William Hackett

YOKE
SNATCH BLOCK

williamhackett.co.uk

e: liftingsales@williamhackett.co.uk
t: 01665 604200 f: 01665 604204

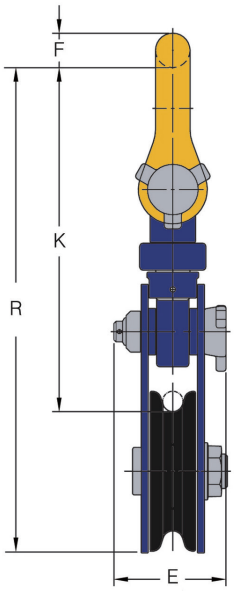
Yoke Snatch Block

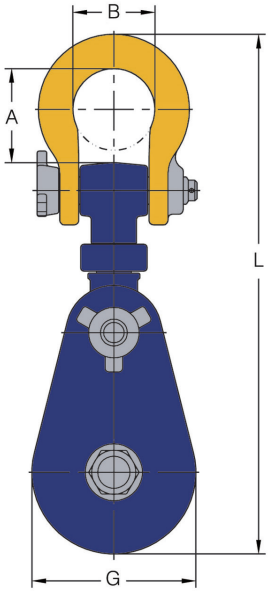
Yoke Snatch Block with captive shackle

Meets or exceeds the requirements specified in ASME B30.26 - 2010.

ABS Type Approval Ref. TA1060896-PDA

- Yoke Snatch Blocks are manufactured from the highest quality tensile steel.
- Snatch Blocks are supplied with bronze bushings and grease fitting for ease of use and extended shelf life.
- Designed with a safety factor 4:1.
- Available in sizes 2 tonnes to 20 tonnes



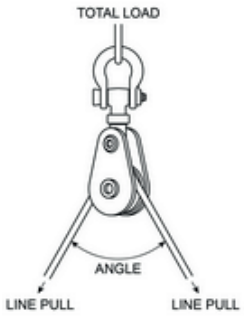


Part Code	WLL tonnes	Sheave Dia mm	Wire Rope Size mm	A mm	B mm	E mm	F mm	G mm	K mm	L mm	R mm	Mass kg
8-501-02	2.0	76	8-10	35	30	64	11	75	150	228	217	3.8
8-501-04	4.0	114	10-13	64	50	79	19	107	243	356	336	6.2
8-501-08	8.0	152	16-19	87	76	104	32	152	320	484	452	13.2
8-501-0808	8.0	203	16-19	87	76	104	32	220	333	558	526	18.2
8-541-12	12.0	152	19-22	78	80	134	44	167	359	540	496	24.8
8-541-15	15.0	203	19-22	78	80	134	44	220	355	589	545	29.6
8-541-1510	15.0	254	19-22	78	80	134	44	280	423	714	670	42.7
8-501-1512	15.0	305	19-22	78	80	134	44	330	428	770	726	52.8
8-551-20	20.0	203	25-29	109	93	150	55	216	433	671	616	41.6
8-551-2010	20.0	254	25-29	109	93	150	55	280	481	778	723	52.4
8-551-2012	20.0	305	25-29	109	93	150	55	330	485	883	778	62.8

Yoke Snatch Block

Loads on Blocks

Angle Factor Mutipliers



The Working Load Limit (WLL) for Yoke Group blocks indicates the maximum load that should be exerted on the block and its connecting fitting. This total load value may be different from the weight being lifted or pulled by a hoisting system. It is necessary to determine the total load being imposed on each block in the system to properly determine the rated capacity block to be used. A single sheave block used to change load line direction can be subjected to total loads greatly different from the weight being lifted or pulled. The total load value varies with the angle between the incoming and departing lines to the block. The following chart indicates the factor to be multiplied by the line pull to obtain the total load on the block.

Angle	Factor	Angle	Factor
0	2.00	100	1.29
10	1.99	110	1.15
20	1.97	120	1.00
30	1.93	130	0.84
40	1.87	135	0.76
45	1.84	140	0.68
50	1.81	150	0.52
60	1.73	160	0.35
70	1.64	170	0.17
80	1.53	180	0.00
90	1.41	-	-

Sheave Size and Wire Rope Strength

Ratio A	Strength Efficiency Compared to Catalogue Strength in %	Ratio A	Strength Efficiency Compared to Catalogue Strength in %
40	95	8	83
30	93	6	79
20	91	4	75
15	89	2	65
10	86	1	50

Ratio A = Sheave Diameter + Rope Diameter

Strength Efficiency

Bending wire rope reduces its strength. To account for the effect of bend radius on wire rope strength when selecting a sheave, use the table above.

Ratio B	Relative Fatigue Bending Life	Ratio B	Relative Fatigue Bending Life
30	10.0	16	2.1
25	6.6	14	1.5
20	3.8	12	1.1
18	2.9	-	-

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Certification

B. Manufacturing assessment Manufactured products (產品製造評估)

B-1 Certification unit : ABS, No. TA3055391-X

CERTIFICATE NUMBER: 16-TA3258802

PORT OFFICE: Taipei, Taiwan

Certificate of

MANUFACTURING ASSESSMENT

This is to certify that: The Undersigned did evaluate the relevant manufacturing quality procedures for the type of products of the manufacturer:

Yoke Industrial Corportion Plant at No.39, 33rd Road, Taichung Industrial Park, Taichung, Taiwan

The methods of assuring and controlling quality during production as required by the ABS Rules or Guides for the product and the associated specifications or standard were verified to reflect the specific surveys, required by the Rules and Standards for the manufacture of:

Loose Gear, Lifting Device, Lifting Frame, Hooks, Links, Shackles, Blocks

The manufacturer presented a sample or specimen of the product, representative of the "type" approved, to the undersigned, for the purpose of verifying that the "type" has been manufactured in conformance with the Manufacturer's Product Design Assessments.

This Certificate of Manufacturing Assessment is an evaluation of the manufacturer alone and is neither an approval nor a rejection of the product described above. Unless cancelled, expired or revoked, this certificate remains valid subject to annual audits

Consult the ABS Type Approval website to confirm the continued validity of this certificate and the status of the particular products being manufactured.

ISSUE DATE	27 December 2016	EXPIRATION DATE	3 January 2021

SURVEYOR R.T. Tsai

FIRST ANNUAL ENDORSEMENT

SECOND ANNUAL ENDORSEMENT

THIRD ANNUAL ENDORSEMENT

FOURTH ANNUAL ENDORSEMENT

Note: This Certificate evidences compliance with one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping and is issued solely for the use of the Bureau, its committees, its clients or other authorized entities. This Certificate is a representation only that the structure, item of material, equipment, machinery or any other item covered by this Certificate has met one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping as of the date of issue. Parties are advised to review the Rules for the scope and conditions of classification and to review the survey records for a fuller description of any restrictions or limitation on the vessel's service or surveys. The validity, applicability and interpretation of this Certificate is governed by the Rules and standards of American Bureau of Shipping who shall remain the sole judge thereof. Nothing contained in this Certificate or in any notation made in contemplation of this Certificate shall be deemed to relieve any designer, builder, owner, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied.

C. Type Approval (產品型式認證) - Certification unit : ABS

C-1 8-501 13-TA1060896-PDA

CERTIFICATE NUMBER: 13-TA1060896-PDA

DATE: 23 July 2013

ABS TECHNICAL OFFICE: Taipei Ship Engineering

CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of

YOKE INDUSTRIAL CORP. - TAICHUNG

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

PRODUCT: **Loose Gear, Lifting Device, Shackles**

MODEL: **8-501-02, 8-501-04, 8-501-08, 8-501-0808 & 8-501-12**

This Product Design Assessment (PDA) Certificate 13-TA1060896-PDA, dated 23/Jul/2013 remains valid until 22/Jul/2018 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING

Yen-Hao Lin

Engineer

AB258(01/10)

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned manufacturing process without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rule 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

C-6 8-503 16-TA1491777-PDA

CERTIFICATE NUMBER: 16-TA1491777-PDA

DATE: 18 Mar 2016

ABS TECHNICAL OFFICE: Taipei SED

CERTIFICATE OF DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of

YOKE INDUSTRIAL CORP.

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: **Loose Gear, Lifting Frame**

Model: **(1) Light Tail Board (Model: 8-503-02, 8-503-04, 8-503-08, 8-503-0808, 8-503-0810, 8-503-0812-16, 8-503-0812-19, 8-503-0814-16 & 8-503-0814-19) (2) Alloy Tail Board (Model: 8-563-1...**

This Product Design Assessment (PDA) Certificate 16-TA1491777-PDA, dated 18/Mar/2016 remains valid until 17/Mar/2021 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING

Yen-Hao Lin

Engineer/Consultant

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C-9 8-502 16-TA1538716-PDA

CERTIFICATE NUMBER: 16-TA1538716-PDA

DATE: 12 Jul 2016

ABS TECHNICAL OFFICE: Taipei SED

CERTIFICATE OF DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of

YOKE INDUSTRIAL CORP.

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: **Loose Gear Lifting Device, Hooks**

Model: **8-502-02, 8-502-04, 8-502-08, 8-502-0808, 8-502-0810, 8-502-0812-16, 8-502-0812-19, 8-502-0814-16 & 8-502-0814-19;**

This Product Design Assessment (PDA) Certificate 16-TA1538716-PDA, dated 12/Jul/2016 remains valid until 11/Jul/2021 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

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