

# KPT-20 PAN & TILT UNIT

Small and powerful  
unit for ocean depths  
down to 11,000 m

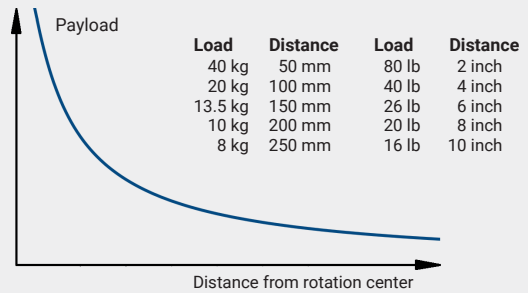


Designed for continuous hard use on Work Class ROVs at full ocean depths. Equipped with absolute position sensors there is no need to find end-stops at start-up. Withstands heavy payloads without compromising with absolute accuracy. To be connected to an external compensator.

## KEY FEATURES

- Compact dual axis unit
- Rugged construction and mounting holes
- High torque – heavy payloads can be added
- 22 Nm (16.2 lb/ft) holding torque
- RS-232 or 100 Mbps Ethernet
- Absolute position sensor
- $\pm 0.1$  deg accuracy;  $\pm 0.01$  deg on request
- 24 to 48 VDC input voltage range
- No rotating connector at unit
- External compensator interface
- Design tested to 11,500 m (36,730 ft)

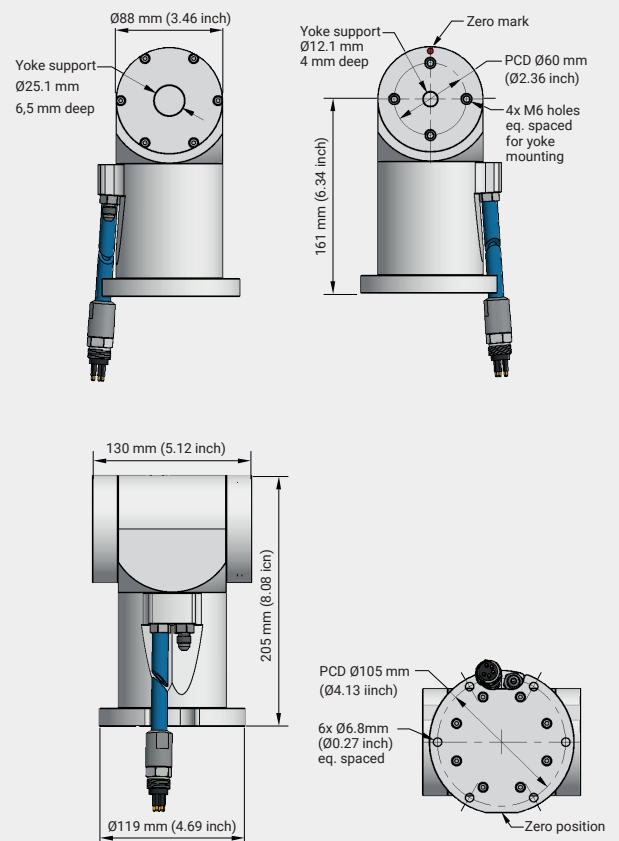
Payload Torque diagram (in air)



## SPECIFICATIONS

| <b>Electrical:</b>                    |   |
|---------------------------------------|---|
| Input Voltage                         | 24 - 48 VDC   |
| Drive Current                         | Up to 1.5 A each axis   |
| Communication                         | RS-232 up to 115200 Baud rate or<br>100 Mbps Ethernet TCP/UDP or Modbus               |
| Connector                             | Customer selectable<br>(SubConn 5 or 8 pin standard)                                  |
| <b>Mechanical:</b>                    |   |
| Angular Limits                        | Pan range: $\pm 175^\circ$<br>Tilt range: $\pm 175^\circ$ (depending on yoke)         |
| Angular Speed                         | 0.5 to 40 deg/sec (Pan and Tilt simultaneously)                                       |
| Torque @ 24VDC                        | 22 Nm (16.2 lb/ft) holding torque<br>20 Nm (14.75 lb/ft) at full speed                |
| Max Payload                           | 50 kg (110 lbs)   |
| Absolute Position/<br>Step resolution | $\pm 0.1^\circ$ (0.09375°/step) or<br>$\pm 0.01^\circ$ (0.009375°/step) on request    |
| Gears                                 | Precision strain wave   |
| Backlash                              | < 3 arc minutes (< 0.05°)   |
| Compensator                           | External  |
| <b>Environmental:</b>                 |   |
| Operating Depth                       | Down to 11,000 m (36,100 ft)  |
| Temperature Range                     | -20°C to +50°C (-4°F to +122°F) operating<br>-30°C to +60°C (-22°F to +140°F) storage |
| <b>Others:</b>                        |   |
| Size (H/W/D)                          | 205 / 130 / 88 mm (Flange $\varnothing$ 119 mm)                                       |
| Materials                             | Hard anodized aluminum (Titanium on request)  |
| Weight in Air                         | 4.6 kg (10.14 lbs) (Aluminum unit)  |
| Weight in Water                       | 3.2 kg (7.05 lbs) (Aluminum unit)   |

All technical data and specification are subject to change 2023-12



### Available compensator interfaces:

