

Heliport solutions
A safer approach

Heliport solutions for increased safety

How do you secure a safe touch-down and lift-off?

A view from an urban rooftop during bad weather conditions



A view with distracting city lights and few visual cues



A view at night with low visibility



A safer approach

Some helipads are located in the proximity of an airport where air traffic control and all service facilities are available. However, most helipads are found in places with few visual cues and many obstacles in the approach area. In these harsh environments lights and other visual aids play a crucial role in bringing the helicopter safely to its desired landing area.

Upgrade your helipad with our solutions

Heliports require the same level of attention as airports. Safegate Group can provide you with solutions that generate the required safety at the helipad. With our comprehensive range of ICAO equipment for visual guidance we help you ensure a safer touch-down and lift-off at your heliport.

Three suitable solutions

To simplify decision making we have created three heliport solutions suitable for different locations and environments. If you wish to combine parts from the different solutions, we can help you to create your own customized solution.

Perfect Precision
for severe weather conditions ▶▶

Clear Guidance
for difficult environments ▶▶

Mandatory Equipment
for regulatory requirements ▶▶

The Safegate Effect

Safegate Group secures the performance of your heliport today and prepares you for the traffic demands of tomorrow. By choosing from our solutions you gain benefits that will improve overall safety, efficiency and environment.

Safety

With our heliport solutions you increase safety at your helipad by making it easier for the pilot to land, regardless of weather conditions and distracting obstacles.

Efficiency

Our solutions are easy to install and by optimizing the visual aid for the pilot, approaches and take-offs can be performed in a much more efficient way.

Environment

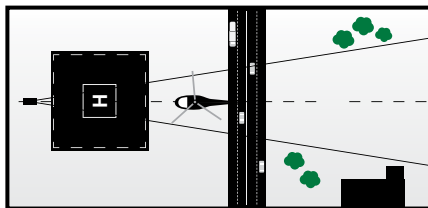
Guiding the pilot more efficiently saves fuel and emissions as less time is spent searching for direction or the landing area.



Imagine yourself trying to land a helicopter on an urban rooftop at night during strong wind and heavy rain with severely compromised visibility.

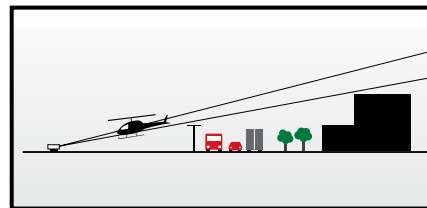
Perfect Precision for severe weather conditions

Many heliports are located in crowded or remote areas with few visual cues, many obstacles in the way and where traffic control requires a certain direction to be used. Under these conditions ICAO Annex 14 Vol.II recommends the helipad to be complemented with the aid of Visual Alignment Systems.



Azimuth Guidance for Approach

Safegate Group's unique Azimuth Guidance System for Approach (SAGA) guides the pilot with perfect precision clear of obstacles when a certain direction and azimuth angle is required by traffic control.



Helipad Approach Path Indicator

When you have obstacles that limit the approach slope, such as trees or buildings that the pilot needs to stay free of, Helipad Approach Path Indicator (HBA) offers increased precision. Safegate Group's unique and simple solution with one unit instead of four is easier to install and requires less space.

Examples of helipad locations which often offer limited visibility

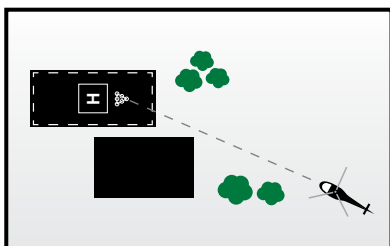
- ▶▶ Urban areas/environments
- ▶▶ Rooftops of office buildings (taxi service)
- ▶▶ Rooftops of high-rise buildings (evacuation)
- ▶▶ Rooftops of police departments and hospitals (turn-outs)
- ▶▶ Large ships and oil rigs (transportation)
- ▶▶ Near forests, lakes and the sea



Imagine yourself trying to land a helicopter in a crowded city with distracting lights and few visual cues to guide you in the right direction.

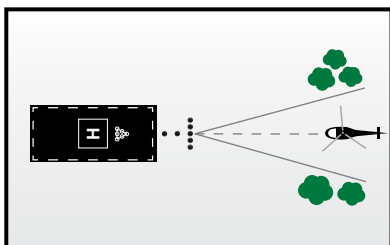
Clear Guidance for difficult environments

Many heliports are located in environments with obstacles interfering and limiting the approach area. Obstacles such as trees, buildings and distracting lights make it necessary to reinforce the preferred direction.



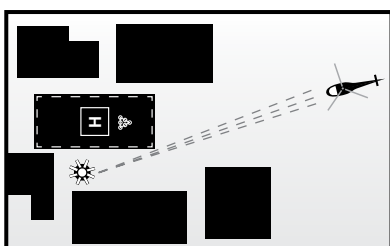
Aiming Point Lights

ICAO Annex 14 Vol.II recommends that Aiming Point Lights should be provided when you have an aiming point marking at a heliport intended for use at night. Aiming Point Lights should be provided at a heliport where it is necessary for a pilot to make an approach to a particular point before proceeding to the TLOF.



Approach Lights

When it is desirable and practical to indicate a preferred landing direction Approach Lights should be provided. In circumstances where it is difficult to add Approach Lights, for example on rooftops, an Azimuth Guidance System should be provided.



Heliport Beacon

A Heliport Beacon with a white flashing light showing the letter H in morse code should be provided where long range visual guidance is necessary and not provided by other means. It should also be provided when identification is difficult due to surrounding lights.





Imagine yourself trying to land a helicopter on the ground at night with insufficient guidance.

Mandatory Equipment for regulatory requirements

If your helipad is intended for use at night, it is mandatory according to ICAO Annex 14 Vol.II regulations that the FATO (Final Approach and Takeoff area) and TLOF (Touch Down and Liftoff area) shall be provided with Perimeter Lights, Floodlighting and Wind Direction Indicator.

The three solutions in short

Perfect Precision

This solution guides the pilot with perfect precision clear of obstacles even under severe weather conditions. The solution also includes lights from Clear Guidance and Mandatory Equipment.

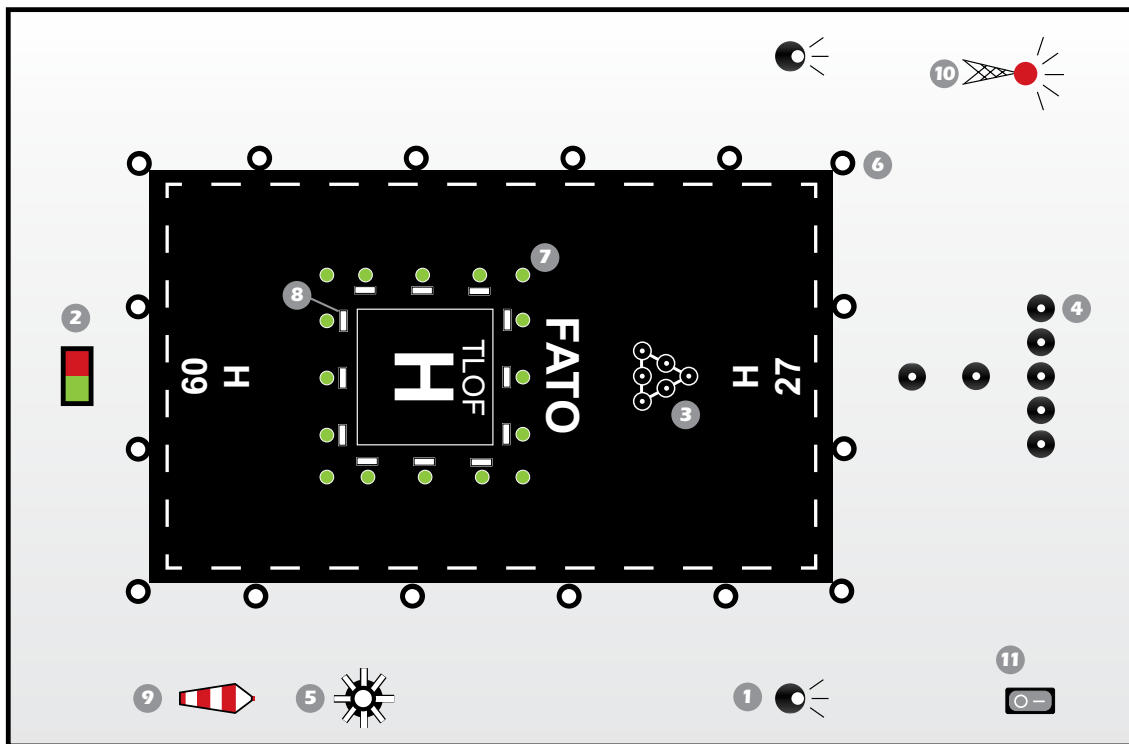
Clear Guidance

This solution indicates the approach direction is free of major obstacles. The solution also includes lights from Mandatory Equipment.

Mandatory Equipment

If your helipad is intended for use at night, this solution ensures that you have the right equipment according to ICAO Annex 14 Vol. II regulations.

Schematic heliport design*



PERFECT PRECISION This solution also includes lights from Clear Guidance and Mandatory Equipment

- 1 System of Azimuthal Guidance for Approach (SAGA)
- 2 Helipad Approach Path Indicator (HBA)

CLEAR GUIDANCE This solution also includes lights from Mandatory Equipment

- 3 Aiming Point Light
- 4 Approach Light
- 5 Heliport Beacon

MANDATORY EQUIPMENT

- 6 FATO Perimeter Light **
- 7 TLOF Perimeter Light
- 8 Floodlight for TLOF-area
- 9 Wind Direction Indicator
- 10 Obstacle Lights (when applicable)
- 11 Control System (to control the lights)

* This is a typical example of a fully equipped ground Heliport including TLOF, FATO and one approach system, designed in compliance with ICAO Annex 14 volume II. TLOF area: 20x20 m | FATO area: 100x60 m | Approach area: 90x18 m
This is a schematic view of the complete offer, it may not be used as a design guideline.

** At elevated heliports (rooftops) where FATO (6) and TLOF (7) are nearly coincidental FATO (6) Perimeter Lights may be omitted according to ICAO Annex 14 Vol.II.

Check in to the future

How many aircraft can your airport handle today? Can this number be increased without adverse effects on the airport's safety level? It is a known fact that traffic volume will rise in the foreseeable future. More movements will demand monitoring of the entire airport. Requirements will be sharpened and the development of an integrated system control-

ling not only ground movements but also air traffic close to the airport is of the highest interest. The International Civil Aviation Organization (ICAO) already describes A-SMGCS, Advanced Surface Movement Guidance and Control System, as the answer to the future modern airport need to control the entire airport space in one superior system.

To a larger extent than today's systems, A-SMGCS will rely on automated processes to give both pilots and traffic controllers exact information about positions and directions. Safegate Group delivers complete A-SMGCS solutions already, as well as all vital parts relating to it. Safegate Group can check your airport into the future – today!



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THORN **IDMAN**
Airfield Lighting

SAFEGATE 
GROUP

Safegate Group offers solutions for increased safety, efficiency and environmental benefits to airports around the world. The company was founded in 1973 and has its headquarters in Malmö, Sweden. Safegate Group has over 70 partners around the globe in order to be close to its customers. The latest members of Safegate Group, Thorn AFL and Idman, have both over 40 years of experience in airfield lighting solutions for airports and heliports worldwide. Safegate Group's complete range of products and services, a "one-stop shop", provides solutions to customers and airborne travellers around the globe.

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