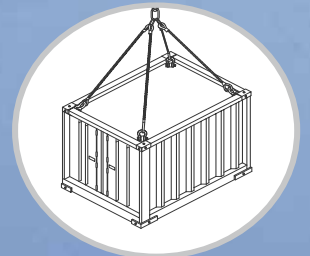




*Safety is our first priority™*



**DNV 2.7-1  
Type Approved**



# **DNV 2.7-1 TYPE APPROVAL**

**Offshore Container Lifting Operation**

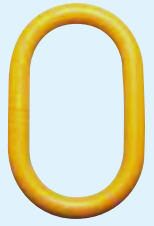
Catalog No. Offshore

**DA<sup>TM</sup>**  
**Offshore Lifting**

**Offshore Container Lifting Operation.**

# Safety is our first priority™

- Quality, Reliability, Innovation -



DA MASTER LINK  
P.8



DA MASTER LINK  
ASSEMBLY  
P.9



DA 838 Shackle  
P.10



DA 808 Shackle  
P.11

**DNV·GL**

Certificate No:  
**S-8059**  
 File No:  
**911.53**  
 Job Id:  
**262.1-016068-1**

**TYPE APPROVAL CERTIFICATE****This is to certify:****That the Lifting set for Offshore containers and Portable Offshore Units**

with type designation(s)  
**Bolt Pin Anchor Shackles - Type DA-808 - Design Temperature -40°C**  
**Bolt Pin Anchor Shackles - Type DA-838 - Design Temperature -20°C**

Issued to

**Yoke Industrial Corp.**  
**Taichung, Taiwan**

is found to comply with

**DNV 2.7-1 Offshore Containers (2013)**  
**DNV Standard for Certification No. 2.7-3 Portable Offshore Units (2011)**  
**EN 12079-2 Offshore containers and associated lifting sets Part 2: Lifting sets Design, manufacture and marking**  
**EN 13889 Forged steel shackles for general lifting purposes - Dee shackles and Bow shackles - Grade 6 - Safety**  
**IMO/MSC Circular 860**

**Application :****Grade 6 Shackles for Lifting Sets for Offshore Containers and Portable Offshore Units**This Certificate is valid until **2019-06-30**.Issued at **Høvik** on **2015-01-22**DNV GL local station: **Kaohsiung**Approval Engineer: **Nina Thorvaldsen Moberg**

for **DNV GL**  
 Digitally Signed By: Hals, Inger-Helene  
 Location: DNV GL Høvik, Norway  
 Signing Date: 2015-02-12

**Inger-Helene Hals**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed. If any person suffers loss or damage which is proven to have been caused by any negligent act or omission of the Society, then the Society shall pay compensation to such person for his proven direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question. The maximum compensation shall never exceed USD 2 million. In this provision the "Society" shall mean DNV GL AS as well as all its direct and indirect owners, affiliates, subsidiaries, directors, officers, employees, agents and any other person or entity acting on behalf of DNV GL AS.

DNV·GL

Certificate No:  
**TAS000005Z****TYPE APPROVAL CERTIFICATE****This is to certify:****That the Lifting set for Offshore containers and Portable Offshore Units**

with type designation(s)

**Master Link - Type DA-003, Master Link Assembly - DA-007**

Issued to

**Yoke Industrial Corp.  
Taichung, Taiwan**

is found to comply with

**DNV 2.7-1 Offshore Containers (2013)****DNV Standard for Certification No. 2.7-3 Portable Offshore Units (2011)****EN 1677-4 Components for slings - Safety - Part 4: Links, Grade 8****EN 12079-2 Offshore containers and associated lifting sets Part 2: Lifting sets Design,  
manufacture and marking****IMO/MSC Circular 860****Application :****Grade 8 Links for Lifting Sets for Offshore Containers or Portable Offshore Units**This Certificate is valid until **2020-10-20**.Issued at **Høvik** on **2015-10-21**DNV GL local station: **Kaohsiung**Approval Engineer: **Nina Thorvaldsen Moberg**for **DNV GL**

Digitally Signed By: Hals, Inger-Helene

Location: DNV GL Høvik, Norway

Signing Date: 2015-10-30

**Inger-Helene Hals  
Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.  
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

*Stu*

## **The Features of YOKE DA™ Offshore Container Lifting Series**

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YOKE DA™ Series are manufactured to meet the requirements of DNV 2.7-1 for offshore container lifting to fulfill the need for the critical requirements of charpy impact, strength and ductility.

### **Lower Temperature Demand**

YOKE DA™ Series are designed to withstand impacts in extreme environments up to maximum -40° C.

### **Higher Safety Factors**

YOKE DA™ Shackles have a design factor of 6 for Grade 6 Shackles and a design factor of 8 for Grade 8 shackles, and YOKE DA™ Master Link & Assembly have a design factor of 5 to enable them to operate in the harshest environments.

### **DNV 2.7-1 Specified Test Certificate**

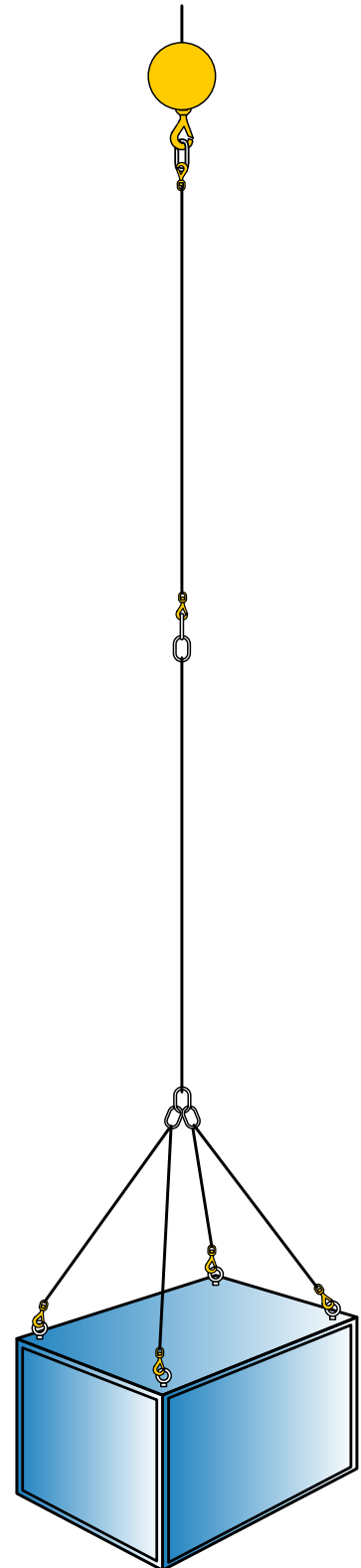
Test certificate with material and manufacturing process specified in DNV 2.7-1 for complete traceability.

To perform in the harshest weather and roughest sea conditions, YOKE DA™ Series are specially designed, manufactured and tested for the operating in the offshore container industry.

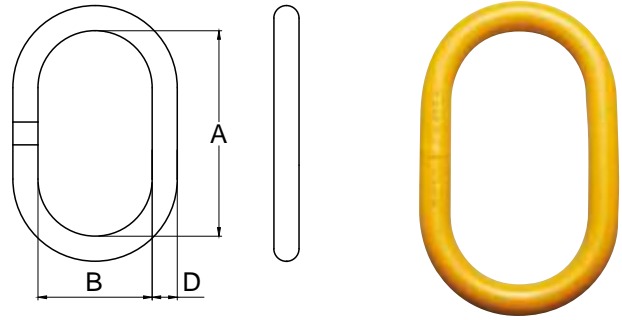
## Determination of

**Table 8-1 Determination of Working Load Limit**

Rating(kg)	Enhancement factor	Minimum required Working Load Limit(WLLmin)(t)
500	-	7.00
1000	-	7.00
1500	-	7.00
2000	3.500	7.00
2500	2.880	7.20
3000	2.600	7.80
3500	2.403	8.41
4000	2.207	8.83
4500	2.067	9.30
5000	1.960	9.80
5500	1.873	10.30
6000	1.766	10.60
6500	1.733	11.26
7000	1.700	11.90
7500	1.666	12.50
8000	1.633	13.07
8500	1.600	13.60
9000	1.567	14.10
9500	1.543	14.57
10000	1.501	15.01
10500	1.479	15.53
11000	1.457	16.02
11500	1.435	16.50
12000	1.413	16.95
12500	1.931	17.38
13000	1.368	17.79
13500	1.346	18.18
14000	1.324	18.54
14500	1.302	18.88
15000	1.280	19.20
15500	1.267	19.64
16000	1.254	20.06
16500	1.240	20.47
17000	1.227	20.86
17500	1.214	21.24
18000	1.201	21.61
18500	1.188	21.97
19000	1.174	22.31
19500	1.161	22.64
20000	1.148	22.96
20500	1.143	23.44
21000	1.139	23.92
21500	1.135	24.39
22000	1.130	24.86
22500	1.126	25.33
23000	1.121	25.79
23500	1.117	26.25
24000	1.112	26.70
24500	1.108	27.15
25000	1.104	27.59



- Meets the following performance requirements:
  - DNV 2.7-1
  - EN 1677-4
  - ASME B30.26
- 20,000 cycle fatigue rated to 1.5 times Working Load Limit
- Charpy test of 42 joules (31ft. lbs.) at -40°C (-40°F) for normal section
- Charpy test of 27 joules (20ft. lbs.) at -40°C (-40°F) for welding section



**-40°C**

## DA Master Link

Item No.	WLL	For grade 100		Dimensions (inch)			N.W.
	β 0-45°	Chain (inch)		D	A	B	
	lbs	1 Leg	2 Legs				lbs
<b>DA-003-1310</b>	14700	1/2	3/8	3/4	6.30	3.54	2.4
<b>DA-003-1613</b>	18700	1/2	3/8	7/8	7.10	3.94	3.5
<b>DA-003-1916</b>	25300	5/8	1/2	1	8.27	4.53	5.3
<b>DA-003-20</b>	28600	5/8	1/2	1-1/8	10.83	5.71	8.6
<b>DA-003-2220</b>	37500	3/4	5/8	1-1/4	10.83	5.71	11.5
<b>DA-003-2622</b>	52900	7/8	3/4	1-7/16	11.20	6.10	15.2
<b>DA-003-28</b>	61900	1	7/8	1-9/16	11.80	6.30	19.8
<b>DA-003-3226</b>	84400	1	1	1-3/4	13.40	7.10	28.2

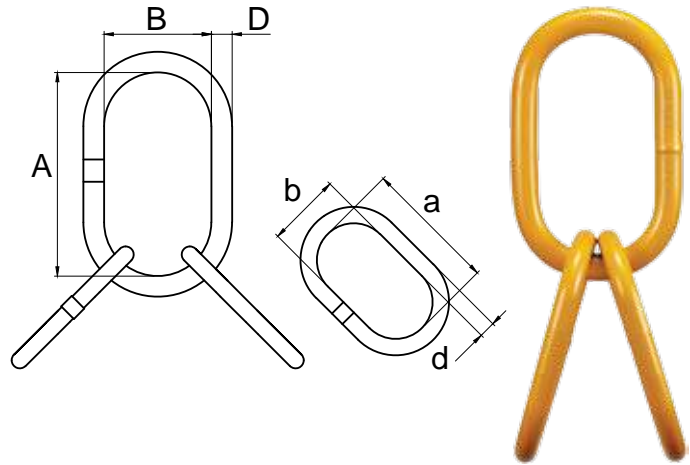
\*Welding Oblong Master Links  
Design factor 5:1 proof tested and certified.

Item No.	WLL	For grade 100		Dimensions (mm)			N.W.
	β 0-45°	Chain (mm)		D	A	B	
	tonnes	1 Leg	2 Legs				kg
<b>DA-003-1310</b>	6.7	13	10	19	160	90	1.1
<b>DA-003-1613</b>	8.5	13	10	22	180	100	1.6
<b>DA-003-1916</b>	11.5	16	13	25	210	115	2.4
<b>DA-003-20</b>	13.0	16	13	28	275	145	3.9
<b>DA-003-2220</b>	17.0	20	16	32	275	145	5.2
<b>DA-003-2622</b>	24.0	22	20	36	285	155	6.9
<b>DA-003-28</b>	28.1	26	22	40	300	160	9.0
<b>DA-003-3226</b>	38.3	26	26	45	340	180	12.8

\*Welding Oblong Master Links  
Design factor 5:1 proof tested and certified.



- Meets the following performance requirements:
  - DNV 2.7-1
  - EN 1677-4
  - ASME B30.26
- 20,000 cycle fatigue rated to 1.5 times Working Load Limit
- Charpy test of 42 joules (31ft. lbs.) at -40°C (-40°F) for normal section
- Charpy test of 27 joules (20ft. lbs.) at -40°C (-40°F) for welding section



**-40°C**

## DA Master Link Assembly

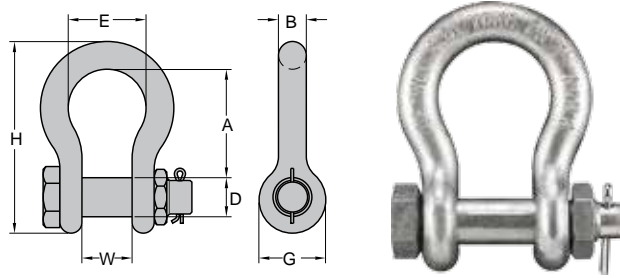
Item No.	WLL	For grade 100 Chain (inch)	Dimensions (inch)						N.W.
	β 0-45°		D	A	B	d	a	b	
	lbs	3 or 4 Legs							lbs
DA-007-10	19600	3/8	1	10.83	5.71	3/4	6.30	3.54	11.5
DA-007-13	28400	3/8	1-1/8	10.83	5.71	7/8	7.10	3.94	15.6
DA-007-16	37500	1/2	1-1/4	10.83	5.71	1	8.27	4.53	22.1
DA-007-19	52000	5/8	1-7/16	10.83	5.71	1-1/8	7.48	3.94	26.9
DA-007-20	61900	5/8	1-9/16	11.80	6.30	1-1/4	5.71	5.71	42.6
DA-007-22	84400	3/4	1-3/4	13.40	7.10	1-7/16	11.20	6.10	58.7

\*Welding Oblong Master Links  
Design factor 5:1 proof tested and certified.

Item No.	WLL	For grade 100 Chain (mm)	Dimensions (mm)						N.W.
	β 0-45°		D	A	B	d	a	b	
	tonnes	3 or 4 Legs							kg
DA-007-10	8.9	10	25	275	145	19	160	90	5.2
DA-007-13	12.9	10	28	275	145	22	180	100	7.1
DA-007-16	17.0	13	32	275	145	25	210	115	10.0
DA-007-19	23.6	16	36	275	145	28	190	100	12.2
DA-007-20	28.1	16	40	300	160	32	275	145	19.3
DA-007-22	38.3	20	45	340	180	36	285	155	26.6

\*Welding Oblong Master Links  
Design factor 5:1 proof tested and certified.

- Meets the following performance requirements:
  - DNV 2.7-1
  - EN 13889
  - U.S. Fed. Spec. RR-C-271F Type IVA, Grade A, Class 3
  - ASME B30.26
- Hot dip galvanized
- 20,000 cycle fatigue rated to 1.5 times Working Load Limit
- Charpy test of 42 joules (31ft. lbs.) at - 20°C ( - 4°F)



# DA 838 Shackle

-20°C

## Grade 6

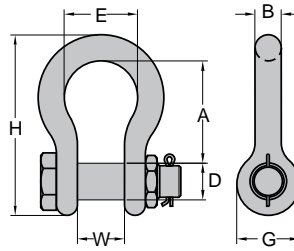
Item No.	Nominal Size	Working Load Limit	Dimensions (inch)							N.W.
			inch	tonnes*	A	B	D	E	G	
DA-838-13	1/2	2.00	1.85	0.52	0.63	1.30	1.18	3.34	0.79	0.9
DA-838-16	5/8	3.25	2.40	0.63	0.75	1.70	1.50	4.17	1.06	1.5
DA-838-19	3/4	4.75	2.83	0.75	0.87	1.97	1.81	5.04	1.30	2.2
DA-838-22	7/8	6.50	3.39	0.87	1.02	2.28	2.09	5.91	1.50	3.7
DA-838-26	1	8.50	3.78	1.02	1.10	2.68	2.40	6.57	1.73	5.3
DA-838-28	1- 1/8	9.50	4.37	1.10	1.26	2.91	2.68	7.52	1.81	7.5
DA-838-32	1- 1/4	12.00	4.76	1.26	1.42	3.30	2.99	8.07	2.12	10.6
DA-838-36	1- 3/8	13.50	5.28	1.42	1.50	3.62	3.31	9.13	2.32	14.3
DA-838-38	1- 1/2	17.00	5.57	1.50	1.77	3.90	3.62	10.00	2.36	19.4
DA-838-45	1- 3/4	25.00	7.00	1.85	2.00	5.00	4.17	12.32	2.87	38.5
DA-838-50	2	35.00	7.76	2.09	2.24	5.75	4.80	13.66	3.27	53.2

\*Minimum Ultimate Load is 6 times the Working Load Limit.

Item No.	Nominal Size	Working Load Limit	Dimensions (mm)							N.W.
			mm	tonnes*	A	B	D	E	G	
DA-838-13	13	2.00	47	13	16	33	30	85	20	0.4
DA-838-16	16	3.25	61	16	19	43	38	106	27	0.7
DA-838-19	19	4.75	72	19	22	50	46	126	33	1.0
DA-838-22	22	6.50	86	22	26	58	53	148	38	1.7
DA-838-26	26	8.50	96	26	28	68	61	166	44	2.4
DA-838-28	28	9.50	111	28	32	74	68	190	46	3.4
DA-838-32	32	12.00	121	32	36	84	76	210	54	4.8
DA-838-36	36	13.50	134	36	38	92	84	232	59	6.5
DA-838-38	38	17.00	146	38	45	99	92	254	60	8.8
DA-838-45	45	25.00	178	47	51	127	106	313	73	17.5
DA-838-50	50	35.00	197	53	57	146	122	347	83	24.2

\*Minimum Ultimate Load is 6 times the Working Load Limit.

- Meets the following performance requirements:
  - DNV 2.7-1
  - EN 13889
  - U.S. Fed. Spec. RR-C-271F Type IVA, Grade A, Class 3
  - ASME B30.26
- Hot dip galvanized
- 20,000 cycle fatigue rated to 1.5 times Working Load Limit
- Charpy test of 42 joules (31ft. lbs.) at - 40°C ( - 40°F)



# DA 808 Shackle

**-40°C**

## Grade 8

Item No.	Nominal Size	Working Load Limit	Dimensions (inch)							N.W.
			A	B	D	E	G	H	W	
DA-808-13	1/2	2.00	1.85	0.52	0.63	1.30	1.18	3.34	0.79	0.9
DA-808-16	5/8	3.25	2.40	0.63	0.75	1.70	1.50	4.17	1.06	1.5
DA-808-19	3/4	4.75	2.83	0.75	0.87	1.97	1.81	5.04	1.30	2.2
DA-808-22	7/8	6.50	3.39	0.87	1.02	2.28	2.09	5.91	1.50	3.7
DA-808-26	1	8.50	3.78	1.02	1.10	2.68	2.40	6.57	1.73	5.3
DA-808-28	1- 1/8	9.50	4.37	1.10	1.26	2.91	2.68	7.52	1.81	7.5
DA-808-32	1- 1/4	12.00	4.76	1.26	1.42	3.30	2.99	8.07	2.12	10.6
DA-808-36	1- 3/8	13.50	5.28	1.42	1.50	3.62	3.31	9.13	2.32	14.3
DA-808-38	1- 1/2	17.00	5.57	1.50	1.77	3.90	3.62	10.00	2.36	19.4
DA-808-45	1- 3/4	25.00	7.00	1.85	2.00	5.00	4.17	12.32	2.87	38.5
DA-808-50	2	35.00	7.76	2.09	2.24	5.75	4.80	13.66	3.27	53.2

\*Minimum Ultimate Load is 8 times the Working Load Limit.

Item No.	Nominal Size	Working Load Limit	Dimensions (mm)							N.W.
			A	B	D	E	G	H	W	
DA-808-13	13	2.00	47	13	16	33	30	85	20	0.4
DA-808-16	16	3.25	61	16	19	43	38	106	27	0.7
DA-808-19	19	4.75	72	19	22	50	46	126	33	1.0
DA-808-22	22	6.50	86	22	26	58	53	148	38	1.7
DA-808-26	26	8.50	96	26	28	68	61	166	44	2.4
DA-808-28	28	9.50	111	28	32	74	68	190	46	3.4
DA-808-32	32	12.00	121	32	36	84	76	210	54	4.8
DA-808-36	36	13.50	134	36	38	92	84	232	59	6.5
DA-808-38	38	17.00	146	38	45	99	92	254	60	8.8
DA-808-45	45	25.00	178	47	51	127	106	313	73	17.5
DA-808-50	50	35.00	197	53	57	146	122	347	83	24.2

\*Minimum Ultimate Load is 8 times the Working Load Limit.



*Safety is our first priority™*

An ISO 9001 Registered Company

YOKE products distributed by:



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[www.yoke.net](http://www.yoke.net)

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