# **GETINGE**

#### **LOADING GUIDEBOOK**

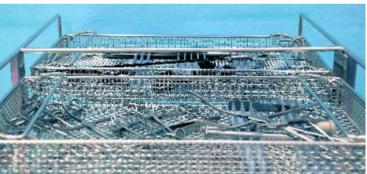
FOR COMMON HOSPITAL INSTRUMENTS IN A GETINGE WASHER-DISINFECTOR



#### **HOW TO USE THIS LOADING GUIDEBOOK**

- 1. Choose chapter depending on type of speciality i.e. Basic surgery, Orthopedics etc.
- 2. Each type of instrument set is represented by overview photos of a typical composition of the set. In some cases, there are different loading alternatives presented.
- 3. The following photos will show you how to load the set in the suitable accessories.





Instrument trays - definitions	SPRI/ISO - standard			DIN-standard	
	SPRI I	SPRI II	SPRI III	DIN <sup>1</sup> / <sub>1</sub>	DIN ½
Length mm	450	340	250	480	240
Width mm	340	250	170	250	250
Height mm	70			50	

#### **CONTENTS**

How to use this loading handbook	2
Preface	5
Loading equipment	6
How to load	7
Cleaning of spray arms	8
GENERAL SURGERY	
Appendix removal set	10
Gall bladder set	11
Container with laparoscopic instruments	12
Adjustable fixation for abdominal hooks	16
Hooks for abdominal openings	18
Gastric bypass	
Small vein/carotis	
Stomach and intestine	26
ORTHOPEDICS	
Basic hip joint surgery set	
Hip replacement I	
Hip replacement II	
Cement pistol	
Air driven saw	
Basic knee joint set	
Knee joint set – acufex	
Knee joint set - femur rigid fix	
Knee joint set - tibia rigid fix	
Accessories for slipped disc surgery	
Marrow nails	
Marrow drills	
Endoscopic inspection set for joint surfaces (arthroscopy)	
Gamma	
Stryker pistol	
GYNECOLOGY	55-66
Incision of abdominal wall	56
Endoscopic examination of abdominal cavity	58
Diagnostic endoscopy of abdominal cavity	62
Additional laparoscopy tools	64
ENT	67-74
Basic ear inspection set	68
Eardrum inspection set	
Vocal cords inspection set	
Nasal partition composing set	74
JAW SURGERY	75-78
Jaw surgery	76
UROLOGY	79-84
Resectoscope	80
Cystoscope	82
OPHTHALMIC	85-95
Introduction ophthalmic surgery	86
Cataract set (phaco)	88
. ,	
Vitrectomy set	90



#### **PREFACE**

Successful sterilization of surgical instruments depends on good cleaning prior to packaging and sterilization. In recent years, instrument technology has advanced in stride with the development of new surgical methods, e.g. minimally invasive surgery (MIS) comprising telescopes, cannulas, troacars, forceps, scissors and suction devices. These sophisticated instruments are expensive. They consist of different materials. They are complicated in design. And they are sensitive and easy to damage. In other words, skill and care are needed to handle, clean, disinfect, inspect, pack and sterilize these instruments for reuse.

**Sterilization procedures have long been** controlled by standards, tests and certificates. The international standard EN/ISO 15883, with documented requirements for good cleaning results, underlines the necessity of washer-disinfectors and their basic features.

But it's not only the washer-disinfector that is significant for good cleaning results. So are the integrated wash carts and numerous other accessories.

The purpose of this loading guidebook is to give users of Getinge washer-disinfectors illustrated examples of how to load soiled surgical instruments for best possible cleaning results. Different surgical cases need special instrument sets. Some instruments are solid, some are hinged, and others are tubular, with one or more channels. The ultimate goal is to be able to load, clean, disinfect and dry all instruments of the same surgical set on a standard wash cart - even if some instruments might need to be handled separately.

To help us show the practical loading of instruments, the Central Sterilizing Department at Kalmar Hospital, Sweden, kindly cooperated with us on this project. We would especially like to thank Ulla Eriksson and Britt-Marie Klingstedt at Kalmar

hospital for their excellent assistance and practical help in the creation of this loading guidebook.

As you will see we have used different wash-carts, some for the Getinge 8666 and some for our smaller models. This is intentional as we want to show that no matter the size of the washer-disinfector, you should be able to obtain a good cleaning result. We have also chosen to use very little explaining text. This is also intentional as we want everyone all over the world, no matter what language they use, to be able to use this books as a reference guide and as a basis for discussions. We also hope that the photos are self-explanatory.

In this second edition of the Loading Guidebook, we have also added more sections, such as Urology and Ophthalmic.

**Enjoy your copy of the Loading Guidebook!** 

### **LOADING EQUIPMENT**

Below you can see the Loading Equipment that has been used in this Loading Guidebook.



MIS-cart



OP-wash cart, 4 levels



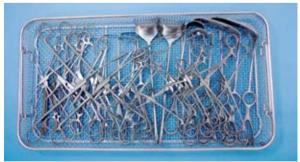
Ophthalmic ramp for 1345



MIS Instrument Ramp



Universal rack for tubular instruments. When using this in a OP-wash cart, remove one sprayarm and one shelf.

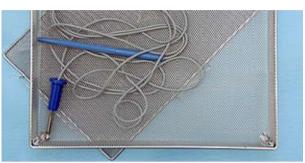


The DIN 1/1 tray is most frequently used in this Loading Guidebook. In cases where other trays are more suitable the DIN tray has been replaced.

#### **HOW TO LOAD**



All jaws must be open during cleaning.



Place all cables in a separate tray. To prevent the cables from being damaged, use a tray with lid.



Dismount the screw



Place all small parts in a fine mesh tray with lid. Art No. 499363700



Use a spring to prevent light instruments from moving during the cleaning process. Art No. 123618 (L=100). Art No. 468525000 (L=160)



For telescope – use a Telescope tray. Art No. 561620802



For sensitive instuments use the Instrument Holding system. Art No. VDM411B  $\,$ 

#### **CLEANING OF SPRAY ARMS**

To have a good cleaning result it is important to have the right conditions. Getinge can offer easy to clean spray arms.



Remove the end caps and use a brush or compressed air to clean the inside of the wing.

# **GENERAL SURGERY**

Appendix removal set	. 10
Gall bladder set	. 11
Container with laparoscopic instruments	. 12
Adjustable fixation for abdominal hooks	. 16
Hooks for abdominal openings	. 18
Gastric bypass	. 20
Small vein/carotis	. 24
Stomach and intestine	. 26



#### **APPENDIX REMOVAL SET**



The Appendix set consists of 47 solid instruments to be placed in trays.



Loading example in MIS-cart



Open all jaws before cleaning.

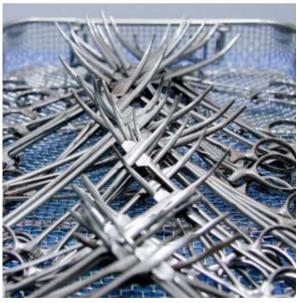
#### **GALL BLADDER SET**



The Gall bladder set consists of: 69 solid instruments to be placed in trays.



DIN-trays are placed on an OP-wash cart, 4 levels.



Open all jaws before cleaning.

# CONTAINER WITH LAPAROSCOPIC INSTRUMENTS



The Laparoscopy container set consists of: 30 solid instruments to be placed in trays and 13 tubular instruments.









A.1 Grab the metallic spring.

A.2 Remove the spring.

A.3 Separate the rod from the handle.







A.5 Separate the rods from each other.

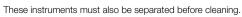


A.6 Dismantle the rubber from the handle.



The instrument is now completely separated.



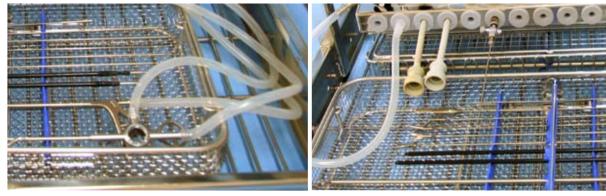




Place all small parts in a fine mesh tray.



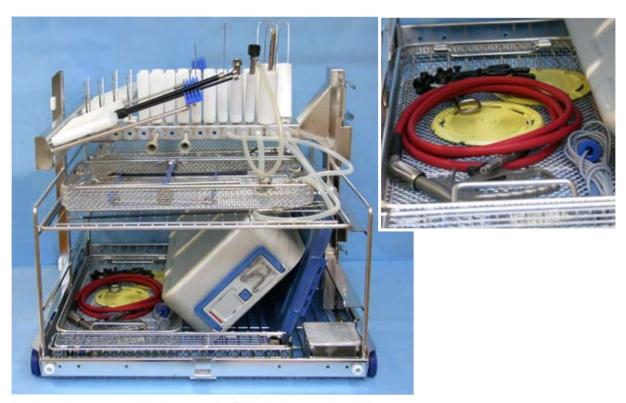
Loading example on MIS-cart. All tubular instruments are connected to injectors. Solid instruments and telescope are placed in trays.



To protect sensitive instruments use the Instrument Holding System.

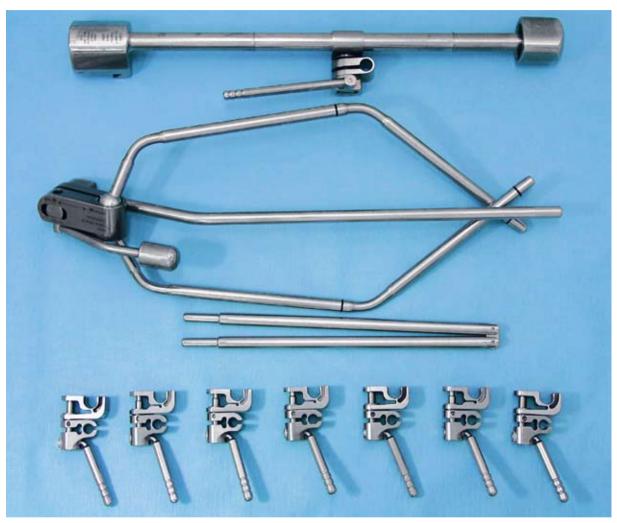


 $Loading\ example\ on\ OP-wash\ cart,\ 4\ level\ equipped\ with\ rack\ for\ tubular\ instruments\ and\ Clamp\ injector\ head\ .$ 



Container and instruments can all be cleaned together. This is a loading example on a MIS-cart.

### **ADJUSTABLE FIXATION FOR ABDOMINAL** HOOKS



The Adjustable fixation for abdominal openings consists of:

<sup>10</sup> solid instruments to be placed in trays.



The picture shows a SPRI I tray. Please note that a DIN 1/1 tray is to small for Abdomen fixation.

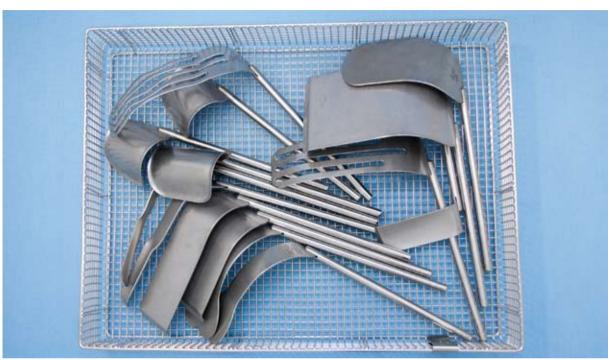


Loading example on OP-wash cart, 4 level.

# **HOOKS FOR ABDOMINAL OPENINGS**



The Abdomen hooks set consists of: 14 solid instruments to be placed in trays.



The picture shows a SPRI I tray. Please note that a DIN 1/1 tray is too small for Abdomen blades.



Loading example on OP wash cart, 4 level.

#### **GASTRIC BYPASS**



The Gastric bypass set consists of: 2 solid instruments to be placed in trays, and 6 tubular instruments.



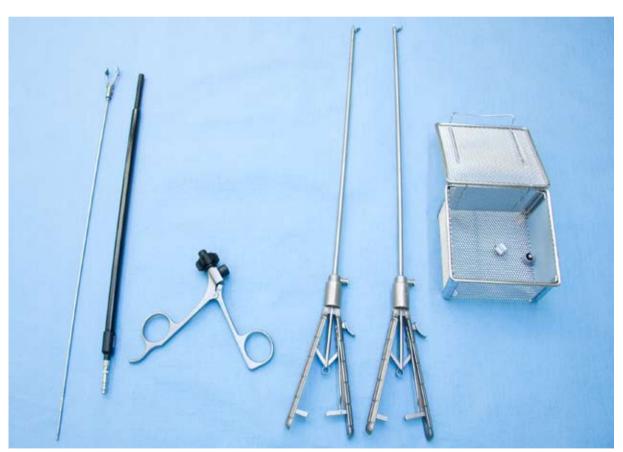




A.2 Separate the pipe from the handle.



A.3 Pull out the rod from the pipe.



The instruments are now correctly separated. Place the small parts in a fine mesh tray.





Open all jaws before cleaning

Loading example on a OP-wash cart, 4 levels equipped with MIS instrument ramp





Place the fine mesh trays on the shelf. Make sure they don't stand directly under the MIS ramp to prevent cleaning shadows.



Loading example on MIS cart.

### **SMALL VEIN/CAROTIS**



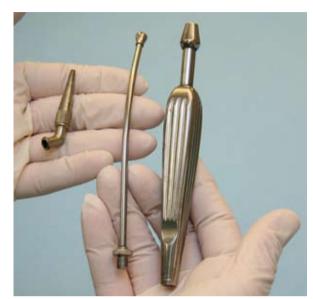
Small Vein/Carotis set consists of: 8 solid instruments to be placed in trays and 2 tubular instruments.



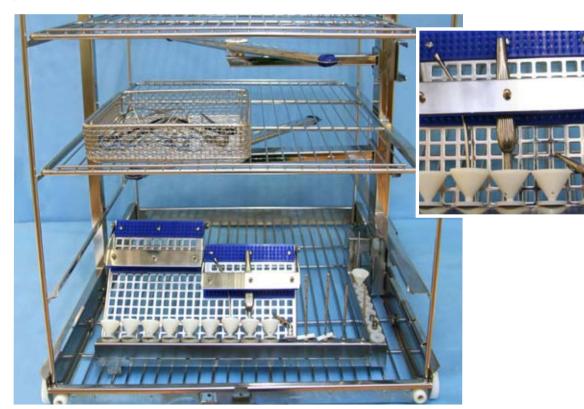
Open all jaws.



A.1 Separate the instrument by holding the handle and twist the upper part.



A.2 The instrument is now corrrectly separated.

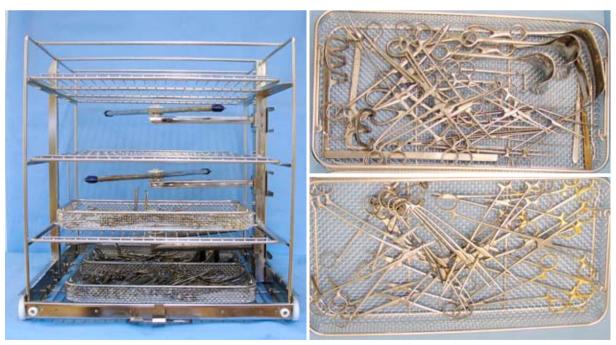


Loading example on OP-wash cart, 4 levels equipped with rack for tubular instruments. All tubular instruments are connected to injectors. Solid instruments are placed in trays.

#### STOMACH AND INTESTINE



The Stomach and Intestine set consists of: 92 solid instruments to be placed in trays.



Loading example on OP-wash cart, 4 levels.

### **ORTHOPEDICS**

Basic hip joint surgery set	3
Hip replacement i	)
Hip replacement ii	2
Cement pistol	4
Air driven saw	3
Basic knee joint set	7
Knee joint set – acufex38	3
Knee joint set - femur rigid fix	)
Knee joint set - tibia rigid fix	2
Slipped disc set	4
Accessories for slipped disc surgery46	3
Marrow nails	7
Marrow drills	3
Endoscopic inspection set for joint surfaces	
(arthroscopy)	)
Gamma	2
Stryker pistol	4



#### **BASIC HIP JOINT SURGERY SET**



The Basic Hip joint surgery set consists of: 71 solid instruments to be placed in trays.

A hip surgery consist of four instrumentation sets:

- Basic Hip joint surgery
- Hip Replacement I
- Hip Replacement II
- Cement pistol

All four sets are presented before the examples of loading.

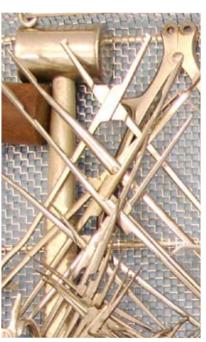


A. The "bone rongeur" must be separated before cleaning.



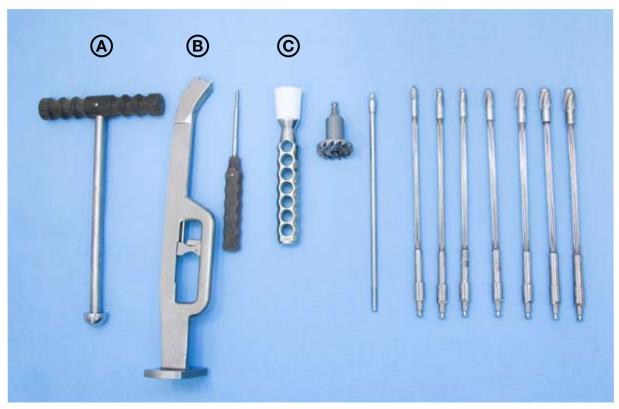
Place the small parts in a fine mesh tray.





Open all jaws.

#### HIP REPLACEMENT I



Hip Replacement I set consists of: 5 solid instruments to be placed in trays and 7 tubular instuments.



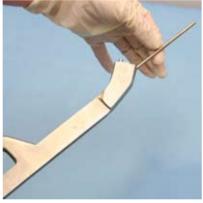




B.1 Push the button upwards.



B.2 Loose the pin by using the screwdriver that belongs to the instrument.



B.3 Pull out the pin.



B.4 Push out the botton.

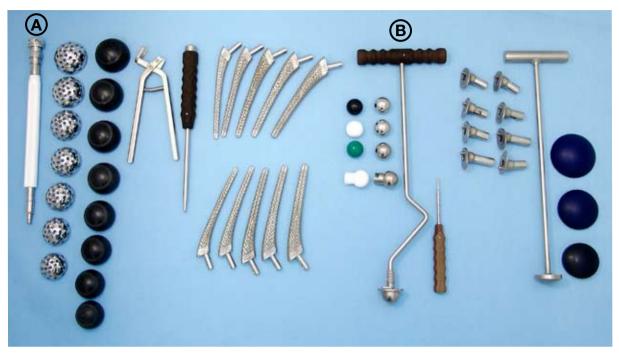


C Dismantle the plastic top.



Place all instruments in a DIN tray. The flexible cutters are connected to injectors.

#### HIP REPLACEMENT II



Hip Replacement II set consists of:

47 solid instruments to be placed in trays and 1 tubular instrument.



A.1 Remove the white cover. Rotate one quarter turn.



A.2 Grab the spring.



A.4 The handle is now correctly separated.



B.1 Pull of the block



B.2 Dismantle the screw. The cup holder with block is now correctly separated.



The separated instruments.

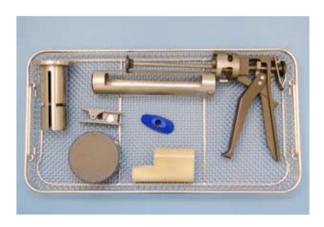
Place the small parts in a fine mesh tray.



#### **CEMENT PISTOL**



Cement pistol set consists of: 6 solid parts to be placed in trays.



#### Loading examples with Basic Hip joint, Hip Replacement I, Hip Replacement II and Cement pistol



Loading example on OP-wash cart, 4 levels equipped with Rack for Tubular Instruments and Clamp Injector Head. In total there are 8 tubular instruments.



Loading example on MIS-cart.

#### **AIR DRIVEN SAW**



The Air driven saw set consists of: 11 solid instruments to be placed in trays.







The handle is sensitive and requires hand washing.

## **BASIC KNEE JOINT SET**



The Basic knee joint set consists of: 36 solid instruments to be placed in trays.



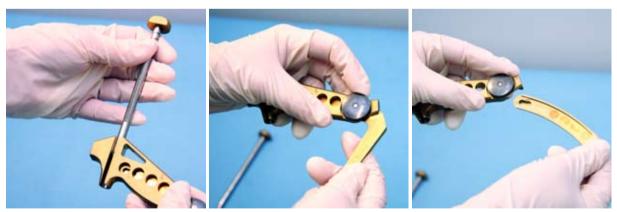
Open all jaws before cleaning. Place the tray in a wash cart.

## **KNEE JOINT SET - ACUFEX**



The Knee joint Acufex set consists of:

12 solid instruments to be placed in trays and 16 tubular instruments.

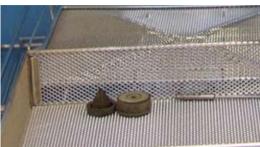


A.1 Pull out the screw

A.2 Twist the black button

A.3 Separate the two parts.

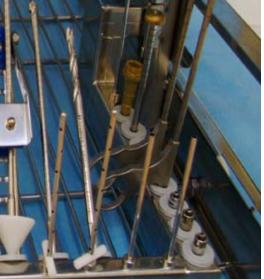






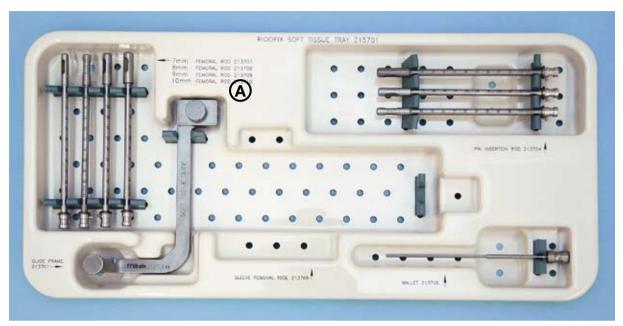
This is a loading example on MIS-cart. Place all tubular instruments in injectors and the solid instruments in DIN trays. Small parts are placed in a fine mesh tray.





Loading example on OP-wash cart, 4 levels equipped with a Rack for Tubular Instruments.

### **KNEE JOINT SET - FEMUR RIGID FIX**



The Knee joint set - Femur Rigid Fix consists of:

1 solid instrument to be placed in trays and 7 tubular instruments.



A.1 Twist the screw.

A.2 Separate the two parts.

A.3 Remove the screw.

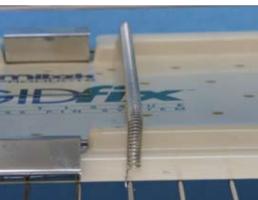




Place all small parts in a fine mesh tray.

Loading example on a MIS-cart. Both used and unused instruments are placed in DIN trays on injectors. The container can either be placed on the MIS-cart or on a separate wash cart.

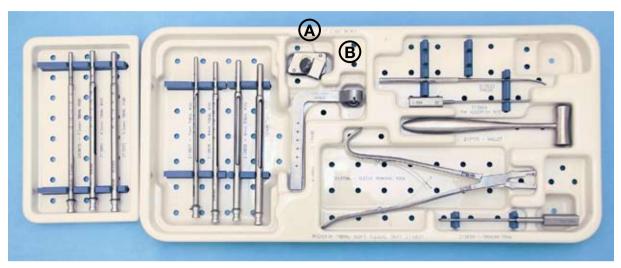




Use a spring for the container lid to prevent it from moving around during the washing process.

Loading example on a MIS-cart. The unused solid instruments are still in the container. All instruments can preferably be placed in a DIN tray.

## **KNEE JOINT SET - TIBIA RIGID FIX**



The Knee joint set - Tibia rigid fix consists of: 5 solid instruments to be placed in trays and 7 tubular instruments.





Place the small parts in a fine mesh tray with lid.

Loading example on a MIS-cart. Both used and unused instruments are placed in DIN trays or on injectors. The container can either be placed on the MIS-cart or together with other containers on a separate wash cart.



Loading example on a OP-wash cart, 4 levels.

## **SLIPPED DISC SET**



The Slipped Disc set consists of: 64 solid instruments to be placed in trays.



The bone rongeur must be separated before cleaning.



Place the small parts and the cable in separate trays with lids.



## **ACCESSORIES FOR SLIPPED DISC SURGERY**



The Accessories for slipped disc set consists of:

12 solid instruments to be placed in trays.



Place the tray in a wash cart.



Open all jaws before cleaning.

## **MARROW NAILS**



The Marrow Nails set consists of: 30 solid instruments to be placed in trays.



Place all nails in DIN trays. Place the tray on a wash cart.

#### **MARROW DRILLS**



The Marrow drills set consists of:

19 solid instruments to be placed in trays and 5 tubular instruments.





Loading example in a OP-wash cart, 4 levels, equipped with a Rack for Instruments.

Place the bore heads in a fine mesh tray with lid.



Loading example in a OP-wash cart, 4 levels, equipped with a MIS Instrument Ramp.

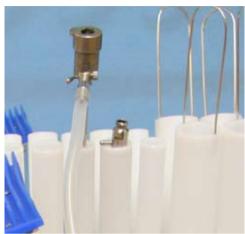
# **ENDOSCOPIC INSPECTION SET FOR JOINT SURFACES (ARTHROSCOPY)**



The Endoscopic inspection set for joint surfaces set consists of: 9 solid instruments to be placed in trays and 3 tubular instruments.



A. Dismantle the screw



Connect the Troacar to a silicon hose which is connected to the MIS-cart. Make sure the tap is open.



Place all solid instruments in a DIN tray, the telescope in a Telescope tray and connect tubular instruments to injectors.



Loading example on a OP-wash cart, 4 levels equipped with a Rack for Tubular instruments.

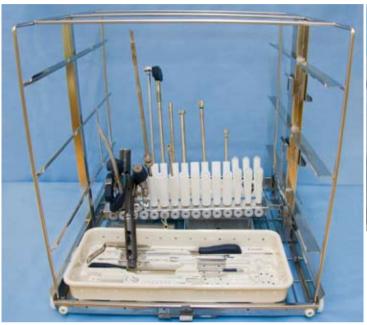


Make sure the tap is open.



The Gamma set consists of:

16 solid instruments to be placed in trays and 15 tubular instruments.





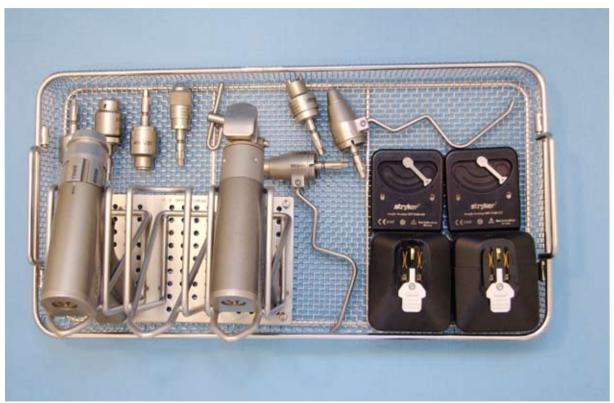
Loading example on OP-wash cart, 4 levels equipped with MIS Instrument Ramp. Tubular instruments are connected to injectors and unused solid instruments are still in the manufacturer's container. All instruments can preferably be placed in a DIN tray.





Loading example on OP-wash cart, 4 levels equipped with Universal holder.

## STRYKER PISTOL



The Stryker pistol consists of: 11 solid parts to be placed in trays.



Place the DIN tray on the shelf of a wash cart. The picture shows a  $\,$ DIN tray with Stryker stand from the the instrument manufacturer.

# **GYNECOLOGY**

ncision of abdominal wall	56
Endoscopic examination of abdominal cavity	58
Diagnostic endoscopy of abdominal cavity	62
Additional laparoscopy tools	64

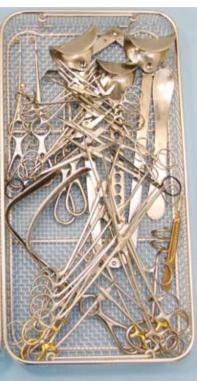


## **INCISION OF ABDOMINAL WALL**



The Incision of abdominal wall set consists of: 79 solid instruments to be placed in trays.





Place all instruments in DIN-trays.

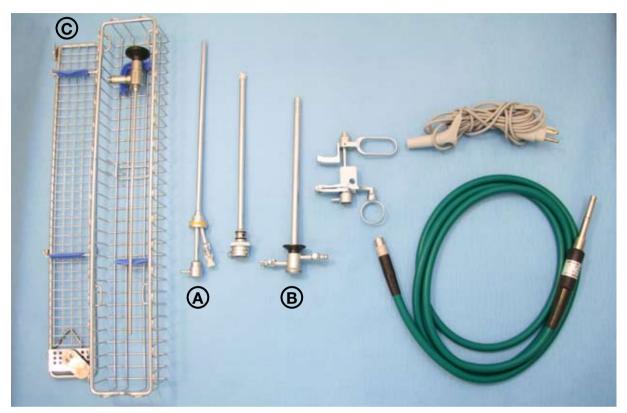






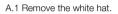
Open all jaws.

# **ENDOSCOPIC EXAMINATION OF ABDOMINAL** CAVITY



The Endoscopic examination of abdominal cavity set consists of: 1 solid instrument to be placed in trays and 4 tubular instruments.







A.2 Unscrew the screw.



A.3 Separate the tap from the instrument.



B.1 Unscrew the screw.



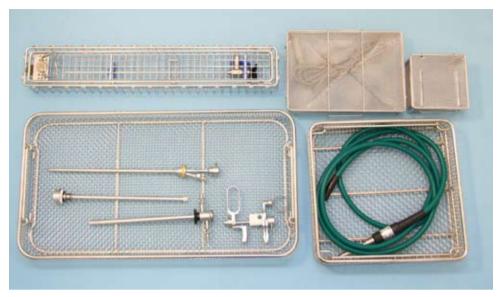
B.2 Separate the tap from the instrument.



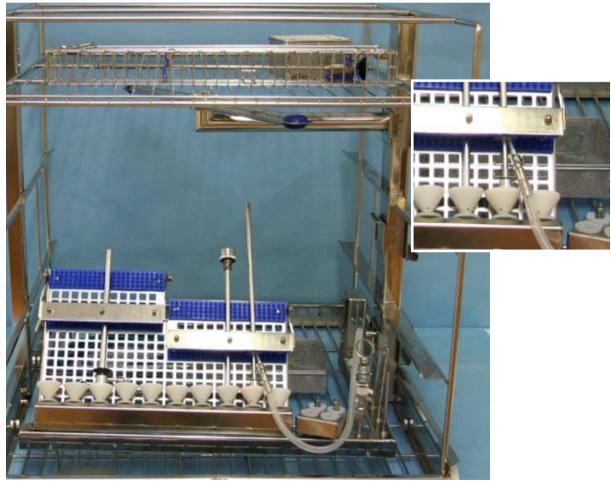
C. Dismantle the screw.



Place all small parts in a fine mesh tray.



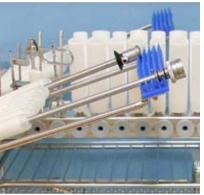
Place the telescope in a Telescope basket and the small cable in a tray with lid.



Place all tubular instruments in the Rack for Tubular instruments. Connect the gyncare with the hat with an extra silicon hose.







Loading example on MIS-cart.

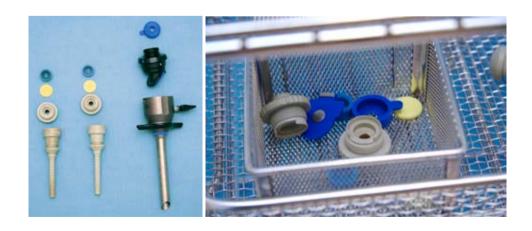


Loading example on MIS Instrument ramp. Use a spring to prevent the instrument from moving during the wash process.

# **DIAGNOSTIC ENDOSCOPY OF ABDOMINAL** CAVITY



The Diagnostic endoscopy of abdominal cavity set consists of: 3 solid instruments to be placed in trays and 6 tubular instruments.

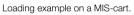














Loading example in OP-wash cart, 4-levels equipped with Rack for Tubular Instrument.

# **ADDITIONAL LAPAROSCOPY TOOLS**



The Additional laparoscopy tools set consists of:

10 tubular instruments.







A.1 Push the button.

A.2 Separate the parts.

A.3 Pull out the rod.







B.1 Push the button.

B.2 Separate the parts.

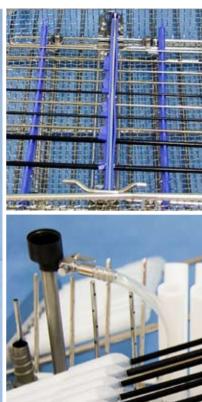
B.3 Pull out the rod.





All parts are separated and can be washed.





Loading example on a MIS-cart. Connect the tubular instruments to injectors and place the rod in the Instrument holding system.





Loading example on OP-wash cart, 4 levels equipped with a Rack for tubular instruments and Clamp injector head.

# **ENT**

Basic ear inspection set	68
Eardrum inspection set	70
Vocal cords inspection set	72
Nasal partition composing set	74



## **BASIC EAR INSPECTION SET**



The Basic ear inspection set consists of:

47 solid instruments to be placed in trays and 2 tubular instruments.





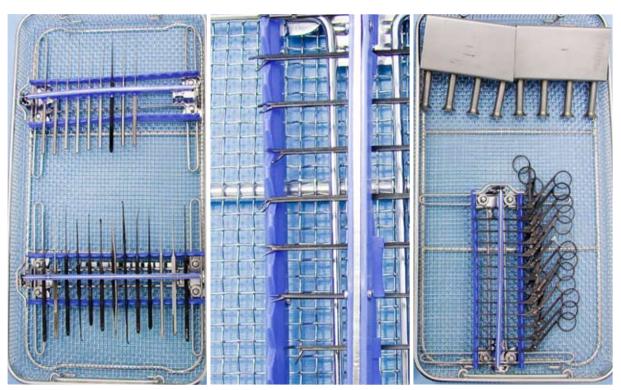


Loading example on OP-wash cart, 4 levels equipped with Rack for Tubular Instruments and Clamp Connect the suctions to injectors. injector head.

## **EARDRUM INSPECTION SET**



The Eardrum inspection set consists of: 46 solid instruments to be placed in trays.



To protect sensitive instruments use the Instrument Holding System. Open the jaws before cleaning.



Loading example on OP-wash cart, 4 levels.

## **VOCAL CORDS INSPECTION SET**



The Vocal Cords set consists of: 9 solid instruments to be placed in trays.



The picture indicates Instrument Holding System which is used to protect the instruments during cleaning. Open all jaws.



Place the tray in a wash cart.

### **NASAL PARTITION COMPOSING SET**



The Nasal partition composing set consists of: 44 solid instruments to be placed in trays.



Place the tray in a wash cart. The picture indicates an OP-wash cart, 4 levels.



All jaws must be open before wash.



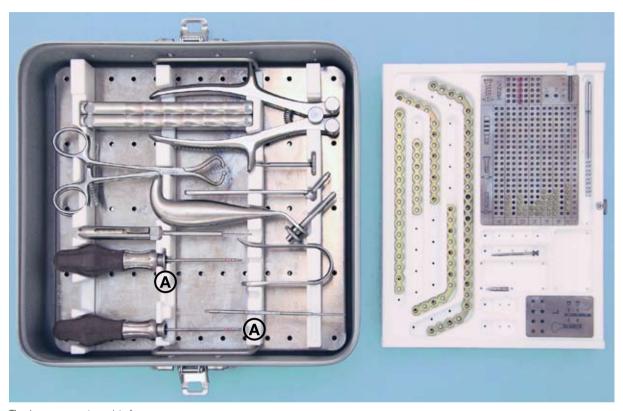
Connect the septum specula to each other to keep them open during cleaning.

## **JAW SURGERY**

Jaw surgery	<sup>,</sup>	 76



### **JAW SURGERY**



The Jaw surgery set consist of: 14 solid instruments and 6 tubular instruments.







A.1 Push the lock ring towards the handle

A.2 Separate the instrument.

Use a spring to fix small tubular instruments.

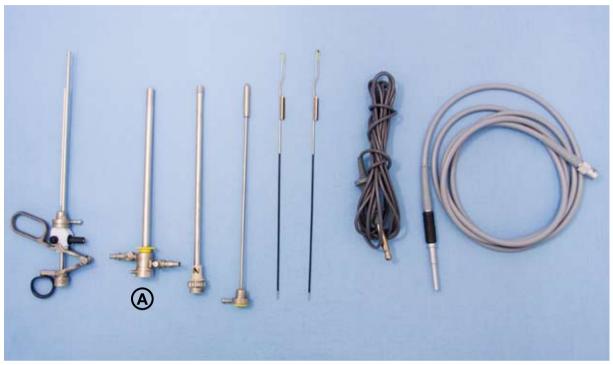


# **UROLOGY**

Resectoscope	. 80
Cystoscope	. 82

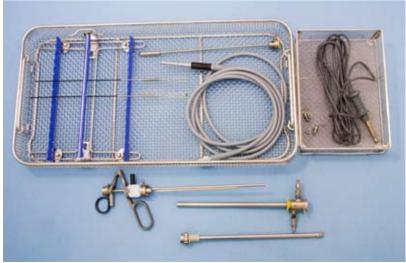


### **RESECTOSCOPE**



The Resectoscope set consists of:

 $4\ \mbox{solid}$  instruments to be placed in trays and  $3\ \mbox{tubular}$  instruments.





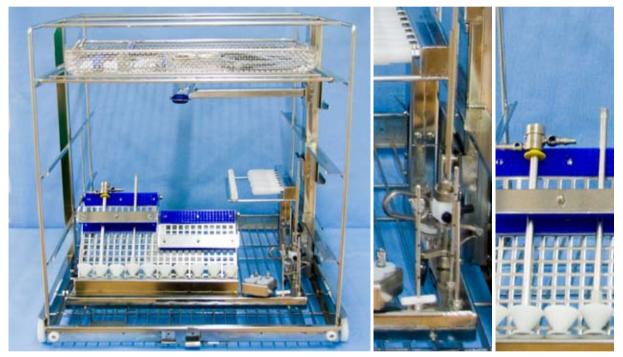
Place the cable and small parts in a separated fine mesh tray with lid.





A.1 Unscrew the screw

A.2 Remove the tap.



Place all solid instruments in DIN trays and connect the tubular instruments to injectors.





### **CYSTOSCOPE**



The Cystoscope set consists of: 6 solid instruments to be placed in trays and 3 tubular instruments.



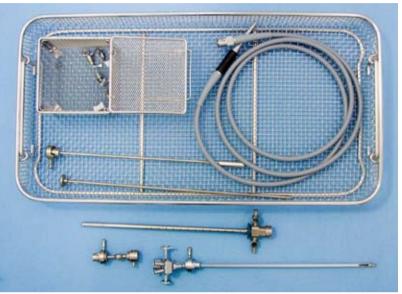
A.1 Remove the white hat.

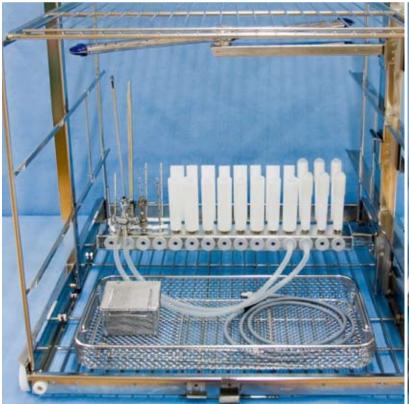
A.2 Unscrew the screw

A.3 Separate the tap from the instrument



Place all small parts in a separate fine mesh tray with lid.





Loading example of OP-wash cart, 4 levels equipped with a MIS instrument ramp.



Place the tubular instruments on the injector pipes.



Place the albaran in the Instrument holding system and connect silicon hoses.

# **OPHTHALMIC**

Introduction ophthalmic surgery	86
Cataract set (phaco)	88
Vitrectomy set	90
Enucleation set	92
Glaucoma set	Q,



### INTRODUCTION OPHTHALMIC SURGERY

This chapter illustrates how to load Ophthalmic instruments in Universal rack for tubular instrument and a Getinge 1345 Washer-Disinfector. The pictures in this chapter are realized both in Kalmar CSSD and Linköping CSSD. Therefore, there are small differences in the instruments sets.

When cleaning Ophthalmic it is very important to use a washer-disinfector with accessories for ophthalmic instruments including a metallic fine mesh filter.

Mesh size 0,1mm (150 mesh). Tubular instruments with bore less than 2mm (0,8mm S-1345) need an extra fine mesh filter.



#### When cleaning Ophthalmic instruments:

- Check and clean the filter after each process.
- No mixed loads. Instruments from other disciplines should be washed in a separate wash process.
- Flush instruments directly after use, to remove residues of secretions and blood.
- If necessary, dismantle the instruments.
- Place carefully in provided transport systems and on the loading equipment.
- Secure vibration free transportation.
- If alkaline detergents are used, use neutralizing agent immediately after cleaning. Select pinpointed Getinge standard cleaning and disinfecting programs.
- Do not use any instrument lubrication.

# **CATARACT SET (PHACO)**

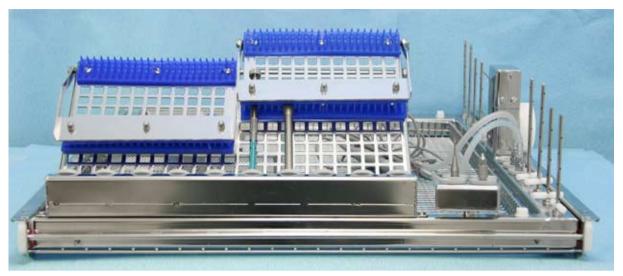


The Cataract set consists of:

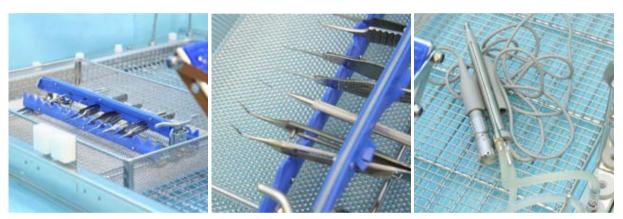
4 solid instruments to be placed in trays and 3 tubular instruments.



Phaco handle is included in the set.



Loading example on Rack for Tubular Instrument for 46-series, 86-series or 88 Turbo.



Place the sensitive instruments in an Instrument — Open all jaws. holding system.



Loading example on 1345 with ophthalic ramp. To prevent unnecessary loss of water pressure, the unused openings should be plugged with silicon hoses.

### **VITRECTOMY SET**

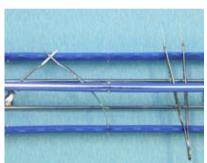


The Vitrectomy set consists of:

13 solid instruments to be placed in trays and 4 tubular instruments.



Loading example on Universal Rack for Tubular instrument for 46-series, 86-series or 88 Turbo.





Place the sensitive instruments in the Instrument Holding System.

Place the solid instruments in a fine mesh tray or if possible, in an instrument holding system.



Loading exampel on 1345 with ophthalic ramp. To prevent unnecessary loss of water pressure, the unused openings should be plugged with silicon hoses.

### **ENUCLEATION SET**



The Enucleation set consists of: 28 solid instruments to be placed in trays.



If possible, all instruments can be put in an instrument holding system.

### **GLAUCOMA SET**



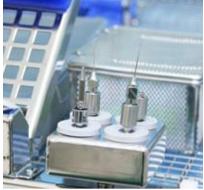
The Glaucoma set consists of:

12 solid instruments to be placed in trays and 3 tubular instruments.



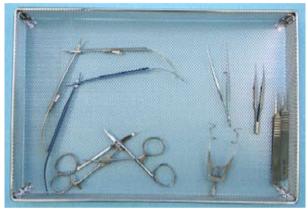
Use a Special connection, made by the instrument manufacturer, to connect to the loading equipment of the washer-disinfector.





Loading example on a Universl wash rack.

Place the solid instruments in a fine mesh tray.



Place solid instruments in a tray.



Place the sensitive instruments in an Instrument holding system. Open all jaws before cleaning.

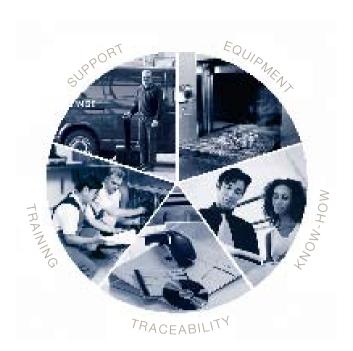


Loading example in 1345.





Place the small pin in a fine mesh tray with lid.



Getinge provides complete solutions for effective and efficient cleaning, disinfection and sterilization in the healthcare and life science sectors. Our know-how comprises everything from architectural planning, production and handling equipment, to systems for full traceability of sterile goods. Our commitment covers expert advice, training and long-term technical support.

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