

Tire protection chains

Protection and traction





Content

Powerful chains for individual applications.

pewag tire protection chains
are used on all 5 continents from
-35°C in mining applications
to +600°C in hot slag.
For more than 60 years pewag
tire protection chains contribute
to keep the machines in mines
and steel mills moving.



pewag group

Welcome to the pewag group	4-5
History, Quality management	6
Business areas, Environment	7
Production and sales locations	8

Benefits and Service

Benefits and service	10-13
----------------------	-------

Application areas

Open pit mining	16-17
Underground mining and tunnelling	18-19
Quarrying	20-21
Slag and scrap handling	22-23
Traction	24-25

Products

Traction	28-29
Application abrasiveness	30-35
Mohs hardness 1-5	30-31
Mohs hardness 5-7	32-33
Mohs hardness 7-10	34-35
Mesh design	36
Measurements	37

Spare parts and accessories

Spare parts and accessories	40
-----------------------------	----

Merchandising

Merchandising	41
---------------	----

Questionnaire

Questionnaire tire protection chains	42-43
--------------------------------------	-------

Welcome to the pewag group

We are an internationally operating group of companies. Our track record goes back to the year 1479.

Mission Statement

pewag group's Mission Statement expresses the goals of our actions as follows:

With our joy for innovation, we ensure that all products of the pewag group are the best in the respective markets, both now and in the future. The high quality of our products and services as well as our employees' passionate dedication are the foundation to our pursuit of outstanding services and complete customer satisfaction.

Principles of pewag group

Leading in Quality

The values of our product brands are demonstrated by our first-class quality and innovations and are communicated consistently and coherently.

We anticipate market demands and changes in the environment and adapt our strategies, organizations and actions accordingly to satisfy our customers' needs through providing the best value for the money; timely delivery; efficient and obliging service.

Leading in Responsibility

We commit ourselves to careful treatment of the environment, by reducing the use of energy and raw materials, ensuring the longevity of our products and making them recyclable.

We value an open, honest and team-oriented work-style, which is based on transparent communication honoring ideas, opinions and experience of our employees as valuable inputs for our decision making process.

We strive for stable and fair partnerships with our employees, customers, suppliers and other business partners and take social aspects into consideration when making business decisions.

Leading in Technology

We secure our technological strength by striving for product quality, constant improvements and innovations of products, as well as manufacturing processes.

We are dedicated to keep on top of product technology. This ensures that our customers always have the best solutions available and that we expand and protect our market position.

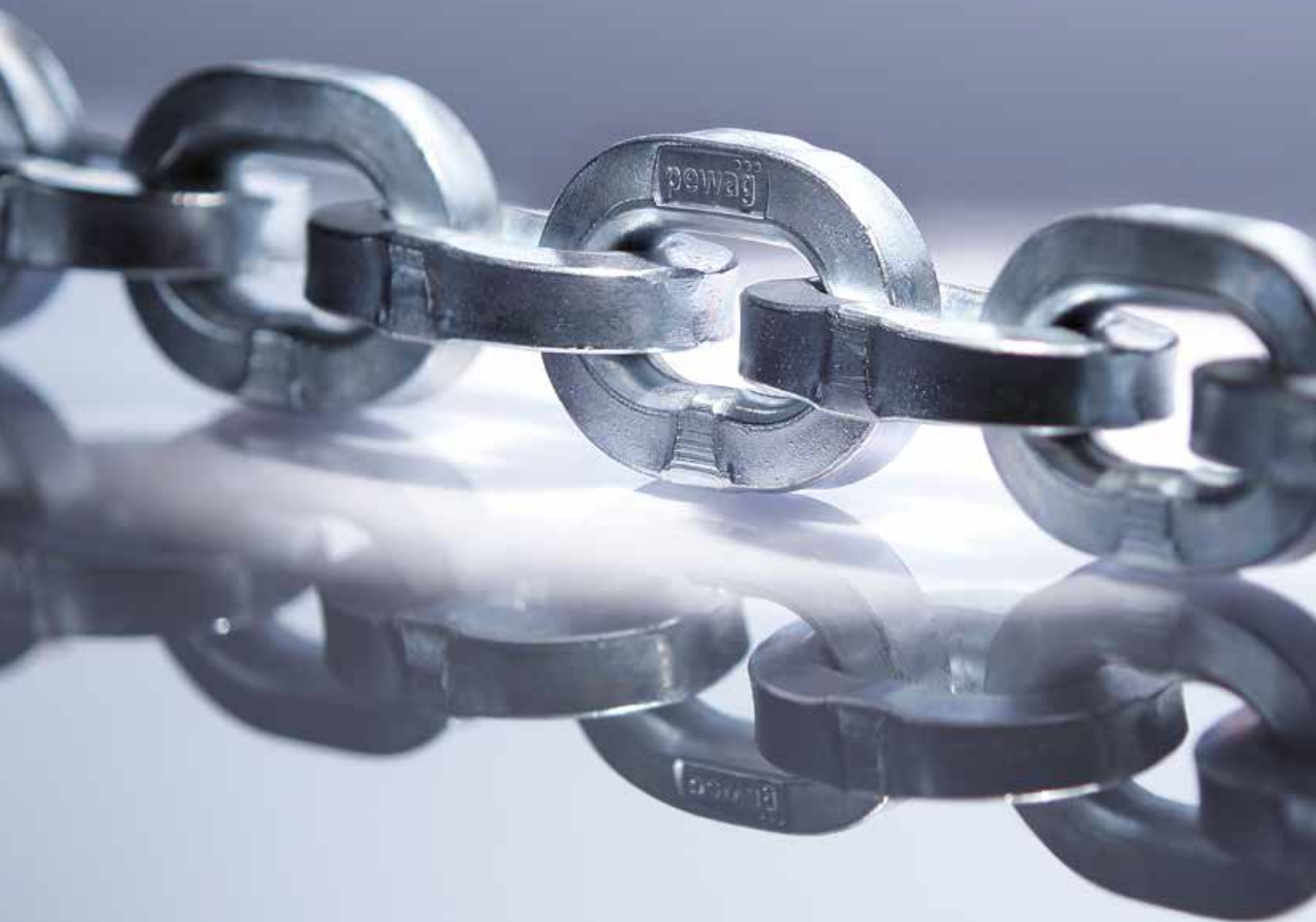
Leading in Economics

In all our processes we use due diligent business practices and efficiency and strive to improve these continuously.

In the long-term, we will continuously increase our economic performance to raise corporate value, achieve sustained growth and thus secure a successful future of the organization.

We are a modern group of companies which looks back to a tradition and experience of more than 500 years. Since our founding years, a lot has changed, but the values that made our success possible from the beginning remain.

**pewag group –
Innovation. Quality. Partnership.**



History of the pewag group

Advantage through tradition

The history of pewag group goes back to the 15th century and therefore makes us the oldest chain manufacturer worldwide. With our experience we are ready for the future.

Timetable of important events

- 1479** First documented references of a forging plant in Brückl
- 1787** Foundation of a chain forge in Kapfenberg
- 1803** Foundation of a chain forge in Graz
- 1836** Establishment of an iron casting plant in Brückl
- 1912** Production of the first pewag snow chain
- 1923** Merger of plants in Graz and Kapfenberg –
Creation of the name “pewag”
- 1972** Foundation of a sales company in Germany
- 1975** Foundation of a sales company in the USA
- 1993** Foundation of pewag austria GmbH
- 1994** Foundation of the first subsidiary in Czech Republic
- 1999** Acquisition of the Weissenfels Group
- 2003** Separation from the Weissenfels Group
- 2005** Reorganization into 2 groups:
Schneeketten Beteiligungs AG Group – Snow Chains
pewag austria GmbH Group – Technical Chains
- 2009** Acquisition of Chaineries Limousines S.A.S.
- 2012** Foundation of the first manufacturing company
in the USA
- 2013** Foundation of various international sales companies



Lithography forging plant Brückl 1855



Anchor chain forge 1878



Chain forgers 1956

Quality management

Our main goal is customer satisfaction

In this instance, quality means that only those products and services are developed, manufactured and delivered which completely and without compromise satisfy the customer. The pewag group's quality policy, is underlined by the following basic principle: **“we supply high-end products and services to our customers that conform to the technical standards and requirements”**, can be summarised in the subsequent four points.

Market-oriented Quality

In order to maintain and to widen the competitive position of the pewag group, the quality of finished goods and services must be consistent with the specifications of the customer and also with their expectations of one of the leading companies. No product should ever pose a danger to people or the environment.

Economic Quality

As a profit-oriented company, quality is achieved by taking into consideration the material, personnel and financial resources; this means that we establish an appropriate best price/performance ratio for the customer within the acknowledged framework.

Quality Responsibility

Stringent demands are placed on all employees to ensure high standards of quality. No matter what hierarchical level, all managers are in charge of managing quality. Every employee within the pewag group should be educated, motivated and instructed by the management team. It is important for promoting high quality awareness that the education and training of employees is at the forefront, as each employee is responsible for the quality of his/her own work.

For each of our employees, the statement
“Quality starts with me” must be true!

Process-oriented Quality

The close interaction between sales, product development, production and customer service is regulated within the individual companies by fixed processes and activities, as well as responsibilities with the aim to reach and maintain the defined quality standards.



Business areas

Working with pewag products

The pewag group has a substantial and diverse spectrum of products and services.

Our range of products varies from traction chains for tires (snow chains for passenger cars, trucks and special-purpose vehicles, tire protection chains for mining vehicles) over different industrial chains to products for the do-it-yourself sector (light chains, belts, etc.)



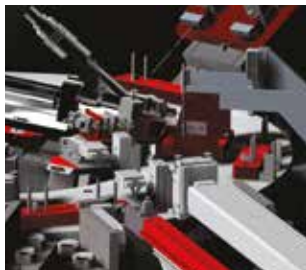
Segment A
Snow and forestry chains



Segment B
Hoist and conveyor chains



Segment C
Do-it-yourself



Segment D
Engineering



Segment F
Lifting and lashing chains and accessories



Segment G
Tire protection chains

Environment – we take responsibility

Ecological awareness in all areas



Our company's manufacturing location in Kapfenberg, Austria, has been used for iron and steel production for over 270 years. A second facility located in Brückl, Austria, was first documented in records dating back to 1479.

Based on this long manufacturing tradition, we take serious responsibility for our products, employees and the environment at all our international locations. Hence, one of our major concerns is to improve energy efficiency and, in doing so, to minimise energy consumption over a long period of time with the development of new production technologies. An important goal is to increase energy efficiency and consequently lower energy demand. Consequently, we develop our products to achieve longer product life-cycles and lower weight but simultaneously, increasing their working load capacities and the safety for our customers. We are committed to upholding all relevant energy and environmental standards by setting clearly defined goals and continually improving our performance. To achieve this goal, we use modern manufacturing technologies. An important step is to provide the necessary resources and to include our employees in the process. We are convinced that well-informed and motivated employees can actively participate in environmental conservation.

Wherever we are unable to avoid an environmental impact, we have set ourselves the goal to continually reduce our energy consumption, waste and environmentally harmful emissions. When purchasing new equipment, we strive to find the best and most efficient technical solution possible. It is important for us to promote the purchase of energy efficient products and services.

Our process-oriented management system regulates the documentation concerning all environmental relevant procedures. It also encompasses preventative measures for possible failures, as well as behavioural instructions for regular and/or extraordinary operational procedures. By systematically monitoring and assessing our environmental activities, we are quickly able to resolve deviances and to take corrective action. This process extends throughout the whole organisation to optimise all business processes. We strive to engage in an open dialogue with our customers, neighbours and authorities to inform them of our energy and environmental engagements.

Through specific communication we want to inform our customers about the environmental aspects of our products – specifically inform them about the longevity of our products. Through meaningful communication, we strive to motivate our suppliers and customers to think – in turn – about their environmental footprint and to put into practice similar environmental standards in their businesses.

Customer proximity

International presence

In the ambitious five-hundred year history pewag has evolved from a small and modest company to a global organization with several subgroups.

With 13 production and 36 sales and other locations on all five continents, pewag documented its claim as one of the world's leading chain manufacturers.

In addition to the numerous locations pewag as an international company relies on his capillary, strong, and professional partner network. These collaborations provide optimal customer service in currently more than 100 countries around the world.

Production and sales locations

Europe

Austria	pewag austria GmbH, Graz pewag austria GmbH, Kapfenberg pewag Schneeketten GmbH & Co KG, Graz pewag Schneeketten GmbH & Co KG, Brückl pewag engineering GmbH, Kapfenberg pewag austria Vertriebsgesellschaft mbH, Graz pewag Ketten GmbH, Klagenfurt pewag International GmbH, Klagenfurt
Germany	pewag Deutschland GmbH, Unna pewag Schneeketten Deutschland GmbH, Unna
France	pewag France SAS, Echirolles/Grenoble Chaineries Limousines SAS, Bellac
Italy	pewag italia srl, Andrian Acciaierie Valcanale srl, Tarvisio
Croatia	pewag d.o.o., Kroatien, Zagreb
The Netherlands	pewag nederland BV, Hillegom APEX International BV, Hillegom APEX Automotive BV, Hillegom
Poland	pewag polska Sp z o.o., Buczkowice
Portugal	pewag Portugal - Comercio de Produtos e Equipamentos Industriais, Lda, Santo Antão do Tojal
Russia	OOO "PEWAG", Moscow
Sweden	pewag sweden AB, Emmaboda
Slovakia	pewag slovakia sro, Nitra
Czech Republic	pewag Czech sro, Vamberk pewag Snow Chains sro, Vamberk pewag sro, Vamberk pewag Czech sro, Česká Třebová KOMAP Dědov sro, Dědov KOMAP Dědov sro, Chrudim peform Chrudim sro, Chrudim

Europe

Ukraine	TOV pewag Ukraine GmbH, Lviv
---------	------------------------------

North America

USA	pewag Inc, Bolingbrook, Illinois pewag Inc, Rocklin, California pewag Traction Chain Inc, Pueblo, Colorado
Mexico	pewag Mexico SA de CV, Mexico

South America

Brazil	pewag Brasil Comércio de Correntes Ltda., São Paulo
--------	---

Africa

South Africa	pewag chain south africa (pty) ltd., Rivonia HVM Engineering (Pty) Ltd, Houghton Johannesburg
--------------	---

Australia

Australia	pewag australia Pty Limited, Barrack Heights
-----------	--

Asia

India	pewag India Private Limited, Bangalore
-------	--

pewag group presents
itself on the internet. More ...
www.pewag-group.com
www.pewag.com

**pewag group –
Innovation. Quality. Partnership.**



Benefits and service

Overview

Benefits and Service

Benefits	12
Service	13





pewag tire protection chains

Benefits

Earth Mover Tires are the highest single cost factor for the operation of a wheeled unit and sensitive to cuts, punctures and other damages.

Their high value means that pewag tire protection chains solve many of these problems by providing the following advantages:

Lower direct hourly operating costs:

- Multiplied tire life – significant reduction of tire costs
- Predictable service life of chains and tires – accurate budgeting at lower costs, low financial costs
- Minimized down-time due to tire failure – maximum equipment availability
- Improved stability, increased traction and better penetration for digging and break-out – increased productivity in output per hour

Additional benefits:

- Optimum tire protection – reduced tire maintenance
- Protection plus traction with chain use – safe operation even in worst conditions



Service

After Sales Service, an elementary key point of pewag's long-term partnership with our customers, is offered by the pewag worldwide network:

- Technical assistance and repair by chain experts
- Training in chain handling (mounting, correct tensioning, repair, adjustment, dismantling, etc.)
- Inspection calls including performance reporting
- Availability of spare parts
- Special tools and accessories facilitating chain handling and maintenance
- Manuals and relevant risk assessments



Application areas

Overview

Application Areas

Open pit mining	16-17
Underground mining and tunnelling	18-19
Quarrying	20-21
Slag and Scrap Handling	22-23
Traction	24-25



Open pit mining

Strong chains for great performance

pewag is always in the forefront when it comes to chaining the world's largest machines and tires. Large-scale mining operations owned by renowned international companies are choosing pewag as their reliable and innovative partner for the protection of their tires.





Characteristics

- Large fleet of earthmovers
- Expensive and vulnerable tires
- Huge mining areas
- Millions of tonnes to be moved
- 24/7 operation



Underground mining and tunnelling

High quality in deepest grounds

From low surface tunnelling to deepest level mining at 4,785 m pewag tire protection chains keep underground operations going. pewag chains are used with a wide range of highly specialized equipment like loaders, shuttle cars, scoops and other wheeled vehicles, for both protection and traction.





Characteristics

- Limited space for chain installation
- Narrow operating space and long driving distances
- Extreme stress and load for the machine, tires and chains
- Difficult equipment and tire maintenance
- Frequent tire failures
- 24/7 operation



Quarrying

The right choice for every need

The largest group of users exploiting all kind of materials, from aggregates to ornamental rock. Their very specific and numerous requirements are fully covered by pewag's wide range of chain solutions.





Characteristics

- High diversity of rock, from soft limestone to hard granite, in all sizes
- Load and carry operation
- Seasonal operation
- Premature tire wear and failure
- 1 to 2, maximum 3 shift operation



Slag and scrap handling

Tire protection in extreme applications

Very high temperatures, liquid steel slag, large and solid scrap pieces, concrete driveways, etc. mean toughest working conditions. pewag's successful answer: reinforced, highly wear resistant and customized chain designs.





Characteristics

- Temperatures up to 1,200°C (2,190°F)
- Punctures and tire burning
- Abrasive ground conditions
- Exceptional stress and load
- Limited time for maintenance
- Operation with time limitation



Traction

Safety with pewag compact cross and quad cross chains

pewag chains ensure that mining operations keep on rolling! A great diversity of machines can be chained such as loaders, dozers, graders, dump and service trucks. For seasonal use on ice and snow as well as for continuous use on slippery and muddy ground.



Characteristics

- Ice and snow
- Slippery or muddy surfaces
- Steep inclines
- Spinning wheels
- Safety requirements for operator and machine
- Seasonal or continuous use throughout the year



Products

Product overview

Products

Traction	28-29
Application abrasiveness	30-35
Mohs hardness 1-5	30-31
Mohs hardness 5-7	32-33
Mohs hardness 7-10	34-35
Mesh design	36
Measurements	37





Traction

Mesh design

hexa

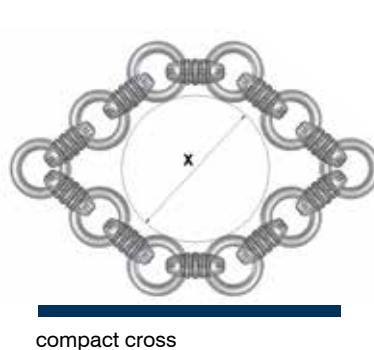
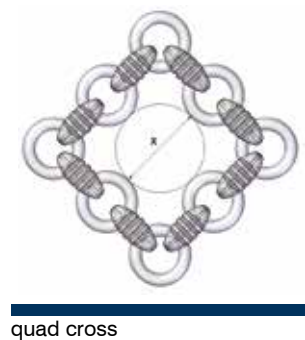
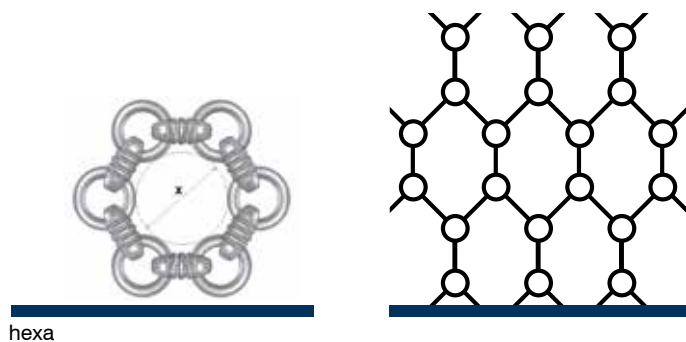
The hexagonal mesh design ensures excellent grip and sufficient tire protection. Suitable for all vehicles where traction is needed before protection.

quad cross

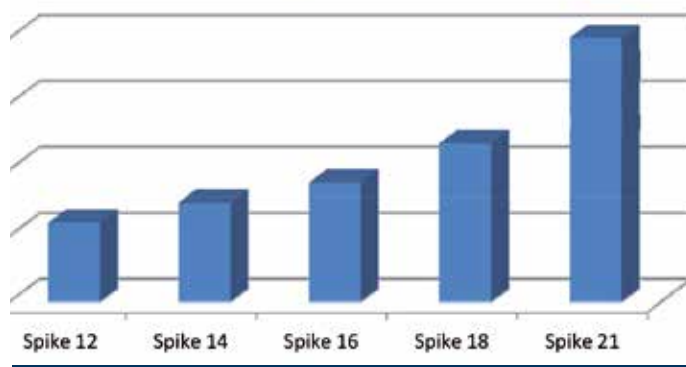
Special 8-link net construction. Traction chains for tough applications.

compact cross

Special 10-link net construction provides excellent grip, stable running and the necessary self cleaning. Suitable for all vehicles that require extra traction to fulfil their operational duties.



■ ring strength



Recommended link

pewag spike

Narrow link design with prominent grip teeth provides excellent traction and self cleaning. For all applications where traction is needed.

Available sizes: 12 | 14 | 16 | 18
Suitable mesh design: hexa, quad cross, compact cross

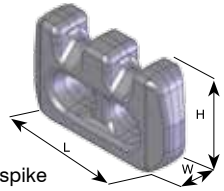


pewag spike 21

Available sizes: 21
Suitable mesh design: hexa, quad cross, compact cross



Measurements

 spike	Link measurements			Ring measurements		Mesh opening (x)		
	L	W	H	d	D	hexa	quad cross	compact cross
12								
spike	60	16	40	12	45	96	99	169
14								
spike	71	19	47	14	50	112	112	194
16								
spike	86	22	54	16	54	130	130	222
18								
spike	88	24	60	18	64	138	140	241
21								
spike	108	30	72	21	70	163	164	275

Application abrasiveness

For mohs hardness (1-5)

The Mohs scale of mineral hardness is a qualitative ordinal scale which characterizes the scratch resistance of various minerals through the ability of a harder material to scratch a softer material.

The hardness of a material is measured against the scale by finding the hardest material that the given material can scratch, and/or the softest material that can scratch the given material. For example, if some material is scratched by apatite but not by fluorite, its hardness on the Mohs scale would fall between 4 and 5.

For example

- 1-5: Talc, Gypsum, Calcite
- 5-7: Apatite, Quartz, Mangan
- 7-10: Topaz, Corundum, Diamond

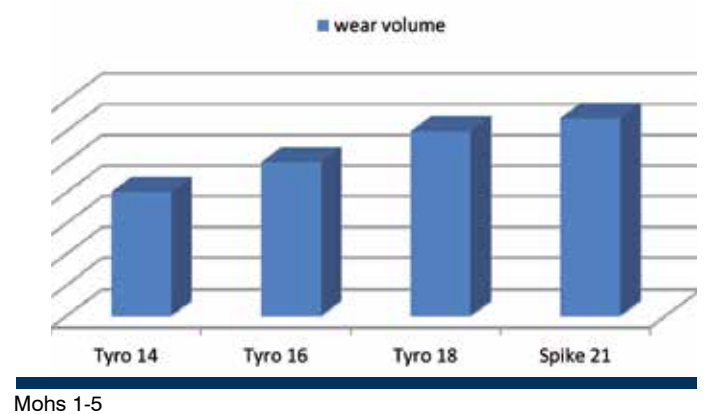
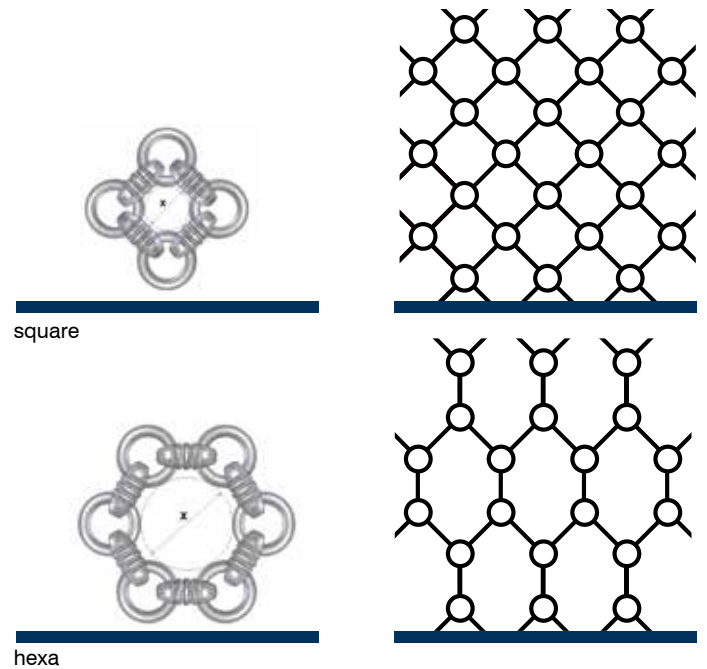
Mesh design

square

The fine mesh of square design provides optimum tire protection even on the sharpest rock.

hexa

The hexagonal mesh design ensures excellent grip and sufficient tire protection. Suitable for all vehicles where traction is needed before protection.



Mohs 1-5

Recommended link

pewag[®] tyro

Mohs hardness (1-5)
Innovative link design with excellent wear volume. By offering best protection and sufficient traction it is suitable for S-L sized earth moving equipment working in soft to medium hard rock applications.

Available sizes: 14 | 16 | 18
Suitable mesh design: square, hexa



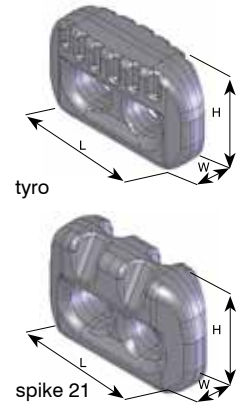
pewag[®] spike 21

Mohs hardness (1-5)
Narrow link design with prominent grip teeth provides excellent traction and self cleaning. For all applications where traction is needed.

Available sizes: 21
Suitable mesh design: square, hexa



Measurements



	Link measurements			Ring measurements		Mesh opening (x)	
	L	W	H	d	D	square	hexa
14							
tyro	76	26	46	14	50	63	122
16							
tyro	88	30	54	16	54	67	130
18							
tyro	97	34	62	18	64	81	156
21							
spike	108	30	72	21	70	83	163

Application abrasiveness

For mohs hardness (5-7)

The Mohs scale of mineral hardness is a qualitative ordinal scale which characterizes the scratch resistance of various minerals through the ability of a harder material to scratch a softer material.

The hardness of a material is measured against the scale by finding the hardest material that the given material can scratch, and/or the softest material that can scratch the given material. For example, if some material is scratched by apatite but not by fluorite, its hardness on the Mohs scale would fall between 4 and 5.

For example

- 1-5: Talc, Gypsum, Calcite
- 5-7: Apatite, Quartz, Mangan
- 7-10: Topaz, Corundum, Diamond

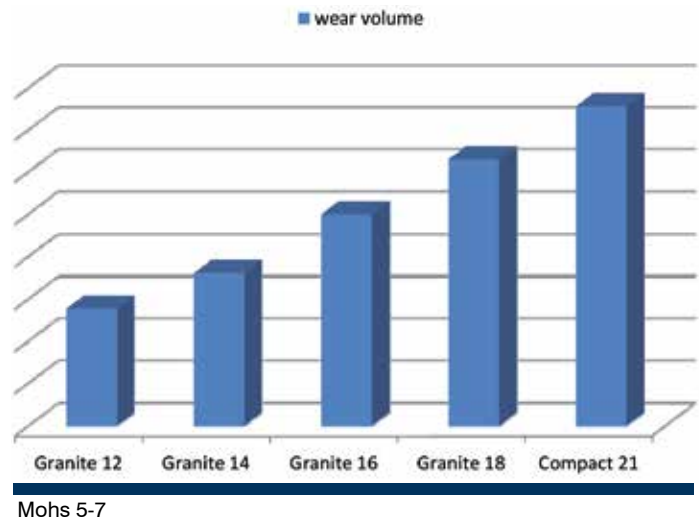
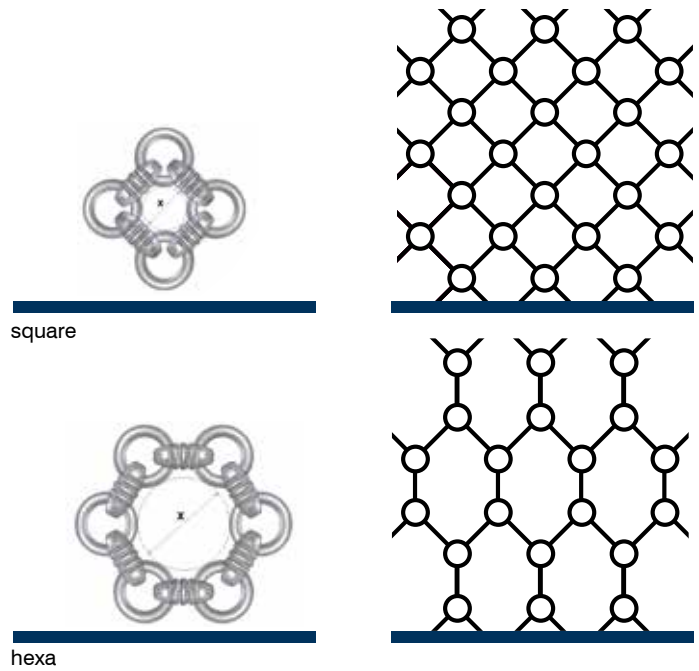
Mesh design

square

The fine mesh of square design provides optimum tire protection even on the sharpest rock.

hexa

The hexagonal mesh design ensures excellent grip and sufficient tire protection. Suitable for all vehicles where traction is needed before protection.



Recommended link

pewag^{***} granite

Mohs hardness (5-7)
The multipurpose chain link suitable for slag and scrap handling as well as for all rock applications. This link design offers excellent tire protection and traction.

Available sizes: 12 | 14 | 16 | 18 | 18/20S
Suitable mesh design: square, hexa



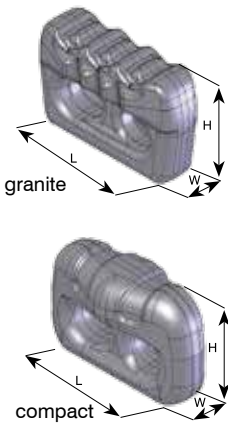
pewag^{***} compact

Mohs hardness (5-7)
Heavy duty link for giant loaders with large wear volume for maximum service life. Suitable for all rock applications and in large scale mining operations.

Available sizes: 21
Suitable mesh design: square, hexa



Measurements



	Link measurements			Ring measurements		Mesh opening (x)	
	L	W	H	d	D	square	hexa
12							
granite	63	22	38	12	45	53	103
14							
granite	79	27	46	14	50	63	122
16							
granite	90	34	53	16	54	67	130
18							
granite	100	38	65	18	64	81	156
18/20S							
granite	100	38	65	19.5	64	78	153
21							
compact	108	46	72	21	70	83	163

Application abrasiveness

For mohs hardness (7-10)

The Mohs scale of mineral hardness is a qualitative ordinal scale which characterizes the scratch resistance of various minerals through the ability of a harder material to scratch a softer material.

The hardness of a material is measured against the scale by finding the hardest material that the given material can scratch, and/or the softest material that can scratch the given material. For example, if some material is scratched by apatite but not by fluorite, its hardness on the Mohs scale would fall between 4 and 5.

For example

- 1-5: Talc, Gypsum, Calcite
- 5-7: Apatite, Quartz, Mangan
- 7-10: Topaz, Corundum, Diamond

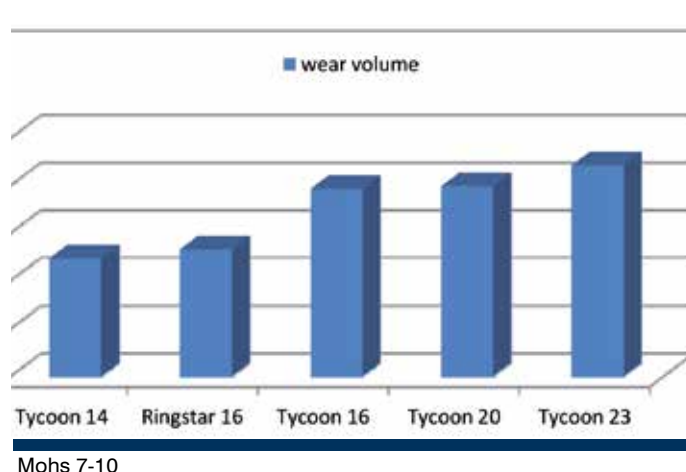
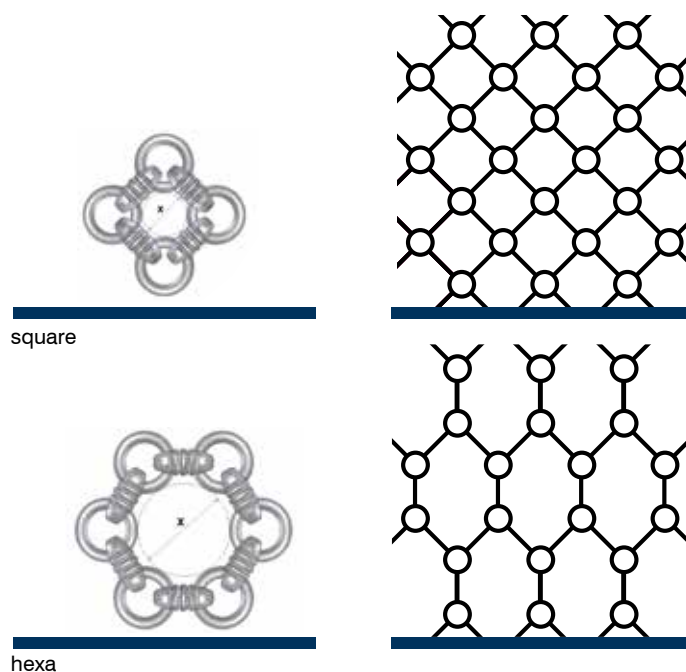
Mesh design

square

The fine mesh of square design provides optimum tire protection even on the sharpest rock.

hexa

The hexagonal mesh design ensures excellent grip and sufficient tire protection. Suitable for all vehicles where traction is needed before protection.



Recommended link

pewag tycoon

Mohs hardness (7-10)
Ultra-resistant heavy duty wear link especially developed for the world's largest wheel loaders as well as for operations in most abrasive hard rock conditions.

Available sizes: 14 | 16 | 20 | 23
Underground: 14/16 | 16/18 | 20
Suitable mesh design: square, hexa



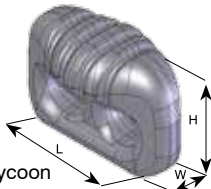
pewag ringstar

Mohs hardness (7-10)
Extremely tight (square) mesh design for optimum tire protection and long service life in wet and abrasive conditions. Excellent traction on ice and snow in hexagonal mesh design.

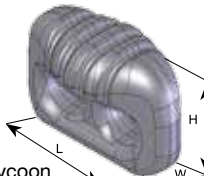
Available sizes: 16
Suitable mesh design: square, hexa



Measurements

	Link measurements			Ring measurements		Mesh opening (x)		
	L	W	H	d	D	square	hexa	
 tycoon								
	tycoon	79	39	47	14	50	61	122
 ringstar								
	tycoon	88	48	59	16	54	60	130
	ringstar	-	21	69	14x17	54(*45)	44	96
	tycoon	97	54	67.5	19.5	64	74	153
	tycoon	112	60	76	23	72	84	170

Underground

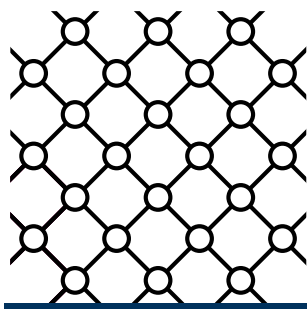
 tycoon	Link measurements			Ring measurements		Mesh opening (x)	
	14/16						
tycoon	79	39	47	16	54	64	122
	16/18 S						
tycoon	88	48	59	18	54	60	126
	20						
tycoon	97	54	67.5	19.5	64	74	153

With reinforced rings for long driving distance in wet underground applications.

Mesh design

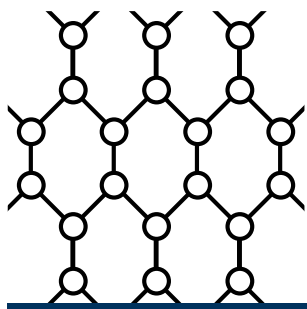
square

The fine mesh of square design provides optimum tire protection even on the sharpest rock.



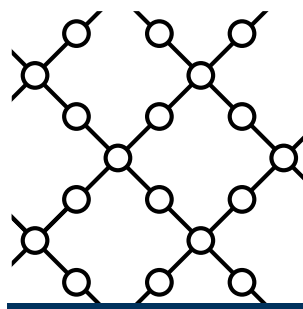
hexa

The hexagonal mesh design ensures excellent grip and sufficient tire protection. Suitable for all vehicles where traction is needed before protection.



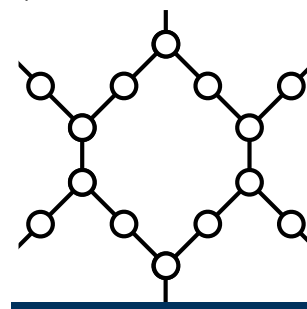
quad cross

Special 8-link net construction. Traction chains for tough applications.



compact cross

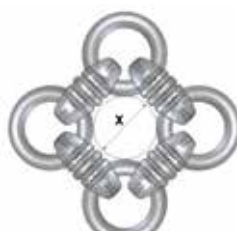
Special 10-link net construction provides excellent grip, stable running and the necessary self cleaning. Suitable for all vehicles that require extra traction to fulfil their operational duties.



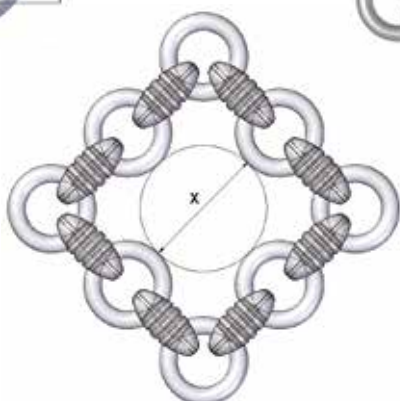
Ring measurements and mesh opening (x)



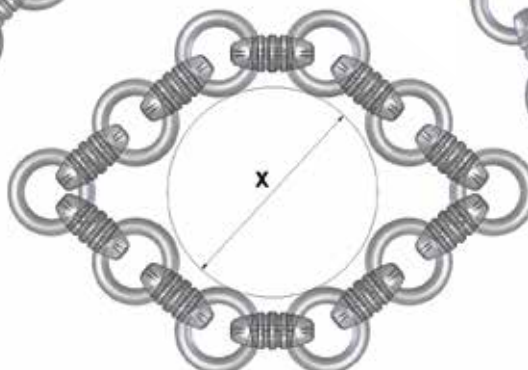
ring



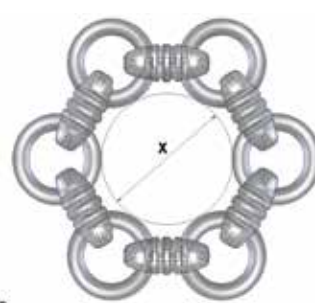
square



quad cross



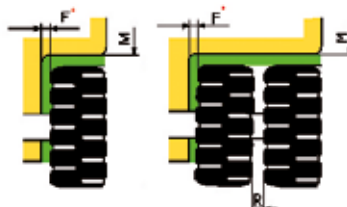
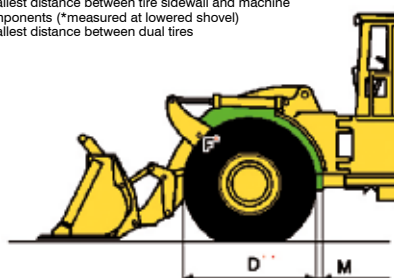
compact cross



hexa

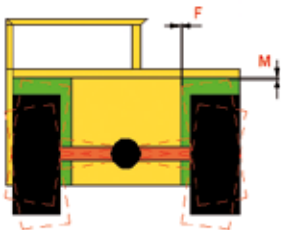
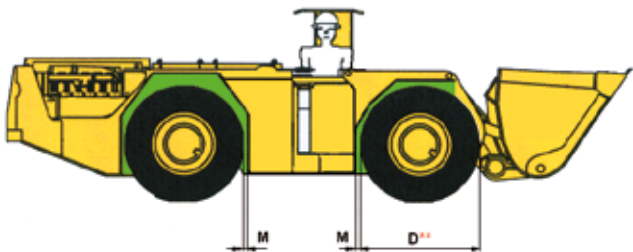
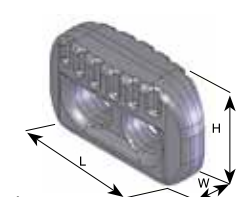
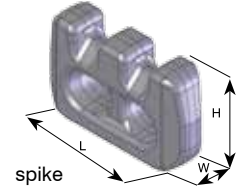
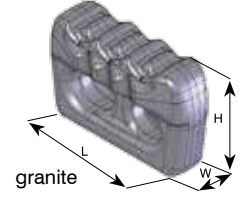
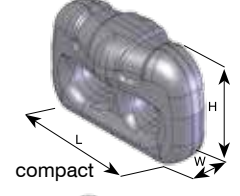
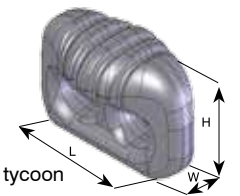
Clearance required for TPC

Attention: „F“ & „M“ measured at fully oscillated axle
 M smallest distance between tire surface and machine components
 F smallest distance between tire sidewall and machine components (*measured at lowered shovel)
 R smallest distance between dual tires



Measurements

	Link measurements			Ring measurements		Mesh opening (x)				Clearance required for TPC		
	L	W	H	d	D	square	hexa	quad cross	compact cross	M	F	R
12												
tycoon	63	22	38	12	45	53	103	103	174	70	50	70
spike	60	16	40	12	45	50	96	99	169	70	50	70
14												
tycoon	79	39	47	14	50	61	122	-	-	80	60	80
granite	79	27	46	14	50	63	122	122	204	80	60	80
tyro	76	26	46	14	50	63	122	122	204	80	60	80
spike	71	19	47	14	50	57	112	112	194	80	60	80
14/16												
tycoon	79	39	47	16	54	64	122	-	-	80	60	80
16												
tycoon	88	48	59	16	54	60	130	-	-	90	70	90
granite	90	34	53	16	54	67	130	130	222	90	70	90
spike	86	22	54	16	54	67	130	130	222	90	70	90
tyro	88	30	54	16	54	67	130	130	222	90	70	90
ringstar	-	21	69	14x17	54(*45)	44	96	-	-	115	70	90
16/18 S												
tycoon	88	48	59	18	54	90	126	-	-	90	70	90
18												
granite	100	38	65	18	64	81	156	156	258	100	70	100
spike	88	24	60	18	64	70	138	140	241	100	70	100
tyro	97	34	62	18	64	81	156	156	258	100	70	100
18/20 S												
granite	100	38	65	19.5	64	78	153	-	-	100	70	100
20												
tycoon	97	54	67.5	19.5	64	74	153	-	-	100	70	100
21												
compact	108	46	72	21	70	83	163	-	-	120	80	110
spike	108	30	72	21	70	83	163	164	275	120	80	110
23												
tycoon	112	60	76	23	72	84	170	-	-	120	80	110



Spare parts and accessories

Overview

Spare parts and accessories

Spare parts and accessories	40
Merchandising	41
Questionnaire tire protection chains	42-43





Spare parts

Mounting and repair parts



No. 24 End shackle
to fix the loose end
of the tension chain



No. 31 Connecting-/Repair ring
to connect the tire protection
chain and to repair broken rings



No. 37 Pin lock
to connect the inside and outside
chain and to repair broken links

Accessories

Special tools for easier TPC handling



No. 49 Lever hoist



No. 50 Assembly pliers



No. 61 Allen key



No. 58 Drawing-out hook



No. 59 Mounting spike



No. 60 Tension aid
(10 mm, 13 mm, 16 mm)

Lifetime Guarantee Conditions

1.)	pewag guarantees that the pewag tire protection chains are made only from excellent steel corresponding to works specifications and are fabricated by competent staff according to the latest state of technology. The individual production steps are subject to a rigorous quality control according to ISO9001.
2.)	Claims for damages, liability and other demands, which are based on pewag's General Terms and Conditions of Sales and Delivery, are not affected by this guarantee.
3.)	This guarantee is only valid provided the conditions shown in the mounting instruction ("Warning against incorrect use") are complied with. If any of the warnings shown in the mounting instruction are not complied with, the guarantee will be deemed invalid.
4.)	For every tire protection chain and every machine exact data of the operating hours must be recorded with the help of a functioning operating hours counter and all measures carried out (i.e. fitting of spare parts, shortening, reversing, removing of the tire protection chain for a certain period) must be recorded.
5.)	pewag reserves the right to check the tire protection chains and the operating conditions any time during the guarantee period; otherwise the guarantee expires. Therefore within 24 hours of pewag's request the machine should be made available with the tire protection chains cleaned.
6.)	Any significant change of the operating conditions indicated, particularly changes of the place of operation, type of rock, machine or working distance will lead to an immediate withdrawal of the guarantee.
7.)	Damage due to abnormal operating conditions, i.e. unusual chemical influence, long-term exposure to temperatures of over 200°C respectively 392 F as well as mechanical overloading of individual parts of the tire protection chain due to incorrect use are not covered by this guarantee. Regarding operations in hot slag pewag recommends: a) For slag temperatures of 500°C respectively 900°F the maximum exposure must not exceed 30 seconds. b) For slag temperatures of 900°C respectively 1600°F the maximum exposure must not exceed 10 seconds. Warranty exclusions: Destroyed chains and chain breakages as a result of packing up with molten steel due to running over hot liquid slag. Annealing of the chains due to long term exposure in hot slag (loss of hardness), see point a) and b).
8.)	Any claim must be accompanied by the corresponding guarantee certificate and an exact description of the damage including all circumstances must be sent to pewag at the latest one week after the damage occurs. Claims received after expiration of the guarantee period cannot be accepted. Defective parts and components whether caused by faulty material or incorrect production will be replaced. Any other claim for consequential loss or damage, i.e. personal injury, damage or loss of production, is specifically excluded.
9.)	Should a claim be made against this guarantee pewag reserves the right to stipulate the measures required to achieve the guaranteed lifetime. This particularly covers the repair or replacement of the tire protection chain either in full or in part. No cash refund can be allowed. If the tire protection chain is replaced either in full or in part the customer has to pay on a prorata basis the service hours already achieved compared with the guaranteed hours.

Data of vehicle for pewag tire protection chains

e-mail: saleinfo@pewag.com

Fax: +43 3862 2990-511

Company _____ **Date** _____

Sender _____

Telephone _____ **Telefax** _____

E-mail _____

1. Machine

Brand _____ Type _____

2. Tire

Dimension _____

Brand _____ Type _____

Tire tread (L2-L5) _____ Tread new ☐ semi worn ☐ worn off ☐

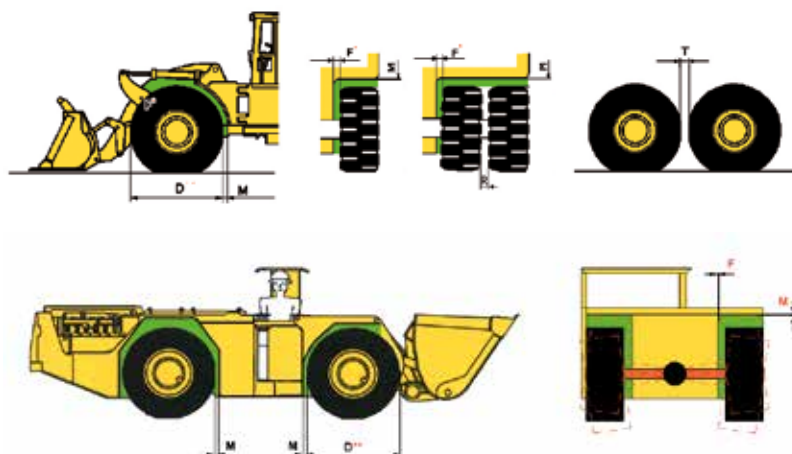
Dimensions d [mm] _____ B [mm] _____

3. Minimum distance

(F + M = minimum distance between tire and machine components)

Front wheels F [mm] _____ M [mm] _____

Rear wheels F [mm] _____ M [mm] _____ R [mm] _____ T [mm] _____



* „F“ measured at lowered shovel
 ** „D“ measured horizontally
 Attention: „F“ & „M“ measured at fully oscillated axle

Data of operating conditions for pewag tire protection chains

e-mail: saleinfo@pewag.com

Fax: +43 3862 2990-511

4. Rock

Type of rock _____ Inclusions in the rock _____

Compressive strength (hardness) Mohs _____ Percentage of quartz (%) _____

Rock sample (in the size of a fist) available* yes ☐ no ☐

5. Working distance

Length per haul _____ Steep gradient (%) _____

Soil condition* _____ dry ☐ occasionally wet ☐ always wet ☐

6. Type of operation

Tire protection chains so far used (brand/type) _____

Average life of tire protection chains (working hours) _____

Operating hours/day _____

Average life (working hours) protected ☐ not protected** ☐

Any other unusual working conditions (such as long idle machine time, long driving distances, great heat, etc.)

* Please check whatever applies

** Consider premature breakdown as a result of damaged tires

Date

Signature



KA/14/00249 9 002546 430595



www.pewag.com

pewag austria GmbH

A-8605 Kapfenberg, Mariazeller Straße 143, Phone: +43 3862 2990-0, Fax: +43 3862 2990-511
saleinfo@pewag.com, www.pewag.com

