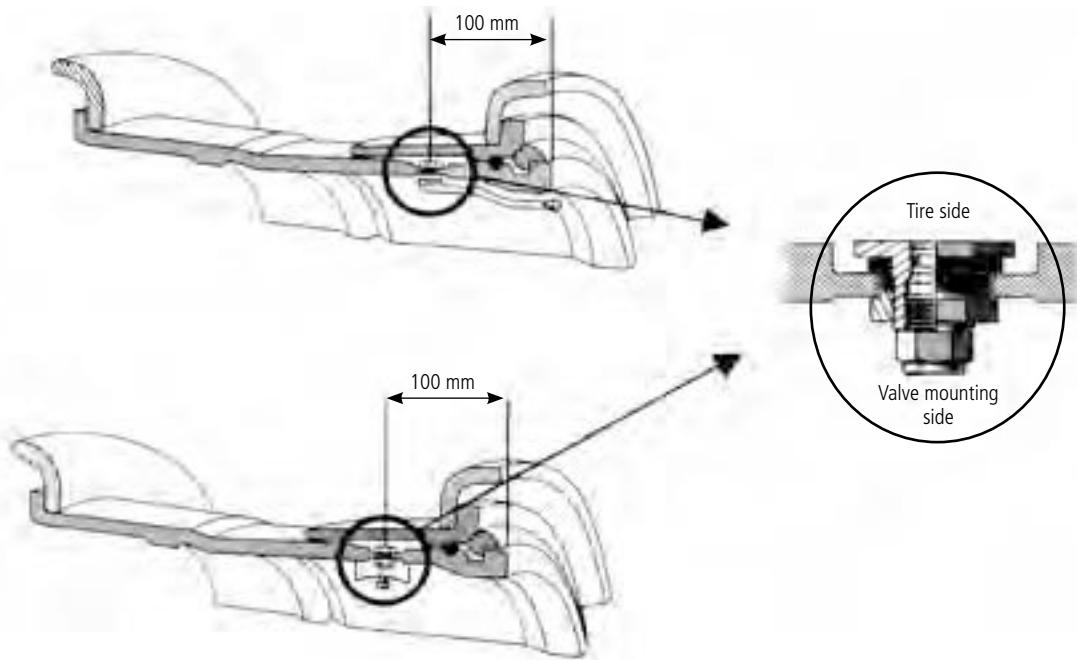
A		B		C		D	
mm	inches	mm	inches	mm	inches	mm	inches
20.5	0.81	131	5.16	49	1.93	62.5	2.46

VALVES AND ASSOCIATED ACCESSORIES

TYPES OF TUBELESS EARTMOVER VALVES

VALVE TYPE A1

TYPE A1

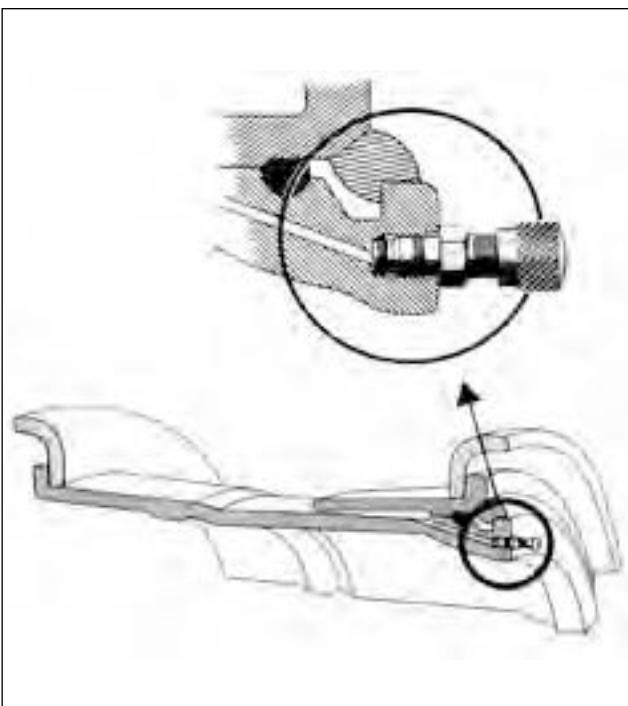


TYPE A1 D

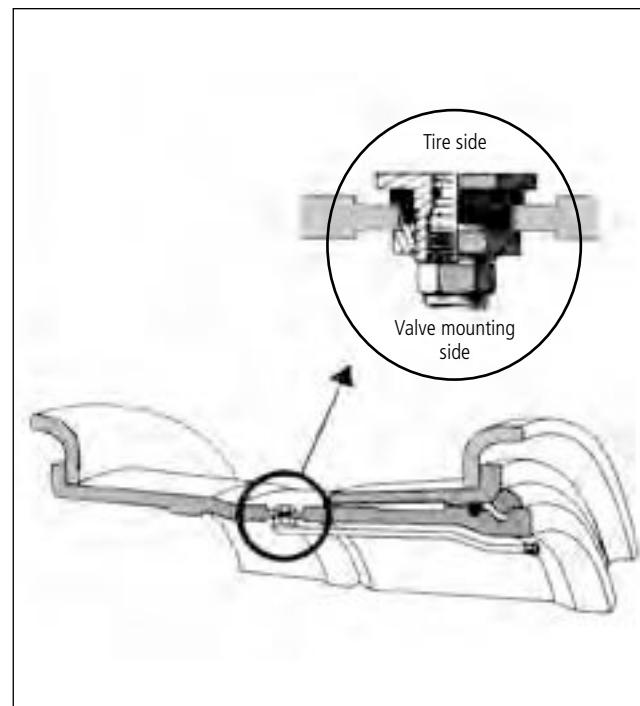
VALVE COMBINATION TYPE A4:

Comprised of two TYPE A1 valves, both set at 100 mm from the rim edge, to enable water filling.

VALVE TYPE A2

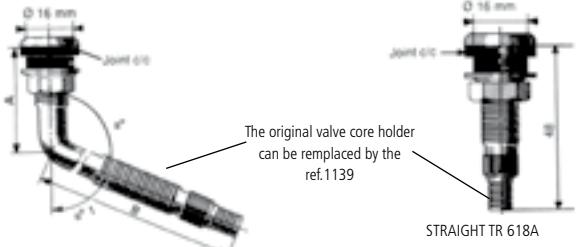


VALVE TYPE A3



VALVES AND ASSOCIATED ACCESSORIES

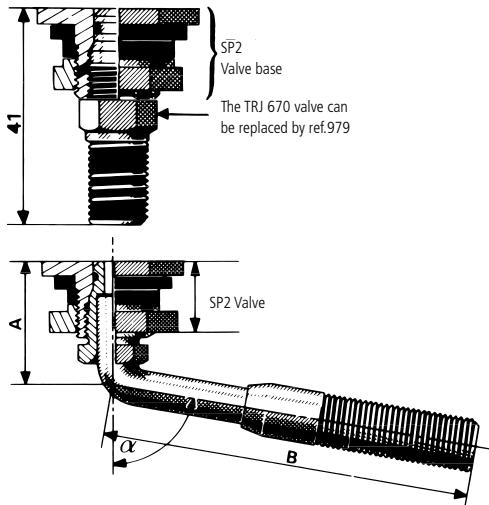
AIR AND WATER TUBELESS VALVES AMERICAN TRA STANDARD



TRA code	ETRTO designation	A		B		α°
		mm	inches	mm	inches	
TR 618 A	V5-01-1	47.5	1.87	-	-	-
TR 621 A	V5-02-1	39	1.54	76	2.99	115°
TR 622 A	V5-02-2	44.5	1.75	117	4.61	90°
TR 623 A	V5-02-3	39	1.54	57	2.24	115°

Valves for 15.7 mm (0.6 inch) diameter hole

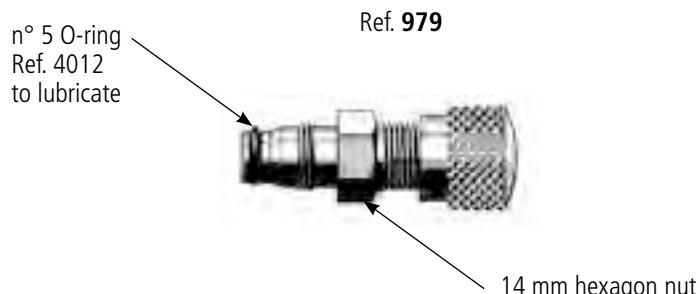
EARTMOVER TUBELESS VALVE (AMERICAN, TRA STANDARD)



Michelin® code	TRA code	ETRTO designation	A		B		α°
			mm	inches	mm	inches	
R 1837	TRJ 650	V5-04-1	27	1.08	79	3.12	100°
	TRJ 651	V5-04-2	32	1.27	119	4.69	90°
	TRJ 652		27	1.08	140	5.5	94°
	TRJ 653		27	1.08	63	2.5	100°
	TRJ 654		27	1.08	79	3.12	120°
	TRJ 655		27	1.08	79	3.12	106°
	TRJ 656		67	2.62	94	3.69	90°
	TRJ 657		27	1.08	102	4	100°
	TRJ 658		27	1.08	140	5.5	100°
	TRJ 659		48	1.89	89	3.5	90°
	TRJ 660		48	1.89	222	8.75	90°
	TRJ 669		27	1.08	64	2.5	90°
R 979	TRJ 670		41	1.63	-	-	-

Valves used on an American valve base SP2 [20.5 mm (0.8 inch) diameter hole] and also on AM tubes.

STRAIGHT LARGE BORE VALVES

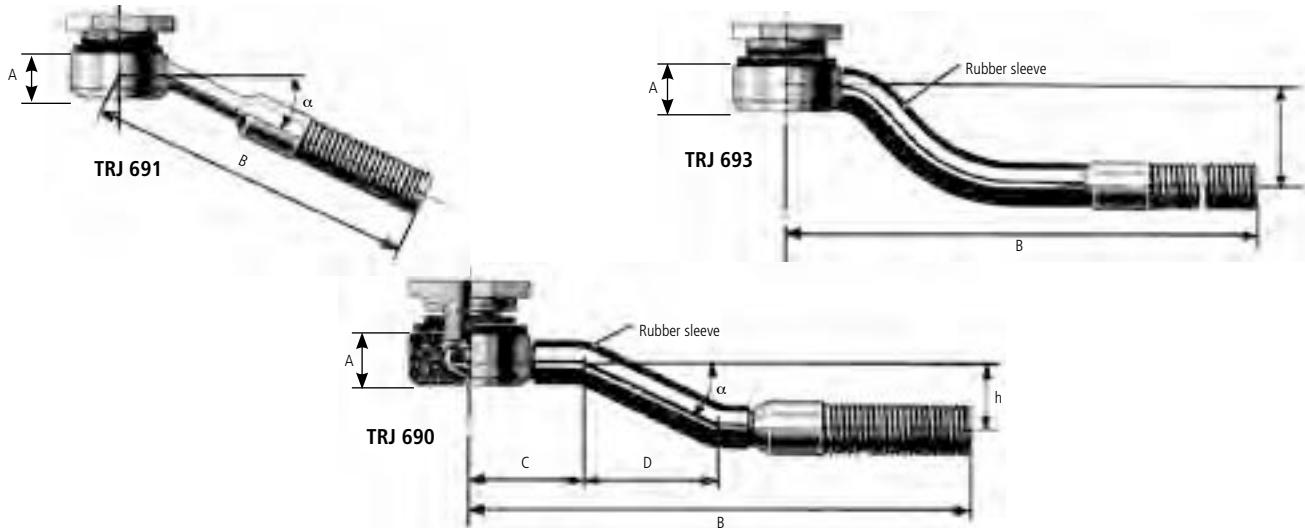


Used with Type A2 rim contour or with SP2 base (may also replace TRJ 670).

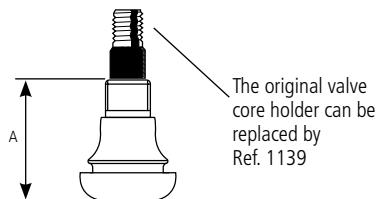
VALVES AND ASSOCIATED ACCESSORIES

SINGLE PIECE VALVES (20.5 mm valve hole)

TRA code	A		B		C		D		H		α°
	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	
TRJ 690	16	0.63	119	4.69	32	1.26	27	1.06	14	0.55	28
TRJ 691	16	0.63	84	3.31							18
TRJ 693	16	0.63	127	5.00					25	0.98	



AIR AND WATER TUBELESS STRAIGHT RUBBER VALVES



The original valve core holder can be replaced by Ref. 1139

A mm/inches	Designation
35	35 GSW 15.7

Valves for 15.7 mm (0.6 inch) diameter hole

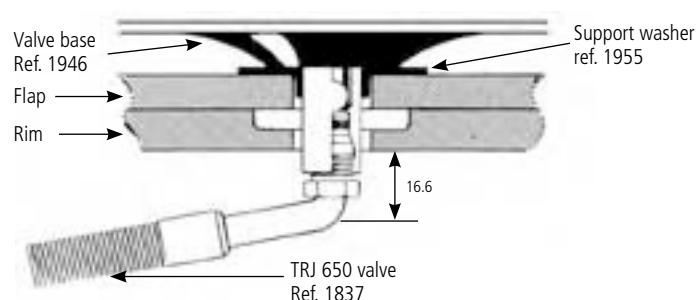


Caution ! Don't use this valve with pressures higher than 4.5 bar.

VALVE BASE

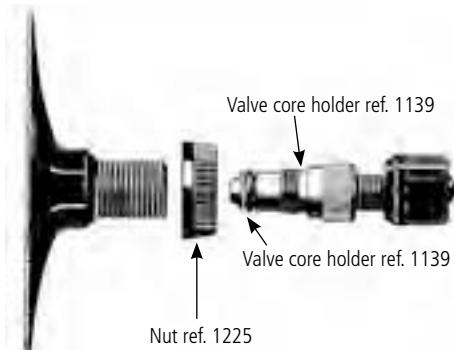
ACTUAL VALVE

(FITMENT WITH TUBE)



AIR AND WATER AGRICULTURAL TYPE VALVE BASE

Allows tire to be water filled.
Valve with core holder 1139 and plastic nut ref. 1225.



Ref. 1224 Code TR 218 A

NOTES

INDUSTRIAL TIRES

Tires for mechanical handling equipment used in areas where there is a high risk of fire or explosion, such as the chemical and petrochemical industries, must meet certain standards concerning their electrical resistivity. These requirements are indicated in the operating norms.

Conforming tires are known as "Antistatic Class 1".

ALL MICHELIN® INDUSTRIAL Tires are marked (or will be progressively marked) with the following symbol moulded into the sidewall.

Notes: for other ranges of TIRE used on mechanical handling equipment in high risk areas, contact Michelin® for advice.



The information given in this brochure is subject to modification without notice.
Figures given for information only and may change. They can not be used for legal purposes.

TIRE CONSTRUCTION

THE SOLID TIRE (PSS – PNEUMATIC SHAPED SOLID) CONSTRUCTION

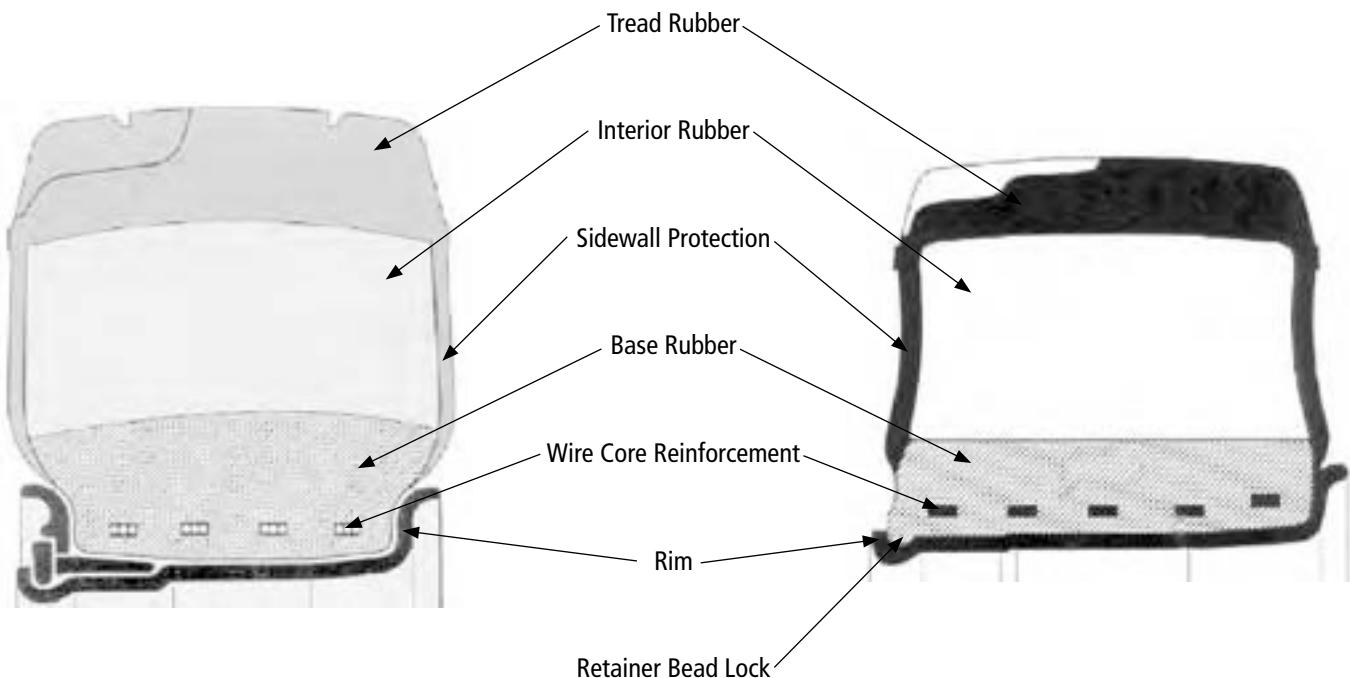


fig. 1

fig. 2

The whole tire is made of rubber, with the possibility of three different rubber compounds.

The construction of the tires is different, depending on how they are fitted to the rim.

- the tire may be built to look like a pneumatic tire, and can be fitted to a multipiece rim (fig. 1)
- the tire may be designed and built in such a manner that it is not necessary to use the removable pieces of the rim to hold the tire in position once fitted.

There is an extension to the base of the tire called the "Retainer Bead" which sits in the locking ring groove to hold the tire in place.

As a result, the removable parts of the wheel are not supplied, making the fitment of a pneumatic tire impossible without purchase of these components (fig. 2)

Disadvantages

- High Rolling Resistance
- Severe thermal degradation with intensive use
- Special Fitting Equipment needed (60 ton hydraulic press)
- Poor load and machine protection
- Poor comfort level
- High purchase price
- Poor Traction properties

Advantages

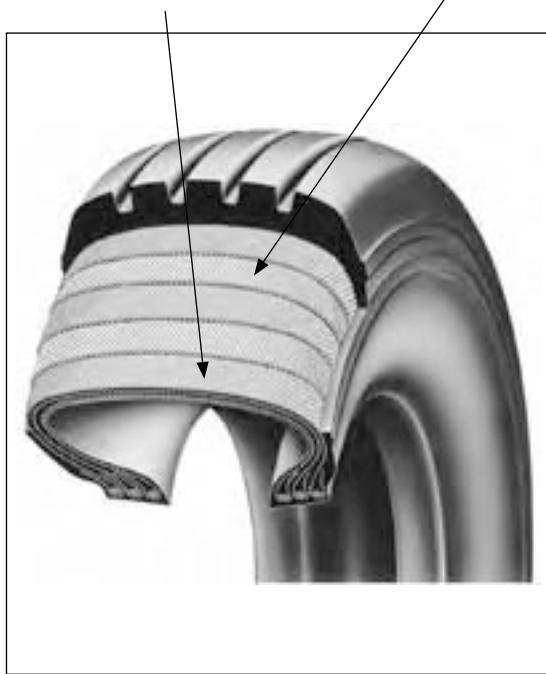
- Puncture-proof tire
- Practically maintenance free
- High levels of stability

TIRE CONSTRUCTION

DIAGONAL PLY CONSTRUCTION

The casing
is made up of several
criss-crossed fabric plies.

The crown
is **not stabilized.**



The crown and sidewalls are formed by the same ply structure. The tread is affected by flexing of the sidewalls, resulting in,

- deformation of the tire contact area on the ground
- movement in the tread contact area.

The casing plies tend to "scissor" in relation to each other.

Disadvantages:

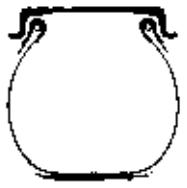
- accelerated wear.
- less grip.
- increased fuel consumption.



MICHELIN® X® RADIAL CONSTRUCTION

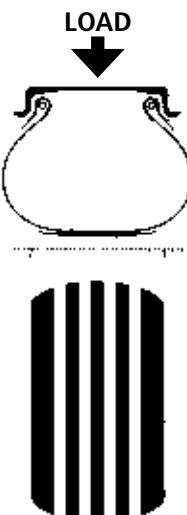
The crown
is stabilized by
several steel plies.

The casing has
one steel radial
ply.



The sidewall and tread function separately. The tread is unaffected by the flexing of the sidewalls, so there is:

- less deformation of the tire contact area on the ground.
- less movement in tread contact area.
- no movement between casing plies.



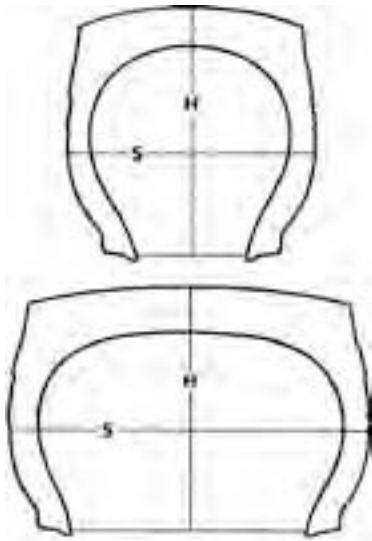
Radial Advantages:

- longer tire life.
- better traction on all types of surface.
- lower fuel consumption due to lower rolling resistance.
- improved comfort.
- increased resistance to punctures / flats.
- increased resistance to heating.

GENERAL INFORMATION

THE DIFFERENT TIRE FAMILIES

There are different tire families categorized by the aspect ratio H/S:
(the ratio between the sidewall height and the tire width).



100 series or standard tire (narrow base)

The H/S aspect ratio is approximately equal to 1.00.

The section width, given in inches, is a whole number

e.g.: 12.00 R 20

or the section width, given in inches, is a whole number followed by a fraction.

e.g.: 8.25 R 15

Low profile tires (65, 70, 75, 80 series)

The H/S aspect ratio is less than to 1 (0.65 - 0.70 - 0.75 or 0.80)

The section width is given in millimeters followed by the number 65, 70 or 75.

e.g.: 225/75 R 10

355/65 R 15

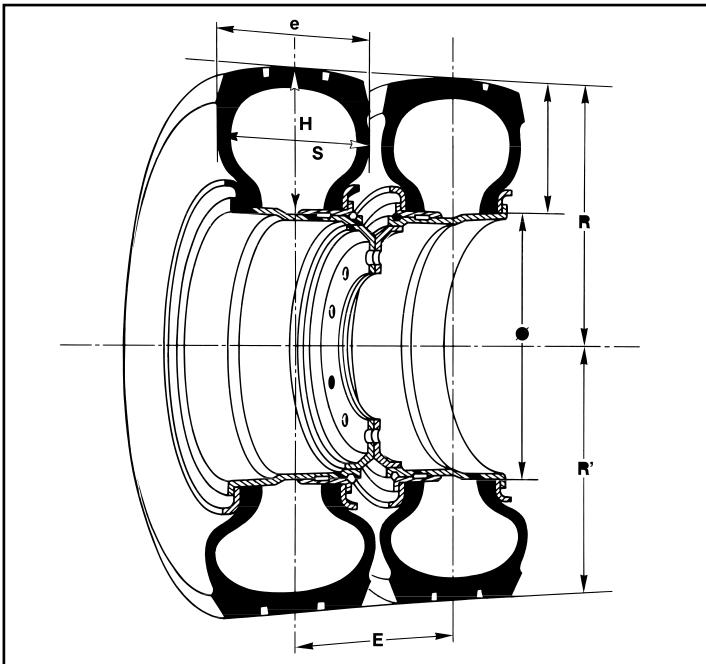
THE DIFFERENT TIRE SIZE DESIGNATIONS

EQUIVALENT MARKINGS					EXPLANATION							
Ø of rim (inches)	STANDARDIZED TIRE SIZE DESIGNATION	RADIAL MARKING	METRIC TIRE SIZE DESIGNATION	RADIAL MARKING	Ø ext. (inch)	section width (inches)	section width (mm)	aspect ratio H/S	Ø of rim (inches)	load index	speed index	Ply Rating
4	4.80 - 4	4.00 - 4					4.00			4		
8	4.80 - 8	4.00 - 8					4.00			8		
	5.70 - 8	5.00 - 8	5.00 R 8				5.00			8	111	A5
	15 x 4 - 8			125 / 75 - 8		15	x 4.5	125 / 75	8			
	16 x 6 - 8			150 / 75 - 8		16	x 6	150 / 75	8			
	18 x 7 - 8	18 x 7		180 / 70 - 8	180/70 R 8	18	x 7	180 / 70	8	125	A5	
9	21 x 8 - 9			200 / 75 - 9		21	x 8	200 / 75	9			
	6.90 - 9	6.00 - 9	6.00 R 9				6.00			9	121	A5
10		6.50 - 10	6.50 R 10				6.50			10	128	A5
	23 x 9 - 10			225 / 75 - 10	225/75 R 10	23	x 9	225 / 75	10	142	A5	
12		7.00 - 12	7.00 R 12				7.00			12	136	A5
	23 x 10 - 12			250 / 60 - 12		23	x 10	250 / 60	12			
	27 x 10 - 12			250 / 75 - 12	250/75 R 12	27	x 10	250 / 75	12	152	A5	
15		7.00 - 15	7.00 R 15				7.00			15	143	A5
		7.50 - 15	7.50 R 15				7.50			15	146	A5
	28 x 9 - 15	8.15 - 15		225 / 75 - 15	225/75 R 15	28	x 9	225 / 75	15	149	A5	
		8.25 - 15					8.25			15	153	A5
				250 - 15	250 / 70 - 15	250/70 R 15		250 / 70	15	153	A5	
				300 - 15	315 / 70 - 15	315/70 R 15		315 / 70	15	165	A5	
				355 / 65 - 15	355/65 R 15			355 / 65	15	175	A5	

GENERAL INFORMATION

EXPLANATION OF DIFFERENT MEASUREMENTS

(ref. notes 1 and 2 on the following pages)



e: maximum overall section width

D: external tire diameter ($R \times 2$)

Ø: Nominal bead seat diameter
(rim diameter)

S: section width on measuring rim
(this rim is indicated in bold)

E: minimum dual spacing (on measuring rim)

H: section height

R: free radius ($2R = D$)

R': static loaded radius *

RC: rolling circumference *

Tread depth: tire tread depth in mm
(rubber depth that can be used without risk)

Cap.: Interior capacity of the tire (to calculate the nitrogen quantity when inflated with nitrogen, or the liquid quantity when filled)

* determined by the reference conditions (see following page).

The dimensional data given in tabular form in this publication (as indicated above) conforms to those of the European Standard (E.T.R.T.O.).
They are given for information only and may change.

TIRE MARKING



Position of wear indicator

MICHELIN® Manufacturer

355 Nominal section width in mm ($S = 355$ mm)

65 Tire aspect ratio ($H/S = 0.65$)

R Radial construction

15 Nominal diameter of rim to which tire should be fitted (15 inches)

STABIL'X "Family" name

XZM Tread pattern

Tubeless Tubeless tire

175 Load Index

A5 Speed Symbol: 25 km/h / 15 mph

CYCLIC Cyclic use (see explanation on following pages)

Radial X Clear indication of tire structure



"Anti-static Class 1" tire

For special conditions use, please consult Michelin® Earthmover.

GENERAL INFORMATION

LOAD INDEX AND SPEED SYMBOL

Industrial and handling tires bear a Load Index and a Speed Symbol.

The **LOAD INDEX** is a numerical code which indicate the maximum load a tire can carry at the speed corresponding to its Speed Symbol, under specified conditions.

LI	maximum load		LI	maximum load		LI	maximum load		LI	maximum load	
	lb	kg		lb	kg		lb	kg		lb	kg
100	1,764	800	130	4,190	1,900	160	9,920	4,500	190	23,370	10,600
101	1,819	825	131	4,300	1,950	161	10,200	4,625	191	24,030	10,900
102	1,874	850	132	4,410	2,000	162	10,470	4,750	192	24,690	11,200
103	1,929	875	133	4,540	2,060	163	10,750	4,875	193	25,360	11,500
104	1,985	900	134	4,670	2,120	164	11,020	5,000	194	26,020	11,800
105	2,040	925	135	4,810	2,180	165	11,350	5,150	195	26,790	12,150
106	2,095	950	136	4,940	2,240	166	11,690	5,300	196	27,560	12,500
107	2,150	975	137	5,070	2,300	167	12,020	5,450	197	28,330	12,850
108	2,205	1,000	138	5,200	2,360	168	12,350	5,600	198	29,100	13,200
109	2,271	1,030	139	5,360	2,430	169	12,790	5,800	199	29,990	13,600
110	2,337	1,060	140	5,510	2,500	170	13,230	6,000	200	30,870	14,000
111	2,403	1,090	141	5,680	2,575	171	13,560	6,150	201	31,970	14,500
112	2,470	1,120	142	5,840	2,650	172	13,890	6,300	202	33,070	15,000
113	2,536	1,150	143	6,010	2,725	173	14,330	6,500	203	34,180	15,500
114	2,602	1,180	144	6,170	2,800	174	14,770	6,700	204	35,280	16,000
115	2,679	1,215	145	6,390	2,900	175	15,210	6,900	205	36,380	16,500
116	2,756	1,250	146	6,610	3,000	176	15,650	7,100	206	37,480	17,000
117	2,833	1,285	147	6,780	3,075	177	16,090	7,300	207	38,590	17,500
118	2,911	1,320	148	6,950	3,150	178	16,530	7,500	208	39,690	18,000
119	2,999	1,360	149	7,170	3,250	179	17,090	7,750	209	40,790	18,500
120	3,090	1,400	150	7,390	3,350	180	17,640	8,000	210	41,890	19,000
121	3,200	1,450	151	7,610	3,450	181	18,190	8,250	211	43,000	19,500
122	3,310	1,500	152	7,830	3,550	182	18,740	8,500	212	44,100	20,000
123	3,420	1,550	153	8,050	3,650	183	19,290	8,750	213	45,420	20,600
124	3,530	1,600	154	8,270	3,750	184	19,840	9,000	214	46,750	21,200
125	3,640	1,650	155	8,540	3,875	185	20,390	9,250	215	48,070	21,800
126	3,750	1,700	156	8,820	4,000	186	20,940	9,500	216	49,390	22,400
127	3,860	1,750	157	9,090	4,125	187	21,500	9,750	217	50,700	23,000
128	3,970	1,800	158	9,370	4,250	188	22,050	10,000	218	52,040	23,600
129	4,080	1,850	159	9,650	4,375	189	22,710	10,300	219	53,580	24,300

The Standard Organizations (ETRTO, T.R.A. and J.A.T.M.A.) take this into account, and define the load limits for tires according to where these are to be fitted on a machine.

The coefficients that are applied to the various positions on the machines are given below.

The speeds indicated below are max. speeds at which the machines may operate.

MECHANICAL HANDLING		MAXIMUM LOAD (% of the reference load)
USE		
FORKLIFT TRUCK		
to 25 km/h (15 mph)	Drive axle	130
	Steer axle	100
to 35 km/h (22 mph)	Drive axle	125
	Steer axle	92.5
SIDE-LOADER (up to 35 km/h / 22mph) and other equipment		
static		151
up to 25 km/h (15 mph)		100
up to 35 km/h (22 mph)		92.5
OTHER MACHINES		
up to 6 mph (10 km/h)		130
up to 25 km/h (15 mph)		100
up to 40 km/h (25 mph)		89
up to 50 km/h (35 mph)		84

"CYCLIC USE" describes applications where tires are not used continually at the Load Index or Speed Symbol ratings, but generally operate one way loaded and one way empty (typically forklift truck use and other front loading machines).

As a general rule, in the case of forklift trucks and other front loading machines (e.g. Reach Stackers), the steer axle (rear axle) is at maximum load when the machine is empty, and the front axle at maximum load when the machine is laden.

GENERAL INFORMATION

SPEED SYMBOLS

The **SPEED SYMBOL** indicates the speed at which the tire can carry a load corresponding to its Load Index, under specified conditions.

Symbol	A1	A2	A3	A4	A5	A6	A7	A8	B	C	D	E	F	G	J	K	L
speed (km/h)	5	10	15	20	25	30	35	40	50	60	65	70	80	90	100	110	120
speed (mph)	3	6	9	12	15	19	22	25	31	37	40	43	50	56	62	68	74

When the max. speed of the machine is higher than the tire Speed Symbol, the tire load capacity must be reduced according to the values indicated in the industrial handling table (for special cases, please consult us).

IMPORTANT:

- do not exceed the max. speed indicated on the tire (example MAX 22 mph / 35 km/h)
- do not exceed the permitted maximum distance in one hour indicated in the following pages
- at the time of fitting, it is vital that the various markings be checked, in order to be certain that the tire is suitable for operation at the maximum allowed vehicle speed and load.

MICHELIN® RADIAL TIRES FOR MECHANICAL HANDLING

INDUSTRIAL USE

(Forklift Trucks - Tractors - Straddle Carriers - Sweepers - Airport Ground Support)



XZM STABIL'X standard profile



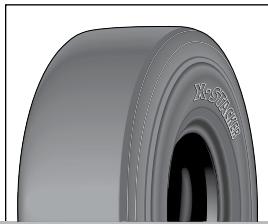
XZM and XZM STABIL'X low profile



XZM2 STABIL'X



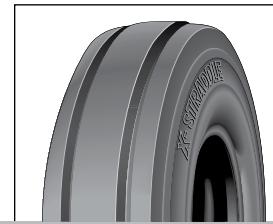
XZR



X STACKER STABIL'X



X TERMINAL-T



X-STRADDLE

OTHER MICHELIN® RADIAL TIRES USED FOR MECHANICAL HANDLING

CONDITIONS OF USE

The range of Michelin® industrial tires has been specifically designed to equip industrial machines.

The sizes are specific to these machines and their work; the loads and speeds correspond to standardized figures.

Each time tires need to be fitted to mechanical handling equipment, the following rules should be followed:

- 1) When the tire size exists in the industrial tire range, the industrial tire must be used.
- 2) When the tire size does not exist in the industrial tire range, look for a tire from other tire ranges (e.g.: Agriculture, Truck or Earthmover) ensuring that the condition of use (speed, load, kilometers per hour, etc.) are compatible with the characteristics of the tire chosen. This can result in certain tires not being recommended for some uses.
- 3) Use of agriculture, truck or earthmover tires in mechanical handling conditions follow different rules than those normally applied to these tires (speed, load, pressure).

In order to use these tires in total safety consult Michelin® Earthmover department for the best advice.

SELECTION OF THE TYPE OF EARTMOVER TIRE

Unless operating conditions are exceptional (long travel distances, high speeds), type A tread compound is generally best suited.

Type of tire	D1	D2
Maximum laden speed, km/h (mph)	20 km/h (12.5 mph)	15 km/h (9 mph)
Maximum number of km (miles) allowed in one hour	14 km (8.7 miles) and 22 km (13.7 miles)*	10 km (6.2 miles)

* as a function of tire and tread compound types (see tire characteristics in the Michelin® Earthmover tire technical data book)

MAXIMUM LOAD CAPACITY, MAXIMUM SPEED, INFLATION PRESSURE

Define the type of ground: rough terrain or level made-up surface. Determine the maximum load per tire.

As a general rule, use the inflation pressure corresponding to the maximum load authorised for the given speed.

Please consult Michelin® Earthmover Department for advice if in doubt.

For more information, consult Earthmover technical databooks.

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION Types CAI (Part Number)	Max. dist. / hour km Miles	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (1)						Measuring Rim Approved Rims (2) - (3)	Tubeless Bead Seal (3)	Tube Type Ref. Flap (4)	
					Michelin® dimensions									
		e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon				

8"

5.00 R 8 Tubeless

XZM STABIL'X 111 A5 110208 (10)	15 9.3	143 5.6	476 18.7	162 6.4	137 5.4	463 18.2	213 8.4	1407 55.4	23 29	9 2	3.00D 3 1/4 I	80TL8	8 CG 83-8 L
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180/70 R 8 Tubeless

XZM 125 A5 110069 (10)	15 9.3	182 7.2	465 18.3	199 7.8	170 6.7	454 17.9	205 8.1	1371 54	19 23.9	11 3	4.33 R	100TL8 110TL8	8 D 5-8
---------------------------------	-----------	------------	-------------	------------	------------	-------------	------------	------------	------------	---------	--------	------------------	------------

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread type	Use	Max. speed	PRESSURE (Bar/PSI)										Size		
			6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0				
			87	94	102	109	116	123	131	138	145				
8"															
XZM STABIL'X	Forklift trucks												5.00 R 8		
	Drive axle	25 km/h	1060	1100	1140	1185	1230	1275	1320	1370	1420				
		15 mph	2337	2426	2514	2613	2712	2811	2911	3021	3131				
		35 km/h	1020	1055	1090	1135	1180	1225	1270	1320	1370				
		22 mph	2249	2326	2403	2503	2602	2701	2800	2911	3021				
	Steer wheel	25 km/h	810	840	870	905	940	975	1010	1050	1090				
		15 mph	1786	1852	1918	1996	2073	2150	2227	2315	2403				
		35 km/h	750	780	810	840	870	905	940	975	1010				
		22 mph	1654	1720	1786	1852	1918	1996	2073	2150	2227				
	Side-loaders														
	All axles	Static	1230	1275	1320	1370	1420	1475	1530	1590	1650				
			2712	2811	2911	3021	3131	3252	3374	3506	3638				
		25 km/h	810	840	870	905	940	975	1010	1050	1090				
		15 mph	1786	1852	1918	1996	2073	2150	2227	2315	2403				
		35 km/h	750	780	810	840	870	905	940	975	1010				
		22 mph	1654	1720	1786	1852	1918	1996	2073	2150	2227				
XZM	Forklift trucks												180/70 R 8		
	Drive axle	25 km/h	1630	1695	1760	1825	1890	1955	2020	2085	2150				
			3594	3737	3881	4024	4167	4311	4454	4597	4741				
		15 mph	1570	1630	1690	1755	1820	1880	1940	2005	2070				
		35 km/h	3462	3594	3726	3870	4013	4145	4278	4421	4564				
	Steer wheel	25 km/h	1250	1300	1350	1400	1450	1500	1550	1600	1650				
		15 mph	2756	2867	2977	3087	3197	3308	3418	3528	3638				
		35 km/h	1160	1205	1250	1300	1350	1395	1440	1485	1530				
		22 mph	2558	2657	2756	2867	2977	3076	3175	3274	3374				
		Side-loaders													
	All axles	Static	1890	1965	2040	2115	2190	2270	2350	2425	2500				
			4167	4333	4498	4664	4829	5005	5182	5347	5513				
		25 km/h	1250	1300	1350	1400	1450	1500	1550	1600	1650				
		15 mph	2756	2867	2977	3087	3197	3308	3418	3528	3638				
		35 km/h	1160	1205	1250	1300	1350	1395	1440	1485	1530				
		22 mph	2558	2657	2756	2867	2977	3076	3175	3274	3374				

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION Types CAI (Part Number)	Max. dist. / hour km Miles	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (1)						Measuring Rim Approved Rims (2) - (3)	Tubeless Bead Seal (3)	Tube Type Ref. Flap (4)					
					Michelin® dimensions													
		e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon								
9"																		
6.00 R 9 Tubeless																		
XZM STABIL'X 121 A5 110204 (10)	15 9.3					539 21.2	249 9.8	1641 64.6	24 30.2	15 4	4.00E	100TL9	9 F					
XZR 121 A5 110206	25 16	173 6.8	551 21.7	192 7.6	164 6.5	530 20.9	241 9	1605 63	10 12.6	18 4.75			110-9 LD					

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread type	Use	Max. speed	PRESSURE (Bar/PSI)										Size
			6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0		
			87	94	102	109	116	123	131	138	145		

9"

	Forklift trucks											6.00 R 9	
	XZM STABIL'X	Drive axle	25 km/h	1370	1435	1500	1565	1630	1695	1760	1825	1890	
			15 mph	3021	3164	3308	3451	3594	3737	3881	4024	4167	
			35 km/h	1320	1380	1440	1505	1570	1630	1690	1755	1820	
			22 mph	2911	3043	3175	3319	3462	3594	3726	3870	4013	
		Steer wheel	25 km/h	1050	1100	1150	1200	1250	1300	1350	1400	1450	
			15 mph	2315	2426	2536	2646	2756	2867	2977	3087	3197	
			35 km/h	980	1025	1070	1115	1160	1205	1250	1300	1350	
			22 mph	2161	2260	2359	2459	2558	2657	2756	2867	2977	
XZR	Mechanical handling	All axles	Side-loaders	1590	1665	1740	1815	1890	1965	2040	2115	2190	
			Static	3506	3671	3837	4002	4167	4333	4498	4664	4829	
			25 km/h	1050	1100	1150	1200	1250	1300	1350	1400	1450	
			15 mph	2315	2426	2536	2646	2756	2867	2977	3087	3197	
			35 km/h	980	1025	1070	1115	1160	1205	1250	1300	1350	
		Mechanical handling	22 mph	2161	2260	2359	2459	2558	2657	2756	2867	2977	
			Static	1590	1665	1740	1815	1890	1965	2040	2115	2190	
			10 km/h	1370	1435	1500	1565	1630	1695	1760	1825	1890	
			6 mph	3021	3164	3308	3451	3594	3737	3881	4024	4167	
			25 km/h	1050	1100	1150	1200	1250	1300	1350	1400	1450	
			15 mph	2315	2426	2536	2646	2756	2867	2977	3087	3197	
			35 km/h	980	1025	1070	1115	1160	1205	1250	1300	1350	
			22 mph	2161	2260	2359	2459	2558	2657	2756	2867	2977	
			40 km/h	940	980	1030	1070	1120	1160	1210	1250	1300	
			25 mph	2073	2161	2271	2359	2470	2558	2668	2756	2867	
			50 km/h	890	920	970	1010	1050	1100	1140	1180	1220	
			31 mph	1962	2029	2139	2227	2315	2426	2514	2602	2690	

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION Types CAI (Part Number)	Max. dist. / hour km Miles	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (1)						Measuring Rim Approved Rims (2) - (3)	Tubeless Bead Seal (3)	Tube Type Ref. Flap (4)	
					Michelin® dimensions									
		e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon				

10"

6.50 R 10 Tubeless

XZM STABIL'X 128 A5 110213 (10)	15 9.3	191 7.5	600 23.6	212 8.3	186 7.3	587 23.1	271 10.7	1786 70.3	27 34	20 5	5.00F 5.50F	125TL10	10 F
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225/75 R 10 Tubeless

XZM 142 A5 110089 (10)	15 9.3	239 9.4	606 23.9	259 10.2	220 8.7	591 23.3	265 10.4	1779 70	24 30.2	25 7	6.50F	165TL10	10 F 7-10
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TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread type	Use	Max. speed	PRESSURE (Bar/PSI)										Size	
			6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0			
			87	94	102	109	116	123	131	138	145			
10"														
XZM STABIL'X	Forklift trucks												6.50 R 10	
	Drive axle	25 km/h	1660	1740	1820	1905	1990	2075	2160	2250	2340			
		15 mph	3660	3837	4013	4201	4388	4575	4763	4961	5160			
		35 km/h	1600	1675	1750	1830	1910	1995	2080	2165	2250			
		22 mph	3528	3693	3859	4035	4212	4399	4586	4774	4961			
	Steer wheel	25 km/h	1280	1340	1400	1465	1530	1595	1660	1730	1800			
		15 mph	2822	2955	3087	3230	3374	3517	3660	3815	3969			
		35 km/h	1180	1240	1300	1360	1420	1480	1540	1605	1670			
		22 mph	2602	2734	2867	2999	3131	3263	3396	3539	3682			
XZM STABIL'X	Side-loaders												225/75 R 10	
	All axles	Static	1930	2025	2120	2215	2310	2410	2510	2615	2720			
			4256	4465	4675	4884	5094	5314	5535	5766	5998			
		25 km/h	1280	1340	1400	1465	1530	1595	1660	1730	1800			
		15 mph	2822	2955	3087	3230	3374	3517	3660	3815	3969			
		35 km/h	1180	1240	1300	1360	1420	1480	1540	1605	1670			
		22 mph	2602	2734	2867	2999	3131	3263	3396	3539	3682			
XZM	Forklift trucks												225/75 R 10	
	Drive axle	25 km/h	2410	2550	2690	2825	2960	3085	3210	3330	3450			
			5314	5623	5931	6229	6527	6802	7078	7343	7607			
		15 mph	2320	2455	2590	2715	2840	2965	3090	3205	3320			
		35 km/h	5116	5413	5711	5987	6262	6538	6813	7067	7321			
		Steer wheel	25 km/h	1850	1960	2070	2170	2270	2370	2470	2560	2650		
			4079	4322	4564	4785	5005	5226	5446	5645	5843			
			15 mph	1720	1820	1920	2010	2100	2195	2290	2375	2460		
			22 mph	3793	4013	4234	4432	4631	4840	5049	5237	5424		
XZM	Side-loaders												225/75 R 10	
	All axles	Static	2800	2960	3120	3275	3430	3580	3730	3870	4010			
			6174	6527	6880	7221	7563	7894	8225	8533	8842			
		25 km/h	1850	1960	2070	2170	2270	2370	2470	2560	2650			
		15 mph	4079	4322	4564	4785	5005	5226	5446	5645	5843			
		35 km/h	1720	1820	1920	2010	2100	2195	2290	2375	2460			
		22 mph	3793	4013	4234	4432	4631	4840	5049	5237	5424			

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION Types CAI (Part Number)	Max. dist. / hour km Miles	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (1)						Measuring Rim Approved Rims (2) - (3)	Tubeless Bead Seal (3)	Tube Type Ref. Flap (4)	
					Michelin® dimensions									
		e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon				

12"

7.00 R 12 Tubeless

XZM STABIL'X 136 A5 110195 (10)	15 9.3				196 7.7	671 26.4	310 12.2	2043 80.4	28 35.3	24 6			
XZR 136 A5 110210	25 16	207 8.1	685 27	230 9.1	193 7.6	661 26	303 12	2006 79	11 13.9	32 8.45	5.00S	125TL12	12 H 125-12 LD

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread type	Use	Max. speed	PRESSURE (Bar/PSI)										Size
			6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0		
			87	94	102	109	116	123	131	138	145		

12"

XZR XZM STABIL'X	Forklift trucks											7.00 R 12
	Drive axle	25 km/h	1990	2075	2160	2265	2370	2505	2640	2780	2920	
		15 mph	4388	4575	4763	4994	5226	5524	5821	6130	6439	
		35 km/h	1920	2000	2080	2180	2280	2410	2540	2670	2800	
		22 mph	4234	4410	4586	4807	5027	5314	5601	5887	6174	
	Steer wheel	25 km/h	1530	1595	1660	1740	1820	1925	2030	2135	2240	
		15 mph	3374	3517	3660	3837	4013	4245	4476	4708	4939	
		35 km/h	1420	1480	1540	1615	1690	1785	1880	1980	2080	
		22 mph	3131	3263	3396	3561	3726	3936	4145	4366	4586	
XZM STABIL'X	Side-loaders											7.00 R 12
	All axles	Static	2320	2415	2510	2630	2750	2910	3070	3230	3390	
			5116	5325	5535	5799	6064	6417	6769	7122	7475	
		25 km/h	1530	1595	1660	1740	1820	1925	2030	2135	2240	
		15 mph	3374	3517	3660	3837	4013	4245	4476	4708	4939	
		35 km/h	1420	1480	1540	1615	1690	1785	1880	1980	2080	
		22 mph	3131	3263	3396	3561	3726	3936	4145	4366	4586	
		Static	2320	2415	2510	2630	2750	2910	3070	3230	3390	
XZR	Mechanical handling	All axles	5116	5325	5535	5799	6064	6417	6769	7122	7475	7.00 R 12
			10 km/h	1990	2075	2160	2265	2370	2505	2640	2780	
		6 mph	4388	4575	4763	4994	5226	5524	5821	6130	6439	
		25 km/h	1530	1595	1660	1740	1820	1925	2030	2135	2240	
		15 mph	3374	3517	3660	3837	4013	4245	4476	4708	4939	
		35 km/h	1420	1480	1540	1615	1690	1785	1880	1980	2080	
		22 mph	3131	3263	3396	3561	3726	3936	4145	4366	4586	
		40 km/h	1370	1420	1480	1550	1620	1720	1810	1900	2000	
		25 mph	2073	3131	3263	3418	3572	3793	3991	4190	4410	
		50 km/h	1290	1340	1400	1470	1530	1620	1710	1800	1890	
		31 mph	2844	2955	3087	3241	3374	3572	3771	3969	4167	

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION Types CAI (Part Number)	Max. dist. / hour km Miles	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (1)						Measuring Rim Approved Rims (2) - (3)	Tubeless Bead Seal (3)	Tube Type Ref. Flap (4)					
					Michelin® dimensions													
		e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon								
12"																		
250/75 R 12 Tubeless																		
XZM152 A5 110108 (10)	15 9.3	274 10.8	695 27.4	294 11.6	256 10.1	688 27.1	313 12.3	2084 82	28 35.3	38 10	8.00G	200TL12	12 KD 9-12 D					
15"																		
7.00 R 15 Tubeless																		
XZM STABIL'X 143 A5 110211 (10)	15 9.3	213 8.4	761 30	236 9.3	196 7.7	733 28.9	340 13.4	2235 88	28 35.3	30 8	5.5 6.0	140TL15 150TL15	15/16 F 15x6.00					
7.50 R 15 Tubeless																		
XZM STABIL'X 146 A5 110214 (10)	15 9.3	229 9	787 31	254 10	212 8.3	771 30.4	358 14.1	2352 92.6	30 37.8	38 10	6.0 6.5	165TL15 150TL15	15/16 J 15x6.00					

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread type	Use	Max. speed	PRESSURE (Bar/PSI)										Size	
			6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0			
			87	94	102	109	116	123	131	138	145			
12"														
XZM	Forklift trucks												250/75 R 12	
	Drive axle	25 km/h	3220	3400	3580	3755	3930	4100	4270	4445	4620			
		15 mph	7100	7497	7894	8280	8666	9041	9415	9801	10187			
		35 km/h	3090	3265	3440	3610	3780	3940	4100	4270	4440			
		22 mph	6813	7199	7585	7960	8335	8688	9041	9415	9790			
	Steer wheel	25 km/h	2470	2610	2750	2885	3020	3150	3280	3415	3550			
		15 mph	5446	5755	6064	6361	6659	6946	7232	7530	7828			
		35 km/h	2290	2420	2550	2675	2800	2920	3040	3165	3290			
		22 mph	5049	5336	5623	5898	6174	6439	6703	6979	7254			
XZM	Side-loaders												7.00 R 15	
	All axles	Static	3730	3945	4160	4365	4570	4765	4960	5165	5370			
			8225	8699	9173	9625	10077	10507	10937	11389	11841			
		25 km/h	2470	2610	2750	2885	3020	3150	3280	3415	3550			
		15 mph	5446	5755	6064	6361	6659	6946	7232	7530	7828			
		35 km/h	2290	2420	2550	2675	2800	2920	3040	3165	3290			
		22 mph	5049	5336	5623	5898	6174	6439	6703	6979	7254			
15"														
XZM STABIL'X	Forklift trucks												7.00 R 15	
	Drive axle	25 km/h	2450	2545	2640	2740	2840	2935	3030	3140	3250			
		15 mph	5402	5612	5821	6042	6262	6472	6681	6924	7166			
		35 km/h	2350	2445	2540	2635	2730	2825	2920	3025	3130			
		22 mph	5182	5391	5601	5810	6020	6229	6439	6670	6902			
	Steer wheel	25 km/h	1880	1955	2030	2105	2180	2255	2330	2415	2500			
		15 mph	4145	4311	4476	4642	4807	4972	5138	5325	5513			
		35 km/h	1740	1810	1880	1950	2020	2090	2160	2240	2320			
		22 mph	3837	3991	4145	4300	4454	4608	4763	4939	5116			
XZM STABIL'X	Side-loaders												7.50 R 15	
	All axles	Static	2840	2955	3070	3185	3300	3410	3520	3650	3780			
			1880	1955	2030	2105	2180	2255	2330	2415	2500			
		25 km/h	4145	4311	4476	4642	4807	4972	5138	5325	5513			
		15 mph	1740	1810	1880	1950	2020	2090	2160	2240	2320			
		35 km/h	3837	3991	4145	4300	4454	4608	4763	4939	5116			
		22 mph	3131	3263	3396	3561	3726	3936	4145	4366	4586			
XZM STABIL'X	Forklift trucks												7.50 R 15	
	Drive axle	25 km/h	2840	2980	3120	3250	3380	3510	3640	3770	3900			
		15 mph	6262	6571	6880	7166	7453	7740	8026	8313	8600			
		35 km/h	2730	2865	3000	3125	3250	3375	3500	3625	3750			
		22 mph	6020	6317	6615	6891	7166	7442	7718	7993	8269			
	Steer wheel	25 km/h	2180	2290	2400	2500	2600	2700	2800	2900	3000			
		15 mph	4807	5049	5292	5513	5733	5954	6174	6395	6615			
		35 km/h	2020	2120	2220	2315	2410	2500	2590	2685	2780			
		22 mph	4454	4675	4895	5105	5314	5513	5711	5920	6130			
XZM STABIL'X	Side-loaders												7.50 R 15	
	All axles	Static	3300	3465	3630	3780	3930	4080	4230	4380	4530			
			7277	7640	8004	8335	8666	8996	9327	9658	9989			
		25 km/h	2180	2290	2400	2500	2600	2700	2800	2900	3000			
		15 mph	4807	5049	5292	5513	5733	5954	6174	6395	6615			
		35 km/h	2020	2120	2220	2315	2410	2500	2590	2685	2780			
		22 mph	4454	4675	4895	5105	5314	5513	5711	5920	6130			

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION Types CAI (Part Number)	Max. dist. / hour km Miles	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (1)						Measuring Rim Approved Rims (2) - (3)	Tubeless Bead Seal (3)	Tube Type Ref. Flap (4)	
					Michelin® dimensions									
		e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon				

15"

8.25 R 15 Tubeless

XZM STABIL'X 153 A5 110218 (10)	15 9.3	253 10	853 33.6	280 11	240 9.4	835 32.9	386 15.2	2543 100.1	33 41.6	46 12	6.5 7.0	175TL15 165TL15	15 K 15x7.50 15x6.00
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225/75 R 15 Tubeless

XZM 149 A5 110079 (10)	15 9.3	245 9.6	732 28.8	248 9.8	225 8.9	708 27.9	322 12.7	2144 84.4	25 31.5	34 9	7.0	175TL15	15/16 F 15x7.50
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250/70 R 15 Tubeless

XZM 153 A5 110075 (10)	15 9.3	264 10.4	745 29.3	288 11.3	250 9.8	736 29	333 13.1	2224 87.6	28 35.3	39 10	7.0 7.5	175TL15 190TL15	15/16 J 15x7.50
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TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread type	Use	Max. speed	PRESSURE (Bar/PSI)										Size	
			6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0			
			87	94	102	109	116	123	131	138	145			
15"														
XZM STABIL'X	Forklift trucks												8.25 R 15	
	Drive axle	25 km/h	3450	3610	3770	3935	4100	4260	4420	4585	4750			
		15 mph	7607	7960	8313	8677	9041	9393	9746	10110	10474			
		35 km/h	3320	3475	3630	3785	3940	4095	4250	4410	4570			
		22 mph	7321	7662	8004	8346	8688	9029	9371	9724	10077			
	Steer wheel	25 km/h	2650	2775	2900	3025	3150	3275	3400	3525	3650			
		15 mph	5843	6119	6395	6670	6946	7221	7497	7773	8048			
		35 km/h	2460	2575	2690	2805	2920	3035	3150	3265	3380			
		22 mph	5424	5678	5931	6185	6439	6692	6946	7199	7453			
XZM STABIL'X	Side-loaders												225/75 R 15	
	All axles	Static	4010	4195	4380	4570	4760	4950	5140	5330	5520			
			8842	9250	9658	10077	10496	10915	11334	11753	12172			
		25 km/h	2650	2775	2900	3025	3150	3275	3400	3525	3650			
		15 mph	5843	6119	6395	6670	6946	7221	7497	7773	8048			
		35 km/h	2460	2575	2690	2805	2920	3035	3150	3265	3380			
		22 mph	5424	5678	5931	6185	6439	6692	6946	7199	7453			
XZM	Forklift trucks												225/75 R 15	
	Drive axle	25 km/h	2990	3155	3320	3480	3640	3790	3940	4085	4230			
		15 mph	6593	6957	7321	7673	8026	8357	8688	9007	9327			
		35 km/h	2880	3035	3190	3345	3500	3645	3790	3930	4070			
		22 mph	6350	6692	7034	7376	7718	8037	8357	8666	8974			
	Steer wheel	25 km/h	2300	2425	2550	2675	2800	2915	3030	3140	3250			
		15 mph	5072	5347	5623	5898	6174	6428	6681	6924	7166			
		35 km/h	2130	2245	2360	2475	2590	2695	2800	2905	3010			
		22 mph	4697	4950	5204	5457	5711	5942	6174	6406	6637			
XZM	Side-loaders												250/70 R 15	
	All axles	Static	3480	3670	3860	4045	4230	4400	4570	4740	4910			
			7673	8092	8511	8919	9327	9702	10077	10452	10827			
		25 km/h	2300	2425	2550	2675	2800	2915	3030	3140	3250			
		15 mph	5072	5347	5623	5898	6174	6428	6681	6924	7166			
		35 km/h	2130	2245	2360	2475	2590	2695	2800	2905	3010			
		22 mph	4697	4950	5204	5457	5711	5942	6174	6406	6637			
XZM	Forklift trucks												250/70 R 15	
	Drive axle	25 km/h	3250	3440	3630	3825	4020	4205	4390	4570	4750			
		15 mph	7166	7585	8004	8434	8864	9272	9680	10077	10474			
		35 km/h	3130	3310	3490	3680	3870	4045	4220	4395	4570			
		22 mph	6902	7299	7695	8114	8533	8919	9305	9691	10077			
	Steer wheel	25 km/h	2500	2645	2790	2940	3090	3230	3370	3510	3650			
		15 mph	5513	5832	6152	6483	6813	7122	7431	7740	8048			
		35 km/h	2320	2455	2590	2725	2860	2990	3120	3250	3380			
		22 mph	5116	5413	5711	6009	6306	6593	6880	7166	7453			
XZM	Side-loaders												250/70 R 15	
	All axles	Static	3780	4000	4220	4445	4670	4880	5090	5305	5520			
			8335	8820	9305	9801	10297	10760	11223	11698	12172			
		25 km/h	2500	2645	2790	2940	3090	3230	3370	3510	3650			
		15 mph	5513	5832	6152	6483	6813	7122	7431	7740	8048			
		35 km/h	2320	2455	2590	2725	2860	2990	3120	3250	3380			
		22 mph	5116	5413	5711	6009	6306	6593	6880	7166	7453			

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION Types CAI (Part Number)	Max. dist. / hour km Miles	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (1)						Measuring Rim Approved Rims (2) - (3)	Tubeless Bead Seal (3)	Tube Type Ref. Flap (4)					
					Michelin® dimensions													
		e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon								
15"																		
315/70 R 15 Tubeless																		
XZM 165 A5 110109 (10)	15 9.3	323 12.7	841 33.1	345 13.6	321 12.6	839 33	374 14.7	2520 99.2	35 44.1	74 20	8.0	200TL15	15 P	15x7.50				
355/65 R 15 Tubeless																		
XZM STABIL'X 170 A5 110462 (10)	15 9.3	372 14.6	861 33.9	369 14.5	355 14	842 33.1	369 14.5	2515 99	35 44.1	83 22	9.75	250TL15	-	-				
NOTE: If your tire has this marking: 175 A5 contact your Michelin representative for more information.																		
20"																		
9.00 R 20 Tubeless																		
XZM STABIL'X 160 A5 110185 (11)	15 9.3	279 11	1038 40.9	310 12.2	271 10.7	1033 40.7	482 19	3157 124.3	33 41.6	99 26	6.5 B6.5 7.0 7.0T B 7.0 7.33V B7.5 7.5	190TL20 175TL20	20 M	20x7.50				

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread type	Use	Max. speed	PRESSURE (Bar/PSI)										Size	
			6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0			
			87	94	102	109	116	123	131	138	145			
15"														
XZM	Forklift trucks												315/70 R 15	
	Drive axle	25 km/h	4620	4880	5140	5400	5660	5925	6190	6445	6700			
		15 mph	10187	10760	11334	11907	12480	13065	13649	14211	14774			
		35 km/h	4440	4690	4940	5190	5440	5695	5950	6195	6440			
		22 mph	9790	10341	10893	11444	11995	12557	13120	13660	14200			
	Steer wheel	25 km/h	3550	3750	3950	4150	4350	4555	4760	4955	5150			
		15 mph	7828	8269	8710	9151	9592	10044	10496	10926	11356			
		35 km/h	3290	3475	3660	3845	4030	4220	4410	4590	4770			
		22 mph	7254	7662	8070	8478	8886	9305	9724	10121	10518			
XZM	Side-loaders												355/65 R 15	
	All axles	Static	5370	5670	5970	6270	6570	6880	7190	7485	7780			
			11841	12502	13164	13825	14487	15170	15854	16504	17155			
		25 km/h	3550	3750	3950	4150	4350	4555	4760	4955	5150			
		15 mph	7828	8269	8710	9151	9592	10044	10496	10926	11356			
		35 km/h	3290	3475	3660	3845	4030	4220	4410	4590	4770			
		22 mph	7254	7662	8070	8478	8886	9305	9724	10121	10518			
XZM STABIL'X	Forklift trucks												355/65 R 15	
	Drive axle	25 km/h	5330	5820	5920	6240	6585	6825	7085	7440	7800			
		15 mph	11753	12833	13054	13759	14520	15049	15622	16405	17199			
		35 km/h	5130	5410	5690	6000	6310	6560	6810	7160	7500			
		22 mph	11312	11929	12546	13230	13914	14465	15016	15788	16538			
	Steer wheel	25 km/h	4100	4325	4550	4800	5050	5250	5450	5725	6000			
		15 mph	9041	9537	10033	10584	11135	11576	12017	12624	13230			
		35 km/h	3800	4000	4210	4450	4670	4850	5050	5300	5550			
		22 mph	8379	8820	9283	9812	10297	10694	11135	11687	12238			
		Static	6190	6530	6870	7250	7630	7930	8230	8645	9060			
			13649	14399	15148	15986	16824	17486	18147	19062	19977			
XZM STABIL'X	Side-loaders												9.00 R 20	
	All axles	25 km/h	4100	4325	4550	4800	5050	5250	5450	5725	6000			
		15 mph	9041	9537	10033	10584	11135	11576	12017	12624	13230			
		35 km/h	3800	4000	4210	4450	4670	4850	5050	5300	5550			
		22 mph	8379	8820	9283	9812	10297	10694	11135	11687	12238			
		Static	6190	6530	6870	7250	7630	7930	8230	8645	9060			
			13649	14399	15148	15986	16824	17486	18147	19062	19977			
		25 km/h	4100	4325	4550	4800	5050	5250	5450	5725	6000			
20"														
XZM STABIL'X	Terminal tractor												9.00 R 20	
	All axles	40 km/h	2850	2995	3140	3280	3420	3565	3710	3860	4010			
		25mph	6284	6604	6924	7232	7541	7861	8181	8511	8842			
XZM STABIL'X	Forklift trucks												9.00 R 20	
	Drive axle	25 km/h	4160	4375	4590	4795	5000	5210	5420	5635	5850			
		15 mph	9173	9647	10121	10573	11025	11488	11951	12425	12899			
		35 km/h	4000	4205	4410	4605	4800	5005	5210	5415	5620			
		22 mph	8820	9272	9724	10154	10584	11036	11488	11940	12392			
	Steer wheel	25 km/h	3200	3365	3530	3685	3840	4005	4170	4335	4500			
		15 mph	7056	7420	7784	8125	8467	8831	9195	9559	9923			
		35 km/h	2970	3120	3270	3415	3560	3710	3860	4015	4170			
		22 mph	6549	6880	7210	7530	7850	8181	8511	8853	9195			
		Static	4840	5085	5330	5565	5800	6045	6290	6545	6800			
			10672	11212	11753	12271	12789	13329	13869	14432	14994			
XZM STABIL'X	Side-loaders												9.00 R 20	
	All axles	25 km/h	3200	3365	3530	3685	3840	4005	4170	4335	4500			
		15 mph	7056	7420	7784	8125	8467	8831	9195	9559	9923			
		35 km/h	2970	3120	3270	3415	3560	3710	3860	4015	4170			
		22 mph	6549	6880	7210	7530	7850	8181	8511	8853	9195			

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION Types CAI (Part Number)	Max. dist. / hour km Miles	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (1)						Measuring Rim Approved Rims (2) - (3)	Tubeless Bead Seal (3)	Tube Type Ref. Flap (4)	
					Michelin® dimensions									
		e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC	Tread depth mm	Cap. l				

20"

10.00 R 20 Tubeless

XZM STABIL'X 166 A5 110014 (11)	15 9.3	297 11.7	1073 42.2	330 13	295 11.6	1068 42	495 19.5	3257 128.2	35 44.1	117 31	7.0 7.0T B 7.0 7.33V B 7.5 7.5 8.0V 8.00V B 8.0 8.0	190TL20 200TL20 175TL20 A20 553004	20 N 20x7.50
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11.00 R 20 Tubeless

XZM STABIL'X 169 A5 110189 (11)	15 9.3	309 12.2	1104 43.5	343 13.5	294 11.6	1092 43	504 19.8	3325 130.9	38 47.9	124 33	7.33V B7.5 7.5 8.0V 8.00V B 8.0 8.0 8.5V 8.5 8.5 - 8.5V B 8.5 8.50V	190TL20 200TL20 215TL20 A20 553004	20 P 20x8.50
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TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread type	Use	Max. speed	PRESSURE (Bar/PSI)										Size	
			6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0			
			87	94	102	109	116	123	131	138	145			
20"														
XZM STABIL'X	Terminal tractor												10.00 R 20	
	All axles	40 km/h	3390	3550	3710	3875	4040	4205	4370	4545	4720			
		25 mph	7475	7828	8181	8544	8908	9272	9636	10022	10408			
XZM STABIL'X	Forklift trucks												10.00 R 20	
	Drive axle	25 km/h	4940	5175	5410	5650	5890	6135	6385	6635	6890			
		15 mph	10893	11411	11929	12458	12987	13528	14079	14630	15192			
		35 km/h	4750	4975	5200	5430	5660	5895	6130	6380	6630			
		22 mph	10474	10970	11466	11973	12480	12998	13517	14068	14619			
	Steer wheel	25 km/h	3800	3980	4160	4345	4530	4720	4910	5105	5300			
		15 mph	8379	8776	9173	9581	9989	10408	10827	11257	11687			
		35 km/h	3520	3685	3850	4025	4200	4375	4550	4730	4910			
		22 mph	7762	8125	8489	8875	9261	9647	10033	10430	10827			
XZM STABIL'X	Side-loaders												11.00 R 20	
	All axles	Static	5740	6015	6290	6570	6850	7135	7420	7715	8010			
			12657	13263	13869	14487	15104	15733	16361	17012	17662			
		25 km/h	3800	3980	4160	4345	4530	4720	4910	5105	5300			
		15 mph	8379	8776	9173	9581	9989	10408	10827	11257	11687			
		35 km/h	3520	3685	3850	4025	4200	4375	4550	4730	4910			
		22 mph	7762	8125	8489	8875	9261	9647	10033	10430	10827			
XZM STABIL'X	Terminal tractor												11.00 R 20	
	All axles	40 km/h	3690	3870	4050	4240	4430	4615	4800	4985	5170			
		25 mph	8136	8533	8930	9349	9768	10176	10584	10992	11400			
XZM STABIL'X	Forklift trucks												11.00 R 20	
	Drive axle	25 km/h	5390	5655	5920	6195	6470	6740	7010	7275	7540			
		15 mph	11885	12469	13054	13660	14266	14862	15457	16041	16626			
		35 km/h	5180	5435	5690	5955	6220	6485	6750	7000	7250			
		22 mph	11422	11984	12546	13131	13715	14299	14884	15435	15986			
	Steer wheel	25 km/h	4140	4345	4550	4760	4970	5180	5390	5595	5800			
		15 mph	9129	9581	10033	10496	10959	11422	11885	12337	12789			
		35 km/h	3830	4020	4210	4405	4600	4795	4990	5180	5370			
		22 mph	8445	8864	9283	9713	10143	10573	11003	11422	11841			
XZM STABIL'X	Side-loaders												11.00 R 20	
	All axles	Static	6260	6570	6880	7195	7510	7825	8140	8450	8760			
			13803	14487	15170	15865	16560	17254	17949	18632	19316			
		25 km/h	4140	4345	4550	4760	4970	5180	5390	5595	5800			
		15 mph	9129	9581	10033	10496	10959	11422	11885	12337	12789			
		35 km/h	3830	4020	4210	4405	4600	4795	4990	5180	5370			
		22 mph	8445	8864	9283	9713	10143	10573	11003	11422	11841			

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION Types CAI (Part Number)	Max. dist. / hour km Miles	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (1)						Measuring Rim Approved Rims (2) - (3)	Tubeless Bead Seal (3)	Tube Type Ref. Flap (4)	
					Michelin® dimensions									
		e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. l gallon				

20"

12.00 R 20 Tubeless

XZM STABIL'X 176 A5 110082 (11)	15 9.3	338 13.3	1144 45	376 14.8	324 12.8	1136 44.7	522 20.6	3453 135.9	40 50.4	184 49	8.0 8.5V 8.5 B 8.5 8.50V 9.00V 9.0	200TL20 215TL20 A20 553004	20 Q 20x8.50
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22.5"

280/75 R 22.5 Tubeless

X-TERMINAL T 168 A8 004371 (12)					279 11	995 39.2	443 17.4	2988 117.6	31 39.1	85 22	22.5/8.25 22.5/7.50	-	-
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310/80 R 22.5 Tubeless

X-TERMINAL T 175 A8 278144 (12)	20 12	310 12.2	1074 42.3	335 13.2	307 12.1	1084 42.7	483 19	3258 128	30 38	9.0	-	-
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TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread type	Use	Max. speed	PRESSURE (Bar/PSI)										Size
			6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0		
			87	94	102	109	116	123	131	138	145		

20"

XZM STABIL'X	Terminal tractor												12.00 R 20
	All axles	40 km/h	4540	4740	4940	5185	5430	5655	5880	6100	6320		
		25mph	10011	10452	10893	11433	11973	12469	12965	13451	13936		
XZM STABIL'X	Forklift trucks												
	Drive axle	25 km/h	6630	6925	7220	7575	7930	8255	8580	8905	9230		
		15 mph	14619	15270	15920	16703	17486	18202	18919	19636	20352		
		35 km/h	6380	6660	6940	7285	7630	7940	8250	8565	8880		
		22 mph	14068	14685	15303	16063	16824	17508	18191	18886	19580		
	Steer wheel	25 km/h	5100	5325	5550	5825	6100	6350	6600	6850	7100		
		15 mph	11246	11742	12238	12844	13451	14002	14553	15104	15656		
		35 km/h	4720	4930	5140	5395	5650	5880	6110	6340	6570		
		22 mph	10408	10871	11334	11896	12458	12965	13473	13980	14487		
	Side-loaders												
	All axles	Static	7710	8050	8390	8805	9220	9595	9970	10350	10730		
			17001	17750	18500	19415	20330	21157	21984	22822	23660		
		25 km/h	5100	5325	5550	5825	6100	6350	6600	6850	7100		
		15 mph	11246	11742	12238	12844	13451	14002	14553	15104	15656		
		35 km/h	4720	4930	5140	5395	5650	5880	6110	6340	6570		
		22 mph	10408	10871	11334	11896	12458	12965	13473	13980	14487		

22.5"

X-TERMINAL T	Terminal tractor												280/75 R 22.5
	All axles	Static	4960	5280	5600	5920	6240	6560	6870	7190	7500		
			10937	11642	12348	13054	13759	14465	15148	15854	16538		
		25 km/h	4200	4480	4750	5025	5300	5575	5850	6075	6300		
		15 mph	9261	9878	10474	11080	11687	12293	12899	13395	13892		
		35 km/h	3750	3980	4210	4445	4675	4905	5135	5370	5600		
		22 mph	8269	8776	9283	9801	10308	10816	11323	11841	12348		

X-TERMINAL T	Terminal tractor												310/80 R 22.5
	All axles	Static	6890	7330	7775	8215	8655	9095	9540	9980	10420		
			15192	16163	17144	18114	19084	20054	21036	22006	22976		
		5 km/h	6160	6598	7035	7473	7910	8348	8785	9223	9660		
		3 mph	13583	14549	15512	16478	17442	18407	19371	20337	21300		
		10 km/h	5930	6310	6690	7070	7450	7830	8210	8590	8970		
		6 mph	13076	13914	14751	15589	16427	17265	18103	18941	19779		
		25 km/h	5080	5415	5750	6085	6420	6755	7090	7425	7760		
		15 mph	11201	11940	12679	13417	14156	14895	15633	16372	17111		
		40 km/h	4450	4750	5060	5370	5675	5980	6300	6600	6900		
		25 mph	9812	10474	11157	11841	12513	13186	13892	14553	15215		

MICHELIN® TIRE CHARACTERISTICS

COMMERCIAL DESCRIPTION Types CAI (Part Number)	Max. dist. / hour km Miles	Standardized dimensions maximum in service			DIMENSIONAL CHARACTERISTICS (1)						Measuring Rim Approved Rims (2) - (3)	Tubeless Bead Seal (3)	Tube Type Ref. Flap (4)					
					Michelin® dimensions													
		e mm inches	D mm inches	E mm inches	e mm inches	D mm inches	R' mm inches	RC mm inches	Tread depth mm 32nd	Cap. I gallon								
24"																		
12.00 R 24 Tubeless																		
XZM STABIL'X 178 A5 110296 (10)	15 9.3	338 13.3	1251 49.3	381 15	325 12.8	1238 48.7	570 22.4	3766 148.3	40 50.4	208 55	8.5 B 8.5 8.50V 9.00V 9.0	-	24 Q 24/25x8.50					
14.00 R 24 Tubeless																		
XZM STABIL'X 193 A5 084179 (14)	15 9.3	405 15.9	1395 54.9	456 18	383 15.1	1416 55.7	641 25.2	4280 168.5	63 79.4	247 65	10.00W 10.0 10.00 WA SDC	- OR 2-25 HEUPO 553201	24/25 T 13-24/25					
25"																		
16.00 R 25 Tubeless																		
X-STRADDLE 200 A5 788305 (15)	12 7.5	467 18.4	1522 59.9	501 19.7	431 17	1510 59.4	672 26.5	4535 178.5	49 61.7	340 90	11.25/2.0 13.00/2.0	-	24/25 VAM					
XZM STABIL'X 200 A5 123781 (14)	15 9.3			526 20.7	443 17.4	1531 60.3	696 27.4	4634 182.4	71 89.4	326 86		OR 3-25 SULLA 553200	14-24/25					
480/95 R 25 Tubeless																		
X-STRADDLE 206 A5 237120 (15)	12 7.5				477 18.8	1553 67.1	688 27.1	4655 183.3	50 63	400 106	13.00/2.5	- OR 3-25 SULLA 553200	25 WAM 16-24/25					
18.00 R 25 Tubeless																		
XZM2 STABIL'X 207 A5 692753 (13 - 17)	10 6.2	538 21.2	1645 64.8	598 23.5	510 20.1	1666 65.6	749 29.5	5020 197.6	78 98.3	480 127	13.00/2.5 15.00/2.5	-	25 WAM					
X STACKER STABIL'X 207 A5 545441 (16)	5 3.1				463 18.2		758 29.8	5045 198.6	90 113.4	460 122		OR 3-25 SULLA 553200	16-24/25					

TIRE LOADS IN KG/LB – TIRE PRESSURES IN BAR/PSI

Tread type	Use	Max. speed	PRESSURE (Bar/PSI)										Size		
			6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0				
			87	94	102	109	116	123	131	138	145				
24"															
XZM STABIL'X	Forklift trucks / Reach stackers												12.00 R 24		
	25 km/h		6630	7020	7410	7800	8190	8580	8970	9360	9750				
	Drive axle		15 mph	14619	15479	16339	17199	18059	18919	19779	20639	21499			
	35 km/h		6380	6755	7130	7505	7880	8255	8630	9005	9380				
	22 mph		14068	14895	15722	16549	17375	18202	19029	19856	20683				
	Steer wheel		25 km/h	5100	5400	5700	6000	6300	6600	6900	7200	7500			
			15 mph	11246	11907	12569	13230	13892	14553	15215	15876	16538			
			35 km/h	4720	5000	5280	5555	5830	6110	6390	6665	6940			
			22 mph	10408	11025	11642	12249	12855	13473	14090	14696	15303			
	Side-loaders														
XZM STABIL'X			All axles	Static	7710	8160	8610	9065	9520	9970	10420	10875	11330	14.00 R 24	
					17001	17993	18985	19988	20992	21984	22976	23979	24983		
			All axles	25 km/h	5100	5400	5700	6000	6300	6600	6900	7200	7500		
				15 mph	11246	11907	12569	13230	13892	14553	15215	15876	16538		
				35 km/h	4720	5000	5280	5555	5830	6110	6390	6665	6940		
				22 mph	10408	11025	11642	12249	12855	13473	14090	14696	15303		
XZM STABIL'X	Forklift trucks / Reach stackers													14.00 R 24	
	Drive axle		25 km/h	10790	11330	11870	12435	13000	13520	14040	14495	14950			
			15 mph	23792	24983	26173	27419	28665	29812	30958	31961	32965			
	Steer wheel		25 km/h	8300	8715	9130	9565	10000	10400	10800	11150	11500			
			15 mph	18302	19217	20132	21091	22050	22932	23814	24586	25358			
XZM STABIL'X			Side-loaders												
	All axles		Static	12540	13160	13780	14440	15100	15705	16310	16840	17370			
				27651	29018	30385	31840	33296	34630	35964	37132	38301			
	All axles		25 km/h	8300	9130	9130	9565	10000	10400	10800	11150	11500			
			15 mph	18302	20132	20132	21091	22050	22932	23814	24586	25358			
25"															
X-STRADDLE			Straddle carrier												
	All axles		10 km/h	12200	12950	13700	14450	15200	15950	16700	17450	18200			
			6mph	26901	28555	30209	31862	33516	35170	36824	38477	40131			
			25 km/h	9440	10010	10580	11150	11720	12290	12860	13430	14000			
			15 mph	20815	22072	23329	24586	25843	27099	28356	29613	30870			
			30 km/h	9085	9635	10185	10730	11280	11830	12380	12925	13475			
			19mph	20032	21245	22458	23660	24872	26085	27298	28500	29712			
			Forklift trucks / Reach stackers												
XZM STABIL'X			Drive axle	25 km/h	13520	14040	14560	15180	15800	16415	17030	17615	18200		
				15 mph	29812	30958	32105	33472	34839	36195	37551	38841	40131		
			Steer wheel	25 km/h	10400	10800	11200	11675	12150	12625	13100	13550	14000		
				15 mph	22932	23814	24696	25743	26791	27838	28886	29878	30870		
X-STRADDLE	Straddle carrier													480/95 R 25	
	All axles		10 km/h	14820	15730	16640	17550	18460	19370	20280	21190	22100			
			6mph	32678	34685	36691	38698	40704	42711	44717	46724	48731			
			25 km/h	11400	12100	12800	13500	14200	14900	15600	16300	17000			
			15 mph	25137	26681	28224	29768	31311	32855	34398	35942	37485			
			30 km/h	10975	11650	12325	12998	13670	14345	15020	15693	16355			
			19mph	24200	25688	27177	28661	30142	31631	33119	34603	36063			
			Straddle carrier												
XZM2 STABIL'X X STACKER STABIL'X			Drive axle	25 km/h	15930	16710	17490	18335	19180	20055	20930	21840	22750	18.00 R 25	
				15 mph	35126	36846	38565	40429	42292	44221	46151	48157	50164		
			Steer wheel	25 km/h	12250	12850	13450	14100	14750	15425	16100	16800	17500		
				15 mph	27011	28334	29657	31091	32524	34012	35501	37044	38588		

COMPONENTS USED WITH INDUSTRIAL AND HANDLING TIRES

THE TUBELESS BEAD SEAL™ (TBS™)

DEFINITION

The TBS™ is a special device conceived to permit the fitment of tubeless tires as tubeless on rims which are not tubeless.

It consists of a ring of special rubber, which is placed inside the tire, and fits between the tire beads.

It ensures the airtightness of the wheel and tire assembly. Valves and the plug can be ordered separately, if required.

RANGE (for fitment with XZM TL and STABIL'X XZM TL up to and including 20")

CAUTION ! The choice of TBS™ depends on the wheel rim width.

Rim Diameter (inches)	Corresponding Size	Rim	Marking			
			Tubeless Bead Seal	Valve	Plastic Plug	CAI of Assembly (TBS + valve + plug)
8	125 / 75 R 8 TL • 5.00 R 8 TL	3 1/4 I 3.00 D	80 TL 8	R 2102 R 2160	- -	102180 (#) 102150
	180 / 70 R 8 TL	4.33 R	100 TL 8 110 TL 8	R 2102 R 2102	- -	102081 (#) 613972
9	6.00 R 9 TL	4.00 E	100 TL 9	R 2102 R 2160	- -	102181 (#) 102151
10	6.50 R 10 TL	5.00 F	125 TL 10	R 2102 R 2161 R 2102 & R 2161	- - -	102183 (#) 421181 (#) 146328
	225 / 75 R 10 TL	6.50 F	165 TL 10	R 2101 R 2102 R 2161 R 2102 & R 2161	R 2110 R 2110 R 2110 R 2110	102114 (#) 102184 (#) 601840 (#) 062642
12	7.00 R 12 TL	5.00 S	125 TL 12	R 2101 R 2102	- -	102145 (#) 522788
	250 / 75 R 12 TL	8.00 G	200 TL 12	R 2101 R 2102	R 2110 R 2110	102040 (#) 787198
15	7.00 R 15 TL	5.5	140 TL 15	R 2101 R 2102	- -	102146 (#) 454346
	7.00 R 15 TL • 7.50 R 15 TL	6.0	150 TL 15	R 2101 R 2102	R 2110 R 2110	102147 (#) 702507
	7.50 R 15 TL • 8.25 R 15 TL	6.5	165 TL 15	R 2102	R 2110	575769
	8.25 R 15 TL • 225/75 R 15 TL • 250/70 R 15 TL	7.0	175 TL 15	R 2101 R 2102	R 2110 R 2110	102042 (#) 260511
	250 / 70 R 15 TL	7.5	190 TL 15	R 2101 R 2102	R 2110 R 2110	102044 (#) 464164
	315 / 70 R 15 TL	8.0	200 TL 15	R 2102	R 2110	609679
	355 / 65 R 15 TL	9.75	250 TL 15	R 2102	R 2110	026320
20	9.00 R 20 TL • 10.00 R 20 TL	7.0	175 TL 20	R 2102	R 2110	102087
	9.00 R 20 TL • 10.00 R 20 TL • 11.00 R 20 TL	7.5	190 TL 20	R 2101 R 2102	R 2110 R 2110	102043 (#) 102083
	10.00 R 20 TL • 11.00 R 20 TL • 12.00 R 20 TL	8.0	200 TL 20	R 2101 R 2102	R 2110 R 2110	102045 (#) 102085
	11.00 R 20 TL • 12.00 R 20 TL	8.5	215 TL 20	R 2101 R 2102	R 2110 R 2110	102046 (#) 102086

TBS™ whose CAI is followed by (#), are not manufactured any more.

The 125 TL 10 TBS™ (CAI 146328) and the 165 TL 10 TBS (CAI 062642) are delivered with 2 valves (R 2102 valve and R 2161 valve).

COMPONENTS USED WITH INDUSTRIAL AND HANDLING TIRES

THE TUBELESS BEAD SEAL™ (TBS™)

SIZE MARKINGS

Example of marking: 100 TL 8 (for 8 x 4.33 rim)

100 indicates the width of the TBS in mm

TL for a tubeless tire

8 indicates the rim diameter in inches

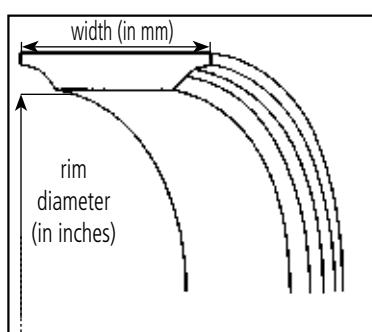
The choice of TBS™ depends on the width of the rim on which the tire is to be fitted.

TBS™ between 80 TL 8 and 140 TL 15 had only one chimney position into which the valve can be fitted.

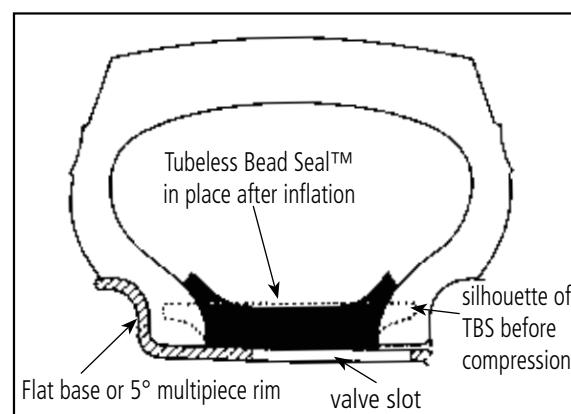
Others have two chimneys; one central and the other offset to allow correct positioning relative to the wheel nave.

The chimney which is not used by the valve, is sealed with a plastic plug (supplied with the TBS™).

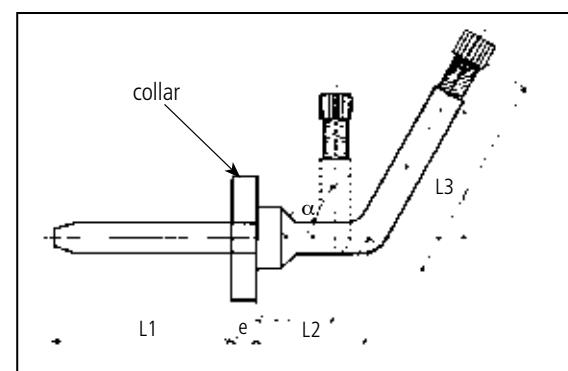
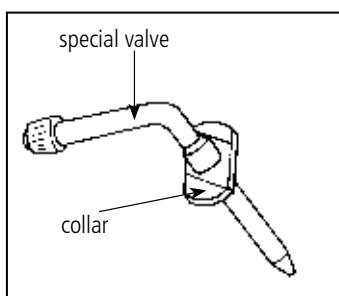
PRINCIPLE



Cross section of a fitted TBS™



Special collared valve



Special collared valve

Valves for TBS™	Ref.	CAI	α	L1	L2	L3	e	collar
Small valve, small collar	R2160	564220	94°	37 mm	18 mm	25 mm	3 mm	11 x 24 mm
Small valve, standard collar	R2102	563008	94°	37 mm	16 mm	25 mm	5 mm	14 x 25 mm
Large valve, standard collar	R2161	158244	94°	36.5 mm	11 mm	55 mm	5 mm	14 x 25 mm
Small valve, standard collar (this valve is no longer available)	R2101	563007	120°	37 mm	22.5 mm	43 mm	5 mm	14 x 25 mm

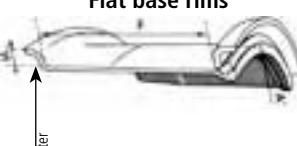
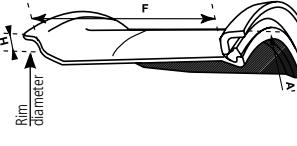
Plug

Ref.	CAI
R2110	579048

See pages 99 to 102 for valves and accessories.

COMPONENTS USED WITH INDUSTRIAL AND HANDLING TIRES

APPROVED RIMS FOR EARTMOVER TIRES

Rim types	Rim designation	F mm inches	H mm inches	A' mm inches	Tire sizes	O-ring
 Flat base rims	8 - 4.33 R	110 4.3	28.5 1.1	260 10.2	180/70 R 8	none
	15 - 6.00 S	152.4 6.0	33.3 1.3	448 17.6	7.50 R 15	
	20 - 7.33 V	186 7.3	44 1.7	596 23.5	9.00 R 20 10.00 R 20 11.00 R 20	
	20 - 8.00 V	203 8.0	44 1.7	596 23.5	10.00 R 20 11.00 R 20	
	20 - 8.50 V	216 8.5	44 1.7	596 23.5	11.00 R 20 12.00 R 20	
	20 - 9.00 V	228.5 9.0	44 1.7	596 23.5	12.00 R 20	
	24 - 8.50 V	216 8.5	44 1.7	698 27.5	12.00 R 24	
	24 - 9.00 V	228.5 9.0	44 1.7	698 27.5	12.00 R 24	
	24 - 10.00 W	254 10.0	51 2.0	712 28.0	14.00 R 24	
	24 - 10.00 WA	254 10.0	51 2.0	714 28.1	14.00 R 24	
5° taper semi drop center rims (SDC - Semi Drop Center) 						Heupo (OR 2-25)
 5° taper bead seat rims	20 - B 6.5	165 6.5	38 1.5	584 23.0	9.00 R 20	R 1443 Tyran (A 20)
	20 - B 7.0	178 7.0	38 1.5	584 23.0	9.00 R 20 10.00 R 20	
	20 - 7.0 T	177.8 7.0	38.1 1.5	584 23.0	9.00 R 20 10.00 R 20	
	20 - B 7.5	190.5 7.5	43 1.7	594 23.4	9.00 R 20 10.00 R 20 11.00 R 20	
	20 - B 8.0	203 8.0	43 1.7	594 23.4	10.00 R 20 11.00 R 20	
	20 - 8.0 V	203 8.0	27.5 1.1	563 22.2	10.00 R 20 11.00 R 20	
	20 - B 8.5	216 8.5	45.5 1.8	599 23.6	11.00 R 20 12.00 R 20	
	20 - 8.5 V	216 8.5	44.4 1.7	597 23.5	11.00 R 20 12.00 R 20	
	24 - B 8.5	216 8.5	45.5 1.8	701 27.6	12.00 R 24	
						none

See pages 131 to 134 for valves and accessories.

COMPONENTS USED WITH INDUSTRIAL AND HANDLING TIRES

APPROVED RIMS FOR EARTMOVER TIRES

Rim types	Rim designation	F mm inches	H mm inches	A' mm inches	Tire sizes	O-ring	
5° taper bead seat rims (advanced rim)	8 - 3.00 D	76 3.0	18 0.7	239 9.4	5.00 R 8	none	
	8 - 3 1/4 I	82.5 3.2	16 0.6	235 9.3	5.00 R 8		
	8 - 5.00 F	127 5.0	22.5 0.9	248 9.8	180/70 R 8		
	9 - 4.00 E	101.5 4.0	20 0.8	243 9.6	6.00 R 9		
	10 - 5.00 F	127 5.0	22.5 0.9	299 11.8	6.50 R 10		
	10 - 5.50 F	140 5.5	22.5 0.9	299 11.8	6.50 R 10		
	10 - 6.50 F	165 6.5	22.5 0.9	299 11.8	225/75 R 10		
	12 - 5.00 S	127 5.0	31.5 1.2	368 14.5	7.00 R 12		
	12 - 8.00 G	203 8.0	28 1.1	361 14.2	250/75 R 12		
	15 - 5.5	139.5 5.5	30.5 1.2	442 17.4	7.00 R 15		
	15 - 6.0	152.5 6.0	33 1.3	447 17.6	7.00 R 15 7.50 R 15		
	15 - 6.5	165 6.5	35.5 1.4	452 17.8	7.50 R 15 8.25 R 15		
	15 - 7.0	178 7.0	38 1.5	457 18.0	225/75 R 15 8.25 R 15 250/70 R 15		
	15 - 7.5	190.5 7.5	40.5 1.6	462 18.2	250/70 R 15		
	15 - 8.0	203 8.0	43 1.7	467 18.4	315/70 R 15		
	15 - 9.75	247.5 9.7	38 1.5	457 18.0	355/65 R 15		
5° taper bead seat rims (advanced rim)	20 - 6.0	178 7.0	38 1.5	584 23.0	7.50 R 20	none	
	20 - 6.5	165 6.5	35.5 1.4	579 22.8	8.25 R 20 9.00 R 20		
	20 - 7.0	178 7.0	38 1.5	584 23.0	9.00 R 20 10.00 R 20		
	20 - 7.5	190.5 7.5	40.5 1.6	589 23.2	9.00 R 20 10.00 R 20 11.00 R 20		
	20 - 8.0	203 8.0	43 1.7	594 23.4	10.00 R 20 11.00 R 20 12.00 R 20		
	20 - 8.5	216 8.5	45.5 1.8	599 23.6	11.00 R 20 12.00 R 20		
	20 - 9.0	228.5 9.0	48.5 1.9	605 23.8	12.00 R 20		
	24 - 8.5	216 8.5	45.5 1.8	701 27.6	12.00 R 24		
	24 - 9.0	228.5 9.0	48.5 1.9	707 27.8	12.00 R 24		
	24 - 10.0	254 10.0	50.8 2.0	711 28.0	14.00 R 24		
	25 - 11.25/2.0	284 11.2	51 2.0	737 29.0	16.00 R 25	Heupo (OR 2-25)	
	25 - 13.00/2.0	330 13.0	51 2.0	737 29.0	16.00 R 25		
	25 - 13.00/2.5	330 13.0	63.5 2.5	762 30.0	18.00 R 25		
	25 - 15.00/2.5	381 15.0	63.5 2.5	762 30.0	18.00 R 25		
	33 - 13.00/2.5	330 13.0	63.5 2.5	965 38.0	18.00 R 33		
5° taper bead seat rims (5 pieces)	See pages 131 to 134 for valves and accessories.						

COMPONENTS USED WITH INDUSTRIAL AND HANDLING TIRES

TUBES AND FLAPS FOR HANDLING TIRES

Rim diameter	Fits tire sizes	Tube Reference	Valve Reference	Valve type (1)	Tube + valve CAI	Flap Reference	Flap CAI
8"	5.00 R 8 (5.70 R 8)	8 CG	570	SC	101013	83-8 L	102500
	180 / 70 R 8 (18 x 7.00 R 8)	8 D	570	SC	101022	5-8	102530
9"	6.00 R 9 (6.90 R 9)	9 F	570	SC	101040	110-9 LD	102660
10"	6.50 R 10	10 F	1012	SC	101049	150-10 LD	102670
	225/75 R 10 (23 x 9 R 10)					7-10	551007
12"	7.00 R 12	12 H	578	DC	101078	125-12 LD	102680
	250 / 75 R 12 (27 x 10 R 12)	12 KD	578	DC	101123	9-12 D	102720
15"	7.00 R 15	15/16 F	570	SC	101071	15 x 6.00	511268
	225 / 75 R 15 (28 x 9 R 15)					15 x 7.50	084220
	7.50 R 15	15/16 J	570	SC	101106	15 x 6.00	511268
	250/70 R 15 (250 R 15)					15 x 7.50	084220
	8.25 R 15	15 K	1156	SC	101128	15 x 6.00	511268
	315/70 R 15 (300 R 15)	15 P	582	TC	510204	15 x 7.50	084220
20"	9.00 R 20	20 M	1157	SC	101153	20 x 7.50	818874
	10.00 R 20	20 N	1158	SC	101161		
	11.00 R 20	20 P	1158	SC	101173	20 x 8.50	111005
	12.00 R 20	20 Q	1158	SC	101192		
24"	12.00 R 24	24 Q	582	TC	101196	24/25 x 8.50	001444
	14.00 R 24	24/25 T	752	SC	514503	13-24/25	551600
25"	16.00 R 25	25 W AM	1837 (TRJ650)	SC	101871	16-24/25	551608
	18.00 R 25	25 W AM	1837 (TRJ650)	SC	101871	16-24/25	551608
33"	18.00 R 33	33 VF AM	1837 (TRJ650)	SC	101321	16 - 33	551760

(1) DR = straight valve, SC = single bend valve, DC = double bend valve, TC = triple bend valve, see pages 131 to 134.

TUBE MARKINGS:

example: eg. 1: 24/25 T eg. 2: 25 W AM

The first two numbers indicate the bead seat (rim) diameter of the tire into which the tube can be fitted.

(in the first example, the tube may be fitted in 24 and 25 inch tires. In the second example, the tube may be fitted only in 25 inch tires.)

The first letter corresponds to the section width of the tube (internal width of the tire). This ranges from A to Z, with A being the smallest.

In the examples above, T and W indicate that the tubes are designed for fitting into tires of relatively large section width.

Sometimes, a second letter provides additional information:

B, E, F and H which indicate intermediate widths.

The third and fourth letters are an indication of the valve type.

AM indicates that the tube is fitted with an American valve base, R1946 (TRA SP4000) and a valve stem

R1837 (TRJ 650).

D would indicate that the valve is offset. T would indicate a tractor tube fitted with an air-water valve, ex. type TR 218A.

Explanation on valves and valve bases are given on subsequent pages.

See pages 131 to 134 for valves and accessories.

COMPONENTS USED WITH INDUSTRIAL AND HANDLING TIRES

TUBES AND FLAPS FOR HANDLING TIRES

FLAP MARKINGS:

Flaps which contain the letter "D" in their description have an offset valve hole (e.g.: 125 - 12 LD). Check before fitting whether the valve slot in the wheel requires a central or offset valve hole. For each tire size shown, the flap shown in bold will be supplied, unless another is specified.

e.g. 1: **20 x 8.50**

The first number indicates the tire seat diameter, expressed in inches, with which the flap is to be used.

In this example, the flap may be used with 20 inch tires.

The second number indicates the enlarged width of the flap (width + height), in inches.

In this example, the enlarged width of the flap is 8.50 inches.

e.g. 2: **14-24/25**

The first number indicates the total width of the flap (includes height of edges), expressed in either mm or in inches.

In the example above, the width of the flap is 14 inches. The second number indicates the rim diameter, or the tire bead seat (rim) diameter in inches, with which the flap is to be used. In this example, the flap may be used with 24 and 25 inch tires.

Additional letters may be used to provide supplementary information.

For example, the significance of different letters is as follows:

L - the edges are tapered, B - the flap has a reinforcing boss around the valve position, S - the flap is reinforced, D - offset hole for valve.

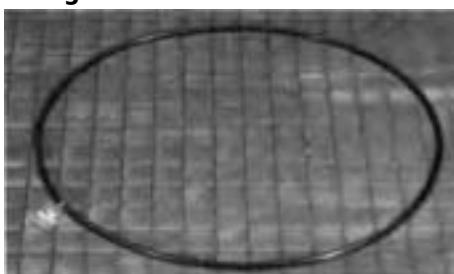
SEALS FOR HANDLING TIRES AND RIMS

Name	Designation	Reference	CAI	Type	Remarks
Tyran	A 20	R 1443	553 004	Corner Seal	for 20" tires
-	OR 6.6 - 20	R 1681	553 215	O-ring	for 335/80 R 20, 375/75 R 20, 405/70 R 20 and 425/75 R 20 on SDC rim
Heupo	OR 2 - 25	R 1438	553 201	O-ring	for 25" rim (3 pieces)
Sulla	OR 3 - 25	R 1437	553 200	O-ring	for 25" rim [5 pieces (1)]
Strix	OR 3 - 33	R 1440	553 203	O-ring	for 33" rim

(1) and for 3 piece CR rims

SEAL DESCRIPTION

O-ring:



Explanation of the sealing ring designation:

The first number is the section diameter of the seal:

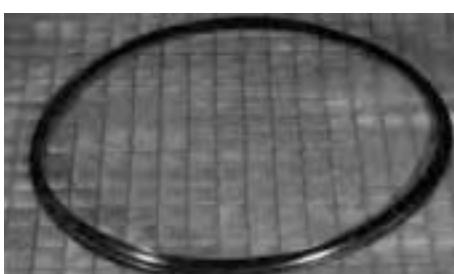
OR: Abbreviation of O Ring

- imperial number: value expressed in 1/8 of inch (3 = 3/8)

- decimal number: value expressed in mm (6.6 = 6.6 mm)

The second number is the nominal bead seat diameter, expressed in inches.

Corner seal:



Explanation of the corner seal designation:

The letter indicates the profile of the seal.

The number is the nominal rim diameter, in inches.

Note:

Approval for use of corner seals must be obtained from Michelin.

RECOMMENDATIONS – INDUSTRIAL TIRES

THE IMPORTANCE OF THE TIRE

Tires are the only contact between the vehicle and the ground. It is therefore vital to have the correct tire and to keep it in good condition. See page 168.

TIRE LOAD INDEX AND SPEED SYMBOL

See page 141 and 142.

CHOICE OF TREAD PATTERN

This depends essentially on the conditions of use, and the type of ground encountered (e.g.: traction requirement, risk of damage, etc.)

Optimum tire performance depends on the correct tire choice.

An unsuitable tread pattern will result in a significant reduction in tire life.

MOUNTING AND REMOVAL OF TIRES

These operations must be entrusted to a professional having the correct equipment and training. Incorrect mounting can cause fatal injuries during the mounting operation or cause damage (which may be visible or not) to either the tire or rim. Such damage could result in premature failure of the tire.

Tube type MICHELIN® tires must be mounted with the corresponding MICHELIN® tube and flap.

Tubeless industrial tires may be mounted with a tubeless bead seal on all rims to which the same size could be mounted as tube type. They can also be mounted with a tube and flap if a TBS™ is not available.

When a tire is replaced, it is recommended that a new TBS™ is mounted at the same time.

If the old TBS™ is re-mounted, it is essential that a new valve is used, and that the valve hole in the TBS™ is undamaged. If it is damaged, the TBS™ must be replaced, as it is the hole and the valve that ensure there is no air loss.

Tubeless Earthmover and Truck Tires, when mounted to a flat base tubeless wheel, must be mounted with the correct corner joint.

Tires mounted and placed in stock must IMPERATIVELY be inflated to 80 psi (5.5 bars) for a correct installation of the beads.

The pressure must then be reduced to between 10 and 12 psi (0.7 and 0.8 bars).

The tire should be inflated to the correct pressure when the assembly is mounted to the machine.

When a tire is mounted to a divided wheel (normally consisting of 2 parts bolted together), or in the case of a dual fitment, it is ESSENTIAL to totally deflate the tire before any intervention.

Failure to follow this rule can result in very serious injury.

The design of divided wheels (2 parts bolted together) varies.

Therefore, the maximum recommended pressure is different from one manufacturer to another.

Please consult the wheel manufacturer to ascertain the recommended max. fitment air pressure.

USAGE RECOMMENDATIONS FOR MICHELIN® EARTMOVER TIRES

GENERAL PRECAUTIONS

- 1 - Never undertake any welding, or apply any heat of any form to the wheel, or in close proximity of the wheel, before removing the tire from the rim. Serious explosion can result if this precaution is not taken.
- 2 - Never work in the vicinity of high tension overhead power cables, before ensuring that the minimum safe distance between the power cables and the materials handling equipment being used will be respected in all operations.
- 3 - The following are NOT recommended:
 - dual wheel application of MICHELIN® radial tires with tires of diagonal ply construction.
 - dual wheel application of normal tread tires and those with a deep tread.
 - dual wheel application of tires of the same type but with different degrees of wear.
 - the mixing on the same machine of radial tires with either diagonal ply tires or pneumatic shaped solid tires. (sometimes referred to as cushion tires).

INFLATION PRESSURE

Tire pressures should be checked every two weeks.

The correct inflation pressure is of utmost importance for safety, stability, tire life, comfort and energy saving. Under-inflation causes an abnormally high temperature in the tire's components and leads to the deterioration of the tire. This deterioration is irreversible and may result in a sudden tire deflation.

The damaging effects of under-inflation do not necessarily show at once, but can show up some time after the pressure has been corrected.

After an extended period of use while under-inflated, the tire must be removed from the wheel, inspected and if judged suitable for further service, re-mounted.

The weighing of each axle (front and rear) of a fully laden vehicle is the only way to determine the correct inflation pressure.

CHECK INFLATION PRESSURE REGULARLY WHEN THE TIRES ARE COLD

It is normal for tire pressures to rise while running, so never bleed air from a tire which has recently been running.

Ensure the tire pressures of twin tires are the same.

Unless a specification to the contrary exists, the recommended pressure for industrial tires is between 9 and 10 bars (131 and 145 PSI). (See note above concerning divided wheels).

STORAGE OF TIRES AND TUBES

To avoid premature ageing and deterioration, tires must be stored in a dark, dry and cool place indoors.

They should be protected from:

- 1) ozone concentrations (sunlight, arc-welding, mercury vapour lamps, electric generators, etc.)
- 2) ultra-violet radiation
- 3) extreme temperatures
- 4) grease, gasoline and other substances which could deteriorate the rubber

Tires should be placed vertically, upright, side-by-side as if positioned on a vehicle.

Tubes, flaps and air-tight seals can be kept in their original packaging or open on shelves or in containers where the surface in contact with the rubber is smooth to avoid risks of tearing, cuts or perforations.

**For more information,
please consult your local
Michelin® Earthmover Representative.**



USAGE RECOMMENDATIONS FOR MICHELIN® EARTMOVER TIRES

THE IMPORTANCE OF THE TIRE

TIRES ARE THE ONLY CONTACT BETWEEN THE VEHICLE AND THE GROUND.
IT IS THEREFORE VITAL TO HAVE THE CORRECT TIRE AND MAINTAIN IT PROPERLY.

GENERAL PRECAUTIONS TO BE TAKEN WHEN MOUNTING OR DISMOUNTING TIRES



Safety Warning

In order to minimize the risk of accidents,

Always follow the recommended mounting and unmounting procedures for pneumatic tires.
Only specially trained and authorized personnel should mount or dismount earthmover tires.
- The inner and the outer tires of a dual fitment must always be deflated before dismounting any rim component from the hub of the vehicle.
- Never attempt to repair a damaged wheel by brazing, soldering or welding with the tire still mounted to the wheel even if deflated.
Do not apply heat to the wheel or rim when the tire is still mounted.
- If working near overhead electric lines, make sure that the highest point on the vehicle or on the load is at a safe distance from the lines.

Never exceed the inflation pressure for the wheel. (This may be lower than that for the tire.)

Always ensure that the tire is properly mounted and seated on the rim before inflation to protect the tire and serviceman.

Please consult Michelin® technical documentation for advice on inflation pressures and safety guidelines.

Maintain the recommended inflation pressure for the application:

Under inflation or over inflation can be dangerous for the serviceman and machine operator, and can cause irreparable damage to the tire (rapid and irregular wear, excessive temperatures, poor handling, etc.)

Ensure that the tire is operated within its design parameters:

Overload or use at excessive speeds will ultimately affect a tire's performance.

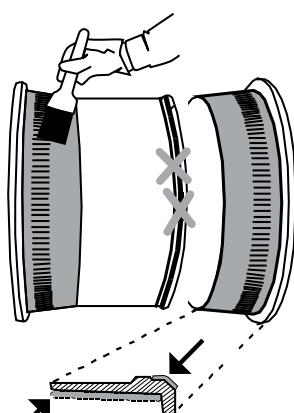
We strongly advise against:

- dual mounting MICHELIN® radial tires with bias-ply tires.
- dual mounting a tire of normal tread depth with a deep treaded tire.
- dual mounting tires of the same type which have different degrees of wear.

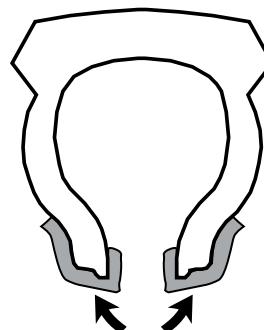
If in any doubt, please consult Michelin® documents on MOUNTING AND DISMOUNTING OF EARTMOVER TIRES.

LUBRICATION

Lubricate only areas on rim components that are in contact with tire.



Lubricate the grooved area of the outside bead seat band using a vegetable-based lubricant.



Lubricate the tire beads, from the bead point rubber to the bead positioning rib.



Safety Note

Never use petroleum based lubricants!

Always remove the bead protectors and lubricate the base of bead seat.
Lubricate the tire beads, from the bead point rubber to the bead positioning rib.

USAGE RECOMMENDATIONS FOR MICHELIN® EARTMOVER TIRES

THE IMPORTANCE OF THE TIRE (CONT.)

HANDLING

Improper handling of a unmounted tire can cause irreparable damage.

In order to eliminate the risk of bead damage and the resulting problems, Michelin® strongly advises that:

- 1 - The tire is not lifted directly by the bead with a crane or bead hook.
- 2 - Flat straps are used (not steel slings or chains).
- 3 - The tire is lifted under the tread and not the beads when a forklift truck is used.
- 4 - For all tubeless tires supplied with bead protectors, **the protector should be left in place immediately before mounting.**
(keep the protectors; they can be refitted when the tire is temporarily removed for repair or retreading).

STORAGE

In order to avoid premature aging and damage to tires, store them in a cool dry place indoors and away from direct sunlight.

If this cannot be done, tires must be protected from:

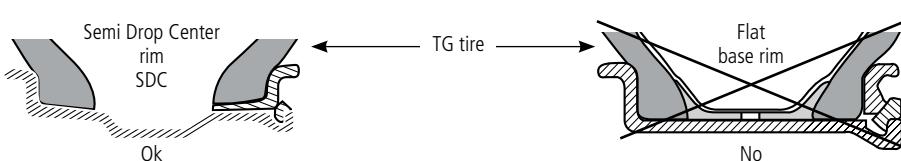
- 1 - Ozone sources (sun, arc-welders, mercury vapor light bulbs, etc).
 - 2 - Ultra-violet rays.
 - 3 - Weather
- Tires should be stored vertically, one against the other (avoid stacking).
- Tubes, flaps and sealing rings may be stored in their original packing, or unwrapped, on clean racks, shelves or in containers, providing that the surfaces in contact with the rubber are smooth to avoid tears, cuts or perforations and free from chemicals which damage rubber.

MOUNTING OF TG EARTMOVER TIRES (24 INCH DIAMETER) (14.00 R 24 / 16.00 R 24)

These tires must only be mounted on drop-center, semi drop-center or single piece wheels.

(XGLA2* TG, XRA* TG, X SNOPLUS* TG and XMPS* TG)

Do not fit * TG tires on flat base rims.



**RIMS MUST BE 15 DEGREE DC,
SDC OR SINGLE PIECE FOR A
TG TIRE.**

MOUNTING OF 15.5 R 25* AND 17.5 R 25* EARTMOVER TIRES

L2 (XTLA*, X SNOPLUS*) and L3 (XHA*) tires can be fitted to:

- multi piece SDC or Flat Base rims
- single piece rims

NOTE: L3** (XKA), L4 (XRD1A) and L5 (XLDD2,* X MINED2, XSMD2+) tires should only be fitted to multi piece rims.
They should not be fitted to single piece rims.

USAGE RECOMMENDATIONS FOR MICHELIN® EARTHMOVER TIRES

MAIN CAUSES OF DETERIORATION IN EARTHMOVER TIRES

A large number of earthmover tires are rendered unserviceable as a result of:

- incorrect inflation pressures
- overload
- excessive speed
- severe impacts
- a combination of the above factors

Separation between component parts of a tire can occur and, if identified, its cause should be immediately investigated.

This generally results from overheating due to:

- traveling at speeds higher than those recommended for the loads and pressures used
- under-inflation or overload of the tires for the application
- heat generated by other parts and transferred to the tires: from brake drums, hub-reduction gears, etc.

Separation can also be caused or aggravated by mechanical forces:

- excessive lateral forces occurring in very tight radius curves
- impacts on badly maintained surfaces
- constant hammering due to the condition of the road surface

To minimize these abnormal mechanical forces:

- bank bends correctly during their construction
- travel at speeds compatible with the radius and the banking of the bends

Relation between curve radius, speed and banking for 0° slip-angle												
RADIUS		km/h	15	20	25	30	35	40	45	50	55	65
(m)	(ft)	mph	9	12	15	20	22	25	28	31	35	40
BANKING %												
50	165		3.5	6	10							
60	195		3	5	8	12						
70	230		2.5	4.5	7	10						
80	260		2	4	6	9	12					
90	295		2	3.5	5.5	8	10.5					
100	330		1.5	3	5	7	9.5					
125	410			2.5	3.5	5.5	7.5	10				
150	490			2	3	5	6.5	8.5	10.5			
175	575				2.5	4	5.5	7	9	11		
200	655					3.5	5	6	8	10	12	
250	820						4	5	7	8	10	
300	985						3	4	5	6	8	10

For traveling on non-banked curves, follow the instructions in the table below:

MINIMUM RADIUS	MAXIMUM SPEED
15 m	50 ft
25 m	80 ft
50 m	165 ft
75 m	245 ft
100 m	330 ft
200 m	655 ft
	8 km/h
	10 km/h
	15 km/h
	20 km/h
	25 km/h
	30 km/h
	5 mph
	6 mph
	9 mph
	12 mph
	15 mph
	20 mph

ROADING (DRIVE-AWAY)

Transportation of empty vehicles over long distances requires maximum precaution with regard to:

- inflation pressures
- maximum speed
- duration of rest stops

For any non-standard application, consult Michelin® Earthmover.

RECOMMENDATIONS

NITROGEN INFLATION

INTRODUCTION

Our tires are designed to give the highest level of performance with normal air inflation.

WHEN SHOULD NITROGEN INFLATION BE RECOMMENDED?

Nitrogen is an inert non-combustible gas.

Nitrogen inflation reduces the risk of fires and improves safety.

Nitrogen diffuses more slowly than oxygen through rubber limiting considerably the risk of oxidation of different parts of the tire (rubber, cables, etc.) and the steel components.

Nitrogen inflation is systematically recommended for reasons of safety when working under the following conditions:

- areas where there is a risk of explosion.
- working with or in areas involving high temperature liquids (e.g. foundries, glass works, etc.)
- working in areas where there is a risk of electrical discharge (close to high tension cables, etc.)
- working where overheating of a tire has been caused by:
 - intensive driving (speed, distance, intensity of the cycles)
 - excessive overheating of a mechanical unit (transmission or brakes for example)

Nitrogen inflation is a well adapted solution for use with mechanical handling equipment.

EQUIPMENT NECESSARY

To install an effective inflation system, we would recommend:

- 2 gas bottles of compressed nitrogen
- 1 nitrogen regulator
- an inflation gun EURODAINU ref. 1822 for truck and industrial, and ref. 35864 for earthmover.

**ATTENTION: Inflation with nitrogen must be undertaken by a person who has been trained to use it.
Never use a nitrogen bottle without the appropriate regulator, and always follow safety guidelines.**

SUPPLIERS: Contact your local specialist in compressed gases.

VOLUME OF NITROGEN NECESSARY TO INFLATE A TIRE

The quantity of nitrogen necessary to inflate a tire is proportional to its internal volume and the inflation pressure required.

The volumes of the industrial tires are shown in the tables (characteristics of MICHELIN® Industrial Tires)

Example: 250 /70 R 15 XZM TL interior volume is 39 liters

for a pressure of 10 bars, the quantity of nitrogen needed is: $39 \times 10 = 390$ liters.

APPROXIMATE LOOSE MATERIAL DENSITIES AND WEIGHTS

Approximate Loose Material Densities (t/m³)

Material	t/m ³	Material	t/m ³
Alkaline potash	1.3 to 1.5	Copper ore	1.6
Anthracite	0.9 to 1.1	Iron ore	2.4 to 3.3
Clay (dry)	1 to 1.1	Pyrites	2.6
Clay (moist)	1.2 to 1.3	Earth dry	1.2 to 1.5
Clay (wet)	1.3 to 1.4	Earth moist	1.3 to 1.4
Bauxite	1.5	Earth wet	1.4 to 1.5
Mud	1.8	Overburden	1.7 to 1.8
Limestone	1.5 to 1.6	75 % rock - 25 % earth	1.9 to 2
Coal	0.7	50 % rock - 50 % earth	1.7 to 1.8
Quick-lime	0.9 to 1.3	25 % rock - 75 % earth	1.6
Slaked lime	1.1 to 1.3	Sand dry	1.5
Chalk	1.8 to 2.6	Sand moist	1.9
Granite	1.6 to 1.7	Gravel dry	1.7 to 1.8
Sandstone	1.6	Gravel moist	2
Crushed gypsum	1.6		
Marl clay	2.2		

Material Densities— Approximate Material Weights

Material	Pounds Per Cubic Yd. (Loose)	Kilograms Per Cubic Meter (Loose)
BASALT	3300	1960
BAUXITE		2400-3200
CALICHE		1425-1900
CALICHE		2100-2500
CLAY - NATURAL BED	2200-2800	1245-1720
- DRY	1850-2500	1100-1485
- WET	2500-2900	1305-1660
CLAY AND GRAVEL		
- DRY	2500	1485
- WET	2500-2800	1305-1660
COAL - ANTHRACITE	1450-2000	860-1185
- BITUMINOUS	1350-1600	800-950
- LIGNITE	1225	725
COPPER ORE	2800	1660
EARTH - DRY LOAM	1800-2400	1070-1426
- MOIST	2080-2600	1235-1545
- WET	2700-2900	1600-1720
EARTH, SAND AND GRAVEL	2650	1570
EARTH AND ROCK		
(25/75)	3300	1760
(50/50)	2900	1720
(75/25)	2650	1570
GRAVEL - DRY	2500	1485
- WET	3400	2020
IRON ORE	4150-5500	2460-3260
LIMESTONE	2400-2600	1425-1540
SAND - DRY	2400-2950	1425-1750
- MOIST	2800-3100	1660-1840
- WET	3100-3250	1840-1930
SANDSTONE	2600-2950	1545-1750
SHALE	2100	1245
SLAG	3000	1780
STONE - CRUSHED	2400-2900	1425-1720
TACONITE	3000-4000	1782-2377

UNITS OF MEASURE AND CONVERSION TABLES

Measurement	Abbreviation	Conversion factor	Abbreviation	Measurement	Conversion factor	Abbreviation
TORQUE						
pound foot	lb ft	x 0.1383	= m kg	kilogram meter	x 7.233	= lb ft
kilogram meter	m kg	x 9.81	= m N	Newton meter	x 0.102	= m kg
LENGTH						
32nds	32nd	$\div 1.26$	= mm	millimeter	x 1.26	= 32nd
inch	in	x 0.0254	= m	meter	x 39.37	= in
inch	in	x 25.4	= mm	millimeter	x 0.039	= in
foot	ft	x 0.3048	= m	meter	x 3.281	= ft
yard	yd	x 0.9144	= m	meter	x 1.0936	= yd
mile	ml	x 1.6093	= km	kilometer	x 0.6214	= ml
LOAD						
pound	lb	x 0.4536	= kg	kilogram	x 2.205	= lb
long ton (G.B.) 2240 lb	lg ton	x 1.016	= T	metric ton	x 0.984	= lg ton
short ton (U.S.) 2000 lb	sh ton	x 0.907	= T	metric ton	x 1.103	= sh ton
DENSITY						
pound cubic foot	lb/cu ft	x 16.0184	= kg/m ³	kilogram/m ³	x 0.625	= lb/cu ft
pound cubic yard	lb/cu yd	x 0.5933	= kg/m ³	kilogram/m ³	x 1.686	= lb/cu yd
PRESSURE						
kilopascal	kPa	x 0.01	= bar	bar	x 100	= kPa
atmosphere (at sea level)	atm	x 0.986	= bar	bar	x 1.014	= atm
pound square inch	psi	x 0.0703	= kg/cm ²	kilogram/cm ²	x 14.22	= psi
pound square inch	psi	x 0.069	= bar	bar	x 14.513	= psi
pound square inch	psi	x 0.068	= atm	atmosphere	x 14.7	= psi
pound square inch	psi	x 6.895	= kPa	kilopascal	x 0.145	= psi
POWER						
french horsepower	CV	x 0.7355	= kW	kilowatt	x 1.36	= CV
horsepower	HP	x 0.7457	= kW	kilowatt	x 1.34	= HP
french horsepower	CV	x 0.98	= HP	horsepower	x 1.014	= CV
VOLUME/CAPACITY						
cubic foot	cu ft	x 0.02832	= m ³	cubic meter	x 35.31	= cu ft
cubic yard	cu yd	x 0.7646	= m ³	cubic meter	x 1.308	= cu yd
gallon (U.S.)	gal	x 3.7854	= l	liter	x 0.2642	= gal
TEMPERATURE						
degree fahrenheit	°F	- 32 x (5/9)	= °C	degree Celsius	x (9/5) + 32	= °F

EARTMOVER TREAD DEPTH CHART

MSPN	SIZE	TREAD	Classification	ISO	STAR	32nds	MM
------	------	-------	----------------	-----	------	-------	----

XZSL STABIL X

56324	10R16.5	STABIL' XZSL	L3	128A5	8	24	19
70710	12R16.5	STABIL' XZSL	L3	141A5	10	28	23
41393	27X8.50R15	STABIL' XZSL	L3	117A5	6	18	15

XCL

12568	7.50 R 15	XLC	C1	---	---	10	8
06569	13/80 R 20 E20 PIL	XLC	C1	---	---	15	12

X MINE D2

18686	10.00 R 15	X MINE D2	L5	---	---	60	48
19601	12.00 R 20	X MINE D2	L5	---	---	72	57
19455	12.00 R 24	X MINE D2	L5	---	---	72	57
64715	14.00 R 20	X MINE D2	L5	---	---	60	48
41368	14.5 R 15	X MINE D2	L5	---	---	60	48
34827	15.5 R 25	X MINE D2	L5	---	---	76	60
32219	17.5 R 25	X MINE D2	L5	---	---	82	65
00489	18.00 R 25	X MINE D2	L5	---	---	103	82
34173	20.5 R 25	X MINE D2	L5	---	---	93	74
14357	23.5 R 25	X MINE D2	L5	---	---	105	83
21337	26.5 R 25	X MINE D2	L5	---	---	115	91
33522	29.5 R 25	X MINE D2	L5	---	---	126	100
19132	35/65 R 33	X MINE D2	L5	---	---	122	97
85701	350/65 R 15	X MINE D2	L5	---	---	45	36
41318	400/80 R 15	X MINE D2	L5	---	---	42	33
23416	7.50 R 15	X MINE D2	L5	---	---	58	46
22154	8.25 R 15	X MINE D2	L5	---	---	60	48
09497	9.00 R 20	X MINE D2	L5	---	---	64	51
51136	45/65 R 39	X MINE D2	L5	---	---	146	116
76263	45/65 R 45	X MINE D2	L5	---	---	145	115
07695	55/80 R 57	X MINE D2 HR	L5	---	---	150	119
09011	60/80 R 57	X MINE D2 HR	L5	---	---	148	118
13267	55/80 R 57	X MINE D2 LC	L5	---	---	150	119
98725	60/80 R 57	X MINE D2 LC	L5	---	---	148	118
18939	55/80 R 57	X MINE D2 SR	L5	---	---	150	119
31145	60/80 R 57	X MINE D2 SR	L5	---	---	148	118

X SNOPLUS M&S

53173	14.00 R 24	X SNOPLUS M+S	G2	---	*	30	24
99466	17.5 R 25	X SNOPLUS M+S	G2,L2	---	*	35	28
62408	20.5 R 25	X SNOPLUS M+S	G2,L2	---	*	39	31
74539	23.5 R 25	X SNOPLUS M+S	G2,L2	---	*	43	34
36887	385/95 R 24	X SNOPLUS M+S	E2	170E	---	30	24
05893	385/95 R 25	X SNOPLUS M+S	E2	170E	---	30	24

X STACKER

21861	18.00 R 25	X STACKER	---	207A5	36	113	90
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MSPN	SIZE	TREAD	Classification	ISO	STAR	32nds	MM
------	------	-------	----------------	-----	------	-------	----

X TERMINAL T

33193	280/75 R 22.5	X TERMINAL T	---	168 A8	16	39	31
	310/80 R 22.5	X TERMINAL T		175 A8		38	30

X TRACTION

02173	24.00 R 35	XTRACTION E4T	E4	---	**	97	77
35019	27.00 R 49	XTRACTION S B	E3	---	**	58	46
35019	27.00 R 49	XTRACTION S A	E3	---	**	58	46
10116	27.00 R 49	XTRACTION B	E4	---	**	102	81
38957	27.00 R 49	XTRACTION A4	E4	---	**	102	81
68679	27.00 R 49	XTRACTION B4	E4	---	**	102	81

XAD65-1 SUPER E3T

89647	650/65 R 25	XAD65-1 SUPER	E3	180B	---	51	40
79374	750/65 R 25	XAD65-1 SUPER	E3	190B	---	54	43
74895	775/65 R 29	XAD65-1 SUPER	E3	195B	---	57	45
87257	850/65 R 25	XAD65-1 SUPER	E3	196B	---	61	47
40269	875/65 R 29	XAD65-1 SUPER	E3	203B	---	64	51

XADN

86650	23.5 R 25	XADN	E3	185B	---	48	38
72625	26.5 R 25	XADN	E3	193B	---	52	41
44038	29.5 R 25	XADN	E3	200B	---	55	44

XADT

60172	26.5 R 25	XADT	E4	193B	---	66	52
63837	29.5 R 25	XADT	E4	200B	---	72	57

X-CRANE AT

22555	385/95 R 25	X-CRANE AT	E2	170F	---	28	22
39675	445/95 R 25	X-CRANE AT	E2	174F	---	32	25
93770	385/95 R 24	X-CRANE AT TT	E2	170F	---	28	22

XDM

37347	37.00 R 57	XDM B	E4	---	**	125	99
51650	40.00 R 57	XDM C4	E3	---	**	80	64

EARTMOVER TREAD DEPTH CHART

MSPN	SIZE	TREAD	Classification	ISO	STAR	32nds	MM
XDR							
95164	59/80 R 63	XDR "S" B	E3	---	**	89	71
99387	59/80 R 63	XDR "S" C4	E3	---	**	89	71
97772	27.00 R 49	XDR A	E4	---	**	95	75
62874	33.00 R 51	XDR A	E4	---	**	110	87
44598	36.00 R 51	XDR A	E4	---	**	122	97
82908	37.00 R 57	XDR A	E4	---	**	122	97
94513	40.00 R 57	XDR A	E4	---	**	122	97
62109	59/80 R 63	XDR A	E4	---	**	146	116
92388	27.00 R 49	XDR B	E4	---	**	95	75
76044	33.00 R 51	XDR B	E4	---	**	110	87
50173	36.00 R 51	XDR B	E4	---	**	122	97
48838	37.00 R 57	XDR B	E4	---	**	122	97
65161	40.00 R 57	XDR B	E4	---	**	122	97
39369	50/80 R 57	XDR B	E4	---	**	121	96
95806	50/90 R 57	XDR B	E4	---	**	135	107
75490	53/80 R 63	XDR B	E4	---	**	132	105
05123	56/80 R 63	XDR B	E4	---	**	132	105
99985	59/80 R 63	XDR B	E4	---	**	146	116
57879	27.00 R 49	XDR B4	E4	---	**	95	75
98534	33.00 R 51	XDR B4	E4	---	**	110	87
87111	36.00 R 51	XDR B4	E4	---	**	122	97
55592	37.00 R 57	XDR B4	E4	---	**	122	97
48755	40.00 R 57	XDR B4	E4	---	**	122	97
51976	50/90 R 57	XDR B4	E4	---	**	135	107
94329	53/80 R 63	XDR B4	E4	---	**	132	105
30587	56/80 R 63	XDR B4	E4	---	**	132	105
60149	59/80 R 63	XDR B4	E4	---	**	146	116
49473	40.00 R 57	XDR C	E4	---	**	122	97
62602	27.00 R 49	XDR C4	E4	---	**	95	75
91900	33.00 R 51	XDR C4	E4	---	**	110	87
97663	37.00 R 57	XDR C4	E4	---	**	122	97
84964	40.00 R 57	XDR C4	E4	---	**	122	97
46349	50/90 R 57	XDR C4	E4	---	**	135	107
72080	53/80 R 63	XDR C4	E4	---	**	132	105
90607	56/80 R 63	XDR C4	E4	---	**	132	105
56935	59/80 R 63	XDR C4	E4	---	**	146	116
XDT							
68272	27.00 R 49	XDT A	E4	---	**	91	72
46374	18.00 R 33	XDT A4	E4	---	**	67	53
94773	21.00 R 35	XDT A4	E4	---	**	74	59
65909	24.00 R 35	XDT A4	E4	---	**	83	66
43037	24.00 R 49	XDT A4	E4	---	**	86	68
63851	27.00 R 49	XDT A4	E4	---	**	91	72
61642	33.00 R 51	XDT A4	E4	---	**	109	87
57305	18.00 R 33	XDT B	E4	---	**	67	53
88632	24.00 R 35	XDT B	E4	---	**	83	66
63786	27.00 R 49	XDT B	E4	---	**	91	72
53227	33.00 R 51	XDT B	E4	---	**	109	87
93342	24.00 R 35	XDT C4	E4	---	**	83	66

MSPN	SIZE	TREAD	Classification	ISO	STAR	32nds	MM
XF							
05876	18R19.5	XF	L2	---	*	23	18
XGC							
30079	445/80 R 25	XGC	E2	170E	---	35	28
38256	525/80 R 25	XGC	E2	179E	---	39	31
XGLA2							
15924	14.00 R 24	XGLA2	G2,L2	---	*	31	25
45611	16.00 R 24	XGLA2	G2,L2	---	*	35	28
XHA							
25042	15.5 R 25	XHA	L3	---	*	33	26
35052	17.5 R 25	XHA	L3	---	*	34	27
31836	20.5 R 25	XHA	L3	---	*	39	31
30826	23.5 R 25	XHA	L3	---	*	43	34
14668	26.5 R 25	XHA	L3,E3	---	*	47	37
00910	29.5 R 25	XHA	L3,E3	---	*	50	40
XHA 2							
	20.5 R 25	XHA 2	L3	---	*		
65791	23.5 R 25	XHA 2	L3	---	*	45	36
65348	26.5 R 25	XHA 2	L3,E3	---	**	51	41
	29.5 R 25	XHA 2	L3,E3	---	**		
X-HAUL							
58887	18.00 R 33	X-HAUL	E4	---	**	61	47
89581	24.00 R 35	X-HAUL	E4	---	**	76	60
08931	21.00 R 33	X-HAUL S	E4	---	**	66	53
XHD1 A							
34694	16.00 R 25	XHD1A	E4	---	**	54	43
34710	18.00 R 25	XHD1A	E4	---	**	59	47
34504	14.00 R 25	XHD1A ***	E4	---	***	48	38
XKA							
06809	12.00 R 24	XKA	E3	---	***	26	21
06866	14.00 R 24	XKA	E3	---	***	30	24
65383	21.00 R 25	XKA	L3	---	**	42	33
XKD1							
06874	14.00 R 24	XKD1A	E4	---	***	47	37
12336	18.00 R 25	XKD1A	E4	---	**	59	47
81726	50/80 R 57	XKD1 B	E4	---	**	104	83
44537	53/80 R 63	XKD1 B	E4	---	**	112	88
74128	55/80 R 63	XKD1 B	E4	---	**	106	84
98908	55/80 R 63	XKD1 B4	E4	---	**	106	84
68972	53/80 R 63	XKD1 C4	E4	---	**	112	88
86962	55/80 R 63	XKD1 C4	E4	---	**	106	84

EARTMOVER TREAD DEPTH CHART

MSPN	SIZE	TREAD	Classification	ISO	STAR	32nds	MM
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XLD D1 / D2

70042	26.5 R 25	XLD D1 A	L4	---	*	67	53
90432	29.5 R 25	XLD D1 A	L4	---	*	73	58
51948	45/65 R 45	XLD D1 A	L4	---	*	95	75
33617	35/65 R 33	XLD D1 A **	L4	---	**	76	60
37608	17.5 R 25	XLD D2 A	L5	---	*	79	63
79084	20.5 R 25	XLD D2 A	L5	---	*	91	72
58159	23.5 R 25	XLD D2 A	L5	---	*	98	78
33046	26.5 R 25	XLD D2 A	L5	---	*	110	87
28230	29.5 R 25	XLD D2 A	L5	---	*	118	94
52185	29.5 R 29	XLD D2 A	L5	---	*	120	95
14466	35/65 R 33	XLD D2 A	L5	---	*	122	97
63953	45/65 R 39	XLD D2 A	L5	---	*	145	115
79806	45/65 R 45	XLD D2 A	L5	---	*	146	116

XLD L3

86785	550/65 R 25	XLD L3	L3	---	*	40	32
82704	600/65 R 25	XLD L3	L3	---	*	43	34
90278	650/65 R 25	XLD L3	L3	---	*	47	37
50629	750/65 R 25	XLD L3	L3	---	*	52	41
45325	800/65 R 29	XLD L3	L3	---	*	62	49

XM47 / XCM1

13902	11LR16	XM27	R4	122A8	---	29	23
43043	405/70R20	XM47	R4	136G	---	35	28
75328	425/75R20	XM47	R4	148G	---	38	30
45627	445/70R24	XM47	R4	151G	---	43	34
25391	280/80R18	XMCL™	R4	132A8/132B	---	35	28
32621	280/80R20	XMCL™	R4	133A8/B	---	35	28
24643	340/80R18	XMCL™	R4	143A8/B	---	35	28
00733	340/80R20	XMCL™	R4	144A8/B	---	35	28
03424	380/75R20	XMCL™	R4	148A8/B	---	37	29
02871	400/70R20	XMCL™	R4	149A8/B	---	37	29
19152	420/75R20	XMCL™	R4	154A8/B	---	38	30
34933	440/80R24	XMCL™	R4	161A8/B	---	40	32
94482	440/80R28	XMCL™	R4	156A8/B	---	40	32
70333	460/70R24	XMCL™	R4	159A8/B	---	43	34
16032	480/80R26	XMCL™	R4	160A8/B	---	44	35
89582	500/70R24	XMCL™	R4	164A8/B	---	45	36

XMH S

12407	385/95 R 24	XMH S	E2	170E	---	30	24
21608	385/95 R 25	XMH S	E2	170E	---	30	24

XMS

41324	40.5/75 R 39	XMS A	E3	---	**	64	51
93211	40.5/75 R 39	XMS B	E3	---	**	64	51

X-QUARRY

59311	18.00 R 33	X-QUARRY	E4	---	**	78	63
59829	24.00 R 35	X-QUARRY	E4	---	**	86	68
15155	18.00 R 33	X-QUARRY-S	E4	---	**	78	63
93536	24.00 R 35	X-QUARRY-S	E4	---	**	86	68

MSPN	SIZE	TREAD	Classification	ISO	STAR	32nds	MM
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XR

08003	18.00 R 33	XR B	E2/E3	---	**	35	28
28035	14.00 R 24	XR A	G3/L3	---	*	28	22
08615	24.00 R 49	XR B	E2/E3	---	**	47	37
85992	36.00 R 51	XR C4	E2/E3	---	**	67	53

XRDN

28662	35/65 R 33	XRDN	L3	---	*	48	38
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XRS

45909	37.5 R 39	XRS	E4	---	**	71	57
75762	37.25 R 35	XRS B	E4	---	**	67	53

X-SUPER TERRAIN AD

13954	23.5 R 25	X-SUPER TERRAIN AD	E4	185B	---	66	52
07638	26.5 R 25	X-SUPER TERRAIN AD	E3	193B	---	68	54
09041	29.5 R 25	X-SUPER TERRAIN AD	E3	200B	---	76	60

XSM D2+

80803	12.00 R 24	XSM D2 +	L5S	---	---	71	57
80802	14.00 R 24	XSM D2 +	L5S	---	---	73	58
80809	17.5 R 25	XSM D2 +	L5S	---	---	96	77
80804	18.00 R 25	XSM D2 +	L5S	---	---	119	95
80807	26.5 R 25	XSM D2 +	L5S	---	---	126	101
41000	35/65 R 33	XSM D2 +	L5S	---	---	122	97

X-STRADDLE

17688	16.00 R 25	X-STRADDLE	E3	200A5	36	62	50
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XTLA

94687	15.5 R 25	XTLA	G2,L2	---	*	33	26
04118	17.5 R 25	XTLA	G2,L2	---	*	35	28
09122	20.5 R 25	XTLA	G2,L2	---	*	39	31
49977	23.5 R 25	XTLA	G2,L2,E2	---	*	43	34
64593	550/65 R 25	XTLA	G2,L2	---	*	42	33

XTS

46731	29.5 R 29	XTS	E3	---	**	47	37
64173	29.5 R 35	XTS	E3	---	**	50	40
76725	33.25 R 29	XTS	E3	---	**	55	44
54190	37.25 R 35	XTS	E3	---	**	59	47

XVC

06957	27.00 R 49	XVC	E2	---	**	42	33
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EARTMOVER TREAD DEPTH CHART

MSPN SIZE TREAD Classification ISO STAR 32nds MM

XZM

42890	10.00 R 20	XZM	---	166A5	18	44	35
74767	11.00 R 20	XZM	---	169A5	18	48	38
78891	12.00 R 20	XZM	---	176A5	20	50	40

42105	12.00 R 24	XZM	---	178A5	24	50	40
93269	14.00 R 24	XZM	---	193A5	32	80	63
61590	16.00 R 25	XZM	---	200A5	36	90	71
55844	18.00 R 25	XZM	---	207A5	36	80	63

64585	180/70 R 8	XZM	---	125A5	16	24	19
59673	225/75 R 10	XZM	---	142A5	20	30	24
55324	225/75 R 15	XZM	---	149A5	16	34	27
50988	250/70 R 15	XZM	---	153A5	18	35	28
51744	250/75 R 12	XZM	---	153A5	20	35	28
85047	315/70 R 15	XZM	---	165A5	18	44	35
45525	355/65 R 15	XZM	---	175A5	20	44	35
86381	5.00 R 8	XZM	---	111A5	10	30	24
50734	6.00 R 9	XZM	---	121A5	12	31	25
54636	6.50 R 10	XZM	---	128A5	14	34	27
71359	7.00 R 12	XZM	---	136A5	16	35	28
85869	7.00 R 15	XZM	---	143A5	14	37	29
62488	7.50 R 15	XZM	---	146A5	16	38	30
56370	8.25 R 15	XZM	---	153A5	18	42	33
87259	9.00 R 20	XZM	---	160A5	18	42	33

XZM2

09703	18.00 R 25	XZM2	---	207A5	36	98	78
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XZR

68425	6.00 R 9	XZR	---	121A5	---	13	10
62234	7.00 R 12	XZR	---	136A5	---	14	11

XZSL

44533	335/80R18	XZSL	L3	151A2/139B	---	33	26
65249	335/80R20	XZSL	L3	153A2/141B	---	32	25
57791	375/75R20	XZSL	L3	155A2/143B	---	37	29
94628	405/70R20	XZSL	L3	155A2/143B	---	38	30
64875	425/75R20	XZSL	L3	167A2/155B	---	37	29

NOTES

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NOTES

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