Kelly A. Williams
COMMISSIONER

City of Wilmington
Delaware

LOUIS L. REDDING CITY/COUNTY BUILDING
800 FRENCH STREET-6TH FLOOR
WILMINGTON, DELAWARE
19801-3537

DEPARTMENT OF PUBLIC WORKS
Water Division

August 29, 2019

Reza Moqtaderi
Engineer
Environmental Finance
Office of the Secretary
Delaware Dept. of Natural Resources & Environmental Control
Enterprise Business Park
97 Commerce Way, Suite 106
Dover, DE 19904-7794

RE: Wilmington Wetland Park - AIS Waiver Request for Stainless Steel Mesh Netting

Dear Mr. Moqtaderi,

The City of Wilmington Department of Public Works is seeking a waiver for the subject project based on the lack of a US made source for the product specified. The Wilmington Wetland Park key pedestrian accessible feature is a boardwalk that traverses through the wetlands. The boardwalk railing design specifies a transparent stainless-steel mesh netting system to minimize visual impact of the adjacent wetlands and to provide increased longevity as well as reduced maintenance. However, after extensive market research it has been determined that an equivalent alternative for the mesh system is not manufactured by any US based company.

For this reason, the City of Wilmington is requesting an AIS waiver for the stainless-steel mesh netting.

Project Description
The Wilmington Wetland Park is an innovative 45-acre urban stormwater wetland park that will concurrently remediate a large brownfield site while restoring impacted tidal wetlands to a highly functioning storm water wetland system. The proposed facility is designed to take pressure off the existing City CSO resulting in reduced flooding of the surrounding communities. The restored natural area and wetland park will remediate soil contamination; provide wetland related water quality and wildlife benefits; increase storm resiliency; and provide a much-needed open space amenity for the surrounding community. The project provides outdoor amenities to a disadvantaged community while still fulfilling the project's main objective of handling stormwater through natural hydrological functions.

Wetland Park Function and Design Features
The overall wetland park project is designed to provide resiliency to flooding and sea level rise while creating a publicly accessible community amenity. It is also envisioned to be the stimulus for economic development in the surrounding blighted communities. Proposed recreational uses within the project

include picnic groves with pavilions at key vantage points, ADA compliant walking trails, and a series of wetland boardwalks with ecological interpretation stations which will provide access through the wetlands. The accessible boardwalks, which are they key public amenity, will provide an immersive experience into the wetlands while discouraging direct access and thus damage to planting communities and wetland hydrology.

About the Boardwalk Mesh Railing System

The materials specified for the boardwalk railing system (mesh netting) is manufactured by Jakob Webnet. The product is a versatile, pliable, high strength stainless steel mesh system manufactured from High Grade 316 stainless steel wire rope. An innovative, highly durable product, Webnet may be used in many different applications, including balustrade infill, animal enclosures, safety nets and plant supports. The Webnet product specified is easy to install and flexible in that it addresses a variety of requirements – aesthetics, durability, ease of installation and cost. Additionally, it discreetly fulfills its function as a barrier in a transparent manor providing appeal as an elegant spatial design element maintaining full visibility to the wetlands beyond.

Justification for Use of Foreign Materials

The justification behind this waiver request is the lack of availability of an equivalent product manufactured in the USA that meets both the specification for mesh netting and the end design of the boardwalk railing system. Extensive searches for a comparable complete system to that manufactured by Jakob Webnet only led to other portions of system products manufactured in China, Singapore or Korea. One US based vendor, Nets Unlimited http://netsunlimited.com/start.html, suggested that they could assemble the netting configuration here in the US but would have to use stainless steel cable procured from oversees as the cable in question is not manufactured in the US. The e-mail response to one of our inquiries states:

> '... the aircraft cable we use to make the net is imported—usually from Korea or China and we buy that from a US based rigging shop that imports it and certifies it from overseas. Then we weave it into a net...'

However, despite Nets Unlimited being the only US vendor potentially available, lead time and ultimate cost make them a non-viable option. Therefore, for all the reasons stated above we are seeking a waiver for the boardwalk railing system (mesh netting) as manufactured by Jakob Webnet. We appreciate your consideration of this waiver request and we look forward to addressing any questions you may have.

Very truly yours,

Bryan Lennon

Bryan Lennon
Assistant Water Division Director City of Wilmington
Department of Public Works

cc: Kelly A. Williams, Commissioner, Department of Public Works
Vincent Carroccia, Deputy Commissioner, Department of Public Works

In response to the request for additional information, please see below:

Reza Moqtaderi
Engineer
Environmental Finance
Office of the Secretary
Delaware Dept. of Natural Resources & Environmental Control
Enterprise Business Park
97 Commerce Way, Suite 106
Dover, DE 19904-7794

Subject: South Wilmington Wetland Park (Contract No: 19052PW) -AIS Waiver Request for Handrail Wire Mesh

Dear Mr. Moqtaderi,

The South Wilmington Wetland Park (Contract Number 19052 PW) is an innovative 45-acre urban stormwater wetland park that will concurrently remediate a large brownfield site while restoring impacted tidal wetlands to a highly functioning storm water wetland system. The proposed facility is designed to take pressure off the existing City CSO resulting in reduced flooding of the surrounding communities. The restored natural area and wetland park will remediate soil contamination; provide wetland related water quality and wildlife benefits; increase storm resiliency; and provide a much-needed open space amenity for the surrounding community. The project provides outdoor amenities to a disadvantaged community while still fulfilling the project's main objective of handling stormwater through natural hydrological functions.

The construction material that is non-AIS is the wire mesh handrail for boardwalk. The waiver will include all components needs for purchasing and installing the complete Jakob system to implement the design. The components include the following product numbers: 20261-0150-060 (webnet micro mesh), 10820-0600 (stainless steel wire rope), 30850-0600-060 (swaged external thread end), 30814-0600-01 (eye end / swaged internal thread end), 30858-0600-10 (suspension-rope clamp), 30896-1000 (washers), 30892-1000 (hexagon nut), and 30894-1000 (dome nut). The accessible boardwalks, which are they key public amenity, will provide an immersive experience into the wetlands while discouraging direct access and thus damage to planting communities and wetland hydrology.

The bid quantity for this item is 1900 linear feet priced at [redacted] per linear foot for a total cost of [redacted]. Total project cost is [redacted]. The material cost at the time of bid was [redacted] and had a lead time of 8 to 12 weeks.

The Project Manual for Bid Add Alternative A, specifically Section 32 34 44 Subpart 2, A & B call out Jakob Inc. as the only source for this alternate, specifically that no substitutions are allowed. The name and address of the required supplier is Jakob, Inc., which is located at: 955 NW 17th Ave. Suite B; Delray Beach, FL 33445. Jakob, Inc. provided the following response that they are "a Swiss based company so all our material is sourced and fabricated overseas. [Jakob is] just a sales office here in the States so nothing is sourced or fabricated locally."

Sincerely,

Alex Schaffer
Construction Project Engineer
RK&K
110 S. Poplar St, Suite 102
Wilmington, DE 19801

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturer of stainless steel wire rope, fittings, and other stainless steel components with 10 years minimum successful experience.

B. Installer Qualifications: Experienced in performing work of this section that has specialized in installation of work similar to that required for this project.

C. Mock-Up: Provide a mock-up for evaluation of preparation techniques and installation workmanship.
   1. Locate in areas designated by Engineer.
   2. Size: Minimum of 10 LF (two railing sections – 3 posts.)
   3. Do not proceed with remaining work until workmanship is approved by Engineer.
   4. Rework mock-up as required to produce acceptable work.
   5. Retain mock-up during construction as quality standard.
   6. Incorporation: Incorporate mock-up into final construction.

D. Preinstallation Meetings: Conduct meetings including Contractor, Engineer, fabricator, installer and other subcontractors whose work involves cable railing system to verify project requirements, framing and support conditions, mounting surfaces and manufacturer's installation. Comply with General conditions requirements.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Handle and store products according to manufacturer's recommendations. Leave products wrapped or otherwise protected and under clean and dry storage conditions until required for installation.

C. Exercise care not to scratch, mark, dent, or bend metal components during delivery, storage, and installation.

1.8 PROJECT CONDITIONS

A. Verify actual openings by field measurements before fabrication; show recorded measurements on shop drawings.

B. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Jakob, Inc., which is located at: 955 NW 17th Ave. Suite B ; Delray Beach, FL 33445; Toll Free Tel: 866-215-1421; Tel: 561-330-6502; Fax: 561-330-6508; Email: info@jakob-usa.com; Web: www.jakob-usa.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of the bidding procedures.

D. Provide all cable, materials, fittings and components from a single manufacturer.

2.2 WIRE ROPE

A. Material: ASTM A 492 and ASTM A 555, Type 316 stainless steel. Fabricate wire rope with integral colored filament designating specific manufacturer.

B. Type 1: 6 x 7wire rope as manufactured by Jakob, Inc.
1. Diameter: 8 mm.
2. Breaking load including safety factor: 38 Kn minimum.

C. Length: Provide wire rope tendons in lengths indicated on Drawings and approved shop drawings.
1. Provide optimum adjustment in both directions by calculating final tendon lengths with allowance for tensioning fittings with 2/3 open and with 1/3 of thread length engaged.

2. Measure tendon length from center of pin to center of pin, or center of eye to center of eye.

2.3 WIRE NETTING

A. Material: Webnet as manufactured by Jakob, Inc. Parallel stainless steel wire ropes connected by reciprocally curved offset sleeves such that ropes are neither knotted nor crossed. Wire rope shall be fabricated from cold-drawn, AISI Type 316 stainless steel wire complying with ASTM A 492 and ASTM A 555.

B. Type 1: Webnet No. 0150-060 as manufactured by Jakob, Inc.
1. Diameter: 1.5 mm.
2. Breaking load including safety factor: 1.4 Kn minimum.

C. Perimeter configurations:
1. Perimeter Type No. H10 as manufactured by Jakob, 1nc.
a. Closed with eye ends.
b. Suitable for:
1) Horizontal installation.

2.4 FITTINGS

A. Provide fittings required for attachment and connection of stainless steel wire rope and infill to support framework and substrates.

B. Fitting minimum breaking strength:
1. As selected by manufacture to suit application and design requirements specified.

C. Types: Fabricate from AISI Type 316 and 316L stainless steel complying with ASTM F

Phone: (302) 658-6524

DIAMOND Materials

Fax: (302) 658-0684

Asphalt • Paving • Excavation • Pipework • Concrete • Demolition
242 N. James Street • Suite 102 • Newport, Delaware 19804
www.diamondmaterials.com

April 16, 2019

Ms. Joni O'Brien
RK&K
110 South Poplar Street, Suite 102
Wilmington, DE 19801

REF: Contract No. 19052 PW, South Wilmington Wetland Park Project

SUBJECT: **RFI#001** – Buy American

Dear Ms. O'Brien,

The statement and question below was submitted to the City of Wilmington prior to the Bid Date; however, no response was ever generated. In an effort to protect ourselves, we are hereby formally submitting the statement and question below for a response to the project team:

> The Project Manual for Bid Add Alternative A, specifically Section 33 34 44 Subpart 2, A & B call out Jakob, Inc as the only source for this alternate, specifically that NO SUBSTITUTIONS are allowed. Jakob Inc. has just notified that, "*We are a Swiss based company so all our material is sourced and fabricated overseas. We're just a sales office here in the States so nothing is sourced / fabricated locally.*" This is in direct violation of the American Iron and Steel Requirements that this project must adhere to. Please advise how a Contractor can certify that they meet this requirement, when being forced to use a non-American supplier.

The question above was asked prior to the bid, therefore the following question is more appropriate: Please advise if the City will accept an alternate railing, if available, and/or if the City will exempt this railing from the AIS requirements?

We look forward to your timely response to the above. Should you have any questions please do not hesitate to contact me.

Sincerely,

Joshua Crane

Joshua Crane, P.E.
VP of Project Management

cc: K. Morgan, K. Lauff, L. Tracey, F. Herron, B. Lennon, B., Jones, J. Reel, File D19-005.RFIs

DIAMOND MATERIALS

242 N. James Street - Suite 102
Newport, Delaware 19804

(302) 658-6524
Fax (302) 658-0684

An Equal Opportunity Employer

LETTER OF TRANSMITTAL

Date:	**5/8/2019**
Contract No:	**19052 PW**
Submittal Identifier	**27**

TO:
City of Wilmington, Delaware
Department of Public Works
South Wilmington Wetlands Park

WE ARE SENDING YOU ☑ Attached ☐ Under separate cover via _____ the following items:

☑ Shop Drawings ☐ Change Order ☐ Plans ☐ Samples ☐ Specifications ☐ _____

COPIES	DATE	DESCRIPTION
1	5/8/2019	ADD Alternate A : Wire Mesh Handrail for Boardwalk

THESE ARE TRANSMITTED AS CHECKED BELOW:

☑ For approval ☐ As requested ☐ For review ☐ Approved as noted

☐ For your use ☐ Approved ☐ Change order ☐ Returned for corrections

☐ For Bids Due ☐ _____

Remarks This is used on the boardwalk handrail.

CHECKED AND APPROVED FOR SUBMISSION
(DIAMOND MATERIALS, LLC)
JOB: SOUTH WILMINGTON WETLANDS PARK
CONTRACT NO. 19052 PW
DATE _____ BY _____
SUBMITTAL NUMBER _____
ITEM _____
CONTRACT REFERENCES:
SPECIFICATION _____
DRAWING _____

Signed: _____
Project Manager

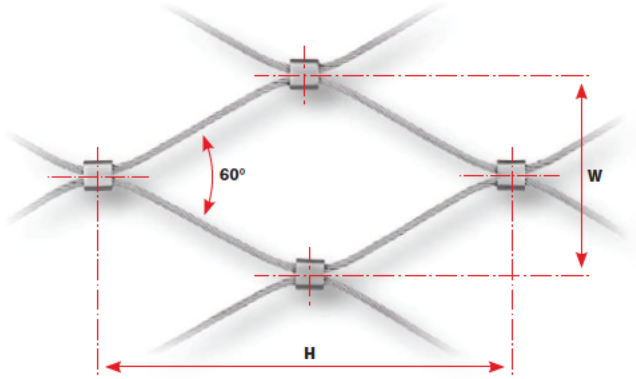
WEBNET micro

1.11

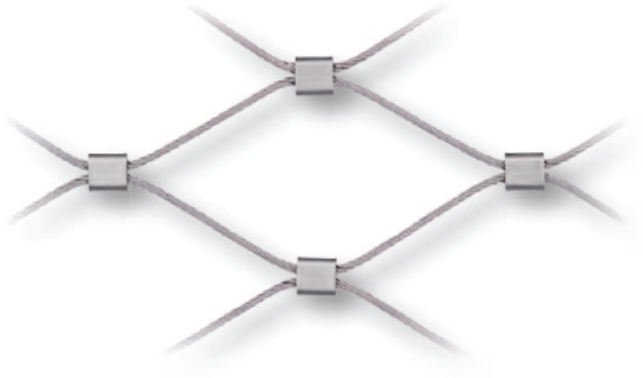
Rope Ø 1.5 mm
AISI 316 material group

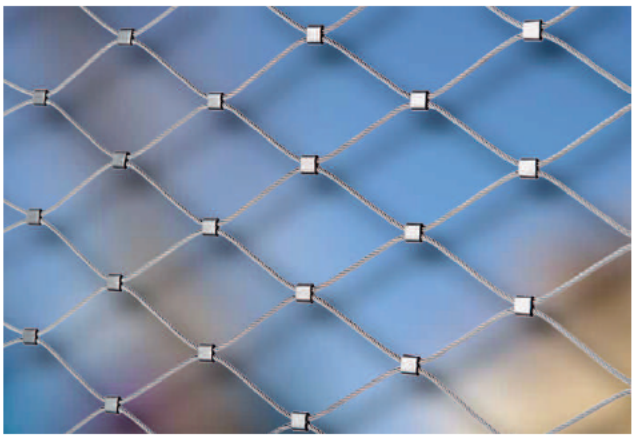
Order No.	Rope Ø mm	Mesh aperture W × H mm	Weight kg/m²	Rope length m/m²	Number of sleeves per m²
20261-0150-025	**1.5**	**25** × 45.46	1.84	87	1800
20261-0150-030	**1.5**	**30** × 60.73	1.28	80	1300
20261-0150-035	**1.5**	**35** × 67.98	1.20	78	855
20261-0150-040	**1.5**	**40** × 75.40	0.85	60	760
20261-0150-050	**1.5**	**50** × 91.39	0.64	48	490
20261-0150-060	**1.5**	**60** × 107.78	0.50	40	360
20261-0150-070	**1.5**	**70** × 124.78	0.47	34	260
20261-0150-080	**1.5**	**80** × 141.45	0.34	30	195
20261-0150-100	**1.5**	**100** × 175.34	0.30	25	130
20261-0150-120	**1.5**	**120** × 210.36	0.24	21	95
20261-0150-140	**1.5**	**140** × 244.98	0.20	18	73
20261-0150-160	**1.5**	**160** × 280.10	0.17	16	57
20261-0150-180	**1.5**	**180** × 314.33	0.14	14	45
20261-0150-200	**1.5**	**200** × 348.51	0.13	13	38
20261-0150-250	**1.5**	**250** × 435.60	0.12	10	27
20261-0150-400	**1.5**	**400** × 694.10	0.07	9	16

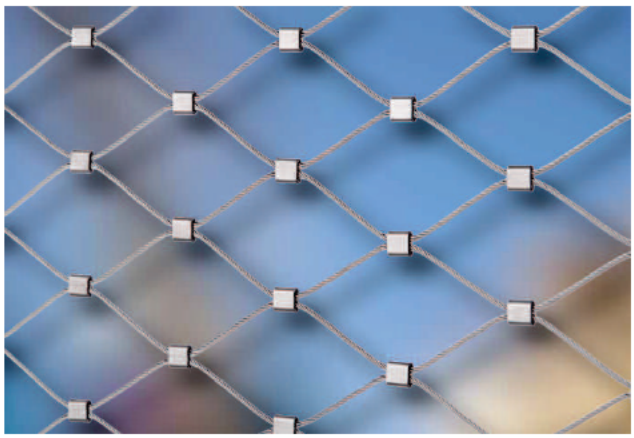
WEBNET micro



Standard sleeves





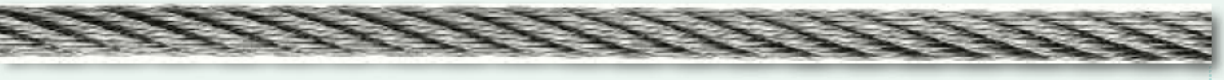


Created: 10.07.2015 **Amended:**

Werkstoffgruppe AISI 316
Groupe de matériaux AISI 316
AISI 316 material group

Inox-Seil WC
Câble Inox WC
Stainless steel wire rope WC

Nr. / N° / No.	Seil Câble Rope ⌀	Mindestbruchkraft Charge de rupture minimale Minimum breaking strength kN x 102 = kp	Konstruktion Construction Construction	Gewicht Poids Weight Kg
	mm	kN		100 m
10820-0100-42	**1**	0,5	6 x 7 + WC	0,4
10820-0200	**2**	2,4	6 x 7 + WC	1,5
10820-0300	**3**	5,2	6 x 7 + WC	3,1
10820-0400	**4**	9,1	6 x 7 + WC	5,5
10820-0500	**5**	13	6 x 7 + WC	8,4
10820-0600	**6**	19	6 x 7 + WC	13
10820-0800	**8**	38	6 x 7 + WC	23



Stahleinlage
Ame métallique
Wire core

⌀ **1–8 mm**

CL: Konfektionslänge / Longueur de confection / Assembly length

Werkstoffgruppe AISI 316
Groupe de matériaux AISI 316
AISI 316 material group

Inox-Seil WC
Câble Inox WC
Stainless steel wire rope WC

Nr. / N° / No.	Seil Câble Rope ⌀	Mindestbruchkraft Charge de rupture minimale Minimum breaking strength kN x 102 = kp	Konstruktion Construction Construction	Gewicht Poids Weight Kg
	mm	kN		100 m
10830-0200	**2**	2	6 x 19 + WC	1,5
10830-0300	**3**	4,6	6 x 19 + WC	3,6
10830-0400	**4**	8,3	6 x 19 + WC	5,6
10830-0500	**5**	13	6 x 19 + WC	8,1
10830-0600	**6**	18,7	6 x 19 + WC	12
10830-0800	**8**	33,3	6 x 19 + WC	23
10830-1000	**10**	52,1	6 x 19 + WC	39
10830-1200	**12**	75	6 x 19 + WC	56
10830-1600	**16**	133	6 x 19 + WC	98
10830-2000	**20**	188	6 x 36 + WC	164

Stahleinlage
Ame métallique
Wire core

⌀ **2–20 mm**

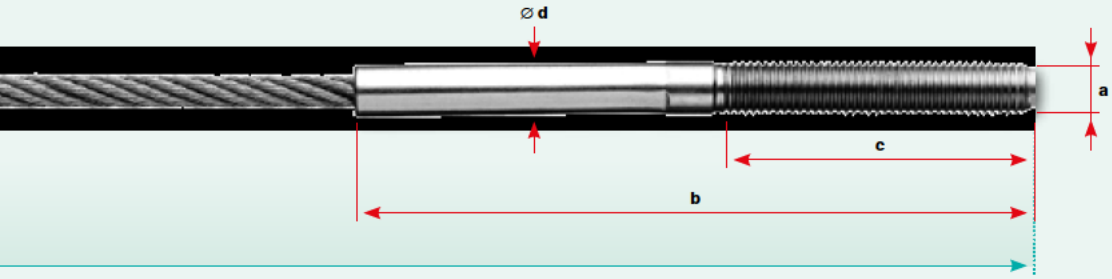
CL: Konfektionslänge / Longueur de confection / Assembly length

Werkstoffgruppe AISI 316
Groupe de matérlaux AISI 316
AISI 316 material group

Aussengewinde verpresst
Filetage extérieur serti
Swaged external thread end

Gewinde rechtsgängig Filetage pas à droite Right-hand thread	Gewinde linksgängig Filetage pas à gauche Left-hand thread	Seil Câble Rope	Gewinde Filetage Thread	Abmessungen Dimensions Dimensions		
Nr. / N° / No.	**Nr. / N° / No.**	⌀	**a**	**b**	**c**	**⌀ d**
		mm	mm	mm	mm	mm
30850-0100-020	**30855**-0100-020	**1**	**M4**	29	20	4
30850-0200-030	**30855**-0200-030	**2**	**M5**	48	30	5
30850-0200-060	**30855**-0200-060	**2**	**M5**	78	60	5
30850-0300-015	**30855**-0300-015	**3**	**M6**	43	15	6
30850-0300-030	**30855**-0300-030	**3**	**M6**	58	30	6
30850-0300-060	**30855**-0300-060	**3**	**M6**	88	60	6
30850-0400-030	**30855**-0400-030	**4**	**M6**	62	30	7
30850-0400-031	**30855**-0400-031	**4**	**M8**	62	30	8
30850-0400-060	**30855**-0400-060	**4**	**M6**	92	60	7
30850-0400-061	**30855**-0400-061	**4**	**M8**	92	60	8
30850-0400-081		**4**	**M8**	111	80	8
30850-0500-030	**30855**-0500-030	**5**	**M8**	68	30	8
30850-0500-060	**30855**-0500-060	**5**	**M8**	98	60	8
30850-0500-080	**30855**-0500-080	**5**	**M8**	118	80	8
30850-0600-030	**30855**-0600-030	**6**	**M10**	80	30	10
30850-0600-060	**30855**-0600-060	**6**	**M10**	110	60	10
30850-0600-080	**30855**-0600-080	**6**	**M10**	130	80	10
30850-0800-080	**30855**-0800-080	**8**	**M12**	157	80	13
30850-0800-120	**30855**-0800-120	**8**	**M12**	197	120	13
30850-1000-110	**30855**-1000-110	**10**	**M16**	210	100	18
30850-1200-120	**30855**-1200-120	**12**	**M20**	255	120	20
30850-1600-120	**30855**-1600-120	**16**	**M24**	283	120	27
30850-2000-150	**30855**-2000-150	**20**	**M30**	341	150	32

⌀ 1–20 mm **M4–30**



CL: Konfektionslänge / Longueur de confection / Assembly length

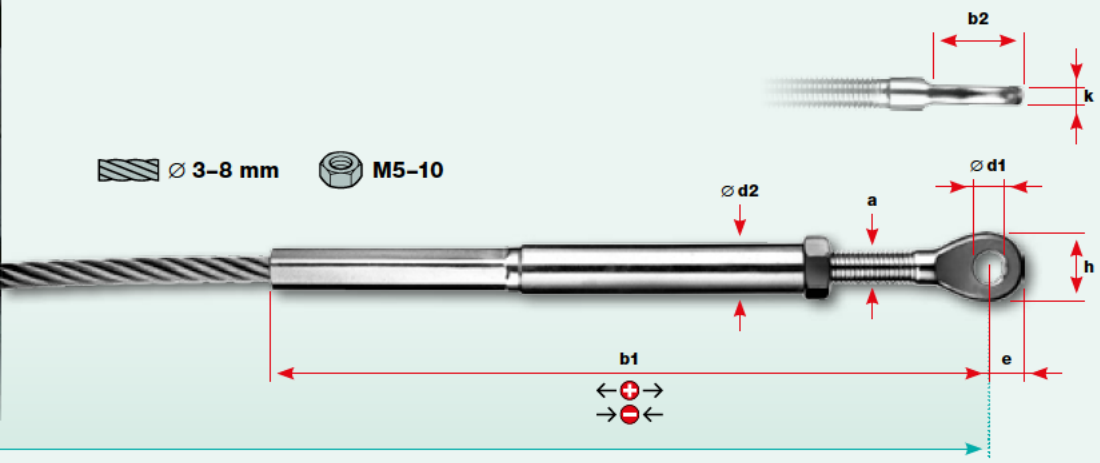
- Bitte beachten Sie die **unterschiedlichen Gewindegrössen** bei gleichem Seil-Ø.
- Tenez compte des **différentes grandeurs des filetages** pour un même Ø de câble.
- Please note the **different thread sizes** for identical wire rope diameters.

- Beim Pressvorgang **verlängert sich das Mass (b)** um 3 bis 6%.
- **La cote (b) s'allonge** de 3 à 6% lors du sertissage.
- **Dimension (b) is enlarged** by 3 to 6% during the swaging process.

Werkstoffgruppe AISI 316
Groupe de matériaux AISI 316
AISI 316 material group

Öse / Innengewinde verpresst
Œillet / filetage intérieur serti
Eye end / swaged internal thread end

Gewinde rechtsgängig Filetage pas à droite Right-hand thread	Gewinde linksgängig Filetage pas à gauche Left-hand thread	Seil Câble Rope	Gewinde Filetage Thread						Abmessungen Dimensions Dimensions			Spannweg Course Range	
Nr. / N° / No.	**Nr. / N° / No.**	**⌀**	**a**	**b1**	**b2**	**⌀ d1**	**⌀ d2**	**e**	**h**	**k**		**⊕**	**⊖**
		mm	mm	mm	mm	mm	mm	mm	mm	mm		mm	mm
30814-0300-01	**30813**-0300-01	**3**	**M5**	83	15	5,5	7	6	12	3		5	8
30814-0300-02	**30813**-0300-02	**3**	**M5**	106	15	5,5	7	6	12	3		13	15
30814-0400-01	**30813**-0400-01	**4**	**M6**	89	16	6,5	8	7	14	4		3	8
30814-0400-02	**30813**-0400-02	**4**	**M6**	114	16	6,5	8	7	14	4		11	15
30814-0500-01	**30813**-0500-01	**5**	**M6**	97	16	6,5	8	7	14	4		3	8
30814-0500-02	**30813**-0500-02	**5**	**M6**	122	16	6,5	8	7	14	4		11	15
30814-0600-01	**30813**-0600-01	**6**	**M8**	124	21	8,5	10	8,5	17	5		3	10
30814-0600-02	**30813**-0600-02	**6**	**M8**	161	21	8,5	10	8,5	17	5		13	25
30814-0800-01	**30813**-0800-01	**8**	**M10**	205	29	10,5	13	12	22	6		10	35
30814-1000-01	**30813**-1000-01	**10**	**M12**	258	31	13	18	14	25	8		15	30
30814-1000-02	**30813**-1000-02	**10**	**M14**	284	34	13	20	14	28	9		15	39
30814-1200-01	**30813**-1200-01	**12**	**M16**	322	37	14,5	24	15	31	10		26	39
30814-1600-01	**30813**-1600-01	**16**	**M20**	392	49	19,5	30	21	40	15		30	44



CL: Konfektionslänge / Longueur de confection / Assembly length

⌀ **10–16 mm** **M12–20**

■ Beim Pressvorgang **verlängert sich das Mass (b1)** um 3 bis 6%.
■ **La cote (b1) s'allonge** de 3 à 6% lors du sertissage.
■ **Dimension (b1) is enlarged** by 3 to 6% during the swaging process.

⊕⊖

■ **Ausgangslage für den Spannweg:** Die Aussengewinde sind je halb eingeschraubt. **Achtung:** Die minimale Einschraubtiefe beträgt 1,5 x Gewinde-Ø (M6 = 9 mm).
←⊕→ = verlängern (lösen)
→⊖← = verkürzen (spannen)

■ **Position initiale pour la course de serrage:** Les filetages extérieurs sont vissés chacun de moitié dans le tuyau de serrage. **Attention:** La profondeur minimale de vissage est égale à 1,5 x Ø du filetage (M6 = 9 mm).
←⊕→ = allonger (diminue la tension)
→⊖← = raccourcir (augmente la tension)

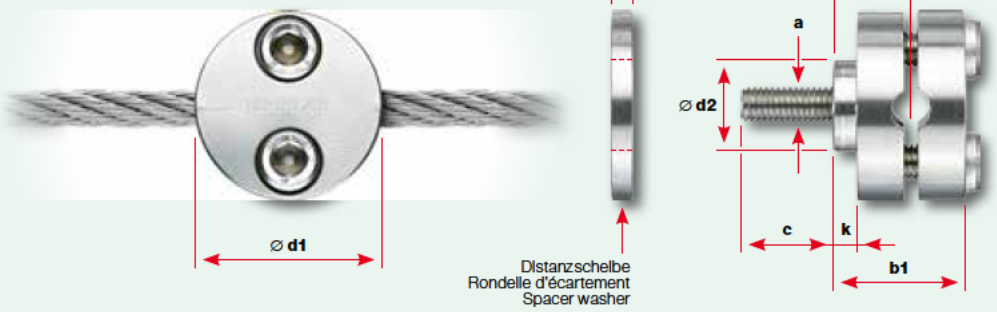
■ **Tensioning range:** The external thread ends are both screwed in halfway. **Caution:** The minimal screw insertion depth is 1.5 x thread Ø (M6 = 9 mm).
←⊕→ = make longer (relax)
→⊖← = make shorter (tension)

Werkstoffgruppe AISI 316
Groupe de matériaux AISI 316
AISI 316 material group

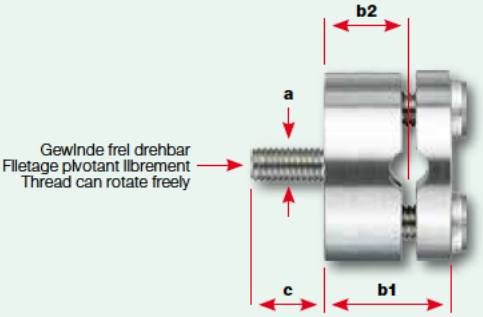
Tragseilhalter
Serre-câble pour câble porteur
Suspension-rope clamp

Nr. / N° / No.	Seil Câble Rope ⌀	Gewinde Filetage Thread a	b1	b2	c	Abmessungen Dimensions Dimensions ⌀ d1	⌀ d2	k
	mm	mm	mm	mm	mm	mm	mm	mm
30858-0600-10	**6**	**M8**	27	16	15	40	20	5
30858-0600-25	**6**	**M8**	27	16	25	40	20	5
30858-0800-10	**8**	**M8**	27	16	15	40	20	5
30858-0800-25	**8**	**M8**	27	16	25	40	20	5
30858-0600-20		Distanzscheibe / Rondelle d'écartement / Spacer washer				40	20,5	5
30858-1012-10	**10–12**	**M12**	34	23	20	50		

⌀ 6–8 mm **M8**



⌀ 10–12 mm **M12**

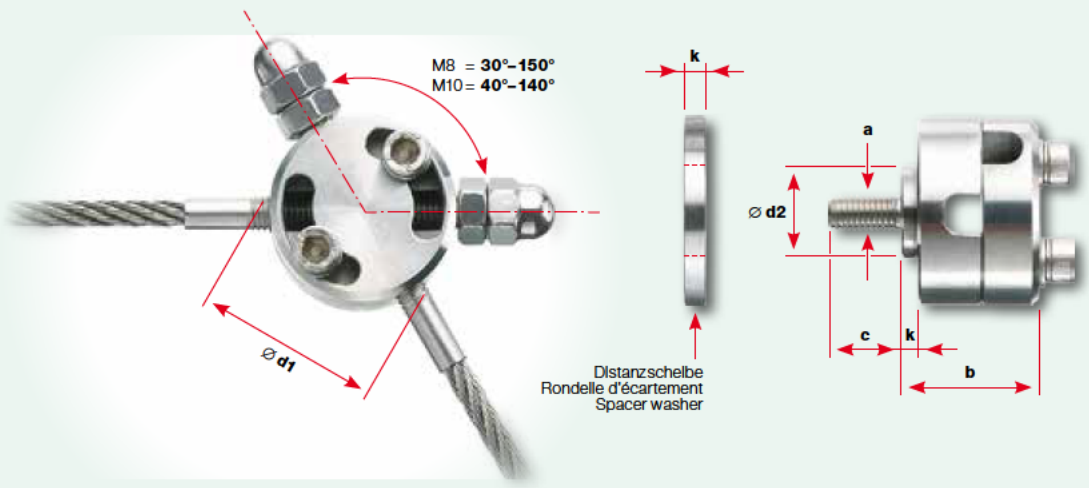


Werkstoffgruppe AISI 316
Groupe de matériaux AISI 316
AISI 316 material group

Tragseilhalter verstellbar
Serre-câble réglable pour câble porteur
Adjustable suspension-rope clamp

Nr. / N° / No.	Für Seilanschluss mit Aussengewinde Pour raccordement du câble avec filetage extérieur For rope connection with external thread a	Gewinde Filetage Thread a	b	c	Abmessungen Dimensions Dimensions ⌀ d1	⌀ d2	k
	mm	mm	mm	mm	mm	mm	mm
30858-0600-11	**M8**	**M8**	31	15	40	20	5
30858-0600-13	**M8**	**M8**	31	25	40	20	5
30858-0600-12	**M10**	**M8**	34,5	15	40	20	5
30858-0600-14	**M10**	**M8**	34,5	25	40	20	5
30858-0600-20		Distanzscheibe / Rondelle d'écartement / Spacer washer			40	20,5	5

M8



Werkstoffgruppe AISI 316
Groupe de matérlaux AISI 316
AISI 316 material group

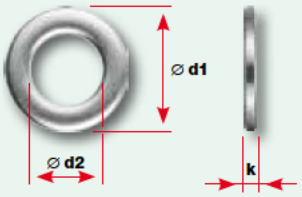
Scheiben
Rondelles
Washers

Schelbe Rondelle Washer **Nr. / N° / No.**	Nenngrösse Désignation Size designation **⌀ d2**	Abmessungen Dimensions Dimensions **⌀ d1**	**k**
	mm	mm	mm
30896-0300	**M3**	6	0,5
30896-0400	**M4**	8	0,5
30896-0500	**M5**	9	1
30896-0600	**M6**	11	1,6
30896-0800	**M8**	15	1,6
30896-1000	**M10**	18	1,6
30896-1200	**M12**	20	2
30896-1400	**M14**	24	2,5
30896-1600	**M16**	28	2,5
30896-2000	**M20**	34	3
30896-2400	**M24**	44	4
30896-3000	**M30**	56	4

Schelbe für Holz Rondelle pour bois Washer for wood **Nr. / N° / No.**	Nenngrösse Désignation Size designation **⌀ d2**	Abmessungen Dimensions Dimensions **⌀ d1**	**k**
	mm	mm	mm
30896-0300-09	**M3**	9	0,8
30896-0400-12	**M4**	12	1
30896-0500-15	**M5**	15	1,2
30896-0600-18	**M6**	18	1,6
30896-0800-24	**M8**	24	2
30896-1000-30	**M10**	30	2,5
30896-1200-37	**M12**	37	3
30896-1600-50	**M16**	50	3
30896-2000-60	**M20**	60	4

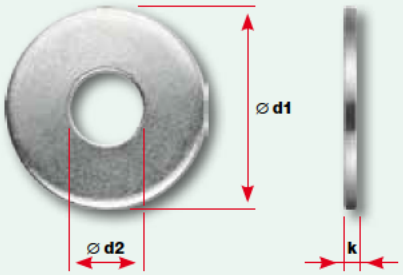
M3–30

(DIN 433 / M24–30 DIN 125)



M3–20

(DIN 9021)



Werkstoffgruppe AISI 316
Groupe de matérlaux AISI 316
AISI 316 materlal group

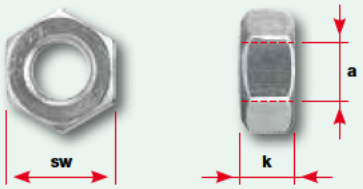
Sechskantmutter / Sicherungsmutter
Ecrou six pans / Ecrou antidesserrage
Hexagon nut / Lock nut

Gewinde rechtsgängig Filetage pas à droite Right-hand thread	Gewinde linksgängig Filetage pas à gauche Left-hand thread	Gewinde Filetage Thread	Abmessungen Dimensions Dimensions	
Nr. / N° / No.		a	k	sw
		mm	mm	mm
30892-0300	**30893**-0300	**M3**	2,4	5,5
30892-0400	**30893**-0400	**M4**	3,2	7
30892-0500	**30893**-0500	**M5**	4	8
30892-0600	**30893**-0600	**M6**	5	10
30892-0800	**30893**-0800	**M8**	6,5	13
30892-1000	**30893**-1000	**M10**	8	17
30892-1200	**30893**-1200	**M12**	10	19
30892-1400	**30893**-1400	**M14**	11	22
30892-1600	**30893**-1600	**M16**	13	24
30892-2000	**30893**-2000	**M20**	16	30
30892-2400	**30893**-2400	**M24**	19	36
30892-3000	**30893**-3000	**M30**	24	46

Gewinde rechtsgängig Filetage pas à droite Right-hand thread	Gewinde Filetage Thread	Abmessungen Dimensions Dimensions	
Nr. / N° / No.	a	k	sw
	mm	mm	mm
30892-0300-02	**M3**	4	5,5
30892-0400-02	**M4**	5	7
30892-0500-02	**M5**	5	8
30892-0600-02	**M6**	6	10
30892-0800-02	**M8**	8	13
30892-1000-02	**M10**	10	17
30892-1200-02	**M12**	12	19
30892-1400-02	**M14**	14	22
30892-1600-02	**M16**	16	24
30892-2000-02	**M20**	20	30
30892-2400-02	**M24**	24	36

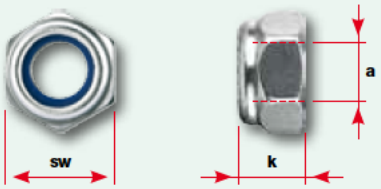
M3–30

(DIN 934)



M3–24

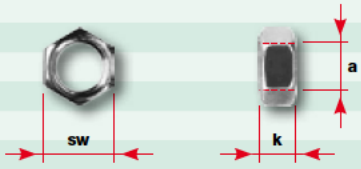
(DIN 985)



Werkstoffgruppe AISI 316
Groupe de matérlaux AISI 316
AISI 316 materlal group

MININUT-Sechskantmutter / Hutmutter
Ecrou six pans MININUT / Ecrou borgne
MININUT hexagon nut / Dome nut

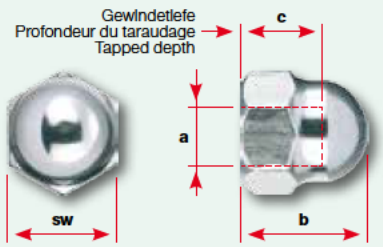
Gewinde rechtsgängig Filetage pas à droite Right-hand thread	Gewinde linksgängig Filetage pas à gauche Left-hand thread	Gewinde Filetage Thread	Abmessungen Dimensions Dimensions	
Nr. / N° / No.		a	k	sw
		mm	mm	mm
30892-0600-01	**30893**-0600-01	**M6**	4	8
30892-0800-01	**30893**-0800-01	**M8**	5	10



Gewinde rechtsgängig Filetage pas à droite Right-hand thread	Gewinde Filetage Thread	Abmessungen Dimensions Dimensions		
Nr. / N° / No.	a	b	c	sw
	mm	mm	mm	mm
30894-0300	**M3**	7	3,5	5,5
30894-0400	**M4**	8	4,1	7
30894-0500	**M5**	10	5,9	8
30894-0600	**M6**	12	6	10
30894-0800	**M8**	15	8,5	13
30894-1000	**M10**	18	10	17
30894-1200	**M12**	22	11,7	19
30894-1400	**M14**	25	13	22
30894-1600	**M16**	28	16	24
30894-2000	**M20**	34	19,7	30

M3–20

(DIN 1587)



Alex Schaffer

From: Kyle Morgan <kmorgan@diamondmaterials.com>
Sent: Friday, September 6, 2019 7:40 AM
To: Alex Schaffer
Cc: Joni O'Brien; 19148_SWWPCS
Subject: RE: Jacobs Info

Alex,

There is also [redacted] for freight.

Regards,

Kyle Morgan

Project Manager
Diamond Materials
242 N. James St, Suite 102
Newport, DE 19804
Office: (302) 658-6524 ext 34
Mobile: (302) 463-2032
Fax: (302)658-0684
Follow us on
LinkedIn
www.diamondmaterials.com

From: Kyle Morgan
Sent: Friday, September 6, 2019 7:38 AM
To: Alex Schaffer <aschaffer@rkk.com>
Cc: Joni O'Brien <jobrien@rkk.com>; 19148_SWWPCS <19148_SWWPCS@rkk.com>
Subject: RE: Jacobs Info

Alex,

The cost for just the Jacobs mesh at the time of bid was [redacted]. This doesn't include installation, only material. The lead time at the time of bid was 8-12 weeks.

Regards,

Kyle Morgan

Project Manager
Diamond Materials
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Newport, DE 19804
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