



LIFTING AND LASHING SYSTEMS

– Special Grade 10 –



Edition 17



The passion of chain manufacturing!

The round steel chain link production in Unterkochen has been running for about 130 years. Producing chains for lifting, lashing, conveying, tire protection as well as snow and off-road chains.

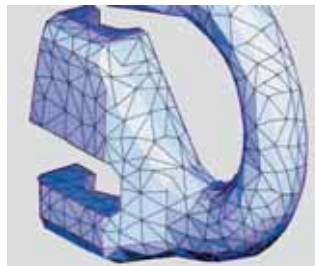
Our headquarters and manufacturing plant is one of the most modern chain producing companies world wide.

Developed from a small chain forging company by the river Kocher, the RUD group has stood to the test of time to become a global player with approximately 800 motivated employees, subsidiaries and sales representatives around the world.

Almost 500 national and international protective clauses are the evidence for our progress.

The well established brand name RUD stands for quality, technical innovation and know how. Continuous research and development has enabled us not only to produce products meeting the highest expectations but also with consistent quality standards. Experience, diligence, ambition and passion are the virtues we manifest in order to remain favourite for our customers. With the above virtues in mind, RUD has successfully entered a new century with the trust and satisfaction of our customers as our prime objective for the future.

What are tomorrow's concepts? This is one of the questions which RUD is trying to address while facing the challenge of consistently providing the best solutions to our customers.



2006: First manufacturer who received the "Type Examination Certificate" from the Inspection and Certification authority PZNM of the Technical Committee MO (*Employers Liability Insurance Association = BG), for VIP-round steel chains according to PAS 1061 (Publicly Available Specification according to the Standard DIN EN 818 Grade 10). **As the First H1-10!**

2007: RUD receives as the first chain manufacturer the approval for Grade 12 (D1-12) from the BG. World premiere of the strongest lifting chain ICE (Grade 12). Innovation leap in chain technology. Always one chain diameter thinner.



Innovation and quality take first priority at RUD. We are always leading in decisive developments.

Examples in the lifting and lashing chains field:

1967: 1. Approval of quality class 5, H1-5 by the Berufsgenossenschaft (*Employers Liability Insurance Association).

1972: First chain factory to gain approval for the quality class 8, H1-8 by the BG* Technical Committee "Steel and Metal".

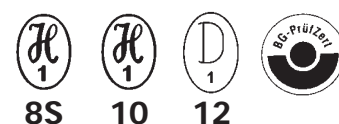
The first idea of a **mecano system** from RUD – fool-proof connection of the correct chains and components, as well as suspension links. This idea became the standard at Ruhrkohle RAG (coal board mining).

1981: The first series of lifting points type RBS and RBG with a safety factor 4:1 in any direction.

1992: First chain factory to obtain certification for their quality assurance system acc. to **DIN/ISO 9001**.

1994: First chain factory to obtain approval of the BG* for their **VIP-special quality** with up to 50 % higher WLL than Grade 8.





















2002: The first universal lifting point – called PPS.



BG and TÜV approved!

*BG = German Employers Liability Assurance Association.

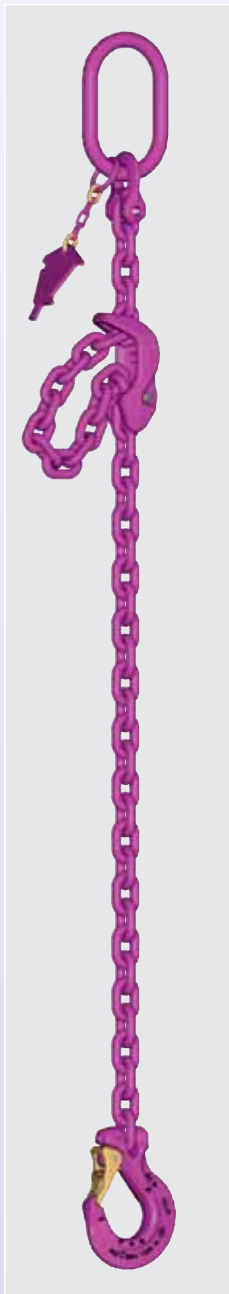
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VIP SLING CHAINS IN RUD SPECIAL QUALITY CLASS 10



VIP-proven since 1994
in the hardest applications!



VIP
Mecano System
"in miniature"
4 mm chain and
components!

Despite having the same chain diameter, an up to 30 % increase in the WLL in comparison to the hitherto highest quality class 8.

Chain dimensions from 4 to 22 mm. WLL from 0.6 t to 20 t in single leg and up to 56 t in a 4-leg configuration with a balancer.

Distinctive fluorescent pink powder coating and clear "VIP" stamp on every chain link and component. Distinctive in comparison to other quality classes. Surface quality is comparable to a zinc plated surface.

Chain diameters 16, 20 and 22 mm in VIP special quality replace the 18, 22 and 26 mm chain diameters of quality grade 8. Smaller chain sizes, hence a considerable reduction of weight which facilitates easy handling.

Multifunctional WLL identification tag: Owing to its special patented shape, it facilitates simple inspection of the three wear criteria for sling chains (diameter, elongation of pitch and overload). The inspection data can be documented on the tag.



Heat indicator:

The pink powder coating changes its colour with temperatures exceeding 200°C. Chain should not be used after being subject to temperatures exceeding 400°C. At this temperature the VIP colour changes to a deep black with small bubbles, clearly indicating that it has been overheated.



Master link collection for every crane hook:

The chain connecting link VRG is attached to the corresponding master link in a permanent but flexible way. The fool – proof clevis connection allways ensures that only the correct chain diameter can be fitted. The collection of master links range from the smallest VBK size for the high tensile hoist hooks up to crane hook No. 50 with Bi = 250 mm in 1 to 4 leg assembly versions.

The patented **multi shortening claw** can be fitted on the chain leg at any required position. No additional chain and coupling parts are required. The robust safety bolt with a spring prevents unintentional hooking out of the chain in both loaded and unloaded conditions. Ideal chain link shaped pocket support, thus no reduction in the WLL.

VIP Cobra hook:

The compact design of the VIP Cobra hook with no protruding hook tip is far superior and safer than the common clevis sling hook. Supplied complete with a forged and tempered safety latch that locks into the hook tip protects against lateral bending. The safety latch is supported by a triple coiled double leg. The enlarged hook tip prevents misuse. Wear edges on both sides of the hook protect against abrasion of the chain when hauling the chain assemblies. Gauge marks on the hook enable easy inspection for the elongation of the width of the hook opening.

VIP automatic clevis hook:

Extremely robust design. The hook locks automatically when lifting the load and can only be opened by activating the protected unlocking lever at the back of the hook. No protruding hook tip. Large mouth width size F.

VIP shortening hook: According to pr. EN1677-7:

With no reduction of WLL and a thickened hook tip to avoid misuse e.g. incorrect fitting of the chain. Ideal chain support facilitated by the calibrated lugs. The U-bend insertion slot protects against accidental chain disengagement.

World wide unique: The VIP Mecano System with the 4 mm chain.

VIP-Quality – “Made in Germany!”



Application examples
- VIP -



Subject to technical alternatives!

YOUR BENEFITS...



VIP Stamping – on every chain link

VIP-stamped chains are manufactured with smaller tolerances in the inner width (size W1) and are coated with the fluorescent colour pink. In connection with the VIP stamped, pink coloured components, whose special clevis design has been perfectly harmonised, a distinctive chain connection is realised.

10 or 8 S

The approval of RUD's special quality VIP by the BG* is documented in short chain link intervals with the following: **H1** referring to the manufacturer's number i.e 1 = RUD and **8 S** or **10** meaning Grade 10.

Verification of quality

At regular intervals, the chains are stamped with a serial and batch number. This identification ensures a continuous record tracking of the manufacturing and proof load data even after a period of 10 years. After all we stick to our VIP quality.

Patented heat indicator

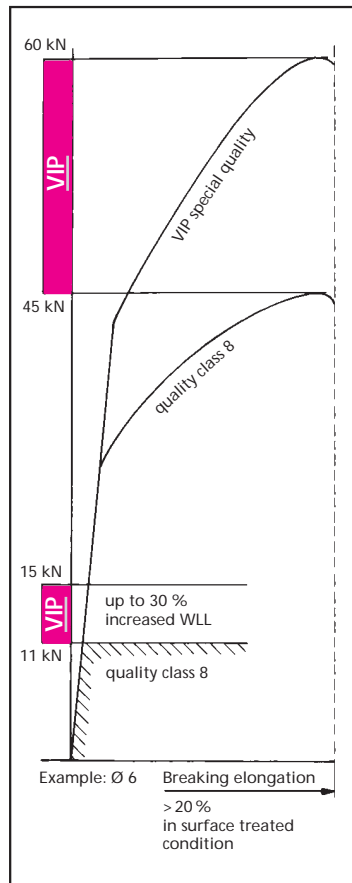
In high temperature environments the special fluorescent pink powder coating permanently changes its colour. Above 400°C the colour changes permanently to black. If this happens the chain assembly should be taken out of service (refer to page 7). The geometric construction and tolerances of the VIP chains are aligned to a higher quality class. On request, **Corrud DS**, a 20 times more red rust resistant component than zinc plating, can be supplied.

VIP Grade 10

A consequential enhancement of the RUD – Mecano system with quality grade 8, which has stood to the test of time for over 30 years. V – distinguished, I – in, P – pink.

Using the patented VIP identification tag, the chain can easily be inspected for wear and pitch elongation. Please refer to pages 8 and 40.

BG* = Employers Liability Insurance Association.



The highly qualitative VIP chains and components are provided with a **duplex surface protection**. This comprises of two processes i.e: Pre-treatment and pink powder coating. Due to this two process procedure, a relatively better surface protection is achieved in comparison to zinc plating.

The highly dynamic **VIP-Mecano system and chains** achieves a dynamic strength higher than the standard values. Tested with over 20,000 load cycles and with a factor ratio of 1.5 of their actual WLL.

An up to 30 % increase in the WLL in comparison to quality class 8

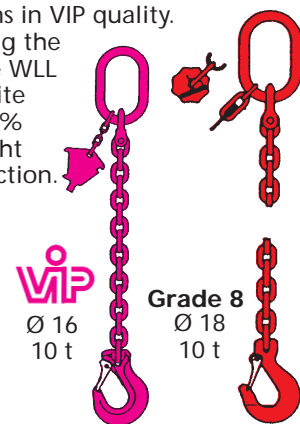
Material CrNiMo alloy steel, specially tempered, high toughness. Minimum breaking elongation $\geq 25\%$ in natural black, $\geq 20\%$ in pink coated.

Less sensitive to notching and hydrogen embrittlement than quality class 8. Bending tests acc. standard DIN EN 818-2, bending min $f = 0.8 \times d$ is by far exceeded. Ratio of WLL : proof load : breaking load is given by 1 : 2.5 : 4.

Owing to a special heat treatment procedure developed by RUD, the highly dynamic RUD – VIP-chains are less sensitive to mechanical abrasion and damages. Hence an increased life expectancy is achieved.

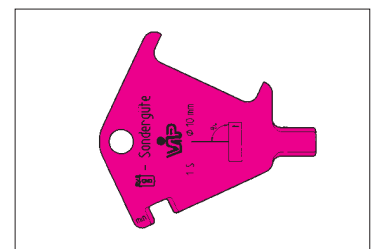
Quality class 8 chains whose nominal diameter exceeds 18 mm can be substituted by a one size less nominal diameter chains in VIP quality.

Giving the same WLL despite a 50 % weight reduction.



RUD chains and components are in accordance with DIN EN 818 and 1677 with a dynamic loading of more than 20,000 load cycles.

The BG* recommends: At high dynamic applications with high load cycles (permanent operation), the WLL must be reduced, e.g. by using a larger chain diameter.



Subject to technical alternations!

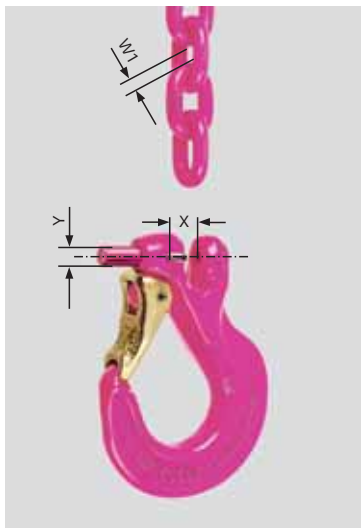
- FOOL-PROOF
»IN PINK«**
- FOOL-PROOF
»IN STAMPING«**
- FOOL-PROOF
»IN PINK+STAMPING«**

The proven clevis connection system has been further enhanced with the new VIP range. With its dimensional adjustments and colour (VIP chains and components in pink) arrangement of the chains and the components, a fool-proof assembly is assured.

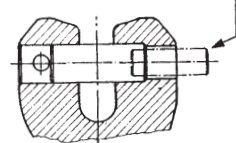
Clevis dimension "X" avoids the connection of a larger VIP chain. VIP chains are manufactured with tighter tolerances in the inner width (size W1). The connection bolt diameter "size Y" avoids the connection of the next smaller VIP chain size.

Result:
Only chains and components with the same WLL are distinctively assembled together.

**VIP-
Fool-proof Mecano
assembly**



Patented: The VG-bolt of the next smaller size drops out.



Subject to technical alternations!



Attention:
VIP chains Ⓢ 8S or 10 must only be connected with VIP components Ⓢ 8S or 10. Follow RUD operating manual and user instructions! Use only original VIP spare parts.

The German Employers Liability Assurance Association requires:
1.) Chain slings of Grade 10 must not be used in combination with chains and components from different manufacturers.
2.) Components which are recognized as Grade 10, must not be mixed with Grade 8 sling components.

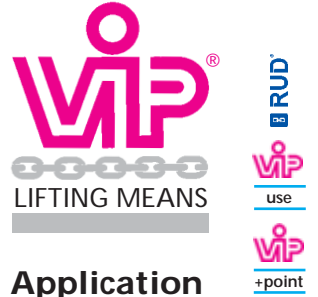


Slot of the tensioning sleeve must be visible facing to the front! The tensioning sleeve must be used only once.



The special fluorescent VIP powder coating permanently shows the temperature to which the VIP chain has been exposed.

Operated in the prohibited temperature ranges i.e. above 400°C, the pink colouration turns black with bubbles on the surface. Replace the VIP chains or return them to the supplier for repair.



Application examples of the versatile VIP system.

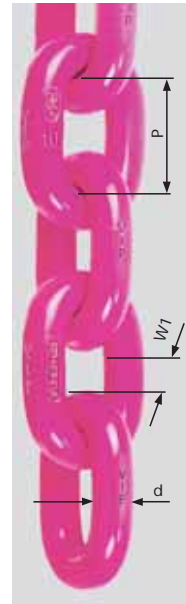
Assembly

**VIP heat indication
European patent
EP 677681**



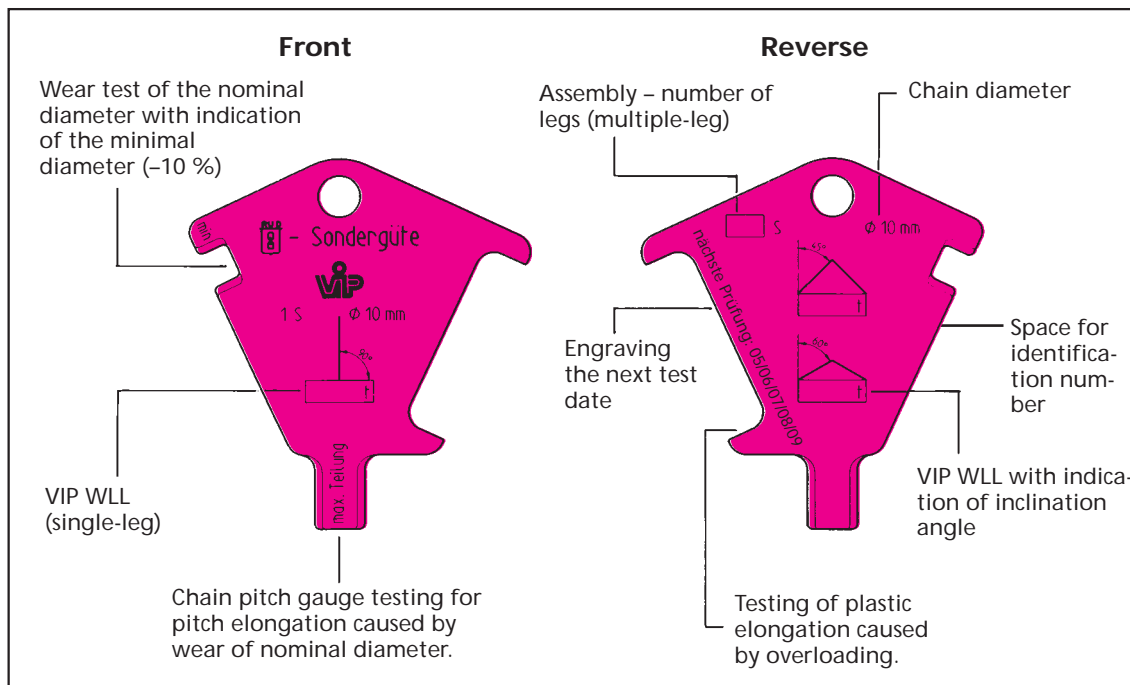
VIP round steel link chain Grade 10

Size d in mm Ø	4	6	8	10	13	16	20	22
Pitch P in mm	12	18	24	30	39	48	60	66
inside, width W1 bi min. mm	5.2	7.8	10.4	13	17	21	26	28.6
WLL in t	0.63	1.5	2.5	4.0	6.7	10	16	20
Proof load MPF min. kN	15.7	37.5	62.5	100	166	250	395	500
Breaking load BF min. kN	25	60	100	160	265	400	630	800
Weight kg/m	0.36	0.85	1.5	2.4	4.0	6.0	9.5	12.3
Surface:	Duplex protection = pre-treatment + pink powder coating							
Order no:	7984399	7100477	7100478	7100479	7100480	7100481	7983689	7100482
Surface:	Corrud-DS-black							
Order no:	7987349	7987591	7986226					



Minimal ultimate elongation: natural black $\geq 25\%$, Pink $\geq 20\%$
 Stamped: VIP identification stamped in every chain link, manufacturing number and the BG approval stamp H1

VIP identification tag with an integrated chain testing gauge EP 610611



Testing wear of nominal diameter



Testing for plastic elongation caused by overload



Testing for pitch elongation caused by wear of nominal diameter

Subject to technical alternations!

Nominal size of sling chain in mm	1-leg	2-leg		3- and 4-leg		endless
Inclination- β	0°	0-45°	> 45-60°	0-45°	> 45-60°	-
Load factor	1	1.4	1	2.1	1.5	1.6
Ø 4	0.63	0.88	0.63	1.32	0.95	1
6	1.5	2.1	1.5	3.15	2.25	2.4
8	2.5	3.5	2.5	5.25	3.75	4
10	4.0	5.6	4.0	8.4	6.0	6.4
13	6.7	9.5	6.7	14	10	10.6
16	10	14	10	21	15	16
20	16	22.4	16	33.6	24	25.6
22	20	28	20	42*	30	32



In case of **unsymmetrical** loading, the load factors must be reduced by 50 %.

Please refer to RUD Multi master with angle measuring device and CD-ROM
* in connection with balancer up to 56 t (see page 26).

VIP
LIFTING MEANS
VIP Grade 10 WLL in tonnes

of single and multiple leg chain slings with different angles of inclination and **symmetrical loading** of the legs.

Ø 4 mm
mini see page 29

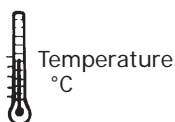
In case of choke hitch applications, reduce WLL by 20 %.

A reduction of 20 % for the choke hitch and bundling (sharp edge) is already within the calculation.

Nominal size of sling chain in mm	Endless chain				Choke hitch		
	single		double		single	double	
	0-45°	> 45-60°	0-45°	> 45-60°	0°	0-45°	> 45-60°
Load factor	1.1	0.8	1.7	1.2	0.8	1.1	0.8
Ø 4	0.69	0.5	1.1	0.75	0.5	0.69	0.5
6	1.65	1.2	2.55	1.8	1.2	1.65	1.2
8	2.75	2	4.25	3	2	2.75	2
10	4.4	3.2	6.8	4.8	3.2	4.4	3.2
13	7.5	5.3	11.2	8	5.3	7.5	5.3
16	11	8	17	12	8	11	8
20	17.6	12.8	27.2	19.2	12.8	17.6	12.8
22	22	16	34	24	16	22	16



In case of **unsymmetrical** loading, the load factors must be modified as follows:



When using sling chains at temperatures beyond 200°C (refer to page 7), the permissible WLL has to be reduced.
Working load in % at chain temperature of:

- 40° up to + 200 °C	above 200° - 300 °C	above 300° - 380 °C
100 %	90 %	60 %



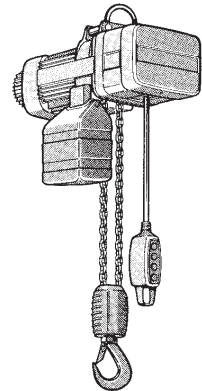
VIP Master link for single leg VBK1

for smaller load hooks



VBK 1 master link with an in all multi-directional movable welded VRG connector. Thus ensuring that the correct chain diameter and number of legs can be connected. Complete identification tag with an integrated testing gauge. Connecting bolt and tensioning sleeve are pre-assembled.

Can also be supplied as **end link (VB-1)** without VIP identification tag.

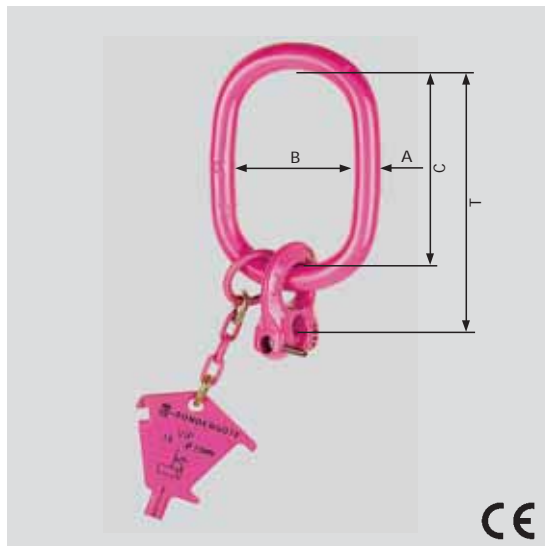


The size corresponds with that of connecting link type B according to DIN 5688. Sufficient for attachment in small load hooks on hoisting devices.

Chain	WLL t	Type	A	B	C	T	kg/pc.	Ref. No.
6	1.5	VBK 1 - 6 (VB 1 - 6)	13	25	54	82	0.5	71 00 675 (71 00 220)
8	2.5	VBK 1 - 8 (VB 1 - 8)	16	34	70	107	0.7	71 00 676 (71 00 221)
10	4	VBK 1 - 10 (VB 1 - 10)	18	40	85	131	1.1	71 00 677 (71 00 222)
13	6.7	VBK 1 - 13 (VB 1 - 13)	22	50	115	174	2.0	71 00 678 (71 00 223)
16*	10	VBK 1 - 16 (VB 1 - 16)	26	65	140	211	3.3	71 00 679 (71 00 224)
20*	16	VBK 1 - 20 (VB 1 - 20)	32	75	170	264	7.6	71 04 092 (71 04 093)
22*	20	VBK 1 - 22 (VB 1 - 22)	36	110	200	294	9.0	71 00 680 (71 02 060)

VIP Master link for single leg VAK 1

for standard crane hooks e.g. DIN 15401



VBK 1 master link with an in all multi-directional movable welded VRG connector. Thus ensuring that the correct chain diameter and number of legs can be connected. Complete identification tag with an integrated testing gauge. Connecting bolt and tensioning sleeve are pre-assembled.

The size corresponds with that of connecting link type A according to DIN 5688.

Master link VAK1 can be used for crane hooks up to No. DIN 15401. - standard size hooks

Size:	6 - No. 2.5	8 - No. 2.5
	10 - No. 5	13 - No. 6
	16 - No. 8	20 - No. 25
	22 - No. 25	

Can also be supplied as **end link (VA-1)** without identification tag.

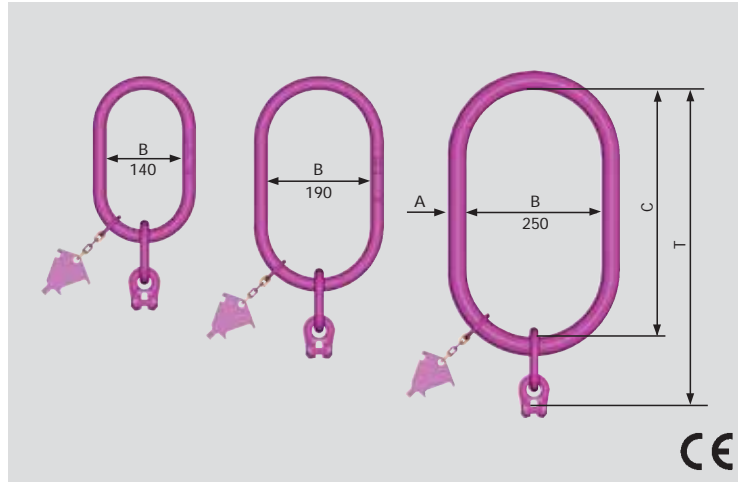
Chain	WLL t	Type	A	B	C	T	kg/pc.	Ref.No.
6	1.5	VAK 1 - 6 (VA 1 - 6)	13	60	110	138	0.6	71 00 681 (71 00 237)
8	2.5	VAK 1 - 8 (VA 1 - 8)	16	60	110	147	0.9	71 00 682 (71 00 238)
10	4	VAK 1 - 10 (VA 1 - 10)	18	75	135	181	1.4	71 00 683 (71 00 239)
13	6.7	VAK 1 - 13 (VA 1 - 13)	22	90	160	218	2.4	71 00 684 (71 00 240)
16*	10	VAK 1 - 16 (VA 1 - 16)	26	100	180	250	3.7	71 00 685 (71 00 241)
20*	16	VAK 1 - 20 (VA 1 - 20)	40	180	340	434	14.7	71 04 089 (71 04 090)
22*	20	VAK 1 - 22 (VA 1 - 22)	45	180	340	434	16.5	71 00 686 (71 02 092)

***Attention:** Master link size 16/20/22 with a special identification tag (refer to page 14). A testing gauge will be additionally supplied with the master link sizes 16/20/22

VSAK1 master link is supplied complete with a welded VRG connector. Therefore only the correct chain diameter and number of legs can be connected. The identification tag with an integrated testing gauge is already attached.

Connecting bolt and tensioning sleeve are pre-assembled.

Owing to a larger gradation of the inner width "B" of the VSAK, improper use (BGR 500) is almost eliminated and wear of the crane hook is minimised. Additional connective components for over size hooks are not necessary.



VIP special master link 1-leg VSAK 1



VSAK – size **B** = **140** for standard hooks up to. **No. 16** DIN 15401
 VSAK – size **B** = **190** for standard hooks up to. **No. 32** DIN 15401
 VSAK – size **B** = **250** for standard hooks up to. **No. 50** DIN 15401

Chain	WLL t	Type	A	B	C	T	kg/pc.	Ref. No.
6	1.5	VSAK 1 – 6/140	18	140	260	342	1.7	71 00 687
8	2.5	VSAK 1 – 8/140	22	140	260	367	3.1	71 00 688
10	4	VSAK 1 – 10/140	26	140	260	391	4.4	71 00 689
13	6.7	VSAK 1 – 13/140	32	140	260	433	7.6	71 00 690
16*	10	VSAK 1 – 16/140	32	140	260	471	8.1	71 00 691

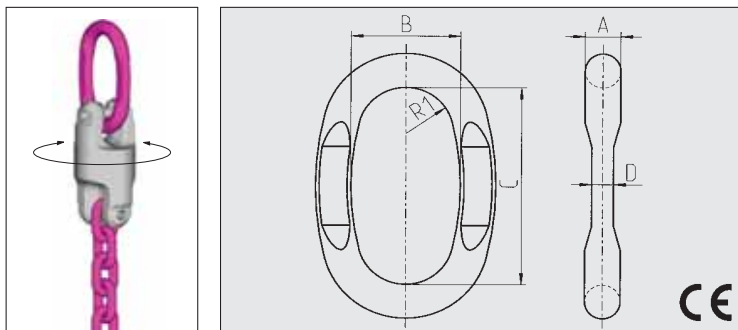
Chain	WLL t	Type	A	B	C	T	kg/pc.	Ref. No.
8	2.5	VSAK 1 – 8/190	22	190	350	457	4.0	71 00 692
10	4	VSAK 1 – 10/190	26	190	350	481	6.0	71 00 693
13	6.7	VSAK 1 – 13/190	32	190	350	523	9.9	71 00 694
16*	10	VSAK 1 – 16/190	36	190	350	560	13.5	71 00 695

Chain	WLL t	Type	A	B	C	T	kg/pc.	Ref. No.
10	4	VSAK 1 – 10/250	36	250	460	590	12	71 00 696
13	6.7	VSAK 1 – 13/250	36	250	460	634	13	71 00 697
16*	10	VSAK 1 – 16/250	40	250	460	670	14	71 00 698
20*	16	VSAK 1 – 20/250	45	250	460	724	25	71 04 100
22*	20	VSAK 1 – 22/250	51	250	460	754	33	71 00 699

Forged Special-Link (in pink) for small load hooks, extreme lightweight construction – centre flattening respective to the corresponding chain diameter.

Fits to the Universal-Swivel-PowerPoint from page 27 or to the Lifting Point PowerPoint-B.

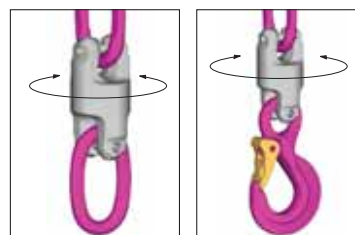
Additionally pay attention to the correct WLL assignment while assembling.



VIP special master link 1-leg PP-X-B – lightweight construction –

Subject to technical alternations!

Chain	WLL t	Type	A	B	C	D	R ₁	kg/pc.	Ref. No.
4	0.63	PP 0.63t - B	9	35	65	4	15	0.1	79 89 531
6	1.5	PP 1.5t - B	11	35	65	6	15	0.14	85 02 173
8	2.5	PP 2.5t - B	13	40	75	8	18	0.2	85 02 174
10	4	PP 4t - B	16	45	95	10	20	0.32	85 02 175
13	6.7	PP-VIP Ø 13-B	21	60	130	13	25	1.02	85 02 176
16	10	PP-VIP Ø 16-B	24	65	140	16	28	1.4	85 02 177



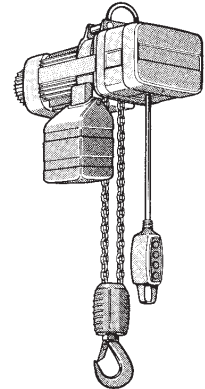


**VIP-
Master link
2-leg
VBK 2**

**for smaller
load hooks**



VBK 2 master link is supplied with two welded VRG connectors. Therefore only the correct chain diameter and number of legs can be connected. The identification tag with an integrated testing gauge is already attached. Connecting bolt and tensioning sleeve are pre-assembled.



The size corresponds with that of connecting link type B according to DIN 5688. Sufficient for attachment to small load hooks on hoisting devices.

Chain	WLL t	Type	A	B	C	T	kg/pc.	Ref. No.
6	2.1/1.5	VBK 2 - 6	13	25	54	82	0.5	71 00 700
8	3.5/2.5	VBK 2 - 8	16	34	70	107	0.9	71 00 701
10	5.6/4.0	VBK 2 - 10	18	40	85	131	1.4	71 00 702
13	9.5/6.7	VBK 2 - 13	22	50	115	174	2.7	71 00 703
16*	14/10	VBK 2 - 16	26	65	140	211	4.4	71 00 704
20*	22.4/16	VBK 2 - 20	32	75	170	264	11	71 04 097
22*	28/20	VBK 2 - 22	36	110	200	294	13.7	71 00 705

**VIP-
Master link
2-leg
VAK 2**

**for standard
crane hooks**



VBK 2 master link is supplied with two welded VRG connectors. Therefore only the correct chain diameter and number of legs can be connected. The identification tag with an integrated testing gauge is already attached. Connecting bolt and tensioning sleeve are pre-assembled.

The size corresponds with that of connecting link type A according to DIN 5688.

Can be used for crane hooks up to No. DIN 15401. - simple hook.

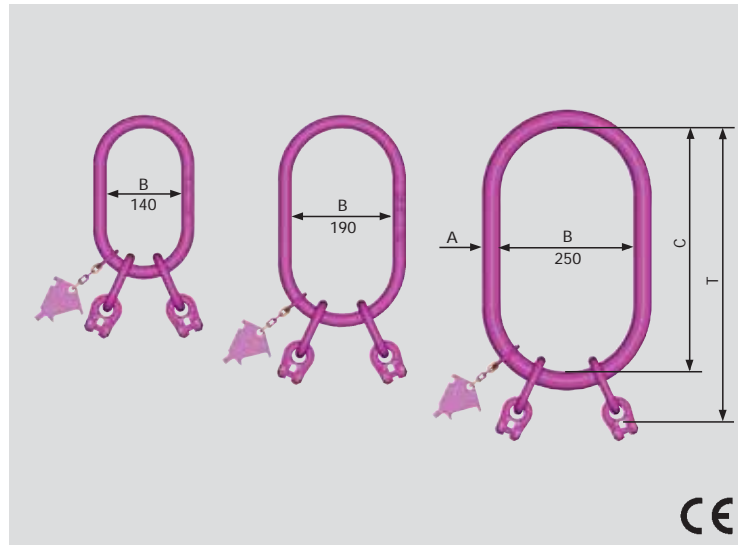
Size:	6 - No. 2.5	8 - No. 5
	10 - No. 6	13 - No. 8
	16 - No. 10	20 - No. 25
	22 - No. 25	

Chain	WLL t	Type	A	B	C	T	kg/pc.	Ref. No.
6	2.1/1.5	VAK 2 - 6	13	60	110	138	0.7	71 00 706
8	3.5/2.5	VAK 2 - 8	18	75	135	172	1.4	71 00 707
10	5.6/4.0	VAK 2 - 10	22	90	160	206	2.3	71 00 708
13	9.5/6.7	VAK 2 - 13	26	100	180	238	3.9	71 00 709
16*	14/10	VAK 2 - 16	32	110	200	270	6.6	71 00 710
20*	22.4/16	VAK 2 - 20	40	180	340	434	16	71 04 095
22*	28/20	VAK 2 - 22	45	180	340	434	20	71 00 711

Subject to technical alternations!

VSAK 2 master link is supplied with two welded VRG connectors. Therefore only the correct chain diameter and number of legs can be connected. The identification tag with an integrated testing gauge is already attached.

Connecting bolt and tensioning sleeve are pre-assembled.



VIP-
special
master link
2-leg
VSAK 2



Owing to a larger gradation of the inner width "B" of the VSAK, improper use (BGR 500) is almost eliminated and wear of the crane hook is minimised. Additional connective components for over size hooks are not necessary.

VSAK – Size **B** = **140** for standard hooks up to **No. 16** DIN 15401
 VSAK – Size **B** = **190** for standard hooks up to **No. 32** DIN 15401
 VSAK – Size **B** = **250** for standard hooks up to **No. 50** DIN 15401

Chain	WLL t	Type	A	B	C	T	kg/pc.	Ref. No.
6	2.1/1.5	VSAK 2 – 6/140	18	140	260	342	2.3	79 94 070
8	3.5/2.5	VSAK 2 – 8/140	22	140	260	367	3.5	79 94 071
10	5.6/4.0	VSAK 2 – 10/140	26	140	260	391	5.2	79 94 072
13	9.5/6.7	VSAK 2 – 13/140	32	140	260	433	9.2	79 94 073
16*	14/10	VSAK 2 – 16/140	32	140	260	471	12.5	79 94 074

Chain	WLL t	Type	A	B	C	T	kg/pc.	Ref. No.
8	3.5/2.5	VSAK 2 – 8/190	22	190	350	457	4.3	79 94 075
10	5.6/4.0	VSAK 2 – 10/190	26	190	350	481	6.5	79 94 076
13	9.5/6.7	VSAK 2 – 13/190	32	190	350	523	10.6	79 94 077
16*	14/10	VSAK 2 – 16/190	36	190	350	560	15.6	79 94 078

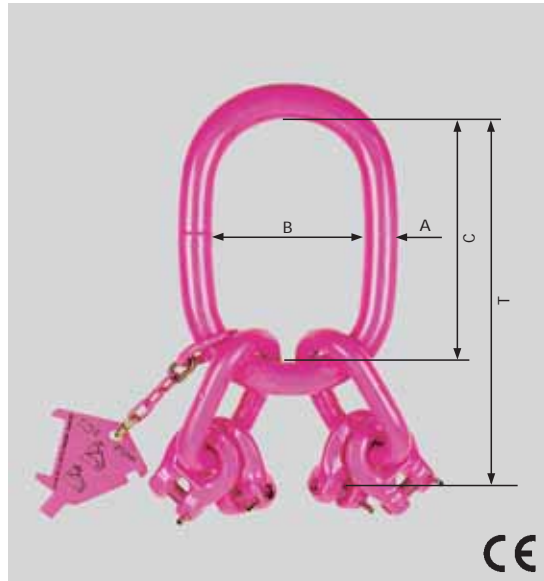
Chain	WLL t	Type	A	B	C	T	kg/pc.	Ref. No.
10	5.6/4.0	VSAK 2 – 10/250	36	250	460	591	12.8	79 94 079
13	9.5/6.7	VSAK 2 – 13/250	36	250	460	634	14.9	79 94 080
16*	14/10	VSAK 2 – 16/250	40	250	460	671	20.5	79 94 081
20*	22.4/16	VSAK 2 – 20/250	45	250	460	724	32.5	79 94 083
22*	28/20	VSAK 2 – 22/250	51	250	460	754	43	79 94 084

Subject to technical alternations!

***Attention:** Master link size 16/20/22 with a special identification tag (refer to page 14).
 A testing gauge will be additionally supplied with the master link sizes 16/20/22



**VIP-
Master link
4-leg
VAK 4**



VAK 4 leg master link is supplied with four welded VRG connectors. Therefore only the correct chain diameter and number of legs can be connected. The identification tag with an integrated testing gauge is already attached. Connecting bolt and tensioning sleeve are pre-assembled.

The size corresponds with that of connecting link type A and B according to DIN 5688.

Can be used for crane hooks up to [No.] acc. to DIN 15401.

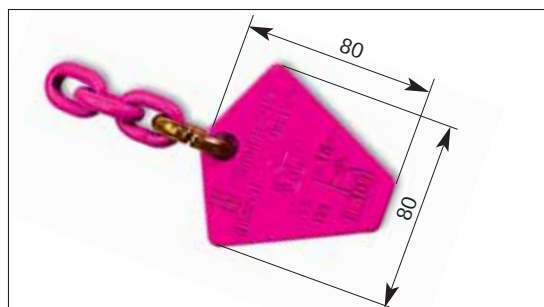
Size:	6 - No. 5	8 - No. 6
	10 - No. 8	13 - No. 10
	16 - No. 16	20 - No. 32
	22 - No. 32	

Chain	WLL t	Type	A	B	C	T	kg/pc.	Ref. No.
6	3.1/2.2	VAK 4 - 6	18	75	135	217	1.5	71 00 742
8	5.2/3.7	VAK 4 - 8	22	90	160	268	2.8	71 00 743
10	8.4/6.0	VAK 4 - 10	26	100	180	311	4.6	71 00 744
13	14/10	VAK 4 - 13	32	110	200	373	8.3	71 00 745
16*	21/15	VAK 4 - 16	36	140	260	470	13.7	71 00 746
20*	33.6/24	VAK 4 - 20	51	190	350	614	39	71 04 181
22*	42/30	VAK 4 - 22	51	190	350	644	42	71 00 747

***Attention:** Master link size 16/20/22 with a special identification tag (refer to page 14). A testing gauge will be additionally supplied with the master link sizes 16/20/22

3 leg master links VAK 3 and VSAK 3 do have the same reference numbers as 4 leg master links. No separate stock exists.

**VIP-
Spare parts
VKZA**



VIP identification tag for chain diameter	Ref. No.
Diameter	
Ø 16 mm/20 mm/22 mm	79 89 739

VKPL



VIP identification tag as *chain testing gauge, for diameters 16 mm/20 mm/22 mm

Chain	Type	Ref. No.
16	VKPL-16	71 00 672
20	VKPL-20	71 04 045
22	VKPL-22	71 01 832

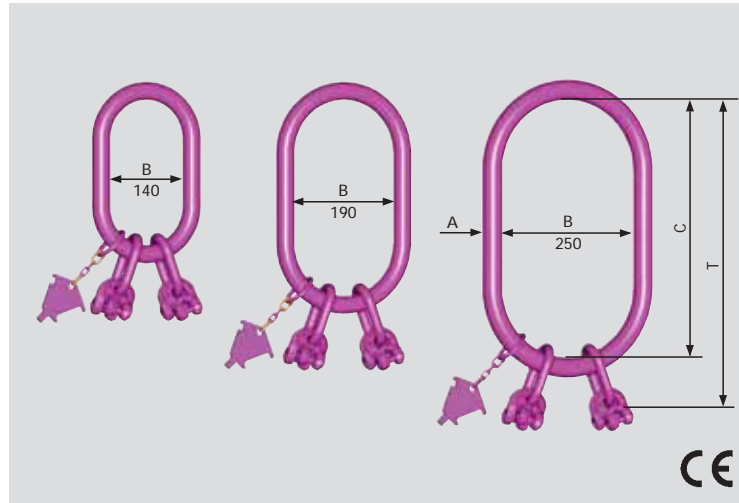
*Comes as separate item with each Masterlink shipment of these sizes.

Subject to technical alternations!

VSAK 4 master link is supplied with four welded VRG connectors. Therefore only the correct chain diameter and number of legs can be connected. The identification tag with an integrated testing gauge is already attached.

Connecting bolt and tensioning sleeve are pre-assembled.

For the respective crane hooks refer to page 11.



VIP-Special master link 4-leg VSAK 4



Chain	WLL t	Type	A	B	C	T	kg/pc.	Ref. No.
6	3.1/2.2	VSAK 4 – 6/140	22	140	260	342	3.3	71 00 748
8	5.2/3.7	VSAK 4 – 8/140	26	140	260	367	5.0	71 00 749
10	8.4/6.0	VSAK 4 – 10/140	32	140	260	391	7.9	71 00 750

Chain	WLL t	Type	A	B	C	T	kg/pc.	Ref. No.
6	3.1/2.2	VSAK 4 – 6/190	22	190	350	432	3.6	71 00 751
8	5.2/3.7	VSAK 4 – 8/190	26	190	350	457	5.5	71 00 752
10	8.4/6.0	VSAK 4 – 10/190	32	190	350	481	9.2	71 00 753
13	14/10	VSAK 4 – 13/190	36	190	350	523	13.5	71 00 754

Chain	WLL t	Type	A	B	C	T	kg/pc.	Ref. No.
10	8.4/6.0	VSAK 4 – 10/250	36	250	460	591	14.8	71 00 755
13	14/10	VSAK 4 – 13/250	40	250	460	634	20.4	71 00 756
16*	21/15	VSAK 4 – 16/250	51	250	460	671	34.5	71 00 757
20*	33.6/24	VSAK 4 – 20/250	54	250	460	754	45.5	**79 93 210
22*	42/30	VSAK 4 – 22/250	56	250	460	763	53.6	**79 93 211

***Attention:** Master link size 16/20/22 with a special identification tag (refer to page 14). A testing gauge will be additionally supplied with the master link sizes 16/20/22

**with VVS-U-connection

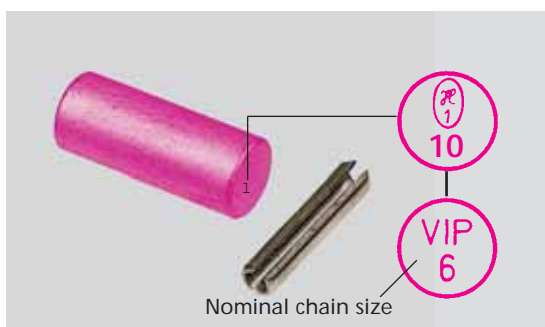


VIP identification tag with integrated testing gauge.

Chain	Type	Ref. No.
4	VKZA-4	79 87 054
6	VKZA-6	71 00 804
8	VKZA-8	71 00 805
10	VKZA-10	71 00 806
13	VKZA-13	71 00 807

VIP-spare parts VKZA

Subject to technical alternations!



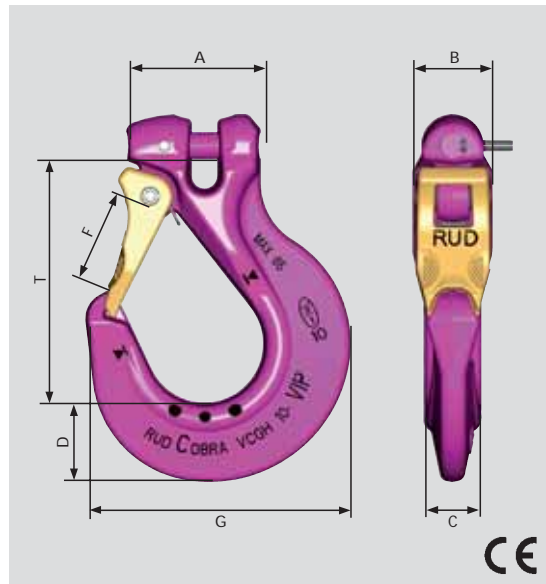
VG bolts with tensioning sleeves

Chain	Type	Ref. No.
4	VG-4/retaining pin 4	79 84 300/51 299
6	VG-6/retaining pin 6	71 01 594/59 289
8	VG-8/retaining pin 8	71 01 595/57 490
10	VG-10/retaining pin 10	71 01 596/59 021
13	VG-13/retaining pin 13	71 01 597/59 022
16	VG-16/retaining pin 16	71 01 598/59 023
20	VG-20/retaining pin 20	71 02 717/59 386
22	VG-22/retaining pin 22	71 01 599/59 387

VG/SP



VIP-Cobra hook with safety latch VCGH



Extremely robust improved version.

No protruding hook tip.

Forged safety latch engages into the tip of the hook and is thus protected against lateral bending.

A triple-coiled, double-leg spring in stainless steel. Thickened tip of the hook prevents misuse. Wearing edges on both sides.

Gauge marks for measuring the width of the hook opening.

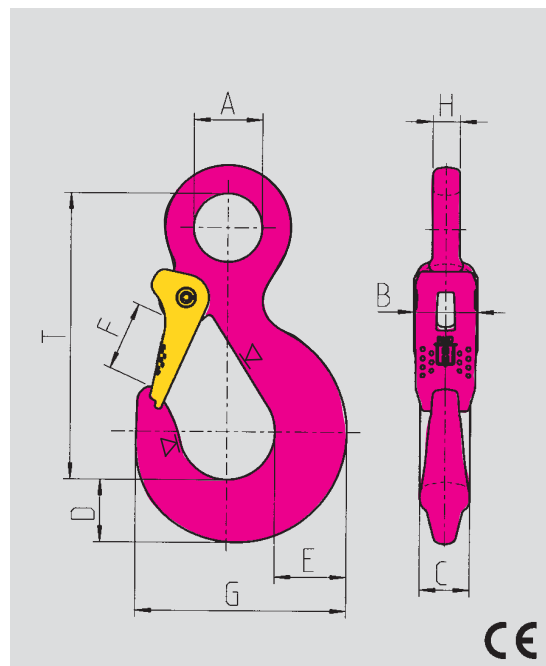
Fmax. = Maximum distance between the gauge marks.



Chain	WLL t	Type	A	B	C	D	F	F max.	G	T	kg/pc.	Ref. No.
6	1.5	VCGH 6	38	22	16	20	25	45	72	76	0.4	71 00 498
8	2.5	VCGH 8	50	28	20	28	30	52	95	97	0.9	71 00 499
10	4.0	VCGH 10	60	36	26	36	35	65	118	108	1.5	71 00 500
13	6.7	VCGH 13	76	46	30	37	40	73	135	126	2.7	71 00 501
16	10.0	VCGH 16	83	56	36	49	48	87	161	152	4.3	71 00 502
20	16.0	VCGH 20	112	68	50	69	63	114	218	195	10.0	71 03 385
22	20.0	VCGH 22	117	78	50	74	63	114	223	198	11.5	71 01 603

NEW!

VIP-Cobra-eye hook with safety latch VCÖH



For special wire rope slings, VIP chain slings, PowerPoint combinations or the universal swivel (refer to page 27).

Extreme durable, compact design, with pink powder coating.

No protruding hook tip.

The forged, quenched and tempered safety latch, engages into the hook tip.

Therefore protected against lateral bending.

Triple coiled, stainless steel double leg spring.

Thickened hook tip to avoid improper use.

Wear edges on both sides.

Gauge marks for measuring the width of the hook opening.

Fmax. = Distance between the gauge marks, see VCGH data above.



Chain	WLL t	Type	A	B	C	D	E	F	G	H	T	kg/pc.	Ref. No.
4	0.63	VCÖH 4	18	18	12	13	14	18	52	8	75	0.14	85 02 323
6	1.5	VCÖH 6	24	22	16	22	24	25	73	11	98	0.5	85 02 203
8	2.5	VCÖH 8	32	28	20	28	31	30	95	13	126	0.8	85 02 142
10	4.0	VCÖH 10	38	36	26	36	39	35	118	17	150	1.6	85 02 145
13	6.7	VCÖH 13	48	45	30	37	48	40	135	21	170	2.9	85 02 204
16	10	VCÖH 16	63	56	36	49	58	50	161	27	208	4.2	85 02 146

Subject to technical alternations!

Considerably larger mouth width than VCGH, but without a safety latch.
Use only where unintentional unhooking is impossible.

Inappropriate for overhead lifting!

When using foundry hooks, special attention must be paid and a risk assessment must be carried out before using.

Robust cross section (size C/G) is resistant against increased lateral forces.
Specially designed wearing edges to protect the chain link, compare the dimension "E".
Connecting bolt and tensioning sleeve are pre-assembled.

Gauge marks for measuring the width of the hook opening.

Fmax. = Maximum distance between marked points.



VIP-Foundry hook VWH

Chain	WLL t	Type	A	B	C	D	E	F	F max.	G	T	kg/pc.	Ref. No.
6	1.5	VWH 6	30	22	18	30	22	50	63	22	87	0.5	71 00 210
8	2.5	VWH 8	40	29	26	40	29	64	81	30	115	0.9	71 00 211
10	4.0	VWH 10	46	37	30	50	36	76	96	37	130	1.7	71 00 212
13	6.7	VWH 13	51	45	37	64	46	90	115	51	168	3.0	71 00 213
16	10.0	VWH 16	64	56	40	75	56	100	129	58	190	5.7	71 00 214
20*	16	VWHÖ 20	86	70	65	107	30	127		70	265	13.0	79 88 985
22*	20	VWHÖ 22	96	80	71	122	34	136		80	305	19.0	79 88 986

*eye type, chain connection with VVS



Chain	Type	kg/pc.	Ref. No.
4	Si-Set VMH-4	0.04	79 87 901
6	Si-Set VCGH-6	0.04	71 00 299
8	Si-Set VCGH-8	0.07	71 00 300
10	Si-Set VCGH-10	0.09	71 00 301
13	Si-Set VCGH-13	0.15	71 00 302
16	Si-Set VCGH-16	0.24	71 00 303
20	Si-Set VCGH-20	0.40	71 01 604
22	Si-Set VCGH-22	0.40	71 01 604

Subject to technical alternations!

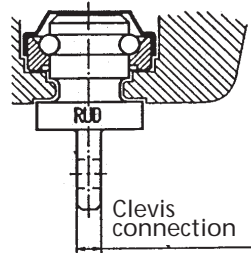
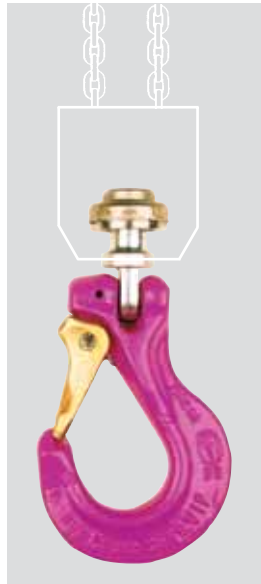


Safety latch set for VCGH

Can also be used as spare part for the RUD GSH 80 hook!

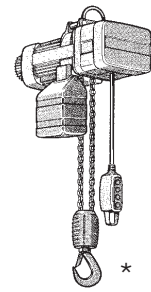


Hoist Swivel adapter HWA

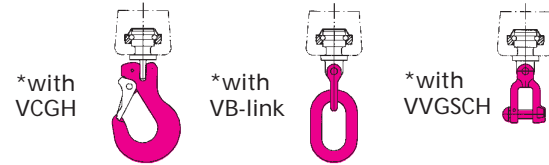


- 1 Supplied complete with original Demag ball bearing
- 1 Manufactured from high-tempered special steel
- 1 tested acc. to EN 1677
- 1 suitable for single leg snatch blocks and for double leg lower blocks
- 1 suitable for all RUD clevis Mecano components

for Demag hoists



Application examples:



for Demag-DK-hoists

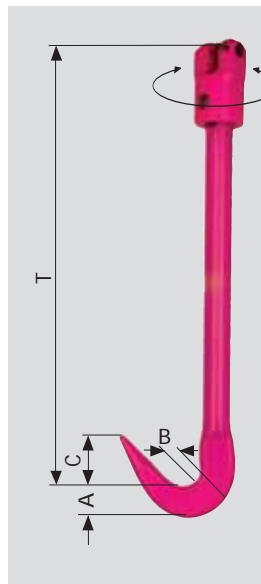
Type	WLL t	Clevis connection	kg/pc.	Ref. No.
HWA 6 DK 400 DC 1+2 up to 250 kg	0.4	6	0.15	7985570
HWA 6 DK 800 DC 5 up to 500 kg	0.8	6	0.30	7985571
HWA 8 DK 800 DC 5 up to 500 kg	0.8	8	0.40	7985572
HWA 8 DK 1250 DC 10+20 up to 1000 kg	1.25	8	0.55	7985573
HWA 10 DK 2500 DC 20* 1000-2000 kg	2.5	10	0.90	7985574
HWA 13 DK 5000	5.0	13	1.3	7985575

for Demag-PK-hoists

Type	WLL kg	Ref. No.
HWA 6 PK (1)	250	51 287
HWA 6 PK (2)	500	51 288
HWA 8 PK (2)	500	51 293
HWA 8 PK (5)	1000	51 294
HWA 10 PK (10)	2000	51 295

*only in combination with Demag DK bottom block

VIP-Bale hook VBMH with ball-bearing swivel



The bevelling on the back of the hook simplifies the horizontal hook insertion between the bales. The clevis connection enables a direct chain connection and the integrated ball bearing swivel prevents the chain from automatically spinning.

Suitable only for the transport of bundled bale packages.

Not suitable for choke lifts!

Inappropriate for overhead lifting!

When using bale hooks, special attention must be paid and a risk assessment must be carried out before using.

Chain	WLL t	Type	A	B	C	T	kg/pc.	Ref. No.
8	2.5	VBMHWA - 8	35	18	61	381	2.5	79 91 478
10	4.0	VBMHWA -10	35	18	61	381	2.5	79 89 017

Extremely robust and approved design.
 Hook automatically locks when lifting the load.
 Can only be opened by activating the protected
 unlocking lever on the back of the hook.
 No protruding hook tip.
 Large mouth width size F.
 Wearing edges > dimension B < on both sides of
 the hook protect the chain against abrasion when
 the assembly is dragged or hauled.
 Connecting bolt and tensioning sleeve are pre-
 assembled.
 Safety latch spare parts available on demand.

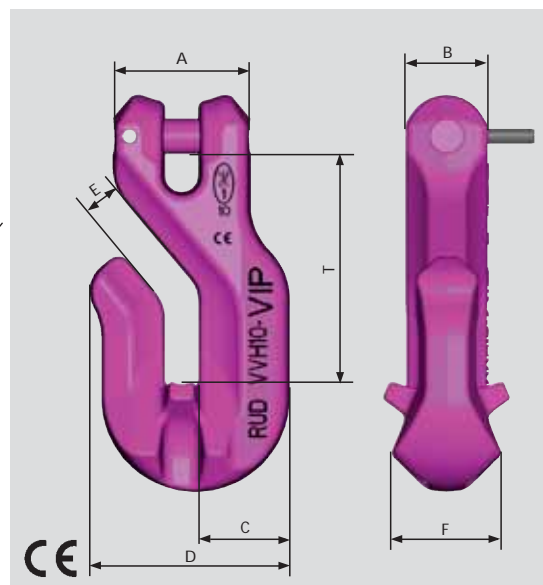
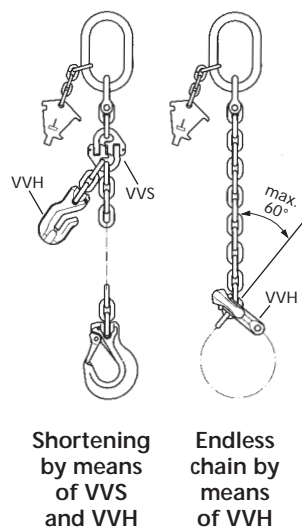


**VIP-
Self-locking
hook
VAGH**



Chain	WLL t	Type	A	B	C	D	E	F	T	kg/pc.	Ref. No.
8	2.5	VAGH 8	36	22	25	31	91	43	117	0.35	71 01 500
10	4.0	VAGH 10	44	28	33	36	109	47	140	0.8	71 01 501
13	6.7	VAGH 13	58	36	38	44	138	64	169	2.2	71 01 502
13	6.7	VMAGH 13	...for dumpers see page 24								

- 1 No reduction of the VIP-WLL.
- 1 Thickened hook tip to avoid misuse e.g; incorrect insertion of the chain.
- 1 The calibrated tooth lugs facilitate an optimal chain positioning in the hook.
- 1 The curved insertion opening prevents the chain from easily falling out in compliance with pr EN 1677-7.
- 1 Connecting bolt and tensioning sleeve are pre-assembled.



**VIP-
shortening
hook
VVH**



Special designed hook tip to avoid misuse.



Probable misuse

Chain	WLL t	Type	A	B	C	D	E	F	T	kg/pc.	Ref. No.
6	1.5	VVH 6	31	18	20	43	7.5	23	50	0.25	79 88 658
8	2.5	VVH 8	38	22	25	54	9.5	33	64	0.35	79 87 319
10	4.0	VVH 10	47	28	31	68	12	42	80	0.8	79 87 320
13	6.7	VVH 13	60	36	40	87	15	47	103	2.2	79 87 321
16	10.0	VVH 16	75	45	50	108	18.5	57	125	2.9	79 88 669

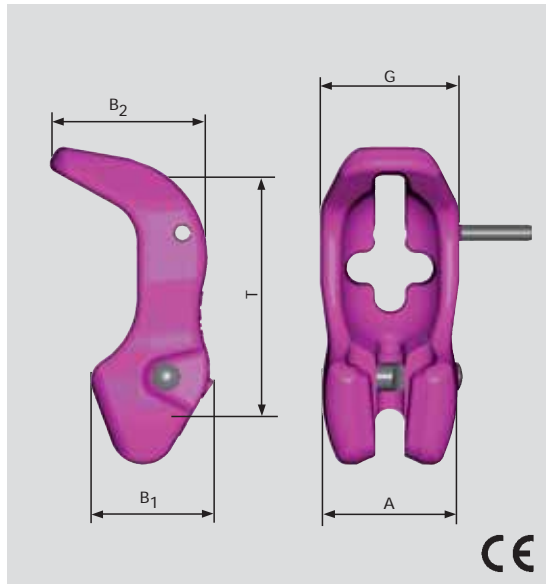
Subject to technical alternations!

Attention:
 New Standard for shortening elements pr EN 1677-7!
 All RUD shortening components do already fulfil these requirements.



**VIP-
Multi-
shortening
claw
VMVK
EP 0736150**

Attention:
New Standard for
shortening ele-
ments pr EN 1677-7!
All RUD shortening
components do
already fulfil these
requirements.

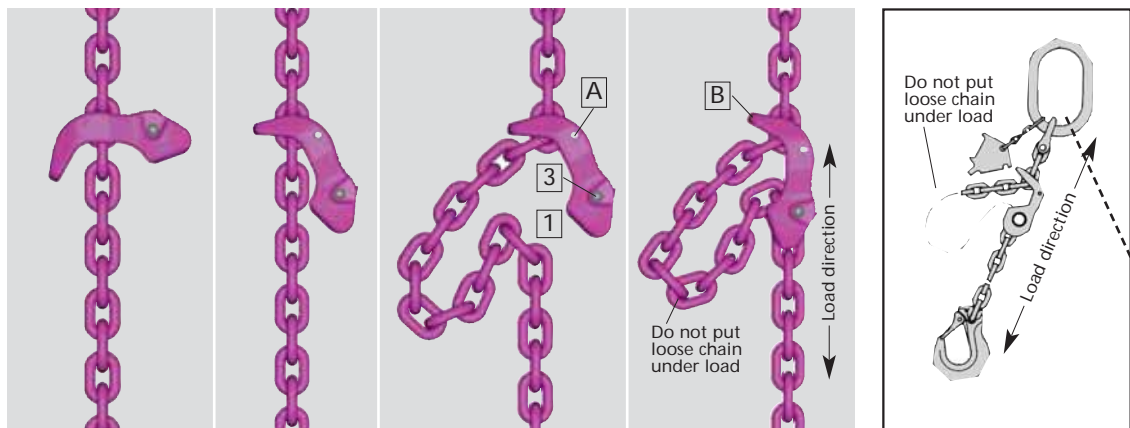


After decades of success the RUD shortening claw has been further enhanced. Fitted on a continuous chain strand at any required position. Fitted permanently on the chain leg at any required position, no additional chain coupling devices are required. It can either be mounted or easily moved to any position along the chain leg. The ideal link shaped chain pocket facilitates even wearing of the chain **thus no reduction of the WLL**. A robust safety bolt with spring prevents accidental loosening of the chain in both loaded and unloaded condition. In case of a mounted but not firmly fixed VMVK, please adhere to the instructions marked "Attention" below.

Complies with pr EN 1677-7.

Chain	WLL t	Type	A	B ₁	B ₂	T	G	kg/pc.	Ref. No.
6	1.5	VMVK 6	38	34	40	66	38	0.3	79 84 072
8	2.5	VMVK 8	46	41	52	88	48	0.55	71 00 760
10	4.0	VMVK 10	58	50	64	110	60	1.1	71 00 761
13	6.7	VMVK 13	74	64	86	143	76	2.4	71 00 762
16	10.0	VMVK 16	91	79	105	176	98	4.4	71 00 763

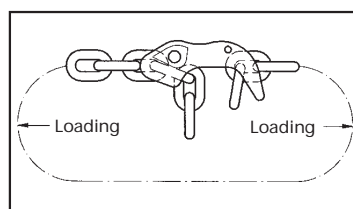
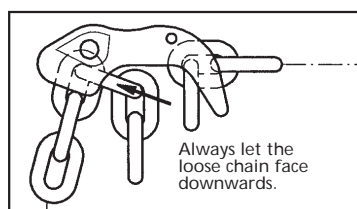
**VMVK
Fitting and
Handling**



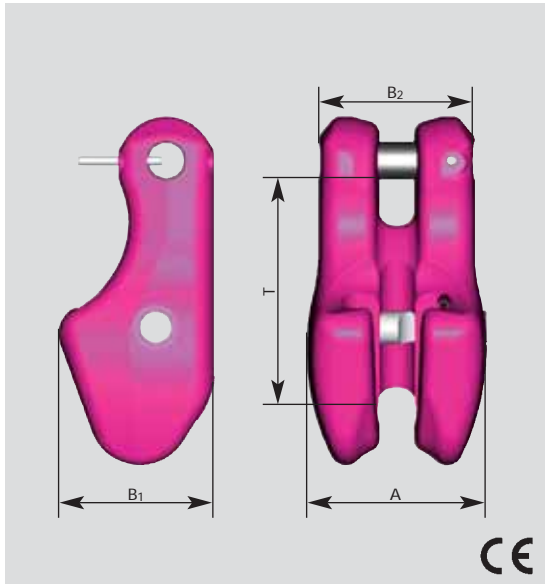
Fitting:
Pull loose chain strand through the crucifix. Secure the chain in the locking pocket at the required position and drive in the retaining pin [A]. Thus the multi shortening claw is fixed in the VIP chain strand. It is preferable to fit and secure the claw on the third chain link down from the suspension link for maximum adjustment. Slide the chain into the slot and secure.

Handling:
In a loosened condition, insert the required link of the slack chain of the to be loaded chain leg into the pocket support [1]. Pull down the chain leg and press the securing bolt [3] the safety bolt locks automatically. Check the locking. To unlock reverse the above procedure while simultaneously pressing the safety bolt [3].

Attention:
If the VMVK or BSEK is used without securing bolt the chain must always be completely seated in the locking slot [B]! When pulling/lifting the shortened chain assembly attention must be paid to ensure that the chain remains in the locking slot!



User advice:
Easier application for example if an endless sling is being used.



For the 20 and 22 mm VIP-chain, only the standard shortening claw is available in VIP quality.

- Chain saving pocket support
- no reduction of WLL
- light construction

New: The robust safety bolt supported by a spring avoids an unintentional dismounting of the chain in unloaded as well as loaded conditions. Complies with pr EN 1677.



VIP-shortening claw VV-20/22

Attention:
New Standard for shortening elements pr EN 1677-7!
All RUD shortening components do already fulfil these requirements.



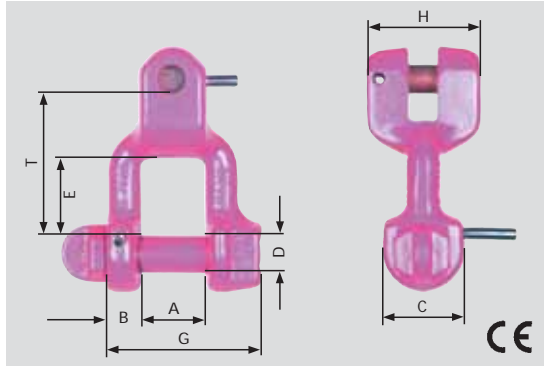
Chain	WLL t	Type	A	B ₁	B ₂	T	G	kg/pc.	Ref. No.
20	16	VV 20	117	101	102	140	-	8.8	79 94 856
22	20	VV 22	117	101	102	140	-	8.5	79 94 855

Assembly for Ø 20 and 22: 1-leg – adjustable – fully captive	2-leg – adjustable – fully captive	4-leg – adjustable – fully captive
<p>Example: VAK 2-22</p> <p>3-link VIP 22x66 W 22</p> <p>Attention: Fit with a 1-leg VKZA-tag</p>	<p>VAK 4-22</p> <p>VKZA 22-2S W 22</p> <p>Attention: Fit with a 2-leg VKZA-tag</p>	<p>VAK 4-22</p> <p>WS 22 W 22</p>





**VIP-
fool-proof
shackle
VV-GSCH**

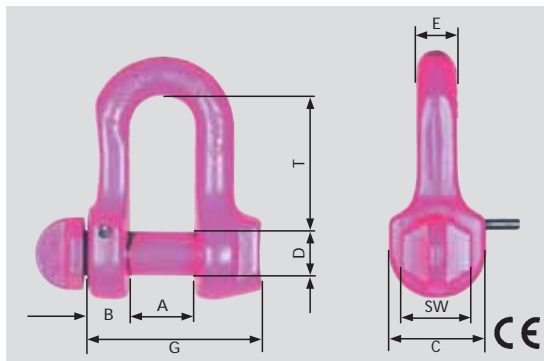


For technical description of the shackle refer to VV-SCH.

- Optimal dimensions – max. mouth width with smallest shackle bolt.
- Due to a turned clevis connection, the shackle is extremely resistant to bending.

Chain	WLL t	Type	A	B	C	D	E	G	H	T	kg/pc.	Ref. No.
6	1.5	VV-GSCH 6	17	8	22	10	21	40	28	36	0.15	71 02 022
8	2.5	VV-GSCH 8	21	10	26	12	32	48	39	48	0.26	71 02 023
10	4.0	VV-GSCH 10	27	13	34	16	35	62	45	61	0.65	71 02 024
13	6.7	VV-GSCH 13	33	17	42	20	41	81	59	78	1.35	71 02 025
16	10.0	VV-GSCH 16	38	22	49	24	49	95	69	96	2.5	71 02 026
20	16.0	VV-GSCH 20	47	27	60	30	57	119	88	108	3.9	71 04 284
22	20.0	VV-GSCH 22	53	30	76	36	72	130	95	132	6.7	71 02 027

**VIP-
fool-proof
shackle
VV-SCH**



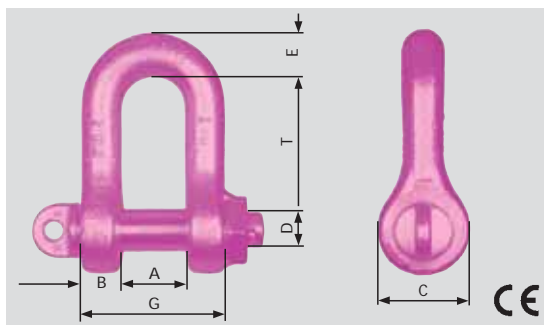
High-tensile patented version with an integrated safety thread in the shackle bracket. On both sides, smooth bolt support in the shackle. Bolt is turnable. No bending strength in the thread, it has only a securing function.

Pre-assembled with tensio-
ning sleeve. Long term secur-
ing by driving in a tensio-
ning sleeve. Special thread,
thus fool-proof compared
to other shackle bolts! Surfa-
ce is pink powder coated.



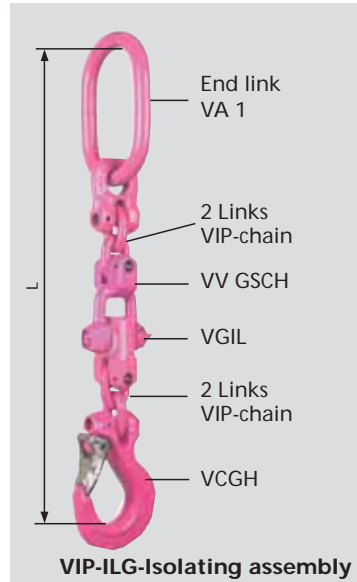
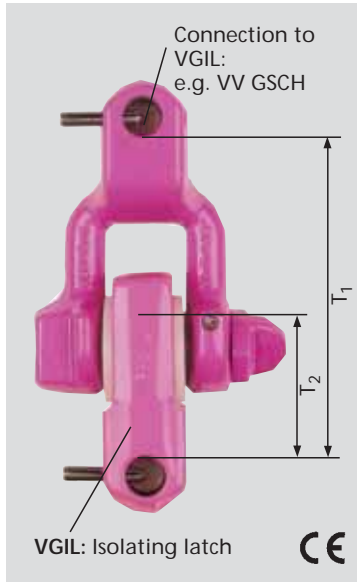
Chain	WLL t	Type	A	B	C	D	E	G	SW	T	kg/pc.	Ref. No.
6	1.5	VV-SCH 6	14	8	22	10	8	36	17	30	0.1	71 00 607
8	2.5	VV-SCH 8	17	10	26	12	10	44	19	36	0.2	71 00 608
10	4.0	VV-SCH 10	21	13	34	16	13	56	24	49	0.4	71 00 609
13	6.7	VV-SCH 13	27	17	42	20	17	75	29	63	0.8	71 00 610
16	10.0	VV-SCH 16	33	21	49	24	21	90	36	73	1.5	71 00 611

**VIP-
Shackle
high-tensile
VC-SCH**



Shape acc. to DIN 82 101-C with an attached fixed nut. Securing by split-pin. Surface is pink powder coated.

WLL t	Type	A	B	C	D	E	F	G	T	kg/pc.	Ref. No.
14.0	VC-SCH 4.0	42	27	60	30	29	27	96	91	2.7	79 84 331
22.4	VC-SCH 5.0	47	30	72	36	33	30	107	111	4.4	79 84 332
28.0	VC-SCH 6.0	53	34	78	39	37	34	121	120	5.9	79 84 333



**VIP-
Isolating
Assembly**

**VIP-
Isolating
latch
VGIL + VV
GSCH**

Up to 1000 V



Chain	WLL t	Type	T ₁	T ₂	L	Weight/ kg	Ref. No. VIP-Isolat. assembly	Ref. No. VGIL
6	1.5	VGIL-6	71	35	357	1.4	79 84 258	79 84 161
8	2.5	VGIL-8	91	43	431	2.4	79 84 259	79 84 162
10	4.0	VGIL-10	108	47	517	4.3	79 84 260	79 84 163
13	6.7	VGIL-13	132	54	632	8.2	79 84 261	79 84 164
16	10.0	VGIL-16	166	70	760	13.1	79 84 262	79 84 165

There is a danger of current flow when welding is carried out on suspended loads. The isolating latch isolates up to max. 1,000 V by means of a special non conductive plastic bearing of the clevis shackle bolt. Max operational temperature is +80°C.



Finally!
Ensures even load distribution by means of a compensating pulley with a VVGSCHE-8. There is neither overload nor deformation of the concrete element.



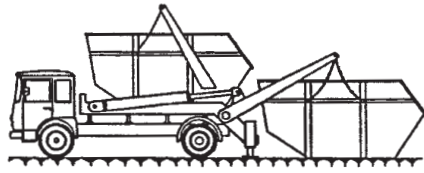
RUD VIP Cobra hook:
with a robust hook securing, small, handy and easy to hook-in in both diagonal and upper chords.



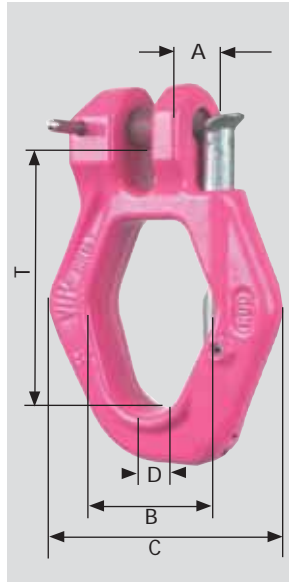
**VIP-
Balancing
assembly
"VIP-
octopus"
for concrete
elements**

Chain	WLL t	Type	Ref. No. complete	Ref. No. clevis shackle with a deflection pulley
8/6	5.25	VIP-Krake 8 x 5000	79 87 582	79 87 366

Subject to technical alternations!



VIP-Rhombic link VRH for skip dumpers



Suitable for standard dumper bins. Easy handling of the bolt and securing hook.

Fool-proof chain connection. Connecting bolt and securing stud are pre-assembled.

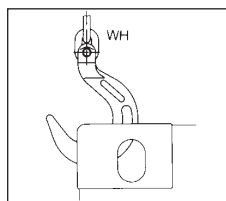
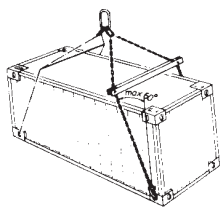
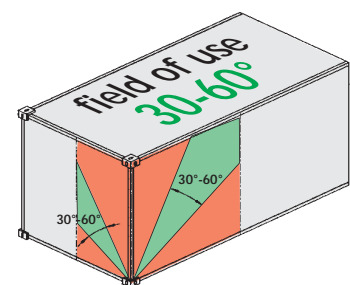
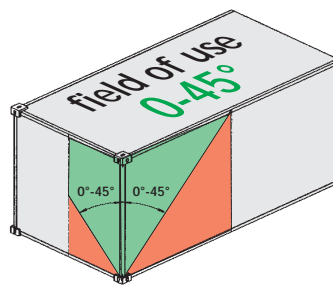
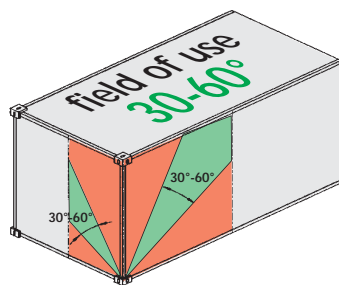
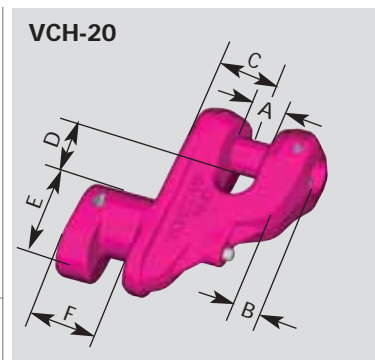
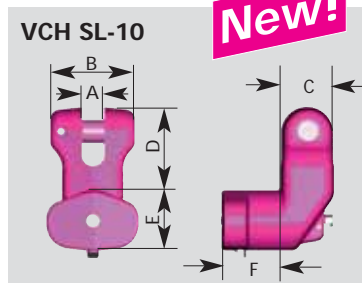
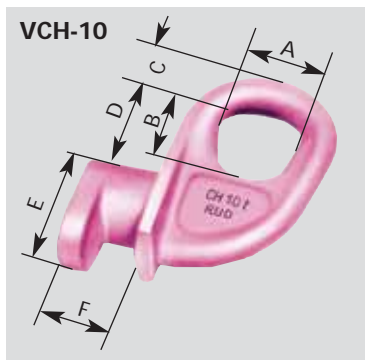


VIP-automatic sling hook VMAGH for skip dumpers



Chain	Type	WLL t	A	B	C	D	E	T	kg/pc.	Ref. No.
13	VRH 13	6.7	34	67	130	25		121	1.5	79 84 370
13	VMAGH-13	6.7	58	120	47	42	38	150	2.2	79 89 490

VIP-Container hook VCH



RUD VCH hooks are not suitable for vertical lifting. When the inclination angle > 30° - accidental loosening is impossible.

VCH - 10 t suitable for ISO container edges. Fix connection by VVS or VVGSC. Loose component for hook mounting.

Suitable for ISO-Container edges. The container hook is equipped with a patented securing device. Therefore the hook cannot fall out of the ISO edge. Easy handling. **Inserting:** Without operating of securing device. **Taking out:** Only possible when locking pin is released. RUD VCH-SL hooks are suitable for vertical lifts and up to max. 45° inclination angle (see graphic chart). Clevis connection suits 16 mm VIP chain.

VCH - 22 t suitable for ISO container edges. Clevis connection for the 22 mm VIP chain. VIP chain size can be reduced to 16 mm when using a VRG-16 connector. **With patented locking mechanism.**

Type	WLL t	A	B	C	D	E	F	kg/pc.	Ref. No.
VCH - 10	10.0	56	70	24	83	76	45	3	51 005
VCH - SL 10	10.0	18	71	42	40	50	47	2.5	85 03 115
VCH - 20	20.0	24	62	48	45	76	45	4.2	85 02 313

Subject to technical alternations!

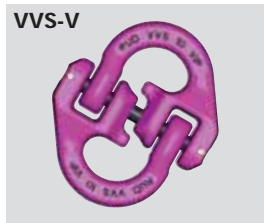
Various external connections e.g. lifting points, metallic grabs, etc. can be mounted in the locking bracket (A2).

The bracket halves can be optionally combined to suit the application.

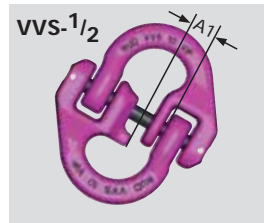
No movement, thus damage of the securing

spring or the sleeves of the retention bolt is avoided.

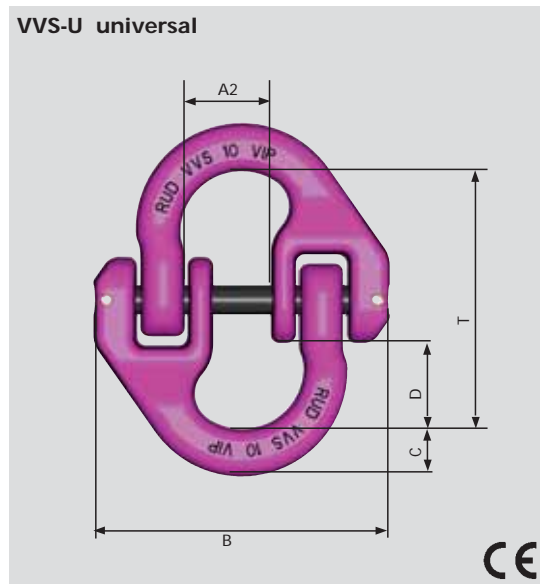
In the fool proof-bracket with a forged nose, only the correct chain size or overload indicator can be (A1) fitted.



fool-proof on both sides



fool-proof chain connection on one side



Chain	WLL	Type	Dimensions							Weight	Ref. No.	Ref. No.	Ref. No.
			A1	A2	B	C	D	T	kg/pc.				
	t										universal	one side	two sides
												fool proof	fool proof
6	1.5	VVS 6	6	7	14	50	8.5	14	40	0.09	79 88 419	79 84 057	79 84 050
8	2.5	VVS 8	8	9	19	64	10.5	19	53	0.17	79 85 714	79 84 058	79 84 051
10	4.0	VVS 10	11	23	80	13	23	70	0.42	79 85 715	79 84 059	79 84 052	
13	6.7	VVS 13	15	27	97	17	27	81	0.64	79 84 293	79 84 060	79 84 053	
16	10.0	VVS 16	18	34	125	21	34	104	1.5	79 86 984	79 84 061	79 84 054	
20	16.0	VVS 20	-	42	155	27	41	124	3	79 84 055	-	-	
22	20.0	VVS 22	-	47	172	30	46	133	3.9	79 84 056	-	-	

VERG to be used as a plug-in bolt for transportation of tools and other similar lifting purposes when bores are the only specified lifting points available.

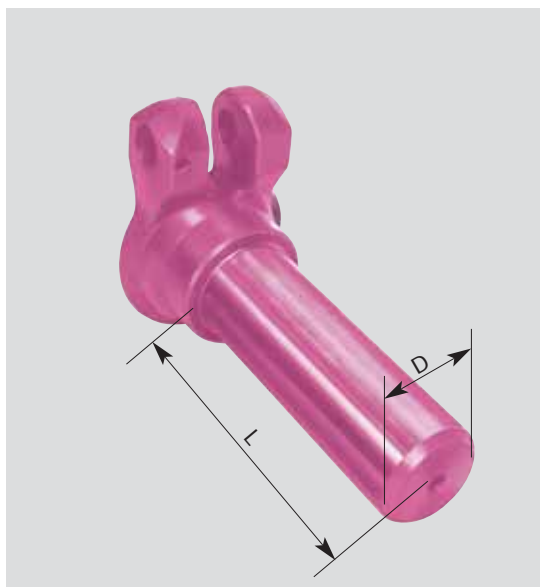
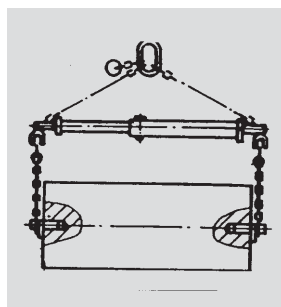
Minimum diameter D, refer to the table, minimum bolt length L is 2 x D. Maximum diameter D = 48 mm. Bore diameter = D + 1 mm. We recommend that for vertical lifting purposes, that the VERG be used with a spreader bar or a cross beam.

Attention:

In the event of any lifting procedure, attachment should always be at the collar.

The plug-in connectors are non stock items and their production is subject to customer requirement.

Thus bear in mind the respective delivery periods.



Chain	WLL t	Type	D _{min}	D*	L*	A _{min.}	T
6	1.5	VERG - 6	17	Indicate sizes L and D when ordering!		11	20
8	2.5	VERG - 8	22			15	26
10	4.0	VERG - 10	28			18	33
13	6.7	VERG - 13	36			24	42
16	10.0	VERG - 16	45			29	54



VIP-Combi lock
VVS-U
VVS-V
VVS-1/2

World champion in load capacity!



Subject to technical alternations!



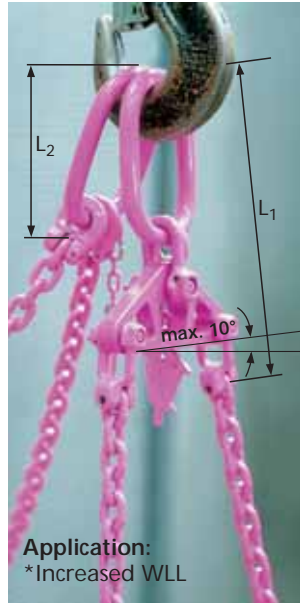
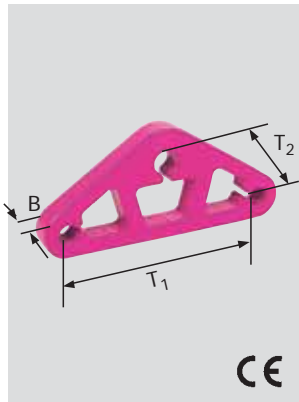
VIP-Balancer VW

$\angle \beta$ 0-45°

Chain	WLL t	Type	T ₁	T ₂	B	Weight/kg	Ref. No.
6	2.1	VW-6	110	42	15	0.4	79 83 128
8	3.5	VW-8	150	56	20	1.0	79 83 129
10	5.6	VW-10	180	70	25	2.2	79 83 130
13	9.5	VW-13	240	97	30	4.1	79 82 669
16	14.0	VW-16	300	120	35	8.1	79 83 131
20	22.4	VW-20	300	123	45	12.4	79 83 135
22	28.0	VW-22	350	138	50	17.1	79 83 142

Attention: Balancing position or inclined position of balancer max. 10°.

Balancer	connection at top	connection at bottom
VW-6	VV-SCH 8	VV-GSCH 6
VW-8	VV-SCH 10	VV-GSCH 8
VW-10	VV-SCH 13	VV-GSCH 10
VW-13	VV-SCH 16	VV-GSCH 13
VW-16	VC-SCH 4.0	VV-GSCH 16
VW-20	VC-SCH 5.0	VV-GSCH 20
VW-22	VC-SCH 6.0	VV-GSCH 22 / <small>when shortened VC-SCH 6 + VVS-22</small>



VIP Balancing head complete 2 leg VWK 2S

*** Increased WLL.** When using **two slings** whereby one is equipped with a **balancer** and both master links are in the crane hook, the calculations for the capacity can be based on four bearing legs; provided the load is **symmetrical** and the inclination angle is max. 45° to the vertical (BGR 500).

Chain	*0-45° WLL 4 leg = 2x2 leg		L ₁	L ₂	A-link	Weight/kg	Ref. No.
	WLL t						
6	4.2		224	138	13x60x110	1.5	79 84 334
8	7.0		288	172	18x75x135	2.8	79 84 335
10	11.2		354	206	22x90x160	6.8	79 84 336
13	19.0		428	238	26x100x180	10.7	79 84 337
16	28.0		507	270	32x110x200	20.2	79 84 338
20	45.0		682	434	40x180x340	35.3	79 84 339
22	56.0		726	434	45x180x340	50	79 84 340

VWK-2S consisting of: 1 x VIP A-link, 1 x VIP shackle, 1 x VIP balancer, 2 x VIP fork shackle. Separately specify and order the VIP 2-leg assemblies and chains.

User advice:

Ideal in combination with a VIP Multi-shortening claw in every chain leg.

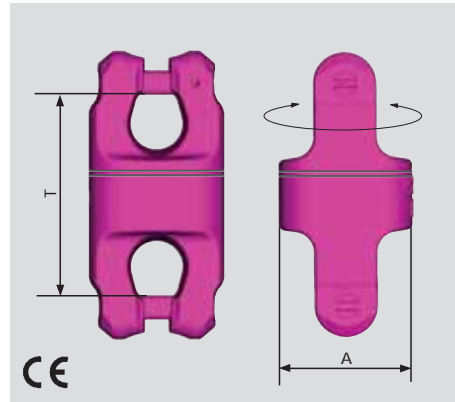


4 leg assembly VIP 10 mm
WLL
0-45° = **8,400 kg**

4 leg assembly VIP 10 mm
consisting of 2 x 2 leg
with 1 x balancer =
4 bearing legs
WLL
0-45° = **11,200 kg**



Subject to technical alternations!



VIP-
Universal
Swivel
-PP-UW-
Patent



The following applies to both versions:

The BGR stipulates that twisted slings are not to be loaded. This requirement is automatically achieved by the ball bearing swivel - swivelling under load.

Not designed for continuous use.

Special universal swivel PowerPoint:

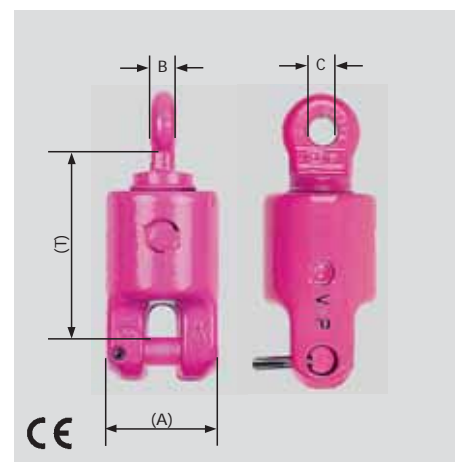
A patented clevis connection design hence a universal connection which is loadable from any direction and facilitates the shortest combination possibilities. Only RUD-approved VIP chains and components must be used.

1. VIP Cobra-Eye Hook VCÖH, see page 16
2. B-Link for PowerPoint PP-(WLL)-B, see page 11

Note: VIP chain connection is designed fool proof. When assembling component 1 and 2, please pay attention to the correct Working Load Limits.

Special VWA:

Owing to the adapter bar, it can be fool-proof connected to all VIP clevis components. The sealed body makes it more resistant to dirt. Do not bend the appliance! The installation of the adapter should be done in such a way that no bending occurs during use. Supply is subject to stock availability. This type will soon be replaced.



VIP-
Swivel
connector
VWA

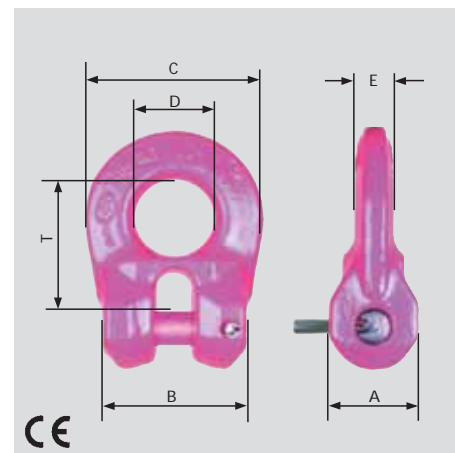
Chain	WLL t	Type	(A)/A	(B)	(C)	(T)/T	(kg/pc.)	(Ref. No.)/Ref. No.
4	0.63	- /UW PP-4	- /34	-	-	- /51	- /0.22	- /79 90 878
6	1.5	(VWA 6)/UW PP-6	(30)/39	6.1	7.2	(50)/65	(0.2)/0.43	(71 00 629)/79 90 879
8	2.5	- /UW PP-8	(37)/53	8.2	9.7	/79	/0.98	/79 90 880
10	4.0	(VWA 10)/UW PP-10	(46)/68	10.3	12.2	(82.5)/97	(0.7)/1.9	(71 00 631)/79 90 881
13	6.7	(VWA 13)/UW PP-13	(60)/83	13.4	15.7	(92)/119	(1.4)/3.6	(71 00 632)/79 90 882
16	10.0	- /UW PP-16	(70)/88	16.4	19.2	(115)/132	(2.5)/4.8	- /79 92 861
20	16.0	(VWA 20)/ -	(100)/ -	21	25	(147)/ -	(6.5)/ -	(79 90 723)/ -
22	20.0	(VWA 22)/ -	(102)/ -	23	28	(147)/ -	(6.8)/ -	(71 00 634)/ -

A single component for extrinsic connections to clevises, flanges etc.

Complete with a pre-assembled connecting bolt and tensioning sleeve.

Subject to technical alternations!

Chain	WLL t	Type	A	B	C	D	E	T	kg/pc.	Ref. No.
6	1.5	VRG 6	17	30	37	16	8	28	0.07	71 00 469
8	2.5	VRG 8	23	40	50	22	10	37	0.2	71 00 470
10	4.0	VRG 10	28	50	60	26	13	46	0.3	71 00 471
13	6.7	VRG 13	36	64	75	32	17	58	0.7	71 00 472
16	10.0	VRG 16	45	75	92	40	20	74	1.1	71 00 473
20	16.0	VRG 20	58	92	118	52	28	94	3.1	71 03 384
22	20.0	VRG 22	62	102	124	52	32	94	3.5	71 01 611

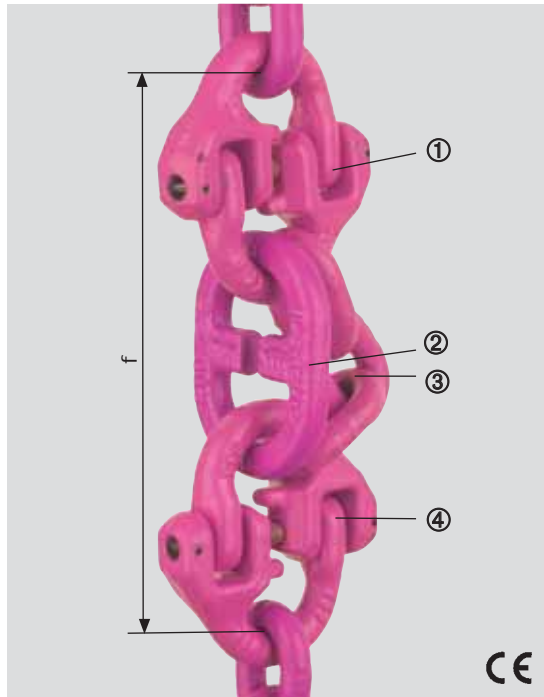


VIP-
Connector
VRG



VIP-
Overload
indicator
complete
VCG

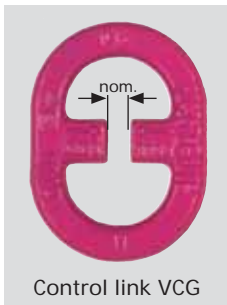
Unique
RUD
product!



The safety sensation

Immediate visual indication of overload - due to the specially calibrated RUD control link VCGH. Although stationary fitted it can easily be replaced by means of the Combi-lock VVS-V consisting of:

- | | |
|-----------------------------------|---|
| ① Combi-lock VVS-V (see page 25) | Easy hammer mounting (fool-proof chain connection) |
| ② Control link VCG | With indicator bars and a calibrated slot width (nominal... mm) |
| ③ VIP chain, 3 links (see page 8) | Additional securing element besides the control link in side connection |
| ④ Combi-lock VVS-V (see page 25) | Easy assembly (fool-proof chain connection) |



Control link VCG

Control link VCG

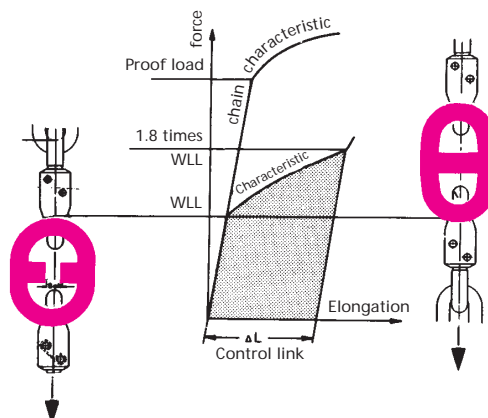
Type	WLL t	Initial size nom. (mm)	Weight kg	Ref. No.
VCG - 6	1.5	4	0.06	79 87 623
VCG - 8	2.5	6	0.10	79 87 046
VCG - 10	4	7	0.20	79 87 626
VCG - 13	6.7	10	0.40	79 88 245
VCG - 16	10	11	0.70	79 89 743
VCG - 20	16	12	1.10	79 92 549
VCG - 22	20	16	1.90	79 92 551

Overload indicator VCG (complete)

Nom. size chain mm	WLL t	single parts	build. length (mm)	Weight kg
6	1.5		115	0.3
8	2.5	VSV-V	151	0.5
10	4	VCG	198	1.2
13	6.7	3 links	232	2.1
16	10	Chain	291	4.5
20	16	VSV-V	345	8.8
22	20		382	12.1

Hints for use

Immediate visual indication of overload - due to the specially calibrated RUD control link VCG.



Do not exceed permissible WLL!
The calibrated slot width corresponds with the indicated nominal size.

Chain strand overloaded!
Clearly visible through the indicator. **Slot width will decrease** with increasing overload. The closing of the indicator implies that the WLL has been exceeded by 80 % to 100 %!

If the two indicator bars are not closed after overload (slot width > 0.5 mm), the user may install a new control link. Should the overload repeatedly occur, a bigger chain size has to be used. If the bars are closed or even bent up, the chain has to be removed from operation and be examined (as per BGR 500).

A WORLD SPECIALTY-

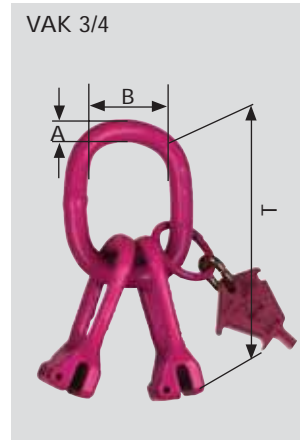
the one and only Mini mecano system 4 mm!



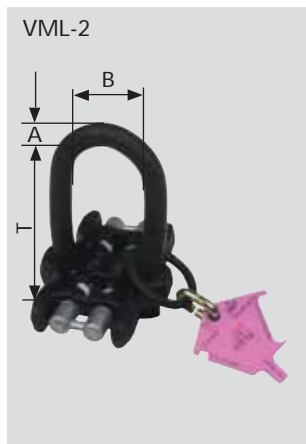
Mecano "in miniature" for small loads up to 1320 kg!



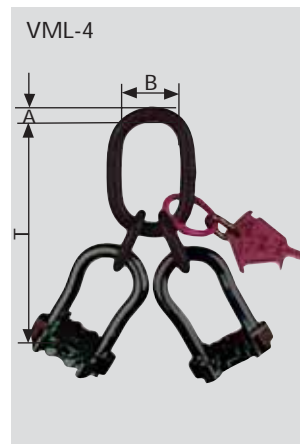
VIP chain assembly, fixed length



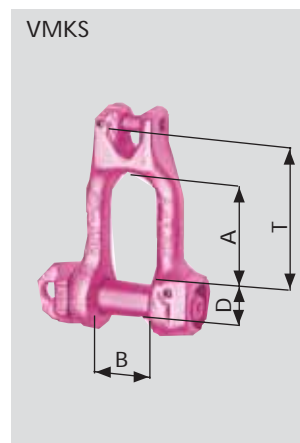
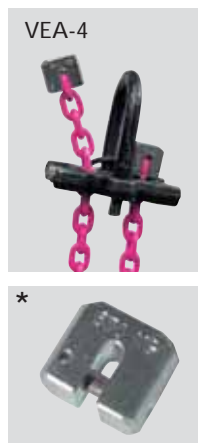
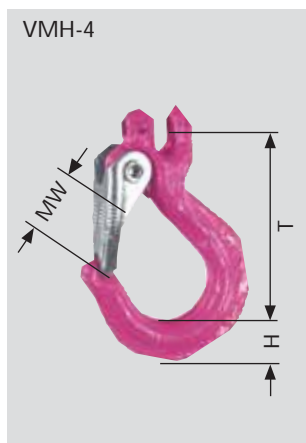
Chain	WLL t	Type	A	B	T	Weight/kg	Ref. No.
4	0.63	VAK 1/2 - 4	9	30	55	0.1	79 84 445
4	1.32	VAK 3/4 - 4	10	35	106	0.3	79 84 447



VIP chain assembly, can be shortened



Chain	WLL t	Type	A	B	T	Weight/kg	Ref. No.
4	0.63/0.88	VML 2 - 4	10	30	66	0.26	79 84 478
4	1.32/0.95	VML 4 - 4	10	35	150	0.85	79 84 479



Chain	WLL t	Type	MW	A	B	T	D	H	Weight/kg	Ref. No.
4	0.63	VMH - 4	18	-	-	56	-	13	0.12	79 84 439
4	0.63	VMKS - 4	-	30	14	42	10	-	0.12	79 85 243
4	0.63	VEA - 4	-	-	-	-	-	-	0.05	79 90 215

VIP®
mini

CE

VIP-
Master link
VAK 1/2

VIP-
Master link
VAK 3/4

VIP-
Mini-lifter
VML-2
- complete
with
shorteners -
»patent«

VIP-
Mini-lifter
VML-4

VIP-
Mini-hook
VMH-4

*VIP-
End link
VEA-4!

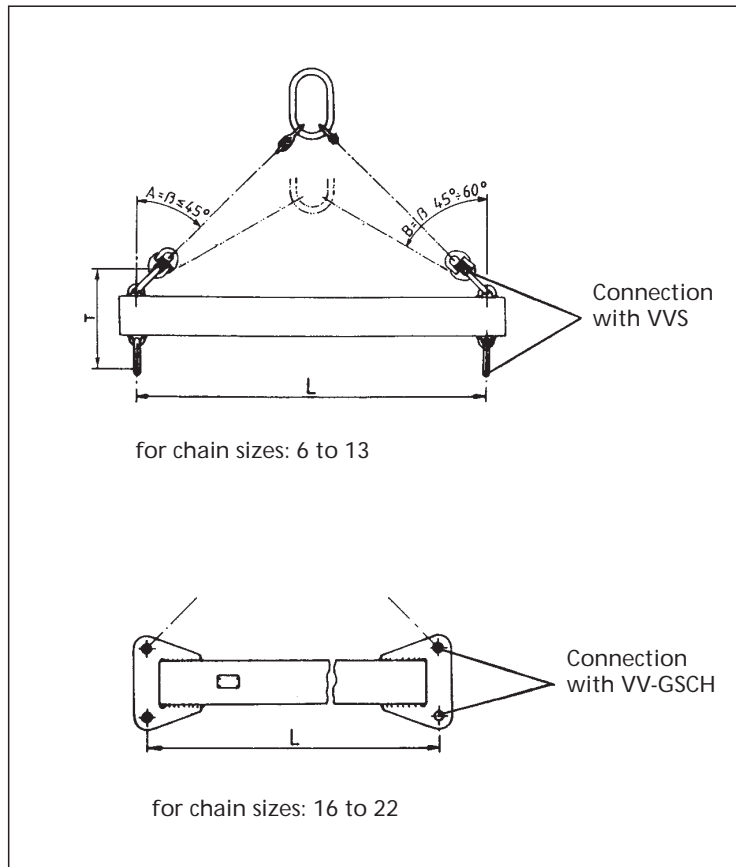
VIP-
Mini-
coupling
shackle
VMKS



Subject to technical alternations!



VIP-Spreader bar fixed VSRS



VIP Spreader bar fixed VSRS
When ordering please indicate the effective length L of the spreader bar!

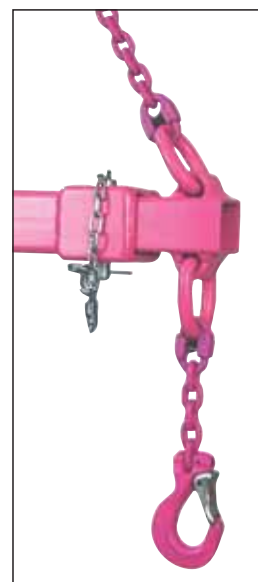
Spreader bars are also available with chain slings. When ordering, specify the type of master link and the required inclination angle β .

VIP spreader bars are non stock items and their production is subject to customer requirement. Thus bear in mind the respective delivery periods.

Surface:
Effective length L up to 2500 mm: pink powder coated.

Effective length L beyond 2500 mm: yellow painted.

Chain size	Type	Possible working length L	T	WLL kg		Weight kg/pc.	Ref. No.
				0 – 45°	45 – 60°		
6	VSRS-6	500 – 4000 mm	190	2100	1500	depending on working length L	86 00 110
8	VSRS-8	500 – 5000 mm	240	3500	2500		86 00 111
10	VSRS-10	500 – 5000 mm	320	5600	4000		86 00 112
13	VSRS-13	1000 – 5000 mm	350	9500	6700		86 00 113
16	VSRS-16	1000 – 5000 mm	250	14000	10000		86 00 114
20	VSRS-20	1000 – 5000 mm	285	22400	16000		86 00 115
22	VSRS-22	1000 – 5000 mm	290	28000	20000		86 00 116



Subject to technical alternations!

VIP Spreader bar adjustable VSRV

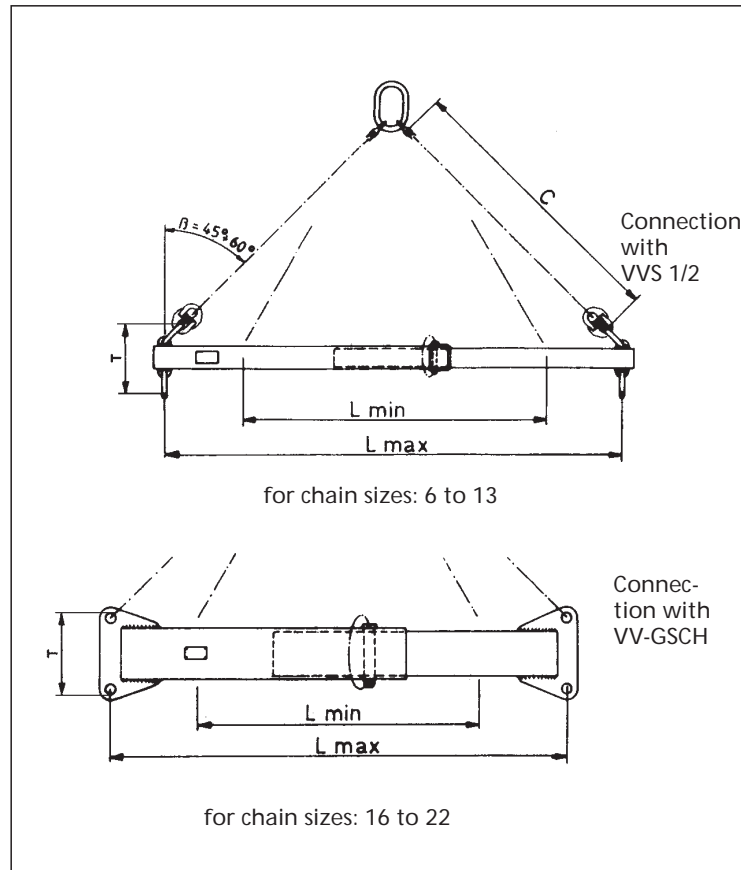
When ordering please indicate working length L of the spreader bar!

Adjustable spreader bars are also available with chain slings. When ordering, specify the type of master link and the required inclination angle β .

VIP spreader bars are non stock items and their production is subject to customer requirement. Thus bear in mind the respective delivery periods.

Surface:
Pink powder coated.

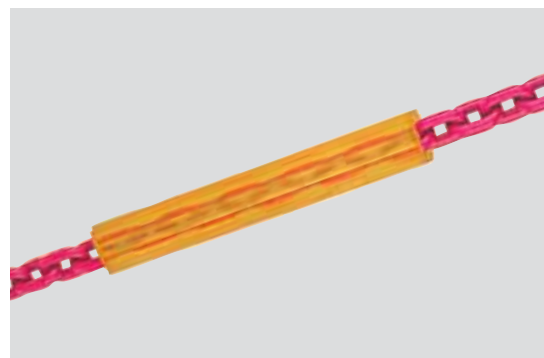
L_{min} , depends on L_{max} , and nominal size.



VIP-Spreader bar adjustable VSRV



Chain size	Type	possible working length L_{max} .	T	WLL kg		Weight Kg/St.	Ref. No.
				$\leq \beta 45^\circ$	$\beta 45 - 60^\circ$		
6	VSRV-6	1500 – 4000 mm	200	2100	1500	depending on working length L	86 00 120
8	VSRV-8	1500 – 4000 mm	250	3500	2500		86 00 121
10	VSRV-10	1500 – 4000 mm	330	5600	4000		86 00 122
13	VSRV-13	1500 – 4000 mm	360	9500	6700		86 00 123
16	VSRV-16	1500 – 4000 mm	250	14000	10000		86 00 124
20	VSRV-20	1500 – 4000 mm	285	22400	16000		86 00 125
22	VSRV-22	1500 – 4000 mm	290	28000	20000		86 00 126



Edge protecting device RSK

Subject to technical alternations!

RUD-RSK system made of durable edge-robust polyurethane.

Flexible in all directions. Manually movable along the chain. Even load distribution due to a diagonal transversal crucifix. Max. 2 m can be supplied.

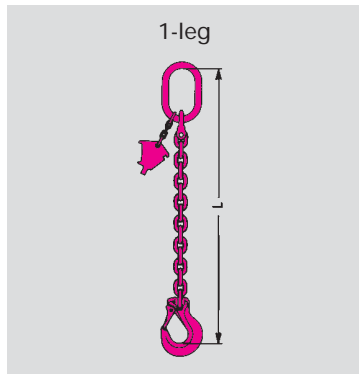
Chain size	Type	A	B	L_{max} .	Ref. No.
6	RSK – 6	27	27	2000	56 033
8	RSK – 8	33	33	2000	56 037
10	RSK – 10	38	38	2000	55 810
13	RSK – 13	50	50	2000	56 038
*					

*further sizes upon request.

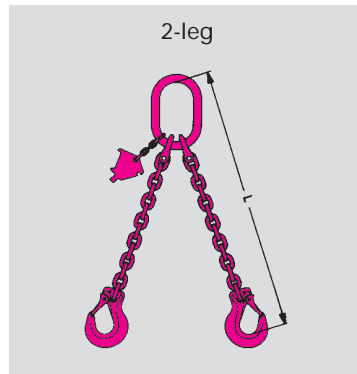


Examples of applications

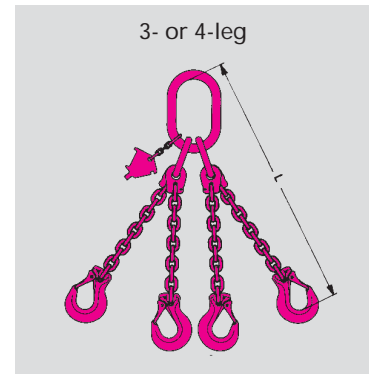
Order references



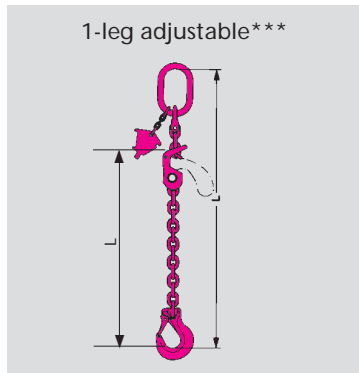
Order reference:
VIP-G1...



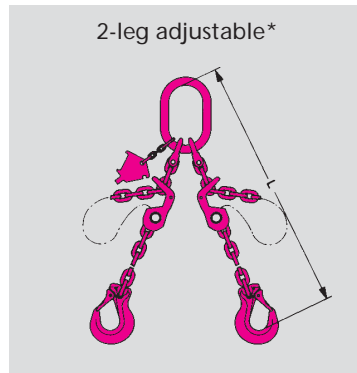
VIP-G2...



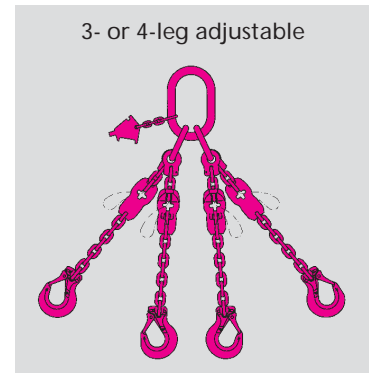
VIP-G3...
or VIP-G4...



Order reference:
VIP-G1-V1...

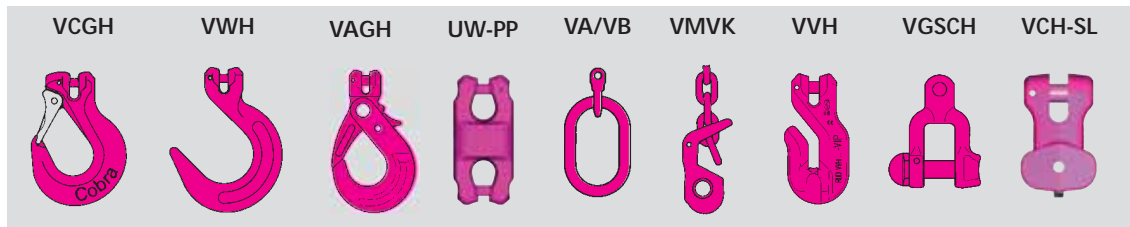


VIP-G2-V2...



VIP-G3-V3...
or VIP-G4-V4...

Combination possibilities



Order reference:

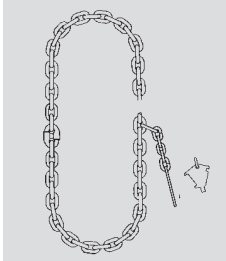
*VIP-G2-V2-VCGH/10x2000

= 2 leg version in RUD special quality VIP with 2 leg shortenings (VMVK).

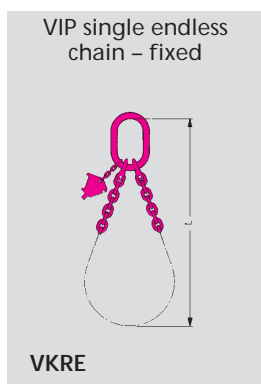
VCGH = End component/10 = chain diameter x 2000 = max. working length size L in mm.

Assembled endless chains

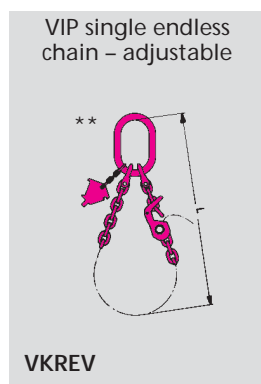
Endless chain – fixed



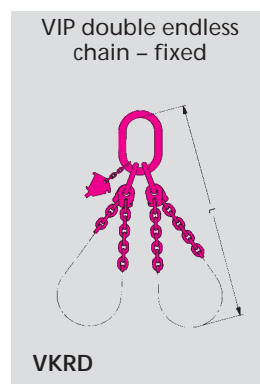
VIP-special connecting lock*
for VIP endless chains:
diameters 20 and 22 mm.
Please ask for details.



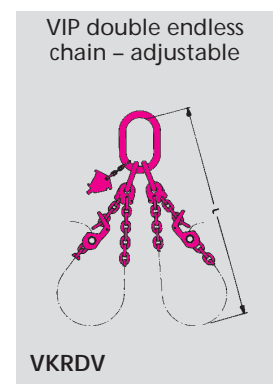
VKRE



VKREV



VKRD



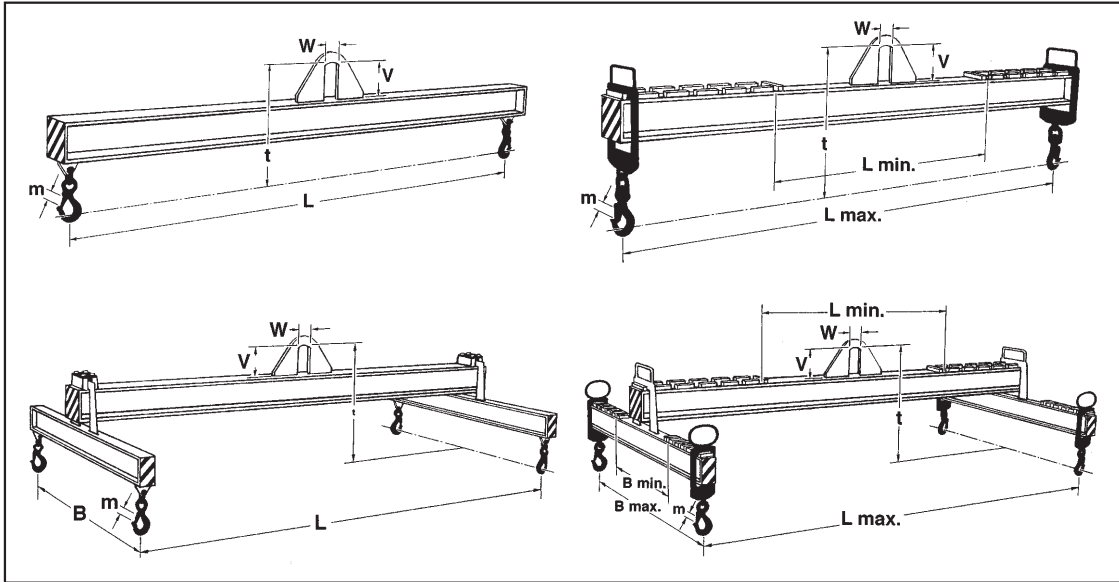
VKRDV

Order examples:

** 1 pc VKREV-8 x 2000 = single endless chain, adjustable in RUD special quality VIP, 8 = chain dia. x 2000 = max. working length size L in mm.

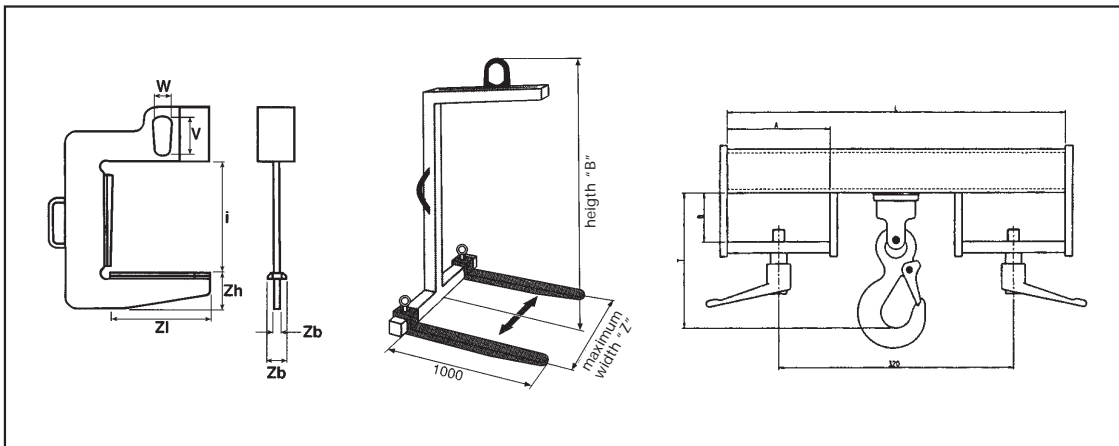
*** in case of long adjustable assemblies it is recommended to mount the multi claw VMVK in the lower part of the chain. Indicate Lv when ordering, e.g. VIP-G2-V2-VCGH/10x5000 Lv-2000.

Subject to technical alternations!



LIFTING MEANS

Spreader bars - fixed - adjustable



Fork lift attachments C-hooks



**Special hooks
Special lifting means
Special components**

Subject to technical alternations!

RUD-lifting means are manufactured acc. to DIN 15428. All welds are carried out by qualified welders. Welds are crack detected.

An inspection certificate as well as register card for load carrying means for regular checks and user information will be supplied.

Just let us know your **design requirements** or give us a short **technical description** eg. the WLL, respective dimensions etc.



Lifting Points - for bolting -

Maximum transport weight "G" in "tonnes"
with different lifting methods



Thread sizes M 6- M 150 Imperial (UNC,...) and special lengths on request		PP-S (Vario) PowerPoint-Star	PP-B (Vario) PowerPoint-B	PP-VIP (Vario) PowerPoint-VIP	VLBG – Load Ring														WBG-V Load Ring Vario													
Number of legs	Load direction	Type	PP-S 0.63 t	PP-S 1.5 t	PP-S 2.5 t	PP-S 4 t	PP-S 6.7 t	PP-S 8 t	VLBG 0.3 t	VLBG 0.63 t	VLBG 1 t	VLBG 1.5 t	VLBG 2.5 t	VLBG 4 t	VLBG 4 t	VLBG 5 t	VLBG 7 t SPEC.	VLBG 8 t	VLBG 10 t	VLBG 15 t	VLBG 20 t	LBG(3) M16 RS 1t	LBG(3) M20 RS 2t	WBG-V 0.3 t	WBG-V 0.45 t	WBG-V 0.6 t	WBG-V 1.0 t	WBG-V 1.3 t	WBG-V 1.8 t	WBG-V 2 t	WBG-V 3.5 t	WBG-V 5 t
		Thread size	M 12	M 16	M 20	M 24	M 30	M 36	M 8	M 10	M 12	M 16	M 20	M 24	M 27	M 30	M 36	M 36	M 42	M 42	M 48	M 16	M 20	M 8	M 10	M 12	M 14	M 16	M 18	M 20	M 24	M 30
	1 0°		0.6	1.5	2.5	4	6.7	10	0.3	0.6	1	1.5	2.5	4	4	5	7	8	10	15	20	1	2	0.6	0.9	1.2	2.0	2.6	3.6	4	7	10
	2 0°		1.2	3	5	8	13.4	20	0.6	1.2	2	3	5	8	8	10	14	16	20	30	40	2	4	1.2	1.8	2.4	4.0	5.2	7.2	8	14	20
	1 90°		0.6	1.5	2.5	4	5	8	0.3	0.6	1	1.5	2.5	4	4	5	7	8	10	15	20	1	2	0.3	0.45	0.6	1.0	1.3	1.8	2	3.5	5
	2 90°		1.2	3	5	8	10	16	0.6	1.2	2	3	5	8	8	10	14	16	20	30	40	2	4	0.6	0.9	1.2	2.0	2.6	3.6	4	7	10
	2 0-45°		0.8	2.1	3.5	5.6	7.1	11.2	0.4	0.8	1.4	2.1	3.5	5.6	5.6	7	9.8	11.2	14	21	28	1.4	2.8	0.4	0.6	0.8	1.4	1.8	2.5	2.8	4.9	7
	2 45-60°		0.6	1.5	2.5	4	5	8	0.3	0.6	1	1.5	2.5	4	4	5	7	8	10	15	20	1	2	0.3	0.4	0.6	1.0	1.3	1.8	2	3.5	5
	2 unsymmetrical		0.6	1.5	2.5	4	5	8	0.3	0.6	1	1.5	2.5	4	4	5	7	8	10	15	20	1	2	0.3	0.4	0.6	1.0	1.3	1.8	2	3.5	5
	3+4 0-45°		1.3	3.2	5.3	8.4	10.5	16.8	0.6	1.3	2.1	3.1	5.2	8.4	8.4	10.5	14.7	16.8	21	31.5	42	2.1	4.2	0.6	0.9	1.2	2.1	2.7	3.7	4.2	7.3	10.5
	3+4 45-60°		0.9	2.2	3.8	6	7.5	12	0.4	0.9	1.5	2.2	3.7	6	6	7.5	10.4	12	15	22.5	30	1.5	3	0.4	0.6	0.9	1.5	1.9	2.7	3	5.2	7.5
	3+4 unsymmetrical		0.6	1.5	2.5	4	5	8	0.3	0.6	1	1.5	2.5	4	4	5	7	8	10	15	20	1	2	0.3	0.4	0.6	1.0	1.3	1.8	2	3.5	5
		Thread size	M 12	M 16	M 20	M 24	M 30	M 36	M 8	M 10	M 12	M 16	M 20	M 24	M 27	M 30	M 36	M 36	M 42	M 42	M 48	M 16	M 20	M 8	M 10	M 12	M 14	M 16	M 18	M 20	M 24	M 30

RUD Lifting Points = Advantages!

- All parts are either 100 % crack detected or proof loaded accord. to EN 1677.
- All original bolts from RUD are 100 % crack detected.
- Safety factor 4 : 1 in any direction.
- The types VRS, VRM and VLBG have to be adjusted to the load direction.
- RUD patented features such as clamping spring (VLBS) for noise reduction and distance lugs for a perfect root pass weld increase the ease of use.

- RUD CD-ROM and slide chart "RUD-MULTI-MASTER" facilitate the correct selection of lifting points.
- Low installation height, high dynamic and static strength. The RUD lifting and lashing points CD-ROM simplifies the (lifting/lashing points) correct layout.
- RUD Lifting Points are in accordance with DIN EN 818 and 1677 with a dynamic loading of more than 20,000 load cycles. The BG recommends: At high dynamic applications with high load cycles (permanent operation), the WLL must be reduced.

Subject to technical alternations!

Lifting Points - for bolting -

Maximum transport weight "G" in "tonnes"
with different lifting methods



WBG Load Ring													VRS Starpoint Vario eyebolt								INOX-STAR		RS/RM High-tensile eye bolt/eye nut						RBG/VRBG Load Ring																										
WBG 4-SPEC.	WBG 8 t	WBG 8-SPEC.	WBG 10 t	WBG 10 t	WBG 10-SPEC.	WBG 15 t	WBG 15 t	WBG 15-SPEC.	WBG 25 t	WBG 30 t	WBG 35 t	WBG 35-SPEC.	VRS M8	VRM M8	VRS M10	VRM M10	VRS M12	VRM M12	VRS M16	VRM M16	VRS M20	VRM M20	VRS M24	VRM M24	VRS M30	VRM M30	VRS M36	VRM M36	VRS M42	VRM M42	VRS M48	VRM M48	INOX M12	INOX M16	INOX M20	INOX M24	INOX M30	RS M6	RS M8	RS M10	RS M12	RS M14	RS M16	RS M20	RS M24	RS M30	RS M36	RS M42	RS M48	RBG 3 t	VRBG 10 t	VRBG 16 t	VRBG 30 t	VRBG 50 t	VRBG 80 t
M 33	M 36	M 39	M 42	M 48	M 42-52	M 56	M 64	M 56-85	M 72-76	M 80-85	M 90	M 90-150	M 8	M 10	M 12	M 16	M 20	M 24	M 30	M 36	M 42	M 48	M 12	M 16	M 20	M 24	M 30	M 6	M 8	M 10	M 12	M 14	M 16	M 20	M 24	M 30	M 36	M 42	M 48	M 16	M 20	M 30	M 30	M 36	M 48										
12.5	12.5	12.5	16	16	16	25	25	25	35	35	35	35	1	1	2	4	6	8	12	16	24	32	1.2	2.4	3.6	5.2	-	0.4	0.8	1	1.6	3	4	6	8	12	16	24	32	3	10	16	30	50	80										
25	25	25	32	32	32	50	50	50	70	70	70	70	2	2	4	8	12	16	24	32	48	64	2.4	4.8	7.2	10.4	-	0.8	1.6	2	3.2	6	8	12	16	24	32	48	64	6	20	32	60	100	160										
6 (7.5)	8 (10)	8 (10)	10 (12.5)	10 (12.5)	10 (12.5)	15 (18)	15 (18)	15 (18)	25 (30)	30 (35)	35 (40)	35 (40)	0.4	0.4	0.7	1.5	2.3	3.2	4.5	7	9	12	0.5	1.0	2.0	2.5	-	3	10	16	30	50	80	3	10	16	30	50	80																
12 (15)	16 (20)	16 (20)	20 (25)	20 (25)	20 (25)	30 (36)	30 (36)	30 (36)	50 (60)	60 (70)	70 (80)	70 (80)	0.8	0.8	1.5	3	4.6	6.4	9	14	18	24	1.0	2.0	4.0	5.0	-	6	20	32	60	100	160	6	20	32	60	100	160																
8.4 (10.5)	11.2 (14)	11.2 (14)	14 (17.5)	14 (17.5)	14 (17.5)	21 (25.2)	21 (25.2)	21 (25.2)	35 (42)	42 (49)	49 (56)	49 (56)	0.56	0.56	1	2.1	3.2	4.5	6.3	9.8	12.6	16.8	0.7	1.4	2.8	3.5	-	4.2	14	22.4	42	70	112	4.2	14	22.4	42	70	112																
6 (7.5)	8 (10)	8 (10)	10 (12.5)	10 (12.5)	10 (12.5)	15 (18)	15 (18)	15 (18)	25 (30)	30 (35)	35 (40)	35 (40)	0.4	0.4	0.7	1.5	2.3	3.2	4.5	7	9	12	0.5	1.0	2.0	2.5	-	3	10	16	30	50	80	3	10	16	30	50	80																
6 (7.5)	8 (10)	8 (10)	10 (12.5)	10 (12.5)	10 (12.5)	15 (18)	15 (18)	15 (18)	25 (30)	30 (35)	35 (40)	35 (40)	0.4	0.4	0.7	1.5	2.3	3.2	4.5	7	9	12	0.5	1.0	2.0	2.5	-	3	10	16	30	50	80	3	10	16	30	50	80																
12.6 (15.7)	16.8 (21)	16.8 (21)	21 (26.2)	21 (26.2)	21 (26.2)	31.5 (38)	31.5 (38)	31.5 (38)	52.5 (63)	63 (73.5)	73.5 (84)	73.5 (84)	0.8	0.8	1.5	3.1	4.8	6.7	9.4	14.7	18.9	25	1.0	2.1	4.2	5.3	-	6.3	21	33.6	63	105	168	6.3	21	33.6	63	105	168																
9 (11.2)	12 (15)	12 (15)	15 (18.8)	15 (18.8)	15 (18.8)	22.5 (27)	22.5 (27)	22.5 (27)	37.5 (45)	45 (52.5)	52.5 (60)	52.5 (60)	0.6	0.6	1.1	2.2	3.4	4.8	6.7	10.5	13.5	18	0.7	1.5	3.0	3.7	-	4.5	15	24	45	75	120	4.5	15	24	45	75	120																
6 (7.5)	8 (10)	8 (10)	10 (12.5)	10 (12.5)	10 (12.5)	15 (18)	15 (18)	15 (18)	25 (30)	30 (35)	35 (40)	35 (40)	0.4	0.4	0.7	1.5	2.3	3.2	4.5	7	9	12	0.5	1.0	2.0	2.5	-	3	10	16	30	50	80	3	10	16	30	50	80																
M 33	M 36	M 39	M 42	M 48	M 42-52	M 56	M 64	M 56-85	M 72-76	M 80-85	M 90	M 90-150	M 8	M 10	M 12	M 16	M 20	M 24	M 30	M 36	M 42	M 48	M 12	M 16	M 20	M 24	M 30	M 6	M 8	M 10	M 12	M 14	M 16	M 20	M 24	M 30	M 36	M 42	M 48	M 16	M 20	M 30	M 30	M 36	M 48										

We recommend to use either "VRS Starpoint" or "PowerPoint" which can be adjusted to the direction of pull!



We have the right tools for you. **Call us!** Phone no. or e-mail:
+ 49 7361-504-1170 or info@rud.com

Subject to technical alternations!



The perfect service for the CAD department.
We provide you with geometry datas for your design.
Order our CD-ROM for the calculation of the right lifting point.
Especially useful for the designer is the 3D-presentation of the lifting points.

...or **www.rud.com**

Click on **lifting means** → **lifting points**

Lifting Points - for welding -



Maximum transport weight "G" in "tonnes" with different slinging methods

LIFTING POINTS		WPP-Serie PowerPoint		WPPH-Serie PowerPoint		LBS/VLBS Load ring for welding						VRBS Eye Plate for welding																	
CE																													
BG-PrüfZert																													
Number of legs	Load direction	all various										all various																	
		Type	WPP 0.63 t	WPP 1.5 t	WPP 2.5 t	WPP 4 t	WPP 6.7 t	WPP 8 t	WPPH 0.63 t	WPPH 1.5 t	WPPH 2.5 t	WPPH 4 t	WPPH 6.7 t	WPPH 8 t	VLBS 1.5 t	VLBS 2.5 t	VLBS 4 t	VLBS 6.7 t	VLBS 10 t	VLBS 16 t	LBS(1) RS 0.5 t	LBS(3) RS 1 t	LBS(5) RS 2 t	VRBS 4 t	VRBS 6.7 t	VRBS 10 t	VRBS 16 t	VRBS 30 t	VRBS 50 t
	1 0°		0.6	1.5	2.5	4	6.7	10	0.6	1.5	2.5	4	6.7	10	1.5	2.5	4	6.7	10	16	0.5	1	2	4	6.7	10	16	30	50
	2 0°		1.2	3	5	8	13.4	20	1.2	3	5	8	13.4	20	3	5.0	8	13.4	20	32	1	2	4	8	13.4	20	32	60	100
	1 90°		0.6	1.5	2.5	4	5	8	0.6	1.5	2.5	4	5	8	1.5	2.5	4	6.7	10	16	0.5	1	2	4	6.7	10	16	30	50
	2 90°		1.2	3	5	8	10	16	1.2	3	5	8	10	16	3	5.0	8	13.4	20	32	1	2	4	8	13.4	20	32	60	100
	2 0-45°		0.8	2.1	3.5	5.6	7.1	11.2	0.8	2.1	3.5	5.6	7.1	11.2	2.1	3.5	5.6	9.38	14	22.4	0.7	1.4	2.8	5.6	9.38	14	22.4	42	70
	2 45-60°		0.6	1.5	2.5	4	5	8	0.6	1.5	2.5	4	5	8	1.5	2.5	4	6.7	10	16	0.5	1	2	4	6.7	10	16	30	50
	2 unsymmetrical		0.6	1.5	2.5	4	5	8	0.6	1.5	2.5	4	5	8	1.5	2.5	4	6.7	10	16	0.5	1	2	4	6.7	10	16	30	50
	3+4 0-45°		1.3	3.2	5.3	8.4	10.5	16.8	1.3	3.2	5.3	8.4	10.5	16.8	3.15	5.25	8.4	14.1	21	33.6	1.05	2.1	4.2	8.4	14.1	21	33.6	63	105
	3+4 45-60°		0.9	2.2	3.8	6	7.5	12	0.9	2.2	3.8	6	7.5	12	2.25	3.75	6	10.1	15	24	0.75	1.5	3	6	10.1	15	24	45	75
	3+4 unsymmetrical		0.6	1.5	2.5	4	5	8	0.6	1.5	2.5	4	5	8	1.5	2.5	4	6.7	10	16	0.5	1	2	4	6.7	10	16	30	50
Weld			Δ	Δ	HV	HV	HV	HV	Δ	Δ	HV	HV	HV	HV	HV	HV	HV	HV	HV	HV	HV	HV	HV	HV	HV	HV	HV	HV	HV
			3.5	4.5	3+4.5	3+5	3+8	3+10	3.5	4.5	3+5	3+6	3+8	3+10	5+3	7+3	8+3	12+4	16+4	25+6	5+3	8+3	12+4	4+3	5.5+3	8.5+4	8.5+4	15+4	25+8

We have the right tools for you. **Call us!** Phone no. or e-mail:

+ 49 7361-504-1170 or info@rud.com



The perfect service for the CAD department.
We provide you with geometry data for your design.

Order our CD-ROM for the calculation of the right lifting point.
Especially useful for the designer is the 3D-presentation of the lifting points.

...or **www.rud.com**

Click on **lifting means** → **lifting points**

Subject to technical alternations!

Lifting Points - for welding -



Maximum transport weight "G" in "tonnes" with different slinging methods

VRBK
Load ring for welding
with a positioning
mechanism

New!



VRBK
Load ring for welding
on edges

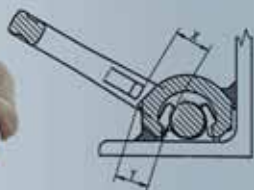
New!



VRBSS 6.7 t	VRBSS 10 t	VRBSS 16 t	VRBK 4 t	VRBK 6.7 t	VRBK 10 t
6.7	10	16	4	6.7	10
13.4	20	32	8	13.4	20
6.7	10	16	4	6.7	10
13.4	20	32	8	13.4	20
9.38	14	22.4	5.6	9.38	14
6.7	10	16	4	6.7	10
6.7	10	16	4	6.7	10
14.1	21	33.6	8.4	14.1	21
10.1	15	24	6	10.1	15
6.7	10	16	4	6.7	10
HV 5.5+3	HV 6+4	HV 8.5+4	HV 4+3	HV 5+3	HV 8+3



subject to technical alternations!



RUD Lifting Points are in accordance with DIN EN 818 and 1677 with a dynamic loading of more than 20,000 load cycles.

The BG recommends: At high dynamic applications with high load cycles (permanent operation), the WLL must be reduced.

VIP-LASHING CHAINS

- in special quality class 10-VIP -



Attention!

The lashing chain standard EN 12195-3 has been valid since 06.2001. All RUD components fulfill the minimum requirements of the above standard. VIP lashing chains possess an up to 30 % higher lashing capacity.

The sensation!



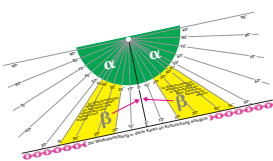
Identification tag also as chain testing gauge (patent).

VIP-KZA	Ref. no. (with assembly link)
VIP-VSK-6	7988 623
VIP-VSK-8	7988 624
VIP-VSK-10	7988 625
VIP-VSK-13	7988 626
VIP-VSK-16	7988 627

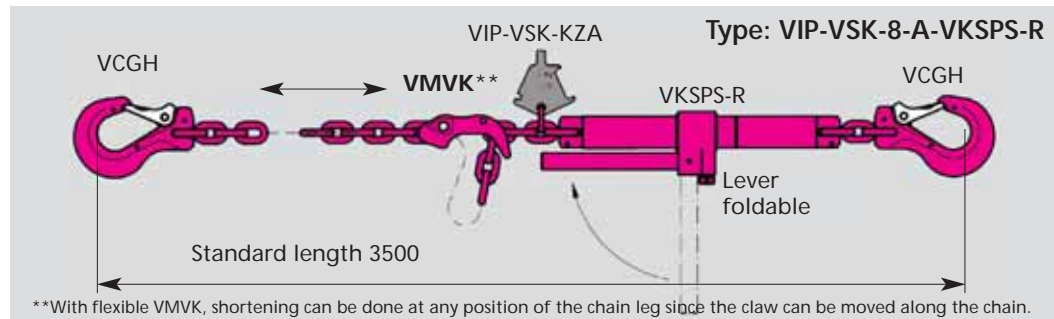
Which lashing chain is suitable for which load? Easy to determine with the RUD...



Reference No. 7982945 see page 42.



Version -A- (VMVK)

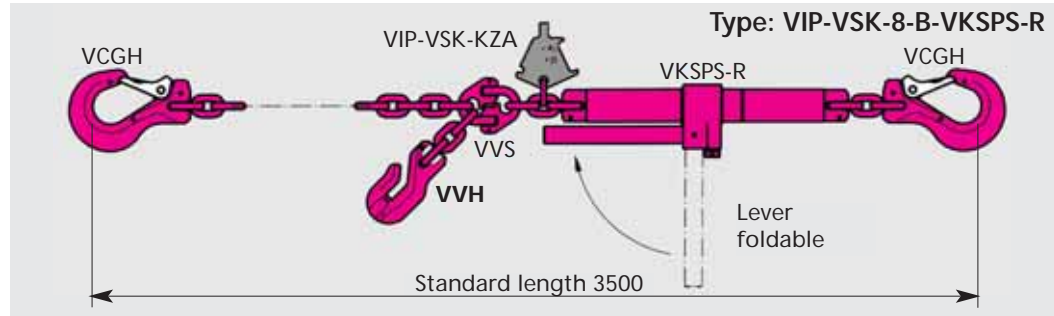


Chain dia.	Type of chain complete	Lashing capacity*** daN	Tensioner		Lmin mm	Weight kg/pc.	Ref. no.
			Type	Standard Tension Force STF in daN (kp)			
6	VIP-VSK-6-A-VKSPS	3000	VKSPS-6	1500	760	4.3	7100 785
6	VIP-VSK-6-A-VKSPS-R	3000	VKSPS-R-6	1500	760	4.5	7990 249
8	VIP-VSK-8-A-VKSPS*	5000	VKSPS-8	2500	900	8.5	7100 786
8	VIP-VSK-8-A-VKSPS-R*	5000	VKSPS-R-8	2500	920	9.0	7987 521
10	VIP-VSK-10-A-VKSPS*	8000	VKSPS-10	2800	1075	12.0	7100 787
10	VIP-VSK-10-A-VKSPS-R*	8000	VKSPS-R-10	2800	1075	12.2	7100 813
13	VIP-VSK-13-A-VKSPS*	13400	VKSPS-13	3600	1400	23.5	7100 788
13	VIP-VSK-13-A-VKSPS-R*	13400	VKSPS-R-13	3600	1400	24.5	7100 814
16	VIP-VSK-16-A-VKSPS	20000	VKSPS-16	3600	1750	36.0	7104 309
16	VIP-VSK-16-A-VKSPS-R	20000	VKSPS-R-16	3600	1750	37.0	7990 250

***LC = Lashing Capacity 1daN= 10N ≈ 1 kg ≈ 1 kp

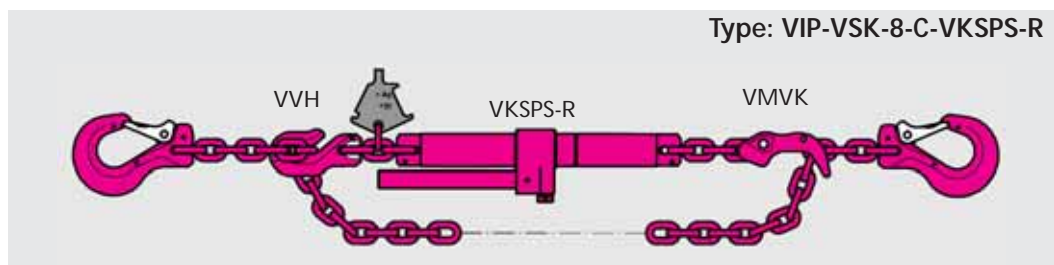
*World innovation: ICE with a 30 % higher WLL than VIP (up to a 60 % higher LC than Grade 8).

Version -B- (VVH)



6	VIP-VSK-6-B-VKSPS	3000	VKSPS-6	1500	840	4.0	7989 511
6	VIP-VSK-6-B-VKSPS-R	3000	VKSPS-R-6	1500	840	4.2	7990 247
8	VIP-VSK-8-B-VKSPS*	5000	VKSPS-8	2500	1000	8.0	7989 512
8	VIP-VSK-8-B-VKSPS-R*	5000	VKSPS-R-8	2500	1020	8.5	7989 513
10	VIP-VSK-10-B-VKSPS*	8000	VKSPS-10	2800	1215	12.0	7989 514
10	VIP-VSK-10-B-VKSPS-R*	8000	VKSPS-R-10	2800	1215	12.2	7989 515
13	VIP-VSK-13-B-VKSPS*	13400	VKSPS-13	3600	1550	21.0	7989 516
13	VIP-VSK-13-B-VKSPS-R*	13400	VKSPS-R-13	3600	1550	22.0	7989 517
16	VIP-VSK-16-B-VKSPS	20000	VKSPS-16	3600	1950	35.0	7989 518
16	VIP-VSK-16-B-VKSPS-R	20000	VKSPS-R-16	3600	1950	36.0	7990 248

Example -C-



Further design examples corresponding with the VIP-mecano – System type C: VIP identification tag attached to the tensioner and the attached shortening components VMVK + VVH, hence the tensioner and the attached components can be moved along the chain to any position.

All lashing chains are with an "EG" manufacturer's declaration and user information.

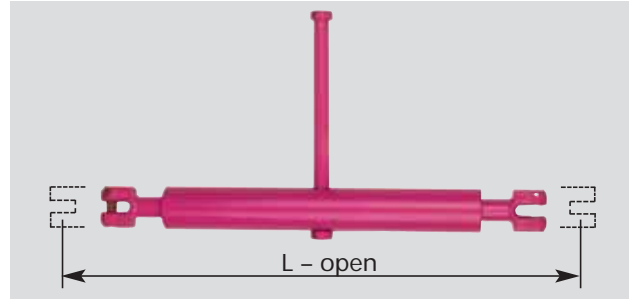
Tensioner according to (DIN-EN-12195-3) standards



Better than the standard requirements!

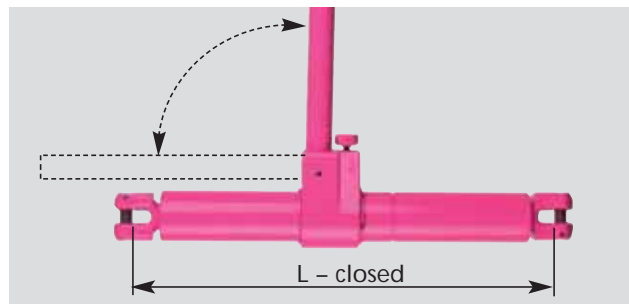
VKSPS VIP compact spindle tensioner with a tensioning lever

Special robust design due to a solid threaded pipe. Resistant to dirt ingress. Threads are protected by solid sleeves and can thus not be easily damaged. Safety device to prevent unthreading and a clevis connection are available on both sides. Connecting bolt and securing stud are pre-assembled. Pink powder coated with an axial tensioning lever. No securing chain is necessary.



VKSPS-R VIP compact spindle with a ratchet

Improved safety due to the foldable ratchet. Pink powder coated. No securing chain is necessary.



Chain dia. VIP	Lifting WLL t	Lashing cap. LC daN	WLL-kg	Type	L-open	L-closed	Adjustment mm	Pretension STF daN	Weight kg/pc.	Ref. no.
6	1.5	3000	1500	VKSPS-6	323	204	120	1500	0.9	7990 170
6	1.5	3000	1500	VKSPS-R-6	323	204	120	1500	0.95	7990 169
8	2.5	5000	2500	VKSPS-8*	518	308	210	2500	2.8	7987 907
8	2.5	5000	2500	VKSPS-R-8*	518	308	210	2500	3.2	7988 569
10	4.0	8000	4000	VKSPS-10*	533	324	210	2800	3.1	7987 994
10	4.0	8000	4000	VKSPS-R-10*	533	324	210	2800	3.6	7988 570
13	6.7	13400	6700	VKSPS-13*	787	487	300	3600	7.6	7990 133
13	6.7	13400	6700	VKSPS-R-13*	787	487	300	3600	8.0	7990 132
16	10.0	20000	10000	VKSPS-16	807	507	300	3600	8.8	7990 135
16	10.0	20000	10000	VKSPS-R-16	807	507	300	3600	9.3	7990 134

Surface: pink powder coated.

Remark: Tensioners once used for lashing must not then used for lifting!

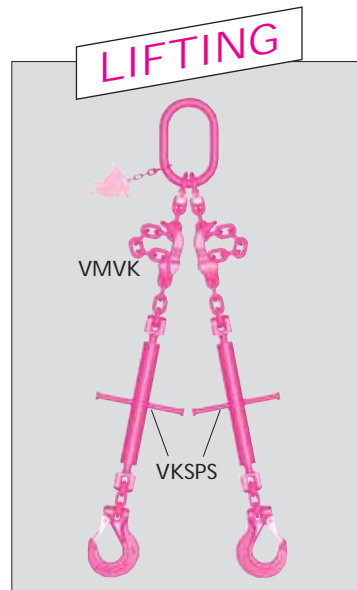
*World innovation: ICE with a 30 % higher WLL than VIP (up to a 60 % higher LC than Grade 8).

Attention:
Design factor for lashing = 2 : 1

Design factor for lifting = 4 : 1

VIP Lashing chains see page 38.

Lashing protocol, easily generated with RUD CD-ROM!
Reference No. 7982945



For exact length compensation with chain assemblies. Length in mm can exactly be adjusted by right- and left hand thread via tensioner or ratchet.

Under load, only lowering (lengthening) is possible.

Tensioner for chain diameter 22, with a lift of stroke of approx. 150 mm, on request.

Subject to technical alternations!





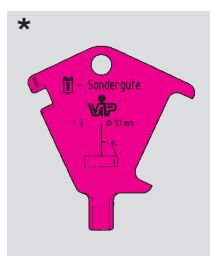
Chain Inspection Service
- prioritising security! -



RUD lifting and lashing means - Inspection service:
Inspection means safety and conservation of value! The RUD inspection service offers an on location complete safety service. We inspect the lifting and lashing means according to the below listed six point program. Our technicians are qualified specialists according to EN 473 and work with modern testing devices. Inspection certification according to BGR 500 and the new EC - law.



VIP-ID tag incl. Testing guide
*for VIP-lifting/
** lashing chains



Chain	Type	Ref. No.
6	VKPL-6	71 00 639
8	VKPL-8	71 00 657
10	VKPL-10	71 00 662
13	VKPL-13	71 00 667
16	VKPL-16	71 00 672
20	VKPL-20	71 04 045
22	VKPL-22	71 01 832



Chain	Type	Ref. No.
6	VSK-KPL-6	7988623
8	VSK-KPL-8	7988624
10	VSK-KPL-10	7988625
13	VSK-KPL-13	7988626
16	VSK-KPL-16	7988627



Testing wear of nominal dia.



Testing for elongation caused by wear of nominal diameter.



Testing for pitch elongation caused by overload.

Subject to technical alternations!

CD-USER- INFORMATION



VIP lifting
and lashing
points
CD-ROM



**NEW
3D-CAD
Files**

RUD-Ref. No.:
7982945

With the RUD CD-ROM it is very easy to determine the correct VIP-lifting means!

New...
with VIP-Lashing Calculation Program and Lashing Protocol!

Using the questionnaire the most important data is entered, for example: working load, number of lifting points (or distance between lifting points), angle, shock load impact, sharp corners, influence of temperature etc.

Automatically the correct VIP Chain Sling or lifting point will be determined within seconds. You can print out: Drawings, part lists, lashing protocols, calculation of the selected components.

SELECTION	USE	INSPECTION/TEST	MAINTAINING/REPAIR	DOCUMENTATION
1	2	3	4	5

Short user Information

Reference No.: 7982411

USER INSTRUCTION

- Benutzung nur durch Beauftragte, die in die Tragfähigkeit und die Unfallverhütungsvorschrift VBG 9a unterwiesen sind und die Unfallverhütungsvorschriften VBG 9a unterwiesen sind und die Unfallverhütungsvorschriften VBG 9a unterwiesen sind
- Abweichungen von normalen Einsatzbedingungen beim Anschlag im Schräglag und beim Einsatz außerhalb des Temperaturbereiches von -40° bis 200° C.
- Einsatz unter chemischen Einflüssen wie z. B. in Säuren, Laugen und deren Dämpfen verboten.
- Anschlag nur an geeigneter Last-Anschlagstelle. Nicht an Umschnürung der Last fassen.
- Dämpfe nur an geeigneter Last-Anschlagstelle durch Sachkundige.
- Überprüfung und Instandsetzung nur durch Sachkundige/Benutzer der Anschlagkette Betriebsanleitung/Benutzerinformation beachten.
- Vor Inbetriebnahme der Anschlagkette Betriebsanleitung/Benutzerinformation lesen und beim Gebrauch beachten.
- Auf Vollständigkeit und Wirksamkeit der Sicherheitsvorrichtungen ist zu achten.
- VIP-Ketten dürfen nur mit VIP-Zubehörteilen verwendet werden.

RUD-Kettenfabrik, Rieger & Dietz GmbH u. Co., D-73428 Aalen

According to EC Machinery Directive 89/392/EWG, 91/368/EWG and 89/655/EWG, - BetrSichV - BGR 500.



User Information for RUD Chain Sling

Reference No.: 7101649

VIP-protector
90 x 120 mm

Selection of nominal chain size acc. to the load weight and the measured angle.

Reference No.: 7991453



RUD-Quality in PINK!
Grade 80, Grade 100 (VIP) and Grade 120 (ICE)
WLL in metric tons of sling chains
According to inclination angle at symmetric loading

Methods of sling

Grade	WLL (t)	WLL (t) at 60°	WLL (t) at 45°	WLL (t) at 30°
Grade 80	80	53	63	98
Grade 100 (VIP)	100	67	79	122
Grade 120 (ICE)	120	80	95	147

„Made in Germany“

Reference No.: 7102334

VIP WLL Poster

Size 420 x 625 mm
Special Grade and Grade 80.



Storage of lifting and lashing system components.

Hang the components appropriately in a frame.

Left - exemplary!
Right - the wrong approach!





Tradition in Leadership

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German engineering
from the heart
of Europe!

