



I-SYS





Carl Stahl is a leading worldwide manufacturer of cable and lifting equipment.

What started out in 1880 as a small rope maker specialised in agricultural products, serving only local customers, has now become a global enterprise with over 1000 employees operating from more than 50 subsidiaries around the world.

Classical applications for cables in mechanical engineering, ship building and the construction industry are today being complemented by new high-tech sectors from medical technology through to automotive industry.

Professional know-how and the motivation of our employees is our major strength; customer satisfaction as our main objective is not just a statement, it is our commitment! All activities are focused on providing customers with real benefits through the products and services we supply; our customers' requirements are our major concerns.

Our thoughts are always guided by the conviction that quality is the decisive factor in global competition. Therefore we are organized according to DIN ISO 9001:2008 (management system) and to DIN ISO 14001:2004 (environmental management).

One of the most recent areas of activity within the company is the development and design of the stainless steel cable system I-SYS, and the stainless steel cable mesh X-TEND, both targeted towards the world of architecture.

Quality, innovation and service from a customer-oriented organization: the right combination to meet future challenges.

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I-SYS:

Advice and Planning

I-SYS includes components, combinations and individual applications. Above all, I-SYS constitutes an invitation to cooperative action. The experts from Carl Stahl offer advice and plan small and large projects, they inspire architects to find the most aesthetically satisfying solutions and supply static calculations. A service which is as rapid as it is professional and which is in demand all over the world. The range of expertise of our specialists ranges from the first idea, through truly exceptional development, up to manufacture, assembly and subsequent service.

I-SYS:

Expertise and Creativity

I-SYS, the stainless steel architectural range, transforms visions into reality. I-SYS offers both form and function to the architect, with a superb range of literally thousands of components and assemblies. I-SYS products can be used for many applications from small decorative projects to high load cables for tensile structures.

I-SYS offers functionality, consistent quality, creativity of application and prize winning design. General planning authority approval of many components, successful test programs and a number of company patents typify the professionalism of the range. Stainless steel material allows durable, cost effective and low maintenance solutions to be created. I-SYS sets worldwide standards of modern construction for architects, engineers and fabricators.





I-SYS: External Threads

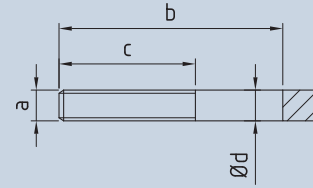
Stainless steel cables are turned into universal elements by means of useful connectors, fittings and guides. They have to be strong in order to take up the forces which occur and at the same time they must harmonise with the architecture. A performance which the individual components of I-SYS negotiate with the greatest of ease. Including the jewel in the crown, the F50, a hammered external thread which brings together different diameters of stainless steel cable and final connectors in a perfect interference fit.



External thread F50 hammered

Part number RH thread	Part number LH thread	ø rope	a	b	c	ø d ^{+0,2} ₀	kN
950-0400-30	951-0400-30	4	M4	55	30	4,4	5,3
950-0400-60	951-0400-60	4	M4	85	60	4,4	5,3
950-0500-30	951-0500-30	5	M5	60	30	5,5	8,4
950-0500-60	951-0500-60	5	M5	90	60	5,5	8,4
950-0600-30	951-0600-30	6	M6	66	30	6,6	12,1
950-0600-60	951-0600-60	6	M6	96	60	6,6	12,1
950-0800-30	951-0800-30	8	M8	90	30	8,8	21,5
950-0800-60	951-0800-60	8	M8	120	60	8,8	21,5

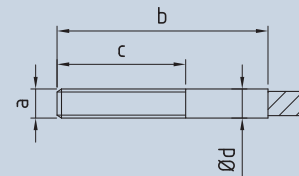
Material 1.4404 | Not suitable for strands



External thread F30 hammered

Part number RH thread	Part number LH thread	ø rope	a	b	c	ø d ±0,2	kN
948-0300-20	949-0300-20	3	M4	37	20	3,9	4
948-0300-40	949-0300-40	3	M4	57	40	3,9	4
948-0400-30	949-0400-30	4	M5	50	30	4,9	7,1
948-0400-50	949-0400-50	4	M5	70	50	4,9	7,1
948-0500-30	949-0500-30	5	M6	55	30	5,9	11,2
948-0500-50	949-0500-50	5	M6	75	50	5,9	11,2
948-0600-30	949-0600-30	6	M8	58	30	7,9	16
948-0600-60	949-0600-60	6	M8	88	60	7,9	16
948-0800-30	949-0800-30	8	M10	68	30	9,9	25
948-0800-60	949-0800-60	8	M10	98	60	9,9	25
948-1000-30	949-1000-30	10	M12	76	30	11,9	41,6
948-1000-60	949-1000-60	10	M12	106	60	11,9	41,6

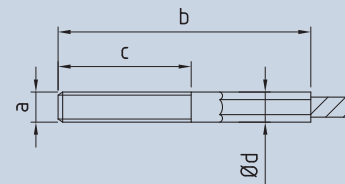
Material 1.4404 | Not suitable for strands



External thread swaged

Part number RH thread	Part number LH thread	ø rope	a	b	c	ø d	kN
850-0100-020	855-0100-020	1	M4	35	20	4	0,5
850-0200-030	855-0200-030	2	M5	55	30	5	2,8
850-0200-060	855-0200-060	2	M5	85	60	5	2,8
850-0300-030	855-0300-030	3	M6	70	30	6	6,3
850-0300-060	855-0300-060	3	M6	100	60	6	6,3
850-0400-030	855-0400-030	4	M6	75	30	7	11,2
850-0400-060	855-0400-060	4	M6	105	60	7	11,2
850-0400-061	855-0400-061	4	M8	105	60	8	11,2
850-0500-030	855-0500-030	5	M8	80	30	8	17,5
850-0500-060	855-0500-060	5	M8	110	60	8	17,5
850-0500-080	855-0500-080	5	M8	130	80	8	17,5
850-0600-030	855-0600-030	6	M10	90	30	10	25,2
850-0600-060	855-0600-060	6	M10	120	60	10	25,2
850-0600-080	855-0600-080	6	M10	140	80	10	25,2
850-0800-080	855-0800-080	8	M12	170	80	13	39,5
850-0800-120	855-0800-120	8	M12	210	120	13	39,5
850-1000-115	855-1000-115	10	M16	225	115	18	61,7
850-1200-130	855-1200-130	12	M20	245	130	20	83,2
850-1600-160	855-1600-160	16	M24	290	160	27	140

Material 1.4404



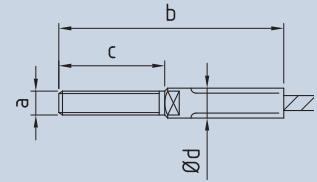


External thread roll swaged

Part number

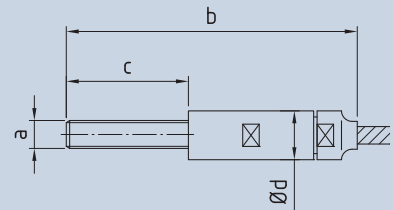
RH thread	LH thread	ø rope a		b	c	ø d
650-0600-045	655-0600-045	6	M10	117	45	12,5
650-0800-060	655-0800-060	8	M12	156	60	16,1
650-1000-076	655-1000-076	10	M14	193	76	17,8
650-1200-090	655-1200-090	12	M16	232	90	21,4
650-1400-110	655-1400-110	14	M20	259	110	24,9
650-1600-130	655-1600-130	16	M24	313	130	28
650-1800-140	655-1800-140	18	M27	357	140	34,5
650-2200-170	655-2200-170	22	M30	430	170	43
650-2600-170	655-2600-170	26	M36	475	170	45,9

Material 1.4404 | European Technical Approval ETA-10/0358 granted



External thread swageless connection

Part number RH thread	Part number LH thread	ø rope a	ø d	b	c	kN
826-0200-030	827-0200-030	2	M6	13	85	2
826-0200-060	827-0200-060	2	M6	13	115	2
826-0300-030	827-0300-030	3	M6	13	85	4,5
826-0300-060	827-0300-060	3	M6	13	115	4,5
826-0400-030	827-0400-030	4	M6	13	85	8
826-0400-060	827-0400-060	4	M6	13	115	8
826-0500-030	827-0500-030	5	M8	15	87	12,6
826-0500-060	827-0500-060	5	M8	15	117	12,6
826-0600-030	827-0600-030	6	M8	15	87	18,1
826-0600-060	827-0600-060	6	M8	15	117	18,1
826-0800-080	827-0800-080	8	M10	20	167	32,2
826-1000-100	827-1000-100	10	M14	28	223	46,8
826-1200-120	827-1200-120	12	M16	30	257	67,6



Material 1.4404 | Not suitable for strand 1 x 19

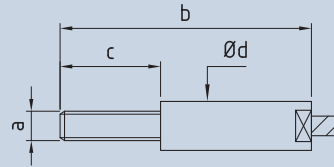




External thread swivel swaged

Part number	ø rope a	b	c	ø d	kN	
856-0300-030	3	M6	88	30	10	4,5
856-0300-060	3	M6	118	60	10	4,5
856-0400-030	4	M6	88	30	10	8,1
856-0400-060	4	M6	118	60	10	8,1
856-0400-061	4	M8	118	60	10	8,1
856-0500-030	5	M8	108	30	13	12,6
856-0500-080	5	M8	158	80	13	12,6
856-0600-060	6	M10	138	60	13	14,5

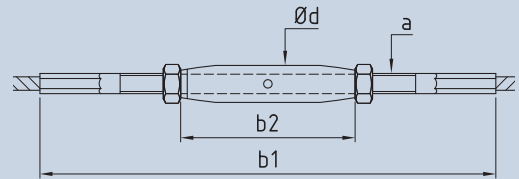
Material 1.4404 | Not suitable for strand 1 x 19



Turnbuckle with external threads swaged

Part number	ø rope a	b1	b2	ø d	Adjustment	kN	
829-0200-01	2	M5	166	80	8	+16 -26	2,8
829-0200-02	2	M5	211	80	8	+30 -40	2,8
829-0300-01	3	M6	207	92	10	+14 -26	6,3
829-0300-02	3	M6	250	92	10	+32 -44	6,3
829-0400-01	4	M6	217	92	10	+14 -26	11,2
829-0400-02	4	M6	260	92	10	+32 -44	11,2
829-0400-03	4	M8	270	112	13,5	+38 -54	11,2
829-0500-01	5	M8	248	112	13,5	+8 -24	17,5
829-0500-02	5	M8	280	112	13,5	+38 -54	17,5
829-0600-01	6	M10	314	120	17,2	+8 -50	25,2
829-0600-02	6	M10	340	120	17,2	+40 -60	25,2
829-0800-01	8	M12	425	150	21,3	+46 -70	39,5
829-1000-01	10	M16	560	190	26,9	+62 -94	61,7
829-1200-01	12	M20	646	220	33,7	+70 -110	83,2
829-1600-01	16	M24	858	328	50	+92 -140	140

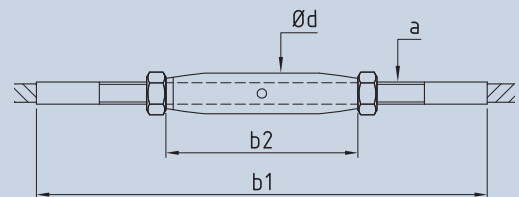
Material 1.4404 | Left/right swaged external threads are screwed half way into the turnbuckle. The minimum screw-in depth is 1.5 x thread ø (M8=12 mm).



Turnbuckle with external threads F30 hammered

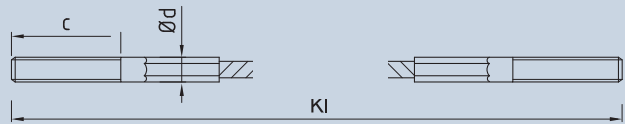
Part number	ø rope a	b1	b2	ø d	Adjustment	kN	
828-0400-02	4	M5	160	80	8	+38 -42	7,1
828-0500-02	5	M6	178	92	10	+32 -40	11,2
828-0600-02	6	M8	214	112	13,5	+36 -47	16
828-0800-02	8	M10	236	120	17,2	+30 -44	25
828-1000-02	10	M12	280	150	21,3	+24 -40	41,6

Material 1.4404 | Left/right hammered external threads are screwed half way into the turnbuckle. The minimum screw-in depth is 1.5 x thread ø (M8=12 mm).





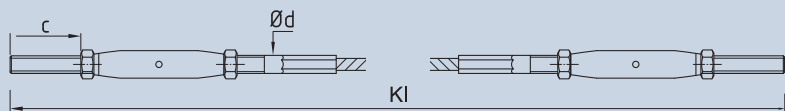
Both sides external thread swaged



Part number both sides RH thread	Part number one LH thread one RH thread	Ø rope Sk	Thread size x length c	Ø d
IK 100-0200	IK 101-0200	2	7 x 7 M5 x 30	5
IK 100-0201	IK 101-0201	2	7 x 7 M5 x 60	5
IK 100-0300	IK 101-0300	3	7 x 7 M6 x 30	6
IK 100-0301	IK 101-0301	3	7 x 7 M6 x 60	6
IK 100-0400	IK 101-0400	4	7 x 7 M6 x 30	7
IK 100-0401	IK 101-0401	4	7 x 7 M6 x 60	7
IK 100-0500	IK 101-0500	5	7 x 7 M8 x 30	8
IK 100-0501	IK 101-0501	5	7 x 7 M8 x 60	8
IK 100-0600	IK 101-0600	6	7 x 7 M10 x 30	10
IK 100-0601	IK 101-0601	6	7 x 7 M10 x 60	10
IK 100-0800	IK 101-0800	8	7 x 7 M12 x 80	13
IK 100-1000	IK 101-1000	10	7 x 19 M16 x 115	18
IK 100-1200	IK 101-1200	12	7 x 19 M20 x 130	20
IK 100-1600	IK 101-1600	16	7 x 19 M24 x 160	27



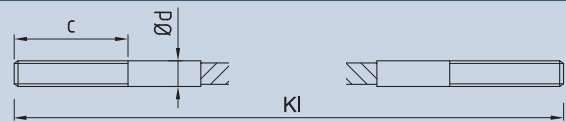
**Both sides turnbuckle
with external thread swaged**



Part number both sides RH thread	Ø rope Sk	Thread size x length c	Adjustment	Ø d
IK 110-0200	2	7 x 7 M5 x 60	+52 -86	5
IK 110-0300	3	7 x 7 M6 x 60	+56 -100	6
IK 110-0400	4	7 x 7 M6 x 60	+56 -100	7
IK 110-0500	5	7 x 7 M8 x 60	+68 -100	8
IK 110-0600	6	7 x 7 M10 x 60	+60 -100	10
IK 110-0800	8	7 x 7 M12 x 60	+92 -140	13
IK 110-1000	10	7 x 19 M16 x 60	+96 -180	18
IK 110-1200	12	7 x 19 M20 x 60	+120 -210	20
IK 110-1600	16	7 x 19 M24 x 60	+180 -240	27



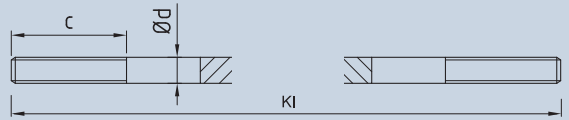
Both sides external thread F30 hammered



Part number both sides RH thread	Part number one LH thread one RH thread	Ø rope Sk	Thread size x length c	Ø d ±0,2
IK 120-0300	IK 121-0300	3	7 x 7 M4 x 20	3,9
IK 120-0301	IK 121-0301	3	7 x 7 M4 x 40	3,9
IK 120-0400	IK 121-0400	4	7 x 7 M5 x 30	4,9
IK 120-0401	IK 121-0401	4	7 x 7 M5 x 50	4,9
IK 120-0500	IK 121-0500	5	7 x 7 M6 x 30	5,9
IK 120-0501	IK 121-0501	5	7 x 7 M6 x 50	5,9
IK 120-0600	IK 121-0600	6	7 x 7 M8 x 30	7,9
IK 120-0601	IK 121-0601	6	7 x 7 M8 x 60	7,9
IK 120-0800	IK 121-0800	8	7 x 7 M10 x 30	9,9
IK 120-0801	IK 121-0801	8	7 x 7 M10 x 60	9,9
IK 120-1000	IK 121-1000	10	7 x 19 M12 x 30	11,9
IK 120-1001	IK 121-1001	10	7 x 19 M12 x 60	11,9



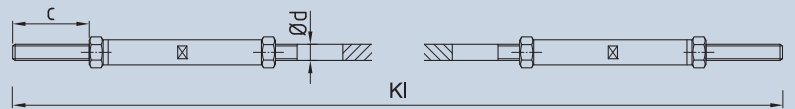
Both sides external thread F50 hammered



Part number both sides RH thread	Part number one LH thread one RH thread	Ø rope Sk	Thread size x length c	Ø d ^{+0,2} ₀
IK 125-0400	IK 126-0400	4 7 x 7	M4 x 30	4,4
IK 125-0401	IK 126-0401	4 7 x 7	M4 x 60	4,4
IK 125-0500	IK 126-0500	5 7 x 7	M5 x 30	5,5
IK 125-0501	IK 126-0501	5 7 x 7	M5 x 60	5,5
IK 125-0600	IK 126-0600	6 7 x 7	M6 x 30	6,6
IK 125-0601	IK 126-0601	6 7 x 7	M6 x 60	6,6
IK 125-0800	IK 126-0800	8 7 x 7	M8 x 30	8,8
IK 125-0801	IK 126-0801	8 7 x 7	M8 x 60	8,8



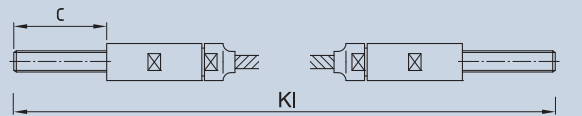
Both sides turnbuckle with external thread F30 hammered



Part number both sides RH thread	Ø rope Sk	Thread size x length c	Adjustment	Ø d ±0,2
IK 130-0400	4 7 x 7	M5 x 60	+60 -90	4,9
IK 130-0500	5 7 x 7	M6 x 60	+74 -110	5,9
IK 130-0600	6 7 x 7	M8 x 60	+74 -110	7,9

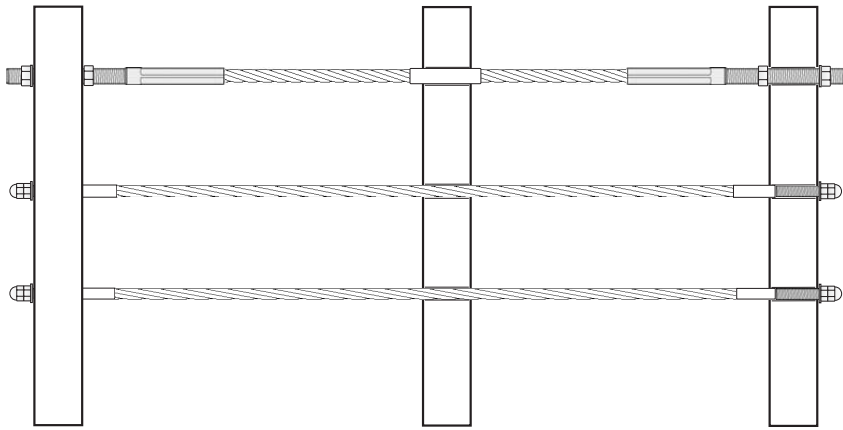


Both sides external thread swageless connection

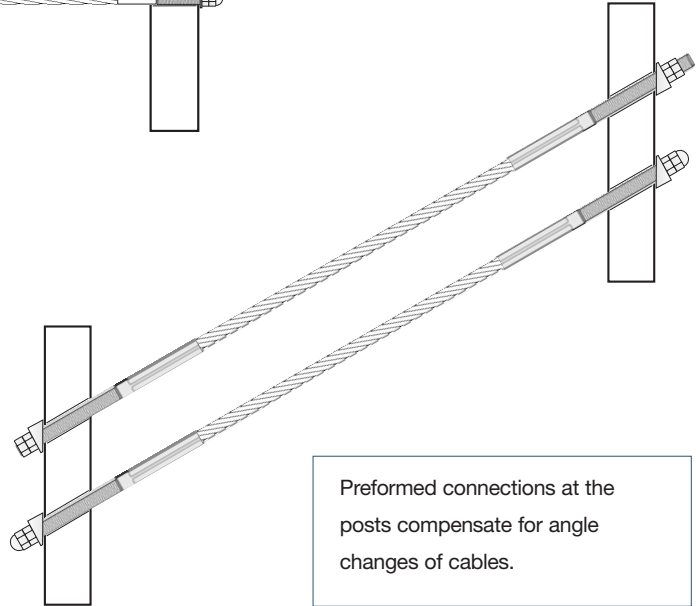


Part number both sides RH thread	Part number one LH thread one RH thread	Ø rope Sk	Thread size x length c
IK 140-0200	IK 141-0200	2 7 x 7	M6 x 30
IK 140-0201	IK 141-0201	2 7 x 7	M6 x 60
IK 140-0300	IK 141-0300	3 7 x 7	M6 x 30
IK 140-0301	IK 141-0301	3 7 x 7	M6 x 60
IK 140-0400	IK 141-0400	4 7 x 7	M6 x 30
IK 140-0401	IK 141-0401	4 7 x 7	M6 x 60
IK 140-0500	IK 141-0500	5 7 x 7	M8 x 30
IK 140-0501	IK 141-0501	5 7 x 7	M8 x 60
IK 140-0600	IK 141-0600	6 7 x 7	M8 x 30
IK 140-0601	IK 141-0601	6 7 x 7	M8 x 60
IK 140-0800	IK 141-0800	8 7 x 7	M10 x 80
IK 140-1000	IK 141-1000	10 7 x 19	M14 x 100
IK 140-1200	IK 141-1200	12 7 x 19	M16 x 120

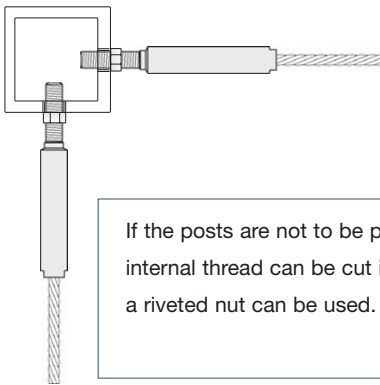




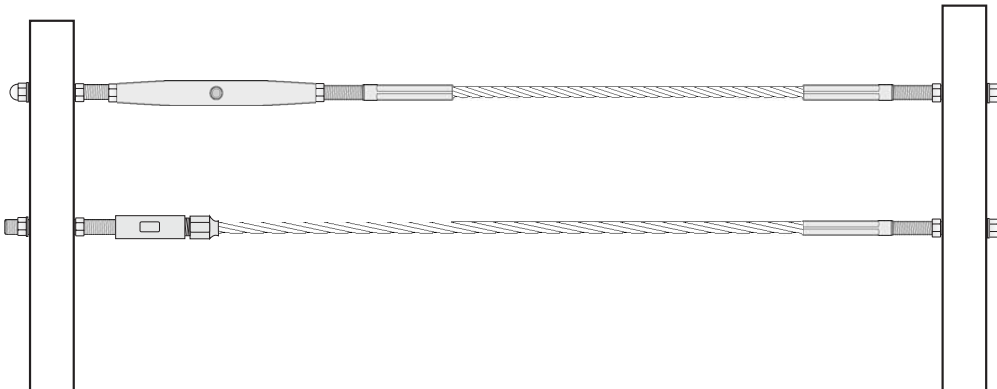
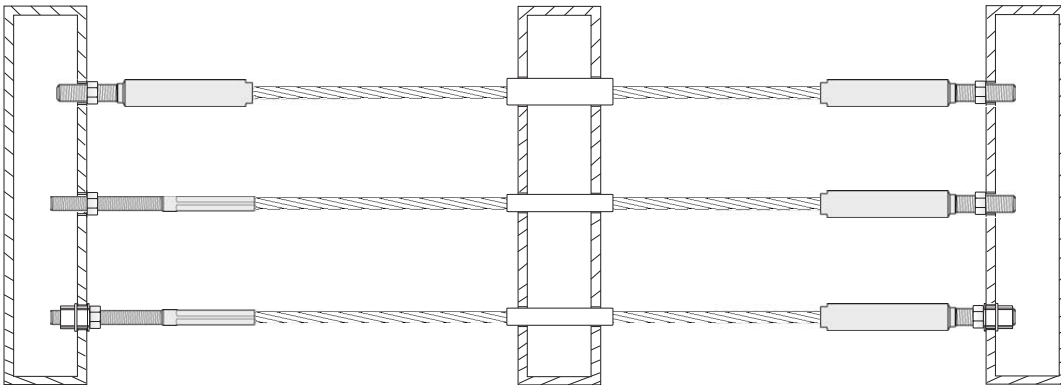
Tension is created within the cable by tightening the nuts. Loose sleeves serve to protect the cables and coated post profiles against abrasion.



Preformed connections at the posts compensate for angle changes of cables.



If the posts are not to be penetrated, an internal thread can be cut in the wall or a riveted nut can be used.



Compensation for large tolerances allows use of ready assembled parts with turnbuckles and end connections for self assembly.



I-SYS: Internal Threads



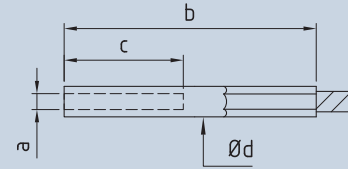
Long lengths of splendid cable can be seen in bridges and on stairways. They provide safety, divide different areas of use from one another or mark structures in public spaces. Generous forms require the cables to be strung in the right rhythm. Internal threads do sterling service here. Reduced to a minimum as regards form, they secure the cable fixing, maintain cables at the right lengths and keep them parallel to one another.



Internal thread swaged

Part number RH thread	Part number LH thread	ø rope	a	b	c	ø d	kN
860-0200-015	861-0200-015	2	M4	45	15	6	2,9
860-0300-020	861-0300-020	3	M5	60	20	7	6,7
860-0300-035	861-0300-035	3	M5	90	35	7	6,7
860-0400-020	861-0400-020	4	M6	65	20	8	11,8
860-0400-035	861-0400-035	4	M6	90	35	8	11,8
860-0500-020	861-0500-020	5	M6	70	20	8	12
860-0500-035	861-0500-035	5	M6	100	35	8	12
860-0600-025	861-0600-025	6	M8	90	25	10	16,5
860-0600-050	861-0600-050	6	M8	120	50	10	16,5
860-0800-060	861-0800-060	8	M10	180	60	13	26
860-1000-080	861-1000-080	10	M12	170	80	18	69,5
860-1000-081	861-1000-081	10	M14	185	80	20	69,5
860-1200-100	861-1200-100	12	M16	210	100	24	93,6
860-1600-120	861-1600-120	16	M20	250	120	30	159

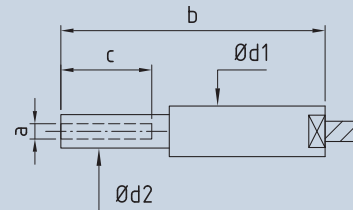
Material 1.4404



Internal thread swivel swaged

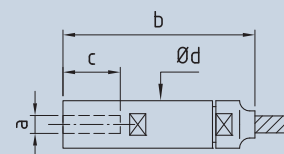
Part number	ø rope	a	b	c	ø d1	ø d2	kN
857-0300-020	3	M5	91	20	10	8	4,6
857-0300-035	3	M5	113	35	10	8	4,6
857-0400-020	4	M6	91	20	10	8	8,1
857-0400-035	4	M6	113	35	10	8	8,1
857-0500-020	5	M6	111	20	13	10	12
857-0500-035	5	M6	133	35	13	10	12
857-0600-025	6	M8	116	25	13	10	12,5
857-0600-050	6	M8	148	50	13	10	12,5

Material 1.4404 | Not suitable for strand 1 x 19



Internal thread swageless connection

Part number RH thread	Part number LH thread	ø rope	a	b	c	ø d	kN
831-0200	832-0200	2	M6	55	18	13	2
831-0300	832-0300	3	M6	55	18	13	4,5
831-0400	832-0400	4	M6	55	18	13	8
831-0500	832-0500	5	M8	57	20	15	12,6
831-0600	832-0600	6	M8	57	20	15	18,1
831-0800	832-0800	8	M10	87	40	20	32,2
831-1000	832-1000	10	M14	123	60	28	46,8
831-1200	832-1200	12	M16	137	60	30	67,6



Material 1.4404 | Not suitable for strand 1 x 19