

VSPN 154/304/3004

Range of high resolution (10 Mpixels) colour digital still and TV cameras

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The Eca Hytec™ range of digital still and video cameras includes:

- The VSPN 154, rated for 150 meters for use by a diver
- The VSPN 304, rated for 300 meters, for use on a ROV
- The VSPN 3004, rated for 3000 meters, meant to be installed on a deep subsea vehicle (submarine, ROV, AUV...)

Note: a 6000 m version is also available.

The VSPN 154 is linked to the surface by an umbilical cable, while VSPN 304 and 3004 use the vehicle's transmission system.

They all combine the functions of a colour video camera with those of a high definition (10 Mpixels) digital still camera, have a x5 optical zoom, and are operated via a user-friendly software, in Windows. A connector on the camera provides power and a synchronized signal for the **flash unit**.

The surface operator receives on his (desktop or laptop) PC the video images in real time viewer and selects among them those he wants to capture as still photographs, which are stored in the camera's built-in memory. Captured pictures can also be reviewed using the viewer mode. When the operation is over and the camera is back to the surface, images are downloaded to the PC. Their very high resolution allows for a strong zoom on details.

Images can then be transferred directly into the inspection report, or transmitted on Internet, or filed on a CDROM.

When the camera is installed on a vehicle, and when its transmission system allows for it, the high resolution images can be collected online.

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TECHNICAL SPECIFICATIONS

Sensor and optics

CCD	: 1/2.3" Colour super HAD type
	: 10.1 M pixels
Video standard	: PAL and NTSC (programmable by operator)
Strobe synchronisation	: External sync signal provided for strobe operation
Lens	: 5x motorised optical zoom (5 to 25 mm) equivalent to 28-140 when converted to a 35mm still
	: Digital zoom (x 2)
	: Auto focus
	: Macro Mode
Diagonal angle of view (in water)	: from 54° (wide angle) to 14° (zoom max)
White balance	: Auto and manual, (7 modes, including strobe mode)
Shutter speed	: Adjustable from 1/4 s to 1/1600 s
Analog video output	: PAL or NTSC (programmable by operator)
	1 Vpp, 75 ohms in real time
Image stabilizer	

Digital images storage and downloading

Recording capacity in fine mode with a memory stick capacity of 4 Gb (supplied with equipment):

Image format (pixels)	Approx. number of images recorded
10 Mp	800
5 Mp	1600
3 Mp	2665

Files Format	: Jpeg for still images / Mpeg-1 for movies
Images downloading	: through USB-2 port, using a (delivered) dedicated junction cable

Telemetry

- Possibilities to transmit analog video through coaxial, twisted pair or fibre optic cable (contact us for more details).
- Remote control of all camera functions (zoom, shutter, record, etc...) through RS232 or RS485 link.

Power supply	: 12 to 30Vdc/350mA
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Host system minimum requirement

Host system	: PC or laptop equipped with video frame grabber board (USB or PCI)
Operating system	: Windows XP / Vista / 7

Mechanical and environmental

VSPN 154-3S

Dimensions	: L 225 mm w/o connector
	: OD 86 mm
Weight	: 2.1 kg (in air) ; 1.1 kg (in water)
Connector	: Subconn
Depth rating	: 150 meters
Operating Temperature	: 0 to 40° C
Storage Temperature	: - 20° to 60° C
Material	: Anodized aluminium
	: PMMA frontal porthole

Outlet for synchro flash VSF 303
Outlet for external lights (optional)

VSPN 304-2S

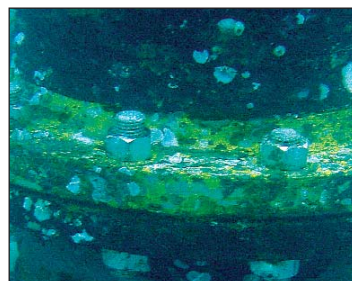
Dimensions	: L 225 mm w/o connector
	: OD 86 mm
Weight	: 2.9 kg (in air) ; 1.6 kg (in water)
Connector	: Subconn
Depth rating	: 300 meters
Operating Temperature	: 0 to 40° C
Storage Temperature	: - 20° to 60° C
Material	: 316L stainless steel housing
	: PMMA frontal porthole

Outlet for synchro flash VSF 303

VSPN3004-2S

Dimensions	: 241 mm w/o connector
	: OD 97 mm
Weight	: 6.0 kg (in air) ; 4.4 kg (in water)
Depth rating	: 3000 meters standard
Connector	: at customer request
Operating Temperature	: 0 to 40° C
Storage Temperature	: - 20° to 60° C
Material	: APX stainless steel housing
	(Titanium in option)
	: Tempered glass frontal porthole

Outlet for synchro flash VSF 3003



Design and specifications subject to change without notice