Leica PAV30

Gyro-Stabilized Camera Mount

Leica
Geosystems

Leica PAV30

High Quality Aerial Photography

The Leica PAV30 gyro-stabilized mount has been developed by Leica Geosystems' aerial camera engineers for compensation of angular aircraft movements to improve the quality of aerial photography and survey flight efficiency.

The PAV30 replaces existing mounts and is fully integrated into the Leica Geosystems camera concept. No aircraft modification is required.

The PAV30 continues Leica Geosystems' tradition of solutions for precise information from imagery by people who make a difference. Leica Geosystems is committed to excellence in design, combining high performance with long-term reliability.

RC30

PAV30

The Leica PAV30 gyro-stabilized mount is the perfect complement to the Leica RC30 aerial camera system.

User Benefits

- Perfectly integrated system
- Superior image quality
- Automatic vertical photography
- Less stress on the flight crew
- More efficient survey flights
- Extended flying hours
- Direct interchange with existing mounts
- Standard output interface for recording attitude angles

Features

Superior Image Quality

The PAV30 automatically corrects for angular motions, even in turbulent flight conditions. The outcome is a far better image quality

Automatic Vertical Photography

With the PAV30 gyro-stabilized mount, the aspirations of camera operators and photogrammetrists have become reality.

- Perfect vertical photography, even in turbulent conditions

- Automatically stored verticality means reduced operator stress

- Simplified aerotriangulation

Extended Flying Hours

Combining an FMC aerial camera with the PAV30 gyro-stabilized mount permits the use of longer exposure times, as required under low light conditions or when using high resolution films.

Efficient Flights

Relieves the camera operator of tedious tasks such as:

- Initialization

- Leveling along flight lines

- Coninuous drift adjustment

Optional Interface to Aircraft Navigation Systems

The PAV30 is unique in its ability to accept drift correction angles from an aircraft navigation system. Drift corrections are received via Leica ASCOT accepting ARINC 429 signals. ASCOT is sold separately — please visit www.gis.leica-geosystems.com for more information.

Direct Interchange with Existing Mounts

With the PAV30 mount, no costly aircraft modification is required. The PAV30 fits directly in the camera hole designed for PAV11, PAV11-A and PAV20 camera mounts.

Smearing in the image plane due to pitch or roll movements for exposure time 1/200sec.

	Turbulent ~ 10° / s		Stabilized ~ 0.3° / s	
	center	corner	center	corner
SAG f = 88mm	77μ	222μ	2μ	7μ
UAG f = 153mm	134μ	209μ	4μ	6μ
NAT f = 303mm	264μ	299μ	8μ	9μ

Smearing in the image plane due to drift movements for exposure time 1/200sec.

	Turbulent ~ 10° / s		Stabilized ~ 0.3° / s	
	center	corner	center	corner
All lens cones (independent of focal length)	0μ	132μ	0μ	8μ

Angular Motion Compensation
WITH   *WITHOUT*
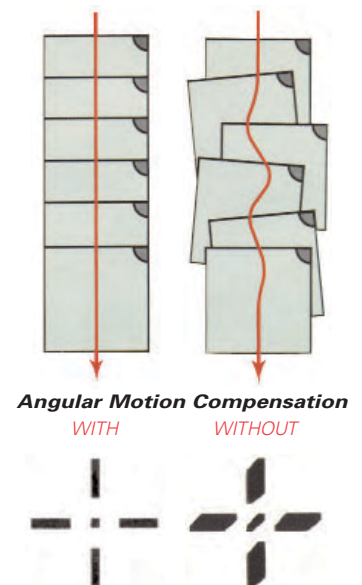
Leica PAV30 PosOp

Making Your Flights More Efficient

A new option enables the PAV30 to accept data from an Applanix POS (Position and Orientation System). This provides real-time input for PAV30 attitude control, in order to benefit from the better data available through the higher accuracy attitude sensors of POS.

Features

- Nadir accuracy alignment to POS reference

- Drift alignment according to POS reference

- Improvement of residual angular velocity

- Gimbal data for post-processing

Connections
1 – Mid Exposure Pulse (MEP)

   – POS AV interface PosOp

   – Analog drift reference

   – External panel box

   – Slave PAV20 (option)

2 – Navigation Sight (PAS 12)

   – Interface to ASCOT

3 – Power (23.5-29.5 VDC)

   – Options include:
external drift
ARINC via ASCOT

Technical Data

Stabilization range in pitch and roll	±5°
Stabilization range in drift	±30°
Typical residual angular motion*	<0.3°/s
Typical residual deviation from vertical direction (nadir)*	+0.5°
Operating voltage	23.5 to 29.5 VDC
Power consumption (average)	200W
Weight	36 kg
Dimensions	665 mm x 535 mm x 150 mm

*For photoflight situations, i.e.,

  - Aircraft angular motions <10°/s

  - Typical aircraft photoflight frequency spectrum

Note: Under conditions of lateral accelerations lasting longer than a few seconds, the PAV30 may exceed the specification for residual deviation from vertical direction (nadir)

GIS & Mapping Division