FOR MORE INFORMATION

viZaar industrial imaging AG



CATALOGUE

REVISION 2.3

FOREIGN OBJECT RETRIEVAL TOOLS & GUIDE TUBES

FOREIGN OBJECT & DEBRIS RETRIEVAL TOOLS | GUIDE TUBES | ACCESSORY

Artikel-Nr.: DXX-80-000240

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1 RETRIEVAL TOOLS



No matter which inspection camera you work with, the right recovery tool should not be missing from your tool store! Why? - Despite precautions, foreign parts such as production residues, forgotten cleaning utensils or lost tools are reoccurring nuisances in plants. If such a foreign part is not found and retrieved, downtimes and high costs are the result. In such cases, our recovery tools make the difference and should always be at hand during routine and maintenance work!

1.1 PRO



Retrieval tools kit PRO

GR 8	GR 16	NON-MOTORIZED RETRIEVAL TOOLS	ACCESSORY SET	PUSH POLE SET	SYSTEM KIT
10 m	✓	✓	✓	✓	BMX-50-000231
15 m	✓	✓	✓	✓	BMX-50-000345

The PRO version is the most complete retrieval tools kit you will find, collected in a portable case. In addition to a full set of standard equipment, it contains two different sized electrical driven retrieval tools with four different grabber options.

Including:

- Motorized retrieval tool GR 8
- Motorized retrieval tool GR 16
- Stainless steel wire snare
- Retrieval magnets
- Hook tool
- Adjustable elbow
- LED flash light
- Tool set
- Accessory set
- Glass fiber push pole set
- Operating instructions

MOTORIZED RETRIEVAL TOOL GR 8

	**Motorized retrieval tool GR 8** Motorized and waterproof 8.4 mm retrieval tool with 10 m / 15 m working length	VXX-70-000104 VXX-70-000105
	**Interchangeable T-Rex grabber for GR 8** 8.4 mm T-Rex grabber, including spare grub screws and allen key (FXX-70-000112)	BMX-50-000334
	**Interchangeable Mouse Tooth grabber for GR 8** 4.5 mm Mouse Tooth, including spare grub screws and allen key (FXX-70-000112)	BMX-50-000335
	**Remote control GR 8** Remote control for the retrieval tool GR 8	BMX-50-000256
	**Batterie** 1x powerful spare battery Ultralite Lithium HI Energy 9-V Block	EXX-90-000106

MOTORIZED RETRIEVAL TOOL GR 16

	**Motorized retrieval tool GR 16** Motorized 16 mm retrieval tool	BEM-30-000165
	**Remote control GR 16** Remote control for the retrieval tool GR 16	BMX-50-000249
	**Cable for remote control GR 16** 15 m cable for remote control retrieval tool GR 16	BEX-20-000113
	**Battery** 2x powerful spare battery Ultralite Lithium HI Energy 9-V Block	EXX-90-000106

THREE FINGER JO FOR GR 16 — BMX-50-000293



Graber with tines for motorized retrieval tool GR 16. Including allen key (FXX-70-000112)

STAINLESS STEEL WIRE SNARE — BMX-50-000115



Diameter	2.5 mm
Length	15 m
Construction	Multi wire snare construction
Mounting	10 mm push pole adapter
Function	Offering big size loops

Other configurations, spare parts and accessories are available in the following chapters.

1 RETRIEVAL TOOLS

1.1 Retrieval tools kits

1.1 PRO

Including

RETRIEVAL HOOK — BMX-50-000117



Function	Reinforced, sharp hook
Mounting	10 mm push pole adapter

RETRIEVAL MAGNET, SMALL — BMX-50-000113



Dimensions	Ø 16 x 40 mm
Mounting	10 mm push pole adapter
Function	Small size magnet for narrow applications

RETRIEVAL MAGNET, MEDIUM — BMX-50-000112



Dimensions	Ø 20 x 40 mm
Mounting	10 mm push pole adapter
Function	Medium sized, but strong magnet for narrow applications

RETRIEVAL MAGNET, LARGE — BMX-50-000114



Dimensions	Ø 24 x 45 mm
Mounting	10 mm push pole adapter
Function	Strong magnet for bigger items and larger amount metal chip collection.

ADJUSTABLE ELBOW — BMX-50-000106



Angle	0° bis 90°
Mounting	10 mm push pole adapter
Function	Tool for better positioning of retrieval snares, magnets, hooks or retrieval tool GR 16

SHORT ROD PIECE 10 CM / 4“ — FXX-71-000124



Function	Optimized for operation with adjustable elbow (BMX-50-000106)
Mounting	10 mm push pole adapter

GLASS FIBER PUSH POLE SET — BMX-50-000292



3x Glass fiber push pole “soft“, each 1,5 meter length
Easily connectable via 10 mm interconnector



3x Glass fiber push pole “medium“, each 1,5 meter length
Easily connectable via 10 mm interconnector



3x Glass fiber push pole “stiff“, each 1,5 meter length
Easily connectable via 10 mm interconnector

SOFT BAG FOR GLASS FIBER PUSH POLES — FXX-82-000108



This soft bag stores up to 15 of your connectable glass fiber push poles. The material is robust and easy to clean.

TRANSPORT CASE — BMX-50-000230



This robust case is home for retrieval tools and accessories. Light-weight, compact and splash water proof HPX® transport case for retrieval tools and accessories. Tailor made interior for perfect protection during transport and storage.

STANDARD TOOLS SET — BSX-90-000101



Screw driver set, wire cutter, LED power flash lamp, scissors; cutter and other usefull tools to fit and fill the retrieval tool case.

RETRIEVAL TOOL CONSUMABLES — BSX-90-000100



Duct tape, cable binder and other useful consumables packed into practical tailored plastic containers to fill the retrieval tool box.

1 RETRIEVAL TOOLS

1.1 Retrieval tools kits

1.1 STANDARD



Retrieval tools kit STANDARD

GR 8	GR 16	NON-MOTORIZED RETRIEVAL TOOLSW	ACCESSORY SET	PUSH POLE SET	SYSTEM KIT
10 m	-	✓	✓	✓	BMX-50-000268

The STANDARD version retrieval tools kit includes a collection of non-motorized retrieval tools, as well as the motorized retrieval tool GR 8 with two interchangeable grabbers.

The recommended optional GR 16 fits perfectly into the same case and upgrades the set to the PRO version.

Including:

- Motorized retrieval tool GR 8
- Stainless steel wire snare
- Retrieval magnets
- Retrieval hook
- Adjustable elbow
- LED flash light
- Tool set
- Disposables
- Glass fiber push pole set
- Operating instructions

MOTORIZED RETRIEVAL TOOL GR 8		
	**Motorized retrieval tool GR 8** Motorized and waterproof 8.4 mm retrieval tool with 10 m / 15 m working length	VXX-70-000104 VXX-70-000105
	**Interchangeable T-Rex grabber for GR 8** 8.4 mm T-Rex grabber, including spare grub screws and Allen key (FXX-70-000112.	BMX-50-000334
	**Interchangeable Mouse Tooth grabber for GR 8** 4.5 mm Mouse Tooth, including spare grub screws and Allen key (FXX-70-000112)	BMX-50-000335
	**Remote control GR 8** Remote control for the retrieval tool GR 8	BMX-50-000256
	**Battery** 1x powerful spare battery Ultralite Lithium HI Energy 9-V Block	EXX-90-000106

STAINLESS STEEL WIRE SNARE	BMX-50-000115
	
Diameter	2.5 mm
Length	15 m
Construction	Multi wire snare construction
Mounting	10 mm push pole adapter
Function	Offering big size loops

RETRIEVAL HOOK	BMX-50-000117
	
Function	Reinforced, sharp hook
Mounting	10 mm push pole adapter

Other configurations, spare parts and accessories are available in further chapters.

1.1 STANDARD

Including

RETRIEVAL MAGNET, SMALL — BMX-50-000113



Dimensions	Ø 16 x 40 mm
Mounting	10 mm push pole adapter
Function	Small size magnet for narrow applications

RETRIEVAL MAGNET, MEDIUM — BMX-50-000112



Dimensions	Ø 20 x 40 mm
Mounting	10 mm push pole adapter
Function	Medium sized, but strong magnet for narrow applications

RETRIEVAL MAGNET, LARGE — BMX-50-000114



Dimensions	Ø 24 x 45 mm
Mounting	10 mm push pole adapter
Function	Strong magnet for bigger items and larger amount metal chip collection.

ADJUSTABLE ELBOW — BMX-50-000106



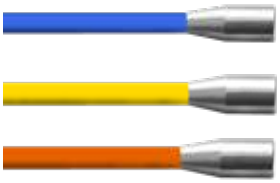
Angle	0° bis 90°
Mounting	10 mm push pole adapter
Function	Tool for better positioning of retrieval snares, magnets, hooks or retrieval tool GR 16

SHORT ROD PIECE 10 CM / 4“ — FXX-71-000124



Function	Optimized for operation with adjustable elbow (BMX-50-000106)
Mounting	10 mm push pole adapter

GLASS FIBER PUSH POLE SET — BMX-50-000292



3x Glass fiber push pole “soft“, each 1.5 meter length
Easily connectable via 10 mm interconnector

3x Glass fiber push pole “medium“, each 1.5 meter length
Easily connectable via 10 mm interconnector

3x Glass fiber push pole “stiff“, each 1.5 meter length
Easily connectable via 10 mm interconnector

SOFT BAG FOR GLASS FIBER PUSH POLES — FXX-82-000108



This soft bag stores up to 15 of your connectable glass fiber push poles. The material is robust and easy to clean.

TRANSPORT CASE — BMX-50-000230



This robust case is home for retrieval tools and accessories. Light-weight, compact and splash water proof HPX® high performance transport case for retrieval tools. Product tailored interior for perfect protection during transport and storage.

STANDARD TOOLS SET — BSX-90-000101



Screw driver set, wire cutter, LED power flash lamp, scissors; cutter and other usefull tools to fit and fill the retrieval tool case.

RETRIEVAL TOOL CONSUMABLES — BSX-90-000100



Duct tape, cable binder and other useful consumables packed into practical tailored plastic containers to fill the retrieval tool box.

1.1 START



Retrieval tools kit START

GR 8	GR 16	NON-MOTORIZED RETRIEVAL TOOLS	ACCESSORY SET	PUSH POLE SET	SYSTEM KIT
-	-	✓	✓	✓	BMX-50-000269

The START retrieval tools kit offers the complete range of basic mechanical retrieval tools fitting seamless onto the extendable push rod poles. Practical accessories and hand tools support you and ensure that you are prepared and ready to go when the emergency pops up.

The recommended optional electrical retrieval tools GR 8 and GR 16 fit perfectly into the tailormade case and upgrade the system to the PRO version.

Including:

- Stainless steel wire snare
- Retrieval magnets
- Hook tool
- Adjustable elbow
- LED flash light
- Tool set
- Disposables
- Glass fiber push pole set
- Operating instructions

STAINLESS STEEL WIRE SNARE — BMX-50-000115



Diameter	2.5 mm
Length	15 m
Construction	Multi wire snare construction
Mounting	10 mm push pole adapter
Function	Offering big size loops

RETRIEVAL HOOK — BMX-50-000117



Function	Reinforced, sharp hook
Mounting	10 mm push pole adapter

RETRIEVAL MAGNET, SMALL — BMX-50-000113



Dimensions	Ø 16 x 40 mm
Mounting	10 mm push pole adapter
Function	Small size magnet for narrow applications

RETRIEVAL MAGNET, MEDIUM — BMX-50-000112



Dimensions	Ø 20 x 40 mm
Mounting	10 mm push pole adapter
Function	Medium sized, but strong magnet for narrow applications

RETRIEVAL MAGNET, LARGE — BMX-50-000114



Dimensions	Ø 24 x 45 mm
Mounting	10 mm push pole adapter
Function	Strong magnet for bigger items and larger amount metal chip collection.

Including

ADJUSTABLE ELBOW — BMX-50-000106



Angle	0° bis 90°
Mounting	10 mm push pole adapter
Function	Tool for better positioning of retrieval snares, magnets, hooks or retrieval tool GR 16

SHORT ROD PIECE 10 CM / 4“ — FXX-71-000124



Function	Optimized for operation with adjustable elbow (BMX-50-000106)
Mounting	10 mm push pole adapter

GLASS FIBER PUSH POLE SET — BMX-50-000292



3x Glass fiber push pole “soft“, each 1.5 meter length
Easily connectable via 10 mm interconnector



3x Glass fiber push pole “medium“, each 1.5 meter length
Easily connectable via 10 mm interconnector



3x Glass fiber push pole “stiff“, each 1.5 meter length
Easily connectable via 10 mm interconnector

SOFT BAG FOR GLASS FIBER PUSH POLES — FXX-82-000108



This soft bag stores up to 15 of your connectable glass fiber push poles. The material is robust and easy to clean.

TRANSPORT CASE — BMX-50-000230



This robust case is home for retrieval tools and accessories. Light-weight, compact and splash water proof HPX® transport case for retrieval tools. Product tailored interior for perfect protection during transport and storage.

STANDARD TOOLS SET — BSX-90-000101



Screw driver set, wire cutter, LED power flash lamp, scissors; cutter and other usefull tools to fit and fill the retrieval tool case.

RETRIEVAL TOOL CONSUMABLES — BSX-90-000100



Duct tape, cable binder and other useful consumables packed into practical tailored plastic containers to fill the retrieval tool box.



Motorized retrieval tool GR 8

OUTER Ø	LENGTH	ITEM NO.
8.4 mm	10 m	VXX-70-000104
8.4 mm	15 m	VXX-70-000105
8.4 mm	20 m	VXX-70-000106
8.4 mm	30 m	VXX-70-000107

Transport case (BMX-50-000230), T-Rex grabber (BMX-50-000334) and Mouse Tooth grabber (BMX-50-000335) must be ordered seperately. The GR 8 is included in the Retrieval tools kits PRO and STANDARD.

Including:

- 2 m umbilical cable
- Remote control
- Lithium high power battery
- Storage box
- Operating instructions

The GR 8 is a motorized gripper, fixed and powered through a flexible and robust glass fiber push rod. It is designed to retrieve smaller and medium size items. Depending on the need, object shape and position, the jaw can be swapped from a 4.5 mm Mouse tooth gripper to a 8.4 mm T-Rex mouth gripper. Operated by remote control, the retrieval tool is battery powered. Avoid cable clutter with the smart storage push rod system with integrated power supply cords. Its push rod is stored in a practical box and provided in one working length, thus very useful in narrow surroundings. The GR 8 will perfectly fit into the retrieval tool case.

Recommended accessory

- Transport case
- T-Rex grabber
- Mouse Tooth grabber

TRANSPORT CASE — **BMX-50-000230**



This robust case is home for retrieval tools and accessories. Light-weight, compact and splash water proof HPX® transport case for retrieval tools. Product tailored interior for perfect protection during transport and storage.

INTERCHANGEABLE T-REX GRABBER FOR GR 8 — **BMX-50-000334**



Outer Ø (jaws closed)	8.4 mm
Distal head length	125 mm
Jaw range	70° | Space required to open jaws to maximum 16.8 mm
Max. grab size	12.5 mm

INTERCHANGEABLE MOUSE TOOTH GRABBER FOR GR 8 — **BMX-50-000335**



Outer Ø (jaws closed)	8.4 mm | tapered to 4.5 mm at grabber head
Distal head length	108 mm | Grabber head 30 mm
Jaw range	70° | Space required to open jaws to maximum 32 mm
Max. grab size	28 mm

Optional useful accessory

- Articulating guide tubes

ARTICULATING GUIDE TUBE, 3 M — **HVT-90-000148**



Outer Ø	22.0 mm
Length	3 m
Articulation	4 x 110°
Inner Ø	9.0 mm

ARTICULATING GUIDE TUBE, 5 M — **HVT-90-000149**



Outer Ø	22.0 mm
Length	5 m
Articulation	4 x 110°
Inner Ø	9.0 mm

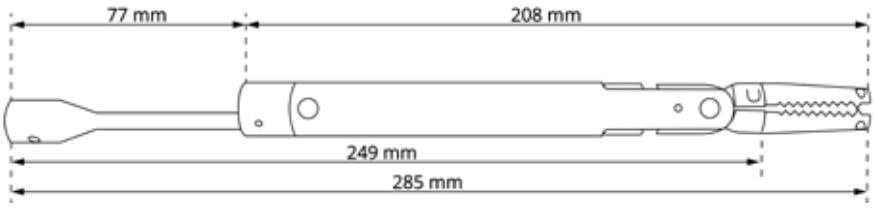
1.3 GR 16



Motorized retrieval tool GR 16

OUTER Ø	CABLE LENGTH*	ITEM NO.
16 mm	15 m	BEM-30-000219

* optionally available up to 30 m.
Transport case (BMX-50-000230) must be ordered separately.
The GR 16 is included in the Retrieval tools kit PRO.



The GR 16 is the workhorse of motorized retrieval tools. Medium size and larger objects are secure gripped and retrieved. Grabs are field interchangeable between an alligator style and a three finger grabber. The alligator mouth including four adjustable front fangs securing additional grip on the object. The viZaar® push rod quick connection system integrates seamlessly with the GR 16 to assist accurate positioning. The flexible push rods used in this system are available in a selection of different lengths and three grades of stiffness. Made of robust stainless steel, the GR 16 is robust and mobile, powered by two lithium ion batteries.

Including:

- 15 m umbilical cable
- Remote control
- Battery
- Storage box
- Operating instructions
- Alligator Jaws

Recommended accessory

- Transport case
- Three finger jaws
- Alligator jaws

TRANSPORT CASE — BMX-50-000230



This robust case is home for retrieval tools and accessories. Light-weight, compact and splash water proof HPX® transport case for retrieval tools. Tailor made interior for perfect protection during transport and storage.

INTERCHANGEABLE THREE FINGER JAWS FOR GR 16 — BMX-50-000293



Outer Ø (jaws closed)	16 mm
Length	42 mm
Jaw range	160°
Max. grab size	77 mm | Space required to open jaws to maximum 84 mm
Including	Allen key

INTERCHANGEABLE ALLIGATOR JAWS FOR GR 16 — BMX-50-000335



Outer Ø (jaws closed)	16 mm
Length	36 mm
Jaw range	160°
Max. grab size	77 mm | Space required to open jaws to maximum 84 mm
Including	2 jaws and 4 adjustable fangs



Stainless steel wire snare

STAINLESS STEEL WIRE SNARE	BMX-50-000115
Diameter	2.5 mm
Length	15 m
Construction	Multi wire snare construction
Mounting	10 mm push pole adapter
Function	Offering big size loops
Recommended	Glass fiber push pole soft / medium / stiff



Retrieval hook

RETRIEVAL HOOK	BMX-50-000117
Function	Reinforced, sharp hook
Mounting	10 mm push pole adapter
Recommended	Glass fiber push pole soft / medium / stiff



Retrieval magnet, small

RETRIEVAL MAGNET, SMALL	BMX-50-000113
Dimensions	Ø 16 x 40 mm
Mounting	10 mm push pole adapter
Function	Small size magnet for narrow applications
Recommended	Flex rod 15 cm / 6" (FXX-71-000105) and glass fiber push pole soft / medium / stiff.



Retrieval magnet, medium

RETRIEVAL MAGNET, MEDIUM	BMX-50-000112
Dimensions	Ø 20 x 40 mm
Mounting	10 mm push pole adapter
Function	Medium sized, but strong magnet for narrow applications
Recommended	Flex rod 15 cm / 6" (FXX-71-000105) and glass fiber push pole soft / medium / stiff.



Retrieval magnet, large

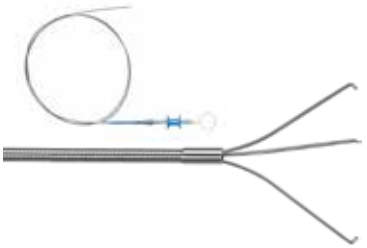
RETRIEVAL MAGNET, LARGE	BMX-50-000114
Dimensions	Ø 24 x 45 mm
Mounting	10 mm push pole adapter
Function	Strong magnet for bigger items and larger amount metal chip collection.
Recommended	Flex rod 15 cm / 6" (FXX-71-000105) and glass fiber push pole soft / medium / stiff.

1.5 RETRIEVAL PLIERS



Alligator forceps

OUTER Ø	LENGTH	PLIERS	JAW RANGE	PLIER LENGTH	FITTING TO	ITEM NO.
1.65 mm	3.3 m	Alligator forceps	100°	10.2 mm	VUCAM® XO (3.3 m)	HSO-50-000100
1.65 mm	7.0 m	Alligator forceps	100°	10.2 mm	DE 2.4 / 4.0 VUCAM® XO (6.6 m)	HSO-50-000101
3.0 mm	2.2 m	Alligator forceps	90°	16.7 mm	VUCAM® XO (2.2 m) VISIO Sonden	HSO-50-000102
3.0 mm	3.3 m	Alligator forceps	90°	16.7 mm	VUCAM® XO (3.3 m) VISIO Sonden	HSO-50-000103
3.0 mm	6.6 m	Alligator forceps	90°	16.7 mm	VUCAM® XO (6.6 m) VUMAN® (5 m)	HSO-50-000104
3.0 mm	9.0 m	Alligator forceps	90°	16.7 mm	VUMAN® (8 m)	HSO-50-000105



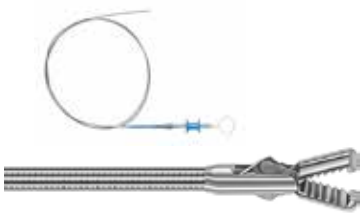
Three pongs jaw

OUTER Ø	LENGTH	PLIERS	JAW RANGE	PLIER LENGTH	FITTING TO	ITEM NO.
1.65 mm	3.3 m	Three pongs jaw	> 15 mm	36 mm	VUCAM® XO (3.3 m) GR 17 (3 m) GR 22 (3 m)	HSO-50-000106
1.65 mm	7.7 m	Three pongs jaw	> 15 mm	36 mm	DE 2.4 / 4.0 VUCAM® XO (6.6 m)	HSO-50-000107



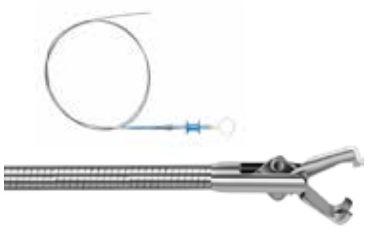
Foreign body retriever

OUTER Ø	LENGTH	PLIERS	JAW RANGE	PLIER LENGTH	FITTING TO	ITEM NO.
6.0 mm	3.3 m	Foreign body retriever	> 30 mm	97.7 mm	VUCAM® XO (3.3 m) GR 17 (3 m) GR 22 (3 m)	HSO-50-000108
6.0 mm	7.0 m	Foreign body retriever	> 30 mm	97.7 mm	VUCAM® XO (6.6 m) VISIO Probes GR 17 GR 22	HSO-50-000109



Alligator forceps, cross serrated

OUTER Ø	LENGTH	PLIERS	JAW RANGE	PLIER LENGTH	FITTING TO	ITEM NO.
6.0 mm	3.3 m	Alligator forceps, cross serrated	Min. 85°	37.0 mm	VUCAM® XO (3.3 m) GR 17 (3 m) GR 22 (3 m)	HSO-50-000110
6.0 mm	7.0 m	Alligator forceps, cross serrated	Min. 85°	37.0 mm	VUCAM® XO (6.6 m) VISIO Probes GR 17 GR 22	HSO-50-000111



Rat tooth

OUTER Ø	LENGTH	PLIERS	JAW RANGE	PLIER LENGTH	FITTING TO	ITEM NO.
6.0 mm	3.3 m	Rat tooth	Min. 85°	36.9 mm	VUCAM® XO (6.6 m) VISIO Probes GR 17 GR 22	HSO-50-000112
6.0 mm	7.0 m	Rat tooth	Min. 85°	37.0 mm	VUCAM® XO (6.6 m) VISIO Probes GR 17 GR 22	HSO-50-000113

In the medical world, tools like this are frequently used for keyhole operations and to remove foreign objects from the human body.
The following retrieval tools utilize the known advantages and have been adapted and improved for industrial applications. Small alligator forceps with spring mechanism, snares and three prong retriever offer good grip and high flexibility in industrial applications. The working length is adapted to typical industrial working lengths of industrial videoscopes like the VUCAM® XO.

1.5 RETRIEVAL PLIERS



GR 19

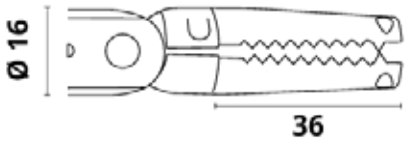
OUTER Ø	LENGTH	ARTICULATION	PLIERS	CONSTRUCTION	ITEM-NO.
19.0 mm	3.3 m	4 x 110°	Alligator	Plastic	HSO-50-000114
19.0 mm	3.3 m	4 x 110°	Three finger grabber	Plastic	HSO-50-000115
19.0 mm	5.3 m	4 x 90°	Alligator	Plastic	HSO-50-000116
19.0 mm	5.3 m	4 x 90°	Three finger grabber	Plastic	HSO-50-000117



GR 22

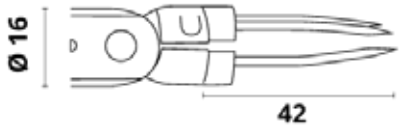
OUTER Ø	LENGTH	ARTICULATION	PLIERS	CONSTRUCTION	ITEM-NO.
22.0 mm	3.3 m	4 x 110°	Alligator	Stainless steel	HSO-50-000118
22.0 mm	3.3 m	4 x 110°	Three finger grabber	Stainless steel	HSO-50-000119
22.0 mm	5.3 m	4 x 90°	Alligator	Stainless steel	HSO-50-000121
22.0 mm	5.3 m	4 x 90°	Three finger grabber	Stainless steel	HSO-50-000121

1.6 ACCESSORY



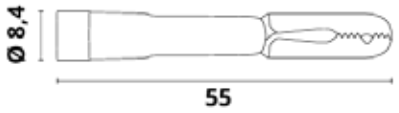
Alligator jaws
GR 16

SPARE ALLIGATOR JAWS FOR GR 16	BMX-50-000386
Outer Ø (jaws closed)	16 mm
Length	36 mm
Jaw range	160°
Max. grab size	77 mm | Space required to open jaws to maximum 84 mm.
Including	2 Jaws and 4 adjustable fangs



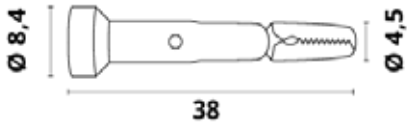
Three finger jaws
GR 16

INTERCHANGEABLE THEREE FINGER JAWS FOR GR 16	BMX-50-000293
Outer Ø (jaws closed)	16 mm
Length	42 mm
Jaw range	160°
Max. grab size	77 mm | Space required to open jaws to maximum 84 mm
Including	Allen key



T-Rex grabber
GR 8

INTERCHANGEABLE T-REX GRABBER FOR GR 8	BMX-50-000334
Outer Ø (jaws closed)	8.4 mm
Length	55 mm
Jaw range	70°
Max. grab size	28 mm | Space required to open jaws to maximum 32 mm
Including	Allen key and spare grub screws



Mouse tooth grabber
GR 8

INTERCHANGEABLE MOUSE TOOTH GRABBER FOR GR 8	BMX-50-000335
Outer Ø (jaws closed)	8.4 mm | Tapered to 4.5 mm at gripping head
Length	38 mm
Jaw range	70°
Max. grab size	12.5 mm | Space required to open jaws to maximum 16.8 mm
Including	Allen key and spare grub screws



Transport case

TRANSPORT CASE	BMX-50-000230

This robust case is home for retrieval tools and accessories. Light-weight, compact and splash water proof HPX® transport case for retrieval tools. Tailor made interior for perfect protection during transport and storage.

1.6 ACCESSORY



Glass fiber push pole, soft

GLASS FIBER PUSH POLE, SOFT	FXX-71-000100
Diameter	6.0 mm
Construction	PE coated glass fiber push pole
Length	1.5 m
Mounting	10 mm stainless steel quick coupling



Glass fiber push pole, medium

GLASS FIBER PUSH POLE, MEDIUM	FXX-71-000101
Diameter	7.5 mm
Construction	PE coated glass fiber push pole
Length	1.5 m
Mounting	10 mm stainless steel quick coupling



Glass fiber push pole, stiff

GLASS FIBER PUSH POLE, STIFF	FXX-71-000102
Diameter	9.0 mm
Construction	PE coated glass fiber push pole
Length	1.5 m
Mounting	10 mm stainless steel quick coupling



Soft bag

SOFT BAG FOR GLASS FIBER PUSH POLES	FXX-82-000108
This soft bag stores up to 15 of your connectable glass fiber push poles. The material is robust and easy to clean.	



Adjustable elbow

ADJUSTABLE ELBOW	BMX-50-000106
Angle	0° to 90°
Mounting	10 mm push pole adapter
Function	Tool for better positioning of retrieval snares, magnets, hooks or retrieval tool GR 16



Short rod piece

LENGTH	FUNCTION	MOUNTING	ITEM NO.
100 mm	Optimized for operation with adjustable elbow (BMX-50-000106)	10 mm push pole adapter	FXX-71-000124
250 mm	Optimized for operation with adjustable elbow (BMX-50-000106)	10 mm push pole adapter	FXX-71-000125

1.6 ACCESSORY



Flex rod

FLEX ROD 15 CM / 6“	FXX-71-000105
Length	150 mm
Mounting	10 mm push pole adapter
Function	Flexible rubber push pole adapter. Recommended for operation of magnets in steel piping.



Umbilical cable GR 16

LENGTH	ITEM NO.
15 m	BEX-20-000113
20 m	BEX-20-000114
30 m	BEX-20-000115



Remote control GR 8

REMOTE CONTROL GR 8	BMX-50-000256
Remote control for the retrieval tool GR 8	



Remote control GR 16

REMOTE CONTROL GR 16	BMX-50-000249
Remote control for the retrieval tool GR 16	



Spare battery

SPARE BATTERY	EXX-91-000106
Powerful spare battery Ultralite Lithium HI Energy 9-V Block. Two batteries required for GR 16, one battery required for GR 8.	

1.6 ACCESSORY



Tool set

STANDARD TOOLS SET **BSX-90-000101**

Screw driver set, wire cutter, LED power flash lamp, scissors; cutter and other usefull tools to fit and fill the retrieval tool case.



Consumables

RETRIEVAL TOOL CONSUMABLES **BSX-90-000100**

Duct tape, cable binder and other useful consumables packed into practical tailored plastic containers to fill the retrieval tool box.

2 GUIDE TUBES

Non-articulating and articulating guide tubes



Guide tubes are essential help to introduce, orientate and position inspection equipment and retrieval tools. The offered range includes simple rigid-, semi-flexible- or flexible guide tubes with working channel and remote articulation mechanism.
These multi-functional tools assist the video probe and retrieval tools during foreign objects search and retrieval operations. They too are used to clean debris or shaving. Guide tubes are utilized to suck in or blow out foreign objects. In some cases, they deliver and position flexible shaft drives allowing remote grinding, cutting or torque tool operation.

2 GUIDE TUBES

2.1 Non-articulating guide tubes

2.1 GUIDE TUBES



Guide tubes

Guide tubes are designed to assist flexible probes during difficult/complex inspections or to ensure that the probe reaches a defined location. Rigid and flexible guide tubes are used in various situations to protect video probes from wear, to insert them into the application in hard-to-reach places, and to position the probes optimally.

OUTER Ø	FOR PROBES WITH Ø	LENGTH	CONSTRUCTION	FOR PRODUCTS	ITEM-NO.
8 mm	4.0 mm	200 mm 400 mm 600 mm 800 mm	Semi Rigid	VISIO and VUCAM® probes	HVT-90-000157 HVT-90-000158 HVT-90-000159 HVT-90-000160
12 mm	6 mm	200 mm 400 mm 600 mm 800 mm	Semi Rigid	VISIO and VUCAM® Probes	HVT-90-000-161 HVT-90-000-162 HVT-90-000-163 HVT-90-000-164
15 mm	8.4 mm	200 mm 400 mm 600 mm 800 mm	Semi Rigid	VUMAN® Probes	HVT-90-000165 HVT-90-000166 HVT-90-000167 HVT-90-000168
6 mm	4 mm	200 mm 400 mm 600 mm 800 mm	Rigid	VUMAN® Probes	HVT-90-000169 HVT-90-000170 HVT-90-000171 HVT-90-000172
8 mm	6 mm	200 mm 400 mm 600 mm 800 mm	Rigid	VUMAN® Probes	HVT-90-000173 HVT-90-000174 HVT-90-000175 HVT-90-000176
10 mm	8.4 mm	200 mm 400 mm 600 mm 800 mm	Rigid	VUMAN® Probes	HVT-90-000152 HVT-90-000153 HVT-90-000154 HVT-90-000155

2.2 ARTICULATING GUIDE TUBES



Articulating guide tubes

OUTER Ø	INNER Ø	LENGTH	ARTICULATION	FITTING PROBE Ø	MATERIAL	ITEM NO.
19.0 mm	6.3 mm	3 m	4 x 110°	6.0 mm	Plastic	HVT-90-000150
19.0 mm	6.3 mm	5 m	4 x 90°	6.0 mm	Plastic	HVT-90-000151
22.0 mm	9.0 mm	3 m	4 x 110°	9.0 mm	Stainless steel	HVT-90-000148
22.0 mm	9.0 mm	5 m	4 x 90°	9.0 mm	Stainless steel	HVT-90-000149

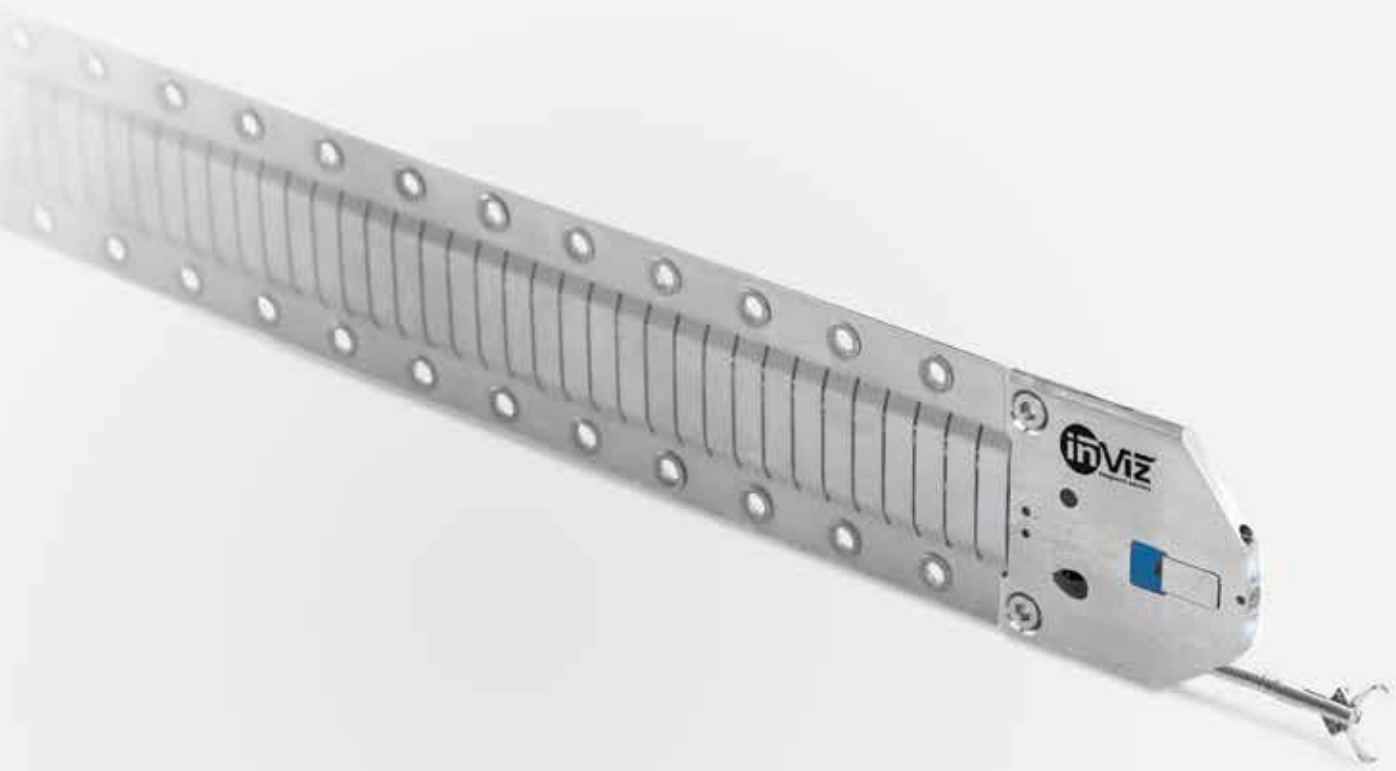
Including:

- Transport case

This articulating guide tubes provide four way articulation. The integrated working channel passes flexible endoscopes and retrieval tools with a maximum outer diameter of 6 mm and 9.0 mm. Available in different diameters and working lengths, the outer sheath is made of cut resistant stainless steel or an additional shrink tube. Two solid steering knobs allow the remote articulation of the distal head together with the inserted tool or camera. The user can move the tools axial inside the tube, offering an additional axis to reach out with the grabber or adding an additional lift and rotating axis to your inspection camera. Sometimes, this is the only possibility to reach the point of interest. The articulating guide tube with 19 mm diameter supports the videoscope VUCAM® XO, video endoscope VUMAN® and visio probes up to 6 mm diameter for search applications. The articulating guide tube with 22 mm diameter fits the field installable, motorized retrieval tool GR 8 and also supports the videoscope VUCAM® XO, video endoscope VUMAN® and VISIO probes up to 8 mm diameter for search applications.

3 SPECIAL RETRIEVAL TOOLS

Custom made FOSAR solutions



Although we offer a big range of search and retrieval tools, sometimes the standard will not do the job. In the following chapter, we list some examples of our knowledge and expertise for successful custom made FOSAR solutions. Fortunately, some retrieval jobs are simple, fast and inexpensive. In certain cases, a complex task requires all our effort and resources.
In the end, all listed solutions solved problems saved our customers shutdown time and a lot of money. Fortunately, we can draw for your solution from a huge range of products, capabilities and experience. Feel free to contact us.

3 SPECIAL RETRIEVAL TOOLS

3.1 GR 22 C



GR 22 C
with integrated camera and
LED illumination

OUTER Ø	LENGTH	ARTICULATION	INNER Ø	FITTING PROBE Ø
22.0 mm	3 m	4 x 110°	9.0 mm	9.0 mm
22.0 mm	5 m	4 x 90°	9.0 mm	9.0 mm

This sophisticated foreign object search and retrieval tool offers the same capabilities as the standard articulating guide tube GR 22 C. With its small integrated camera system and integrated LED illumination, search and retrieval jobs are performed fast and secure.
Utilizing the 15 mm retrieval pliers or the motorized retrieval tool GR 8, this system enables precise manoeuvring to find, monitor and retrieve the object immediately.

3.2 RETRIEVAL SNARE



Retrieval snare
with emergency release
mechanism

RETRIEVAL SNARE WITH EMERGENCY RELEASE MECHANISM

This remotely operated retrieval snare provides a special release mechanism and is positioned with an articulating guide tube. The chosen snare type ensures maximum pull strength.
If the part to retrieve would get stuck with the snare inside the application, the entire operation would be in danger. Therefore, a safety mechanism was integrated allowing the operator to remotely open up the snare. This solution results in pulling out only one string, thus allowing to reconnect attempt a new foreign object retrieval.

3.3 GR 6

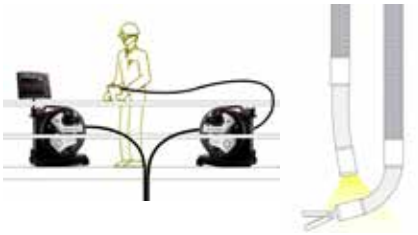


GR 6
with gas nozzle

ARTICULATING GUIDE TUBE GR 6 WITH WORKING CHANNEL AND GAS NOZZLE

This guide tube system with only 6 mm outer diameter contains a working channel allowing a micro tool or fiber bundle for a laser operation to pass. A special air/gas blow system can be connected and a true gas nozzle at the tip the tool can be cooled down, a specific protective gas environment can be created or simply air blown.

3.4 GR 10



GR 10 - pneumatically articulated guide tube system

JOYSTICK CONTROLLED, PNEUMATIC ARTICULATING GUIDE TUBE SYSTEM GR 10

Combined with the video endoscope system VUMAN® X-WAY, this remotely pneumatic articulating system is winded up and down from the patented drum reel. This system is mainly operated and utilized for foreign object retrieval, released vertically down from a scaffold or operation bridge. The GR 10 is capable of underwater operation and provides working lengths up to 30 m.

3.5 GR 25



GR 25 - articulating guide tube

ARTICULATING GUIDE TUBE GR 25 WITH EXTRA-LARGE 12 MM WORKING CHANNEL

The GR 25 guide tubes key benefit is the articulation capability and the large 12 mm working channel. This feature allows passing through and remotely positioning strong flexible drive shafts for remote cutting, grinding opening, closing screws and other torque related tooling work. The large 12 mm working channel is also very well suited for sucking in bigger amounts of shavings and waste materials.

3.6 VUFLEX 2.4



VUFLEX
with retrieval hook

VUFLEX 2.4 WITH RETRIEVAL HOOK, WORKING CHANNEL FOR MICRO RETRIEVAL TOOLS

The VUFLEX 2.4 is a special probe, only 2.4 mm flat, integrating a retrieval hook in the distal head construction and a working channel inside the insertion belt. This solution has entered the secondary side of steam generators traveling in between the tube bundles. It helped to inspect and locate foreign objects, cut to big parts and retrieve foreign debris. This operation has restored safe operation conditions of steam generators, thus saving time and costs.

XPANDING YOUR VU

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