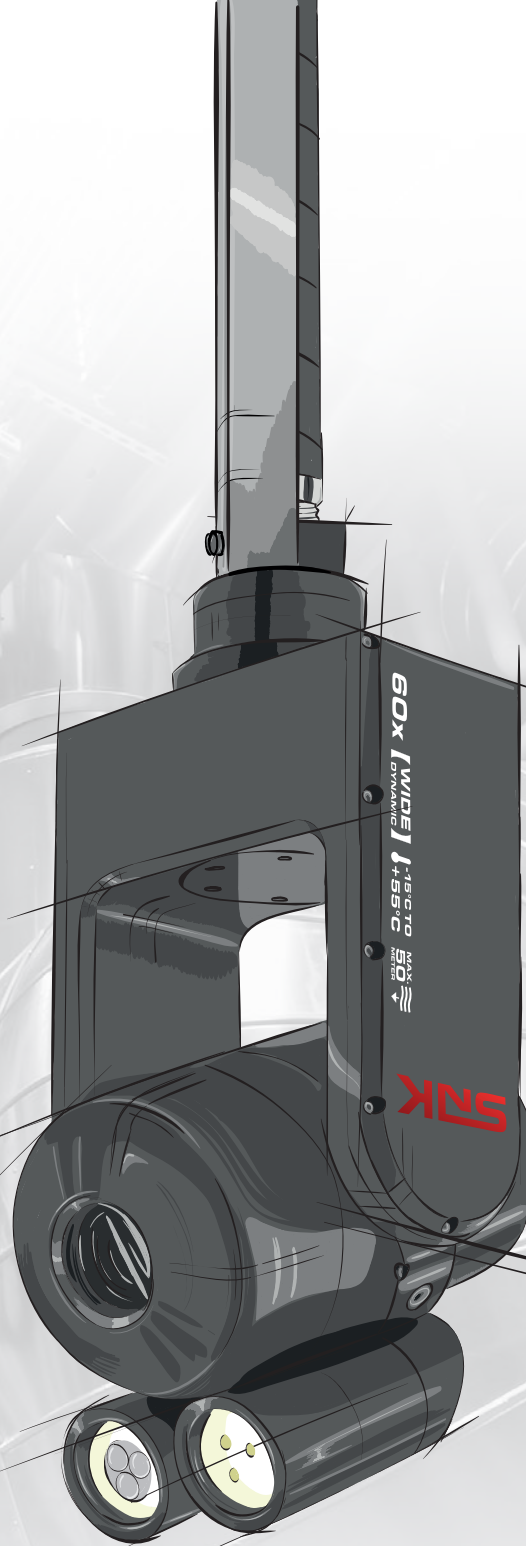


MADE  
IN  
GERMANY



# SNK 60x

PLANT, INFRASTRUCTURE & VESSEL INSPECTIONS

**THE EVOLUTION OF PERFORMANCE  
FROM GENERATION I TO V**



Your Complete Source for  
Testing Equipment Since 1969!

[www.BergEng.com](http://www.BergEng.com)  
Berg Engineering & Sales Company, Inc.

1-847-577-3980  
Info@BergEng.com

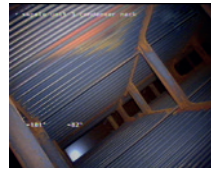
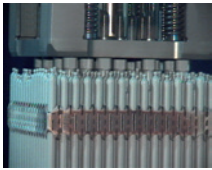


## INCREASE YOUR PRODUCTIVITY

Inspections with the SNK will reduce inspection time, the downtime of your plant and increase productivity.

## REDUCE INSPECTION COST

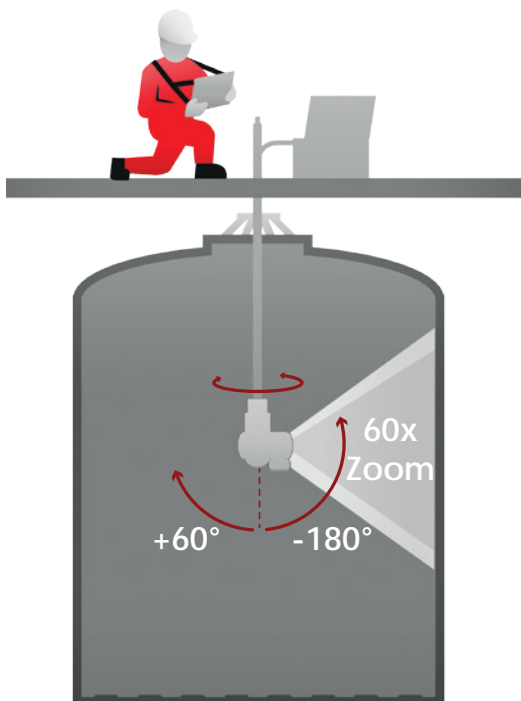
Avoid the unnecessary complexity and cost of access equipment as well as the risk of contamination and perform rapid remote inspections quickly and easily.



# PROVEN PAN-TILT-ZOOM TECHNOLOGY

- Class leading pan and tilt capabilities offer all round inspection.
- Wide angle optics provide rapid orientation and positioning.
- Use the 60x Zoom to see every defect in highest resolution.
- Over 10 times the light sensitivity and double the wide dynamic range compared to the previous generation.

ZOOM AND TILT RANGE



- **Save specific camera positions** that can be recalled and automatically recalled.
- **Auto Run & Scan** function for progressive wall inspections.
- **X/Y position information** for ease of orientation and defect logging.
- Digital image manipulation provides a **constant vertically oriented image**.



Your Complete Source for  
Testing Equipment Since 1969!

[www.BergEng.com](http://www.BergEng.com)  
Berg Engineering & Sales Company, Inc.

1-847-577-3980  
Info@BergEng.com



## IMPROVE SAFETY FOR PERSONNEL AND PLANT

Due to the exceptional working length, the all-round view and the 60x zoom of the SNK, there is no need for direct entry into the inspection area. This improves safety and avoids the risk of contamination and damage to the application.



Connect & control



Visualize



Edit, record,  
communicate



Archive

## FOR TANK AND VESSEL INSPECTIONS FULL 60X ZOOM

- The Kevlar® reinforced cable ensures a durable and safe use and is available in multiple lengths.
- Macro function: the highest resolution at the closest distance.
- Available in both aluminium and stainless steel



Two independently controlled lights provide optimum illumination and defect detection.



Waterproof up to 50 m.



Up to 5hrs operation in battery mode with standard Bosch® Li-Ion battery. Allowing for off grid operation in hazardous environments.



Your Complete Source for  
Testing Equipment Since 1969!

[www.BergEng.com](http://www.BergEng.com)  
Berg Engineering & Sales Company, Inc.

1-847-577-3980  
[Info@BergEng.com](mailto:Info@BergEng.com)



# INTEGRATED CONNECTIVITY



## CONTROL AND DOCUMENTATION

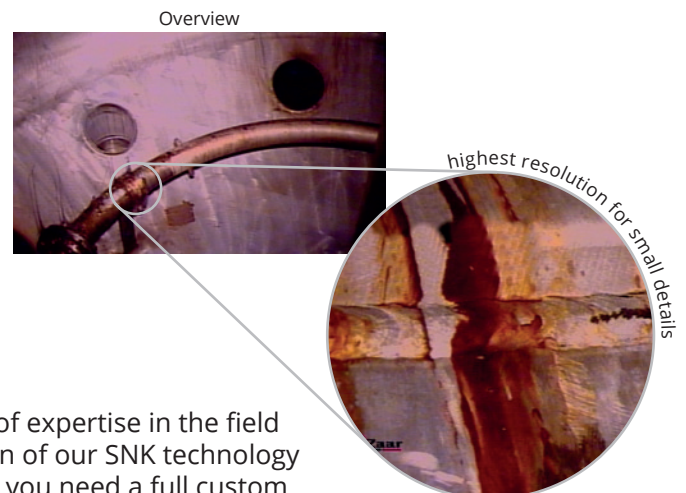
Use the SNK 60x in combination with our MATRIX E3 documentation system, developed for remote visual inspections with the SNK and Revolver 80. The MATRIX system allows you to inspect tanks and vessels up to 150 m long without the need to enter the application. Through digital image processing, the MATRIX E3 system provides a vertically oriented image on your screen, regardless of camera position. X/Y co-ordinates are also continually displayed to ensure ease of positioning and defect logging.

## LONG DISTANCE - SMALL DETAILS

The 60x zoom of the SNK 60x provides you with the most detailed recordings for your inspection, even when the object you are recording is at a great distance. Smallest cracks, changes at weld seams and other critical areas can easily be detected due to the 60x zoom and the high resolution. Even macro recordings are simple and effective with the SNK 60x.

## CUSTOM-MADE SOLUTIONS

When the standard product is not enough, our many years of expertise in the field of special solutions come into play. We offer a large selection of our SNK technology as custom-made products and in limited production runs. If you need a full custom solution for your application with a different housing, different motive abilities, laser measurement, custom optical ranges, infrared or even UV operation, then simply ask the leading specialist in inspection technology and we will be delighted to discuss your needs with you.







# PORTABLE SOLUTION

## EASY TO TRANSPORT

Experience our MATRIX E3 and SNK60x with new, even more mobile and durable transport cases. No more awkward handling thanks to the extendable handles and rubber wheels. Transport the inspection systems to your application easily and conveniently. The cases are also waterproof in order to protect your inspection systems from the elements.



## MODULAR POWER

To achieve even greater mobility, we have also revised the power supply of our camera system. The MATRIX E3 and SNK60x can now be operated with an external battery. A dock on top of the power supply unit allows the battery to be attached intuitively by simply sliding it on. Removing it is just as easy.

The commercially available, universal 36V battery provides up to 5hrs additional inspection time. This avoids the need for problematic cable extensions when there is no power socket nearby. Work independently from mains power - simply equip yourself with as many batteries as you need for your inspection. Thanks to the handy size of the batteries, transporting several of them is no problem. There are two slots for additional batteries integrated into the new camera cases.

Retro-compatibility: after a simple upgrade, existing SNK 40x camera heads can also be used with the new battery operated MATRIX E3.





CAMERA HEAD	
Type	1/3" Panasonic CMOS sensor
Resolution	700 horizontal TV lines PAL, active sensor pixels 1920(H) x 1080(V)
Zoom	60x Zoom   Focal Range: 1.6° to 45°
Focal range	Manual & automatic adjustment   Macro function   10 mm to ∞
Light sensitivity	Color 0,125 lx   BW 0,025 lx
Iris & shutter	1/30.000 to 1/7 sec
Display of camera temperature	Yes
Cable length	3 m (9.8 ft.), 30 m (98.4 ft.), 50 m (164 ft.), 80 m (262.4 ft.), optional up to 150 m (492.1 ft.) on viZaar®'s cable reel
Features*	Wide Dynamic Range   high resolution   enhanced noise reduction
ILLUMINATION	
Head lights**	1 x LED 7 Watt (25°) 1 x LED 7 Watt (100°) - wide angle for complete illumination of macro recordings and pictures
OPERATING ENVIRONMENT	
Temperature	-15°C (5°F) to +55°C (131°F)
Pressure resistance	50 m / 160 ft. depth of water
Inner CO <sub>2</sub> pressure	Max. 0.7 bar / 10 psi
AXIS RANGE	
Pan range	347° (+/- 173.5°)
Tilt range	-180° to +60°
Speed (dependent on housing)	Aluminium: 0 to 14°/sec.   Stainless Steel: 0 to 7°/sec.
Torque (clutch protected)	Yes
DIMENSIONS	
Weight	black anodized aluminium: 2.97 kg / 6.4 lbs   stainless steel: 6.6 kg / 14.8 lbs
Dimensions in mm / inch	Opening diameter: 164 mm (6.4") height   Standard: 280 mm (11.02") total height
Mounting for accessories	Four M6 mounting points
Position feedback	Resolution: 0.1°   Accuracy: 1.0°

\* Only when operated with MATRIX E3 control unit.  
 \*\* Halogen illumination upon request





## ACCESSORIES

Camera head case	Transport case for inspection cameras SNK / Revolver 80. Dimensions in mm: (B) 551 x (H) 358 x (T) 226.	
Accessory soft pack	Accessory soft pack including standard main cable soft bag (up to 50 m / 164 ft.).	
Slipping cable reel	Allows to wind and unwind cable during operation up to 200 m (640 ft.) cable.	
Camera lift	Allows camera transport into vessels from the bottom. Max. height: 5 m (16.4 ft.).	
Pushing trolley	Pushing trolley as guidance in tubes for long distances (longer than 3 m / 9.84 ft.).	
Manhole swivel tripod	Supporting the inspection of vessels / cavities with precisely guidance of the SNK, mounted to the push poles.	
Push poles and push pole transportation and storage soft bag	For mounting and guiding of the camera head in the application. Push poles available in 1 m / 3.28 ft. and 2 m / 6.56 ft. length. The Soft bag allows easy transportation of over 10 push poles.	
SNK camera to push poles adapter	Connecting the push poles with the SNK camera head. Stainless steel.	
L-piece	Extends the inspection capabilities in complex geometry by positioning the camera head 90° horizontal.	
Pressurization kits*	Check camera before inspection to be waterproof. Increase your water depth inspection range by pre pressurisation. Incl. CO <sub>2</sub> one-way cartridges.	
Air pump	Check camera before inspection to be waterproof. Increase your water depth inspection range by pre pressurisation without CO <sub>2</sub> .	
Spare parts	Spare parts available upon request.	

\* Only available in Germany

┌ Aramid fiber (Kevlar®) reinforced cable sheath for increased  
robustness and durability. Tensile load of up to 400kg! ┐



Your Complete Source for  
Testing Equipment Since 1969!

[www.BergEng.com](http://www.BergEng.com)  
Berg Engineering & Sales Company, Inc.

1-847-577-3980  
Info@BergEng.com



[www.vizaar.com](http://www.vizaar.com)

# SNK

## EXPANDING YOUR VU®



Autorisierter Handels- und Vertriebspartner von viZaar®:



Your Complete Source for  
Testing Equipment Since 1969!

[www.BergEng.com](http://www.BergEng.com)  
Berg Engineering & Sales Company, Inc.

1-847-577-3980  
[Info@BergEng.com](mailto:Info@BergEng.com)