SMP design and build TBM Personnel Transfer Shuttes Chamber (TSC). These are used for transferring compressed air workers/divers from the manlocks of the TBM pressurised cutting head to the designated main decompression complex.

The Shuttle is designed to accommodate 2 men in the entry lock and 6 men in the main lock. The Life Support System is designed to provide two hours of onboard life support when it is disconnected from the TBM or decompression complex. The chamber is installed in a crash proof exostructure with interconnecting chamber mating clamp mounted on the end of the structure. The units are mounted on wheels so that they can be transported on conventional rails easily during a working transit period.
SHUTTLE SPECIFICATION

Length  4,920 mm
Width   1,750 mm
Height  1,698 mm
Tare Weight  6,500 kg (Plus Personnel)
Lifting ISO Castings to Lower Corners, Lifting Eyes in Upper Corners
Transit Four Train Wheels to Lower Structure
TBM Interface Services Penetrator and Plugable Electrical Connections Plate
On Board Gas  Air = 2 x 50 litre @ 300 bar
               Oxygen = 1 x 50 litre @ 200 bar
               Mixed Gas = 1 x 50 litre @ 300 bar

VESEL DATA DESIGN

Certification Lloyds Register
Working Pressure  10 bar
Design Pressure  11 bar
Test Pressure    16 bar
Volume  Entry Lock = 2.2m³ / Main Lock = 4.4m³ / Total = 6.6m³
Length  3.763 mm
Width   1,730 mm
Height  1,615 mm
Weight  4,500 kg
Viewports 2 x Entry Lock and 2 x Main Lock
Manways  800mm ID
Seating/Bunks 2 x Entry Lock, 6 x Main Lock (or 2 Persons Lying Down)
CHAMBER EQUIPMENT OVERVIEW

- 0-10 bar/msw Gauges & 0-2.4 bar/msw Therapeutic Gauge
- 0-400 bar HP Gauges & 0-30 bar LP Gauges
- Communications Radio & Sound Powered Phone
- Oxygen & Carbon Dioxide Analyzer with Flow Meter with High and Low Sample
- Vessel Over Pressure Relief Valves
- Suitable Service Control Valves
- Tungum Pipe Work
- Oxygen Overboard Dump Masks (BIBS)
- BIBS - Oxygen & Mixed Gas Connections
- CO2 Scrubbers
- Temperature & Humidity Hygrometer
- Habitat Conditioning Unit (Cooling)
- Hyperbaric Mattresses
- BIBS Exhaust Back Pressure Regulator Assemblies
- Chamber Internal CCTV Monitoring
- Hyperbaric LED Lights
- Hyperbaric Fire Extinguishers
- HP Water Mist Fire Suppression System

The above diagram is a typical layout of a TBM system using the SMP transfer shuttles