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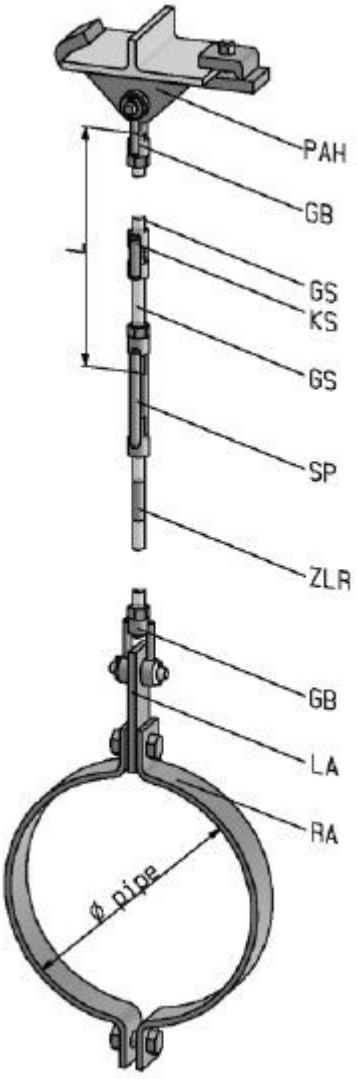
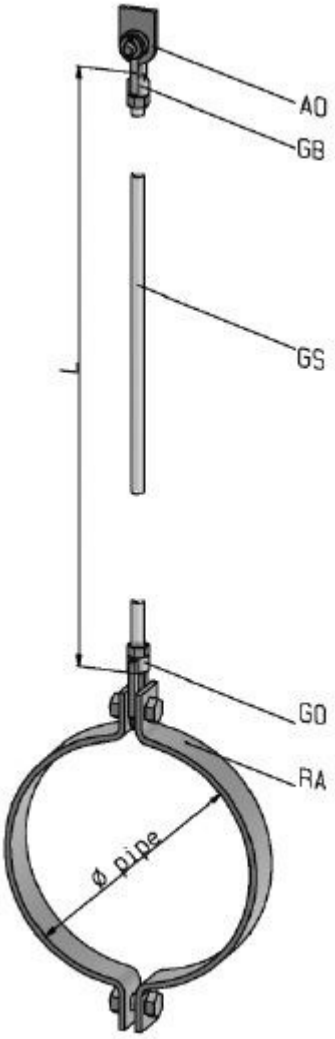
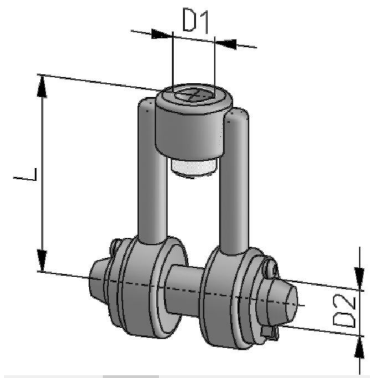
Bernecker

THREADED COMPONENTS



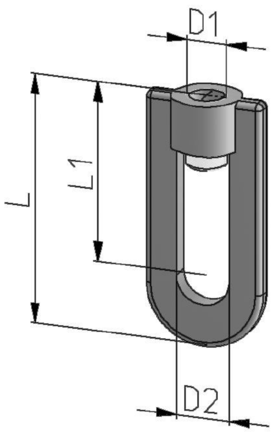




Shackles Type GB

Material	**P250GH** (1.0460) DIN 10222-2
Type	Forged, incl. Bolt, washer and split pins
Surface	Zinc plated-**Q-Z**/hot-dip galvanized-**Q-F**

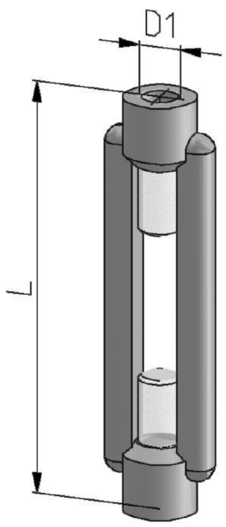
Type	**D1**	**D2**	**L**				**Load kN**	**Weight kg**
GB-010	M10	10	50				-	0,10
GB-012	M12	12	70				4,7	0,20
GB-016	M16	16	80				8,8	0,40
GB-020	M20	20	90				13,8	1,00
GB-024	M24	24	110				19,9	1,60
GB-030	M30	34	130				31,6	2,70
GB-036	M36	40	150				46,0	4,40



Thread eyes Type GO

Material	**P250GH** (1.0460) DIN 10222-2
Type	Forged
Surface	Zinc plated-**Q-Z**/hot-dip galvanized-**Q-F**

Type	**D1**	**D2**	**L**	**L1**			**Load kN**	**Weight kg**
GO-010	M10	13	55	40			-	0,05
GO-012	M12	17	79	60			4,7	0,10
GO-016	M16	25	101	75			8,8	0,20
GO-020	M20	29	125	90			13,8	0,40
GO-024	M24	35	154	110			19,9	0,80
GO-030	M30	42	181	127			31,6	1,20
GO-036	M36	47	202	140			46,0	2,00



Turnbuckles Type SP

Material	**S235JR** DIN 10025-2
Type	Forged, left/right thread
Surface	Zinc plated-**R-Z**/hot-dip galvanized-**R-F**

Type	**D1**	**L**					**Load kN**	**Weight kg**
SP-010	M10	125					-	0,15
SP-012	M12	125					4,7	0,20
SP-016	M16	170					8,8	0,40
SP-020	M20	200					13,8	0,70
SP-024	M24	255					19,9	1,20
SP-030	M30	255					31,6	1,80
SP-036	M36	295					46,0	3,00

Notes: Standard design in galvanized. Also available in hot-dip galvanized

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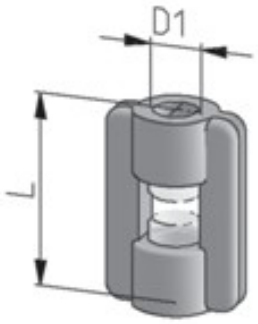
CVR nr. DK70614316 ● cobalch@cobalch.com ● www.cobalch.com

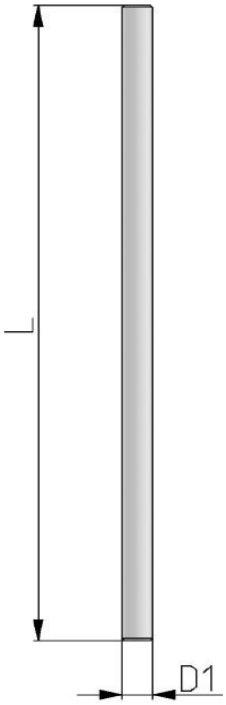
Couplers Type KS



Material	**S235JR** DIN 10025-2
Type	Forged, with right thread
Surface	Zinc plated-**R-Z**/hot-dip galvanized-**R-F**

Type	D1	L					Load kN	Weight kg
KS-010	M10	45					-	0,10
KS-012	M12	45					4,7	0,10
KS-016	M16	60					8,8	0,20
KS-020	M20	75					13,8	0,50
KS-024	M24	90					19,9	0,70
KS-030	M30	105					31,6	1,20
KS-036	M36	120					46,0	1,60

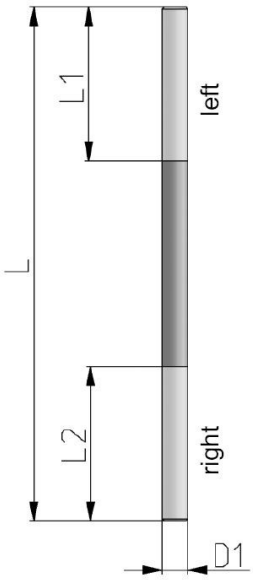
Thread rod Type GS



Material	**S235JR** DIN 10025-2
Type	Rolled, with right thread DIN 13
Surface	Zinc plated-**R-Z**/hot-dip galvanized-**R-F**

Type	D1	L					Load kN	Weight kg
GS-010x1000	M10	1000					-	0,50
GS-012x1000	M12	1000					4,7	0,71
GS-016x1000	M16	1000					8,8	1,52
GS-020x1000	M20	1000					13,8	2,05
GS-024x1000	M24	1000					19,9	2,99
GS-030x1000	M30	1000					31,6	4,73
GS-036x1000	M36	1000					46,0	8,00
GS-010x2000	M10	2000					-	1,25
GS-012x2000	M12	2000					4,7	1,42
GS-016x2000	M16	2000					8,8	3,04
GS-020x2000	M20	2000					13,8	4,10
GS-024x2000	M24	2000					19,9	5,98
GS-030x2000	M30	2000					31,6	9,46
GS-036x2000	M36	2000					46,0	16,00

Tie rods Type ZLR

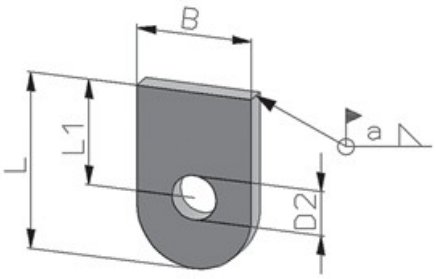


Material	**S235JR** DIN 10025-2
Type	Forged, with left/right thread DIN 13
Surface	Zinc plated-**R-Z**/hot-dip galvanized-**R-F**

Type	D1	L	L1	L2			Load kN	Weight kg
ZLR-010x0250	M10	250	80	80			-	0,14
ZLR-012x0300	M12	300	80	80			4,7	0,27
ZLR-016x0350	M16	350	100	100			8,8	0,55
ZLR-020x0400	M20	400	120	120			13,8	0,99
ZLR-024x0450	M24	450	140	140			19,9	1,60
ZLR-030x0500	M30	500	160	160			31,6	2,77
ZLR-036x0500	M36	500	180	180			46,0	4,00

The welds were calculated on a basic of a permissible stress of 75 n/mm² in load case H

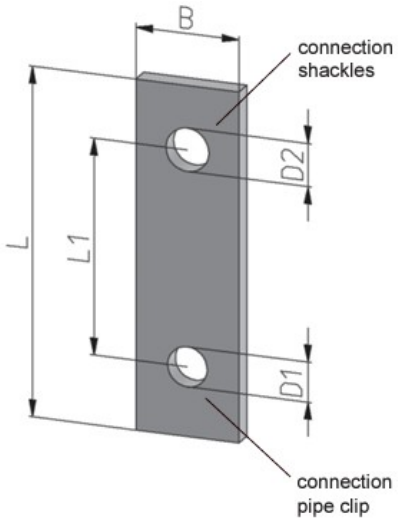
Welding eye Type AO



Material	**S235JR** DIN 10025-2
Type	Plain, stamped/drilled
Surface	Black-**R**

Type	B	D2	L	L1			Load kN	Weight kg
AO-040	40	13	67	45			4,7	0,20
AO-050	50	17	78	50			8,8	0,30
AO-060	60	23	92	55			13,8	0,60
AO-070	70	26	100	60			19,9	0,90
AO-080	80	36	120	70			31,6	1,40
AO-100	100	43	145	80			46,0	2,40

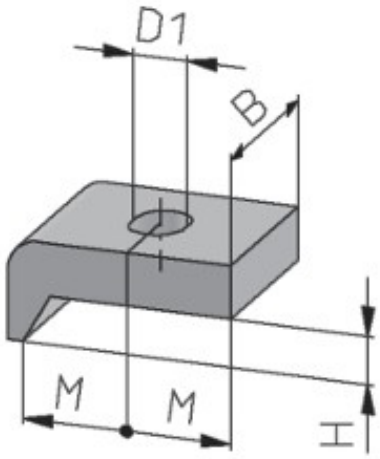
Straps Type LA



Material	**S235JR** DIN 10025-2
Type	Stamped/drilled
Surface	Hot-dip galvanized-**R-F**

Type	B	D2	D1	L	L1		Load kN	Weight kg
LA-046	40	13	11	87	50		4,7	0,16
LA-048	40	17	13	123	75		8,8	0,31
LA-050	50	21	17	163	100		13,8	0,64
LA-060	60	21	21	202	125		19,9	1,14
LA-070	70	26	25	240	150		31,6	1,98
LA-090	90	36	31	270	170		31,6	2,86
LA-130	130	43	31	300	190		46,0	5,90

Clampplates Type KP



Material	**S235JR** DIN 10025-2
Type	Stamped/drilled
Surface	Hot-dip galvanized-**R-F**

Type	B	D1	H	M			Load kN	Weight kg
KP-50*07	50	14	7	23				0,22
KP-50*09	50	14	9	23				0,23
KP-60*10	60	18	10	35				0,57
KP-60*12	60	18	12	35				0,58
KP-60*14	60	18	14	35				0,59
KP-60*16	60	18	16	35				0,60
KP-60*18	60	18	18	35				0,61
KP-60*20	60	18	20	35				0,63
KP-70*14	70	23	14	45				1,05
KP-70*16	70	23	16	45				1,06
KP-70*18	70	23	18	45				1,07
KP-70*20	70	23	20	45				1,08
KP-70*22	70	23	22	45				1,10

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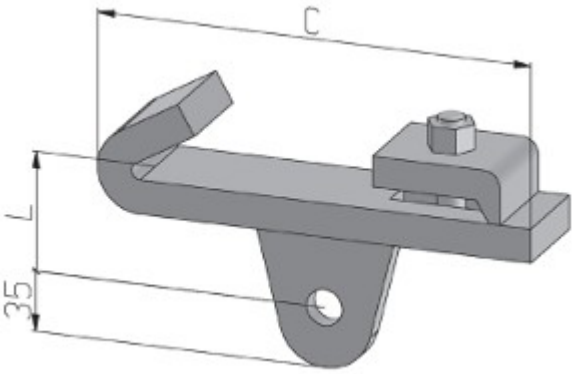
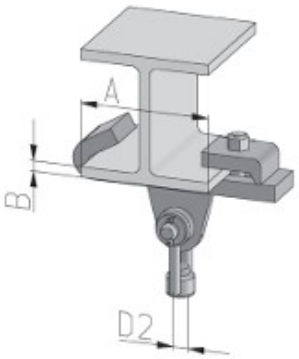


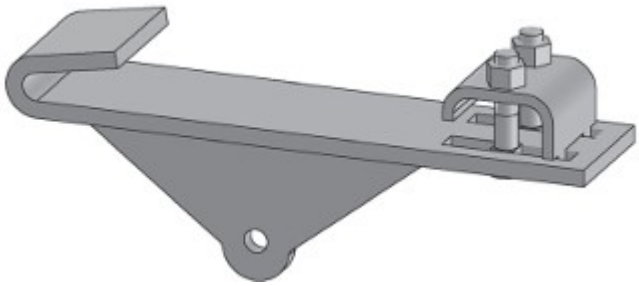


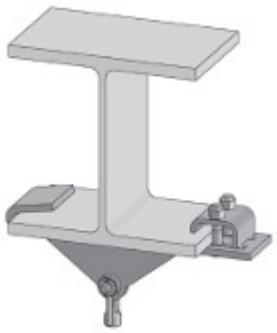
Beam hangers type PAH standard range

Material	**S235JR** DIN EN 10025-2, for temperature up to 300°C
Type	Incl. clamp plate and bolt
Surface	Hot-dip galvanized-**R-F** Required preload on clamping plate M16 - 80 Nm

Type	Beam dimension Width A	Thickness B	Thread D2	L	C		Loads kN	Weight kg
PAH-120/12-R-F	100-120	8-11	M12	65	215		4,7	3,50
PAH-120/16-R-F	100-120	8-11	M16	65	215		8,8	3,45
PAH-120/20-R-F	100-120	8-11	M20	65	215		13,8	3,40
PAH-160/12-R-F	130-160	8-13	M12	65	250		4,7	4,10
PAH-160/16-R-F	130-160	8-13	M16	65	250		8,8	4,05
PAH-160/20-R-F	130-160	8-13	M20	65	250		13,8	4,00
PAH-200/12-R-F	170-200	10-16	M12	65	290		4,7	4,40
PAH-200/16-R-F	170-200	10-16	M16	65	290		8,8	4,35
PAH-200/20-R-F	170-200	10-16	M20	65	290		13,8	4,30
PAH-240/12-R-F	210-240	11-19	M12	65	340		4,7	5,20
PAH-240/16-R-F	210-240	11-19	M16	65	340		8,8	5,15
PAH-240/16-R-F	210-240	11-19	M20	65	340		13,8	5,10
PAH-300/12-R-F	260-300	12-19	M12	65	400		4,7	5,85
PAH-300/16-R-F	260-300	12-19	M16	65	400		8,8	5,80
PAH-300/20-R-F	260-300	12-19	M20	65	400		13,8	5,75

Other sizes available on request as a special type!





cobalch
pipeline accessories

Technical information

Expert advice
With our many years of experience as suppliers to the pipeline and plant construction industries we are well placed to assist you with expert advice on the design and detail for large-scale projects including can provide tailor made solutions for specific problems and applications.

Loads
The calculation loads mentioned in this document were made with statically models under certain conditions and parameters.
All possible care is taken compliance and applicable technical regulations and applicable standards, guarantees are given against the loads for the static cases shown in the catalog, these are approximate values. Liabilities for the particular application cannot be derived. Any unauthorized variations or changes would invalidate any warranty and guarantee on our part.

Materials
The materials and characteristics are in accordance to the corresponding standards and should be used as the minimum requirement. For the characteristics and quality, Bernecker would only accept warranty in combination with an inspection certificate 3.1

Special design
For your individual requirements we also offer special pipe supports. Either as a variant production through the use of other:
- materials (e.g. P265GH, P275NL1)
- coatings (e.g. Duplex)
- diameter (e.g. RA-102-R)
- lengths (e.g. GLY-200/324L500-RB3)
- heights (e.g. GLY-75/324-RB3)

or according to your specifications routines or static specification.

SI units
The psysical quantities are stated in SI units as follows:
- Dimensions in mm
- Loads in kN
- Temperatures at 80°
- Weights in kg

in not stated otherwise.

General tolerances
The general tolerances are for lengths, angles, shape and location in accordance with ISO 2768-ck.

Heat treatment
We can hot form and heat treat components to order, e.g. stress-free annealing, normalizing or hardening of high temperature materials. On request we supply a diagram of the heat treatment and temperature curve of the heat treated components supplied.

Corrosion protection and surface finishes

- The corrosion protection of our components in accordance with DIN EN ISO 12944.
- Hot-dip galvanized components are standard galvanized to DIN EN ISO 1461.
- According to your needs and specifica tions we can also provide our compo nent parts with the following surface treatment: Sanding, pickling, oiling, basic coating, painting or galvanic sur face treatment.

Prefabrication service supplied complete to site
As a specialist manufacturer in the field of pipe supports we can fabricate all supports and ancillaries for you ready to install, complete with labeling, to order. Prefabricated and labeled components enable a quick and efficient assembly and save time on site.

Acceptance/Certificate
On request we can supply our pipe support products with acceptance test certificates to DIN EN 50049 3.1 or with factory certificates to DIN EN 10204 2.2. We can arrange for acceptance tests to be carried out by the TÜV or other inspectorate on our premises if required. Inspections by our customers can be arranged at any time.

Our safety is your guarantee
We operate in a quality assurance system that is certified to DIN ISO 9001, which means that we have a formally written and approved Quality Management Manual (QMH). This is your guarantee that we will turn your specifications and requirements into a fully functional and reliable system that is right for the job.

Registrations (Status in 05/2012)
QS - DIN ISO 9001:2008
TÜV - AD2000 W-0
DVS - General certificate of qualification to DIN 18 800-7
TÜV - Components registration KWU
QS - KTA 1401

Legal notice

Korrekturfaktorer for de i kataloget anvendte belastningsværdier ved andre temperaturer.
(Omregning må dog altid være med gennemprøvet materiale)

Materiale	Nr.	DIN	20°/50°	100°	150°	200°	250°	300°	350°	400°	450°	500°	520°	540°	560°
S235JR	1.0038	EN 10025-2	**1,00**	0,80	0,74	0,69	0,62	0,52							
16Mo3	1.5415	EN 10028-2	1,55	1,47	1,43	1,38	1,27	1,11	**1,00**	0,94	0,88				
13CrMo4-5	1.7335	EN 10028-2	1,77	1,70	1,65	1,60	1,48	1,36	1,25	1,19	1,14	**1,00**	0,67	0,41	0,27
10CrMo9-10	1.7380	EN 10028-2	1,42	1,39	1,35	1,32	1,26	1,21	1,16	1,11	1,04	**1,00**	0,77	0,56	0,38
X10CrNiTi 18 10	1.4541	DIN 17440	**1,00**	0,93	0,88	0,83	0,77	0,72	0,68	0,66					
X10CrNiMoTi 18 10	1.4571	DIN 17440	**1,00**	0,90	0,86	0,81	0,76	0,70	0,68	0,66					

02-26-242

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