

# UNDERWATER WELDING TORCH COOLING

## SOLUTIONS: GB-P25



### FLUID

Water and glycol fluid circulated to cool a welding torch.

### APPLICATION

The underwater welding device allows methane gas pipelines that run underwater to be welded directly in the sea. The Micropump pump provides the circulation of liquid to cool the welding torch while in operation.

Previous to this new technology, it was only possible to weld pipelines together on the outside. If the weld wasn't correct, it was necessary to cut and weld it again. The internal weld of the pipeline is critical. With past techniques, it required a longer time to complete pipeline sections and was more expensive.

The customer realized how impactful a system for welding the internal section of pipes would be for underwater pipelines. The welding device designed is tubular with a length of 40- 50 cm and a diameter a little bigger than the diameter of the pump and motor.

Flow rate: > 1.5 l/min

Differential pressure: High

Air pressure (motor): 6 bar

Liquid: Water + Glycol (% n/a)

Liquid temperature: 5-40 °C

### PROJECT SUCCESS

GB-P25. JF5S. A-M1 pump paired with a DV-955 air motor was key to the project success. The size of the pump and drive coupled together met the small size requirements for the welding device with an overall limited diameter of the entire machine.

Due to the small diameter of the tubes within the cooling circuit, it is important for the pump to be able to meet the high differential pressure requirements generated in the circuit.

Additionally, utilizing the air motor allowed for a solution not impacted by the magnetic field generated by the welding machine.

## BENEFITS

### FEATURE / ADVANTAGE

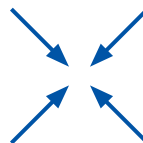
- External gear pump design → Precise, pulse-free flow and reliability for operation
- Magnetically driven → Seal-less design, no leakages
- GB Series → Small size to fit inside pipelines. pulse-free flow and reliability for operation
- Motor compatibility → Adaptable to fit an air motor to combat magnetic field challenges
- Suction shoe design → Self-compensates for wear and wide temperature range operation



**Accurate Flow**



**Wide operating temperature range**



**Compact for easy integration**



**Motor mount flexibility**



### Distributor Partner

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