

# CHAINS & MOORING

## CHAINI? & MOORING



- Pick-Up Chain Stud Link
- Pick-Up Chain Common Link
- Hang-Off Snubbing Chain Stud Link
- Hang-Off Snubbing Chain Common Link
- Buoy Mooring Components
- Chafe Chain A & B
- Hawser Rope





# Pick-up Chain Stud Link

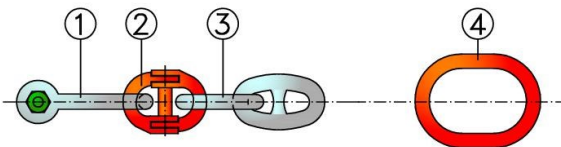
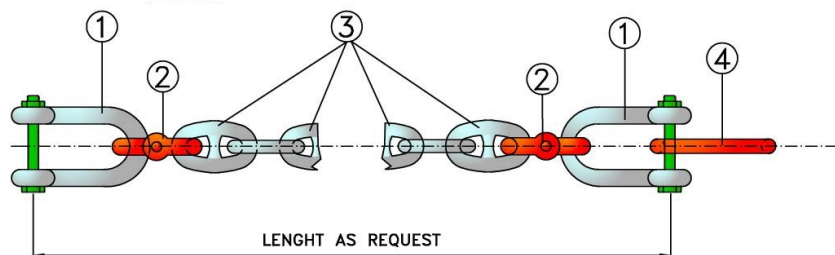
According to **GMPHOM 2009 & ISO 1704:2008**

**Prod.Code: 130**

It is a short length (usually 1,5 meters long) chain which is used to lift the rail/tail assembly from the water for connection at the manifold. This chain is stronger than the snubbing chain. The free end of the chain has a large master link connected to it. The pick-up buoy or marker buoy roper eye is connected to this master link via a large bow shackle.

After initial capture of the pick up buoy, the tanker derrick hook can then latch on to the master link if necessary.

Longer lengths of pick up chains are used to lift CBM submarine hose strings from the sea bed to the tanker.



1 SHACKLE G 2150 or equivalent		
HOSE N.D. Inch / mm	SHACKLE $\phi$ Inch	NOMINAL WEIGHT Kg/m
8" / 200	7/8"	1,74
10" / 250	1"	2,52
12" / 300	1 1/4"	4,90
16" / 400	1 1/2"	8,39
20" / 500	1 3/4"	14,20

2 CONNECTING LINK Gr. 80 or equivalent		
HOSE N.D. Inch / mm	CONNECTING LINK $\phi$ Inch	NOMINAL WEIGHT Kg
8" / 200	5/8"	1,24
10" / 250	3/4"	2,26
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3 STUD LINK Gr. U3 or equivalent		
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12" / 300	22	10
16" / 400	26	14
20" / 500	32	20,5

4 MASTER LINK Gr. 80 or equivalent		
HOSE N.D. Inch / mm	MASTER LINK SIZE	NOMINAL WEIGHT Kg
8" / 200	A 22	1,61
10" / 250	A 28	3,77
12" / 300	A 32	4,67
16" / 400	A 38	7,63
20" / 500	A 50	17,28

LOADS each link			
HOSE N.D. Inch / mm	S.W.L. KN	PROOF KN	BREAKING KN
8" / 200	50	125	250
10" / 250	70	175	350
12" / 300	100	250	500
16" / 400	150	375	750
20" / 500	200	500	1000



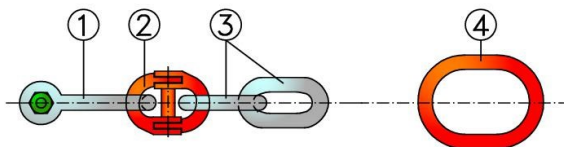
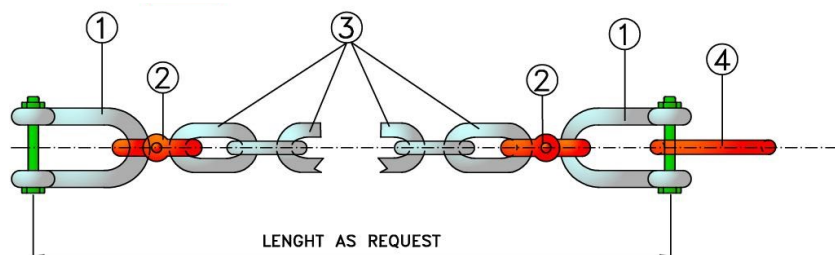
# Pick-up Chain Common Links

According to GMPHOM 2009 & UNI EN 818

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20" / 500	200	500	1000



# Hang-off Subbing Chain Stud Links

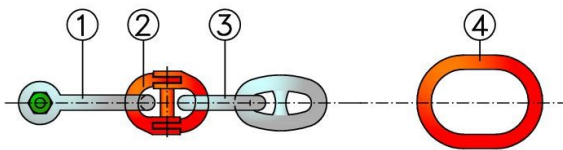
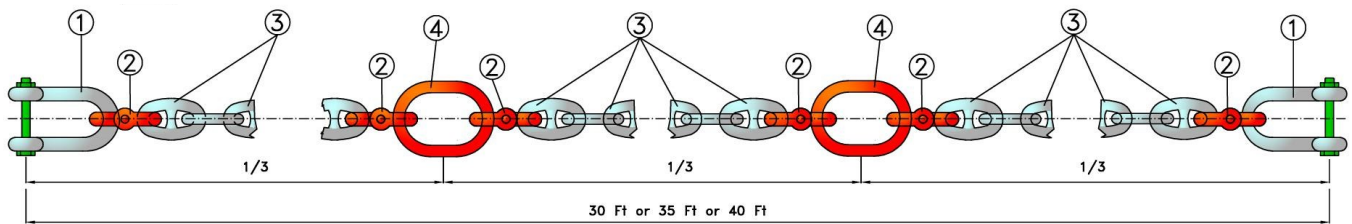
According to **GMPHOM 2009 & ISO 1704:2008**

**Prod. Code: 140**

Snubbing chain takes the weight of the tail hoses which are out of the water at the manifold when the rail hose is connected to the tanker vessel. The chain is specially sized to give enough slack to take up the rail hose via chain shackles (usually 1,52 meters longer than the rail hose).

It is attached to lifting lugs at either end of the rail hose by the chain shackles.

The shackle at the tanker end is a screw pin type to facilitate quick and easy connection and disconnection.



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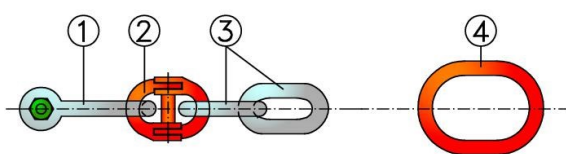
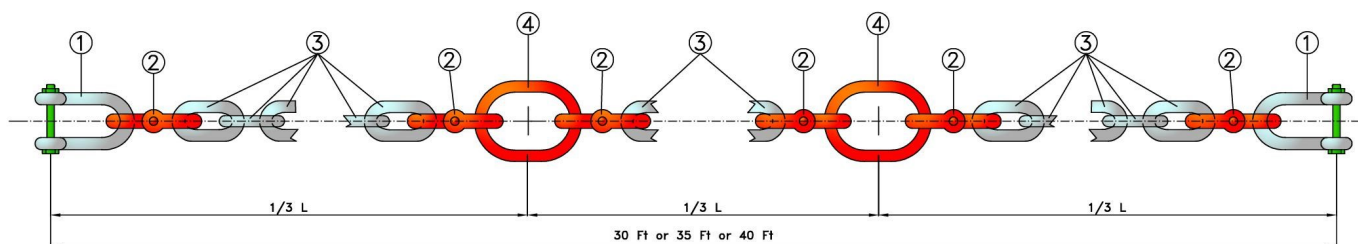
According to GMPHOM 2009 & UNI EN 818

**Prod. Code: 141**

Snubbing chain takes the weight of the tail hoses which are out of the water at the manifold when the rail hose is connected to the tanker vessel. The chain is specially sized to give enough slack to take up the rail hose via chain shackles (usually 1,52 meters longer than the rail hose).

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12" / 300	100	250	500
16" / 400	150	375	750
20" / 500	200	500	1000



# Buoy Mooring Component

According to OCIMF 2000 and 2007

**Prod. Code: 150**

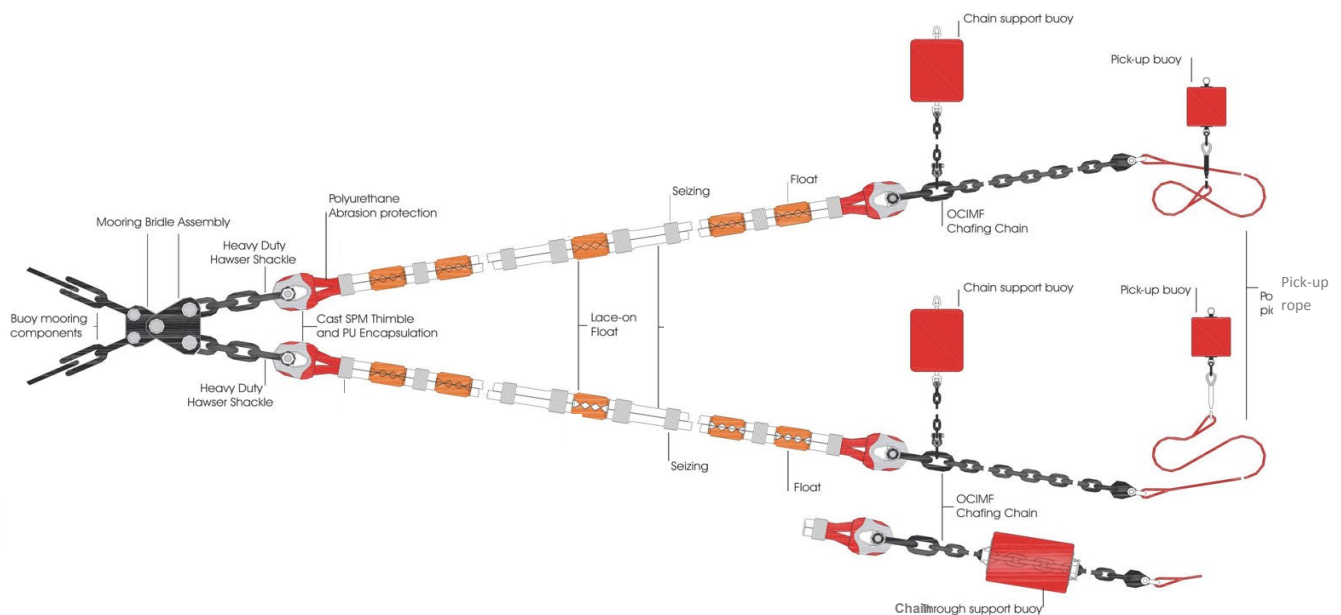
Our full range of Single Point Mooring products is manufactured and supplied in strict accordance with the OCIMF 2000 and 2007 "Guidelines for the Purchasing and Testing of SPM Hawsers".

Our SPM product range offers outstanding operational performance, reliability, safety and on-time delivery.

Our bespoke Single Point Mooring packages can include:

- Chafe chains
- Mooring hawsers
- Marine breakaway coupling
- Pick-up and messenger ropes
- Support buoys
- Shackles
- Associated fittings
- Load monitoring equipment
- Marine hose ancillary equipment

Typical components and configuration for Tanker vessel mooring to buoy type SPM are shown below.

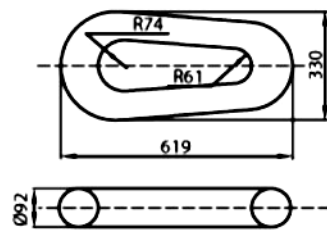
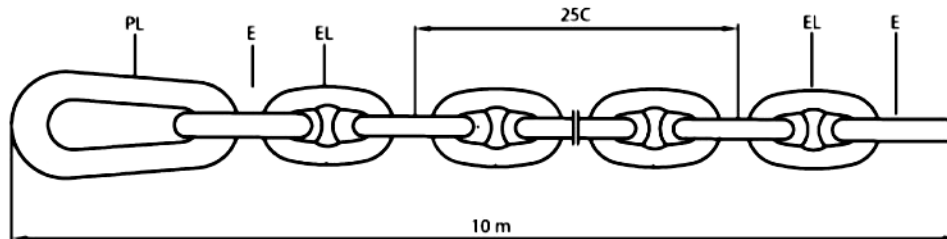




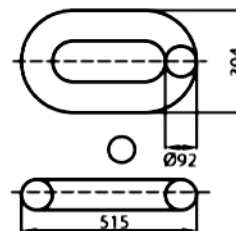
# Chafe Chain A

According to GMPHOM 2009

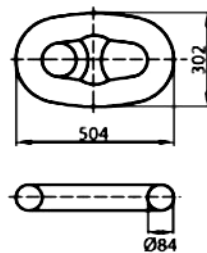
**CHAPE CHAIN A - 76 mm - GRADE 3**



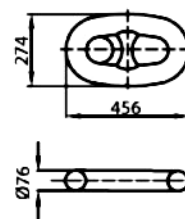
PEAR SHAPED LINK = PL



END LINK = E



ENLARGED LINK = EL



COMMON LINK = C

PROOF LOAD KN	BREAK LOAD KN	S.W.L. TONNES	MBL TONNES
3242	4884	200	497,8

The number and size of chains used should be determined by the terminal operator after an analysis of the maximum mooring load.

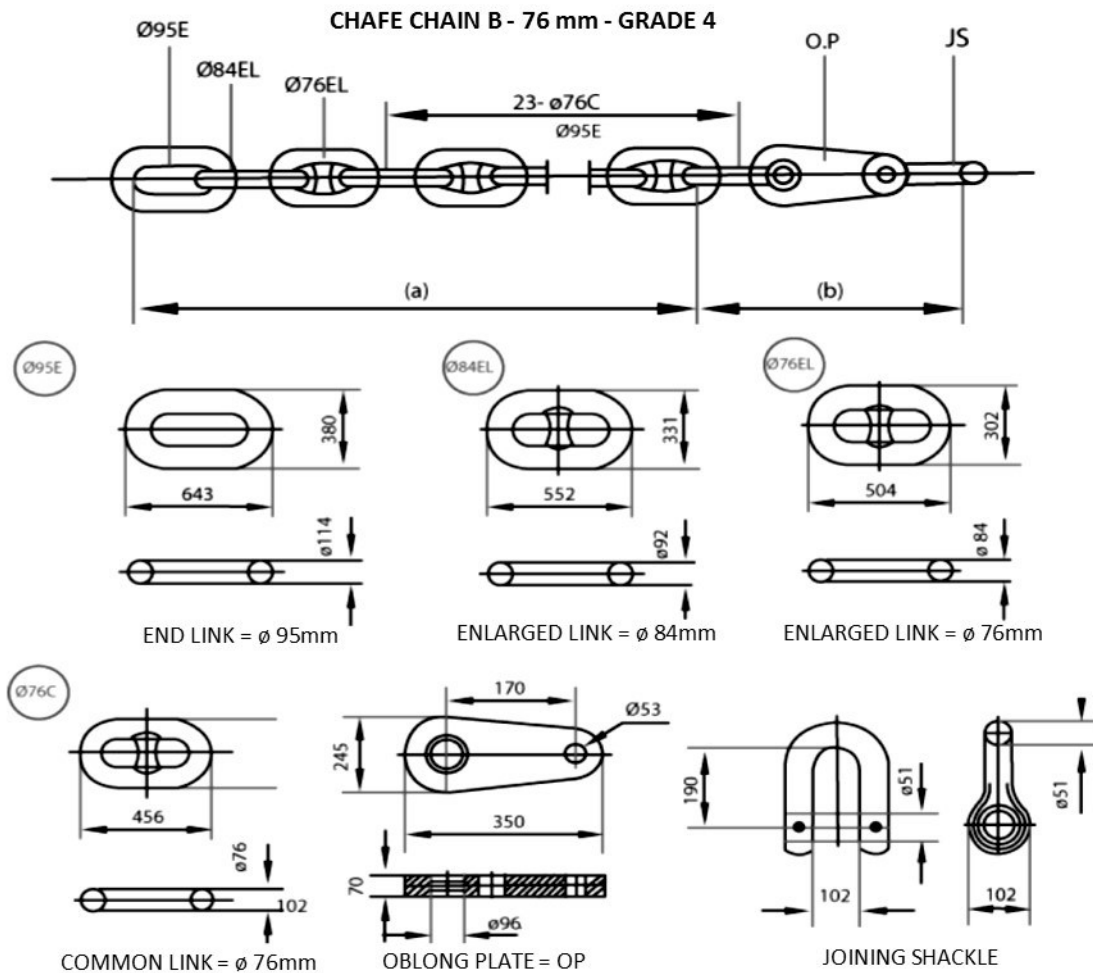
If necessary, weak links or quick release devices should be incorporated into the mooring system.



# Chafe Chain B

According to GMPHOM 2009

Prod. Code: 170



PROOF LOAD KN	BREAK LOAD KN	S.W.L. TONNES	MBL TONNES
4731	6001	250	611,7

The number and size of chains used should be determined by the terminal operator after an analysis of the maximum mooring load.

If necessary, weak links or quick release devices should be incorporated into the mooring system.





# Hawser Rope

## For Tanker Vessel Mooring



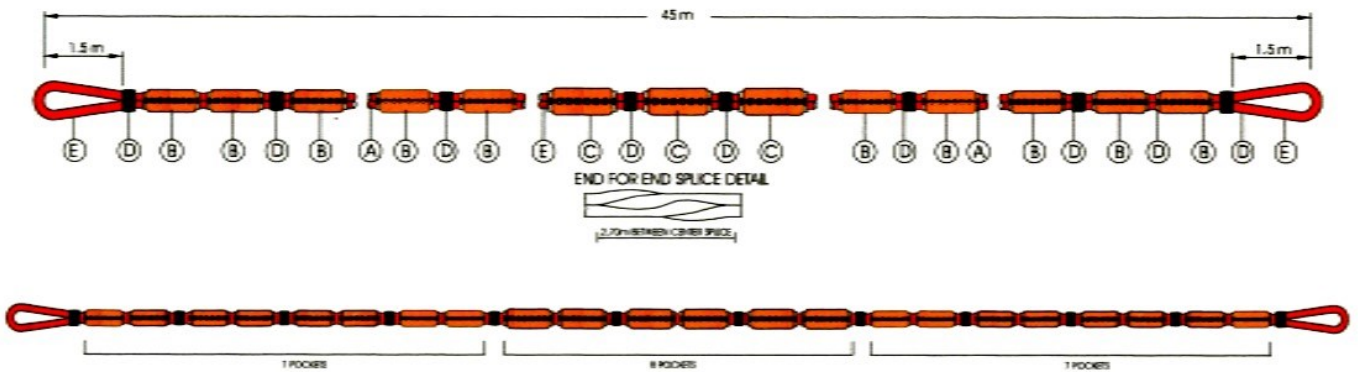
### Hawser Selection

OCIMF recommends that when selecting hawsers, terminal operators should take into account Hawser selection criteria including strength but also energy absorption and fatigue performance. Detailed information can be found in the OCIMF 2000 'Guidelines for the Purchasing and Testing of SPM Hawsers'

Moreover, it should be borne in mind that the NWBS (New Wet Break Strength), energy absorption and fatigue performance of hawsers will deteriorate during service under the influence of factors such as service life, cyclic load history, hawser type, construction, environmental conditions, damage and stowage arrangements between use. Terminal operators should take these factors into account when determining the appropriate hawser for the mooring system and hawser retirement criteria.

### Integral Hawser Flotation

Hawsers can be supplied with Integral Flotation system and/or PU encapsulation for increased durability and operational cost savings.



NOTES:

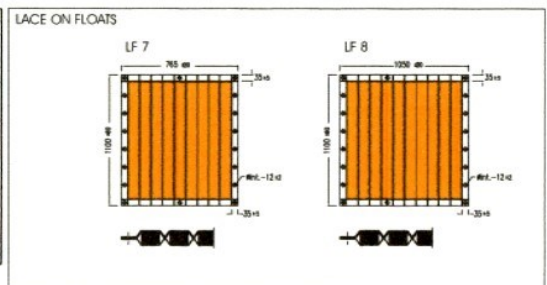
1. END FOR END SPICE IN EACH LEG. SPICES TO BE STAGGERED AS PER DETAIL SHOWN.

QUALITY PROCEDURE STANDARDS

1. WI 534 - END FOR END SPICING, SPICES TO BE STAGGERED AS SHOWN.
2. WI 556 - PROCEDURE FOR APPLICATION OF SEIZINGS.
3. WI 543 - PROCEDURE FOR SECURING OF ROPE FLOATS TO MOORING ROPE ASSEMBLIES.
4. WI 546 - PROCEDURE FOR FITMENT OF PU COATED ANTI-ABRASION SLEEVING TO MOORING ROPE ASSEMBLIES

NEW DRY BREAKING STRENGTH OF ROPE: 299 Tonnes  
 NEW DRY BREAKING STRENGTH OF GROMMET: 508 Tonnes

MANUFACTURED, INSPECTED AND SUPPLIED IN ACCORDANCE WITH THE LATEST OCIMF 2000 'GUIDELINES FOR THE PURCHASING & TESTING OF SPM HAWSERS'.



E	-	PROTECTED SOFT EYE EACH END AND THE ENTIRE HAWSER 100% POLYURETHANE ELASTOMER COATED.
D	12	300mm (Ø16mm 3 STRAND ROPE).
C	8	LF 8 8 POCKET LACE ON FLOATS
B	16	LF 7 7 POCKET LACE ON FLOATS
A	1	14" (112mm nom. DIA.) CIRC. LANIKHORST DOUBLE BRAIDED CONSTRUCTION, 100% NYLON ROPE.

ITEM	QTY	PART CODE	DESCRIPTION
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