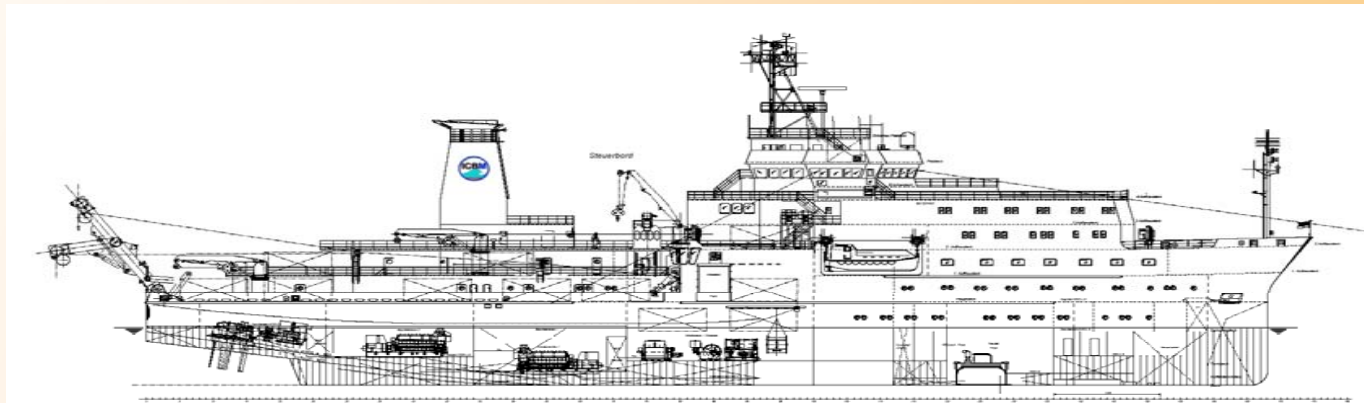


# Updates From Germany – New Vessels

## - Replacement of SONNE

- pre-tender call for ship yard / operator consortium found 6 teams
- deadline for indicative bids was Oct. 2009
- final assessment and negotiation until June 2010
- contract should be signed in July 2010
- vessel should be delivered by mid 2013



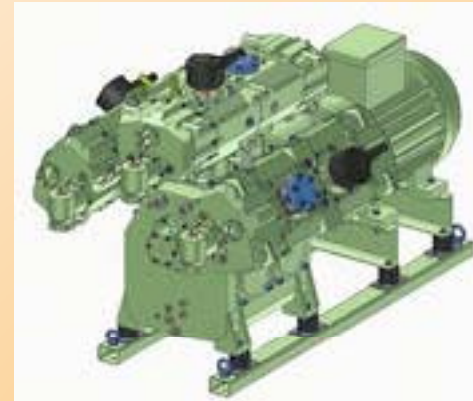
## - Replacement of POLARSTERN

- scientific community suggests a new ship no refurbishment
- discussion of requirements in scientific advisory committees are underway
- list of requirements to be completed by early December
- scientific advisory board meets in March 2010
- vessel completion not before 2016

# Updates From Germany - Compressors

## R/V MERIAN

- three new compressors in 2010
  - hull mounted
  - 36 m<sup>3</sup>/min
  - max 400 bar



Sauer & Sohn WP6000

## R/V METEOR

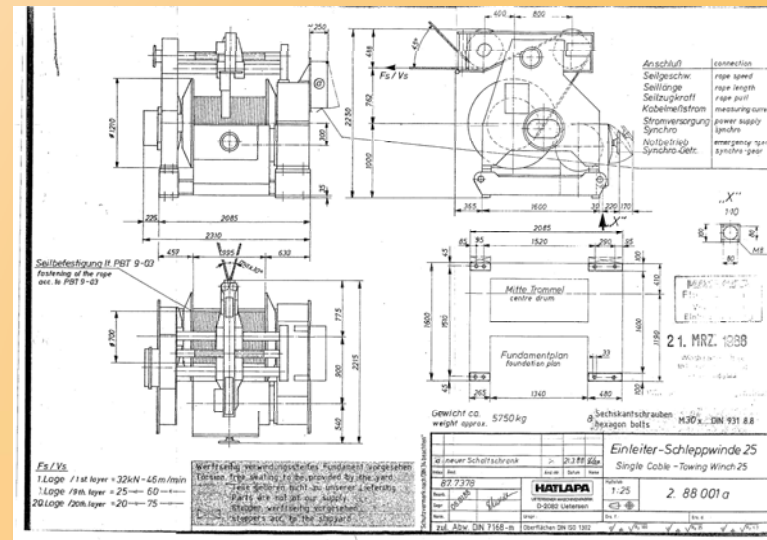
- 1 mobile compressor in 2010
  - 10" container
  - 12 m<sup>3</sup>/min



# Updates From Germany – R/V POSEIDON

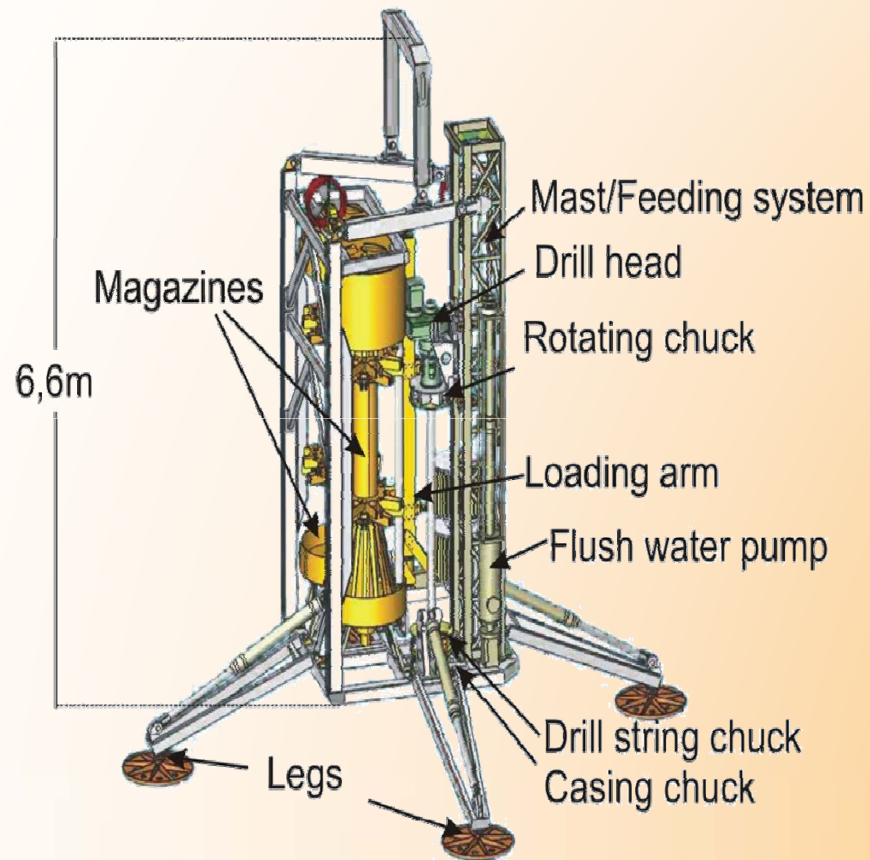
## IFM-GEOMAR R/V POSEIDON

- major refurbishment in 2009 & 2010
  - new engines
  - new and upgraded air condition
  - refurbishment of lab space
  - refurbishment of winches
  - digital length counter
  
- refurbishment of mobile Werner Winch
  - 11 mm coax wire
  - fibre optic prepared
  - 3000 m wire



# Updates From Germany - Equipment

## MARUM - Bremen

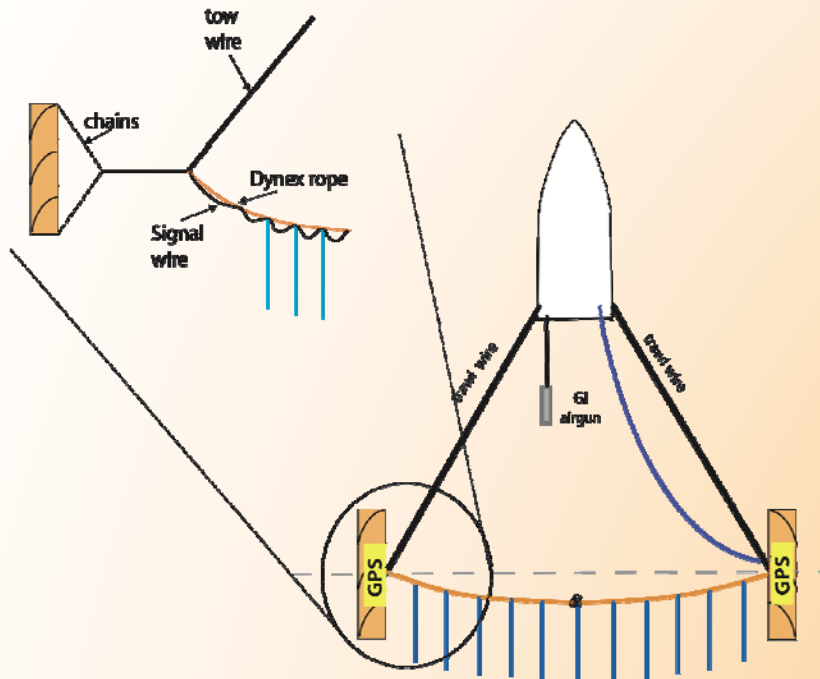


## MeBo specifications

- Drilling depth 70 m
- Coring of soft sediments and hard rocks
- Wireline system available
- Autoclav chambers developed
- Core diameter 55 – 84 mm
- Deployment depth 0 – 2000 m
- MeBo weight about 10 tonnes
- Total system weight about 75 tonnes
- Transport within six 20' containers

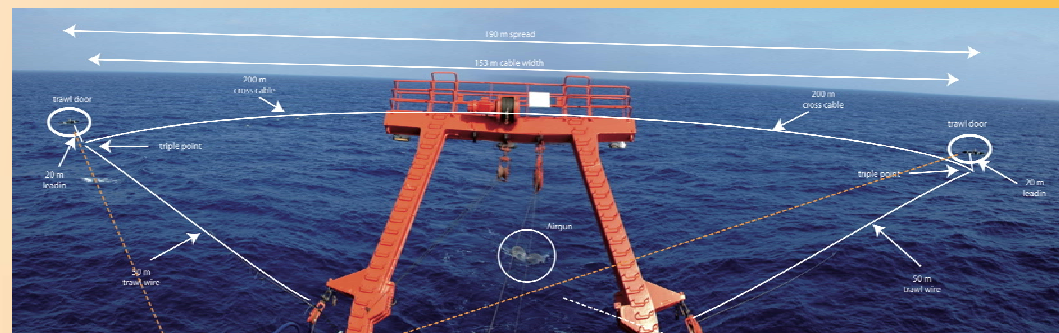
# Updates From Germany - Equipment

## IFM-GEOMAR



## 3-D Seismic Acquisition System P-Cable

- two trawl doors hold a set of streamers perpendicular to the ships heading
- multiple short streamers provide full 3-D coverage
- easy to deploy – flexible to operate
- operation from mid size vessels

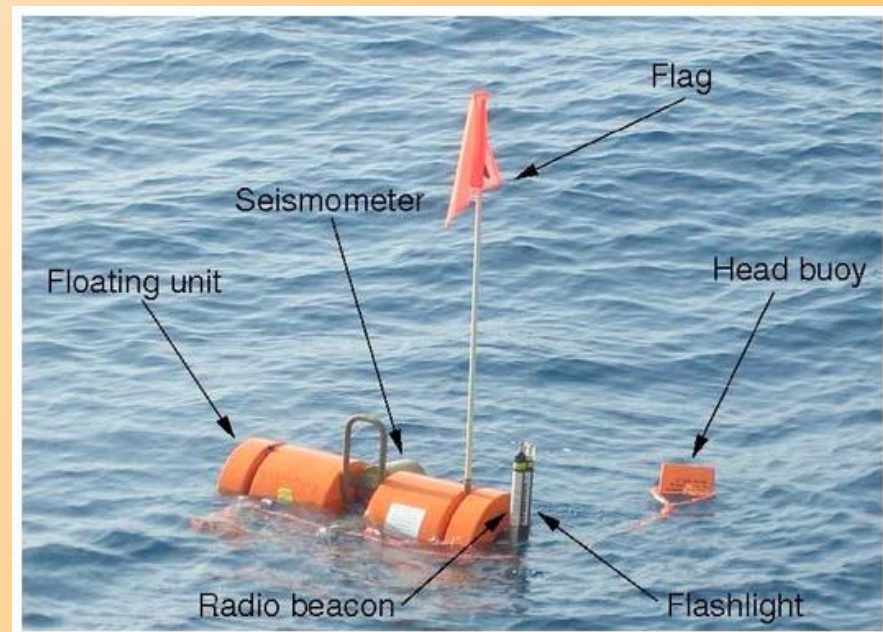
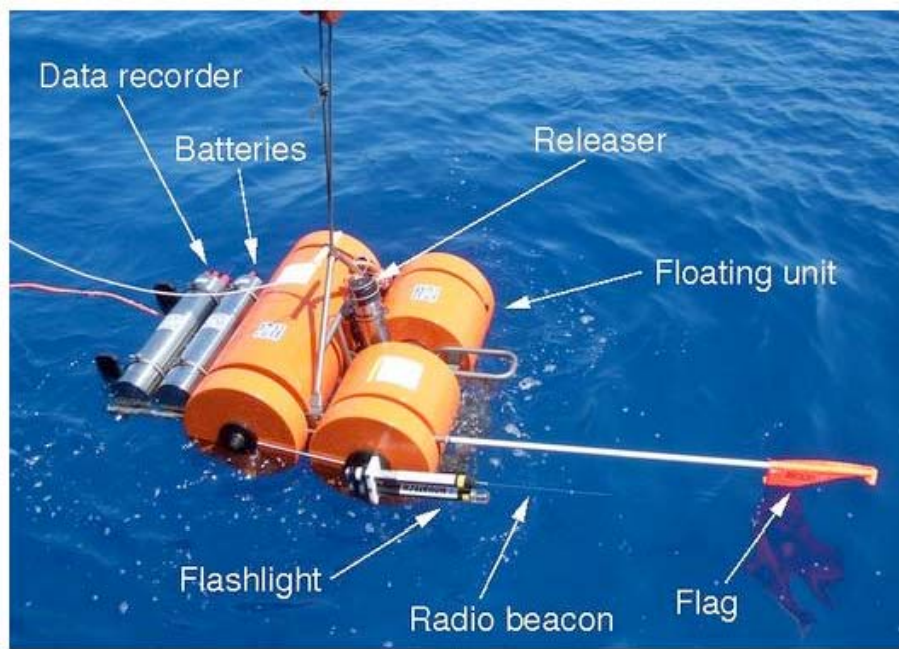


# Updates From Germany - Equipment

## AWI – DEPAS Pool

- 80 OBS / 5 OBH (increasing)
  - 68 Standard OBS
  - 12 deep sea OBS (8000 m)

- availability requires project funding
- 24 OBS, 1 year deployment, incl. shipment and technician 229 kEUR

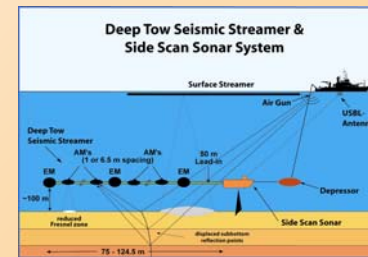
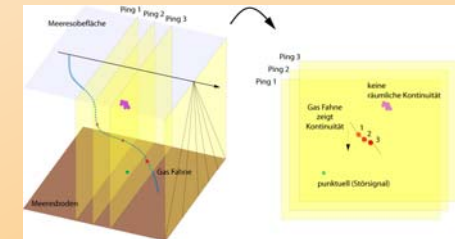


# Updates From Germany - Equipment

Under Development

## IFM-GEOMAR

- portable multibeam with WCI for gas bubble detection
  - automatic tracking algorithms
- deep towed multichannel streamer
- deep towed EM source
- stationary HF EM and MT receivers



## BGR

- bottom towed CSEM
  - improved sensitivity

