

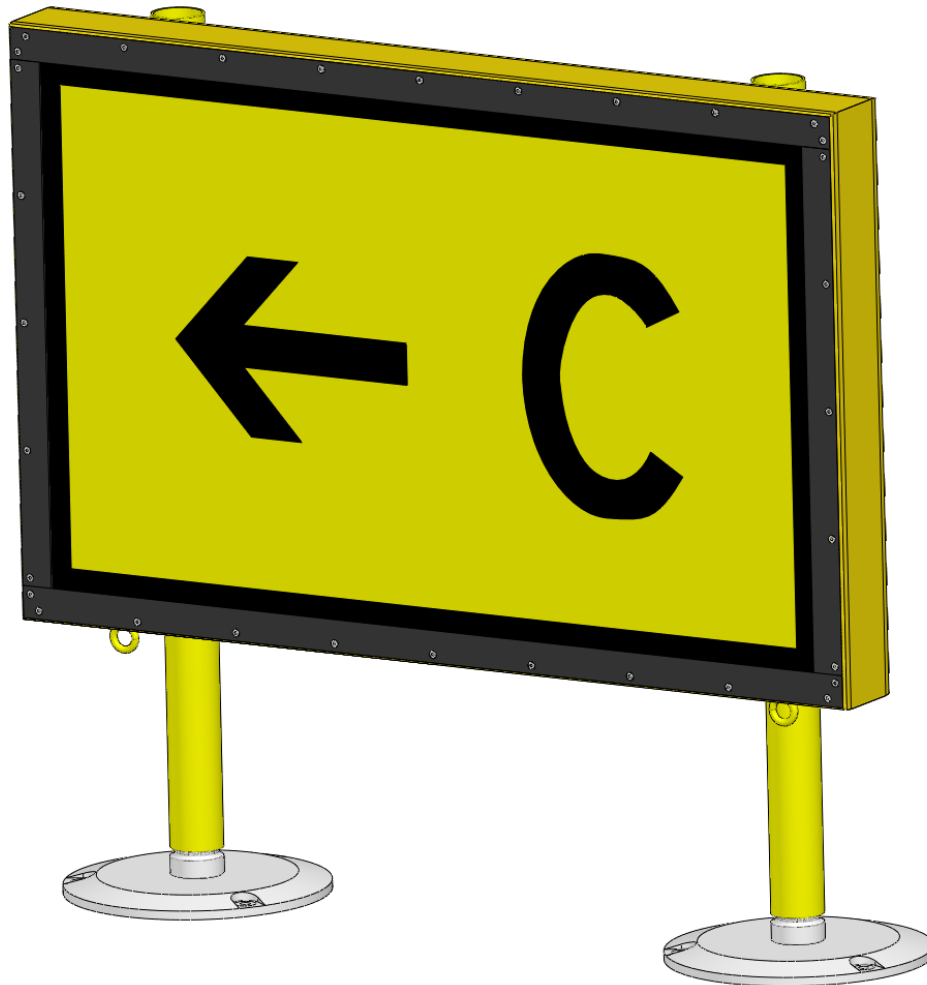


Porvoo, Finland

LED Airfield Guidance signs

Installation Instructions

Airfield guidance signs EGS-series

**04L-22R WL**



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Product description

TWOY airfield guidance sign (TGS-series) is LED illuminated design according to ICAO ANNEX 14 Section 5.4 and 50235 and EASA CS-ADR-DSN.

Following sign types are available:

Mandatory sign - white inscription on red background

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Informative sign - black inscription on yellow background for indicate information, position, and direction.

↙ WL WM WL ↗

Arresting gear markers

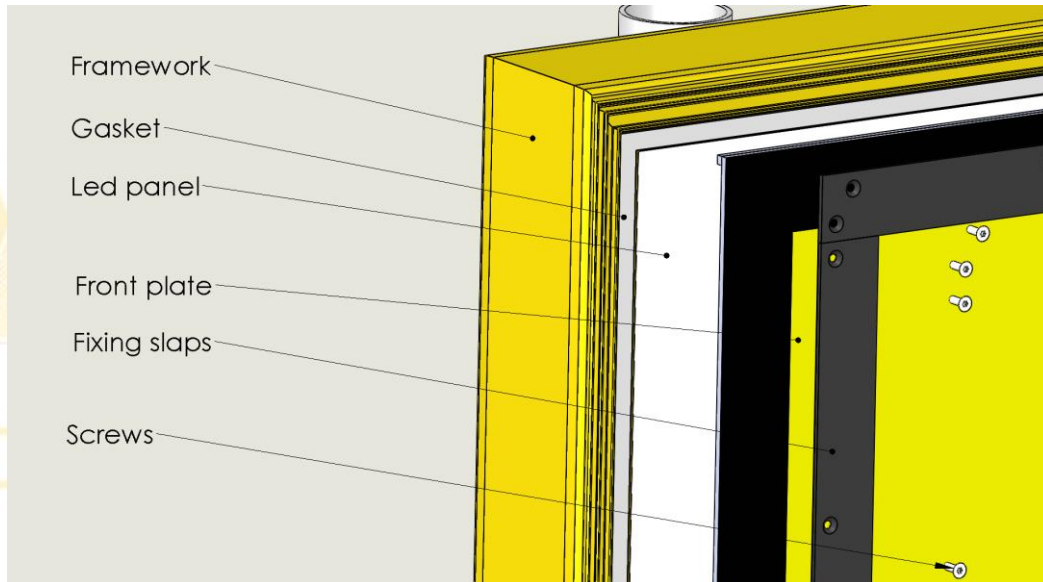


Runway distance remaining



LED Airfield Guidance signs**Design:**

Aluminium frame is powder coated. All metal parts either aluminium or stainless steel. Front plate is made of UV resistance polycarbonate. Translucent films are fixed on the inside of the front panel. All parts are easy to change.

**Technical characteristics**

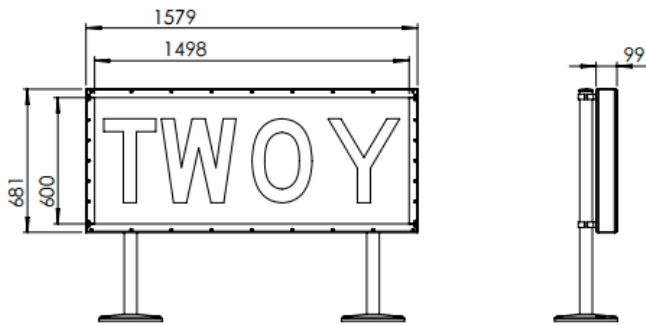
- Letters, characters, and numerals according to ICAO Annex 14.
- Wind loading 240 km/h (ICAO). Wind loading 90 m/s (FAA).
- Height of the sign max 1100 mm.
- Installation on concrete pad.
- Operating humidity range 0-100
- Operating temperature range -40 +70
- Storage temperature range -60 +80
- Weight -20-25 kg/m depending on the type
- Power factor ~0,95 (typical value with variable intensity)
- Protection glass IP55/65



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Dimensions



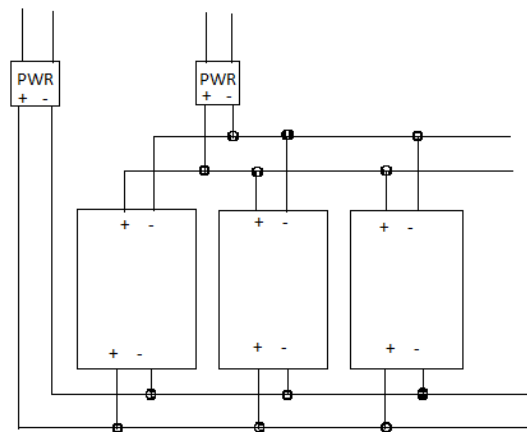
Nominal Front plate size (mm)	Overall dimensions (mm)
EGS 600/500	681x570
EGS 600/1000	681x1070
EGS 600/1500	681x1579
EGS 600/2000	681x2088
EGS 600/2500	681x2597
EGS 600/3000	681x3106

Nominal Front plate size (mm)	Overall dimensions (mm)
EGS 800/500	881x570
EGS 800/1000	881x1070
EGS 800/1500	881x1579
EGS 800/2000	881x2088
EGS 800/2500	881x2597
EGS 800/3000	881x3106

Other sizes available on request

Electrical connection

Power is supplied to the TGS signs by airfield ground lighting transformers (AGLST or isolating transformers). EGS is designed to use 45W or 65W AGLST as many as there are secondary plugs.



Internal power supply electronics are designed so that it acts much as a linear load to the electrical circuit.

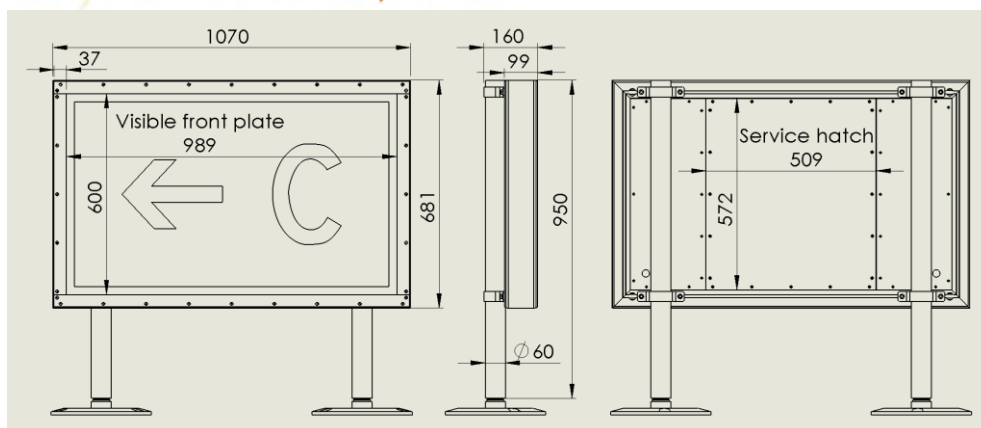
LED Airfield Guidance signs**Power supplies:**

	Circuit type	Characteristics
1a	Series circuit 6.6A variable	Illumination varies according to the current
1b	Series circuit 6.6A constant	Illumination varies only slightly
2a	120V/230V	Normal mains
2b	12V/24V/48V	SELV and solar power
Low current versions available on request		

Before installation

Never install EGS sign to live-circuits either change any component nor adjust inside the equipment when the circuit is live. Only competent authorized personnel should make any measures to the equipment. General and local regulation must be followed. Read the installation manual perusal.

An example of dimensions of EGS.

**Mounting****Airfield guidance signs transformer sizes**

Variable intensity			Constant intensity		
Nominal length [m]	Height 600mm	Height 800mm	Nominal length [m]	Height 600mm	Height 800mm
1	1x45W or 65W	1x45W or 65W	1	1x45W or 65W	1x45W or 65W
1,5	2x45W or 65W	2x45W or 65W	1,5	1x45W or 65W	2x45W or 65W
2	2x45W or 65W	2x45W or 65W	2	2x45W or 65W	2x45W or 65W
2,5	2x45W or 65W	3x45W or 65W	2,5	2x45W or 65W	3x45W or 65W
3	3x45W or 65W	3x45W or 65W	3	2x45W or 65W	3x45W or 65W
3,5	3x45W or 65W	4x45W or 65W	3,5	3x45W or 65W	4x45W or 65W
4	4x45W or 65W	4x45W or 65W	4	3x45W or 65W	4x45W or 65W

45W is enough when the transformer is close to the sign.



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Default pole height is 110mm. Height from the mounting base is +50mm.

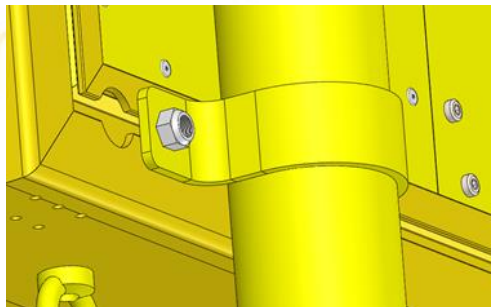
The signs are to be installed on to the base plates and frangible joints. Base plate is to be fastened correctly on concrete foundation or on other reliable base type.

EGS sign has a full-length installation slot up and down of the sign's back side. Install the correct number of fixing screws in the slots on correct place. Both side of each pole.

Place a correct number of fastening screws in the upper and lower installation slots (2 per a pole up and 2 per pole down) and slide them close to poles' places.

Place the outermost poles so that they are close to both ends (for example 15-20cm)

fasten the lightly with U-fixing means, washers, and nuts.

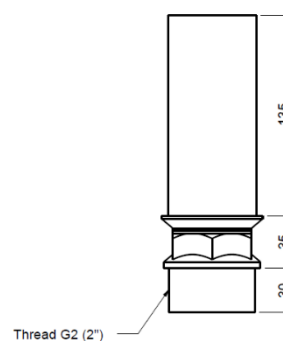


Install the frangible couplings and base plates and place the sign on its place. Adjust the poles so that the base plates are correctly on the foundation.

Drill the anchor screws holes to the foundation through the base plate or my pre-made marks.

Frangible coupling for signs

For a pole with inner diameter 60mm
Weather resistant cast aluminium alloy
Tool: fork spanner 52mm
Compatible with both base plates

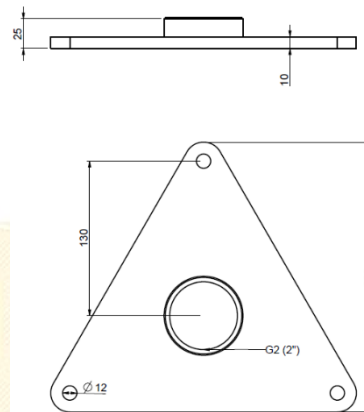
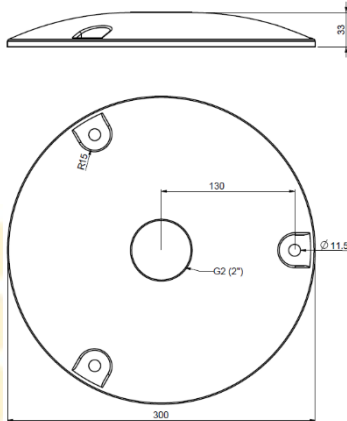




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Base plates for guidance signs



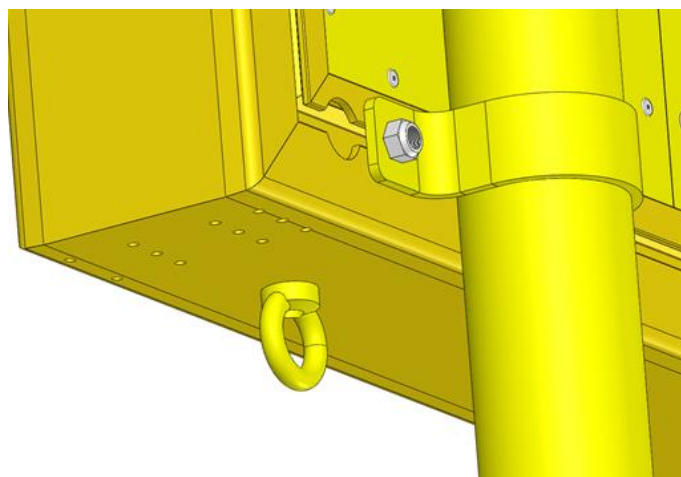
Aluminium base plate

Stainless steel base plate

Mount the base plates with anchor bolts or corresponding means. Make sure that any unnecessary tension shall not occur.

Adjust the sign and tight the nuts, and bolts correctly.

An anchoring point is provided under the sign in both sides for tying down the sign against being blown away from the foundation. The anchoring point is suitable for a rope up to 22mm (25mm)





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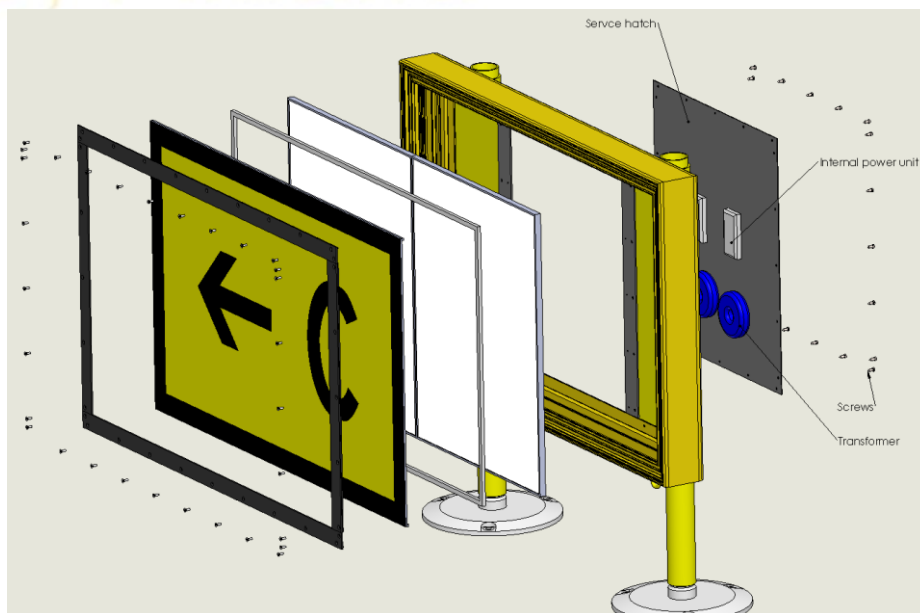
Maintenance and periodical check

EGS sign does generally not need any maintenance, only some periodical check and cleaning. Possible needed service is limited to the change of spare parts.

Following checks are recommend:

- Check the overall condition of the sign.
- Clean the signs face when needed.
- Use soft cloth and water or mild soap solution to remove the dirt.
- Do not use excessive power or sharp/scraping tools.
- with mild soap water solution.
- Check that face illumination is steady and smooth.
- Check that supply cables are fastened correctly.
- Possible needed service is limited to the change of spare parts.

Service hatch is in the back side of the sign. Opening screws are T3 slotted. Internal power unit with transformer is connected in the service hatch so it needs to be opened very carefully.



Spare parts

Light panel 600mm	Frangible joint
Light panel 800mm	Base plate round 300mm
Power supply	Base plate triangle
Pole	Legend plate h 600mm nominal
Fixing means, set	Legend plate h 800mm nominal