USER MANUAL FOR SUBSEA MAGNET TOOL

Document title	:	*UMA-7564-001 Subsea Magnet Tool*
IKM TECHNOLOGY AS ref.	:	*P7564*
Customer ref.	:	*Subsea Tool*

IKM Technology AS

Rev.	Date	Reason For Issue	Prepared	Checked	Approved
01	20.06.2016	Issued for use	KF	RH	KF

1 GENERAL INFORMATION

This manual is a user manual for the Subsea Magnet Tool.

The Subsea Magnet Tool is intended to be used as an additional handle for an ROV subsea. It can be used when the ROV is operating on constructions where there is nothing to hold on to for the ROV.

1.1 Abbreviations

HPU	Hydraulic Power Unit
ROV	Remotely Operated Vehicle
kg	Kilo gram
mm	Milli meter
BSP	British standard pipe
JIC	Joint industry council
t	Tonn

1.2 References

Doc nr	Description	Rev.	Issued	Can be found
7564-001 rev-02	Drawing of Subsea Magnet Tool	02	29.05.15	Appendix A

2 TECHNICAL SPESIFICATION

The Subsea Magnet Tool consists mainly of a ROV handle, bracket between handle and magnet and magnet with handle.

Weight:
In air: 7 kg.
In water: 5 kg.

Maximum dimensions:
Height: 373 mm.
Width: 140 mm.
Length: 272 mm.

Magnet force: 450 kg.
Magnet type: Miko MAM-003.

For more information please see the drawing of the tool in Appendix A.

3 SAFETY

3.1 General – Operations

Only authorised people and qualified personnel should work on the system, and take suitable precautions to prevent any potential injuries. Always adhere to authorised working practices, and use the correct tools for the job. To facilitate this, make sure that these are available before commencing the test.

Ensure that the working area is kept clear and uncluttered.

3.2 General – Mechanical

Beware of and keep clear of all moving components. Do not work on the system whilst power is applied, or if there is any potential for components to move.

Ensure that all load bearing components are adequately and regularly inspected. If damage is found the component must be repaired/replaced as necessary. Do not allow damaged components to remain in service.

Always ensure that items are correctly and adequately supported before removal, and that authorised lifting equipment and procedures are used.

Note: trying to lift heavy components in an awkward position by hand without the assistance of correct lifting equipment, or lifting any component without adopting the correct stance, can lead to serious injury.

Ensure that when working within or underneath the machine that your presence is known to your supervisor. If working underneath the machine, always ensure that there are no loose or unsupported assemblies, components or tools above.

4 OPERATIONAL DESCRIPTION

The following description is a generic description of preparation and use of the Subsea Magnet Tool. Customers are advised to adapt the following information to their own specific operations and specific work area.

4.1 Preparation on the vessel prior to operations

- Unpack all parts and check for transport damages
- Verify that all parts on equipment list is present
- Check that magnet turns off and on while operating the handle.

4.2 Operation

The following steps are to be regarded as guidelines for operation. Operator of the tooling must adapt the steps into their own operations procedure.

- Use the ROV manipulator to place the tool in the desired place.
- Then use the other manipulator to operate the handle for activating the magnet.
- Verify that it is fixed to the wall.

5 MAINTENANCE

After use:

- Clean the tool with fresh water and apply a lite coating of WD40 or adequate lubrication.
- Check bolts, lifting point etc.

6 SPARE PART LIST

- Handle
- Magnet
- Nuts and bolts.
-

7 REVISION CHANGES

Revision	Procedure change	Author
01	*Original version*	KF

8 CONTACT INFORMATION

All enquiries relating to the tooling should be addressed to:

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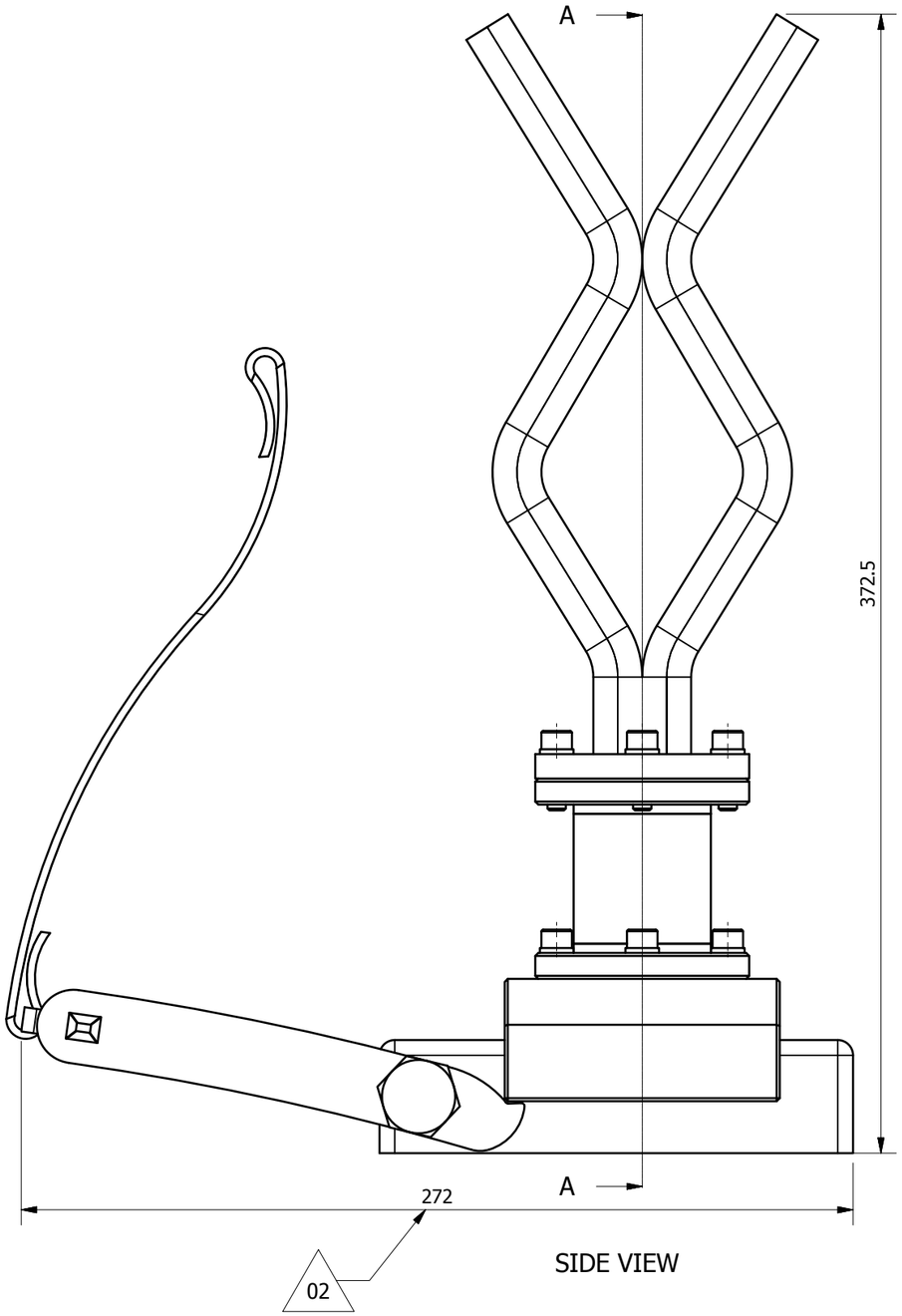
9 APPENDIX

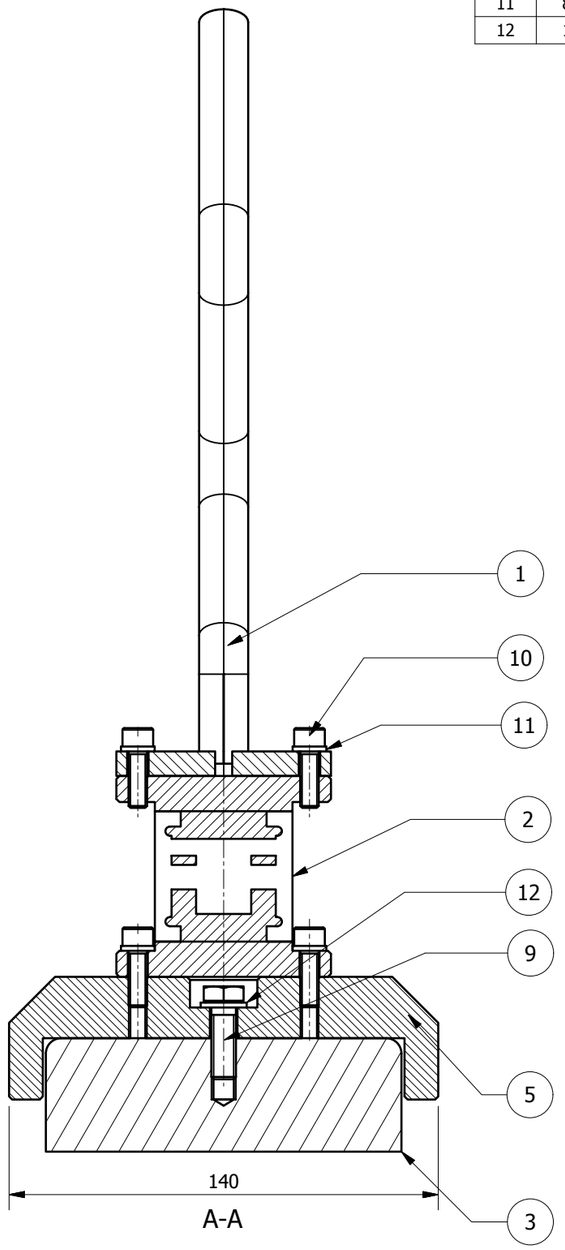
	Doc number	Description	Rev
Appendix A	*7564-001 rev-2*	*Drawing of Subsea Magnet Tool*	02
Appendix B			
Appendix C			

PARTS LIST

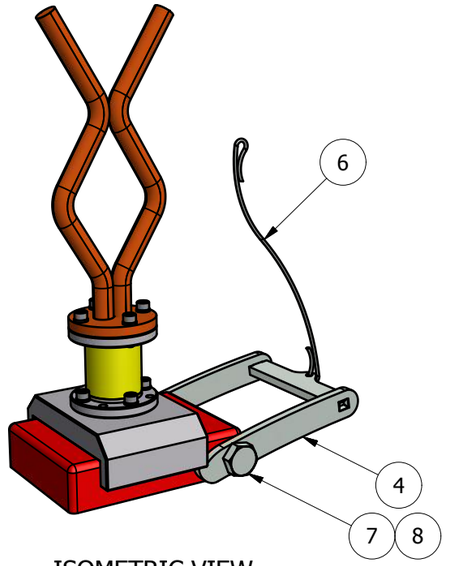
ITEM	QTY	PART NUMBER	MATERIAL	MASS	DESCRIPTION
1	1	4853-001	250mm LONG	1.07 kg	FISH TALE
2	1	4975-001		0.16 kg	FlexLink
3	1	7306-Magnet	Miko - MAM-003	3.3 kg	Magnet
4	1	7564-002	Stainless Steel, AISI 316L	0.61 kg	LEVER HANDLE
5	1	7564-100	Aluminium, 6082-T6	0.71 kg	CLAMP
6	1	7564-103	Stainless Steel	0.02 kg	3mm WIRE X 300mm LENGTH
7	2	7564-104	Stainless Steel, AISI 316L	0.09 kg	Hex-Head Bolt
8	2	DIN 988 - S14 x 20	Stainless Steel	0 kg	Supporting Ring
9	1	ISO 4017 - M8 x 25	Stainless Steel	0.02 kg	Screw
10	8	ISO 4762 - M6 x 20	Stainless Steel	0.01 kg	Screw
11	8	ISO 7092 - ST 6 - 140 HV	Stainless Steel	0 kg	Washer
12	1	ISO 7092 - ST 8 - 140 HV	Stainless Steel	0 kg	Washer



SIDE VIEW



A-A



ISOMETRIC VIEW
(1 : 5)

REV	DATE	DESCRIPTION	BY	CHKD	APPD
02	29.05.2015	RE-ISSUED FOR CONSTRUCTION	AH	LET	AH
01	21.04.2015	FOR CONSTRUCTION	AH	LET	AH

WEIGHT:
IN AIR: 6,15 kg
IN WATER: 4,83 kg

UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS ARE IN MILLIMETRES

TOLERANCES:
LINEAR: ISO 2768-1 M
ANGULAR: ISO 2768-1 M
EDGES: ISO 2768-1 M

REMOVE ALL BURRS
BREAK ALL SHARP EDGES

FIRST ANGLE PROJECTION

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PROJECT TITLE: P7564

DRAWING TITLE: MAGNET MOUNTING TOOL

SHEET SIZE: A3 | SHEET NO.: 1 OF 1 | SCALE: 1:2, 1:5

DRAWING NO.: 7564-001 | LATEST REV.: 02