



# VideoProbe accessories guide

# VideoProbe accessories guide

Waygate Technologies' VideoProbes give you the highest image quality and measurement capability on your visual inspection device so you can be confident your inspections are thorough and accurate. To compliment the most advanced line of VideoProbes in the industry, we offer a comprehensive selection of optical tips and accessories so you can get the most out of your video borescope. We understand that performing a video borescope inspection requires a skilled technician putting in long hours in sometimes challenging environments. Deploying the proper accessory for the job can ensure inspections are performed properly, ergonomically, and efficiently.

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# Tip optics

There are several features and accessories that make Waygate Technologies VideoProbes versatile inspection devices, but none may be more critical than the wide selection of optical tip adapters. Each optical tip uses a unique lens system to modify the image which provides the ability to perform a diverse set of inspections. Standard optical tips provide different angles of viewing and different focus ranges, while 3D Stereo and 3D Phase Measurement tips provide the ability to perform defect measurements with a fully surfaced 3D point cloud!

## Optical tip selection:

Before performing an inspection, it is essential that the proper optical tip has been selected. There are certain variables within each application that will help you to determine which tip is best for the inspection. The three main variables that must be determined when selecting an optical tip are listed in Figure 1. Each tip features a unique direction of view (DOV), depth of field (DOF) and field of view (FOV).

Application variables	Optical tip specifications	
Does the application require a unique angle of viewing?	Direction of view	DOV
What is the approximate distance that the optical tip will be from the inspection target?	Depth of field	DOF
How wide of a viewing angle does the inspection require?	Field of view	FOV

Figure 1

## Depth of field:

Depth of field is the object distance range, which the image resolves as sharp. This is a range in which an object will appear in focus. When using a VideoProbe™, in order to appear in focus, the target object must be within the optical range. Anything lying outside the DOF will be out of focus and will appear blurry. Figure 2 illustrates Depth of Field and show a range of focus that is very short.

## Magnification:

Magnification is the amount larger an object appears through the lens system as compared to its actual size. Magnification is directly related to Field of View, the smaller the FOV the larger something will appear in it.

## Field of view:

Field of view is the angular extent of the observable target that can be seen at a given moment. A large field of view means you can see a large area. Conversely, a small field of view means you can only see a small area.

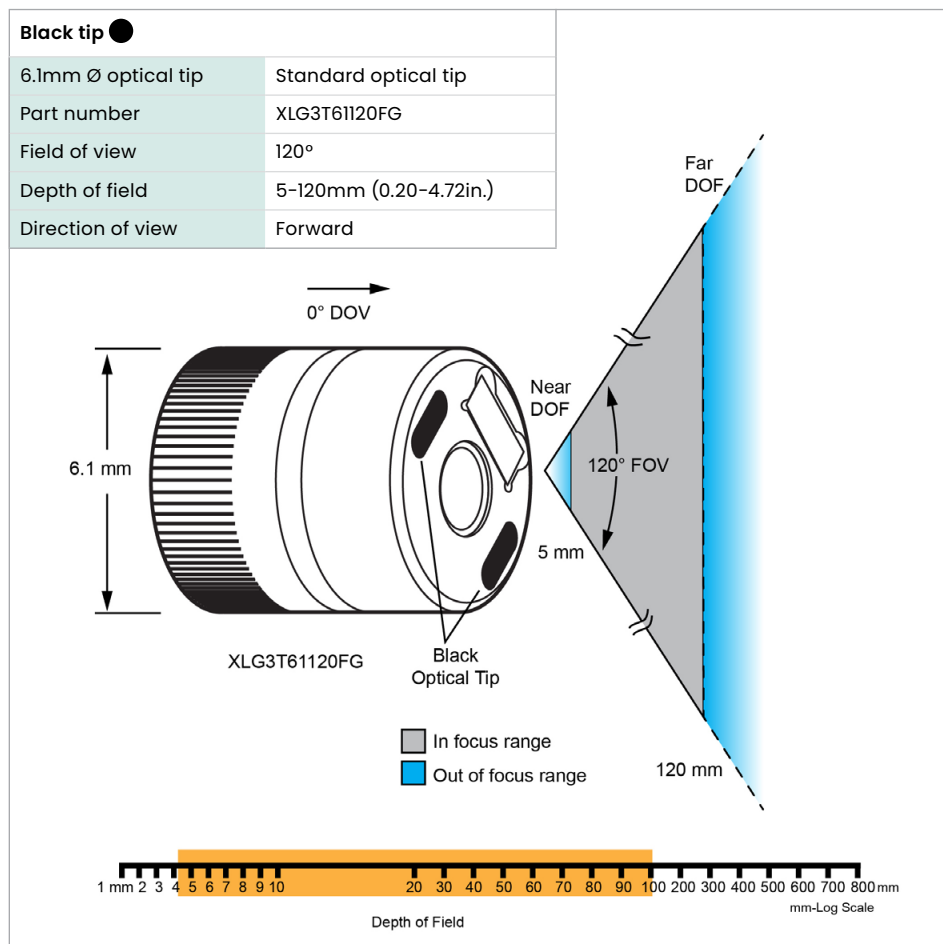








Figure 2

## 3.9mm tips





	Part number	Color	FOV	DOF (mm)	DOF (in)	DOV	
	PXT480FG	None	80 degrees	6-80	0.24-3.15	0 degrees	
	PXT490FN	Orange	90 degrees	3-40	0.12-1.57	0 degrees	
	PXT490SN	Red	90 degrees	2-16	0.08-0.63	90 degrees	
	PXT480SG	Brown	80 degrees	4-80	0.16-3.15	90 degrees	
Kit part number	PXT4SET	PXT490FN	Orange	90 degrees	3-40	0.12-1.57	0 degrees
		PXT480SG	Brown	80 degrees	4-80	0.16-3.15	90 degrees
		PXT490SN	Red	90 degrees	2-16	0.08-0.63	90 degrees
Kit part number	PXTM4SET ST	PXTM45050FG	Black	50/50 degrees	5-45	0.20-1.77	0 degrees
		PXTM45050SG	Blue	50/50 degrees	4-45	0.16-1.77	90 degrees

## 3.9mm StereoProbe Measurement tips



	Part number	Color	FOV	DOF (mm)	DOF (in)	DOV
	PXTM45050FG	Black	50/50 degrees	5-45	0.20-1.77	0 degrees
	PXTM45050SG	Blue	50/50 degrees	4-45	0.16-1.77	90 degrees

## Tip optics

### 4.0mm tips

	Part number	Color	FOV	DOF (mm)	DOF (in)	DOV	
	T4080FF	None	80 degrees	35-inf.	1.38-inf.	0 degrees	
	T40120SF	Blue	120 degrees	6-inf.	0.24-inf.	90 degrees	
	T40115FN	Black	115 degrees	4-inf.	0.16-inf.	0 degrees	
	T40115SN	Red	115 degrees	1-30	0.04-1.18"	90 degrees	
Kit part number	MVIQAT4SET	T40115FN	Black	115 degrees	4-inf.	0.16-inf.	0 degrees
		T40115SN	Red	115 degrees	1-30	0.04-1.18	90 degrees
		T40120SF	Blue	120 degrees	6-inf.	0.24-inf.	90 degrees
Kit part number	MVIQAT4SET ST	TM405555FG	Black	55/55 degrees	5-inf.	0.2-inf.	0 degrees
		TM405555SG	Blue	55/55 degrees	4-inf.	0.16-inf.	90 degrees








### 4.0mm StereoProbe Measurement tips

	Part number	Color	FOV	DOF (mm)	DOF (in)	DOV
	TM405555FG	Black	55/55 degrees	5-inf.	0.2-inf.	0 degrees
	TM405555SG	Blue	55/55 degrees	4-inf.	0.16-inf.	90 degrees

## 6.1mm tips

	Part number	Color	FOV	DOF (mm)	DOF (in)	DOV
	<b>XLG3T6150FG</b>	White	50 degrees	12-200	0.47-7.87	0 degrees
	<b>XLG3T6180FN</b>	Orange	80 degree	3-20	0.12-0.79	0 degrees
	<b>XLG3T6190FF</b>	Yellow	90 degrees	20-inf.	0.79-inf.	0 degrees
	<b>T6165FF</b>	Orange and blue	65 degrees	65-inf.	2.56-inf.	0 degrees
	<b>XLG3T6150FF</b>	None	50 degrees	50-inf.	2.36-inf.	0 degrees
	<b>T6150FF-1</b>	None (Sealed Window)	50 degrees	50-inf.	2.36-inf.	0 degrees
	<b>T6150FF</b>	None	50 degrees	50-inf.	2.36-inf.	0 degrees
	<b>T6150HP</b>	None	50 degrees	50-inf.	2.36-inf.	0 degrees
	<b>XLG3T61120FG</b>	Black	120 degrees	5-120	0.20-4.72	0 degrees
	<b>T61120FF</b>	Gray	120 degrees	20-inf.	0.79-inf.	0 degrees



## 6.1mm tips

		Part number	Color	FOV	DOF (mm)	DOF (in)	DOV	
			<b>XLG3T6150FB</b>	Purple	50 degrees	12-80	0.47-3.15	0 degrees
			<b>XLG3T6150SF</b>	Brown	50 degrees	45-inf.	1.77-inf.	90 degrees
			<b>XLG3T6150SG</b>	Green	50 degrees	9-160	9.35-6.30	90 degrees
			<b>XLG3T61120SG</b>	Blue	120 degrees	4-100	0.16-3.94	90 degrees
			<b>XLG3T6180SN</b>	Red	80 degrees	1-20	0.04-0.79	90 degrees
			<b>XLG3TM6150FG</b>	White	50 degrees	12-30	0.47-1.18	0 degrees
			<b>XLG3TM6150SG</b>	Blue	50 degrees	7-24	0.28-.94	90 degrees
Kit part number	<b>XLG3T61SET</b>	<b>XLG3T61120FG</b>	Black	120 degrees	5-120	0.20-4.72	0 degrees	
		<b>XLG3T6180FN</b>	Orange	80 degrees	12-80	0.47-3.15	0 degrees	
		<b>XLG3T6150SF</b>	Brown	50 degrees	45-inf.	1.77-inf.	90 degrees	
		<b>XLG3T61120SG</b>	Blue	120 degrees	4-100	0.16-3.94	90 degrees	
		<b>XLG3T6180SN</b>	Red	80 degrees	1-20	0.04-0.79	90 degrees	
		<b>XLG3T6150FG</b>	White	50 degrees	12-200	0.47-7.87	0 degrees	
		<b>XLG3T6180FN</b>	Orange	80 degrees	3-20	0.12-0.79	0 degrees	
		<b>XLG3T6190FF</b>	Yellow	90 degrees	20-inf.	0.79-inf.	0 degrees	
		<b>XLG3T61120FG</b>	Black	120 degrees	5-120	0.20-4.72	0 degrees	
		<b>XLG3T6150FB</b>	Purple	50 degrees	12-80	0.47-3.15	0 degrees	
		<b>XLG3T6150SF</b>	Brown	50 degrees	45-inf.	1.77-inf.	90 degrees	
		<b>XLG3T6150SG</b>	Green	50 degrees	9-160	0.35-6.30	90 degrees	
		<b>XLG3T61120SG</b>	Blue	120 degrees	4-100	0.16-3.94	90 degrees	
		<b>XLG3T6180SN</b>	Red	80 degrees	1-20	0.04-0.79	90 degrees	









## 6.1mm tips









### 6.1mm StereoProbe Measurement tips

	Part number	Color	FOV	DOF (mm)	DOF (in)	DOV
	XLG3TM616060FG	Black	60/60 degrees	4-80	0.16-3.15	0 degrees
	XLG3TM615050SG	Blue	50/50 degrees	2-50	0.08-1.97	90 degrees





### 6.1mm 3D Phase Measurement tips

	Part number	Color	FOV	DOF (mm)	DOF (in)	DOV
	XL4TM61105FG	Black	105 degrees	8-250	0.31-9.84	0 degrees
	XL4TM61105SG	Blue	105 degrees	7-250	0.27-9.84	90 degrees
	XL4TM61105SF	Green	105 degrees	15-inf.	0.59-inf.	90 degrees
	XL4TM61105FN	Orange	105 degrees	3-120	12-4.72	0 degrees
	XL4TM61105SN	Red	105 degrees	2-20	(.08-.79)	90 degrees
	XL4TM61105FF	Yellow	105 degrees	15-inf	(0.59-inf)	0 degrees

## 6.2mm tips






	Part number	Color	FOV	DOF (mm)	DOF (in)	DOV
	PXT62120FF	Yellow	120 degrees	25-inf.	0.98-inf.	0 degrees
	PXT62120SN	Blue	120 degrees	5-inf.	0.20-inf.	90 degrees
	PXT6240FF	None	40 degrees	100-inf.	3.94-inf.	0 degrees
	PXT62120FN	Black	120 degrees	4-190	0.16-3.15	0 degrees
	PXT6280SF	Green	80 degrees	18-inf.	0.75-inf.	90 degrees
	T62120FN*	Black	120 degrees	2-200	0.08-7.87	0 degrees
	T62120FF*	Yellow	120 degrees	15-inf.	0.59-inf.	0 degrees
	T6280SF*	Green	80 degrees	15-inf.	0.59-inf.	90 degrees
	T62120SN*	Blue	120 degrees	6-inf.	0.24-inf.	90 degrees

## 6.2mm StereoProbe Measurement tips

	Part number	Color	FOV	DOF (mm)	DOF (in)	DOV
	PXTM626060FG	Black	60 degrees	4-80	0.16-3.15	0 degrees
	PXTM626060SG	Blue	60 degrees	4-80	0.16-3.15	90 degrees
	TM626060FN*	Black	60/60 FWD degrees	2-200	0.08-7.87	0 degrees
	TM626060SN*	Blue	60/60 SIDE degrees	2-200	0.08-7.87	90 degrees

\*\* tips available for MVIQJP6235 only



## 8.4mm tips

	Part number	Color	FOV	DOF (mm)	DOF (in)	DOV
	<b>XLG3T8440FF</b>	None	40 degrees	250-inf.	9.84-inf.	0 degrees
	<b>XLG3T84120FN</b>	Black	120 degrees	5-200	0.20-7.87	0 degrees
	<b>XLG3T84120SN</b>	Blue	120 degrees	4-200	0.16-7.87	90 degrees
	<b>XLG3T8440FG</b>	White	40 degrees	80-500	3.15-19.68	0 degrees
	<b>XLG3T8440SF</b>	Brown	40 degrees	250-inf.	9.84-inf.	90 degrees
	<b>XLG3T8480FG</b>	Yellow	80 degrees	25-500	0.98-19.68	0 degrees
	<b>XLG3T8480SG</b>	Green	80 degrees	25-500	0.98-19.68	90 degrees
	<b>T84120FF</b>	Orange and blue	120 degrees	20-inf.	0.79-inf.	0 degrees

## 8.4mm tips

	Part Number	Color	FOV	DOF (mm)	DOF (in)	DOV	
Kit part number	XLG3T84SET	XLG3T8480FG	Yellow	80 degrees	25-500	0.98-19.68	0 degrees
		XLG3T84120FN	Black	120 degrees	5-200	0.20-7.87	0 degrees
		XLG3T8440SF	Brown	40 degrees	250-inf.	9.84-inf.	90 degrees
		XLG3T8480SG	Green	80 degrees	25-500	0.98-19.68	90 degrees
		XLG3T84120SN	Blue	120 degrees	4-200	0.16-7.87	90 degrees

## 8.4mm StereoProbe Measurement tips

	Part number	Color	FOV	DOF (mm)	DOF (in)	DOV
	XLG3TM846060FG	Black	60/60 degrees	4-50	0.16-1.97	0 degrees
	XLG3TM846060SG	Blue	60/60 degrees	4-50	0.16-1.97	90 degrees

# Tip tools

Optical tip tools are designed to make it easy to attach and remove 3.9mm or 4.0mm optical tips. Each 3.9mm and 4.0mm tip is sold standard with a dedicated tip tool which also serves to store and protect the tip.



Part number	Color	Description
PXT480FG-T	None	Used for installation and removal of head guard for 3.9mm VideoProbe
PXT480SG-T	Brown	Used for installation and removal of PXT480SG for 3.9mm VideoProbe
PXT490FN-T	Orange	Used for installation and removal of PXT490FN for 3.9mm VideoProbe
PXT490SN-T	Red	Used for installation and removal of PXT490SN for 3.9mm VideoProbe
PXTM45050FG-T	Black	Used for installation and removal of PXTM45050FG for 3.9mm VideoProbe
PXTM45050SG-T	Blue	Used for installation and removal of PXTM45050SG for 3.9mm VideoProbe
T4080FF-T	None	Used for installation and removal of 4.0mm head guard
T40115FN-T	Black	Used for installation and removal of T40115FN, 4.0mm forward viewing optical tip
T40115SN-T	Red	Used for installation and removal of T40115SN, 4.0mm side viewing optical tip

# Guide tubes

Guide tubes make it easier to navigate challenging inspection paths such as complex bends or gaps while providing an added layer of protection for the insertion tube. Once a particular diameter and length is selected, guide tubes are compatible with all Waygate Technologies VideoProbes as a cross platform accessory.

# Mechanical guide tubes

Mechanical guide tubes offer the ability to articulate the guide either 2-way or 4-ways allowing the user to navigate the most challenging inspection paths. Each mechanical guide tube comes with a durable polyurethane impregnated outer tungsten braid and steel internal monocoil for added crush resistance.



Part number	Length
MECHGTUBE-8536	13.7mm (0.539") x 8 ft (96")
MECHGTUBE-8537	13.7mm (0.539") x 19 ft (228")
MECHGTUBE-8538	10.7mm (0.421") x 2m (78.74")
MECHGTUBE-8539	10.7mm (0.421") x 3m (118.11")
MECHGTUBE-8559	13.7mm (0.539") x 2.75m (108.27")
MECHGTUBE-8560	13.7mm (0.539") x 2.0m (78.74")
MECHGTUBE-8649	10.7mm (0.421") x 3.0m (118.11"), R&P
MECHGTUBE-8662	10.7mm (0.421") x .8m (31.5)
MECHGTUBE-8686	10.7mm (0.421") x 2.4m (94.49")
MECHGTUBE-8742	10.7mm (0.421") x 3.35m (131.89")
MECHGTUBE-8802	9.4mm (0.370") x 2.8m (110.24")
MECHGTUBE-8832	6mm (0.236") x 12m (472.44"), W/WC

# Non-articulating guide tubes

Non-articulating guide tubes are strong and flexible. Made from the same materials as Waygate Technologies' VideoProbe insertion tubes.



Part number	Length	Diameter
GTN-415	1.5m (59.06")	6.1mm (0.240")
GTN-415-8976	1.5m (59.06")	6.1mm (0.240")
GTN-415-55D-8977	1.5m (59.06")	6.1mm (0.240")
GTN-420	2.0m (78.74")	6.1mm (0.240")
GTN-425	2.5m (98.43")	6.1mm (0.240")
GTN-430	3.0m (118.11")	6.1mm (0.240")
GTN4-8933	10.6m (417.32")	4mm (0.157")
GTN-515	1.5m (59.06")	8.4mm (.331")
GTN-520	2.0m (78.74")	8.4mm (.331")
GTN-525	2.5m (98.43")	8.4mm (.331")
GTN-530	3.0m (118.11")	8.4mm (.331")
GTN-615	1.5m (59.06")	10mm (.394")
GTN-620	2.0m (78.74")	10mm (.394")
GTN-625	2.5m (98.43")	10mm (.394")
GTN-630	3.0m (118.11")	10mm (.394")
GTN-645	4.5m (177.17")	10mm (.394")
GTN-660	6.0m (236.22")	10mm (.394")
GTN-675	7.5m (295.28")	10mm (.394")
GTN6-8934	6m (236.22")	6.1mm (0.240")
GTN-815	1.5m (59.06")	12.7mm (.5")
GTN-820	2.0m (78.74")	12.7mm (.5")
GTN-825	2.5m (98.43")	12.7mm (.5")
GTN-830	3.0m (118.11")	12.7mm (.5")
GTN-845	4.5m (177.17")	12.7mm (.5")
GTN-860	6.0m (236.22")	12.7mm (.5")
GTN-875	7.5m (295.28")	12.7mm (.5")
GTN-6100-8923	10m (393.7")	6.1mm (0.240")
GTN-61120-8924	12m (472.441")	6.1mm (0.240")



# Dekoron bendable guide tubes

Provide both rigidity and flexibility to your VideoProbe insertion tube with a bendable Dekoron Guide Tube. Manually bend the guide tube in nearly any configuration and it will hold its position to allow for more control, precision, and protection for the insertion tube when delivering it into the application.



Part number	Description
<b>GTD-400S</b>	Dekoron guide tube attached to 3.9mm tube gripper Includes: GTD-600 Dekoron bendable tubing Supports 3.9mm & 4.0mm VideoProbes Guide tube length: 3.0m (9.75 ft.)* XA131: 3.9mm tube gripper
<b>GTD-600</b>	Dekoron bendable tubing Sold per foot Outer diameter 9.5mm (.375") Supports 3.9mm (0.1534") & 5.0mm (0.197") VideoProbes.
<b>GTD-600S</b>	Dekoron guide tube attached to 6.1mm (0.24") tube gripper Includes: GTD-800 Dekoron bendable tubing Outer diameter ~12.7mm (~.512") Supports 6.1mm (0.24"), 6.2mm (0.244") & 8.4mm (0.301") Ø VideoProbes XA118 6.1mm (0.24") tube gripper Guide tube length: 6.6m (21.7ft)
<b>GTD-800</b>	Dekoron bendable tubing Sold per foot Outer diameter 12.7mm (.500") Supports 6.1, 6.2 & 8.4mm Ø VideoProbes
<b>GTD-800S</b>	Dekoron guide tube attached to 8.4mm tube gripper. Includes: GTD-800 Dekoron bendable tubing. Outer diameter ~12.7mm (~.512") Supports 6.1, 6.2 & 8.4mm Ø VideoProbes. XA125 8.4mm tube gripper Guide tube length 6.6m (21.7ft)
<b>856A1310G01</b>	Custom guide tube kit with a blue molded plastic (not Dekoron) custom guide tube and a steel straightening rod for CFM56 HPT inspections
<b>856A1351P01</b>	Red molded plastic (not Dekoron) custom guide tube for CFM56 HPT inspections

\* Note: Distal Length can be cut to length required.

# Cooling sleeves

A tungsten braided insertion tube sleeve that allows for use of a VideoProbe in temperatures up to 300 °F (149 °C). The sleeve connects to a shop air supply requiring 80-120 psi to provide active cooling down the sleeve surrounding the VideoProbe insertion tube and camera head. Each cooling sleeve comes standard with the air valve assembly, air regular assembly, and an air hose to connect to air supply. All components are shipped in a rugged shipping and storage case with dedicated foam cutouts.



Part number	Length	Diameter
XLCOOLTUBE-8506	3m (118.11")	6.1mm (0.240")
XLCOOLTUBE-8668	2m (78.74")	10.7mm (0.421")
XLCOOLTUBE-8789	4.5m (177.17")	12.7mm (0.5")
XLCOOLTUBE-8792	2m (78.74")	12.7mm (0.5")
XLCOOLTUBE-8506	3m (118.11")	6.1mm (0.240")
XLCOOLTUBE-8668	2m (78.74")	10.7mm (0.421")
XLCOOLTUBE-8789	4.5m (177.17")	12.7mm (0.5")



# Rigidizers



A stainless steel rigid guide tube that turns a flexible VideoProbe into a rigid scope providing control and protection for the insertion tube. When used with tube grippers and access port couplers a rigidizer allows for hands free probe positioning. Once a particular diameter and length is selected, rigidizers are compatible with all Waygate Technologies VideoProbes as a cross platform accessory.

Part number	Length	Diameter
GTR-411	6" (152 mm)	4mm
GTR-413	12" (305 mm)	4mm
GTR-415	16.75" (425 mm)	4mm
GTR-416	18" (457 mm)	4mm
GTR-601	6" (152 mm)	6mm
GTR-603	12" (305 mm)	6mm
GTR-605	16.75" (425 mm)	6mm
GTR-606	24" (610 mm)	6mm
GTR-612	48" (1219 mm)	6mm
GTR-801	6" (152 mm)	8mm
GTR-803	12" (305 mm)	8mm
GTR-805	16.75" (425 mm)	8mm
GTR-806	24" (610 mm)	8mm
GTR-812	48" (1219 mm)	8mm

# Rigidizers (Gripper included)

Part number	Length	Diameter	Gripper
GTR-411S	6" (152 mm)	4 mm	XA-GRIP4
GTR-413S	12" (305 mm)	4 mm	XA-GRIP4
GTR-415S	16.75" (425 mm)	4 mm	XA-GRIP4
GTR-416S	18" (457 mm)	4 mm	XA-GRIP4
GTR-601S	6" (152 mm)	6mm	XA-GRIP6
GTR-603S	12" (305 mm)	6mm	XA-GRIP6
GTR-605S	16.75" (425 mm)	6mm	XA-GRIP6
GTR-606S	24" (610 mm)	6mm	XA-GRIP6
GTR-612S	48" (1219 mm)	6mm	XA-GRIP6
GTR-801S	6" (152 mm)	8mm	XA-GRIP8
GTR-803S	12" (305 mm)	8mm	XA-GRIP8
GTR-805S	16.75" (425 mm)	8mm	XA-GRIP8
GTR-806S	24" (610 mm)	8mm	XA-GRIP8
GTR-812S	48" (1219 mm)	8mm	XA-GRIP8

## Rigidizer kits

Kit part number	Length	Diameter	Gripper
<b>GTR4-KIT</b>	6" (152 mm) 12" (305 mm) 18" (457 mm)	4mm	XA-GRIP4
<b>GTR6-KIT</b>	6" (152mm) 12" (305 mm) 18" (457mm)	6mm	XA-GRIP6
<b>GTR8-KIT</b>	6" (152mm) 12" (305 mm) 18" (457 mm)	8mm	XA-GRIP8

# Grippers









Tube grippers use a compression fitting which when twisted locks the gripper in place and allows easy manipulation of the insertion tube providing precision control while reducing hand fatigue. Grippers are threaded for use with rigidizers, non-articulating guide tubes and access port couplers. Gripper are cross platform accessories and are compatible with all Waygate Technologies VideoProbes. All grippers include an embedded 1/4"-20 threaded stud to allow for easy connection to the magic arm for hands free use of the insertion tube












New part number	Description
<b>XA-GRIP4</b>	3.9mm/4.0mm Gripper with 1/4"-20 insert
<b>XA-GRIP6</b>	6.1mm/6.2mm Gripper with 1/4"-20 insert
<b>XA-GRIP8</b>	8.4mm Gripper with 1/4"-20 insert

# Hands-free mounting

A wide range of accessories specifically designed to allow use of Waygate Technologies video borescopes hands-free for improved efficiency and ergonomics. Whether it's a c-clamp or hook to mount the borescope handset to an engine, or a shoulder strap to take the weight off of the user's hands, there is an option for any application or environment.








	Part number	Description
	SA-C	Service parts for magic-arm assemblies. Clamp portion of magic arm kit (XA119S) includes gold quarter-twenty stud.
	MVIQAHOOK	Mentor Visual iQ handset mounting hook for hands free operation. Attaches to the Mentor iQ handset using the standard mount kit bracket (MVIQBHOLDER). Can also be used with the XL family of products using XLGOABRO handset holder. Allows the handset to rotate 360 degrees continuously. Requires MViQ handset holder bracket (part number: MVIQBHOLDER) – *sold separately*.
	XA-HOOK	Rigid handset hanging hook with integrated quick disconnect (QD) to interface directly with Everest Mentor Flex or Mentor Visual iQ handset (also connects to Mentor Flex holder). Allows for easy hanging of the handset with 360° swivel to optimize display viewing angle.
	XA BALL	Swivel ball mount with 1/4 x 20 adapter.
	XA203	Brass male fitting for XA BALL.
	XLGOABRO	XL Go handset holder with 1/4 x 20 female mount.
	XLGOALANYARD	Neck or shoulder strap with attached handset holder (XLGOABRO) for use with the XL family of products.
	XLGOAMAGARKIT	Full-size Magic Arm mounting kit for XL family of products. Includes: XLGOABRO handset holder SA-A Variable friction Magic Arm SA-C Super Clamp.

## Hands-free mounting

	Part number	Description
	<b>XLGOAMOUNTKIT</b>	Mini magic arm hands free mount kit for use with the XL family of products. Kit containing SA-C, XA BALL, XA203 and XLGOABRO.
	<b>MVIQALANYARD</b>	Shoulder strap with attached handset holder (MVIQBHOLDER) for a Mentor Visual iQ system.
	<b>MFLALANYARD</b>	Neck or shoulder strap with attached handset holder (MFLAHOLDER) for the Everest Mentor Flex.
	<b>XA-STRAP</b>	Handset hanging strap with integrated quick disconnect (QD) to interface directly with Everest Mentor Flex or Mentor Visual iQ handset (Also connects to Mentor Flex cradle). Allows for easy hanging of the handset with secure clips and effortless adjustment using cam buckle.
	<b>XLGOABELTCLIP</b>	Durable belt clip with attached handset holder (XLGOABRO) for an XL family of products
	<b>MVIQAMOUNTKIT</b>	Small hands free mount kit with swivel for Mentor Visual iQ VideoProbes that supports the equipment during inspection operations
	<b>MFLAMOUNTKIT</b>	Small hands free mount kit with moveable swivel for Everest Mentor Flex VideoProbes that supports the equipment during inspection operations. Includes c-clamp, swivel ball, and handset cradle with integrated kickstand.
	<b>MVIQAMAGICARM</b>	Full size hands free mount kit with moveable arm for Mentor Visual iQ VideoProbes that supports the equipment during inspection operations
	<b>MFLAMAGICARM</b>	Full size hands free mount kit with moveable arm for Everest Mentor Flex VideoProbes that supports the equipment during inspection operations. Includes c-clamp, full magic arm, and handset cradle with integrated kickstand.



## Hands-free mounting

	Part number	Description
	<b>MVIQBHOLDER</b>	Spare handset holder, used to hold handset when attached to hands free devices
	<b>MFLAHOLDER</b>	<p>Everest Mentor Flex handset cradle. Includes integrated kickstand to provide optimal display viewing angle.</p> <p>Includes integrated 1/4"-20 mount screw and Quick Disconnect (QD) port for compatibility with Waygate Technologies hands free mounting accessories.</p>
	<b>UG-MVIQA-QD</b>	Quick disconnect mounting kit for MVIQ enables use with hands free accessories utilizing QD connection point
	<b>MFLACASE-POLEKIT</b>	<p>Telescoping handset mounting pole kit for Everest Mentor Flex. Designed to securely slide into place at the base of the carry-on case to allow for hands free use of the Mentor Flex.</p> <p>Includes telescoping pole, swivel ball, and Mentor Flex handset cradle (MFLAHOLDER). All items can be stored in the carry-on case.</p>
	<b>MENTORCOCASE-POLE</b>	<p>Telescoping handset mounting pole (only) for Everest Mentor Flex.</p> <p>Designed to securely slide into place at the base of the carry-on case to allow for hands-free use of the VideoProbe.</p>
	<b>MVIQA2.2HANDSFREE</b>	1/4-20 Hands free adapter for use with MVIQ handset and 2.2mm USB probe.
	<b>MVIQA-IDICOV</b>	IDI Pin cover kit for use with Handset and 2.2mm USB probe.

# Working tools

## Retrieval tools

Loose parts and foreign objects stuck inside piping or other confined spaces can cause serious damage to manufacturing, process and power generation systems. Waygate Technologies offers a complete line of external and internal retrieval tools to remove foreign objects from hard-to-reach areas—without requiring disassembly. Our specialized tools provide significant cost-savings by minimizing downtime and eliminating the need for additional equipment.














# Internal working tools

Our 6.2mm  $\varnothing$  VideoProbe insertion tube contains an internal working channel which allows for the insertion of special retrieval tools. Internal tools can also be used with non-working channel probes externally when combined with an external attachment kit (WT-1.4MMEXT KIT).



## 1.4mm internal working tools

	Part number	Diameter	Length
	WT-141426A	1.4mm (0.055")	Alligator Tool 26m (102.4") working length
	WT-141426HC	1.4mm (0.055")	Hook comparator cable 2.6m (102.4") working length Note: Requires either WT-H or WT-C50
	WT-141426P	1.4mm (0.055")	Three-pronged gripper 2.6m (102.4") working length
	WT-141432S	1.4mm (0.055")	Snare tool 2.6m (102.4") working length
	WT-141432A	1.4mm (0.055")	Alligator tool 3.2m (126.1") working length
	WT-141432HC	1.4mm (0.055")	3.2m (126.1") working length
	WT-141432P	1.4mm (0.055")	Three-pronged gripper tool 3.2m (126.1") working length
	WT-141475A	1.4mm (0.055")	Alligator tool 7.5m (295.3") working length
	WT-141432S	1.4mm (0.055")	Snare tool 3.2m (126.1") working length
	WT-143026A	3.0mm (0.118")	Alligator tool 2.6m (102.4") working length
	WT-143032A	3.0mm (0.118")	Alligator tool 3.2m (126.1") working length
	WT-143526B	3.5mm (0.138")	Brush tool 2.6m (102.4") working length

## 1.4mm internal working tools

	Part number	Diameter	Length
	WT-143532B	3.5mm (0.138")	Brush tool 3.2m (126.1") working length
	WT-144026M	4.0mm (0.158")	Magnet tool 2.6m (102.4") working length
	WT-144032M	4.0mm (0.158")	Magnet tool 3.2m (126.1") working length
	WT141435P	1.4mm (0.055")	Three pronged gripper tool 4.4m (173.2") working length
	WT-148026M	8.0mm (.0315")	Magnet tool 2.6m (102.4") working length
	WT-148032M	8.0mm (.0315")	Magnet tool 3.2m (126.1") working length
	WT-141435A	1.4mm (0.055")	Alligator tool 3.5m (137.8") working length
	WT-143035B	1.4mm (0.055")	Brush tool 3.5m (137.8") working length
	WT-144035M	1.4mm (0.055")	Magnet tool 4m (157.5") working length
	WT-143035A	3.0mm (0.118")	Alligator tool 3.5m (137.8") working length
	WT-148035M	3.0mm (0.118")	Magnet tool 3.5m (137.8") working length
	WT-141435HC	1.4mm (0.055")	Hook Comparitor Cable, 3.5m (137.8") working length
	WT-C50	1.27mm (0.05")	Quantity 5













## Internal working tools

	Part number	Diameter	Length
	<b>WT-H</b>	1.4mm (0.055")	Quantity 5
	<b>WTH6</b>	Working Tool Holder, 6.1mm Probe H x W equals 15.5mm x 11.5mm (.609" x .455")	Length equals ~ 32mm-36mm (1.250"-1.420"). Used for attaching any external retrieval tool to 6.1mm VideoProbe
	<b>WT-1.4MMEXT KIT</b>	External attachment kit to allow use of 1.4mm (0.055") working tools with any diameter VideoProbe	Uses the internal tube developed for the 7.3mm (0.287") VideoProbe Working tool slides through the attached tube allowing free movement and articulation





# External working tools

Quickly and easily clip external working tools onto small-diameter probes to achieve unrivaled retrieval capabilities with just one piece of equipment. Our complete line of external retrieval tools are compatible with Waygate Technologies 6.1mm ø or 8.4mm ø VideoProbes.

## 3.0mm external working tools

	Part number	Diameter	Length
	WT-304020B	4.0mm (0.157")	Wire basket tool 2.4m (94.5") working length
	WT-304020P	4.0mm (0.157")	Three-pronged gripper 2.4m (94.5") working length
	WT-304020S	4.0mm (0.157")	Snare tool 2.4m (94.5") working length
	WT-304030B	4.0mm (0.157")	Wire basket tool 3.3m (129.9") working length
	WT-304030P	4.0mm (0.157")	Three-pronged gripper 3.3m (129.9") working length
	WT-304030S	4.0mm (0.157")	Snare tool 3.3m (129.9") working length
	WT-304075B	4.0mm (0.157")	Wire basket tool 7.8m (307.1") working length
	WT-304075P	4.0mm (0.157")	Three-pronged tool 7.8m (307.1") working length
	WT-306075S	4.0mm (0.157")	Snare tool 7.8m (307.1") working length
	WT-306020F	6.0mm (0.236")	Fork and tine tool 2.4m (94.5") working length
	WT-306030F	6.0mm (0.236")	Fork and tine tool 3.3m (129.9) working length
	WT-306075F	6.0mm (0.236")	Fork and tine tool 7.8m (307.1") working length

## 3.0mm external working tools

	Part number	Diameter	Length
	WT-308020A	8.0mm (0.315")	Alligator tool 2.4m (94.5") working length
	WT-308020M	8.0mm (0.315")	Magnet tool 2.4m (94.5") working length
	WT-308030A	8.0mm (0.315")	Alligator tool 3.3m (129.9") working length
	WT-308030M	8.0mm (0.315")	Magnet tool 3.3 m (129.9") working length
	WT-308020C22	8.0mm (0.315")	Wire cutting tool 2.4m (94.5") working length cuts up to 22 gage wire

### Working tool pouch

Part number	Diameter	Length
WT-POUCH26	7mm (0.276")	2.6m (102.4")
WT-POUCH32	7mm (0.276")	3.2m (126")
WT-TOOLPOUCH35	7mm (0.276")	3.2m (126")
WT-POUCH620	6mm (0.236")	2.4m (102.4")
WT-POUCH630	6mm (0.236")	3m (118.1")
WT-POUCH675	6mm (0.236")	7.5m (295.3")
WT-POUCH820	8mm (0.315")	2.0m (78.7")
WT-POUCH830	8mm (0.314961")	3.0m (118.11")
WT-POUCH875	8mm (0.315")	7.5m (295.3")



## Working tool kits

Kit part number	Kit contents	Description
WT-620KIT	Includes one each of the following:	<b><i>*All tools listed below are 2.4m working length and come in a labeled pouch*</i></b>
	WT-308020A	8.0mm (0.315") alligator tool
	WT-306020F	6.0mm (0.236") fork and tine tool
	WT-308020M	8.0mm (0.315") magnet tool
	WT-304020P	4.0mm (0.157") three-pronged gripper tool
	WT-304020S	4.0mm (0.157") snare tool
	WT-304020B	4.0mm (0.157") four wire basket tool
	WT-POUCH620	pouch to hold 2.4m (102.4") working tools (quantity 6)
	WTH6	working tool holder, 6mm (0.236") probe
WT-630KIT	Includes one each of the following:	<b><i>*All tools listed below have a working length of 3.3 meters and come in a labeled pouch</i></b>
	WT-308030A	8.0mm (0.315") alligator tool
	WT-304030S	4.0mm (0.157") snare tool
	WT-304030P	4.0mm (0.157") three-pronged gripper
	WT-304030B	4.0mm (0.157") four wire basket tool
	WT-308030M	8.0mm (0.315") magnet tool
	WT-306030F	6.0mm (0.236") fork and tine tool
	WTH6 (quantity 6)	Working tool holder
WT-POUCH630	Pouch to hold 3.3 (129.9") meter working tools for 6mm (0.236") x 3.0 meter (118.11") probes	
WT-632KIT	Includes one each of the following:	<b><i>*All tools listed below have a working length of 3.3 meters and come in a labeled pouch</i></b>
	WT-C50	Assy comparator vial .050
	WT-141432A	1.4mm (0.055") alligator tool 3.2m
	WT-141432S	1.4mm (0.055") snare tool 3.2m
	WT-141432P	1.4mm (0.055") gripper tool 3.2m
	WT-143532B	3.5mm (0.138") brush tool 3.2m
	WT-144032M	4.0mm (0.157") magnet tool 3.2m
	WT-148032M	8.0mm (0.315") magnet tool 3.2m
	WT-143032A	3.0mm (0.118") alligator tool 3.2m
	WT-141432HC	Hook comparator cable 3.2m
WT-H	Assy, hook vial	

### Working tool kits

Kit part number	Kit contents	Description
WT-675KIT	Includes one each of the following:	<b>*All tools are 7.8 meters in length and come in a labeled pouch:</b>
	WT-308075A	8.0mm (0.315") alligator tool
	WT-304075S	8.0mm (0.315") snare tool
	WT-304075P	4.0mm (0.157") three-pronged gripper tool
	WT-304075B	4.0mm (0.157") four wire basket tool
	WT-308075M	8.0mm (0.315") magnet tool
	WT-306075F	6.0mm (0.236") fork and tine tool
	WTH6 (quantity 6)	Working tool holder
	WT-POUCH675	Pouch to hold 7.8 meter working tools
WT-726KIT	Includes one each of the following:	<b>*All Tools are 2.6 meters (102.4") in length and come in a labeled storage pouch:</b>
	WT-141426A	1.4mm (0.055") alligator tool
	WT-141426S	1.4mm (0.055") snare tool
	WT-141426P	1.4mm (0.055") three-pronged gripper
	WT-143526B	3.5mm (0.138") brush tool
	WT-144026M	4.0mm (0.157") magnet tool
	WT-148026M	8.0mm (0.315") magnet tool
	WT-143026A	3.0mm (0.111") alligator tool
	WT-141426HC	Hook comparitor cable
	WT-H	1.4mm (0.055") hook piece
WT-C50	1.4mm (0.055") comparitor piece	

# Working tool kits





Kit part number	Kit contents	Description
WT-820KIT	Includes one each of the following:	<b>*All tools are 2.4 meters in length and come in a labeled storage pouch</b>
	WT-308020A	8.0mm (0.315") alligator tool 2.4m (94.49") working length
	WT-304020S	4.0mm (0.157") snare tool 2.4m working length
	WT-304020P	4.0mm (0.157") three-pronged gripper tool 2.4m working length
	WT-POUCH820	Pouch to hold 2.4 meter (94.49") working tools for 8mm x 2.0 meter (78.74") probes
	WT-308020M	8.0mm (0.315") magnet tool 2.4m (94.49") working length
	WT-306020F	6.0mm (0.236") fork and tine tool 2.4m (94.49") working length
	WT-304020B (quantity 6)	4.0mm (0.157") four wire basket tool 2.4m (94.49") working length
	WTH8	Working tool holder, 8mm (0.315") probe
WT-830KIT	Includes one each of the following:	<b>*All tools are 3.3 meters in length and come in a labeled storage pouch</b>
	WT-308030A	8.0mm (0.315") alligator tool 3.3m (129.921") working length
	WT-304030S	4.0mm (157.48") snare tool 3.3m (129.921") working length
	WT-304030P	4.0mm (157.48") three-pronged gripper tool 3.3m (129.921") working length
	WT-304030B	4.0mm (157.48") four wire basket tool 3.3m working length
	WT-308030M	8.0mm magnet tool 3.3m (129.921") working length
	WT-306030F	6.0mm (0.236") fork and tine tool 3.3m (129.921") working length
	WTH8 (quantity 6)	Working tool holder, 8mm (0.315") probe
	WT-POUCH830	Pouch to hold 3.3 meter (129.921") working tools for 8mm (0.315") x 3.0 meter (129.921") probes
WT-875KIT	Includes one each of the following:	<b>*All tools are 7.8 meters in length and come in a labeled storage pouch:</b>
	WT-308075A	8.0mm (0.315") alligator tool
	WT-304075S	4.0mm (0.157") snare tool
	WT-304075P	4.0mm (0.157") three-pronged gripper
	WT-308075M	8.0mm (0.315") magnet tool
	WT-306075F	6.0mm (0.236") fork and tine tool
	WT-304075B (quantity 6)	4.0mm (0.157") four wire basket tool
	WTH8	Working tool holder, 8mm (0.315") probe
	WT-POUCH875	Pouch to hold 7.8 meter (307.09") working tools

### Working tool kits

Kit part number	Kit contents	Description
WT-F100KIT	Includes one each of the following:	<i>*In individual pouches:</i>
	WT-141426A	1.4mm (0.055") alligator tool 2.6m (102.36") working length
	WT-141426S	1.4mm (0.055") snare tool 2.6m (102.36") working length
	WT-141426P	1.4mm (0.055") three-pronged gripper tool 2.6m (102.36") working length
	WT-C50 (quantity 5)	Comparator piece, 1.4mm (0.055")
	WT-143026A	3.0mm (0.118") alligator tool 2.6m (102.36") working length
	WT-141426HC	Hook comparator cable 2.6m (102.36") working length
WTH6	WT-H (quantity 5)	Hook piece, 1.4mm (0.055") Length equals ~ 32mm - 36mm (1.250"-1.420")

# Centering devices


Perform more efficient pipe inspections with these essential devices that hold the insertion tube centered inside the pipe allowing wide angle forward view inspection of the pipe surface or 90 degree viewing of orbital welds. Centering devices are cross platform accessories and are compatible with all Waygate Technologies VideoProbes.

	Part number	Diameter	Description
	CD6-060	.06in (0.002mm)	For 6.1mm diameter VideoProbes. 0.6" diameter. Holds the VideoProbe up off the surface being inspected to provide better view.
	CD6-150	1.5in (0.059mm )	For 6.1mm diameter VideoProbes. 1.5" diameter. Holds the VideoProbe up off the surface being inspected to provide better view.
	CD8-150	1.5in (0.059mm )	For 8.4mm diameter VideoProbes. 1.5" diameter. Holds the VideoProbe up off the surface being inspected to provide better view.
	CD8-300	3.0in (0.118mm)	For 8.4mm diameter VideoProbes. 3" diameter. Holds the VideoProbe up off the surface being inspected to provide better view.

# Measurement verification blocks

Verify that the system measures accurately with the Waygate technologies-supplied NIST traceable verification block before and after performing measurements.

Compatibility will be determined by tip diameter. Once a diameter is selected the verification blocks are cross platform.

	Part number	Diameter
	<b>3D-MEASBLOCK</b>	3D measurement training block For use with 3D Phase Measurement, 3D stereo, traditional stereo, or comparison measurement.



Part number	Diameter
UG-VER2400B	3.9mm (0.154")
UG-VER2500B	5.0mm (0.196")
UG-VER2600C	6.0mm (0.236")
UG-VER2620B	6.2mm (0.244")
UG-XLG3TM84VER	8.4mm (0.331")
VER2400B	3.9mm (0.154")
VER2400C	4.0mm (0.157")
VER2500B	5.0mm (0.197")
VER2600D	6.1mm (0.240")
VER2600E	6.1mm (0.240")
VER2620B	6.2mm (0.244")
VER2300UV-9258	UV verification block for 3.9mm UV probes
VER2400UV-9196	UV verification block for 4.0mm UV probes
VER2600UV-9197	UV verification block for 6.1mm UV probes
VER2620UV-9198	UV verification block for 6.2mm UV probes
VER8400UV-9199	UV verification block for 8.4mm UV probes
XLG3TM84VER	8.4mm (0.331")

# Software and upgrades

Waygate Technologies VideoProbes are scalable to allow users the opportunity to upgrade system capabilities over time to meet growing inspection needs. Whether the user would like to add 3D Phase Measurement software to their Mentor Visual iQ or Menu Directed Inspection (MDI) automated reporting software to their XL Detect+ VideoProbe, these upgrade packages make field installation simple.

Part number	Description
<b>INSPMGR-CD</b>	Inspection Manager software for viewing and re-measurement of 3D phase measurement, StereoProbe measurement, ShadowProbe measurement, and comparison measurement images Inspection Manager also provides a menu directed inspection (MDI) viewer for easy image viewing
<b>MVIQ-3DST</b>	Provides 3D stereo measurement SW including point cloud visualization Available on Inspect and Touch versions of the Mentor Visual iQ platform
<b>UG-MVIQ-3DST</b>	Includes 3D point cloud visualization Available for fielded units, requires factory install Available on Inspect and Touch versions of the Mentor Visual iQ platform Must come in on RMA (returned materials authorization)
<b>MVIQ-MDI</b>	MDI (menu directed inspection) helps guide an inspector through the inspection process and intelligently auto-generates a report MDI Builder software for the PC also included
<b>UG-MVIQ-MDI</b>	MVIQ Menu Directed Inspection
<b>MVIQ-POD</b>	Mentor Visual iQ probability of detection enhancement Includes high-dynamic range (HDR), adaptive noise reduction (ANR), distortion correction, and image presets factory install *Available on Inspect and Touch versions of the Mentor Visual iQ platform
<b>UG-MVIQ-POD</b>	Mentor Visual iQ probability of detection enhancement Includes high-dynamic range (HDR), adaptive noise reduction (ANR), distortion correction, and image presets Field upgrade Available on Inspect and Touch versions of the Mentor Visual iQ platform
<b>MVIQ-ST</b>	Mentor Visual iQ stereo measurement enhancement Factory install *Available on Inspect and Touch versions of the Mentor Visual iQ platform
<b>UG-MVIQ-ST</b>	Mentor Visual iQ stereo measurement enhancement Available for fielded units, requires factory install Available on Inspect and Touch versions of the Mentor Visual iQ platform Must come in on RMA (returned materials authorization)
<b>MVIQ-3DPM</b>	Provides 3D phase measurement SW including point cloud visualization Available on Inspect and Touch versions of the Mentor Visual iQ platform
<b>UG-MVIQ-3DPM</b>	Includes 3D point cloud visualization Available for fielded units, *requires factory install *Available on Inspect and Touch versions of the Mentor Visual iQ platform Must come in on RMA (returned materials authorization)
<b>MVIQ-NOIM</b>	Mentor Visual iQ internal memory disable – factory install Disables the ability to store data to the internal drive.
<b>UG-MVIQ-NOIM</b>	Mentor Visual iQ internal memory disable – field upgrade Disables the ability to store data to the internal drive
<b>MVIQ-NOUSB</b>	Mentor Visual iQ USB memory disable – factory install Disables the ability to store data to the USB drives
<b>UG-MVIQ-NOUSB</b>	Mentor Visual iQ USB memory disable – factory install Disables the ability to store data to the USB drives

## Software and upgrades

Part number	Description
<b>UG-XLLV-MDI-11</b>	MDI 1.1 helps guide an inspector through the inspection process and intelligently auto-generates a report MDI (menu directed inspection) Builder software for the PC also included
<b>MVIQ-MDI</b>	MDI (menu directed inspection) helps guide an inspector through the inspection process and intelligently auto-generates a report MDI Builder software for the PC also included
<b>UG-MVIQ-MDI</b>	Custom high definition Mentor Visual iQ QuickChange Interchangeable VideoProbe with high intensity LED light engine and advanced image processing for improved image brightness Includes quartz fibers for increased radiation tolerance 6.1mm diameter x 4.5 meter length Includes: probe soft storage case, tip storage case and headguard optical characteristics: 50 degree field of view (FOV), 50mm-inf. (2.36"-inf.) Depth of Field (FOV) Minimum articulation: 160 degrees all-way maximum operating temperature: 100 °C (212 °F)
<b>MVIQ-PPM</b>	Mentor Visual iQ Software for projected plane measurement Requires 3D phase measurement (MVIQ-3DPM) or 3D stereo measurement (MVIQ-3DST) capable handset.
<b>UG-MVIQ-PPM</b>	Mentor Visual iQ Software for projected plane measurement Requires 3D phase measurement (MVIQ-3DPM) or 3D stereo measurement (MVIQ-3DST) capable handset Requires handset serial number upon order entry
<b>UG-MVIQ-ADP</b>	Mentor Visual iQ Software for area depth profile measurement Requires 3D phase measurement (MVIQ-3DPM) or 3D stereo measurement (MVIQ-3DST) capable handset Requires handset serial number upon order entry
<b>UG-XLVUD-ST</b>	XL Vu DStereo measurement enhancement Available for fielded units, requires factory install Must come in on RMA (returned materials authorization) for stereo measurement tip calibration Comes standard with a licensed copy of Inspection Manager version 1.5 remeasurement software Inspection Manager software for viewing and re-measurement of 3D phase measurement, StereoProbe measurement, ShadowProbe measurement, and comparison measurement images Inspection Manager also provides a menu directed inspection (MDI) viewer for easy image viewing
<b>UG-XLVU-MDI-20</b>	MDI 2.0 helps guide an inspector through the inspection process and intelligently auto-generates a report MDI (menu directed inspection) Builder software for the PC also included
<b>UG-XLFL-ST</b>	XL flex stereo measurement enhancement Available for fielded units, requires factory install Must come in on RMA for stereo measurement tip calibration
<b>UG-XLFL-MDI-20</b>	Menu Directed Inspection version 2.0 guides an inspector through the inspection process and intelligently auto-generates a report MDI Builder software for the PC also included Comes with a software upgrade thumbdrive Requires handset serial number upon order
<b>XLDE-MDI-11</b>	MDI 1.1 helps guide an inspector through the inspection process and intelligently auto-generates a report MDI Builder software for the PC also included






## Software and upgrades

Part number	Description
<b>UG-XLDE-MDI-11</b>	MDI 1.1 guides an inspector through the inspection process and intelligently auto-generates a report MDI Builder software for the PC also included Comes with a software upgrade thumbdrive Requires handset serial number upon order
<b>MVIQ-OVERLAY</b>	Overlay feature for comparing a know image to a live inspection image
<b>UG-MVIQ-OVERLAY</b>	Field upgrade for overlay feature for comparing a know image to a live inspection image
<b>UG-MVIQ-IMINSP</b>	Mentor Visual iQ internal memory enablement for inspect model - field upgrade Enables 16 GB internal memory for MViQ Inspect model Requires device serial number upon order
<b>MVIQ-TOUCHSCRN</b>	Adds optically bonded, multipoint capacitive dragontrial touchscreen feature to the Inspect model
<b>MVIQ-32GB</b>	32GB internal memory feature addition
<b>MVIQ-DARKBOOST</b>	Mentor Visual iQ software enhancement – factory install. Dark Boost is a live video processing function that digitally brightens darker areas in scenes with bright foreground surfaces or glare without overexposing or degrading the contrast of more uniform scenes.
<b>UG-MVIQ-DARKBOOST</b>	Mentor Visual iQ software enhancement – field upgrade. Dark Boost is a live video processing function that digitally brightens darker areas in scenes with bright foreground surfaces or glare without overexposing or degrading the contrast of more uniform scenes. Requires handset serial number upon order entry.
<b>MVIQ-TIPCLEARNC</b>	Mentor Visual iQ software enhancement – factory install. Blade Tip Clearance is a measurement type that is available with Real3D Stereo and or Real3D Phase measurement technologies. BTC automatically identifies the minimum, maximum and average clearance measurements for tip to shroud (blade tip clearance) inspections.
<b>UG-MVIQ-TIPCLEARNC</b>	Mentor Visual iQ software enhancement – field upgrade. Blade Tip Clearance is a measurement type that is available with Real3D Stereo and or Real3D Phase measurement technologies. BTC automatically identifies the minimum, maximum and average clearance measurements for tip to shroud (blade tip clearance) inspections. Requires handset serial number upon order entry.
<b>MFL-3DST</b>	Everest Mentor Flex Real3D Stereo Measurement including point cloud visualization. Measurement types included: Length, Point To Line, Depth, Area, Multi-Segment. Factory install.
<b>UG-MFL-3DST</b>	Everest Mentor Flex Real3D Stereo Measurement including point cloud visualization. Measurement types included: Length, Point To Line, Depth, Area, Multi-Segment. Field Upgrade. Requires handset serial number upon order.
<b>MFL-ST</b>	Everest Mentor Flex Stereo Measurement enhancement. Factory install.
<b>UG-MFL-ST</b>	Everest Mentor Flex Stereo Measurement enhancement. Field upgrade. Requires handset serial number upon order.
<b>UG-MFL-POD</b>	Everest Mentor Flex Probability of Detection enhancement software. Includes distortion correction for wide-angle tip adapters, dark boost for dark scene optimization, and color saturation for precise image color adjustment. Factory Install.
<b>MFL-POD</b>	Everest Mentor Flex Probability of Detection enhancement software. Includes distortion correction for wide-angle tip adapters, dark boost for dark scene optimization, and color saturation for precise image color adjustment. Field upgrade. Requires handset serial number upon order.

# Cross platform accessories




Waygate technologies offers a wide range of purpose built accessories to compliment and add versatility to each VideoProbe. Cross Platform Accessories range from an access port coupler to a micro fiber optical tip cleaning kit to ensure clean tips and optimal image quality.

	Part number	Description
	<b>XLGOA8GBTD</b>	USB 2.0 thumb drive, 8 GB, external memory device Not compatible with the XLG3
	<b>XLGOAAUTOC</b>	12V DC auto adapter for XL Go operation and battery charging
	<b>XLGOADOORKIT</b>	Replacement door kit Includes: 815589 - right (USB) door, 815590 - left (mic-speaker) door
	<b>XLGOAHEADSET</b>	Headset for recording and listening to audio – 2.5mm jack
	<b>XLGOAVISOR</b>	Sun shield for XL Go when inspecting in sunlight.
	<b>XLGOC8GBHD</b>	8 GB external hard drive for use with the XL Go and XLGo+ VideoProbe.
	<b>MVIQADP-VGA</b>	Display port to VGA cable
	<b>XA-VGA30</b>	VGA cable for use with external monitor Length: 30 ft. (9.1m), Connects to Mentor Visual iQ with use of MVIQADP-VGA *sold separately*
	<b>XA-HDMI</b>	HDMI cable - 6 ft. (1.8m) length.

## Cross platform accessories

	Part number	Description
	<b>XA-CLEANKIT</b>	Lens cleaning kit for VideoProbe tip optics includes: 5 packages of alcohol wipes and 1 package of cotton swabs Contents are packaged inside a small case with cleaning instruction label on the inside lid.
	<b>114M2569</b>	XA-CLEANKIT replacement pack: lens cleaning kit for VideoProbe tip optics Includes: 5 packages of alcohol wipes and 1 package of cotton swabs.
	<b>XA-KEYBOARD</b>	Mini keyboard for use with the following Waygate Technologies products. Comes standard with USB connector and adapter for PS2 connection. <ul style="list-style-type: none"> <li>• Mentor Visual IQ</li> <li>• XL Flex &amp; XL Flex+</li> <li>• XL Detect &amp; XL Detect+</li> <li>• XL Vu VideoProbe</li> <li>• XL Lv VideoProbe</li> <li>• Ca-Zoom PTZ</li> </ul>
	<b>MVIQATD-2</b>	Thumb drive containing the following: All translated languages of User's Manual and Quick Start Guides Inspection Manager 2.0 software for viewing and re-measurement of 3D phase measurement, 3D stereo measurement, StereoProbe measurement, and comparison measurement images.
	<b>MVIQAUSB A-B</b>	USB 3.0 A to B cable
	<b>MVIQAUSB-ETHNET</b>	USB to ethernet adapter cable
	<b>MVIQAPOLE</b>	Spare handset pole

## Cross platform accessories

	Part number	Description
	<p><b>MVIQABSA</b></p>	<p>Borescope adapter for the MViQ VideoProbe system. The MVIQABSA is a full VGA camera and light source for rigid borescopes and fiberscopes that provides the ability to utilize most UI functionality of the MVIQ system</p> <p>The MVIQABSA includes borescope adapter, storage case and set-up guide</p> <p>Note: A borescope coupler is also required</p> <p>Please order separately one of the following part numbers:</p> <ol style="list-style-type: none"> <li><b>Part number: CCF28</b> Description: variable focus c-mount camera coupler, 28mm focal length (best for rigid borescopes &gt; 4mm diameter)</li> <li><b>Part number: CCF35</b> Description: variable focus c-mount camera coupler, 35mm focal length (best for fiberscopes and 2.7mm dia. mini-rigid)</li> <li><b>Part number: CCF45</b> Description: variable focus c-mount camera coupler, 45mm focal length (best for mini-rigid borescopes and mini-semi-flexible fiberscopes &lt;2mm)</li> </ol>
	<p><b>PROBE-HOLDER</b></p>	<p>VideoProbe Accessory Tool used to support and lock a 6.1mm or 6.2mm VideoProbe Insertion Tube into an access port. This compliant, urethane holder fits access ports from 10mm to 25mm in diameter.</p> <p>Color: Red</p>
	<p><b>MVIQAPC100S</b></p>	<p>Access port adapter kit.</p> <p>Includes nylon pouch made to fit into bottom of Mentor Visual iQ Workstation case.</p> <p>Kit includes the follow access port adapters:</p> <p>A100016S150 -CP 1-16UNF1.5",  A112512S150 -CP 1 1/8-12UNF1.5",  A37524C150 -CP 3/8-24UNF3A1.5",  A43820C150 -CP 7/16-20UNF3A1.5",  A50020S150 -1.500X 1/2-20 X 1/2-13 ADAPTER,  A50020S275 -CP 1/2-20UNF-2.75",  A56318C150 -CP 9/16-18UNF3A1.5",  A56318S150 -CP 9/16-18UNF1.5",  A62518S150 -CP 5/8-18UNF1.5",  A62518S300 -CP 5/8-18UNF3.0",  A75016S150 - CP 3/4-16UNF1.5",  A87514S150 -CP 7/8-14UNF1.5",  XA125 -GRIPPER, 8MM.</p>

# Batteries and power supplies

Boost portability with a variety of light weight lithium ion batteries for your video borescope.

	Part number	Run Time
	<b>XLGOABATTA</b>	2 hr run time Compatible the following products; XL Flex, XL Flex+, XL Detect, XL Detect+, XL Vu, XL Vu+, XL Lv, XL Go, XL Go+
	<b>XLGOABATTB</b>	4 hr run time Compatible the following products; XL Flex, XL Flex+, XL Detect, XL Detect+, XL Vu, XL Vu+, XL Lv, XL Go, XL Go+
	<b>MVIQABATT</b>	Interchangeable Lithium Ion battery for use with Mentor Visual iQ or Everest Mentor Flex. 2-hour run time for Mentor Visual iQ, 3-hour runtime for Everest Mentor Flex.
	<b>XLVUPWRBRK</b>	AC power supply for corded version of XL Vu VideoProbe system
	<b>XLGOACHGR</b>	Battery charger for XLGOABATTA and XLGOABATTB, also provides AC power to operate XL Go Compatible the following products; XL Flex, XL Flex+, XL Detect, XL Detect+, XL Vu, XL Vu+, XL Lv, XL Go, XL Go+
	<b>MVIQBCHARGER</b>	Spare battery charger/AC power supply for Mentor Visual iQ or Everest Mentor Flex
	<b>MVIQAPWRSTRAP</b>	Nylon strain relief strap for Mentor Visual iQ or Everest Mentor Flex AC power cord Includes instructions for attachment to power cord.
	<b>MVIQABATT-NOCELLS</b>	Empty battery shell for use with Mentor Visual iQ VideoProbes Contains no lithium-ion cells Acts as a pass-through for the A/C power supply.

# Shipping and storage




Shipping and storage offerings ranging from a durable case with wheels for your borescope system to a protective optical tip case with dedicated foam cutouts..

	Part number	Description
	<p><b>MVIQACASE-WS</b></p>	<p>Spare work station shipping/storage case for use with Mentor Visual iQ VideoProbes</p>
	<p><b>MVIQAPRBCASE</b></p>	<p>Mentor Visual iQ QuickChange VideoProbe soft storage case fits lengths 2m-10m</p>
	<p><b>MVIQAACCPOUCH</b></p>	<p>Accessory storage pouch, fits in work station shipping storage case</p>
	<p><b>XLDETECTCASE</b></p>	<p>Storage for one XL Detect &amp; XL Detect+ system, tip case, AC transformer, 2 or 4 hour spare battery, XL Detect handset holder, magic clamp, swivel ball, gripper, 12" rigidizer and owner's manual Comes standard with all XL Detect and XL Detect+ systems This case is compatible with all XL Detect and XL Detect+ VideoProbes.</p>
	<p><b>MVIQATIPCASE-40</b></p>	<p>4.0mm spare interchangeable optical tip storage case This case is compatible with all XL 4.0mm diameter optical tip adapters.</p>
	<p><b>MVIQATIPCASE-61</b></p>	<p>6.1mm spare interchangeable tip optics storage case This case is compatible with all 6.1mm diameter optical tip adapters.</p>
	<p><b>XLVUBCASE</b></p>	<p>Shipping and storage case for XL Vu Sturdy hard case to protect against shock, moisture and dust Safely provides storage for one XL Vu system, tip case, AC transformer, 2 or 4 hour spare battery, XL Vu handset holder, magic clamp, swivel ball, gripper, 12" rigidizer and owner's manual This case is compatible with all XL Vu VideoProbes.</p>

## Shipping and storage

	Part number	Description
	<b>XLLVBCASE</b>	<p>Shipping and storage case for XL Lv</p> <p>Sturdy hard case to protect against shock, moisture and dust</p> <p>Safely provides storage for one XL Lv system, tip case, 2 or 4 hour spare battery, XL Lv handset holder, magic clamp, swivel ball, gripper, 12" rigidizer and owner's manual</p> <p>This case is compatible with all XL Lv VideoProbes.</p>
	<b>MVIQACASE-CO</b>	<p>Spare carry-on shipping/storage case for use with Mentor Visual iQ VideoProbes</p>
	<b>XLFCASE-CO</b>	<p>Carry on case with wheels</p> <p>Comes standard with all XL Flex and Flex+ systems</p> <p>Optional upgrade for XL Detect and XL Detect+</p>
	<b>MVIQACASE-CD</b>	<p>MViQ dual probe case kit</p>
	<b>MFLACASE-CO</b>	<p>Sturdy hard case to protect against shock, moisture and dust.</p> <p>Safely provides storage for one Everest Mentor Flex system, tip case, AC power supply, two spare 3-hour batteries, Mentor Flex handset cradle, magic clamp, swivel ball, gripper, 12" rigidizer, telescoping handset pole kit, rigid hook (XA-HOOK), and handset hanging strap (XA-STRAP).</p>

## Shipping and storage

	Part number	Description
	<p><b>MFLACASE-BP</b></p>	<p>Hard shell backpack case for Everest Mentor Flex for easy hands free storage and transportation.</p> <p>Capable of storing the following:</p> <ul style="list-style-type: none"> <li>- VideoProbe handset and probe</li> <li>- 3 hour battery</li> <li>- AC power supply</li> <li>- Rigidizer</li> <li>- Gripper</li> <li>- Optical tip case</li> </ul> <p>4 latches for secure storage.</p> <p>ATA (Air Transport Association) 300 rated.</p> <p>IP67 Military specification for protection against dust and the effect of immersion between 15cm and 1.0m.</p>
	<p><b>XLCASE-BP</b></p>	<p>Backpack Case for XL VideoProbe Hard shell backpack case for the XL family of VideoProbes for easy hands-free storage and transportation.</p> <p>Includes integrated insertion tube storage reel.</p> <p>Capable of storing the following:</p> <ul style="list-style-type: none"> <li>- VideoProbe handset with 2 hour battery</li> <li>- Spare 4 hour battery</li> <li>- AC power pack</li> <li>- Rigidizer</li> <li>- Gripper</li> <li>- Optical tip case</li> </ul> <p>4 latches for secure storage.</p> <p>ATA (Air Transport Association) 300 rated.</p> <p>IP67 Military specification for protection against dust and the effect of immersion between 15cm and 1.0m.</p>
	<p><b>MVIQACASE-BP</b></p>	<p>Backpack Case for Mentor Visual IQ</p> <p>Hard shell backpack case for the Mentor Visual iQ for easy hands-free storage and transportation. Includes integrated insertion tube storage reel.</p> <p>Capable of storing the following:</p> <ul style="list-style-type: none"> <li>- VideoProbe handset and probe</li> <li>- 2 hour battery</li> <li>- AC power pack</li> <li>- Rigidizer</li> <li>- Gripper</li> <li>- Optical tip case</li> </ul> <p>4 latches for secure storage.</p> <p>ATA (Air Transport Association) 300 rated.</p> <p>IP67 Military specification for protection against dust and the effect of immersion between 15cm and 1.0m.</p>



# Training and operating manuals

Live classroom training with a Waygate Technologies RVI expert covering topics ranging from 3D Phase Measurement to care and operation at the customer site or a Waygate Technologies facility.

VideoProbe operating manuals and Quick Start guides are offered in several different languages.



## Mentor Visual IQ manuals

Part number	Description	Language
MVIQAMANUAL	User's Manual, hard copy	English
MVIQAMANUAL-DE	User's Manual, hard copy	German
MVIQAMANUAL-FR	User's Manual, hard copy	French
MVIQAMANUAL-CH	User's Manual, hard copy	Chinese
MVIQAMANUAL-JP	User's Manual, hard copy	Japanese
MVIQAMANUAL-ES	User's Manual, hard copy	Spanish
MVIQAMANUAL-KO	User's Manual, hard copy	Korean
MVIQAMANUAL-PB	User's Manual, hard copy	Portuguese
MVIQAMANUAL-PL	User's Manual, hard copy	Polish
MVIQAMANUAL-RU	User's Manual, hard copy	Russian
MVIQAMANUAL-FN	User's Manual, hard copy	Finnish
MVIQAMANUAL-HG	User's Manual, hard copy	Hungarian

## Everest Mentor Flex manuals

Part number	Description	Language
MFLAMANUAL	User manual for Everest Mentor Flex, hard copy	English
MFLAMANUAL-DE	User manual for Everest Mentor Flex, hard copy	German
MFLAMANUAL-FR	User manual for Everest Mentor Flex, hard copy	French
MFLAMANUAL-CH	User manual for Everest Mentor Flex, hard copy	Chinese
MFLAMANUAL-JP	User manual for Everest Mentor Flex, hard copy	Japanese
MFLAMANUAL-ES	User manual for Everest Mentor Flex, hard copy	Spanish
MFLAMANUAL-KO	User manual for Everest Mentor Flex, hard copy	Korean
MFLAMANUAL-PB	User manual for Everest Mentor Flex, hard copy	Portuguese
MFLAMANUAL-PL	User manual for Everest Mentor Flex, hard copy	Polish
MFLAMANUAL-RU	User manual for Everest Mentor Flex, hard copy	Russian
MFLAMANUAL-FN	User manual for Everest Mentor Flex, hard copy	Finnish
MFLAMANUAL-HG	User manual for Everest Mentor Flex, hard copy	Hungarian

## Training and operating manuals

Part number	Description
WT-1.4MMEXTMAN	1.4mm (0.055") Retrieval Kit Instruction Manual.

### Mentor Visual IQ Quick Start Guide

Part number	Description	Language
MVIQAQSG	Quick Start Guide, hard copy	English
MVIQAQSG-DE	Quick Start Guide, hard copy	German
MVIQAQSG-FR	Quick Start Guide, hard copy	French
MVIQAQSG-CH	Quick Start Guide, hard copy	Chinese
MVIQAQSG-JP	Quick Start Guide, hard copy	Japanese
MVIQAQSG-ES	Quick Start Guide, hard copy	Spanish
MVIQAQSG-KO	Quick Start Guide, hard copy	Korean
MVIQAQSG-PB	Quick Start Guide, hard copy	Portuguese
MVIQAQSG-PL	Quick Start Guide, hard copy	Polish
MVIQAQSG-RU	Quick Start Guide, hard copy	Russian
MVIQAQSG-SW	Quick Start Guide, hard copy	Swedish
MVIQAQSG-FN	Quick Start Guide, hard copy	Finnish
MVIQAQSG-HG	Quick Start Guide, hard copy	Hungarian

Part number	Description
MVIQATD-2	Thumb Drive Containing the following: All translated languages of user's manual and Quick Start Guides Inspection Manager 2.0 software for viewing and re-measurement of 3D Phase measurement, 3D stereo measurement, StereoProbe measurement, and comparison measurement images.
XLGOCMAN	Print version of XL Go+ owner's manual (8.5 x 5.5") – English
XLGOCMANCD	CD ROM version of XL Go+ owner's manual including 11 languages; includes QuickTime and VLC Player
XLGOCQUICKSTART	Laminated 8.5 x 5.5" XL Go+ Quick Start Guide – English
XLVUAMAN	Print version of XL Vu owner's manual (8.5 x 5.5").
XLVUAMANCD	CD ROM version of XL Vu owner's manual; includes QuickTime.

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