

Visual Alignment Guidance System

The ALS Heliport Visual Alignment Guidance System provides a combined signal of approach by using angles of azimuth guidance and threshold identification.

It comprises of 2 parts that are both flashing Units (one master and one slave) that work together to guide the pilot.

The system is located symmetrically on both sides of the runway (or TLOF for heliport threshold). Depending on the position of the aircraft on the approach axis, the pilot will receive visual information of two “Flashes” supplied by the two “flashing” units of the system. This indicates to the pilot if he is correctly “centred” or if the aircraft is too far left or too far right and to allow the pilot to adjust before landing.



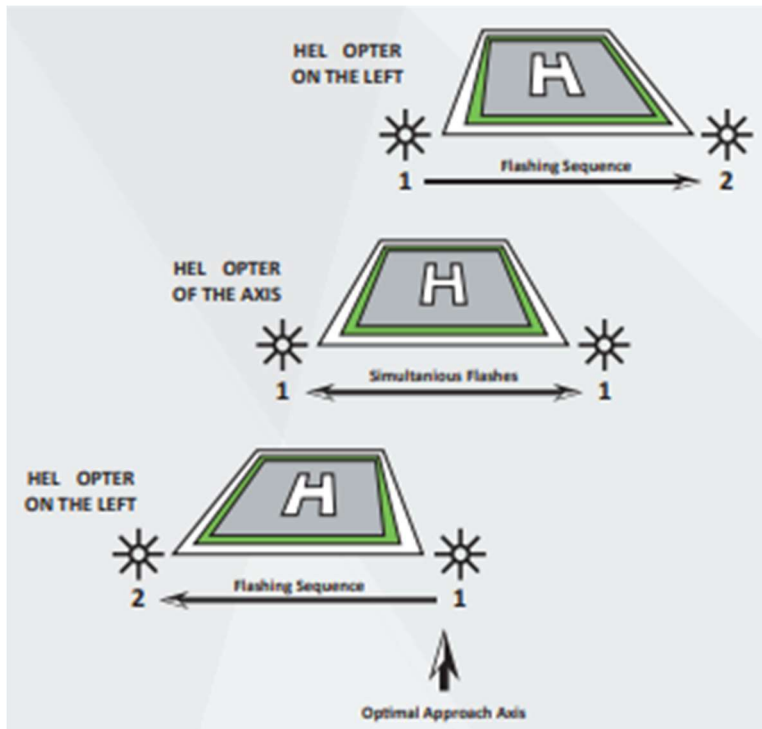


How it works

If the pilot is on the axis $\pm 0.5^\circ$, the two Flashes are simultaneous or if the pilot is not on the axis within an angle comprise between -15 and $+15^\circ$, the two “Flashes” will be seen delayed of a time between 0 and 330ms (the further the aircraft is from the axis, the greater the delay). The delay between the two flashes produces a sequence effect which shows the direction of the axis.

The two light units must be installed at 10 metres from the runway Edge symmetrically on both sides of the Runway threshold (for TLOF the two units must be installed as close as possible to the threshold edges). The Master unit must be installed on the right of the Threshold. When the aircraft flies inside a 1° angular sector, centred on the approach axis, the pilot sees the two lights flashing simultaneously.

When the aircraft flies inside a 30° angular sector, centred on the approach axis and outside the previous one, the pilot sees the two lights flashing in a sequence with a variable delay 0 to 330ms according to the position of the aircraft in the sector. The further the aircraft is from the axis, the greater the delay. The delay between the two flashes, produces a sequence effect which shows the direction of the axis. The visual signal is not visible when the aircraft flies outside the 30° angular sector.



Compliance

- ICAO Annex 14 Vol 2. Heliports. 4th Edition, 5.3.5



Features

- There are 2 dry contacts, one for each light unit. Between the units there is a RS-485 connection monitoring the synchronization and the status of the LED lamps. In case of a potential failure both units will be turned OFF and the dry contact will change the status, indicating a failure, according to ICAO Annex 14, vol. 2, Paragraph 5.3.5.18.
- Protection Degree: IP65 certified.
- Light fixtures are provided with anti-condensation valve.
- Expected Life of LEDs: > 100.000 h. Will not require any replacement for the whole life of the product.
- All metal parts can withstand corrosive environments.
- Diffuser made of clear Polycarbonate.
- Compact and low weight.
- Optimized for integration in elevated Helipads.

Technical Characteristics

- Light distribution to 10 degrees in horizontal plane (Divergence of the “on track” sector) according to: ICAO Annex 14, vol. 2, Figure 5-13.
- Light intensity average 40.000 cd, equal to or better than APAPI white intensity according to: ICAO Annex 14, Vol. 2, Paragraph 5.3.5.13
- 100 in vertical plane above 00 Each unit generates a flash with a frequency of 1 Hz
- Installation is made with frangible bolts according to ICAO Annex 14, Vol. 2, Paragraph 5.3.5.4
- There is the possibility of rotating the light fixtures with +/- 7.50
- The unit levelling is adjustable from the fastening system.
- CE Certified.
- 2 x Cool white LED Chips
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Applications and Codes

Type	Code
Visual Guidance System	AL-087-02-WH

Dimensions

- Diameter: 305mm
- Height: 900mm
- Light Axis origin: 650mm



Drawing

