

## Pan & Tilt

The HLK-21000 is a light duty hydraulic pan & tilt platform designed to work reliably on all types of submersible systems. It is ideally suited for the positioning of cameras, lights or survey equipment and can be installed to the end of camera booms for pipe inspection activities.

All hydraulic connections are ported into the rear of the body and are available in 1/8" BSPP in accordance with ISO 1179 and 7/16" SAE in accordance with SAE J1926-1.

The HLK-21000 pan & tilt unit can be paired with the HLK-6000 double pilot operated check valve to ensure accurate position holding of the tilt function.

The rotate function is a rack and pinion design while the tilt function is a double acting actuator. The body and bracket are manufactured of 6082 aluminium with a 50 micron hard anodized surface.



## Features

- Porting available in 1/8" BSPP or 7/16" SAE in accordance with ISO 1179 & SAE J1926-1 respectively
- Constructed from corrosion resistant materials
- Compact and lightweight at only 1.6kg (3.52lb) in water
- Pan range of 180° and a tilt range of 90°

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## Technical Specifications

### General

Function	Pan & Tilt
Materials	316 Stainless Steel, 6082 Aluminium
Product Finish	Hard Anodised
Seal Material	Nitrile/NBR/Buna-N, PTFE
Ports	1/8" BSPP (ISO 1179) or 7/16" SAE (SAE J1926-1)
Dimensions	(H) 212mm x (W) 108mm x (D) 57mm (8.34" x 4.25" x 3")
Weight in Air	2.2kg (4.85lbs)
Weight in Water	1.6kg (3.52lbs)
Pan Travel	180°
Tilt Travel	90°

### Hydraulic Performance

Maximum Working Pressure	140bar (2000psi)
Flow	3lpm Maximum (0.79gpm)
Fluid Type	Mineral: DIN 51524, ISO 11158, ISO 6743-4, ASTM D6158 Synthetic: Panolin Atlantis, HLP-Synth
Viscosity	16cSt to 220cSt. VG 22-32 Recommended
Temperature	5-60°C (41-140°F)
Cleanliness Requirements	ISO 4406:19/17/14, NAS 1638:8, AS4059:9A/8B/8C

### Forces

Pan Torque	8.1Nm @ 140bar (6lbf.ft @ 2000psi)
Max. Payload	6kg (13.2lb)

### Environmental

Operational Depth	3000msw (9,840ft)
Operating Temperature	5-60°C (41-140°F)
Storage Temperature	0-70°C (32-158°F)
Humidity	0% to 100% Condensing

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