



Flying Lead Orientation Tool (FLOT)

The Flying Lead Orientation Tool (FLOT) is designed to operate in conjunction with a torque tool for the connection of subsea flying lead assemblies. The FLOT and torque tool are mounted on a ROV and can be used for either flexible or steel flying lead connections. The FLOT is designed to easily accommodate a variety of subsea torque tools. A simple collet mechanism is used to securely clamp the torque tool in the FLOT. The hydraulic rotary actuator located in the base of the FLOT allows the torque tool to be pitched a full 180° with a load of up to 600 lbs attached. For correct roll alignment of the torque tool with the Flying Lead Head Unit, the FLOT also allows a $\pm 15^\circ$ rotational capability. Only two solenoid valve control functions are required to operate the FLOT; one for the vertical pitch (up and down) and one for the angular rotation (clockwise and counter-clockwise). In the event of hydraulic failure of the host ROV, the FLOT tool retains its pitch position and the rotational movement can be configured to freely rotate or remain fixed by selection of an appropriate valve from the host vehicle. To allow safe deployment of the ROV the tool can be completely retracted within the ROV's framework, and the lightweight aluminum construction helps keep the vehicle orientation level during operations.

Specifications

FLOT Weight

- In Air 100 lbs (50.5Kg)
- In Water 82 lbs (36.5 Kg)

Hydraulic Power Requirements

- 3000 psi (207 Bar) for full load performance
- 2 each solenoid valve functions
- Directional control valve
- 2 gpm (adjustable) flow for pitch
- Directional control valve
- 0.1 gpm (adjustable) flow for the roll axis

Dimensions

- 24"(H) x 18"(W) x 21"(L)
- 610mm(H) x 460mm(W) x 535mm(L)

FLOT Pitch Angle

- 180°

FLOT Rotation

- $\pm 15^\circ$

Maximum Load

- 600 lbs (225 Kg)

