

HiPAP® 102P



KONGSBERG



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PORTABLE ACOUSTIC POSITIONING SYSTEM - ULTRA DEEP WATER

The HiPAP 102P with full ocean depth positioning and modem capability is designed for tracking ROV's, tow fish and other subsea targets.

HiPAP 102P is a portable acoustic positioning system designed for operation from a surface vessel to track ROV's, tow fish and any other subsea targets at several thousand meters range in ultra deep water. The system operates in SSBL mode where it measures the distance and direction to subsea transponders and computes a 3D position in local or geographical coordinates.

HiPAP 102P is designed to be a portable system for easy installation on surface vessels without the need for a through hull deployment unit. APOS, the operator station for HiPAP, provides the full range of functions for acoustic positioning and data communication. The Cymbal digital acoustic protocol provides accurate position and robust telemetry.

HiPAP 102P has full LBL calibration and positioning capabilities and can be used for position box in, calibration and positioning. The system is offering the user a wide range of transponder channels and cNODE® transponder models for depths down to 7000 meters and beyond.

HiPAP 102P has built in motion sensors for compensating the position for vessels roll and pitch movements. These models have no need for calibration of roll and pitch alignments and only need to calibrate for heading alignment W.R.T. to the vessels' gyro compass. The system can be interfaced to the vessel heading sensor and GNSS system. Data output to users are available in established formats.

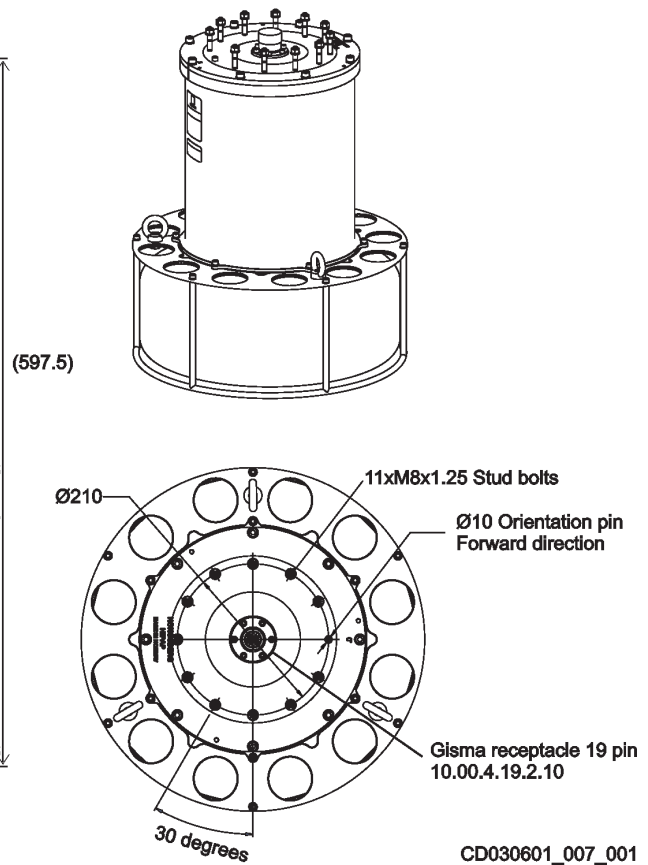
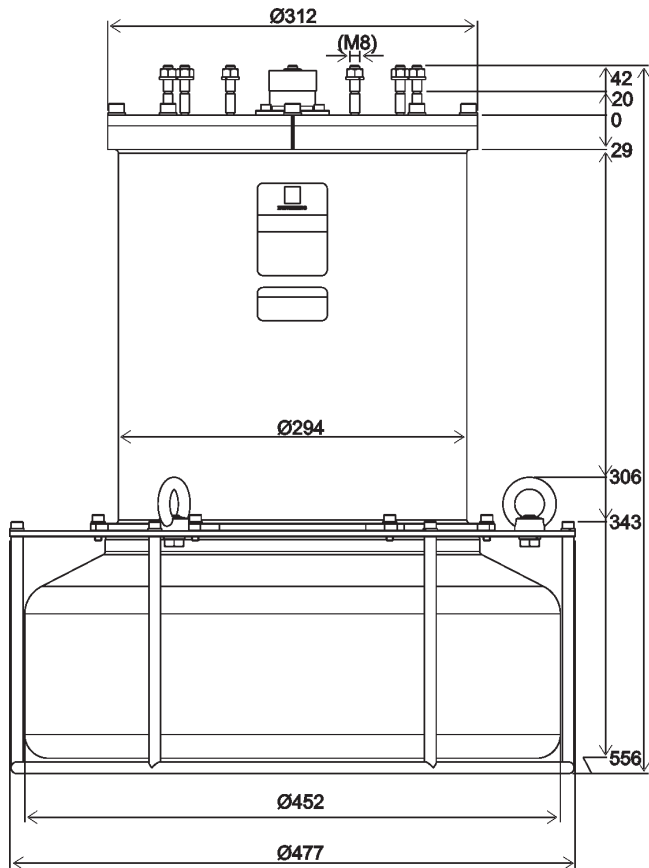
The calibration free HiPAP 102P-MGC contains attitude and heading sensor. This model has no need for calibration to determine roll, pitch and heading alignments.

To meet various demands in the market, HiPAP 102P transducer is available in several models with respect to motion sensors:

- HiPAP 102P-MGC Motion Gyro Compass
- HiPAP 102P-5 MRU 5 Motion Sensor

OUTLINE DIMENSIONS

HiPAP 102P-MGC/102P-5



TECHNICAL SPECIFICATIONS

GENERAL

Operation modes	SSBL, LBL and data telemetry
Transducer cable length	50 m or 70 m
Max deployment depth	50 m
Temperature operational	0°C to +35°C
Temperature storage	-20°C to +35°C
Storage humidity	95% relative (non-condensing)
Operational coverage	±90° (see Note 1)
Main coverage	±60° (see Note 1)
Receiver beam	Approx. 15° steerable
Total length/diameter	535.5/477 mm
Weight	80 kg
Material	Bronze/Stainless steel

Position accuracy

Model	Motion sensor (°)	HiPAP only (°) (1σ)	Total (°) (1σ)	% of range (1σ)
HiPAP 102P-MGC	>0.01 Range: ±180°	0.1	0.1	0.17
HiPAP 102P-5	>0.02 Range: ±180°	0.1	0.11	0.19

PERFORMANCE

Operating range, typical	1-13000 m
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Note 1: Operational coverage defines the sector where acoustic positioning and communications are operational. Main Coverage is the sector where maximum range and angular accuracy can be achieved. Outside the main coverage range and elevation angular accuracy are reduced, therefore a depth input for aiding is recommended.

Specifications subject to change without any further notice. (4249/4/A)