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Diving with underwater powered tools

This bulletin provides guidance about the use of underwater powered tools when diving.

This technical bulletin clarifies whether the use of SSBA* or SCUBA* are suitable systems when using underwater powered tools.

What are underwater powered tools?

Underwater powered tools are powered by either surface supplied hydraulic, pneumatic or electric systems, or by high powered batteries or powder actuated charges.

These types of tools are most often used in the construction, maintenance, repair, recovery and removal of structures (for example, tanks, platforms, piers) and/or vessels. Common underwater powered tools include impact wrenches, chain saws, disc cutters, jack hammers, drills and surface powered water jets and airlifts.

This does not include underwater cameras, diver propulsion vehicles (DPVs), hand-held torches, diver carried metal detectors and any hand powered tools.

The risk

Using powered tools underwater can present risks for divers including loss of breathable gas if the tool cuts the air supply, electric shock, distraction from safe diving procedures, and physical trauma.

Recommendations

The use of surface powered hydraulic, pneumatic, or electric underwater tools should only be undertaken by divers using SSBA.

The use of any underwater powder actuated device should also only be undertaken using SSBA.

Airlifts operated from the surface should only be used on SSBA.

Low suction air cleaners and water lifts that can be controlled by the diver (powered on and off by the diver) may be used using SCUBA as long as the risk of the job and potential harm is assessed as acceptable. Examples of these would be aquarium vacuum cleaners and small suction dredges with no risk of diver entrapment.

Surface powered lighting rigs used in filming may be used on SCUBA as long as adequate diver electrical protection is in place and a diver communication system is used.

The use of battery powered tools that are fully controlled by the diver (powered on and off by the diver) may be used using SCUBA as long as the risk of job and potential harm is assessed as acceptable.

If using any tool on SCUBA that could directly physically injure or impede the diver's air supply then the use of Full Face Masks and Voice Communications should be considered.

Further information

- [WorkSafe occupational diving guidance](#)
- [Technical Bulletin on the use of underwater thermal cutting equipment in occupational diving](#)

Acknowledgement

This technical bulletin has been developed in consultation with the Diving Industry Advisory Group (DIAG).