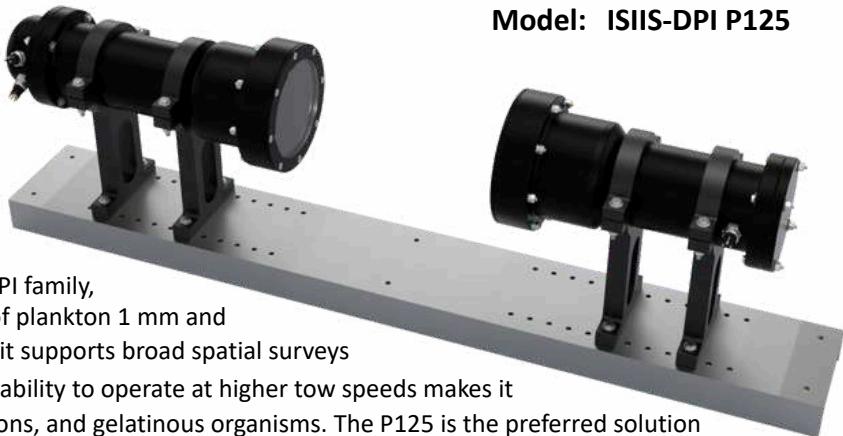


ISIIS-DPI Plankton Shadowgraph Camera

Model: ISIIS-DPI P125



Overview

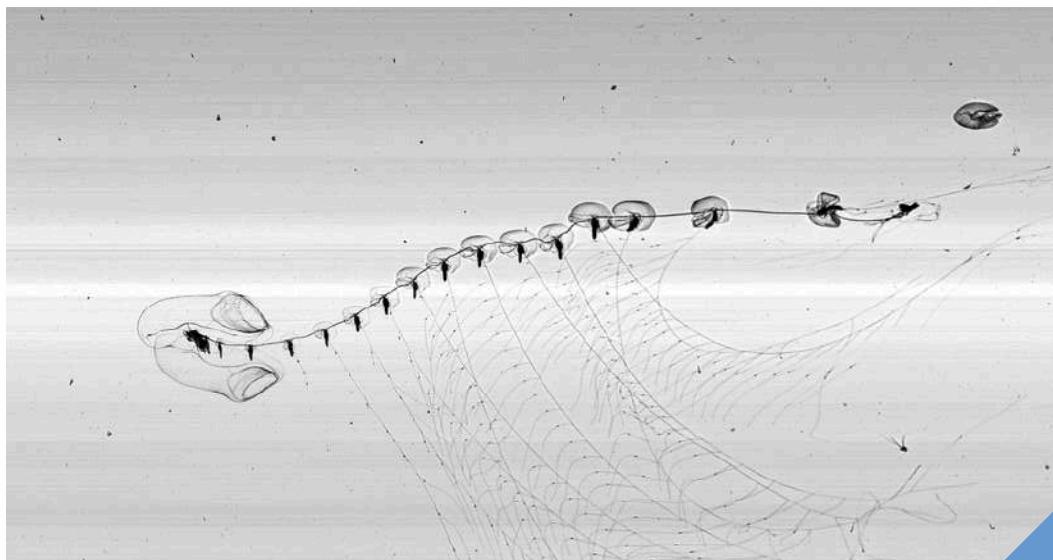
The **ISIIS-DPI P125** is the **workhorse** of the ISIIS-DPI family, designed for high-speed, large-volume sampling of plankton 1 mm and larger. **Proven on long-term ecological transects**, it supports broad spatial surveys where consistency and coverage are essential. Its ability to operate at higher tow speeds makes it ideal for ecosystem-scale studies, sparse populations, and gelatinous organisms. The P125 is the preferred solution for demanding towed vehicle deployments.

Configured with an area-scan camera, the P125 provides a field of view of $\sim 80 \times 80$ mm with a depth of field of ~ 30 cm, supporting quantitative imaging at tow speeds up to 5.5 knots. When equipped with a line-scan camera, the field of view increases to approximately 115×115 mm while maintaining the same depth of field, enabling tow speeds up to 6 knots with an increasing sampled volume.

At 20 frames per second, the line-scan configuration samples nearly 4 liters per image, corresponding to approximately 80 liters of water per second. This high volumetric sampling rate makes the P125 particularly well suited for studies of macroplankton, gelatinous organisms, particle fields, and ecosystem-scale patterns, especially where organisms are sparse or patchily distributed.

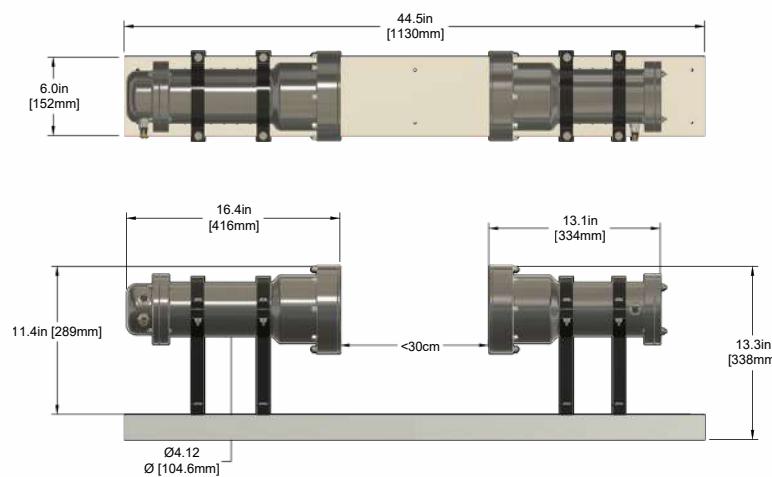
On towed vehicle deployments, multiple P125 imagers are often stacked to increase environmental coverage, allowing simultaneous observations across a larger portion of the water column while preserving fine-scale spatial structure that is lost with traditional sampling methods.

The P125 is available in 60 m and 1,000 m depth-rated configurations and integrates seamlessly with SIDEKICK Performance, enabling synchronized imaging and environmental measurements within a field-proven, high-throughput observational system.



Credit: Plankton Ecology Lab - Oregon State University - Hatfield Marine Science Center

ISIIS-DPI Plankton Shadowgraph Camera | P125



	60m Rating	1,000m Rating
Material	Black Acetal	Anodized Aluminum
Weight in Air	14.2 Kg	18 Kg
Weight in Water	3.9 Kg	7.7 Kg

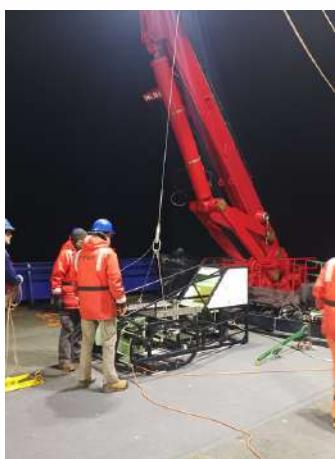
Features

Standard Field of View:	area-scan 80 mm x 80 mm line-scan 115 mm x 115 mm	Image File Size	area-scan 3.10MB line-scan 3.80MB
Standard depth of Field:	300 mm	Camera resolution:	area-scan 5MP sensor, 3.48 μ m / pixel line-scan 2k sensor, 7 μ m / pixel
Pixel Resolution:	area-scan 46 μ m/pixel line-scan 60 μ m/pixel	Camera Frame Rate:	up to 37 fps
Recommended for Particles:	>1 mm	Light:	Blue 475nm, Red 630nm as an option
Max. Water Speed *	up to 6 knots	Power:	12V 6 Watts
Water Sampled per min.	Typical 75+ L /min	Connectors:	MCBH8M-CAT, 2 x MCBH2M-Power

* 100 % coverage condition; higher flow implies sub-sampling.

Deployment Methods

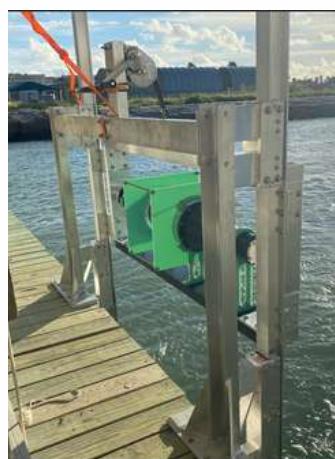
Towed Vehicles



Multiple Nets



Piers & Mesocosms



CTD Rosettes

