

# Insert Bowl



## Operating Instructions

### Original Operating Instructions

P/N	Type	Pipe Size Range	Size	Load rating [sh t]
<b>Master Bushing Insert Bowls</b>				
34-101-X	#1 Insert Bowl [Split] <sup>1</sup>	11 3/4" - 13 3/8"	27 1/2"	500
34-102-X	#2 Insert Bowl [Split] <sup>1</sup>	9 5/8" - 10 3/4"	27 1/2"	500
34-103-X	#3 Insert Bowl [Split] <sup>1</sup>	8 5/8" and smaller	27 1/2"	500
551903-X	#1 Insert Bowl [Split] <sup>1</sup>	11 3/4" - 13 3/8"	27 1/2"	500
551904-X	#2 Insert Bowl [Split] <sup>1</sup>	9 5/8" - 10 3/4"	27 1/2"	500
551810-X	#3 Insert Bowl [Split] <sup>1</sup>	8 5/8" and smaller	27 1/2"	500
556610-X	#1 Insert Bowl [Split] <sup>1+2</sup>	11 3/4" - 13 3/8"	37 1/2" & 49 1/2"	750
556609-X	#2 Insert Bowl [Split] <sup>1+2</sup>	9 5/8" - 10 3/4"	37 1/2" & 49 1/2"	750
556608-X	#3 Insert Bowl [Split] <sup>1+2</sup>	8 5/8" and smaller	37 1/2" & 49 1/2"	750
34-301-X	#1 Insert Bowl [Split] <sup>1+2</sup>	11 3/4" - 13 3/8"	37 1/2" & 49 1/2"	500
34-302-X	#2 Insert Bowl [Split] <sup>1+2</sup>	9 5/8" - 10 3/4"	37 1/2" & 49 1/2"	500
34-303-X	#3 Insert Bowl [Split] <sup>1+2</sup>	8 5/8" and smaller	37 1/2" & 49 1/2"	500
556610-L-X	#1 Insert Bowl with 120 mm Slot <sup>1+2</sup>	11 3/4" - 13 3/8"	37 1/2" & 49 1/2"	750
556609-L-X	#2 Insert Bowl with 120 mm Slot <sup>1+2</sup>	9 5/8" - 10 3/4"	37 1/2" & 49 1/2"	750
556608-L-X	#3 Insert Bowl with 120 mm Slot <sup>1+2</sup>	8 5/8" and smaller	37 1/2" & 49 1/2"	750
34-303-03-X	#3 Insert Bowl - Centralizer Bowl <sup>1+2</sup>	8 5/8" and smaller	37 1/2" & 49 1/2"	500
34-303-04-X	#3 Insert Bowl - Umbilical J-Notch <sup>1+2</sup>	8 5/8" and smaller	37 1/2" & 49 1/2"	500
34-303-01-X	#3 Insert Bowl - Umbilical Slot <sup>1+2</sup>	8 5/8" and smaller	37 1/2" & 49 1/2"	500
34-303-02-X	#3 Insert Bowl - Dual Umbilical Slot <sup>1+2</sup>	8 5/8" and smaller	37 1/2" & 49 1/2"	500
<b>Power Slip Insert Bowls</b>				
755820-X	#3 Insert Bowl for PS-500, 750-1, 750-2, 1000	2 3/8" - 8 5/8"	Power Slip only	350
755870-X	#3 Insert Bowl for PS-500, 750-1, 750-2, 1000	2 3/8" - 8 5/8"	Power Slip only	150

<sup>1</sup> suitable for MPCH, MSPC, <sup>2</sup> suitable for LRMB

**Revision history**

Version	Date	Author	Changes
01	04-2015	FORUM Handling Tools, ROK, MH	Initial Release, Type series Insert Bowl
02	05-2017	FORUM Handling Tools, ROK, MH	Update Documentation, Merged document FBV and AOT, API 7K 6th edition.
03	07-2017	FORUM Handling Tools, ROK, MH	Update weights and P/N
04	08-2018	FORUM Handling Tools, ROK, St.S	New Layout

**Document Approval**

Version	Author	Eng. Check	Approval Check
04	FORUM Handling Tools, TD St.S 08-18	FORUM Handling Tools, PLE as per revision 03	FORUM Handling Tools, EngMgr as per revision 03

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Other company brands and product names may be trademarks or registered trademarks of the respective companies and are also acknowledged. All data in this manual takes place using best knowledge. This manual is based on the latest product information that was available at the time of printing. Depending on ongoing technical improvements (ISO 9001), FORUM Handling Tools reserves the right to make alterations to the design and specifications without notice. The values specified in this manual represent the nominal value of a unit produced in series. The values in individual units may have slight differences.

Only with written consent from FORUM Handling Tools the contents of this Instructions may be passed on to third persons. Especially procedure descriptions and explanations are not to be passed on to third persons. Copying or multiplying for internal use is permitted. We are grateful for suggestions and critique regarding this documentation or the product itself.

**oiltools@f-e-t.com**

# Table of contents

<b>A.</b>	<b>GENERAL</b>	<b>4</b>	<b>4</b>	<b>COMMISSIONING AND OPERATION</b>	<b>36</b>
I	BASIC INFORMATION	4	4.1	COMMISSIONING	36
II	INTENDED USE	4	4.2	COMMISSIONING CHECKLIST	37
III	IMPROPER USE	4	4.3	OPERATING THE INSERT BOWL	38
IV	POTENTIAL MISUSE	5	<b>5</b>	<b>SERVICE</b>	<b>40</b>
V	WARRANTY AND LIABILITY	5	5.1	MALFUNCTION	40
VI	OBLIGATIONS OF THE OPERATING COMPANY	6	5.2	REPAIR	40
VII	USER GROUPS	7	5.2.1	REPAIR BY CUSTOMER	40
VIII	SAFETY SYMBOLS	8	5.2.2	REPAIR BY MANUFACTURER	40
IX	PERSONAL PROTECTIVE EQUIPMENT (PPE)	9	<b>5.3</b>	<b>DRAWING, PARTS LISTS AND SPARE PARTS</b>	<b>40</b>
X	CONTACT FORUM HANDLING TOOLS WORLDWIDE	10	5.3.1	MASTER BUSHING INSERT BOWLS	41
XI	ONLINE TECHNICAL DOCUMENT ACCESS	11	5.3.2	LIFTING ACCESSORIES	42
XI-01	INFORMATION VIA HOMEPAGE	11	5.3.2.1	LIFTING TRIANGLE (TRAVERSE) WITH LIFTING SLINGS AND 4 HOOKS	42
XI-02	INFORMATION VIA EXTRANET	12	5.3.2.2	LIFTING SLING 2 HOOKS	43
<b>1</b>	<b>DESCRIPTION</b>	<b>14</b>	5.3.2.3	LIFTING CABLE WITH 2 HOOKS	44
1.1	TYPE SERIES OVERVIEW	15	5.3.2.4	LIFTING TRIANGLE (TRAVERSE) WITH LIFTING CABLE AND 4 HOOKS	44
1.1.1	STANDARD SPLIT INSERT BOWL AND CASING BOWL	15	5.3.3	POWER SLIP INSERT BOWLS - 755820-X, 755870-X	45
1.1.2	LOCKING TAB INSERT BOWL	15	<b>6</b>	<b>INSPECTION / MAINTENANCE</b>	<b>48</b>
1.1.3	UMBILICAL INSERT BOWL	15	6.1	LUBRICATION	49
1.1.4	POWER SLIP INSERT BOWL	15	6.2	INSPECTIONS	50
1.2	MAIN DIMENSIONS	16	6.3	INSPECTION CATEGORIES	50
1.3	OPTIONAL ACCESSORIES	17	6.3.1	INSPECTION CATEGORY I	51
1.4	RECOMMENDED LUBRICANTS	17	6.3.2	INSPECTION CATEGORY II	51
1.5	OPERATIONAL ENVIRONMENT	18	6.3.3	INSPECTION CATEGORY III	51
1.6	EQUIPMENT MARKINGS	18	6.3.4	INSPECTION CATEGORY IV	51
1.7	RFID-CHIP EQUIPPED HANDLING TOOL EQUIPMENT	19	6.3.5	INSPECTIONS LIST	51
<b>2</b>	<b>SAFETY</b>	<b>22</b>	6.3.6	INSPECTION CHECK LIST CATEGORY I - IV	52
2.1	GENERAL SAFETY PRECAUTIONS	22	6.3.7	CRITICAL AREAS	53
2.2	OPERATION MANUAL AND EQUIPMENT	23	6.3.8	WEAR DATA CRITERIA	53
2.3	SAFETY PRECAUTIONS AGAINST REMAINING HAZARDS	23	6.4	CLEANING	54
2.4	ORGANIZATIONAL MEASURES	24	<b>7</b>	<b>STORAGE / DISPOSAL</b>	<b>56</b>
2.5	HUMAN ERROR	24	7.1	STORAGE	56
2.6	ACCIDENTS, FIRE	24	7.2	DISPOSAL	56
2.7	SAFETY INSTRUCTION CARD I	25	7.3	SAFE STORAGE EXAMPLE	57
2.8	SAFETY INSTRUCTION CARD II	26	<b>8</b>	<b>APPENDIX</b>	<b>60</b>
<b>3</b>	<b>TRANSPORT / SET-UP</b>	<b>28</b>	A.	THIRD PARTY DOCUMENTS	61
3.1	DELIVERY	28	I	SAFETY DATA-SHEET	61
3.1.1	SCOPE OF DELIVERY	28	II	COMPONENTS	62
3.1.2	UNPACKING AND DISPOSAL OF PACKING MATERIAL	28			
3.2	TRANSPORT	29			
3.3	LIFTING POINTS AND LIFTING ARRANGEMENTS	30			
3.4	INSTALLATION	31			
3.4.1	SOLID INSERT BOWL INSTALLATION	31			
3.4.2	SPLIT INSERT BOWL INSTALLATION	32			
3.4.3	POWER SLIP INSERT BOWL INSTALLATION	33			

DESCRIPTION  
SAFETY  
TRANSPORT  
COMMISSIONING / OPERATION  
SERVICE  
INSPECTION / MAINTENANCE  
STORAGE  
APPENDIX

## A. General

### I Basic Information

This operating manual refers to Insert Bowl manufactured and sold by FORUM Handling Tools for use on oil drilling platforms and rigs. The permissible range of application is specified in the technical data.

This manual covers several different FORUM Handling Tools models from the Insert Bowl type series that are all common in use and operation. Most assembly, disassembly, and inspection procedures are the same for all models. However, where there are differences, they are called out separately within the manual.

When installed in potentially explosive atmospheres, the instructions that follow the Ex symbol must be followed. Personal injury and/or equipment damage may occur if these instructions are not followed.

This operating manual is intended for the operator of the Insert Bowl. It is intended to ensure safe operation and must be read carefully and kept where it is accessible for Insert Bowl users at all times.

This operating manual contains all information on safe and proper operation of Insert Bowl. Observance of these instructions is required for safe operation.

In addition, it is necessary to observe all applicable national and local regulations (e.g. accident prevention regulations and environmental regulations) as well as the company's own internal safety regulations.

For installation, maintenance and repair work and proper training of the operating personnel. FORUM Handling Tools recommends requesting service from FORUM Handling Tools itself.

### II Intended Use

The FORUM Handling Tools Insert Bowls are operated with a Hand Slip and a Master Bushing (27 1/2", 37 1/2" and 49 1/2") or other suitable equipment such as the Power Slip PS-750 or the LMRB, in order to accommodate the loads of drill rods. The Insert Bowl provides the necessary wedge surface for the Hand Slip and allows a uniform radial load distribution on the Master Bushing. Insert Bowls are fixed during use.

FORUM Handling Tools Insert Bowls are available as one-piece or two-part variants. In addition to observing and adhering to all instructions in this operation maintenance manual, the use of the prescribed assembly, disassembly, commissioning, operation, maintenance and maintenance work within the specified inspection intervals as well as the observance of all safety instructions must be in accordance with the intended use.

Insert Bowls may only be used as intended. All FORUM Handling Tools Insert Bowls are load rated and designed, manufactured and tested according to API 7K.

## INFO



In this documentation the abbreviation t and the word tons are used to describe short tons. If the metric ton is referred it will explicit be named in the text or the abbreviation ton.

1 ston	= 2000 lb	= 907,19 kg
1 metric ton	= 2204,62 lb	= 1000 kg

### III Improper Use

## INFO



Improper use or alteration of the equipment releases FORUM Handling Tools from any liability for personal injury or property damage resulting therefrom.

The Insert Bowl are intended to be used with additional carrying and pipe holding equipment. The following is specifically prohibited:

- Using the Insert Bowl with Master Bushing-diameter for which use is not specified.
- Exceeding the load rating/limit of the Insert Bowl.
- Any use of the Insert Bowl which is not intended.

Moreover, operation of the Insert Bowl is prohibited under the following conditions:

- When the equipment is used for applications other than intended.
- When the equipment or parts thereof are damaged or when the additional equipment is not installed properly.
- When protective or safety equipment is damaged, unusable, improperly installed or not present.
- When the Insert Bowl are not operating properly.
- When humans or foreign objects or personnel are located in the hazard area of the Insert Bowl.
- When the Insert Bowl are operated outside the designated temperature environment.
- When conversions or modifications have been performed without previous, written approval by FORUM Handling Tools .
- When tools not approved by FORUM Handling Tools are used.
- When the prescribed maintenance intervals have been exceeded.
- When replacement parts not approved by FORUM Handling Tools are used.
- When repair or service work has been performed on the equipment by companies not authorized by FORUM Handling Tools .

Observe also the chapter "Warranty and Liability".

DESCRIPTION

SAFETY

TRANSPORT

COMMISSIONING / OPERATION

SERVICE

INSPECTION / MAINTENANCE

STORAGE

APPENDIX



#### IV Potential Misuse

This manual contains information and warnings on procedures that address hazardous conditions and could cause personal injury but cannot reflect all fashions in which hazardous consequences may occur due to service and/or operation. All personnel using this equipment or service procedures contained within this manual must be completely satisfied that personal and/or equipment safety will not be compromised.

##### Common methods of MISUSE include but are not limited to:

1. Use without ALL warning and identification labels present. This can cause operating personnel to misunderstand the areas of the equipment that can cause serious injury.
2. Use with insufficient and/or worn assemblies and parts. This can cause failure causing a suspended hazard which can result in serious injury or death.
3. Use of the Insert Bowl in methods not intended. The Insert Bowl should be used ONLY in the methods described in this manual.

#### V Warranty and Liability

##### Liability

The technical information, data and instructions for operation contained in this operating manual correspond to the status at the time of print and are provided according to the best of our knowledge in consideration of our previous experience and know-how.

We reserve all rights to make technical modifications within the scope of technical development of the Insert Bowl treated in this operating manual. Claims or entitlements cannot be deduced or derived from information, illustrations and /or descriptions in this operating manual.

FORUM Handling Tools is liable for all warranty obligations made within the scope of the contract for any faults or omissions on our part, excluding further claims. Claims for damages suffered are excluded regardless of the legal grounds.

Translations are complete according to best knowledge. We cannot assume any liability for translation errors, even when the translation was performed at our order. Only the original text is binding. The original text language for FORUM Handling Tools documents and manual is English.

The descriptions and illustrations do not necessarily reflect the scope of delivery or any parts orders. The drawings and illustrations are not to scale.

#### Warranty

FORUM Handling Tools general terms of purchase and delivery apply. Purchasers recognize these conditions on the day the contract is signed, at the latest.

The terms and duration of FORUM Handling Tools warranty are specified in the sales documents as well as the order confirmation. These will be submitted to the operating company as information at the time the contract is signed, at the latest.

The manufacturer assumes no warranty whatsoever for damage or interruptions in operation resulting from failure to observe the operating instructions.

The operating manual is to be supplemented by the operating company with operating instructions based on existing national regulations on accident and environmental protection, including information on supervisory and reporting obligations taking into consideration operating peculiarities, e.g. in regard to work organization.

Warranty claims/complaints within the scope of the guarantee and liability for personal injury and property damage are excluded, when such result from any of the following causes:

- Any use other than intended;
- Improper installation, operation, maintenance or repair;
- Operation with defective, improperly attached or non-operational safety and/or protective equipment;
- Failure to observe the instructions in the operating manual regarding safe conduct;
- Impermissible structural and/or functional modifications;
- Use of replacement parts not approved by FORUM Handling Tools;
- Normal wear or insufficient inspection of components subject to wear;
- External effects or force majeure;
- Lubricating the Insert Bowl with lubricants other than those recommended by FORUM Handling Tools.

#### Info



Any structural or functional modification to the equipment by the operating company requires previous written approval by FORUM Handling Tools. Failure to obtain such approval voids the warranty as well as the declaration of conformity and releases FORUM Handling Tools from any product liability.

Following modifications or installation of optional equipment, all safety equipment must be reinstalled and checked by the operator for proper function.

## VI Obligations of the Operating Company

### Planning and Checking Safety Measures

The obligation of the operating company to due diligence includes planning safety measures and supervising their observance.

All personnel performing work on and with the Insert Bowl must be trained by the operating company for the work performed on and with the Insert Bowl.

All personnel must have read and understood the operating manual.

### Minimizing Risk of Injury

The following principles apply to minimize the risk of injury:

- Ensure that work on the Insert Bowl is performed only by qualified personnel.
- The personnel must be authorized for such work by the operating company.
- The personnel must wear the prescribed protective equipment.
- Procedures, competencies and responsibilities must be clearly defined and established in the area of the Insert Bowl. Proper behavior in the event of a malfunction must be clear for everyone. The personnel must be given regular training.
- All WARNING signs and information on the Insert Bowl must be complete and easily legible. For this purpose WARNING signs and information are to be cleaned regularly and replaced as required.

### Trouble-free Operation

The following principles apply for trouble-free operation:

- Keep the complete operating manual at the location where the Insert Bowl is in operation where it is easily accessible for everyone and in an easily legible condition.
- Use the Insert Bowl exclusively for its intended purpose.
- Use the Insert Bowl only when it is in a perfect operating state.
- Before starting work, check to ensure that it is in a safe operating state and functioning properly.

### Requirements for Operator

Basic knowledge of safe handling and use of the Insert Bowl includes knowledge of the general safety precautions.

Ensure that the Insert Bowl is operated only in compliance with the general safety precautions and other instructions in this manual.

### Training

The operating company is obligated to organize and hold regular training to ensure that all personnel involved with transporting, installing, operating and/or servicing the Insert Bowl is familiar with the required procedures and safety precautions.

### Minimum Qualifications

All work on the equipment requires special knowledge and qualifications on the part of the operating personnel.

All personnel working on Insert Bowl must have the following qualifications:

- Personal suitability for the work performed.
- Suitable qualifications for the work performed.
- Familiarity with the safety equipment and its function.
- Familiarity with this operating manual – particularly the safety precautions – and all sections relevant for the work to be performed.
- Familiarity with the elementary instructions on operating safety and accident prevention.

In general, all employees must have one of the following minimum qualifications:

- Technical training for independent work on the Insert Bowl.
- Sufficient qualifications for working on the Insert Bowl under supervision and at the instructions of a trained specialist.

## VII User Groups

This operating manual is subdivided into the following user groups:

Personnel	Qualifications
Operating personnel	Sufficiently trained in <ul style="list-style-type: none"> <li>• Functional procedures on the equipment.</li> <li>• Operating procedures.</li> </ul> Knowledge: <ul style="list-style-type: none"> <li>• Competency and responsibility in regard to the work to be performed.</li> <li>• Behavior in emergencies.</li> </ul>
Service personnel	Basic knowledge of Mechanics and Authorizations (according to standards of safety engineering): <ul style="list-style-type: none"> <li>• Starting up equipments</li> <li>• Grounding equipments</li> <li>• Marking of equipments</li> <li>• Basic knowledge of installation and operation of the Insert Bowl.</li> </ul>

### Special Technical Knowledge

The following work should be performed only by specially trained personnel:

Work Performed	Qualifications
Work on mechanical parts	Personnel qualified or trained in industrial mechanics; work is to be performed only under supervision and on instructions of a person qualified according to generally accepted codes of practice in industrial mechanics.

## VIII Safety Symbols

The safety precautions in this document contain standardized depictions and symbols. Three hazard classes are distinguished depending on the probability of occurrence and severity of the consequences. Selection of the WARNING category depends on the probability of occurrence and the possible extent of damage.



### ⚠ CAUTION

Indication of recognizable hazard for humans or possible property damage.

**Failure to observe can lead to reversible injuries or property damage!**

The symbol as specified in ANSI Z535.6 emphasizes the cause.

Measures for avoiding are listed.



### ⚠ WARNING

Indication of recognizable hazard for humans.

Failure to observe can lead to irreversible injuries!

The symbol as specified in ANSI Z535.6 emphasizes the cause.

Measures for avoiding are listed.



### ⚠ DANGER

Indication of imminent hazard for humans.

Failure to observe can lead to irreversible or lethal injuries!

The symbol as specified in ANSI Z535.6 emphasizes the cause.

Measures for avoiding are listed.

## Preliminary Safety Precautions

Safety precautions are given in the preceding form at the beginning of complete chapters or sections. They apply for the entire chapter or the entire subsequent section.

### Safety Precautions Relevant for Action

If a safety precaution applies only for one single action or a short series of actions, it is integrated into the text preceding the possible hazard point.

For example:

1. Attach hoisting gear to eye bolts in cover.

**⚠ CAUTION** of pinching/crushing hands! The cover can fall shut when the retainer is not engaged. Never open the cover by hand.

2. Open the cover with a crane and suitable hoisting gear.
3. Unscrew the M10 bolts with a 17 mm box wrench.
4. ...

### Instructions for Safe Procedure

Special work steps to ensure Safe Procedure are depicted as follows (example):

### Safe Procedure

1. Shut off equipment.
2. Disconnect supply lines.
3. Attach equipment to crane.
4. ...

### Linguistic Conventions

This documentation uses terms and symbols intended to help you find information more easily, perform work steps more effectively and recognize dangerous situations more quickly. These symbols and terms are explained below:

All important text sections are printed in bold face.

- Lists without any necessary sequence are marked with a dash (-) at the left side of the column.
- Individual activities to be performed are indicated by a dot (•) to the left of the column.

Relevant consequences of an action or work step are marked with an arrow (>) in the left margin.

Enumerations in a certain sequence (e.g. a series of work steps) are indicated by sequential numbers (1, 2, 3..) in the left margin.

For example:

1. Unscrew nuts on equipment feet.
2. Lift equipment.

For greater clarity the illustrations are located in the right column with the text opposite or directly below the associated text section. Larger illustrations extending over the entire width of the page are located before the explanatory text. The illustrations are provided with captions in telegraph style.

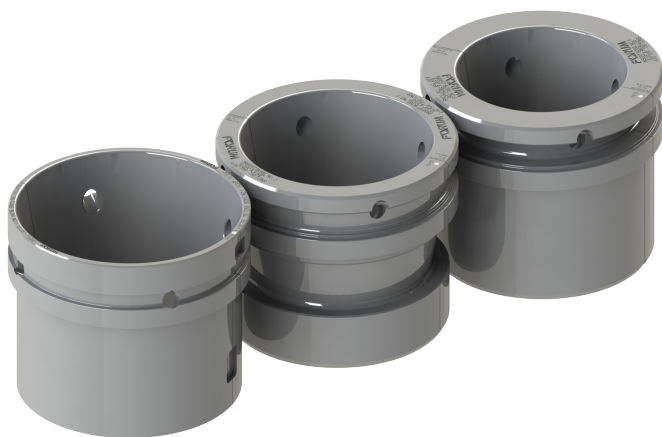


Fig. 1: Illustration Example

### IX Personal Protective Equipment (PPE)

The following symbols located at appropriate points in the operating manual indicate that it is mandatory to wear personal protective equipment:



WEAR PROTECTIVE GLOVES!



WEAR EYE PROTECTION!



WEAR SAFETY SHOES!



WEAR PROTECTIVE HELMET!



WEAR EAR PROTECTION!

### INFO



Additional information and relationships requiring special attention are distinguished in this manner.

## X Contact FORUM Handling Tools worldwide

In the event of problems that cannot be solved with the aid of this manual, please contact one of the following addresses.

FORUM B + V Oil Tools GmbH	FORUM Handling Tools
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Hermann-Blohm-Straße 2 20457 Hamburg Germany Tel: + 49.40.37022.6855 Fax: + 49.40.37022.6899	1023 FORUM Drive Broussard, LA 70518 USA Tel: +1.337.373.1800 Fax: +1.337.369.6893
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E-Mail: [oiltools@f-e-t.com](mailto:oiltools@f-e-t.com)  
 web: [www.f-e-t.com](http://www.f-e-t.com)  
[www.blohmvoss-oiltools.com](http://www.blohmvoss-oiltools.com)

## FORUM ENERGY TECHNOLOGIES Drilling-Service-Locations Email: [ForumDP.Sales@f-e-t.com](mailto:ForumDP.Sales@f-e-t.com)

Canada	Mexico	Scotland
Nr. 106, 3903 - 75 Ave Leduc, Alberta T9E 0K3 Tel: + 1 780.980.0345 Fax: + 1 780.986.3278	Avenida Avante Monterrey N 300 Parqu Industrialxico Tel: + 52.81.8245.6800	Peregrine Road, Westhill Aberdeenshire, AB32 6JL Tel: + 44,1224.744000

United Arab Emirates	Singapore
Oilfields Supply Center Building B-45 Jebel Ali Free Zone Dubai UAE Tel: + 971.4.883.5266	No 51 Benoi Road #06-00 Liang Huat Industrial Complex 629908 Tel: + 65.6465.4850 Fax: + 65.6465.4851 Out of hours + 65.913.898.12



**XI Online Technical Document access**

**XI-01 Information via homepage**

**INFO**

**i** For further and actual information you can also visit our homepage in the Internet.

A digital version of the operation instructions for this product as well as the operation instructions, safety- and update notes for other FORUM Handling Tools products can be reached via the blohm-voss-oiltools homepage. To join our Internet Technical Documentation service with the latest updates on new technical documentation in a casual way, you must register to our service with your email-address and name in the customer-login area **1** on [www.blohm-voss-oiltools.com](http://www.blohm-voss-oiltools.com).



GENERAL

Fig. 2: Illustration Service–Homepage

**XI-02 Information via Extranet**

GENERAL

**INFO**



For further and actual information you can also visit our Extranet homepage .

A digital version of the operation instructions for this product as well as the operation instructions, safety – and update notes for other FORUM Handling Tools products can be reached via the Extranet.

To join our Internet Technical Documentation service with the latest updates on new technical documentation in a free and easy way, you must register to our service with your email-address and name in the customer-login area on <https://www.accessoiltools.com/fx/>.



Technical Documentations  
Safety Notes and Product Updates

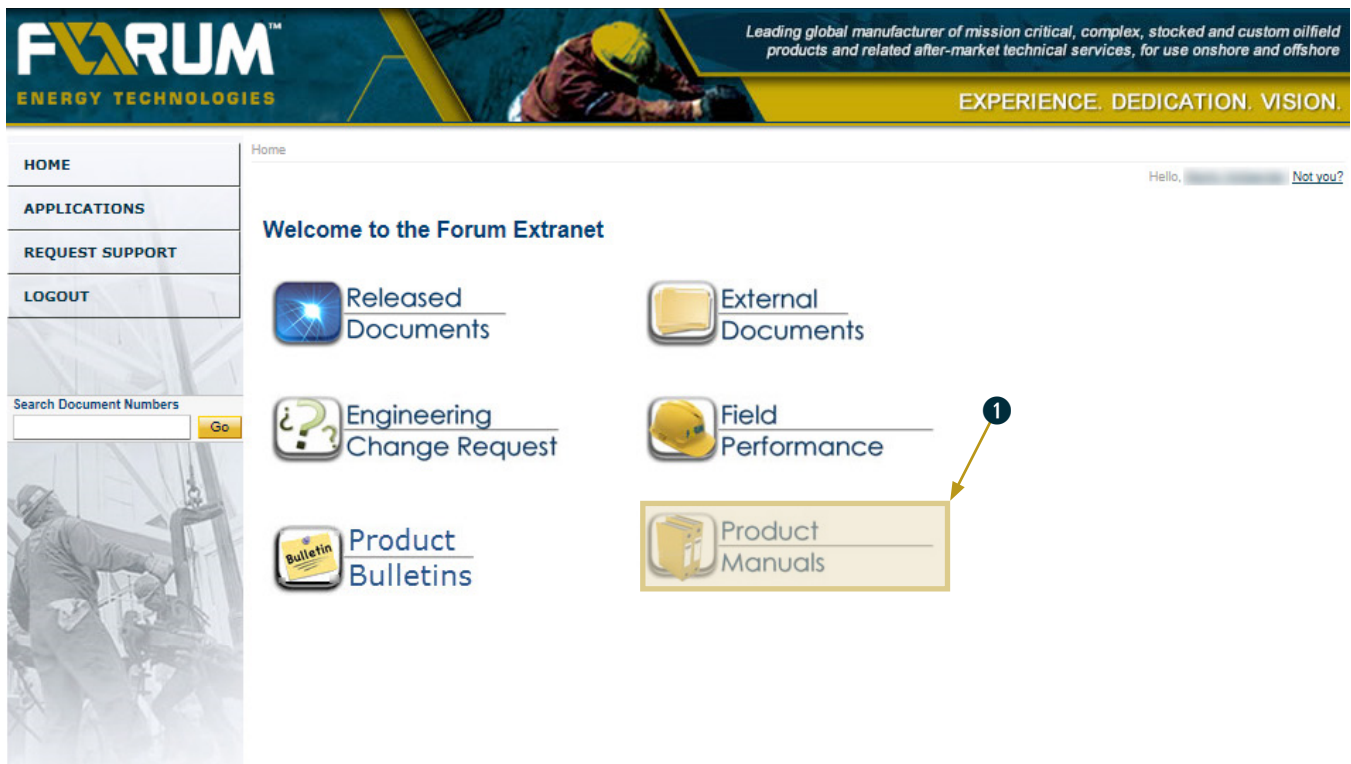


Fig. 3: Illustration Service–Extranet

# DESCRIPTION

DESCRIPTION

## 1 Description

The FORUM Handling Tools Insert Bowls are operated with a hand slip and a Master Bushing (27 1/2", 37 1/2" and 49 1/2") or other suitable fixtures such as the Power Slip PS-750 or the LMRB, in order to accommodate the loads of drill pipes (nominal diameter range of 13 3/8" to 8 5/8" or smaller). The Insert Bowl provides the necessary wedge surface for the hand slip and allows a uniform radial load distribution on the Master Bushing. Insert bowls are fixed during use. The Insert Bowl itself is available in 3 variants (# 1, # 2, # 3). All FORUM Handling Tools Insert Bowls were designed and manufactured according to the API 7K 6th Edition.

**⚠ WARNING** When using the FORUM Handling Tools Insert Bowl, the specified load rating must never be exceeded.

- Insert Bowl can be used with
  - Hinged Master Bushings [MPCH/MSPC],
  - Load rated Master Bushing [LRMB]
  - Split Casing Bushings and
  - Power Slips

A description of the optional accessories is given in the following chapters and in the parts lists.

The equipment is approved for operation in explosion hazard areas.

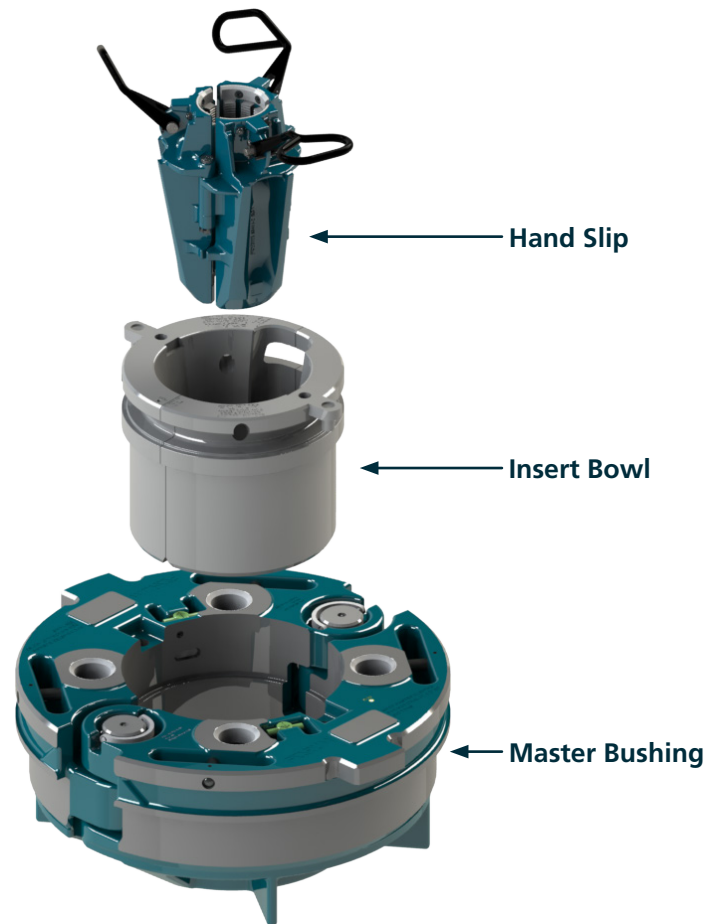


Fig. 4: Example Insert Bowl - Master Bushing

P/N	Type	Pipe Size Range	Size	Load rating [sh t]
34-101-X	#1 Insert Bowl [Split] <sup>1</sup>	11 3/4" - 13 3/8"	27 1/2"	500
34-102-X	#2 Insert Bowl [Split] <sup>1</sup>	9 5/8" - 10 3/4"	27 1/2"	500
34-103-X	#3 Insert Bowl [Split] <sup>1</sup>	8 5/8" and smaller	27 1/2"	500
551903-X	#1 Insert Bowl [Split] <sup>1</sup>	11 3/4" - 13 3/8"	27 1/2"	500
551904-X	#2 Insert Bowl [Split] <sup>1</sup>	9 5/8" - 10 3/4"	27 1/2"	500
551810-X	#3 Insert Bowl [Split] <sup>1</sup>	8 5/8" and smaller	27 1/2"	500
556610-X	#1 Insert Bowl [Split] <sup>1+2</sup>	11 3/4" - 13 3/8"	37 1/2" & 49 1/2"	750
556609-X	#2 Insert Bowl [Split] <sup>1+2</sup>	9 5/8" - 10 3/4"	37 1/2" & 49 1/2"	750
556608-X	#3 Insert Bowl [Split] <sup>1+2</sup>	8 5/8" and smaller	37 1/2" & 49 1/2"	750
34-301-X	#1 Insert Bowl [Split] <sup>1+2</sup>	11 3/4" - 13 3/8"	37 1/2" & 49 1/2"	500
34-302-X	#2 Insert Bowl [Split] <sup>1+2</sup>	9 5/8" - 10 3/4"	37 1/2" & 49 1/2"	500
34-303-X	#3 Insert Bowl [Split] <sup>1+2</sup>	8 5/8" and smaller	37 1/2" & 49 1/2"	500
556610-L-X	#1 Insert Bowl with 120 mm Slot <sup>1+2</sup>	11 3/4" - 13 3/8"	37 1/2" & 49 1/2"	750
556609-L-X	#2 Insert Bowl with 120 mm Slot <sup>1+2</sup>	9 5/8" - 10 3/4"	37 1/2" & 49 1/2"	750
556608-L-X	#3 Insert Bowl with 120 mm Slot <sup>1+2</sup>	8 5/8" and smaller	37 1/2" & 49 1/2"	750
34-303-03-X	#3 Insert Bowl - Centralizer Bowl <sup>1+2</sup>	8 5/8" and smaller	37 1/2" & 49 1/2"	500
34-303-04-X	#3 Insert Bowl - Umbilical J-Notch <sup>1+2</sup>	8 5/8" and smaller	37 1/2" & 49 1/2"	500
34-303-01-X	#3 Insert Bowl - Umbilical Slot <sup>1+2</sup>	8 5/8" and smaller	37 1/2" & 49 1/2"	500
34-303-02-X	#3 Insert Bowl - Dual Umbilical Slot <sup>1+2</sup>	8 5/8" and smaller	37 1/2" & 49 1/2"	500
755820-X	#3 Insert Bowl for PS-500, 750-1, 750-2, 1000	2 3/8" - 8 5/8"	Power Slip only	350
755870-X	#3 Insert Bowl for PS-500, 750-1, 750-2, 1000	2 3/8" - 8 5/8"	Power Slip only	150

<sup>1</sup>suitable for MPCH, MSPC, <sup>2</sup>suitable for LRMB

## 1.1 Type Series Overview

### 1.1.1 Standard Split Insert Bowl and Casing Bowl



Fig. 5: Standard Insert Bowl (Split) and Casing Bowl

Item	Part number	Weight lb [kg]
#1 Insert Bowl	551903-X	331 [150]
#2 Insert Bowl	551904-X	472 [214]
#3 Insert Bowl	551810-X	794 [360]
#1 Insert Bowl	556610-X	335 [152]
#2 Insert Bowl	556609-X	485 [220]
#3 Insert Bowl	556608-X	811 [368]
#1 Insert Bowl	34-101-X	320 [145]
#2 Insert Bowl	34-102-X	540 [245]
#3 Insert Bowl	34-103-X	869 [394]

### 1.1.2 Locking Tab Insert Bowl

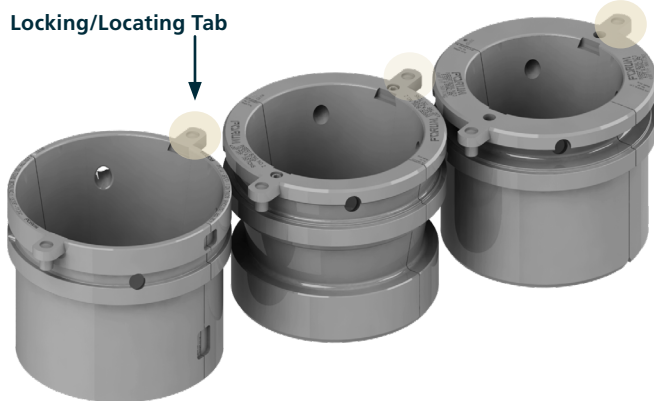


Fig. 6: Locking Tab Insert Bowl

Item	Part number	Weight lb [kg]
#1 Insert Bowl	34-301-X	324 [147]
#2 Insert Bowl	34-302-X	545 [247]
#3 Insert Bowl	34-303-X	871 [395]

### 1.1.3 Umbilical Insert Bowl

Umbilical Option notch



Fig. 7: Umbilical Insert Bowl

Item	Part number	Weight lb [kg]
#1 Insert Bowl	556610-L-X	331 [150]
#2 Insert Bowl	556609-L-X	463 [210]
#3 Insert Bowl	556608-L-X	767 [348]
#3 Insert Bowl	34-303-01-X	829 [376]
#3 Insert Bowl	34-303-02-X	776 [352]
#3 Insert Bowl	34-303-03-X	452 [205]
#3 Insert Bowl	34-303-04-X	787 [357]

### 1.1.4 Power Slip Insert Bowl

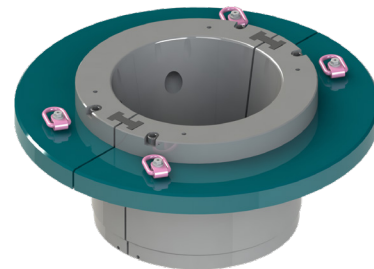


Fig. 8: Power Slip Insert Bowl

Item	Part number	Weight lb [kg]
#3 Insert Bowl	755820-X	997 [452]
#3 Insert Bowl	755870-X	997 [452]

## 1.2 Main dimensions

DESCRIPTION

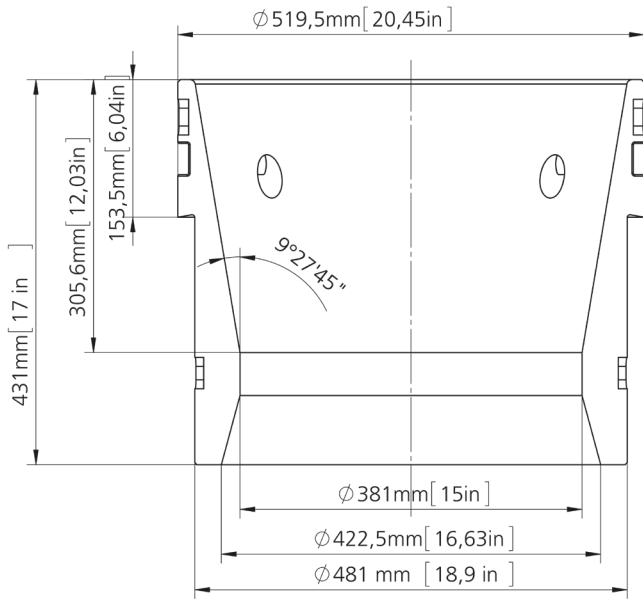


Fig. 9: Insert Bowl # 1

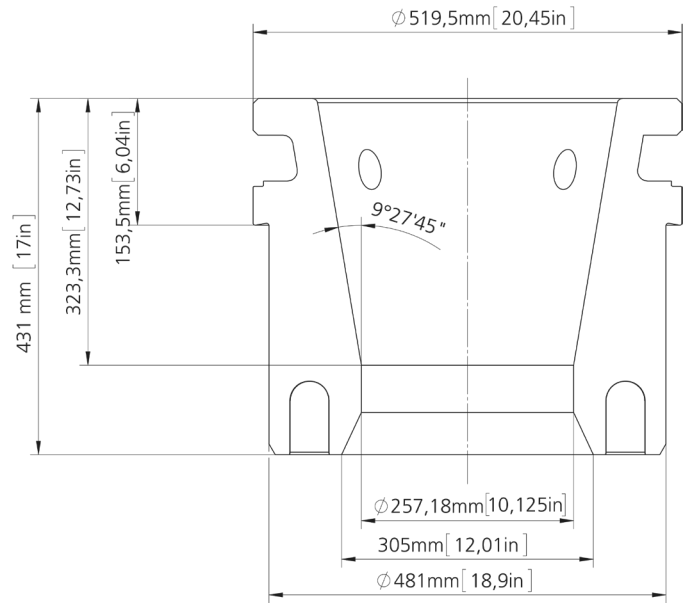


Fig. 10: Insert Bowl # 3

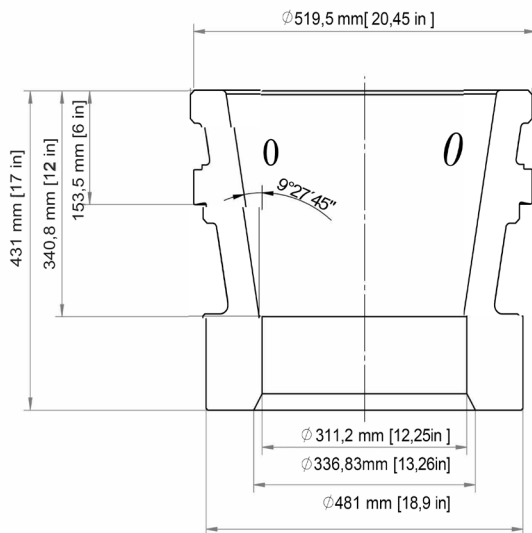


Fig. 11: Insert Bowl # 2



### 1.3 Optional Accessories

To ease the handling and to support the device functions following accessories are available from FORUM Handling Tools for the Insert Bowl. Please contact your local FORUM Handling Tools representative for detailed information.

- **Lubricants Pump , manual PN 755667-3**  
Manual Lubricants pump to apply Lubricants on the device Lubricants points.
- **Lifting Chain slings/ Cable Slings**  
Lifting Chain slings/ Cable Slings are used to lift the Insert Bowl. The SWL [WLL] is defined at

**WLL 2 sh t for 2 hooks** Chain/Cable Slings and  
**WLL 6 sh t for 4 hooks** Chain/Cable Slings.

- **Lifting Chain Slings (4 hooks) PN 553400-L or PN 34-316**  
with 26 [660] x 1 [26]x10 [250] triangle traverse in[mm]
- **Lifting Chain Slings (2 hooks) PN 553400-2 or PN 34-315**
- **Lifting Cable Slings (4 hooks) PN 34-316 CAB**  
with 26 [660] x 1 [26]x10 [250] triangle traverse in[mm]
- **Lifting Cable Slings (2 hooks) PN 34-315 CAB**
- **BowlSaver PN M2001-A-001**  
Additionally, in an effort to prevent premature wear in the throat section of the inner drilling bowls during drilling operations with a top drive, FORUM Handling Tools has designed a BowlSaver.



Fig. 12: Manual Lubricants Pump



Fig. 13: Lifting Slings

### 1.4 Recommended Lubricants

FORUM Handling Tools recommends use of the following lubricants for effective lubrication under various ambient conditions:

Brand	Name	Temperature range	Remarks
Finke	Aviaticon XRF Low-Viscosity Grease	- 20 to + 29 °C (- 4 to + 84,2 °F)	NLGI 0
Fuchs	NESSOS SF0 EP grease for non-oil tight gear trains	- 20 to + 29 °C (- 4 to + 84,2 °F)	NLGI 0 DIN 51826 GPOF-25 DIN 51502 GPOF-25
Castrol	MP grease	- 20 to + 29 °C (- 4 to + 84,2 °F)	-
Chevron	Avi-Motive W	- 20 to + 29 °C (- 4 to + 84,2 °F)	-
Exxon	Lidok EP2	- 20 to + 29 °C (- 4 to + 84,2 °F)	-
Gulf	Gulfcrown EP@	- 20 to + 29 °C (- 4 to + 84,2 °F)	-
Mobil	Mobilux EP2	- 20 to + 29 °C (- 4 to + 84,2 °F)	-
Shell	Alvania EP2	- 20 to + 29 °C (- 4 to + 84,2 °F)	-
Texaco	Multifak EP2	- 20 to + 29 °C (- 4 to + 84,2 °F)	-
Union	Unoba EP2	- 20 to + 29 °C (- 4 to + 84,2 °F)	-

\* For temperatures above + 30 °C (+ 86 °F) FORUM Handling Tools recommends using lubricants in consistency class NLGI 2.

- refer to 6 „Inspection / Maintenance“ on page 48 for details on lubrication.

### 1.5 Operational Environment

The Insert Bowl are designed and constructed for use in the drilling industry on ships and platforms. The equipment is approved for operation in explosion hazard areas. For equipments containing any hydraulic powered parts, the directive 2014 / 34 / EU "Equipment and protective systems in potentially explosive atmospheres " applies. The corresponding ATEX certificates are present in the Data book. The Classification according to CE (with reference to the ATEX guideline) is as followed:

**CE** **Ex** II 2G IIB T6 for manual equipment

#### Explanation

<b>CE</b>	CE- marking (with reference to the ATEX guideline)
<b>Ex</b>	Marking of the equipment for the Ex- range
<b>II</b>	Equipment Group (II)
<b>2</b>	Equipment Category
<b>G</b>	For explosive mixtures of air and combustible gases, mists or vapors (G)
<b>IIB</b>	Category for Gases
<b>T6</b>	Temperature class

### 1.6 Equipment Markings

The markings are generally used for traceability and provide general information about the component/ device. All markings are in compliance to the latest API 7K 6th Edition and at least include the following information:



Fig. 14: Markings on Insert Bowl



Fig. 15: Contact with Technical Support

The email address of the manufacturer is given on the support sticker if service is required.

#### General Markings according to API 7K 6th Edition

- API Stamp (API monogram, spec, license)
- Manufacturer’s specifications (FORUM logo)
- Production Date (Month / Year)
- Part number (marking P/N before the part number)
- Serial number (marking S/N before the serial number)
- Load Rating
- Own weight
- Maximum weight in kg, if the weight increases by attachments
- CE-ATEX marking (**CE Ex** II 2G IIB T5 / T6)
- Country of manufacture
- Slip taper (a taper of 3 or 4 in./ft are stamped as 3.00 or 4.00 TPF)

#### Supplementary Requirements - SR

Supplementary Requirements, abbreviated by "SR", are labeled beside the general markings, if additionally ordered. Supplementary Requirements in according to API 7K 6th Edition are:

- SR 1 - Proof Load Testing
- SR 2 - Low-temperature Testing
- SR 3 - Data Book
- SR 4 - Additional Volumetric Examination of Castings
- SR 5 - Volumetric Examination of Wrought Material

## 1.7 RFID-Chip Equipped Handling Tool Equipment

### INFO



For further information, you may access the Forum/IC Database from the FET Website or at [www.infochip.com](http://www.infochip.com)

FORUM Handling Tools outfits/supplies certain equipment with patent pending RFID Technology. This technology allows for easy real-time access to pertinent equipment information and technical documentation anytime, anywhere. The database is accessible via the internet or mobile application.

#### Tier I Access – General Access

As standard, the customer will be assigned and issued login information to the database provided for their assets/equipment. Once logged into the database, customers will be able to see all assets assigned to them. Attached to each asset is complete documentation including all contents of databook related to that specific asset. The customer will be able to view, download and print all documents associated with their particular assets.

#### Tier II Access – User Access

Customers opting for improved access as a system user will have the full functionality of Tier I Access but will be able to manipulate their assets. Additional functionality includes but is not limited to:

- Assigning Inspection and Certification due dates and reminders.
- Attaching Internal Inspection Checklists/Documentation.
- Managing Asset Locations.
- Assigning Internal Asset/Serial Numbers.

### INFO



For detailed RFID instruction, please refer to Forum Document 1155081, FORUM RFID User Manual (refer to XI „Online Technical Document access“ on page 11).

#### Frequently Asked Questions (FAQ)

- How do I know if my equipment has RFID?
  - » RFID tags are embedded and clearly marked (“RFID”) on equipment in inconspicuous locations generally at the upper visible part of the equipment.
- What type of RFID tag are we using?
  - » The RFID tags used in FORUM equipment operate on the UHF Frequency.
- How can I scan the tag?
  - » Standard NFC UHF Frequency Reader (available through Forum).
- What is on the tag/chip?
  - » The chip identification number is the only information physically on the chip. All other information is stored on the cloud-based database associated with the chip identification number.
- Whom do I contact to get Tier I access or to inquire about Tier II access?
  - » Forum Sales personnel can help with basic access and upgrade information.

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# SAFETY

SAFETY

## 2 Safety

The Insert Bowls are designed and produced with consideration of all required safety precautions. Failure to observe the safety precautions and operating instructions specified in this manual can lead to hazardous situations when operating a Insert Bowl. While it is not possible to eliminate all hazardous situations with awareness and instruction from this manual, good judgement should be used at all times surrounding the use of a Insert Bowl. Insert Bowls should only be used for their intended purpose. Rectify all faults immediately which could have a negative effect on the safety.

### 2.1 General Safety Precautions

Ensure that work on the Insert Bowl, particularly installation, maintenance and repair work, is performed only by personnel with the necessary qualifications and who are familiar with the associated risks (refer to section VI "Obligations of the Operating Company" on page 6). For safe and proper operation of the equipment it is essential that all personnel working on and with Insert Bowl take the prescribed safety measures and observe the safety precautions specified in this operation maintenance manual.

The Insert Bowl is a subject to wear. After longer periods of operation the safety can be reduced due to wear. Service the Insert Bowl regularly in compliance with the maintenance chart (refer to section 6.2 "Inspections" on page 50) to ensure that all safety requirements are always fulfilled. Check the specified wear limits regularly. Replace worn or defective parts immediately with new parts. If safe operation is no longer guaranteed, take the Insert Bowl out of service. Advise the responsible service organization and FORUM Handling Tools. Rectify every fault, which affects the safety, immediately.



#### **⚠ WARNING**

**Reuse of safety components can cause accidents.**

- » Replace such components with new safety parts.



The operating company is responsible for ensuring safe and correct use of the equipment within the sense of the hazard and risk analysis.

The operating company is also obligated to issue and supervise observance of operating instructions on safe use as well as to observe the instructions in this operating manual.

Protective equipment may never be taken out of service or replaced by unauthorized persons. Violations can lead to dangerous situations, for the consequences of which FORUM Handling Tools can not be held liable. All protective devices must always be kept in an impeccable condition and checked regularly.

#### **Potential hazard zones**

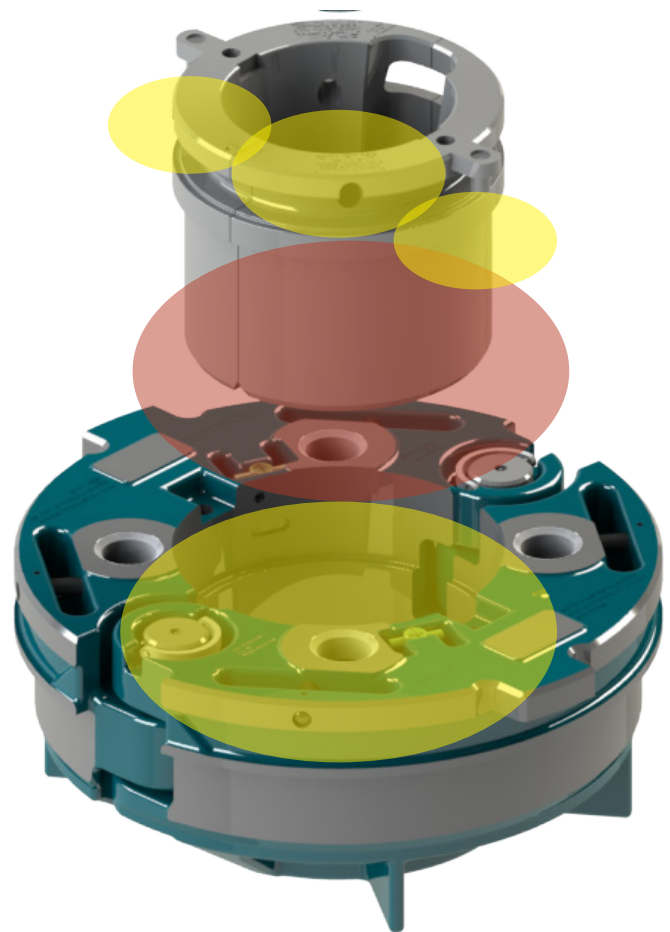


Fig. 16: Potential hazard zones



## 2.2 Operation Manual and Equipment

The safety precautions in this operation maintenance manual are indicated using standardized depictions and symbols. Examples of the symbols and terms used in this manual are explained below. These are used in the form shown wherever possible hazards are present.



### **⚠ DANGER**

#### **Suspended load!**

This indicates injury risks from transporting heavy components.



### **⚠ DANGER**

#### **Tipping hazard for components!**

This indicates injury risks from tipping components.



### **⚠ WARNING**

#### **Danger of pinching/crushing hands!**

This indicates injury risks from moving parts, which pose a hazard of pinching or crushing hands.



### **⚠ WARNING**

#### **Danger of pinching/crushing feet!**

This indicates injury risks from moving parts, which pose a hazard of pinching or crushing feet.



### **⚠ WARNING**

#### **Health hazards from service products!**

This symbol warns of health hazards resulting from contact of service products (e.g. Lubricants) with the skin, mucous membranes, eyes and respiratory paths.



### **⚠ CAUTION**

#### **Risk of stumbling/tripping!**

This symbol warns of tripping hazards, which can lead to stumbling resulting in injuries.

## 2.3 Safety Precautions against Remaining Hazards

This Equipment was designed and produced in consideration of the safety precautions specified in EC Directive 2006 / 42 / EU on Machinery.

The Equipment may be used only for:

- Its intended purpose (refer to Chapter 1).
- When it is in a technically safe state.

Nevertheless, it is not possible to completely exclude all hazardous situations which could arise when the Equipment is used. Reference is made to these remaining risks at the beginning of each chapter and at the corresponding points in the description and measures for avoiding these risks are explained.

### **⚠ WARNING**

#### **Mechanically generated sparks**

Metal tools (e.g. hammers) may generate sparks when used.

- » The use of metal tools in explosive areas has to be prohibited by the operator.
- » Only tools approved for use in potentially explosive atmospheres may be used.



### **Info**



The operating company is responsible for ensuring that all personnel working on the equipment is familiar with the remaining risks and observe the appropriate safety precautions.

## 2.4 Organizational Measures

The operating company is responsible for ensuring that all legally and officially prescribed approvals for operation of the equipment are present and in compliance with national laws and regulations.

The required personal protective equipment (refer to section IX "Personal Protective Equipment (PPE)" on page 9) must be provided by the company operating the equipment.

All safety features present must be checked regularly in compliance as well with OEM recommendations as with national and local requirements.

Warning signs and safety notices on the equipment must be easily legible at all times and replaced as required.

The operating instructions must be kept so that they are available to those operating the equipment at all times.

### Personal Protective Equipment

The required Personal Protective Equipment (PPE) must be used when operating the equipment. This is to be provided by the operating company.

The following PPE is recommended:

- Oil resistant protective clothing,
- Protective gloves,
- Eye protection,
- Safety shoes,
- Protective helmet.

All parts of the protective equipment must be checked regularly for damage in compliance with the specific national regulations and replaced as required.

## 2.5 Human Error

Ignorance of hazards, inattentiveness and limited reactions can lead to hazard situations while working with the Insert Bowl.

### Safe Work

1. All personnel working on and with the Insert Bowl are responsible for paying attention to their colleagues.
2. Consumption of alcohol and drugs is prohibited.
3. Any work on the Insert Bowl is not permissible after taking medication which reduces reactions.
4. AT LEAST visual contact must exist between the operator in the doghouse and the personnel.
5. The personal protective equipment must always be kept and used in perfect condition.
6. All personnel must be familiar with and observe the safety precautions in this instruction manual and on the equipment.
7. The instructions for handling and maintenance intervals specified in this operating manual must be observed.
8. Keep a copy of this operating manual in the vicinity of the equipment, where it is accessible at all times.

## 2.6 Accidents, Fire

### Basic rules in event of accidents or fire

1. Move accident victims out of hazard area and switch off equipment immediately.
2. Administer first-aid.
3. Alert rescue services and fire department immediately and inform supervisor.

In addition, all national, local and internal plant regulations for fire fighting in explosion hazard areas apply.

# SAFETY INSTRUCTIONS

## for Insert Bowls



**WARNING**  
To reduce the risk of injury, everyone using, installing, performing maintenance, changing accessories on, or working with this tool must read and understand these instructions before operation.

*OUR goal is to produce tools that help you work safely and efficiently.  
The most important safety device for this tool is YOU.  
YOUR good judgement is the best protection against injury.*

### Maintenance Hazards

- ⚠ **Practice safety all the time** when servicing this tool by always using the proper safety methods, materials, and personal protective equipment (e.g., eye, head and hands).
- ⚠ **To protect yourself** against flying chip fragments, always wear eye protection when removing or replacing inserts.
- ⚠ **Improper welding** and/or re-machining of cast alloy heat treated steel can cause personal injury, property damage, or death.

### Operation Hazards

- ⚠ **Do not overload or misuse** the insert bowls or bushings. Overloading/misuse can cause serious injury or death.
- ⚠ **Use insert bowls** and bushings with same inside taper. Failure to use the proper bowls and bushings can result in tool malfunction and/or personal injury.
- ⚠ **Use the proper size** insert bowl and bushing for the proper size drill string being run. Failure to use the proper bowls and bushings can result in tool malfunction and/ or personal injury.
- ⚠ **Practice safety at all times** when using the insert bowls and bushings. Always wear personal protective equipment (e.g., gloves, eye protection, hard hat)

### Workplace Hazards

- ⚠ **Be aware** of trip hazards on or around the walking or work surface. To slip/trip/fall are major causes of serious injury or death.
- ⚠ **Maintain a balanced** body position and secure footing.

### Inspection Guide

#### Basic Inspection

- Check all component condition and function
- Replace bad/worn components
- Check all connections for proper installation

Task / Interval	Daily	Weekly
1. Grease all grease points and check state of lubrication	☑	☑
2. Check completeness and condition	!	!
3. Check completeness and condition of warning labels and plates	☒	☑
4. Check for loose items	☒	☑

☑ Necessary ☒ Not necessary ! Safety task!  
Take out of service and repair!

#### Inspection Intervals and tasks

Refer to Chapter 6 of Operation Maintenance Manual for detailed information on Inspections intervals and tasks.

**FXRUM™** Handling Tools

**DO NOT DISCARD - GIVE TO OPERATOR**

# SAFETY INSTRUCTIONS

## for Insert Bowls



### **WARNING**

To reduce the risk of injury, everyone using, installing, performing maintenance, changing accessories on, or working with this tool must read and understand these instructions before operation.

*OUR goal is to produce tools that help you work safely and efficiently.  
The most important safety device for this tool is **YOU**.  
**YOUR** good judgement is the best protection against injury.*

### ▶ Your Safety Notes:

**FXRUM™** Handling Tools

**DO NOT DISCARD - GIVE TO OPERATOR**

# TRANSPORT/ INSTALLATION

TRANSPORT/  
INSTALLATION

### 3 Transport / Set-up



Ensure that set-up and installation work are performed only by sufficiently qualified and trained personnel.



Read these instructions carefully before setting up the equipment and putting it into service.

#### 3.1 Delivery

The Insert Bowls and all accessory parts are shipped on transport pallets. All items on the pallets are secured against tipping and slipping with transport straps.

- » Instructions for safe transport are attached to the transport crate.
- » Transport the packed equipment as specified in these instructions.

##### 3.1.1 Scope of Delivery

###### Info

The contract documents and shipment papers specify the precise scope of delivery. Check these documents carefully on delivery. In the event of any discrepancies please contact the FORUM Handling Tools representative specified in Chapter „X Contact worldwide“ immediately.

The scope of delivery includes all components required for the intended operation of the Insert Bowl.

#### 3.1.2 Unpacking and Disposal of Packing Material

Remove the transport packaging and transport aids before hoisting the equipment to final site.

###### Info



- Do not remove transport retainers.
- The transport retainers should be removed only at the installation site just before startup.

#### Check scope of delivery.

1. Are any transport damage visible?
2. Is the shipment complete? Compare the scope of delivery with the specifications in the shipping documents.

If the equipment has been damaged during transport or the shipment is incomplete, please notify FORUM Handling Tools immediately. Dispose of the packaging material responsibly in compliance with all applicable regulations.

##### Intermediate Storage

If intermediate storage of the Insert Bowl is necessary, observe the following:

- Leave the Insert Bowl in its transport packaging. This provides sufficient protection against external influences.
- Secure the Insert Bowl against sliding or falling due to motion.

TRANSPORT/  
INSTALLATION



## 3.2 Transport



### **⚠ DANGER**

#### **Suspended load!**

The falling load can cause severe, even lethal injuries.

- » NEVER stand beneath or in the swing area of lifted loads



WEAR PROTECTIVE HELMET!



WEAR PROTECTIVE GLOVES!



WEAR SAFETY SHOES!

## Principles for transport

1. Ensure that transport routes are sufficiently dimensioned and designated.
    - » Ensure that all personell are aware that a transport is taking place.
  2. Always use pallets with borders or transport frames for longer transport distances.
  3. The total weight (object to be transported + means of transport, e.g. forklift) must not exceed the supporting capacity of the subsurface.
  4. Ensure that such work is performed only by sufficiently qualified personnel.
  5. Ensure that visual and audio contact exists between the crane operator and operating personnel.
  6. Secure the area against unauthorized entry.
    - » If necessary mark the area with information signs to warn of maintenance and repair work.
  7. Only use approved and tested lifting equipment.
    - » Pay attention to the specific load limits.
  8. Secure the Insert Bowl against slipping.
    - » Observe equipment weight. Observe center of gravity.
  9. Never stand under suspended loads.
  10. Transport the Insert Bowl carefully and close to the ground.
    - » Avoid sudden stops.
  11. Make sure that all assembly and hoisting procedures are consistent with accepted industry practices and standards.
  12. Attach the Insert Bowl only at locations which are intended for this purpose. Only use the lifting points and techniques which are shown in this operation maintenance manual.
  13. Strike the hoisting equipment so that it is straightened straight and kink-free.
  14. Always place only one half of a split Insert Bowl on a pallet. Place them sideways.
  15. Always use a pallet for one-piece Insert Bowls and keep them upright for transport.
- 
- » Detailed weight specifications with the technical data [refer to section 1.1 "Type Series Overview" on page 15].
-

### 3.3 Lifting Points and Lifting Arrangements

#### Hoist the equipment safely

1. Attach the Insert Bowl only at the hoisting eyes provided for transport.
2. Attach the hoisting chains/cables so that they are tensioned straight without kinks.
3. Use hoisting chains/cables and load hooks with sufficient supporting capacity.



#### **⚠ DANGER**

##### **Safe lifting!**

Make sure that the load hooks are fully assembled before lifting the Insert Bowl.



#### **⚠ DANGER**

##### **Suspended load!**

It can cause serious injury and death if the load crashes.

- » NEVER stand under or in the swing area of loads.
- » To raise the Insert Bowl, use ONLY the marked attachment points on.

#### Lifting Points

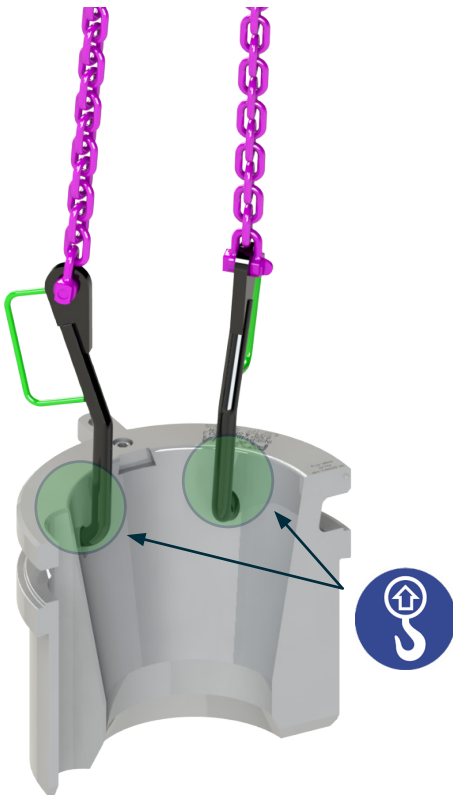


Fig. 17: Attachment Points I

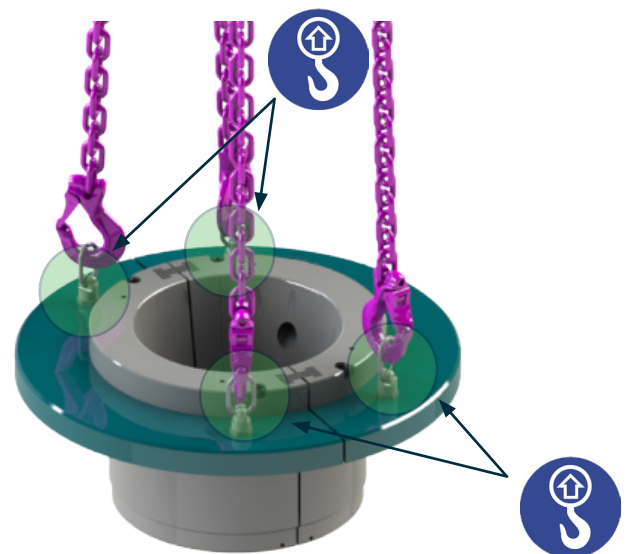


Fig. 18: Attachment Points II

#### Info

**i** FORUM Handling Tools recommends to use lifting cable slings with traverse for lifting operations (refer to section 1.3 "Optional Accessories" on page 17).

TRANSPORT/  
INSTALLATION

### 3.4 Installation



WEAR PROTECTIVE HELMET!



WEAR PROTECTIVE GLOVES!



WEAR SAFETY SHOES!

#### **⚠ WARNING**

##### **Pinching/crushing hazard from lowering!**

Severe pinching/crushing up to loss of limbs.

- » NEVER step over edge of Rotary Table/Master Bushing with feet.

#### **⚠ DANGER**

##### **Suspended load!**

The falling load can cause severe, even lethal injuries.

- » Never stand beneath or in the swing area of a suspended load.



#### Info



Ensure compatibility of the Master Bushing/ Rotary Table/ Hand Slip and the Insert Bowl to be installed.

#### 3.4.1 Solid Insert Bowl Installation

##### Preparation

- Check all surfaces on the rotary table / master bushing and Insert Bowl for damages.
- Clean and lubricate the inside of the rotary table / master bushing. Clean and lubricate the outside of the Insert Bowl.

##### Installation

4. Attach the hoisting equipment to the crane and install the load hooks at the lifting points of the Insert Bowl.
5. Lift the Insert Bowl slightly to tension the hoisting cables and ensure full Lifting Hook penetration into Lifting Holes.
6. Lift the Insert Bowl gently.
7. Move the Insert Bowl to the installation site (Master Bushing).
8. Lift and center the Insert Bowl over the master bushing / rotary table and lower it.
9. Secure the Insert Bowl and remove all lifting equipment.

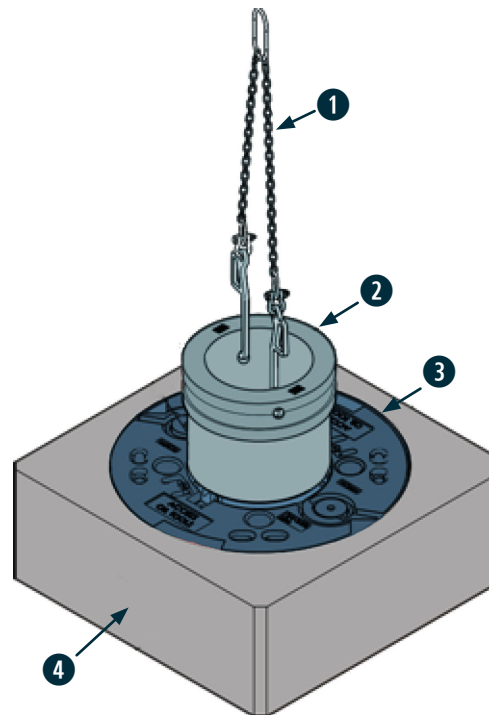


Fig. 19: Installation of the solid Insert Bowl

- |          |                |          |              |
|----------|----------------|----------|--------------|
| <b>1</b> | Lifting Sling  | <b>2</b> | Insert Bowl  |
| <b>3</b> | Master Bushing | <b>4</b> | Rotary Table |

#### **⚠ DANGER**

##### **Master Bushing Lock**

After installation of the Insert Bowl it must be arrested with the Master Bushing/Bowl Lock in the Master Bushing.

- » Pull **1** and turn **2** Master Bushing/ Bowl lock in locked position.

Refer to the Operation Manual for your Master Bowl for details.



### 3.4.2 Split Insert Bowl Installation

#### Preparation

- Check all surfaces on the rotary table / master bushing and Insert Bowl segments for damages.
- Clean and lubricate the inside of the rotary table / master bushing. Clean and lubricate the outside of the Insert Bowl segment.

#### Installation

1. Attach the hoisting equipment to the crane and install the load hooks at the lifting points of the Insert Bowl segment.
2. Lift the Insert Bowl segment slightly to tension the hoisting cables and ensure full Lifting Hook penetration into Lifting Holes.
3. Lift the Insert Bowl segment gently.
4. Move the Insert Bowl segment to the installation site (Master Bushing).
5. Lift and center the Insert Bowl segment over the master bushing / rotary table and lower it.
6. Position the Insert Bowl segment and remove the load hooks.
7. Repeat step 1. - 8. at the other segment.

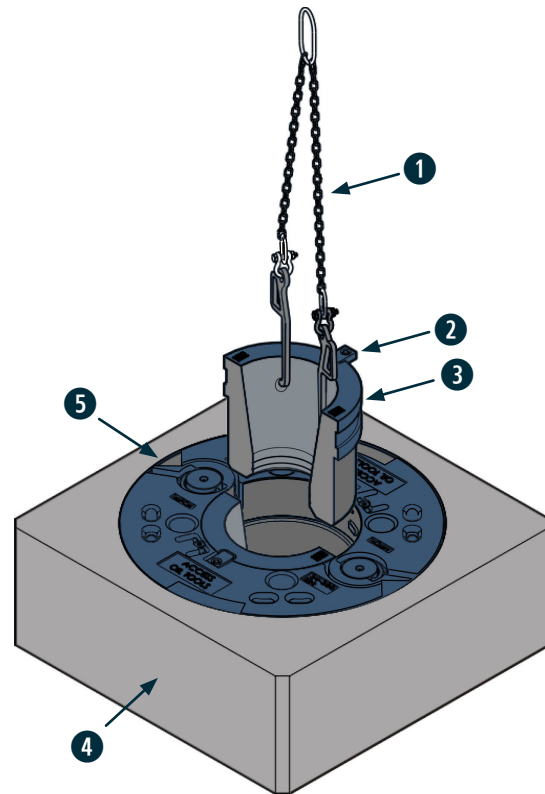


Fig. 20: Installation of the split Insert Bowl

- |                       |                |
|-----------------------|----------------|
| 1 Lifting Sling       | 2 Locking Tab  |
| 3 Insert Bowl Segment | 4 Rotary Table |
| 5 Master Bushing      |                |

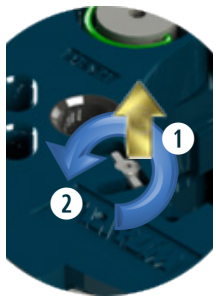
#### **⚠ DANGER**

##### Master Bushing Lock

After installation of the Insert Bowl it must be arrested with the Master Bushing/Bowl Lock in the Master Bushing.

- » Pull 1 and turn 2 Master Bushing/ Bowl lock in locked position.

Refer to the Operation Manual for your Master Bowl for details.



TRANSPORT/  
INSTALLATION

### 3.4.3 Power Slip Insert Bowl Installation

#### Preparation

- Remove the HCS Guide Plates.
- Move Slip Assembly to the upper position and remove all three Insert Carrier.
- Disconnected the Power Slip from the hydraulic supply.
- Check all surfaces on the HCS and Insert Bowl for damages.
- Clean the top of the HCS and the bottom of the retaining ring. Clean and lubricate the inner and the outer surfaces of the Insert Bowl.

#### Installation

1. Attach the hoisting equipment to the crane and install the load hooks to the attachment points of the Insert Bowl.
2. Lift the Insert Bowl slightly to tension the hoisting cables.
3. Move the Insert Bowl to the installation site (Power Slip).
4. Lower the Insert Bowl directly into the HCS, until the retaining ring of the Insert Bowl rests on the HCS.
5. Make sure the Insert Bowl has been installed correctly and remove all lifting equipment.

#### Info



The Power Slip Insert Bowls can not be used with FORUM Handling Tools Slip Lifter/Backsaver. For more information regarding to installation / removal of Insert Carriers, installation and removal of HCS Guide Plates and operating the Power Slip, please refer to your Power Slip Operation and Maintenance Manual.

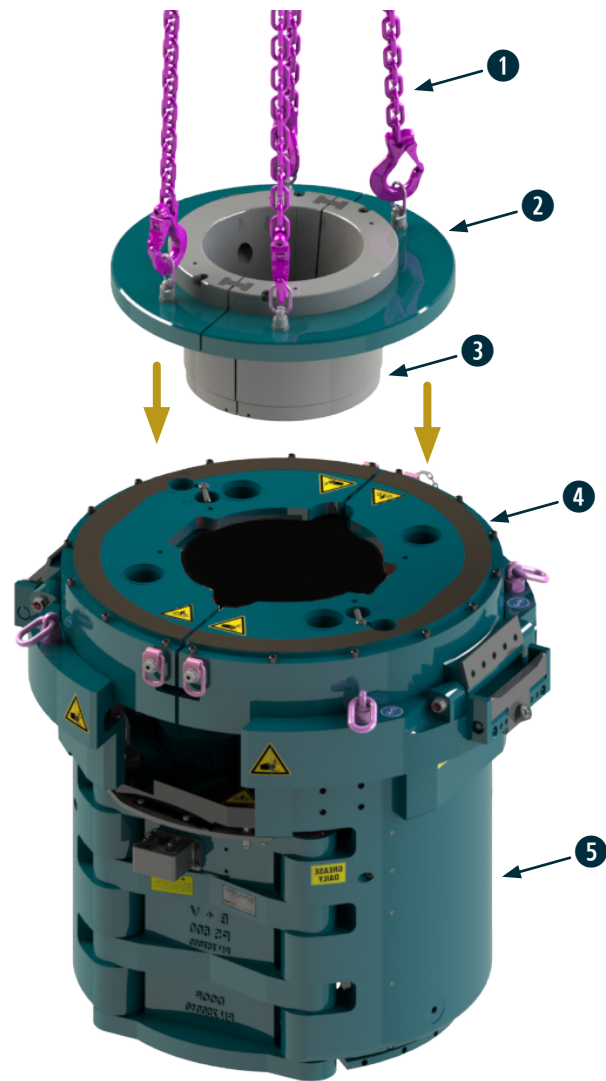


Fig. 21: Installation of the Power Slip Insert Bowl

- |                 |                           |
|-----------------|---------------------------|
| ① Lifting Sling | ② Retaining Ring          |
| ③ Insert Bowl   | ④ Hydraulic Center System |
| ⑤ Power Slip    |                           |

TRANSPORT/  
INSTALLATION

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# COMMISSIONING/ OPERATION

COMMISSIONING/  
OPERATION



## 4 Commissioning and Operation



Ensure that all work is carried out by adequately qualified and trained personnel.



Read these instructions carefully before performing any operations on and with the Insert Bowl.

### 4.1 Commissioning



#### **⚠ WARNING**

##### **Danger of pinching/crushing feet!**

Transporting and setting down heavy components.

- » NEVER step below moving Insert Bowl parts.



#### **⚠ DANGER**

##### **Suspended load!**

The falling load can cause severe, even lethal injuries.

- » NEVER stand beneath or in the swing area of suspended loads.



#### **⚠ WARNING**

##### **Danger of pinching/crushing hands!**

- » Do NOT reach between or under the Insert Bowl.
- » Do NOT reach between or under the segments of the Insert Bowl.

## Safety considerations for operation

1. All screws are tightened.
2. All screw locks are present.
3. The Insert Bowl segments have the same serial number.
4. All lubrication points are properly lubricated.



WEAR PROTECTIVE HELMET!



WEAR PROTECTIVE GLOVES!



WEAR SAFETY SHOES!

**⚠ CAUTION** Never attempt to operate without remedy to all issues identified during checks.

COMMISSIONING / OPERATION

## 4.2 Commissioning Checklist

FORUM Handling Tools strongly recommends to accomplish the commissioning with the FORUM Handling Tools Commissioning Service.

### Prior to use of the FORUM Handling Tools following checks must be carried out :

- OK  Ensure that the entire personnel has been informed of all possible hazards associated with handling the Insert Bowl.
- OK  The operating instructions were carried out together with the entire operating crew.

### Scope of supply

- OK  Verification of the scope of delivery for correctness, completeness and integrity.
- OK  All information on the stamping corresponds with the specifications in the delivered papers.

### Check Installation and Lubrication

- OK  Check the aligning tabs for correct seating and securing.
- OK  Verify that the installation steps have been performed correctly.
- OK  Check state of lubrication of the Insert Bowl and the Master Bushing.
- OK  Check that the Insert Bowl is correctly selected according to the operating parameters.
- OK  Check for no loose components.
- OK  All slings and transport guards have been removed from the Insert Bowl.

### Function test

- OK  Check the seat of the adjustment tabs (Aligning tab).
- OK  Check the securing of the Insert Bowl.

### 4.3 Operating the Insert Bowl



**⚠ WARNING**

**Danger of pinching/crushing feet!**

Transporting and setting down heavy components.

» NEVER step below Insert Bowl parts.



**⚠ WARNING**

**Danger of pinching/crushing hands!**

Do NOT reach between Master Bushing/ Hand Slip and Insert Bowl, or between Insert Bowl segments.



WEAR PROTECTIVE HELMET!



WEAR PROTECTIVE GLOVES!



WEAR SAFETY SHOES!

### Operational Safety

1. Do not touch the Insert Bowl while in operation.
2. Make sure that all screw locks are present.
3. Examine the Insert Bowl regularly for wear.
4. Lubricate the inside of the Insert Bowl regularly.
5. Ensure not to get your hands and feet between the Hand Slip and the Insert Bowl during operation.
6. Do not throw the Hand Slip forcefully into the Insert Bowl.
7. Be careful when you insert a Hand Slip into the Insert Bowl. Do not to place your hand or anything else between the Hand Slip and the Insert Bowl.
8. Be careful when removing the Insert Bowl. Foreign objects may fall into the drill-hole.-

It is necessary to remove the Insert Bowl for the following user operations:

- Changing and replacing components in the Insert Bowl when changing the type/size of pipe used.
- Maintenance work, repair or inspection of the Insert Bowl.

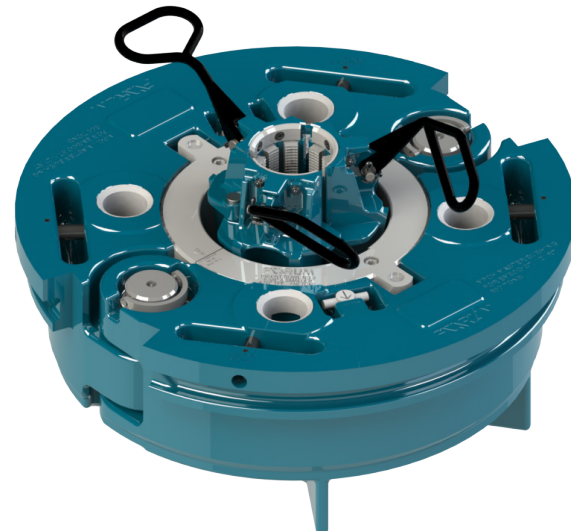


Fig. 22: Insert Bowl in conjunction with a Master Bushing and a Hand Slips

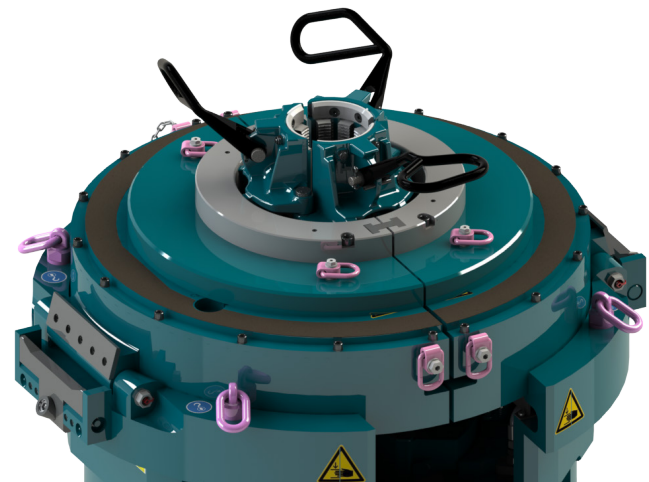


Fig. 23: Insert Bowl in conjunction with a Power Slip and a Hand Slip

COMMISSIONING / OPERATION

# SERVICE

SERVICE

## 5 Service

### Info



Operational safety and readiness of the Insert Bowl do not only depend on your skill, but also on maintenance and servicing of the Insert Bowl. Insist on using original spare parts when carrying out maintenance and repair work. This ensures operational safety and readiness of your Insert Bowl.

### 5.1 Malfunction

If a malfunction occurs or the Insert Bowl does not operate as expected, troubleshoot as follows:

1. Verify that the appropriate Insert Bowl is installed for the pipe size / type used.
2. Check for proper lubrication of the Insert Bowl.
3. Collect all information on the malfunction and define the problem.
4. Attempt to find a quick solution to the problem.
5. Check the last changes/modifications.
6. Isolate the problem.
7. Replace any defective components.

### Info



In the event of problems, which cannot be solved with the aid of this operation maintenance manual, please contact the FORUM Handling Tools Technical Support or one of the authorized service companies.

## 5.2 Repair

### 5.2.1 Repair by Customer

It is only permissible for the customer/company operating the Insert Bowl to replace defective parts with Original Equipment Manufacturer (OEM) parts approved by FORUM Handling Tools in conformance with the present operating instructions. Use of parts not approved by FORUM Handling Tools voids the warranty.

### 5.2.2 Repair by Manufacturer

Ensure that any repair work required on the Insert Bowl is performed only by FORUM Handling Tools or an authorized service company.

### Info



Please contact the FORUM Handling Tools Technical Support or one of the authorized service companies to perform repair or maintenance work.

## 5.3 Drawing, Parts Lists and Spare Parts

### Contact to Parts Department

### Info



Please contact the FORUM Handling Tools Technical Support or one of the authorized service companies to order replacement parts or in the event of any questions.

### 5.3.1 Master Bushing Insert Bowls



#### Parts list Insert Bowl

Pos.	P/N	Description
	34-101-X	#1 Insert Bowl For 11 3/4" - 13 3/8"
	34-102-X	#2 Insert Bowl For 9 5/8" - 10 3/4"
	34-103-X	#3 Insert Bowl For 8 5/8" And Smaller
1	551903-X	#1 Insert Bowl For 11 3/4" - 13 3/8"
2	551904-X	#2 Insert Bowl For 9 5/8" - 10 3/4"
3	551810-X	#3 Insert Bowl For 8 5/8" And Smaller
11	556610-X	#1 Insert Bowl For 11 3/4" - 13 3/8" [Split]
12	556609-X	#2 Insert Bowl For 9 5/8" - 10 3/4" [Split]
13	556608-X	#3 Insert Bowl For 8 5/8" And Smaller [Split]
	34-301-X	#1 Insert Bowl For 11 3/4" - 13 3/8"
	34-302-X	#2 Insert Bowl For 9 5/8" - 10 3/4"
	34-303-X	#3 Insert Bowl For 8 5/8" And Smaller
21	556610-L-X	#1 Insert Bowl For 11 3/4" - 13 3/8" W 120 Mm Slot
22	556609-L-X	#2 Insert Bowl For 9 5/8" - 10 3/4" W 120 Mm Slot
23	556608-L-X	#3 Insert Bowl For 8 5/8" And Smaller W 120 Mm Slot
-	34-303-01-X	#3 Insert Bowl - Umbilical Slot For 8 5/8" And Smaller
-	34-303-02-X	#3 Insert Bowl- Dual Umbilical Slot For 8 5/8" And Smaller
-	34-303-03-X	#3 Insert Bowl - Centralizer Bowl (8 5/8" And Smaller)
-	34-303-04-X	#3 Insert Bowl - Umbilical J-Notch (8 5/8" And Smaller)

- not shown

### 5.3.2 Lifting Accessories

#### 5.3.2.1 Lifting Triangle (Traverse) with Lifting Slings and 4 hooks



Fig. 24: Lifting slings

#### Part lists PN 553 400-L

Pos.	Qty.	P/N	Description
1	6	553400-2	Shackle
2	1	553400-1	Shackle
3	1	553457	Traverse
4	4	553458	Hook
5	8	553400-3	Chain Joint
6	4	553400-4	Chain

#### Part lists PN 34-316

Pos.	Qty.	P/N	Description
1	1	56141-18-A-S	Shackle, Bolt Type
2	6	56141-10-A-S	Shackle, Bolt Type
3	1	34-314	Four Hook Top Plate
4	4	34-312	Lifting Hook
5	8	1012731	Connecting Link, Alloy
6	16 FT.	56130-06-10-G	Chain, Steel



### 5.3.2.2 Lifting Sling 2 hooks



Fig. 25: Lifting slings

#### Part lists PN 553 400-L

Pos.	Qty.	P/N	Description
1	1	553400-1	Shackle
2	4	553458	Hook
3	2	553400-2	Shackle
4	4	553400-3	Chain Joint
5	2	553400-4	Chain

#### Part lists PN 34-315

Pos.	Qty.	P/N	Description
1	1	56138-06	Link, Master-Standard
2	2	34-312	Lifting Hook
3	2	56141-10-A-S	Shackle, Bolt Type
4	4	1012731	Connecting Link, Alloy
5	8 FT.	56130-06-10-G	Chain, Steel

**5.3.2.3** Lifting Cable with 2 Hooks

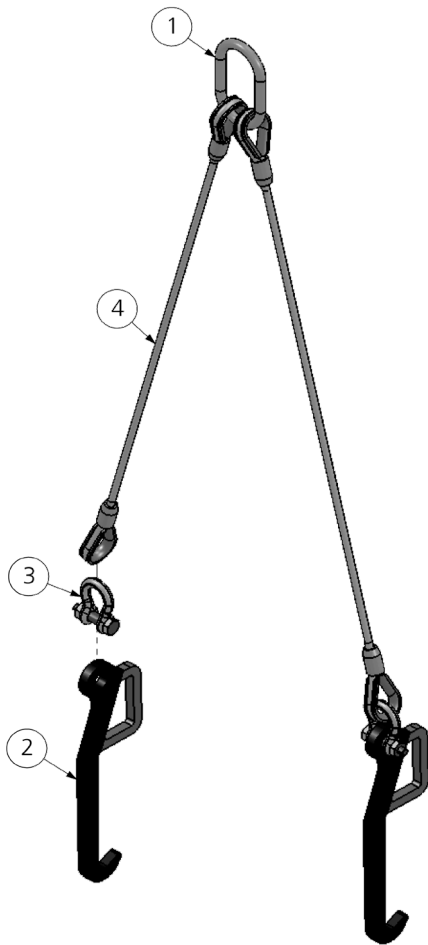


Fig. 26: Lifting slings

**Part lists PN 34-315 CAB**

Pos.	Qty.	P/N	Description
1	1	56138-06	Link, Master-Standard
2	2	34-312	Lifting Hook
3	2	56141-10-A-S	Shackle, Bolt Type
4	2	34-307	Leg
5	2	553400-4	Chain

**5.3.2.4** Lifting Triangle (Traverse) with Lifting Cable and 4 hooks



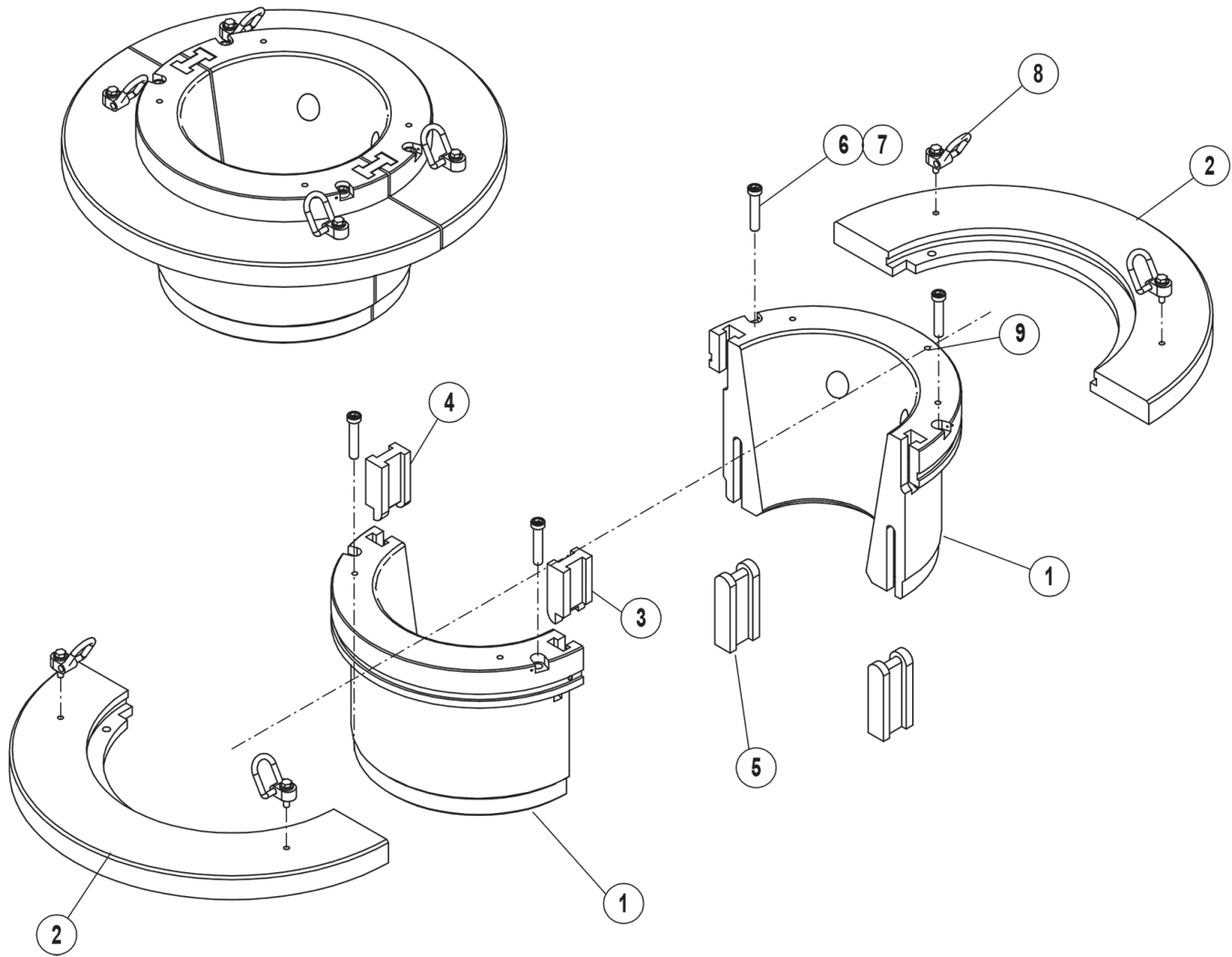
Fig. 27: Lifting slings

**Part lists PN 34-316 CAB**

Pos.	Qty.	P/N	Description
1	1	56141-18-A-S	Shackle, Bolt Type
2	6	56141-10-A-S	Shackle, Bolt Type
3	1	34-314	Four Hook Top Plate
4	2	56138-06	Link, Master-Standard
5	4	34-312	Lifting Hook
6	4	34-307	Leg

SERVICE

### 5.3.3 Power Slip Insert Bowls - 755820-X, 755870-X



#### Parts list for Power Slip Insert Bowl 755820-X and 755870-X

Pos.	P/N	Description
1	755820-X-BF	Insert Bowl
2	755822	Retaining Ring Plate
3	755823	Upper Connection Block [left]
4	755825	Upper Connection Block [right]
5	755824	Lower Connection Block
6	755826	Screw
7	792106	Washer
8	553469	Lifting Eye
9	1150376	Duraplug 9.5 UHF, Infochip

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# INSPECTION / MAINTENANCE

INSPECTION /  
MAINTENANCE

## 6 Inspection / Maintenance

This chapter contains important information about how to maintain your Insert Bowl safely, correctly and economically. These information will help you in avoiding dangerous situations and reducing repair costs and downtime. FORUM Handling Tools recommends to create preventive maintenance program for each Insert Bowl. These written maintenance procedures must be made available to the crew or the maintenance personnel.



Ensure that inspection and maintenance work are performed only by sufficiently qualified and trained personnel.



Read these instructions carefully before inspecting and maintaining the Insert Bowl.



WEAR EYE PROTECTION!



WEAR PROTECTIVE HELMET!



WEAR PROTECTIVE GLOVES!



WEAR SAFETY SHOES!

### Instructions for inspection and maintenance

1. In the event of visible damage or excessive wear, contact the FORUM Handling Tools Service Department or an authorized repair company.
2. Ensure that welding work on primary load components is performed exclusively by the FORUM Handling Tools Service Department or an authorized repair company observing the FORUM Handling Tools welding instructions.
3. Ensure that all other maintenance work is performed only by personnel trained for this work and familiar with the risks involved in operating the Insert Bowl.
4. Ensure that all repair work not performed by FORUM Handling Tools is, nevertheless, performed in compliance with the manufacturer's specifications and instructions.
5. Small cracks and irregularities, which do not affect the safety or proper operation of the Insert Bowl, can be removed by light buffing or grinding (refer to section „Critical Areas“ on page 53).
6. After repair always check the repaired part in a suitable manner to ensure that the defect has been remedied.

### Prerequisites for maintenance work

1. Ensure that the Insert Bowl is placed on a good supporting surface so that it cannot tip.
2. Provide sufficient lighting at the workplace.
3. The Insert Bowl must be removed from the Master Bushing and cleared from the area around well center to avoid objects dropped downhole during maintenance.

### Trouble shooting

In all events where the Insert Bowl's function is not as expected, the following checks must be carried out to identify the cause.

- All components are compatible.
- Check for proper lubrication.
- Check size and installation.

## 6.1 Lubrication



### ⚠ WARNING

**Lubricants can pose a health hazard!**

Lubricants may irritate skin and eyes.  
» Avoid contact with lubricants.



WEAR EYE PROTECTION!



WEAR PROTECTIVE GLOVES!

### Lubrication intervals

The **green** colored areas on the Insert Bowl have to be lubricated several times a day. Depending on the conditions of use, the lubrication requirement may increase. The lubricant can be easily applied with a brush or similar device. The **yellow** marked areas of the Insert Bowl must be lubricated with each installation.

### Lubrication areas on the Insert Bowl:

- ① Insert Bowl inner surface
- ② Insert Bowl outer surface

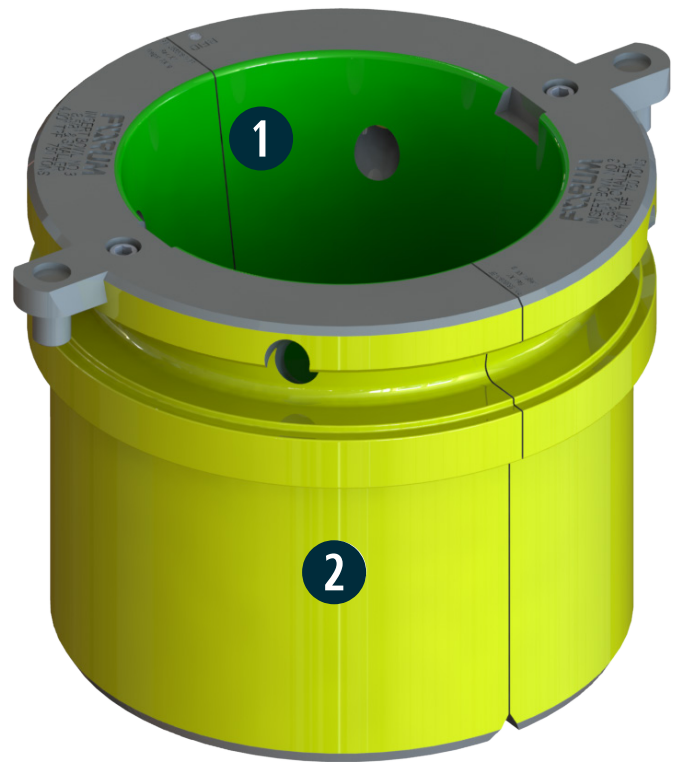


Fig. 28: Insert Bowl - Lubrication areas



## 6.2 Inspections

Perform inspections in compliance with API RP 7L at specified intervals and in inspection categories. Otherwise the frequency of required inspections depends on the conditions of use of the Insert Bowl.

Before inspection remove all foreign material such as dirt, paint, lubricants, oil, abrasion, etc. from the affected parts. Use suitable methods (steam cleaning, sand blasting, etc).

After an inspection, the scope and results of the tests performed have to be documented and retained.

Periodic inspections and inspections following critical assignments should be performed at the operation location by the operators under the supervision of a supervisor.

In the event of cracks, excessive wear, etc. contact FORUM Handling Tools or an authorized service company.

### INFO

Specified maintenance intervals are recommended for the Insert Bowl during its service life. The necessity of inspections depends primarily on the following conditions:

- i** - Ambient conditions
- Load cycles
- Regulatory requirements
- Period of use
- Tests
- Repairs
- Overhauls

## Inspection Following Critical Loads

Perform an inspection IMMEDIATELY following any critical or unexpected loads. Critical loads could be:

- Loads resulting from shock when the drill pipe sets.
- Pulling wedged drill strings.
- Exceeding the load limit.
- Operation at very low ambient temperatures (< -20 °C / -4 °F).

## 6.3 Inspection Categories

Always perform a complete inspection according to the instructions in Categories III or IV **before AND after critical loads**. Inspections always have to be done by only sufficient trained personnel.

### INFO



Inspection categories in accordance with API RP 7L.

### Inspection Intervals

Category	Interval	Preparatory measures
I	Daily	- Insert Bowl in working environment
II	Weekly	- Insert Bowl in working environment
III	Semi-annually	- Insert Bowl disassembled
IV	Annually	- Insert Bowl disassembled

### 6.3.1 Inspection Category I

This category consists of observing the equipment during operation for signs of inadequate operation.

#### Scope and Procedure

- Daily visual check of all visible surfaces on damages such as cracks, fractures and deformations.
- Check for proper function and lubrication.

### 6.3.2 Inspection Category II

Category II includes additional tests not included in, but in addition to Category I inspections.

#### Scope and Procedure

- Weekly checks for signs of corrosion, aging processes and loosened components.

### 6.3.3 Inspection Category III

Category III includes additional tests not included in, but in addition to Category II inspections.

#### Scope and Procedure

- Semi-annual check of areas and components which are subjected to wear.
- Before performing inspections of Category III remove all foreign material such as dirt, paint, Lubricants, oil, abrasion from the affected areas. Use suitable methods.
- Category III inspections may require removal of certain parts to assess the wear limits according to the specified tolerances.

### 6.3.4 Inspection Category IV

In addition to the inspections in Category III, Category IV includes removal of all primary, load-bearing parts for nondestructive testing (NDT).

#### Scope and Procedure

- Remove all primary load-bearing parts or parts critical for operation to such an extent that complete inspection is possible.
- Inspect all parts for excessive wear, cracks, deformation and other damages.
- NDT testings have to be carried out properly and in accordance with standards in a suitably equipped workshop by sufficient qualified personnel.
- Check critical areas and remove specific parts to determine wear limits according to specified tolerances.
- All checks must be carried out according to the manufacturer's instructions.
- Before any inspection, remove all foreign material such as dirt, paint, lubricants, oil, abrasion from the affected parts. Use suitable methods such as pickling, steam cleaning or sandblasting.

### 6.3.5 Inspections list

Task / Interval	Daily	Weekly	Semi annually	Annually
Daily visual check of all visible surfaces on damages (cracks, fractures, deformations) and cleaning.	✓	✓	✓	✓
State of lubrication of all lubrication points.	✓	✓	✓	✓
Check correct seat of Insert Bowl in the Master Bushing.	✓	✓	✓	✓
Check for loose items: Screws, Nuts, Washers	✓	✓	✓	✓
Check for wear of the inner and outer surface of the Insert Bowl	✗	✓	✓	✓
Condition and completeness of warning labels.	✗	✗	✓	✓
NDT testing of all critical parts.	✗	✗	✗	✓

✓ Necessary!

✗ Not necessary!

### 6.3.6 Inspection Check List Category I - IV

#### INFO



The following check list serve as a copy template for inspections to be performed in compliance with API RP 7L and have to be documented and stored safely.



Ensure that maintenance work is performed only by sufficiently qualified and trained personnel.

Type Insert Bowl

Serial Number \_\_\_\_\_

Inspection Category I

Date / Place of Inspection	Checked		Name of Inspection Operator / Supervisor	Signature
	OK	NOK		
	<input type="checkbox"/>	<input type="checkbox"/>		

Remarks: \_\_\_\_\_

Inspection Category II

Date / Place of Inspection	Checked		Name of Inspection Operator / Supervisor	Signature
	OK	NOK		
	<input type="checkbox"/>	<input type="checkbox"/>		

Remarks: \_\_\_\_\_

Inspection Category III

Date / Place of Inspection	Checked		Name of Inspection Operator / Supervisor	Signature
	OK	NOK		
	<input type="checkbox"/>	<input type="checkbox"/>		

Remarks: \_\_\_\_\_

Inspection Category IV

Date / Place of Inspection	Checked		Name of Inspection Operator / Supervisor	Signature
	OK	NOK		
	<input type="checkbox"/>	<input type="checkbox"/>		

Remarks: \_\_\_\_\_

INSPECTION / MAINTENANCE

### 6.3.7 Critical Areas

Check critical areas shown according to inspection check lists.

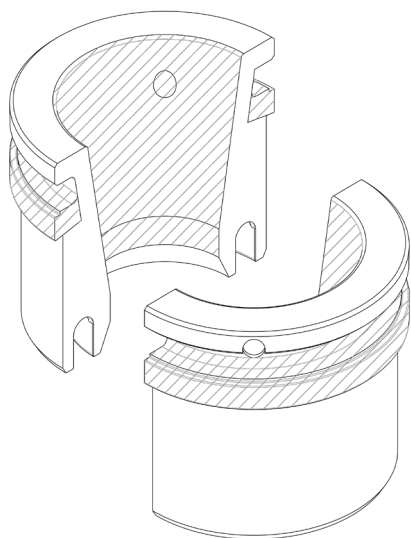


Fig. 29: Critical Areas

### 6.3.8 Wear data criteria

Any repairs not performed by FORUM Handling Tools, should be done in accordance with manufacturers methods and procedures or with their authorized agents. Minor cracks or defects, which may be removed without reducing safety or operation of the Insert Bowl, can be removed by lightly buffing or grinding. Following the repair, the parts should again be inspected by an appropriate method to insure that the defect has been completely removed.

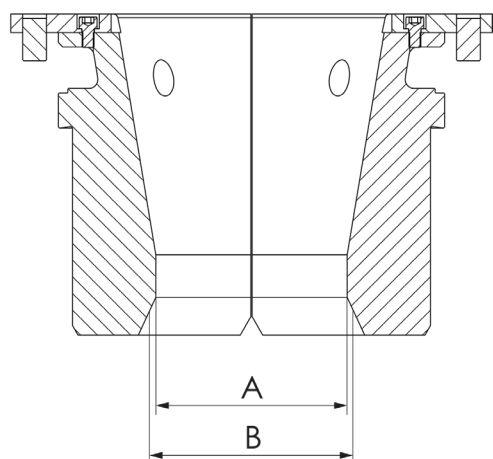


Fig. 30: Measurement of wear

#### Insert Bowl

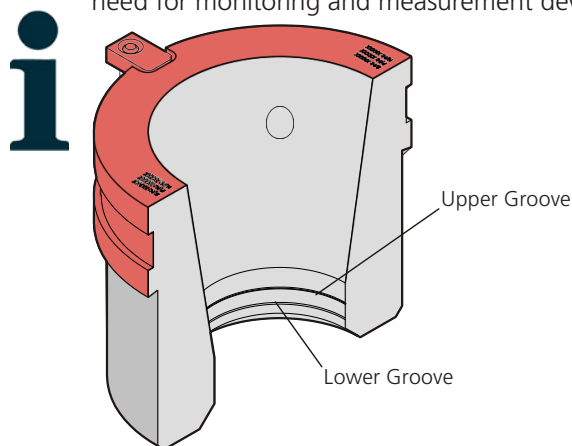
Bowl	Dia. A NEW inch [mm]	Dia. B WORN inch [mm]
No # 1	15 [381]	15,7 [400]
No # 2	12,2 [311]	13 [330]
No # 3	10,1 [257]	10,9 [276]

### INFO

To ensure safe continued use of its Insert Bowl, FORUM has patented Insert Bowl wear groove indicators to

- allow the rig crew to visually monitor bowl wear without having to remove the Master Bushing, and
- provide a more accurate assessment of wear.

The use of these groove indicators eliminates the need for monitoring and measurement devices.



Additionally, in an effort to prevent premature wear in the throat section of the inner drilling bowls during drilling operations with a top drive, FORUM Handling Tools has designed a Bowl Saver.

The benefits of the Bowl Saver include

- fitting into existing Pin Drive Master Bushings,
- an open throat that allows simple installation and removal,
- split and hinged cover plates for quick Master Bushings access, and
- a replaceable nonmetallic composite wear guide that provides long life while minimizing spark risk

## 6.4 Cleaning

### **⚠ WARNING**



#### **Health hazards from service products!**

Splashes of diluted drilling mud and small parts.

- » ALWAYS wear your personal protective equipment.



WEAR EYE PROTECTION!



WEAR PROTECTIVE GLOVES!

The operating conditions and operating environment result in contamination on the Elevator. Remove this contamination regularly to prevent incrustation and ensure safe operation of the Equipment. The Equipment should be cleaned thoroughly at the end of each shift at the latest. FORUM Handling Tools recommends to use a high pressure cleaner when performing cleaning tasks.

# STORAGE / DISPOSAL

STORAGE /  
DISPOSAL

## 7 Storage / Disposal

### 7.1 Storage

#### Safe Storage

1. Clean the Insert Bowl before storing it.
2. Use pallets with borders and tensioning cables.
3. Fix and secure the Insert Bowl.
4. Make sure the Insert Bowl is stored in such a way that people can not be injured by moving parts or sharp edges.
5. Store your Insert Bowl only on level and stable surfaces that are designed for weight.
6. Conserve all bare metal surfaces. FORUM Handling Tools recommends the use of a lubricant or Tectyl.
7. In terms of longer storage, check the effectiveness of your preservation.

#### Short-term storage

- Protection of tools**
- Clean the Insert Bowl roughly.
  - Apply lubricant to all bare surfaces (e.g. cylinders).
  - Protect all other bare surfaces with Tectyl Type 864 or an equivalent agent.
  - Place the Insert Bowl only on surrounded pallets and secure them with tensioning cables and anti-slip mat.

- Ambient Conditions**
- Store in dry surroundings (maximum humidity 80%).

#### Short-term storage for less than three months

#### Long-term storage

- Protection of tools**
- Clean the Insert Bowl roughly.
  - Apply lubricant to all bare surfaces (e.g. cylinders).
  - Protect all other bare surfaces with Tectyl Type 864 or an equivalent agent.
  - Place the Insert Bowl only on surrounded pallets and secure them with tensioning cables and anti-slip mat.
  - Protect the Insert Bowl against water penetration with a plastic tarp.

- Ambient Conditions**
- Store in dry surroundings (maximum humidity 80%).

### 7.2 Disposal

When used properly the Insert Bowl does not pose any hazard for users or the environment. However, operation of FORUM Handling Tools Insert Bowl requires use of lubricants and/or cleaning agents, which can pollute the environment. For this reason always ensure that such substances are disposed of properly according to international, national and local regulations. Never dispose greases, cleaning rags or polluted water together with industrial or domestic wastes. Observe the safety data sheets published by the manufacturers on environmental hazards and disposal of the service and operating products used. Ensure that all service and operating products as well as replacement parts are disposed of safely and ecologically. Please note specifically that FORUM Handling Tools is not obligated to take back used equipment.

#### List of Service Products Used

The Safety Data Sheets on the service products used are included in the appendix of this operation maintenance manual.



### 7.3 Safe storage example

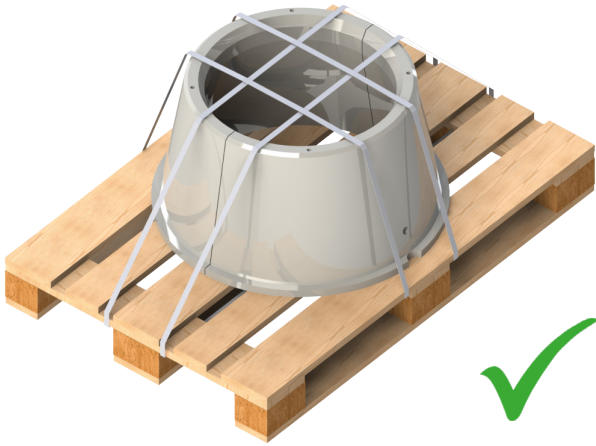


Fig. 31: Correct Storage I

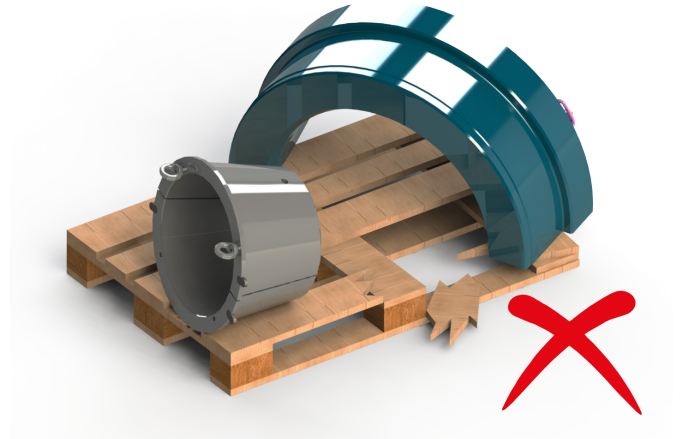


Fig. 33: Wrong Storage

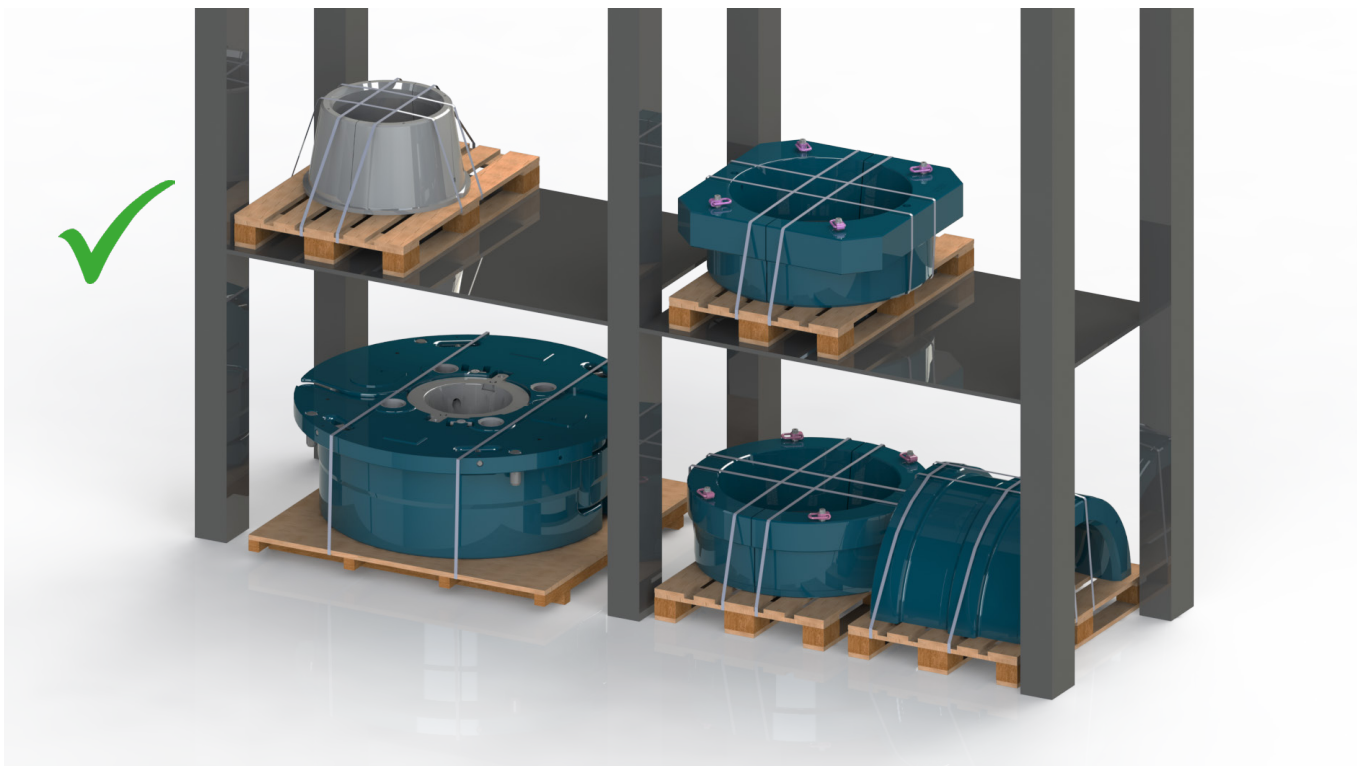


Fig. 32: Correct Storage II

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# APPENDIX

APPENDIX












## 8 Appendix

A.	THIRD PARTY DOCUMENTS	59
	I SAFETY DATA-SHEET	59
	II COMPONENTS	60




## A. Third Party Documents

### I Safety Data-Sheet

Material Name	Link to file
[Aerosol] Krylon Paint Aerosols	
[Aerosol] Rust O Leum Paint Aerosols	
[Hydraulic Fluid] Aral Vitam GF 32	
[Hydraulic Fluid] Citgo AW 68	
[Hydraulic Fluid] Conoco Megaflow AW 32 68	
[Hydraulic Fluid] Shell Tellus S2 M 32	
[Hydraulic Fluid] Shell Tellus S2 M 68	
[Hydraulic Fluid] Shell Tellus S2 V 15	
[Hydraulic Fluid] Shell Tonna S2 M 68	
[Lubricant] Buster 2007	
[Lubricant] AVIATICON FETT XRF	
[Lubricant] KO5	
[Lubricant] Lubrimatic Multipurpose Lithium	
[Lubricant] MasterPro Hi Temp WB	
[Lubricant] Mobil CM L	
[Lubricant] Mystik JT 6 Multi purpose #2	
[Lubricant] Permatex 767 Anti Seize Lubricant	
[Lubricant] Shell Gadus S2 V220 2	
[Lubricant] Shell Stamina RLS 2	
[Lubricant] Sprayon LU 100 White Lithium	
[Lubricant] Super S Hi Temp Red	
[Lubricant] Thermaplex Hi Temp Bearings	

Material Name	Link to file
[Paint] Paint Gallon	
[Paint] Paint Marker	
[Paint] Paint Marking Ink	
[Paint] Ruthless Paint and Varnish Remover	
[Paint] Startex Paint Thinner	
[Paint] Uni Paint Markers	
[Safety adhesive] Loctite 242 Threadlocker	
[Safety adhesive] Loctite 262 (High Strength)	
[Safety adhesive] Loctite 515 Gasket Eliminator	
[Safety adhesive] Loctite Clover Compound	
[Safety adhesive] Loctite Silver Grade Anti Seize	

## II Components

Component Name	Link to file
[Safety Washer] NordLock	
[Lifting] RUD VRS Starpoint	
[Lifting] RUD VLBG Load Ring	

Our goal is to become the leading provider of mission critical oilfield products and related services in terms of customer satisfaction, safety and financial performance.

Our experienced management team and employees are dedicated to solving our customers' problems. We invest in long term relationships and cooperate on product development with our clients, we consider them our partners.

## OUR CORE VALUES

- Integrity:** In everything we do, in every interaction, both internally and externally, we strive to operate with the upmost integrity and mutual respect.
- Customer focused:** Our products enhance our customer's performance and we listen to their needs and work with them to solve their challenges.
- Good place to work:** We are committed to creating a workplace that fosters innovation, teamwork and pride. Every team member is integral to our success and is treated equally and fairly.
- No one gets hurt:** The safety of our employees and customers is our first priority coupled with a healthy respect for the environment.



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