



THIELE



App



THIELE



Lifting Points



Product Overview Lifting Points

	TWN 0121/1 	TWN 0122 	TWN 0123 	TWN 0127 	TWN 1120 
	TWN 1830 	TWN 1890 			
Page 116-120	Lifting Points, screwed type				

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Page 124-128	Lifting Points, weld-on type				

	TWN 0301 	TWN 0302 	TWN 0304 	TWN 0308 	TWN 0321 
Page 131-132	TWN 0323 				
	Hitches				

Lifting Points

Select a suitable Lifting Point



1. Determine the **weight** of the load to be lifted.
2. Select the **type of application** according to the **number of legs** and position of the Lifting Points under load (see pictographs P. 112, 120).
3. Determine the area of **inclination angle**.
4. Consider the **temperature** influence:

Application between -40° up to $+200^{\circ}\text{C}$ (Screwed type up to -20°C):

Full weight under point **1** can be considered.

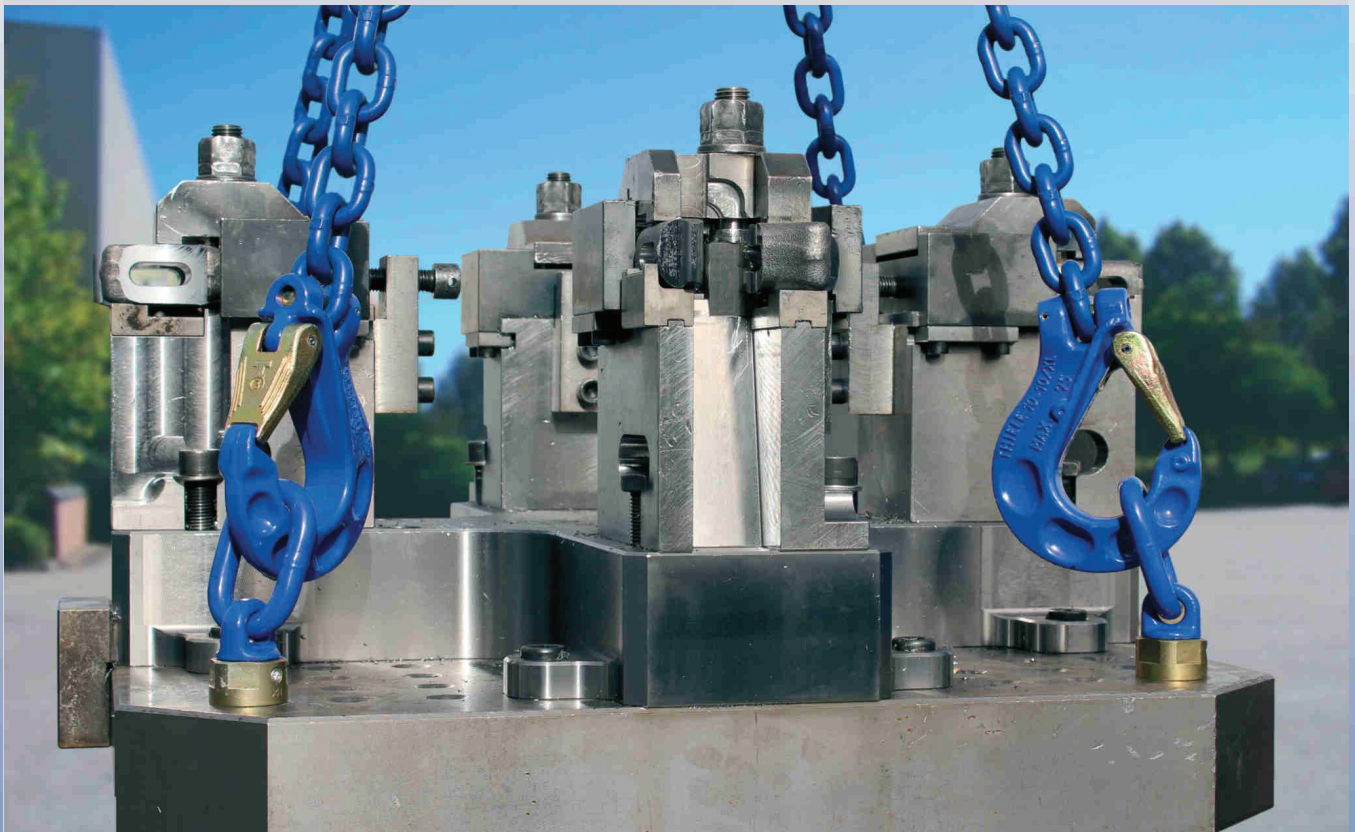
Application between $+200^{\circ}$ up to $+300^{\circ}\text{C}$:

Divide the weight under point **1** by reduction factor 0,90

Application between $+300^{\circ}$ up to $+380^{\circ}\text{C}$:

Divide the weight under point **1** by reduction factor 0,60

5. Obtain the working load limit, thread diameter and marking by selecting the appropriate application, inclination angle, number of legs and the type of Lifting Point.




Working Load Limit Table for Lifting Points, screwed type



			TWN 0121/1 Lifting Point swivel type				TWN 0122 Lifting Point (2 Screws)								TWN 0123 Lifting Point			TWN 0127 Lifting Point MDB														
Application	Inclination Angle β	No. of Legs																														
			Working Load Limits in [t]																													
	Marking		1,12	2	3,15	5,3	3,15	5,3	8	15	21,2	25	31,5	36	1,12	2	3,15	3,15	5,3													
	Screw Size		M16	M20	M24	M30	M16	M20	M30	M36	M42	M45	M56	M56	M16	M20	M24	M20	M24													
	0°	1	1,12	2	3,15	5,3	3,15	5,3	8	15	21,2	25	31,5	36	1,12	2	3,15	3,15	5,3													
	0°	2	2,24	4	6,3	10,6	6,3	10,6	16	30	42,4	50	63	72	2,24	4	6,3	6,3	10,6													
	90°	1	1,12	2	3,15	5,3	3,15	5,3	8	15	21,2	25	31,5	36	1,12	2	3,15	3,15	5,3													
	90°	2	2,24	4	6,3	10,6	6,3	10,6	16	30	42,4	50	63	72	2,24	4	6,3	6,3	10,6													
	0-45°	2	1,6	2,8	4,25	7,5	4,25	7,5	11,2	21,2	30	33,5	45	50	1,6	2,8	4,25	4,25	7,5													
	45-60°	2	1,12	2	3,15	5,3	3,15	5,3	8	15	21,2	25	31,5	36	1,12	2	3,15	3,15	5,3													
	unbalanced	2	1,12	2	3,15	5,3	3,15	5,3	8	15	21,2	25	31,5	36	1,12	2	3,15	3,15	5,3													
	0-45°	3+4	2,36	4,25	6,7	11,2	6,7	11,2	17	31,5	45	50	67	75	2,36	4,25	6,7	6,7	11,2													
	45-60°	3+4	1,7	3	4,75	8	4,75	8	11,8	22,4	31,5	37,5	47,5	53	1,7	3	4,75	4,75	8													
	unbalanced	3+4	1,12	2	3,15	5,3	3,15	5,3	8	15	21,5	25	31,5	36	1,12	2	3,15	3,15	5,3													

New

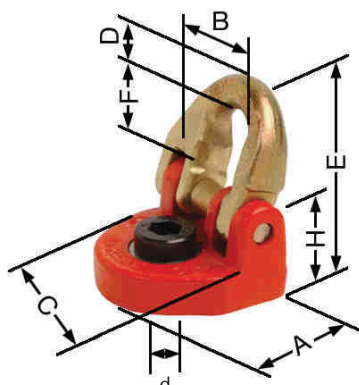
New

TWN 1120 Titan Lifting Point									TWN 1830 X-TREME Lifting Point																TWN 1890 XS-Lifting Point											
																																				
Working Load Limits in [t]																																				
0,3	0,45	0,6	1,4	2,5	3,5	6,7	8	0,45	0,6	1,4	2,5	3,5	5,3	8	10	12,5	12,5	17	0,5	0,8	1,5	2,5	4	6	8	10	12									
M8	M10	M12	M16	M20	M24	M30	M36	M10	M12	M16	M20	M24	M30	M36	M42	M45	M48	M56	M10*	M12*	M16	M20	M24	M30	M36	M42	M48*									
0,3	0,45	0,6	2,1	3	6	7,1	12,5	0,9	1,2	2,8	5,3	7	10	15	18	20	20	28			1,7	2,5	4,0	6,0	8,0	10,0										
0,6	0,9	1,2	4,2	6	12	14,2	25	1,8	2,4	5,6	10,6	14	20	32	36	40	40	56			3,4	5,0	8,0	12	16,0	20,0										
0,3	0,45	0,6	1,4	2,5	3,5	6,7	8	0,45	0,6	1,4	2,5	3,5	5,3	8	10	12,5	12,5	17			1,7	2,5	4,0	6,0	8,0	10,0										
0,6	0,9	1,2	2,8	5	7	13,4	16	0,9	1,2	2,8	5	7	10,6	16	20	25	25	34			3,4	5	8,0	12	16,0	20,0										
0,42	0,63	0,85	2	3,55	5	9	11,2	0,63	0,85	2	3,55	5	7,5	11,2	14	17,5	17,5	23,6			2,4	3,5	5,7	8,5	11,2	14,0										
0,3	0,45	0,6	1,4	2,5	3,55	6,7	8	0,45	0,6	1,4	2,5	3,55	5,3	8	10	12,5	12,5	17			1,7	2,5	4,0	6,0	8,0	10,0										
0,3	0,45	0,6	1,4	2,5	3,55	6,7	8	0,45	0,6	1,4	2,5	3,55	5,3	8	10	12,5	12,5	17			1,7	2,5	4,0	6,0	8,0	10,0										
0,63	0,95	1,25	3	5,3	7,1	14	17	0,95	1,25	3	5,3	7,1	11,2	17	21,2	26,5	26,5	35,5			3,6	5,3	8,5	12,5	17,0	21,2										
0,45	0,67	0,9	2,1	3,8	5,3	10	11,8	0,67	0,9	2,1	3,8	5,3	8	11,8	15	18,8	18,8	25			2,6	3,8	6,0	9,0	11,8	15,0										
0,3	0,45	0,6	1,4	2,5	3,55	6,7	8	0,45	0,6	1,4	2,5	3,55	5,3	8	10	12,5	12,5	17			1,7	2,5	5,0	6,0	8,0	10,0										
Please also see W.L.L. in hinged load direction page 119																																				
* in development																																				

Please also see W.L.L. in hinged load direction page 119

* in development

Lifting Points, screwed type



Rotating Lifting Point **GK8** TWN 0121/1

a true Athlete – powerful and strong even under extreme loads.

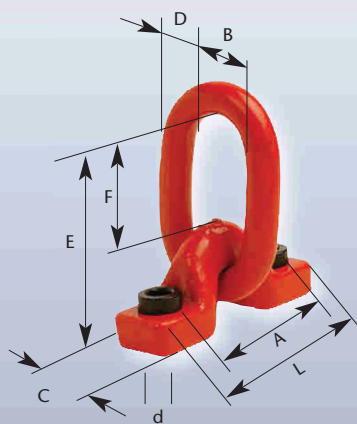
The two forged parts make this lifting point particularly sturdy for lifting, moving and securing loads. Our TWN 0121/1 lifting point features full load working load limit in all tension directions, and can be rotated 360° and swivelled 180°. The THI-LOK half features electrolytic treatment and is more corrosion-resistant in the area of the greatest wear, all of which gives this lifting point an especially long serviceable life.

This BG-approved safety component that moves expensive machinery or steel elements has undergone 100% electromagnetic crack-testing and is delivered including operating instructions.

Finish: RAL 3003, electro galvanized and yellow chromated



Screw Size [d]	Article-No.	Working Load Limit [t max]	Marking DSK-N G	Dimensions [mm]								Weight app. [kgs]
				E	F	A	C	H	B	D	NG	
M16	F35000	1,12	1	65	30	61	65	38	22	12	6-8	0,70
M20	F35010	2,00	2	85	40	79	82	49	28	15	8-8	1,50
M24	F35020	3,15	3	98	45	92	101	59	33	19	10-8	2,60
M30	F35030	5,30	5	120	53	113	125	72	45	25	13-8	4,60



Lifting Point **GK8** TWN 0122

Notably high Quality for notably high demands.

Our design engineers have developed an lifting/lashing point for mechanical engineering and plant construction that is distinctive in its compact construction. The extra wide intermediate link simplifies hooking-in the broadest variety of hook types. This makes fast, smooth transport easy. The full working load limit in every direction of tension enables unlimited functionality, even with extremely heavy loads. Delivery includes the 100% crack-tested, high strength special screws along with operating instructions.

Finish: RAL 3003



Screw Size [d]	Article-No.	Working Load Limit [t max]	Marking DSK-N G	Dimensions [mm]								Weight app. [kgs]
				E	F	A	C	L	D	B	NG	
M16	F35070	3,15	3	112	57	90	38	130	18	40	10-8	1,54
M20	F35075	5,30	5	149	79	115	48	165	22	50	13-8	2,83
M30	F35080	8,00	8	183	93	150	62	212	26	65	16-8	5,87
M36	F35095	15,00	15	226	114	175	72	255	36	75	22-8	11,20
M42	F35098	21,20	20	272	142	200	90	295	45	95	26-8	19,30
M45	F35101	25,00	25	272	142	200	90	295	45	95	28-8	20,20
M56	F35102	31,50	32	336	193	230	100	330	48	110	32-8	31,70
M56	F35285	36,00	36	336	193	230	100	330	48	110	34-8	31,70

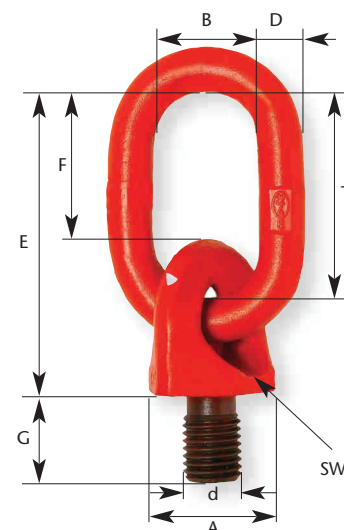
Lifting Points, screwed type

Lifting Point **GK8** TWN 0123

Simple and economic.

Our TWN 0123 threaded lifting point is easy to mount very quickly. All you need is a threaded bore hole. This captive unit features compact construction and only requires minimum assembly space. The attachment link is optionally available as a master link or intermediate link, making it adaptable to the specific job at hand. This means we have the right solution for your requirements, even at low mounting heights. The lifting point is constructed of high-strength tempered and powder-coated steel. Delivery includes operating instructions.

Finish: RAL 3003



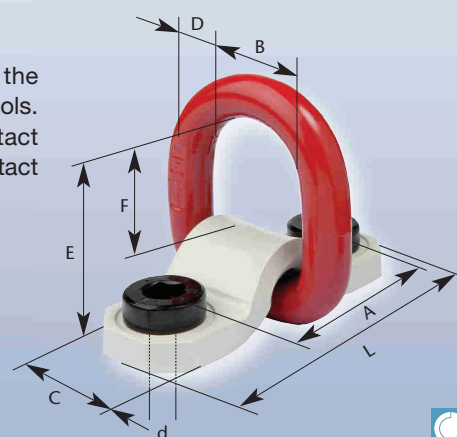
Screw Size [d]	Article-No.	Working Load Limit [t max]	Thread Length [mm] G	Dimensions [mm]								Weight app. [kgs]
				E	F	D	T	B	SW	A	NG	
M16	F34110	1,12	30	113	52	16	70	34	46	60	6-8	0,73
M16	F34115	1,12	30	153	92	16	110	60	46	60	6-8	1,00
M20	F34120	2,00	38	113	52	16	70	34	46	60	8-8	0,95
M20	F34121	2,00	38	153	92	16	110	60	46	60	8-8	1,12
M24	F34130	3,15	35	128	67	18	85	40	46	60	10-8	1,04
M24	F34131	3,15	45	45	92	18	110	60	46	60	10-8	1,39

Lifting Point **GK8** MDB TWN 0127

Reliable – Trustworthy – dependable.

Delivery of our precision-tooled threaded TWN 0127 lifting point includes the necessary screws. It can be mounted and removed very quickly using common tools. Our engineers have constructed a component with the largest possible contact surface, subsequently ensuring highly effective attachment thanks to the flat contact surface of the bolt-on bracket and a mirrored screw head surface.

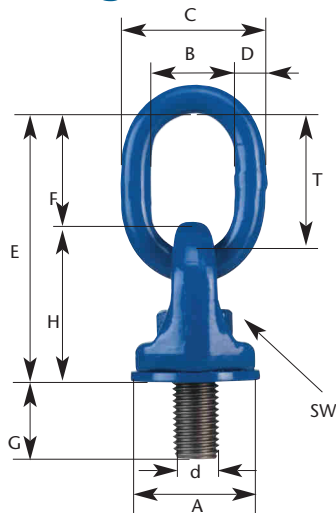
Finish: RAL 3003



Screw Size [d]	Article-No.	Working Load Limit [t max]		Dimensions [mm]								Weight app. [kgs]
				E	F	A	C	L	D	B	NG	
M20	F35157	3,15		68	48	90	44	130	18	48	10-8	1,10
M24	F35158	5,80		113	69	110	60	160	24	66	13-8	2,70



Lifting Points, screwed type



The **TITAN Lifting Point XL TWN 1120** is capable to lift with the nominal working load limit in all directions. The coupling link is unlimited in all directions free movable. It rotates easily due to the special bush and glide plate, made from stainless steel. Built as a compact one piece unit, it requires less space for the assembly.

The TITAN Lifting Point allows a fast and easy assembling with common tools and can be supplied with other screw lengths upon request. A plastic net cover protects the screw during shipment and storage.

100% Magnetic crack tested. BG - approved.

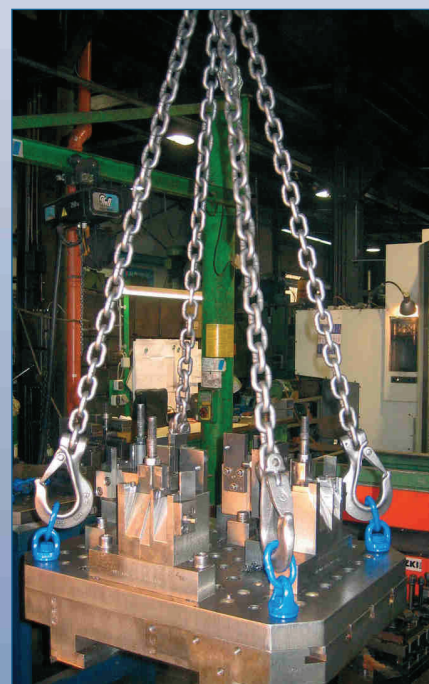
Warning: Does not swivel under load!

Finish: RAL 5002



Screw Size	Article-No.	Working Load Limit	Thread Length	Dimensions										Weight
[d]		[t max]	[mm] G	E	F	D	T	B	A	C	H	SW	app. [kg]	
M8	F34405	0,30	19	95	40	10	50	28	43	50	55	13	0,40	
M10	F34390	0,45	19	95	40	10	50	28	43	50	55	16	0,41	
M12	F34395	0,60	24	95	40	10	50	28	43	50	55	18	0,43	
M16	F34400	1,40	29	95	40	10	50	28	43	50	55	24	0,47	
M20	F34410	2,50	33	115	49	12	60	34	54	60	66	30	0,79	
M24	F34420	3,50	40	135	55	16	70	40	65	74	80	36	1,50	
M30	F34430	6,70	52	167	66	18	85	50	85	93	101	46	3,00	
M36	F34440	8,00	66	212	92	22	115	50	96	107	120	55	4,80	

The right turn!



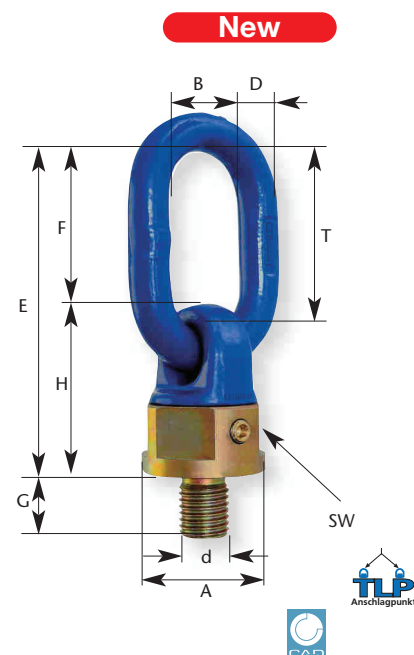
Lifting Points, screwed type

The **X-TREME** Lifting Point **XL TWN 1830**

is equipped with a ball bearing system. It has a special wide coupling link which enables an easy slinging of bigger hooks. It is particularly well suited for loads that have to be turned or flipped. The octagonal shap of the subpart enables an easy assembling with a common hand tool. 100% Magnetic crack tested. According to the principles of the BG GS-0A-15-04

Like the TITAN Lifting Point the X-TREME Lifting Point is capable to lift with the nominal working load limit in all directions. The X-TREME Lifting Point is not suitable for permanent rotations under load.

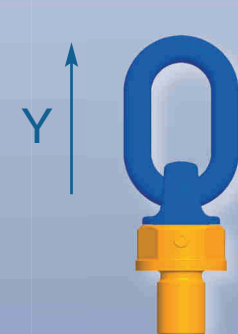
Finish: RAL 5002, electro galvanized and yellow chromated



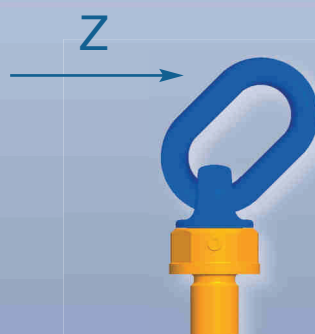
Description	Working Load (WLL)			Screw Size	Article-No.	Dimensions [mm]								Weight app. [kg]
	Vertical Y [t]	Extreme Z [t]	Hinged X [t]			E	F	D	T	B	A	SW	H	
X-TRE 0,45	0,9	0,45	0,6	M10 x 15	F34306	101	46,5	13	55	33	39	36	54,5	0,50
X-TRE 0,60	1,2	0,60	0,7	M12 x 18	F34307	101	46,5	13	55	33	39	36	54,5	0,50
X-TRE 1,40	2,8	1,4	1,7	M16 x 20	F34300	101	46,5	13	55	33	39	36	54,5	0,50
X-TRE 2,50	5,3	2,5	2,8	M20 x 25	F34310	121	58,5	16	70	34	50	46	62,5	0,90
	5,3	2,5	2,8	M20 x 50	F34312	121	58,5	16	70	34	50	46	62,5	1,00
X-TRE 3,50	7	3,5	4	M24 x 30	F34320	148	72	18	85	40	57	50	76	1,50
	7	3,5	4	M24 x 90	F34321	148	72	18	85	40	57	50	76	1,70
X-TRE 5,30	10	5,3	6,3	M30 x 40	F34330	170,5	83	22	100	50	73	65	87,5	2,70
X-TRE 8,00	15	8	9,5	M36 x 50	F34340	179	81	22	100	50	83	70	98	3,60
	15	8	9,5	M36 x 63	F34341	179	81	22	100	50	83	70	98	3,80
	15	8	9,5	M36 x 70	F34343	179	81	22	100	50	83	70	98	3,90
X-TRE 10,00	18	10	12,5	M42 x 60	F34350	244	116	32	140	70	106	95	128	8,30
X-TRE 12,50	18	12,5	16,5	M45 x 65	F34353	244	116	32	140	70	106	95	128	8,40
	20	12,5	16	M48 x 68	F34355	244	116	32	140	70	106	95	128	8,60
X-TRE 17,00	28	17	22	M56 x 78	F34360	251	116	32	140	70	116	95	135	10,00

Variable screw lengths up to 3 x d available at thread diameter M20, M24, M30, M36.

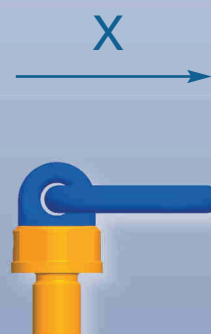
Load Direction



Load Direction vertical
Highest Working Load Limit



Extremely Load Direction
Nominal Working Load Limit
(not aligned)



*Load Direction hinged
higher Working Load Limit
(aligned)

Lifting Points, screwed type

New



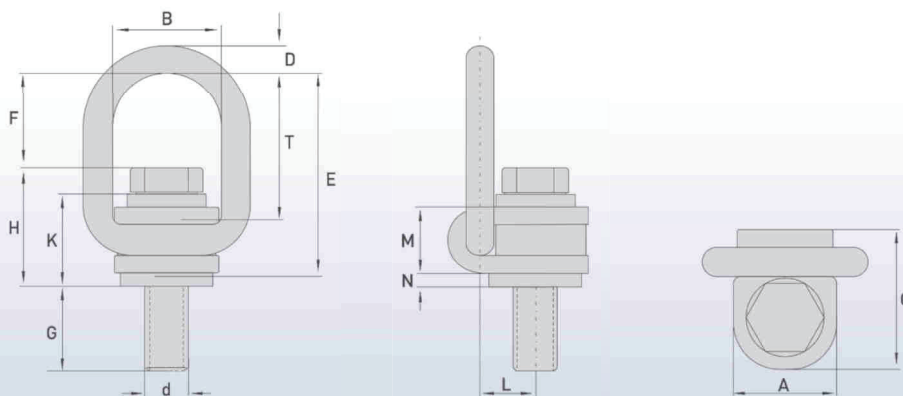
XS-Lifting Point **XL** TWN 1890

A piece of individualism combined with technology for more safety.

Our new XS-Lifting Point TWN 1890 has a 100% nominal working load limit in all tensile directions and it can also be rotated by 360° and swivelled by 180°. Our engineers designed a Lifting Point which guarantees a fast and uncomplicated mounting and removal using a standard open-end spanner. The extrawide bow enables load hooks of a large nominal size to be used for slinging without any difficulty.

The XS-Lifting Point is especially designed for the exchange of the screws and therefore screw lengths.

Finish: RAL 5002, electro galvanized and yellow chromated



Screw Size [d]	Article-No.	Working Load Limit [t max]	Thread Length [mm] G	Dimensions [mm]										
				E	F	D	T	B	A	C	H	K	L	
M10 *	F35243	0,50	17	96	52,0	13	70	50	48	64	44,5	38,0	25,0	
M12 *	F35244	0,80	22	96	51,0	13	70	50	48	64	45,5	38,0	25,0	
M16	F35245	1,70	30	97	47,0	13	70	50	48	64	50,0	40,0	25,0	
M20	F35246	2,50	38	98	43,5	13	70	50	48	64	54,5	42,0	25,0	
M24	F35247	4,00	40	134	70,0	16	102	58	50	71	64,0	49,0	28,0	
M30	F35249	6,00	44	149	73,0	20	110	70	65	87,5	75,0	56,5	35,0	
M36	F35250	8,00	63	191	102,0	24	145	84	78	106	89,0	66,5	43,0	
M42	F35251	10,00	73	191	98,0	24	145	84	78	106	93,0	66,5	43,0	
M48 *	F35252	12,00	76	211	96,5	32	150	100	95	148	114,5	84,5	50,0	

* in development



Lifting Points, screwed type


XS-Lifting Point **XL** TWN 1890





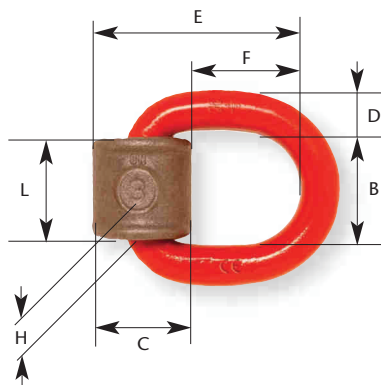
Working Load Limit Table for Lifting Points, weld-on type



			TWN 0119 Lifting Point								TWN 0124 Lifting Point with fixing spring				
Application	Inclination Angle β	No. of Legs													
			Working Load Limits in [t]												
	Marking		1,12	2	3,15	5,3	8	15	31,5	50	1,12	2	3,15	5,3	8
	0°	1	1,12	2	3,15	5,3	8	15	31,5	50	1,12	2	3,15	5,3	8
	0°	2	2,24	4	6,3	10,6	16	30	63	100	2,24	4	6,3	10,6	16
	90°	1	1,12	2	3,15	5,3	8	15	31,5	50	1,12	2	3,15	5,3	8
	90°	2	2,24	4	6,3	10,6	16	30	63	100	2,24	4	6,3	10,6	16
	0-45°	2	1,6	2,8	4,25	7,5	11,2	21,2	45	71	1,6	2,8	4,25	7,5	11,2
	45-60°	2	1,12	2	3,15	5,3	8	15	31,5	50	1,12	2	3,15	5,3	8
	unbalanced	2	1,12	2	3,15	5,3	8	15	31,5	50	1,12	2	3,15	5,3	8
	0-45°	3+4	2,36	4,25	6,7	11,2	17	31,5	67	106	2,36	4,25	6,7	11,2	17
	45-60°	3+4	1,7	3	4,75	8	11,8	22,4	47,5	75	1,7	3	4,75	8	11,8
	unbalanced	3+4	1,12	2	3,15	5,3	8	15	31,5	50	1,12	2	3,15	5,3	8

New

Lifting Points, weld-on type



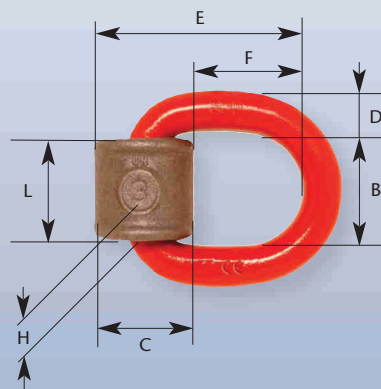
Welded Lifting Point **GK8** TWN 0119

A safety & security milestone thanks to the utilisation of high-strength steel. Our BG approved TWN 0119 attachment point is manufactured from high-strength, specially tempered steel. It features 4-times security safeguarding against breakage in all tension directions and is available with a working load limit of up to 50 tonnes. Its universal application for lifting and lashing make this component a true all-rounder. It can be welded easily and quickly to any steel construction thanks to its pre-aligned weld joint on the weld-on bracket and the accompanying welding instructions. Operating instructions are included in delivery.

Finish: RAL 3003

Trade Size	Article-No.	Working Load Limit [t max]	Lashing Capacity [daN]	Marking DSK-N	Dimensions [mm]								Weight app. [kgs]
					E*	F*	C	L	H	D	B		
6-8	F35103	1,12	2200	1	59	31	32	32	28	12	36	0,24	
8-8	F35113	2,00	4000	2	69	37	38	38	33	14	42	0,46	
10-8	F35123	3,15	6300	3	84	46	45	44	38	18	48	0,63	
13-8	F35133	5,30	10000	5	120	69	60	60	51	24	66	1,90	
16-8	F35143	8,00	16000	8	127	66	68	65	61	28	72	2,67	
22-8	F35163	15,00		15	178	98	96	109	80	39	120	8,09	
32-8	F35183	31,50		32	292	174	145	165	118	56	180	27,30	
40-8	F35193	50,00		50	371	228	186	210	145	72	230	60,00	

* E- and F-Dimension vertical to the welding level



Welded Lifting Point **GK8** with Spring TWN 0124

Guaranteed fast, easy handling

This lifting point is easily and quickly welded to any steel construction. The weld-on bracket is already prepared at delivery to accommodate the required weld joint. An inserted spring additionally holds the D-bracket in the desired position. The resulting noise reduction makes this lifting point particularly suited for utilisation as a load securing lashing point. This also simplifies attachment to the pre-aligned lifting point.

Like all of our lifting points, this one is equally approved by BG and is delivered with operating instructions.

Finish: RAL 3003

Trade Size	Article-No.	Working Load Limit [t max]	Lashing Capacity [daN]	Marking DSK-N	Dimensions [mm]								Weight
					E*	F*	C	L	H	D	B	app. [kgs]	
6-8	F35107	1,12	2200	1	56	30	32	32	28	12	36	0,25	
8-8	F35110	2,00	4000	2	67	37	38	38	33	14	42	0,43	
10-8	F35124	3,15	6300	3	81	45	45	44	38	18	48	0,72	
13-8	F35139	5,30	10000	5	117	69	60	60	51	24	66	1,90	
16-8	F35144	8,00	16000	8	122	67	68	65	61	28	72	2,80	

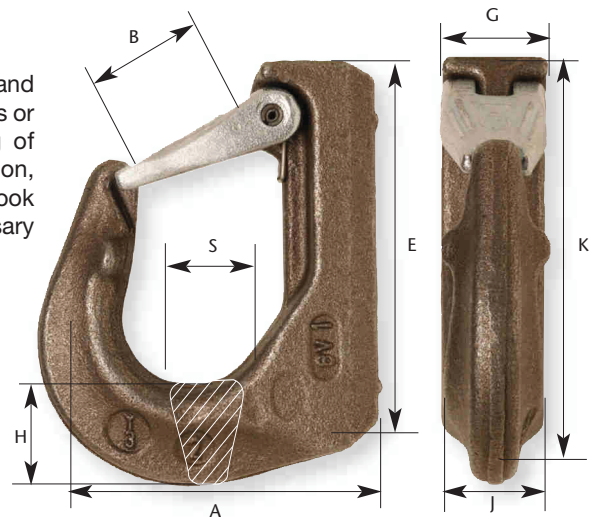
* E- and F-Dimension vertical to the welding level

Lifting Points, weld-on type

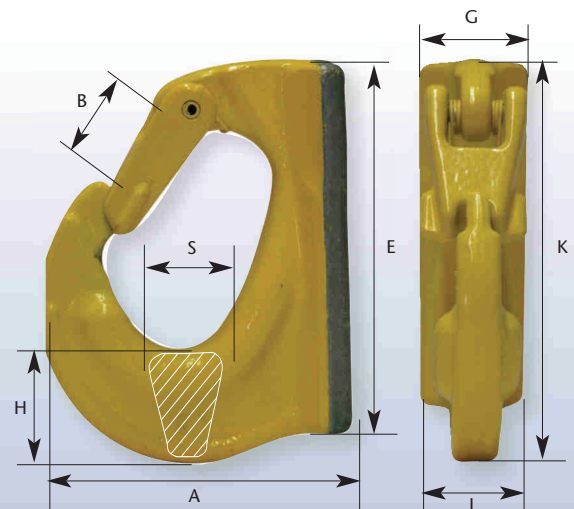
Weld-On Hook **GK8** TWN 0850/1

Uniting Stability, Functionality and Safety.

The TWN 0850/1 weld-on hook is a component that is relevant for safety and is primarily welded onto earth-moving machinery extension arms, trusses or excavation buckets in applications involving the lifting and moving of loads. The hook and the safety latch both feature forged construction, ensuring robust, reliable, risk-free handling. Our TWN 0850/1 weld-on hook can bear loads of up to 10 tonnes and is delivered with all the necessary documentation.



Finish: self colored
Pic.: Type GH2



Finish: yellow
Pic.: Type for Trade Size from GH3

Trade Size	Article-No.			Working Load Limit [t max]	Dimensions [mm]								Weight app. [kgs]
	yellow	red	self colored		B	E	F	G	H	J	K	S	
GH1	Z04499	–	F32751	1,12	26	85	77	24	24	24	94	20	0,52
GH2	–	–	F32752 ¹⁾	2,00	33	107	97	30	28	30	120	26	0,84
GH3	Z05449	Z06068	–	3,00	29	117	105	36	31	36	131	24	1,18
GH5	Z05836	Z05629	–	5,00	34	161	133	47	45	44	173	29	2,55
GH8	Z05630	Z06070	–	8,00	35	166	135	47	52	52	178	39	3,30
GH10	Z05837	–	–	10,00	49	205	168	47	57	54	202	39	4,20

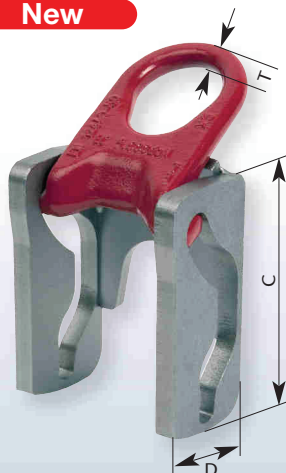
1) W.L.L. values as per standard EN 1677-1. Test requirements according to test principle of Excavator Hooks for earthmoving equipments at lifting application (GS-MO 15-03) of the safety association.

NOTE: The component must approve a strength introduction at the chosen place! Welding works are to be carried out in accordance with the delivered welding instructions! Further operating instruction and the standard DIN 15429 is to be considered!

Lifting Points, weld-on type



New



Lashing Point ZK Module **GK8** TWN 1470

The newly developed ZK module from THIELE is a lashing ring with a cassette that can easily be adapted and attached to the side frames of trailers. These lashing rings are made of the same steel used in the manufacture of lashing chains. The THIELE ZK module is additionally approved by the German TÜV inspection board and complies with the European standard DIN EN 12640.

It also offers 100% lashing capacity and is capable of withstanding strain in all directions of strain. The lashing point has a swivel range of 150°, enabling the secure strapping of low-load goods as well as goods that project beyond the load platform. Besides this, the lashing ring is retractable, consequently preventing accidents from happening when walking on the cargo area.

Finish: RAL 3003



Trade Size	Article-No.	Lashing Capacity (LC) [daN]	Dimensions [mm]						Weight app. [kgs]
			A	B	C	D	E	T*	
5	F352365	5.000	107	12	144	72	50	14	2,60
10	F352375	10.000	137	15	144	72	60	18	3,60

Lashing Point ZK Module **GK8** TWN 1470

Lashing points and elements must meet the requirements specified in DIN EN 12640. This standard spells out the minimum needs and test requirements for lashing points on road trucks and trailers with flatbed bodies and a permissible GVW of more than 3.5 t which are meant for mixed cargo transportation.

Lashing points in this context are attachment devices/arrangements on a vehicle to which a load securing device can be directly fastened. A lashing point may, for example, be designed as an oval link, hook, and eyelet or lashing rail. It is in this technical context that problems are most frequently noticed in practice. An inexperienced sizing and use of unsuitable lashing points may not only cause damage to the lashing point itself and the vehicle frame, but also create very serious hazards to road traffic and safety.



Suspension element

If a lashing design includes a suspension link, unforeseeable bending moments are often encountered which may result in damage to the lashing point and car body. More often than not, the arising angles are left out of consideration. Moreover, if not in use the suspension links lead to unnecessary noise pollution when the vehicle is on the road.

The ZK module (lashing ring with cassette) newly developed by THIELE can be attached most easily and safely to the lateral frame of trailers. The lashing rings are made of the same steel material as are used for the manufacture of the lashing chains. THIELE's ZK module has also been approved by the TÜV inspections agency and corresponds to European standard

DIN EN 12640; it has 100 % lashing capacity in all pulling directions. The lashing ring offers a 150° swivel range and enables cargo of low height as well as load items projecting over the load area to be safely secured. Furthermore, the lashing ring can be folded away thus preventing accidents when people move on the cargo platform.

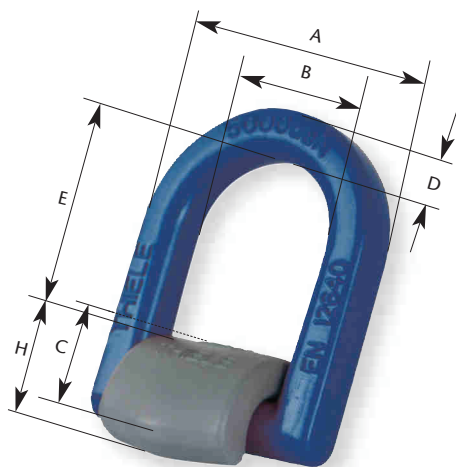
GVW = Gross Vehicle Weight



Lashing Ring

The lashing ring is marked with permissible Lashing Capacity, manufacturer's sign and DIN EN number so that official agencies are able to check its correct installation locally. The ZK module manufactured by THIELE provides maximum safety for cargo securing and is thus highly instrumental in road traffic safety.

New



Welded Lashing Point **XL** with spring TWN 1880

A perfect interaction between compactness and easier handling.

The small size of the TWN 1880 lashing point was at the focus during the development of this weld-on lashing point. The high working load limit/lashing capacity when compared with its compact design is what makes the lashing point something special. It can be swivelled by 180°.

100% Magnetic crack tested.

Finish: RAL 5002



Trade Size	Article-No.	Nominal Size [mm]	Lashing Capacity (LC)* [daN]	Dimensions [mm]						Weight app. [kgs]
				D	B	A	E*	H	C	
6-XL	F35204	6	3.000	14	38	65	42	25	49	0,42
8-XL	F35205	8	5.000	15	45	76	45	27	50	0,57
10-XL	F35206	10	8.000	17	50	85	57	31	55	1,66
13-XL	F35207	13	13.500	23	68	116	79	44	77	2,20
16-XL	F35208	16	20.000	27	69	130	72	54	92	3,35

* upright standing ring

Operating Manual Lifting Points, screwed type TWN 0121, TWN 0122, TWN 0123, TWN 0127, TWN 1120, TWN 1830, TWN 1890

1 Introduction

THIELE screw-type lifting rings serve to secure components/loads by means of hoisting means, for instance chain suspensions, to enable handling activities to be performed safely. The present operating manual includes information on how lifting rings of the following types are safely used:

- TWN 0121/1 Lifting ring, rotatable, with slide bearing
- TWN 0122 Lifting ring
- TWN 0123 Lifting ring
- TWN 0127 Lifting ring MDB
- TWN 1120 TITAN Lifting ring, rotatable, with slide bearing
- TWN 1830 X-TREME Lifting ring, rotatable, with ball bearing

TWN = THIELE-company standard

2 Intended Use

The lifting points are intended for attachment to steel, aluminum or non-ferrous metal structures and components. They serve to connect the structures and components to hoisting means used for handling.

The lifting points must exclusively be used

- as prescribed by their permissible load carrying capacity,
- within the temperature limits prescribed,
- with appropriate screws/bolts (refer to Chapter 5) firmly attached to the components to be lifted.

Turning and rotating loads:

- TWN 0121/1 Turning allowed, rotating not allowed.
- TWN 0122 Turning allowed, rotating not allowed.
- TWN 0123 No turning and/or rotating allowed.
- TWN 0127 Turning allowed, rotating not allowed.
- TWN 1120 Turning allowed, rotating not allowed.
- TWN 1830 Turning and rotating allowed.
- TWN 1890 Turning allowed, rotating not allowed.

This classification relates to occasionally turning or rotating loads. Continuous or long term turning or rotating is not allowed.

3 Safety Notes

3.1 Personnel

- Operators must familiarize themselves with this operating manual as well as regulation BGR 500, Chapter 2.8 „Betreiben von Lastaufnahmeeinrichtungen im Hebezeugbetrieb“ (Use of load suspension devices for hoisting purposes) as issued by German Accident Prevention & Insurance Association).
- Mounting and removal must exclusively be carried out by authorized persons.

Outside the Federal Republic of Germany the specific provisions issued locally in the country where the items are used must also be observed.

3.2 Product Safety

Risk of Injury

- Make sure to use lifting rings free from defects.
- Never use worn-out, bent or damaged lifting rings.
- Never make structural changes to lifting rings (e.g. by welding, bending).

3.3 Use

Risk of Injury

- Never stay under lifted loads.
- Only lift loads the weight of which is less than or equal to the carrying capacity of the suspension gear.
- Never subject lifting rings to loads higher than their specified carrying capacity.
- Do not use force when mounting/positioning the lifting rings.
- Do not start lifting before you have made sure that the load has been correctly attached.
- Make sure nobody stands or walks under or near suspended loads.

- Never move a suspended load over persons.
- When lifting loads make sure your hands or other body parts do not come into contact with the suspension gear.
- Never cause a suspended load to swing.
- Make sure lifting rings are mounted above the load's center of gravity.
- The mounting location of the rings on the component must be suited for the forces admitted via the lifting ring to be safely absorbed without the component suffering

deformation.

4 Product Description

THIELE lifting rings are marked with nominal carrying capacity (WLL) in tons or nominal size of the chain.

This indication only applies to the lifting ring itself and not to the overall load or suspension gear used.

The lifting rings are in conformity with Machinery Directive 2006/42/EG and marked with the CE symbol. The rings have been type tested by 'Metallberufsgenossenschaft Nord Süd' and marked with the H-stamp.

6 Mounting

6.1 Preparations

Make sure the attachment faces are flat and dry and the tapped hole is made perpendicular to the attachment face.

6.2 Mounting the Lifting Ring

Mount the lifting ring so that

- no areas of danger are created,
- structural parts cannot cause the suspension gear to be deflected when the load is lifted,
- the suspension gear cannot be damaged, e.g. by sharp edges.

The useful depth of the thread must enable the lifting rings to be safely screwed in.

Make sure the tapped hole is arranged at right angle to the attachment face on the component. The depth of thread „L“ in the component must at least be as follows:

L = 1	x d	in steel
L = 1.25	x d	in castings
L = 2	x d	in aluminum
L = 2.5	x d	in aluminum-magnesium alloys

(where L = depth of thread; d = thread diameter)

- Make sure the threads of the lifting ring and in the component are clean and dry.
- TWN 0123, TWN 1120 and TWN 1830: Use a suitable open-ended spanner to fix the lifting rings so as to be finger-tight.
- TWN 0121/1, TWN 0122 and TWN 0127: Tighten the screws at the tightening torques specified in Chapter 5.

- If the lifting rings are to remain on the component make sure to use liquid agents to secure and safeguard the screws.
- In case of through-boltings secure the nuts by suitable locking means.

7 Application

7.1 Use under Normal Conditions

The top part of the lifting point including attachment link must always be freely movable. It must not rest on or be supported by other structural parts. When attaching the components make sure the position of the lifting point always enables forces to be exerted in longitudinal direction.

Make sure only the top part of the lifting points turns into loading direction and not the firmly secured stationary portion. Check the correct positioning of the lifting points each time the load is turned and/or rotated, especially when the load is applied parallel to the screw-on surface.

TWN 1830:

The lifting ring must not be used for a permanent or prolonged turning of the load.

7.2 Influence of Temperature

The permissible carrying capacity of the lifting rings reduces at elevated temperatures.

The reduced carrying capacity figures shown in the following table shall only apply for short-term use at the temperatures indicated.

TWN 0121/1, TWN 0122, TWN 0127, TWN 1120:			
Temperature range		Remaining carrying capacity	
from -30 °C	to 100 °C	=>	100 %
from 100 °C	to 200 °C	=>	85 %
from 200 °C	to 250 °C	=>	80 %
from 250 °C	to 300 °C	=>	75 %
TWN 0123, TWN 1830:		Remaining carrying capacity	

from -30 °C	to 200 °C	=>	100 %
from 200 °C	to 300 °C	=>	90 %
from 300 °C	to 400 °C	=>	75 %

When the rings are to be used within other temperature ranges please get in touch with the manufacturer.

7.3 Environmental Influence

In case the rings shall be used under the influence of chemicals please consult with the manufacturer.

8 Maintenance

8.1 Inspections

Check the lifting rings visually at regular intervals. The results of the inspection shall be entered into a register to be prepared when the lifting ring is first used.

This register includes characteristics of the ring as well as identification particulars (Statement of compliance/Inspection certificate).

An inspection must be carried out at least once a year or more frequent if the rings are in heavy-duty service. After three years at the latest the rings shall be examined for cracks.

The condition of lifting ring and its components must be documented during these inspections.

When making repairs to lifting rings note down the cause of the defect and the remedial action that has been taken.

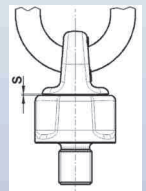
Immediately stop using lifting rings that show the following defects:

- Deformation,
- Cuts, notches, cracks, incipient cracks,
- Rings cannot freely rotate or turn,
- Rings have been heated beyond permissible limits,
- Severe corrosion,
- Wear exceeding 10%, e.g. in the suspension link diameter area,
- Identification marks are unreadable,
- Defect screws/bolts,
- TWN 1830: Size of gap s exceeds figures in table below.

Max. gap size „s“ for TWN 1830:

Nominal size s [mm]

NG 6	1.5
NG 8	1.5
NG 10	2.0
NG 13	2.5
NG 16	3.0



8.2 Repairs

Only use THIELE spare parts. Exclusively use original THIELE screws and bolts because these are made to meet special requirements. If defects are detected make sure to repair the lifting ring before it is used again.

9 Storage

Store the lifting rings in dry space at temperatures between 0 °C and +40 °C.

Secure lifting rings by applying suitable screw locking means to prevent screws from working loose.

All informations of this documentation were checked and verified carefully.

The THIELE GmbH & Co. KG assumes no liability for failures or damage caused by the usage of this informations. Subject to modifications.

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Operating Manual Lifting Points, weld-type TWN 0119, TWN 0124 with spring, TWN 1880

1 Introduction

THIELE weld-type lifting rings serve to secure components/loads by means of hoisting means, for instance chain suspensions, to enable handling activities to be performed safely. They can also be used for lashing purposes.

The present operating manual includes information on how lifting rings of the following types are safely used:

- TWN 0119 Lifting ring, weld-type
- TWN 0124 Lifting ring, weld-type, with spring

TWN = THIELE-company standard

2 Intended Use

The lifting rings are intended for attachment to steel, aluminum or non-ferrous metal structures and components.

They serve to connect the structures and components to hoisting means used for handling or secure loads.

The lifting rings must exclusively be used

- as prescribed by their permissible load carrying capacity or lashing force,
- within the temperature limits prescribed,
- with properly laid weldings seams.

3 Safety Notes

3.1 Personnel

- Operators must familiarize themselves with this operating manual as well as regulation BGR 500, Chapter 2.8 „Betreiben von Lastaufnahmeeinrichtungen im Hebezeugbetrieb“ (Use of load suspension devices for hoisting purposes) as issued by German Accident Prevention & Insurance Association).
- Mounting and removal must exclusively be carried out by authorized persons.
- Outside the Federal Republic of Germany the specific provisions issued locally in the country where the items are used must also be observed.

3.2 Product Safety

Risk of Injury

Make sure to use lifting rings free from defects.

- Never use worn-out, bent or damaged lifting rings.
- Never make structural changes to lifting rings (e.g. by grinding, bending).



3.3 Use

Risk of Injury

Never stay under lifted loads.

- Only lift loads the weight of which is less than or equal to the carrying capacity of the suspension gear.
- Never subject lifting rings to loads higher than their specified carrying capacity or lashing force.
- Do not use force when mounting/positioning the lifting rings.
- Do not start lifting before you have made sure that the load has been correctly attached.
- Make sure nobody stands or walks under or near suspended loads.
- Never move a suspended load over persons.
- When lifting loads make sure your hands or other body parts do not come into contact with the suspension gear.
- Never cause a suspended load to swing.
- Make sure lifting rings are mounted above the load's center of gravity.
- The mounting location of the rings on the component must be suited for the forces admitted via the lifting ring to be safely absorbed without the component suffering deformation.



4 Product Description

Weld-type lifting rings TWN 0119 and TWN 0124 mainly consist of a weld-on support and a ring. The weld-on support of lifting ring TWN 124 comes with integrated spring provided for position stabilization.

THIELE lifting rings are marked with nominal carrying capacity (WLL) in tons.

This indication only applies to the lifting ring itself and not to the overall load or suspension gear used. The lifting rings are in conformity with Machinery Directive 2006/42/EG. The rings have been type tested by 'Metall-berufsgenossenschaft Nord Süd' and marked with the H-stamp.

6 Mounting

6.1 Preparation

Mount the lifting ring so that

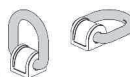
- no areas of danger are created,
- structural parts cannot cause the suspension gear to be deflected when the load is lifted,
- the suspension gear cannot be damaged, e.g. by sharp edges.

Make sure the useful weld seam area at the component is large enough for the lifting rings to be safely attached by welding.

7 Application

7.1 Use under Normal Conditions

The ring must always be freely movable. It must not rest on or be supported by other structural parts.



7.2 Influence of Temperature

The permissible carrying capacity of the lifting rings reduces at elevated temperatures. The reduced carrying capacity figures shown in the following table shall only apply for short-term use at the temperatures indicated.

TWN 0119, TWN 0124:

Temperature range	Remaining carrying capacity
from -20 °C to 100 °C =>	100 %
from 100 °C to 200 °C =>	85 %
from 200 °C to 250 °C =>	80 %
from 250 °C to 300 °C =>	75 %

When the rings are to be used within other temperature ranges please get in touch with the manufacturer.

7.3 Environmental Influence

In case the rings shall be used under the influence of chemicals please consult with the manufacturer.

8 Inspections

Check the lifting rings visually at regular intervals. The results of the inspection shall be entered into a register to be prepared when the lifting ring is first used. This register includes characteristics of the ring as well as identification particulars (Statement of compliance/Inspection certificate).

An inspection must be carried out at least once a year or more frequent if the rings are in heavy-duty service. After three years at the latest the rings shall be examined for cracks. The condition of lifting ring and its components must be documented during these inspections. When making repairs to lifting rings note down the cause of the defect and the remedial action that has been taken.

Immediately stop using lifting rings that show the following defects:

- Deformation,
- Cuts, notches, cracks, incipient cracks,
- Rings cannot freely rotate or turn,
- Rings have been heated beyond permissible limits,
- Severe corrosion,
- Wear, e.g. exceeding 10% in the ring diameter area,
- Identification marks are unreadable,

- Defective or non-conforming welds.

9 Storage

Store the lifting rings in dry space at temperatures between 0 °C and +40 °C.

10 Welding Instructions

Welding instructions relating to weld-on supports (S355 NL or similar) to be attached to C22, S235, S355 or similar components.

The following general welding instructions shall be duly followed:

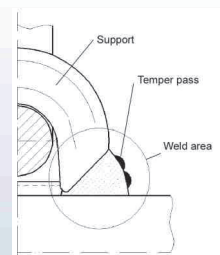
- DIN EN ISO3834
- EN 1011-2
- SEW 088
- DIN 18800
- EN 15085
- DIN 15018
- DVS 0702-1 / 0711

Welding must exclusively performed by trained and authorized personnel qualified as per EN 287.

Preweld Treatment:

The surfaces to be joined by welding shall be flat and treated so as to have a white metal finish.

Sketch:



Please note also the THIELE Welding Operating Manual:

Welding process Metal active gas welding (MAG), EN 287; No. 135

Welding process: Manual metal arc welding (MMA), EN 287; No. 111

Miscellaneous:


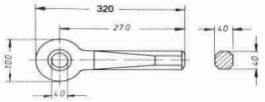
1. Min. notched-bar impact strength values of ISO-V specimens KV = 27 J at -40 °C (e.g. S355J4G3 or S355 NL, EN10025)


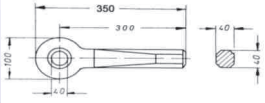
2. When selecting material grades other than those listed above please contact the base material and filler metal manufacturers for information.


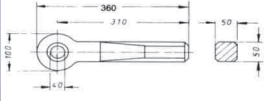
3. The responsible welding supervisor must make sure the welding current is correctly adjusted to suit the given welding position.


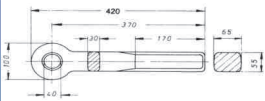
Download: www.thiele.de

Hitches


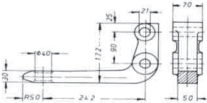
TWN 0301  	Type	Bush	Article-No.	Bore	Weight approx. [kgs]	
	Hitches as per DIN 74054 Part 1 and Part 2					
	C	without	F27100	40 mm	3,7	
	A	40 mm	F27101	48 mm	3,7	


TWN 0302  	Type	Bush	Article-No.	Bore	Weight approx. [kgs]	
	Hitches as per DIN 74054 Part 1 and Part 2					
	C	without	F27110	40 mm	4,0	
	A	40 mm	F27111	48 mm	4,0	

TWN 0304  	Type	Bush	Article-No.	Bore	Weight approx. [kgs]	
	Hitches as per DIN 74054 Part 1 and Part 2					
	C	without	F27130	40 mm	5,1	
	A	40 mm	F27131	48 mm	5,1	

TWN 0308  	Type	Bush	Article-No.	Bore	Weight approx. [kgs]	
	Hitches as per DIN 74054 Part 1 and Part 2					
	C	without	F27180	40 mm	8,5	
	A	40 mm	F27181	48 mm	8,5	
	D	without	F27182	48 mm	8,5	

Hitches

TWN 0321  	Type	Bush	Article-No.	Bore	Weight approx. [kgs]	
	Hitches as per DIN 74054 Part 1 and Part 2					
	C	without	F27300	40 mm	7,3	
	A	40 mm	F27301	48 mm	7,3	

TWN 0323 	Type	Bush	Article-No.	Bore	Weight approx. [kgs]	
	Hitches as per DIN 74054 Part 1 and Part 2					
	C	without	F27320	40 mm	6,4	
	A	40 mm	F27321	48 mm	6,4	