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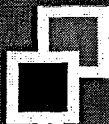
## EBS systems operated in the UK

- HEED 3 / STASS (Submersible Systems Inc)
- P-STASS (MSI Defence Systems)
- Air Pocket (Shark)
- Air Pocket Plus (Shark)

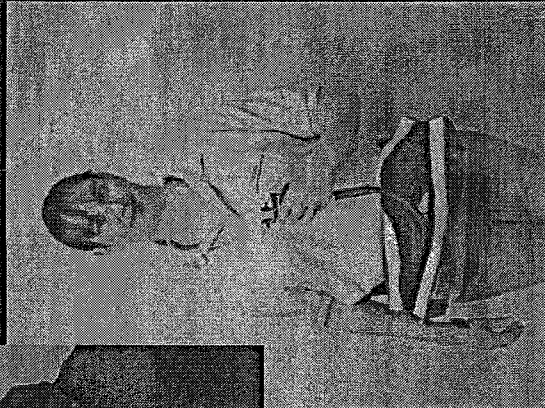
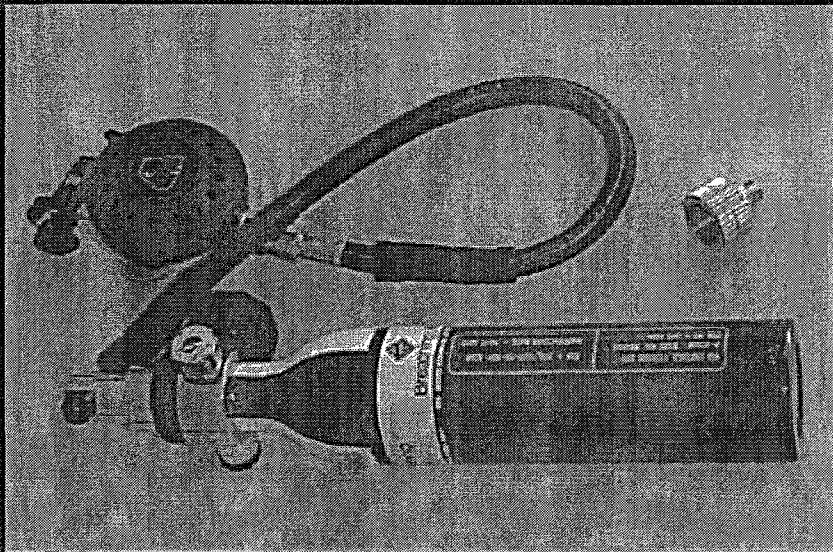


# HEED 3 / STASS

- Used by UK military.
- Compressed air system.
- First-breath activation.
- Requires considerable training, particularly to purge unit when deployed underwater.
- No nose-clip.



# P-STASS





Risks associated with compressed air EBS –  
case studies

Case 1: Arterial gas embolism  
- RNAS, Yeovilton (1994)


Case 2: Mediastinal emphysema  
- Nutech, Bergen (1997)



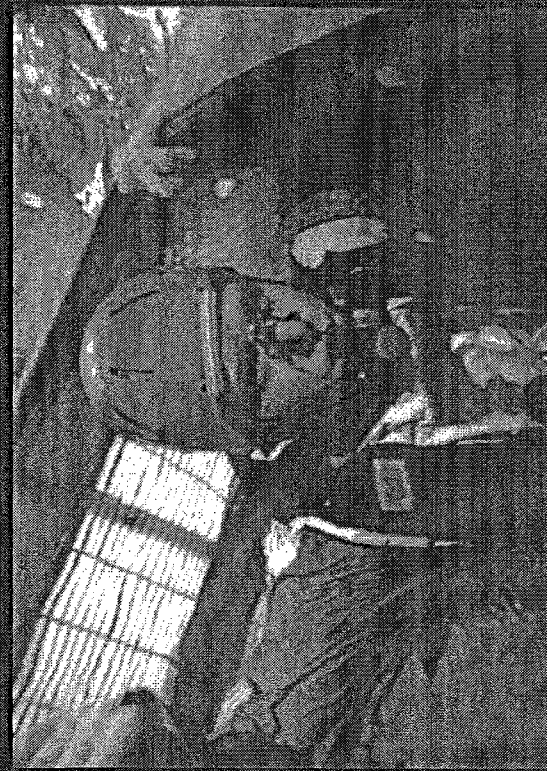


## Risks of compressed air EBS use

- rough estimate

- 44,000 Canadian Air Force personnel trained without incident, but ...
  - In SCUBA diving, total risk of fatality has been estimated at 1 in 5,000 divers per year (Paras, 1997).
  - Approx. 4% of UK SCUBA fatalities are due to air embolism ~ 1 in 125,000 divers per year.
  - Fatality risk during EBS training likely to be less than this due to shallow water use of equipment and single exposure.
  - Injury rate higher than fatality rate?
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## Air Pocket (AP)



- Re-breather only.
- Suits with integral Air Pocket approved on a "no hazard, no credit" basis.
- Use world-wide?