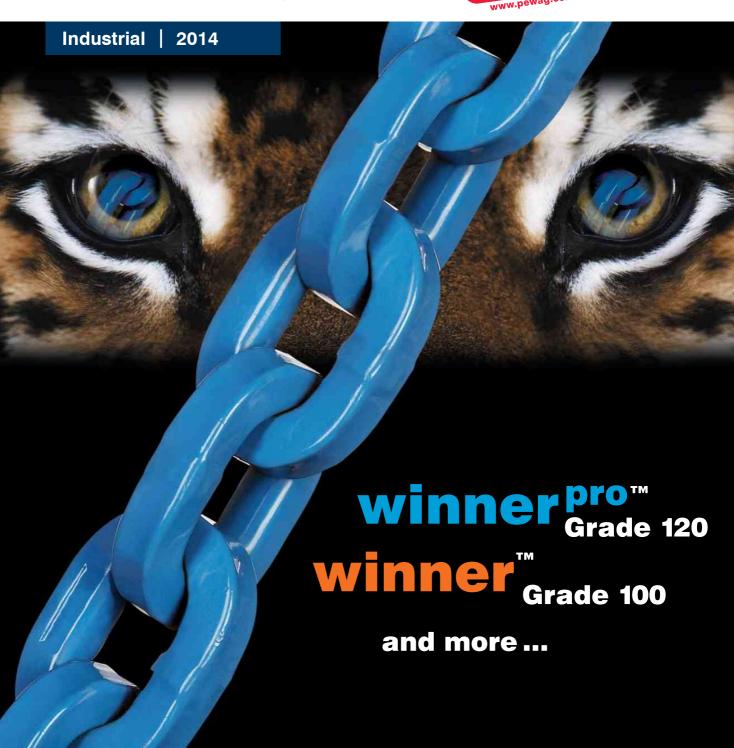




# product catalog







#### **History**

#### At the core of chain innovation since 1479

pewag is one of the oldest chain manufacturers in the world and the company's history goes back over 535 years when the first production facility was established in the town of Bruckl, Austria in 1479. With over 535 years of engineering and manufacturing know-how, pewag has continued its research and development to provide the highest-quality innovative chain products to the market.

The pewag brand is well-known for premium-quality chain products around the world and is well established as a global market leader.

Today, pewag is the technological innovator in the high quality chain business and offers a diverse liveof round-link chains for overhead lifting, hoists, conveying, traction and tire protection chains

#### Timetable of important events

- 1479 First documented references of a forging plant in Brückl
- 1787 Foundation of a chain forgery in Kapfenberg
- 1803 Foundation of a chain forgery in Graz
- 1836 Establishment of an iron casting plant in Brückl
- 1912 Production of the First Snow Chain worldwide
- 1923 Merger of plants in Graz and Kapfenberg Creation of the name "pewag"
- 1947 Production of the first Tire Protection Chain
- 1975 Established pewag Inc. the North American Distribution Compnay
- 1991 pewag introduces Grade 100 Chain and components as the first manufacturer in the world
- **1992** pewag produces the largest tire protection chain in the world -recorde in the Guinness Book of World Records
- 1993 Establishment of a manufacturing facility in Czech Republic
- 2002 pewag introduces Grade 120 chains and components as the first manufacturer in the world - The World's strongest
- 2003 pewag manufactures the world's largest TPC for a 60/80-57 giant loader tire
- 2004 pewag wins the Pinnacle Award for the introduction of Grade 120 in the USA
- 2007 pewag launches it's new generation of 23mm TPC
- 2009 pewag Inc. opens it's new North American headquarters in Bolingbrook, Illinois
- 2014 pewag opens first chain production plant outside of Euro pe in Pueblo, CO

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Lithography forging plant Brückl 1855





Anchor chain forgery 1878

Chain forgers 1956

#### **Business areas**

#### Working with pewag products

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

Our Products range from:

- Traction Chains for cars, trucks, special purpose vehicles
- Tire Protection Chains for mining vehicles
- Industrial Lifting Chains.

#### **DISCLAIMER FOR PRINTED LITERATURE:**

The information contained in this catalog is to be used only as a guide to assist with product selection. Pewag Inc. makes no representation or warranty as to the completeness or accuracy of the information contained herein. The products and specifications set forth in this catalog are subject to change without notice and Pewag Inc. disclaims any and all liability for such changes. The information contained herein is provided without warranties of any kind, either express or implied, and Pewag Inc. disclaims any and all liability for typographical, printing, or production errors or changes affecting the products and/or the specifications contained herein. It is the responsibility of the customer to thoroughly analyze all aspects of the customers' proposed application for the products. Due to the diversity of possible applications of Pewag Inc. products, the customer is solely responsible for making the final selection of the product(s) to be used and to assure that all performance, safety and warning requirements of the application are satisfied.



# www.rodavigo.net







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## Maximum Work Load [Ibs] of Various Chain Sling Applications

**Design Factor** 4:1 **Grade 120 Alloy Winner Pro** Temperature Resistance 60 degrees 1.7 30 degrees 45 degrees 2.1 45 degrees 1.4 Angle: Load Factor: 60 degrees 2.6 30 degrees 1.45 N1720 0/32 5.200 9.000 7.400 5 200 13.500 11.000 7.800 Retains 100% of 11,400 N1820 5/16 6.600 9.300 6.600 17.100 14,000 9.900 -40 to 400°F. Not for NI1020 3/8 10,600 18,400 15.000 10.600 27,500 22.500 15,900 NI1320 26,900 1/2 17.900 31,000 25.300 17,900 46.500 38.000 **Grade 100 Alloy Winner** 60 degrees 1.7 45 degrees 1.4 30 degrees 60 degrees 2.6 45 degrees 2.1 30 degrees 1.45 Temperature Resistance Chain NI5.50 7/32 2.700 4.700 3.800 2,700 7.000 5.700 4.000 Retains 100% of work load limit at -40 to 400°F. NI70 9/32 4,300 7,400 6,100 4,300 11,200 9,100 6,400 N180 5/16 5,700 9,900 5,700 14,800 8,500 8,100 12,100 over 400°F NI100 3/8 8.800 15,200 12,400 8.800 22,900 18,700 13,200 NI130 15.000 31.800 22.500 1/2 15.000 26.000 21.200 39.000 NI160 5/8 22.600 39.100 32.000 22.600 58.700 47.900 33.900 NI200 3/4 35 300 61 100 49 900 35 300 91 700 74 900 53 000 NI220 74.000 60.400 90.600 64.000 7/8 42.700 42.700 110.900 NI260 59,700 103,400 84,400 59,700 155,100 126,600 89,550 NI320 1-1/4" 90,400 156,600 127,800 90,400 234,900 191,800 135,600 Grade 80 Allov 90 degrees 30 degrees 60 degrees 1.7 45 degrees 1.4 60 degrees 2.6 45 degrees 2.1 30 degrees 1.45 Temperature Resistance Chain NI5.5 7/32 2,100 3,600 3.000 2,100 5.500 4.400 3,200 Retains 100% of work load limit at NI7 9/32 3,500 6,100 4,900 3,500 9,100 7,400 5,200 -40 to 400°F, 90% at 400 to 570°F, NI8 5/16 4,500 7,800 6,400 4,500 11,700 9,500 6.800 and 75% at 570 to 750°F. NI10 3/8 10,600 7,100 12,300 10,000 7,100 18,400 15,100 Not for 12,000 NI13 1/2 20,800 17,000 12,000 31,200 25,500 18,000 NI16 5/8 18.100 31.300 25.600 18.100 47.000 38.400 27,100 NI20 3/4 28.300 49.000 28.300 73.500 60.000 42.400 40.000 NI22 7/8 34,200 59,200 48,400 34,200 88,900 72,500 51,300 NI26 47,700 82.600 67,400 47,700 123,900 101,200 71,500 1 N132 1-1/4 72 300 125 200 102 200 72 300 187 800 153 400 108 500 Grade 50 Stainless Steel 60 degrees 2.6 30 degrees 1.45 45 degrees 1.4 30 degrees 45 degrees 2.1 60 degrees 1.7 Temperature Resistance NIK5 3/16 1,100 1,900 1,600 1,100 2,900 2,300 1,700 Retains 100% of work load 3.300 NIK7 9/32 2,200 3.800 3,100 2.200 5,700 4.600 -50 to 700°F, NIK10 3/8 6.200 4.400 11.500 9.300 6.600 4.400 7.500

#### Reduction Factors

1/2

5/8

To be used for various slinging methods and conditions without shock loads.

18,500

28,600



12,100

18,700

10,000

15,600



7,100

11,000



14,900

23,100



10,700

16,500



Load factor:

NIK13

NIK 16

7,100

11,000

Reduction factor:

Asymmetrical distribution of load R = more than 2 x chain dia R = more than chain dia

Sharp

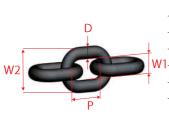




## Chain | Dimensions, Weights



Grade 120 Alloy												
Code	Nominal Thickness D	Pitch p	Width Inside W1 min.	Width Outside W2 max	WLL lb Design Factor 4:1	Breaking Load	Weight [lb/ft]					
N1720 (9/32")	0.276 (7mm)	0.866	0.393	1.024	5,200	20,800	0.874					
NI820 (5/16")	0.315 (8mm)	0.984	0.433	1.142	6,600	26,400	1.040					
NI1020 (3/8")	.394 (10mm)	1.300	0.559	1.457	10,600	42,400	1.747					
NI1320 (1/2")	.512 (13mm)	1.614	0.732	1.949	17,900	71,600	3.091					



	Diameter	Grade 100 Alloy	Grade 80 Alloy	Grade 50 Stainless Steel	Nominal Dia. D	Pitch P	Inside W1 min	Outside W2 max.	Weight
	3/16"	-	-	NiK5	0.197	0.630	0.295	0.728	0.376
	7/32"	NI5.50	N15.5	-	0.217	0.680	0.319	0.787	0.470
	9/32"	NI70	NI7	NIK7	0.276	0.826	0.375	0.992	0.738
	5/16″	NI80	NI8	-	0.315	0.945	0.430	1.134	0.939
/1-	3/8 ″	NI100	NI10	NIK10	0.394	1.181	0.531	1.417	1.475
٠.	1/2″	NI130	NI13	NIK13	0.512	1.535	0.689	1.843	2.548
	5/8″	NI160	NI16	NIK16	0.630	1.890	0.846	2.268	3.830
	3/4 ″	NI200	N120	-	0.787	2.440	1.008	2.776	5.780
	7/8 ″	N1220	N122	-	0.866	2.598	1.161	3.118	7.324
	* 1″	NI260	NI26	-	1.024	3.071	1.378	3.704	10.214
	1-1/4″	N1320	N132	-	1.260	3.780	1.657	4.646	15.455

<sup>\*</sup> Dimensions are for Grade 100, for Grade 80 the inner width W1 minimum is smaller, also W2 max is bigger.

## Chain | Load Rating

Grade 120 Alloy				Grade 100 Alloy				Grade 80 Alloy				Grade 50 Stainless Steel			
Diameter	Working load [16] Design factor 4:1	Manufac- turing test load	Breaking load [lb]	Diameter	Working load [16] Design factor 4:1	Manufac- turing test load bracket	Breaking load [16]	Diameter	Working load [16] Design factor 4:1	Manufac- turing test load	Breaking load [16]	Diameter	Working load [16] Design factor 4:1	Manufacturing test load	Breaking load [16]
												3/16″	1,100	2,200	4,400
				7/32″	2,700	5,400	10,800	7/32″	2,100	4,200	8,400				
9/32"	5,200	10,400	20,800	9/32"	4,300	8,600	17,200	9/32"	3,500	7,000	14,000	9/32"	2,200	4,400	8,800
5/16″	6,600	13,200	26,400	5/16″	5,700	11,400	22,800	5/16″	4,500	9,000	18,000				
3/8″	10,600	21,200	42,400	3/8″	8,800	17,600	35,200	3/8 "	7,100	14,200	28,400	3/8″	4,400	8,800	17,600
1/2″	17,900	35,800	71,600	1/2″	15,000	30,000	60,000	1/2 ″	12,000	24,000	48,000	1/2″	7,100	14,200	28,200
				5/8″	22,600	45,200	90,400	5/8 ″	18,100	36,200	72,400	5/8″	11,000	22,000	44,000
				3/4"	35,300	70,600	141,200	3/4 "	28,300	56,600	113,200				
				7/8″	42,700	85,400	170,800	7/8 ″	34,200	68,400	136,800				
				1″	59,700	119,400	238,800	1″	47,700	95,400	190,800				
				1 1/4"	90,400	180,800	361,600	1 1/4"	72,300	144,600	289,200				





#### **Continuous Maintenance**

Chain and fittings must be withdrawn from service if any damage or deformation is noticed.

#### **Maintenance**

Keep a record for all chain slings, and inspect them regularly in accordance with federal regulations and standards. (ASME B30.9)

### **Inspection Procedure**

Each link and each attachment shall be examined individually, taking care to expose inner link surfaces of the chain and attachments.

### **Visual Inspection**

Check for wear, nicks, cracks, breaks, gouges, stretch, bends, weld splatter, discoloration from excessive heat and throat opening of hooks.

## Measuring

The medium link thickness must not be reduced by more than 10% of the nominal diameter on any part of the chain. The elongation of the chain should not exceed 5% at any point.



Inspection and testing should be carried out in accordance with all relevant regulations.

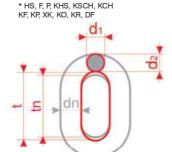


#### **Maximum Tolerance**

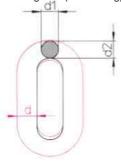
(For all chain and components).

#### Maximal approved dimensional change:

Designation	<b>Dimensions</b> (as show on product page)	Admissible deviation
chain	dn	-10%
	tn	+5% = (t)
links	dn	-10%
	tn	+10% = (t)
hooks *	е	+5%
	d2 and h	-10%
	g	+10%
C, CAR, CL	Halves loose	no changing admissible
	е	+5%
	С	-10%
BW,	е	+5%
	d1	+5%
	angle change	<u>&lt;</u> 3%
LH, KLH,	d2	-10%
WLH(B)W	h	-10%
	opening of hook (dimension s)	2x s max.



stretched due to elongation (overloading)



Pitch (p) increased due to wear



Hook bent open



Io be removed whenever a deformation is noticed





## **Identification And Testing**



Pewag lifting chain and fitings are marked with a batch identification number and the manfaturer's identification marking: the number "120" or "12" to indicate Grade 120 Alloy, "100", "10" to indicate Grade 100 Alloy, "8" to indicate Grade 80 Alloy and "50" to indicate grade 50 Stainless.

All Alloy chains are 100% tested to 2 times the working load values and are furnished with a test certificate to this effect.

Every chain sling manufactured by pewag is supplied with a steel tag and test certificate as shown.

