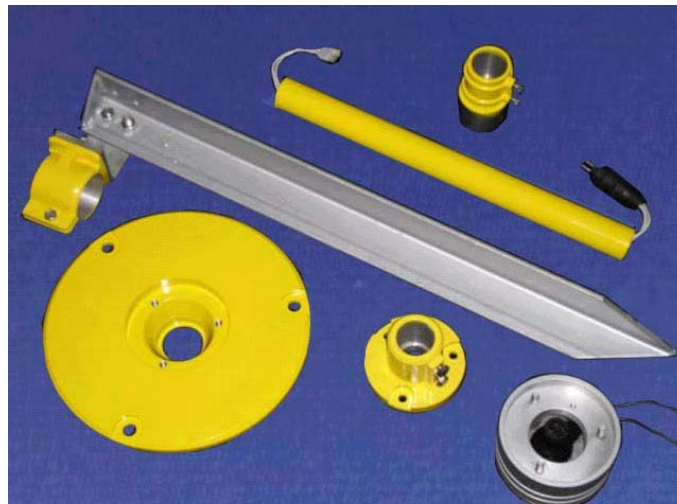


Support Structures

The support structures meet the following regulations:

ICAO Annex 14, Volume I, 4th edition 2004

ICAO Aerodrome Design Manual, Part 4, Visual Aids, 4th edition 2004



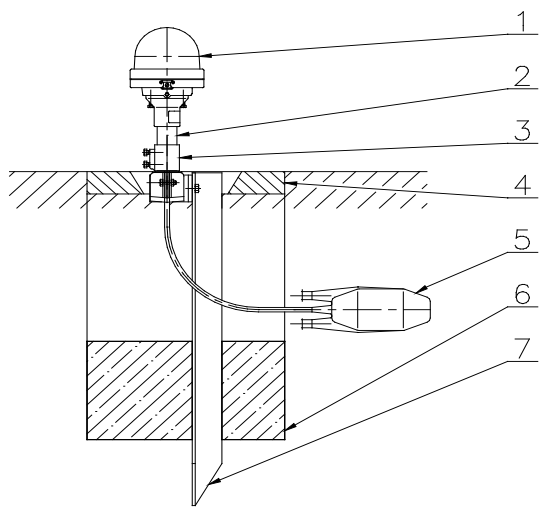
Basic Information

Powder coating in the "aerial yellow" tint protects surfaces of all parts located aboveground.

The **93 002 A, B breakable coupling** is the fixing part the purpose of which is to break easily the signal device above the breaking plane (ground level) in case of collision with an aircraft. This coupling consists of a cylindrical cast of aluminium alloy with thinned wall in the middle (breaking plane). Two stainless screws in the upper section of the coupling are used for fixing the complete tube. The bottom section design, along with the use of connectors, ensures that the signal device breaks off in case of collision and the electric circuit disconnects without any change in the socket position and its damage.

The **93 302 A÷Q and 93 312 A÷F complete tube** is the support element of the signal device. The bottom section of the tube is fixed by means of the breakable coupling to the needle or the cover; the signal device is mounted on the upper section of the tube. The tube is made of an aluminium alloy with the outer diameter of 40 mm; a letter variant determines its length. A flexo (two one-core cables terminated at one end with the normalised plug, and with flat slip-on connectors) is part of the tube and used for energy supply.

The **93 316 A÷C type tilting needle** allows fixing the signal device into the vertical position and setting up its height using the complete tube and the breakable coupling. The needle consists of a steel hot zinc-dipped channel with a spike on the bottom end; a partly adjustable holder is mounted on the upper end for fixing the breakable coupling. A grounding screw is also part of the needle. The needle is available in three basic lengths: 745, 990, and 1,490 mm. The length of the used needle depends on the ground conditions in the

	<p>signal device installation location.</p> <p>The 93 301 type flange cover is the cast made of an aluminium alloy furnished with three stainless screws on which the 93 318 S003 type breakable coupling is fixed. The cover has a plate-like shape with an opening in its bottom for fixing the secondary outlet.</p>
<p>Basic Information on Insulation Transformer</p>	<p>The cover is furnished on its bottom side with the grounding screw. The cover is fixed onto bolts that are concrete-cast in the concrete block provided with a cylindrical shaft.</p> <p>The 93 318 A÷J and 93 319 A÷E type complete cover is an aluminium cast shaped as an open cylinder with three stainless bolts on which the 93 318 S003 breakable coupling is fixed. The supply flexo and the grounding wire are also parts of the cover; the supply flexo is used for connecting the signal device with the insulation transformer. The cover is designed for sticking down into the prepared opening in concrete or asphalt.</p>
<p>Use</p>	<p>The support structures of aboveground signal devices are used for fixing airport signal devices along taking-off and landing runways, rolling runways, and in airport approach systems. <u>Basic division:</u></p> <ul style="list-style-type: none"> • Needle fixing <ul style="list-style-type: none"> ○ Type 93 002 A, B breakable coupling ○ Type 93 302 A÷Q and 93 312 A÷F complete tube ○ 93 316 A÷C type tilting needle • Cover fixing <ul style="list-style-type: none"> ○ Type 93 301 flange cover ○ Type 93 318 A÷J complete cover ○ Type 93 319 A÷E complete cover ○ Type 93 318 S003 breakable coupling
<p>Installation</p> <p>Needle fixing installation example:</p> <ul style="list-style-type: none"> 1 – Signal device 2 – Complete tube 3 – Breakable coupling 4 – Concrete (asphalt) protective circle 5 – Insulation transformer 6 – Concrete for anchoring the needle 7 – Needle 	
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